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SIEMENS

Catalog
ST 80/
ST PC

Edition
2022

SIMATIC HMI / PC-BASED AUTOMATION

Human Machine Interface Systems/ PC-based Automation

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Related catalogs

SIMATIC ST 70
Products for
Totally Integrated Automation

PDF (E86060-K4670-A101-B9-7600)

SIMATIC ST PCS 7
SIMATIC PCS 7 Process Control System
Vol. 1: System components

E86060-K4678-A111-C7-7600

Industrial Communication IK PI
SIMATIC NET

E86060-K6710-A101-B8-7600

SITOP KT 10.1
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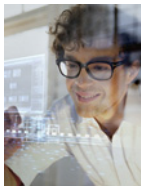

Siemens TIA Selection Tool
for the selection, configuration and ordering of
TIA products and devices

www.siemens.com/tst

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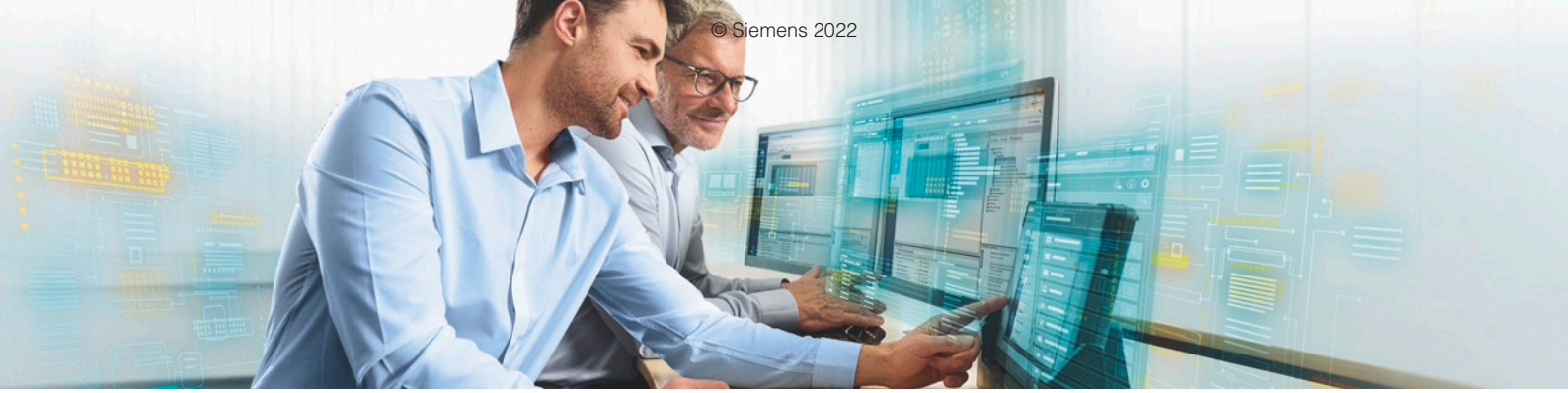
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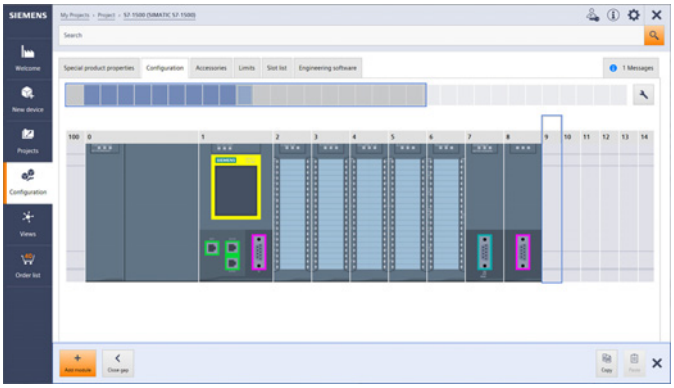
TIA Selection Tool – quick, easy, smart configuration

For you to get the most out of our portfolio quickly and easily.

Do you always need the optimum configuration for planning your project?
For your application we offer the TIA Selection Tool to support all project planners, beginners and experts alike.
No detailed portfolio knowledge is necessary.
TIA Selection Tool is available for download as a free desktop version or a cloud variant.



Your Advantages

Quick

- Configure a complete project with just a few entries – without a manual, without special knowledge
- Import and export of hardware configuration to TIA Portal or other systems
- Ideal visualization of the projects to be configured

Easy

- Tool download either as desktop version or web-based cloud version
- Technically always up-to-date about product portfolio and innovative approaches
- Highly flexible, secure, cross-team work in the cloud
- Direct ordering in the Siemens Industry Mall

Smart

- Smart selection wizard for error-free configuration and ordering
- Configuration options can be tested and simulated in advance
- Library for archiving sample configurations

The TIA Selection Tool is a completely paperless solution.
Download it now:
www.siemens.com/tst

For more information, scan the QR code

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Digital Enterprise

The building blocks that ensure everything works together perfectly in the digital enterprise

Digitalization is already changing all areas of life and existing business models. It is placing greater pressure on industry while at the same time creating new business opportunities. Today, thanks to scalable solutions from Siemens, companies can already become a digital enterprise and ensure their competitiveness.

Industry faces tremendous challenges

Reduce time-to-market

Today manufacturers have to bring products to market at an ever-increasing pace despite the growing complexity of these products. In the past, a major manufacturer would push aside a small one, but now it is a fast manufacturer that overtakes a slow one.

Boost flexibility

Consumers want customized products, but at a price they would pay for a mass-produced item. That only works if production is more flexible than ever before.

Improve quality

To ensure a high level of quality while meeting legal requirements, companies have to establish closed quality loops and enable the traceability of products.

Boost efficiency

Today the product itself needs to be sustainable and environmentally friendly, while energy efficiency in production has become a competitive advantage.

Increase security

Increasing networking escalates the threat to production facilities of cyberattacks. Today more than ever, companies need suitable security measures.

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The digital enterprise has already become a reality

To fully benefit from all the advantages of digitalization, companies first have to achieve complete consistency of their data. Fully digitally integrated business processes, including those of suppliers, can help to create a digital representation of the entire value chain. This requires

- the integration of industrial software and automation,
- expansion of the communication networks,
- security in automation,
- and the use of business-specific industrial services.

MindSphere

The cloud-based open IoT operating system from Siemens

With MindSphere, Siemens offers a cost-effective and scalable cloud platform as a service (PaaS) for the development of applications. The platform, designed as an open operating system for the Internet of Things, makes it possible to improve the efficiency of plants by collecting and analyzing large volumes of production data.

Totally Integrated Automation (TIA)

Where digitalization becomes reality

Totally Integrated Automation (TIA) ensures the seamless transition from the virtual to the real world. It already encompasses all the necessary conditions for transforming the benefits of digitalization into true added value. The data that will form the digital twin for actual production is generated from a common base.

Digital Plant
Learn more about the digital enterprise for the process industry
www.siemens.com/digitalplant

Digital Enterprise Suite
Learn more about the digital enterprise for the discrete industry
www.siemens.com/digital-enterprise-suite

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Operator control and monitoring systems/ PC-based Automation

SIMATIC HMI / PC-based Automation

Catalog ST 80 / ST PC · 2022

Supersedes:
Catalog ST 80 / ST PC · 2021

Refer to the Industry Mall for current updates of this catalog:
www.siemens.com/industrymall

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Appendix 7

The products and systems described in this catalog are manufactured/distributed under application of a certified quality management system in accordance with DIN EN ISO 9001 (Certified Registration No. 2613-05). The certificate is recognized by all IQNet countries.

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1/2 SIMATIC HMI operator control and monitoring systems
1/6 PC-based Automation

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SIMATIC HMI operator control and monitoring systems

Overview

SIMATIC HMI operator control and monitoring systems – efficient machine-level operator control and monitoring

Equipment for monitoring and operator control is needed wherever people have to work with or on machinery and plants performing diverse tasks from cylinder driers to waste compactors. It is not difficult to find the right device for your specific task. The challenge is to find a solution that is future-proof and flexible, that can be integrated into higher-level networks, and that can also meet the ever-increasing demands for transparency and data provision. SIMATIC HMI Panels have proven their value in a variety of different applications in all industrial sectors over many years. The range of the systems in use is just as wide as that of the applications and technologies in the respective plants.

SIMATIC HMI stands for highly efficient machine-level operator control and monitoring and has some unique advantages:

- Efficient engineering
  Visualization can be created more quickly and easily than ever before.
- Innovative design and operation
  Visualization becomes the outstanding feature of the machine.
- Brilliant HMI operator panels
  The right operator panel for every application.
- Backup – with security
  Protection for investments and know-how, secure operation.
- Commissioning in the fast lane
  Lose no time with testing and servicing.
- Openness with PC-based
  For flexible, independent applications

http://www.siemens.com/hmi

NEW: SIMATIC WinCC Unified system – unlimited visualization for every application

SIMATIC WinCC Unified is a totally new visualization system for meeting the challenges of digitalization in machine and plant construction.
State-of-the-art hardware and software technologies make this possible now and in the future. Tried and tested engineering in the TIA Portal, the latest web technology and great reserves of performance for the coming years combined with the freedom to implement your ideas as you imagine them.

http://www.siemens.com/wincc-unified

SIMATIC HMI software – a lot more than just visualization software

With the SIMATIC WinCC (TIA Portal), SIMATIC WinCC and SIMATIC WinCC Open Architecture product families, SIMATIC HMI covers the entire engineering and visualization software spectrum for the human machine interface.

- Almost the entire range of SIMATIC operator panels can be configured with SIMATIC WinCC (TIA Portal), the successor to SIMATIC WinCC flexible.
  The functionality covers both visualization tasks at machine level and SCADA applications on PC-based multi-user systems.
- The current version 7.5 of SIMATIC WinCC is available for extremely complex process visualization tasks and SCADA applications, e.g. taking account of redundant solutions and vertical integration all the way to plant intelligence solutions.
- Ultimately, SIMATIC WinCC Open Architecture addresses applications that require extensive customer-specific adaptations or manage large and/or complex applications, as well as projects that demand special system requirements and functions.

http://www.siemens.com/hmi-software

NEW: SIMATIC WinCC Unified visualization software

SIMATIC WinCC Unified software enables access to open interfaces, modern web technologies and consistent integration in order to implement modern visualization concepts simply and easily in the TIA Portal.

http://www.siemens.com/wincc-unified-software

SIMATIC HMI – brilliant and rugged operator panels

Basic HMI – for the entry level

- Key Panels
  Pre-assembled and ready for installation, for conventional operator panels. No configuration required with WinCC!
  http://www.siemens.com/key-panels
- Basic Panels
  The entry level series for simple HMI applications.
  http://www.siemens.com/basic-panels

Advanced HMI Panel-based - for higher requirements

- New: SIMATIC HMI Unified Comfort Panels
  High-end performance and state-of-the-art technology for the future of visualization.
  http://www.siemens.com/wincc-unified-hardware
- Comfort Panels
  High-end functionality for demanding indoor and outdoor HMI applications.
  http://www.siemens.com/comfort-panels
- Mobile Panels
  Portable operator panels for mobile deployment on site.
  http://www.siemens.com/mobile-panels

Individual HMI devices in customized versions

http://www.siemens.com/customized-automation

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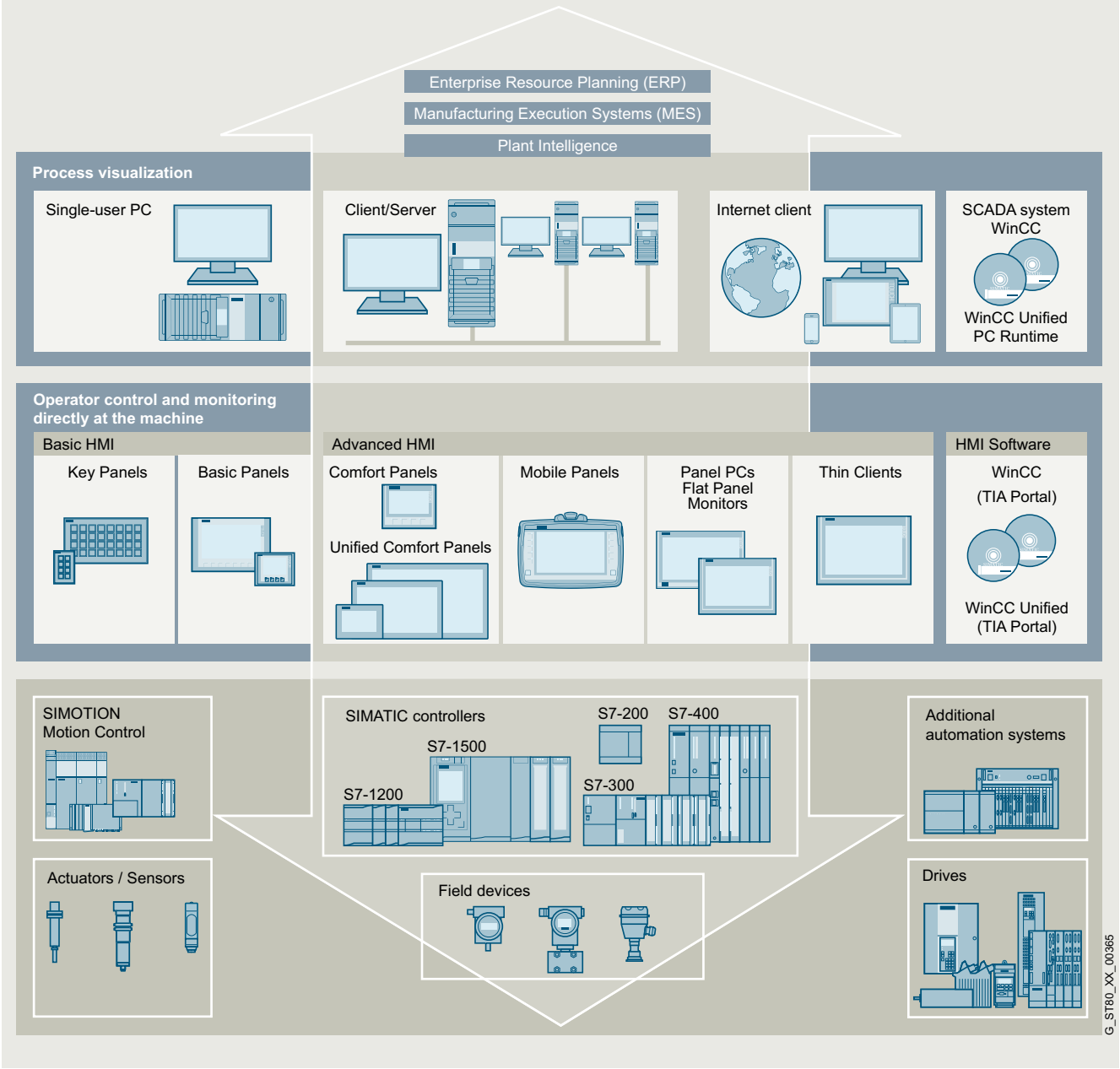
Overview



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Overview

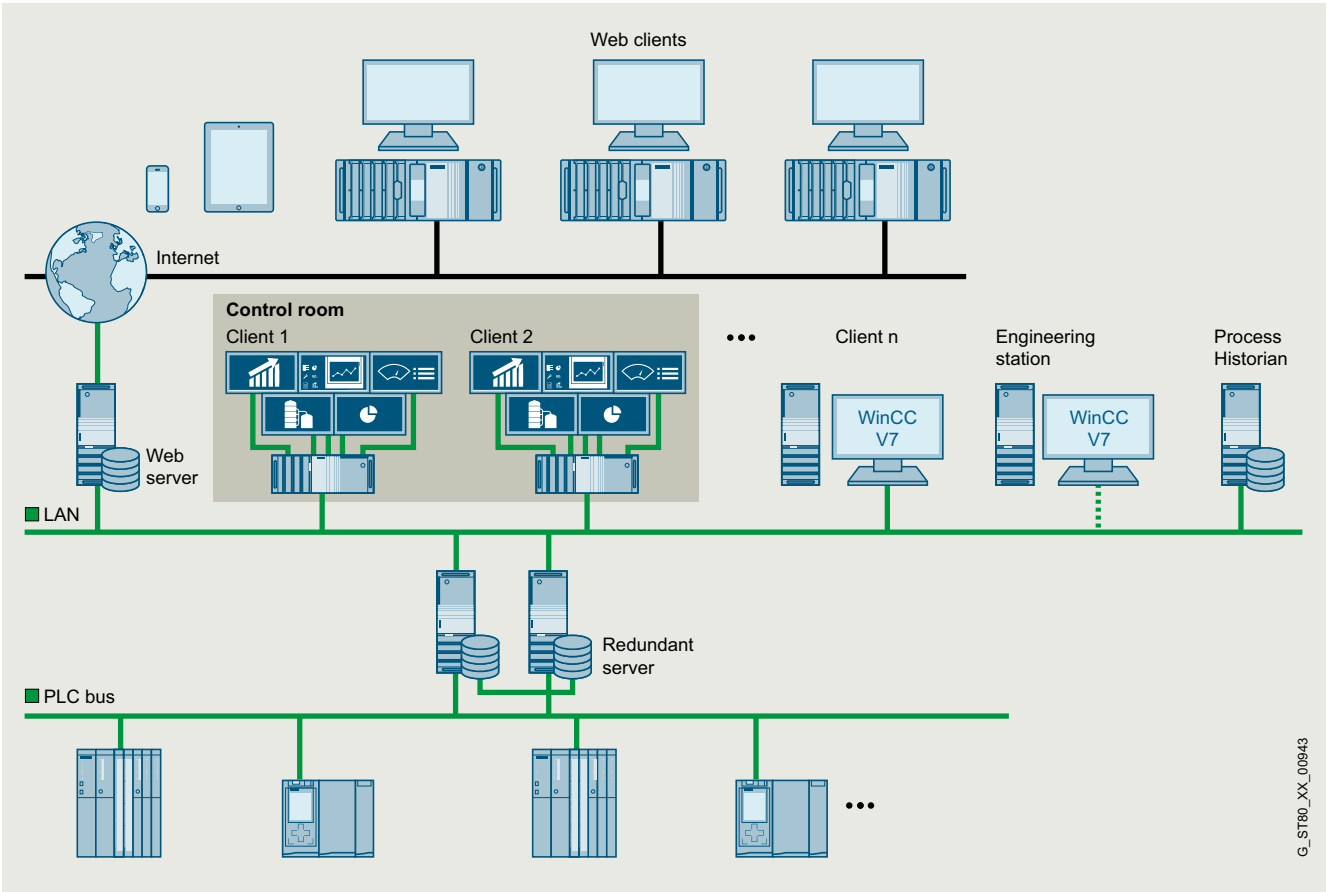
Control system optimizes the productivity of a hot dip galvanizing plant

Reference: V7 control room

As semi-finished products, galvanized steel sheets play a key role in industrial production, such as car manufacturing. One proven method of protecting steel sheets from rust is the application of a zinc coating in a hot dip galvanizing process, in which strips of sheet steel are drawn through a bath containing liquid zinc. Plants for this process are complex and in continuous operation, thus placing high demands on the process control system and the hardware used.

Advantages of the SIMATIC SCADA system and SIMATIC IPC solution:

- SIMATIC WinCC V7 SCADA control system whose scalability and openness also permits the implementation of future functional expansions.
- Redundant setup of the control system and operating stations with industry-compatible SIMATIC industrial PCs and Thin Clients.
- Optimum overview thanks to multi-monitor solution in the control room and more than 27 operating stations throughout the plant and production hall.
- Availability of the production data over a long period in SIMATIC Process Historian for reasons of traceability.
- Increased productivity using long-term analyses of plant availability, productivity, energy consumption and quality.
- More effective support and shorter downtimes thanks to fast, web-based access to plants with the SIMATIC WinCC WebNavigator.



SIMATIC WinCC V7 SCADA control system

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Overview

Modernization of a plant in the food and beverage industry on the basis of an integrated automation and visualization solution

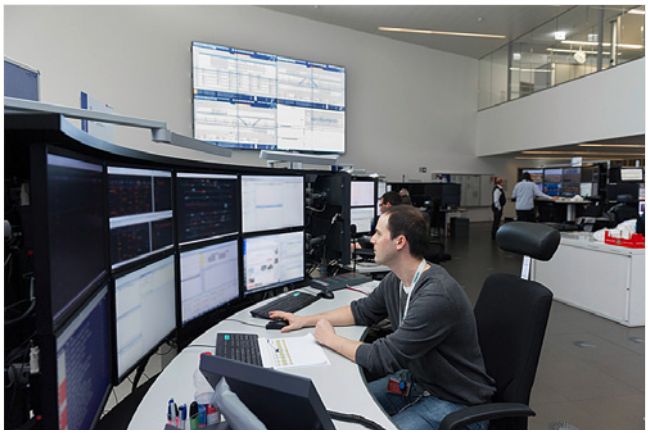
WinCC Professional reference

The modernization involved equipping 3 production lines with an expanded SCADA control system, a new control architecture, converters and motor starters. The project was implemented smoothly, and the integrated hardware and software solution with the TIA Portal enabled the simplification of the engineering process.

Advantages of the solution with the SIMATIC SCADA system WinCC Professional in the TIA Portal, S7-1500 and SIMATIC IPC:

- Simplified application engineering
- Efficient monitoring of the production lines enables the optimal path through the production to be defined for each batch.
- Increased productivity
- Simple and intuitive operation implemented thanks to good visual support
- Better control of the motors involved with the process
- Integration of the production data into the existing ERP system
- Faults in the current process can be easily localized

Tunnel control system for the longest railway tunnel in the world



Control room with WinCC OA

The SIMATIC WinCC Open Architecture tunnel control system is at the heart of the monitoring systems for the entire tunnel infrastructure. Continuous availability of the entire system is essential to ensure the trouble-free operation of the Gotthard Base Tunnel.

The Gotthard Base Tunnel has a tunnel control center at the south and north portals. The two tunnel control systems installed there monitor and control all of the installed systems and plants. All the required data are acquired, collated and visualized on the tunnel control system. A fully integrated maintenance management tool and an operations control system are also part of the tunnel control system with a large screen display.

The advantages of the solution:

- Highest failure safety thanks to the presence of doubly redundant tunnel control equipment – Disaster Recovery System (2x2 redundancy)
- Central monitoring of the infrastructure simplifies fault management
- More efficient operation through central control of the entire infrastructure
- Integration of many (sub-)systems thanks to OPC UA as a standardized interface throughout the entire project
- Optimal user friendliness through uniform user interface across all plants, overview of all systems at one workstation as well as large screen display (multi-monitor management)

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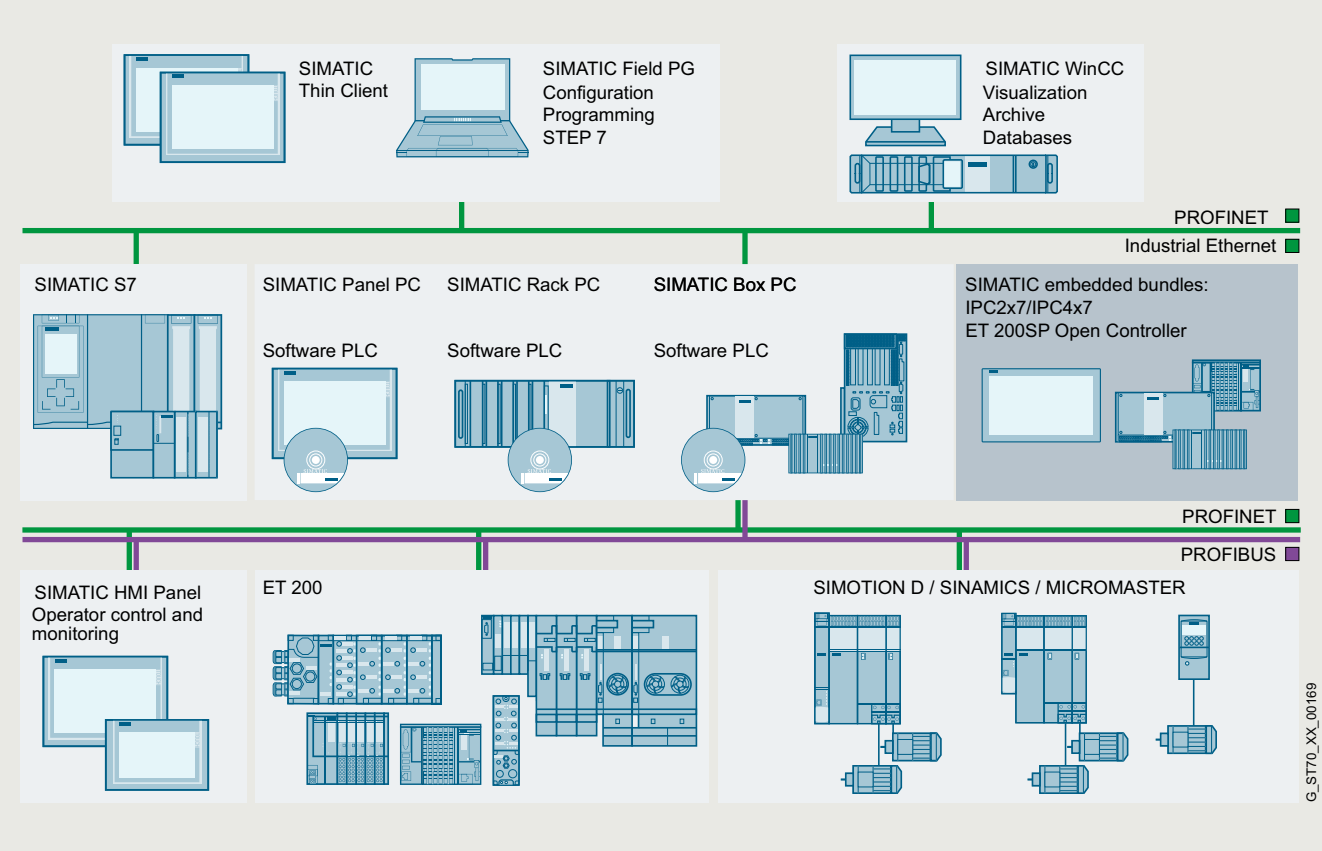
Overview



SIMATIC PC-based Automation

http://www.siemens.com/pc-based

Industrial IoT Gateway - SIMATIC IOT2000

An intelligent gateway which harmonizes communication between the various sources of data before analyzing it and forwarding it to the corresponding recipients. An easy-to-implement solution.

http://siemens.com/iot2000

Industrial PCs

Our reliable and innovative industrial PCs are the optimal PC hardware platform for PC-based Automation from Siemens.

- Rack PC
- Box PC
- Panel PC
- Tablet PC
- Industrial monitors and thin clients
- Devices for special requirements
  - Fully-enclosed IP65-protected devices
  - Devices with stainless steel fronts
  - Devices for hazardous areas
- IPC software
- Embedded bundles/software packages

http://www.siemens.com/simatic-ipc

Software Controllers

The SIMATIC S7-1500 Software Controller implements a SIMATIC S7-1500 Controller on SIMATIC IPC. It is particularly suitable for control solutions in special-purpose machine manufacturing which involve a high-performance implementation of complex control tasks, the integration of PC applications, or the realization of multiple tasks on a single device.

http://www.siemens.com/software-controller

PC-based Controllers

PC-based Controllers combine the functions of a PC-based software controller with visualization, PC applications and central I/Os (inputs/outputs) in a single, compact device. The SIMATIC ET 200SP Open Controller is an industrial PC with the design of the ET 200SP I/O system and a pre-installed S7-1500 Software Controller.

http://www.siemens.com/open-controller

Application examples and references

You can find an overview of the references and application examples at the Reference Center and on the following web pages:

http://www.siemens.com/automation/references

or

https://new.siemens.com/global/en/products/automation/references.html

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Overview

SIMATIC HMI Panels – HMI devices for efficient machine-level interaction

A complete range of powerful and innovative operator control and monitoring devices is available for implementing efficient, machine-level HMI solutions in the most diverse applications and industries. One unique and highly efficient feature is the integrated configuring via SIMATIC WinCC in the TIA Portal, with which users can achieve significant savings with regard to engineering time, costs and effort.

http://www.siemens.com/hmi-panels

Basic HMI

- Panel-based:
  HMI devices with excellent price-performance ratio for simple visualization tasks.
  http://www.siemens.com/basic-hmi

Advanced HMI

- Panel-based:
  Powerful HMI devices for realization of demanding visualization tasks with a high level of convenience.
  http://www.siemens.com/advanced-hmi-panel
- PC-based:
  High-performance operator panels for complex, data-intensive, visualization tasks.
  http://www.siemens.com/advanced-hmi-pc

Rugged and compact for use at machine level

With IP65/NEMA 4 degree of protection at the front, high EMC and extreme vibration resistance, the SIMATIC HMI operator panels are ideally suited for use at machine level in rough industrial environments.
Thanks to their compact design with a shallow mounting depth, the stationary operator panels can be fitted anywhere, even where only restricted space is available. For distributed configurations, there are also devices available with all-round IP65/NEMA 4 protection.

The extremely rugged and shock-proof enclosure with degree of protection IP65 makes the Mobile Panels especially suitable for industrial applications. Their low weight and ergonomic design means that they are user-friendly and easy to operate.

One configuration software for everything

SIMATIC WinCC (TIA Portal) is a tool for the uniform configuration of all SIMATIC HMI Panels as well as PC-based systems. Graded variants are available for every task. The software permits simple and efficient configuration. Programming experience is not required.

Once created, configurations can be reused within the family. Key Panels only need to be configured, not programmed.

Component of Totally Integrated Automation

Siemens provides the complete modular system of matched components for automation solutions from one source and — with Totally Integrated Automation — one of the most globally successful automation concepts. SIMATIC WinCC (TIA Portal) is an integral component of this world. It offers crucial advantages. Thanks to the triple uniformity in configuration/programming, data management and communication, automation solution engineering costs are significantly reduced.

Open for a wide variety of automation systems

Despite being consistently incorporated into the SIMATIC world, the panels are nevertheless open for connection to PLCs from many different manufacturers. The standard delivery includes a comprehensive range of user-friendly drivers.

Innovative operator control and monitoring

The SIMATIC HMI Panels facilitate innovative operator control and monitoring combined with ruggedness, stability and simplicity. On the Comfort Panels in particular, standard hardware and software interfaces, e.g. the Multimedia Card/SD Card, USB, Ethernet, PROFINET, PROFIBUS DP and Visual Basic scripts, provide more flexibility and openness as well as access to the office world.

Worldwide application

The SIMATIC HMI Panels are ideally equipped for global use. Online language switching permits selection of up to 32 languages during operation simply by pressing a button. The wide variety of languages available also includes, for example, Asian logographic languages (Chinese, Taiwanese, Korean, Japanese) and Russian. The configuration interface of WinCC (TIA Portal) including the online help and the complete documentation is also multilingual. Up to 32 languages can be used in one project. And all this is complemented by global service and support from Siemens.

Configuration at a glance

Engineering software	**WinCC Unified (TIA Portal)**		**WinCC (TIA Portal)**				**STEP 7**
	Comfort	PC	Basic	Comfort	Advanced	Professional	STEP 7
Key Panels	-	-	-	-	-	-	•
Basic Panels 2nd Generation [1]	•	•	•	•	•	•	-
Basic Panels 1st Generation	-	-	•	•	•	•	-
Comfort Panels	•	•	-	• [3]	•	•	-
Unified Comfort Panels	•	•	-	-	-	-	-
Mobile Panels 2nd Generation	•	•	-	• [2]	• [2]	• [2]	-
Mobile Panels x77 Series	-	-	-	•	•	•	-

• Possible

[1] As of WinCC (TIA Portal) V13

[2] As of WinCC (TIA Portal) V13 SP1

[3] Outdoor versions from WinCC (TIA Portal) V13 SP1, Update 6 and HSP (download), or Comfort Panels 15" - 22" (-0AX1) from V14 SP1 HSP

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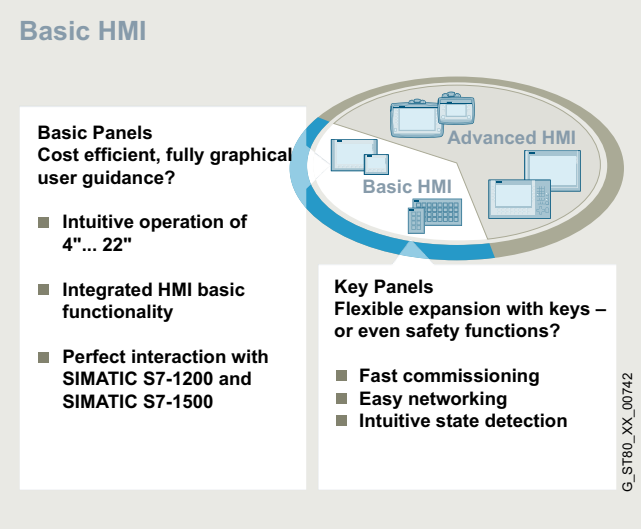
Overview



Inexpensive realization of simple HMI tasks

Basic HMI is recommended for simple applications with a limited quantity structure, where the price-performance ratio counts as well as fast, intuitive operation.

The devices offer a brilliant display quality and high-power visualization, which significantly simplifies the operation of simple machines and equipment. You can also save valuable time during installation, commissioning and engineering with turnkey and flexible solutions.

SIMATIC HMI Key Panels

You can use the Key Panels to realize operator panels quickly, as well as save a lot of time and money setting them up since they are prefabricated and ready for installation.

All illuminated pushbuttons are freely configurable and equipped with five colored LEDs (red, green, blue, yellow and white). All buttons can also easily be inscribed in IP65. On the back, there are integrated IO terminals for connecting actuators and sensors.

SIMATIC HMI Basic Panels

Basic Panels are perfect for the cost-effective implementation of simple visualization tasks at machine level. Their basic features and functionality as well as the especially attractive price make them perfect entry-level devices.

The following modules are available:

- Key Panels
  - SIMATIC HMI KP8/KP8F/KP32F (key devices with multi-colored LEDs)
- Basic Panels
  - Standard devices 2nd Generation

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Overview

SIMATIC HMI Key Panels

The Key Panels, PROFINET successors to the PROFIBUS-based Push Button Panels, are operator panels which are ready-to-run without any configuration effort at all.

Alternatives to individually wired long-stroke keys. They are designed for direct operator control of the machine.

Key Panels provide many basic functions for direct operator control and monitoring instead of machine operator control, a cost-effective, versatile and space-saving combination, and they reduce configuration and installation costs to a minimum. Furthermore, additional actuators and sensors can also be optionally connected directly on the back of the devices. For applications directly next to a monitor, a very slim KP8 version is available (KP8 PN LX with 8 keys on top of each other).

The Key Panels can be used directly in line and ring topologies thanks to an integrated switch and two RJ45 PN sockets.

In addition there are two fully configured IP65 installation enclosures for KP8(F) available.

Exact cutouts included. Even supply cables with plugs can easily be connected in IP65 without any drilling or milling. These ready-made enclosures can be used as small local operator stations.
They can be found under Accessories -> Fixing elements, and depending on the version can come supplied with features such as emergency off buttons.

- SIMATIC HMI blank front design
- SIMATIC HMI KP8 PN
- SIMATIC HMI KP8 PN LX
- SIMATIC HMI KP8F PN (shared device with GSD file possible)
- SIMATIC HMI KP32F PN (PROFIsafe can be switched off)
- Installation enclosure KP8 (Accessories -> Fixing elements)
- Installation enclosure KP8F (Accessories -> Fixing elements)

More information is available at:

http://www.siemens.com/key-panels

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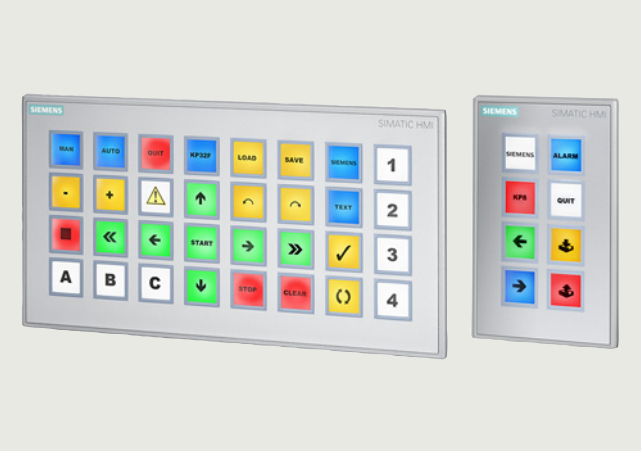
Overview



Key Panels KP8 PN, KP32 PN

SIMATIC HMI KP8 PN LX, 8 short-stroke keys long,
1-6 mm sheet thickness, PN interfaces, black neutral design,
8 configurable DI/DO pins

SIMATIC HMI Key Panels

- Optimum operability thanks to large mechanical keys and multi-colored LED backlighting (daylight readable)
- Over 60% time savings for wiring and installation (Plug&Play)
- More than 30% savings in material costs compared to conventional keypad operator panels
- 2 PROFINET ports (incl. switch) already integrated for setting up line and ring topologies
- Freely configurable digital I/Os on the rear for connecting key-operated switches, indicator lamps, etc.
- Connection of fail-safe emergency stop buttons or other fail-safe signals with KP8F and KP32F (in SIL2 or SIL3)
- Functionally compatible with all standard PROFINET master CPUs, also non-Siemens
- KP8 PN LX is suitable for direct installation next to monitors
- KP8 and blank front design, also optimized for installation in IPC Extension Units in IP65
- Maximum flexibility due to parameterization
- Blank front design for standardized assembly of flexible operator panels
- Installation enclosure, fully-enclosed IP65, no drilling or milling necessary, KP8(F) not included; for accessories see technical specifications for installation enclosure

Ordering data

	Article No.
SIMATIC HMI KP8 PN Key Panel, 8 short-stroke keys with multi-colored LEDs, PROFINET interfaces, 2 x parameterizable with STEP 7 V5.5 or higher	
• SIEMENS design (4 x 2 key pairs)	**6AV3688-3AY36-0AX0**
SIMATIC HMI KP8 PN LX Neutral design black LX (8 keys on top of each other); Short-stroke keys long, 1-6 mm sheet thickness, PN interfaces, 8 configurable DI/DO pins, 24 V DC can be looped through, parameterizable with STEP 7 V5.5 or higher	**6AV2127-1AB00-0LX1**
SIMATIC HMI KP8F PN Key Panel, 8 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFIsafe, parameterizable with STEP 7 V5.5 or higher; 4 additional fail-safe inputs. Can be used as 2 x SIL 2 or 1 x SIL 3	
• SIEMENS design	**6AV3688-3AF37-0AX0**
• As neutral design without Siemens imprint	**6AV3688-3AF37-0AX0-Z A01+S00**
• Blank front design for standard 22.5 mm operator controls, same mounting dimensions as KP8	**6AV3688-3XY38-3AX0**
SIMATIC HMI KP32F PN Key Panel, SIEMENS design; 32 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFIsafe, parameterizable with STEP 7 V5.5 or higher; including 8 fail-safe inputs. Can be used as 4 x SIL 2 or 2 x SIL 3	**6AV3688-3EH47-0AX0**
Documentation	
You can find the Equipment Manual for the Key Panels on the internet at:	http://support.automation.siemens.com/WW/view/en/56652789
Accessories	See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

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Technical specifications

Article number	6AV3688-3AY36-0AX0	6AV2127-1AB00-0LX1
	SIMATIC HMI KP8 PN	SIMATIC HMI KP8 PN LX 6 mm
General information		
Product type designation	KP8 PN	Key Panel KP8 PN LX (1 mm)
Control elements		
With parameterizable keys	Yes	Yes
Keyboard fonts		
• Membrane keyboard		
- user-definable label membrane keys	Yes	No; possible via adjacent display
• Function keys		with L-pattern at key edge
- Number of function keys	8	8; 19 x 19 mm per button
• Short-stroke keys		
- Number of short-stroke keys	8	8
Expansions for operator control of the process		
• DP direct LEDs (LEDs as S7 output I/O)	8; Adjustable brightness	
• Number of color modes for LED	5; red, green, blue, yellow, white	
• Direct keys (keys as S7 input I/O)	8	8
Installation type/mounting		
Mounting type	Mounting clip	clamp fastening with additional mounting clips
Front mounting	Yes; Compatible with Extension Units dimensions	Yes; mounting clip - Torx T20 tighten to 0.2 Nm; enclosure - Torx T10 tighten to 0.2 Nm
Rail mounting	No	No
Mounting in portrait format possible	Yes	Yes
Mounting in landscape format possible	Yes	Yes
maximum permissible angle of inclination without external ventilation	30°; To the front/rear	30°; To the front/rear
Number of slots for command devices and signaling units	0	0
Supply voltage		
Rated value (DC)	24 V; 24 V can be looped through connector, interrupted when pulled	
Digital inputs		
Number of digital inputs	8; Total inputs and outputs max. 8 and 1x SIL 2 or 2x SIL 3	
Input voltage		
• Rated value (DC)	24 V	24 V

Article number	6AV3688-3AY36-0AX0	6AV2127-1AB00-0LX1
	SIMATIC HMI KP8 PN	SIMATIC HMI KP8 PN LX 6 mm
Digital outputs		
Number of digital outputs	8; Max. 8 inputs and outputs (total)	
Short-circuit protection	Yes	Yes
Switching capacity of the outputs		
• with resistive load, max.	100 mA	100 mA
Output voltage		
• Rated value (DC)	24 V; Non-isolated	24 V; Non-isolated
Total current of the outputs		
• Current per channel, max.	100 mA	100 mA
• Current per group, max.	800 mA	800 mA
Interfaces		
Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch
Number of PROFINET interfaces	2; Incl. switch	2; Incl. switch
Industrial Ethernet		
• Number of ports of the integrated switch	2; Per port	2; Per port
Protocols		
PROFINET	Yes; also 3rd party PLC	Yes; also 3rd party PLC
PROFINET CBA	No	No
IRT	Yes	Yes
PROFIsafe	No	No
PROFIBUS	No	No
Redundancy mode		
Media redundancy		
- MRP	Yes	Yes
Test commissioning functions		
Illuminant test	Yes; During switch on	Yes; During switch on
Key and signal lamp test	Yes; automatically when switching on	Yes; automatically when switching on
Degree and class of protection		
IP (at the front)	IP65	IP54
IP (rear)	IP20	IP20
NEMA (front)		
• Enclosure Type 4x at the front	Yes; Incl. NEMA12	No
• Enclosure Type 12 at the front		No

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Technical specifications

Article number	**6AV3688-3AY36-0AX0**	**6AV2127-1AB00-0LX1**
	SIMATIC HMI KP8 PN	SIMATIC HMI KP8 PN LX 6 mm
Standards, approvals, certificates		
CE mark	Yes	Yes
CSA approval		No
UL approval		No
cULus	Yes	No
FM approval		No
RCM (formerly C-TICK)	Yes	No
KC approval	Yes	No
EAC (formerly Gost-R)	Yes	No
CCC		No; not necessary
Suitable for safety functions	Yes	No
Marine approval		No
Use in hazardous areas		
• ATEX Zone 2	Yes	No
• ATEX Zone 22	Yes	No
• cULus Class I Zone 2, Division 2	Yes	No
• FM Class I Division 2	Yes	No
Ambient conditions		
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	55 °C	60 °C
Relative humidity		
• Operation, max.	95 %; no condensation	
Configuration		
Configuration software		
• STEP 7 Basic (TIA Portal)	Yes	Yes
• STEP 7 Professional (TIA Portal)	Yes	Yes
Functionality under WinCC (TIA Portal)		
Process coupling		
• S7-1200	Yes; with ET 200pro CPU and ET 200S CPU	Yes; with ET 200pro CPU and ET 200S CPU
• S7-1500	Yes	Yes
• S7-200	No	No
• S7-300/400	Yes; with F-CPU: STEP 7 V11 SP1 (or higher) and Safety V11 (or higher) or SIMATIC STEP 7 Basic V11 (or higher)	
• LOGO!	No	No
• WinAC	Yes	Yes
• SIMOTION	No	No
• Allen Bradley (EtherNet/IP)	No	No
• Allen Bradley (DF1)	No	No
• Mitsubishi (MC TCP/IP)	No	No
• Mitsubishi (FX)	No	No
• OMRON (FINS TCP)	No	No
• OMRON (LINK/Multilink)	No	No
• Modicon (Modbus TCP/IP)	No	No
• Modicon (Modbus)	No	No

Article number	**6AV3688-3AY36-0AX0**	**6AV2127-1AB00-0LX1**
	SIMATIC HMI KP8 PN	SIMATIC HMI KP8 PN LX 6 mm
Mechanics/material		
Enclosure material (front)		Bayblend FR3010 enclosure, Autotex F150 front membrane
• Plastic	Yes	Yes; neutral enclosure, black RAL 9005
• Aluminum	No	No
• Stainless steel	No	No
Service life		
• Short-stroke keys (in switching cycles)	1 500 000	1 500 000
• LEDs (ON period)	100 %	100 %
Dimensions		
Width of the housing front	98 mm	40.7 mm
Height of housing front	155 mm	252.4 mm
Mounting cutout, width	68 mm; Max. thickness of mounting plate 2 - 6 mm	24 mm; tolerances +0.5 mm, not including connection plug (depending on connector type)
Mounting cutout, height	129 mm	244 mm; tolerances +0.5 mm, not including connection plug (depending on connector type)
Overall depth	49 mm; Incl. angled SIMATIC Ethernet connector	68.15 mm
Weights		
Weight (without packaging)	280 g	280 g
Other		
Merchandise		Yes; K S27602/ TKS-008-KP8 PN LX-SIEMENS-C10093
Manufacturer name		GETT Gerätetechnik GmbH
Manufacturer's address		Mittlerer Ring 1, 08233 Treuen (Vogtland), Germany
Note:		key panel must be configured as 6AV3688-3AY36-0AX0 Key Panel

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Technical specifications

Article number	**6AV3688-3AF37-0AX0**
	SIMATIC HMI KP8F PN
General information	
Product type designation	KP8F PN
Control elements	
With parameterizable keys	Yes
Keyboard fonts	
• Membrane keyboard	
- user-definable label membrane keys	Yes
• Function keys	
- Number of function keys	8
• Short-stroke keys	
- Number of short-stroke keys	8
Expansions for operator control of the process	
• DP direct LEDs (LEDs as S7 output I/O)	8; Adjustable brightness
• Number of color modes for LED	5; red, green, blue, yellow, white
• Direct keys (keys as S7 input I/O)	8
Installation type/mounting	
Mounting type	Mounting clip
Front mounting	Yes; Compatible with Extension Units dimensions
Rail mounting	No
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	30°; To the front/rear
Number of slots for command devices and signaling units	0
Supply voltage	
Rated value (DC)	24 V; 24 V can be looped through connector, interrupted when pulled
Digital inputs	
Number of digital inputs	8; Total inputs and outputs max. 8 and 1x SIL 2 or 2x SIL 3
Input voltage	
• Rated value (DC)	24 V

Article number	**6AV3688-3AF37-0AX0**
	SIMATIC HMI KP8F PN
Digital outputs	
Number of digital outputs	8; Max. 8 inputs and outputs (total)
Short-circuit protection	Yes
Switching capacity of the outputs	
• with resistive load, max.	100 mA
Output voltage	
• Rated value (DC)	24 V; Non-isolated
Total current of the outputs	
• Current per channel, max.	100 mA
• Current per group, max.	800 mA
Interfaces	
Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch
Number of PROFINET interfaces	2; Incl. switch
Industrial Ethernet	
• Number of ports of the integrated switch	2; Per port
Protocols	
PROFINET	Yes; also 3rd party PLC
PROFINET CBA	No
IRT	Yes
PROFIsafe	Yes; 1x SIL 3 (two-channel) or 2x SIL 2 (single-channel) emergency stop sensors
PROFIBUS	No
Redundancy mode	
Media redundancy	
- MRP	Yes
Test commissioning functions	
Illuminant test	Yes; During switch on
Key and signal lamp test	Yes; automatically when switching on
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4x at the front	Yes; Incl. NEMA12
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
CCC	No; not necessary
Suitable for safety functions	Yes
Use in hazardous areas	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• cULus Class I Zone 2, Division 2	Yes
• FM Class I Division 2	Yes

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Technical specifications

Article number	**6AV3688-3AF37-0AX0**
	SIMATIC HMI KP8F PN
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Relative humidity	
• Operation, max.	95 %; no condensation
Configuration	
Configuration software	
• STEP 7 Basic (TIA Portal)	Yes
• STEP 7 Professional (TIA Portal)	Yes
Functionality under WinCC (TIA Portal)	
Process coupling	
• S7-1200	Yes; with ET 200pro CPU and ET 200S CPU
• S7-1500	Yes
• S7-200	No
• S7-300/400	Yes; with F-CPU: STEP 7 V11 SP1 (or higher) and Safety V11 (or higher) or SIMATIC STEP 7 Basic V11 (or higher)
• LOGO!	No
• WinAC	Yes
• SIMOTION	No
• Allen Bradley (EtherNet/IP)	No
• Allen Bradley (DF1)	No
• Mitsubishi (MC TCP/IP)	No
• Mitsubishi (FX)	No
• OMRON (FINS TCP)	No
• OMRON (LINK/Multilink)	No
• Modicon (Modbus TCP/IP)	No
• Modicon (Modbus)	No
Mechanics/material	
Enclosure material (front)	
• Plastic	Yes
• Aluminum	No
Service life	
• Short-stroke keys (in switching cycles)	1 500 000
• LEDs (ON period)	100 %
Dimensions	
Width of the housing front	98 mm
Height of housing front	155 mm
Mounting cutout, width	68 mm; Max. thickness of mounting plate 2 - 6 mm
Mounting cutout, height	129 mm
Overall depth	49 mm; Incl. angled SIMATIC Ethernet connector
Weights	
Weight (without packaging)	280 g

Article number	**6AV3688-3EH47-0AX0**
	SIMATIC HMI KP32F PN
General information	
Product type designation	KP32F PN
Control elements	
With parameterizable keys	Yes
Keyboard fonts	
• Membrane keyboard	
- user-definable label membrane keys	Yes
• Function keys	
- Number of function keys	32
• Short-stroke keys	
- Number of short-stroke keys	32
Expansions for operator control of the process	
• DP direct LEDs (LEDs as S7 output I/O)	8; Adjustable brightness
• Number of color modes for LED	5; red, green, blue, yellow, white
• Direct keys (keys as S7 input I/O)	32
Installation type/mounting	
Mounting type	Mounting clip
Front mounting	Yes
Rail mounting	No
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	30°; To the front/rear
Number of slots for command devices and signaling units	0
Supply voltage	
Rated value (DC)	24 V; 24 V looped through at connector, no interruption on pulling
Digital inputs	
Number of digital inputs	32; Total inputs and outputs max. 32 and 2x SIL 2 or 4x SIL 3
Input voltage	
• Rated value (DC)	24 V
Digital outputs	
Number of digital outputs	16; Max. 32 inputs and outputs (total)
Short-circuit protection	Yes
Switching capacity of the outputs	
• with resistive load, max.	100 mA
Output voltage	
• Rated value (DC)	24 V; Non-isolated
Total current of the outputs	
• Current per channel, max.	100 mA
• Current per group, max.	800 mA

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Technical specifications

Article number	**6AV3688-3EH47-0AX0**
	SIMATIC HMI KP32F PN
Interfaces	
Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch
Number of PROFINET interfaces	2; Incl. switch
Industrial Ethernet	
• Number of ports of the integrated switch	2; Per port
Protocols	
PROFINET	Yes; incl. shared device, 3rd party PLC
PROFINET CBA	No
IRT	Yes
PROFIsafe	Yes; 2x SIL 3 (two-channel) or 4x SIL 2 (single-channel) emergency stop sensors
PROFIBUS	No
Redundancy mode	
Media redundancy	
- MRP	Yes
Test commissioning functions	
Illuminant test	Yes; During switch on
Key and signal lamp test	Yes; automatically when switching on
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4 at the front	No
• Enclosure Type 4x at the front	Yes; Incl. NEMA12
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
CCC	No; not necessary
Suitable for safety functions	Yes
Use in hazardous areas	
• ATEX Zone 2	No
• ATEX Zone 22	No
• cULus Class I Zone 2, Division 2	No
• FM Class I Division 2	No
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Relative humidity	
• Operation, max.	95 %; no condensation
Configuration	
Configuration software	
• STEP 7 Basic (TIA Portal)	Yes
• STEP 7 Professional (TIA Portal)	Yes

Article number	**6AV3688-3EH47-0AX0**
	SIMATIC HMI KP32F PN
Functionality under WinCC (TIA Portal)	
Process coupling	
• S7-1200	Yes; with ET 200pro CPU and ET 200S CPU
• S7-1500	Yes
• S7-200	No
• S7-300/400	Yes; with F-CPU: STEP 7 V11 SP1 or higher and Safety V11 (or higher), without F-CPU STEP 7 or SIMATIC STEP 7 Basic V11 (or higher)
• LOGO!	No
• WinAC	Yes
• SIMOTION	No
• Allen Bradley (EtherNet/IP)	No
• Allen Bradley (DF1)	No
• Mitsubishi (MC TCP/IP)	No
• Mitsubishi (FX)	No
• OMRON (FINS TCP)	No
• OMRON (LINK/Multilink)	No
• Modicon (Modbus TCP/IP)	No
• Modicon (Modbus)	No
Mechanics/material	
Enclosure material (front)	
• Plastic	No
• Aluminum	Yes
Service life	
• Short-stroke keys (in switching cycles)	1 500 000
• LEDs (ON period)	100 %
Dimensions	
Width of the housing front	295 mm
Height of housing front	155 mm
Mounting cutout, width	277 mm; Max. thickness of mounting plate 2 - 6 mm
Mounting cutout, height	137 mm
Overall depth	69 mm; Incl. angled SIMATIC Ethernet connector
Weights	
Weight (without packaging)	1 220 g

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Technical specifications

Article number	**6AV3688-3XY38-3AX0**
	KP8 Design blank Front
General information	
Product type designation	Empty front design
Installation type/mounting	
Mounting type	Clamp terminals
Rack mounting	No
Front mounting	Yes; Compatible with Extension Units dimensions
Rail mounting	No
Wall mounting/direct mounting	No
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	180°; To the front/rear
Number of slots for command devices and signaling units	5; Max. 5 possible
Supply voltage	
Design of the power supply	external
Interfaces	
Number of industrial Ethernet interfaces	0
Number of PROFINET interfaces	0
Number of USB interfaces	0
Protocols	
PROFINET	No
PROFIsafe	No
Redundancy mode	
Media redundancy	
- MRP	No
Test commissioning functions	
Key and signal lamp test	No
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4 at the front	No
• Enclosure Type 4x at the front	No
Standards, approvals, certificates	
CE mark	Yes
cULus	No
RCM (formerly C-TICK)	No
KC approval	No
Use in hazardous areas	
• ATEX Zone 2	No
• ATEX Zone 22	No
• cULus Class I Zone 1	No
• cULus Class I Zone 2, Division 2	No
• FM Class I Division 2	No
Marine approval	
• Germanischer Lloyd (GL)	No
• American Bureau of Shipping (ABS)	No
• Bureau Veritas (BV)	No
• Det Norske Veritas (DNV)	No
• Lloyds Register of Shipping (LRS)	No
• Nippon Kaiji Kyokai (Class NK)	No
• Polski Rejestr Statkow (PRS)	No

Article number	**6AV3688-3XY38-3AX0**
	KP8 Design blank Front
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Relative humidity	
• Operation, max.	95 %
Mechanics/material	
Enclosure material (front)	
• Plastic	No
• Aluminum	Yes
• Stainless steel	No
Dimensions	
Width of the housing front	98 mm
Height of housing front	155 mm
Mounting cutout, width	68 mm; Max. thickness of mounting plate 2 - 6 mm
Mounting cutout, height	129 mm
Overall depth	49 mm
Weights	
Weight (without packaging)	240 g
Other	
Merchandise	Yes
Manufacturer name	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany

More information

You can find more information on the Internet at:

http://www.siemens.com/key-panels

For accessories see "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

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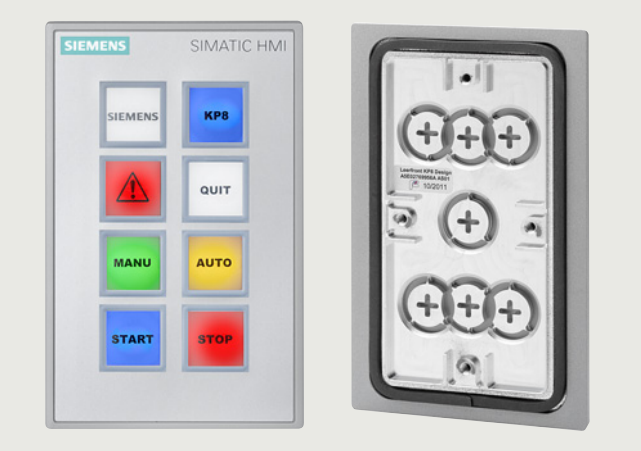
SIPLUS HMI KP8/KP8F/KP32F

Overview



SIPLUS HMI KP8 PN - populated and as blank front

SIPLUS HMI Key Panels

- Optimum operability thanks to large mechanical keys and multi-colored LED backlighting (daylight readable)
- Over 60% time savings for wiring and installation (Plug&Play)
- More than 30% savings in material costs compared to conventional keypad operator panels
- 2 PROFINET ports (incl. switch) already integrated for setting up line and ring topologies
- Freely configurable digital I/Os on the rear for connecting key-operated switches, indicator lamps, etc.
- Connection of fail-safe emergency stop buttons or other fail-safe signals with KP8F and KP32F (in SIL 2 or SIL 3)
- Functionally compatible with all standard PROFINET master CPUs, also non-Siemens
- KP8 and blank front design, also optimized for installation in IPC Extension Units in IP65
- Maximum flexibility due to parameterization
- Blank front design for standardized assembly of flexible operator panels

Note

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the corresponding standard products. SIPLUS extreme-specific information was added.

Ordering data

	Article No.
SIPLUS HMI KP8 PN (extended temperature range and exposure to environmental substances) Key Panel, 8 short-stroke keys with multi-colored LEDs, PROFINET interfaces, 2 x parameterizable with STEP 7 V5.5 or higher	**6AG1688-3AY36-2AX0**
SIPLUS HMI KP8F PN (extended temperature range and exposure to environmental substances) Key Panel, 8 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFIsafe, parameterizable with STEP 7 V5.5 or higher; 4 additional fail-safe inputs. Can be used as 2 x SIL 2 or 1 x SIL 3	**6AG1688-3AF37-2AX0**
SIPLUS HMI KP32F PN (extended temperature range and exposure to environmental substances) Key Panel, 32 short-stroke keys with multi-colored LEDs, PROFINET interfaces with PROFIsafe, parameterizable with STEP 7 V5.5 or higher; including 8 fail-safe inputs. Can be used as 4 x SIL 2 or 2 x SIL 3	**6AG1688-3EH47-2AX0**
Blank front design (Exposure to environmental substances) For standard 22.5 mm operator controls, same mounting dimensions as KP8	**6AG1688-3XY38-2AX0**
Documentation	
You can find the Equipment Manual for the Key Panels on the Internet at:	http://support.automation.siemens.com/WW/view/en/56652789
Accessories	See SIMATIC HMI accessories

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Technical specifications

Article number	**6AG1688-3AY36-2AX0**	**6AG1688-3AF37-2AX0**	**6AG1688-3EH47-2AX0**
	SIPLUS HMI KP8 PN	SIPLUS HMI KP8F PN	SIPLUS HMI KP32F PN
Ambient conditions			
Ambient temperature during operation			
• min.	-40 °C; = Tmin; Startup @ -25 °C	-20 °C; = Tmin (incl. condensation/frost)	-20 °C; = Tmin (incl. condensation/frost)
• max.	60 °C; = Tmax	55 °C; = Tmax	55 °C; = Tmax
Altitude during operation relating to sea level			
• Installation altitude above sea level, max.	5 000 m	2 000 m	2 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)
Relative humidity			
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
Resistance			
Coolants and lubricants			
- Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems			
- to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
- to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
- to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea			
- to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)
- to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
- to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology			
- Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)		
- Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)		
Remark			
- Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating			
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A

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Standard devices 2nd Generation

Overview

Basic Panels 2nd Generation

With their fully developed HMI basic functions, SIMATIC HMI Basic Panels 2nd Generation are the ideal entry-level series for simple HMI applications.

The device family offers panels with 4", 7", 9" and 12" displays, as well as combined key and touch operation.

The innovative high-resolution widescreen displays with 64 000 colors are also suitable for upright installation, and they can be dimmed down to 100%. The innovative operator interface with improved usability opens up a diverse range of options thanks to new controls and graphics.
The new USB interface enables the connection of keyboard, mouse or barcode scanner, and supports the simple archiving of data on a USB flash drive as well as the manual backup and restoring of the complete panel.

The integrated Ethernet or RS 485/422 interface (version-specific) enables simple connection to the controller.

http://www.siemens.com/basic-panels

Ordering data

	Article No.
SIMATIC HMI Basic Panels (2nd Generation)	
Key and touch devices	
SIMATIC HMI KTP400 Basic Key/touch operation; 4" TFT widescreen display, 65 536 colors, PROFINET interface	**6AV2123-2DB03-0AX0**
SIMATIC HMI TP400 Basic Keyless Touch screen operation; 4" TFT widescreen display, 65 536 colors, PROFINET interface	**6AV2143-6DB00-0AA0**
SIMATIC HMI KTP700 Basic Key/touch operation; 7" TFT display, 65 536 colors, PROFINET interface	**6AV2123-2GB03-0AX0**
SIMATIC HMI KTP700 Basic DP Key/touch operation; 7" TFT display, 65 536 colors, PROFIBUS interface	**6AV2123-2GA03-0AX0**
SIMATIC HMI TP700 Basic Keyless Touch screen operation; 7" TFT display, 65 536 colors, PROFINET interface	**6AV2143-6GB00-0AA0**
SIMATIC HMI KTP900 Basic Key/touch operation; 9" TFT display, 65 536 colors, PROFINET interface	**6AV2123-2JB03-0AX0**
SIMATIC HMI TP900 Basic Keyless Touch screen operation; 9" TFT display, 65 536 colors, PROFINET interface	**6AV2143-6JB00-0AA0**
SIMATIC HMI KTP1200 Basic Key/touch operation; 12" TFT display, 65 536 colors, PROFINET interface	**6AV2123-2MB03-0AX0**
SIMATIC HMI KTP1200 Basic DP Key/touch operation; 12" TFT display, 65 536 colors, PROFIBUS interface	**6AV2123-2MA03-0AX0**
Starter kits	
Starter kit LOGO! + KP300 Basic mono PN	**6AV2132-0HA00-0AA1**
Starter kit LOGO! + KTP400 Basic	**6AV2132-0KA00-0AA1**
Starter kit LOGO! + KTP700 Basic	**6AV2132-3GB00-0AA1**
Starter kits with a LOGO! consist of: • the respective SIMATIC HMI Basic Panel SIMATIC HMI KP300 Basic mono PN SIMATIC HMI KTP400 Basic SIMATIC HMI KTP700 Basic • LOGO! 12/24 RCE • LOGO! POWER 24 V 1.3 A • LOGO! SOFT COMFORT V7 • WINCC BASIC (TIA Portal) • Ethernet CAT5 cable, 2 m	
Documentation	
You can find the Equipment Manual for the Basic Panels on the Internet at:	http://support.automation.siemens.com
Accessories	See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

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Technical specifications

Article number	**6AV2123-2DB03-0AX0**	**6AV2143-6DB00-0AA0**	**6AV2123-2GB03-0AX0**	**6AV2123-2GA03-0AX0**	**6AV2143-6GB00-0AA0**
	SIMATIC HMI KTP400 Basic	SIMATIC HMI TP400 Basic OEM	SIMATIC HMI KTP700 Basic	SIMATIC HMI KTP700 Basic DP	SIMATIC HMI TP700 Basic OEM
General information					
Product type designation	KTP400 Basic	TP400 Basic Keyless	KTP700 Basic color PN	KTP700 Basic color DP	TP700 Basic Keyless
Display					
Design of display	TFT widescreen display, LED backlighting				
Screen diagonal	4.3 in	4.3 in	7 in	7 in	7 in
Number of colors	65 536	65 536	65 536	65 536	65 536
Resolution (pixels)					
• Horizontal image resolution	480 pixel	480 pixel	800 pixel	800 pixel	800 pixel
• Vertical image resolution	272 pixel	272 pixel	480 pixel	480 pixel	480 pixel
Backlighting					
• MTBF backlighting (at 25 °C)	20 000 h	20 000 h	20 000 h	20 000 h	20 000 h
Control elements					
Keyboard fonts					
• Function keys		No			No
- Number of function keys	4	0	8	8	0
Touch operation					
• Design as touch screen	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive
• Design as multi-touch screen		No			
• Monitor keyboard		Yes			
Installation type/mounting					
Wall mounting/direct mounting	No	No	No		
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes
Supply voltage					
Rated value (DC)	24 V	24 V	24 V	24 V	24 V
Memory					
Memory available for user data	10 Mbyte	10 Mbyte	10 Mbyte	10 Mbyte	10 Mbyte
Type of output					
Acoustics					
• Buzzer	Yes	Yes	Yes	Yes	Yes
Time of day					
Clock					
• Software clock	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes
Interfaces					
Number of industrial Ethernet interfaces	1	1	1	0	1
Number of RS 485 interfaces	0	0	0	1	0
Number of USB interfaces	1; Up to 16 GB	1	1; Up to 16 GB	1; Up to 16 GB	1; Up to 16 GB
Number of SD card slots	0	0	0	0	0

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Technical specifications

Article number	**6AV2123-2DB03-0AX0**	**6AV2143-6DB00-0AA0**	**6AV2123-2GB03-0AX0**	**6AV2123-2GA03-0AX0**	**6AV2143-6GB00-0AA0**
	SIMATIC HMI KTP400 Basic	SIMATIC HMI TP400 Basic OEM	SIMATIC HMI KTP700 Basic	SIMATIC HMI KTP700 Basic DP	SIMATIC HMI TP700 Basic OEM
Protocols					
PROFINET	Yes	Yes	Yes	No	Yes
IRT	No	No	No	No	No
PROFIBUS	No	No	No	Yes	No
MPI	No	No	No	Yes	No
Redundancy mode					
Media redundancy					
- MRP	No		No	No	No
Degree and class of protection					
IP (at the front)	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20
NEMA (front)					
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates					
CE mark	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes
KC approval	Yes		Yes	Yes	Yes
EAC (formerly Gost-R)		Yes			
Use in hazardous areas					
• ATEX Zone 2	No	No	No	No	No
• ATEX Zone 22	No	No	No	No	No
• IECEx Zone 2	No		No	No	No
• IECEx Zone 22	No		No	No	No
• cULus Class I Zone 2, Division 2	No	No	No	No	No
• FM Class I Division 2	No	No	No	No	No
Marine approval					
• Germanischer Lloyd (GL)	Yes		Yes	Yes	Yes
• American Bureau of Shipping (ABS)	Yes		Yes	Yes	Yes
• Bureau Veritas (BV)	Yes		Yes	Yes	Yes
• Det Norske Veritas (DNV)	Yes		Yes	Yes	Yes
• Lloyds Register of Shipping (LRS)	Yes		Yes	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes		Yes	Yes	Yes
• Polski Rejestr Statkow (PRS)	No		No	No	No
• Chinese Classification Society (CCS)	No		No	No	
Ambient conditions					
Suited for indoor use	Yes			Yes	
Suited for outdoor use	No			No	
Ambient temperature during operation					
Operation (vertical installation)					
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C	50 °C
Relative humidity					
• Operation, max.	90 %; no condensation	90 %	90 %; no condensation	90 %; no condensation	90 %; no condensation

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Technical specifications

Article number	**6AV2123-2DB03-0AX0**	**6AV2143-6DB00-0AA0**	**6AV2123-2GB03-0AX0**	**6AV2123-2GA03-0AX0**	**6AV2143-6GB00-0AA0**
	SIMATIC HMI KTP400 Basic	SIMATIC HMI TP400 Basic OEM	SIMATIC HMI KTP700 Basic	SIMATIC HMI KTP700 Basic DP	SIMATIC HMI TP700 Basic OEM
Configuration					
Configuration software					
• STEP 7 Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)				
• WinCC flexible Compact	No	No	No	No	No
• WinCC Basic (TIA Portal)	Yes	Yes	Yes	Yes	Yes
Languages					
Online languages					
• Number of online/runtime languages	10	10	10	10	10
Functionality under WinCC (TIA Portal)					
Applications/options					
• Web browser	Yes		Yes	No	Yes
• SIMATIC WinCC Sm@rtServer	Yes; Available with WinCC (TIA Portal) V14 or higher		Yes; Available with WinCC (TIA Portal) V14 or higher	No	
Number of Visual Basic Scripts	No	No	No	No	No
Task planner	Yes	Yes	Yes	Yes	Yes
• time-controlled	No	No	No	No	No
• task-controlled	Yes	Yes	Yes	Yes	Yes
Message system					
• Bit messages					
- Number of bit messages	1 000	1 000	1 000	1 000	1 000
• Analog messages					
- Number of analog messages	25	25	25	25	25
• Message buffer					
- Number of entries	256	256	256	256	256
- Circulating buffer	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes
Recipe management					
• Number of recipes	50	50	50	50	50
• Size of internal recipe memory	256 kbyte	256 kbyte	256 kbyte	256 kbyte	256 kbyte
• Recipe memory expandable	No	No	No	No	No
Variables					
• Number of variables per device	800	800	800	800	800
• Number of variables per screen	100	100	100	100	100
Images					
• Number of configurable images	250	100	250	250	250
Archiving					
• Number of archives per device	2; One message and one process value archive	2	2; One message and one process value archive	2; One message and one process value archive	2
• Number of entries per archive	10 000	10 000	10 000	10 000	10 000
• Message archive	Yes	Yes	Yes	Yes	Yes
• Process value archive	Yes	Yes	Yes	Yes	Yes
• Archiving methods					
- Sequential archive	Yes	Yes	Yes	Yes	Yes
- Short-term archive	Yes	Yes	Yes	Yes	Yes
• Memory location					
- Memory card	No	No	No	No	No
- USB memory	Yes	Yes	Yes	Yes	Yes
- Ethernet	No	No	No	No	No
• Data storage format					
- CSV	No	Yes	No	No	No
- TXT	Yes	No	Yes	Yes	Yes
- RDB	No	No	No	No	No

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Technical specifications

Article number	**6AV2123-2DB03-0AX0**	**6AV2143-6DB00-0AA0**	**6AV2123-2GB03-0AX0**	**6AV2123-2GA03-0AX0**	**6AV2143-6GB00-0AA0**
	SIMATIC HMI KTP400 Basic	SIMATIC HMI TP400 Basic OEM	SIMATIC HMI KTP700 Basic	SIMATIC HMI KTP700 Basic DP	SIMATIC HMI TP700 Basic OEM
Security					
• Number of user groups	50	50	50	50	50
• Number of users	50		50	50	50
• SIMATIC Logon	No	No	No	No	No
Transfer (upload/download)					
• MPI/PROFIBUS DP	No	No	No	Yes	No
• Ethernet	Yes	Yes	Yes	No	Yes
Process coupling					
• S7-1200	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes	No	Yes
• Allen Bradley (DF1)	No	No	No	Yes	No
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	No	Yes
• Mitsubishi (FX)	No	No	No	Yes	No
• OMRON (FINS TCP)	No	No	No	No	No
• OMRON (LINK/Multilink)	No	No	No	Yes	No
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	No	Yes
• Modicon (Modbus)	No	No	No	Yes	No
Peripherals/Options					
Printer	No	No	No	No	No
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	No	No	No	No	No
USB memory	Yes	Yes; USB storage medium can be connected	Yes	Yes	Yes
Mechanics/material					
Enclosure material (front)					
• Plastic	Yes	Yes	Yes	Yes	Yes
• Aluminum	No	No	No	No	No
• Stainless steel	No	No	No	No	No
Dimensions					
Width of the housing front	141 mm	141 mm	214 mm	214 mm	214 mm
Height of housing front	116 mm	116 mm	158 mm	158 mm	158 mm
Mounting cutout, width	123 mm	123 mm	197 mm	197 mm	197 mm
Mounting cutout, height	99 mm	99 mm	141 mm	141 mm	141 mm
Overall depth	33 mm	33 mm	39 mm	39 mm	39 mm
Weights					
Weight (without packaging)	360 g		780 g	800 g	780 g

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Technical specifications

Article number	**6AV2123-2JB03-0AX0** SIMATIC HMI KTP900 Basic	**6AV2143-6JB00-0AA0** SIMATIC HMI TP900 Basic OEM	**6AV2123-2MB03-0AX0** SIMATIC HMI KTP1200 Basic	**6AV2123-2MA03-0AX0** SIMATIC HMI KTP1200 Basic DP
General information				
Product type designation	KTP900 Basic color PN	TP900 Basic Keyless	KTP1200 Basic color PN	KTP1200 Basic color DP
Display				
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	9 in	9 in	12 in	12 in
Number of colors	65 536	65 536	65 536	65 536
Resolution (pixels)				
• Horizontal image resolution	800 pixel	800 pixel	1 280 pixel	1 280 pixel
• Vertical image resolution	480 pixel	480 pixel	800 pixel	800 pixel
Backlighting				
• MTBF backlighting (at 25 °C)	20 000 h	20 000 h	20 000 h	20 000 h
Control elements				
Keyboard fonts				
• Function keys		No		
- Number of function keys	8	0	10	10
Touch operation				
• Design as touch screen	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive
• Design as multi-touch screen		No		
• Monitor keyboard		Yes		
Installation type/mounting				
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Supply voltage				
Rated value (DC)	24 V	24 V	24 V	24 V
Memory				
Memory available for user data	10 Mbyte	10 Mbyte	10 Mbyte	10 Mbyte
Type of output				
Acoustics		Buzzer		
• Buzzer	Yes	Yes	Yes	Yes
Time of day				
Clock				
• Software clock	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes
Interfaces				
Number of industrial Ethernet interfaces	1	1	1	0
Number of RS 485 interfaces	0	0	0	1
Number of USB interfaces	1; Up to 16 GB	1; USB 2.0, up to 16 GB respectively	1; Up to 16 GB	1; Up to 16 GB
Number of SD card slots	0	0	0	0
Industrial Ethernet				
• Number of ports of the integrated switch		0		

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Technical specifications

Article number	**6AV2123-2JB03-0AX0** SIMATIC HMI KTP900 Basic	**6AV2143-6JB00-0AA0** SIMATIC HMI TP900 Basic OEM	**6AV2123-2MB03-0AX0** SIMATIC HMI KTP1200 Basic	**6AV2123-2MA03-0AX0** SIMATIC HMI KTP1200 Basic DP
Protocols				
PROFINET	Yes	Yes	Yes	No
IRT	No	No	No	No
PROFIBUS	No	No	No	Yes
MPI	No	No	No	Yes
Redundancy mode				
Media redundancy				
- MRP	No	No	No	No
Degree and class of protection				
IP (at the front)	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20
NEMA (front)				
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
cULus	Yes		Yes	Yes
RCM (formerly C-TICK)	Yes		Yes	Yes
KC approval	Yes		Yes	Yes
Use in hazardous areas				
• ATEX Zone 2	No		No	No
• ATEX Zone 22	No		No	No
• IECEx Zone 2	No		No	No
• IECEx Zone 22	No		No	No
• cULus Class I Zone 2, Division 2	No		No	No
• FM Class I Division 2	No		No	No
Marine approval				
• Germanischer Lloyd (GL)	Yes		Yes	Yes
• American Bureau of Shipping (ABS)	Yes		Yes	Yes
• Bureau Veritas (BV)	Yes		Yes	Yes
• Det Norske Veritas (DNV)	Yes		Yes	Yes
• Lloyds Register of Shipping (LRS)	Yes		Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes		Yes	Yes
• Polski Rejestr Statkow (PRS)	No		No	No
• Chinese Classification Society (CCS)	No		No	No
Ambient conditions				
Suited for indoor use				Yes
Suited for outdoor use				No
Ambient temperature during operation				
Operation (vertical installation)				
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C
Relative humidity				
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration				
Configuration software				
• STEP 7 Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)
• WinCC flexible Compact	No	No	No	No
• WinCC Basic (TIA Portal)	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV2123-2JB03-0AX0** SIMATIC HMI KTP900 Basic	**6AV2143-6JB00-0AA0** SIMATIC HMI TP900 Basic OEM	**6AV2123-2MB03-0AX0** SIMATIC HMI KTP1200 Basic	**6AV2123-2MA03-0AX0** SIMATIC HMI KTP1200 Basic DP
Languages				
Online languages				
• Number of online/runtime languages	10	10	10	10
Functionality under WinCC (TIA Portal)				
Applications/options				
• Web browser	Yes	No	Yes	No
• SIMATIC WinCC Sm@rtServer	Yes; Available with WinCC (TIA Portal) V14 or higher	No	Yes; Available with WinCC (TIA Portal) V14 or higher	No
Number of Visual Basic Scripts	No	No	No	No
Task planner	Yes	Yes	Yes	Yes
• time-controlled	No	No	No	No
• task-controlled	Yes	Yes	Yes	Yes
Message system				
• Bit messages				
- Number of bit messages	1 000	1 000	1 000	1 000
• Analog messages				
- Number of analog messages	25	25	25	25
• Message buffer				
- Number of entries	256	256	256	256
- Circulating buffer	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes
Recipe management				
• Number of recipes	50	50	50	50
• Size of internal recipe memory	256 kbyte	256 kbyte	256 kbyte	256 kbyte
• Recipe memory expandable	No		No	No
Variables				
• Number of variables per device	800	800	800	800
• Number of variables per screen	100	100	100	100
Images				
• Number of configurable images	250	100	250	250
Archiving				
• Number of archives per device	2; One message and one process value archive	2	2; One message and one process value archive	2; One message and one process value archive
• Number of entries per archive	10 000	10 000	10 000	10 000
• Message archive	Yes	Yes	Yes	Yes
• Process value archive	Yes	Yes	Yes	Yes
• Archiving methods				
- Sequential archive	Yes	Yes	Yes	Yes
- Short-term archive	Yes	Yes	Yes	Yes
• Memory location				
- Memory card	No	No	No	No
- USB memory	Yes	Yes	Yes	Yes
- Ethernet	No	No	No	No
• Data storage format				
- CSV	No	No	No	No
- TXT	Yes	Yes	Yes	Yes
- RDB	No	No	No	No

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Technical specifications

Article number	**6AV2123-2JB03-0AX0** SIMATIC HMI KTP900 Basic	**6AV2143-6JB00-0AA0** SIMATIC HMI TP900 Basic OEM	**6AV2123-2MB03-0AX0** SIMATIC HMI KTP1200 Basic	**6AV2123-2MA03-0AX0** SIMATIC HMI KTP1200 Basic DP
Security				
• Number of user groups	50	50	50	50
• Number of users	50		50	50
• SIMATIC Logon	No	No	No	No
Transfer (upload/download)				
• MPI/PROFIBUS DP	No	No	No	Yes
• Ethernet	Yes	Yes	Yes	No
Process coupling				
• S7-1200	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes	No
• Allen Bradley (DF1)	No	No	No	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	No
• Mitsubishi (FX)	No	No	No	Yes
• OMRON (FINS TCP)	No	No	No	No
• OMRON (LINK/Multilink)	No	No	No	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	No
• Modicon (Modbus)	No	No	No	Yes
Peripherals/Options				
Printer	No	No	No	No
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	No	No	No	No
USB memory	Yes	Yes; USB storage medium can be connected	Yes	Yes
Mechanics/material				
Enclosure material (front)				
• Plastic	Yes	Yes	Yes	Yes
• Aluminum	No	No	No	No
• Stainless steel	No	No	No	No
Dimensions				
Width of the housing front	267 mm	267 mm	330 mm	330 mm
Height of housing front	182 mm	182 mm	245 mm	245 mm
Mounting cutout, width	251 mm	251 mm	310 mm	310 mm
Mounting cutout, height	166 mm	166 mm	221 mm	221 mm
Overall depth	55 mm	55 mm	60 mm	60 mm
Weights				
Weight (without packaging)	1 130 g	1 130 g	1 710 g	1 710 g

More information is available on the Internet at:

http://www.siemens.com/basic-panels

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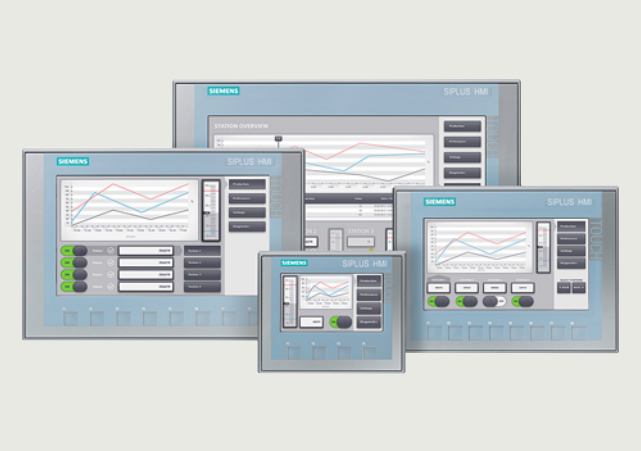
Overview



With their fully developed HMI basic functions, 2nd Generation SIPLUS Basic Panels are the ideal entry-level series for simple HMI applications.

The device family offers panels with 4", 7", 9" and 12" displays, as well as combined key and touch operation.

The innovative high-resolution widescreen displays with 64 000 colors are also suitable for upright installation, and they can be dimmed down to 100%. The innovative operator interface with improved usability opens up a diverse range of options thanks to new controls and graphics. The new USB interface enables the connection of keyboard, mouse or barcode scanner, and supports the simple archiving of data on a USB flash drive.

The integrated Ethernet or RS 485/422 interface (version-specific) enables simple connection to the controller.

Note:

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

Technical documentation on SIPLUS can be found here:
http://www.siemens.com/siplus-extreme

Ordering data

	Article No.
SIPLUS HMI Basic Panels, Key and Touch	
SIPLUS HMI KTP400 Basic For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -20 ... +60 °C	**6AG1123-2DB03-2AX0**
SIPLUS HMI KTP700 Basic For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -20 ... +50 °C	**6AG1123-2GB03-2AX0**
SIPLUS HMI KTP700 Basic DP For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -20 ... +50 °C	**6AG1123-2GA03-2AX0**
SIPLUS HMI KTP900 Basic For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -20 ... +50 °C	**6AG1123-2JB03-2AX0**
SIPLUS HMI KTP1200 Basic For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -10 ... +50 °C	**6AG1123-2MB03-2AX0**
SIPLUS HMI KTP1200 Basic DP For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -10 ... +50 °C	**6AG1123-2MA03-2AX0**
Accessories	See SIMATIC Basic Panels 2nd Generation

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SIPLUS Basic Panels (2nd Generation)

Technical specifications

Article number	**6AG1123-2DB03-2AX0**	**6AG1123-2GB03-2AX0**	**6AG1123-2GA03-2AX0**
	SIPLUS HMI KTP400 Basic	SIPLUS HMI KTP700 Basic	SIPLUS HMI KTP700 Basic DP
Ambient conditions			
Suited for indoor use		Yes	Yes
Suited for outdoor use		No	No
Ambient temperature during operation			
Operation (vertical installation)			
- For vertical installation, min.	-20 °C; = Tmin	-20 °C	-20 °C; = Tmin
- For vertical installation, max.	60 °C; = Tmax	50 °C	50 °C
Altitude during operation relating to sea level			
• Installation altitude above sea level, max.	5 000 m	5 000 m	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
Relative humidity			
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation/frost (no commissioning when condensation present), vertical mounting position
Resistance			
Coolants and lubricants			
- Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems			
- to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request		
- to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *		
- to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea			
- to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request		
- to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *		
- to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology			
- Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)
- Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)		
Remark			
- Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating			
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A

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Technical specifications

Article number	**6AG1123-2JB03-2AX0**	**6AG1123-2MB03-2AX0**	**6AG1123-2MA03-2AX0**
	SIPLUS HMI KTP900 BASIC	SIPLUS HMI KTP1200 BASIC	SIPLUS HMI KTP1200 BASIC DP
- MRP		No	No
Ambient conditions			
Suited for indoor use	Yes	Yes	Yes
Suited for outdoor use	No	No	No
Ambient temperature during operation			
Operation (vertical installation)			
- For vertical installation, min.	-20 °C	-10 °C; = Tmin	-10 °C; = Tmin
- For vertical installation, max.	50 °C	50 °C	50 °C
Altitude during operation relating to sea level			
• Installation altitude above sea level, max.	5 000 m	5 000 m	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
Relative humidity			
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation	100 %; RH incl. condensation/frost (no commissioning when condensation present), vertical mounting position
Resistance			
Coolants and lubricants			
- Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems			
- to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request		
- to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *		
- to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea			
- to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request		
- to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *		
- to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology			
- Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)
- Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)		
Remark			
- Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating			
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A

More information is available on the Internet at:

http://www.siemens.com/basic-panels

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Overview

Realization of demanding HMI tasks with a high level of user convenience

Advanced HMI is the Panel-based solution for demanding applications with large configuration limits.
The user benefits from excellent functionality and a wide range of devices and applications, with key or touch operation.
Both stationary and mobile solutions are available.

SIMATIC HMI Unified Comfort Panels

The new generation of high-end, 7–22-inch operator panels, part of the new SIMATIC WinCC Unified System, boasts numerous improvements over the predecessor devices in terms of performance, openness and user-friendliness.

- Rugged multi-touch technology
- Innovative SIMATIC WinCC Unified visualization software
- Integrated Edge functionality

SIMATIC HMI Comfort Panels

SIMATIC HMI Comfort Panels are designed for implementing high-performance visualization tasks at machine-level.
High performance, functionality and numerous integrated interfaces offer the greatest convenience in high-end applications.

- Brilliant widescreen display of 4" to 22"
- Easy commissioning and service concept

SIMATIC HMI Mobile Panels

Panels for high-end mobile applications – even in the fail-safe area of machines and widely distributed plants. The process communication can be wired or via WLAN.

- Innovative operation from 4" to 9"
- Rugged for location-related local operation
- Integrated security concept

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Overview

SIMATIC HMI Unified Comfort Panels

The new generation of high-end, 7–22-inch operator panels, part of the new SIMATIC WinCC Unified System, boasts numerous improvements over the predecessor devices in terms of performance, openness and user-friendliness.

Thanks to their capacitive glass front with multi-touch technology, the Unified Comfort Panels are as convenient to use as a smartphone or tablet. The sharp colors and high contrast improve the readability and ease of use.

Visualization on the devices is based on SIMATIC WinCC Unified, the new visualization system in the TIA Portal. This opens up many new opportunities and functionalities for the user – across all device sizes.

Brand new to the SIMATIC HMI product portfolio is the option to expand device functionality with apps. Previously, HMI Panels were used exclusively for visualization software. Thanks to the integration of Siemens Industrial Edge, users can now run other programs simultaneously alongside this standard device functionality. Project-specific requirements can thus be implemented quickly and easily.

The following SIMATIC HMI Unified Comfort Panels are available:

- Standard design:
  - MTP700 Comfort
  - MTP1000 Comfort
  - MTP1200 Comfort
  - MTP1500 Comfort
  - MTP1900 Comfort
  - MTP2200 Comfort
- Neutral design:
  - MTP700 Comfort
  - MTP1000 Comfort
  - MTP1200 Comfort
  - MTP1500 Comfort
  - MTP1900 Comfort
  - MTP2200 Comfort

Starter Kits are available for standard design devices.

These consist of:

- HMI Unified Comfort Panel
- WinCC Unified V16 Comfort
- EDGE Runtime for Unified Comfort (Device-managed) license
- 1.5 m PROFINET cable
- Memory card (32 GB)
- Protective film

SIMATIC WinCC Unified options

- WinCC Unified Audit Basis
- WinCC Unified Clients (Operate Client and Monitor Client)
- WinCC Unified Database Storage
- WinCC Unified Logging
- WinCC Unified Parameter Control
- WinCC Unified Report Execution
- WinCC Unified Collaboration

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SIMATIC HMI Unified Comfort Panels Standard

Overview

SIMATIC HMI MTP2200 Unified Comfort Panel Standard design front view

SIMATIC HMI Unified Comfort Panels - standard devices

SIMATIC HMI Unified Comfort Panels consist of six different devices with varying display sizes.
All devices come with the same number of hardware interfaces and the same functionality – just select the perfect device for your needs based on the screen size.

Each Unified Comfort Panel is available in the standard design with Siemens and SIMATIC HMI branding and a silver-colored aluminum frame.

All Unified Comfort Panels come with integrated Edge functionality.

Siemens Industrial Edge can be used in two different ways:

- Device-managed Edge
- Centrally-managed Edge (planned)

SIMATIC HMI Unified Comfort Panels can also be ordered with a neutral design.
Starter Kits are available for standard design devices.

Note:

The technical specifications of the neutral design devices correspond to the technical specifications of the devices with standard design.

Ordering data

	Article No.
Touch devices for SIMATIC HMI Unified Comfort Panels	
Standard design	
SIMATIC HMI MTP700 Unified Comfort Panel	
7" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16	
• Contains open source SW which is provided free of charge See enclosed Blu-Ray	**6AV2128-3GB06-0AX0**
• With additional certifications for explosion-proof areas and for use in shipbuilding (see technical specifications). Contains open source SW, which is provided free of charge See enclosed DVD	**6AV2128-3GB06-0AX1**
SIMATIC HMI MTP1000 Unified Comfort Panel	
10.1" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16	
• Contains open source SW which is provided free of charge See enclosed Blu-Ray	**6AV2128-3KB06-0AX0**
• With additional certifications for explosion-proof areas and for use in shipbuilding (see technical specifications). Contains open source SW, which is provided free of charge See enclosed DVD	**6AV2128-3KB06-0AX1**
SIMATIC HMI MTP1200 Unified Comfort Panel	
12.1" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16	
• Contains open source SW which is provided free of charge See enclosed Blu-Ray	**6AV2128-3MB06-0AX0**
• With additional certifications for explosion-proof areas and for use in shipbuilding (see technical specifications). Contains open source SW, which is provided free of charge See enclosed DVD	**6AV2128-3MB06-0AX1**

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Ordering data	Article No.
SIMATIC HMI MTP1500 Unified Comfort Panel	
15.6" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16	
• Contains open source SW which is provided free of charge See enclosed Blu-Ray	**6AV2128-3QB06-0AX0**
• With additional certifications for explosion-proof areas and for use in shipbuilding (see technical specifications). Contains open source SW, which is provided free of charge See enclosed DVD	**6AV2128-3QB06-0AX1**
SIMATIC HMI MTP1900 Unified Comfort Panel	
18.5" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16	
• Contains open source SW which is provided free of charge See enclosed Blu-Ray	**6AV2128-3UB06-0AX0**
• With additional certifications for explosion-proof areas and for use in shipbuilding (see technical specifications). Contains open source SW, which is provided free of charge See enclosed DVD	**6AV2128-3UB06-0AX1**
SIMATIC HMI MTP2200 Unified Comfort Panel	
21.5" widescreen TFT display, touch operation, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16	
• Contains open source SW which is provided free of charge See enclosed Blu-Ray	**6AV2128-3XB06-0AX0**
• With additional certifications for explosion-proof areas and for use in shipbuilding (see technical specifications). Contains open source SW, which is provided free of charge See enclosed DVD	**6AV2128-3XB06-0AX1**

	Article No.
Neutral design	
SIMATIC HMI MTP700 Unified Comfort Panel	
Neutral, touch operation; 7" widescreen TFT display, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16	
• Contains open source SW which is provided free of charge See enclosed Blu-Ray	**6AV2128-3GB36-0AX0**
• With additional certifications for explosion-proof areas and for use in shipbuilding (see technical specifications). Contains open source SW, which is provided free of charge See enclosed DVD	**6AV2128-3GB36-0AX1**
SIMATIC HMI MTP1000 Unified Comfort Panel	
Neutral, touch operation, 10.1" widescreen TFT display, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16	
• Contains open source SW which is provided free of charge See enclosed Blu-Ray	**6AV2128-3KB36-0AX0**
• With additional certifications for explosion-proof areas and for use in shipbuilding (see technical specifications). Contains open source SW, which is provided free of charge See enclosed DVD	**6AV2128-3KB36-0AX1**
SIMATIC HMI MTP1200 Unified Comfort Panel	
Neutral, touch operation, 12.1" widescreen TFT display, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16	
• Contains open source SW which is provided free of charge See enclosed Blu-Ray	**6AV2128-3MB36-0AX0**
• With additional certifications for explosion-proof areas and for use in shipbuilding (see technical specifications). Contains open source SW, which is provided free of charge See enclosed DVD	**6AV2128-3MB36-0AX1**
SIMATIC HMI MTP1500 Unified Comfort Panel	
Neutral, touch operation, 15.6" widescreen TFT display, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16	
• Contains open source SW which is provided free of charge See enclosed Blu-Ray	**6AV2128-3QB36-0AX0**
• With additional certifications for explosion-proof areas and for use in shipbuilding (see technical specifications). Contains open source SW, which is provided free of charge See enclosed DVD	**6AV2128-3QB36-0AX1**

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SIMATIC HMI Unified Comfort Panels Standard

Ordering data	Article No.
SIMATIC HMI MTP1900 Unified Comfort Panel Neutral, touch operation, 18.5" widescreen TFT display, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16	
• Contains open source SW which is provided free of charge See enclosed Blu-Ray	**6AV2128-3UB36-0AX0**
• With additional certifications for explosion-proof areas and for use in shipbuilding (see technical specifications). Contains open source SW, which is provided free of charge See enclosed DVD	**6AV2128-3UB36-0AX1**
SIMATIC HMI MTP2200 Unified Comfort Panel Neutral, touch operation, 21.5" widescreen TFT display, 16 million colors, PROFINET interface, configurable as of WinCC Unified Comfort V16	
• Contains open source SW which is provided free of charge See enclosed Blu-Ray	**6AV2128-3XB36-0AX0**
• With additional certifications for explosion-proof areas and for use in shipbuilding (see technical specifications). Contains open source SW, which is provided free of charge See enclosed DVD	**6AV2128-3XB36-0AX1**

	Article No.
Starter Kits	
Standard design	
Each consisting of: • The corresponding Unified Comfort Panel • WinCC Unified Comfort (TIA Portal) • EDGE Runtime license • Industrial Ethernet cable, for test purposes • SIMATIC SD Card Indoor 32 GB • 5 protective films	
SIMATIC HMI MTP700 Unified Comfort	**6AV2128-3GB06-0AP0**
SIMATIC HMI MTP1000 Unified Comfort	**6AV2128-3KB06-0AP0**
SIMATIC HMI MTP1200 Unified Comfort	**6AV2128-3MB06-0AP0**
SIMATIC HMI MTP1500 Unified Comfort	**6AV2128-3QB06-0AP0**
SIMATIC HMI MTP1900 Unified Comfort	**6AV2128-3UB06-0AP0**
SIMATIC HMI MTP2200 Unified Comfort	**6AV2128-3XB06-0AP0**
Software	
EDGE Runtime for SIMATIC Unified Comfort Runtime software, single license, license key for download, without software and documentation, Class A, email address required for delivery	**6AV2170-2BA00-0AA0**

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Technical specifications

Article number	**6AV2128-3GB06-0AX0**	**6AV2128-3KB06-0AX0**	**6AV2128-3MB06-0AX0**	**6AV2128-3QB06-0AX0**	**6AV2128-3UB06-0AX0**	**6AV2128-3XB06-0AX0**
	SIMATIC HMI MTP700 Unified Comfort	SIMATIC HMI MTP1000 Unified Comfort	SIMATIC HMI MTP1200 Unified Comfort	SIMATIC HMI MTP1500 Unified Comfort	SIMATIC HMI MTP1900 Unified Comfort	SIMATIC HMI MTP2200 Unified Comfort
General information						
Product type designation	MTP700 Unified Comfort	MTP1000 Unified Comfort	MTP1200 Unified Comfort	MTP1500 Unified Comfort	MTP1900 Unified Comfort	MTP2200 Unified Comfort
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	10.1 in	12.1 in	15.6 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	480 pixel	800 pixel	800 pixel	768 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h	50 000 h; At 25°C	30 000 h; At 25°C
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV2128-3GB06-0AX0**	**6AV2128-3KB06-0AX0**	**6AV2128-3MB06-0AX0**	**6AV2128-3QB06-0AX0**	**6AV2128-3UB06-0AX0**	**6AV2128-3XB06-0AX0**
	SIMATIC HMI MTP700 Unified Comfort	SIMATIC HMI MTP1000 Unified Comfort	SIMATIC HMI MTP1200 Unified Comfort	SIMATIC HMI MTP1500 Unified Comfort	SIMATIC HMI MTP1900 Unified Comfort	SIMATIC HMI MTP2200 Unified Comfort
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	No	No	No	Yes	Yes	Yes
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
Use in hazardous areas						
• ATEX Zone 2	No; Available soon					
• ATEX Zone 22	No; Available soon					
• IECEx Zone 2	No; Available soon					
• IECEx Zone 22	No; Available soon					
• cULus Class I Zone 2, Division 2	No; Available soon					
• cULus Class II Division 2	No					
• FM Class I Division 2	No; Available soon					
• FM Class II Division 2	No					
Marine approval						
• Germanischer Lloyd (GL)	No; Available soon					
• American Bureau of Shipping (ABS)	No; Available soon					
• Bureau Veritas (BV)	No; Available soon					
• Det Norske Veritas (DNV)	No; Available soon					
• Lloyds Register of Shipping (LRS)	No; Available soon					
• Nippon Kaiji Kyokai (Class NK)	No; Available soon					
• Chinese Classification Society (CCS)	No; Available soon					
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation					
Configuration						
Configuration software						
• WinCC Unified Comfort Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32

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Technical specifications

Article number	**6AV2128-3GB06-0AX0**	**6AV2128-3KB06-0AX0**	**6AV2128-3MB06-0AX0**	**6AV2128-3QB06-0AX0**	**6AV2128-3UB06-0AX0**	**6AV2128-3XB06-0AX0**
	SIMATIC HMI MTP700 Unified Comfort	SIMATIC HMI MTP1000 Unified Comfort	SIMATIC HMI MTP1200 Unified Comfort	SIMATIC HMI MTP1500 Unified Comfort	SIMATIC HMI MTP1900 Unified Comfort	SIMATIC HMI MTP2200 Unified Comfort
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes					
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF viewer	Yes					
• Media player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	No	No	No	No	No	No
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No					
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Alarm system						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte			12 Mbyte		
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Variables						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	600	600	800	800	800
Image objects						
• Number of objects per image	800	800	800	1 200	1 200	1 200
Archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17
Transfer (upload/download)						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	No	No	No	No	No	No

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Technical specifications

Article number	**6AV2128-3GB06-0AX0**	**6AV2128-3KB06-0AX0**	**6AV2128-3MB06-0AX0**	**6AV2128-3QB06-0AX0**	**6AV2128-3UB06-0AX0**	**6AV2128-3XB06-0AX0**
	SIMATIC HMI MTP700 Unified Comfort	SIMATIC HMI MTP1000 Unified Comfort	SIMATIC HMI MTP1200 Unified Comfort	SIMATIC HMI MTP1500 Unified Comfort	SIMATIC HMI MTP1900 Unified Comfort	SIMATIC HMI MTP2200 Unified Comfort
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	No	No	No	No	No	No
Mechanics/material						
Enclosure material (front)						
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions						
Width of the housing front	214 mm	280 mm	326 mm	398 mm	464 mm	529 mm
Height of housing front	158 mm	205 mm	237 mm	257 mm	294 mm	331 mm
Mounting cutout, width	197 mm	264 mm	310 mm	382 mm	448 mm	513 mm
Mounting cutout, height	141 mm	189 mm	221 mm	241 mm	278 mm	315 mm
Overall depth	64 mm	64 mm	64 mm	73 mm	73 mm	73 mm
Weights						
Weight (without packaging)	1.4 kg	2.1 kg	2.8 kg	4.3 kg	5.5 kg	6.9 kg

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Technical specifications

Article number	**6AV2128-3GB06-0AX1**	**6AV2128-3KB06-0AX1**	**6AV2128-3MB06-0AX1**	**6AV2128-3QB06-0AX1**	**6AV2128-3UB06-0AX1**	**6AV2128-3XB06-0AX1**
	SIMATIC HMI MTP700 Unified Comfort	SIMATIC HMI MTP1000 Unified Comfort	SIMATIC HMI MTP1200 Unified Comfort	SIMATIC HMI MTP1500 Unified Comfort	SIMATIC HMI MTP1900 Unified Comfort	SIMATIC HMI MTP2200 Unified Comfort
General information						
Product type designation	MTP700 Unified Comfort	MTP1000 Unified Comfort	MTP1200 Unified Comfort	MTP1500 Unified Comfort	MTP1900 Unified Comfort	MTP2200 Unified Comfort
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	10.1 in	12.1 in	15.6 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	480 pixel	800 pixel	800 pixel	768 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h	50 000 h; At 25°C	30 000 h; At 25°C
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV2128-3GB06-0AX1** SIMATIC HMI MTP700 Unified Comfort	**6AV2128-3KB06-0AX1** SIMATIC HMI MTP1000 Unified Comfort	**6AV2128-3MB06-0AX1** SIMATIC HMI MTP1200 Unified Comfort	**6AV2128-3QB06-0AX1** SIMATIC HMI MTP1500 Unified Comfort	**6AV2128-3UB06-0AX1** SIMATIC HMI MTP1900 Unified Comfort	**6AV2128-3XB06-0AX1** SIMATIC HMI MTP2200 Unified Comfort
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	No	No	No	No	No	No
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
Use in hazardous areas						
• ATEX Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class II Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• FM Class I Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No; included in DNV	No; included in DNV	No; included in DNV	No; included in DNV	No; included in DNV	No; included in DNV
• American Bureau of Shipping (ABS)	Yes	Yes	Yes	Yes	Yes	Yes
• Bureau Veritas (BV)	Yes	Yes	Yes	Yes	Yes	Yes
• Det Norske Veritas (DNV)	Yes	Yes	Yes	Yes	Yes	Yes
• Korean Register of Shipping (KRS)	Yes	Yes	Yes	Yes	Yes	Yes
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes	Yes	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes	Yes	Yes	Yes
• Chinese Classification Society (CCS)	Yes	Yes	Yes	Yes	Yes	Yes
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration						
Configuration software						
• WinCC Unified Comfort Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32

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Technical specifications

Article number	**6AV2128-3GB06-0AX1**	**6AV2128-3KB06-0AX1**	**6AV2128-3MB06-0AX1**	**6AV2128-3QB06-0AX1**	**6AV2128-3UB06-0AX1**	**6AV2128-3XB06-0AX1**
	SIMATIC HMI MTP700 Unified Comfort	SIMATIC HMI MTP1000 Unified Comfort	SIMATIC HMI MTP1200 Unified Comfort	SIMATIC HMI MTP1500 Unified Comfort	SIMATIC HMI MTP1900 Unified Comfort	SIMATIC HMI MTP2200 Unified Comfort
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes					
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF viewer	Yes					
• Media player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	No	No	No	No	No	No
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No					
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Alarm system						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte			12 Mbyte		
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Variables						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	600	600	800	800	800
Image objects						
• Number of objects per image	800	800	800	1 200	1 200	1 200
Archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17
Transfer (upload/download)						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	No	No	No	No	No
• OPC UA Server	Yes	No	No	No	No	No
• Software Controller/Open Controller	No	No	No	No	No	No

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Technical specifications

Article number	**6AV2128-3GB06-0AX1**	**6AV2128-3KB06-0AX1**	**6AV2128-3MB06-0AX1**	**6AV2128-3QB06-0AX1**	**6AV2128-3UB06-0AX1**	**6AV2128-3XB06-0AX1**
	SIMATIC HMI MTP700 Unified Comfort	SIMATIC HMI MTP1000 Unified Comfort	SIMATIC HMI MTP1200 Unified Comfort	SIMATIC HMI MTP1500 Unified Comfort	SIMATIC HMI MTP1900 Unified Comfort	SIMATIC HMI MTP2200 Unified Comfort
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	No	No	No	No	No	No
Mechanics/material						
Enclosure material (front)						
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions						
Width of the housing front	214 mm	280 mm	326 mm	398 mm	464 mm	529 mm
Height of housing front	158 mm	205 mm	237 mm	257 mm	294 mm	331 mm
Mounting cutout, width	197 mm	264 mm	310 mm	382 mm	448 mm	513 mm
Mounting cutout, height	141 mm	189 mm	221 mm	241 mm	278 mm	315 mm
Overall depth	64 mm	64 mm	64 mm	73 mm	73 mm	73 mm
Weights						
Weight (without packaging)	1.4 kg	2.1 kg	2.8 kg	4.3 kg	5.5 kg	6.9 kg

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Technical specifications

Article number	**6AV2128-3KB36-0AX0**	**6AV2128-3XB36-0AX0**	**6AV2128-3MB36-0AX0**	**6AV2128-3QB36-0AX0**	**6AV2128-3GB36-0AX0**	**6AV2128-3UB36-0AX0**
	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1900 Unified Comfort Neut
General information						
Product type designation	MTP1000 Unified Comfort	MTP2200 Unified Comfort	MTP1200 Unified Comfort	MTP1500 Unified Comfort	MTP700 Unified Comfort	MTP1900 Unified Comfort
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	10.1 in	21.5 in	12.1 in	15.6 in	7 in	18.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	1 280 pixel	1 920 pixel	1 280 pixel	1 366 pixel	800 pixel	1 920 pixel
• Vertical image resolution	800 pixel	1 080 pixel	800 pixel	768 pixel	480 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	30 000 h; At 25°C	50 000 h; At 25°C	50 000 h	50 000 h; At 25°C	50 000 h; At 25°C
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV2128-3KB36-0AX0**	**6AV2128-3XB36-0AX0**	**6AV2128-3MB36-0AX0**	**6AV2128-3QB36-0AX0**	**6AV2128-3GB36-0AX0**	**6AV2128-3UB36-0AX0**
	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1900 Unified Comfort Neut
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	No	Yes	No	Yes	No	Yes
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
Use in hazardous areas						
• ATEX Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• ATEX Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• IECEx Zone 22	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class I Zone 2, Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• cULus Class II Division 2	No	No	No	No	No	No
• FM Class I Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• American Bureau of Shipping (ABS)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• Bureau Veritas (BV)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• Det Norske Veritas (DNV)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• Lloyds Register of Shipping (LRS)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• Nippon Kaiji Kyokai (Class NK)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• Chinese Classification Society (CCS)	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon

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Technical specifications

Article number	**6AV2128-3KB36-0AX0**	**6AV2128-3XB36-0AX0**	**6AV2128-3MB36-0AX0**	**6AV2128-3QB36-0AX0**	**6AV2128-3GB36-0AX0**	**6AV2128-3UB36-0AX0**
	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1900 Unified Comfort Neut
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	45 °C	50 °C	50 °C	50 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration						
Configuration software						
• WinCC Unified Comfort Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc					Yes	
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF viewer					Yes	
• Media player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	No	No	No	No	No	No
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts					No	
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Alarm system						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV2128-3KB36-0AX0**	**6AV2128-3XB36-0AX0**	**6AV2128-3MB36-0AX0**	**6AV2128-3QB36-0AX0**	**6AV2128-3GB36-0AX0**	**6AV2128-3UB36-0AX0**
	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1900 Unified Comfort Neut
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory				12 Mbyte	12 Mbyte	
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Variables						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	800	600	800	600	800
Image objects						
• Number of objects per image	800	1 200	800	1 200	800	1 200
Archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17
Transfer (upload/download)						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
• Software Controller/Open Controller	No	No	No	No	No	No
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	No	No	No	No	No	No
Mechanics/material						
Enclosure material (front)						
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions						
Width of the housing front	280 mm	529 mm	326 mm	398 mm	214 mm	464 mm
Height of housing front	205 mm	331 mm	237 mm	257 mm	158 mm	294 mm
Mounting cutout, width	264 mm	513 mm	310 mm	382 mm	197 mm	448 mm
Mounting cutout, height	189 mm	315 mm	221 mm	241 mm	141 mm	278 mm
Overall depth	64 mm	73 mm	64 mm	73 mm	64 mm	73 mm
Weights						
Weight (without packaging)	2.1 kg	6.9 kg	2.8 kg	4.3 kg	1.4 kg	5.5 kg

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Technical specifications

Article number	**6AV2128-3GB36-0AX1**	**6AV2128-3KB36-0AX1**	**6AV2128-3MB36-0AX1**	**6AV2128-3QB36-0AX1**	**6AV2128-3UB36-0AX1**	**6AV2128-3XB36-0AX1**
	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP1900 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut
General information						
Product type designation	MTP700 Unified Comfort	MTP1000 Unified Comfort	MTP1200 Unified Comfort	MTP1500 Unified Comfort	MTP1900 Unified Comfort	MTP2200 Unified Comfort
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	10.1 in	12.1 in	15.6 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	480 pixel	800 pixel	800 pixel	768 pixel	1 080 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h	50 000 h; At 25°C	30 000 h; At 25°C
Control elements						
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Type of output						
Acoustics						
• Speaker	No	No	No	No	No	No
Time of day						
Clock						
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)	4; USB 3.1 Gen. 1 (type A)
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV2128-3GB36-0AX1**	**6AV2128-3KB36-0AX1**	**6AV2128-3MB36-0AX1**	**6AV2128-3QB36-0AX1**	**6AV2128-3UB36-0AX1**	**6AV2128-3XB36-0AX1**
	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP1900 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	No	No	No	No	No	No
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
Use in hazardous areas						
• ATEX Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class II Division 2	Yes	Yes	Yes	Yes	Yes	Yes
• FM Class I Division 2	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
• FM Class II Division 2	No	No	No	No	No	No
Marine approval						
• Germanischer Lloyd (GL)	No; included in DNV	No; included in DNV	No; included in DNV	No; included in DNV	No; included in DNV	No; included in DNV
• American Bureau of Shipping (ABS)	Yes	Yes	Yes	Yes	Yes	Yes
• Bureau Veritas (BV)	Yes	Yes	Yes	Yes	Yes	Yes
• Det Norske Veritas (DNV)	Yes	Yes	Yes	Yes	Yes	Yes
• Korean Register of Shipping (KRS)	Yes	Yes	Yes	Yes	Yes	Yes
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes	Yes	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes	Yes	Yes	Yes
• Chinese Classification Society (CCS)	Yes	Yes	Yes	Yes	Yes	Yes
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration						
Configuration software						
• WinCC Unified Comfort Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
• WinCC Unified PC Engineering (TIA Portal)	Yes	Yes	Yes	Yes	Yes	Yes
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32

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Technical specifications

Article number	**6AV2128-3GB36-0AX1**	**6AV2128-3KB36-0AX1**	**6AV2128-3MB36-0AX1**	**6AV2128-3QB36-0AX1**	**6AV2128-3UB36-0AX1**	**6AV2128-3XB36-0AX1**
	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP1900 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut
Functionality under WinCC Unified						
Applications/options						
• Writer	Yes	Yes	Yes	Yes	Yes	Yes
• Calc	Yes					
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• PDF viewer	Yes					
• Media player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	No	No	No	No	No	No
• Unified Collaboration	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	No					
JavaScript	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Alarm system						
• Bit messages						
- Number of bit messages	9 000	9 000	9 000	9 000	9 000	9 000
• Analog messages						
- Number of analog messages	300	300	300	300	300	300
• Message buffer	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive	Yes; Configured as alarm archive
- Circulating buffer	Yes	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes	Yes
Parameter set management (recipes)						
• Number of parameter set types	750	750	750	750	750	750
• Size of internal parameter set memory	12 Mbyte			12 Mbyte		
• Parameter set memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Variables						
• Number of variables per device	8 000	8 000	8 000	8 000	8 000	8 000
• Number of variables per screen	600	600	600	800	800	800
Image objects						
• Number of objects per image	800	800	800	1 200	1 200	1 200
Archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of roles	50	50	50	50	50	50
• Number of users	200	200	200	200	200	200
• Central user administration	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17	Yes; as of WinCC V17
Transfer (upload/download)						
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	No	No	No	No	No	No
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• Number of S7 connections	16	16	16	16	16	16
• LOGO!	No	No	No	No	No	No
• SIMOTION	No	No	No	No	No	No
• OPC UA Client	No	No	No	No	No	No
• OPC UA Server	No	No	No	No	No	No
• Software Controller/Open Controller	No	No	No	No	No	No

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Technical specifications

Article number	**6AV2128-3GB36-0AX1**	**6AV2128-3KB36-0AX1**	**6AV2128-3MB36-0AX1**	**6AV2128-3QB36-0AX1**	**6AV2128-3UB36-0AX1**	**6AV2128-3XB36-0AX1**
	SIMATIC HMI MTP700 Unified Comfort Neutr	SIMATIC HMI MTP1000 Unified Comfort Neut	SIMATIC HMI MTP1200 Unified Comfort Neut	SIMATIC HMI MTP1500 Unified Comfort Neut	SIMATIC HMI MTP1900 Unified Comfort Neut	SIMATIC HMI MTP2200 Unified Comfort Neut
Peripherals/Options						
Peripherals	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader	Printer, barcode reader
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	No	No	No	No	No	No
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	No	No	No	No	No	No
Mechanics/material						
Enclosure material (front)						
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
Dimensions						
Width of the housing front	214 mm	280 mm	326 mm	398 mm	464 mm	529 mm
Height of housing front	158 mm	205 mm	237 mm	257 mm	294 mm	331 mm
Mounting cutout, width	197 mm	264 mm	310 mm	382 mm	448 mm	513 mm
Mounting cutout, height	141 mm	189 mm	221 mm	241 mm	278 mm	315 mm
Overall depth	64 mm	64 mm	64 mm	73 mm	73 mm	73 mm
Weights						
Weight (without packaging)	1.4 kg	2.1 kg	2.8 kg	4.3 kg	5.5 kg	6.9 kg

More information

Every Unified Comfort Panel is available in two different design variants.

- The standard design has Siemens and SIMATIC HMI branding on the front and a silver-colored aluminum frame.
- The neutral design has no branding on the front and a black aluminum frame.

Note:

The devices with the Article No. extension *-0AX1 have additional certifications for explosion-proof areas as well as for use in shipbuilding (see technical specifications). All other functions and properties are fully compatible with the devices with Article No. extension *-0AX0.

For selected SIMATIC HMI Unified Comfort Panels, the option exists to apply the customer name or logo or to select the membrane color in accordance with the customer's corporate design. This is also possible for small quantities.

More information is available at:

http://www.siemens.com/express-hmi-tool

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Overview

SIMATIC HMI Comfort Panels - Standard devices

- Excellent HMI functionality for demanding applications
- Widescreen TFT displays with 4", 7", 9", 12", 15", 19" and 22" diagonals (all 16 million colors) with up to 40% more visualization area as compared to the predecessor devices
- Integrated high-end functionality with archives, scripts, PDF/Word/Excel viewer, Internet Explorer, Media Player and Web Server
- Dimmable displays from 0 to 100% via PROFIenergy, via the HMI project or via a controller
- Modern industrial design, cast aluminum fronts for 7" upwards
- Upright installation for all touch devices
- Data security in the event of a power failure for the device and for the SIMATIC HMI Memory Card
- Innovative service and commissioning concept
- Maximum performance with short screen refresh times
- Suitable for extremely harsh industrial environments thanks to extended approvals such as ATEX 2/22 and marine approvals
- All versions can be used as an OPC UA client or as a server
- Key-operated devices with LED in every function key and new text input mechanism, similar to the keypads of mobile phones
- All keys have a service life of 2 million operations
- Configuring with the WinCC engineering software of the TIA Portal engineering framework

Note:

A 7" and a 15" Comfort Outdoor version are available. These devices have been specially designed for outdoor applications in difficult environments. Best display quality, even under sunlight, UV-resistant fronts and much more.

For more information, please go to:

http://www.siemens.com/comfort-panels

Ordering data

	Article No.
SIMATIC HMI Comfort Panels	
Key and touch devices	
SIMATIC HMI KTP400 Comfort Key/touch operation; 4" widescreen display	**6AV2124-2DC01-0AX0**
Touch devices	
SIMATIC HMI TP700 Comfort Touch operation; 7" widescreen display	**6AV2124-0GC01-0AX0**
SIMATIC HMI TP900 Comfort Touch operation; 9" widescreen display	**6AV2124-0JC01-0AX0**
SIMATIC HMI TP1200 Comfort Touch operation; 12" widescreen display	**6AV2124-0MC01-0AX0**
SIMATIC HMI TP1500 Comfort Touch operation; 15" widescreen display	**6AV2124-0QC02-0AX1**
SIMATIC HMI TP1900 Comfort Touch operation; 19" widescreen display	**6AV2124-0UC02-0AX1**
SIMATIC HMI TP2200 Comfort Touch operation; 22" widescreen display	**6AV2124-0XC02-0AX1**
Key devices	
SIMATIC HMI KP400 Comfort Key operation; 4" widescreen display	**6AV2124-1DC01-0AX0**
SIMATIC HMI KP700 Comfort Key operation; 7" widescreen display	**6AV2124-1GC01-0AX0**
SIMATIC HMI KP900 Comfort Key operation; 9" widescreen display	**6AV2124-1JC01-0AX0**
SIMATIC HMI KP1200 Comfort Key operation; 12" widescreen display	**6AV2124-1MC01-0AX0**
SIMATIC HMI KP1500 Comfort Key operation; 15" widescreen display	**6AV2124-1QC02-0AX1**
Accessories	See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

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Technical specifications

Article number	**6AV2124-2DC01-0AX0** SIMATIC HMI KTP400 Comfort
General information	
Product type designation	KTP400 Comfort
Display	
Design of display	TFT
Screen diagonal	4.3 in
Number of colors	16 777 216
Resolution (pixels)	
• Horizontal image resolution	480 pixel
• Vertical image resolution	272 pixel
Backlighting	
• MTBF backlighting (at 25 °C)	80 000 h
Control elements	
Keyboard fonts	
• Function keys	
- Number of function keys	4
Touch operation	
• Design as touch screen	Yes; Analog-resistive
Installation type/mounting	
Wall mounting/direct mounting	No
Mounting in portrait format possible	Yes
Supply voltage	
Rated value (DC)	24 V
Memory	
Memory available for user data	4 Mbyte
Type of output	
• Speaker	No
Time of day	
Clock	
• Hardware clock (real-time)	Yes
• retentive	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes
Interfaces	
Number of industrial Ethernet interfaces	1
Number of RS 485 interfaces	1; RS 422 / 485 combined
Number of USB interfaces	1; USB 2.0
• USB Mini B	1; 5-pole
Number of SD card slots	2
Industrial Ethernet	
• Number of ports of the integrated switch	1; No switch integrated

Article number	**6AV2124-2DC01-0AX0** SIMATIC HMI KTP400 Comfort
Protocols	
PROFINET	Yes
IRT	No
PROFIBUS	Yes
MPI	Yes
Redundancy mode	
Media redundancy	
- MRP	No
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4x at the front	Yes
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
Use in hazardous areas	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• IECEx Zone 2	Yes
• IECEx Zone 22	Yes
• cULus Class I Zone 2, Division 2	Yes
• FM Class I Division 2	Yes
Marine approval	
• Germanischer Lloyd (GL)	Yes
• American Bureau of Shipping (ABS)	Yes
• Bureau Veritas (BV)	Yes
• Det Norske Veritas (DNV)	Yes
• Lloyds Register of Shipping (LRS)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes
• Polski Rejestr Statkow (PRS)	No
Ambient conditions	
Ambient temperature during operation	
Operation (vertical installation)	
- For vertical installation, min.	0 °C
- For vertical installation, max.	50 °C
Relative humidity	
• Operation, max.	90 %; no condensation
Configuration	
Configuration software	
• WinCC Comfort (TIA Portal)	Yes; from V11
Languages	
Online languages	
• Number of online/runtime languages	32

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Technical specifications

Article number	**6AV2124-2DC01-0AX0**
	SIMATIC HMI KTP400 Comfort
Functionality under WinCC (TIA Portal)	
Applications/options	
• Web browser	Yes
• Pocket Word	Yes
• Pocket Excel	Yes
• PDF Viewer	Yes
• Media Player	Yes
• SIMATIC WinCC Sm@rtServer	Yes
• SIMATIC WinCC Audit	Yes
Number of Visual Basic Scripts	Yes
Task planner	
• time-controlled	Yes
• task-controlled	Yes
Message system	
• Bit messages	Yes
- Number of bit messages	2 000
• Analog messages	Yes
- Number of analog messages	50
Recipe management	
• Number of recipes	100
• Size of internal recipe memory	512 kbyte
• Recipe memory expandable	Yes
Variables	
• Number of variables per device	1 024
• Number of variables per screen	50
Images	
• Number of configurable images	500
Archiving	
• Number of archives per device	10
Security	
• Number of user groups	50
• Number of users	50
• SIMATIC Logon	Yes
Logging through printer	
• Alarms	Yes
• Report (shift log)	Yes
• Hardcopy	Yes
• Electronic print to file	Yes; PDF, HTML
Transfer (upload/download)	
• MPI/PROFIBUS DP	Yes
• Ethernet	Yes

Article number	**6AV2124-2DC01-0AX0**
	SIMATIC HMI KTP400 Comfort
Process coupling	
• S7-1200	Yes
• S7-1500	Yes
• S7-200	Yes
• S7-300/400	Yes
• LOGO!	Yes
• WinAC	Yes
• SIMOTION	Yes
• Allen Bradley (EtherNet/IP)	Yes
• Allen Bradley (DF1)	Yes
• Mitsubishi (MC TCP/IP)	Yes
• Mitsubishi (FX)	Yes
• OMRON (FINS TCP)	No
• OMRON (LINK/Multilink)	Yes
• Modicon (Modbus TCP/IP)	Yes
• Modicon (Modbus)	Yes
• OPC UA Client	Yes
• OPC UA Server	Yes
Peripherals/Options	
Printer	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes; Up to 128 MB
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB
USB memory	Yes
Network camera	Yes
Mechanics/material	
Enclosure material (front)	
• Plastic	Yes
• Aluminum	No
• Stainless steel	No
Dimensions	
Width of the housing front	140 mm
Height of housing front	116 mm
Mounting cutout, width	123 mm
Mounting cutout, height	99 mm
Overall depth	49 mm
Weights	
Weight (without packaging)	0.6 kg

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Technical specifications

Article number	**6AV2124-1DC01-0AX0**	**6AV2124-1GC01-0AX0**	**6AV2124-1JC01-0AX0**	**6AV2124-1MC01-0AX0**	**6AV2124-1QC02-0AX1**
	SIMATIC HMI KP400 Comfort	SIMATIC HMI KP700 Comfort	SIMATIC HMI KP900 Comfort	SIMATIC HMI KP1200 Comfort	SIMATIC HMI KP1500 Comfort
General information					
Product type designation	KP400 Comfort	KP700 Comfort	KP900 Comfort	KP1200 Comfort	KP1500 Comfort
Display					
Design of display	TFT	TFT	TFT	TFT	TFT
Screen diagonal	4.3 in	7 in	9 in	12.1 in	15.4 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)					
• Horizontal image resolution	480 pixel	800 pixel	800 pixel	1 280 pixel	1 280 pixel
• Vertical image resolution	272 pixel	480 pixel	480 pixel	800 pixel	800 pixel
Backlighting					
• MTBF backlighting (at 25 °C)	80 000 h	80 000 h	80 000 h	80 000 h	80 000 h
Control elements					
Keyboard fonts					
• Function keys					
- Number of function keys	8	24	26	34	36
Touch operation					
• Design as touch screen	No; without	No; without	No; without	No; without	No; without
Installation type/mounting					
Wall mounting/direct mounting	No	No	No	No	
Mounting in portrait format possible	No	No	No	No	No
Supply voltage					
Rated value (DC)	24 V	24 V	24 V	24 V	24 V
Memory					
Memory available for user data	4 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	24 Mbyte
Type of output					
Acoustics					
• Speaker	No	Yes	Yes	Yes	Yes
Time of day					
Clock					
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes
Interfaces					
Number of industrial Ethernet interfaces	1	1; 2 ports (switch)	1; 2 ports (switch)	1; 2 ports (switch)	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	1; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0
• USB Mini B	1; 5-pole	1; 5-pole	1; 5-pole	1; 5-pole	
Number of SD card slots	2	2	2	2	2
Industrial Ethernet					
• Number of ports of the integrated switch	1; No switch integrated	2	2	2	2

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Technical specifications

Article number	**6AV2124-1DC01-0AX0**	**6AV2124-1GC01-0AX0**	**6AV2124-1JC01-0AX0**	**6AV2124-1MC01-0AX0**	**6AV2124-1QC02-0AX1**
	SIMATIC HMI KP400 Comfort	SIMATIC HMI KP700 Comfort	SIMATIC HMI KP900 Comfort	SIMATIC HMI KP1200 Comfort	SIMATIC HMI KP1500 Comfort
Protocols					
PROFINET	Yes	Yes	Yes	Yes	Yes
IRT	No	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes
PROFIBUS	Yes	Yes	Yes	Yes	Yes
MPI	Yes	Yes	Yes	Yes	Yes
Redundancy mode					
Media redundancy					
- MRP	No	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes
Degree and class of protection					
IP (at the front)	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20
NEMA (front)					
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates					
CE mark	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)					Yes
Use in hazardous areas					
• ATEX Zone 2	Yes	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes	Yes; For inscription on device rating plate
• cULus Class II Division 2					No; Available soon
• FM Class I Division 2	Yes	Yes	Yes	Yes	Yes; For inscription on device rating plate
• FM Class II Division 2					No; Available soon
Marine approval					
• Germanischer Lloyd (GL)	Yes	Yes	Yes	Yes; As of product version: 10	No
• American Bureau of Shipping (ABS)	Yes	Yes	Yes	Yes; As of product version: 10	No
• Bureau Veritas (BV)	Yes	Yes	Yes	Yes; As of product version: 10	No
• Det Norske Veritas (DNV)	Yes	Yes	Yes	Yes; As of product version: 10	No
• Korean Register of Shipping (KRS)					No
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes	Yes; As of product version: 10	No
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes	Yes; As of product version: 10	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No
• Chinese Classification Society (CCS)					No
Ambient conditions					
Suited for indoor use					Yes
Suited for outdoor use					No
Ambient temperature during operation					
Operation (vertical installation)					
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C; (55 °C, see entry ID: 64847814)			
Relative humidity					
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation

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Technical specifications

Article number	**6AV2124-1DC01-0AX0**	**6AV2124-1GC01-0AX0**	**6AV2124-1JC01-0AX0**	**6AV2124-1MC01-0AX0**	**6AV2124-1QC02-0AX1**
	SIMATIC HMI KP400 Comfort	SIMATIC HMI KP700 Comfort	SIMATIC HMI KP900 Comfort	SIMATIC HMI KP1200 Comfort	SIMATIC HMI KP1500 Comfort
Configuration					
Configuration software					
• WinCC Comfort (TIA Portal)	Yes; from V11	Yes; from V11	Yes; from V11	Yes; from V11	Yes; V14 SP1 HSP and higher
Languages					
Online languages					
• Number of online/runtime languages	32	32	32	32	32
Functionality under WinCC (TIA Portal)					
Applications/options					
• Web browser	Yes	Yes	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes	Yes	Yes
Task planner					
• time-controlled	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes
Message system					
• Bit messages	Yes	Yes	Yes	Yes	
- Number of bit messages	2 000	4 000	4 000	4 000	6 000
• Analog messages	Yes	Yes	Yes	Yes	
- Number of analog messages	50	200	200	200	200
Recipe management					
• Number of recipes	100	300	300	300	500
• Size of internal recipe memory	512 kbyte	2 Mbyte	2 Mbyte	2 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes	Yes	Yes
Variables					
• Number of variables per device	1 024	2 048	2 048	2 048	4 096
• Number of variables per screen	50	400	400	400	400
Images					
• Number of configurable images	500	500	500	500	750
Archiving					
• Number of archives per device	10	50	50	50	50
Security					
• Number of user groups	50	50	50	50	50
• Number of users	50	50	50	50	50
• SIMATIC Logon	Yes	Yes	Yes	Yes	Yes
Logging through printer					
• Alarms	Yes	Yes	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML
Transfer (upload/download)					
• MPI/PROFIBUS DP	Yes	Yes	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV2124-1DC01-0AX0**	**6AV2124-1GC01-0AX0**	**6AV2124-1JC01-0AX0**	**6AV2124-1MC01-0AX0**	**6AV2124-1QC02-0AX1**
	SIMATIC HMI KP400 Comfort	SIMATIC HMI KP700 Comfort	SIMATIC HMI KP900 Comfort	SIMATIC HMI KP1200 Comfort	SIMATIC HMI KP1500 Comfort
Process coupling					
• S7-1200	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes
Peripherals/Options					
Printer	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes
Mechanics/material					
Enclosure material (front)					
• Plastic	Yes	No	No	No	No
• Aluminum	No	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No
Dimensions					
Width of the housing front	152 mm	308 mm	362 mm	454 mm	483 mm
Height of housing front	188 mm	204 mm	230 mm	289 mm	310 mm
Mounting cutout, width	135 mm	281 mm	338 mm	434 mm	450 mm
Mounting cutout, height	171 mm	177 mm	206 mm	269 mm	291 mm
Overall depth	49 mm	63 mm	63 mm	65 mm	75 mm
Weights					
Weight (without packaging)	0.8 kg	2.2 kg	2.7 kg	4.4 kg	4.7 kg

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Technical specifications

Article number	6AV2124-0GC01-0AX0	6AV2124-0JC01-0AX0	6AV2124-0MC01-0AX0	6AV2124-0QC02-0AX1	6AV2124-0UC02-0AX1	6AV2124-0XC02-0AX1
	SIMATIC HMI TP700 Comfort	SIMATIC HMI TP900 Comfort	SIMATIC HMI TP1200 Comfort	SIMATIC HMI TP1500 Comfort	SIMATIC HMI TP1900 Comfort	SIMATIC HMI TP2200 Comfort
General information						
Product type designation	TP700 Comfort	TP900 Comfort	TP1200 Comfort	TP1500 Comfort	TP1900 Comfort	TP2200 Comfort
Display						
Design of display	TFT	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	9 in	12.1 in	15.4 in	18.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)						
• Horizontal image resolution	800 pixel	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel	1 920 pixel
• Vertical image resolution	480 pixel	480 pixel	800 pixel	800 pixel	768 pixel	1 080 pixel
Backlighting						
• MTBF backlighting (at 25 °C)	80 000 h	80 000 h	80 000 h	80 000 h	50 000 h	30 000 h
Control elements						
Keyboard fonts						
• Function keys						
- Number of function keys	0	0	0	0	0	0
Touch operation						
• Design as touch screen	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive
Installation type/mounting						
Wall mounting/direct mounting	No	No	No			
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Memory						
Memory available for user data	12 Mbyte	12 Mbyte	12 Mbyte	24 Mbyte	24 Mbyte	24 Mbyte
Type of output						
Acoustics						
• Speaker	Yes	Yes	Yes	Yes	Yes	Yes
Time of day						
Clock						
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes	Yes
Interfaces						
Number of industrial Ethernet interfaces	1; 2 ports (switch)	1; 2 ports (switch)	1; 2 ports (switch)	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0
• USB Mini B	1; 5-pole	1; 5-pole	1; 5-pole			
Number of SD card slots	2	2	2	2	2	2
Industrial Ethernet						
• Number of ports of the integrated switch	2	2	2	2	2	2
Protocols						
PROFINET	Yes	Yes	Yes	Yes	Yes	Yes
IRT	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes	Yes	Yes
PROFIBUS	Yes	Yes	Yes	Yes	Yes	Yes
MPI	Yes	Yes	Yes	Yes	Yes	Yes
Redundancy mode						
Media redundancy						
- MRP	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes	Yes	Yes

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Technical specifications

Article number	6AV2124-0GC01-0AX0	6AV2124-0JC01-0AX0	6AV2124-0MC01-0AX0	6AV2124-0QC02-0AX1	6AV2124-0UC02-0AX1	6AV2124-0XC02-0AX1
	SIMATIC HMI TP700 Comfort	SIMATIC HMI TP900 Comfort	SIMATIC HMI TP1200 Comfort	SIMATIC HMI TP1500 Comfort	SIMATIC HMI TP1900 Comfort	SIMATIC HMI TP2200 Comfort
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)				Yes	Yes	Yes
Use in hazardous areas						
• ATEX Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• cULus Class II Division 2				No; Available soon	No; Available soon	No; Available soon
• FM Class I Division 2	Yes	Yes	Yes	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• FM Class II Division 2				No; Available soon	No; Available soon	No; Available soon
Marine approval						
• Germanischer Lloyd (GL)	Yes	Yes	Yes; As of product version: 10	No	No	No
• American Bureau of Shipping (ABS)	Yes	Yes	Yes; As of product version: 10	No	No	No
• Bureau Veritas (BV)	Yes	Yes	Yes; As of product version: 10	No	No	No
• Det Norske Veritas (DNV)	Yes	Yes	Yes; As of product version: 10	No	No	No
• Korean Register of Shipping (KRS)				No	No	No
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes; As of product version: 10	No	No	No
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes; As of product version: 10	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No	No
• Chinese Classification Society (CCS)				No	No	No
Ambient conditions						
Suited for indoor use				Yes	Yes	Yes
Suited for outdoor use				No	No	No
Ambient temperature during operation						
Operation (vertical installation)						
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C; (55 °C, see entry ID: 64847814)	50 °C; (55 °C, see entry ID: 64847814)	50 °C; (55 °C, see entry ID: 64847814)	50 °C; (55 °C, see entry ID: 64847814)	45 °C	45 °C
Relative humidity						
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration						
Configuration software						
• WinCC Comfort (TIA Portal)	Yes; from V11	Yes; from V11	Yes; from V11	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher
Languages						
Online languages						
• Number of online/runtime languages	32	32	32	32	32	32

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Technical specifications

Article number	**6AV2124-0GC01-0AX0**	**6AV2124-0JC01-0AX0**	**6AV2124-0MC01-0AX0**	**6AV2124-0QC02-0AX1**	**6AV2124-0UC02-0AX1**	**6AV2124-0XC02-0AX1**
	SIMATIC HMI TP700 Comfort	SIMATIC HMI TP900 Comfort	SIMATIC HMI TP1200 Comfort	SIMATIC HMI TP1500 Comfort	SIMATIC HMI TP1900 Comfort	SIMATIC HMI TP2200 Comfort
Functionality under WinCC (TIA Portal)						
Applications/options						
• Web browser	Yes	Yes	Yes	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes	Yes	Yes	Yes
Task planner						
• time-controlled	Yes	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes	Yes
Message system						
• Bit messages	Yes	Yes	Yes			
- Number of bit messages	4 000	4 000	4 000	6 000	6 000	6 000
• Analog messages	Yes	Yes	Yes			
- Number of analog messages	200	200	200	200	200	200
Recipe management						
• Number of recipes	300	300	300	500	500	500
• Size of internal recipe memory	2 Mbyte	2 Mbyte	2 Mbyte	4 Mbyte	4 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes	Yes	Yes	Yes
Variables						
• Number of variables per device	2 048	2 048	2 048	4 096	4 096	4 096
• Number of variables per screen	400	400	400	400	400	400
Images						
• Number of configurable images	500	500	500	750	750	750
Archiving						
• Number of archives per device	50	50	50	50	50	50
Security						
• Number of user groups	50	50	50	50	50	50
• Number of users	50	50	50	50	50	50
• SIMATIC Logon	Yes	Yes	Yes	Yes	Yes	Yes
Logging through printer						
• Alarms	Yes	Yes	Yes	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes	Yes	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML
Transfer (upload/download)						
• MPI/PROFIBUS DP	Yes	Yes	Yes	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	6AV2124-0GC01-0AX0	6AV2124-0JC01-0AX0	6AV2124-0MC01-0AX0	6AV2124-0QC02-0AX1	6AV2124-0UC02-0AX1	6AV2124-0XC02-0AX1
	SIMATIC HMI TP700 Comfort	SIMATIC HMI TP900 Comfort	SIMATIC HMI TP1200 Comfort	SIMATIC HMI TP1500 Comfort	SIMATIC HMI TP1900 Comfort	SIMATIC HMI TP2200 Comfort
Process coupling						
• S7-1200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes	Yes
Peripherals/Options						
Printer	Yes	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes	Yes
Mechanics/material						
Enclosure material (front)						
• Plastic	No	No	No	No	No	No
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	No	No	No	No	No	No
Dimensions						
Width of the housing front	214 mm	274 mm	330 mm	415 mm	483 mm	560 mm
Height of housing front	158 mm	190 mm	241 mm	310 mm	337 mm	380 mm
Mounting cutout, width	197 mm	251 mm	310 mm	396 mm	465 mm	542 mm
Mounting cutout, height	141 mm	166 mm	221 mm	291 mm	319 mm	362 mm
Overall depth	63 mm	63 mm	65 mm	75 mm	75 mm	75 mm
Weights						
Weight (without packaging)	1.4 kg	1.9 kg	2.8 kg	4.4 kg	5.6 kg	6.7 kg

More information

More information is available on the Internet at:

http://www.siemens.com/comfort-panels

You can find an overview of approved printers, supply sources and printer settings on the Internet at:

http://support.industry.siemens.com/cs/ww/en/view/11376409

Certain SIMATIC HMI Comfort Panels allow the application of a customer name or logo, or selection of the membrane color in accordance with the customer's corporate design. This is also possible for small quantities.

More information is available at:

http://www.siemens.com/express-hmi-tool

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SIPLUS Comfort Panels Standard

Overview

- Excellent HMI functionality for demanding applications
- Widescreen TFT displays with 4", 7", 9", 12", 15", 19" and 22" diagonals (all 16 million colors) with up to 40% more visualization area as compared to the predecessor devices
- Integrated high-end functionality with archives, scripts, PDF/Word/Excel viewer, Internet Explorer, Media Player
- Dimmable displays from 0 to 100% via PROFIenergy, via the HMI project or via a controller
- Modern industrial design, cast aluminum fronts for 7" upwards
- Upright installation for all touch devices
- Optimal selection option: seven touch and five key versions are available
- Data security in the event of a power failure for the device and for the SIMATIC HMI memory card
- Innovative service and commissioning concept through second SD card (automatic backup)
- Easy project transfer via standard cable (standard Ethernet cable, standard USB cable)
- Maximum performance with short screen refresh times
- Suitable for extremely harsh industrial environments thanks to extended approvals such as ATEX 2/22
- Wide range of communication options: PROFIBUS and PROFINET onboard; 2x PROFINET with integrated switch for 7" models or larger; plus 1 additional PROFINET with Gigabit support for 15" models or larger
- All variants can be used as an OPC UA client or as an OPC DA server
- Key-operated devices with LED in every function key and new text input mechanism, similar to the keypads of mobile phones
- Key-operated devices with stamped keys for optimum tactile feedback
- All keys have a service life of 2 million operations
- Configuring with the WinCC engineering software of the TIA Portal

Note:

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

Ordering data

	Article No.
SIPLUS HMI Comfort Panels, Keys and Touch	
SIPLUS HMI KTP400 Comfort	**6AG1124-2DC01-4AX0**
SIPLUS HMI Comfort Panels, Touch	
SIPLUS HMI TP700 Comfort	**6AG1124-0GC01-4AX0**
SIPLUS HMI TP900 Comfort	**6AG1124-0JC01-4AX0**
SIPLUS HMI TP1200 Comfort	**6AG1124-0MC01-4AX0**
SIPLUS HMI TP1500 Comfort	**6AG1124-0QC02-4AX1**
SIPLUS HMI TP1900 Comfort	**6AG1124-0UC02-4AX1**
SIPLUS HMI TP2200 Comfort	**6AG1124-0XC02-4AX1**
SIPLUS HMI Comfort Panels, Keys	
SIPLUS HMI KP400 Comfort	**6AG1124-1DC01-4AX0**
SIPLUS HMI KP700 Comfort	**6AG1124-1GC01-4AX0**
SIPLUS HMI KP900 Comfort	**6AG1124-1JC01-4AX0**
SIPLUS HMI KP1200 Comfort	**6AG1124-1MC01-4AX0**
SIPLUS HMI KP1500 Comfort	**6AG1124-1QC02-4AX1**
Accessories	See HMI accessories

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Technical specifications

Article number	**6AG1124-2DC01-4AX0**	**6AG1124-0GC01-4AX0**	**6AG1124-0JC01-4AX0**	**6AG1124-0MC01-4AX0**
	SIPLUS HMI KTP400 Comfort	SIPLUS HMI TP700 Comfort	SIPLUS HMI TP900 Comfort	SIPLUS HMI TP1200 Comfort
Ambient conditions				
Suited for indoor use	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No
Ambient temperature during operation				
Operation (vertical installation)				
- For vertical installation, min.	0 °C; = Tmin	0 °C; = Tmin	0 °C; = Tmin	0 °C; = Tmin
- For vertical installation, max.	50 °C; = Tmax	50 °C; = Tmax	50 °C; = Tmax	50 °C; = Tmax
Altitude during operation relating to sea level				
• Installation altitude above sea level, max.	5 000 m	5 000 m	5 000 m	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
Relative humidity				
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance				
Coolants and lubricants				
- Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems				
- to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
- to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
- to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea				
- to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
- to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
- to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *

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Technical specifications

Article number	**6AG1124-2DC01-4AX0**	**6AG1124-0GC01-4AX0**	**6AG1124-0JC01-4AX0**	**6AG1124-0MC01-4AX0**
	SIPLUS HMI KTP400 Comfort	SIPLUS HMI TP700 Comfort	SIPLUS HMI TP900 Comfort	SIPLUS HMI TP1200 Comfort
Usage in industrial process technology				
- Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)
- Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)			
Remark				
- Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating				
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A

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Technical specifications

Article number	**6AG1124-1DC01-4AX0**	**6AG1124-1GC01-4AX0**	**6AG1124-1JC01-4AX0**	**6AG1124-1MC01-4AX0**	**6AG1124-1QC02-4AX1**
	SIPLUS HMI KP400 Comfort	SIPLUS HMI KP700 Comfort	SIPLUS HMI KP900 Comfort	SIPLUS HMI KP1200 Comfort	SIPLUS HMI KP1500 Comfort
Ambient conditions					
Suited for indoor use	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No
Ambient temperature during operation					
Operation (vertical installation)					
- For vertical installation, min.	0 °C; = Tmin	0 °C; = Tmin	0 °C; = Tmin	0 °C; = Tmin	0 °C
- For vertical installation, max.	50 °C; = Tmax	50 °C; = Tmax	50 °C; = Tmax	50 °C; = Tmax	50 °C; (55 °C, see entry ID: 64847814)
Altitude during operation relating to sea level					
• Installation altitude above sea level, max.	5 000 m	5 000 m	5 000 m	5 000 m	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)				
Relative humidity					
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)				
Resistance					
Coolants and lubricants					
- Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems					
- to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request				
- to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *				
- to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea					
- to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request				
- to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *				
- to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology					
- Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)				
- Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)				
Remark					
- Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!				
Conformal coating					
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A

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SIPLUS Comfort Panels Standard

Technical specifications

Article number	**6AG1124-0QC02-4AX1**	**6AG1124-0UC02-4AX1**	**6AG1124-0XC02-4AX1**
	SIPLUS HMI TP1500 Comfort	SIPLUS HMI TP1900 Comfort	SIPLUS HMI TP2200 Comfort
Ambient conditions			
Suited for indoor use	Yes	Yes	Yes
Suited for outdoor use	No	No	No
Ambient temperature during operation			
Operation (vertical installation)			
- For vertical installation, min.	0 °C	0 °C; = Tmin	0 °C; = Tmin
- For vertical installation, max.	50 °C; (55 °C, see entry ID: 64847814)	45 °C; = Tmax	45 °C; = Tmax
Altitude during operation relating to sea level			
• Installation altitude above sea level, max.	5 000 m	5 000 m	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)		
Relative humidity			
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance			
Coolants and lubricants			
- Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems			
- to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request		
- to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *		
- to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea			
- to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request		
- to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *		
- to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology			
- Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)	Yes; Class 3 (excluding trichlorethylene)
- Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)		
Remark			
- Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating			
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection	Yes; Type 1 protection	Yes; Type 1 protection
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A

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More information

More information is available on the Internet at:

http://www.siemens.com/comfort-panels

You can find an overview of approved printers, supply sources and printer settings on the Internet at:

http://support.industry.siemens.com/cs/ww/en/view/11376409

Certain SIMATIC HMI Comfort Panels allow the application of a customer name or logo, or selection of the membrane color in accordance with the customer's corporate design. This is also possible for small quantities.

http://www.siemens.com/express-hmi-tool

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Comfort Panels Outdoor

Overview

SIMATIC HMI Comfort Panels Outdoor

Special HMI Panels have been developed which are designed to withstand outdoor environments.

It's not only extreme temperatures which call for robust hardware. Direct sunlight, too, must not be allowed to impair display readability and the panel front must be protected from UV radiation.
The specially-bonded Outdoor fronts and the rugged hardware of the Outdoor Panels make the SIMATIC HMI Comfort Panels Outdoor a reliable partner in this environment.

- For outdoor operation without additional measures
- 7" and 15" daylight-readable display, widescreen
- Automatic, central or manual dimming of the backlight, with integrated sensor
- Panel front 100% UV protected
- Front resistant to salt mist
- Front IP66 and Nema4 x (indoor/outdoor)
- Numerous explosion protection and shipbuilding certifications
- Extended operating temperature range: from -30 °C to +60 °C at 3 000 m installation altitude
- TIA Portal central engineering tool (WinCC V13 SP1&HSP or higher)
- Comfort Panel functionality and performance

Notice:

The 7" Comfort Panel Outdoor corresponds to a 7" Comfort Panel Standard, the 15" Comfort Panel Outdoor corresponds to a 12" Comfort Panel Standard in respect of performance, functionality and quantity structure.

http://www.siemens.com/comfort-panels-outdoor

Ordering data

Ordering data	Article No.
SIMATIC HMI Comfort Panels Outdoor	
SIMATIC TP700 Comfort Panel Outdoor Touch operation, 7" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, configurable as from WinCC Comfort V13, SP1, HSP	**6AV2124-0GC13-0AX0**
SIMATIC TP1500 Comfort Panel Outdoor Touch operation, 15" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, configurable as from WinCC Comfort V13, SP1, HSP	**6AV2124-0QC13-0AX0**
Starter kit for SIMATIC HMI TP700 Comfort Panel Outdoor Contents: • 1x touch panel • 1x SD system outdoor card • 1x touch pen system • 1x SIMATIC WinCC Comfort	**6AV2124-0GC10-0SA0**
Starter kit for SIMATIC HMI TP1500 Comfort Panel Outdoor Contents: • 1x touch panel • 1x SD system outdoor card • 1x touch pen system • 1x SIMATIC WinCC Comfort	**6AV2124-0QC10-0SA0**
Accessories	See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

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Technical specifications

Article number	6AV2124-0GC13-0AX0	6AV2124-0QC13-0AX0
	SIMATIC HMI TP700 Comfort Outdoor	SIMATIC HMI TP1500 Comfort Outdoor
General information		
Product type designation	TP700 Comfort Outdoor	TP1500 Comfort Outdoor
Display		
Design of display	TFT, bonded, daylight-readable	TFT, bonded, daylight-readable
Screen diagonal	7 in	15.4 in
Number of colors	16 777 216	16 777 216
Resolution (pixels)		
• Horizontal image resolution	800 pixel	1 280 pixel
• Vertical image resolution	480 pixel	800 pixel
Backlighting		
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h
Control elements		
Keyboard fonts		
• Function keys		
- Number of function keys	0	0
Touch operation		
• Design as touch screen	Yes; Analog-resistive	Yes; Analog-resistive
Installation type/mounting		
Mounting in portrait format possible	Yes	Yes
Supply voltage		
Rated value (DC)	24 V	24 V
Memory		
Memory available for user data	12 Mbyte	12 Mbyte
Type of output		
Acoustics		
• Speaker	Yes	Yes
Time of day		
Clock		
• Hardware clock (real-time)	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes
Interfaces		
Number of industrial Ethernet interfaces	2	2
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0
• USB Mini B	1; 5-pole	1; 5-pole
Number of SD card slots	2	2
Industrial Ethernet		
• Number of ports of the integrated switch	2	2

Article number	6AV2124-0GC13-0AX0	6AV2124-0QC13-0AX0
	SIMATIC HMI TP700 Comfort Outdoor	SIMATIC HMI TP1500 Comfort Outdoor
Protocols		
PROFINET	Yes	Yes
IRT	Yes; WinCC V13 SP1 HSP or higher	Yes; WinCC V13 SP1 HSP or higher
PROFIBUS	Yes	Yes
MPI	Yes	Yes
Redundancy mode		
Media redundancy		
- MRP	Yes; WinCC V13 SP1 HSP or higher	Yes; WinCC V13 SP1 HSP or higher
Degree and class of protection		
IP (at the front)	IP66	IP66
IP (rear)	IP20	IP20
NEMA (front)		
• Enclosure Type 4x at the front	Yes	Yes
Standards, approvals, certificates		
CE mark	Yes	Yes
cULus	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes
KC approval	Yes	Yes
Use in hazardous areas		
• ATEX Zone 2	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• ATEX Zone 22	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• IECEx Zone 2	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• IECEx Zone 22	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• cULus Class I Zone 2, Division 2	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
• FM Class I Division 2	Yes; For inscription on device rating plate	Yes; For inscription on device rating plate
Marine approval		
• Germanischer Lloyd (GL)	Yes	Yes
• American Bureau of Shipping (ABS)	Yes	Yes
• Bureau Veritas (BV)	Yes; Available soon	Yes; Available soon
• Det Norske Veritas (DNV)	Yes	Yes
• Korean Register of Shipping (KRS)	No; Available soon	No; Available soon
• Lloyds Register of Shipping (LRS)	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes; Available soon	Yes; Available soon
• Polski Rejestr Statkow (PRS)	No	No
• Chinese Classification Society (CCS)	Yes; Available soon	Yes; Available soon
• Compass working clearance	5 m	5 m

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Technical specifications

Article number	6AV2124-0GC13-0AX0	6AV2124-0QC13-0AX0
	SIMATIC HMI TP700 Comfort Outdoor	SIMATIC HMI TP1500 Comfort Outdoor
Ambient conditions		
Suited for indoor use	Yes	Yes
Suited for outdoor use	Yes; Powder-coated, UV resistant	Yes; Powder-coated, UV resistant
Ambient temperature during operation		
Operation (vertical installation)		
- For vertical installation, min.	-30 °C	-30 °C
- For vertical installation, max.	60 °C; (55 °C, see entry ID: 64847814)	60 °C; (55 °C, see entry ID: 64847814)
Altitude during operation relating to sea level		
• Installation altitude above sea level, max.	3 000 m; Depending on the operating temperature	3 000 m; Depending on the operating temperature
Relative humidity		
• Operation, max.	90 %; no condensation	90 %; no condensation
Configuration		
Configuration software		
• WinCC Comfort (TIA Portal)	Yes; WinCC V13 SP1 Update 7 + HSP or higher	Yes; WinCC V13 SP1 Update 7 + HSP or higher
Languages		
Online languages		
• Number of online/runtime languages	32	32
Functionality under WinCC (TIA Portal)		
Applications/options		
• Web browser	Yes	Yes
• Pocket Word	Yes	Yes
• Pocket Excel	Yes	Yes
• PDF Viewer	Yes	Yes
• Media Player	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes
Task planner		
• time-controlled	Yes	Yes
• task-controlled	Yes	Yes
Message system		
• Bit messages		
- Number of bit messages	4 000	4 000
• Analog messages		
- Number of analog messages	200	200

Article number	6AV2124-0GC13-0AX0	6AV2124-0QC13-0AX0
	SIMATIC HMI TP700 Comfort Outdoor	SIMATIC HMI TP1500 Comfort Outdoor
Recipe management		
• Number of recipes	300	300
• Size of internal recipe memory	2 Mbyte	2 Mbyte
• Recipe memory expandable	Yes	Yes
Variables		
• Number of variables per device	2 048	2 048
• Number of variables per screen	400	400
Images		
• Number of configurable images	500	500
Archiving		
• Number of archives per device	50	50
Security		
• Number of user groups	50	50
• Number of users	50	50
• SIMATIC Logon	Yes	Yes
Logging through printer		
• Alarms	Yes	Yes
• Report (shift log)	Yes	Yes
• Hardcopy	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	Yes; PDF, HTML
Transfer (upload/download)		
• MPI/PROFIBUS DP	Yes	Yes
• Ethernet	Yes	Yes
Process coupling		
• S7-1200	Yes	Yes
• S7-1500	Yes	Yes
• S7-200	Yes	Yes
• S7-300/400	Yes	Yes
• LOGO!	Yes	Yes
• WinAC	Yes	Yes
• SIMOTION	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes
• Mitsubishi (FX)	Yes	Yes
• OMRON (FINS TCP)	No	No
• OMRON (LINK/Multilink)	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes
• Modicon (Modbus)	Yes	Yes
• OPC UA Client	Yes	Yes
• OPC UA Server	Yes	Yes

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Technical specifications

Article number	**6AV2124-0GC13-0AX0**	**6AV2124-0QC13-0AX0**
	SIMATIC HMI TP700 Comfort Outdoor	SIMATIC HMI TP1500 Comfort Outdoor
Peripherals/Options		
Printer	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes	Yes
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes
USB memory	Yes; e.g. USB RFID reader, see FAQ entry ID: 99808171	
Network camera	Yes; See FAQ Entry ID: 62383298 and entry ID: 65647473	
Accessories		
Expansion module	Optional e.g. USB RFID reader, see FAQ entry ID: 99808171	
Further accessories are available	Yes; Mounting clips and 2-pin power supply connector	
Mechanics/material		
Enclosure material (front)		
• Plastic	No	No
• Aluminum	Yes; Powder-coated, UV resistant	Yes; Powder-coated, UV resistant
• Stainless steel	No	No
Dimensions		
Width of the housing front	214 mm	415 mm
Height of housing front	158 mm	310 mm
Mounting cutout, width	197 mm	396 mm
Mounting cutout, height	141 mm	291 mm
Overall depth	67 mm	77 mm
Weights		
Weight (without packaging)	1.5 kg	4 kg
Other		
Note:	Power, quantity structure and performance correspond to a standard 7" Comfort Panel	Power, quantity structure and performance correspond to a standard 12" Comfort Panel

Article number	**6AV2124-0GC10-0SA0**	**6AV2124-0QC10-0SA0**
	Starter kit TP700 Comfort Outdoor	Starter kit TP1500 Comfort Outdoor
General information		
Product type designation	TP700 Outdoor	TP1500 Outdoor
Display		
Design of display	TFT, bonded, daylight-readable	TFT, bonded, daylight-readable
Screen diagonal	7 in	15.4 in
Number of colors	16 777 216	16 777 216
Resolution (pixels)		
• Horizontal image resolution	800 pixel	1 280 pixel
• Vertical image resolution	480 pixel	800 pixel
Backlighting		
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h
Control elements		
Keyboard fonts		
• Function keys		
- Number of function keys	0	0
Touch operation		
• Design as touch screen	Yes; Analog-resistive	Yes; Analog-resistive
Installation type/mounting		
Mounting in portrait format possible	Yes	Yes
Supply voltage		
Rated value (DC)	24 V	24 V
Memory		
Memory available for user data	12 Mbyte	12 Mbyte
Type of output		
Acoustics		
• Speaker	Yes	Yes
Time of day		
Clock		
• Hardware clock (real-time)	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes
Interfaces		
Number of industrial Ethernet interfaces	2	2
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0
• USB Mini B	1; 5-pole	1; 5-pole
Number of SD card slots	2	2
Industrial Ethernet		
• Number of ports of the integrated switch	2	2

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Technical specifications

Article number	6AV2124-0GC10-0SA0 Starter kit TP700 Comfort Outdoor	6AV2124-0QC10-0SA0 Starter kit TP1500 Comfort Outdoor
Protocols		
PROFINET	Yes	Yes
IRT	Yes; WinCC V13 SP1 HSP or higher	Yes; WinCC V13 SP1 HSP or higher
PROFIBUS	Yes	Yes
MPI	Yes	Yes
Redundancy mode		
Media redundancy		
- MRP	Yes; WinCC V13 SP1 HSP or higher	Yes; WinCC V13 SP1 HSP or higher
Degree and class of protection		
IP (at the front)	IP66	IP66
IP (rear)	IP20	IP20
NEMA (front)		
• Enclosure Type 4x at the front	Yes	Yes
Standards, approvals, certificates		
CE mark	Yes	Yes
cULus	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes
KC approval	Yes	Yes
Use in hazardous areas		
• ATEX Zone 2	Yes; For inscription on device rating plate	
• ATEX Zone 22	Yes; For inscription on device rating plate	
• IECEx Zone 2	Yes; For inscription on device rating plate	
• IECEx Zone 22	Yes; For inscription on device rating plate	
• cULus Class I Zone 2, Division 2	Yes; For inscription on device rating plate	
• FM Class I Division 2	Yes; For inscription on device rating plate	
Marine approval		
• Germanischer Lloyd (GL)	Yes	Yes
• American Bureau of Shipping (ABS)	Yes	Yes
• Bureau Veritas (BV)	Yes; Available soon	
• Det Norske Veritas (DNV)	Yes	Yes
• Korean Register of Shipping (KRS)	No; Available soon	
• Lloyds Register of Shipping (LRS)	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes; Available soon	
• Polski Rejestr Statkow (PRS)	No	No
• Chinese Classification Society (CCS)	Yes; Available soon	
• Compass working clearance	5 m	5 m

Article number	6AV2124-0GC10-0SA0 Starter kit TP700 Comfort Outdoor	6AV2124-0QC10-0SA0 Starter kit TP1500 Comfort Outdoor
Ambient conditions		
Suited for indoor use	Yes	Yes
Suited for outdoor use	Yes; Powder-coated, UV resistant	Yes; Powder-coated, UV resistant
Ambient temperature during operation		
Operation (vertical installation)		
- For vertical installation, min.	-30 °C	-30 °C
- For vertical installation, max.	60 °C; (55 °C, see entry ID: 64847814)	60 °C; (55 °C, see entry ID: 64847814)
Altitude during operation relating to sea level		
• Installation altitude above sea level, max.	3 000 m; Depending on the operating temperature	3 000 m; Depending on the operating temperature
Relative humidity		
• Operation, max.	90 %; no condensation	90 %; no condensation
Configuration		
Configuration software		
• WinCC Comfort (TIA Portal)	Yes; WinCC V13 SP1 Update 7 + HSP or higher	Yes; WinCC V13 SP1 Update 7 + HSP or higher
Languages		
Online languages		
• Number of online/runtime languages	32	32
Functionality under WinCC (TIA Portal)		
Applications/options		
• Web browser	Yes	Yes
• Pocket Word	Yes	Yes
• Pocket Excel	Yes	Yes
• PDF Viewer	Yes	Yes
• Media Player	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes
Task planner		
• time-controlled	Yes	Yes
• task-controlled	Yes	Yes
Message system		
• Bit messages		
- Number of bit messages	4 000	4 000
• Analog messages		
- Number of analog messages	200	200

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Technical specifications

Article number	6AV2124-0GC10-0SA0 Starter kit TP700 Comfort Outdoor	6AV2124-0QC10-0SA0 Starter kit TP1500 Comfort Outdoor
Recipe management		
• Number of recipes	300	300
• Size of internal recipe memory	2 Mbyte	2 Mbyte
• Recipe memory expandable	Yes	Yes
Variables		
• Number of variables per device	2 048	2 048
• Number of variables per screen	400	400
Images		
• Number of configurable images	500	500
Archiving		
• Number of archives per device	50	50
Security		
• Number of user groups	50	50
• Number of users	50	50
• SIMATIC Logon	Yes	Yes
Logging through printer		
• Alarms	Yes	Yes
• Report (shift log)	Yes	Yes
• Hardcopy	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	Yes; PDF, HTML
Transfer (upload/download)		
• MPI/PROFIBUS DP	Yes	Yes
• Ethernet	Yes	Yes
Process coupling		
• S7-1200	Yes	Yes
• S7-1500	Yes	Yes
• S7-200	Yes	Yes
• S7-300/400	Yes	Yes
• LOGO!	Yes	Yes
• WinAC	Yes	Yes
• SIMOTION	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes
• Mitsubishi (FX)	Yes	Yes
• OMRON (FINS TCP)	No	No
• OMRON (LINK/Multilink)	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes
• Modicon (Modbus)	Yes	Yes
• OPC UA Client	Yes	Yes
• OPC UA Server	Yes	Yes
Peripherals/Options		
Printer	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes	Yes
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes
USB memory	Yes; e.g. USB RFID reader, see FAQ entry ID: 99808171	
Network camera	Yes; See FAQ Entry ID: 62383298 and entry ID: 65647473	

Article number	6AV2124-0GC10-0SA0 Starter kit TP700 Comfort Outdoor	6AV2124-0QC10-0SA0 Starter kit TP1500 Comfort Outdoor
Accessories		
Expansion module	Optional e.g. USB RFID reader, see FAQ entry ID: 99808171	
Further accessories are available	Yes; incl. 1x outdoor SD system card, 1x touch pen system for resistive and capacitive touch displays, and current engineering system WinCC Comfort	
Mechanics/material		
Enclosure material (front)		
• Plastic	No	No
• Aluminum	Yes; Powder-coated, UV resistant	Yes; Powder-coated, UV resistant
• Stainless steel	No	No
Dimensions		
Width of the housing front	214 mm	415 mm
Height of housing front	158 mm	310 mm
Mounting cutout, width	197 mm	396 mm
Mounting cutout, height	141 mm	291 mm
Overall depth	67 mm	77 mm
Weights		
Weight (without packaging)	1.8 kg	4.3 kg
Other		
Note:	Power, quantity structure and performance correspond to a standard 7" Comfort Panel	Power, quantity structure and performance correspond to a standard 7" Comfort Panel

More information

More information is available on the Internet at:

http://www.siemens.com/comfort-panels-outdoor

Note:

The TP700 Comfort Panel Outdoor is comparable with the TP700 Comfort Panel Standard.

The TP1500 Comfort Panel Outdoor is comparable with the TP1200 Comfort Panel Standard with a 15" display.

A TP1500 Comfort Standard unit with the maximum possible configuration cannot be installed on a TP1500 Comfort Panel Outdoor.

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SIPLUS Comfort Panels Outdoor

Overview

SIPLUS HMI Comfort Panels Outdoor

Special HMI Panels have been developed which are designed to withstand outdoor environments.

It's not only extreme temperatures which call for robust hardware. Direct sunlight, too, must not be allowed to impair display readability and the panel front must be protected from UV radiation. The specially-bonded Outdoor fronts and the rugged hardware of the Outdoor Panels make the SIMATIC HMI Comfort Panels Outdoor a reliable partner in this environment.

- For outdoor operation without additional measures
- 7" and 15" daylight-readable display, widescreen
- Automatic, central or manual dimming of the backlight, with integrated sensor
- Panel front 100% UV protected
- Front resistant to salt mist
- Front IP66 and Nema4 x (indoor/outdoor)
- Many explosion protection and shipbuilding certifications
- Extended operating temperature range: from -30 °C to +60 °C at 3 000 m installation altitude
- TIA Portal central engineering tool (WinCC V13 SP1&HSP or higher)
- Comfort Panel functionality and performance

Notice:

The SIPLUS HMI 7" Comfort Panel Outdoor corresponds to a SIPLUS HMI 7" Comfort Panel Standard, the SIPLUS HMI 15" Comfort Panel Outdoor corresponds to a SIPLUS HMI 12" Comfort Panel Standard in respect of performance, functionality and quantity structure.

http://www.siemens.com/comfort-panels-outdoor

Note:

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

Ordering data

	Article No.
SIPLUS HMI Comfort Outdoor Panels	
SIPLUS HMI TP700 Comfort Panels Outdoor For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -30 ... +60 °C Touch operation, 7" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, configurable as from WinCC Comfort V13, SP1, HSP	**6AG1124-0GC13-2AX0**
SIPLUS HMI TP1500 Comfort Panels Outdoor For areas with extreme exposure to environmental substances (conformal coating); ambient temperature -30 ... +60 °C Touch operation, 15" widescreen TFT display, 16 million colors, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, configurable as from WinCC Comfort V13, SP1, HSP	**6AG1124-0QC13-2AX0**
Accessories	See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

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Technical specifications

Article number	**6AG1124-0GC13-2AX0** SIPLUS HMI TP700 Comfort Outdoor	**6AG1124-0QC13-2AX0** SIPLUS HMI TP1500 Comfort Outdoor
Ambient conditions		
Suited for indoor use	Yes	Yes
Suited for outdoor use	Yes; Powder-coated, UV resistant	Yes; Powder-coated, UV resistant
Ambient temperature during operation		
Operation (vertical installation)		
- For vertical installation, min.	-30 °C; = Tmin	-30 °C; = Tmin
- For vertical installation, max.	60 °C; (55 °C, see entry ID: 64847814)	60 °C; (55 °C, see entry ID: 64847814)
Altitude during operation relating to sea level		
• Installation altitude above sea level, max.	5 000 m	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)	
Relative humidity		
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning when condensation present), vertical mounting position	
Resistance		
Coolants and lubricants		
- Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air	
Use in stationary industrial systems		
- to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request	
- to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	
- to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *	

Article number	**6AG1124-0GC13-2AX0** SIPLUS HMI TP700 Comfort Outdoor	**6AG1124-0QC13-2AX0** SIPLUS HMI TP1500 Comfort Outdoor
Use on ships/at sea		
- to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request	
- to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *	
- to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *	
Usage in industrial process technology		
- Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)	
- Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)	
Remark		
- Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!	
Conformal coating		
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability	Yes; Class 2 for high reliability
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection	Yes; Type 1 protection
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	Yes; Conformal coating, Class A

More information

More information is available on the Internet at:

http://www.siemens.com/comfort-panels-outdoor

Note:

The SIPLUS HMI TP700 Comfort Panel Outdoor is comparable with the SIPLUS HMI TP700 Comfort Panel Standard.

The SIPLUS HMI TP1500 Comfort Panel Outdoor is comparable with the SIPLUS HMI TP1200 Comfort Panel Standard with a 15" display.

A TP1500 Comfort Standard unit with the maximum possible configuration cannot be installed on a SIPLUS HMI TP1500 Comfort Panel Outdoor.

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Overview

SIMATIC HMI Comfort PRO: The new Comfort Panel PRO with all-round IP65 protection – powerful, ready-to-use, and can be installed directly at the machine

SIMATIC HMI Comfort Panels PRO with 12", 15", 19" and 22" widescreen format expand the Comfort Panel portfolio to include devices with glass fronts.

The rugged aluminum housing enables it to be used directly at the machine and guarantees durability, even in harsh and extreme operating environments.

Highlights:

- All-round IP65 protection
- Comfort Panel functionality and performance
- Rugged, industrial 12", 15", 19" and 22" widescreen displays
- Slim, modern design
- Can be adapted to support arm system of various manufacturers
- Integration of operator controls with Extension Units
- High degree of investment security
- Fast integration capability

12", 15", 19" and 22" SIMATIC HMI Comfort Panels PRO are available in three different versions, depending on the application:

- For support arm (extendable, round tube): mounting by means of standard 48 mm round tube or Siemens flange mount adapter
- For support arm (not extendable, flange on top): mounting by means of basic adapter and flange on top, included in scope of delivery
- For pedestal (extendable, flange below): mounting by means of basic adapter and flange below, included in scope of delivery

For more information, please go to:

http://siemens.com/simatic-hmi-pro

System components for fully-enclosed IP65 devices

System components for PRO devices are only suitable for SIMATIC HMI/IPC PRO devices.

In combination with the SIMATIC HMI PRO basic devices, these components enable easy adaptation to individual customer requirements for operator control and monitoring at the machine level, as well as offering a versatile and attractive solution for visualization and automation without a control cabinet.

The following system components are available:

- Fixing elements
  - Adapter sets
  - Basic adapter
  - Flange mount adapter
- Extension Units 12" - 22" with operator controls
- Extension components
  - Stainless steel keyboard
  - Tool and keyboard tray

For more detailed information about system components refer to "PC-based Automation" -> "Devices for special requirements" -> "System components".

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Ordering data

	Article No.
Comfort Panels PRO	
TP1200 Comfort PRO 12.1'' TFT display, 1 280 x 800 pixels, 16 million colors; touch screen; 1 x MPI/PROFIBUS DP, 1 x PROFINET/Industrial Ethernet interface with MRP and RT/IRT support (2 ports); 1 x Ethernet (Gigabit); 2 x SD card slots; 2 x USB	
• For support arm (not extendable, flange on top)	**6AV2124-0MC24-0AX0**
• For support arm (extendable, round tube)	**6AV2124-0MC24-0BX0**
• For pedestal (extendable, flange below)	**6AV2124-0MC24-1AX0**
TP1500 Comfort PRO 15.6'' TFT display, 1 366 x 768 pixels, 16 million colors; touch screen; 1 x MPI/PROFIBUS DP, 1 x PROFINET/Industrial Ethernet Interface with MRP and RT/IRT support (2 ports); 1 x Ethernet (Gigabit); 2 x SD card slots; 2 x USB	
• For support arm (not extendable, flange on top)	**6AV2124-0QC24-0AX0**
• For support arm (extendable, round tube)	**6AV2124-0QC24-0BX0**
• For pedestal (extendable, flange below)	**6AV2124-0QC24-1AX0**
TP1900 Comfort PRO 18.5'' TFT display, 1 366 x 768 pixels, 16 million colors; touch screen; 1 x MPI/PROFIBUS DP, 1 x PROFINET/Industrial Ethernet Interface with MRP and RT/IRT support (2 ports); 1 x Ethernet (Gigabit); 2 x SD card slots; 2 x USB	
• For support arm (not extendable, flange on top)	**6AV2124-0UC24-0AX0**
• For support arm (extendable, round tube)	**6AV2124-0UC24-0BX0**
• For pedestal (extendable, flange below)	**6AV2124-0UC24-1AX0**
TP2200 Comfort PRO 21.5'' TFT display, 1 920 x 1 080 pixels, 16 million colors; touch screen; 1 x MPI/PROFIBUS DP, 1 x PROFINET/Industrial Ethernet Interface with MRP and RT/IRT support (2 ports); 1 x Ethernet (Gigabit); 2 x SD card slots; 2 x USB	
• For support arm (not extendable, flange on top)	**6AV2124-0XC24-0AX0**
• For support arm (extendable, round tube)	**6AV2124-0XC24-0BX0**
• For pedestal (extendable, flange below)	**6AV2124-0XC24-1AX0**

Technical specifications

Article number	**6AV2124-0MC24-0AX0** SIMATIC HMI TP1200 Comfort Pro	**6AV2124-0MC24-1AX0** SIMATIC HMI TP1200 Comfort Pro	**6AV2124-0MC24-0BX0** SIMATIC HMI TP1200 Comfort Pro
General information			
Product type designation	TP1200 PRO	TP1200 PRO	TP1200 PRO
Display			
Design of display	TFT	TFT	TFT
Screen diagonal	12.1 in	12.1 in	12.1 in
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Horizontal image resolution	1 280 pixel	1 280 pixel	1 280 pixel
• Vertical image resolution	800 pixel	800 pixel	800 pixel
Backlighting			
• MTBF backlighting (at 25 °C)	80 000 h	80 000 h	80 000 h
Control elements			
Keyboard fonts			
• Function keys			
- Number of function keys	0	0	0
Touch operation			
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive

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Technical specifications

Article number	**6AV2124-0MC24-0AX0** SIMATIC HMI TP1200 Comfort Pro	**6AV2124-0MC24-1AX0** SIMATIC HMI TP1200 Comfort Pro	**6AV2124-0MC24-0BX0** SIMATIC HMI TP1200 Comfort Pro
Installation type/mounting			
Mounting	Support arm	Pedestal	Support arm
Mounting in portrait format possible	No	No	No
Supply voltage			
Rated value (DC)	24 V	24 V	24 V
Memory			
Memory available for user data	12 Mbyte	12 Mbyte	12 Mbyte
Type of output			
Acoustics			
• Speaker	Yes	Yes	Yes
Time of day			
Clock			
• Hardware clock (real-time)	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes
Interfaces			
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0
Number of SD card slots	2	2	2
Industrial Ethernet			
• Number of ports of the integrated switch	2	2	2
Protocols			
PROFINET	Yes	Yes	Yes
IRT	Yes	Yes	Yes
PROFIBUS	Yes	Yes	Yes
MPI	Yes	Yes	Yes
Redundancy mode			
Media redundancy			
- MRP	Yes	Yes	Yes
Degree and class of protection			
IP (at the front)	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65
NEMA (front)			
• Enclosure Type 4x at the front	Yes	Yes	Yes
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	No; Available soon	No; Available soon	No; Available soon
Ambient conditions			
Suited for indoor use	Yes	Yes	Yes
Suited for outdoor use	No	No	No
Ambient temperature during operation			
Operation (vertical installation)			
- For vertical installation, min.	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C
Relative humidity			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation

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Technical specifications

Article number	**6AV2124-0MC24-0AX0** SIMATIC HMI TP1200 Comfort Pro	**6AV2124-0MC24-1AX0** SIMATIC HMI TP1200 Comfort Pro	**6AV2124-0MC24-0BX0** SIMATIC HMI TP1200 Comfort Pro
Configuration			
Configuration software			
• WinCC Comfort (TIA Portal)	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher
Languages			
Online languages			
• Number of online/runtime languages	32	32	32
Functionality under WinCC (TIA Portal)			
Applications/options			
• Web browser	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes
Task planner			
• time-controlled	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes
Message system			
• Bit messages			
- Number of bit messages	4 000	4 000	4 000
• Analog messages			
- Number of analog messages	200	200	200
Recipe management			
• Number of recipes	300	300	300
• Size of internal recipe memory	2 Mbyte	2 Mbyte	2 Mbyte
• Recipe memory expandable	Yes	Yes	Yes
Variables			
• Number of variables per device	2 048	2 048	2 048
• Number of variables per screen	400	400	400
Images			
• Number of configurable images	500	500	500
Archiving			
• Number of archives per device	50	50	50
Security			
• Number of user groups	50	50	50
• Number of users	50	50	50
• SIMATIC Logon	Yes	Yes	Yes
Logging through printer			
• Alarms	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML
Transfer (upload/download)			
• MPI/PROFIBUS DP	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes

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Technical specifications

Article number	**6AV2124-0MC24-0AX0** SIMATIC HMI TP1200 Comfort Pro	**6AV2124-0MC24-1AX0** SIMATIC HMI TP1200 Comfort Pro	**6AV2124-0MC24-0BX0** SIMATIC HMI TP1200 Comfort Pro
Process coupling			
• S7-1200	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes
Peripherals/Options			
Printer	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes
Network camera	Yes	Yes	Yes
Mechanics/material			
Enclosure material (front)			
• Plastic	No	No	No
• Aluminum	Yes	Yes	Yes
• Stainless steel	No	No	No
Dimensions			
Width of the housing front	313 mm	313 mm	313 mm
Height of housing front	226 mm; Without basic adapter	226 mm; Without basic adapter	226 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights			
Weight (without packaging)	4.9 kg	4.9 kg	4.5 kg

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Technical specifications

Article number	**6AV2124-0QC24-0AX0**	**6AV2124-0QC24-0BX0**	**6AV2124-0QC24-1AX0**
	SIMATIC HMI TP1500 Comfort PRO	SIMATIC HMI TP1500 Comfort PRO	SIMATIC HMI TP1500 Comfort PRO
General information			
Product type designation	TP1500 Comfort PRO	TP1500 Comfort PRO	TP1500 Comfort PRO
Display			
Design of display	TFT	TFT	TFT
Screen diagonal	15.6 in	15.6 in	15.6 in
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Horizontal image resolution	1 366 pixel	1 366 pixel	1 366 pixel
• Vertical image resolution	768 pixel	768 pixel	768 pixel
Backlighting			
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h
Control elements			
Keyboard fonts			
• Function keys			
- Number of function keys	0	0	0
Touch operation			
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
Installation type/mounting			
Mounting	Support arm	Support arm	Pedestal
Mounting in portrait format possible	No	No	No
Supply voltage			
Rated value (DC)	24 V	24 V	24 V
Memory			
Memory available for user data	24 Mbyte	24 Mbyte	24 Mbyte
Type of output			
Acoustics			
• Speaker	Yes	Yes	Yes
Time of day			
Clock			
• Hardware clock (real-time)	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes
Interfaces			
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0
Number of SD card slots	2	2	2
Industrial Ethernet			
• Number of ports of the integrated switch	2	2	2
Protocols			
PROFINET	Yes	Yes	Yes
IRT	Yes	Yes	Yes
PROFIBUS	Yes	Yes	Yes
MPI	Yes	Yes	Yes
Redundancy mode			
Media redundancy			
- MRP	Yes	Yes	Yes

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Technical specifications

Article number	**6AV2124-0QC24-0AX0** SIMATIC HMI TP1500 Comfort PRO	**6AV2124-0QC24-0BX0** SIMATIC HMI TP1500 Comfort PRO	**6AV2124-0QC24-1AX0** SIMATIC HMI TP1500 Comfort PRO
Degree and class of protection			
IP (at the front)	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65
NEMA (front)			
• Enclosure Type 4x at the front	Yes	Yes	Yes
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	No; Available soon	No; Available soon	No; Available soon
Ambient conditions			
Suited for indoor use	Yes	Yes	Yes
Suited for outdoor use	No	No	No
Ambient temperature during operation			
Operation (vertical installation)			
- For vertical installation, min.	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C
Relative humidity			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration			
Configuration software			
• WinCC Comfort (TIA Portal)	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher
Languages			
Online languages			
• Number of online/runtime languages	32	32	32
Functionality under WinCC (TIA Portal)			
Applications/options			
• Web browser	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes
Task planner			
• time-controlled	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes
Message system			
• Bit messages			
- Number of bit messages	6 000	6 000	6 000
• Analog messages			
- Number of analog messages	200	200	200
Recipe management			
• Number of recipes	500	500	500
• Size of internal recipe memory	4 Mbyte	4 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes
Variables			
• Number of variables per device	4 096	4 096	4 096
• Number of variables per screen	400	400	400
Images			
• Number of configurable images	750	750	750

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Technical specifications

Article number	**6AV2124-0QC24-0AX0**	**6AV2124-0QC24-0BX0**	**6AV2124-0QC24-1AX0**
	SIMATIC HMI TP1500 Comfort PRO	SIMATIC HMI TP1500 Comfort PRO	SIMATIC HMI TP1500 Comfort PRO
Archiving			
• Number of archives per device	50	50	50
Security			
• Number of user groups	50	50	50
• Number of users	50	50	50
• SIMATIC Logon	Yes	Yes	Yes
Logging through printer			
• Alarms	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML
Transfer (upload/download)			
• MPI/PROFIBUS DP	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes
Process coupling			
• S7-1200	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes
Peripherals/Options			
Printer	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes
Network camera	Yes	Yes	Yes
Mechanics/material			
Enclosure material (front)			
• Plastic	No	No	No
• Aluminum	Yes	Yes	Yes
• Stainless steel	No	No	No
Dimensions			
Width of the housing front	396 mm	396 mm	396 mm
Height of housing front	256 mm; Without basic adapter	256 mm; Without basic adapter	256 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights			
Weight (without packaging)	6.3 kg	6.3 kg	6.3 kg

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Technical specifications

Article number	**6AV2124-0UC24-0AX0**	**6AV2124-0UC24-0BX0**	**6AV2124-0UC24-1AX0**
	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort PRO
General information			
Product type designation	TP1900 Comfort PRO	TP1900 Comfort PRO	TP1900 Comfort PRO
Display			
Design of display	TFT	TFT	TFT
Screen diagonal	18.5 in	18.5 in	18.5 in
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Horizontal image resolution	1 366 pixel	1 366 pixel	1 366 pixel
• Vertical image resolution	768 pixel	768 pixel	768 pixel
Backlighting			
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h
Control elements			
Keyboard fonts			
• Function keys			
- Number of function keys	0	0	0
Touch operation			
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
Installation type/mounting			
Mounting	Support arm	Support arm	Pedestal
Mounting in portrait format possible	No	No	No
Supply voltage			
Rated value (DC)	24 V	24 V	24 V
Memory			
Memory available for user data	24 Mbyte	24 Mbyte	24 Mbyte
Type of output			
Acoustics			
• Speaker	Yes	Yes	Yes
Time of day			
Clock			
• Hardware clock (real-time)	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes
Interfaces			
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0
Number of SD card slots	2	2	2
Industrial Ethernet			
• Number of ports of the integrated switch	2	2	2
Protocols			
PROFINET	Yes	Yes	Yes
IRT	Yes	Yes	Yes
PROFIBUS	Yes	Yes	Yes
MPI	Yes	Yes	Yes
Redundancy mode			
Media redundancy			
- MRP	Yes	Yes	Yes
Degree and class of protection			
IP (at the front)	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65
NEMA (front)			
• Enclosure Type 4x at the front	Yes	Yes	Yes

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Technical specifications

Article number	**6AV2124-0UC24-0AX0**	**6AV2124-0UC24-0BX0**	**6AV2124-0UC24-1AX0**
	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort PRO
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	No; Available soon	No; Available soon	No; Available soon
Ambient conditions			
Suited for indoor use	Yes	Yes	Yes
Suited for outdoor use	No	No	No
Ambient temperature during operation			
Operation (vertical installation)			
- For vertical installation, min.	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C
Relative humidity			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration			
Configuration software			
• WinCC Comfort (TIA Portal)	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher
Languages			
Online languages			
• Number of online/runtime languages	32	32	32
Functionality under WinCC (TIA Portal)			
Applications/options			
• Web browser	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes
Task planner			
• time-controlled	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes
Message system			
• Bit messages			
- Number of bit messages	6 000	6 000	6 000
• Analog messages			
- Number of analog messages	200	200	200
Recipe management			
• Number of recipes	500	500	500
• Size of internal recipe memory	4 Mbyte	4 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes
Variables			
• Number of variables per device	4 096	4 096	4 096
• Number of variables per screen	400	400	400
Images			
• Number of configurable images	750	750	750
Archiving			
• Number of archives per device	50	50	50

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Technical specifications

Article number	**6AV2124-0UC24-0AX0**	**6AV2124-0UC24-0BX0**	**6AV2124-0UC24-1AX0**
	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort PRO	SIMATIC HMI TP1900 Comfort PRO
Security			
• Number of user groups	50	50	50
• Number of users	50	50	50
• SIMATIC Logon	Yes	Yes	Yes
Logging through printer			
• Alarms	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML
Transfer (upload/download)			
• MPI/PROFIBUS DP	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes
Process coupling			
• S7-1200	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes
Peripherals/Options			
Printer	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes
Network camera	Yes	Yes	Yes
Mechanics/material			
Enclosure material (front)			
• Plastic	No	No	No
• Aluminum	Yes	Yes	Yes
• Stainless steel	No	No	No
Dimensions			
Width of the housing front	462 mm	462 mm	462 mm
Height of housing front	296 mm; Without basic adapter	296 mm; Without basic adapter	296 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights			
Weight (without packaging)	7.4 kg	7.4 kg	7.4 kg

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Technical specifications

Article number	**6AV2124-0XC24-0AX0**	**6AV2124-0XC24-0BX0**	**6AV2124-0XC24-1AX0**
	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort PRO
General information			
Product type designation	TP2200 Comfort PRO	TP2200 Comfort PRO	TP2200 Comfort PRO
Display			
Design of display	TFT	TFT	TFT
Screen diagonal	21.5 in	21.5 in	21.5 in
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Horizontal image resolution	1 920 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	1 080 pixel	1 080 pixel	1 080 pixel
Backlighting			
• MTBF backlighting (at 25 °C)	30 000 h	30 000 h	30 000 h
Control elements			
Keyboard fonts			
• Function keys			
- Number of function keys	0	0	0
Touch operation			
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
Installation type/mounting			
Mounting	Support arm	Support arm	Pedestal
Mounting in portrait format possible	No	No	No
Supply voltage			
Rated value (DC)	24 V	24 V	24 V
Memory			
Memory available for user data	24 Mbyte	24 Mbyte	24 Mbyte
Type of output			
Acoustics			
• Speaker	Yes	Yes	Yes
Time of day			
Clock			
• Hardware clock (real-time)	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes
Interfaces			
Number of industrial Ethernet interfaces	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0
Number of SD card slots	2	2	2
Industrial Ethernet			
• Number of ports of the integrated switch	2	2	2
Protocols			
PROFINET	Yes	Yes	Yes
IRT	Yes	Yes	Yes
PROFIBUS	Yes	Yes	Yes
MPI	Yes	Yes	Yes
Redundancy mode			
Media redundancy			
- MRP	Yes	Yes	Yes

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Technical specifications

Article number	**6AV2124-0XC24-0AX0**	**6AV2124-0XC24-0BX0**	**6AV2124-0XC24-1AX0**
	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort PRO
Degree and class of protection			
IP (at the front)	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65
NEMA (front)			
• Enclosure Type 4x at the front	Yes	Yes	Yes
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon
EAC (formerly Gost-R)	No; Available soon	No; Available soon	No; Available soon
Ambient conditions			
Suited for indoor use	Yes	Yes	Yes
Suited for outdoor use	No	No	No
Ambient temperature during operation			
Operation (vertical installation)			
- For vertical installation, min.	0 °C	0 °C	0 °C
- For vertical installation, max.	45 °C	45 °C	45 °C
Relative humidity			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration			
Configuration software			
• WinCC Comfort (TIA Portal)	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher
Languages			
Online languages			
• Number of online/runtime languages	32	32	32
Functionality under WinCC (TIA Portal)			
Applications/options			
• Web browser	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes
Task planner			
• time-controlled	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes
Message system			
• Bit messages			
- Number of bit messages	6 000	6 000	6 000
• Analog messages			
- Number of analog messages	200	200	200
Recipe management			
• Number of recipes	500	500	500
• Size of internal recipe memory	4 Mbyte	4 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes
Variables			
• Number of variables per device	4 096	4 096	4 096
• Number of variables per screen	400	400	400
Images			
• Number of configurable images	750	750	750
Archiving			
• Number of archives per device	50	50	50

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Technical specifications

Article number	**6AV2124-0XC24-0AX0**	**6AV2124-0XC24-0BX0**	**6AV2124-0XC24-1AX0**
	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort PRO	SIMATIC HMI TP2200 Comfort PRO
Security			
• Number of user groups	50	50	50
• Number of users	50	50	50
• SIMATIC Logon	Yes	Yes	Yes
Logging through printer			
• Alarms	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML
Transfer (upload/download)			
• MPI/PROFIBUS DP	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes
Process coupling			
• S7-1200	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes
Peripherals/Options			
Printer	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes
Network camera	Yes	Yes	Yes
Mechanics/material			
Enclosure material (front)			
• Plastic	No	No	No
• Aluminum	Yes	Yes	Yes
• Stainless steel	No	No	No
Dimensions			
Width of the housing front	527 mm	527 mm	527 mm
Height of housing front	330 mm; Without basic adapter	330 mm; Without basic adapter	330 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights			
Weight (without packaging)	8.5 kg	8.5 kg	8.5 kg

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Comfort Panels INOX and INOX PCT

Overview

SIMATIC HMI TP1200 Comfort INOX PCT

SIMATIC HMI TP Comfort Panels INOX and INOX PCT (PCT = Projected Capacitive Touchscreen)

Panels with touch screens (analog-resistive or projective-capacitive) and stainless steel fronts are designed for use in the food, beverages and tobacco industry, the pharmaceutical industry, fine chemicals and in other hygiene areas for machine-level operator control and monitoring.

For this reason, the devices with stainless steel front have been developed in compliance with EN 1672-2 "Food processing machinery – Safety and Hygiene Requirements".

http://www.siemens.com/comfort-panels-inox

Ordering data

	Article No.
SIMATIC HMI TP Comfort Panel INOX	
With analog-resistive touch and front film	
SIMATIC HMI TP700 Comfort Panel INOX With accessory pack consisting of: clamping frame, device seal, mounting clamps, connection terminal, as well as installation instructions.	**6AV2144-8GC10-0AA0**
SIMATIC HMI TP900 Comfort Panel INOX With accessory pack consisting of: clamping frame, device seal, mounting clamps, connection terminal, as well as installation instructions.	**6AV2144-8JC10-0AA0**
SIMATIC HMI TP1200 Comfort Panel INOX With accessory pack consisting of: clamping frame, device seal, mounting clamps, connection terminal, as well as installation instructions.	**6AV2144-8MC10-0AA0**
SIMATIC HMI TP Comfort Panel INOX PCT	
With projective-capacitive touch and front glass	
SIMATIC HMI TP700 Comfort Panel INOX PCT Stainless steel front, glass pane, capacitive touch, IP69K degree of protection front, 7" widescreen TFT display, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0, WinCC Comfort V15.1	**6AV2144-8GC20-0AA0**
SIMATIC HMI TP900 Comfort Panel INOX PCT With accessory pack consisting of: clamping frame, device seal, mounting clamps, connection terminal, as well as installation instructions.	**6AV2144-8JC20-0AA0**
SIMATIC HMI TP1200 Comfort Panel INOX PCT With accessory pack consisting of: clamping frame, device seal, mounting clamps, connection terminal, as well as installation instructions.	**6AV2144-8MC20-0AA0**

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Ordering data

	Article No.
Comfort Panels Large Front	
SIMATIC HMI TP1200 Comfort INOX with long stainless steel front 12" widescreen TFT display with long stainless steel front, decorative membrane, IP66K degree of protection front, PROFINET interface, MPI/PROFIBUS DP interface, 12 MB configuration memory, Windows CE 6.0 (Microsoft support including safety updates set), configurable as from WinCC Comfort V11 or higher	**6AV2144-8MC10-0AC0**
SIMATIC HMI TP1500 Comfort Panel INOX with long stainless steel front 15" widescreen TFT display with long stainless steel front, decorative membrane, IP66K degree of protection front, PROFINET interface, MPI/PROFIBUS DP interface, 24 MB configuration memory, Windows, CE 2013, configurable as from WinCC Comfort V14 SP1 with HSP or higher	**6AV2144-8QC10-0AA2**
SIMATIC HMI TP1900 Comfort Panel INOX with long stainless steel front 19" widescreen TFT display with long stainless steel front, decorative membrane, IP66K degree of protection front, PROFINET interface, MPI/PROFIBUS DP interface, 24 MB configuration memory, Windows, CE 2013, configurable as from WinCC Comfort V14 SP1 with HSP or higher	**6AV2144-8UC10-0AA1**
Accessories	See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

The device seals can be replaced using the corresponding service packages from the accessories.

Technical specifications

Article number	**6AV2144-8GC10-0AA0**	**6AV2144-8JC10-0AA0**	**6AV2144-8MC10-0AA0**	**6AV2144-8QC10-0AA2**	**6AV2144-8UC10-0AA1**
	SIMATIC HMI TP700 COMFORT INOX	SIMATIC HMI TP900 COMFORT INOX	SIMATIC HMI TP1200 COMFORT INOX	SIMATIC HMI TP1500 Comfort INOX	SIMATIC HMI TP1900 Comfort INOX
General information					
Product type designation	TP700 Comfort INOX	TP900 INOX	TP1200 Comfort INOX	TP1500 Comfort INOX	TP1900 Comfort INOX
Display					
Design of display	TFT	TFT	TFT	TFT	TFT
Screen diagonal	7 in	9 in	12.1 in	15.4 in	18.5 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)					
• Horizontal image resolution	800 pixel	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel
• Vertical image resolution	480 pixel	480 pixel	800 pixel	800 pixel	768 pixel
Backlighting					
• MTBF backlighting (at 25 °C)	80 000 h	80 000 h	80 000 h	80 000 h	50 000 h
Control elements					
Keyboard fonts					
• Function keys					
- Number of function keys	0	0	0	0	0
Touch operation					
• Design as touch screen	Yes	Yes	Yes	Yes; Analog-resistive	Yes

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Technical specifications

Article number	**6AV2144-8GC10-0AA0**	**6AV2144-8JC10-0AA0**	**6AV2144-8MC10-0AA0**	**6AV2144-8QC10-0AA2**	**6AV2144-8UC10-0AA1**
	SIMATIC HMI TP700 COMFORT INOX	SIMATIC HMI TP900 COMFORT INOX	SIMATIC HMI TP1200 COMFORT INOX	SIMATIC HMI TP1500 Comfort INOX	SIMATIC HMI TP1900 Comfort INOX
Installation type/mounting					
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes
Supply voltage					
Rated value (DC)	24 V	24 V	24 V	24 V	24 V
Memory					
Memory available for user data	12 Mbyte	12 Mbyte	12 Mbyte	24 Mbyte	24 Mbyte
Type of output					
Acoustics					
• Speaker	Yes	Yes	Yes	Yes	Yes
Time of day					
Clock					
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes	Yes	Yes
Interfaces					
Number of industrial Ethernet interfaces	1; 2 ports (switch)	1; 2 ports (switch)	1; 2 ports (switch)	2; 2 ports (switch) + independent port	2; 2 ports (switch) + independent port
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0	2; USB 2.0
• USB Mini B	1; 5-pole	1; 5-pole	1; 5-pole		
Number of SD card slots	2	2	2	2	2
Industrial Ethernet					
• Number of ports of the integrated switch	2	2	2	2	2
Protocols					
PROFINET	Yes	Yes	Yes	Yes	Yes
IRT	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes	Yes
PROFIBUS	Yes	Yes	Yes	Yes	Yes
MPI	Yes	Yes	Yes	Yes	Yes
Redundancy mode					
Media redundancy					
- MRP	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes; As of WinCC V12	Yes	Yes
Degree and class of protection					
IP (at the front)	IP66K	IP66K	IP66K	IP66K	IP66K
IP (rear)	IP20	IP20	IP20	IP20	IP20
NEMA (front)					
• Enclosure Type 4x at the front	Yes; indoor use only	Yes; indoor use only	Yes; indoor use only	Yes; indoor use only	Yes; indoor use only

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Technical specifications

Article number	**6AV2144-8GC10-0AA0**	**6AV2144-8JC10-0AA0**	**6AV2144-8MC10-0AA0**	**6AV2144-8QC10-0AA2**	**6AV2144-8UC10-0AA1**
	SIMATIC HMI TP700 COMFORT INOX	SIMATIC HMI TP900 COMFORT INOX	SIMATIC HMI TP1200 COMFORT INOX	SIMATIC HMI TP1500 Comfort INOX	SIMATIC HMI TP1900 Comfort INOX
Standards, approvals, certificates					
CE mark	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes
FM approval	Yes		Yes		
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes
KC approval	Yes		Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes
Use in hazardous areas					
• ATEX Zone 2	Yes	Yes	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes	Yes	Yes
• FM Class I Division 2	Yes	No	Yes	No	No
Marine approval					
• Germanischer Lloyd (GL)	No	No	No	No	No; In application process
• American Bureau of Shipping (ABS)	No	No	No	No	No; Available soon
• Bureau Veritas (BV)	No	No	No	No	No; Available soon
• Det Norske Veritas (DNV)	No	No	No	No	No; Available soon
• Korean Register of Shipping (KRS)			No	No	No; Available soon
• Lloyds Register of Shipping (LRS)	No	No	No	No	No; Available soon
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No; Available soon
• Polski Rejestr Statkow (PRS)	No	No	No	No	No; Available soon
• Chinese Classification Society (CCS)				No	No; Available soon
Ambient conditions					
Suited for indoor use				Yes	Yes
Suited for outdoor use				No	No
Ambient temperature during operation					
Operation (vertical installation)					
- For vertical installation, min.	0 °C	0 °C	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C	50 °C	50 °C	50 °C	45 °C
Relative humidity					
• Operation, max.	90 %; no condensation	90 %; no condensation	80 %; no condensation	80 %; no condensation	70 %; no condensation
Configuration					
Configuration software					
• WinCC Comfort (TIA Portal)	Yes; from V11	Yes; from V11	Yes; from V11	Yes; V14 SP1 HSP and higher	Yes; V14 SP1 HSP and higher
Languages					
Online languages					
• Number of online/runtime languages	32	32	32	32	32

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Technical specifications

Article number	**6AV2144-8GC10-0AA0**	**6AV2144-8JC10-0AA0**	**6AV2144-8MC10-0AA0**	**6AV2144-8QC10-0AA2**	**6AV2144-8UC10-0AA1**
	SIMATIC HMI TP700 COMFORT INOX	SIMATIC HMI TP900 COMFORT INOX	SIMATIC HMI TP1200 COMFORT INOX	SIMATIC HMI TP1500 Comfort INOX	SIMATIC HMI TP1900 Comfort INOX
Functionality under WinCC (TIA Portal)					
Applications/options					
• Web browser	Yes	Yes	Yes	Yes	Yes
• Pocket Word	Yes	Yes	Yes	Yes	Yes
• Pocket Excel	Yes	Yes	Yes	Yes	Yes
• PDF Viewer	Yes	Yes	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes	Yes	Yes
Task planner					
• time-controlled	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes
Message system					
• Bit messages					
- Number of bit messages	4 000	4 000	4 000	6 000	6 000
• Analog messages					
- Number of analog messages	200	200	200	200	200
Recipe management					
• Number of recipes	300	300	300	500	500
• Size of internal recipe memory	2 Mbyte	2 Mbyte	2 Mbyte	4 Mbyte	4 Mbyte
• Recipe memory expandable	Yes	Yes	Yes	Yes	Yes
Variables					
• Number of variables per device	2 048	2 048	2 048	4 096	4 096
• Number of variables per screen	400	400	400	400	400
Images					
• Number of configurable images	500	500	500	750	750
Archiving					
• Number of archives per device	50	50	50	50	50
Security					
• Number of user groups	50	50	50	50	50
• Number of users	50	50	50	50	50
• SIMATIC Logon	Yes	Yes	Yes	Yes	Yes
Logging through printer					
• Alarms	Yes	Yes	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes	Yes	Yes
• Electronic print to file	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML	Yes; PDF, HTML
Transfer (upload/download)					
• MPI/PROFIBUS DP	Yes	Yes	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV2144-8GC10-0AA0**	**6AV2144-8JC10-0AA0**	**6AV2144-8MC10-0AA0**	**6AV2144-8QC10-0AA2**	**6AV2144-8UC10-0AA1**
	SIMATIC HMI TP700 COMFORT INOX	SIMATIC HMI TP900 COMFORT INOX	SIMATIC HMI TP1200 COMFORT INOX	SIMATIC HMI TP1500 Comfort INOX	SIMATIC HMI TP1900 Comfort INOX
Process coupling					
• S7-1200	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes	Yes	Yes
Peripherals/Options					
Printer	Yes	Yes	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes	Yes	Yes
Network camera	Yes	Yes	Yes	Yes	Yes
Mechanics/material					
Enclosure material (front)					
• Plastic	No	No	No	No	No
• Aluminum	No	No	No	No	No
• Stainless steel	Yes	Yes	Yes	Yes	Yes
Dimensions					
Width of the housing front	214 mm	274 mm	330 mm	415 mm	483 mm
Height of housing front	158 mm	190 mm	241 mm	310 mm	337 mm
Mounting cutout, width	197 mm	250 mm	310 mm	396 mm	465 mm
Mounting cutout, height	141 mm	166 mm	221 mm	291 mm	319 mm
Overall depth	65 mm	65 mm	67 mm	74 mm	73 mm
Weights					
Weight (without packaging)	1.9 kg	2.5 kg	3.6 kg	5.9 kg	7.9 kg

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Technical specifications

Article number	**6AV2144-8GC20-0AA0** SIMATIC HMI TP700 Comfort INOX PCT	**6AV2144-8JC20-0AA0** SIMATIC HMI TP900 COMFORT INOX PCT	**6AV2144-8MC20-0AA0** SIMATIC HMI TP1200 COMFORT INOX PCT
General information			
Product type designation	TP700 Comfort INOX PCT	TP900 Comfort INOX PCT	TP1200 Comfort INOX PCT
Display			
Design of display	TFT	TFT	TFT
Screen diagonal	7 in	9 in	12.1 in
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Horizontal image resolution	800 pixel	800 pixel	1 280 pixel
• Vertical image resolution	480 pixel	480 pixel	800 pixel
Backlighting			
• MTBF backlighting (at 25 °C)	80 000 h	80 000 h	80 000 h
Control elements			
Keyboard fonts			
• Function keys			
- Number of function keys	0	0	0
Touch operation			
• Design as touch screen	Yes	Yes	Yes
• Design as multi-touch screen	No	No	No
• Monitor keyboard	Yes	Yes	Yes
Installation type/mounting			
Mounting in portrait format possible	No	Yes	Yes
Supply voltage			
Rated value (DC)	24 V	24 V	24 V
Memory			
Memory available for user data	12 Mbyte	12 Mbyte	12 Mbyte
Type of output			
Acoustics	Speaker	Speaker	Speaker
• Speaker	Yes	Yes	Yes
Time of day			
Clock			
• Hardware clock (real-time)	Yes	Yes	Yes
• retentive	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes	Yes	Yes
Interfaces			
Number of industrial Ethernet interfaces	1; 2 ports (switch)	1; 2 ports (switch)	1; 2 ports (switch)
Number of RS 485 interfaces	1; RS 422 / 485 combined	1; RS 422 / 485 combined	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0	2; USB 2.0	2; USB 2.0
• USB Mini B	1; 5-pole	1; 5-pole	1; 5-pole
Number of SD card slots	2	2	2
Industrial Ethernet			
• Number of ports of the integrated switch	2	2	2
Protocols			
PROFINET	Yes	Yes	Yes
IRT	Yes; As of WinCC V15.1	Yes; As of WinCC V15	Yes; As of WinCC V15
PROFIBUS	Yes	Yes	Yes
MPI	Yes	Yes	Yes
Redundancy mode			
Media redundancy			
- MRP	Yes; As of WinCC V15.1	Yes; As of WinCC V15	Yes; As of WinCC V15

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Technical specifications

Article number	**6AV2144-8GC20-0AA0** SIMATIC HMI TP700 Comfort INOX PCT	**6AV2144-8JC20-0AA0** SIMATIC HMI TP900 COMFORT INOX PCT	**6AV2144-8MC20-0AA0** SIMATIC HMI TP1200 COMFORT INOX PCT
Degree and class of protection			
IP (at the front)	IP66 / IPx6K and IP69 / IPx9K	IP66 / IPx6K and IP69 / IPx9K	IP66 / IPx6K and IP69 / IPx9K
IP (rear)	IP20	IP20	IP20
NEMA (front)			NEMA 4, NEMA 12 (when installed)
• Enclosure Type 4x at the front		No	Yes
• Enclosure Type 12 at the front	No	No	Yes
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	No	No	No
EAC (formerly Gost-R)	Yes	Yes	Yes
Use in hazardous areas			
• ATEX Zone 2	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes
• cULus Class II Division 2	No	No	No
• FM Class I Division 2	No	No	No
• FM Class II Division 2	No	No	No
Ambient conditions			
Suited for indoor use	Yes	Yes	Yes
Suited for outdoor use	No	No	No
Ambient temperature during operation			
Operation (vertical installation)			
- For vertical installation, min.	0 °C	0 °C	0 °C
- For vertical installation, max.	50 °C; (55 °C, see entry ID: 64847814)	50 °C; (55 °C, see entry ID: 64847814)	50 °C
Altitude during operation relating to sea level			
• Installation altitude above sea level, max.	2 000 m	2 000 m	2 000 m
Relative humidity			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation
Configuration			
Configuration software			
• WinCC Comfort (TIA Portal)	Yes; From WinCC V15.1 HSP	Yes; As of WinCC V15	Yes; As of WinCC V15
Languages			
Online languages			
• Number of online/runtime languages	32	32	32

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Technical specifications

Article number	**6AV2144-8GC20-0AA0** SIMATIC HMI TP700 Comfort INOX PCT	**6AV2144-8JC20-0AA0** SIMATIC HMI TP900 COMFORT INOX PCT	**6AV2144-8MC20-0AA0** SIMATIC HMI TP1200 COMFORT INOX PCT
Functionality under WinCC (TIA Portal)			
Applications/options	Internet Explorer, PDF/Word/Excel Viewer, Sm@rtService, Sm@rtAccess, ProAgent	Internet Explorer, PDF/Word/Excel Viewer, Sm@rtService, Sm@rtAccess, ProAgent	Internet Explorer, PDF/Word/Excel Viewer, Sm@rtService, Sm@rtAccess, ProAgent
• Web browser	Yes	Yes	Yes
• Pocket Word	Yes; Viewer	Yes; Viewer	Yes; Viewer
• Pocket Excel	Yes; Viewer	Yes; Viewer	Yes; Viewer
• PDF Viewer	Yes	Yes	Yes
• Media Player	Yes	Yes	Yes
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes
Task planner	Yes	Yes	Yes
• time-controlled	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes
Message system			
• Bit messages			
- Number of bit messages	4 000	4 000	4 000
• Analog messages			
- Number of analog messages	200	200	200
Recipe management			
• Number of recipes	300	300	300
• Size of internal recipe memory	2 Mbyte	2 Mbyte	2 Mbyte
• Recipe memory expandable	Yes	Yes	Yes
Variables			
• Number of variables per device	2 048	2 048	2 048
• Number of variables per screen	400	400	400
Images			
• Number of configurable images	500	500	500
Archiving			
• Number of archives per device	50	50	50
Security			
• Number of user groups	50	50	50
• Number of users	50	50	50
• SIMATIC Logon	Yes	Yes	Yes
Logging through printer			
• Alarms	Yes	Yes	Yes
• Report (shift log)	Yes	Yes	Yes
• Hardcopy	Yes	Yes	Yes
• Electronic print to file	No	Yes; PDF, HTML	Yes; PDF, HTML
Transfer (upload/download)			
• MPI/PROFIBUS DP	Yes	Yes	Yes
• Ethernet	Yes	Yes	Yes

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Technical specifications

Article number	**6AV2144-8GC20-0AA0** SIMATIC HMI TP700 Comfort INOX PCT	**6AV2144-8JC20-0AA0** SIMATIC HMI TP900 COMFORT INOX PCT	**6AV2144-8MC20-0AA0** SIMATIC HMI TP1200 COMFORT INOX PCT
Process coupling			
• S7-1200	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes
• WinAC	Yes	Yes	Yes
• SIMOTION	Yes	Yes	Yes
• Allen Bradley (EtherNet/IP)	Yes	Yes	Yes
• Allen Bradley (DF1)	Yes	Yes	Yes
• Mitsubishi (MC TCP/IP)	Yes	Yes	Yes
• Mitsubishi (FX)	Yes	Yes	Yes
• OMRON (FINS TCP)	No	No	No
• OMRON (LINK/Multilink)	Yes	Yes	Yes
• Modicon (Modbus TCP/IP)	Yes	Yes	Yes
• Modicon (Modbus)	Yes	Yes	Yes
• OPC UA Client	Yes	Yes	Yes
• OPC UA Server	Yes	Yes	Yes
Peripherals/Options			
Printer	Yes	Yes	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes; Up to 128 MB	Yes; Up to 128 MB	Yes; Up to 128 MB
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB	Yes; Up to 2 GB	Yes; Up to 2 GB
USB memory	Yes	Yes	Yes
Network camera	Yes	Yes	Yes
Accessories			
Further accessories are available	Yes; Service Pack (seal, mounting clips, clamping frame, power supply connector)	Yes; Service Pack (seal, mounting clips, clamping frame, power supply connector)	Yes; Service Pack (seal, mounting clips, clamping frame, power supply connector)
Mechanics/material			
Enclosure material (front)			
• Plastic	No	No	No
• Aluminum	No	No	No
• Stainless steel	Yes	Yes	Yes
Dimensions			
Width of the housing front	214 mm	274 mm	330 mm
Height of housing front	158 mm	190 mm	241 mm
Mounting cutout, width	197 mm	251 mm	310 mm
Mounting cutout, height	141 mm	166 mm	221 mm
Overall depth	66 mm	66 mm	65 mm
Weights			
Weight (without packaging)	2 kg	2.9 kg	4.2 kg

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Technical specifications

Article number	**6AV2144-8MC10-0AC0** SIMATIC HMI TP1200 COMFORT INOX LF
General information	
Product type designation	TP1200 Comfort INOX LF
Display	
Design of display	TFT
Screen diagonal	12.1 in
Number of colors	16 777 216
Resolution (pixels)	
• Horizontal image resolution	1 280 pixel
• Vertical image resolution	800 pixel
Backlighting	
• MTBF backlighting (at 25 °C)	80 000 h
Control elements	
Keyboard fonts	
• Function keys	
- Number of function keys	0
Touch operation	
• Design as touch screen	Yes
Installation type/mounting	
Mounting in portrait format possible	Yes
Supply voltage	
Rated value (DC)	24 V
Memory	
Memory available for user data	12 Mbyte
Type of output	
Acoustics	
• Speaker	Yes
Time of day	
Clock	
• Hardware clock (real-time)	Yes
• retentive	Yes; Back-up duration typically 6 weeks
• synchronizable	Yes
Interfaces	
Number of industrial Ethernet interfaces	1; 2 ports (switch)
Number of RS 485 interfaces	1; RS 422 / 485 combined
Number of USB interfaces	2; USB 2.0
• USB Mini B	1; 5-pole
Number of SD card slots	2
Industrial Ethernet	
• Number of ports of the integrated switch	2
Protocols	
PROFINET	Yes
IRT	Yes; As of WinCC V12
PROFIBUS	Yes
MPI	Yes
Redundancy mode	
Media redundancy	
- MRP	Yes; As of WinCC V12

Article number	**6AV2144-8MC10-0AC0** SIMATIC HMI TP1200 COMFORT INOX LF
Degree and class of protection	
IP (at the front)	IP66K
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4x at the front	Yes; indoor use only
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
FM approval	No
RCM (formerly C-TICK)	No
KC approval	No
EAC (formerly Gost-R)	Yes
Use in hazardous areas	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• IECEx Zone 2	Yes
• IECEx Zone 22	Yes
• cULus Class I Zone 2, Division 2	Yes
• FM Class I Division 2	No
Marine approval	
• Germanischer Lloyd (GL)	No
• American Bureau of Shipping (ABS)	No
• Bureau Veritas (BV)	No
• Det Norske Veritas (DNV)	No
• Korean Register of Shipping (KRS)	No
• Lloyds Register of Shipping (LRS)	No
• Nippon Kaiji Kyokai (Class NK)	No
• Polski Rejestr Statkow (PRS)	No
Ambient conditions	
Ambient temperature during operation	
Operation (vertical installation)	
- For vertical installation, min.	0 °C
- For vertical installation, max.	50 °C
Relative humidity	
• Operation, max.	80 %; no condensation
Configuration	
Configuration software	
• WinCC Comfort (TIA Portal)	Yes; from V11
Languages	
Online languages	
• Number of online/runtime languages	32

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Technical specifications

Article number	**6AV2144-8MC10-0AC0** SIMATIC HMI TP1200 COMFORT INOX LF
Functionality under WinCC (TIA Portal)	
Applications/options	
• Web browser	Yes
• Pocket Word	Yes
• Pocket Excel	Yes
• PDF Viewer	Yes
• Media Player	Yes
• SIMATIC WinCC Sm@rtServer	Yes
• SIMATIC WinCC Audit	Yes
Number of Visual Basic Scripts	Yes
Task planner	
• time-controlled	Yes
• task-controlled	Yes
Message system	
• Bit messages	
- Number of bit messages	4 000
• Analog messages	
- Number of analog messages	200
Recipe management	
• Number of recipes	300
• Size of internal recipe memory	2 Mbyte
• Recipe memory expandable	Yes
Variables	
• Number of variables per device	2 048
• Number of variables per screen	400
Images	
• Number of configurable images	500
Archiving	
• Number of archives per device	50
Security	
• Number of user groups	50
• Number of users	50
• SIMATIC Logon	Yes
Logging through printer	
• Alarms	Yes
• Report (shift log)	Yes
• Hardcopy	Yes
• Electronic print to file	Yes; PDF, HTML
Transfer (upload/download)	
• MPI/PROFIBUS DP	Yes
• Ethernet	Yes
Process coupling	
• S7-1200	Yes
• S7-1500	Yes
• S7-200	Yes
• S7-300/400	Yes
• LOGO!	Yes
• WinAC	Yes
• SIMOTION	Yes
• Allen Bradley (EtherNet/IP)	Yes
• Allen Bradley (DF1)	Yes
• Mitsubishi (MC TCP/IP)	Yes
• Mitsubishi (FX)	Yes
• OMRON (FINS TCP)	No
• OMRON (LINK/Multilink)	Yes
• Modicon (Modbus TCP/IP)	Yes
• Modicon (Modbus)	Yes
• OPC UA Client	Yes
• OPC UA Server	Yes

Article number	**6AV2144-8MC10-0AC0** SIMATIC HMI TP1200 COMFORT INOX LF
Peripherals/Options	
Printer	Yes
SIMATIC HMI MM memory card: Multi Media Card	Yes; Up to 128 MB
SIMATIC HMI SD memory card: Secure Digital memory card	Yes; Up to 2 GB
USB memory	Yes
Network camera	Yes
Mechanics/material	
Enclosure material (front)	
• Plastic	No
• Aluminum	No
• Stainless steel	Yes
Dimensions	
Width of the housing front	330 mm
Height of housing front	269 mm
Mounting cutout, width	310 mm
Mounting cutout, height	248 mm
Overall depth	67 mm
Weights	
Weight (without packaging)	4.2 kg

More information

Customer-specific modifications

- Customized design (logo, type designation and background color)
- Protection against condensation and corrosive gases

More information is available on the Internet at:

http://www.siemens.com/comfort-panels-inox

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2

Overview

SIMATIC Mobile Panels

Mobile Panels 2nd Generation

The second generation of SIMATIC HMI Mobile Panels impresses with its convenience, performance and quality.

The highlights: A brilliant widescreen display, particularly simple configuration and the unique illuminated emergency stop button.

This series of devices offers Panels with 7", 9" and 10" displays, some of which are available with or without safety-related operator controls.

Mobile Panels of the 2nd Generation are the successors to the SIMATIC HMI Mobile Panels x77 with cable connections.

- SIMATIC HMI KTP400F Mobile
- SIMATIC HMI KTP700 Mobile
- SIMATIC HMI KTP700F Mobile
- SIMATIC HMI KTP700F Mobile HW
- SIMATIC HMI KTP700F Mobile HW/OR
- SIMATIC HMI KTP900 Mobile
- SIMATIC HMI KTP900F Mobile
- SIMATIC HMI TP1000F Mobile

Mobile Panels for low-temperature environment

SIMATIC HMI KTP700F Mobile Arctic is designed for use in weather-protected areas with low ambient temperatures down to -28 °C.
For optimum operation even at low temperatures, a touch pen has been integrated in the front panel at the center underneath the display.

The operator panel has the same functionality as the SIMATIC HMI Mobile Panels 2nd Generation and is integrated in the "Totally Integrated Automation Portal" engineering framework.

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Overview

- SIMATIC HMI KTP700F Mobile HW
- SIMATIC HMI KTP700F Mobile HW/OR
- SIMATIC HMI TP1000F Mobile
- SIMATIC HMI KTP400F Mobile
- SIMATIC HMI KTP700 Mobile
- SIMATIC HMI KTP700F Mobile
- SIMATIC HMI KTP900 Mobile
- SIMATIC HMI KTP900F Mobile

Ordering data

	Article No.
SIMATIC Mobile Panels for 2nd Generation [1]	
SIMATIC HMI KTP700F Mobile HW 7.0" TFT display, 800 x 480 pixels, 16 million colors, key and touch operation, 6 function keys, 2 illuminated pushbuttons, 1x PROFINET/Industrial Ethernet interface, 1x Multimedia card, 1x USB, key-operated switch, acknowledgment button, emergency stop/stop button, handwheel, configurable as from WinCC Comfort V15	**6AV2145-8GB00-0AA0**
SIMATIC HMI KTP700F Mobile HW/OR 7.0" TFT display, 800 x 480 pixels, 16 million colors, key and touch operation, 6 function keys, 2 illuminated pushbuttons, 1x PROFINET/Industrial Ethernet interface, 1x Multimedia card, 1x USB, key-operated switch, acknowledgment button, emergency stop/stop button, handwheel and override, configurable as from WinCC Comfort V15	**6AV2145-8GB01-0AA0**
SIMATIC HMI TP1000F Mobile 10.0" TFT display, 1 280 x 800 pixels, 16 million colors, touch operation, touch pen, 1x PROFINET/Industrial Ethernet interface, 1x Multimedia card, 1x USB, key-operated switch, acknowledgment button, emergency stop/stop button, configurable as from WinCC Comfort V14	**6AV2145-6KB20-0AS0**
KTP400F Mobile	**6AV2125-2DB23-0AX0**
KTP700 Mobile	**6AV2125-2GB03-0AX0**
KTP700F Mobile	**6AV2125-2GB23-0AX0**
KTP900 Mobile	**6AV2125-2JB03-0AX0**
KTP900F Mobile	**6AV2125-2JB23-0AX0**
Starter kit Mobile Panel Consisting of: 1x KTP700F Mobile, 1x connection box standard, 1x connecting cable 2 m, 1x wall bracket, 1x WinCC Comfort (TIA Portal)	**6AV2133-5GA00-0AA0**
Accessories	
Connecting cable and accessories for Mobile Panels	See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

[1] The system components (connecting cables and connection boxes) must be ordered separately.

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Technical specifications

Article number	6AV2125-2DB23-0AX0	6AV2125-2GB03-0AX0	6AV2125-2GB23-0AX0	6AV2125-2JB03-0AX0	6AV2125-2JB23-0AX0
	SIMATIC HMI KTP400F Mobile	SIMATIC HMI KTP700 Mobile	SIMATIC HMI KTP700F Mobile	SIMATIC HMI KTP900 Mobile	SIMATIC HMI KTP900F Mobile
General information					
Product type designation	KTP400F Mobile	KTP700 Mobile	KTP700F Mobile	KTP900 Mobile	KTP900F Mobile
Display					
Design of display	TFT	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	4.3 in	7 in	7 in	9 in	9 in
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)					
• Horizontal image resolution	480 pixel	800 pixel	800 pixel	800 pixel	800 pixel
• Vertical image resolution	272 pixel	480 pixel	480 pixel	480 pixel	480 pixel
Backlighting					
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h	50 000 h	50 000 h
Control elements					
Keyboard fonts					
• Function keys					
- Number of function keys	4	8	8	10	10
Touch operation					
• Design as touch screen	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	No	No	No	No	No
Special operator controls					
• Stop button (forced blocking)	Yes	No	Yes	No	Yes
• Emergency stop button (illuminated and forced blocking)	Yes	No	Yes	No	Yes
• Acknowledgement button (3-stage)	Yes	No	Yes	No	Yes
• Key-operated switch	No	No	Yes	No	Yes
• Illuminated pushbutton	Yes	Yes	Yes	Yes	Yes
Camera					
• integrated camera	No	No	No	No	No
Expansions for operator control of the process					
• Direct keys (touch buttons as S7 input I/O)	32	32	32	32	32
Supply voltage					
Rated value (DC)	24 V	24 V	24 V	24 V	24 V
Memory					
Memory available for user data	4 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte	12 Mbyte
Time of day					
Clock					
• Hardware clock (real-time)	Yes	Yes	Yes	Yes	Yes
Interfaces					
Number of industrial Ethernet interfaces	1	1	1	1	1
Number of PROFINET interfaces	1	1	1	1	1
Number of RS 485 interfaces	0	0	0	0	0
Number of USB interfaces	1; USB 2.0	1; USB 2.0	1; USB 2.0	1; USB 2.0	1; USB 2.0
Number of wireless interfaces	0	0	0	0	0
Number of SD card slots	0	1	1	1	1

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Technical specifications

Article number	6AV2125-2DB23-0AX0	6AV2125-2GB03-0AX0	6AV2125-2GB23-0AX0	6AV2125-2JB03-0AX0	6AV2125-2JB23-0AX0
	SIMATIC HMI KTP400F Mobile	SIMATIC HMI KTP700 Mobile	SIMATIC HMI KTP700F Mobile	SIMATIC HMI KTP900 Mobile	SIMATIC HMI KTP900F Mobile
Protocols					
PROFINET	Yes	Yes	Yes	Yes	Yes
PROFIsafe	Yes	No	Yes	No	Yes
PROFIBUS	No	No	No	No	No
EtherNet/IP	Yes	Yes	Yes	Yes	Yes
Protocols (Ethernet)					
• TCP/IP	Yes	Yes	Yes	Yes	Yes
• DHCP	Yes	Yes	Yes	Yes	Yes
• SNMP	Yes	Yes	Yes	Yes	Yes
• DCP	Yes	Yes	Yes	Yes	Yes
• LLDP	Yes	Yes	Yes	Yes	Yes
WEB characteristics					
• HTTP	Yes	Yes	Yes	Yes	Yes
• HTTPS	Yes	Yes	Yes	Yes	Yes
• HTML	Yes	Yes	Yes	Yes	Yes
• XML	No	No	No	No	No
• CSS	Yes	Yes	Yes	Yes	Yes
• Active X	No	No	No	No	No
• JavaScript	Yes	Yes	Yes	Yes	Yes
• Java VM	No	No	No	No	No
Further protocols					
• MODBUS	Yes	Yes	Yes	Yes	Yes
communication functions / header					
Wireless communication					
• supported standards					
- Radio standard WLAN 802.11	No	No	No	No	No
- Bluetooth radio standard	No	No	No	No	No
Degree and class of protection					
IP65 (all-round)	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates					
CE mark	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon	No; Available soon	No; Available soon
Suitable for safety functions	Yes	No	Yes	No	Yes
Marine approval	Yes	Yes	Yes	Yes	Yes
Highest safety class achievable in safety mode					
• Performance level according to ISO 13849-1	PLe	none	PLe	none	PLe
• SIL acc. to IEC 61508	SIL 3	No	SIL 3	No	SIL 3
Use in hazardous areas					
• ATEX Zone 2	No	No	No	No	No
• ATEX Zone 22	No	No	No	No	No
• IECEx Zone 2	No	No	No	No	No
• IECEx Zone 22	No	No	No	No	No
• cULus Class I Zone 2, Division 2	No	No	No	No	No
• FM Class I Division 2	No	No	No	No	No

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Technical specifications

Article number	6AV2125-2DB23-0AX0	6AV2125-2GB03-0AX0	6AV2125-2GB23-0AX0	6AV2125-2JB03-0AX0	6AV2125-2JB23-0AX0
	SIMATIC HMI KTP400F Mobile	SIMATIC HMI KTP700 Mobile	SIMATIC HMI KTP700F Mobile	SIMATIC HMI KTP900 Mobile	SIMATIC HMI KTP900F Mobile
Ambient conditions					
Free fall					
• Fall height, max.	1.2 m	1.2 m	1.2 m	1.2 m	1.2 m
Ambient temperature during operation					
• min.	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity					
• Operation, max.	90 %	90 %	90 %	90 %	90 %
Languages					
Online languages					
• Number of online/runtime languages	32	32	32	32	32
Functionality under WinCC (TIA Portal)					
Applications/options					
• Web browser	Yes	Yes	Yes	Yes	Yes
• Pocket Word	No	No	No	No	No
• Pocket Excel	No	No	No	No	No
• PDF Viewer	Yes	Yes	Yes	Yes	Yes
• Media Player	No	No	No	No	No
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes	Yes	Yes
Task planner					
• time-controlled	Yes	Yes	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes	Yes	Yes
Multiproject					
• Number of projects (internal)	0	0	0	0	0
• Number of projects (external)	0	0	0	0	0
Message system					
• Bit messages					
- Number of bit messages	4 000	4 000	4 000	4 000	4 000
• Analog messages					
- Number of analog messages	200	200	200	200	200
• Message buffer					
- Number of entries	1 024	1 024	1 024	1 024	1 024
- Circulating buffer	Yes	Yes	Yes	Yes	Yes
- retentive	Yes	Yes	Yes	Yes	Yes
Recipe management					
• Number of recipes	300	300	300	300	300
• Size of internal recipe memory	2 Mbyte	2 Mbyte	2 Mbyte	2 Mbyte	2 Mbyte
• Recipe memory expandable	Yes	Yes	Yes	Yes	Yes
Variables					
• Number of variables per device	2 048	2 048	2 048	2 048	2 048
• Number of variables per screen	50	400	400	400	400
Images					
• Number of configurable images	500	500	500	500	500
Archiving					
• Number of archives per device	50	50	50	50	50
• Number of entries per archive	20 000	20 000	20 000	20 000	20 000

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Technical specifications

Article number	**6AV2125-2DB23-0AX0**	**6AV2125-2GB03-0AX0**	**6AV2125-2GB23-0AX0**	**6AV2125-2JB03-0AX0**	**6AV2125-2JB23-0AX0**
	SIMATIC HMI KTP400F Mobile	SIMATIC HMI KTP700 Mobile	SIMATIC HMI KTP700F Mobile	SIMATIC HMI KTP900 Mobile	SIMATIC HMI KTP900F Mobile
Security					
• Number of user groups	50	50	50	50	50
• Number of users	50	50	50	50	50
• SIMATIC Logon	Yes	Yes	Yes	Yes	Yes
Process coupling					
• S7-1200	Yes	Yes	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes	Yes	Yes
• WinAC	Yes; WinAC RTX	Yes; WinAC RTX	Yes; WinAC RTX	Yes; WinAC RTX	Yes; WinAC RTX
• SIMOTION	Yes	Yes	Yes	Yes	Yes
Peripherals/Options					
SIMATIC HMI MM memory card: Multi Media Card	No	Yes	Yes	Yes	Yes
SIMATIC HMI SD memory card: Secure Digital memory card	No	Yes	Yes	Yes	Yes
USB memory	Yes	Yes	Yes	Yes	Yes
Mechanics/material					
Enclosure material (front)					
• Plastic	Yes	Yes	Yes	Yes	Yes
• Aluminum	No	No	No	No	No
• Stainless steel	No	No	No	No	No
Dimensions					
Width of the housing front	194 mm	248.4 mm	248.4 mm	307.5 mm	307.5 mm
Height of housing front	166 mm	171.7 mm	194.9 mm	200.9 mm	223.5 mm
Weights					
Weight (without packaging)	0.7 kg	1.2 kg	1.3 kg	1.5 kg	1.6 kg

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Technical specifications

Article number	**6AV2145-8GB00-0AA0**	**6AV2145-8GB01-0AA0**	**6AV2145-6KB20-0AS0**
	SIMATIC HMI KTP700F Mobile HW	SIMATIC HMI KTP700F Mobile HW/OR	SIMATIC HMI TP1000F MOBILE
General information			
Product type designation	KTP700F	KTP700F	TP1000F Mobile
Display			
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	7 in	7 in	10.1 in
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Horizontal image resolution	800 pixel	800 pixel	1 280 pixel
• Vertical image resolution	480 pixel	480 pixel	800 pixel
Backlighting			
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h
Control elements			
Keyboard fonts			
• Function keys			
- Number of function keys	6	6	0
Touch operation			
• Design as touch screen	Yes	Yes	Yes
• Design as multi-touch screen	No	No	No
Special operator controls			
• Stop button (forced blocking)	Yes	Yes	Yes
• Emergency stop button (illuminated and forced blocking)	Yes	Yes	Yes
• Acknowledgement button (3-stage)	Yes	Yes	Yes
• Key-operated switch	Yes	Yes	Yes
• Illuminated pushbutton	Yes	Yes	Yes
• Handwheel	Yes	Yes	No
Camera			
• integrated camera	No	No	No
Expansions for operator control of the process			
• Direct keys (touch buttons as S7 input I/O)	32	32	0
Supply voltage			
Rated value (DC)	24 V	24 V	24 V
Memory			
Memory available for user data	12 Mbyte	12 Mbyte	12 Mbyte
Time of day			
Clock			
• Hardware clock (real-time)	Yes	Yes	Yes
Interfaces			
Number of industrial Ethernet interfaces	1	1	1
Number of PROFINET interfaces	1	1	1
Number of RS 485 interfaces	0	0	0
Number of USB interfaces	1; USB 2.0	1; USB 2.0	1; USB 2.0
Number of wireless interfaces	0	0	0
Number of SD card slots	1	1	1

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Technical specifications

Article number	**6AV2145-8GB00-0AA0**	**6AV2145-8GB01-0AA0**	**6AV2145-6KB20-0AS0**
	SIMATIC HMI KTP700F Mobile HW	SIMATIC HMI KTP700F Mobile HW/OR	SIMATIC HMI TP1000F MOBILE
Protocols			
PROFINET	Yes	Yes	Yes
PROFIsafe	Yes	Yes	Yes
PROFIBUS	No	No	No
EtherNet/IP	Yes	Yes	Yes
Protocols (Ethernet)			
• TCP/IP	Yes	Yes	Yes
• DHCP	Yes	Yes	Yes
• SNMP	Yes	Yes	Yes
• DCP	Yes	Yes	Yes
• LLDP	Yes	Yes	Yes
WEB characteristics			
• HTTP	Yes	Yes	Yes
• HTTPS	Yes	Yes	Yes
• HTML	Yes	Yes	Yes
• XML	No	No	No
• CSS	Yes	Yes	Yes
• Active X	No	No	No
• JavaScript	Yes	Yes	Yes
• Java VM	No	No	No
Further protocols			
• MODBUS	Yes	Yes	Yes
communication functions / header			
Wireless communication			
• supported standards			
- Radio standard WLAN 802.11	No	No	No
- Bluetooth radio standard	No	No	No
Degree and class of protection			
IP65 (all-round)	Yes	Yes	Yes
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
UL approval	Yes	Yes	
cULus	Yes	Yes	Yes
FM approval	No	No	
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	No	No	No
EAC (formerly Gost-R)	Yes	Yes	
Suitable for safety functions	Yes	Yes	Yes
Marine approval	No	No	No
Highest safety class achievable in safety mode			
• Performance level according to ISO 13849-1	PLe	PLe	PLe
• SIL acc. to IEC 61508	SIL 3	SIL 3	SIL 3
Use in hazardous areas			
• ATEX Zone 2	No	No	No
• ATEX Zone 22	No	No	No
• IECEx Zone 2	No	No	No
• IECEx Zone 22	No	No	No
• cULus Class I Zone 2, Division 2	No	No	No
• cULus Class II Division 2	No	No	
• FM Class I Division 2	No	No	No
• FM Class II Division 2	No	No	

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Technical specifications

Article number	**6AV2145-8GB00-0AA0**	**6AV2145-8GB01-0AA0**	**6AV2145-6KB20-0AS0**
	SIMATIC HMI KTP700F Mobile HW	SIMATIC HMI KTP700F Mobile HW/OR	SIMATIC HMI TP1000F MOBILE
Ambient conditions			
Free fall			
• Fall height, max.	1.2 m	1.2 m	1.2 m
Ambient temperature during operation			
• min.	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C
Relative humidity			
• Operation, max.	90 %	90 %	90 %
Languages			
Online languages			
• Number of online/runtime languages	32	32	32
Functionality under WinCC (TIA Portal)			
Applications/options			
• Web browser	Yes	Yes	Yes
• Pocket Word	No	No	No
• Pocket Excel	No	No	No
• PDF Viewer	Yes	Yes	Yes
• Media Player	No	No	No
• SIMATIC WinCC Sm@rtServer	Yes	Yes	Yes
• SIMATIC WinCC Audit	Yes	Yes	Yes
Number of Visual Basic Scripts	Yes	Yes	Yes
Task planner			
• time-controlled	Yes	Yes	Yes
• task-controlled	Yes	Yes	Yes
Multiproject			
• Number of projects (internal)	0	0	0
• Number of projects (external)	0	0	0
Message system			
• Bit messages			
- Number of bit messages	4 000	4 000	4 000
• Analog messages			
- Number of analog messages	200	200	200
• Message buffer			
- Number of entries	1 024	1 024	1 024
- Circulating buffer	Yes	Yes	Yes
- retentive	Yes	Yes	Yes
Recipe management			
• Number of recipes	300	300	300
• Size of internal recipe memory	2 Mbyte	2 Mbyte	2 Mbyte
• Recipe memory expandable	Yes	Yes	Yes
Variables			
• Number of variables per device	2 048	2 048	2 048
• Number of variables per screen	400	400	400
Images			
• Number of configurable images	500	500	500
Archiving			
• Number of archives per device	50	50	50
• Number of entries per archive	20 000	20 000	20 000

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Technical specifications

Article number	**6AV2145-8GB00-0AA0**	**6AV2145-8GB01-0AA0**	**6AV2145-6KB20-0AS0**
	SIMATIC HMI KTP700F Mobile HW	SIMATIC HMI KTP700F Mobile HW/OR	SIMATIC HMI TP1000F MOBILE
Security			
• Number of user groups	50	50	50
• Number of users	50	50	50
• SIMATIC Logon	Yes	Yes	Yes
Process coupling			
• S7-1200	Yes	Yes	Yes
• S7-1500	Yes	Yes	Yes
• S7-200	Yes	Yes	Yes
• S7-300/400	Yes	Yes	Yes
• LOGO!	Yes	Yes	Yes
• WinAC	No	No	Yes; WinAC RTX
• SIMOTION	Yes	Yes	Yes
Peripherals/Options			
SIMATIC HMI MM memory card: Multi Media Card	Yes	Yes	Yes
SIMATIC HMI SD memory card: Secure Digital memory card	Yes	Yes	Yes
USB memory	Yes	Yes	Yes
Mechanics/material			
Enclosure material (front)			
• Plastic	Yes	Yes	Yes
• Aluminum	No	No	No
• Stainless steel	No	No	No
Dimensions			
Width of the housing front	248.4 mm	248.4 mm	307.5 mm
Height of housing front	171.7 mm	171.7 mm	223.5 mm
Weights			
Weight (without packaging)	1.3 kg	1.3 kg	1.6 kg

More information

More information is available on the Internet at:

http://www.siemens.com/mobile-panels

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Mobile Panels for low-temperature environment

Overview

SIMATIC HMI KTP700F MOBILE ARCTIC

SIMATIC HMI KTP700F Mobile Arctic

The operator panel with glass touch screen is designed for use in weather-protected areas with low ambient temperatures, e.g. in cooling technology.

It has the same functionality as the SIMATIC HMI Mobile Panels 2nd Generation and is configured exclusively with the innovative HMI software WinCC.

The engineering software is integrated into the "Totally Integrated Automation Portal" engineering framework. WinCC (TIA Portal) as of V15.1 is required to configure the device.

Ordering data

	Article No.
SIMATIC HMI KTP700F Mobile Arctic Extended operating temperature range, 7.0" TFT display, 800 x 480 pixels, 16 million colors, key and touch operation, 8 function keys, 1x PROFINET/Industrial Ethernet interface, 1x Multimedia card, 1x USB, 1x touch pen, key-operated switch, acknowledgment button, emergency stop/stop button, configurable as of WinCC Comfort V15.1	**6AV2145-6GB06-0AA0**
Accessories	
Connection boxes, Compact and Advanced	See System components for Mobile Panels
Connecting cable	Connecting cable KTP Mobile

Technical specifications

Article number	**6AV2145-6GB06-0AA0** SIMATIC HMI KTP700F Mobile Arctic
General information	
Product type designation	KTP700F Mobile Arctic
Display	
Design of display	TFT, bonded, daylight-readable
Screen diagonal	7 in
Number of colors	16 777 216
Resolution (pixels)	
• Horizontal image resolution	800 pixel
• Vertical image resolution	480 pixel
Backlighting	
• MTBF backlighting (at 25 °C)	50 000 h
Control elements	
Keyboard fonts	
• Function keys	
- Number of function keys	8
Touch operation	
• Design as touch screen	Yes
• Design as multi-touch screen	No
Special operator controls	
• Stop button (forced blocking)	Yes
• Emergency stop button (illuminated and forced blocking)	Yes
• Acknowledgement button (3-stage)	Yes
• Key-operated switch	Yes
• Illuminated pushbutton	Yes
Camera	
• integrated camera	No
Expansions for operator control of the process	
• Direct keys (touch buttons as S7 input I/O)	32
Supply voltage	
Rated value (DC)	24 V
Memory	
Memory available for user data	12 Mbyte
Time of day	
Clock	
• Hardware clock (real-time)	Yes
Interfaces	
Number of industrial Ethernet interfaces	1
Number of PROFINET interfaces	1
Number of RS 485 interfaces	0
Number of USB interfaces	1; USB 2.0
Number of wireless interfaces	0
Number of SD card slots	1

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Technical specifications

Article number	**6AV2145-6GB06-0AA0**
	SIMATIC HMI KTP700F Mobile Arctic
Protocols	
PROFINET	Yes
PROFIsafe	Yes
PROFIBUS	No
EtherNet/IP	Yes
Protocols (Ethernet)	
• TCP/IP	Yes
• DHCP	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
WEB characteristics	
• HTTP	Yes
• HTTPS	Yes
• HTML	Yes
• XML	No
• CSS	Yes
• Active X	No
• JavaScript	Yes
• Java VM	No
Further protocols	
• MODBUS	Yes
communication functions / header	
Wireless communication	
• supported standards	
- Radio standard WLAN 802.11	No
- Bluetooth radio standard	No
Degree and class of protection	
IP65 (all-round)	Yes
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
FM approval	No
RCM (formerly C-TICK)	Yes
KC approval	No
Suitable for safety functions	Yes
Marine approval	No
Highest safety class achievable in safety mode	
• Performance level according to ISO 13849-1	PLe
• SIL acc. to IEC 61508	SIL 3
Use in hazardous areas	
• ATEX Zone 2	No
• ATEX Zone 22	No
• IECEx Zone 2	No
• IECEx Zone 22	No
• cULus Class I Zone 2, Division 2	No
• cULus Class II Division 2	No
• FM Class I Division 2	No
• FM Class II Division 2	No

Article number	**6AV2145-6GB06-0AA0**
	SIMATIC HMI KTP700F Mobile Arctic
Ambient conditions	
Free fall	
• Fall height, max.	1.2 m
Ambient temperature during operation	
• min.	-28 °C
• max.	45 °C
Relative humidity	
• Operation, max.	90 %; no condensation
Languages	
Online languages	
• Number of online/runtime languages	32
Functionality under WinCC (TIA Portal)	
Applications/options	
• Web browser	Yes
• Pocket Word	No
• Pocket Excel	No
• PDF Viewer	Yes
• Media Player	No
• SIMATIC WinCC Sm@rtServer	Yes
• SIMATIC WinCC Audit	Yes
Number of Visual Basic Scripts	Yes
Task planner	
• time-controlled	Yes
• task-controlled	Yes
Multiproject	
• Number of projects (internal)	0
• Number of projects (external)	0
Message system	
• Bit messages	
- Number of bit messages	4 000
• Analog messages	
- Number of analog messages	200
• Message buffer	
- Number of entries	1 024
- Circulating buffer	Yes
- retentive	Yes
Recipe management	
• Number of recipes	300
• Size of internal recipe memory	2 Mbyte
• Recipe memory expandable	Yes
Variables	
• Number of variables per device	2 048
• Number of variables per screen	400
Images	
• Number of configurable images	500
Archiving	
• Number of archives per device	50
• Number of entries per archive	20 000

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Mobile Panels for low-temperature environment

Technical specifications

Article number	**6AV2145-6GB06-0AA0** SIMATIC HMI KTP700F Mobile Arctic
Security	
• Number of user groups	50
• Number of users	50
• SIMATIC Logon	Yes
Process coupling	
• S7-1200	Yes
• S7-1500	Yes
• S7-200	Yes
• S7-300/400	Yes
• LOGO!	Yes
• WinAC	Yes; WinAC RTX
• SIMOTION	Yes
Peripherals/Options	
SIMATIC HMI MM memory card: Multi Media Card	Yes
SIMATIC HMI SD memory card: Secure Digital memory card	Yes
USB memory	Yes
Mechanics/material	
Enclosure material (front)	
• Plastic	Yes
• Aluminum	No
• Stainless steel	No
Dimensions	
Width of the housing front	248.4 mm
Height of housing front	171.7 mm
Weights	
Weight (without packaging)	1.3 kg

More information

You can find more information on the Internet at:

http://www.siemens.com/wincc-unified-system

Customized modification options

Do you need a specific modification or option for the products described here? Then look up "Customized products", where you will find information about additional sector-specific products that can be ordered as well as about options for customer-specific modification and adaptation.

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Overview

Mobile Panels with emergency stop/stop buttons can be wired into the emergency stop circuit of a machine or plant by means of the connection boxes.

Pressing the emergency stop/stop button on the Mobile Panel activates the emergency stop function.

The emergency stop/stop button on the Mobile Panel supplements, but does not replace, the emergency stop equipment permanently installed on the machine.

Ordering data

	Article No.
Connection boxes for SIMATIC Mobile Panels for 2nd Generation and Arctic Panel	
• Connection Box, Compact	**6AV2125-2AE03-0AX0**
• Connection Box, Standard	**6AV2125-2AE13-0AX0**
• Connection Box, Advanced	**6AV2125-2AE23-0AX0**
Connecting cable and accessories for Mobile Panels	See "SIMATIC HMI operator control and monitoring systems" -> "Accessories"

Technical specifications

Article number	**6AV2125-2AE03-0AX0**	**6AV2125-2AE13-0AX0**	**6AV2125-2AE23-0AX0**
SIMATIC HMI Connection Box	Compact	Standard	Advanced
General information			
Product type designation	Connection box	Connection box	Connection box
Product function			
• Web-based management	No	Yes	Yes
FH technology			
Safety evaluation through direct wiring			
• Reconnection without emergency stop circuit interruption	No	No	Yes
• Reconnection with emergency stop circuit interruption	Yes	Yes	No
• Monitoring the STOP button	Yes	Yes	Yes
• Monitoring of emergency stop button	Yes	Yes	Yes
• Monitoring of acknowledgement button	Yes	Yes	Yes
Safety evaluation via PROFIsafe			
• Reconnection without emergency stop circuit interruption	Yes	Yes	Yes
• Reconnection with emergency stop circuit interruption	No	No	No
• Monitoring the STOP button	Yes	Yes	Yes
• Monitoring of emergency stop button	Yes	Yes	Yes
• Monitoring of acknowledgement button	Yes	Yes	Yes
Installation type/mounting			
Wall mounting/direct mounting	No	Yes	Yes
Control cabinet installation	Yes	No	No
Supply voltage			
Rated value (DC)	24 V	24 V	24 V
Input current			
Current consumption (rated value)	18 mA	96 mA	95 mA
Starting current inrush I^2t	0.003 $A^2 \cdot s$	0.15 $A^2 \cdot s$	0.16 $A^2 \cdot s$
Power			
Active power input, typ.	0.43 W	2.3 W	2.3 W

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Connection box for Mobile Panels (2nd Generation)

Technical specifications

Article number	6AV2125-2AE03-0AX0	6AV2125-2AE13-0AX0	6AV2125-2AE23-0AX0
SIMATIC HMI Connection Box	Compact	Standard	Advanced
Interfaces			
Number of industrial Ethernet interfaces	2	3	3
Number of PROFINET interfaces	2	3	3
Connection point identification	Yes	Yes	Yes
Industrial Ethernet			
• Industrial Ethernet status LED	0	3	3
Protocols			
PROFINET	Yes; No switch functionality	Yes	Yes
IRT	No	No	Yes
PROFIsafe	Yes; No switch functionality	Yes	Yes
EtherNet/IP	Yes	Yes	Yes
AS-Interface	No	No	No
EIB/KNX	No	No	No
Protocols (Ethernet)			
• TCP/IP	Yes; No switch functionality	Yes	Yes
• DHCP	No	Yes	Yes
• SNMP	No	Yes	Yes
• DCP	No	Yes	Yes
• LLDP	No	Yes	Yes
Redundancy mode			
Media redundancy			
- MRP	No	No	Yes
Further protocols			
• MODBUS	Yes	Yes	Yes
• other bus systems	No	No	No
Degree and class of protection			
IP degree of protection		IP65	IP65
IP65 (all-round)		Yes	Yes
IP (at the front)	IP65	IP65	IP65
IP (rear)	IP20		
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	No; Available soon	No; Available soon	No; Available soon
Suitable for safety functions	Yes	Yes	Yes
Highest safety class achievable in safety mode			
• Performance level according to ISO 13849-1	PLe	PLe	PLe
• SIL acc. to IEC 61508	SIL 3	SIL 3	SIL 3

Article number	6AV2125-2AE03-0AX0	6AV2125-2AE13-0AX0	6AV2125-2AE23-0AX0
SIMATIC HMI Connection Box	Compact	Standard	Advanced
Use in hazardous areas			
• ATEX Zone 2	No	No	No
• ATEX Zone 22	No	No	No
• cULus Class I Zone 2, Division 2	No	No	No
• FM Class I Division 2	No	No	No
Marine approval			
• Germanischer Lloyd (GL)	Yes	Yes	Yes
• American Bureau of Shipping (ABS)	Yes	Yes	Yes
• Bureau Veritas (BV)	No; Available soon	No; Available soon	No; Available soon
• Det Norske Veritas (DNV)	Yes	Yes	Yes
• Korean Register of Shipping (KRS)	No	No	No
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes
• Polski Rejestr Statkow (PRS)	No	No	No
• Chinese Classification Society (CCS)	No	No	No
Ambient conditions			
Ambient temperature during operation			
• min.	0 °C	0 °C	0 °C
• max.	55 °C	55 °C	55 °C
Relative humidity			
• Operation, max.	90 %	90 %	90 %
Configuration			
Configuration software			
• STEP 7 Professional (TIA Portal)	No	No	No
• WinCC Comfort (TIA Portal)	No	Yes; Optional	Yes; Optional
• WinCC Advanced (TIA Portal)	No	Yes; Optional	Yes; Optional
• WinCC Professional (TIA Portal)	No	Yes; Optional	Yes; Optional
Mechanics/material			
Enclosure material (front)			
• Plastic	Yes	Yes	Yes
• Aluminum	No	No	No
• Stainless steel	No	No	No
Dimensions			
Width of the housing front	96 mm	230 mm	230 mm
Height of housing front	125 mm	145 mm	145 mm
Depth of housing	78 mm	76 mm	76 mm
Mounting cutout, width	77.5 mm		
Mounting cutout, height	106.5 mm		
Overall depth	30 mm		
Weights			
Weight (without packaging)	0.25 kg	0.72 kg	0.72 kg

More information

More information is available on the Internet at:

http://www.siemens.com/mobile-panels

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Overview

SIMATIC HMI Advanced – efficient realization of even the most demanding and sophisticated HMI tasks

A PC-based system is recommended if the production places particularly high demands on the quantity and type of information to be processed and documented.

It offers the appropriate options for sufficient storage space, processor performance and data connection. The user can either opt for a centralized solution in which the visualization and PC are combined in a single unit, or for a distributed solution with an industrial monitor as thin client.

SIMATIC Industrial Panel PCs (chapter 5)

The most complex visualization and control tasks can be realized centrally on the machine with extremely compact industrial panel PCs. You can always find an optimum solution in our portfolio – from the embedded to the high-end industrial PC – to meet the many requirements of manufacturing and process automation.

SIMATIC IFP and SIMATIC ITC (chapter 5)

Two innovative options are available for distributed control concepts. SIMATIC industrial monitors and thin clients are used as desktop devices for control centers, as built-in devices for operator panels or as PC-based visualization and control solutions, in which the control unit is operated separately.

The following modules are available:

- Panel PC
- Industrial monitors and thin clients
- Software packages

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Introduction

Overview

The SIMATIC Basic Panel, Comfort Panel and Mobile Panel offer HMI functionality for the control systems:

- SIMATIC S7
- Non-Siemens controllers:
  - Allen Bradley
  - Mitsubishi
  - Modicon
  - Omron

For more detailed information, refer to the WinCC (TIA Portal) user manual, the "Windows-based systems communication" manual, or the WinCC (TIA Portal) online help.

OPC communication and HTTP communication are offered for Comfort Panels and Mobile Panels with an integrated Ethernet interface. Both OPC and HTTP communication can be used in parallel with the process links to SIMATIC S7 or non-Siemens PLCs.

Note:

Interface options for HMI devices: See the individual device descriptions.

OPC communication

OPC Data Access is an open standard for exchanging both local and remote variables between various applications via Industrial Ethernet.

HTTP communication for variable exchange between SIMATIC HMI systems

Communication based on HTTP message frames enables variables to be exchanged between SIMATIC HMI systems.

Communication standard	SIMATIC HMI			
Version	**Comfort Panel**	**Mobile Panel 177 PN/ 277**	**Mobile Panel KTPx00**	**WinCC Runtime Advanced**
OPC Data Access V2.05a + OPC UA Data Access V1.01 + OPC Data Access XML V1.00				
OPC DA client (COM/DCOM)	–	–	–	•
OPC DA server (COM/DCOM)	–	–	–	•
OPC UA DA client	•	–	•	•
OPC UA DA server	•	–	•	•
HTTP communication for variable exchange between SIMATIC HMI systems				
HTTP client	•	•	•	•
HTTP server	•	•	•	•

• System interface possible

– System interface not possible

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Overview

The following types of interface are differentiated in respect of the link between the SIMATIC Panels and SIMATIC S7 controllers:

- PROFINET interface:
  Coupling of SIMATIC Panel to SIMATIC S7 controllers via Industrial Ethernet TCP/IP using the integrated PROFINET interface of the CPU or, alternatively, a PROFINET interface module.
- MPI/PROFIBUS interface:
  Coupling of SIMATIC Panel to SIMATIC S7 controllers via MPI/PROFIBUS using the integrated MPI/PROFIBUS interface of the CPU or the integrated PPI interface of the CPU in the case of S7-200 or, alternatively, a PROFIBUS interface module in the case of S7-1200, S7-1500, S7-300 and S7-400.
- PPI interface:
  Coupling of SIMATIC Panel to SIMATIC S7-200 via PPI network using the integrated PPI interface of the CPU.

The maximum possible number of S7 connections of one CPU is determined by its performance capacity (see Catalog ST 70); from the point of view of the SIMATIC Panel, the following restrictions apply:

- Basic Panel, Comfort Panel 4", Mobile Panel 177: max. 4 connections
- Comfort Panels from 7" to 22" (incl. Outdoor), Mobile Panel 2nd Generation: max. 8 connections
- Mobile Panel 277: max. 6 connections
- PC with WinCC Runtime Advanced: max. 8 connections

PPI interface

The PPI interface is a point-to-point connection between a SIMATIC Panel (PPI master) or alternatively a PG (PPI master) and an S7-200 (PPI slave).

MPI/PROFIBUS interface or PROFINET interface

The corresponding multipoint-enabled SIMATIC Panel and SIMATIC S7 communication interfaces are used.
The following are possible:

- Interface between one or more SIMATIC Panels (MPI master) and one or more S7-1200/S7-1500/S7-300/S7-400s or WinAC (MPI master) (possible network topology: MPI/PROFIBUS or Industrial Ethernet TCP/IP)
- Interface between one or more SIMATIC Panels (MPI master) and one or more S7-200s (MPI slave)[1] (possible network topology: PPI, MPI/PROFIBUS)

Unlike PPI connections, MPI connections are static connections that are set up during run-up and then monitored.

In principle this type of information exchange between SIMATIC Panels and SIMATIC S7 is independent of the network used, PPI, MPI/PROFIBUS or Industrial Ethernet: SIMATIC Panels are S7 clients and SIMATIC S7 CPUs are S7 servers.

Controller	SIMATIC HMI					
Target hardware (PROTOCOL) (physics)	**Basic Panel**	**Comfort Panel**	**Mobile Panel 177 DP / PN [1]**	**Mobile Panel 277 [1]**	**KTPx00(F) Mobile [1]**	**WinCC Runtime Advanced**
SIMATIC S7-1200 [2]						
over Ethernet (TCP/IP)	• [3]	•	• [3]	•	•	•
over MPI or PROFIBUS network	• [4]	•	• [3]	•	–	• [5]
SIMATIC S7-1500 [2]						
over Ethernet (TCP/IP)	• [3]	•	• [3]	•	•	•
over PROFIBUS network	• [3]	•	• [3]	•	–	• [5]
SIMATIC S7-300, -400, WinAC [2]						
over Ethernet (TCP/IP)	• [3]	•	• [3]	•	•	•
over MPI or PROFIBUS network		•	• [4]	•	–	• [5]
SIMATIC S7-200 [2]						
over Ethernet (TCP/IP) (MPI protocol)	• [3]	•	• [3]	•	•	•
over MPI or PROFIBUS network	• [4]	• [6]	• [4] [6]	• [6]	–	• [5] [6]
over PPI network (MPI protocol)	• [4]	–	•	–	–	–
over PPI network (PPI protocol)	–	• [7]	• [7]	• [7]	–	• [5] [7]

• System interface possible

- System interface not possible

[2] Mobile Panel connection via special connecting cable and connection box (see Mobile Panels), see Manual for cable assignment

[3] Controllers can be combined as desired

[4] Basic Panel PN and Mobile Panel 177 PN only

[5] Basic Panel DP and Mobile Panel 177 DP only

[6] Connection via integrated MPI/PROFIBUS interface; in the case of a standard PC, a communications processor (CP) is to be used (e.g. CP 5612/5622)

[7] Only on passive S7-200

[8] Can be interfaced via PPI to max. 1 x S7-200 (PPI); network operation (parallel PG, etc.) is possible

Note:

For detailed information on cable assignment, refer to WinCC Online Help.

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2

Overview

The SIMATIC Basic Panels, Comfort Panels and Mobile Panels, as well as the SIMATIC HMI software package for PC WinCC Runtime Advanced support the following protocols for linking the control systems of other manufacturers:

- Allen Bradley
  - Ethernet IP protocol
  - DF1 protocol
- Mitsubishi
  - MC TCP/IP protocol
  - FX protocol
- Modicon
  - Modbus TCP/IP protocol
  - Modbus RTU protocol
- Omron
  - Link/Multi-Link protocol

The following table contains more detailed information.

Connection overview

Controller	SIMATIC HMI					
Target hardware (PROTOCOL) (physics)	**Basic Panel**	**Comfort Panel Outdoor**	**Mobile Panel 177 DP [1] Mobile Panel 177 PN [1]**	**Mobile Panel 277 [1]**	**KTPx00(F) Mobile**	**WinCC Runtime Advanced**
Allen Bradley (Ethernet IP)						
via Ethernet TCP/IP network to max. 4 x controllers [2] • ControlLogix 1756-L6x, -L6xS with Ethernet module 1756-ENBT • GuardLogix System • CompactLogix 1769-L2xE, -L3xE • CompactLogix 1769-L4x with Ethernet module 1768-ENBT • SLC 5/05 • MicroLogix 1100, 1400	• [3]	•	• [3]	•	•	•
Allen Bradley (DF1)						
to max. 1 x controller • SLC 5/03, /04, /05 • MicroLogix (RS 232)	• [4] [5]	• [4]	• [4] [5]	• [4]	–	• [6]
to max. 1 x controller • PLC5/11, /20, /30, /40, /60, /80 (RS 232)	• [4] [5]	• [4]	• [4] [5]	• [4]	–	• [7]
via KF2 gateway and DH+ network to max. 4 x controllers [2] • SLC 5/04 • PLC5/11, /20, /30, /40, /60, /80 (RS 232)	• [4] [5]	• [4]	• [4] [5]	• [4]	–	• [7] [8]
via KF2 gateway and DH+ network to max. 4 x controllers [2] • SLC 5/04 • PLC5/11, /20, /30, /40, /60, /80 (RS 422)	• [5]	•	• [5]	•	–	–
via KF3 gateway and DH485 network to max. 4 x controllers [2] • SLC 500 • MicroLogix (RS 232)	• [4] [5]	• [4]	• [4] [5]	• [4]	–	• [7] [8]

• System interface possible

- System interface not possible

1) Mobile Panel connection via special connecting cable and connection box (see Mobile Panels), see Manual for cable assignment

2) The following listed controllers can be combined as required

3) Basic Panel PN and Mobile Panel 177 PN only

4) The RS 422/RS 232 adapter 6AV6671-8XE00-0AX0 is required for Basic Panels and Comfort Panels

5) Basic Panel DP and Mobile Panel 177 DP only

6) Connection via Allen Bradley PC cable 1747 CP3

7) Connection via Allen Bradley PC cable 1784 CP10

8) For connection to KF2/KF3 gateway, a gender-changer (25-pin socket/25-pin socket) is required on the gateway side

Note:

For detailed information on cable assignment, refer to WinCC Online Help; see also FAQs:

http://support.automation.siemens.com/WW/view/en/29034071

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Overview

Controller	SIMATIC HMI					
Target hardware (PROTOCOL) (physics)	**Basic Panel**	**Comfort Panel Outdoor**	**Mobile Panel 177 DP [1] Mobile Panel 177 PN [1]**	**Mobile Panel 277 [1]**	**KTPx00(F) Mobile**	**WinCC Runtime Advanced**
Mitsubishi (MC TCP/IP)						
via Ethernet IP network to max. 4 x controllers [2] • FX series FX3G, FX3U, FX3UC with Ethernet module FX3U ENET, • Series Q with Ethernet module QJ71E71-100 • iQ series/QnUD QnUDEH	• [3]	•	• [3]	•	•	•
Mitsubishi FX (serial)						
to max. 1 x controller FX series FX1N, FX2N (RS 232)	• [4]	•	• [4]	•	–	• [5]

• System interface possible

- System interface not possible

[1] Mobile Panel connection via special connecting cable and connection box (see Mobile Panels), see Manual for cable assignment

[2] The following listed controllers can be combined as required

[3] Basic Panel PN and Mobile Panel 177 PN only

[4] Basic Panel DP and Mobile Panel 177 DP only

[5] Connection using a Mitsubishi PC cable SC-09 with integrated level converter RS 232/RS 422

Note:

For detailed information on cable assignment, refer to WinCC Online Help; see also FAQs:

http://support.automation.siemens.com/WW/view/en/29034071

Controller	SIMATIC HMI					
Target hardware (PROTOCOL) (physics)	**Basic Panel**	**Comfort Panel Outdoor**	**Mobile Panel 177 DP [1] Mobile Panel 177 PN [1]**	**Mobile Panel 277 [1]**	**KTPx00(F) Mobile**	**WinCC Runtime Advanced**
Modicon (MODBUS TCP/IP)						
via MODBUS TCP/IP network to max. 4 x controllers [2] • Concept Quantum, Unity Quantum • Momentum • Premium (TSX57) • TSX Micro (TSX37) • Modicon M340 20x0 (except 2010)	• [3]	•	• [3]	•	•	•
via TCP/IP Modbus Plus Bridge 174 CEV 200 40 and MODBUS PLUS network to max. 4 x controllers [2] • Concept Quantum, Unity Quantum • Momentum • Compact	• [3]	•	• [3]	•	•	•
Modicon (MODBUS RTU)						
to max. 1 x controller • Concept Quantum • Momentum • Compact (RS 232)	• [4] [5]	• [4]	• [4] [5]	• [4]	–	•
via bridge BM85-000 or PLC with bridge functionality and MODBUS PLUS network to max. 4 x controllers [2] • Concept Quantum • Compact (RS 232)	• [4] [5]	• [4]	• [4] [5]	• [4]	–	•

• System interface possible

- System interface not possible

[1] Mobile Panel connection via special connecting cable and connection box (see Mobile Panels), see Manual for cable assignment

[2] The following listed controllers can be combined as required

[3] Basic Panel PN and Mobile Panel 177 PN only

[4] The RS 422/RS 232 adapter 6AV6671-8XE00-0AX0 is required for Basic Panels and Mobile Panels

[5] Basic Panel DP and Mobile Panel 177 DP only

Note:

For detailed information on cable assignment, refer to WinCC Online Help; see also FAQs:

http://support.automation.siemens.com/WW/view/en/29034071

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Overview

Controller	SIMATIC HMI					
Target hardware (PROTOCOL) (physics)	**Basic Panel**	**Comfort Panel Outdoor**	**Mobile Panel 177 DP [1] Mobile Panel 177 PN [1]**	**Mobile Panel 277 [1]**	**KTPx00(F) Mobile**	**WinCC Runtime Advanced**
Omron (Link/Multi Link)						
to max. 1 x controller • CP1L, CP1H, CP1E • CJ1M, CJ1H, CJ1G • CJ2H • CS1G, CS1H, CS1D • CP2MC (RS 232)	–	• [3]	• [3] [4]	• [3]	–	•
via converter NT-AL001 and RS 422 network to max. 4 x controllers [2] • CP1L, CP1H, CP1E • CJ1M, CJ1H, CJ1G • CJ2H • CS1G, CS1H, CS1D • CP2MC (RS 232)	–	• [3]	• [3] [4]	• [3]	–	•
via RS 422 network to max. 4 x controllers [2] • CP1L, CP1H, CP1E • CJ1M, CJ1H, CJ1G (RS 422)	• [4]	•	• [4]	• [4]	–	–
via RS422 network to max. 4 x controllers [2] • CJ2H • CS1G, CS1H, CS1D • CP2MC (RS 422)	–	–	• [4]	• [4]	–	–

• System interface possible

- System interface not possible

[1] Mobile Panel connection via special connecting cable and connection box (see Mobile Panels), see Manual for cable assignment

[2] The controllers listed below can be combined in any way required; connection via RS 422 interface of the controller or via RS 422 module

[3] The RS 422/RS 232 adapter 6AV6671-8XE00-0AX0 is required for Basic Panels and Mobile Panels

[4] Basic Panel DP and Mobile Panel 177 DP only

Note:

For detailed information on cable assignment, refer to WinCC Online Help; see also FAQs:

http://support.automation.siemens.com/WW/view/en/29034071

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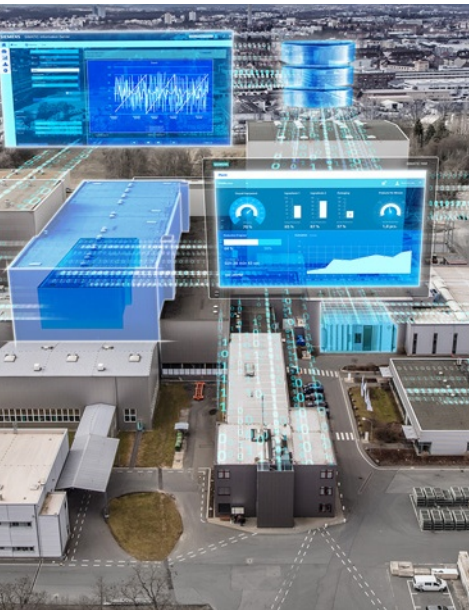

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3/99 WinCC/Event Notifier
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3/236 Software for energy management
3/237 SIMATIC Energy Suite
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Overview

SIMATIC WinCC Unified (TIA Portal)

SIMATIC WinCC Unified is the new visualization system which permits users to competently meet the challenges of digitalization in machine and plant construction.
SIMATIC WinCC Unified combines the know-how accumulated from more than 30 years of experience in the area of Human Machine Interface with state-of-the-art hardware and software technologies.

Highlights:

- The latest technology with proven engineering
  - The runtime of the newly developed SIMATIC WinCC Unified visualization software is based on native web technologies such as HTML5, SVG and JavaScript.
  - Visualization is created simply and efficiently with SIMATIC WinCC Unified Engineering in the proven Totally Integrated Automation Portal (TIA Portal).
- Simple and unlimited scalability
  - Simple and consistently scalable for all applications, from the operator panel directly on the machine through to the complex SCADA solution.
  - SIMATIC Unified Comfort Panels and SIMATIC IPCs are provided to ensure optimum utilization of the performance capability of WinCC Unified.
  - Expandable to meet every demand and diverse possibilities for the implementation of requirements using open interfaces.
  - Through flexible data exchange, the system facilitates the interaction of all devices during operation and allows direct access to authorized users from any modern web browser – without the need for any additional installation.

www.siemens.com/wincc-unified-system

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Overview

SIMATIC WinCC Unified Engineering

- Proven engineering in the TIA Portal allows a consistent, efficient, and intuitive solution for all automation tasks.
- Together with the STEP 7 (TIA Portal) products, WinCC (TIA Portal) forms the optimum solution for integrated engineering.
- WinCC Unified Engineering is the configuration software for all applications, from the operator panel directly on the machine through to the complex SCADA solution.
- WinCC Unified Engineering also supports configuration of the SIMATIC Basic Panel, SIMATIC Comfort Panel and WinCC Runtime Advanced.

Application

Depending on the selected product, various target systems can be configured:

- WinCC Unified Comfort Engineering
  - Unified Comfort Panels
  - Additionally Basic Panels, Comfort Panels and Mobile Panels from WinCC Comfort
- WinCC Unified PC Engineering
  - WinCC Unified PC and Unified Comfort Panels
  - Additionally the Basic Panels, Comfort Panels, Mobile Panels and WinCC Runtime Advanced

Design

The engineering tools of the SIMATIC WinCC (TIA Portal) family build on one another with regard to their respective capacities. The available editors are largely determined by the respective configurable target systems and their function.

The larger edition, such as WinCC Unified PC Engineering, always offers the additional possibilities of configuring the target devices of smaller editions (e.g. Unified Comfort Panels). WinCC Unified Engineering also includes configuration of the Basic Panels, Comfort Panels, Mobile Panels, and the WinCC Runtime Advanced.
A Powerpack can be used to upgrade from a smaller edition to a larger one.
The functional scope of the WinCC engineering tools already includes the configuration support for available runtime options, regardless of the RT licenses purchased.

Ordering data

Ordering data	Article No.
SIMATIC WinCC Unified Engineering System	
Base Packages V17	
Data storage medium	
• WinCC Unified Comfort V17	**6AV2151-0XB01-7AA5**
• WinCC Unified PC (10k) ES V17	**6AV2153-2FB01-7AA5**
• WinCC Unified PC (100k) ES V17	**6AV2153-2GB01-7AA5**
• WinCC Unified PC (max.) ES V17	**6AV2153-0XB01-7AA5**
Download	
• WinCC Unified Comfort V17	**6AV2151-0XB01-7LA5**
• WinCC Unified PC (10k) ES V17	**6AV2153-2FB01-7LA5**
• WinCC Unified PC (100k) ES V17	**6AV2153-2GB01-7LA5**
• WinCC Unified PC (max.) ES V17	**6AV2153-0XB01-7LA5**
PowerPacks V16..V17	
Data storage medium	
• WinCC Comfort -> WinCC Unified PC (10k)	**6AV2153-2FB20-0AB5**
• WinCC Unified PC (10k) -> WinCC Unified PC (100k)	**6AV2153-2GB20-0AB5**
• WinCC Unified PC (100k) -> WinCC Unified PC (max.)	**6AV2153-0XB20-0AB5**
• WinCC Advanced and WinCC Prof. 512..4096 -> WinCC Unified PC (100k)	**6AV2153-2GB60-0AB5**
• WinCC Prof. max -> WinCC Unified PC (max.)	**6AV2153-0XB60-0AB5**
Download	
• WinCC Comfort -> WinCC Unified PC (10k)	**6AV2153-2FB20-0LB5**
• WinCC Unified PC (10k) -> WinCC Unified PC (100k)	**6AV2153-2GB20-0LB5**
• WinCC Unified PC (100k) -> WinCC Unified PC (max.)	**6AV2153-0XB20-0LB5**
• WinCC Advanced and WinCC Prof. 512..4096 -> WinCC Unified PC (100k)	**6AV2153-2GB60-0LB5**
• WinCC Prof. max -> WinCC Unified PC (max.)	**6AV2153-0XB60-0LB5**
Base Packages V16	
Data storage medium	
• WinCC Unified Comfort V16	**6AV2151-0XB01-6AA5**
• WinCC Unified PC (10k) ES V16	**6AV2153-2FB01-6AA5**
• WinCC Unified PC (100k) ES V16	**6AV2153-2GB01-6AA5**
• WinCC Unified PC (max.) ES V16	**6AV2153-0XB01-6AA5**
Download	
• WinCC Unified Comfort V16	**6AV2151-0XB01-6LA5**
• WinCC Unified PC (10k) ES V16	**6AV2153-2FB01-6LA5**
• WinCC Unified PC (100k) ES V16	**6AV2153-2GB01-6LA5**
• WinCC Unified PC (max.) ES V16	**6AV2153-0XB01-6LA5**
Software Update Service	
WinCC Unified Comfort ES Software Update Service	
• Download	**6AV2151-0XB00-0LY5**
• 100k; Download	**6AV2153-2GB00-0LY5**
• 10k; Download	**6AV2153-2FB00-0LY5**
• max; Download	**6AV2153-0XB00-0LY5**

More information

Additional information is available on the Internet at:

http://www.siemens.com/wincc-unified-system

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Overview

SIMATIC WinCC Unified Runtime

A simple and consistently scalable PC-based visualization system for all applications, from single-user solutions directly on the machine through to complex SCADA solutions.

The basic package includes visualization, communication, alarms/messages, report creation, system structuring, and user administration.

Furthermore, a client for local operation, an additional WinCC Unified Client Operate for remote operator control and monitoring, and a WinCC Unified Client Monitor for monitoring only are also included in the basic package. Additional clients can be enabled with a license.

SIMATIC WinCC Unified is based on native web technologies such as HTML5, SVG and JavaScript. The visualization can be accessed via any modern web browser – without the need for additional installation.

Open interfaces and option packages allow the expansion and implementation of industry-specific application cases. Once created, components can be used comprehensively on all platforms, whether Panel or PC.

Benefits

Functions for all visualization tasks:

- Operator functions
- Graphics and trend displays
- Alarm logging
- Archiving (optional)
- Management of parameter sets (optional)
- Audit (optional)
- Report creation
- Automated report creation (optional)
- User administration
- Flexible runtime

Functionality with Java scripts:

- Consistently scalable expandable from single-user station to distributed systems
- Process visualization using any modern HTML5-capable web browser

Part of the Totally Integrated Automation Portal:

- Support of the SIMATIC S7-1200/1500 and the SIMATIC S7-300/400 Controllers
  - Access to tags with symbolic and absolute addressing
  - Full text alarms of the SIMATIC S7-1500 Controller
- Support of OPC UA DA (Client and Server), OPC UA A&C (Server)

Open standards for easy integration:

- Efficient real-time database (option)
- Application Program Interface (API)
- OpenPipe interface
- Integration of your own HTML5 controls in the user interface of WinCC Unified

Design

SIMATIC WinCC Unified PC is available as a software package with 150, 500, 1 000, 2 500, 5 000, 10 000, 50 000 or 100 000 PowerTags.
Additionally, a license for the maximum number of PowerTags within the system limit is also available. Data points with an external connection are designated as PowerTags.
At the same time, internal tags which are exempt from the PowerTag license are provided at no charge.

The basic system can be extended as required with option packages.

Requirements

SIMATIC WinCC Unified Runtime Station:

The performance is determined primarily by the hardware equipment. A powerful processor and more work memory should be selected for larger projects and visualization tasks, in particular. Depending on the options used, e.g. logging, additional free hard disk memory is required.

Hardware requirements (PC systems)	**SIMATIC WinCC Unified Runtime**
Processor type	x64 processor, Intel Core i3 or better is recommended for small applications, also Intel Atom or Intel Celeron
RAM	4 GB or better
Free hard disk space	10 GB, 8GB CF or better

Operating systems (PC systems)	**SIMATIC WinCC Unified Runtime V17**
Windows 11 Pro	Windows 11 Pro (64bit)
Windows 10 Pro	Windows 10 Pro Version 1909 (64-bit) Windows 10 Pro Version 2004 (64-bit) Windows 10 Pro Version 2009/20H2 (64-bit)
Windows 11 Enterprise	Windows 11 Enterprise (64bit)
Windows 10 Enterprise	Windows 10 Enterprise Version 1909 (64-bit) Windows 10 Enterprise Version 2004 (64-bit) Windows 10 Enterprise Version 2009 (64-bit) Windows 10 Enterprise Version 20H2 (64-bit)
Windows 10 IoT Enterprise LTSB (Test for IPC)	Windows 10 IoT Enterprise 2016 LTSB (64-bit) Windows 10 IoT Enterprise 2019 LTSC (64-bit)
Windows Server 2016 Standard	Full installation (64-bit)
Windows Server 2019 Standard	Full installation (64-bit)

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Design

Operating systems (PC systems)	SIMATIC WinCC Unified Runtime V16
Windows 10 Pro	Windows 10 Pro Version 1809 (64-bit) Windows 10 Pro Version 1903 (64-bit)
Windows 10 Enterprise	Windows 10 Enterprise Version 1809 (64-bit) Windows 10 Enterprise Version 1903 (64-bit)
Windows 10 IoT Enterprise LTSB (Test for IPC)	Windows 10 IoT Enterprise 2015 LTSB (64-bit) Windows 10 IoT Enterprise 2016 LTSB (64-bit) Windows 10 IoT Enterprise 2019 LTSC (64-bit)
Windows Server 2012 R2 StdE	Full installation (64-bit)
Windows Server 2016 Standard	Full installation (64-bit)
Windows Server 2019 Standard	Full installation (64-bit)

Note:

If more than 5 clients are to be connected to a PC-RT station, use of a server operating system (Windows 10 Server) is essential.

SIMATIC WinCC Unified Runtime Client

An installed HTML5-capable web browser is required on a client to display the graphical user interface of the WinCC Unified Runtime.
In principle, use of the latest available version of the respective browser is recommended.

Client operating systems	Recommended browser
Microsoft Windows	• Google Chrome (preferred) - Version 77 or newer • Microsoft Edge Chromium - Version 88 or newer • Mozilla Firefox - Version 78 or newer • Mozilla Firefox ESR - Version 78.6 or newer
Android	• Google Chrome (preferred) • Firefox • Edge
iOS, Max	• Safari (preferred) • Google Chrome • Firefox • Microsoft Edge

Ordering data

	Article No.
SIMATIC WinCC Unified Runtime System	
SIMATIC WinCC Unified Runtime System V17	
Base Packages	
Data storage medium	
• WinCC Unified PC (150) RT	**6AV2154-3DB01-7AA0**
• WinCC Unified PC (500) RT	**6AV2154-1EB01-7AA0**
• WinCC Unified PC (1 000) RT	**6AV2154-2EB01-7AA0**
• WinCC Unified PC (2 500) RT	**6AV2154-2MB01-7AA0**
• WinCC Unified PC (5 000) RT	**6AV2154-1FB01-7AA0**
• WinCC Unified PC (10k) RT	**6AV2154-2FB01-7AA0**
• WinCC Unified PC (50k) RT	**6AV2154-1GB01-7AA0**
• WinCC Unified PC (100k) RT	**6AV2154-2GB01-7AA0**
• WinCC Unified PC (max.) RT	**6AV2154-0XB01-7AA0**
Download [1]	
• WinCC Unified PC (150) RT	**6AV2154-3DB01-7LA0**
• WinCC Unified PC (500) RT	**6AV2154-1EB01-7LA0**
• WinCC Unified PC (1 000) RT	**6AV2154-2EB01-7LA0**
• WinCC Unified PC (2 500) RT	**6AV2154-2MB01-7LA0**
• WinCC Unified PC (5 000) RT	**6AV2154-1FB01-7LA0**
• WinCC Unified PC (10k) RT	**6AV2154-2FB01-7LA0**
• WinCC Unified PC (50k) RT	**6AV2154-1GB01-7LA0**
• WinCC Unified PC (100k) RT	**6AV2154-2GB01-7LA0**
• WinCC Unified PC (max.) RT	**6AV2154-0XB01-7LA0**
SIMATIC WinCC Unified Runtime System V17 ASIA	
Base Packages	
Data storage medium	
• WinCC Unified PC (150) RT	**6AV2154-3DB01-7BA0**
• WinCC Unified PC (500) RT	**6AV2154-1EB01-7BA0**
• WinCC Unified PC (1 000) RT	**6AV2154-2EB01-7BA0**
• WinCC Unified PC (2 500) RT	**6AV2154-2MB01-7BA0**
• WinCC Unified PC (5 000) RT	**6AV2154-1FB01-7BA0**
• WinCC Unified PC (10k) RT	**6AV2154-2FB01-7BA0**
• WinCC Unified PC (50k) RT	**6AV2154-1GB01-7BA0**
• WinCC Unified PC (100k) RT	**6AV2154-2GB01-7BA0**
• WinCC Unified PC (max.) RT	**6AV2154-0XB01-7BA0**

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SIMATIC WinCC Unified Runtime

Ordering data	Article No.
SIMATIC WinCC Unified Runtime System V16	
Base Packages	
Data storage medium	
• WinCC Unified PC (150) RT	**6AV2154-3DB01-6AA0**
• WinCC Unified PC (500) RT	**6AV2154-1EB01-6AA0**
• WinCC Unified PC (1 000) RT	**6AV2154-2EB01-6AA0**
• WinCC Unified PC (2 500) RT	**6AV2154-2MB01-6AA0**
• WinCC Unified PC (5 000) RT	**6AV2154-1FB01-6AA0**
• WinCC Unified PC (10k) RT	**6AV2154-2FB01-6AA0**
• WinCC Unified PC (50k) RT	**6AV2154-1GB01-6AA0**
• WinCC Unified PC (100k) RT	**6AV2154-2GB01-6AA0**
• WinCC Unified PC (max.) RT	**6AV2154-0XB01-6AA0**
Download [1]	
• WinCC Unified PC (150) RT	**6AV2154-3DB01-6LA0**
• WinCC Unified PC (500) RT	**6AV2154-1EB01-6LA0**
• WinCC Unified PC (1 000) RT	**6AV2154-2EB01-6LA0**
• WinCC Unified PC (2 500) RT	**6AV2154-2MB01-6LA0**
• WinCC Unified PC (5 000) RT	**6AV2154-1FB01-6LA0**
• WinCC Unified PC (10k) RT	**6AV2154-2FB01-6LA0**
• WinCC Unified PC (50k) RT	**6AV2154-1GB01-6LA0**
• WinCC Unified PC (100k) RT	**6AV2154-2GB01-6LA0**
• WinCC Unified PC (max.) RT	**6AV2154-0XB01-6LA0**
SIMATIC WinCC Unified Runtime System Upgrades	
WinCC Unified PC RT Upgrade V16 -> V17	
• Data storage medium	**6AV2154-0BB31-7AA0**
• Download [1]	**6AV2154-0BB31-7LA0**

Ordering data	Article No.
SIMATIC WinCC Unified Runtime System	
PowerPacks	
Data storage medium	
• WinCC Unified PC (150->500) RT PowerPack (V16..V17)	**6AV2154-1EB20-0AB0**
• WinCC Unified PC (500->1k) RT PowerPack (V16..V17)	**6AV2154-2EB20-0AB0**
• WinCC Unified PC (1k->2.5k) RT PowerPack (V16..V17)	**6AV2154-2MB20-0AB0**
• WinCC Unified PC (2.5k->5k) RT PowerPack (V16..V17)	**6AV2154-1FB20-0AB0**
• WinCC Unified PC (5k->10k) RT PowerPack (V16..V17)	**6AV2154-2FB20-0AB0**
• WinCC Unified PC (10k->50k) RT PowerPack (V16..V17)	**6AV2154-1GB20-0AB0**
• WinCC Unified PC (50k->100k) RT PowerPack (V16..V17)	**6AV2154-2GB20-0AB0**
• WinCC Unified PC (100k->max.) RT PowerPack (V16..V17)	**6AV2154-0XB20-0AB0**
Download [1]	
• WinCC Unified PC (150->500) RT PowerPack (V16..V17)	**6AV2154-1EB20-0LB0**
• WinCC Unified PC (500->1k) RT PowerPack (V16..V17)	**6AV2154-2EB20-0LB0**
• WinCC Unified PC (1k->2.5k) RT PowerPack (V16..V17)	**6AV2154-2MB20-0LB0**
• WinCC Unified PC (2.5k->5k) RT PowerPack (V16..V17)	**6AV2154-1FB20-0LB0**
• WinCC Unified PC (5k->10k) RT PowerPack (V16..V17)	**6AV2154-2FB20-0LB0**
• WinCC Unified PC (10k->50k) RT PowerPack (V16..V17)	**6AV2154-1GB20-0LB0**
• WinCC Unified PC (50k->100k) RT PowerPack (V16..V17)	**6AV2154-2GB20-0LB0**
• WinCC Unified PC (100k->max.) RT PowerPack (V16..V17)	**6AV2154-0XB20-0LB0**

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

More information

More information is available on the Internet at:

http://www.siemens.com/wincc-unified-system

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Overview

SIMATIC WinCC Unified options

WinCC Unified Audit Basis

Contains the functionality to trace all operator actions related to value changes on tags.
Other entries in the Audit Trail can be made by system and script functions.

Licensing:

One RT license is required for each RT station (Panel or PC) to be monitored. The WinCC Unified Report license is required for automatic creation of reports.

WinCC Unified Clients

The WinCC Unified Client is the graphical user interface for interacting with the WinCC Unified Runtime.
The WinCC Unified Client accesses the WinCC Unified Runtime via web mechanisms (on the runtime station itself or via a network) for operator control and monitoring of machines and plants. Using the standard web mechanisms, the WinCC Unified images can be displayed on any PCs or mobile devices in the HTML5-capable browser. No additional know-how of the web is necessary for engineering of the WinCC Unified Screens in the TIA Portal.
A distinction is made between WinCC Unified Client Operate and WinCC Unified Client Monitor.

WinCC Unified Client Operate

The WinCC Unified Client Operate is used for operator control and monitoring of the WinCC Unified Runtime (Panel or PC).

WinCC Unified Client Monitor

The WinCC Unified Client Monitor is used purely for monitoring the WinCC Unified Runtime (PC).
It can be navigated using the operating screens, but the connection to the field for tags is no longer active. Moreover, defined functions, e.g. acknowledgment in the alarm and tag logging control is blocked.

Licensing:

For the WinCC Unified Client, a (server-based) license of the WinCC Unified Runtime is required.
The client licenses are provided on the runtime station (the server or HMI Unified Comfort Panel) and are graded in accordance with the number of simultaneous WinCC Unified Web Client access operations.
The number of version-independent licenses can be increased at any time via additive WinCC Unified Client licenses (countable licenses).
WinCC Unified Client Operate:
License packages in stages of 1, 3, 10, 30 and 100 WinCC Unified Clients Operate.
WinCC Unified Client Monitor:
License packages in stages of 1, 3 and 10 WinCC Unified Clients Monitor.

Client accesses to the PC Runtime (PC) contained in the WinCC Unified PC Runtime:

- 1 x WinCC Unified Client Operate for local operator control and monitoring
- 1 x WinCC Unified Client Operate for operator control and monitoring via the web client (local or remote)
- 1 x WinCC Unified Client Monitor for monitoring via the web client (local or remote)

Access to the Panel Runtime (Panel) contained in the HMI Unified Comfort Panel:

- 1 x local operator control and monitoring on the HMI Unified Comfort Panel
- 1 x WinCC Unified Client Operate for operator control and monitoring via the web client (remote)
- The Unified Comfort Panel supports up to 3 web clients

WinCC Unified Database Storage

WinCC Unified PC uses a file-based database (SQLite) in the basic system for the archiving of process values and messages. The WinCC Unified Databased Storage option is available for use with greater quantity frameworks or lengthy archiving periods. All archive data is stored in an MS SQL server after installing the option and the license.

Licensing:

WinCC Unified PC: One license per WinCC Unified PC Runtime is required for activating the functionality.

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Overview

WinCC Unified Logging

Option for WinCC Unified for archiving of process values and messages. Process value archiving for the recording, compression and storage of measured values and alarm logging to record events. Online evaluation of process value archives and alarm logs with display and possible operations, for example representation of trends and display of tables, as well as further processing. Powerful standard functions permit user-friendly and flexible utilization of the logs.

Licensing:

SIMATIC Unified Comfort Panels:

- Messages can be logged without an additional license.
- Process values (tags) can be archived without an additional license.
- Utilization of file-based archiving, with the possibility of a maximum 5 000 logging tags

WinCC Unified PC:

- Messages can be logged without an additional license.
- Graded licenses for the number of logging tags used are available for the archiving of process values (tags). This number can be increased at any time via additive WinCC Unified Logging Tags (countable licenses).
- The licenses are divided into 100, 500, 1 000, 5 000, 10 000 and 30 000 logging tags.
- A maximum of 5 000 logging tags are possible with utilization of the file-based archiving (default)
- When using the database-based archiving (optional), the number of logging tags is limited by the performance capability of the PC system being used.

WinCC Unified Parameter Control

Option for SIMATIC WinCC Unified for the generation and management of parameter sets which contain associated machine or production data. The structure of a user data type (PLC UDT or HMI UDT) can be adopted for one or more parameter set types and can be changed automatically using a new user data type version.

Licensing:

SIMATIC Unified Comfort Panels:

- No license is required

WinCC Unified PC:

- One license per WinCC Unified PC Runtime is required for activating the functionality.

WinCC Unified Report Execution

Excel Addin is included in the scope of supply of WinCC Unified to connect WinCC Unified Tags, Logging Tags and Alarms with an Excel report template. The report templates are imported into the WinCC Unified Runtime without the engineering system at runtime, and connected with execution parameters. Afterwards, reports are automatically created cyclically, needs-oriented or event-oriented, stored in Excel and/or PDF format and/or sent by Email.

Licensing:

No license is required for the creation of reports in Excel and manual execution of the reports in Excel or from the Report Runtime Control. A WinCC Unified Report Execution license (Panel or PC) is required for the automated cyclic report depending on requirements and events.

WinCC Unified Collaboration

Licensing:

Each WinCC Unified Station (Panel or PC) to be connected via Collaboration requires a corresponding license.
The scope and type of exchanged data is not limited.
The configuration of Collaboration in the engineering system does not require additional licensing.

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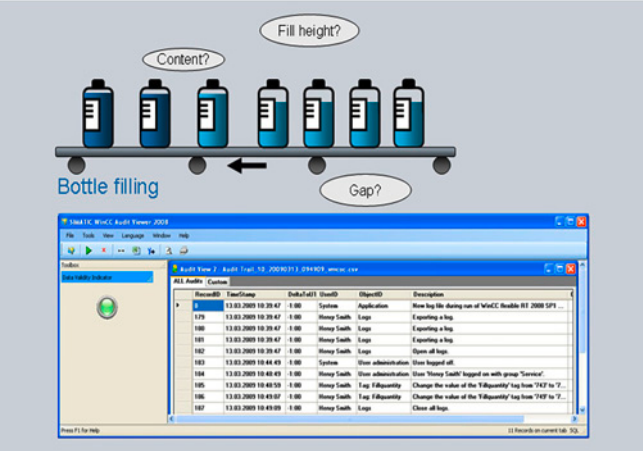
Overview



WinCC TIA RT Audit

WinCC Unified Audit Basis

Contains the functionality to trace all operator actions related to value changes on tags.
Other entries in the Audit Trail can be made by system and script functions.

Tracing can be used to determine who performed which operations on the machine and when.

In addition, the user can perform activities of an individual nature at specific objects or events, such as pressing a function button, moving sliders and other actions, while using a so-called audit entry function to record these activities in the Audit Trail.

An RT license is required for each RT station (server) to be monitored. The WinCC Unified Report license is required for automatic creation of reports.

Benefits

- Recording of changes to process data manually, automated or via script
- Commenting changes to process data
- Quick and easy traceability configuration
- Reduction in plant downtimes thanks to fast analysis of the Audit Trail information recorded gap-free
- The Audit Trail is furnished with a security mechanism with which subsequent manipulations can be detected.
- Gap-free and automated recording of value changes on tags
- Additional entries through a system function or script function
- The Audit Trail entry can be acknowledged without a comment, with an individual comment or with a pre-defined comment from a configurable text list
- Task of Audit Trail with WinCC Unified Report in an Excel or PDF report during runtime
- The reports can be sent via email

Ordering data

	Article No.
WinCC Unified Audit Basis V17	
• Data storage medium	**6AV2157-0BL01-7AB0**
• Download	**6AV2157-0BL01-7LB0**

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Overview

WinCC Unified Clients

The WinCC Unified Client is the graphical interface for the WinCC Unified Runtime.

The WinCC Unified Client accesses the WinCC Unified Runtime via web mechanisms (on the Runtime Station itself or via agepard_dp@i.uanetwork) to operate and monitor machines and plants. Using the standard web mechanisms, the WinCC Unified images can be displayed on any PCs or mobile devices in the HTML5-capable browser.

No additional know-how of the web is necessary for engineering of the WinCC Unified Screens in the TIA Portal.

Two types of clients are available:

- WinCC Unified Client for operator control and monitoring processes
- WinCC Unified Client Monitor for monitoring only (View-Only)

Licensing

SIMATIC HMI Unified Comfort Panels:

A (Panel-based) license of the Panel is required for the WinCC Unified Client.

A WinCC Unified Client (Operate) license is already included with each Panel. It can be extended with the WinCC Unified Client licenses.
Three clients are permissible on the WinCC Unified Comfort Panel.

SIMATIC WinCC Unified PC:

A (server-based) license of WinCC Unified PC Runtime is required for the WinCC Unified Client.
Two WinCC Unified Client licenses and one WinCC Unified Client Monitor license are already included with each WinCC Unified PC Runtime licensing:

- For local operation on the runtime station
- For remote operation via an additional independent client.
- For local or remote monitoring via an additional independent Monitor client.

The client licenses are located on the WinCC Unified RT Station or the Unified Comfort Panel and are graded according to the number of simultaneous WinCC Unified web client access operations.
The number can be increased at any time via additive WinCC Unified Client licenses (countable licenses).
Version-independent license packages are available with 1, 3, 10, 30 or 100 WinCC Unified Clients or 1, 3, 10 WinCC Unified Monitor Clients.

Benefits

WinCC Unified Client (Operate)

- Parallel, global web-based operator control and monitoring
- Highest level of flexibility
  - Independent of browser and platform (PCs, tablets, smartphones)
  - No installation of software required on the client device, a web browser is generally present
- Minimized maintenance costs with central software administration on the server
  - No maintenance workload on the client
  - No engineering on the client side
- Scalability
  - Supplementation of new operating stations without installation
  - Central license management on the runtime station (the server)
- Independent of version between WinCC Unified PC Runtime and WinCC Unified Client
- High Internet security standards
- Fast update rates (e.g. after value change, picture change)
- Efficient remote diagnostics for production plant through web access
- Future-proof due to the utilization of accepted standards (HTML5, SVG)

WinCC Unified Client (Monitor)

- The WinCC Unified Client Monitor is identical to the Unified Client, but the connection to the field is interrupted.
- Setting the monitoring right per user
- External tag connections are interrupted
- Acknowledge and Reset of active alarms is blocked
- Commenting, deleting, releasing and locking of archived alarms is blocked
- Writing, correcting, commenting and deleting logged alarms is blocked

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Ordering data

	Article No.
SIMATIC WinCC Unified options	
WinCC Unified Client (Operate)	
Data storage medium	
• WinCC Unified Clients Operate (1)	**6AV2157-1JW00-0AB0**
• WinCC Unified Clients Operate (3)	**6AV2157-3JW00-0AB0**
• WinCC Unified Clients Operate (10)	**6AV2157-2CW00-0AB0**
• WinCC Unified Clients Operate (30)	**6AV2157-6CW00-0AB0**
• WinCC Unified Clients Operate (100)	**6AV2157-2DW00-0AB0**
Download	
• WinCC Unified Clients Operate (1)	**6AV2157-1JW00-0LB0**
• WinCC Unified Clients Operate (3)	**6AV2157-3JW00-0LB0**
• WinCC Unified Clients Operate (10)	**6AV2157-2CW00-0LB0**
• WinCC Unified Clients Operate (30)	**6AV2157-6CW00-0LB0**
• WinCC Unified Clients Operate (100)	**6AV2157-2DW00-0LB0**
WinCC Unified Client (Monitor)	
Data storage medium	
• WinCC Unified Clients Monitor (1)	**6AV2157-1JM00-0AB0**
• WinCC Unified Clients Monitor (3)	**6AV2157-3JM00-0AB0**
• WinCC Unified Clients Monitor (10)	**6AV2157-2CM00-0AB0**
Download	
• WinCC Unified Clients Monitor (1)	**6AV2157-1JM00-0LB0**
• WinCC Unified Clients Monitor (3)	**6AV2157-3JM00-0LB0**
• WinCC Unified Clients Monitor (10)	**6AV2157-2CM00-0LB0**

More information

More information is available on the Internet at:

http://www.siemens.com/wincc-unified-system

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Overview

SIMATIC WinCC Unified options

WinCC Unified Database Storage

SIMATIC WinCC Unified PC uses a file-based database (SQLite) in the basic system for the archiving of process values and messages. The WinCC Unified Databased Storage option is available for use with greater quantity frameworks or lengthy archiving periods. All archive data is stored in an MS SQL server after installing the option and the license.

Licensing

SIMATIC WinCC Unified PC:

- One license per WinCC Unified PC Runtime is required for activating the functionality.
- Alarms can be logged without an additional license.
- Licenses for the number of logging tags used are required for the archiving of process values (tags). This number can be increased at any time via additive WinCC Unified logging tags (countable licenses).

Ordering data

	Article No.
SIMATIC WinCC Unified options	
WinCC Unified Database Storage V17	
• Data storage medium	**6AV2154-0BS01-7AA0**
• Download [1]	**6AV2154-0BS01-7LA0**
Upgrade V16 -> V17	
• Data storage medium	**6AV2154-0BS31-7AA0**
• Download [1]	**6AV2154-0BS31-7LA0**
WinCC Unified Database Storage V16	
Data storage medium	
• Data storage medium	**6AV2154-0BS01-6AA0**
• Download [1]	**6AV2154-0BS01-6LA0**

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

More information

More information is available on the Internet at:

http://www.siemens.com/wincc-unified-system

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Overview

WinCC Unified Logging

Option for WinCC Unified for archiving of process values and messages. Process value archiving for the recording, compression and storage of measured values and alarm logging to record events. Online evaluation of process value archives and alarm logs with display and possible operations, for example representation of trends and display of tables, as well as further processing. Powerful standard functions permit user-friendly and flexible utilization of the logs.

Licensing

SIMATIC HMI Unified Comfort Panels:

- Messages can be logged without an additional license.
- Process values (tags) can be archived without an additional license.
- Utilization of file-based archiving, with the possibility of a maximum 5 000 logging tags

SIMATIC WinCC Unified PC:

- Messages can be logged without an additional license.
- Graded licenses for the number of logging tags used are available for the archiving of process values (tags). This number can be increased at any time via additive WinCC Unified Logging Tags (countable licenses).
- The licenses are divided into 100, 500, 1 000, 5 000, 10 000 and 30 000 logging tags.
- A maximum of 5 000 logging tags are possible with utilization of the file-based archiving (default)
- When using the database-based archiving (optional), the number of logging tags is limited by the performance capability of the PC system being used.

Benefits

- Process value logging is used to record and archives process data from the plant.
- The alarm log is used to archive any alarms which are issued in the monitored process.
- This archiving can be used to analyze fault states and to document the process.
- A subsequent evaluation of the archived process data then provides you with essential information regarding the operating state of a plant.
- The logs allow hazardous conditions and faults to be identified in good time, known as predictive diagnostics, which in turn avoids downtimes
- Increase of product quality and productivity due to regular evaluation of the logs

Ordering data

	Article No.
SIMATIC WinCC Unified options	
WinCC Unified Logging	
Data storage medium	
• WinCC Unified Logging Tags (100)	**6AV2157-2DA00-0AB0**
• WinCC Unified Logging Tags (500)	**6AV2157-1EA00-0AB0**
• WinCC Unified Logging Tags (1000)	**6AV2157-2EA00-0AB0**
• WinCC Unified Logging Tags (5000)	**6AV2157-1FA00-0AB0**
• WinCC Unified Logging Tags (10k)	**6AV2157-2FA00-0AB0**
• WinCC Unified Logging Tags (30k)	**6AV2157-6FA00-0AB0**
Download [1]	
• WinCC Unified Logging Tags (100)	**6AV2157-2DA00-0LB0**
• WinCC Unified Logging Tags (500)	**6AV2157-1EA00-0LB0**
• WinCC Unified Logging Tags (1000)	**6AV2157-2EA00-0LB0**
• WinCC Unified Logging Tags (5000)	**6AV2157-1FA00-0LB0**
• WinCC Unified Logging Tags (10k)	**6AV2157-2FA00-0LB0**
• WinCC Unified Logging Tags (30k)	**6AV2157-6FA00-0LB0**

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

More information

More information is available on the Internet at:

http://www.siemens.com/wincc-unified-system

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Overview

WinCC Unified Parameter Control

Option for SIMATIC WinCC Unified for the generation and management of parameter sets which contain associated machine or production data. The structure of a user data type (PLC UDT or HMI UDT) can be adopted for one or more parameter set types and can be changed automatically using a new user data type version.

Licensing:

SIMATIC HMI Unified Comfort Panels:

- No license is required

SIMATIC WinCC Unified PC:

- One license per WinCC Unified PC Runtime is required for activating the functionality.

Benefits

- An expansive selection of parameters can be exchanged between the operator panel and PLC manually or automatically in order to convert production to another product variant.
- Simple operator guidance due to configurable image object
- Export/import of parameter sets for creation or further processing with other tools (e.g. MS Excel)

Ordering data

	Article No.
SIMATIC WinCC Unified options	
WinCC Unified Parameter Control V17	
Data storage medium	
• WinCC Unified Parameter Control (PC) V17	**6AV2154-0BP01-7AB0**
Download [1]	
• WinCC Unified Parameter Control (PC) V17	**6AV2154-0BP01-7LB0**
Upgrade	
WinCC Unified Parameter Control (PC) V16 -> V17	
• Data storage medium	**6AV2154-0BP31-7AB0**
• Download [1]	**6AV2154-0BP31-7LB0**
WinCC Unified Parameter Control V16	
Data storage medium	
• WinCC Unified Parameter Control (PC)	**6AV2154-0BP01-6AB0**
Download [1]	
• WinCC Unified Parameter Control (PC)	**6AV2154-0BP01-6LB0**

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

More information

More information is available on the Internet at:

http://www.siemens.com/wincc-unified-system

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Overview

WinCC Unified Report Execution

An Excel Add-in is included in the scope of supply of WinCC Unified to connect WinCC Unified data (tags, alarms, etc.) with an Excel report template.

The report templates are imported into the WinCC Unified Runtime without the engineering system at runtime. The reports can be created automatically or manually, stored in the format (Excel, PDF), and sent via secured or unsecured email.

The corresponding execution parameters (execution time, trigger, email contacts) are configured in the control for automatic report generation.

Licensing:

No license is required for the creation of reports in Excel and manual execution of the reports in Excel or from the Report Runtime Control.

For each WinCC Unified RT (HMI Unified Comfort Panel or PC), a WinCC Unified Report Execution license is required for the automated cyclic report dependent on requirements and events.

Benefits

WinCC Unified Report Execution

- Full transparency via WinCC Unified Tags, Logging Tags and Alarms
- Filter mechanism for the selection of alarms and tags
- Insertion of individual values and time series data
- Call of the WinCC Unified alarm statistics
- Automatic insertion of pre-defined formulas in time-series data
- Individual creation of report templates with the familiar MS Excel and Excel Online
- Activation of created report templates during the runtime without Engineering System
- Automated cyclic report creation based on requirements, context or events
- Individual reports in Excel format without Excel installation
- Individual reports in PDF format with Excel or LibreOffice-Calc installation
- Sending of created reports via email

Ordering data

	Article No.
SIMATIC WinCC Unified options	
WinCC Unified Report Execution V17	
WinCC Unified Report	
• Data storage medium	**6AV2157-0BQ01-7AB0**
• Download [1]	**6AV2157-0BQ01-7LB0**
WinCC Unified Report Execution V16	
WinCC Unified Report	
• Data storage medium	**6AV2157-0BQ01-6AB0**
• Download [1]	**6AV2157-0BQ01-6LB0**

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

More information

More information is available on the Internet at:

http://www.siemens.com/wincc-unified-system

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Overview

WinCC Unified Runtime Collaboration

The option for Unified Collaboration offers the possibility to connect several Unified systems (Panels and PC) with each other and to exchange data in runtime. For example, process displays from other stations can be referenced and shown in a display window to easily and efficiently create plant overview displays.

Licensing

SIMATIC HMI Unified Comfort Panels and SIMATIC WinCC Unified PC:

Each WinCC Unified Station (Panel or PC) to be connected via Collaboration requires a corresponding license.

The volume and type of data exchanged is not limited.
The configuration of Collaboration in the engineering system does not require additional licensing.

Benefits

- Configuration of distributed Unified systems
- Integration and display of contents of other Unified stations without duplicated configuration work
- Cross-project configuration possible via export and import

Ordering data

	Article No.
SIMATIC WinCC Unified options	
WinCC Unified Collaboration V17	
Data storage medium	
• WinCC Unified Collaboration (PC & Panel)	**6AV2154-0BR01-7AB0**
• Upgrade V16->V17 WinCC Unified Collaboration (PC & Panel)	**6AV2154-0BR31-7AB0**
Download [1]	
• WinCC Unified Collaboration (PC & Panel)	**6AV2154-0BR01-7LB0**
• Upgrade V16->V17 WinCC Unified Collaboration (PC & Panel)	**6AV2154-0BR31-7LB0**
WinCC Unified Collaboration V16	
Data storage medium	
• WinCC Unified Collaboration (PC)	**6AV2154-0BR01-6AB0**
Download [1]	
• WinCC Unified Collaboration (PC)	**6AV2154-0BR01-6LB0**

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

More information

More information is available on the Internet at:

http://www.siemens.com/wincc-unified-system

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Overview

Plant Intelligence options

With the SIMATIC WinCC Unified Plant Intelligence options, it is possible to expand SIMATIC WinCC Unified Runtime in line with the requirements on the production plant and visualize it in HMI.

The options allow you to plan production processes and analyze and optimize the overall effectiveness of your plant.

Note:

The SIMATIC WinCC Unified Plant Intelligence options can be used on a PC system. The technological plant hierarchy is a prerequisite for using the SIMATIC WinCC Unified Plant Intelligence options.

WinCC Unified Calendar:

Planning, configuration and management of events and actions in one general calendar in WinCC Unified (including connection of tags or scripts).

WinCC Unified Performance Insight:

Definition, calculation and analysis of plant-specific KPIs for individual plant units, machines or entire production lines in machine or line-oriented production plants.

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Overview

WinCC Unified Calendar

Recurring, calendar-related working times (shifts) and processes (switching commands) can be planned and modified in advance using the WinCC Unified Calendar.

Planning is based on predefined templates and a time model. This time model is used equally for the "WinCC Unified Calendar" and "WinCC Unified Performance Insight" options.

A technological system hierarchy for the project is created in the TIA Portal. One main calendar is assigned to one branch (main node or root node) within this hierarchy. For runtime (within WinCC Unified Runtime), templates can be created for this main calendar and planning for working times and processes can be defined. Planning takes effect automatically for its "hierarchical children"; they can be supplemented or modified there.

The "WinCC Unified Calendar" option is only available for the WinCC Unified PC system.

Benefits

- Definition of uniform time categories and the selection of usable process tags as a switching command in the TIA Portal
- Planning of working times and processes during runtime
  - Management of shift and day templates, as well as switching actions relative to shift events (start, end)
  - Creation of planning based on templates
  - Modification of planning of hierarchically subordinate system components
  - Definition of recurring, cyclic shifts
- Import and export of templates and planning
- Runtime openness (API) interface
- Use of maintained shifts as criteria for calculating indicators via the "WinCC Unified Performance Insight" option

Application

WinCC Unified Calendar serves user groups which have structured a plant via a plant hierarchy and want to define recurring events within this hierarchy.

Design

With WinCC Unified Calendar licensing, it is possible to manage templates and the use/planning within a main node via the option. Modifications and adaptations of planning hierarchically subordinate system components is possible. The license is stored on the assigned WinCC Unified runtime station. If other main nodes are created and managed on this WinCC Unified runtime station, additional extension licenses for each additional main node are necessary. These extension licenses are additive (countable licenses).

The necessary runtime and engineering components are supplied with the licenses.

Ordering data

Ordering data	Article No.
WinCC Unified Calendar V17	
Download[1]	
• WinCC Unified Calendar Base	**6AV2156-0BC01-7LA0**
• WinCC Unified Calendar Extension (1)	**6AV2156-1JC00-0LB0**
WinCC Unified Calendar Base Upgrade V16 -> V17	**6AV2156-0BC31-7LA0**
Download[1]	
WinCC Unified Calendar V16	
Download[1]	
• WinCC Unified Calendar Base	**6AV2156-0BC01-6LA0**

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

More information

Additional information is available on the Internet at:

http://www.siemens.com/wincc-unified-system

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Overview

WinCC Unified Performance Insight

The WinCC Unified Performance Insight can be used to calculate and analyze plant-specific indicators for individual plant units, machines or entire production lines in machine or line-oriented production plants with WinCC Unified PC systems.

Licensing:

A version-specific Runtime basic license is required to use the option.
In addition, every plant object to which a Performance Insight configuration (e.g. KPI, operand) is assigned either directly or via the plant object type is an "analyzed plant object" in the licensing context.

Graded licenses are available for analyzing plant objects. This number can be increased at any time via additive plant objects (countable licenses).
The licenses are divided into 10, 30, 100 and 300 plant objects.

The configuration of Performance Insight in the engineering does not require a license.

Benefits

Demonstration of weak points in production processes and deriving optimization potential.

- Flexible - individual calculation of plant-specific indicators in WinCC Unified
- Creating relationships - recognizing indicators in context, e.g. availability per shift
- Optimally informed - analyzing indicators in WinCC Unified Runtime as a bar graph, Gantt chart or table even via Web
- Expandable - adding indicators in existing plants without production losses
- Getting results fast - short configuration time and familiarization time thanks to integration in WinCC Unified

Application

All user groups benefit from the Performance Insight, from the application engineer to management-level evaluators. The engineer can use the application environment integrated in WinCC Unified to derive individual formulas for calculating performance indicators.

KPIs and operands from Performance Insight are automatically created in event- or time-controlled Excel reports and used by management for production analysis and documentation.

For maintenance, the web client of the WinCC Unified can be used for analysis with the bar (for performance), progression (Gantt) and table controls.
Performance indicators can be displayed on local user interfaces using standard WinCC Unified resources to keep machine operators up to date.

Design

Fault analyses provide information about the frequency and duration of machine or plant downtimes. The included controls can be effortlessly integrated in WinCC Unified process pictures.

The determined data gives information on the effectiveness of individual machines and of entire production plants.
The transparency of the data allows for a quick response and countermeasures in the event of faults, which increases the availability of the machine. Structuring of the production plant constituting central elements for evaluation (equipment efficiency)

- Can be used for individual machines or even complete production plants
- Easy integration in existing WinCC Unified plants
- Cyclic or event-controlled calculation of indicators (KPIs)

All of the analysis results are integrated in the form of controls in WinCC Unified screens. Bar (performance), trend (Gantt) and table views are available in WinCC Unified process pictures. Complete transparency throughout the machine park as the basis for optimizing plant productivity via automatic execution of reports.

- Recognition of production relationships
- Calculation of downtimes and localization of sources
- Weak-point analysis in production processes.

Ordering data

	Article No.
WinCC Unified Performance Insight	
Base V17	
Download; email address required for delivery	
• WinCC Unified Performance Insight (PC) Base incl. 3 analyzed plant objects	**6AV2156-0BP01-7LA0**
• WinCC Unified Performance Insight (PC) Base Upgrade V16/V17	**6AV2156-0BP31-7LA0**
Extension	
Download; email address required for delivery	
• 10 analyzed plant objects	**6AV2156-2CP00-0LB0**
• 30 analyzed plant objects	**6AV2156-6CP00-0LB0**
• 100 analyzed plant objects	**6AV2156-2DP00-0LB0**
• 300 analyzed plant objects	**6AV2156-0XP00-0LB0**
Base V16	
Download; email address required for delivery	
• WinCC Unified Performance Insight (PC) Base incl. 3 analyzed plant objects	**6AV2156-0BP01-6LA0**

More information

More information is available on the Internet at:

http://www.siemens.com/wincc-unified-system

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Overview

SIMATIC WinCC (TIA Portal) engineering software

Family of configuration systems with WinCC Basic, Comfort, Advanced and Professional for SIMATIC operator panels, as well as for the WinCC Runtime Advanced and WinCC Runtime Professional PC-based visualization systems.

SIMATIC WinCC Runtime Advanced visualization software

- PC-based operator control and monitoring solution for single-user systems directly at the machine
- Basic package for visualization, reporting and logging, user administration, can be expanded flexibly with VB scripts
- Basic package expandable by means of option packages
- Can be integrated into automation solutions based on TCP/IP networks
- Expanded service concepts with remote operation, diagnostics and administration over the intranet and Internet in combination with Email communication

http://www.siemens.com/wincc-advanced

SIMATIC WinCC Runtime Professional visualization software

- PC-based operator control and monitoring system for visualization and operator control of processes, production flows, machines and plants in all sectors – from the simple single-user station through to distributed multi-user systems and cross-location solutions with web clients. WinCC Runtime Professional is the information hub for corporation-wide vertical integration.
- Industry-standard functions for signaling and acknowledging events, archiving of messages and measured values, logging of all process and configuration data, user administration, can be expanded flexibly with VB and C scripts
- Basic package expandable by means of option packages
- Also included are APIs for the Runtime to utilize the open programming interfaces

http://www.siemens.com/wincc-professional

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Overview

- Integrated family of engineering tools for configuring SIMATIC HMI operator panels, as well as for the PC-based visualization systems WinCC Runtime Advanced and WinCC Runtime Professional.
- WinCC (TIA Portal) is based on the new central engineering framework Totally Integrated Automation Portal (TIA Portal), which offers the user a uniform, efficient and intuitive solution to all automation tasks.
- WinCC (TIA Portal) also offers uniform engineering from the Basic Panel through to SCADA applications.
- Together with the STEP 7 (TIA Portal) products, WinCC (TIA Portal) forms the optimum solution for integrated, efficient engineering.

Current version:

- SIMATIC WinCC Basic V17
- SIMATIC WinCC Comfort V17
- SIMATIC WinCC Advanced V17
- SIMATIC WinCC Professional V17

Benefits

- The integrated configuration software reduces training, maintenance and service overhead and protects the customer's investments.
- Minimized engineering overhead and reduction of lifecycle costs thanks to Totally Integrated Automation (TIA)
- Minimized configuration overhead due to reuse of scalable and dynamizable objects
- Intelligent tools for efficient and simple configuration:
  - Wizard for defining the basic structure of the HMI project
  - Table-based editors simplify the generation and processing of similar types of objects, e.g. for tags, texts, or alarms.
  - Complex configuration tasks such as the definition of paths of motion or the creation of the fundamental operator prompting are simplified by means of graphical configuration.
- Comprehensive support of multi-language configurations for worldwide use
  - Selectable views for entering configuration data in several languages
  - System and user-specific text lexicons
  - Export/import of language-dependent texts
- Security of investment due to
  - Import of the configuration from WinCC flexible 2008 SP2, 2008 SP3 and 2008 SP5
  - Import of the configuration from WinCC V7.3, V7.4 and V7.5

Application

SIMATIC WinCC in the editions Basic, Comfort, Advanced and Professional are innovative engineering tools for configuring SIMATIC HMI operator panels, as well as for the PC-based visualization systems WinCC Runtime Advanced and WinCC Runtime Professional.

Depending on the selected product, various target systems can be configured:

WinCC Basic

- Basic Panels 1st Generation
- Basic Panels 2nd Generation

WinCC Comfort

As WinCC Basic, plus:

- Comfort Panels
- Mobile Panels 2nd Generation
- Mobile Panels x77 Series

WinCC Advanced

As WinCC Comfort, plus:

- SIMATIC PCs with WinCC Runtime Advanced:
  - SIMATIC Rack PCs
  - SIMATIC Box PCs
  - SIMATIC Panel PCs
  - SIMATIC S7 Open Controllers
- Standard PC with WinCC Runtime Advanced
- SINUMERIK PC: PCU 50.3, PCU 50.5

WinCC Professional

As WinCC Advanced, plus:

- SIMATIC PCs with WinCC Runtime Professional
  - SIMATIC Rack PCs
  - SIMATIC Box PCs
  - SIMATIC Panel PCs
- Standard PC with WinCC Runtime Professional

Design

The functionalities of the engineering tools of the SIMATIC WinCC family are based on each other. The available editors are largely determined by the respective configurable target systems and their function. A more comprehensive engineering tool such as WinCC Advanced can always be used to configure lower-level target devices as well (e.g. Basic Panels)

A Powerpack can be used to upgrade from a smaller edition to a larger one. This does not apply to WinCC Basic.

The functionality of WinCC engineering tools already contains the configuration support of the available Runtime options for SIMATIC Panels, WinCC Runtime Advanced or WinCC Runtime Professional, irrespective of the purchased RT licenses.
A separate license is required for the target system when using the configured Runtime options.

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Function

Integration into automation systems

Integration into the SIMATIC Totally Integrated Automation Portal (TIA Portal)

- Shared data management and uniform symbols via the controller and HMI
- Optimum interaction between the controller and HMI in a working environment
- System diagnostics as an integral component
- Shared use of communication settings and process point definitions
- Simple dragging and dropping of tags from STEP 7 to an HMI device, e.g. onto a screen
- Excellent support for the new SIMATIC S7-1500 Controllers
  - With symbolic addressing
  - Access to the new memory-optimized data blocks
  - New alarm and diagnostics concept

Configuration interface

- Intuitive user interfaces with maximum degree of user friendliness
- Comprehensive and fast access to editors and project data
- Adaptive user interface of engineering tools depending on configured target system
- User-definable user interface settings, e.g. layout, toolbars
- Integrated mass data operations for efficient configuration

Project handling

- Device-independent configuration data can be used on a variety of target systems without the need for conversion. The interface adapts itself to the functional possibilities of the target device.
- Cross-device utilization of common configuration data (e.g. message classes, text library) in multi-device projects
- Wizard-assisted definition of basic structure of HMI projects (e.g. display layout, operator prompting)

Screen editor with comprehensive options for efficient and fast screen configuration

- Generation of interconnected screen objects via Drag&Drop, e.g. tags for the creation of input/output fields with process interfacing or buttons with screen selection function
- Definition of screen templates and functions (comparable with the Slide Master in MS PowerPoint)
- User-friendly editor for the creation of faceplates with defined external interface from screen objects
- Graphics-based configuration of motion paths
- Layer technology with up to 32 layers
- Tools for the Align, Rotate and Mirror functions

Import/export

- Of tags, links, text lists, and alarms

Tabular editors

- Quick and easy generation and modification of configuration objects of the same type, e.g. tags, texts or messages, in tabular editors
- Intelligent default settings depending on previously configured data, e.g. automatic incrementing of addresses when generating consecutive tags
- Simple access to the properties of an object without superfluous user intervention
- Simultaneous modification of common object properties

Object-based data management with user-friendly search and edit options

- Configuration of alarms and logs directly on the HMI tag, no switching between different editors
- Cross-reference list with direct access to all objects, e.g. for editing or selection
- Search for objects in entire project
- Text search and replace functions

Project documentation

- Selective project documentation, the following contents can be printed:
  - An entire project
  - One or more project-associated devices
  - Contents of an editor
  - Libraries

Libraries for predefined/user-defined configuration objects

- Storage of all configuration objects in the library, e.g. blocks and even entire screens or tags
- Faceplates can be constructed from simple screen objects on a customer-specific or project-specific basis. Changes to these faceplates can be made centrally (block definition).
- A large number of scalable and dynamizable screen objects is included in the scope of supply
- Size-scalable graphics for industrial applications are included in the scope of supply
- Preview function for library objects

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Function

Language support

- Multilingual project creation (max. 32 languages) in editors thanks to selectable views
- Central management of language-specific texts and graphics in libraries
- Edit, export and import of texts for translation
- Language-specific graphics

Visual Basic and C-Script Support

- IntelliSense function for fast programming of access to runtime objects
- Simple creation of control sequences in script code
- Visual Basic Script debugging in simulator and WinCC Runtime Advanced and WinCC Runtime Professional

Test and commissioning support

- Simulation of HMI projects on engineering PC
- Marking of incomplete or incorrect configuration directly in the respective editor
- Jump to error cause based on alarm messages in the Compiler

Migration of existing HMI projects

- Data transfer in projects from WinCC flexible
- Data transfer in projects from WinCC

System requirements

	WinCC Engineering software
Processor type (recommended)	Intel® Core™ i5-8400H (2.5 to 4.2 GHz)
RAM (recommended)	16 GB or more (32 GB for large projects)
Hard disk	SSD with at least 50 GB storage space available
Operating systems	64-bit operating systems • Windows 10 Home Version 1909 / 2004 / 2009 / 20H2 (only WinCC Basic) • Windows 10 Professional Version 1909 / 2004 / 2009 / 20H2 • Windows 10 Enterprise Version 1909 / 2004 / 2009 / 20H2 • Windows 10 Enterprise 2016 / 2019 LTSB / LTSC • Windows Server 2016 / 2019 Standard
Screen resolution	Recommended 1 920 x 1 080
Optical drive	DVD-ROM

Note:

Opening several instances of WinCC on your engineering PC at the same time may result in more demanding hardware requirements.

In addition to WinCC, Windows also requires space on the hard disk; e.g. free storage space should be available for the swap file. The following formula has proven itself in the past:
Size of swap file = 3 x size of RAM.

For more information, refer to your Windows documentation

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SIMATIC WinCC (TIA Portal) Engineering

Ordering data	Article No.
SIMATIC WinCC Basic software	
SIMATIC WinCC Basic V17	
• Data storage medium	**6AV2100-0AA07-0AA5**
• Download [1]	**6AV2100-0AA07-0AH5**
SIMATIC WinCC Comfort V17	
• Data storage medium	**6AV2101-0AA07-0AA5**
• Download [1]	**6AV2101-0AA07-0AH5**
SIMATIC WinCC Advanced V17	
• Data storage medium	**6AV2102-0AA07-0AA5**
• Download [1]	**6AV2102-0AA07-0AH5**
SIMATIC WinCC Professional V17	
Data storage medium	
• 512 PowerTags	**6AV2103-0DA07-0AA5**
• 4 096 PowerTags	**6AV2103-0HA07-0AA5**
• Max. PowerTags	**6AV2103-0XA07-0AA5**
Download [1]	
• 512 PowerTags	**6AV2103-0DA07-0AH5**
• 4 096 PowerTags	**6AV2103-0HA07-0AH5**
• Max. PowerTags	**6AV2103-0XA07-0AH5**
SIMATIC STEP 7 / SIMATIC WinCC Trial Licenses	
SIMATIC STEP 7 Basic/ Professional; SIMATIC WinCC Basic/Comfort/ Advanced V17, Trial License, on data storage medium, 21 day trial	**6AV2102-0AA07-0AA7**
SIMATIC STEP 7 Basic/ Professional; SIMATIC WinCC Professional V17, Trial License on data storage medium, 21 day trial	**6AV2103-0AA07-0AA7**
SIMATIC 50 h Engineering V17 with STEP 7 Professional Combo, WinCC Professional (incl. WinCC flexible 2008) and STEP 7 Safety Advanced (incl. Distributed Safety)	**6ES7823-1GE07-0YA5**
PowerPacks (without version change)	
SIMATIC WinCC Basic -> Comfort	
• Data storage medium	**6AV2101-2AA00-0BD5**
• Download [1]	**6AV2101-2AA00-0BJ5**
SIMATIC WinCC Comfort -> Advanced	
• Data storage medium	**6AV2102-2AA00-0BD5**
• Download [1]	**6AV2102-2AA00-0BJ5**
SIMATIC WinCC Advanced -> Professional	
Data storage medium	
• 512 PowerTags	**6AV2103-2AD00-0BD5**
• 4 096 PowerTags	**6AV2103-2DH00-0BD5**
• Max. PowerTags	**6AV2103-2HX00-0BD5**
Download [1]	
• 512 PowerTags	**6AV2103-2AD00-0BJ5**
• 4 096 PowerTags	**6AV2103-2DH00-0BJ5**
• Max. PowerTags	**6AV2103-2HX00-0BJ5**

	Article No.
Upgrades	
WinCC V11..16 -> WinCC V17	
Data storage medium	
• SIMATIC WinCC Basic	**6AV2100-3AA07-0AE5**
• SIMATIC WinCC Comfort	**6AV2101-3AA07-0AE5**
• SIMATIC WinCC Advanced	**6AV2102-3AA07-0AE5**
• SIMATIC WinCC Professional 512 PowerTags	**6AV2103-3DA07-0AE5**
• SIMATIC WinCC Professional 4 096 PowerTags	**6AV2103-3HA07-0AE5**
• SIMATIC WinCC Professional max. PowerTags	**6AV2103-3XA07-0AE5**
Download [1]	
• SIMATIC WinCC Basic	**6AV2100-3AA07-0AK5**
• SIMATIC WinCC Comfort	**6AV2101-3AA07-0AK5**
• SIMATIC WinCC Advanced	**6AV2102-3AA07-0AK5**
• SIMATIC WinCC Professional 512 PowerTags	**6AV2103-3DA07-0AK5**
• SIMATIC WinCC Professional 4 096 PowerTags	**6AV2103-3HA07-0AK5**
• SIMATIC WinCC Professional max. PowerTags	**6AV2103-3XA07-0AK5**
WinCC flexible 2008 to WinCC V17	
• WinCC flexible Compact to WinCC Comfort	**6AV2101-4AB07-0AE5**
• WinCC flexible Standard to WinCC Comfort	**6AV2101-4BB07-0AE5**
• WinCC flexible Advanced to WinCC Advanced	**6AV2101-4AA07-0AE5**
Download [1]	
• WinCC flexible Compact to WinCC Comfort	**6AV2101-4AB07-0AK5**
• WinCC flexible Standard to WinCC Comfort	**6AV2101-4BB07-0AK5**
• WinCC flexible Advanced to WinCC Advanced	**6AV2101-4AA07-0AK5**

[1] Current information and availability regarding the new type of delivery can be fond at: http://www.siemens.com/tia-online-software-delivery

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Ordering data	Article No.
SIMATIC WinCC Basic software	
SIMATIC WinCC Basic V16	
• Data storage medium	**6AV2100-0AA06-0AA5**
• Download [1]	**6AV2100-0AA06-0AH5**
SIMATIC WinCC Comfort V16	
• Data storage medium	**6AV2101-0AA06-0AA5**
• Download [1]	**6AV2101-0AA06-0AH5**
SIMATIC WinCC Advanced V16	
• Data storage medium	**6AV2102-0AA06-0AA5**
• Download [1]	**6AV2102-0AA06-0AH5**
SIMATIC WinCC Professional V16	
Data storage medium	
• 512 PowerTags	**6AV2103-0DA06-0AA5**
• 4 096 PowerTags	**6AV2103-0HA06-0AA5**
• Max. PowerTags	**6AV2103-0XA06-0AA5**
Download [1]	
• 512 PowerTags	**6AV2103-0DA06-0AH5**
• 4 096 PowerTags	**6AV2103-0HA06-0AH5**
• Max. PowerTags	**6AV2103-0XA06-0AH5**
SIMATIC STEP 7 / SIMATIC WinCC Trial Licenses	
SIMATIC STEP 7 Basic/ Professional; SIMATIC WinCC Basic/Comfort/ Advanced V16, Trial License on DVD, 21 day trial	**6AV2102-0AA06-0AA7**
SIMATIC STEP 7 Professional; SIMATIC WinCC Professional V16, Trial License on DVD, 21 day trial	**6AV2103-0AA06-0AA7**
SIMATIC 50 h Engineering V16 with STEP 7 Professional Combo, WinCC Professional (incl. WinCC flexible 2008) and STEP 7 Safety Advanced (incl. Distributed Safety)	**6ES7823-1GE06-0YA5**

Ordering data	Article No.
Software Update Service	
For a period of 12 months and for a fixed price, the customer is automatically provided with all upgrades and Service Packs for each installed WinCC engineering system or option. The contract is automatically extended by a further year unless canceled at least 12 weeks prior to expiration.	
Software Update Service (Standard Edition)	
The delivery is implemented according to the number of ordered SUS products (e.g. 10 upgrade packages with 10 DVDs, 10 USB flash drives, etc.)	
• SIMATIC WinCC Comfort	**6AV6612-0AA00-0AL0**
• SIMATIC WinCC Advanced	**6AV6613-0AA00-0AL0**
• SIMATIC WinCC Professional 512 PowerTags	**6AV2103-0DA00-0AL0**
• SIMATIC WinCC Professional 4 096 PowerTags	**6AV2103-0HA00-0AL0**
• SIMATIC WinCC Professional max. PowerTags	**6AV2103-0XA00-0AL0**
Download [1]	
Email address required for delivery	
• SIMATIC WinCC Comfort	**6AV6612-0AA00-0AY0**
• SIMATIC WinCC Advanced	**6AV6613-0AA00-0AY0**
• SIMATIC WinCC Professional 512 PowerTags	**6AV2103-0DA00-0AY0**
• SIMATIC WinCC Professional 4 096 PowerTags	**6AV2103-0HA00-0AY0**
• SIMATIC WinCC Professional max. PowerTags	**6AV2103-0XA00-0AY0**
Software Update Service (Compact Edition)	
The delivery items are combined. For several contracts, only 1 package with 1 data storage medium set, 1 USB flash drive with the corresponding number of licenses and the corresponding number of CoLs will be supplied.	
Delivery items to be combined must be ordered as one item.	
• SIMATIC WinCC Comfort	**6AV6612-0AA00-0AM0**
• SIMATIC WinCC Advanced	**6AV6613-0AA00-0AM0**
• SIMATIC WinCC Professional 512 PowerTags	**6AV2103-0DA00-0AM0**
• SIMATIC WinCC Professional 4 096 PowerTags	**6AV2103-0HA00-0AM0**
• SIMATIC WinCC Professional max. PowerTags	**6AV2103-0XA00-0AM0**

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

More information

More information is available on the Internet at:

http://www.siemens.com/wincc-unified-system

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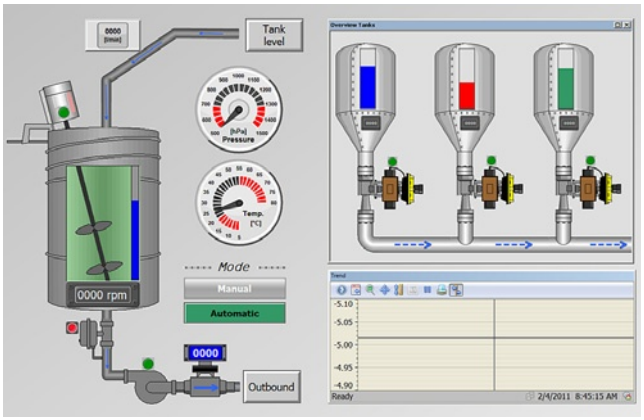
Overview



SIMATIC WinCC Runtime Advanced visualization software

- PC-based operator control and monitoring solution for single-user systems directly at the machine
- Basic package for visualization, reporting and logging, user administration, can be expanded flexibly with VB scripts
- Basic package expandable by means of option packages
- Can be integrated into automation solutions based on TCP/IP networks
- Expanded service concepts with remote operation, diagnostics and administration over the intranet and Internet in combination with email communication

http://www.siemens.com/wincc-advanced

SIMATIC WinCC Runtime Professional visualization software

- PC-based operator control and monitoring system for visualization and operator control of processes, production flows, machines and plants in all sectors – from the simple single-user station through to distributed multi-user systems and cross-location solutions with web clients. WinCC Runtime Professional is the information hub for corporation-wide vertical integration.
- Industry-standard functions for signaling and acknowledging events, archiving of messages and measured values, logging of all process and configuration data, user administration, can be expanded flexibly with VB and C scripts
- Basic package expandable by means of option packages
- Also included are APIs for the Runtime to utilize the open programming interfaces

Additional information is available on the Internet at:

http://www.siemens.com/wincc-professional

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Overview

PC-based operator control and monitoring system for single-user systems directly at the machine.
SIMATIC WinCC Runtime Advanced is configured with the SIMATIC WinCC Advanced or SIMATIC WinCC Professional configuration software.

Benefits

- Functions for all visualization tasks:
  - Operator functions
  - Graphics and trend displays
  - Alarm logging
  - Report system
  - Archiving (option)
  - Recipe management (option)
  - Audit Trail (option)
- Flexible runtime functionality due to Visual Basic scripts
- Service concepts with remote operation, diagnostics and administration via intranet/Internet as well as email communication increase availability (option)
- Support for simple distributed automation solutions based on TCP/IP networks at the machine-level (option)
- Part of the Totally Integrated Automation Portal
  - Direct access to the tag and message configuration of the SIMATIC Controller
  - Excellent support of the new SIMATIC S7-1500 Controller
    With symbolic addressing
    Access to the new memory-optimized data blocks
    New alarm and diagnostics concept (incl. ProDiag)
  - Integrated diagnostic functions for increasing productivity

Application

SIMATIC WinCC Runtime Advanced is the high-performance visualization software for simple, machine-oriented visualization tasks. It can be used as a single-user solution for all automation applications in production automation, process automation and building services automation.

SIMATIC WinCC Runtime Advanced can be used in combination with the following operator panels:

- SIMATIC Rack PC:
  - IPC347, IPC547, IPC647, IPC847
- SIMATIC Box PC:
  - IPC227, IPC427, IPC627, IPC827
- SIMATIC Panel PC:
  - IPC277, IPC477, IPC677, Panel PC Ex OG
- SIMATIC S7 Open Controller: ET 200SP Open Controller
- SINUMERIK PC: PCU 50.3, PCU 50.5
- Standard PCs with resolutions (W x H in pixels) of:
  - 4:3 format: 640 x 480, 800 x 600, 1024 x 768, 1280 x 1024, 1600 x 1200
  - Widescreen format: 800 x 480, 1280 x 800, 1366 x 768, 1440 x 900, 1680 x 1050, 1920 x 1080, 1920 x 1200, 1980 x 1080

Design

SIMATIC WinCC Runtime Advanced is available as a software package with 128, 512, 2 048, 4 096, 8 192 and 16 384 PowerTags.

The term PowerTags is used to identify process tags and area pointers that have a process link to the controller. Tags without process links, constant limit values of tags, and messages (up to 4 000 bit-triggered messages) are also available for additional system performance. The range of functions of WinCC Runtime Advanced includes the centralized HMI components for visualizing and reporting, and it can be expanded to suit requirements and costs by using optional packages.

SIMATIC WinCC Runtime Advanced is configured with the SIMATIC WinCC Advanced or SIMATIC WinCC Professional configuration software.

Function

Visualization via Windows-compliant user interface

Made up of parameterizable screen objects and faceplates created on a project-specific basis:

- Numeric and alphanumeric input/output fields
- Static text and graphic display plus vector graphics
- Dynamizable graphics from HMI symbol library
- Bar graph, trend curve graph with scroll and zoom function as well as read line
- Signal-specific text and graphic lists
- Buttons and switches for operator-process communication
- Editing fields for process values (signals)
- Analog display, slider as example for further screen objects
- Project-specific faceplates created from basic objects of the system
- Graphic displays for various standard graphic formats, e.g. bitmaps, .jpg, .wmf

Alarms and messages

- Discrete alarms and analog alarms as well as event-driven Alarm-S/Alarm-D message procedure with SIMATIC S7
- The new ProDiag alarm and diagnostics concept of the S7-1500 Controller is also supported
- Freely-definable message classes for definition of acknowledgment response and display of alarm events

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Function

Logging of alarms and process values [1)]

- Logging in files (e.g. CSV or TXT file) and Microsoft SQL databases
- Online evaluation of process value and alarm logs
- Evaluation of process value and alarm logs using standard Microsoft tools such as Excel

Recipes [1)]

- Generation of data records for machine data or production data
- Display or entry of data records via a configurable screen object or via process screens distributed within the project
- Transmission of data records from or to the PLC
- Import/export of data records from/to CSV files for further processing with other tools (e.g. MS Excel)

Documentation of process data, alarm events, and recipes

- Time or event-driven report output
- User-definable layout

Flexible expansion of integrated system function using Visual Basic script

Language support for multilingual projects

- Up to 32 online languages
- Language-dependent texts and graphics
- Language selection during runtime

User-oriented access protection according to requirements of regulated sectors

- Authentication with user ID and password
- User group-specific rights
- Central system-wide user administration based on SIMATIC Logon[1)]
- Monitoring of changes by operators in runtime operation[1)]
- Recording of operator actions in an Audit Trail [1)]

Onboard PLC connection to many different PLCs

- Communication via native drivers and standard OPC channel
- Simultaneous connection using several protocols: OPC Client and SIMATIC HMI HTTP protocol are additive, i.e. they can be used in conjunction with other PLC connections

Open communication between HMI systems and with higher-level systems

- OPC Servers
  - Use of the visualization system as a data server (OPC Server) for higher-level automation components, e.g. control systems or systems in the office area
  - OPC DA Server: tags, e.g. process values
- Communication between HMI systems is established on the basis of Ethernet networks, or via the intranet/Internet
  - Read and write access to tags. The WinCC Runtime Advanced or SIMATIC Panels provide other SIMATIC HMI systems or office applications with data (tags)
- Sending of emails on demand or event-driven
  - e.g. to maintenance personnel via SMTP server (Simple Mail Transfer Protocol)
  - The optional use of email/SMS gateways enables access to standard networks (external service provider required)
- System diagnostics via device-specific HTML pages. The following functions are available:
  - Starting and stopping the HMI runtime for maintenance
  - Remote access to recipe data records, passwords and information specific to the HMI system
  - Access to the HMI system files via a file explorer
  - Download of configuration data via the intranet/Internet
  - Supplement with own HTML pages

WinCC Sm@rtServer for the remote control via the intranet and Internet [1)]

- Display and control of process screens on remote PC or Panel
- A SIMATIC HMI system can be used to control or monitor another system remotely; entry level for client/server configurations for distributed operator stations or for solutions with head-end stations or control rooms

[1)] Option for SIMATIC WinCC Runtime Advanced; runtime licenses must be purchased separately. More information is available under "WinCC options".

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Function

System requirements

	SIMATIC WinCC Runtime Advanced
Processor type (min.) [1]	64-bit operating system: at least Intel® Celeron™ 2.2 GHz or comparable
RAM (min.) [2]	4 GB or more
Hard disk	8 GB disk space available
Operating systems	64-bit operating systems: • Windows 10 Professional Version 1909 • Windows 10 Professional Version 2004 • Windows 10 Enterprise Version 1909 • Windows 10 Enterprise Version 2004 • Windows 10 Enterprise 2016 LTSB / LTSC • Windows 10 Enterprise 2019 LTSB / LTSC • Windows Server 2016 Standard Edition • Windows Server 2019 Standard Edition
Optical drive	DVD-ROM

[1] In combination with options, more powerful systems may be required

[2] The required RAM is determined primarily by the size of the graphics used.

Note:

In addition to WinCC, Windows also requires space on the hard disk; e.g. free storage space should be available for the swap file. The following formula has proven itself in the past:
Size of swap file = 3 x size of RAM.

For more information, refer to your Windows documentation.

Ordering data

	Article No.
SIMATIC WinCC Runtime Advanced V17	
Basic software	
Data storage medium	
• 128 PowerTags	**6AV2104-0BA07-0AA0**
• 512 PowerTags	**6AV2104-0DA07-0AA0**
• 2 048 PowerTags	**6AV2104-0FA07-0AA0**
• 4 096 PowerTags	**6AV2104-0HA07-0AA0**
• 8 192 PowerTags	**6AV2104-0KA07-0AA0**
• 16 384 PowerTags	**6AV2104-0LA07-0AA0**
As download[1]	
Email address required for delivery	
• 128 PowerTags	**6AV2104-0BA07-0AH0**
• 512 PowerTags	**6AV2104-0DA07-0AH0**
• 2 048 PowerTags	**6AV2104-0FA07-0AH0**
• 4 096 PowerTags	**6AV2104-0HA07-0AH0**
• 8 192 PowerTags	**6AV2104-0KA07-0AH0**
• 16 384 PowerTags	**6AV2104-0LA07-0AH0**
PowerPacks (version-independent)	
Data storage medium	
• 128 PowerTags to 512 PowerTags	**6AV2104-2BD00-0BD0**
• 512 PowerTags to 2 048 PowerTags	**6AV2104-2DF00-0BD0**
• 2 048 PowerTags to 4 096 PowerTags	**6AV2104-2FH00-0BD0**
• 4 096 PowerTags to 8 192 PowerTags	**6AV2104-2HK00-0BD0**
• 8 192 PowerTags to 16 384 PowerTags	**6AV2104-2KL00-0BD0**
As download[1]	
Email address required for delivery	
• 128 PowerTags to 512 PowerTags	**6AV2104-2BD00-0BJ0**
• 512 PowerTags to 2 048 PowerTags	**6AV2104-2DF00-0BJ0**
• 2 048 PowerTags to 4 096 PowerTags	**6AV2104-2FH00-0BJ0**
• 4 096 PowerTags to 8 192 PowerTags	**6AV2104-2HK00-0BJ0**
• 8 192 PowerTags to 16 384 PowerTags	**6AV2104-2KL00-0BJ0**

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

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Ordering data	Article No.
Upgrades	
SIMATIC WinCC Runtime Advanced V11..16 to V17	
• 128 PowerTags	**6AV2104-3BB07-0AE0**
• 512 PowerTags	**6AV2104-3DD07-0AE0**
• 2 048 PowerTags	**6AV2104-3FF07-0AE0**
• 4 096 PowerTags	**6AV2104-3HH07-0AE0**
• 8 192 - 16 384 PowerTags	**6AV2104-3KK07-0AE0**
As download[1]	
Email address required for delivery	
• 128 PowerTags	**6AV2104-3BB07-0AK0**
• 512 PowerTags	**6AV2104-3DD07-0AK0**
• 2 048 PowerTags	**6AV2104-3FF07-0AK0**
• 4 096 PowerTags	**6AV2104-3HH07-0AK0**
• 8 192 - 16 384 PowerTags	**6AV2104-3KK07-0AK0**
SIMATIC WinCC flexible 2008 to SIMATIC WinCC Runtime Advanced V17	
• 128 PowerTags to 128 PowerTags	**6AV2104-4BB07-0AE0**
• 512 PowerTags to 512 PowerTags	**6AV2104-4DD07-0AE0**
• 2 048 PowerTags to 2 048 PowerTags	**6AV2104-4FF07-0AE0**
• 4 096 PowerTags to 4 096 PowerTags	**6AV2104-4HH07-0AE0**
• 8 000 PowerTags to 8 192 PowerTags	**6AV2104-4KK07-0AE0**
As download[1]	
Email address required for delivery	
• 128 PowerTags to 128 PowerTags	**6AV2104-4BB07-0AK0**
• 512 PowerTags to 512 PowerTags	**6AV2104-4DD07-0AK0**
• 2 048 PowerTags to 2 048 PowerTags	**6AV2104-4FF07-0AK0**
• 4 096 PowerTags to 4 096 PowerTags	**6AV2104-4HH07-0AK0**
• 8 000 PowerTags to 8 192 PowerTags	**6AV2104-4KK07-0AK0**
Options for WinCC (TIA Portal)	
Upgrade for WinCC flexible Panel Options (Sm@rtAccess/ Sm@rtService/Audit)	
Runtime software, single license; without software, without documentation; Class A	
• License key on USB flash drive	**6AV2107-4XP00-0BF0**
• License key download; email address required for delivery	**6AV2107-4XP00-0BK0**

Ordering data	Article No.
SIMATIC WinCC Runtime Advanced V16	
Basic software	
Data storage medium	
• 128 PowerTags	**6AV2104-0BA06-0AA0**
• 512 PowerTags	**6AV2104-0DA06-0AA0**
• 2 048 PowerTags	**6AV2104-0FA06-0AA0**
• 4 096 PowerTags	**6AV2104-0HA06-0AA0**
• 8 192 PowerTags	**6AV2104-0KA06-0AA0**
• 16 384 PowerTags	**6AV2104-0LA06-0AA0**
As download[1]	
Email address required for delivery	
• 128 PowerTags	**6AV2104-0BA06-0AH0**
• 512 PowerTags	**6AV2104-0DA06-0AH0**
• 2 048 PowerTags	**6AV2104-0FA06-0AH0**
• 4 096 PowerTags	**6AV2104-0HA06-0AH0**
• 8 192 PowerTags	**6AV2104-0KA06-0AH0**
• 16 384 PowerTags	**6AV2104-0LA06-0AH0**
Upgrades	
SIMATIC WinCC Runtime Advanced V11..15.1 to V16	
• 128 PowerTags	**6AV2104-3BB06-0AE0**
• 512 PowerTags	**6AV2104-3DD06-0AE0**
• 2 048 PowerTags	**6AV2104-3FF06-0AE0**
• 4 096 PowerTags	**6AV2104-3HH06-0AE0**
• 8 192 - 16 384 PowerTags	**6AV2104-3KK06-0AE0**
As download[1]	
Email address required for delivery	
• 128 PowerTags	**6AV2104-3BB06-0AK0**
• 512 PowerTags	**6AV2104-3DD06-0AK0**
• 2 048 PowerTags	**6AV2104-3FF06-0AK0**
• 4 096 PowerTags	**6AV2104-3HH06-0AK0**
• 8 192 - 16 384 PowerTags	**6AV2104-3KK06-0AK0**
SIMATIC WinCC flexible 2008 to SIMATIC WinCC Runtime Advanced V16	
• 128 PowerTags to 128 PowerTags [2]	**6AV2104-4BB06-0AE0**
• 512 PowerTags to 512 PowerTags [2]	**6AV2104-4DD06-0AE0**
• 2 048 PowerTags to 2 048 PowerTags [2]	**6AV2104-4FF06-0AE0**
• 4 096 PowerTags to 4 096 PowerTags [2]	**6AV2104-4HH06-0AE0**
• 8 000 PowerTags to 8 192 PowerTags [2]	**6AV2104-4KK06-0AE0**
As download[1]	
Email address required for delivery	
• 128 PowerTags to 128 PowerTags [2]	**6AV2104-4BB06-0AK0**
• 512 PowerTags to 512 PowerTags [2]	**6AV2104-4DD06-0AK0**
• 2 048 PowerTags to 2 048 PowerTags [2]	**6AV2104-4FF06-0AK0**
• 4 096 PowerTags to 4 096 PowerTags [2]	**6AV2104-4HH06-0AK0**
• 8 000 PowerTags to 8 192 PowerTags [2]	**6AV2104-4KK06-0AK0**

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

[2] Each including 1 upgrade license to the WinCC Runtime Advanced options

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Technical specifications

The following tables of system limitations provide assistance in estimating whether a specific project is still within the system limitations for WinCC Runtime Advanced.

The stated maximum values are not additive. We cannot guarantee proper functioning of configurations that make full use of all system limits on the HMI devices. In addition to the limitations specified, allowances must be made for restrictions in configuration memory resources.

	SIMATIC WinCC Runtime Advanced
Tags	
Number of tags in the project	24 576
Number of PowerTags	128–16 384
Number of elements per array	1 600
Number of local tags	8 192
Alarms	
Number of alarm classes	32
Number of discrete alarms	6 000
Number of analog alarms	500
Length of an alarm in characters	80
Number of process values per alarm	8
Size of the alarm buffer	2 048
Number of queued alarm events	500
Screens	
Number of screens	750
Number of fields per screen	600
Number of tags per screen	400
Number of complex objects per screen[1)]	40
Recipes	
Number of recipes	1 000
Number of elements per recipe[2)]	2 000
User data length in KB per data record	512
Number of data records per recipe	5 000
Logs	
Number of logs	100
Number of entries per log (including all log segments)[3)]	500 000
Number of log segments	400
Cyclical trigger for tag logging	1 s
Number of tags that can be logged per log	24 576
Trends	
Number of trends	800
Text lists and graphics lists	
Number of graphic lists	500
Number of text lists	500
Number of entries per text or graphic list	3 500
Number of graphic objects	24 576
Number of text elements	40 000
Scripts	
Number of scripts	200
Communication	
Number of connections	8
Number of connections based on "SIMATIC HMI HTTP"	16
Maximum number of connected Sm@rtClients (including a service client)	4 [4)]
Help system	
Number of characters in a help text	500
Languages	
Number of runtime languages	32
Scheduler	
Time-triggered tasks[5)]	48
User administration	
Number of user groups	50
Number of user rights	32
Number of users	100

1) Complex objects are: Bars, sliders, symbol library, clock, and all objects from the Controls area.

2) When using arrays, each array element represents a recipe element

3) For the "segmented circular log" logging method, the number of entries for all sequence logs is valid. The product derived from the number of circular logs times the number of data records in this log may not be exceeded.

4) Up to three Sm@rtClients can interconnect with the Sm@rtServer on Panel PC 477.

5) Event-triggered tasks are not relevant for the system limits.

More information

More information is available on the Internet at:

http://www.siemens.com/wincc-advanced

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Overview

PC-based operator control and monitoring system for visualization and operator control of processes, production flows, machines and plants in all sectors – from the simple single-user station through to distributed multi-user systems and cross-location solutions with web clients.

SIMATIC WinCC Runtime Professional is the information hub for corporation-wide vertical integration. SIMATIC WinCC Runtime Professional is configured with the SIMATIC WinCC Professional configuration software.

Benefits

- Functions for all visualization tasks:
  - Operator functions
  - Graphics and trend displays
  - Alarm logging
  - Report system
  - Archiving (option)
  - Recipe management (option)
- Universally scalable
  - Expandable from single station to client-server configurations
  - Process visualization via the web with the WinCC WebNavigator
- Open standards for easy integration
  - Efficient real-time database MS SQL Server
  - Open for application modules with ActiveX controls
  - Visual Basic for Applications for individual expansions
  - OPC for cross-vendor communication
- Part of the Totally Integrated Automation Portal
  - Direct access to the tag and message configuration of the SIMATIC controller
  - Excellent support of the new SIMATIC S7-1500 Controller
  - With symbolic addressing
  - Access to the new memory-optimized data blocks
  - New ProDiag alarm and diagnostics concept
  - Integrated diagnostic functions for increasing productivity

Application

SIMATIC WinCC Runtime Professional is designed for visualization and operator control of processes, production flows, machines and plants. With its powerful process interface, especially to the SIMATIC family, and the secure data logging, WinCC Runtime Professional enables solutions for the process control.

The sector-neutral basic system enables universal usage in all automation applications.

SIMATIC WinCC Runtime Professional can be used in combination with the following operator panels:

SIMATIC PCs:

- SIMATIC Rack PC: IPC547, IPC647, IPC847
- SIMATIC Box PC: IPC427, IPC627, IPC827
- SIMATIC Panel PC: IPC477, IPC677
- Standard PC

Design

SIMATIC WinCC Runtime Professional is available as a software package with 128, 512, 2 048, 4 096, 8 192, 65 536, 102 400, 153 600 and 262 144 PowerTags.

PowerTags are data points that are connected to controllers or other data sources via a WinCC Runtime Professional channel. Up to 32 alarms can be obtained from one data point. Moreover, internal tags without coupling are available for additional system performance. WinCC Runtime Professional also contains 500 archive tags. Additional archive licenses can be obtained for greater quantity structures.

Licenses for a multi-user configuration

The system software with the required number of PowerTags and additionally the SIMATIC WinCC Server for Runtime Professional option must be installed on the server. For the clients in the basic configuration, a SIMATIC WinCC Client for Runtime Professional license is sufficient.

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Function

Visualization via Windows-compliant user interface

Made up of parameterizable screen objects and faceplates created on a project-specific basis:

- Numeric and alphanumeric input/output fields
- Static text and graphic display plus vector graphics
- Dynamizable graphics from HMI symbol library
- Bar graph, trend curve graph with scroll and zoom function as well as read line
- Signal-specific text and graphic lists
- Buttons and switches for operator-process communication
- Editing fields for process values (signals)
- Analog display, slider as example for further screen objects
- Project-specific faceplates created from basic objects of the system
- Graphic displays for various standard graphic formats, e.g. bitmaps, .jpg, .wmf, .svg

Alarms and messages

- Discrete alarms and analog alarms, as well as event-driven Alarm-S/Alarm-D message procedure with SIMATIC S7
- The new ProDiag alarm and diagnostics concept of the S7-1500 Controller is also supported
- Freely-definable message classes for definition of acknowledgment response and display of alarm events

Logging of messages and process values [1)]

- Signaling system for detecting and archiving events with display and control options according to DIN 19235
- Process logging for the acquisition, compression and storage of measured values
- Online evaluation of process value and alarm logs

Recipes [1)]

- Generation of data records for machine data or production data
- Display or entry of data records via a configurable screen object or via process screens distributed within the project
- Transmission of data records from or to the PLC
- Import/export of data records for further processing with other tools (e.g. MS Excel)

Documentation of process data, alarm events, and recipes

- Time or event-driven report output
- User-definable layout

Flexible expansion by means of Visual Basic Script and ANSI-C

- Programming interfaces for individual access to data and functions of WinCC Runtime Professional and for the integration in user programs with VBA, VB Script, C-API, C-Script (ANSI-C)

Open communication between HMI systems and with higher-level systems

- OPC Server/Client
  Use of the visualization system as a data server (OPC Server) for higher-level automation components such as control systems or systems in the office area
  - OPC DA Server: tags, e.g. process values
  - OPC HDA Server: logged process values
  - OPC A&E Server: Alarms
  - OPC XML DA Server: tags, e.g. process values
  - OPC UA DA Server: tags, e.g. process values
  - OPC UA DA Client: Tags, e.g. process values
- OLE DB Server
  - Standardized and user-friendly access to WinCC log data (MS SQL Server 2005).
  - Access via the OLE DB provider supplies all WinCC log data available along with the accompanying process values, as well as alarm and user texts.
  - The WinCC OLE DB provider also supports analysis functions such as minimum, maximum, alarm hit list, etc.
- WinCC WebUX for Runtime Professional [1)]
  - The WebUX option enables platform and browser-independent operator control and monitoring via the Internet or the in-house intranet or LAN.
  - Installation on the terminal is not necessary – an HTML5-compatible browser is sufficient. WebUX can then also be used on mobile terminals.
- WinCC WebNavigator for Runtime Professional[1)]
  - Option for SIMATIC WinCC Runtime Professional for operator control and monitoring of plants over the Internet, company Intranet or LAN.
  - Configuration from a web server with the SIMATIC WinCC Runtime Professional software as a single-user, client or server version and a web client that enables operator control and monitoring of a current WinCC Runtime Professional project via an Internet browser with ActiveX support. The WinCC basic system does not have to be installed on the client computer.
- WinCC DataMonitor for Runtime Professional [1)]
  - The WinCC DataMonitor is used for display and evaluation of current process states and historical data on office PCs using standard tools such as Microsoft Internet Explorer or Microsoft Excel. The DataMonitor Client is supported by a web server with current and historical process data and alarms. All staff ranging from machine operators to corporate managers can use the DataMonitor to obtain information.

[1)] Option for SIMATIC WinCC Runtime Professional; runtime licenses must be purchased separately. More information is available under "WinCC options".

Language support for multilingual projects

- Language-dependent texts and graphics
- Language selection during runtime

Onboard PLC connection to many different PLCs

- Communication via native drivers and standard OPC channel
- For communication with subordinate PLCs (SIMATIC protocols, PROFIBUS DP, PROFIBUS FMS, DDE and OPC Server included in the scope of supply)

Note:

For communication, the supplied SIMATIC Net V17 must be installed.
Before installing SIMATIC WinCC RT Professional, please always ensure compatibility with the add-on packages and options you require and use.

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Function

System requirements	SIMATIC WinCC Runtime Professional
Processor type (min.) [1]	• Intel Celeron Dual Core 2.2 GHz (Ivy/Sandy Bridge)
RAM (min.) [2]	4 GB
Free hard disk space [3]	8 GB on system drive "C:"
Operating systems	32-bit operating system: for WinCC Client, WebNavigator Client, DataMonitor, WebUX • Windows 7 SP1 (Professional, Enterprise, Ultimate) • Windows Embedded Standard Edition 7 SP1 64-bit operating systems: • Windows 10 Professional 1909, 2004 • Windows 10 Enterprise 1909, 2004 • Windows 10 Enterprise 2016 LTSB / LTSC • Windows 10 Enterprise 2019 LTSB / LTSC • Windows Server 2016 Standard (full installation) • Windows Server 2019 Standard (full installation)
Graphics card	32 MB RAM, 24-bit color depth
Network	Ethernet 10 Mbps or higher
Optical drive	DVD-ROM

1) In combination with options, more powerful systems may be required

2) The required RAM is determined primarily by the size of the graphics used.

3) Without taking archives into account.

Note:

In addition to WinCC, Windows also requires space on the hard disk; e.g. free storage space should be available for the swap file.

The following formula has proven itself in the past: Size of swap file = 3 x size of RAM.

For more information, refer to your Windows documentation.

Integration

Integration in company-wide solutions (IT and business integration)

WinCC Runtime Professional is strictly based on Microsoft technology, which provides for the greatest possible compatibility and integration ability.

Cross-manufacturer communication is also a simply exercise. The reason: WinCC Runtime Professional can be used as an OPC client and server, and in addition to access to current process values, it also supports standards such as OPC HDA (Historical Data Access), OPC Alarm & Events, OPC UA Data Access and OPC XML Data Access.

Just as important: Visual Basic Scripting (VBS) as an easy-to-learn, open Runtime language. If desired, professional application developers can also use ANSI-C.

WinCC Runtime Professional integrates a powerful and scalable Historian function based on the Microsoft SQL Server in the basic system.

Thus the user is given all possibilities: from high-performance archiving of current process data, to long-term archiving with high data compression, through to a central information hub in the form of a company-wide Process Historian. Open interfaces form the basis for an effective IT and business integration.

Ordering data

	Article No.
SIMATIC WinCC Runtime Professional V17	
Basic software	
• 128 PowerTags	**6AV2105-0BA07-0AA0**
• 512 PowerTags	**6AV2105-0DA07-0AA0**
• 2 048 PowerTags	**6AV2105-0FA07-0AA0**
• 4 096 PowerTags	**6AV2105-0HA07-0AA0**
• 8 192 PowerTags	**6AV2105-0KA07-0AA0**
• 65 536 PowerTags	**6AV2105-0MA07-0AA0**
• 102 400 PowerTags	**6AV2105-0PA07-0AA0**
• 153 600 PowerTags	**6AV2105-0RA07-0AA0**
• 262 144 PowerTags	**6AV2105-0TA07-0AA0**
• Client for Runtime Professional	**6AV2107-0DB07-0AA0**
Incl. 500 archive tags each	
As download[1] Email address required for delivery.	
• 128 PowerTags	**6AV2105-0BA07-0AH0**
• 512 PowerTags	**6AV2105-0DA07-0AH0**
• 2 048 PowerTags	**6AV2105-0FA07-0AH0**
• 4 096 PowerTags	**6AV2105-0HA07-0AH0**
• 8 192 PowerTags	**6AV2105-0KA07-0AH0**
• 65 536 PowerTags	**6AV2105-0MA07-0AH0**
• 102 400 PowerTags	**6AV2105-0PA07-0AH0**
• 153 600 PowerTags	**6AV2105-0RA07-0AH0**
• 262 144 PowerTags	**6AV2105-0TA07-0AH0**
• Client for Runtime Professional	**6AV2107-0DB07-0AH0**
Incl. 500 archive tags each	
SIMATIC WinCC Runtime Professional ASIA V17	
• 128 PowerTags	**6AV2105-0BA17-0AA0**
• 512 PowerTags	**6AV2105-0DA17-0AA0**
• 2 048 PowerTags	**6AV2105-0FA17-0AA0**
• 4 096 PowerTags	**6AV2105-0HA17-0AA0**
• 8 192 PowerTags	**6AV2105-0KA17-0AA0**
• 65 536 PowerTags	**6AV2105-0MA17-0AA0**
• 102 400 PowerTags	**6AV2105-0PA17-0AA0**
• 153 600 PowerTags	**6AV2105-0RA17-0AA0**
• 262 144 PowerTags	**6AV2105-0TA17-0AA0**
Incl. 500 archive tags each	

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Ordering data

	Article No.
PowerPacks (version-independent)	
SIMATIC WinCC Runtime Professional and SIMATIC WinCC Runtime Professional ASIA	
• 128 to 512 PowerTags	**6AV2105-2BD00-0BD0**
• 512 to 2 048 PowerTags	**6AV2105-2DF00-0BD0**
• 2 048 to 4 096 PowerTags	**6AV2105-2FH00-0BD0**
• 4 096 to 8 192 PowerTags	**6AV2105-2HK00-0BD0**
• 8 192 to 65 536 PowerTags	**6AV2105-2KM00-0BD0**
• 65 536 to 102 400 PowerTags	**6AV2105-2MP00-0BD0**
• 102 400 to 153 600 PowerTags	**6AV2105-2PR00-0BD0**
• 153 600 to 262 144 PowerTags	**6AV2105-2RT00-0BD0**
As download[1)] Email address required for delivery.	
• 128 to 512 PowerTags	**6AV2105-2BD00-0BJ0**
• 512 to 2 048 PowerTags	**6AV2105-2DF00-0BJ0**
• 2 048 to 4 096 PowerTags	**6AV2105-2FH00-0BJ0**
• 4 096 to 8 192 PowerTags	**6AV2105-2HK00-0BJ0**
• 8 192 to 65 536 PowerTags	**6AV2105-2KM00-0BJ0**
• 65 536 to 102 400 PowerTags	**6AV2105-2MP00-0BJ0**
• 102 400 to 153 600 PowerTags	**6AV2105-2PR00-0BJ0**
• 153 600 to 262 144 PowerTags	**6AV2105-2RT00-0BJ0**
Upgrades V11..16 to WinCC V17	
SIMATIC WinCC Runtime Professional and	
SIMATIC WinCC Runtime Professional ASIA	
• SIMATIC WinCC Runtime Professional 128 PowerTags	**6AV2105-3BB07-0AE0**
• SIMATIC WinCC Runtime Professional 512 PowerTags	**6AV2105-3DD07-0AE0**
• SIMATIC WinCC Runtime Professional 2 048 PowerTags	**6AV2105-3FF07-0AE0**
• SIMATIC WinCC Runtime Professional 4 096 PowerTags	**6AV2105-3HH07-0AE0**
• SIMATIC WinCC Runtime Professional 8 192 PowerTags	**6AV2105-3KK07-0AE0**
• SIMATIC WinCC Runtime Professional 64k to 256k PowerTags	**6AV2105-3MM07-0AE0**
• Client for Runtime Professional	**6AV2107-3DB07-0AE0**
As download[1)] Email address required for delivery.	
• SIMATIC WinCC Runtime Professional 128 PowerTags	**6AV2105-3BB07-0AK0**
• SIMATIC WinCC Runtime Professional 512 PowerTags	**6AV2105-3DD07-0AK0**
• SIMATIC WinCC Runtime Professional 2 048 PowerTags	**6AV2105-3FF07-0AK0**
• SIMATIC WinCC Runtime Professional 4 096 PowerTags	**6AV2105-3HH07-0AK0**
• SIMATIC WinCC Runtime Professional 8 192 PowerTags	**6AV2105-3KK07-0AK0**
• SIMATIC WinCC Runtime Professional 64k to 256k PowerTags	**6AV2105-3MM07-0AK0**
• Client for Runtime Professional	**6AV2107-3DB07-0AK0**

	Article No.
Upgrades	
WinCC V7.3 .. V7.5 to SIMATIC WinCC RT Professional V17	
• SIMATIC WinCC Runtime Professional 128 PowerTags	**6AV2105-4BB07-0AE0**
• SIMATIC WinCC Runtime Professional 512 PowerTags	**6AV2105-4DD07-0AE0**
• SIMATIC WinCC Runtime Professional 2 048 PowerTags	**6AV2105-4FF07-0AE0**
• SIMATIC WinCC Runtime Professional 8 192 PowerTags	**6AV2105-4KK07-0AE0**
• SIMATIC WinCC Runtime Professional 64k to 256k PowerTags	**6AV2105-4MM07-0AE0**
• Client for Runtime Professional	**6AV2107-4DB07-0AE0**
As download[1)] Email address required for delivery.	
• SIMATIC WinCC Runtime Professional 128 PowerTags	**6AV2105-4BB07-0AK0**
• SIMATIC WinCC Runtime Professional 512 PowerTags	**6AV2105-4DD07-0AK0**
• SIMATIC WinCC Runtime Professional 2 048 PowerTags	**6AV2105-4FF07-0AK0**
• SIMATIC WinCC Runtime Professional 8 192 PowerTags	**6AV2105-4KK07-0AK0**
• SIMATIC WinCC Runtime Professional 64k to 256k PowerTags	**6AV2105-4MM07-0AK0**
• Client for Runtime Professional	**6AV2107-4DB07-0AK0**

[1)] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

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Ordering data	Article No.
SIMATIC WinCC Runtime Professional V16	
Basic software	
• 128 PowerTags	**6AV2105-0BA06-0AA0**
• 512 PowerTags	**6AV2105-0DA06-0AA0**
• 2 048 PowerTags	**6AV2105-0FA06-0AA0**
• 4 096 PowerTags	**6AV2105-0HA06-0AA0**
• 8 192 PowerTags	**6AV2105-0KA06-0AA0**
• 65 536 PowerTags	**6AV2105-0MA06-0AA0**
• 102 400 PowerTags	**6AV2105-0PA06-0AA0**
• 153 600 PowerTags	**6AV2105-0RA06-0AA0**
• 262 144 PowerTags	**6AV2105-0TA06-0AA0**
• Client for Runtime Professional	**6AV2107-0DB06-0AA0**
Incl. 500 archive tags each	
As download[1]	
Email address required for delivery.	
• 128 PowerTags	**6AV2105-0BA06-0AH0**
• 512 PowerTags	**6AV2105-0DA06-0AH0**
• 2 048 PowerTags	**6AV2105-0FA06-0AH0**
• 4 096 PowerTags	**6AV2105-0HA06-0AH0**
• 8 192 PowerTags	**6AV2105-0KA06-0AH0**
• 65 536 PowerTags	**6AV2105-0MA06-0AH0**
• 102 400 PowerTags	**6AV2105-0PA06-0AH0**
• 153 600 PowerTags	**6AV2105-0RA06-0AH0**
• 262 144 PowerTags	**6AV2105-0TA06-0AH0**
• Client for Runtime Professional	**6AV2107-0DB06-0AH0**
Incl. 500 archive tags each	
SIMATIC WinCC Runtime Professional ASIA V16	
• 128 PowerTags	**6AV2105-0BA16-0AA0**
• 512 PowerTags	**6AV2105-0DA16-0AA0**
• 2 048 PowerTags	**6AV2105-0FA16-0AA0**
• 4 096 PowerTags	**6AV2105-0HA16-0AA0**
• 8 192 PowerTags	**6AV2105-0KA16-0AA0**
• 65 536 PowerTags	**6AV2105-0MA16-0AA0**
• 102 400 PowerTags	**6AV2105-0PA16-0AA0**
• 153 600 PowerTags	**6AV2105-0RA16-0AA0**
• 262 144 PowerTags	**6AV2105-0TA16-0AA0**
Incl. 500 archive tags each	

	Article No.
Upgrades V11..15.1 to WinCC V16	
SIMATIC WinCC Runtime Professional V11..15.1 and SIMATIC WinCC Runtime Professional ASIA V11..V15.1 to V16	
• SIMATIC WinCC Runtime Professional 128 PowerTags	**6AV2105-3BB06-0AE0**
• SIMATIC WinCC Runtime Professional 512 PowerTags	**6AV2105-3DD06-0AE0**
• SIMATIC WinCC Runtime Professional 2 048 PowerTags	**6AV2105-3FF06-0AE0**
• SIMATIC WinCC Runtime Professional 4 096 PowerTags	**6AV2105-3HH06-0AE0**
• SIMATIC WinCC Runtime Professional 8 192 PowerTags	**6AV2105-3KK06-0AE0**
• SIMATIC WinCC Runtime Professional 64k to 256k PowerTags	**6AV2105-3MM06-0AE0**
• Client for Runtime Professional	**6AV2107-3DB06-0AE0**
As download[1]	
Email address required for delivery.	
• SIMATIC WinCC Runtime Professional 128 PowerTags	**6AV2105-3BB06-0AK0**
• SIMATIC WinCC Runtime Professional 512 PowerTags	**6AV2105-3DD06-0AK0**
• SIMATIC WinCC Runtime Professional 2 048 PowerTags	**6AV2105-3FF06-0AK0**
• SIMATIC WinCC Runtime Professional 4 096 PowerTags	**6AV2105-3HH06-0AK0**
• SIMATIC WinCC Runtime Professional 8 192 PowerTags	**6AV2105-3KK06-0AK0**
• SIMATIC WinCC Runtime Professional 64k to 256k PowerTags	**6AV2105-3MM06-0AK0**
• Client for Runtime Professional	**6AV2107-3DB06-0AK0**

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Ordering data	Article No.
Upgrades	
to SIMATIC WinCC RT Professional V16	
• SIMATIC WinCC Runtime Professional 128 PowerTags	**6AV2105-4BB06-0AE0**
• SIMATIC WinCC Runtime Professional 512 PowerTags	**6AV2105-4DD06-0AE0**
• SIMATIC WinCC Runtime Professional 2 048 PowerTags	**6AV2105-4FF06-0AE0**
• SIMATIC WinCC Runtime Professional 8 192 PowerTags	**6AV2105-4KK06-0AE0**
• SIMATIC WinCC Runtime Professional 64k to 256k PowerTags	**6AV2105-4MM06-0AE0**
• Client for Runtime Professional	**6AV2107-4DB06-0AE0**
As download[1)] Email address required for delivery.	
• SIMATIC WinCC Runtime Professional 128 PowerTags	**6AV2105-4BB06-0AK0**
• SIMATIC WinCC Runtime Professional 512 PowerTags	**6AV2105-4DD06-0AK0**
• SIMATIC WinCC Runtime Professional 2 048 PowerTags	**6AV2105-4FF06-0AK0**
• SIMATIC WinCC Runtime Professional 8 192 PowerTags	**6AV2105-4KK06-0AK0**
• SIMATIC WinCC Runtime Professional 64k to 256k PowerTags	**6AV2105-4MM06-0AK0**
• Client for Runtime Professional	**6AV2107-4DB06-0AK0**

Ordering data	Article No.
Software Update Service (SUS)	
SIMATIC WinCC RT Professional Software Update Service (SUS); Under this contract, you receive all current software versions for a period of one year. The contract is automatically extended for one more year unless it is canceled three months before expiration. Delivery and service period: 1 year from date of invoice Condition for contract: current software version	
• standard	**6AV2105-0XA00-0AL0**
• as download; email address required for delivery	**6AV2105-0XA00-0AY0**
SIMATIC WinCC RT Professional Client Software Update Service (SUS); Under this contract, you receive all current software versions for a period of one year. The contract is automatically extended for one more year unless it is canceled three months before expiration. Delivery and service period: 1 year from date of invoice Condition for contract: current client version	
• standard	**6AV2107-0DB00-0AL0**
• as download; email address required for delivery	**6AV2107-0DB00-0AY0**

[1)] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

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Technical specifications

The following tables of system limits provide assistance in estimating whether a specific project is still within the system limitations for WinCC Runtime Professional. The stated maximum values are not additive.

We cannot guarantee proper functioning of configurations that make full use of all system limits on the HMI devices. In addition to the limitations specified, allowances must be made for restrictions in configuration memory resources.

	SIMATIC WinCC Runtime Professional
Alarms	
Configurable alarms per server/single user	150,000
PowerTags per alarm line	10
User text blocks per alarm line	10
Message classes	256
Alarm types	16
Alarm priorities	17 (0...16)
Alarms in Runtime	
Alarms per alarm log	Unlimited [1]
Alarms per short-term log list	1,000
Alarms per long-term log list	1,000 [2]
Alarms per alarm display	5,000 [3]
Screens	
Objects per screen [4]	Unlimited [5]
Levels per screen	32
Screens per project	Unlimited [5]
Instances of fixed faceplates in a process screen	31 instances of the same picture type
Screen size in pixels	10 000 x 10 000
Nesting levels of screen objects	20
Recipes	
Number of recipes	Unlimited [5]
Number of recipe elements	500 [6]
Number of recipe data records	10,000 [6]
Number of views	Unlimited [5]
Logs	
Trend views per screen	25
Trends per trend view	80
Tables per screen	25
Columns per table	12
Values per table	30,000
Logs per single-user station/server	100
Log tags per single-user station/server [7]	80,000
Trends	
Trend views per image	25
Trends per trend view	80
User administration	
Number of user groups	128
Number of user rights	999
Number of users	128
Configurations – Quantity structure in a multi-user system	
WinCC Clients in a system	32 [8] [9]
Web clients in a system	150 [10]

1) Limited by system resources.

2) On single-user station or server or on client per server if "LongTimeArchiveConsistency" is set to "No". On single-user station, server, or client if "LongTimeArchiveConsistency" is set to "Yes".

3) On single-user station or server or on client per server.

4) The number and complexity of the objects affect the performance.

5) Limited by system resources.

6) The sum of the number of recipe elements and number of data records must not exceed a value of 1,000,000

7) Dependent on the Logging PowerPack used for the log tags. 500 log tags are contained in the basis version.

8) If the server is also used as an operator station, the number of clients for this server is reduced to four.

9) Mixed configuration: 32 clients + 3 web clients

10) Mixed configuration: 50 web clients + 1 WinCC Client

More information

More information is available on the Internet at:

http://www.siemens.com/wincc-professional

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Overview

Communication – SIMATIC WinCC Runtime Advanced

WinCC Advanced is an open visualization system and offers the option of connecting the most diverse control systems.

Number of connectable controllers

WinCC Advanced permits the parallel coupling of up to 8 controllers.
Connection to controllers from other manufacturers.

The following "Coupling overview" table includes lists of third-party protocols and controllers from other manufacturers which are directly supported by WinCC Advanced. Generally it is also possible to connect controllers from other manufacturers via OPC (OLE for Process Control).

Current notes and information about OPC servers from many different suppliers can be found at:
http://www.opcfoundation.org/

WinCC Advanced supports the standards:

- OPC Data Access 2.05a
- OPC UA Data Access 1.01
- OPC XML Data Access 1.00 (client via DCOM/XML gateway)

Coupling overview for WinCC Runtime Advanced

Protocol	Description	PC interface
SIMATIC HMI		
Ethernet TCP/IP (HTTP communication)	HTTP communication for data exchange between SIMATIC HMI (client + server) [1]	CP 1612 A2
SIMATIC S7		
Ethernet TCP/IP (S7 communication)	Channel for communication via Ethernet TCP/IP with max. 8 x SIMATIC S7 controllers S7-1200, S7-1500 S7-300, S7-400, S7-200 with CP 243-1	CP 1612 A2 CP 1623
MPI, PROFIBUS (S7 communication)	Channel for communication via MPI, PROFIBUS with max. 8 x SIMATIC S7 controllers S7-1200 with CM 1243-5 (DP master), S7-1500 S7-300, S7-400, S7-200 (passive S7-200 only)	CP 5612 CP 5622 CP 5711 CP 5613 A3 CP 5623
PPI (PPI protocol)	Channel for communication via PPI with 1 x SIMATIC S7-200 (network operation, e.g. parallel PG possible)	CP 5612 CP 5622 CP 5711 CP 5613 A3 CP 5623
Software interface (S7 communication)	Channel for communication via software interface with WinAC	
SINUMERIK [2]		
Ethernet TCP/IP (S7 communication)	Channel for communication via Ethernet TCP/IP with SINUMERIK 840D sl	CP 1612 A2 CP 1623
MPI (S7 communication)	Channel for communication via MPI with SINUMERIK 840D sl	CP 5612 CP 5622 CP 5711 CP 5613 A3 CP 5623

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Overview

Protocol	Description	PC interface
Controllers from other manufacturers (WinCC V11.0 and higher) [3]		
Allen Bradley Ethernet IP	Channel for communication with max. 4 x Allen Bradley controllers via Ethernet TCP/IP with Allen Bradley Ethernet IP protocol The ControlLogix / CompactLogix, SLC500 / MicroLogix and PLC5 controllers are supported	CP 1612 A2
Allen Bradley DF1	Channel for communication with Allen Bradley controllers via DF1 protocol The controllers SLC500 / MicroLogix and PLC5 are supported [3]	COM1/COM2
Mitsubishi MC TCP/IP	Channel for communication with max. 4 x Mitsubishi controllers via Ethernet TCP/IP with Mitsubishi MC TCP/IP protocol The FX3, Q, and iQ/QnUD controller series are supported	CP 1612 A2
Mitsubishi FX	Channel for communication with Mitsubishi controllers via FX protocol The FX1N, FX2N controllers are supported	COM1/COM2
Modbus TCP/IP	Channel for communication with max. 4 x Modicon controllers via Ethernet TCP/IP using the Modbus TCP/IP protocol The Quantum, Momentum, Premium, TSX Micro, Compact and M340 controllers are supported	CP 1612 A2
Modbus RTU	Channel for communication with Modicon controllers via the Modbus RTU protocol The Quantum, Momentum, and Compact controllers are supported	COM1/COM2
Omron Link / Multi Link	Channel for communication with Omron controllers via the Link/Multi protocol The CP1x, CJ1x, CJ2H, CS1x, and CP2MC controllers are supported	COM1/COM2
Cross-vendor		
OPC client [1] [4] for OPC DA, OPC UA DA, XML DA	Channel for OPC communication, WinCC can acquire data from OPC server applications	CP 1612 A2
OPC server for OPC DA	Server applications for OPC communication; WinCC provides process data to OPC clients	CP 1612 A2

[1] HTTP and OPC communication can be used in combination with the other couplings; regarding SIMATIC Panels that support HTTP or OPC communication, see the overview under "System interfaces (WinCC V11)".

[2] "SINUMERIK Operate WinCC RT Advanced" license required; for more information, see NC 60 Catalog.

[3] For detailed information regarding supported controllers, see "System interfaces (WinCC V11)"

[4] Application note:
Parallel use of the OPC client channel allows, for example, connection to an SNMP OPC server for visualization of the data present there. The SNMP OPC server enables monitoring of any network components (e.g. switches) that support the SNMP protocol. More information can be found under SIMATIC NET communications systems/SNMP OPC server.

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Overview

Communication – SIMATIC WinCC Runtime Professional

WinCC Professional is an open process visualization system and offers the option of connecting the most diverse control systems.

Released communication software

Only communication software with the listed (or higher) product versions should be used. Corresponding SIMATIC NET upgrades are available for the upgrading of older versions.

Number of connectable controllers

With CP 1623, a maximum of 64 S7 controllers can be connected via Industrial Ethernet; with CP 5612/CP 5622 a maximum of 8 and with CP 5613 A3 a maximum of 44 S7 controllers via PROFIBUS. With approx. 10 or more controllers, the use of Industrial Ethernet is recommended.

Client-server communication

Communication between the clients and the server is implemented using the TCP/IP protocol. The construction of a separate PC-LAN is recommended. For small projects with correspondingly small message frame advent, a SIMATIC NET Industrial Ethernet can be used for both process communication (WinCC/server ↔ PLC) and for PC-PC communication (WinCC/client ↔ WinCC/server)

Controllers from other manufacturers

The following "Coupling overview" table includes lists of third-party protocols and controllers from other manufacturers which are directly supported by WinCC Professional. Generally it is also possible to connect controllers from other manufacturers via OPC (OLE for Process Control).

Current notes and information about OPC servers from many different suppliers can be found at:
http://www.opcfoundation.org/

WinCC Professional supports the standards:

- OPC Data Access 2.05a
- OPC Data Access 3.00
- OPC UA Data Access 1.01
- OPC XML Data Access 1.00
- OPC HDA 1.20
- OPC A&E 1.10

Coupling overview for WinCC Runtime Professional

Protocol	Description	PC interface
SIMATIC S7		
SIMATIC S7	Protocol Suite with channel units for communication with SIMATIC S7 via • Ethernet TCP/IP (S7 communication) to S7-1200, S7-1500, S7-300, S7-400 • MPI, PROFIBUS (S7 communication) to S7-1200 with CM 1243-5 (DP master), S7-1500, S7-300, S7-400 • Software interface (S7 communication) to Win AC	CP 5612 CP 5622 CP 5711 CP 5613 A3 CP 5623
Controllers from other manufacturers (WinCC V11.0 and higher)		
Allen Bradley Ethernet IP	Channel for communication with Allen Bradley controllers via Ethernet TCP/IP with Ethernet IP protocol The ControlLogix / CompactLogix, SLC500 / MicroLogix, and PLC5 controllers are supported	CP 1612 A2
Mitsubishi MC TCP/IP	Channel for communication with Mitsubishi controllers via Ethernet TCP/IP with Mitsubishi MC TCP/IP protocol The FX3, Q, and iQ/QnUD controller series are supported	CP 1612 A2
Modbus TCP/IP	Channel for communication with Modicon controllers via Ethernet TCP/IP using the Modbus TCP/IP protocol The Quantum, Momentum, Premium, TSX Micro, Compact and M340 controllers are supported	CP 1612 A2
Cross-vendor		
OPC client [1] for OPC DA, OPC XML DA	Channel for OPC communication, WinCC can acquire data from OPC server applications	CP 1612 A2
OPC server for OPC DA, OPC UA DA, OPC XML DA, OPC A&E, OPC HDA	Server applications for OPC communication; WinCC provides process data to OPC clients	CP 1612 A2

[1] Application note:
Parallel use of the OPC client channel allows, for example, connection to an SNMP OPC server for visualization of the data present there. The SNMP OPC server enables monitoring of any network components (e.g. switches) that support the SNMP protocol. More information can be found under SIMATIC NET communications systems/SNMP OPC server.

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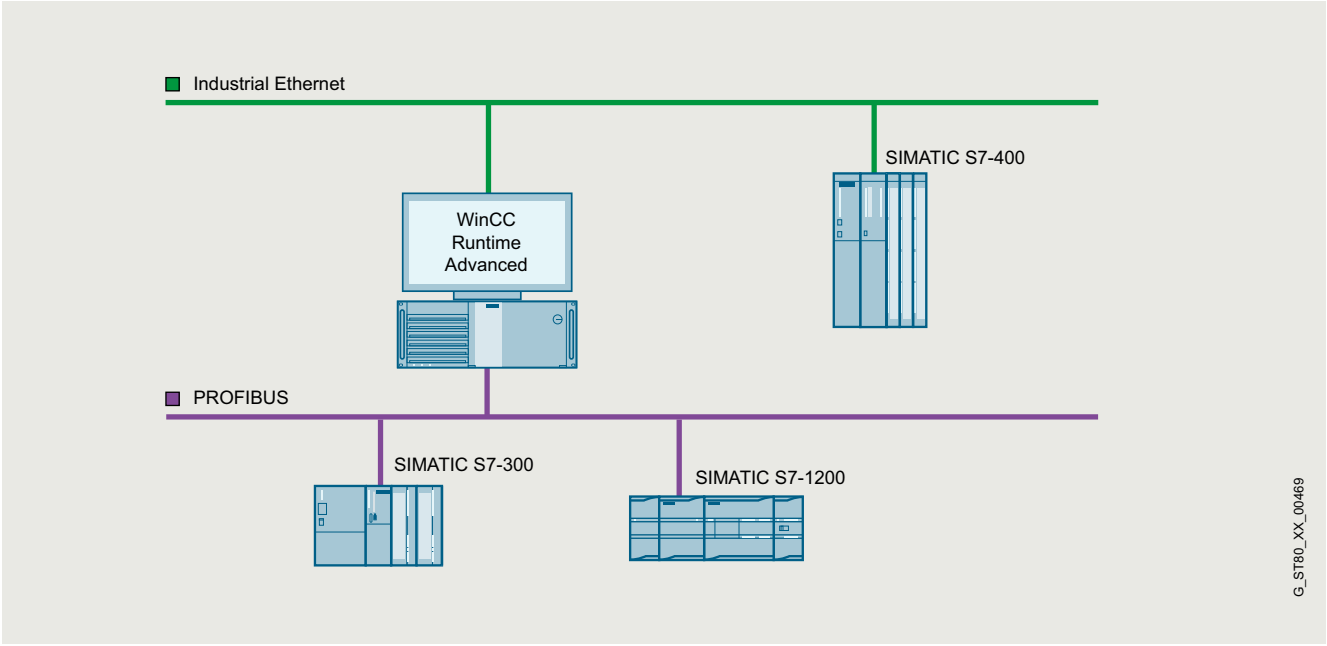
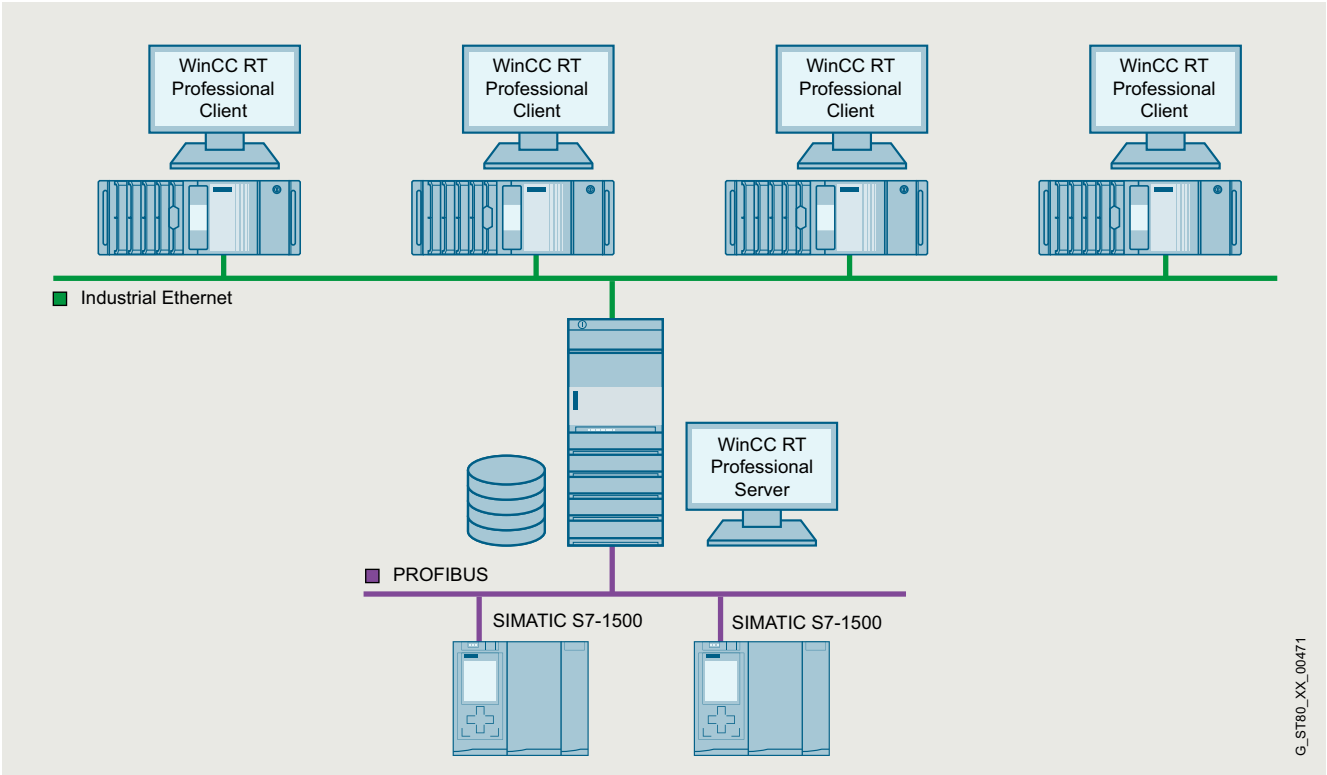
Overview

Communications examples



WinCC Runtime Advanced single-user system



WinCC Runtime Professional multi-user system with operable server

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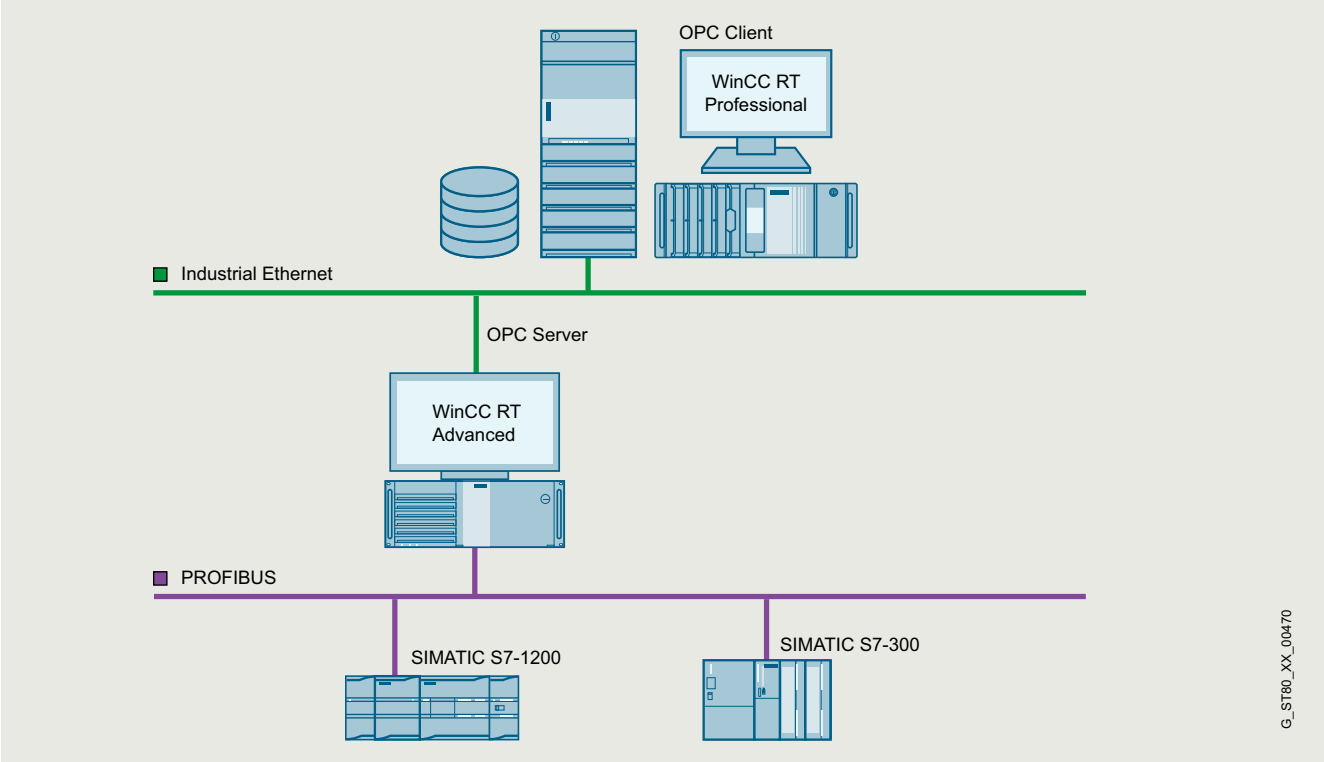
Overview



OPC coupling

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Ordering data	Article No.
SIMATIC WinCC (TIA Portal) Communication via Industrial Ethernet TCP/IP	
CP 1612 A2 PCI card (32-bit) for connecting a programming device or PC to Industrial Ethernet (10/100/1 000 Mbps) with RJ45 connection via SOFTNET-S7 and SOFTNET PG. Software requirement: WinCC Runtime Advanced: No further installation is required (SOFTNET-S7) WinCC Runtime Professional: SOFTNET-S7 Lean (maximum of 8 connections) or SOFTNET-S7 (maximum of 64 connections) must be installed (SOFTNET-S7 Lean is included in the scope of delivery of WinCC Runtime Professional)	**6GK1161-2AA01**
SIMATIC NET SOFTNET-IE S7 V17 SP1 Software for S7 and S5-compatible communication, incl. OPC server, PG/OP communication and NCM PC, up to 64 connections, single license for 1 installation, runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A	
• Single license for 1 installation	**6GK1704-1CW17-0AA0**
• Upgrade package for SIMATIC NET from Edition 2006	**6GK1704-1CW00-3AE0**
SOFTNET-IE S7 Extended V17 SP1 Software for S7-, S5-compatible communication, OPC; PG/OP communication, proj. SW up to 255 connections (S7) or 512 connections (S7-1200/S7-1500); single license for 1 installation	**6GK1704-1BW17-0AA0**
SIMATIC NET SOFTNET-IE S7 LEAN V17 SP1 (included in the scope of delivery of WinCC Runtime Professional) Software for S7-compatible and S5-compatible communication incl. OPC server, PG/OP communication and NCM PC, up to 8 connections, single license for one installation of runtime software, software and electronic manual on CD-ROM, license key on USB flash drive; Class A	
• Single license for 1 installation	**6GK1704-1LW17-0AA0**
• Upgrade package for SIMATIC NET from Edition 2006	**6GK1704-1LW00-3AE0**

Ordering data	Article No.
SIMATIC NET HARDNET-IE S7 V17 SP1 Software for S7, open communication; OPC, PG/OP communication, project software; up to 120 connections; single license for one installation of runtime software, software and electronic manual on DVD; license key on USB flash drive; Class A	
• Single license for 1 installation	**6GK1716-1CB17-0AA0**
• Upgrade package for SIMATIC NET from Edition 2006	**6GK1716-1CB00-3AE0**
CP 1623 PCI Express X1 card (32-bit) for connection of PG/PC to Industrial Ethernet (communications software must be ordered separately)	**6GK1162-3AA00**
Communication via PROFIBUS	
CP 5612 PCI card (32-bit) for connecting a PG/PC to PROFIBUS (communications software included in the WinCC basic package)	**6GK1561-2AA00**
CP 5622 PCI Express X1 card (32-bit) for connection of PG/PC to PROFIBUS (communications software included in WinCC basic package)	**6GK1562-2AA00**
CP 5711 USB adapter (USB V2.0) for connecting a PG/notebook to PROFIBUS or MPI (communications software included in WinCC Basic package)	**6GK1571-1AA00**
CP 5613 A3 PCI Card (32-bit) for connecting a PC to PROFIBUS (communication software must be ordered separately)	**6GK1561-3AA02**
CP 5623 PCI Express X1 card (32-bit) for connection of PG/PC to Industrial Ethernet (communications software must be ordered separately)	**6GK1562-3AA00**

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Overview

Options for SIMATIC Panels, SIMATIC WinCC Runtime Advanced and SIMATIC WinCC Runtime Professional

SIMATIC ProDiag

- Fully-integrated TIA solution for machine and plant diagnostics
- Saves the need for programming diagnostics in the CPU during the engineering phase and provides support for troubleshooting directly on the HMI without an engineering system using diagnostic overviews and PLC code

SIMATIC Logon

- Creates user administration on a central computer to which one or more WinCC stations can be connected over Ethernet networks.
- With each user logon/logoff on one of the connected stations, SIMATIC Logon checks whether a user password has been created and that the required authorizations exist.
- SIMATIC Logon supports the user in combination with the Audit option in meeting requirements in accordance with FDA 21 CFR Part 11 and EU178.

Options for SIMATIC WinCC Runtime Advanced and SIMATIC WinCC Runtime Professional

SIMATIC WinCC Logging

- Logging of messages and process values
- Online evaluation of process value logs and alarm logs
- Evaluation of process value and alarm logs using standard MS tools such as Excel

SIMATIC WinCC Recipes

- Generation and management of data records for machine or production data
- Display or entry of data records via a configurable screen object or via process pictures distributed within the project
- Transmission of data records from or to the PLC
- Import/export of data records for further processing with other tools (e.g. MS Excel)

Options for SIMATIC Panels and SIMATIC WinCC Runtime Advanced

SIMATIC WinCC Audit

- Recording of operator actions in an audit trail
- Electronic signature for important user actions relevant to production
- Audit supports users in meeting special quality requirements, e.g.
  - Production plants requiring validation according to FDA 21 CFR Part 11
  - In respect of traceability according to EU 175/2002 (EU directive)

SIMATIC WinCC Sm@rtServer

- Flexible solution for location-independent access to HMI systems
- Remote maintenance of machines and plants via the internet/intranet
- Reduced downtimes for machines and plants due to direct remote access
- Flexible solution for location-independent access to machines and plants

Options for SIMATIC WinCC Runtime Professional

SIMATIC WinCC DataMonitor

- Display and evaluation of current process states and historical data on office PCs with standard tools.
- Information can be individually compiled online during runtime via the internet/intranet.

WinCC IndustrialDataBridge for WinCC Runtime Professional (V13 SP1 and higher)

Using the SIMATIC WinCC IndustrialDataBridge, communication links between different data sources and data targets can be created by means of simple configuration/parameter assignment. The WinCC IndustrialDataBridge can either be integrated into WinCC or used as a stand-alone application (not in conjunction with WinCC).

SIMATIC Information Server 2014 SP3

The SIMATIC Information Server 2014 SP3 is an open, web-based reporting system for interactive areas. Reports can be used in Internet Explorer, for Excel, Word or PowerPoint, as well as for Adobe Reader (pdf). The SIMATIC Information Server has access to archived process values and messages, and can be used either directly in conjunction with WinCC / WinCC/RT Professional / PCS7 OS or with SIMATIC Process Historian 2014.

For more detailed information on the SIMATIC Information Server and article numbers, see SCADA System SIMATIC WinCC.

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SIMATIC WinCC (TIA Portal) options

Overview

SIMATIC Process Historian 2014

The SIMATIC Process Historian 2014 is a powerful, long-term archive server solution that stores the WinCC process values and messages in a central database. The system offers full scalability for performance and scope. It records and stores data from one or more WinCC, WinCC/RT Professional and PCS 7 projects.

The number of connected single stations, servers, or redundant server pairs is unrestricted. SIMATIC Process Historian is designed for use throughout your plant, and is positioned below the corporate management level (ERP, MES).

For more detailed information on the SIMATIC Process Historian and article numbers, see SCADA System SIMATIC WinCC.

SIMATIC WinCC Redundancy

For assembling a high-performance, fail-safe, client-server system. One WinCC/Redundancy package is required for each redundant pair of servers.

SIMATIC WinCC Server and SIMATIC WinCC Client

For assembling a high-performance client-server system

- A number of coordinated HMI stations can be operated in a single group with networked automation systems
- Client/server solution:
  - One server supplies up to 32 connected clients with process and archive data, messages, screens and reports.

SIMATIC WinCC WebNavigator

- Operator control and monitoring of plants via the internet or the in-house intranet/LAN
- Web Client permits the operator control and monitoring of a current WinCC Runtime Professional project via an internet browser with ActiveX support

SIMATIC WinCC WebUX

- Mobile operator control and monitoring via the internet or the in-house intranet/LAN, using commercially available mobile devices.
- Platform and browser can be used independently on HTML5-capable and SVG-capable data terminal equipment without installation on the client.

Overview of the individual options

Options	WinCC RT Advanced	WinCC RT Professional	SIMATIC Panels
SIMATIC ProDiag	•	•	•
SIMATIC Logon	•	•	•
WinCC Logging	•	•	• [1]
WinCC Recipes	•	•	• [1]
WinCC Audit	•	-	•
WinCC Sm@rtServer	• [1]	-	• [1]
WinCC DataMonitor	-	•	-
WinCC IndustrialDataBridge	-	•	-
SIMATIC Information Server	-	•	-
SIMATIC Process Historian	-	•	-
WinCC Redundancy	-	•	-
WinCC Server/WinCC Client	-	•	-
WinCC WebNavigator	-	•	-
WinCC WebUX	-	•	-

• possible

[1] integrated in basic system

http://www.siemens.com/wincc-tia-portal-options

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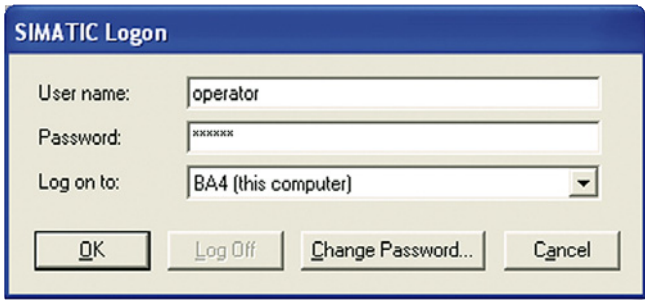
Overview



- Option for connecting SIMATIC Panels and PCs with SIMATIC WinCC Runtime Advanced as well as WinCC Runtime Professional to a central user administration.
- Creates user administration on a central computer to which one or more panels or WinCC stations can be connected over Ethernet.
- With each logging-on/off of a user on one of the connected stations, SIMATIC Logon checks whether a user password has been created and that the required privileges exist.

SIMATIC Logon for Panels and WinCC Runtime Advanced

- All users of the SIMATIC Panels or WinCC Runtime Advanced stations can be managed plant-wide from a central location
- Supports the user in combination with the Audit option in meeting requirements in accordance with FDA 21 CFR Part 11 and EU178.
- Licensing:
  SIMATIC Logon (basic license) and SIMATIC Logon Remote Access (3-pack license) for the connection of 3 panels or WinCC Runtime Advanced stations to a central user administration. Additional stations can be connected by using further SIMATIC Logon Remote Access licenses (3-pack/10-pack).

SIMATIC Logon for WinCC Runtime Professional

- All users of WinCC Runtime Professional can be managed plant-wide from a central location.
- The central user management with SL utilizes Windows mechanisms and must be installed on all participating WinCC Runtime Professional stations.
- Licensing:
  SIMATIC Logon (basic license) is included in the basic package of WinCC Runtime Professional

Benefits

- Centralized configuration of all access authorizations of a distributed system avoids unnecessary travel times. Time-consuming multiple configurations for each individual local station become unnecessary. Accordingly, users can be easily configured from a central location.
- All access data apply throughout the plant on every connected station. Additional access data on local subsystems is no longer necessary.

Design

SIMATIC Logon for Panels and WinCC Runtime Advanced

SIMATIC Logon and SIMATIC Logon Remote Access are installed on a central station.

The following Runtime stations are connected to the central station via the Ethernet network:

- PCs with WinCC Runtime Advanced
- SIMATIC Panels from the 177 series or higher (with Ethernet interface)
- SIMATIC Mobile Panels from the 177 series or higher (with Ethernet interface)
- SIMATIC Multi Panels
- SIMATIC Comfort Panels

SIMATIC Logon for WinCC Runtime Professional

The SIMATIC Logon can be used for the central user management of several WinCC Runtime Professional stations. Operation in a Windows Workgroup or even in a domain is possible.

Function

Users receive a unique user ID, user name and password. This information is encrypted and stored at a central point (for SIMATIC Logon in the Windows user management). Functions such as changing the password, automatic log-off after a predefined time and lockout after several incorrect entries of a password ensure maximum security of operation.

In addition, SIMATIC Logon allows setting up new users online, plant-wide and across applications, or blocking of existing users. SIMATIC Logon also supports electronic signature.

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Ordering data

	Article No.
SIMATIC Logon V1.6 Basic license [1] For Panels or WinCC Runtime Advanced stations, the corresponding number of additional SIMATIC Logon Remote Access licenses is required. No SIMATIC Logon Remote Access licenses are required for WinCC Runtime Professional	**6ES7658-7BX61-0YA0**
SIMATIC Logon upgrade to V1.6	**6ES7658-7BX61-0YE0**
SIMATIC Logon Remote Access (3 clients) Remote Access for 3 clients; single license for 3 SIMATIC Logon Remote Access clients; the number of licensed clients is determined from the sum of the installed SIMATIC Logon Remote Access licenses.	**6ES7658-7BA00-2YB0**
SIMATIC Logon Remote Access (10 clients) Remote Access for 10 clients; single license for 10 SIMATIC Logon Remote Access clients; the number of licensed clients is determined from the sum of the installed SIMATIC Logon Remote Access licenses.	**6ES7658-7BB00-2YB0**

[1] SIMATIC Logon V1.5 included in scope of supply of WinCC Runtime Professional.

More information

More information is available at:

http://www.siemens.com/simatic-logon

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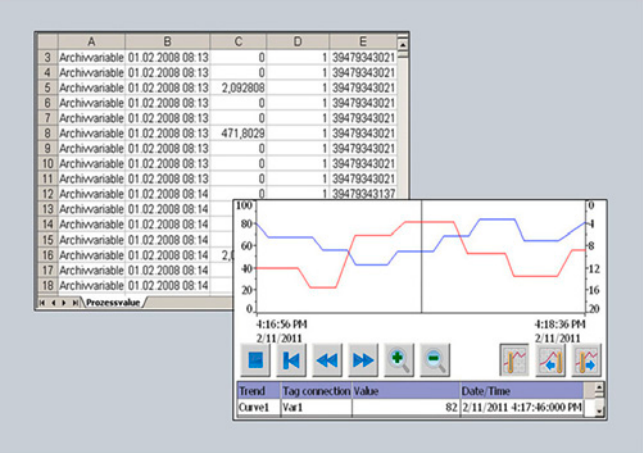
Overview



- Option for SIMATIC WinCC Runtime Advanced and WinCC Runtime Professional for logging process values and alarms
- Logging of process values and alarms supports the acquisition and processing of process data from an industrial plant or machine. Evaluation of the logged process data provides information about the operating states of the plant or machine
- Licensing:
  - SIMATIC Panels / Multi Panels / Comfort Panels: No license is required.
  - WinCC Runtime Advanced: One license is required per operator station
  - WinCC Runtime Professional: 500 Logging Tags are already included in the basic package The number of Logging Tags can be increased by means of additional licenses

Benefits

- Alarm and process value logs enable predictive diagnostics, which avoids downtimes
- Early detection of danger and fault conditions
- Increase of the product quality and the productivity thanks to regular analysis of the alarm and process value logs

Application

- Transfer of the logs for evaluation and long-term archiving
- Detection of recurring error states
- Optimization of maintenance cycles
- Ensuring quality standards
- Quality assurance and checking the utilization of production sequences
- Documentation of process sequences

Function

- Time-controlled as well as manual or process-controlled swapping out of process data and alarms for long-term archiving
- During runtime, swapped out data are read in and selectively analyzed using WinCC Runtime Professional
  - Presentation and evaluation of archived process data based on a configurable trend display. Reading of the values is facilitated by a read line.
  - Presentation and evaluation of archived alarms based on a configurable alarm view.
  - User-friendly navigation in the logs
- External evaluation of the logs using MS standard tools
- Various log types are supported: sequence and circular logs
- Logging of process values and alarms on external, Windows-supported storage media
  - SIMATIC Panels and WinCC Runtime Advanced: CSV files, RDB files, Microsoft SQL Server via ODBC
  - WinCC Runtime Professional: Microsoft SQL Server 2005
- Powerful standard functions permit user-friendly and flexible utilization of the logs

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Ordering data

	Article No.
SIMATIC WinCC Logging for Runtime Advanced [1]	
• Single license, license key only on USB flash drive	**6AV2107-0GA00-0BB0**
• As download[2] Single license, license key download only Email address required for delivery	**6AV2107-0GA00-0BH0**
SIMATIC WinCC Recipes + Logging for Runtime Advanced [1]	
• Single license per option, license key only on USB flash drive	**6AV2107-0HA00-0BB0**
• As download[2] Single license, license key download only Email address required for delivery	**6AV2107-0HA00-0BH0**
SIMATIC WinCC Logging for Runtime Professional 1500 logging tags	
• Single license, license key only on USB flash drive	**6AV2107-0GB00-0BB0**
• As download[2] Single license, license key download only Email address required for delivery	**6AV2107-0GB00-0BH0**
SIMATIC WinCC Logging for Runtime Professional 5 000 logging tags	
• Single license, license key only on USB flash drive	**6AV2107-0GD00-0BB0**
• As download[2] Single license, license key download only Email address required for delivery	**6AV2107-0GD00-0BH0**
WinCC Logging for Runtime Professional Powerpack 1 500 -> 5 000 logging tags	
• Single license, license key only on USB flash drive	**6AV2107-2GD00-0BD0**
• As download[2] Single license, license key download only Email address required for delivery	**6AV2107-2GD00-0BJ0**
WinCC Logging Upgrade for SIMATIC WinCC Archives V7.0 (10 licenses)	**6AV2107-4GX00-0BF0**
• Single license per option, license key only on USB flash drive	
• As download[2] Single license, license key download only Email address required for delivery	

[1] One license is required for each operator station. A license is not required for the engineering system for configuring the runtime option.

[2] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

Technical specifications

	WinCC Logging for Runtime Advanced
	The values specified are maximum values
Number of logs	100
Archivable data	Process values, alarms
Cyclical trigger for archiving process values (variables)	1 s
Max. number of entries per log (incl. sequence log)	500,000 [1]
Log types	Circular logs, sequence logs (max. 400 per log)
Data storage format	CSV (Comma Separated Variable), RDB (Runtime Data Base), Microsoft SQL database (database not included in scope of delivery)

[1] Dependent on memory medium used

	WinCC Logging for Runtime Professional
	The values specified are maximum values
Number of logs per single-user station/server	100
Archivable data	Process values, alarms
Measured values per second, max.	Server/single-user station: 5 000 per sec.
Log tags per single-user station/server	80,000 [2]
Log types	Circular log with and without long-term logging
Data storage format	Microsoft SQL 2008 database

[2] Dependent on the Logging PowerPack used for the log tags. 500 log tags are contained in the basis version.

More information

Additional information is available on the Internet at:

http://www.siemens.com/wincc-logging-tia-portal

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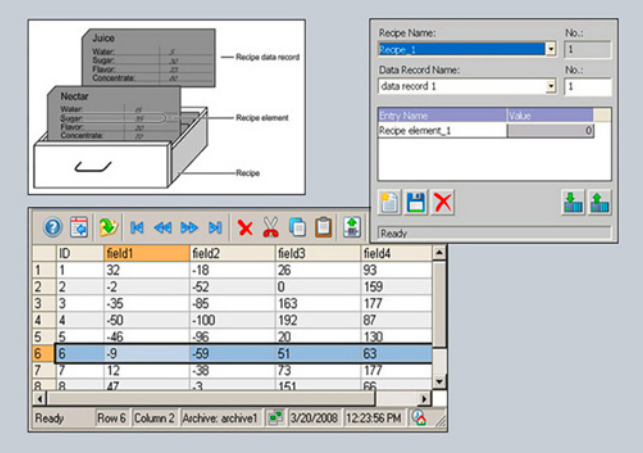
Overview



- Option for SIMATIC WinCC Runtime Advanced and WinCC Runtime Professional for managing data records in recipes that contain related machine or production data
- The data in a data set can be transferred, for example, from the control unit to the PLC to switch production to a different product variant
- Licensing:
  - SIMATIC Panels / Multi Panels / Comfort Panels: No license is required.
  - WinCC Runtime Advanced: One license is required per operator station
  - WinCC Runtime Professional: A license is only required on the server (or single-user system).

Benefits

- Generation and management of machine parameters and production data on the basis of data records, and exchange with the automation device, e.g. with the machine.
- Clear tabular representation of the data elements with the aid of a configurable screen object, or depiction in technological relationships across several process screens.
- Simple operator guidance through standard functions.
- Export/import of data records for further processing with other tools (e.g. MS Excel)

Function

- Input of data records (e.g. operating parameters of a machine, production data for a plastics machine) on the HMI device as well as their storage and transfer to the control
- Display or entry of data records via a configurable screen object or via several process screens distributed within the project
- The data record elements are coupled with the process via a direct tag connection
- Transmission of data records from or to the controller
- Powerful interfaces enable a synchronized data exchange with the controller.
- Storage of data records on local data carriers or on remote data servers via networks
- Logging of data records, e.g. as batch report/shift report
- User-friendly and flexible management of data records by powerful standard functions

The recipes and the associated data records are created using a separate, user-friendly WinCC Engineering editor and data is pre-assigned to them.

A configurable table object is used for displaying the data at runtime. Furthermore, the individual data record elements can also be displayed directly based on standard input/output fields across several process screens. In this way, the data in technological views can be presented clearly to the operator.

Import and export functions support the importing and exporting of data via external applications (e.g. MS Excel).

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Ordering data

	Article No.
SIMATIC WinCC Recipes for Runtime Advanced [1]	
• Single license, license key only on USB flash drive	**6AV2107-0JA00-0BB0**
• As download [2] Single license, license key download only Email address required for delivery	**6AV2107-0JA00-0BH0**
SIMATIC WinCC Recipes + Logging for Runtime Advanced [1]	
• Single license, license key only on USB flash drive	**6AV2107-0HA00-0BB0**
• As download [2] Single license, license key download only Email address required for delivery	**6AV2107-0HA00-0BH0**
SIMATIC WinCC Recipes for Runtime Professional [1]	
• Single license, license key only on USB flash drive	**6AV2107-0JB00-0BB0**
• As download [2] Single license, license key download only Email address required for delivery	**6AV2107-0JB00-0BH0**

[1] One license is required for each operator console. A license is not required for the engineering system for configuring the runtime option.

[2] Current information and availability regarding the new delivery form can be found at: http://www.siemens.com/tia-online-software-delivery

Technical specifications

	WinCC Recipes for Runtime Advanced
	The values specified are maximum values
Number of recipes	1 000
Number of elements per recipe [1]	2 000
User data length in KB per data record	256
Number of data records per recipe	5 000

[1] When using arrays, each array element represents a recipe element

	WinCC Recipes for Runtime Professional
	The values specified are maximum values
Number of recipes	1 000 [2]
Number of elements per recipe [1]	500 [3]
User data length in KB per data record	3 000 [3]
Number of data records per recipe	3 000 [2]

[1] When using arrays, each array element represents a recipe element

[2] Limited by system resources.

[3] The product of the number of recipe elements and the number of data records must not exceed a value of 320 000.

More information

More information is available at:

http://www.siemens.com/wincc-recipes-tia-portal

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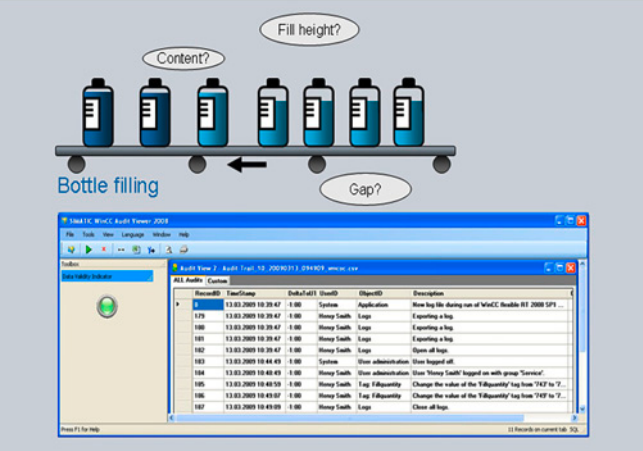
Overview



- Option for SIMATIC WinCC Runtime Advanced as well as SIMATIC Panels for recording operations in an audit trail, and electronic signature
- The audit trail is furnished with a security mechanism that displays subsequent manipulations.
- A user-friendly configuration function, which is included as standard in WinCC, is used to define the following:
  - Which operator actions should be recorded in the audit trail during runtime
  - Which important operator actions during runtime require electronic signature/comments
- Available for the following SIMATIC HMI systems:
  - Comfort Panels
  - Mobile Panels
  - TP/OP 277
  - MP 277
  - MP 377
  - WinCC Runtime Advanced
- Licensing:
  - A license for SIMATIC WinCC Logging and SIMATIC WinCC Audit is required for every operator station (panel or PC).

Benefits

- Audit supports the user in meeting special quality requirements, e.g.
  - Production plant requiring validation according to 21 CFR Part 11 FDA [1)]
  - In respect of traceability according to EU 175/2002 [2)]
- The entries in the audit trail are uniquely assigned to users. This means that responsibilities are clearly identifiable.
- The audit trail, stored as a CSV file [3)], can be checked via a security mechanism to find out if subsequent changes have been made.
- For particularly important user actions, e.g., starting production or loading new recipes, electronic signatures and comments can be configured and then called up and logged during runtime.

1) The FDA (Food and Drug Administration) is the American public health body
2) 21 CFR Part 11- law on plant validation
3) CSV Comma Separated Values

Ordering data

	Article No.
SIMATIC WinCC Audit for SIMATIC Comfort/Mobile Panels	
• Single license, license key only on USB flash drive	**6AV2107-0RP00-0BB0**
• As download[1)] Single license, license key download only Email address required for delivery	**6AV2107-0RP00-0BH0**
SIMATIC WinCC Audit for Runtime Advanced [2)]	
• Single license, license key only on USB flash drive	**6AV2107-0RA00-0BB0**
• As download[1)] Single license, license key download only Email address required for delivery	**6AV2107-0RA00-0BH0**

1) Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery
2) The following license is also required: SIMATIC WinCC Logging for Runtime Advanced

Technical specifications

	WinCC Audit
Storage location for Audit Trail when used on the Panel	Plug-in Flash memory card or via Ethernet in the higher-level PC
Storage location for Audit Trail when using WinCC Runtime Advanced	Local hard disk or via Ethernet in the higher-level PC
Execution platform	
SIMATIC Panels	Mobile Panel 277, TP/OP 277
SIMATIC Multi Panels	MP 277, MP 377
SIMATIC Comfort Panels	all
PC systems	SIMATIC WinCC Runtime Advanced

More information

More information is available at:

http://www.siemens.com/wincc-audit-tia-portal

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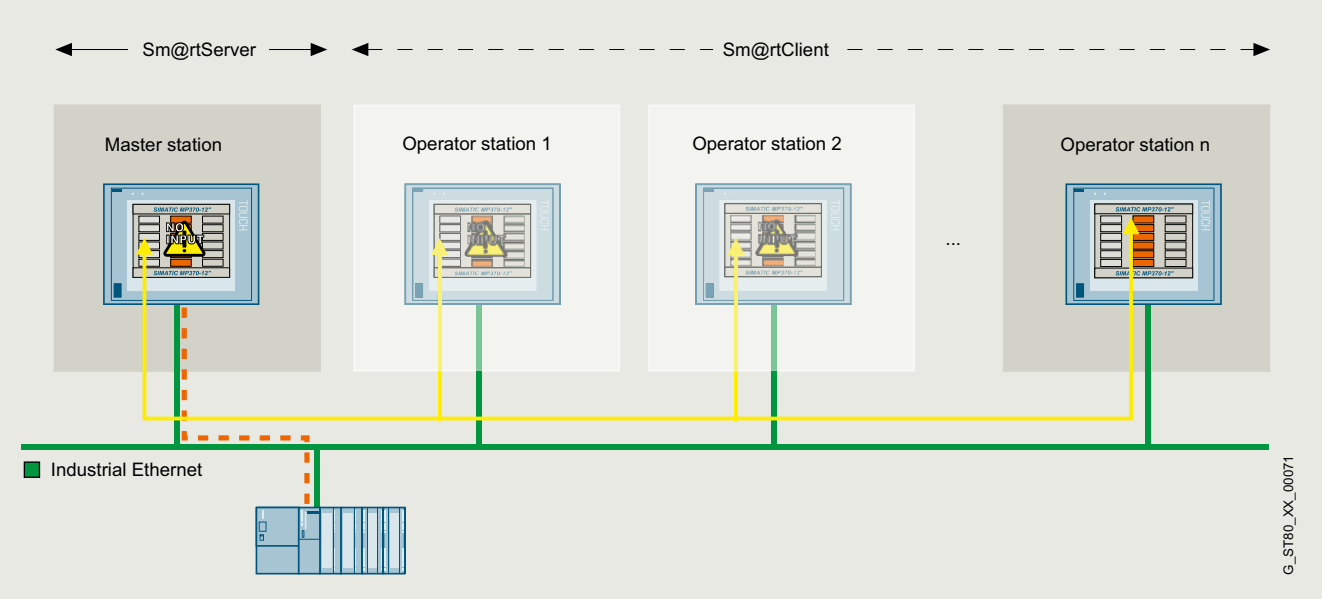
Overview



- Option for SIMATIC WinCC Runtime Advanced plus SIMATIC Panels for communication between various SIMATIC HMI systems.
- Available for the following SIMATIC HMI systems:
  - Basic Panels 2nd Generation (with Ethernet interface)
  - Comfort Panels
  - Mobile Panel 2nd Generation, Mobile Panel 277, Mobile Panel 177 PN
  - TP 177B PN/DP, OP 177B PN/DP
  - TP 277, OP 277
  - MP 177, MP 277, MP 377
  - WinCC Runtime Advanced
- A SIMATIC HMI system can be used to control or monitor another system remotely; entry level for client/server configurations for distributed operator stations or for solutions with head end or control room
- Local operation, visualization and data processing are as possible as plant-wide access to information. Integrated information flows ensure an overview of the status of all processes.
- Licensing:
  The "SIMATIC WinCC Sm@rtServer for Panel" or "SIMATIC WinCC Sm@rtServer for Basic Panel" or "SIMATIC WinCC Sm@rtServer for Runtime Advanced" license must be installed on the server operator panel.
  A separate license is no longer required for Comfort / Mobile Panels Version V14 or higher and for Runtime Advanced Version V14 SP1 or higher.
  A license is not required for the engineering system for configuring the runtime option.

Note:

When accessing the operator stations via the Sm@rtServer option, suitable protective measures (including IT security such as network segmentation) should be taken in order to ensure safe operation of the system.

Additional information on the topic of industrial security is available on the Internet at:

http://www.siemens.com/industrialsecurity

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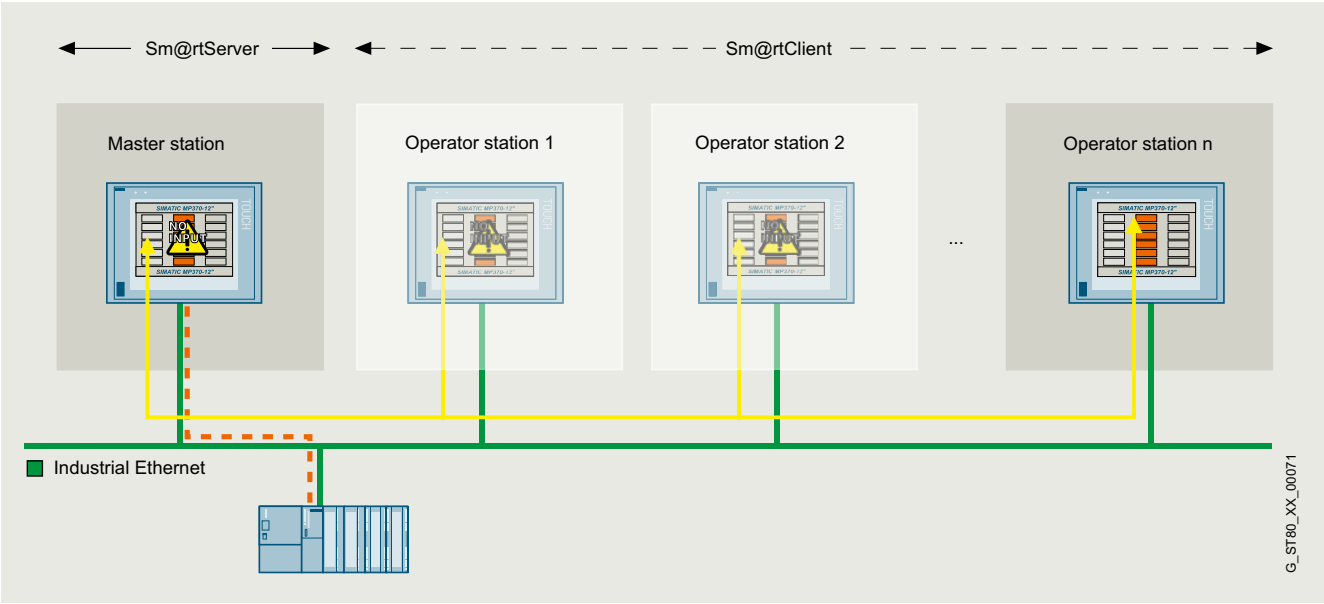
Benefits

- Flexible solution for remote access to HMI systems
- Quick elimination of malfunctions or downtimes – thus increasing the productivity – through global access to machines/plants by the service and maintenance personnel.
- Avoidance of on-site service calls.

Application

- Operator control and monitoring of machines covering large areas with several operator stations by one operator.
- Operator control and monitoring of machine-level HMI systems from one central station (e.g. head-end station of a production line or from a control room)
- Remote maintenance and servicing of machines/plants over the Internet/Intranet



Application of the Sm@rtClient concept: Coordinated operation of several operator stations

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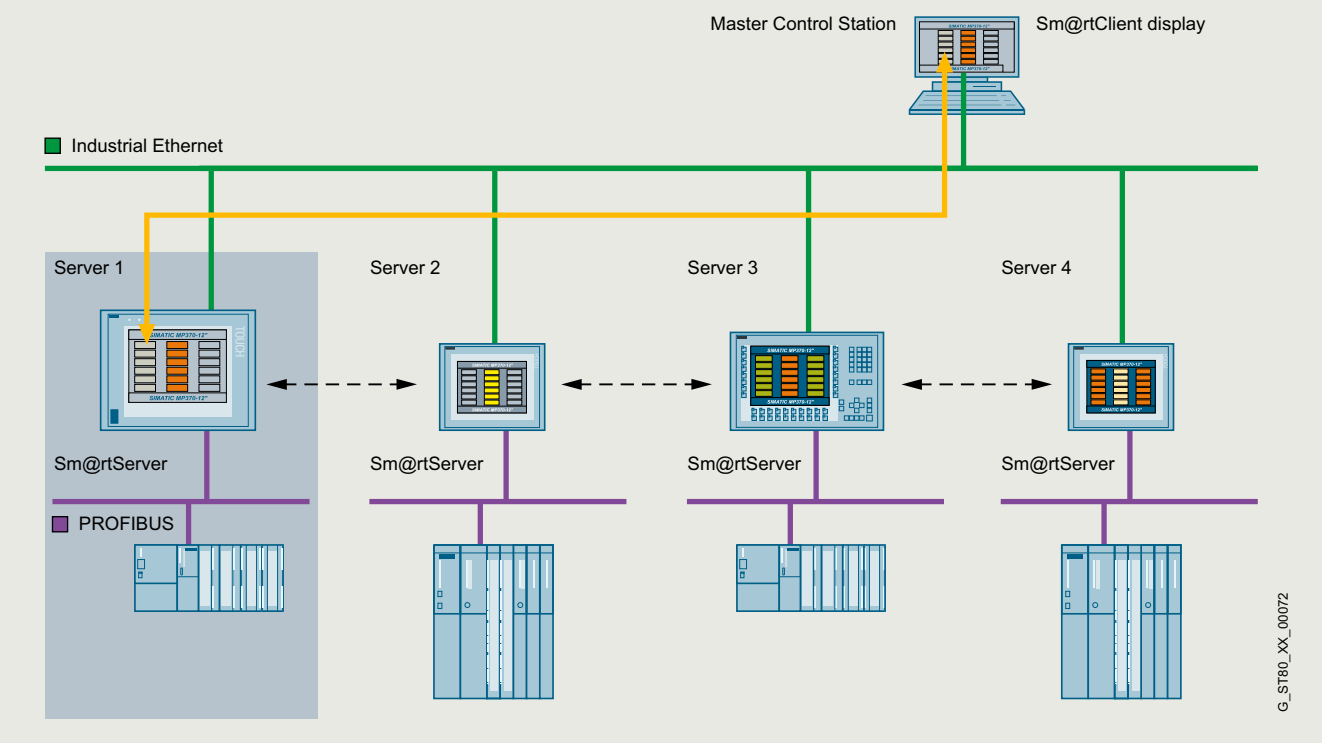
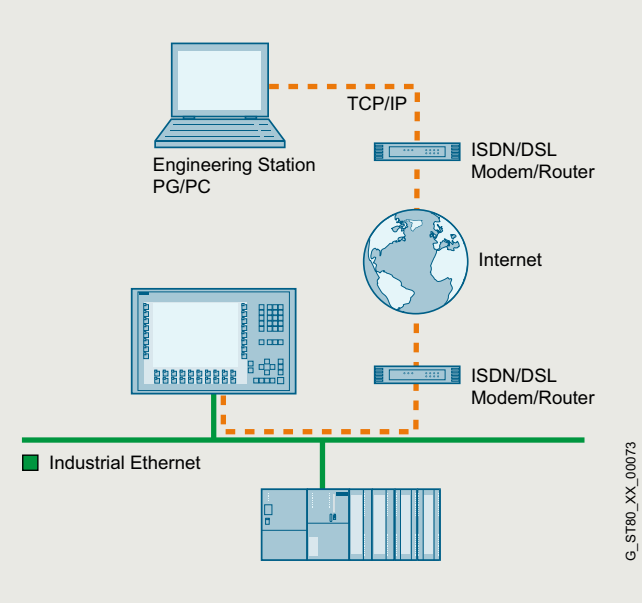
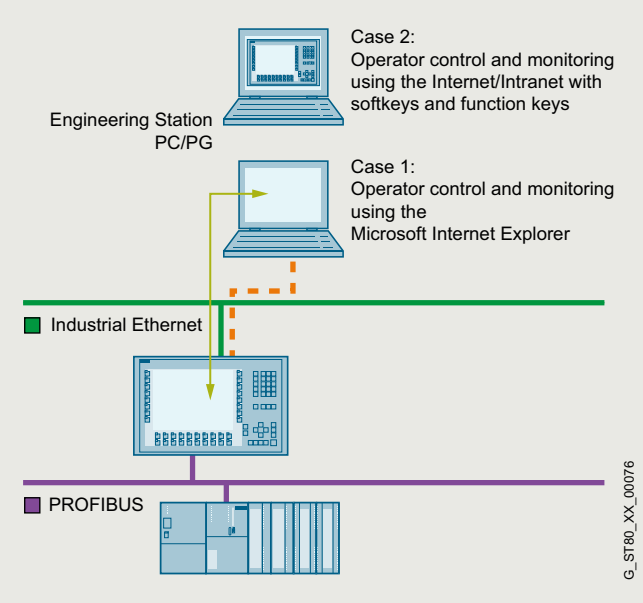
Application



Use of the Sm@rtClient display: Operator control and monitoring of machine-level HMI systems from one central station



Remote operator control and monitoring of SIMATIC HMI systems using Industrial Ethernet and/or via the Intranet/Internet



Remote operator control and monitoring of SIMATIC HMI systems using Industrial Ethernet and/or via the Intranet/Internet

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Function

Coordinated operation of several operator stations:

- The HMI application and communication with the controller takes place via the master station. "Sm@rtClients" can be activated from here in the case of machines/plants with larger dimensions which require a larger number of operator panels. The Sm@rtClients are then provided with access to the master station and thus to the process. Access procedures guarantee that only one operator system can actively access the process at any given time.
- Embedded in process screens, a configurable screen object (Sm@rtClient display) represents the screen of the relevant HMI system (Sm@rtServer)
- Powerful standard functions permit user-friendly and flexible operation of the display

Remote control of an operating station:

- The HMI application and communication with the controller takes place via the HMI system. Using the Sm@rtServer, the HMI systems in the machines/systems can be serviced remotely. An access process ensures that only one operator (either locally at the machine or remotely via Internet Explorer) can actively access the process at one time.
- Microsoft Internet Explorer V6.0 SP1 or higher is sufficient for accessing an HMI system.

Ordering data

	Article No.
WinCC Sm@rtServer for SIMATIC Basic Panels [1) 5)]	
• Single license License key only on USB flash drive	**6AV2107-0CR00-0BB0**
• As download[2)] Single license, license key download only Email address required for delivery	**6AV2107-0CR00-0BH0**
WinCC Sm@rtServer for SIMATIC Panels [1) 3)]	
• Single license License key only on USB flash drive	**6AV2107-0CP00-0BB0**
• As download[2)] Single license, license key download only Email address required for delivery	**6AV2107-0CP00-0BH0**
WinCC Sm@rtServer for Runtime Advanced [1) 4)]	
• Single license License key only on USB flash drive	**6AV2107-0CA00-0BB0**
• As download[2)] Single license, license key download only Email address required for delivery	**6AV2107-0CA00-0BH0**

1) The license must be installed on the Sm@rtServer operator panel. A license is not required for the engineering system for configuring the runtime option.

2) Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

3) The license is no longer required for version V14 or higher

4) The license is no longer required for version V14 SP1 or higher

5) The license is no longer required for version V17 or higher

Technical specifications

	WinCC Sm@rtServer
	The values specified are maximum values
Execution platform	
SIMATIC Basic Panels 2nd Generation	All devices with Ethernet interfaces
SIMATIC Comfort Panels	all
SIMATIC Panels	Mobile Panel 177 PN, Mobile Panel 277, TP/OP 177B PN/DP, TP/OP 277
SIMATIC Multi Panels	MP 177, MP 277, MP 377
PC systems	SIMATIC WinCC Runtime Advanced
Number of Sm@rtClients that can simultaneously connect to a Sm@rtServer	
SIMATIC Basic Panels 2nd Generation	1 client
Comfort Panel, Mobile Panel 2nd Generation as Sm@rtServer	2 clients for 4" devices 3 clients for 7", 9", 12" and 15" devices 2 clients for 19" devices 1 client for 22" devices
Mobile Panel 177 PN, TP/OP 177B PN/DP, MP 177 as Sm@rtServer	2 clients
Mobile Panel 277, TP/OP 277, MP 277 as Sm@rtServer	3 clients for 6" devices 2 clients for 8" and 10" devices
MP 377 as Sm@rtServer	3 clients for 12" devices 2 clients for 15" devices 1 client for 19" devices
WinCC Runtime Advanced as Sm@rtServer	5 clients

More information

More information is available at:

http://www.siemens.com/wincc-smartserver-tia-portal

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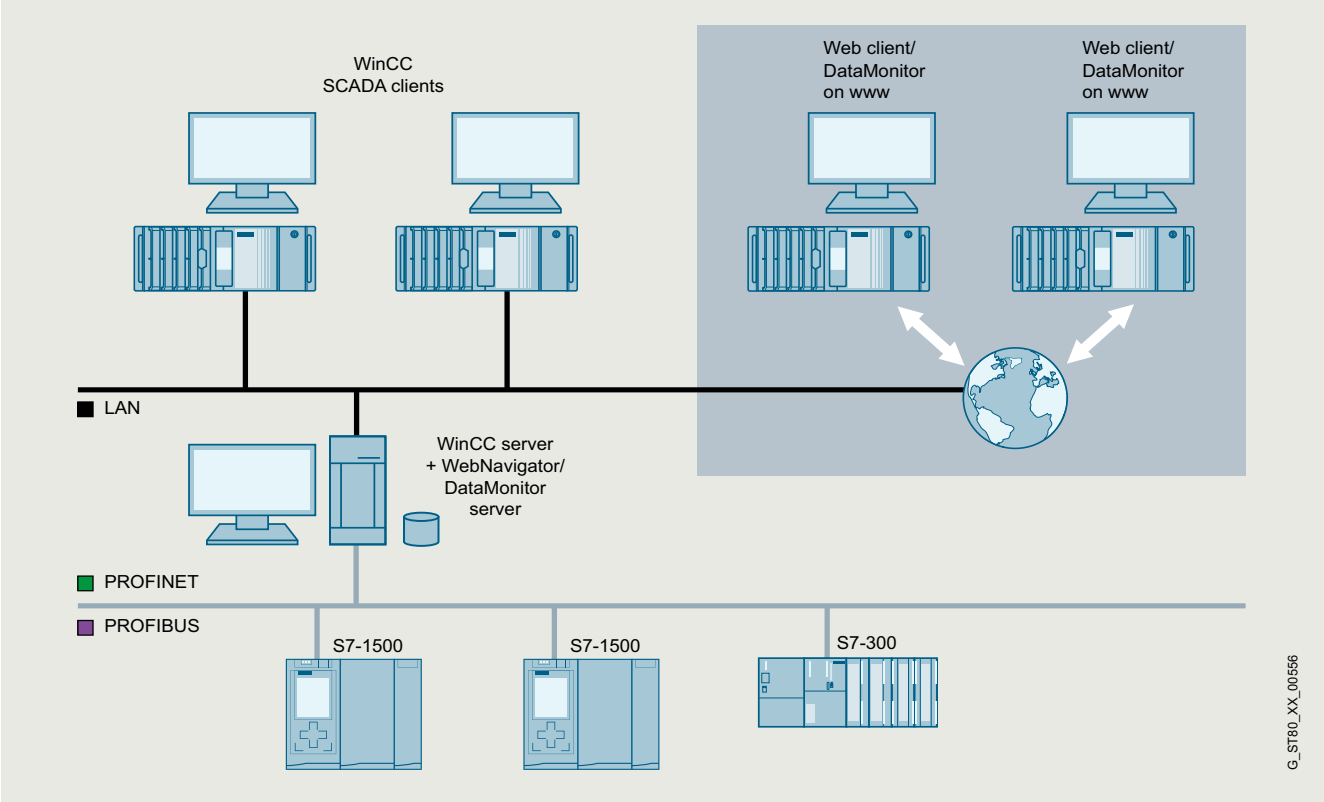
Overview



WinCC DataMonitor

- The WinCC DataMonitor is used for display and evaluation of current process states and historical data on office PCs using standard tools such as Microsoft Internet Explorer or Microsoft Excel.
  The DataMonitor Client is supported by a web server with current and historical process data and alarms. All staff ranging from machine operators to corporate managers can use the DataMonitor to obtain information. In combination with WinCC V7 and with the aid of the multiclient architecture, access can be made to several lower-level WinCC stations.
- DataMonitor is a suite of Internet-capable tools:
  - Process Screens
    Tool exclusively for monitoring and navigating via WinCC or WinCC Runtime Professional screens using the WinCC Web Viewer (WinCCViewer RT) in the "view only" mode
  - Excel Workbooks
    Logging tool that integrates WinCC or WinCC Runtime Professional Archive and online values into Microsoft Excel and supports online analysis
  - Published Reports
    Event- or time-driven execution of Excel or PDF reports for the output of process data and analysis results.
  - WebCenter
    Individual configuration of Internet pages and compilation of information within a portal.
- DataMonitor does not require manual client installation because it loads the required components from the DataMonitor server
- There is no installation required on the client for the WebCenter, Trends and Alarms functions.

Licenses

- A (server-based) license is required for the WinCC DataMonitor. This is a graduated license based on the number of simultaneous web client access operations and can be incremented at any time using additive web client licenses (countable licenses).
- The DataMonitor Client software can be installed as many times as required without the need for a license.

Additional information is available on the Software Update Service, license types, online software delivery and handling your software licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

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Benefits

- Information can be compiled online individually during runtime via the Internet/Intranet.
- Efficiently monitor and analyze production lines.
- Easily collect and distribute information.
- Substantiate decisions with reports.
- View production status anywhere and anytime.

Highlights:

- With the WebCenter function, archive tags can be accessed without changing the configuration system.
- Dedicated Internet pages can be created for displaying data with the WebCenter.
  For this purpose, for example, a bar chart, a pie chart or a trend graph is available.
- The analyses can be made with relative or absolute time specification.
  This enables comparisons of identical time periods on different days.
- Reports can be made available on the DataMonitor server or emailed automatically based on time intervals or triggered by events.
- Support of Microsoft Internet Explorer version, including "tabbed browsing".

Function

- All tools are fully Internet-compatible and, therefore, support access via any type of connection (LAN, GSM, radio, modem, Internet, etc.).
- All popular security mechanisms such as login/password, firewalls, encryption, etc. are supported.
- Users can combine the available tools at will.
  Licensing only takes into account simultaneous access to one web server.
- For display purposes, screens from the WinCC project can be used or special overview displays configured.
  Animations, scripts, navigation and access rights remain valid.
- The WinCC DataMonitor has purely a display function
- Company-wide Excel reports, which contain historical and current process values, can be stored centrally for general access (reports, statistics).
  However, local queries to meet individual requirements can also be compiled and executed online.
  Plot and trend displays are supported for archive data already swapped out.
- Enhanced user management for the WebCenter in order to assign individual Internet pages and created reports to specific user groups.
- A search function simplifies the management of connections to the WinCC server

Ordering data

	Article No.
SIMATIC WinCC DataMonitor as from Runtime Professional V14 and WinCC as from V7.4 [2]	
Standard scope of supply	
• 1 client license (countable)	**6AV6362-3AB00-0BB0**
• 3 client licenses (countable)	**6AV6362-3AD00-0BB0**
• 10 client licenses (countable)	**6AV6362-3AF00-0BB0**
• 30 client licenses (countable)	**6AV6362-3AJ00-0BB0**
As download [1]	
• 1 client license (countable)	**6AV6362-3AB00-0AH0**
• 3 client licenses (countable)	**6AV6362-3AD00-0AH0**
• 10 client licenses (countable)	**6AV6362-3AF00-0AH0**
• 30 client licenses (countable)	**6AV6362-3AJ00-0AH0**

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

[2] As from WinCC V14 the licenses are cumulative (countable), i.e. one 10 client license and one 30 client license permit access by 40 clients.

A license is not required for the engineering system for configuring the runtime option.

More information

Additional information is available on the Internet at:

http://www.siemens.com/wincc-datamonitor

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Overview

Option for SIMATIC WinCC (TIA Portal), supporting the parallel operation of two interfaced WinCC single-user systems or process data servers for mutual monitoring

If one of the two server PCs or one of the two WinCC stations fails, the second one will take over control of the entire system. Once the failed server or station is restored to operation, the contents of all the message and process value archives are copied to it.

One WinCC Redundancy package is required for each redundant pair of servers.

Benefits

- Increased system availability with gap-free data integrity
- Automatic switchover of the client when a server fails or the communication to the server fails
- Continuous operation and visualization through automatic switchover of the clients to the intact server
- Automatic synchronization of all archives in the background after a fault is cleared

Function

Normally, two WinCC stations or process data servers run in parallel. Each station has its own process connection and its own data archives. WinCC Redundancy ensures automatic matching of system and user archive data.

If one of the two server computers or WinCC stations fails, the second will take over the archiving of messages and process data, thereby ensuring seamless data integrity. In client/server mode, the clients are automatically switched from the failed server to the redundant partner. This ensures continuous plant visualization and operation on every operator station.

When the failed partner resumes operation, all process values, messages and data archived during the fail period are automatically matched with the partner. This process runs in the background and does not affect plant continuity. Once this is complete, two equivalent servers/stations will be available again.

Communication with the SIMATIC S7 PLC can also be configured with redundancy (an H Series SIMATIC S7 is required) by plugging in two communication modules and configuring two communication paths (S7-REDCONNECT software package). The use of failsafe H Series SIMATIC S7 PLCs can, if required, further increase availability at control level.

Ordering data

	Article No.
SIMATIC WinCC Redundancy for Runtime Professional	
• Single license for 2 installations, license key on USB flash drive, software and documentation on DVD	**6AV2107-0FB00-0BB0**
• As download[1] Single license for 2 installations, license key download only Email address required for delivery	**6AV2107-0FB00-0BH0**

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

A license is not required for the engineering system for configuring the runtime option.

More information

More information is available at:

http://www.siemens.com/wincc-redundancy-tia-portal

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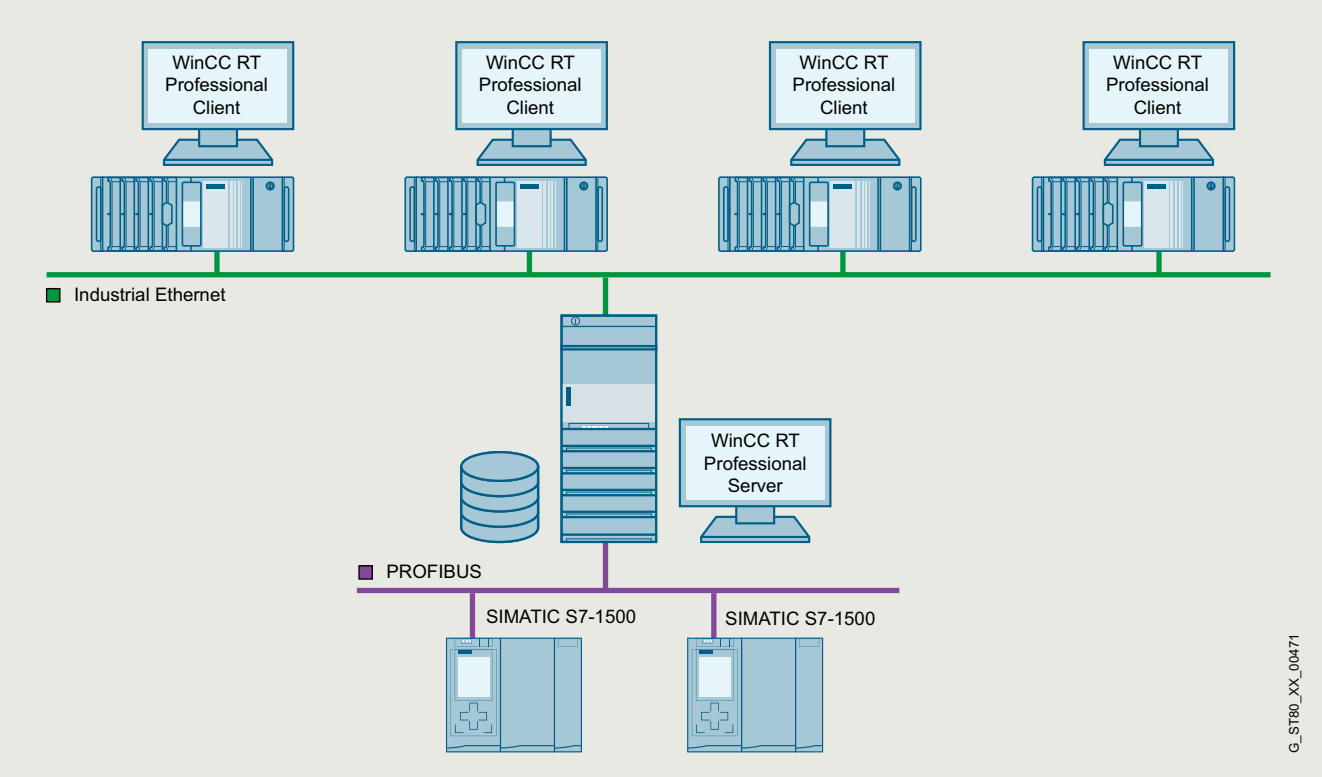
Overview



- Option for SIMATIC WinCC Runtime Professional, which permits the configuration of a powerful client/server system
- One of the following operating systems must be available to install the option on the server:
  Windows Server 2003 R2 SP2,
  Windows Server 2008 SP2 or
  Windows XP Professional.
  When using Windows XP Professional,
  a maximum of 3 clients can be connected.
- A number of coordinated HMI stations can be operated in a single group with networked automation systems.
- Client/server solution: One server supplies up to 32 connected clients with process and archive data, alarms, screens and reports.
  - Requirement: Network connection (TCP/IP) between the server PC and the connected clients.
- Licensing:
  - A WinCC Runtime Professional license on the server with the appropriate number of PowerTags and the "WinCC Server for RT Professional" license.
  - The "WinCC Client for RT Professional" license on the clients.

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Benefits

- Integrated scalability from the single-user system to the client/server solution
- Considerably expanded quantity structure, relieves the load on the individual servers, and thus better performance through the distribution of the overall application or of the tasks among several servers

Application

In a complex plant, WinCC Runtime Professional can be configured as a distributed system depending on the requirements:

- Functional distribution (e.g. alarm server, log server, etc.), or
- Distribution corresponding to the physical plant structure (e.g. body-in-white, paint shop, etc.).

Function

All process data of a WinCC project is stored in different Runtime databases, e.g. alarms, trend values, etc. These Runtime databases are located on a central computer, the WinCC Server, instead on each HMI device. The operator stations, i.e. the WinCC Clients, then access the WinCC Server.

WinCC Clients and WinCC Server are independent systems. You can also connect WinCC Clients subsequently. Alternatively, you can activate and deactivate a project from a WinCC Client.

Ordering data

	Article No.
SIMATIC WinCC Server for Runtime Professional	
• Single license, license key only on USB flash drive	**6AV2107-0EB00-0BB0**
As download[1]	
• Single license, license key download only, Email address required for delivery	**6AV2107-0EB00-0BH0**
SIMATIC WinCC Client for Runtime Professional	
V17	
• Single license, license key on USB flash drive, software and documentation on DVD	**6AV2107-0DB07-0AA0**
• Single license, software and license key download. Email address required for delivery	**6AV2107-0DB07-0AH0**
SIMATIC WinCC Client for Runtime Professional ASIA V17	**6AV2107-0DB17-0AA0**
Single license, license key on USB flash drive, software and documentation on DVD	
V16	
• Single license, license key on USB flash drive, software and documentation on DVD	**6AV2107-0DB06-0AA0**
As download[1]	
• Single license, software and license key download. Email address required for delivery	**6AV2107-0DB06-0AH0**
SIMATIC WinCC Client for Runtime Professional ASIA V16	**6AV2107-0DB16-0AA0**
Single license, license key on USB flash drive, software and documentation on DVD	

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

A license is not required for the engineering system for configuring the runtime option.

More information

More information is available at:

http://www.siemens.com/wincc-server-tia-portal

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Overview

WinCC WebNavigator

- Option for SIMATIC WinCC or WinCC Runtime Professional for operating and monitoring plants over the Internet, company Intranet or LAN.
- Configuration from:
  - A web server with SIMATIC WinCC as single-user or server version and a web client that permits operator control and monitoring of a current WinCC project using the Internet Explorer. In combination with WinCC V7, the WebNavigator Server can be operated on a MultiClient

Licenses

- A (server-based) license is required for the WebNavigator. This is a graduated license based on the number of simultaneous web client access operations and can be incremented at any time using additive web client licenses (countable licenses).
- The WebNavigator client software can be installed as many times as required without the need for a license.
- A (client-based) license is required for the WebNavigator diagnostics. This provides access to all web servers with a WebNavigator Server or WebNavigator Diagnostic Server license.
- The WinCC/WebUX and WinCC/WebNavigator licenses can be combined, if necessary.

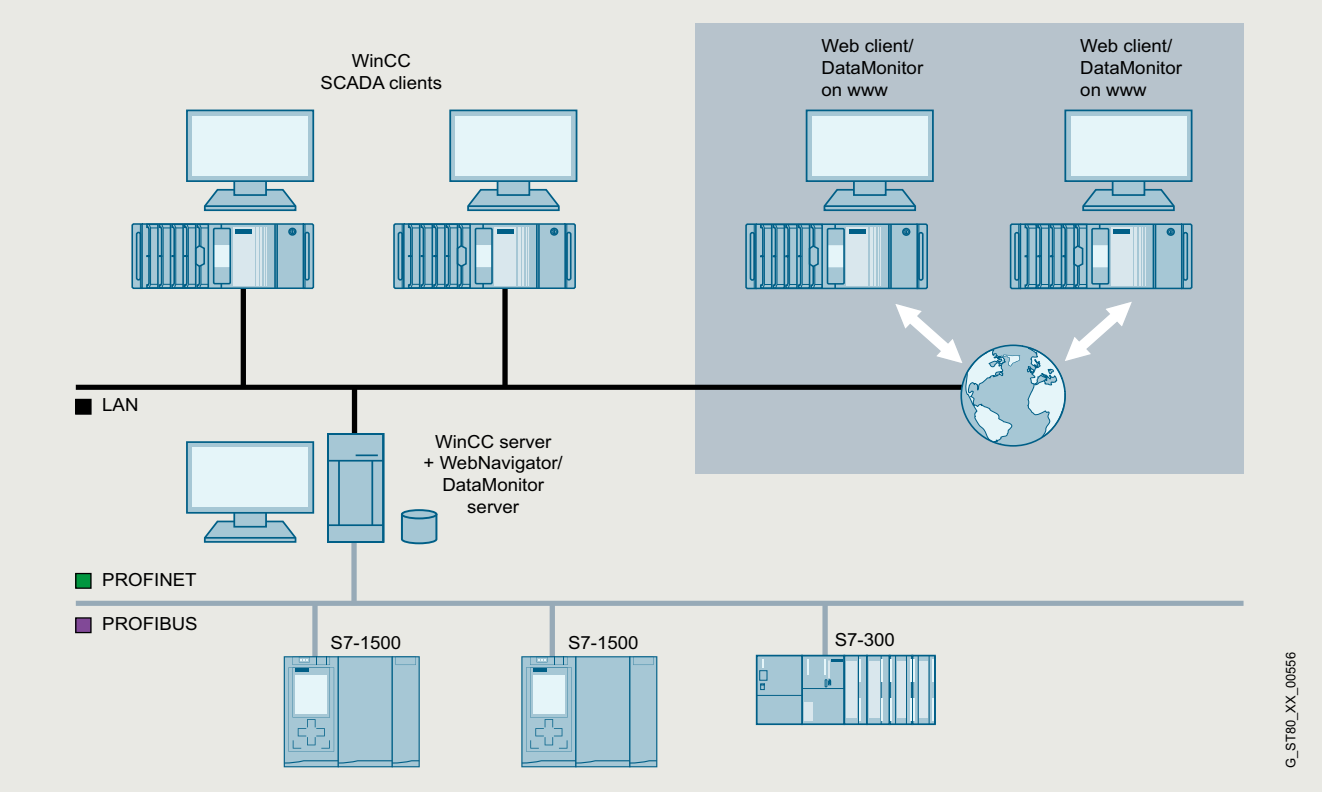
You can find more information on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

Note:

When accessing the operator stations via the WinCC WebNavigator option, suitable protective measures (including IT security such as network segmentation) should be taken in order to ensure safe operation of the system.

You will find more information on the topic of Industrial Security on the Internet at:

http://www.siemens.com/industrialsecurity



WinCC Server as web server

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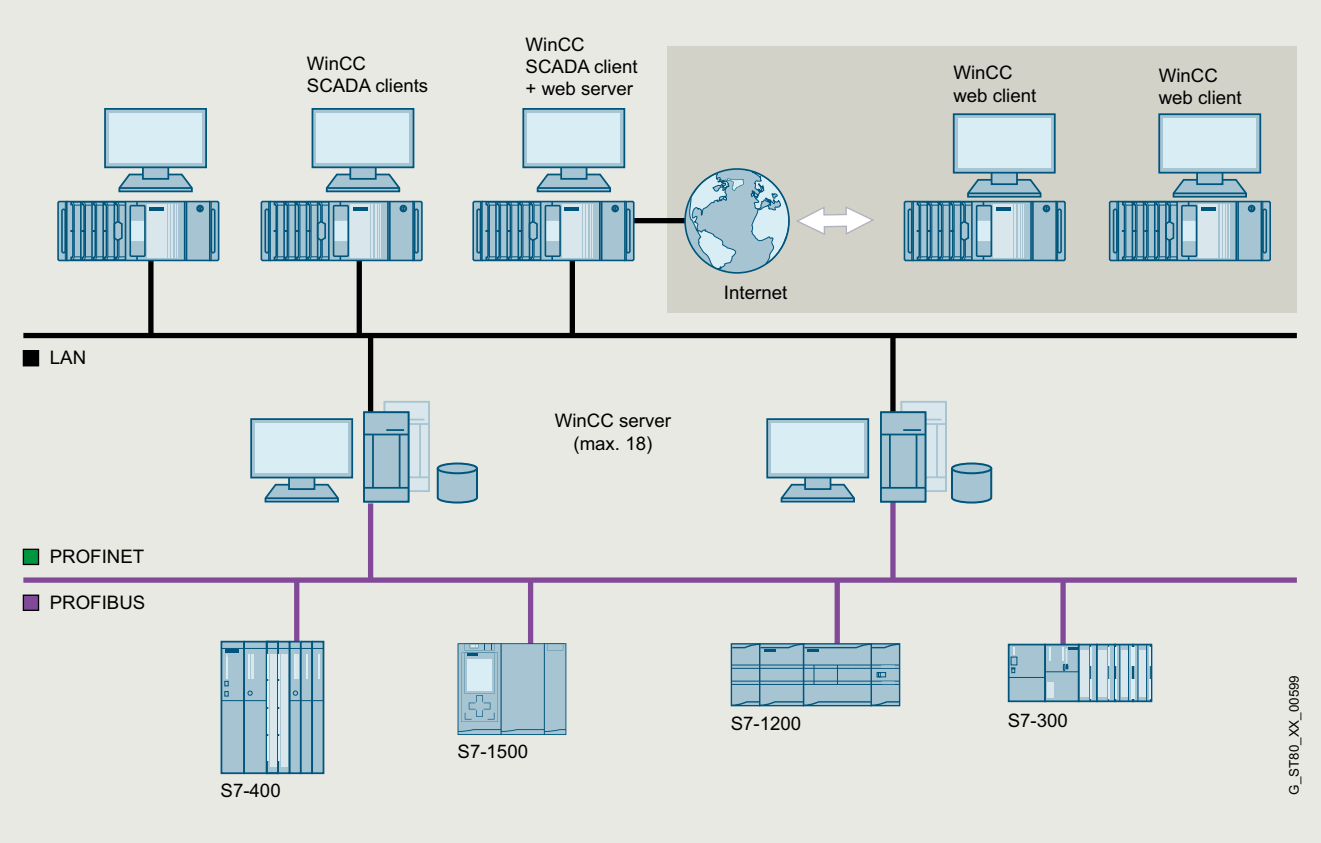
Benefits



WinCC MultiClient as web server

Benefits

- Operator control and monitoring across long distances and on different platforms (PC, local panel, mobile PDA)
- Large configurations with up to 150 operator stations (depending on the plant complexity and communication load)
- Optimally tailored clients for operating and monitoring, analysis, service and diagnostics
- Acceptance of configuration data for the web, generally without changes
- Minimum maintenance costs due to central software administration
- With the WinCC Web Viewer (WinCC Viewer RT), the process screens can be displayed on the web client independently of the Internet Explorer. Settings for the client are made on the client itself. The WinCC Web Viewer can also be used in conjunction with the MS Terminal Service.
- The SIMATIC WinCC WebNavigator can also be operated in "view only" mode and is thus used as tool for monitoring and navigating using Internet Explorer or WinCC Web Viewer (WinCC Viewer RT).
- Security is increased by adjustable automatic logout.
  If an automatic logout is to take place, an absolute or inactive time period can be set.

Application

In addition to the standard WebNavigator licensing, there is the "Diagnostics Client" with identical functionality but different licensing. It is especially suitable for the following applications:

- Remote diagnostics/operation of several unmanned WinCC server stations
- Central control rooms that monitor several web servers via one user interface
- Maintenance personnel who require guaranteed access to the server at any time, regardless of the number of users already logged on to the server.
  On the server side, only one WebNavigator Diagnostics Server license or, alternatively, one Standard WebNavigator license is required.

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Design

Thin Client solutions

The WebNavigator can also run under Windows Server 2008 R2 SP1 or Windows Server 2012 R2 terminal services.
The Windows Server 2008 R2 SP1 or Windows Server 2012 R2 operating system is required.
This makes it possible, for example, to connect SIMATIC Thin Clients to the WinCC server as visualization stations.

For this purpose, the Windows terminal services must be installed on the PC on which the web client is installed.
The Windows Server 2008 R2 SP1 or Windows Server 2012 R2 operating system is required.

Up to 25 Thin Clients can be connected to one terminal server.

Applications:

- Mobile devices
- Handhelds
- Rugged on-site visualizations

Function

The WinCC basic system makes setting up and configuring a WebNavigator Server very easy. WinCC process screens to be visualized via the Internet are created as usual using the graphic editor.

To display WinCC process screens on the web client, the Microsoft Internet Explorer or supplied browser-independent WinCC Web Viewer (WinCC Viewer RT) is used.

The operator on the web client is integrated in the central WinCC user administration and can operate and monitor the system according to the configured access rights.

The WebNavigator supports all standard security mechanisms that can be used for applications on the Internet, e.g. routers, firewalls and proxy servers.

Ordering data

	Article No.
SIMATIC WinCC WebNavigator as from Runtime Professional V14 and WinCC as from V7.4 [2]	
Single license, license key on USB flash drive	
• 1 client license (countable)	**6AV6362-1AB00-0BB0**
• 3 client licenses (countable)	**6AV6362-1AD00-0BB0**
• 10 client licenses (countable)	**6AV6362-1AF00-0BB0**
• 30 client licenses (countable)	**6AV6362-1AJ00-0BB0**
• 100 client licenses (countable)	**6AV6362-1AM00-0BB0**
As download [1]	
Single license, license key download. Email address mandatory	
• 1 client license (countable)	**6AV6362-1AB00-0AH0**
• 3 client licenses (countable)	**6AV6362-1AD00-0AH0**
• 10 client licenses (countable)	**6AV6362-1AF00-0AH0**
• 30 client licenses (countable)	**6AV6362-1AJ00-0AH0**
• 100 client licenses (countable)	**6AV6362-1AM00-0AH0**
SIMATIC WinCC WebNavigator Diagnostics Client	
For WinCC V14 Runtime Professional and WinCC as from V7.4	
• Standard scope of supply	**6AV6362-1BA00-0BB0**
• As download	**6AV6362-1BA00-0AH0**
WinCC WebNavigator Load Balancing	
For WinCC V7.4 only	
• Load Balancing	**6AV6362-1FA00-0BB0**
• Load Balancing Step Up	**6AV6362-1GA00-0BB0**
As download	
RT-SW, single license, license key download. Email address mandatory	
• Load Balancing	**6AV6362-1FA00-0AH0**
• Load Balancing Step Up	**6AV6362-1GA00-0AH0**

[1] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

[2] As from WinCC V14 the licenses are cumulative (countable), i.e. one 10 client license and one 30 client license permit access by 40 clients.

A license is not required for the engineering system for configuring the runtime option.

More information

You can find more information at:

http://www.siemens.com/wincc-webnavigator

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Overview

Much more than visualization software

From machine-level visualization all the way to the high-performance SCADA system, SIMATIC WinCC in the TIA Portal and its efficient tools covers the entire engineering and visualization software spectrum – integrated across all performance classes.

The following software is currently offered:

- SIMATIC WinCC Unified (TIA Portal)
  - SIMATIC WinCC Unified Engineering
  - SIMATIC WinCC Unified Runtime
  - SIMATIC WinCC Unified options
- SIMATIC WinCC (TIA Portal)
  - SIMATIC WinCC (TIA Portal) Engineering
  - SIMATIC WinCC (TIA Portal) Runtime
  - SIMATIC WinCC (TIA Portal) options
- TIA Portal options
  - TIA Portal Multiuser Engineering
  - TIA Portal Test Suite
  - TIA Portal Cloud Connector
  - TIA Portal Teamcenter Gateway
  - SIMATIC Visualization Architect
  - SIMATIC ProDiag
  - SIMATIC Modular Application Creator

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Overview

SIMATIC Visualization Architect

Challenge:

- To standardize the user interfaces of the visualizations throughout the plant
- Significant reduction of the engineering costs for generating the visualizations
- To make the in-house work standard usable

Solution:

- Automatic generation and creation of the visualizations, based on the program code of the PLC and corresponding visualization objects within the framework of system-wide library concepts.

Licensing

- The software can be installed on multiple computers. The number of existing licenses determines the number of computers on which the software can be used simultaneously (floating license).
- An upgrade to the subsequent version is offered for users of previous versions.
- A rental license is available for temporary use
- A trial license is available for testing purposes.
- It is possible to conclude Software Update Service (SUS) contracts

You can find more information on the Software Update Service, license types, Online Software Delivery and handling your software licenses with the Automation License Manager here:

http://www.siemens.com/simatic-licenses

Benefits

- Automatic creation of visualizations – drastic reduction of the engineering time
- Reduction of the commissioning times by the early detection and avoidance of faults
- Adaptation at the touch of a button to the visualizations on the basis of changes/adaptations in the control program

Function

- Integration in the TIA Portal V14 or higher
- Support of controllers:
  - S7-1200, S7-1500, ET200SP
- Support of HMI:
  - Basic Panels, Comfort Panels and Mobile Panels of the 2nd Generation
- Support of PC-based:
  - WinCC Runtime Advanced, WinCC Runtime Professional, S7-1500 Software Controller
- SiVArc is configured using rules (not programmed!)

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SIMATIC Visualization Architect

Ordering data

	Article No.
SIMATIC Visualization Architect V17	
As package	
• SIMATIC Visualization Architect V17	**6AV2107-0PX07-0AA5**
• SIMATIC Visualization Architect V17 Rental	**6AV2107-0PX07-0AA6**
• SIMATIC Visualization Architect V17 Trial Download in Customer Support Portal	**6AV2107-0PX07-0AA7**
As download [1]	
• SIMATIC Visualization Architect V17	**6AV2107-0PX07-0AH5**
• SIMATIC Visualization Architect V17 Rental	**6AV2107-0PX07-0AH6**
Upgrade SIMATIC Visualization Architect Engineering software in the TIA Portal; software and documentation on CD, License key on USB flash drive Class A; 6 languages: en, de, fr, es, it, zh	
V16 -> V17	
• As package	**6AV2107-3PX07-0AA5**
• As download [1] Email address required for delivery	**6AV2107-3PX07-0AH5**
V15/V15.1 -> V16	
• As package	**6AV2107-3PX06-0AA5**
• As download [1] Email address required for delivery	**6AV2107-3PX06-0AH5**

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

Technical specifications

SIMATIC Visualization Architect	
Operating system requirements	In accordance with the requirements of the TIA Portal components: • SIMATIC STEP 7 (TIA Portal) • SIMATIC WinCC Unified, Professional, Advanced, Comfort, Basic
Supported STEP 7 version	SIMATIC STEP 7 V17
Supported WinCC versions	SIMATIC WinCC V17 Unified, Professional, Advanced, Comfort, Basic

More information

For up-to-date information and availability, see:

http://www.siemens.com/sivarc

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Overview

The TIA Portal option ProDiag makes it possible to monitor a machine or plant and to intervene in the event of a fault. The monitoring messages which can be generated for the various faults provide specific information on the monitoring mode, location and cause of the fault. Information on troubleshooting can be provided in addition. Plant operators can then not only recognize faults, they can also identify any potential danger in advance and take appropriate countermeasures.

Licensing

- The runtime license for controllers includes 250 supervisions or an unlimited number of supervisions per CPU. From FW 2.0 onwards, the software can run on S7-1500/ET 200SP CPUs regardless of the TIA Portal version.
- For the visualization of the messages, the controls are licensed according to the HMI runtime platforms.

You can find more information on the Software Update Service, license types, Online Software Delivery and handling your software licenses with the Automation License Manager here:

http://www.siemens.com/simatic-licenses

Benefits

- Automatic code generation in the CPU
- Message texts are derived automatically from the information existing in the project
- Simple visualization on the HMI by means of prepared controls

Application

SIMATIC ProDiag is the fully-integrated TIA solution for machine and plant diagnostics. It saves the need for programming diagnostics in the CPU during the engineering phase and provides support for troubleshooting on the HMI.

Function

- Central, cycle-exact time stamping of the fault messages
- Automatic generation of the monitoring logic and message calls
- Automatic updating of the SIMATIC HMI when changing the message configuration for 3 languages
- HMI systems do not have to exit runtime mode in the event of changes
- Directly available in the language editors LAD, FBD, SCL and STL
- Monitoring can be parameterized at a later date on F blocks and know-how-protected blocks
- Central definition of message structure for the project

Ordering data

	Article No.
SIMATIC ProDiag for SIMATIC Comfort / Mobile Panels Controls for SIMATIC WinCC as of V14.	
• Package with data storage medium	**6AV2107-0UP00-0BB0**
• Download incl. license key [1] Email address required for delivery	**6AV2107-0UP00-0BH0**
SIMATIC ProDiag for WinCC Runtime Advanced Controls for SIMATIC WinCC as of V14.	
• Package with data storage medium	**6AV2107-0UA00-0BB0**
• Download incl. license key [1]	**6AV2107-0UA00-0BH0**
• Email address required for delivery	
SIMATIC ProDiag for WinCC Runtime Professional Controls for SIMATIC WinCC as of V14	
• Package with data storage medium	**6AV2107-0UB00-0BB0**
• Download incl. license key [1]	**6AV2107-0UB00-0BH0**
• Email address required for delivery	

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

More information

TIA Portal highlights

http://www.siemens.com/tiaportal

Software download

For up-to-date information and download availability, see:

http://www.siemens.com/tia-online-software-delivery

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Overview

SIMATIC WinCC V7 SCADA system

The scalable and open SCADA system for maximum plant transparency and productivity

- Efficiency:
  As a key to greater productivity, SIMATIC WinCC combines efficient engineering with high-performance archiving and maximum data security. With integrated diagnostics functions and flexible production analysis, you shorten the time-to-market and also reduce your plant standstill times. SIMATIC WinCC is the basis for efficient operations management and intelligent production analyses, so it offers a secure basis for deciding on optimization measures, and thus more productivity at lower cost.
- Scalability:
  With SIMATIC WinCC, it is possible to implement plants in all industrial sectors and technologies, and easily expand or modernize them by means of options or add-ons, in functional terms or sector-specifically.
  You can benefit from the redundancy concepts for enhanced availability, or decide on centralized archiving and analysis of plant information. SIMATIC WinCC offers stationary and mobile solutions to cover increasing demands.
- Innovation:
  With innovative technology, you have all the important information in view at all times. In this way, SIMATIC WinCC simplifies intuitive operation and monitoring of the production plant – even remotely. Stay informed with mobile SCADA solutions anywhere and at any time – including with existing tablet and smartphone hardware.
  The use of multi-touch gestures in the industrial environment opens the door to modern operator concepts.
- Openness:
  Since international standards and system-internal script and programming interfaces are supported, special requests can also be easily implemented.
  SIMATIC WinCC backs cross-manufacturer communication for integrating existing hardware, as well as for simple integration into the IT world. WinCC specialists are available worldwide as qualified solution providers. These certified and centrally audited partners are ready to implement your individual SCADA project even in diversified client-server architectures with redundancy, or in applications with energy data management systems.
  SIMATIC WinCC is designed to be independent of any specific technology or industrial sector, modular in structure, and easy to expand. It is used worldwide in single-user applications in mechanical engineering, as well as in complex multi-user solutions with redundant servers or Web-based client access. References from many industries prove the versatility and performance capability.

http://www.siemens.com/wincc-v7

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Overview

- PC-based operator control and monitoring system for visualizing and operating processes, production flows, machines and plants in all sectors – from the simple single-user station through to distributed multi-user systems with redundant servers and cross-location solutions with web clients. WinCC is the information hub for corporation-wide vertical integration.
- The basic system configuration (WinCC Basic Software) includes industry-standard functions for signaling and acknowledging events, archiving of messages and measured values, logging of all process and configuration data, user administration and visualization.
- The WinCC Basic Software forms the core of a wide range of different applications. Based on the open programming interfaces, a wide range of WinCC options (from Siemens Industry Automation) and WinCC Add-ons have been developed (by Siemens-internal and external partners).
- WinCC can be operated with every PC that meets the given HW requirements. The SIMATIC IPC product range is available in particular for the industrial use of WinCC systems. SIMATIC IPCs impress with their powerful PC technology, are designed for round-the-clock operation, and can be operated in both office areas and harsh industrial environments.

Current version:

SIMATIC WinCC V7.5 SP2

Runs on:

- Windows 11 Professional, Enterprise (64-Bit)
- Windows 10 Professional, Enterprise (64-bit)
- Windows 10 Enterprise LTSB (64-bit)
- Windows 2012 Server R2 (64-bit)
- Windows 2016 Server (64-Bit)
- Windows 2019 Server (64-bit)

For WebNavigator Clients and DataMonitor Clients, also:

- Windows 7 SP1 Professional, Enterprise, Ultimate (32-/64-bit)
- Windows 8.1 Professional, Enterprise (32-/64-bit)

Please check the Siemens Online Support compatibility list for details:

https://support.industry.siemens.com/kompatool/pages/main/index.jsf

SIMATIC SCADA and SIMATIC IPCs

Perfect interaction for optimum productivity.

- Price advantage as "Package" comprising hardware and software
- System-tested solutions reduce testing overhead
- Simple ordering and synchronized logistics

Only if ordered together with the SIMATIC IPC.

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Benefits

- All-purpose
  - Solutions for all sectors
  - Multi-language for worldwide usage
  - Can be integrated into all automation solutions
- All operator control & monitoring functions on board
  - User administration
  - Operator control and monitoring
  - Reporting, acknowledging, and archiving of events
  - Collecting, consolidating and archiving measured values (including long-term backup)
  - Logging and documenting of process and configuration data
- Can be configured simply and efficiently
  - Configuration wizards let the user focus on the essentials
  - In the picture by means of cross-reference lists and screen property displays
  - Configuration of multi-language applications
  - Configuration tool for configuring bulk data
- Universally scalable
  - Expandable from single station to client-server configurations
  - Increased availability by means of redundant servers
  - Process visualization via the Web with the WinCC WebNavigator or WebUX
- Open standards for simple integration
  - Efficient real-time database MS SQL Server
  - Open for application modules with ActiveX controls
  - Visual Basic for Applications for individual expansions
  - OPC for cross-vendor communication
- Process visualization with Plant Intelligence
  - Integrated evaluation functions for the online analysis (statistical process control)
  - Production optimization with the help of diverse options
- Expandable using options and add-ons
  - Options for scalable configurations
  - Options for increasing the availability
  - Options for IT & business integration
  - Options for SCADA expansions
  - Options for validation in accordance with FDA 21 CFR Part 11
  - Options for the use of telecontrol protocols
- Part of Totally Integrated Automation
  - Direct access to the tag and message configuration of the SIMATIC control system
  - Integrated diagnostic functions for increasing productivity

Application

SIMATIC WinCC is designed for visualization and operation of processes, production flows, machines and plants. With its powerful process interface, especially to the SIMATIC family, and the secure data archiving, WinCC enables highly available solutions for the process control.

The sector-neutral basic system enables universal usage in all automation applications. Sector-specific solutions can, for example, be implemented using WinCC options (e.g. FDA options for the pharmaceutical industry) and sector-specific add-ons (e.g. for the water industry).

Design

SIMATIC WinCC is available as a complete package and as a runtime package with 128, 512, 2 048, 8 192, 65 536, 102 400, 153 600, 262 144 PowerTags.

PowerTags are data points that are connected to controllers or other data sources over a WinCC channel. Up to 32 alarms can be obtained from one data point. Moreover, internal tags without coupling are available for additional system performance. In addition WinCC also contains 512 archive tags. Additional archive licenses can be obtained for larger quantity structures.

Licenses for a multi-user configuration

The system software with the required number of PowerTags and additionally the option WinCC/Server must be installed on the WinCC server. In the basic configuration, one RT Client License is sufficient for the WinCC Clients [1].

An RC Client License is required to configure on clients [1]. Remote configuration is possible if WinCC Clients without their own project (Uni Client) are configured on the server project.

[1] The SQL Server Express is installed for RT / RC Clients.

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Function

The powerful configuration functions of SIMATIC WinCC contribute to a reduced engineering and training overhead and lead to a more flexible use of personnel and greater operational reliability.

Anyone familiar with Microsoft Windows can also operate the WinCC Explorer, the central switching point of WinCC. Even large quantities of data can be processed intuitively and efficiently with the WinCC Configuration Studio.

In combination with other SIMATIC components, the system is also equipped with auxiliary functions, such as process diagnostics and maintenance. All SIMATIC engineering tools work together in the configuration of the functions.

SIMATIC WinCC offers a complete basic functionality for process visualization and operation. To this end WinCC has a number of editors and interfaces that can be used to individually configure this functionality according to the respective application. Expansions of a WinCC station for control tasks are also possible with minimal engineering effort.

WinCC editors	Task or configurable runtime functionality
WinCC Explorer	Central project management for the quick access to all project data and central settings
WinCC Graphics Designer	Graphics system for user-defined visualization and operation via pixel-graphic objects
WinCC Configuration Studio	Alarm Logging Signaling system for detecting and archiving events with display and control options based on DIN 19235; freely selectable message classes, message display and logging WinCC Tag Logging Process archiving for the acquisition, compression and storage of measured values, e.g. presentation in trend and table format as well as further processing WinCC User Administrator For managing users and authorizations
WinCC Report Designer	Reporting and logging system for time and event-controlled documentation of messages, operator inputs and current process data in the form of user reports or project documentation in an arbitrary layout
WinCC Global Script	Processing functions with limitless functionality by means of the use of VBScript and ANSI-C

Interfaces

	Task or configurable runtime functionality
Communication channels	Communication with lower-level controls (SIMATIC protocols, PROFIBUS DP and OPC server included in scope of supply)
Standard interfaces	Facilitate the open integration of other Windows applications via WinCC, WinCC OLE DB, ActiveX, OLE, OPC etc.
Programming interfaces	For the individual access to data and functions of WinCC and for the integration in user programs with VBA, VB Script, C-API (ODK), C-Script (ANSI-C)

Integration

Integration in company-wide solutions (IT and business integration)

WinCC is based on Microsoft technology, which ensures openness and integration capability. ActiveX and .net controls facilitate technology-specific and industry-specific expansions. Cross-manufacturer communication is also possible since WinCC can be used as an OPC Client and server in addition to accessing current process values and supporting standards such as OPC HDA (Historical Data Access), OPC Alarm & Events, OPC XML Data Access, and OPC UA.

Just as important: Visual Basic for Applications (VBA) is available for user-specific expansions in engineering, and Visual Basic Scripting (VBS) as an easy-to-learn, open, runtime language. If desired, professional application developers can also use ANSI-C. The Open Development Kit (ODK) simplifies access to the API programming interfaces.

WinCC integrates a powerful and scalable archiving feature using database technology This provides the user with a variety of options: from high-performance archiving of current process data, to long-term archiving with high data compression, through to a connection to the central information hub in the form of a company-wide Process Historian. Versatile clients and tools for evaluation, the open interfaces, and special options (Connectivity Pack, Connectivity Station, IndustrialDataBridge) provide the basis for effective IT and business integration.

WinCC offers various security mechanisms, such as encrypted communication, to ensure secure operation of the plant. If external networks are accessed, for example, suitable protective measures (incl. IT security measures, such as network segmentation) should still also be taken.

More information is available on the topic of Industrial Security on the Internet at:

http://www.siemens.com/industrialsecurity

Integration in automation solutions

WinCC is an open process visualization system and provides the option to connect the most diverse controllers.

Approved communication software

Use communication software with the listed product versions. Corresponding SIMATIC NET upgrades are available for upgrading older versions.

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Integration

Number of connectable controllers

For the number of controllers which can be connected via Industrial Ethernet CP 1613, the following applies with a message frame length of 512 bytes:

Type of connection	Number of nodes
SIMATIC S5 Ethernet Layer 4 + TCP/IP	Up to 60
SIMATIC S7 Protocol Suite	Up to 64
SIMATIC 505 Ethernet Layer 4 + TCP/IP	Up to 60
SIMATIC S7-1200/ 1500 Channel	Up to 128

Via PROFIBUS, a maximum of 8 controllers can be connected with CP 5612, and a maximum of 44 controllers with CP 5613. Industrial Ethernet is recommended when 10 or more PLCs are used.

Mixed operation with different controllers

With their multi-protocol stack, the CP 1613 and CP 5613 communications processors enable the parallel operation of two protocols, such as for the mixed operation of different PLCs, via a single bus cable. WinCC supports the operation of two similar interface boards only in connection with the channels SIMATIC S5 Ethernet Layer 4 (2 x CP 1613), SIMATIC S7 Protocol Suite (2 x CP 1613, 2 x CP 5613) as well as PROFIBUS DP (4 x CP 5613; max. 122 slaves for each CP 5613). In addition to communication via Industrial Ethernet CP 1613 or PROFIBUS CP 5613, one CP 5612/5622 can be used in each case for communication with SIMATIC S7 via MPI.

Client-server communication

Communication between the clients and the server is via TCP/IP protocol. Setting up a separate PC LAN is recommended. For small projects with a correspondingly low incidence of message frames, SIMATIC NET Industrial Ethernet communication can be used for both process communication (WinCC/server ↔ PLC) and PC-PC communication (WinCC/client ↔ WinCC/server).

Channel DLL PROFIBUS DP

In accordance with the PROFIBUS standard, DP/slaves are always permanently assigned to a DP master; i.e. a second WinCC station (DP/master) cannot access the same PLCs (DP/slaves). This means that redundant operation of two WinCC stations is not possible using the PROFIBUS DP connection.

Connection to third-party controllers:

If a native driver is not available, OPC or OPC UA is available for connection to third-party controllers.

Current notes and information about OPC Servers from various suppliers can be found at:

http://www.opcfoundation.org

WinCC supports the standards:

- OPC Data Access 2.05a
- OPC Data Access 3.00
- OPC UA 1.02
- OPC UA HA 1.20
- OPC UA Alarms and Conditions 1.20
- OPC Historical Alarms and Events 1.10
- OPC XML Data Access 1.01 (Connectivity Pack/ Connectivity Station)
- OPC HDA 1.20 (Connectivity Pack/Connectivity Station)
- OPC A&E 1.10 (Connectivity Pack/Connectivity Station)
- OPC UA Client Data Access
- OPC UA Server Data Access, HDA, Alarm & Condition (Connectivity Pack/Connectivity Station)

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Integration

Connection overview

Protocol	Description
SIMATIC S7	
SIMATIC S7 Protocol Suite	Channel DLL for S7 functions via MPI, PROFIBUS or Ethernet Layer 4 + TCP/IP
SIMATIC S5	
SIMATIC S5 Ethernet Layer 4	Channel DLL for S5 Layer 4 communication + TCP/IP
SIMATIC S5 Programmer Port AS511	Channel DLL and driver for serial communication with S5 using AS511 protocol to programmers port
SIMATIC S5 Serial 3964R	Channel DLL and driver for serial communication with S5 using RK512 protocol
SIMATIC S5 PROFIBUS-FDL	Channel DLL for S5-FDL
SIMATIC 505	
SIMATIC 505 Serial	Channel DLL and driver for serial communication with 505 using NITP/TBP protocol to SIMATIC 535/545/555/565/575
SIMATIC 505 Ethernet Layer 4	Channel DLL for 505 Layer 4 communication
SIMATIC 505 TCP/IP	Channel DLL for 505 TCP/IP communication
SIMATIC S7-1200, S7-1500	
SIMATIC S7-1200, S7-1500 Channel	Channel DLL for S7-1200 and S7-1500 communication

Protocol	Description
Third-party controllers	
Allen Bradley Ethernet IP	Channel DLL and drivers for communication with Allen Bradley PLCs via Ethernet TCP/IP using Ethernet IP protocol
Modbus TCP/IP	Channel DLL and drivers for communication with Modicon PLCs via Ethernet TCP/IP using Modbus TCP/IP protocol
Mitsubishi MC TCP/IP	Channel DLL and drivers for communication with Mitsubishi PLCs via Ethernet TCP/IP using Mitsubishi MC TCP/IP protocol
Cross-manufacturer	
OPC Client for DA, XML DA	Channel DLL for OPC communication; WinCC can acquire data from OPC Server applications
OPC Server for DA, XML DA, A&C	Channel DLL for OPC communication; WinCC can acquire data from OPC Client
OPC Server for DA, XML DA, A&E, HDA	Server applications for OPC communication; WinCC provides process data to OPC Clients
OPC UA Server for DA, HDA, A&C	Server applications for OPC UA communication
PROFIBUS DP	Channel DLL for PROFIBUS DP
SIMOTION	Channel DLL for SIMOTION

Application note:

Parallel usage of the OPC Client channel allows, for example, connection to an SNMP OPC Server for visualization of the data contained there. The SNMP OPC Server enables monitoring of any network components (such as switches) that support the SNMP protocol.

Additional information is available under SIMATIC NET Communications Systems/SNMP OPC Server.

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Integration

PG/PC communication components for SIMATIC (for WinCC V7.5 SP2)

Industrial Ethernet	SIMATIC S5 Ethernet Layer 4	SIMATIC S5 TCP/IP	SIMATIC S7 Protocol Suite	SIMATIC 505 Ethernet Layer 4	SIMATIC 505 TCP/IP [1]	Article No.
WinCC – channel DLL						
SIMATIC S5 Ethernet Layer 4 Channel DLL for S5 Layer 4 communication + TCP/IP	•	•				Included in the basic package
SIMATIC S7 Protocol Suite Channel DLL for S7 functions			•			Included in the basic package
SIMATIC 505 Ethernet Layer 4 Channel DLL for 505 Layer 4 communication				•		Included in the basic package
SIMATIC 505 TCP/IP [1] Channel DLL for 505 TCP/IP communication					•	Included in the basic package
Communication components for extension of the OS/OP						
CP 1612 A2 PCI card for connecting a PG/PC to Industrial Ethernet (SOFTNET-S7 or SOFTNET-S7 Lean communication software must be ordered separately)		•	•		•	**6GK1161-2AA01**
SOFTNET-IE S7 Communication software for S7 functions (max. 64 connections) Version 16 [2][3]		•	•			**6GK1704-1CW16-0AA0**
SOFTNET-IE S7 Lean Communication software for S7 functions (max. 8 connections) Version 16 [2][3]		•	•			**6GK1704-1LW16-0AA0**
CP 1623 PCI Express X1 card (32-bit) for connecting a PG/PC to Industrial Ethernet (S7-1613 communication software required)	•	•	•	•	•	**6GK1162-3AA00**
CP 1628 PCI Express X1 card (32-bit) for connecting a PG/PC to Industrial Ethernet (HARDNET-IE S7 / S7-1613 communication software required)	•	•	•	•	•	**6GK1162-8AA00**
HARDNET-IE S7 / S7-1613 Communication software for S7 functions, OPC, PG/OP communication Version 16 [2][3]	•	•	•	•		**6GK1716-1CB16-0AA0**

• System interface possible

1) Via any interface board with NDIS 3.0 interface; no separate communication software required

2) See ordering data for SIMATIC NET upgrade packages

3) SIMATIC NET Version V16 is supplied together with WinCC V7.5 SP2

4) SOFTNET-S7 Lean included in scope of supply of WinCC V7.5 SP2

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Integration

PG/PC communication components for SIMATIC (for WinCC V7.5 SP2)

PROFIBUS	SIMATIC S5 PROFIBUS FDL	SIMATIC S7 Protocol Suite	PROFIBUS DP	PROFIBUS FMS	Article No.
WinCC – channel DLL					
SIMATIC S5 PROFIBUS FDL Channel DLL for S5-FDL	•				Included in the basic package
SIMATIC S7 Protocol Suite Channel DLL for S7 functions		•			Included in the basic package
PROFIBUS DP Channel DLL for PROFIBUS DP			•		Included in the basic package
Communication components for extension of the OS/OP					
CP 5612 [2] PCI card (32-bit) for connecting a PG/PC to PROFIBUS (communication software included in WinCC basic package)		•			**6GK1561-2AA00**
CP 5622 [2] PCI Express X1 card (32-bit) for connecting a PG/PC to PROFIBUS (communication software included in WinCC basic package)		•			**6GK1562-2AA00**
CP 5711 USB adapter for connecting a PG/PC to PROFIBUS or MPI (communication software included in WinCC basic package)		•			**6GK1571-1AA00**
CP 5613 A3 PCI card (32-bit) for connecting a PC to PROFIBUS (S7-5613, DP-5613 or FMS-5613 communication software required)	•	•	•	•	**6GK1561-3AA02**
CP 5614 A3 PCI card (32-bit) for connecting a PC to PROFIBUS (communication software must be ordered separately)	•	•	•	•	**6GK1561-4AA02**
CP 5623 PCI Express X1 card (32-bit) for connecting a PG/PC to PROFIBUS or MPI (**HARDNET PB S7** or **HARDNET PB DP** communication software required)	•	•	•	•	**6GK1562-3AA00**
HARDNET PB S7 Communication software for S7 functions + FDL	•	•			**6GK1713-5CB16-0AA0**
HARDNET PB DP Communication software for DP master + FDL	•		•		**6GK1713-5DB16-0AA0**

• System interface possible

[1] See ordering data for SIMATIC NET upgrade package

[2] SIMATIC NET Version V16 is supplied together with WinCC V7.5 SP2

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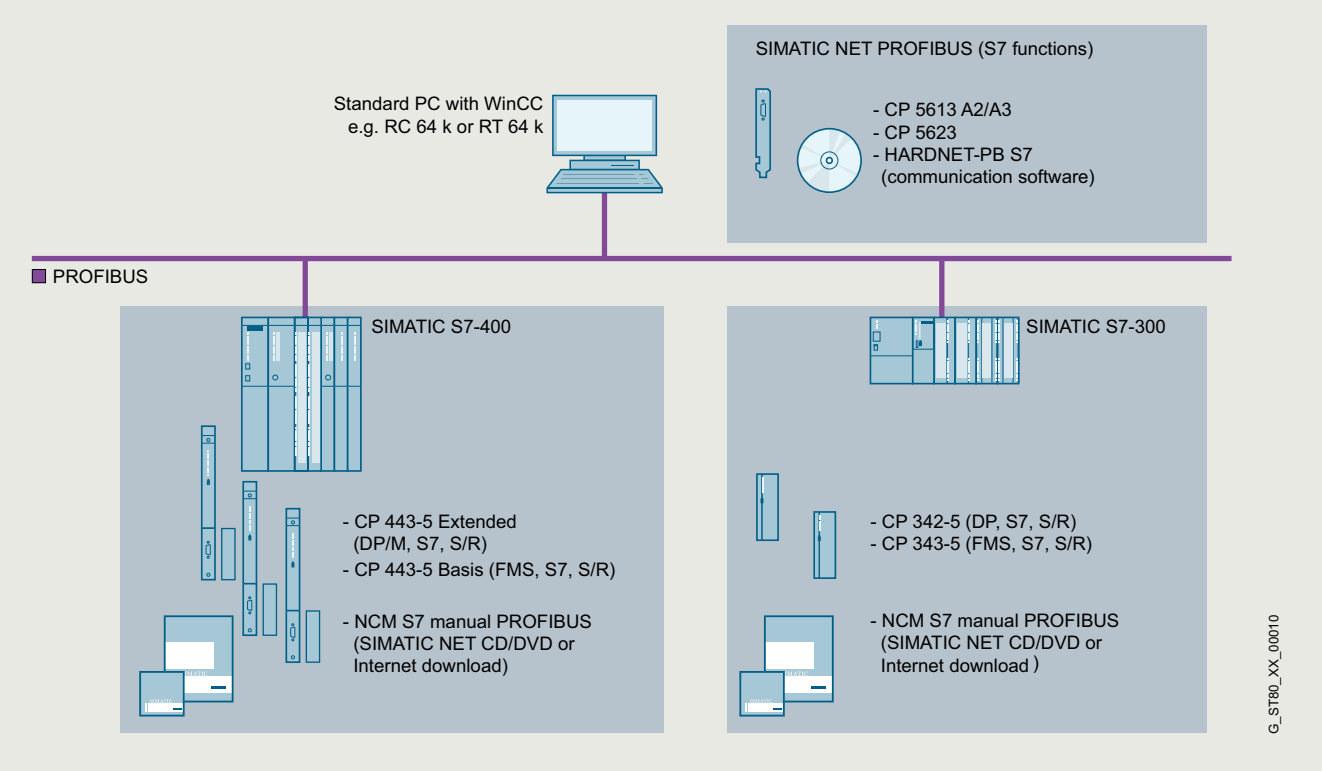
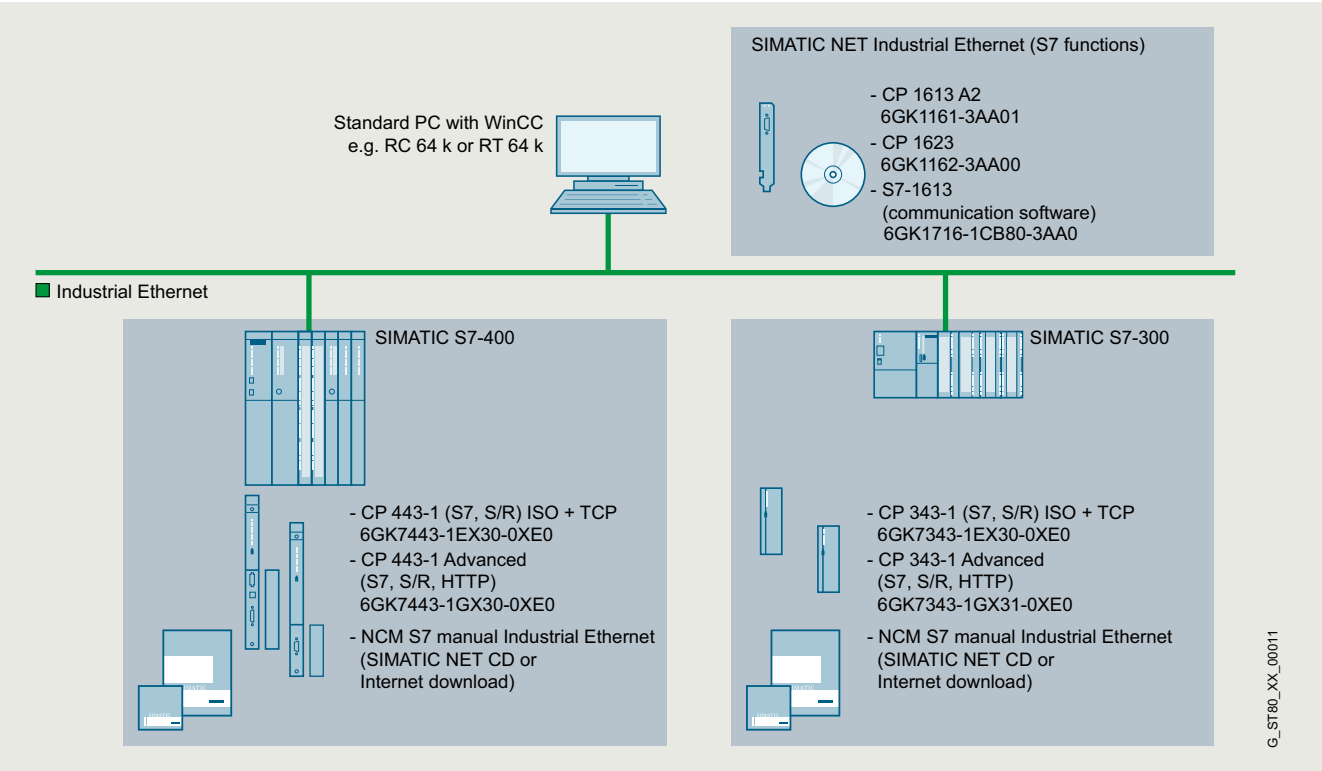
Integration

Communication examples



WinCC single-user system: PROFIBUS with S7 communication



WinCC single-user system: Industrial Ethernet with S7 communication

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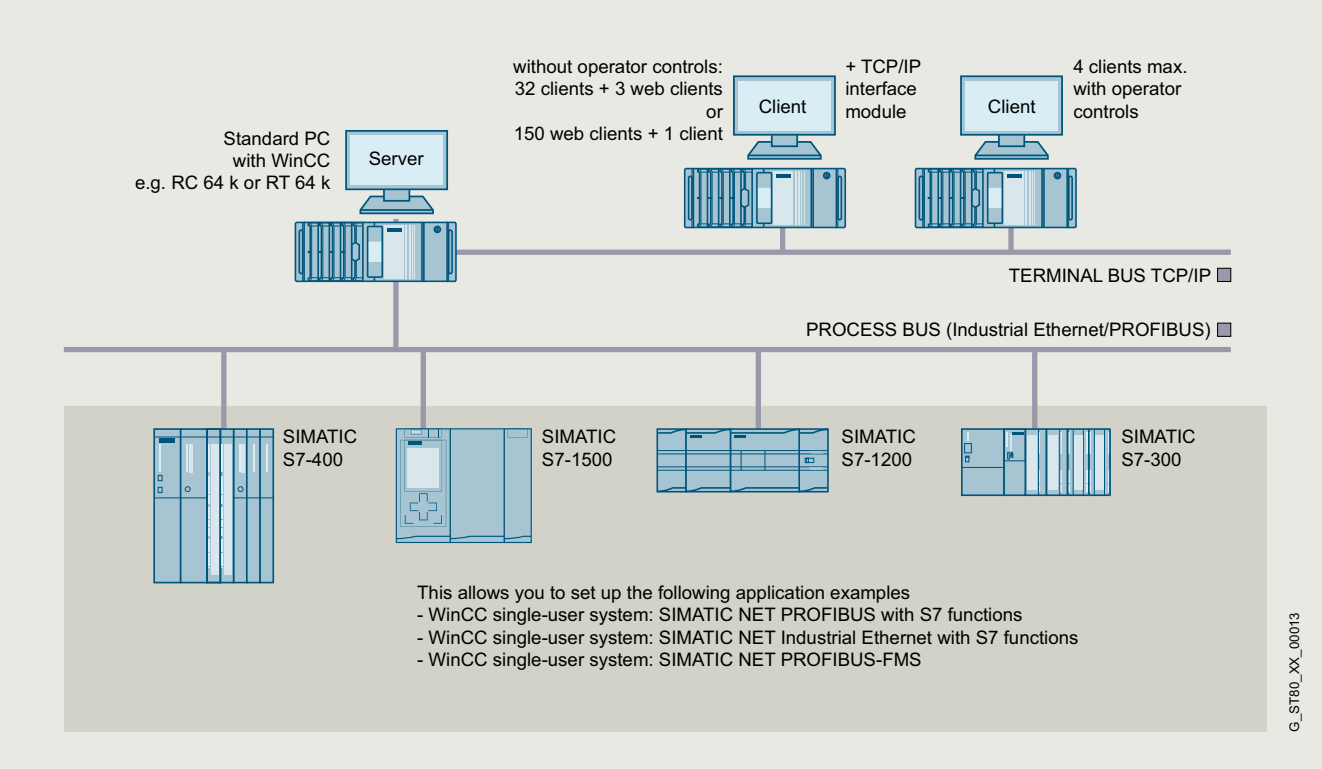
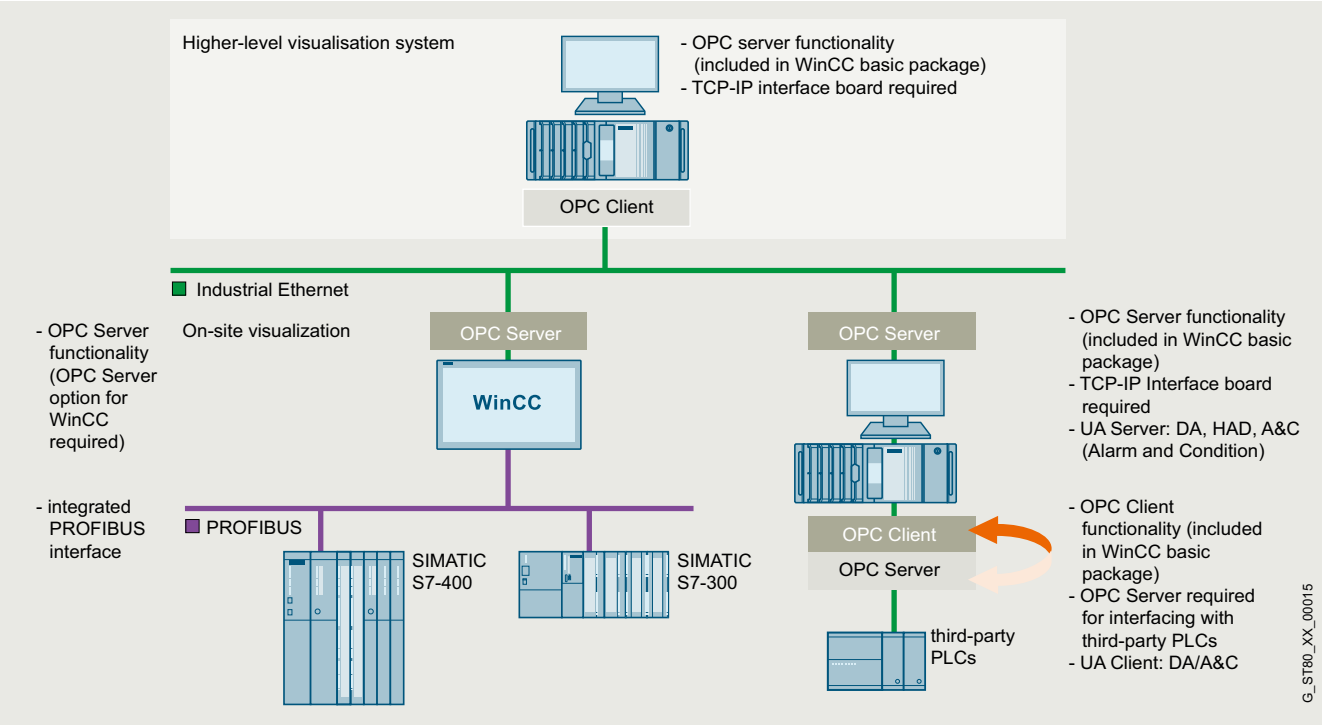
Integration



WinCC: Multi-user system with operable server



OPC coupling

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SIMATIC WinCC V7 basic software

Ordering data	Article No.
SIMATIC WinCC system software	
V7.5 SP2	
Runtime Packages on DVD	
Incl. 512 archive tags each; language/script versions: en, de, fr, it, es; with license for	
• WinCC RT Client	**6AV6381-2CA07-5AX0**
• 128 PowerTags (RT 128)	**6AV6381-2BC07-5AX0**
• 512 PowerTags (RT 512)	**6AV6381-2BD07-5AX0**
• 2 048 PowerTags (RT 2 048)	**6AV6381-2BE07-5AX0**
• 8 192 PowerTags (RT 8 192)	**6AV6381-2BH07-5AX0**
• 65 536 PowerTags (RT 65 536)	**6AV6381-2BF07-5AX0**
• 102 400 PowerTags (RT 102 400)	**6AV6381-2BJ07-5AX0**
• 153 600 PowerTags (RT 153 600)	**6AV6381-2BK07-5AX0**
• 262 144 PowerTags (RT 262 144)	**6AV6381-2BL07-5AX0**
As download	
• WinCC RT Client	**6AV6381-2CA07-5AH0**
• 128 PowerTags (RT 128)	**6AV6381-2BC07-5AH0**
• 512 PowerTags (RT 512)	**6AV6381-2BD07-5AH0**
• 2 048 PowerTags (RT 2 048)	**6AV6381-2BE07-5AH0**
• 8 192 PowerTags (RT 8 192)	**6AV6381-2BH07-5AH0**
• 65 536 PowerTags (RT 65 536)	**6AV6381-2BF07-5AH0**
• 102 400 PowerTags (RT 102 400)	**6AV6381-2BJ07-5AH0**
• 153 600 PowerTags (RT 153 600)	**6AV6381-2BK07-5AH0**
• 262 144 PowerTags (RT 262 144)	**6AV6381-2BL07-5AH0**
Complete packages on DVD	
Language versions: en, de, fr, it, es; with license for	
• WinCC RC Client	**6AV6381-2CB07-5AX0**
• 128 PowerTags (RC 128)	**6AV6381-2BM07-5AX0**
• 512 PowerTags (RC 512)	**6AV6381-2BN07-5AX0**
• 2 048 PowerTags (RC 2 048)	**6AV6381-2BP07-5AX0**
• 8 192 PowerTags (RC 8 192)	**6AV6381-2BS07-5AX0**
• 65 536 PowerTags (RC 65 536)	**6AV6381-2BQ07-5AX0**
• 102 400 PowerTags (RC 102 400)	**6AV6381-2BT07-5AX0**
• 153 600 PowerTags (RC 153 600)	**6AV6381-2BU07-5AX0**
• 262 144 PowerTags (RC 262 144)	**6AV6381-2BV07-5AX0**
As download	
• WinCC RC Client	**6AV6381-2CB07-5AH0**
• 128 PowerTags (RC 128)	**6AV6381-2BM07-5AH0**
• 512 PowerTags (RC 512)	**6AV6381-2BN07-5AH0**
• 2 048 PowerTags (RC 2 048)	**6AV6381-2BP07-5AH0**
• 8 192 PowerTags (RC 8 192)	**6AV6381-2BS07-5AH0**
• 65 536 PowerTags (RC 65 536)	**6AV6381-2BQ07-5AH0**
• 102 400 PowerTags (RC 102 400)	**6AV6381-2BT07-5AH0**
• 153 600 PowerTags (RC 153 600)	**6AV6381-2BU07-5AH0**
• 262 144 PowerTags (RC 262 144)	**6AV6381-2BV07-5AH0**

Ordering data	Article No.
V7.5 SP2 ASIA	
Runtime Packages on DVD	
Language/script versions: en, zh-CN, zh-TW, ko, ja; with license for	
• WinCC RT Client	**6AV6381-2CA07-5AV0**
• 128 PowerTags (RT 128)	**6AV6381-2BC07-5AV0**
• 512 PowerTags (RT 512)	**6AV6381-2BD07-5AV0**
• 2 048 PowerTags (RT 2 048)	**6AV6381-2BE07-5AV0**
• 8 192 PowerTags (RT 8 192)	**6AV6381-2BH07-5AV0**
• 65 536 PowerTags (RT 65 536)	**6AV6381-2BF07-5AV0**
• 102 400 PowerTags (RT 102 400)	**6AV6381-2BJ07-5AV0**
• 153 600 PowerTags (RT 153 600)	**6AV6381-2BK07-5AV0**
• 262 144 PowerTags (RT 262 144)	**6AV6381-2BL07-5AV0**
Complete packages on DVD	
Language versions: en, zh-CN, zh-TW, ko, ja; with license for	
• WinCC RC Client	**6AV6381-2CB07-5AV0**
• 128 PowerTags (RC 128)	**6AV6381-2BM07-5AV0**
• 512 PowerTags (RC 512)	**6AV6381-2BN07-5AV0**
• 2 048 PowerTags (RC 2 048)	**6AV6381-2BP07-5AV0**
• 8 192 PowerTags (RC 8 192)	**6AV6381-2BS07-5AV0**
• 65 536 PowerTags (RC 65 536)	**6AV6381-2BQ07-5AV0**
• 102 400 PowerTags (RC 102 400)	**6AV6381-2BT07-5AV0**
• 153 600 PowerTags (RC 153 600)	**6AV6381-2BU07-5AV0**
• 262 144 PowerTags (RC 262 144)	**6AV6381-2BV07-5AV0**
V7.5 SP2 PowerPacks	
For upgrading from:	
Runtime Packages	
• 128 to 512 PowerTags	**6AV6371-2BD07-5AX0**
• 512 to 2 048 PowerTags	**6AV6371-2BG07-5AX0**
• 2 048 to 8 192 PowerTags	**6AV6371-2BM07-5AX0**
• 8 192 to 65 536 PowerTags	**6AV6371-2BN07-5AX0**
• 65 536 to 102 400 PowerTags	**6AV6371-2BP07-5AX0**
• 102 400 to 153 600 PowerTags	**6AV6371-2BQ07-5AX0**
• 153 600 to 262 144 PowerTags	**6AV6371-2BR07-5AX0**
As download	
• 128 to 512 PowerTags	**6AV6371-2BD07-5AJ0**
• 512 to 2 048 PowerTags	**6AV6371-2BG07-5AJ0**
• 2 048 to 8 192 PowerTags	**6AV6371-2BM07-5AJ0**
• 8 192 to 65 536 PowerTags	**6AV6371-2BN07-5AJ0**
• 65 536 to 102 400 PowerTags	**6AV6371-2BP07-5AJ0**
• 102 400 to 153 600 PowerTags	**6AV6371-2BQ07-5AJ0**
• 153 600 to 262 144 PowerTags	**6AV6371-2BR07-5AJ0**
Complete packages	
• 128 to 512 PowerTags	**6AV6371-2BD17-5AX0**
• 512 to 2 048 PowerTags	**6AV6371-2BG17-5AX0**
• 2 048 to 8 192 PowerTags	**6AV6371-2BM17-5AX0**
• 8 192 to 65 536 PowerTags	**6AV6371-2BN17-5AX0**
• 65 536 to 102 400 PowerTags	**6AV6371-2BP17-5AX0**
• 102 400 to 153 600 PowerTags	**6AV6371-2BQ17-5AX0**
• 153 600 to 262 144 PowerTags	**6AV6371-2BR17-5AX0**
As download	
• 128 to 512 PowerTags	**6AV6371-2BD17-5AJ0**
• 512 to 2 048 PowerTags	**6AV6371-2BG17-5AJ0**
• 2 048 to 8 192 PowerTags	**6AV6371-2BM17-5AJ0**
• 8 192 to 65 536 PowerTags	**6AV6371-2BN17-5AJ0**
• 65 536 to 102 400 PowerTags	**6AV6371-2BP17-5AJ0**
• 102 400 to 153 600 PowerTags	**6AV6371-2BQ17-5AJ0**
• 153 600 to 262 144 PowerTags	**6AV6371-2BR17-5AJ0**

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Ordering data	Article No.
V7.5 SP2 archives	
• 1 500 archive tags (countable)	**6AV6371-1DQ17-5AX0**
• 5 000 archive tags (countable)	**6AV6371-1DQ17-5BX0**
• 10 000 archive tags (countable)	**6AV6371-1DQ17-5CX0**
• 30 000 archive tags (countable)	**6AV6371-1DQ17-5EX0**
As download	
• 1 500 archive tags (countable)	**6AV6371-1HQ17-5AX0**
• 5 000 archive tags (countable)	**6AV6371-1HQ17-5BX0**
• 10 000 archive tags (countable)	**6AV6371-1HQ17-5CX0**
• 30 000 archive tags (countable)	**6AV6371-1HQ17-5EX0**
SIMATIC WinCC software packages	
SIMATIC WinCC V7.5 SP2 Runtime	
• WinCC RT Client	**6AV6382-2AA07-5AX0**
• 128 PowerTags	**6AV6382-2CA07-5AX0**
• 512 PowerTags	**6AV6382-2DA07-5AX0**
• 2 048 PowerTags	**6AV6382-2EA07-5AX0**
• 8 192 PowerTags	**6AV6382-2HA07-5AX0**
• 65 536 PowerTags	**6AV6382-2FA07-5AX0**
SIMATIC WinCC V7.5 SP2 Runtime ASIA	
• WinCC RT Client	**6AV6382-2AA07-5AV0**
• 128 PowerTags	**6AV6382-2CA07-5AV0**
• 512 PowerTags	**6AV6382-2DA07-5AV0**
• 2 048 PowerTags	**6AV6382-2EA07-5AV0**
• 8 192 PowerTags	**6AV6382-2HA07-5AV0**
• 65 536 PowerTags	**6AV6382-2FA07-5AV0**
SIMATIC WinCC Upgrades/ Software Update Service	
SIMATIC WinCC V7.5 SP2 Upgrade [1]	
For upgrading the RT version	
• From V7.2/7.3 to V7.5 SP2	**6AV6381-2AA07-5AX3**
• From V7.4 to V7.5 SP2	**6AV6381-2AA07-5AX4**
• From V7.2/7.3 ASIA to V7.5 SP2 ASIA [2]	**6AV6381-2AA07-5AV3**
• From V7.4 ASIA to V7.5 SP2 ASIA [2]	**6AV6381-2AA07-5AV4**
As download	
• From V7.2/7.3 to V7.5 SP2	**6AV6381-2AA07-5AK3**
• From V7.4 to V7.5 SP2	**6AV6381-2AA07-5AK4**

Article No.
For upgrading the RC version
• From V7.2/7.3 to V7.5 SP2 **6AV6381-2AB07-5AX3**
• From V7.4 to V7.5 SP2 **6AV6381-2AB07-5AX4**
• From V7.2/7.3 ASIA to V7.5 SP2 ASIA [2] **6AV6381-2AB07-5AV3**
• From V7.4 ASIA to V7.5 SP2 ASIA [2] **6AV6381-2AB07-5AV4**
As download
• From V7.2/7.3 to V7.5 SP2 **6AV6381-2AB07-5AK3**
• From V7.4 to V7.5 SP2 **6AV6381-2AB07-5AK4**
For upgrading the Client RT version
• From V7.2/7.3 to V7.5 SP2 **6AV6381-2CA07-5AX3**
• From V7.4 to V7.5 SP2 **6AV6381-2CA07-5AX4**
• From V7.2/7.3 ASIA to V7.5 SP2 ASIA **6AV6381-2CA07-5AV3**
• From V7.5 ASIA to V7.5 SP2 ASIA **6AV6381-2CA07-5AV4**
As download
• From V7.2/7.3 to V7.5 SP2 **6AV6381-2CA07-5AK3**
• From V7.4 to V7.5 SP2 **6AV6381-2CA07-5AK4**
For upgrading the Client RC version
• From V7.2/7.3 to V7.4 SP2 **6AV6381-2CB07-5AX3**
• From V7.4 to V7.5 SP2 **6AV6381-2CB07-5AX4**
• From V7.2/7.3 ASIA to V7.5 SP2 ASIA **6AV6381-2CB07-5AV3**
• From V7.4 ASIA to V7.5 SP2 ASIA **6AV6381-2CB07-5AV4**
As download
• From V7.2/7.3 to V7.4 SP2 **6AV6381-2CB07-4AK3**
• From V7.2/7.3 to V7.5 SP2 **6AV6381-2CB07-5AK3**
• From V7.4 to V7.5 SP2 **6AV6381-2CB07-5AK4**
SIMATIC WinCC Software Update Service (SUS) [3] [4] [5]
SIMATIC WinCC V7 Update
Software Update Service for WinCC basic software and options:
• 1 license **6AV6381-1AA00-0AX5**
• 3 licenses **6AV6381-1AA00-0BX5**
• 10 licenses **6AV6381-1AA00-0CX5**
As download
• 1 license **6AV6381-1KA00-0AX5**
• 3 licenses **6AV6381-1KA00-0BX5**
• 10 licenses **6AV6381-1KA00-0CX5**

[1] According to licensing provisions, 1 upgrade package must be ordered for each WinCC station

[2] Upgrading from V7.X RT/RC ASIA to V7.5 ASIA is carried out using the "respective non-Asia Package"

[3] The Software Update Service is valid for 1 year. The contract is automatically extended by 1 more year unless canceled 3 months prior to expiration. According to licensing provisions, 1 Software Update Service must be ordered for each WinCC station.

[4] Requires the current software version

[5] SUS is available as download

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Ordering data	Article No.
SIMATIC WinCC system software	
V7.4 SP1	
Runtime Packages on DVD	
Incl. 512 archive tags each; language/script versions: en, de, fr, it, es; with license for	
• WinCC RT Client	**6AV6381-2CA07-4AX0**
• 128 PowerTags (RT 128)	**6AV6381-2BC07-4AX0**
• 512 PowerTags (RT 512)	**6AV6381-2BD07-4AX0**
• 2 048 PowerTags (RT 2 048)	**6AV6381-2BE07-4AX0**
• 8 192 PowerTags (RT 8 192)	**6AV6381-2BH07-4AX0**
• 65 536 PowerTags (RT 65 536)	**6AV6381-2BF07-4AX0**
• 102 400 PowerTags (RT 102 400)	**6AV6381-2BJ07-4AX0**
• 153 600 PowerTags (RT 153 600)	**6AV6381-2BK07-4AX0**
• 262 144 PowerTags (RT 262 144)	**6AV6381-2BL07-4AX0**
As download	
• WinCC RT Client	**6AV6381-2CA07-4AH0**
• 128 PowerTags (RT 128)	**6AV6381-2BC07-4AH0**
• 512 PowerTags (RT 512)	**6AV6381-2BD07-4AH0**
• 2 048 PowerTags (RT 2 048)	**6AV6381-2BE07-4AH0**
• 8 192 PowerTags (RT 8 192)	**6AV6381-2BH07-4AH0**
• 65 536 PowerTags (RT 65 536)	**6AV6381-2BF07-4AH0**
• 102 400 PowerTags (RT 102 400)	**6AV6381-2BJ07-4AH0**
• 153 600 PowerTags (RT 153 600)	**6AV6381-2BK07-4AH0**
• 262 144 PowerTags (RT 262 144)	**6AV6381-2BL07-4AH0**
Complete packages on DVD	
Language versions: en, de, fr, it, es; with license for	
• WinCC RC Client	**6AV6381-2CB07-4AX0**
• 128 PowerTags (RC 128)	**6AV6381-2BM07-4AX0**
• 512 PowerTags (RC 512)	**6AV6381-2BN07-4AX0**
• 2 048 PowerTags (RC 2 048)	**6AV6381-2BP07-4AX0**
• 8 192 PowerTags (RC 8 192)	**6AV6381-2BS07-4AX0**
• 65 536 PowerTags (RC 65 536)	**6AV6381-2BQ07-4AX0**
• 102 400 PowerTags (RC 102 400)	**6AV6381-2BT07-4AX0**
• 153 600 PowerTags (RC 153 600)	**6AV6381-2BU07-4AX0**
• 262 144 PowerTags (RC 262 144)	**6AV6381-2BV07-4AX0**
As download	
• WinCC RC Client	**6AV6381-2CB07-4AH0**
• 128 PowerTags (RC 128)	**6AV6381-2BM07-4AH0**
• 512 PowerTags (RC 512)	**6AV6381-2BN07-4AH0**
• 2 048 PowerTags (RC 2 048)	**6AV6381-2BP07-4AH0**
• 8 192 PowerTags (RC 8 192)	**6AV6381-2BS07-4AH0**
• 65 536 PowerTags (RC 65 536)	**6AV6381-2BQ07-4AH0**
• 102 400 PowerTags (RC 102 400)	**6AV6381-2BT07-4AH0**
• 153 600 PowerTags (RC 153 600)	**6AV6381-2BU07-4AH0**
• 262 144 PowerTags (RC 262 144)	**6AV6381-2BV07-4AH0**

	Article No.
V7.4 SP1 ASIA	
Runtime Packages on DVD	
Incl. 512 archive tags each; language/script versions: en, zh-CN, zh-TW, ko, ja; with license for	
• WinCC RT Client	**6AV6381-2CA07-4AV0**
• 128 PowerTags (RT 128)	**6AV6381-2BC07-4AV0**
• 512 PowerTags (RT 512)	**6AV6381-2BD07-4AV0**
• 2 048 PowerTags (RT 2 048)	**6AV6381-2BE07-4AV0**
• 8 192 PowerTags (RT 8 192)	**6AV6381-2BH07-4AV0**
• 65 536 PowerTags (RT 65 536)	**6AV6381-2BF07-4AV0**
• 102 400 PowerTags (RT 102 400)	**6AV6381-2BJ07-4AV0**
• 153 600 PowerTags (RT 153 600)	**6AV6381-2BK07-4AV0**
• 262 144 PowerTags (RT 262 144)	**6AV6381-2BL07-4AV0**
Complete packages on DVD	
Language versions: en, zh-CN, zh-TW, ko, ja; with license for	
• WinCC RC Client	**6AV6381-2CB07-4AV0**
• 128 PowerTags (RC 128)	**6AV6381-2BM07-4AV0**
• 512 PowerTags (RC 512)	**6AV6381-2BN07-4AV0**
• 2 048 PowerTags (RC 2 048)	**6AV6381-2BP07-4AV0**
• 8 192 PowerTags (RC 8 192)	**6AV6381-2BS07-4AV0**
• 65 536 PowerTags (RC 65 536)	**6AV6381-2BQ07-4AV0**
• 102 400 PowerTags (RC 102 400)	**6AV6381-2BT07-4AV0**
• 153 600 PowerTags (RC 153 600)	**6AV6381-2BU07-4AV0**
• 262 144 PowerTags (RC 262 144)	**6AV6381-2BV07-4AV0**
V7.4 SP1 PowerPacks	
For upgrading from:	
Runtime Packages	
• 128 to 512 PowerTags	**6AV6371-2BD07-4AX0**
• 512 to 2 048 PowerTags	**6AV6371-2BG07-4AX0**
• 2 048 to 8 192 PowerTags	**6AV6371-2BM07-4AX0**
• 8 192 to 65 536 PowerTags	**6AV6371-2BN07-4AX0**
• 65 536 to 102 400 PowerTags	**6AV6371-2BP07-4AX0**
• 102 400 to 153 600 PowerTags	**6AV6371-2BQ07-4AX0**
• 153 600 to 262 144 PowerTags	**6AV6371-2BR07-4AX0**
As download	
• 128 to 512 PowerTags	**6AV6371-2BD07-4AJ0**
• 512 to 2 048 PowerTags	**6AV6371-2BG07-4AJ0**
• 2 048 to 8 192 PowerTags	**6AV6371-2BM07-4AJ0**
• 8 192 to 65 536 PowerTags	**6AV6371-2BN07-4AJ0**
• 65 536 to 102 400 PowerTags	**6AV6371-2BP07-4AJ0**
• 102 400 to 153 600 PowerTags	**6AV6371-2BQ07-4AJ0**
• 153 600 to 262 144 PowerTags	**6AV6371-2BR07-4AJ0**
Complete packages	
• 128 to 512 PowerTags	**6AV6371-2BD17-4AX0**
• 512 to 2 048 PowerTags	**6AV6371-2BG17-4AX0**
• 2 048 to 8 192 PowerTags	**6AV6371-2BM17-4AX0**
• 8 192 to 65 536 PowerTags	**6AV6371-2BN17-4AX0**
• 65 536 to 102 400 PowerTags	**6AV6371-2BP17-4AX0**
• 102 400 to 153 600 PowerTags	**6AV6371-2BQ17-4AX0**
• 153 600 to 262 144 PowerTags	**6AV6371-2BR17-4AX0**
As download	
• 128 to 512 PowerTags	**6AV6371-2BD17-4AJ0**
• 512 to 2 048 PowerTags	**6AV6371-2BG17-4AJ0**
• 2 048 to 8 192 PowerTags	**6AV6371-2BM17-4AJ0**
• 8 192 to 65 536 PowerTags	**6AV6371-2BN17-4AJ0**
• 65 536 to 102 400 PowerTags	**6AV6371-2BP17-4AJ0**
• 102 400 to 153 600 PowerTags	**6AV6371-2BQ17-4AJ0**
• 153 600 to 262 144 PowerTags	**6AV6371-2BR17-4AJ0**

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Ordering data	Article No.
V7.4 SP1 archives	
• 1 500 archive tags (countable)	**6AV6371-1DQ17-4AX0**
• 5 000 archive tags (countable)	**6AV6371-1DQ17-4BX0**
• 10 000 archive tags (countable)	**6AV6371-1DQ17-4CX0**
• 30 000 archive tags (countable)	**6AV6371-1DQ17-4EX0**
As download	
• 1 500 archive tags (countable)	**6AV6371-1HQ17-4AX0**
• 5 000 archive tags (countable)	**6AV6371-1HQ17-4BX0**
• 10 000 archive tags (countable)	**6AV6371-1HQ17-4CX0**
• 30 000 archive tags (countable)	**6AV6371-1HQ17-4EX0**
SIMATIC WinCC Upgrades/ Software Update Service	
SIMATIC WinCC V7.4 SP1 Upgrade [1]	
For upgrading the RT version	
• From V7.X to V7.4 SP1	**6AV6381-2AA07-4AX3**
• From V7.X ASIA to V7.4 SP1 ASIA [2]	**6AV6381-2AA07-4AV3**
As download	
• From V7.X to V7.4 SP1	**6AV6381-2AA07-4AK3**
For upgrading the RC version	
• From V7.X to V7.4 SP1	**6AV6381-2AB07-4AX3**
• From V7.X ASIA to V7.4 SP1 ASIA [2]	**6AV6381-2AB07-4AV3**
As download	
• From V7.X to V7.4 SP1	**6AV6381-2AB07-4AK3**
For upgrading the Client RT version	
• From V7.X to V7.4 SP1	**6AV6381-2CA07-4AX3**
• From V7.X ASIA to V7.4 SP1 ASIA	**6AV6381-2CA07-4AV3**
As download	
• From V7.X to V7.4 SP1	**6AV6381-2CA07-4AK3**
For upgrading the Client RC version	
• From V7.X to V7.4 SP1	**6AV6381-2CB07-4AX3**
• From V7.X ASIA to V7.4 SP1 ASIA	**6AV6381-2CB07-4AK3**
As download	
• From V7.X to V7.4 SP1	**6AV6381-2CB07-4AV3**
SIMATIC WinCC Software Update Service (SUS) [3] [4] [5]	
SIMATIC WinCC V7 Update	
Software Update Service for WinCC basic software and options:	
• 1 license	**6AV6381-1AA00-0AX5**
• 3 licenses	**6AV6381-1AA00-0BX5**
• 10 licenses	**6AV6381-1AA00-0CX5**
As download	
• 1 license	**6AV6381-1KA00-0AX5**
• 3 licenses	**6AV6381-1KA00-0BX5**
• 10 licenses	**6AV6381-1KA00-0CX5**

1) According to licensing provisions, 1 upgrade package must be ordered for each WinCC station

2) Upgrading from V7.X RT/RC ASIA is carried out using the "respective non-ASIA Package"

3) The Software Update Service is valid for 1 year. The contract is automatically extended by 1 more year unless canceled 3 months prior to expiration. According to licensing provisions, 1 Software Update Service must be ordered for each WinCC station.

4) Requires the current software version

5) SUS is available as download

SIMATIC WinCC V7.5 SP1 communication

	Article No.
Communication via Industrial Ethernet/PROFIBUS	
CP 1612 A2 PCI card (32-bit) for connection of a PG/PC to Industrial Ethernet (10/100/1 000 Mbps) with RJ45 connection via SOFTNET S7 and SOFTNET PG.	**6GK1161-2AA01**
SOFTNET-IE S7 Version 16 Software for S7- and S5-compatible communication incl. OPC Server, PG/OP communication and NCM PC; up to 64 connections; Single License for one installation of runtime software, software and electronic manual on CD-ROM; license key on USB flash drive, Class A. For CP 1612 A2 English/German	
• Single License for 1 installation	**6GK1704-1CW16-0AA0**
• Upgrade package for SIMATIC NET Edition 2006 or higher	**6GK1704-1CW00-3AE0**
• Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005	**6GK1704-1CW00-3AE1**
SOFTNET-IE S7 Lean Version 16 (license included in scope of supply of WinCC V7.5 SP2) Software for S7 and S5-compatible communication including OPC Server, PG/OP communication and NCM PC; up to 8 connections; Single License for one installation of runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A For CP 1612 A2, English/German	
• Single License for 1 installation	**6GK1704-1LW16-0AA0**
• Upgrade package for SIMATIC NET Edition 2006 or higher	**6GK1704-1LW00-3AE0**
• Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005	**6GK1704-1LW00-3AE1**
CP 1623 PCI Express X1 card (32-bit) for connection of PG/PC to Industrial Ethernet (communications software must be ordered separately)	**6GK1162-3AA00**
HARDNET-IE S7 V16 Software for S7- and S5-compatible communication incl. OPC Server, PG/OP communication and NCM PC, Single License for one installation of runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A for CP 1613 A2, CP 1623, CP 1628; English/German	
• Single License for 1 installation	**6GK1716-1CB16-0AA0**
• Upgrade package for SIMATIC NET Edition 2006 or higher	**6GK1716-1CB00-3AE0**
• Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005	**6GK1716-1CB00-3AE1**

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Ordering data	Article No.
SIMATIC WinCC V7.5 SP2 Communication via PROFIBUS	
CP 5612 PCI card (32-bit) for connecting a PG/PC to PROFIBUS (communications software included in WinCC Basic Package)	**6GK1561-2AA00**
CP 5622 PCI Express X1 card (32-bit) for connecting a PG/PC to PROFIBUS (communications software included in WinCC Basic Package)	**6GK1562-2AA00**
CP 5711 USB adapter for connecting a PG/PC to PROFIBUS or MPI (communications software included in WinCC Basic Package)	**6GK1571-1AA00**
CP 5613 A3 PCI card (32-bit) for connecting a PC to PROFIBUS (communications software must be ordered separately)	**6GK1561-3AA02**
CP 5614 A3 PCI card (32-bit) for connecting a PC to PROFIBUS (communications software must be ordered separately)	**6GK1561-4AA02**
CP 5623 PCI Express X1 card (32-bit) for connection of PG/PC to Industrial Ethernet (communications software must be ordered separately)	**6GK1562-3AA00**
HARDNET PB S7 Software for S7 communication incl. PG/OP communication, FDL, OPC Server, runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A for CP 5613 A3, CP 5614 A3, CP 5623 English/German	
• Single License for 1 installation	**6GK1713-5CB16-0AA0**
• Upgrade package for SIMATIC NET Edition 2006 or higher	**6GK1713-5CB00-3AE0**
• Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005	**6GK1713-5CB00-3AE1**
HARDNET PB DP Software for DP protocol incl. PG/OP communication, FDL, DP OPC Server, runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A, for CP 5613 A3, CP 5614 A3, CP 5623; English/German	
• Single License for 1 installation	**6GK1713-5DB16-0AA0**
• Upgrade package for SIMATIC NET Edition 2006 or higher	**6GK1713-5DB00-3AE0**
• Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005	**6GK1713-5DB00-3AE1**

SIMATIC WinCC V7.4 SP1 communication

	Article No.
Communication via Industrial Ethernet/PROFIBUS	
CP 1612 A2 PCI card (32-bit) for connection of a PG/PC to Industrial Ethernet (10/100/1 000 Mbps) with RJ45 connection via SOFTNET S7 and SOFTNET PG. Windows 8.1 and Windows 2012 Server are not supported.	**6GK1161-2AA01**
SOFTNET-IE S7 Version 14 SP1 SOFTNET-IE S7 V14 software for S7, S5-comp. communication, OPC; PG/OP communication, configuration software, up to 64 conn.; Floating License; runtime software, software and electr. manual; on DVD; license key on USB flash drive; Class A; 2 languages (en, de); for 32/64-bit: Windows 7 SP1 Prof./Ultimate, 64-bit: Windows 8.1Pro; Windows 10 Server 2008 R2 SP1, 2012 R2CP 1612 (no Win 8.1, Win 10 Server 2012, R2)	
• Single License for 1 installation	**6GK1704-1CW14-0AA0**
• Upgrade package for SIMATIC NET Edition 2006 or higher	**6GK1704-1CW00-3AE0**
• Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005	**6GK1704-1CW00-3AE1**
SOFTNET-IE S7 Lean Version V14 SP1 (license included in scope of supply of WinCC V7.4 SP1) SIMATIC NET SOFTNET-IE S7 LEAN V14; SW f. S7, S5-comp. comm., OPC PG/OP comm., config. SW, up to 8 conn. Floating License; Runtime Software, SW and electr. manual on DVD; license key on USB flash drive; Class A; 2 languages (en, de); for 32/64-bit: Win 7 SP1 Prof/Ult, 64-bit: Win 8.1 PRO; Windows 10 Server 2008 R2 SP1, 2012 R2; CP 1612 (no Win 8.1, Win 10, Server 2012, R2)	
• Single License for 1 installation	**6GK1704-1LW14-0AA0**
• Upgrade package for SIMATIC NET Edition 2006 or higher	**6GK1704-1LW00-3AE0**
• Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005	**6GK1704-1LW00-3AE1**
CP 1623 PCI Express X1 card (32-bit) for connection of PG/PC to Industrial Ethernet (communications software must be ordered separately)	**6GK1162-3AA00**
CP 1628 PCI Express X1 card (32-bit) for connecting a PG/PC to Industrial Ethernet (communications software must be ordered separately)	**6GK1162-8AA00**

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Ordering data

	Article No.
HARDNET IE S7 V14	
Software for S7-compatible and S5-compatible communication incl. OPC Server, PG/OP communication and NCM PC, Single License for one installation of runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A for CP 1613 A2, CP 1623, CP 1628; English/German	
• Single License for 1 installation	**6GK1716-1CB14-0AA0**
• Upgrade package for SIMATIC NET Edition 2006 or higher	**6GK1716-1CB00-3AE0**
• Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005	**6GK1716-1CB00-3AE1**
Communication via PROFIBUS	
CP 5612	**6GK1561-2AA00**
PCI card (32-bit) for connecting a PG/PC to PROFIBUS (communications software included in WinCC Basic Package)	
CP 5622	**6GK1562-2AA00**
PCI Express X1 card (32-bit) for connecting a PG/PC to PROFIBUS (communications software included in WinCC Basic Package)	
CP 5711	**6GK1571-1AA00**
USB adapter for connecting a PG/PC to PROFIBUS or MPI (communications software included in WinCC Basic Package)	
CP 5613 A3	**6GK1561-3AA02**
PCI card (32-bit) for connecting a PC to PROFIBUS (communications software must be ordered separately)	
CP 5614 A3	**6GK1561-4AA02**
PCI card (32-bit) for connecting a PC to PROFIBUS (communications software must be ordered separately)	
CP 5623	**6GK1562-3AA00**
PCI Express X1 card (32-bit) for connection of PG/PC to Industrial Ethernet (communications software must be ordered separately)	

	Article No.
HARDNET PB S7 V14	
Software for S7 communication incl. PG/OP communication, FDL, OPC Server, runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A for CP 5613 A3, CP 5614 A3, CP 5623 English/German	
• Single License for 1 installation	**6GK1713-5DB14-0AA0**
• Upgrade package for SIMATIC NET Edition 2006 or higher	**6GK1713-5CB00-3AE0**
• Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005	**6GK1713-5CB00-3AE1**
HARDNET PB DP V14	
Software for DP protocol incl. PG/OP communication, FDL, DP OPC Server, runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A, for CP 5613 A3, CP 5614 A3, CP 5623; English/German	
• Single License for 1 installation	**6GK1713-5DB14-0AA0**
• Upgrade package for SIMATIC NET Edition 2006 or higher	**6GK1713-5DB00-3AE0**
• Upgrade package for SIMATIC NET V6.0, V6.1, V6.2 and Edition 2005	**6GK1713-5DB00-3AE1**
FMS 5613 V7.1 SP6 (Edition 2008 + SP6)	
Software for FMS protocol incl. PG/OP communication, FDL, OPC Server, runtime software, software and electronic manual on CD-ROM, license key on USB flash drive, Class A, for CP 5613 A2, CP 5614 A2, CP 5623; English/German	
• Single License for 1 installation	**6GK1713-5FB71-3AA0**
• Upgrade package for SIMATIC NET Edition 2006 or higher	**6GK1713-5FB00-3AE0**

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Technical specifications

Type	SIMATIC WinCC V7.5 SP2
PC hardware requirements	
Processor type	
• Minimum	Single-user station/server: Dual-core; 2.5 GHz
	Client: Dual-core; 2.5 GHz
• Recommended	Single-user station/server: Multi-core; 3.5 GHz
	Client: Multi-core; 3 GHz [2]
Work memory RAM	
• Minimum	Windows 10 (64-bit) • Single-user station/server: 4 GB • Client: 2 GB
	Windows Server 2012 R2 / Windows Server 2016 / Windows Server 2019 Server: 4 GB
• Recommended	Windows 10 (64-bit) • Single-user station/server: 4 GB • Client: 4 GB
	Windows Server 2012 R2 / Windows Server 2016 / Windows Server 2019 Server: 8 GB
Graphics resolution	
• Minimum	800 x 600
• Recommended	1 920 x 1 080
Hard disk	
• Minimum	Single-user station/server: 80 GB
	Client: 20 GB
	WebClient/DataMonitor Client: 5 GB
• Recommended	Single-user station/server: 160 GB
	Client: 40 GB
	WebClient/DataMonitor Client: 10 GB
DVD-ROM/USB interface	For software installation and license transfer

Type	SIMATIC WinCC V7.5 SP2
Functionality/quantity structure	
Number of messages	150 000
• Message text (number of characters)	10 x 256
• Message archive	System-limited [1]
• Process values per message	10
• Constant load of messages, max.	Server/single-user station: 10/s
• Message burst, max.	Server/single-user station: 2 000/10 s every 5 min
Archive	
• Archive data points	Max. 80 000 per server [2]
• Archive types	Short-term archive with and without long-term archiving
• Data storage format	Microsoft SQL Server 2016 SP2
• Measured values per second	Server/single-user station: up to 30 000/s [4]
User archive	
• Total archives	No limit
• Fields per user archive	500 (maximum number of 1 000 000 fields)
• Data records per user archive	10 000
• User archive views	No limit
Graphics system	
• Number of screens	System-limited [1]
• Number of objects per screen	System-limited [1]
• Number of controllable fields per screen	System-limited [1]
PowerTags	256 K [3]
Trends	
• Trend views per picture	25
• Trends per trend view	80
User administration	
• User groups	128
• Number of users	128
• Authorization groups	999
Configuration languages	5 European (en, de, fr, it, es), 4 Asian (zh-CN, zh-TW, ko, ja)
Protocols	
• Message sequence reports (simultaneously)	1 per server/single-user station
• Message archive reports (simultaneously)	3
• User reports	System-limited [1]
• Report lines per group	66
• Tags per report	300 [5]
Multi-user system	
• Server	18
• Uni Client (without its own project)	Max. 64
• Multi-Client (with its own project)	Max. 50

[1] Dependent on available storage space

[2] Dependent on number of licensed archive tags (ArchiveTags)

[3] Dependent on the number of licensed PowerTags

[4] Dependent on system performance, especially of hard disk (SSD/RAID recommended)

[5] Number of variables per report depends on process communication performance

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More information

WinCC language versions

SIMATIC WinCC is also offered in simplified Chinese, traditional Chinese, Korean and Japanese especially for Asian markets. These WinCC versions are intended for machine manufacturers, plant constructors and exporters who supply the regions of China, Taiwan, Korea and Japan.

WinCC ASIA includes all familiar WinCC functions and offers in addition the configuration user interface in the respective national language and English. The online help is available in simplified Chinese, traditional Chinese, Korean, Japanese and English. A Chinese, Korean, Japanese or multilingual Windows operating system is required for operation.

The runtime licenses are language-neutral. The English handling program (Automation License Manager – ALM) is executable under the Chinese, Korean and Japanese Windows versions.

In order to use the Asian languages in WinCC, an Asia hardware dongle is required.

More information is available on the Internet at:

http://www.siemens.com/wincc-v7

IPC packages

There are attractive packages available with SIMATIC Rack PCs (IPC347, IPC547, IPC647, IPC847), SIMATIC Box PCs (IPC227, IPC427, IPC627, IPC827) and SIMATIC Panel PCs (IPC277, IPC477, IPC677) for a completely matched software and hardware package. These IPCs can be configured in different ways for use as single station, server or client.

http://www.siemens.com/scada-ipc

Downloads:

In most cases, the products can also be obtained as software downloads.

You can find more information on the Software Update Service, license forms, Online Software Delivery and handling your SW licenses with the Automation License Manager here:

http://www.siemens.com/simatic-licenses

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Overview

The universal WinCC basic software is the basis for modular expansions. These functional expansions can be obtained in the form of WinCC options and as WinCC Premium add-ons.

WinCC options are created by WinCC Development and are Siemens Industry Automation products. You can obtain support from our Advisory Services and via the central hotline.

Options for scalable plant configurations

- WinCC/Server
  For configuring a powerful client/server system
- WinCC/Redundancy
  For increasing system availability through redundancy
- WinCC Web Navigator
  For operator control and monitoring of plants via the Internet, in-house intranet or LAN
- WinCC WebUX
  For operator control and monitoring of plants, independent of platforms and browsers, via the Internet, in-house intranet or LAN
- SIMATIC Process Historian
  Central, scalable long-term archive for the whole plant
- SIMATIC TeleControl
  For connecting outlying stations (remote terminal units = RTUs) via telecontrol protocols in a WinCC SCADA system

Options for greater efficiency in operations management

- WinCC/UserArchives
  For managing data records in user archives
- WinCC/DataMonitor
  For displaying and evaluating current process states and historical data on office PCs with standard tools
- WinCC/Performance Monitor
  For analysis and optimization of production on the basis of individual performance indicators
- WinCC/SES (Sequence Execution System)
  Scalable step sequence control for sequence-based processes
- WinCC/Audit
  - Change management
  - Generation of audit trails for engineering and runtime
- WinCC/Calendar Scheduler
  Calendar-based planning of events
- WinCC/ChangeControl
  - Change and version management
  - Generation of audit trails for engineering
- WinCC/Event Notifier
  For sending of notifications triggered by specific events in the WinCC message system
- SIMATIC Information Server
  Web-based, integrated reporting from production to management, based on archived data

Options for openness and individual system expansions

- WinCC/Connectivity Pack
  Access to WinCC logs via OPC HDA, OPC A&E, OPC XML Server, OPC UA Server/Client and WinCC OLE DB / OLE DB
- WinCC/Connectivity Station
  Gateway to WinCC server data via OPC HDA, OPC A&E, OPC XML server, OPC UA Server/Client, and WinCC OLE DB / OLE DB from independent computers
- WinCC IndustrialDataBridge
  Configurable connection to databases and IT systems
- WinCC/ODK (Open Development Kit)
  For the use of open programming interfaces and the generation of customer-specific WinCC ActiveX objects

More information

SIMATIC WinCC Options

http://www.siemens.com/simatic-wincc-options

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Overview

SIMATIC TeleControl

SIMATIC TeleControl for WinCC supports connection to outlying stations (Remote Terminal Units = RTUs) via telecontrol protocols.

- SIMATIC TeleControl V7.4 has been released for use with WinCC V7.4.
- For compatibility with WinCC 7.4 SP1, use TeleControl V7.4 update 1
- SIMATIC TeleControl V7.4 supports the combination with WinCC as a Windows service

Licenses

- SIMATIC TeleControl for WinCC consists of an engineering and a runtime component
- The engineering software is supplied with a floating license. The floating license allows installation of the software on any number of computers. This means one user per license can use the software independently of the computer used or a specific workstation.
- The runtime software is supplied as a single license for one server and allows a specific number of stations to be connected depending on the license.

You can find more information on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

Benefits

SIMATIC TeleControl for WinCC V7.4 can not only integrate newly configured RTUs, but it can also integrate units which already exist in outlying areas by means of DNP3 or IEC 870-5-101/104 drivers. For communication with the outstations, SIMATIC TeleControl for WinCC V7.4 uses the SINAUT ST7 and DNP3 protocols (both via serial and TCP/IP communication connections) as well as IEC 870-5-101 (serial) and IEC 870-5-104 (Ethernet TCP/IP).

The serial RTU link is possible via the following components, which can be connected directly via WinCC (single station or server):

- SINAUT TIM communication modules (SINAUT ST7 telecontrol protocol)
- TCP/IP serial converter (telecontrol protocols DNP3, IEC 870-5-101)

Equipment from MOXA or Lantronix, for example, can be used as TCP/IP serial converters.

By means of Ethernet TCP/IP, the RTUs can be connected directly or via TCP/IP WAN routers to the SIMATIC WinCC system bus (SINAUT ST7, DNP3, IEC 870-5-104 telecontrol protocols). When using the SINAUT ST7 telecontrol protocol, the SINAUT TIM communication module can be used in addition to the TCP/IP WAN router or as an alternative.

Application

Telecontrol communication over the wide area network is largely determined by the communication infrastructure which already exists. Various transmission media such as dedicated line, analog or digital telephone networks, wireless networks (GSM or private), DSL or GPRS can also be combined with each other.

SINAUT ST7 telecontrol protocol

Detailed information for implementing telecontrol applications with the SINAUT ST 7 telecontrol protocol via the Industry Mall.

IEC 60870-5-101/104 telecontrol protocols

More detailed information for implementing telecontrol applications with the IEC 60870-5-101/104 telecontrol protocols via the Industry Mall.

DNP3 telecontrol protocol

SIMATIC TeleControl for WinCC V7.4 also supports the DNP3 telecontrol protocol. Widely distributed outstations (RTUs) can be controlled and monitored with the DNP3 telecontrol protocol via serial or Ethernet TCP/IP communication links by means of the telecontrol center in SIMATIC WinCC.

The control center integrated with SIMATIC TeleControl into the SCADA system is the master during telecontrol communication. The slaves are represented by the remote stations.
SIMATIC S7-1200, SIMATIC S7-1500, SIMATIC Distributed Controllers ET 200SP, SIMATIC S7-300/S7-300F and S7-400/S7-400F/S7-400H/S7-400FH controllers as well as RTU3000C and third-party RTUs can be used as remote stations.

Further hardware and software components round off the range of products:

- TIM communication modules
- TCP/IP converters – serial and MD modem modules
- Mobile radio components (GSM/GPRS)
- TCP/IP routers and switches
- SCALANCE S security modules
- Dedicated line accessories
- Cables
- Engineering package for configuration of DNP3 data objects, stations, networks and connections as well as for diagnostics

In order to implement telecontrol networks, basic topologies including point-to-point, multi-point, star and ring can be configured using classic or TCP/IP-based media. These can be combined flexibly depending on the existing infrastructure.

Classic WAN media:

- Dedicated line via modem, e.g. SINAUT MD2
- Private radio networks
- Analog telephone network
- Digital ISDN network
- GSM, UMTS, LTE mobile network

TCP/IP-based WAN media:

- Ethernet networks, e.g. SCALANCE X with fiber-optic cables
- Industrial Wireless LAN with SCALANCE W
- Public networks and the Internet using DSL and/or GPRS

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Function

Special characteristics of DNP3 communication

- Change-driven data transmission
  - Change-driven transmission of process data between RTU and control center
  - Signaling of RTU, control center or connection failure
  - Automatic data updating for all communication partners involved following troubleshooting and following the startup of the RTU or control center
- Chronological processing of process data
  - Time tagging of all data frames at the place of origin allows process data to be archived by the process control system in the correct chronological order
  - The time of the DNP3 stations in the WAN can be synchronized via SIMATIC WinCC (including summertime/ wintertime switchover)
- Local data storage
  - The TIM communication module can temporarily store (for several hours or even days) message frames should the connection or the communication partner fail
  - Intermediate storage of message frames of lower priority in the case of priority-controlled data transmission (with dial-up networks or quantity-dependent data transmission costs)

Operating modes

The DNP3 telecontrol protocol supports the following operating modes:

- Polling
- Polling with time slot procedure
- Multi-master polling with time slot procedure
- Spontaneous mode in dial-up networks
- Spontaneous mode in the TCP/IP-based WAN

Integration

Integration of SIMATIC WinCC/TeleControl for WinCC V7.4 into the WinCC SCADA system offers particular advantages for the sectors water/wastewater, as well as oil and gas, especially in the case of the following types of plant:

- Freshwater treatment and distribution
- Wastewater treatment plants
- Oil and gas pipelines and water pipes
- Oil and gas drilling fields and the associated treatment plants

In these types of plant, remote outstations such as pumping stations, valve stations or automated stations for wellheads must be integrated.

Through the support of communication protocols for RTUs such as SINAUT ST7, SIMATIC WinCC/TeleControl for WinCC V7.4 supports the following advanced communication concepts:

- Reduction in the transferred data volume by means of event-controlled communication mechanisms for alarm and measured value information.
- Time synchronization of RTUs and correct time stamping of all data in the RTU.
- Tolerance of lower bandwidth, high latency or lack of reliability of communication lines
- Prevention of data loss due to communications failure through data backup in the RTU
- Support of communication media with serial interface (dedicated lines, dial-up connections over analog telephone lines and ISDN lines), various radio devices (standard, spread spectrum modulation), microwave and GSM
- Support for TCP/IP-based WANs (Wide Area Networks) such as DSL, GPRS or Ethernet radio networks
- Support for redundant communication connections
- Expanded communication diagnostics functions for RTU communication connection
- Remote programming of RTUs
- Support for different communication topologies – Point-to-point, multidrop (multistation mode) and hierarchic network structures
- High quality server redundancy scheme without data loss in the case of server failure

Through the support of communication protocols for RTUs such as IEC 60870-5 and DNP3, SIMATIC WinCC/TeleControl for WinCC V7.4 supports the following advanced communication concepts:

- Reduction in the transferred data volume by means of event-controlled communication mechanisms for alarm and measured value information.
- Time synchronization of RTUs and correct time stamping of all data in the RTU.
- Tolerance of lower bandwidth, high latency or lack of reliability of communication lines
- Prevention of data loss due to communications failure through data backup in the RTU (not all non-Siemens RTUs support this)
- Support of communication media with serial interface (dedicated lines, dial-up connections over analog telephone lines and ISDN lines), various radio devices (standard, spread spectrum modulation), microwave and GSM
- Support for TCP/IP-based WANs (Wide Area Networks) such as DSL, GPRS or Ethernet radio networks
- Support for redundant communication connections
- Expanded communication diagnostics functions for RTU communication connection
- Remote programming of RTUs
- Support for different communication topologies – Point-to-point, multidrop (multistation mode) and hierarchic network structures
- High quality server redundancy scheme without data loss in the case of server failure

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Integration

Outstations/remote terminal units

SIMATIC WinCC/TeleControl for WinCC V7.4 supports the following preferred outstations for local distributed automation:

- Controller integrated into ET 200S (IEC 870-5-101/104 telecontrol protocols); for cost-sensitive applications, up to approx. 30 I/O signals or approx. 200 data points
- Controller integrated into RTU3030C (DNP3, IEC 60870-5-104 telecontrol protocols); for very compact and energy-saving applications, up to approx. 16 I/O signals or approx. 150 data points
- S7-1200/S7-1200F Controller (DNP3, IEC 60870-5-104 telecontrol protocols); up to 150 I/O signals or approx. 2 000 data points
- S7-1500 Controller (IEC 60870-5-101/104 telecontrol protocols); up to 250 I/O signals or approx. 4 000 data points
- S7-300/S7-300F Controller (SINAUT ST7, DNP3, IEC 60870-5-101/104 telecontrol protocols); for extremely flexible configuration, up to 100 I/O signals or approx. 2 000 data points
- S7-400/S7-400F Controller (SINAUT ST7, DNP3, IEC 60870-5-101/104 telecontrol protocols); up to 500 I/O signals or approx. 5 000 data points
- Redundant S7-400H/S7-400FH Controller (DNP3 and IEC 60870-5-101/104 telecontrol protocols); up to 500 I/O signals or approx. 5 000 data points
- Third-party station with the IEC 60870-5-101/104 and DNP3 telecontrol protocols (depending on type of station)
- ET 200SP / ET 200SP F Distributed Controllers (telecontrol protocols DNP3, IEC 60870-5-104); extremely flexible configuration options; number of I/O signals / data points depend on the CPU type

The following table provides an overview of the current options for connecting to these outstations:

Spectrum of outstations and integration versions

Telecontrol protocol		**SINAUT ST 7**		**DNP3**		**IEC 60870-5-101**	**IEC 60870-5-104**
Type of communication		Serial	Ethernet TCP/IP	Serial	Ethernet TCP/IP	Serial	Ethernet TCP/IP
Interface		TIM 4R-IE	TCP/IP WAN router or/and TIM 4R-IE	TCP/IP serial converter	TCP/IP WAN router	TCP/IP serial converter	TCP/IP WAN router
RTU/ interface	ET 200S with integr. CPU (corresponds to S7-314)	-	-	-	-	IM 151-7 CPU or IM 151-8 PN/DP CPU as well as 1 SI module + SIPLUS RIC library	IM 151-8 PN/DP CPU + SIPLUS RIC library
	S7-1200/S7-1200F	-	CP 1243-8 IRC	-	CP 1243-1	-	CP 1243 – 1 IEC
	ET 200SP with integr. CPU CPU1510SP(F)-1PN CPU1512SP(F)-1PN	-	CP 1542SP-1 IRC	-	CP 1542SP-1 IRC	-	CP 1542SP-1 IRC
	S7-1500	TIM 1531 IRC	TIM 1531 IRC	-	-	CM PtP + SIPLUS RIC Library	SIPLUS RIC Library
	RTU3000C	-	UMTS modem integrated or external WAN router	-	UMTS modem integrated or external WAN router	-	UMTS modem integrated or external WAN router
	S7-300/S7-300F	TIM 3V-IE	TIM 3V-IE	TIM 3V-IE DNP3	TIM 3V-IE DNP3	CP 341 + SIPLUS RIC library	CP 343 + IEC on S7 or integr. PN interface + SIPLUS RIC Library
	S7-400/S7-400F	TIM 4R-IE	TIM 4R-IE	TIM 4R-IE DNP3	TIM 4R-IE DNP3	CP 441 + SIPLUS RIC library	CP 443 + SIPLUS RIC library or integrated PN interface + SIPLUS RIC library
	S7-400H/S7-400FH	-	-	TIM 4R-IE DNP3	TIM 4R-IE DNP3	ET 200M + 2 x CP 341 + SIPLUS RIC library	CP 443 + SIPLUS RIC library
	Third-party station	-	-	Depends on type of station		Depends on type of station	
Dial-up lines		•	-	•	-	-	-
Dedicated line and radio networks		•	•	•	•	•	•
Master-slave		•	•	•	•	•	•
Peer-to-peer		•	•	-	-	•	•
Mesh networks		•	•	•	•	•	•
Time tagging in RTU		•	•	•	•	•	•
RTU time synchronization		•	•	•	•	•	•
Data buffering in RTU		•	•	•	•	•	•
Routing with SIMATIC PDM		•	•	-	-	-	•
International standard		-	-	•	•	•	•

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SIMATIC TeleControl

Ordering data	Article No.
SIMATIC TeleControl for WinCC	
SIMATIC TeleControl 7.4 for WinCC Basic Engineering Software package with SIMATIC Telecontrol for WinCC 7.4 engineering software, floating license for 1 user; runs with Windows 7 Ultimate and Enterprise 32/64-bit, Windows 10 LTSB 2015 (64-bit), Windows Server 2008 R2 Standard 64-bit or Windows Server 2012 R2 Standard 64-bit, electronic documentation on CD/DVD, two languages (English, German) Type of delivery: License key memory stick, certificate of license including terms and conditions, SIMATIC WinCC Data Medium Package V7.4 and CD "WinCC TeleControl Option V7.4"	**6DL5000-7AA47-0XA5**
SIMATIC TeleControl V7.4 for WinCC Server Runtime Software package with SIMATIC Telecontrol for WinCC 7.4 engineering software, single license for 1 user; runs with Windows 7 Ultimate and Enterprise 32/64-bit, Windows 10 LTSB 2015 (64-bit), Windows Server 2008 R2 Standard 64-bit or Windows Server 2012 R2 Standard 64-bit, electronic documentation on CD/DVD, two languages (English, German) Type of delivery: License key memory stick, certificate of license including terms and conditions, SIMATIC WinCC Data Medium Package V7.4 and CD "WinCC TeleControl Option V7.4"	
• 6 stations	**6DL5002-7AA47-0XA0**
• 12 stations	**6DL5002-7AB47-0XA0**
• 256 stations	**6DL5002-7AE47-0XA0**
• unlimited	**6DL5002-7AF47-0XA0**
Upgrades	
SIMATIC TeleControl for WinCC, upgrade V7.0 to V7.4 Upgrade package; single license for 1 installation, E-SW and documentation on DVD; license key on USB flash drive, Class A; two languages (English, German). Executable under Windows 7 Ult/Server 2008 R2/Server 2012 R2	**6DL5002-7AA47-0XE0**

	Article No.
Driver software for telecontrol protocols	
TeleControl SINAUT driver Runtime license for a WinCC stand-alone system or WinCC Server, single license for 1 installation. Requirement: SIMATIC TeleControl 7.4 software for WinCC Server Runtime (6, 12, 256 stations) Type of delivery: License key memory stick, certificate of license including terms and conditions	**6DL5101-8AX00-0XB0**
TeleControl DNP3 driver Runtime license for a WinCC stand-alone system or WinCC Server, single license for 1 installation. Requirement: SIMATIC TeleControl 7.4 software for WinCC Server Runtime (6, 12, 256 stations) Type of delivery: License key memory stick, certificate of license including terms and conditions	**6DL5101-8EX00-0XB0**
TeleControl IEC 870-5-101/-104 driver Runtime license for one WinCC Single Station or one WinCC Server, single license for 1 installation Requirement: SIMATIC TeleControl 7.4 software for WinCC Server Runtime (6, 12, 256 stations) Type of delivery: License key memory stick, certificate of license including terms and conditions	**6DL5101-8CX00-0XB0**

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More information

For an overview of the complete performance range on the Internet, visit:

Service & Support:

International:

https://support.industry.siemens.com/cs/?lc=en-DE

Technical Support (Hotline):

International:

https://support.industry.siemens.com/My/ww/en/requests

More information on telecontrol (RTUs):

International:

http://www.siemens.com/telecontrol

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Overview

WinCC/Audit & WinCC/ChangeControl

- **WinCC/ChangeControl** is used to **trace engineering changes** in a tamper-proof long-term Audit Trail database, called the Audit Trail for short. All engineering changes are automatically recorded in the Audit Trail. This provides a traceable record of every change that has been made, as well as enabling the causes to be deduced and the system downtimes to be minimized.
  To begin tracing at defined project statuses, a project version definition is provided that contains all data and files of a WinCC project version. The project version definition naturally provides the ability to reactivate earlier project versions. Document management is also provided, which manages and archives intermediate statuses for system graphics, reports or user files and stores change information of the user. The audit viewer with helpful filter functions enables the Audit Trail to be quickly and easily evaluated, exported or even printed out.
- **WinCC/Audit** includes the full functionality of **WinCC/ChangeControl** and is also used for **tracing all operations**. All operations are automatically recorded in the Audit Trail at RT.
- The WinCC/Audit or WinCC/ChangeControl options and SIMATIC Logon support users in the validation of their plants and meet the requirements according to FDA CFR 21 Part 11.

Licenses

WinCC Audit complete licenses include the runtime and configuration licenses (RC).
Licensing applies to one engineering station (configuration) and one operating station (runtime) for which an Audit Trail is to be generated.
An RC license also always includes a runtime (RT) license. Only one RT license is required for each additional operating station with Audit Trail.

Benefits

- Quick and easy traceability configuration
- Gap-free and automated recording of engineering changes and operator actions in an Audit Trail
- Reduction in plant downtimes thanks to fast analysis of the gap-free recorded Audit Trail information
- Logging of defined WinCC project status with all database information and files of the application
- Gap-free documentation of the project version definition procedures with version number, user and comments
- Complete tracing support by WinCC single and multi-station systems, single and multi-project solutions, Client/Server architecture
- Extensive reduction in engineering outlay in order to meet the requirements of FDA 21 CFR Part11 & EU 178/2002
- Compliance with the requirements of the Food and Drug Administration (FDA) for the food, beverages and tobacco industries

Design

WinCC/ChangeControl and WinCC/Audit consist of five components:

- The audit editor for configuration the Audit Trail content
- The project version definition for logging WinCC projects
- Document management for automatic archiving and versioning of WinCC plant mimics, scripts, reports, and project-specific documents, and the recording of the associated change information
- The audit viewer for visualizing, exporting and printing WinCC and WinCC flexible Audit Trails. The viewer is available as an executable program under Windows, as well as OCX with WinCC Runtime.
- The Audit Trail, which tracks all changes in respect of both engineering and plant operation in a separate SQL database. The Audit Trail can be set up as a central Audit Trail for a number of projects or even just for a single project.

WinCC/ChangeControl and WinCC/Audit support both single-user and multi-user systems, client/server architectures and even the WinCC redundancy system. No redundant Audit Trail is created however.

Function

WinCC/ChangeControl

WinCC/ChangeControl is a functional subset of WinCC/Audit. WinCC/ChangeControl is for tracing engineering changes in the engineering phase or in online operation. All change data is recorded in an Audit Trail.

There are two types of engineering changes:

- those that change the WinCC database or are executed through the WinCC Explorer, such as e.g. changes to tag management or creating a user group,

and those

- limited to changing files, the so-called document management.

The document management manages system images, scripts and log layouts and customer-specific documents and stores respective intermediate versions as backups. All of these documents or files are subject to a change process, i.e. documents can be booked out for processing, booked in for finalization and intermediate versions can be retrieved from backup storage with a rollback function.

The project version definition as a component of WinCC / ChangeControl archives WinCC projects and creates reproducible project statuses or defined start-time points for starting tracing. An Audit Trail is also provided with information on who has created which project version or which version has been reproduced or deleted.

Configuring the Audit Trail, the project version definition and the document management is simple, quick and comfortable.

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Function

The Audit Trail data is visualized from WinCC, as well as from WinCC flexible via the audit viewer, an executable program under Windows.

The data can also be evaluated with the audit viewer OCX in Runtime by WinCC however. Users select the desired view of the Audit Trail information via filters or selection criteria and can export the data to an Excel file or print it on a printer.

Audit Trail information is tamper-proof and can thus not be modified or deleted. An export function can be used to swap out the Audit Trail to an XML file or to archive it.

WinCC/Audit

WinCC/Audit has all of the functionality of WinCC/ChangeControl and is also used for tracing user operations in RT operation. Tracing can be used for determining who, when and what conditions the machine has undergone. In addition to recording operator activities, the Audit Trail also records the starting and modifying of recipes or user logs.

In addition, the user can perform activities of an individual nature at specific objects or events, such as pressing a function button, moving sliders and other actions, while using a so-called audit entry function to record these activities in the Audit Trail.

A WinCC/ChangeControl RC license or a WinCC/Audit RC license is required for configuring the Audit Trail. One RT license is required for each station (client/server) to be monitored. One RC license always includes one RT license.

Ordering data

	Article No.
WinCC/ChangeControl	
For the configuration of the Audit Trail incl. RT	
• WinCC V7.5 SP2	**6AV6371-1DV27-5AX0**
• WinCC V7.4 SP1	**6AV6371-1DV27-4AX0**
As download	
• WinCC V7.5 SP2	**6AV6371-1HV27-5AX0**
• WinCC V7.4 SP1	**6AV6371-1HV27-4AX0**
WinCC/Audit	
WinCC/Audit RC	
For the configuration of the Audit Trail incl. RT	
• WinCC V7.5 SP2	**6AV6371-1DV17-5AX0**
• WinCC V7.4 SP1	**6AV6371-1DV17-4AX0**
As download	
• WinCC V7.5 SP2	**6AV6371-1HV17-5AX0**
• WinCC V7.4 SP1	**6AV6371-1HV17-4AX0**
WinCC/Audit RT	
Creation of Audit Trails in RT	
• WinCC V7.5 SP2	**6AV6371-1DV07-5AX0**
• WinCC V7.4 SP1	**6AV6371-1DV07-4AX0**
As download	
• WinCC V7.5 SP2	**6AV6371-1HV07-5AX0**
• WinCC V7.4 SP1	**6AV6371-1HV07-4AX0**
Upgrades	
V7.4 to V7.5 SP2	
• For WinCC/Audit RT	**6AV6371-1DV07-5BX4**
• For WinCC/Audit RC or WinCC/ChangeControl	**6AV6371-1DV17-5BX4**
As download	
• WinCC/Audit RT	**6AV6371-1KV07-5BX4**
• For WinCC/Audit RC or WinCC/ChangeControl	**6AV6371-1KV17-5BX4**
V7.2/7.3 to V7.5 SP2	
• For WinCC/Audit RT	**6AV6371-1DV07-5BX3**
• For WinCC/Audit RC or WinCC/ChangeControl	**6AV6371-1DV17-5BX3**
As download	
• WinCC/Audit RT	**6AV6371-1KV07-5BX3**
• For WinCC/Audit RC or WinCC/ChangeControl	**6AV6371-1KV17-5BX3**
V7.x to V7.4 SP1	
• For WinCC/Audit RT	**6AV6371-1DV07-4BX3**
• For WinCC/Audit RC or WinCC/ChangeControl	**6AV6371-1DV17-4BX3**
As download	
• WinCC/Audit RT	**6AV6371-1KV07-4BX3**
• For WinCC/Audit RC or WinCC/ChangeControl	**6AV6371-1KV17-4BX3**

More information

More information is available at:

http://www.siemens.com/wincc-audit

Information on the declarations of conformity for SIMATIC WinCC can be found at:

https://new.siemens.com/global/en/markets/pharma-industry/good-manufacturing-practice.html

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WinCC/Calendar Scheduler

Overview

WinCC/Calendar Scheduler

- Option for SIMATIC WinCC for managing events in a calendar.
- Setting WinCC variables or starting global scripts at defined times.

Licenses

- WinCC/Calendar Scheduler comprises engineering and runtime software, with licensing either on the WinCC server or single-user system
- A common "Upgrade for WinCC Calendar options" software package is used to upgrade to a new version.

Benefits

- Simple operation, configuration and planning of events thanks to handling in the style of Microsoft Office Calendar
- Simple configuration of the actions by parameterization (execution of WinCC scripts or writing of WinCC tags at certain times)
- Configuration of recurring events taking account of configurable public holidays, vacation periods, and maintenance periods
- Secure operation of the plant taking account of different authentication levels
- Clear representation of events at runtime by means of Calendar Runtime Control
- Flexible use in all typical WinCC plant configurations client/server, redundant systems, WebNavigator

Function

With the WinCC Calendar Scheduler, events and their associated actions can be configured in a user-friendly and clear way in an editor in WinCC Explorer.

The events are represented in a calendar. The period represented can be freely selected. Recurring events can be defined as serial events with any desired exceptions.

The events are displayed in a .Net control. The Calendar Scheduler is easy and intuitive to operate and supports drag & drop during configuration and runtime.

Ordering data

	Article No.
WinCC/Calendar Scheduler	
• WinCC V7.5 SP2	**6AV6372-1DC07-5AX0**
• WinCC V7.4 [1]	**6AV6372-1DC07-4AX0**
As download	
• WinCC V7.5 SP2	**6AV6372-1HC07-5AX0**
• WinCC V7.4 [1]	**6AV6372-1HC07-4AX0**
Upgrade	
• V7.4 -> V7.5 SP2	**6AV6372-1DC07-5AX4**
• V7.2/7.3 -> V7.5 SP1	**6AV6372-1DC07-5AX3**
• V7.x -> V7.4 [1]	**6AV6372-1DC07-4AX3**
As download	
• V7.4 -> V7.5 SP2	**6AV6372-1KC07-5AX4**
• V7.2/7.3 -> V7.5 SP2	**6AV6372-1KC07-5AX3**
• V7.x->V7.4 [1]	**6AV6372-1KC07-4AX3**

[1] Also compatible with WinCC V7.4 SP1, except Windows Server 2016.

More information

You can find more information at:

http://www.siemens.com/wincc-calendar-options

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Overview

WinCC/Connectivity Pack & WinCC Connectivity Station

Cross-manufacturer communication in the automation sector has always been of primary importance for WinCC. This is even more true for the release of preprocessed production data for higher-level information systems (e.g. MES = Management Execution System, ERP = Enterprise Resource Planning or Office packages = MS Excel, MS Access, etc.). WinCC features integrated OPC Data Access and OPC XML DA servers for access to all online values in the system and makes open interfaces available for access to historical WinCC data.

- The Connectivity Pack includes OPC XML DA 1.00, OPC HDA 1.20 (Historical Data Access), OPC A&E 1.10 (Alarm & Events) as well as a WinCC OLE DB interface, which also gives remote computers without installed WinCC access to WinCC archive and alarm data.
- The function of the OPC servers (XML DA, HDA and A&E) and the OPC UA servers (DA, HDA, AC) is assured by the WinCC/Connectivity Pack. In order to access data in the database via WinCC OLE DB/OLE DB, you will also need a license for the WinCC/Connectivity Pack.

Licensing

- A Connectivity Pack license is required for each WinCC system to be accessed.
- When using the Connectivity Station it is not necessary to install additional Connectivity Pack licenses on the WinCC systems being accessed.
- In order to use the OPC interfaces of the Connectivity Station on a computer without the WinCC installation, you need the "WinCC Connectivity Station" license.
- For sole use of the OPC interfaces of a WinCC installation, only the Connectivity Pack license is required.

The following table shows the rules:

	New: WinCC-independent installation at Connectivity Station	**Conventional installation: OPC with WinCC**
OPC DA	"WinCC Connectivity Station" license	No license required
OPC HDA	"WinCC Connectivity Station" license	"WinCC Connectivity Pack" license
OPC A&E	"WinCC Connectivity Station" license	"WinCC Connectivity Pack" license
OPC UA DA		"WinCC OPC UA HDA / AC Connectivity Pack" license

The Connectivity Station is planned over NCM PC Manager or SIMATIC Manager. In versions 7.0 and higher, the Connectivity Station does not run as a service.

Additional information is available on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager here: http://www.siemens.com/simatic-licenses

Benefits

- Access to variables, historical WinCC data, alarm data and user archives from any computer
- Options for analyzing and evaluating process data with specialist tools or user-defined applications (e.g., via VisualBasic)

Function

As an OPC HDA server, WinCC makes historical data from the WinCC archive system available to other applications. An OPC HDA client (e.g. a reporting tool) can define the time interval for the required data by entering a start and end time. OPC HDA servers also support the generation of a variety of aggregate functions on the server itself (e.g. standard deviation, variance, mean values, integral values, etc.), thereby helping to relieve the load on the network, as only preprocessed data are transmitted.

OPC A&E servers are used to forward WinCC messages (along with all associated process values) to any client at production or enterprise control level. Filter mechanisms and subscriptions ensure that only selected modified data are transmitted. Acknowledgement is of course also supported.

The WinCC OPC XML DA server makes cross-platform communication between Windows and non-Windows systems possible, even via the Internet. This enables read and write WinCC online values (external and internal WinCC variables) to be exchanged with non-Siemens systems.

WinCC OLE DB makes standardized and user-friendly access to WinCC archive data possible (MS SQL Server). In exactly the same way as access via the OPC HDA and OPC A&E interfaces, access via the WinCC OLE DB Provider makes all WinCC archive data available along with the associated process values and message/user texts. The WinCC OLE DB Provider also supports analysis functions such as minimum, maximum, message hit list, etc.

The WinCC Connectivity Station was designed as a stand-alone gateway to WinCC server data. It supports access to WinCC server data over the OPC channels described as well as those for process values (not alarms) over OLE DB. Access to WinCC data is transparent, i.e. independent of which server of a redundant pair is active or whether data have already been transferred to the central archive server.

Connectivity Station

If no visualization is required at a station, any Windows computer with access to WinCC via OPC and OLE DB can be configured via the Connectivity Station. This permits access to WinCC stations with server packages from a central computer without WinCC installation. The WinCC stations can be accessed via the following interfaces:

- OPC interfaces of the Connectivity Station
- OLE DB interface of the Connectivity Pack

The two access variants are autonomous access options with different ranges of functions.

OPC interfaces of the Connectivity Station

The Connectivity Station provides interfaces via which you can access the following using an OPC client.

- OPC DA server: tags, e.g. process values
- OPC HDA server: archived process values
- OPC A&E server: alarms

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WinCC/Connectivity Pack & WinCC Connectivity Station

Ordering data

	Article No.
WinCC/Connectivity Pack & WinCC/Connectivity Station	
V7.5 SP2 for WinCC V7.5 SP2	
Basic Packages	
• WinCC/Connectivity Pack V7.5 SP2 [1]	**6AV6371-1DR07-5AX0**
• WinCC/Connectivity Station V7.5 SP2 [1]	**6AV6371-1DR17-5AX0**
As download	
• WinCC/Connectivity Pack V7.5 SP2	**6AV6371-1HR07-5AX0**
• WinCC/Connectivity Station V7.5 SP2	**6AV6371-1HR17-5AX0**
V7.4 SP1 for WinCC V7.4 SP1	
Basic Packages	
• WinCC/Connectivity Pack V7.4 SP1 [1]	**6AV6371-1DR07-4AX0**
• WinCC/Connectivity Station V7.4 SP1 [1]	**6AV6371-1DR17-4AX0**
As download	
• WinCC/Connectivity Pack V7.4 SP1	**6AV6371-1HR07-4AX0**
• WinCC/Connectivity Station V7.4 SP1	**6AV6371-1HR17-4AX0**

[1] Upgrades are included in the WinCC Basic Software upgrades

More information

You can find more information at:

http://www.siemens.com/wincc-connectivity-pack

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Overview

WinCC/Event Notifier

- Option for SIMATIC WinCC for notifying selected persons by email in specified time slots
- Notification depends on events occurring in the WinCC Message System
- Escalation levels, i.e. Group 2 is only notified when nobody "on site" or from Group 1 has reacted within a specified time
- Final notification of all persons previously notified in connection with the specific event about the reaction that has taken place

Licenses

- WinCC/Event Notifier comprises engineering and runtime software, with licensing either on the WinCC server or single-user system
- A common "Upgrade for WinCC Event Notifier options" software package is used to upgrade to a new version

Benefits

- Simple operation, configuration and planning of notifications thanks to handling like the Microsoft Office Calendar
- Easy configuration of the notifications including support of the WinCC Runtime languages by connecting to the WinCC Message System
- Configuration of recurring events taking account of configurable public holidays, vacation periods, and maintenance periods
- Secure operation of the plant taking account of different authentication levels
- Clear display and intuitive operation at runtime by means of Calendar Control
- Flexible use in all typical WinCC plant configurations single station, client/server, redundant systems, WebNavigator

Function

The WinCC Event Notifier enables the following to be configured in a clear and user-friendly manner via the Calendar Options Editor in the WinCC Explorer:

- The e-mail service for sending and receiving messages
- The messages by selecting configured messages in the WinCC Alarm System as well the setup and contents of the message by selecting the message blocks
- Contacts by selecting predefined persons from the WinCC user administration.

In a calendar it is then possible to select the persons to be notified within the opened time slot from the existing contacts. If several persons or groups of persons are set up for the same time slot, escalation levels can be implemented by assigning different escalation times (= dead time before notification). The period represented by the calendar can be freely selected. Recurring events can be defined as serial events with any desired exceptions.

The calendar can also be integrated as .Net Control in WinCC screens; the appearance of the calendar controls at runtime is configurable. Via the calendar control, you can create time slots during runtime with contacts who should be notified upon occurrence of the configured events in the WinCC Alarm System. In addition, the calendar control allows the creation of new contacts by means of selection from the WinCC user management.

The Event Notifier is easy and intuitive to operate and supports drag & drop during configuration and runtime.

Ordering data

	Article No.
WinCC/Event Notifier	
• For WinCC 7.5 SP2	**6AV6372-1DD07-5AX0**
• For WinCC V7.4 [1]	**6AV6372-1DD07-4AX0**
As download	
• For WinCC V7.5 SP2	**6AV6372-1HD07-5AX0**
• For WinCC V7.4 [1]	**6AV6372-1HD07-4AX0**
Upgrade	
• From V7.4 -> 7.5 SP2	**6AV6372-1DC07-5AX4**
As download	
• From V7.4 -> 7.5 SP2	**6AV6372-1KC07-5AX4**

[1] Also compatible with WinCC V7.4 SP1, except Windows Server 2016.

More information

You can find more information at:

https://new.siemens.com/global/en/products/automation/industry-software/automation-software/scada/simatic-wincc-v7/wincc-v7-options.html

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WinCC/Open Development Kit (ODK)

Overview

WinCC/ODK (Open Development Kit)

- WinCC option for utilization of the exposed programming interfaces that can be used to access data and functions of the WinCC configuration and WinCC runtime system
- The interfaces are designed as "C-Application Programming Interface" (C-API)
- As of WinCC version 7.2, the Open Development Kit includes the previous WinCC/IndustrialX option

Licenses

The scope of supply of WinCC/ODK includes many examples and comprehensive documentation.

You can find more information on the Software Update Service, license types, online software delivery and handling your licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

Benefits

- Individual system expansions via an open standard programming language
- Access to data and functions of the WinCC configuration and runtime system
- Development of your own applications and add-ons for the WinCC basic system

Function

API functions are configuration and runtime functions, such as:

- MSRTCreateMsg: Creates a message
- DMGetValue: Determines the value of a tag
- PDLRTSetProp: Sets the object properties in a display

They can be used as follows:

- Within WinCC, e.g. in global scripts or within the scope of C actions in the Graphics Designer
- In Windows applications in the C programming language (the current version of Microsoft Visual C++ is required as a developer's environment for WinCC)

Ordering data

	Article No.
SIMATIC WinCC/ODK	
Open Development Kit, option for SIMATIC WinCC	
• V7.4 [1]	**6AV6371-1CC07-4AX0**
• V7.3 SE	**6AV6371-1CC07-3AX0**
As download	
• V7.4 [1]	**6AV6371-1GC07-4AX0**
• V7.3 SE	**6AV6371-1GC07-3AX0**

[1] Also compatible with WinCC V7.4 SP1

More information

You can find more information at:

http://www.siemens.com/wincc-odk

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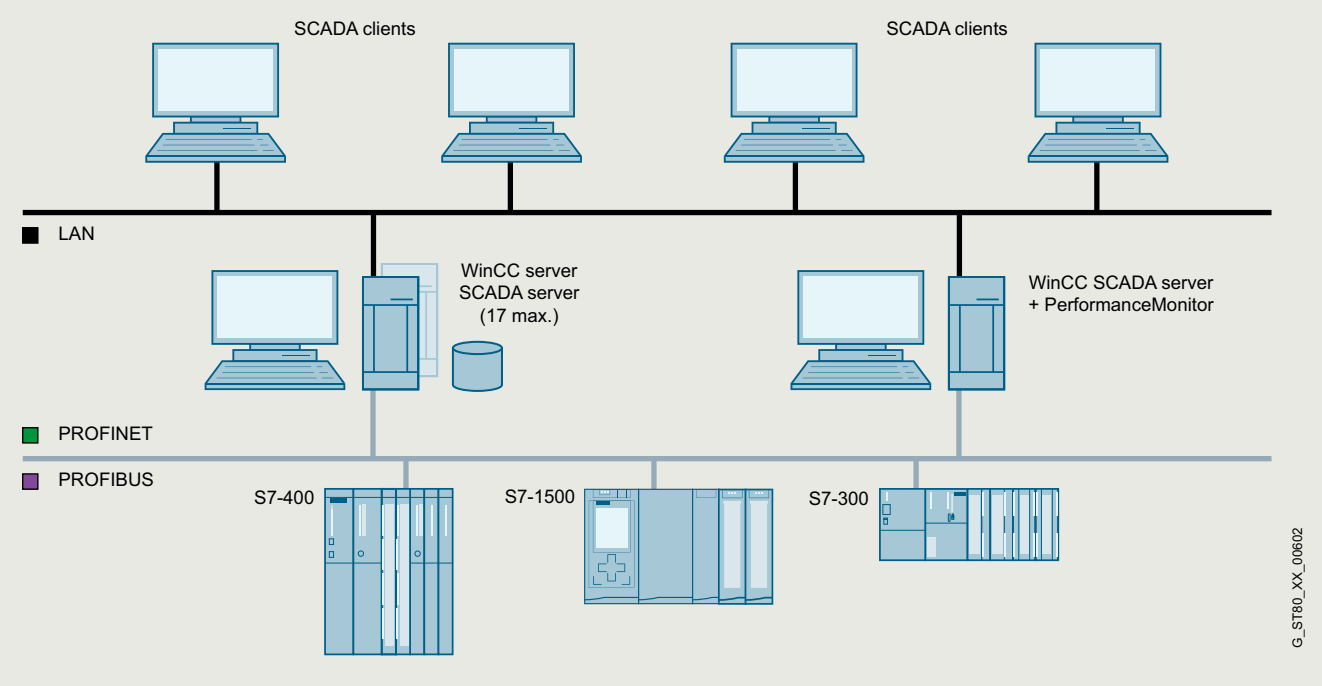
Overview



WinCC/PerformanceMonitor

WinCC/PerformanceMonitor – Analysis and optimization of production on the basis of individual performance indicators

The WinCC/PerformanceMonitor facilitates flexible calculation and powerful analysis of plant-specific key performance indicators (KPIs). The indicators provide the basis for deriving optimization potential, thus enabling productivity enhancement.

They relate to individual machine groups, plant sections or production lines. The elements to be monitored are designated as equipment. Indicators are calculated based on operands which are derived from already configured WinCC tags. By combining them with associated values, more accurate production correlations can be highlighted, such as quality/supplier dependencies. The calculation formulas used are quick and simple to create in WinCC.

Analysis of the indicators and their operands can be carried out in the WinCC system at any time. Indicators, along with their associated values if required, can be clearly displayed in bar graphs, allowing easy comparison. In addition, the input values of each performance indicator can be shown via an integrated analysis function (drill-down). The Gantt chart illustrates the chronological sequence of the operands. The table display lists the archived values, allowing subsequent correction if required. Performance indicators calculated online, either cyclically or triggered by a tag, can be written to WinCC tags for further processing in WinCC, and display in WinCC images, for example.

The PerformanceMonitor can be combined with the WebNavigator for distribution on the Internet, and with the Information Server for reporting purposes. Integration into WinCC ensures fast configuration and complete transparency across all machine and plant data as a basis for optimizing plant productivity.

- The WinCC/PerformanceMonitor can be installed on a WinCC stand-alone system, WinCC server or WinCC client project (WinCC RT Client license), and consists of an engineering client as well as a runtime user interface.
- The WinCC/PerformanceMonitor provides ActiveX control elements for embedding in WinCC images.
  - PerformanceControl: Bar graphs for displaying performance indicators in relation to context values, showing the operands for cause analysis in each case.
  - Gantt chart: Chronological sequence of time-based operands
  - TableControl: Tabular listing of operands with post correction option.
- With the help of the integrated configuration environment, operands are calculated (based on tags) which can be used to calculate key statistics at the set evaluation time.
- For analysis via intranet or Internet, the controls of the WinCC/PerformanceMonitor are available when using the WinCC/WebNavigator.
- The SIMATIC Information Server can be used for generating plant-specific, web-based reports (predefined and expandable).

Licensing

- The basic package comprises a configuration environment, runtime controls (bars, Gantt, tables) and a license for archiving 30 values.
- The logged values (operands, context) form the basis of the analysis. If more values are to be archived, the number of (additive) archive values can be increased in steps of 30, 100, 300 or 1 000 (countable tags).

You can find more information on the Software Update Service, license types, online software delivery and handling your licenses with the Automation License Manager here: http://www.siemens.com/simatic-licenses

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Benefits

Management and quality assurance

Complete transparency throughout the machine park as the basis for optimizing plant productivity.

- Recording of downtimes, localizing causes and reasons for failure times, and monitoring of equipment efficiency.
- Decision making based on performance indicators.
- Global availability of information server reports means they can be used by different user groups.
- Recognition of production correlations by combining associated values with indicators such as material used.

Servicing and maintenance

Support through cyclic and process-event triggered calculation of characteristics:

- Standardization of new plants by defining controller-based status information for key figure calculation
- Individual, targeted analysis using plant-specific performance indicators.
- Weak-point analysis in production processes and recording of undesirable process activities.
- Cause analysis by examining "drill down to operands" calculation basis.
- Identification of the events that lead to cost-intensive failures.

Line management and plant operator

The operator is always kept up-to-date by graphical display of the characteristics.

- Later modification of archived input values.
- Continuous information at the operator interface thanks to integration in the WinCC user interface.
- Alarm messaging of limit violations and trend recording through cyclic calculation of characteristics.
- Integration into the WinCC system means it is not necessary to train operating personnel
- Quick detection of weaknesses in the process using cyclic calculation of characteristics.

WinCC Engineering

- Quick configuration of WinCC operator displays with WinCC and web-based reports from the Information Server.
- Minimal networking overhead by using the WinCC infrastructure in the local network as well as for the Internet.
- Short familiarization times and simple configuration using familiar tools for user interfaces and reports (WinCC, SIMATIC Information Server)
- Minimal configuration overhead due to the type-instance concept
- Minimal administrative overhead by using the WinCC infrastructure in the local network as well as for the Internet.

Highlights

Creation of performance indicators by the WinCC engineer with subsequent utilization by all user groups in the manufacturing company on WinCC stations or Internet clients.

Application

All user groups benefit from the PerformanceMonitor, from the application engineer to management-level evaluators. The engineer can use the application environment integrated in WinCC to derive individual formulas for calculating performance indicators.

Management uses Web-based reporting without the need for installation on standard computers.

For maintenance, the web client of the WebNavigator can be used for analysis with the bar (for performance), progression (Gantt) and table controls. Performance indicators can be displayed on local user interfaces using standard WinCC resources to keep machine operators up to date. The service engineer can analyze the plant from his/her workstation using the WinCC Client, the Webclient of the WinCC/WebNavigator, for example. At the management level, it is possible to access Web-based reports without the need for installation on standard computers.

Function

- Structuring of the production plant in equipment units constituting central elements for evaluation
- Use of structured tags in order to facilitate implementation of machine status models
- WinCC tags are compressed to an operand using formulas
- Calculated operands are stored in the archive
- Archived operands are used as input values for calculating performance indicators
- Bar graphs for analyzing performance indicators and root cause determination (drill down)
  Indicator input values (operands) can be displayed if required.
- Tabular presentation of all operands (input values)
- Progression diagrams (Gantt charts) of time-based operands
- Cyclic or event-triggered calculation results are written to WinCC tags
- WinCC Runtime, alarm logging and trend logging can utilize cyclically-calculated values
- Database information and evaluations can be displayed at every WinCC station
- Information server reports can be displayed on independent PC workstations

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Ordering data	Article No.
WinCC/PerformanceMonitor	
WinCC/PerformanceMonitor Basic Package	
Including 30 PerformanceMonitor archive tags	
• WinCC/PerformanceMonitor V7.5 SP2	**6AV6372-2DG07-5AA0**
• WinCC/PerformanceMonitor V7.4 SP1	**6AV6372-2DG07-4AA0**
As download	
• WinCC/PerformanceMonitor V7.5 SP2	**6AV6372-2HG07-5AA0**
• WinCC/PerformanceMonitor V7.4 SP1 for WinCC V7.4 SP1	**6AV6372-2HG07-4AA0**
Option for WinCC/PerformanceMonitor V7.4 SP1 and V7.5 SP2 Basic Package	
• 30 additive PerformanceMonitor archive tags	**6AV6372-2CG20-0BA0**
• 100 additive PerformanceMonitor archive tags	**6AV6372-2CG20-0CA0**
• 300 additive PerformanceMonitor archive tags	**6AV6372-2CG20-0DA0**
• 1 000 additive PerformanceMonitor archive tags	**6AV6372-2CG20-0EA0**
As download	
• 30 additive PerformanceMonitor archive tags	**6AV6372-2JG20-0BA0**
• 100 additive PerformanceMonitor archive tags	**6AV6372-2JG20-0CA0**
• 300 additive PerformanceMonitor archive tags	**6AV6372-2JG20-0DA0**
• 1 000 additive PerformanceMonitor archive tags	**6AV6372-2JG20-0EA0**

	Article No.
WinCC/PerformanceMonitor Upgrade	
V7.4 to V7.5 SP2	
• Standard software	**6AV6372-2DG07-5AX4**
• As download	**6AV6372-2KG07-5AX4**
V7.2/7.3 to V7.5 SP2	
• Standard software	**6AV6372-2DG07-5AX3**
• As download	**6AV6372-2KG07-5AX3**
V7.x to V7.4 SP1	
• Standard software	**6AV6372-2DG07-4AX3**
• As download	**6AV6372-2KG07-4AX3**

More information

You can find more information at:

http://www.siemens.com/wincc-performancemonitor

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WinCC/Redundancy

Overview

WinCC/Redundancy

- Option for SIMATIC WinCC, supporting the parallel operation of two interfaced WinCC single-user systems or process data servers for mutual monitoring
- If one of the two server PCs or one of the two WinCC stations fails, the second one will take over control of the entire system. Once the failed server or station is restored to operation, the process value archives are copied to the restored partner.

Licenses

The WinCC/Redundancy option includes licenses for both redundant servers. A Redundancy license is required on each of the two servers in addition to other necessary licenses.

You can find more information on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

Benefits

- Increased system availability with continuous data integrity
- Automatic changeover of client in the event of failure of a server or failure of the communication to a server
- Continuous operator control and visualization thanks to automatic client changeover to the intact server
- Automatic updating of all archives in the background after rectification of the fault

Function

Normally, two WinCC stations or process data servers run in parallel. Each station has its own process connection and its own data archives. WinCC/Redundancy ensures automatic matching of system and user archive data.

If one of the two server computers or WinCC stations fails, the second will take over the archiving of messages and process data, thereby ensuring seamless data integrity. In client/server mode, the clients are automatically switched from the failed server to the redundant partner. This ensures continuous plant visualization and operation on every operator station.

When the failed partner resumes operation, all process values, messages and data archived during the fail period are automatically matched with the partner. This process runs in the background and does not affect plant continuity. Once this is complete, two equivalent servers/stations will be available again.

Communication with the SIMATIC S7 PLC can also be configured with redundancy (an H Series SIMATIC S7 is required) by plugging in two communication modules and configuring two communication paths (S7-REDCONNECT software package). The use of failsafe H Series SIMATIC S7 PLCs can, if required, further increase availability at control level.

Ordering data

	Article No.
SIMATIC WinCC/Redundancy V7.5 SP2	
• Runtime Software, Single License for 2 installations	**6AV6371-1CF07-5AX0**
• As download, Runtime Software, Single License for 2 installations	**6AV6371-1HF07-5AX0**
SIMATIC WinCC/Redundancy V7.4 SP1	
• Runtime Software, Single License for 2 installations	**6AV6371-1CF07-4AX0**
• As download, Runtime Software, Single License for 2 installations	**6AV6371-1HF07-4AX0**

More information

You can find more information at:

http://www.siemens.com/wincc-redundancy

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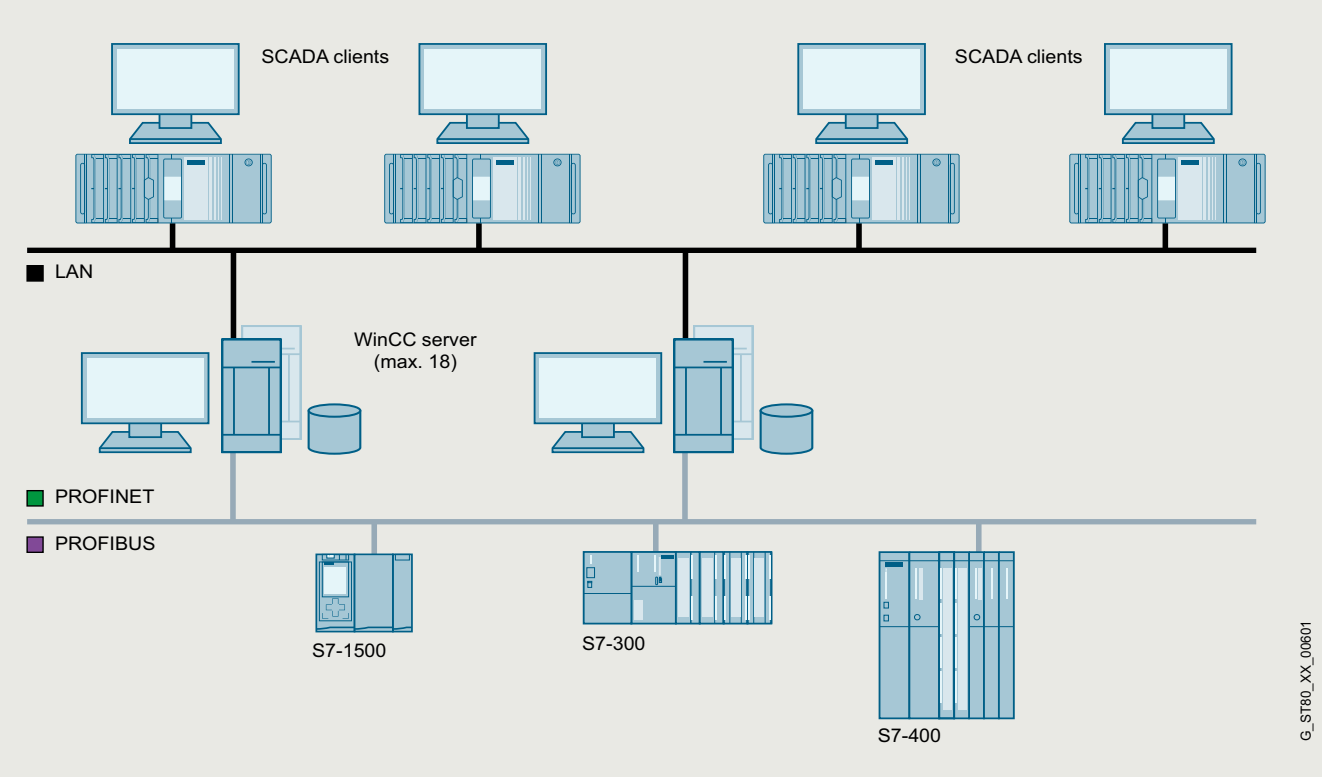
Overview



SIMATIC WinCC/Server

- Option for SIMATIC WinCC, which permits the configuration of a powerful client/server system.
- A maximum of 3 clients can be connected to non-server operating systems.
- A number of coordinated HMI stations can be operated in a single group with networked automation systems
- Client/server solution:
  - Client without its own project ("UNI-Client"):
    One (redundant) server can supply up to 64 clients with process and archive data, messages, images and reports. The clients act as display and operating stations for the project on the server.
  - Client with its own project ("MULTI-Client"):
    One client can simultaneously access up to 18 (redundant) servers. These servers make the data and images available. This data can be collectively processed and displayed in the client project in order, for example, to implement a system overview across several servers. In this case, one server can supply data to as many as 50 clients.
- Requirement: Network connection (TCP/IP) between the server PC and the connected clients

Licenses

The following licenses are required for configuring a multi-user system:

- WinCC Server license on the server in addition to a WinCC RT license (a server license is required for each server)
- One WinCC RT Client license on each client.

You can find more information on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

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Benefits

- Plant-wide scalability from the single-user system to the client/server solution
- Significantly higher quantity framework, relieving the individual servers and better performance due to distributing the complete application or tasks over several servers
- Low-cost configuration on the client is possible (the minimum RC license is sufficient)

Application

In a complex plant, WinCC can also be configured as a distributed system according to requirements:

- Functional distribution (e.g. message servers, archive servers, etc.) or
- Distribution according to the physical plant structure (e.g. body-in-white, paintshop, etc.)

Function

Each client can access more than one server at a time. Clients can also be used for configuration on the server.

A configuration of WinCC clients as a central Web server - as a distributed system if required - with an overview of all server projects in the system is also possible.

For WinCC clients, only the smallest runtime license WinCC RT client is required. In order to also facilitate configuration on WinCC clients, the smallest complete license WinCC RC client is required. Remote configuration is possible if WinCC clients without their own project (Uniclients) on the server project are configured. This makes it possible to configure inexpensive operator and configuration stations in a network.

Ordering data

	Article No.
SIMATIC WinCC/Server V7.5 SP2	
• Runtime Software, Single License	**6AV6371-1CA07-5AX0**
• As download, Runtime Software, Single License	**6AV6371-1HA07-5AX0**
SIMATIC WinCC/Server V7.4 SP1	
• Runtime Software, Single License	**6AV6371-1CA07-4AX0**
• As download, Runtime Software, Single License	**6AV6371-1HA07-4AX0**

More information

You can find more information at:

http://www.siemens.com/wincc-server

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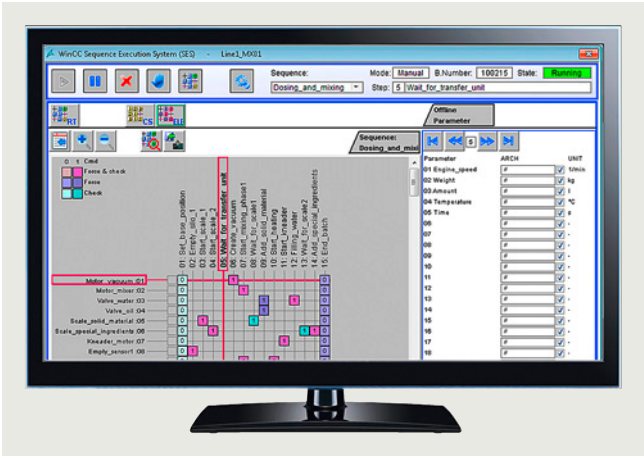
Overview



WinCC/SES

The WinCC/SES (Sequence Execution System) is designed for the sequential control of recipe and sequence-based processes in production. WinCC/SES is especially suitable for production plants in which dosing, mixing and material transport are important process actions.

Sequence controls can be structured with a high degree of flexibility, with the production steps being defined in a clear configuration interface and freely combined to form individual process sequences. In addition both the step sequences and the parameters can be modified online during production runs.

WinCC/SES helps the user to fine tune their production processes by allowing them to easily combine automatic sequences with manual interventions. This means that operators can react quickly and intervene in the running process, for example when quality of the raw materials fluctuates or if a different sequence among the production steps becomes necessary to facilitate more versatile production paths.

WinCC/SES also offers a high level of system availability and rapid response times since the program sequence takes place directly on the automation controller instead of on the PC.

Licenses

In addition to the basic SIMATIC WinCC V7.4 software, WinCC/SES V7.4 also requires STEP 7 version 5.5 SP4 to be installed.
The basic pack allows the sequential control of two plant sections. Extension Units can be used to increase the number of plant sections by 5 in each case (countable licenses).

You can find more information on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

Benefits

- Combination of automatic step sequence with manual fine adjustment of the production sequences (e.g. if behavior of natural raw materials fluctuates)
- Due to the pre-assembled SES visualization control and the SES function blocks, a high degree of engineering efficiency is achieved, because the plant engineer or configurator saves both engineering and testing and commissioning time as a result.
- SES allows flexible paths through the production and is thus an enabler for even utilization of the individual production plants
- Increased quality due to efficient operations management
- SES fulfils the real-time requirement because the steps run in the PLC
- High availability due to the execution of the step sequencer in the PLC.
- Low training costs due to uniform procedures for all step sequencers
- Minimal engineering outlay due to standardization

Application

WinCC/SES is used in production facilities in which dosing, mixing and material transport play an important role.
In such facilities, raw materials stored in tanks, silos or containers must be combined in the right process sequence with reaction containers and processing machines. This is done over several processing steps until the end product.

In WinCC/SES, the plant operator defines the production steps of his production units, specifies the production parameters such as the setpoints, and defines the corresponding production sequences in the form of step sequencers, which may comprise numerous single steps.

The SES operator control provides live visualization of the steps, including intuitive operation. After the start of production, all of the steps and production parameters such as the setpoints and actual values, as well as the current status of the production sequence are displayed in the form of an overview in the SES operator control.
During operation, the operator can thus quickly and easily readjust production sequences by manually intervening in the automatic step sequence online and, if necessary, by jumping to another step or changing the step sequence. This is required, for example, if the quality of natural raw materials fluctuates or if a different order of individual production steps is generally needed for flexible paths through production.

High system availability and fast response times are characteristic of WinCC/SES, because all of the step sequencers do not run on the PC. Instead, they are executed directly on the PLCs. As a result, the user gets a real-time behavior, on the one hand, due to the processing on the PLCs and, on the other hand, this also increases the protection against failures, because a batch continues to be produced without changes if the PC/SCADA fails.

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WinCC/SES (Sequence Execution System)

Ordering data	Article No.
SIMATIC WinCC/SES Sequence Execution System Software option package for the sequential control of recipe and sequence-based processes in production, functional enhancement for SIMATIC WinCC; electronic documentation in English, German	
V7.5 SP2 [1] [2]	
• Basic Package (incl. 2 units) For configuration of the Sequence Execution System	**6AV6372-2DJ07-5AA0**
• Extension 5 units (countable) For increasing the number of units [2]	**6AV6372-2BJ07-5BA0**
As download	
• Basic Package (incl. 2 units)	**6AV6372-2HJ07-5AA0**
• Extension 5 units (countable)	**6AV6372-2JJ07-5BA0**
Upgrades	
• Basic Package Upgrade from 7.4 to 7.5 SP2 [1]	**6AV6372-2DJ17-5AA1**
• Extension 5 units Upgrade from 7.4 to 7.5 SP2 [1]	**6AV6372-2BJ17-5BA1**
• Basic Package Upgrade from 7.2/3 to 7.5 SP2 [1]	**6AV6372-2DJ17-5AA0**
• Extension 5 units Upgrade from 7.2/3 to 7.5 SP2 [1]	**6AV6372-2BJ17-5BA0**
As download	
• Basic Package Upgrade from 7.4 to 7.5 SP2 [1]	**6AV6372-2HJ17-5AA1**
• Extension 5 units Upgrade from 7.4 to 7.5 SP2 [1]	**6AV6372-2JJ17-5BA1**
• Basic Package Upgrade from 7.2/3 to 7.5 SP2 [1]	**6AV6372-2HJ17-5AA0**
• Extension 5 units Upgrade from 7.2/3 to 7.5 SP2 [1]	**6AV6372-2JJ17-5BA0**

	Article No.
V7.4 [1] [2]	
• Basic Package (incl. 2 units) For configuration of the Sequence Execution System	**6AV6372-2DJ07-4AA0**
• Extension 5 units For increasing the number of units [2]	**6AV6372-2BJ07-4BA0**
As download	
• Basic Package (incl. 2 units)	**6AV6372-2HJ07-4AA0**
• Extension 5 units	**6AV6372-2JJ07-4BA0**
Upgrades	
• Basic Package Upgrade 7.4 [1]	**6AV6372-2DJ17-4AA0**
• Extension 5 units Upgrade 7.4 [1]	**6AV6372-2BJ17-4BA0**
As download	
• Basic Package Upgrade 7.4 [1]	**6AV6372-2HJ17-4AA0**
• Extension 5 units Upgrade 7.4 [1]	**6AV6372-2JJ17-4BA0**

[1] Also compatible with WinCC V7.4 SP1

[2] Additionally requires STEP 7 V5.5. Based on SIMATIC S7-300 from S7-315 or higher, redundancy, WebNavigator is not supported.

More information

You can find more information at:

http://www.siemens.com/wincc-ses

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Overview

WinCC/UserArchives

- Option for SIMATIC WinCC for managing data sets in user archives that contain related data.
- WinCC and its automation partners (e.g. a SIMATIC S7 controller) write these data sets and exchange them if required.

The WinCC/UserArchives option can also be used in the context of the WinCC/WebNavigator (see also WinCC/WebNavigator option).

Licenses

A license is only required for the server (or single-user system).

You can find more information on the Software Update Service, license types, online software delivery and handling your licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

Benefits

- Storing and managing of any user data in data sets
- Flexible display using ActiveX controls
- Simple linking of data set fields to the process via direct tag linking
- Import/export functions for further processing with other tools (e.g. MS Excel)

Function

- Input of parameter sets (e.g. operating parameters of a machine) in WinCC, storage of the sets in the user archive, and forwarding to the automation level
- Continuous acquisition of production parameters by the automation system and forwarding of the parameters to WinCC at the end of the shift
- Acquisition of batch data
- Specification of production parameters
- Management of warehousing data

WinCC user archives are created and assigned data in a user-friendly way using a dedicated editor. Special ActiveX controls are used for displaying data from the user archives at runtime.

Data sets and fields from user archives are linked to the process via direct tag linking.

Import and export functions support read-in/out of data via external applications (e.g. MS Excel). Freely selectable filter criteria allow clear representation of data sets.

WinCC provides functions for free organization of the data storage in the user archives that affect archives, data sets and fields. Archives can thus be generated, opened, closed, or reset, and data sets or field contents can be read, written or overwritten.

Sequence archives can accommodate batch data, shift production data, or also product quality data, and meet legal obligations for verification thanks to gap-free recording.

Ordering data

	Article No.
SIMATIC WinCC/UserArchives	
• Option for SIMATIC WinCC V7.5 SP2, Runtime Software, Single License	**6AV6371-1CB07-5AX0**
• Option for SIMATIC WinCC V7.4 SP1, Runtime Software, Single License	**6AV6371-1CB07-4AX0**
As download	
• Option for SIMATIC WinCC V7.5 SP2, Runtime Software, Single License	**6AV6371-1HB07-5AX0**
• Option for SIMATIC WinCC V7.4 SP1, Runtime Software, Single License	**6AV6371-1HB07-4AX0**

More information

You can find more information at:

http://www.siemens.com/wincc-user-archives

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Overview

SIMATIC WinCC flexible ES engineering software

- Family of configuration systems with WinCC flexible/ Compact/Standard/Advanced for SIMATIC operator panels, the HMI part of SIMATIC C7 as well as for the WinCC flexible Runtime PC-based visualization software
- Runs on Windows 7 Professional, Ultimate, Enterprise / Windows 10 Professional, Enterprise
- Can be expanded by the option "WinCC flexible/ChangeControl" for version management and change logging

SIMATIC WinCC flexible Runtime visualization software

- Modular PC-based HMI solution for single-user systems directly at the machine (further development of ProTool/Pro RT)
- Runs on Windows 7 Professional, Ultimate, Enterprise / Windows 10 Professional, Enterprise
- Basic package for visualization, reporting and logging; can be expanded by implementing option packages
- Flexible expansion possible with VB scripts and customized ActiveX controls created with OPP (Open Platform Program)
- Can be integrated into automation solutions based on TCP/IP networks
- Expanded service concepts with remote operation, diagnostics and administration over the intranet and Internet in combination with email communication

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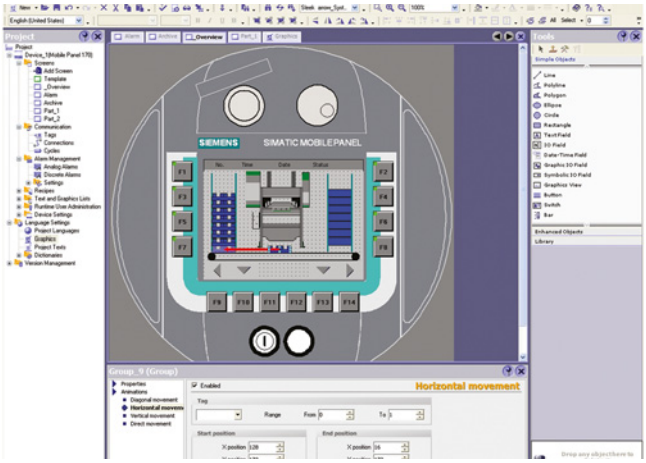
Overview



- Uniform family of engineering tools for configuring SIMATIC HMI operator panels, the operator controls of SIMATIC C7 units, SINUMERIK Panel PCs as well as the PC-based visualization software WinCC flexible Runtime.
- Runs on Windows 7 Professional, Ultimate, Enterprise / Windows 10 Professional, Enterprise
- Current version:
  - SIMATIC WinCC flexible 2008 SP5 Micro
  - SIMATIC WinCC flexible 2008 SP5 Compact
  - SIMATIC WinCC flexible 2008 SP5 Standard
  - SIMATIC WinCC flexible 2008 SP5 Advanced

Application

SIMATIC WinCC flexible Compact/Standard/Advanced are engineering tools for configuring SIMATIC HMI operator panels, the operator controls of SIMATIC C7 units, SINUMERIK Panel PCs as well as the PC-based WinCC flexible Runtime visualization system.

Depending on the selected product, various target systems can be configured:

WinCC flexible Compact

In addition to the target systems that are configured using WinCC flexible Micro:

- Basic Panels: KTP400 Basic, KTP600 Basic, KTP1000 Basic, TP1500 Basic
- Mobile Panels: Mobile Panel 170, Mobile Panel 177
- 70 series Panels: OP 73, OP 77A, OP 77B
- 170 series Panels: TP 170A, TP 177A, TP 170B, TP 177B, OP 170B, OP 177B
- 170 series Multi Panels: MP 177
- C7 devices: C7-635 (Touch/Key)

WinCC flexible Standard

In addition to the target systems that are configured using WinCC flexible Compact:

- Mobile Panels: Mobile Panel 277
- 270 series Panels: TP 270, TP 277, OP 270, OP 277
- 270 series Multi Panels: MP 270B, MP 277
- 370 series Multi Panels: MP 370, MP 377
- C7 devices: C7-636 (Touch/Key)

WinCC flexible Advanced

In addition to the target systems that are configured using WinCC flexible Standard:

- Standard PC
- SIMATIC Panel PC: IPC277E, IPC277D, IPC477E, IPC477D, IPC677D
  SIMATIC Box PC: IPC227E, IPC227D, IPC427E, IPC427D, IPC627D, IPC827D
  SIMATIC Rack PC: IPC347E, IPC547G, IPC647D, IPC847D
- SINUMERIK Panel PC: HT8, OP08T, OP010, OP012, TP012, OP015, TP015, OP015A

For configuring panels released after the start of delivery of WinCC flexible 2008, an HSP (Hardware Support Package) is required that can be downloaded free of charge via the following link:

http://www.siemens.com/wincc-flexible-hsp

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SIMATIC WinCC flexible ES

Ordering data	Article No.
WinCC flexible 2008 Compact incl. SP5	
• Software and documentation on DVD, floating license, license key on USB flash drive	**6AV6611-0AA51-3CA5**
• As download [3], software and license key download, floating license, email address required for delivery	**6AV6611-0AA51-3CH5**
WinCC flexible 2008 Standard incl. SP5	
• Software and documentation on DVD, floating license, license key on USB flash drive	**6AV6612-0AA51-3CA5**
• As download [3], software and license key download, floating license, email address required for delivery	**6AV6612-0AA51-3CH5**
WinCC flexible 2008 Advanced incl. SP5	
• Software and documentation on DVD, floating license, license key on USB flash drive	**6AV6613-0AA51-3CA5**
• As download [3], software and license key download, floating license, email address required for delivery	**6AV6613-0AA51-3CH5**
WinCC flexible /ChangeControl for WinCC flexible 2008 Compact/ Standard/Advanced [1] [2]	
• Floating license, option, license key only	**6AV6613-6AA01-3AB5**
• As download [3], license key download only, floating license, email address required for delivery	**6AV6613-6AA01-3AH5**
PowerPacks	
SIMATIC WinCC flexible PowerPacks	
Floating license, license key only on USB flash drive	
• WinCC flexible 2008 Standard to 2008 Advanced	**6AV6613-2CD01-3AD5**
• WinCC flexible 2008 Compact to 2008 Advanced	**6AV6613-2BD01-3AD5**
• WinCC flexible 2008 Compact to 2008 Standard	**6AV6612-2BC01-3AD5**
As download [3], floating license, license key download only, email address required for delivery	
• WinCC flexible 2008 Standard to 2008 Advanced	**6AV6613-2CD01-3AJ5**
• WinCC flexible 2008 Compact to 2008 Advanced	**6AV6613-2BD01-3AJ5**
• WinCC flexible 2008 Compact to 2008 Standard	**6AV6612-2BC01-3AJ5**

	Article No.
Updates	
WinCC flexible 2008 Compact/ Standard/Advanced Update 2008, 2008 SP1, SP2, SP3 -> SP5	**6AV6613-0AA51-3CU8**
Upgrades	
SIMATIC WinCC flexible 2004/2005/2007 to SIMATIC WinCC flexible 2008 incl. SP5	
• Upgrade to WinCC flexible 2008 Compact, incl. ChangeControl option [1]	**6AV6611-0AA51-3CE5**
• Upgrade to WinCC flexible 2008 Standard, incl. ChangeControl option [1]	**6AV6612-0AA51-3CE5**
• Upgrade to WinCC flexible 2008 Advanced, incl. ChangeControl option [1]	**6AV6613-0AA51-3CE5**
As download [3], Email address required for delivery	
• Upgrade to WinCC flexible 2008 Compact, incl. ChangeControl option [1]	**6AV6611-0AA51-3CK5**
• Upgrade to WinCC flexible 2008 Standard, incl. ChangeControl option [1]	**6AV6612-0AA51-3CK5**
• Upgrade to WinCC flexible 2008 Advanced, incl. ChangeControl option [1]	**6AV6613-0AA51-3CK5**

[1] A separate license for WinCC flexible /ChangeControl must be purchased for each engineering station

[2] The ChangeControl option has not been released for integrated operation with STEP 7

[3] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

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Technical specifications

System requirements (minimum requirements)	WinCC flexible Engineering Software
Operating system	• Windows 7 Professional SP1, Ultimate/Enterprise SP1 (32-bit and 64-bit) • Windows 10 Professional, Enterprise, LTSB Enterprise (64-bit)
Processor	Pentium 4 (or comparable) processor running at 1.6 GHz or faster
Resolution	1024 x 768 or higher
Main memory (RAM)	≥ 1 GB, ≥ 512 MB for WinCC flexible Micro
Hard disk (free memory space) [1]	≥ 2 GB [2] ≥ 1.2 GB for WinCC flexible Micro [3]
DVD drive	for software installation

[1] In addition to WinCC flexible, Windows also requires free hard drive space; e.g. space should be reserved for the swap file. The following formula has proven itself in the past: The size of the swap file = 3 x the size of available RAM.
For more information, refer to your Windows documentation

[2] When installing one language. An additional 200 MB are required for each further language. In the case of different partitions for system and configuration: System partition approx. 700 MB, project partition approx. 1.3 GB.

[3] When installing one language. An additional 80 MB are required for each further language. In the case of different partitions for system and configuration: System partition approx. 600 MB, project partition approx. 600 MB.

More information

More information is available on the Internet at:

http://www.siemens.com/wincc-flexible

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Overview

PC-based visualization software for single-user systems directly at the machine.

- Runs on Windows 7 Professional, Ultimate, Enterprise and Windows 10 Professional, Enterprise
- Current version: SIMATIC WinCC flexible 2008 SP5 Runtime

SIMATIC WinCC flexible Runtime is configured with the SIMATIC WinCC flexible Advanced configuration software.

Application

SIMATIC WinCC flexible Runtime is the high-performance visualization software for simple visualization tasks at machine level. It can be used as a single-user solution for all automation applications in factory automation, process automation and building services automation.

SIMATIC WinCC flexible Runtime can be used in combination with the following operator panels:

- SIMATIC Panel PCs
  - PC IL 70/77
  - Microbox 420
  - Panel PCs 477/477B/477C
  - Panel PCs 577/577B/577C
  - Panel PCs 670/677/677B/677C
  - Panel PCs 870/877
- SINUMERIK Panel PCs
  - HT8; OP08T
  - OP010, OP012, OP015
  - TP012, TP015, OP015A
- Standard PCs with resolutions (W x H in pixels) of:
  - 4:3 format: 640 x 480, 800 x 600, 1 024 x 768, 1 280 x 1 024, 1 600 x 1 200
  - Widescreen format: 800 x 480, 1 280 x 800, 1 366 x 768, 1 440 x 900, 1 680 x 1 050, 1 920 x 1 080, 1 920 x 1 200, 1 980 x 1 080

Design

SIMATIC WinCC flexible Runtime is available as a software package with 128, 512, 2048 or 4096 PowerTags. The term PowerTags is used exclusively to identify process variables and range pointers that have a process link to the controller. Variables without process link, constant limit values of variables, and messages (up to 4000 bit-triggered messages) are also available for additional system performance.

The range of functions of WinCC flexible Runtime includes the centralized HMI components for visualizing and reporting, and it can be expanded to suit requirements and costs by using optional packages.

SIMATIC WinCC flexible Runtime is configured with the SIMATIC WinCC flexible Advanced configuration software.

Function

System requirements	WinCC flexible Runtime
Operating system	• Windows 7 Professional / Ultimate / Enterprise (32-bit and 64-bit) • Windows 7 Embedded Standard, Standard with SP1 (32-bit) [1] • Windows 10 Professional, Enterprise, LTSB Enterprise • Windows 10 IoT LTSB Enterprise [1]
Processor [4]	
• Minimum	Windows 7: 1 GHz
• Recommended	Windows 7: ≥ 1 GHz
Graphics	
• Minimum	SVGA
• Resolution	640 x 480 to 1600 x 1200 or 800 x 480 to 1980 x 1080
RAM [2]	
• Minimum	Windows 7: 1 GB
• Recommended	Windows 7: ≥ 1 GB
Hard disk (free memory space) [3]	≥ 250 MB

1) Only on approved systems such as SIMATIC IPCs. For more detailed information, please contact your Siemens contact person

2) RAM requirements are determined primarily by the size of the graphics used.

3) Without taking archives into account.
In addition to the space needed by WinCC flexible, Windows also requires space on the hard disk; e.g. for the swap file. The following formula has proven itself in the past: The size of the swap file = 3 x the size of the RAM. For further information, refer to your Windows documentation

4) More powerful systems (Pentium 4 and higher) may be required in order to use options

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Integration

SIMATIC WinCC flexible Runtime supports linking to:

Protocol	PC interfaces
SIMATIC S5 via AS511 (TTY)	
S5-90U	COM1/COM2 [13]
S5-90U	
S5-100U (CPU 100, 102, 103)	
S5-115U (CPU 941, 942, 943, 944, 945)	
S5-135U (CPU 928A, 928B)	
S5-155U (CPU 946/947, 948)	
SIMATIC S5 via PROFIBUS DP [1]	
S5-95U/L2-DP master	CP 5512 [2]
S5-115U (CPU 941, 942, 943, 944, 945)	
S5-135U (CPU 928A, 928B)	
S5-155U (CPU 946/947, 948)	
SIMATIC S7 via PPI	
S7-200	CP 5612 CP 5621 [1] CP 5622 CP 5613 A3 CP 5614 A3 CP 5623 CP 5624 CP 5711 PC/PPI adapter [3]
SIMATIC S7 via MPI	
S7-200 (except CPU 212) [4]	CP 5612 CP 5621 [1] CP 5622 CP 5613 A3 CP 5614 A3 CP 5623 CP 5624 CP 5711 PC adapter USB A2 [6] Teleservice V6.1
S7-300	
S7-400	
WinAC Basis (V3.0 and higher)	
WinAC RTX	
SIMATIC S7 via PROFIBUS DP [5]	
S7-215 [4]	CP 5612 CP 5621 [1] CP 5622 CP 5613 A3 CP 5614 A3 CP 5623 CP 5624 CP 5711
S7-300 CPUs with integral PROFIBUS-SS	
S7-300 with CP 342-5	
S7-400 CPUs with integral PROFIBUS-SS	
S7-400 with CP 443-5 or IM 467	
WinAC Basis (V3.0 and higher)	
WinAC RTX	
SIMATIC S7 via Ethernet (TCP/IP)	
S7-200 with CP 243-1	CP 1612 A2 [7] CP 1613 A2
S7-300 CPUs with integral Ethernet interface	
S7-300 with CP 343-1	
S7-400 CPUs with integral Ethernet interface	
S7-400 with CP 443-1	
WinAC Basis (V3.0 and higher)	
WinAC RTX	
SIMATIC S7 via integrated interface	
WinAC Basis (V2.0 and higher)	Internal system interface
WinAC RTX	
SIMATIC 505 NITP	
SIMATIC 500/505 RS 232/RS 422	COM1/COM2
SIMATIC 505 via PROFIBUS DP	
SIMATIC 545/555 with CP 5434	CP 5612 [2] CP 5622 [2]
SIMOTION [8]	
SINUMERIK [9]	
Controllers from other manufacturers	
Allen Bradley (DF1/DH485)	COM1/COM2
Allen Bradley (Ethernet)	CP 1612 A2 [7]
GE Fanuc (SNP/SNPX)	COM1/COM2
LG GLOFA GM	COM1/COM2
Mitsubishi (FX/MP4)	COM1/COM2
Modicon (Modbus)	COM1/COM2
Modicon (Modbus TCP/IP)	CP 1612 A2 [7]
OMRON (Link/Multilink)	COM1/COM2
OPC [10] [12]	
Data Access V2.05a (client + server)	CP 1612 A2 [7]
Data Access XML V1.00 (client)	
HTTP communication for data exchange between SIMATIC HMI (client + server) [11] [12]	CP 1612 A2 [7]

1) WinCC flexible Runtime is passive (DP slave); the function block required for the link is included in the scope of supply of WinCC flexible

2) For Microbox 427 and Panel PC 477/577/677 via internal MPI/DP interface

3) Only point-to-point to S7-200; no configuration download, operating systems: Windows XP; article number: 6ES7901-3CB30-0AX0

4) Constraint with regard to baud rate for S7-200; see Catalog ST 70

5) WinCC flexible RT is active; communication with S7 functions

6) Only point-to-point to S7-300/-400; no configuration download, operating systems: Windows XP or higher; article number: 6GK1571-0BA00-0AA0 (USB)

7) For Microbox 427 and Panel PC 477/577/677/877 via internal Ethernet interface

8) For more information, see Catalog PM 21

9) "SINUMERIK HMI copy license OA" option required; for more information, see Catalog NC 60

10) OPC client is included in scope of supply, the "WinCC flexible /OPC Server for WinCC flexible Runtime" license is required for the OPC Server option

11) "WinCC flexible /Sm@rtAccess for WinCC flexible Runtime" license required

12) OPC and HTTP communication are additive, i.e. can be used in conjunction with the PLC links listed above

13) Via PC cable with integrated level converter RS 232/TTY; article number: 6ES5734-1BD20

For information about SIMATIC Panels that support OPC/http communication, see the overview under "System interfaces".

Application note

In parallel with each and every PLC link, WinCC flexible Runtime supports the use of the OPC client channel; this enables, for example, connection to an SNMP OPC Server for the purpose of visualizing the data stored there. The SNMP OPC Server provides a means of monitoring network components of any type (e.g. switches) which support the SNMP protocol. For more information, see Catalog IK PI.

Note:

For more information, see "Operator Control and Monitoring Devices/System interfaces"

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Ordering data	Article No.
SIMATIC WinCC flexible 2008 Runtime	
For PC systems; software and documentation on DVD, including software of the options for PC systems [1];	
Single license, license key on USB flash drive for:	
• 128 PowerTags (RT 128)	**6AV6613-1BA51-3CA0**
• 512 PowerTags (RT 512)	**6AV6613-1DA51-3CA0**
• 2 048 PowerTags (RT 2 048)	**6AV6613-1FA51-3CA0**
• 4 096 PowerTags (RT 4 096)	**6AV6613-1GA51-3CA0**
As download [2] Single license, software and license key download, email address required for delivery.	
• 128 PowerTags	**6AV6613-1BA51-3CH0**
• 512 PowerTags	**6AV6613-1DA51-3CH0**
• 2 048 PowerTags	**6AV6613-1FA51-3CH0**
• 4 096 PowerTags	**6AV6613-1GA51-3CH0**
PowerPacks	
SIMATIC WinCC flexible 2008 Runtime	
Single license, license key only on USB flash drive for PowerTags from	
• 128 to 512 PowerTags	**6AV6613-4BD01-3AD0**
• 128 to 2 048 PowerTags	**6AV6613-4BF01-3AD0**
• 128 to 4 096 PowerTags	**6AV6613-4BG01-3AD0**
• 512 to 2 048 PowerTags	**6AV6613-4DF01-3AD0**
• 512 to 4 096 PowerTags	**6AV6613-4DG01-3AD0**
• 2 048 to 4 096 PowerTags	**6AV6613-4FG01-3AD0**
As download [2] Single license, license key download only, email address required for delivery.	
• 128 to 512 PowerTags	**6AV6613-4BD01-3AJ0**
• 128 to 2 048 PowerTags	**6AV6613-4BF01-3AJ0**
• 128 to 4 096 PowerTags	**6AV6613-4BG01-3AJ0**
• 512 to 2 048 PowerTags	**6AV6613-4DF01-3AJ0**
• 512 to 4 096 PowerTags	**6AV6613-4DG01-3AJ0**
• 2 048 to 4 096 PowerTags	**6AV6613-4FG01-3AJ0**
Updates	
SIMATIC WinCC flexible 2008 Runtime Update 2008, 2008 SP1, SP2, SP3 -> SP5	**6AV6613-1XA51-3CU8**

	Article No.
Upgrades	
SIMATIC WinCC flexible 2004/2005/2007 Runtime to SIMATIC WinCC flexible 2008 Runtime	
Upgrade to SIMATIC WinCC flexible Runtime 2008 PowerTags including Runtime options for: WinCC flexible /Archives; WinCC flexible /Recipes; WinCC flexible /Audit; WinCC flexible /Sm@rtAccess; WinCC flexible /OPC Server; WinCC flexible /ProAgent	
• Software and documentation on DVD, single license, license key on USB flash drive	**6AV6613-1XA51-3CE0**
• As download [2], software and license key download, single license, email address required for delivery	**6AV6613-1XA51-3CK0**
Upgrade of the SIMATIC WinCC flexible Panel options:	
WinCC flexible /Audit for SIMATIC Panel; WinCC flexible /Sm@rtAccess for SIMATIC Panel; WinCC flexible /Sm@rtService for SIMATIC Panel; WinCC flexible /OPC Server for SIMATIC Multi Panel; WinCC flexible /ProAgent for SIMATIC Multi Panel	
• license key only on USB flash drive, single license	**6AV6618-7XX01-3AF0**
• As download [2], license key download only, single license, email address required for delivery	**6AV6618-7XX01-3AK0**

[1] Runtime licenses for WinCC flexible Runtime options must be purchased separately for each target system.

[2] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

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Ordering data	Article No.
Communication via Industrial Ethernet	
SIMATIC NET HARDNET-IE S7 V12 Software for S7 communication and open communication; OPC, PG/OP communication, configuring software; up to 120 connections; Single License for 1 installation of runtime software, software and electronic manual on DVD	
• Software Update Service for one year, with automatic extension; requirement: current software version	**6GK1716-1CB00-3AL0**
• Upgrade S7-1613 from V6.4 to S7-1613 V8.0 SP1	**6GK1716-1CB00-3AE0**
• Upgrade S7-1613 from V6.0, V6.1, V6.2 or V6.3 to S7-1613 V8.0 SP1	**6GK1716-1CB00-3AE1**
Communication via PROFIBUS	
CP 5613 A3 PCI card (32-bit) for connecting a PC to PROFIBUS (communications software must be ordered separately)	**6GK1561-3AA02**
CP 5614 A3 PCI card (32-bit) for connecting a PC to PROFIBUS (communications software must be ordered separately)	**6GK1561-4AA02**
SIMATIC NET PB S7-5613 V8.0 SP1 Software for S7 communication, incl. PG and FDL protocol, OPC Server and NCM PC; Runtime software, software and electronic manual on USB flash drive, license key on diskette, Class A, for 32-bit Windows 7 Professional/Ultimate for up to 4 CP 5613 A2, CP5614 A2, CP 5603 / CP 5623 / CP 5624;	
• Software Update Service for one year, with automatic extension; requirement: current software version	**6GK1713-5CB00-3AL0**
• Upgrade S7-5613 from V6.4 to S7-5613 V8.0 SP1	**6GK1713-5CB00-3AE0**
• Upgrade S7-5613 from V6.0, V6.1, V6.2 or V6.3 to S7-5613 V8.0 SP1	**6GK1713-5CB00-3AE1**
CP 5612 PCI card (32-bit) for connecting a PG/PC to PROFIBUS (communications software included in WinCC flexible basic package)	**6GK1561-2AA00**
CP 5622 PCI Express X1 card (32-bit) for connection of PG/PC to PROFIBUS or MPI (communications software included in WinCC flexible basic package)	**6GK1562-2AA00**
CP 5711 USB adapter (USB V2.0) for connecting a PG/notebook to PROFIBUS or MPI (communications software included in WinCC basic package)	**6GK1571-1AA00**
SIMATIC S7, MPI cable For linking SIMATIC S7 and PG via MPI	**6ES7901-0BF00-0AA0**

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Technical specifications

Type	SIMATIC WinCC flexible Runtime
	The specifications are maximum values
Displays	500
• Fields per screen	400
• Variables per screen	400
• Static text	30 000
• Graphic objects	2 000
• Complex objects per display (e.g. bars)	40
• Trends	800
• Graphics lists [1]	500
• Text lists [1]	500
• Number of entries in symbol tables	3 500
Variables	4 096 [3]
Messages bit-triggered / analog	4 000 / 500
• Message text (number of characters)	80
• Number of process values per message	8
• Size of message buffer	1 024
• Pending message events	500
Archives [4]	100
• Archivable data	Process values, messages
• Max. number of entries per archive (incl. all archive segments)	500 000
• Archive types	Short-term archive, sequence archive (max. 400 per archive)
• Data storage format	CSV (**C**omma **S**eparated **V**ariable), RDB (**R**untime **D**ata **B**ase), interface to MS SQL database
Recipes[4]	1 000
• Elements per recipe	2 000 [3]
• Data records per recipe	5 000 [2]
Password protection	
• User rights	32
• Number of user groups	50
Visual Basic scripts	200
Online languages, max.	16
Communication	
SIMATIC S7 MPI interface/ PROFIBUS DP interface	
• Number of connectable stations, max.	Depending on the scope of the configuration (communication) from the point of view of WinCC flexible Runtime, as many as 8 connections are possible
SIMATIC S7 PPI interface	
• Number of connectable stations, max.	1 from viewpoint of WinCC flexible Runtime
SIMATIC S5 PROFIBUS DP interface	
• Number of connectable stations, max.	1 from viewpoint of WinCC flexible Runtime
Multiprotocol mode	Yes, OPC Client or SIMATIC HMI HTTP protocol are additive, i.e. can be used in conjunction with other PLC links

[1] Together only 500 text and graphics lists

[2] Dependent on storage medium used

[3] Dependent on number of licensed PowerTags

[4] Option for SIMATIC WinCC flexible Runtime. For more information, refer to "WinCC flexible options".

More information

More information is available on the internet at:

http://www.siemens.com/wincc-flexible

Note:

Do you need a specific modification or option for the products described here? You will find information about the Open Platform Program for the creation of user-specific functions and controls for WinCC flexible under "Customized Products".

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Overview

Option for SIMATIC WinCC flexible Engineering

SIMATIC WinCC flexible /ChangeControl

WinCC flexible /ChangeControl enables consistent backup of configuration data. The history of changes can be verified down to the last detail for applications requiring interruption-free proof for the complete life cycle of a product.

Options for SIMATIC Panels/Multi Panels and SIMATIC WinCC flexible Runtime

SIMATIC WinCC flexible /Archives

Archiving of alarms and process values

SIMATIC WinCC flexible /Recipes

Generation and management of data records for machine or production data

SIMATIC WinCC flexible /Audit

Recording of operator actions in an Audit Trail

- Audit supports users in meeting special quality requirements, e.g.
  - Production plant requiring validation according to 21 CFR Part 11 (Food Drug Administration legislation)
  - In respect of traceability according to EU 175/2002 (EU directive)

SIMATIC Logon for WinCC flexible

Option for connecting PCs with SIMATIC WinCC flexible Runtime and SIMATIC Panels to central user administration.

SIMATIC WinCC flexible /Sm@rtAccess

- Flexible solution for access to HMI systems and process data from any location
- Communication between different SIMATIC HMI systems

SIMATIC WinCC flexible /Sm@rtService

- Remote maintenance and servicing of machines and plants via Internet/intranet
- Flexible solution for remote access to machines and plant

SIMATIC WinCC flexible /OPC Server

- Incorporation of automation components from different manufacturers into a single automation concept
- Communication for data exchange between HMI systems and/or higher-level control system

SIMATIC WinCC flexible /ProAgent

- Precise and rapid process fault diagnostics in plant and machines for SIMATIC S7 and SIMATIC HMI
- Standardized diagnostics concept for various SIMATIC components
- No further configuration overhead for diagnostics functionality

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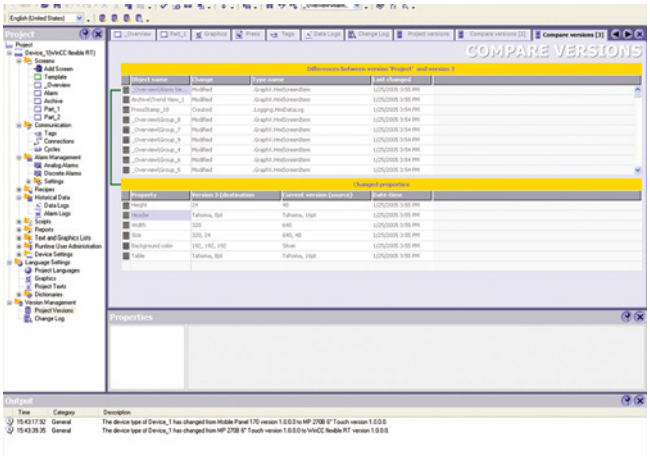
WinCC flexible /ChangeControl

Overview



- Options for the versioning of configuration data and for tracing configuration changes (e.g. as verification in regulated sectors)
- For the engineering tool SIMATIC WinCC flexible Compact/ Standard/Advanced
- One license is required for each configuration computer

Benefits

- Consistent backup of configuration data
  - Delivered versions, approved reference states or development stages are managed in a database.
  - Changes to project data can be integrated without problem into the version management using new versions. A rollback is possible at any time.
- Tracing of configuration changes
  - The history of changes can be verified down to the last detail for applications requiring interruption-free proof for the complete life cycle of a product.

Ordering data

	Article No.
WinCC flexible /ChangeControl for WinCC flexible 2008 Compact/Standard/Advanced [1] Floating license, license key only on USB stick as download [2]	**6AV6613-6AA01-3AB5**
WinCC flexible /ChangeControl for WinCC flexible 2008 Compact/Standard/Advanced [1] Floating license, only license key download; Email address required for delivery	**6AV6613-6AA01-3AH5**

[1] The ChangeControl option has not been released for integrated operation with STEP 7.

[2] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

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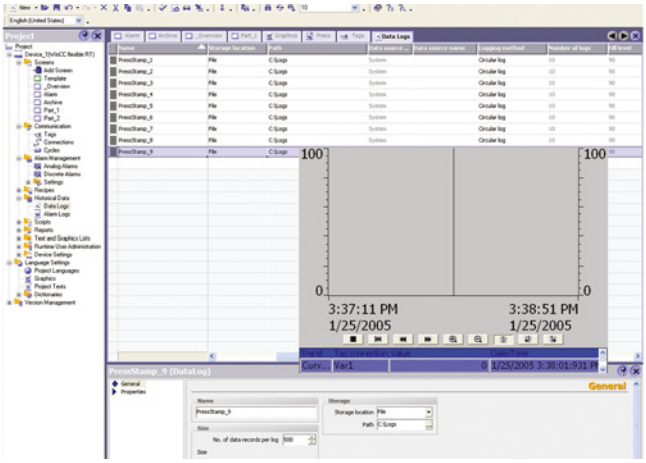
Overview



- Option for SIMATIC WinCC flexible Runtime for archiving process values and messages
- Archiving of process values and messages supports the acquisition and processing of process data from an industrial plant or machine. Evaluation of the archived process data provides information about the operating states of the plant or machine
- One license is required per operator station (no license is required for SIMATIC Panels/Multi Panels)

Ordering data

	Article No.
WinCC flexible /Archives for WinCC flexible 2008 Runtime [1] Single license, license key only on USB stick	**6AV6618-7ED01-3AB0**
WinCC flexible / Archives+Recipes for WinCC flexible 2008 Runtime [1] Single license for each option, license key only on USB stick as download [2]	**6AV6618-7GD01-3AB0**
WinCC flexible /Archives for WinCC flexible 2008 Runtime [1] Single license, license key download only Email address required for delivery	**6AV6618-7ED01-3AH0**
WinCC flexible / Archives+Recipes for WinCC flexible 2008 Runtime [1] Single license for each option, license key download only Email address required for delivery	**6AV6618-7GD01-3AH0**

[1] One license is required for each operator station. A license is not required for the engineering system for configuring the Runtime option.

[2] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

Technical specifications

Type	**WinCC flexible /Archives**
	The specifications are maximum values
Execution platform	SIMATIC WinCC flexible Runtime
Archives	100
• Archivable data	Process values, messages
• Cyclical trigger for archiving process values (variables)	1 s
• Max. number of entries per archive (incl. sequence archive)	500,000 [1]
• Archive types	• Circulating archive • Sequence archive (max. 400 per archive)
• Data storage format	CSV (**C**omma **S**eparated **V**ariable), RDB (**R**untime **D**ata **B**ase) and interface to Microsoft SQL database (database not included in scope of delivery)

[1] Dependent on memory medium used

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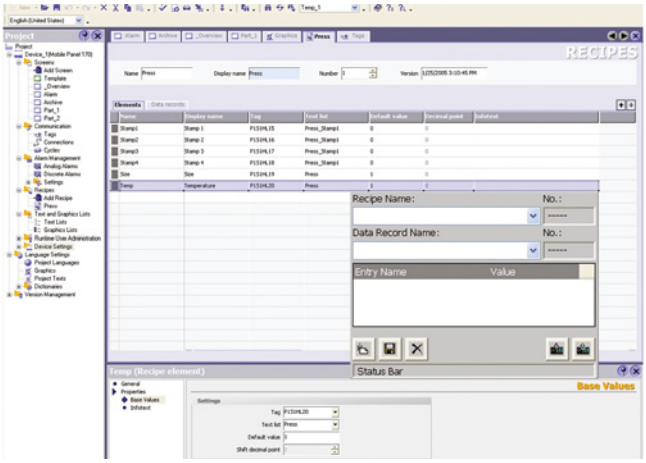
WinCC flexible /Recipes

Overview



- Option for SIMATIC WinCC flexible Runtime for managing data records in recipes that contain related machine or production data
- The data in a data set can be transferred, for example, from the control unit to the PLC to switch production to a different product variant
- One license is required per operator station (no license is required for SIMATIC Panels/Multi Panels)

Ordering data

	Article No.
WinCC flexible /Recipes for WinCC flexible 2008 Runtime [1] Single license, license key only on USB flash drive	**6AV6618-7FD01-3AB0**
WinCC flexible /Archives+ Recipes for WinCC flexible 2008 Runtime [1] Single license per option, license key only on USB flash drive	**6AV6618-7GD01-3AB0**
As download [2]	
WinCC flexible /Recipes for WinCC flexible 2008 Runtime [1] Single license, license key download only Email address required for delivery	**6AV6618-7FD01-3AH0**
WinCC flexible /Archives+Recipes for WinCC flexible 2008 Runtime [1] Single license for each option, license key download only Email address required for delivery	**6AV6618-7GD01-3AH0**

[1] One license is required for each operator station. A license is not required for the engineering system for configuring the Runtime option.

[2] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

Technical specifications

Type	WinCC flexible /Recipes
	The specifications are maximum values
Execution platform	SIMATIC WinCC flexible Runtime
Recipes	1000
• Entries per recipe	2000 [1]
• Data records per recipe	5000 [2]
• User data length in bytes per data record	8000 KB [2]

[1] Dependent on number of licensed PowerTags

[2] Dependent on memory medium used

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Overview

WinCC flexible /Audit

- Option for SIMATIC WinCC flexible Runtime as well as SIMATIC Panels for recording operations in an audit trail, and electronic signature
- The audit trail features a safety mechanism that indicates subsequent manipulation.
- An easy-to-use configuration option included as standard in WinCC flexible enables you to set:
  - The operator actions to be recorded in the audit trail during runtime
  - The important operator actions requiring electronic signature/comments during runtime
- The audit option combined with the WinCC flexible ES ChangeControl option supports the user with plant validation
- Available for the following SIMATIC HMI systems: TP/OP 270, TP/OP 277, MP 270B, MP 277, MP 370, MP 377, WinCC flexible Runtime
- A license is required for every operator station (panel or PC)

Ordering data

	Article No.
WinCC flexible /Audit for SIMATIC Panels [1] Single license, license key only on USB flash drive	**6AV6618-7HB01-3AB0**
WinCC flexible /Audit for WinCC flexible Runtime 2008 [1] Single license, license key only on USB flash drive	**6AV6618-7HD01-3AB0**
As download [2]	
WinCC flexible /Audit for SIMATIC Panels [1] Single license, license key download only Email address required for delivery	**6AV6618-7HB01-3AH0**
WinCC flexible /Audit for WinCC flexible Runtime 2008 [1] Single license, license key download only Email address required for delivery	**6AV6618-7HD01-3AH0**

[1] One license is required for each operator station. A license is not required for the engineering system for configuring the Runtime option.

[2] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

Technical specifications

	WinCC flexible /Audit
Archive for Audit Trail use on the Panel	• Plug-in flash memory card on the panel • In the higher-level PC (memory medium) connected to the panel via Ethernet
Archive for Audit Trail use of WinCC flexible Runtime	On the PC (storage medium)
Execution platform	
SIMATIC Panels	Mobile Panel 277, TP/OP 270, TP/OP 277
SIMATIC Multi Panels	MP 270B, MP 277, MP 370, MP 377
PCs	SIMATIC WinCC flexible Runtime

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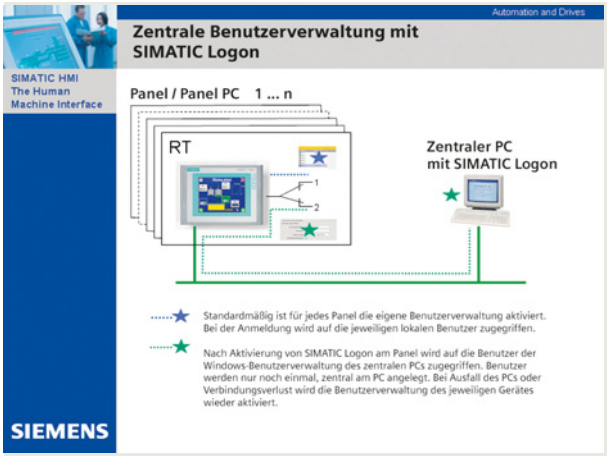
SIMATIC Logon for WinCC flexible

Overview



- Option for connecting PCs with SIMATIC WinCC flexible Runtime and SIMATIC Panels to central user administration SIMATIC Logon.
- Creates user administration on a central computer to which one or more WinCC flexible stations can be connected over Ethernet.
- SIMATIC Logon for WinCC flexible supports the user in combination with the /Audit and /ChangeControl options in meeting requirements in accordance with FDA 21 CFR Part 11 and EU178.

Design

SIMATIC Logon and SIMATIC Logon Remote Access are installed on a central station.

The following WinCC flexible stations are connected to the central station via Ethernet network:

- PCs with WinCC flexible Runtime
- SIMATIC Panels from the 177 series or higher (panels with Ethernet interface)

Licensing

The following licenses are required:

- SIMATIC Logon basic license
- SIMATIC Logon Remote Access license (3-pack license 10-pack license); more than one SIMATIC Logon Remote Access license can be installed.

The number of connectable stations depends on the SIMATIC Logon Remote Access licenses used. This number is the total of the connections provided by the individual licenses. As an example: Two installed licenses for 10 enable the connection of 20 stations to the central station.

Ordering data

	Article No.
SIMATIC Logon V1.5 Basic license; for Panels or WinCC flexible Runtime stations, the corresponding number of additional SIMATIC Logon Remote Access licenses is required.	**6ES7658-7BX51-0YA0**
SIMATIC Logon Upgrade to V1.5	**6ES7658-7BX51-0YE0**
SIMATIC Logon Remote Access for WinCC flexible (3 clients) Remote access for 3 WinCC flexible 2008 clients; single license for 3 remote access clients; type of delivery: CD, license key disk, Certificate of License, Terms and Conditions The number of licensed clients is determined based on the amount of installed SIMATIC Logon remote access licenses.	**6ES7658-7BA00-2YB0**
SIMATIC Logon Remote Access for WinCC flexible (10 clients) Remote access for 10 WinCC flexible 2008 clients; single license for 10 remote access clients; type of delivery: CD, license key disk, Certificate of License, Terms and Conditions The number of licensed clients is determined based on the amount of installed SIMATIC Logon remote access licenses.	**6ES7658-7BB00-2YB0**

Technical specifications

	SIMATIC Logon for WinCC flexible
Execution platform	
SIMATIC Panels	Mobile Panel 177 PN; Mobile Panel 277, TP/OP 177B PN/DP, TP/OP 277
SIMATIC Multi Panels	MP 177, MP 277, MP 377
PCs	WinCC flexible Runtime

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Overview

- Option for SIMATIC WinCC flexible Runtime plus SIMATIC Panels for communication between various SIMATIC HMI systems.
- Available for the following SIMATIC HMI systems:
  - Mobile Panel 177 PN, Mobile Panel 277
  - TP 177B PN/DP, OP 177B PN/DP
  - TP 270, TP 277, OP 270, OP 277
  - MP 177, MP 270B, MP 277, MP 370, MP 377
  - WinCC flexible Runtime
- Communication between HMI systems is established on the basis of Ethernet networks, or via the intranet/Internet:
  - Read and write access to tags;
  - One SIMATIC HMI system can be remotely controlled or monitored from another one;
- Licensing:
  The license "WinCC flexible /Sm@rtAccess for Panel" or "WinCC flexible /Sm@rtAccess for WinCC flexible Runtime" must be installed on both the server and client HMI device.

Note:

If the operator stations are accessed using the Sm@rtAccess option, suitable protective measures (including IT security such as network segmentation) should be taken in order to ensure safe operation of the system.

More information is available on the topic of Industrial Security on the Internet at:

http://www.siemens.com/industrialsecurity

Ordering data

	Article No.
WinCC flexible /Sm@rtAccess for SIMATIC Panel [1] Single license, license key only on USB flash drive	**6AV6618-7AB01-3AB0**
WinCC flexible /Sm@rtAccess for WinCC flexible 2008 Runtime [1] Single license, license key only on USB flash drive As download [2]	**6AV6618-7AD01-3AB0**
WinCC flexible /Sm@rtAccess for SIMATIC Panel [1] Single license, license key download only Email address required for delivery	**6AV6618-7AB01-3AH0**
WinCC flexible /Sm@rtAccess for WinCC flexible 2008 Runtime [1] Single license, license key download only Email address required for delivery	**6AV6618-7AD01-3AH0**

1) The license must be installed on the server and on the client operator panel. Server applications are the options Sm@rtServer, HTTP server and SOAP server. Client applications are the screen object Sm@rtClient display, and the utilization of the communication driver HTTP protocol. A license is not required for the engineering system for configuring the Runtime option.

2) Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

Technical specifications

Type	WinCC flexible /Sm@rtAccess
	The specifications are maximum values
Execution platform	
• SIMATIC Panels	Mobile Panel 177 PN, Mobile Panel 277, TP/OP 177B PN/DP, TP/OP 270, TP/OP 277
• SIMATIC Multi Panels	MP 177, MP 270B, MP 277, MP 370, MP 377
• PCs	WinCC flexible Runtime
Sm@rtAccess SIMATIC HMI HTTP protocol	
Number of connections for one client	
• Mobile Panel 177 PN, TP/OP 177 B PN/DP, MP 177 as HTTP server	4
• Mobile Panel 277, TP/OP 270, TP/OP 277, MP 270B, MP 277, MP 370, MP 377 as HTTP server	8
• for WinCC flexible Runtime	16
Sm@rtAccess Sm@rtClient concept	
Number of Sm@rtClients that can connect to a Sm@rtServer at the same time [1] [2]	
• Mobile Panel 177 PN, TP/OP 177B PN/DP, MP 177 as Sm@rtServer	2 clients
• Mobile Panel 277, TP/OP 270, TP/OP 277, MP 270B, MP 277 as Sm@rtServer	3 clients for 6" devices 2 clients for 8" and 10" devices
• MP 370, MP 377 as Sm@rtServer	3 clients for 12" devices 2 clients for 15" devices 1 client for 19" devices
• for WinCC flexible Runtime as Sm@rtServer	5 clients
Number of Sm@rtClient displays per screen	
• for Panels/Multi Panels	1
• for WinCC flexible Runtime	2

1) Including 1 Service Client

2) The Sm@rtServer and the WinCC flexible/Pro Agent option cannot be used simultaneously on OP/TP/MP 270/370. Parallel operation of the runtime options ProAgent, Sm@rtAccess and Sm@rtService is possible in the context of the MP 277 8" and 10" devices, Mobile Panel 277 as well as the MP 377. Limitation: a maximum of 2 clients can be connected simultaneously to a Sm@rtServer.

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WinCC flexible /Sm@rtService

Overview

- Option for SIMATIC WinCC flexible Runtime and SIMATIC Panels for remote maintenance and servicing of machines/plants via the Internet/intranet
- Available for the following SIMATIC HMI systems:
  - Mobile Panel 177 PN, Mobile Panel 277
  - TP 177B PN/DP, OP 177B PN/DP
  - TP 270, TP 277, OP 270, OP 277
  - MP 177, MP 270B, MP 277, MP 370, MP 377
  - WinCC flexible Runtime
- Licensing
  The "WinCC flexible /Sm@rtService for Panel" license or "WinCC flexible /Sm@rtService for WinCC flexible Runtime" license must be installed on the operator panels that use one of the following options/functions: Sm@rtServer, HTML pages (mini-Web server), email.

Note:

If the operator stations are accessed using the Sm@rtService option, suitable protective measures (including IT security such as network segmentation) should be taken in order to ensure safe operation of the system.

You will find more information on the topic of Industrial Security on the Internet at:

http://www.siemens.com/industrialsecurity

Application

- Remote maintenance and servicing of machines and plants via Internet/Intranet
- Calling of system information, control of target systems, and updating of data sets via Internet/Intranet
- Automatic sending of emails to experts for fast elimination of faults

Ordering data

	Article No.
WinCC flexible /Sm@rtService for SIMATIC Panels [1] Single license, license key only on USB flash drive	**6AV6618-7BB01-3AB0**
WinCC flexible /Sm@rtService for WinCC flexible Runtime 2008 [1] Single license, license key only on USB flash drive As download [2]	**6AV6618-7BD01-3AB0**
WinCC flexible /Sm@rtService for SIMATIC Panels [1] Single license, license key download only Email address required for delivery	**6AV6618-7BB01-3AH0**
WinCC flexible /Sm@rtService for WinCC flexible Runtime 2008 [1] Single license, license key download only Email address required for delivery	**6AV6618-7BD01-3AH0**

1) The "WinCC flexible /Sm@rtService for Panel" license or "WinCC flexible / Sm@rtService for WinCC flexible Runtime" license must be installed on the operator panels that use one of the following options: Sm@rtServer, HTML pages, email. The remote service PC and engineering system do not require a license for configuration of the Runtime option.

2) Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

Technical specifications

Type	WinCC flexible /Sm@rtService
Execution platform	
• SIMATIC Panels	Mobile Panel 177 PN, Mobile Panel 277, TP 177B PN/DP, OP 177B PN/DP, TP/OP 270, TP/OP 277
• SIMATIC Multi Panels	MP 177, MP 270B, MP 277, MP 370, MP 377
• PCs	SIMATIC WinCC flexible Runtime
Sm@rtService [1]	
Remote access via	Internet Explorer V6.0 SP1 and higher
HTML pages	
• for Panels/Multi Panels	HTML V1.1 (no support for ActiveX, Java, ASP)
• for WinCC flexible Runtime	HTML V1.1
Sending emails	• via SMTP server • Subject, message texts with 250 characters of text per email; date/time of message, message no.

1) The Sm@rtServer and the WinCC flexible/ProAgent option cannot be used simultaneously on OP/TP/MP 270/370. Parallel operation of the runtime options ProAgent, Sm@rtAccess and Sm@rtService is possible in the context of the MP 277 8" and 10" devices, Mobile Panel 277 as well as the MP 377. Limitation: a maximum of 2 clients can be connected with a Sm@rtServer.

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Overview

- Option for SIMATIC WinCC flexible Runtime as well as Multi Panels for communication with applications from different manufacturers (e.g. MES, ERP, or applications in the office sector)
- Available for the following SIMATIC HMI systems:
  - Mobile Panel 277, MP 270B, MP 277, MP 370, MP 377 (use of OPC on XML basis)
  - WinCC flexible Runtime (use of OPC based on DCOM)
- One license is required for each operator station.

Application

OPC Foundation

http://www.opcfoundation.org

Ordering data

	Article No.
WinCC flexible /OPC Server for SIMATIC Multi Panels [1] Single license, license key only on USB flash drive	**6AV6618-7CC01-3AB0**
WinCC flexible /OPC Server for WinCC flexible Runtime 2008 [1] Single license, license key only on USB flash drive As download [2]	**6AV6618-7CD01-3AB0**
WinCC flexible /OPC Server for SIMATIC Multi Panels [1] Single license, license key download only Email address required for delivery	**6AV6618-7CC01-3AH0**
WinCC flexible /OPC Server for WinCC flexible Runtime 2008 [1] Single license, license key download only Email address required for delivery	**6AV6618-7CD01-3AH0**

[1] One license is required for each operator station. A license is not required for the engineering system for configuring the Runtime option.

[2] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

Technical specifications

Type	WinCC flexible /OPC Server
	The specifications are maximum values
Execution platform	
• SIMATIC Panels	Mobile Panel 277
• SIMATIC Multi Panels	MP 270B, MP 277, MP 370, MP 377
• PCs	SIMATIC WinCC flexible Runtime
OPC Server	
• XML server for Multi Panels	Supports the OPC XML Data Access specification V1.0 [1]
• DCOM server for WinCC flexible Runtime	Supports the OPC Data Access specification V1.0a and V2.0
• Number of connections that an OPC server can accommodate	8

[1] Data access via XML has a functional scope that is similar to OPC Data Access. A software adapter is required that must be installed on the OPC client PC to enable DCOM-based OPC clients to access the OPC XML server without any modification. The software adapter is supplied with WinCC flexible Engineering and Runtime.

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WinCC flexible /ProAgent

Overview

- Targeted and rapid process diagnostics in plants and machines for SIMATIC S7 and SIMATIC HMI
- Standardized diagnostics concept for various SIMATIC components
- No further configuration overhead for diagnostics functionality
- Frees up PLC capacity with regard to memory and program execution time

Note:

For more information, see "Process Diagnostics Software SIMATIC ProAgent".

Ordering data

Ordering data	Article No.
WinCC flexible /ProAgent	
• WinCC flexible /ProAgent for SIMATIC Panels [1] executable on Mobile Panel 277, TP/OP/MP 270/277 and MP 370/377, single license, only license key on USB stick	**6AV6618-7DB01-3AB0**
• WinCC flexible /ProAgent for WinCC flexible Runtime 2008 [1] single license, only license key on USB stick	**6AV6618-7DD01-3AB0**
as download [2]	
WinCC flexible /ProAgent	
• WinCC flexible /ProAgent for SIMATIC Panels [1] executable on Mobile Panel 277, TP/OP/MP 270/277 and MP 370/377, single license, only license key download email address required for delivery	**6AV6618-7DB01-3AH0**
• WinCC flexible /ProAgent for WinCC flexible Runtime 2008 [1] single license, only license key download email address required for delivery	**6AV6618-7DD01-3AH0**

[1] One license is required for each operator station. A license is not required for the engineering system for configuring the Runtime option.

[2] Current information and availability regarding the new type of delivery can be found at: http://www.siemens.com/tia-online-software-delivery

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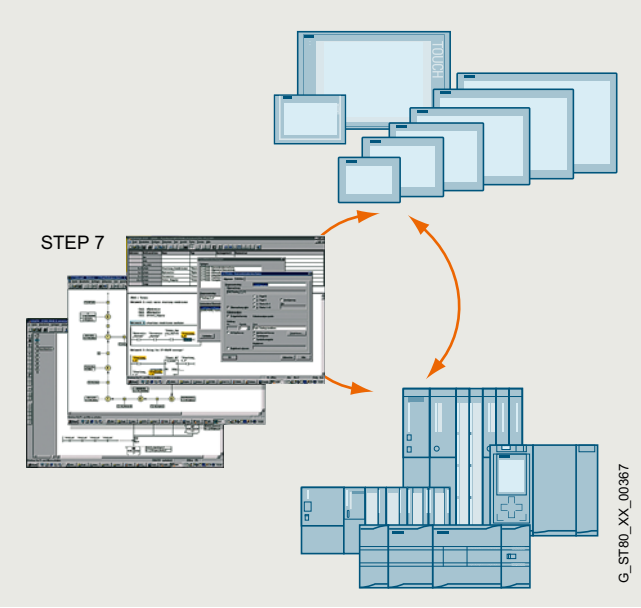
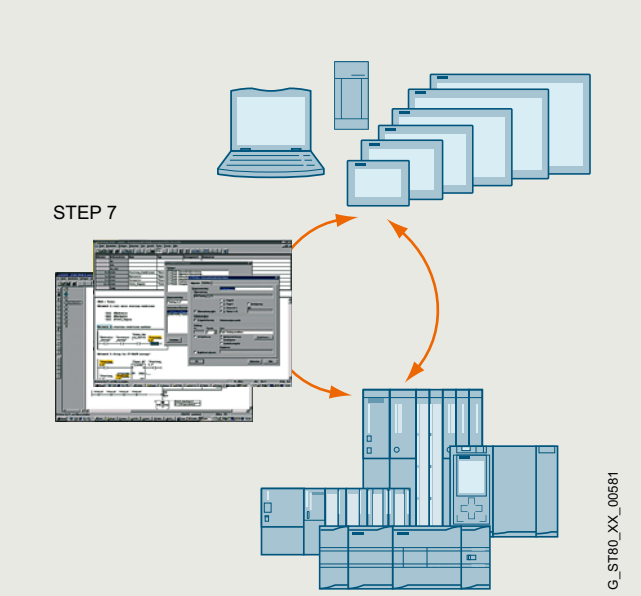
Overview



Process fault diagnostics with ProAgent for WinCC flexible /ProAgent and with the STEP 7 engineering tools



- Process fault diagnostics software for quick and precise diagnosis of faults/errors in plants and machines for SIMATIC S7 and SIMATIC HMI
- Standardized diagnostics concept for various SIMATIC components:
  optimum interaction of STEP 7 engineering tools and SIMATIC HMI
- Standardized user interface

Licensing

Runtime software, one license is required for each piece of target hardware.

Additional information is available on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

Benefits

- Integral component of Totally Integrated Automation (TIA): increases productivity, minimizes the engineering outlay, reduces the lifecycle costs
- ProAgent:
  - Provides optimum support for plant and machine personnel in respect of troubleshooting and fault rectification
  - Increases plant availability
  - Reduces downtimes
- No further configuration overhead for diagnostics functionality
- Frees up PLC capacity with regard to memory and program execution time
- No special operator know-how is required thanks to clearly comprehensible indication of the cause of error

Application

Increased productivity is being achieved more and more by cutting costs. In this context, the focus is increasingly on maintenance. The emphasis here is on rectifying faults as quickly and efficiently as possible. Ideally, the operating personnel should also perform part of the maintenance tasks. The operating personnel are on-site, they are familiar with the procedures and can intervene quickly. This saves time and reduces costs. It is precisely here that ProAgent can assist operating personnel in identifying faults quickly, in particular in the automotive and machine tool industries.

In the event of a process fault, process fault diagnostics with SIMATIC ProAgent will provide information about the location and cause of that fault and support personnel with troubleshooting.

The ProAgent solution has been optimized specifically for use with SIMATIC S7-300/S7-400 and SIMATIC WinAC. It can be used in combination with the S7-PDIAG, S7-GRAPH and S7-HiGraph[1)] STEP 7 engineering tools. The ProAgent option package features standard displays that are updated with process-specific data during runtime.

[1)] Process diagnostics with S7-HiGraph in combination with TP/OP/MP 270/277, MP 370/377, and C7636 and PC RT systems.

3

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Function

- Context-sensitive diagnostics initiation due to process error message
- Output of operands with symbols and comment
- Switching is possible between LAD, STL and signal list
- Supporting fault rectification with direct process access when using the motion display
- Output of the faulty operands directly in the message including address, symbol and comment[1)]
- Consistency test in RT:
  Inconsistent diagnostic units are marked with icons.
  This permits quick locating of faults regarding configured data in the commissioning phase.
- Direct, unit-related entry point in the diagnostic display from user displays by using ProAgent functions
- Unit or message-related entry to STEP 7 (LAD/STL/FBD editor, S7-GRAPH, HW CONFIG (upon system error messages)), supported fully automatically [2)]
- Unit or message-related entry to STEP 7, supported fully automatically[3)]
- Graphic display of step sequences (overview display)[4)]

1) In combination with TP/OP/MP 270/277, MP 370/377, C7 636, WinCC/ProAgent as of V6.0, and WinCC flexible/ProAgent

2) WinCC/ProAgent as of V5.5 and as of WinCC flexible 2007/ProAgent on PC RT

3) Only WinCC/ProAgent as of V5.5

4) As of WinCC flexible 2007/ProAgent, WinCC/ProAgent as of V5.6 in combination with S7-GRAPH as of V5.1 (OCX is delivered as of S7-GRAPH 5.1)

Standardized user interface with standard displays

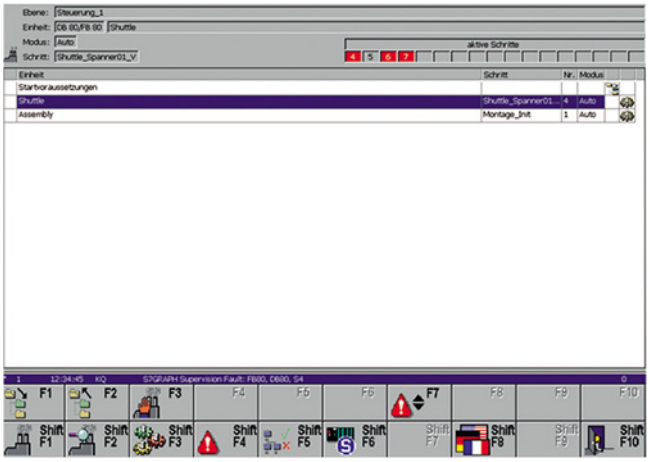
- Message display
- Unit overview
- Diagnostics detail display
- Motion display
- Sequencer operating display

The displayed image contents are related to the previously selected units or messages. This means that the proper. context-sensitive diagnostics display can be called up based on a message or a selected technological unit.

Message display

All of the existing process messages are shown in the message display. Context-sensitive branching to other diagnostic displays is also possible with a selected message.

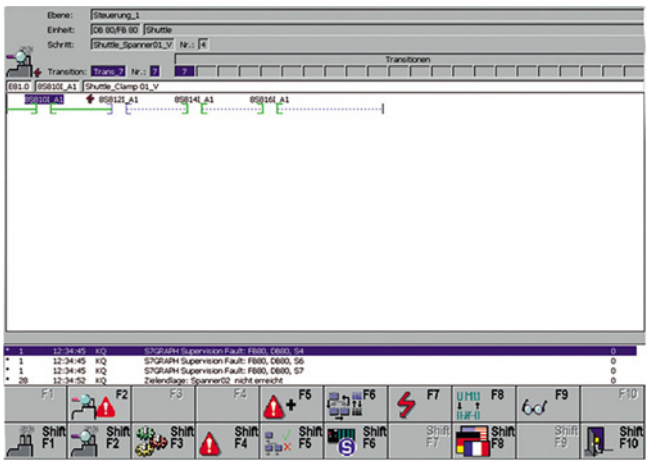
The operating personnel can also take the message directly from the erroneous operands and react immediately without having to perform any other operations on the HMI device. WinCC flexible permits this function on the Windows CE-based devices TP/OP/MP 270/277, MP 370/377, and on PC Runtime systems. The function is available as of version 6.0 for WinCC/ProAgent.



Unit overview

The unit overview displays all technological units and the respective sub-units (system/machine components) in table form. In this display, the user is able to recognize, for example, which operating mode or which status the respective unit is in. The operating mode can be changed by the user if required.

Faulty units are marked with attributes.



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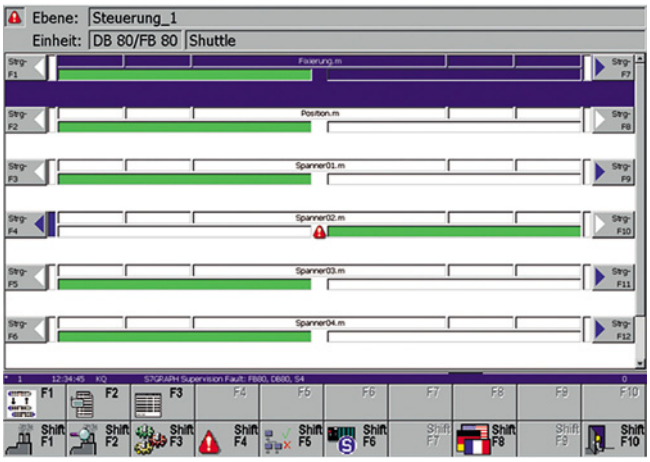
Function

Diagnostics detail display

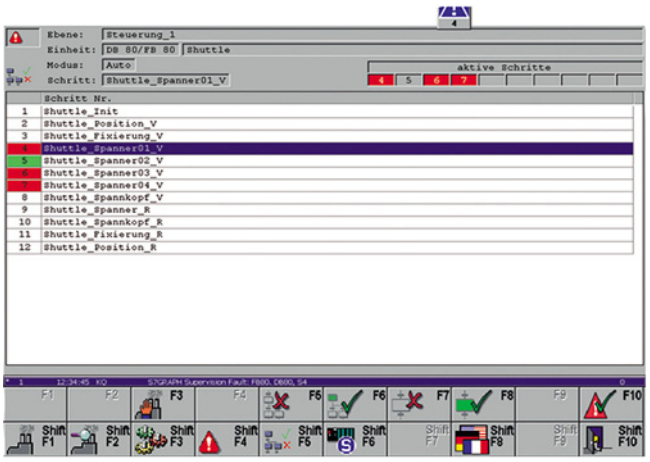
The diagnostics detail display shows the faulty operands at the time of origination of a process error. As an option, current status information can also be displayed. The diagnostics results are either displayed in a ladder diagram (LAD), statement list (STL), or in a clearly arranged signal list overview. The output of the operands depends on the display format with symbols and comments from the S7 symbol table. Only the operands that cause the fault are displayed and marked with a highlighted attribute. Switching to a display that calls up the current status of all operands in the controller is also possible.



Motion display

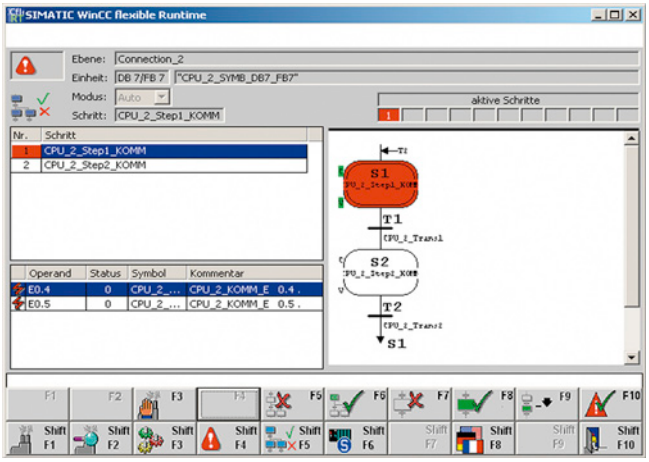
The motion display is used for supported fault rectification. Every motion line contains a comment line that describes the motion (e.g. x-axis), two actions for implementing the motion, response concerning the actuation of a motion and information on the respectively achieved end positions (max. 16).

The motion itself is controlled with softkeys on the side of SIMATIC Panels and Multi Panels. For time-critical motions, the actuation can be done directly through inputs of the controller (depending on the capabilities of the target hardware: 24 V direct keys, DP direct keys via PROFIBUS).



Sequencer operating display

The sequencer operating display supports sequencer control. This makes functions such as initializing and acknowledging sequencers, activating/deactivating individual steps and operating mode settings possible analog to the status/control in S7-GRAPH. The steps are output to a list with step number/name. Attributes for identifying an active/faulty step give the operating personnel an overview of the current status of the step sequence.



Sequencer diagnostic display

WinCC flexible/ProAgent and WinCC/ProAgent[1] also offer capabilities for graphic monitoring and sequencer diagnostics. This gives the user the ability to monitor active/faulty steps as well as the fault cause, e.g. faulty transition conditions, simultaneously on the HMI device.

[1] WinCC/ProAgent as of V5.6 in combination with S7-GRAPH as of V5.1 (OCX is delivered as of S7-GRAPH 5.1)

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SIMATIC WinCC/ProAgent

Ordering data	Article No.
SIMATIC WinCC/ProAgent	
Software option package for process diagnosis based on S7 GRAPH V5 and higher and S7 PDIAG V5 and higher; functional enhancement for SIMATIC WinCC; electronic documentation in English, French and German; functions and standard screens for use on a PC (resolution 1024 x 768 pixels) and Panel PC 577/677/877 15" (resolution 1024 x 768 pixels) in English, French and German, runtime license (single license)	
WinCC version:	
• V7.5[1)]	**6AV6371-1DG07-5AX0**
• V7.4[1)]	**6AV6371-1DG07-4AX0**
As download	
• V7.5[1)]	**6AV6371-1HG07-5AX0**
• V7.4[1)]	**6AV6371-1HG07-4AX0**
Upgrade	
• V7.4 to V7.5[1)]	**6AV6371-1DG07-5AX4**
• V7.2/3 to V7.5[1)]	**6AV6371-1DG07-5AX3**
• V7.x to V7.4[1)]	**6AV6371-1DG07-4AX3**
As download	
• V7.4 to V7.5[1)]	**6AV6371-1KG07-5AX4**
• V7.2/3 to V7.5[1)]	**6AV6371-1KG07-5AX3**
• V7.x to V7.4[1)]	**6AV6371-1KG07-4AX3**
SIMATIC WinCC flexible/ ProAgent	
Software option package for process diagnostics based on S7 PDIAG V5.1 and higher, S7 GRAPH V5.2 + SP3 and higher; S7 HiGRAPH V5.3 and higher. Functional enhancement for SIMATIC WinCC flexible; electronic documentation in English, French, German, Italian, and Spanish	
• **WinCC flexible/ProAgent for SIMATIC Panels** Runtime license (single license) executable on TP/OP/MP 270/277, Mobile Panel 277, and MP 370/377	**6AV6618-7DB01-3AB0**
• **WinCC flexible /ProAgent for WinCC flexible Runtime** Runtime license (single license)	**6AV6618-7DD01-3AB0**

[1)] Not multi-station-capable

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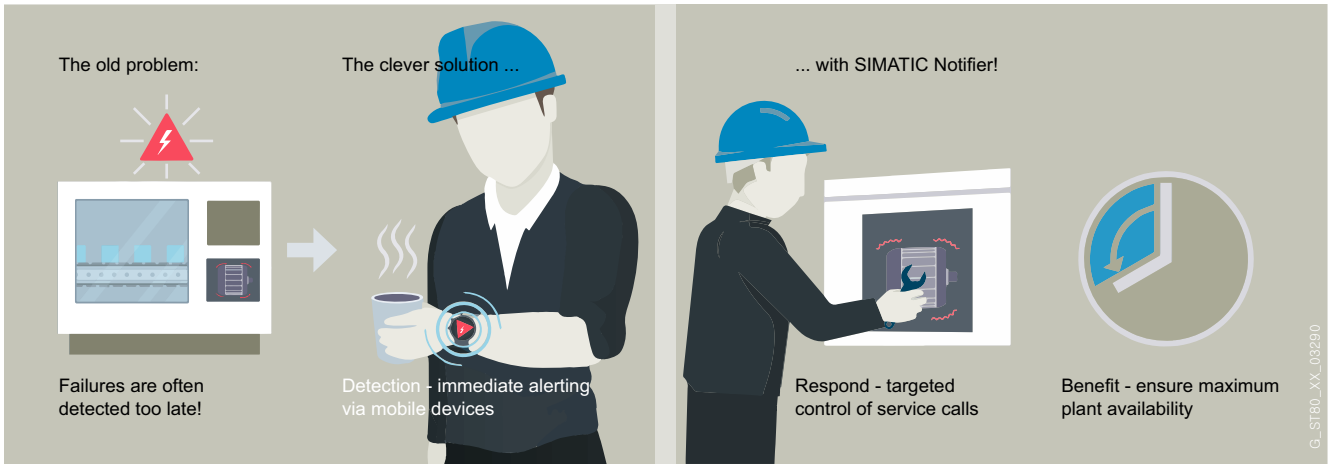
Overview



SIMATIC Notifier

SIMATIC Notifier: Detect. React. Benefit.

SIMATIC Notifier is used to provide targeted notifications to employees on their smart devices. The web-based configuration is performed on the Notifier Server in advance for each individual device.

The SIMATIC Notifier Client app receives the notifications. S7, S7 Classic or OPC UA communication is required for integration into a system/machine.

Licenses:

- SIMATIC Notifier Server
- SIMATIC Notifier Client License (unlimited extension options, depending on the number of linked smart devices)

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SIMATIC Notifier

Benefits

- Detection and localization of plant or machine faults
- Direct notification on smartwatches, smartphones and tablets
- Increased productivity by avoiding downtimes
- Increased freedom of movement and ability to reach employees via wireless LAN communication

Application

- Plants and machines with operator intervention
- Long production lines, individual machines or total systems
- Simple retrofit/integration
- Fast and user-friendly configuration
- Licensing based on number of connected smart devices (smartwatch, smartphone or tablet)

Function

- Notifications on smart devices
- User and role management
- Different notification categories: Alert, warning and information
- Customizable notification texts and triggering conditions
- "Take over" feature for team applications

Ordering data

	Article No.
SIMATIC Notifier Server 1.0 for Win7 or Win10 (64-bit) SIMATIC Notifier Server license key, download + SIMATIC Notifier Server software, download. Including a SIMATIC Notifier Client license. Email address required for delivery.	**6AV2170-0AA10-0AA0**
SIMATIC Notifier Client license Freely expandable Client license, download. Email address required for delivery.	**6AV2170-0AA20-0AA0**

Technical specifications

	SIMATIC Notifier
Machine integration	S7 Classic, S7+, OPC UA
Max. number of controllers/ machines	30x S7 or 30x OPC UA or 30x mixed configurations [1]
Max. number of variables per second per machine	50 [1]
Max. number of variables per second per Notifier Server	1500 [1]
Max. number of connected smart devices per Notifier Server	50 [1]
Minimum requirements for smartwatch OS	Android Wear 2
Minimum requirements for a Windows PC	Windows 7 or 10 (64-bit), 4 GB RAM; Internet Explorer or Google Chrome
Availability	In countries as per OSD country list (Online Software Delivery)

[1] Depending on the performance of the Windows PC used

More information

More information is available at:

http://www.siemens.com/simatic-notifier

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Overview

SIMATIC WinCC OA

The SCADA system SIMATIC WinCC Open Architecture addresses applications with a high demand for customer-specific adaptations, large and/or complex applications, as well as projects that demand special system requirements and functions.

SIMATIC WinCC OA stands for:

- Object orientation supports efficient engineering and flexible plant expansion
- Up to 2 048 servers for distributed systems
- Scalable – from small, single-user systems to networked, redundant high-end systems with more than 10 million PowerTags
- Can be used on any platform, and is available for Windows, Linux, iOS and Android
- Hot-standby redundancy and disaster recovery system assure maximum fail-safety and availability
- Platform for customized solutions
- Extensive driver and interfacing options:
  S7, S7 PLUS, OPC, OPC UA, Modbus, Rockwell EtherNet/IP, IEC 61850, IEC 60870-5-101/104, DNP3, XML, TCP/IP

Apart from the software, SIMATIC WinCC OA also offers a large spectrum of services and preconfigured additional functionalities, such as:

- Single server: products required for operation of a single-user system
- Server: Server Basic Package and expansions with PowerTags (I/Os)
- User interfaces: all available user interface licenses and engineering licenses for one server
- Driver: a wide range of additional connection options for one server
- Add-ons: functional expansions within a WinCC OA Server and additional functions based on the server
- IPC Packages: special offers for SIMATIC WinCC OA Servers, purchased together with a SIEMENS PC platform
- Development Packages: special offers for development environments and expansions
- Solution Frameworks: pre-defined projects with pre-implemented functions such as extended maintenance applications, tree views of a plant or simulation options with SIMATIC WinCC OA
- Trade goods: commodities for SIMATIC WinCC OA

SIMATIC WinCC OA IOT Suite

The product spectrum of SIMATIC WinCC OA is extended towards IoT with the SIMATIC WinCC OA IOT Suite.
This is based on the standard product SIMATIC WinCC OA and comprises two components:

- IOT Box and IOT OPA

SIMATIC WinCC OA Services

SIMATIC WinCC OA offers a multitude of support such as consulting, solution portfolio or special implementations (e.g. driver extensions or creation of new ones), as well as hotline support. A large number of training courses is also offered for the multitude of WinCC OA possibilities. This offer is rounded out with travel expense flat rates to ensure the deployment of our employees on site.

End User License Agreement

The current End User License Agreement (EULA) can be found under:

https://www.winccoa.com/downloads/detail/eula-end-user-license-agreement.html

Product warranty

During the 12-month warranty period, faults will be corrected at ETM's discretion either by a workaround, a patch or a new WinCC OA version. For resolved defects, the warranty is extended by max. 3 months for the corrected area in WinCC OA (starting from the availability of the patch correcting the fault). An upgrade to the latest WinCC OA version is not part of the product warranty!

Definitions:

- "Update" means a modification or expansion of the current software release, including additional functionalities
- "Upgrade" means replacing the current software version with the next higher version.

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Overview

SIMATIC WinCC Open Architecture

SIMATIC WinCC Open Architecture is a SCADA system for visualizing and operating processes, production flows, machines and plants in all industrial sectors.

SIMATIC WinCC OA is built consistently on object-oriented structures. Due to this consistent and well-considered use of object-oriented structures, from process images to the database, the engineering costs improve for SIMATIC WinCC OA customers.

Distributed systems enable the connection of up to 2 048 autonomous SIMATIC WinCC Open Architecture systems via a single network. Each subsystem can be configured either as single-user or multi-user system, each of which may be redundant or non-redundant.

Current version:
SIMATIC WinCC Open Architecture V3.18

New in Version 3.18:

- Dashboard
  - Web-based
  - Online configurations
  - Individually adapted widgets
- Archiving
  - PostgreSQL
  - MS SQL Server (later as version)
  - Parallel archiving
- Connectivity
  - SINUMERIK powerline
  - OMRON FINS
  - OPC UA improvements
- Other
  - Docker Support
  - New icon theme
  - Connectors & Auto-Routing

Supported platforms:

- Windows 2019 Server
- Windows 2019 Server LTSC
- Windows 10 CB Version 20H2
- Windows 10 LTSC 2019
- Red Hat Enterprise Linux 8.2
- Oracle Linux
- SIEMENS Industrial OS 2.x
- Docker – Debian 10
- VMware ESXi 7
- vSphere HA Cluster

You can find the supported platforms for older versions in the https://www.winccoa.com/knowledge-base.html of the WinCC OA Portal.

Note:

Native 64-bit support.

Software services:

Four types of software services are available. They are ordered for each WinCC OA software component.

Software service	Short description	Available service periods	Renewable
POS	Patch Only Service	1 year	Yes
SUS	Software Update Service	1 year	Yes
SMS	Software Maintenance Service	1 year	Yes
UPG	One Upgrade	n/a	No

An exact description of the respective options can be found under **More information**.

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Benefits

Efficient engineering and flexible plant expansion

- Object orientation
- Unlimited number of data points
- Mass engineering
- Multi-language with UTF-8 support

Object-oriented data model

- Mapping of setpoint and measured values for a physical plant object onto a structured data point
- Data point comprises a tree structure with data point elements
- The individual process values are mapped onto the data point elements
- Any number of data points can be instanced from one defined data point structure (data point type), e.g. 20 pumps of the same type.
- Data point types can be embedded in other data point types, which enables more complex plant objects to be generated (e.g. one pump station comprises 2 pumps).
- Graphical plant symbols can be linked with a data point type. They only need to be drawn once, but can be used for all instances of the linked type.
- Savings in engineering outlay.

Freely scalable

- From a small single-user system up to a networked, redundant high-end system
- Distributed systems of up to 2 048 servers

Platform-independent

- Available for Windows, Linux, iOS and Android

Native 64-bit support

- More system memory is usable due to native 64-bit support
- This means that larger data quantity structures per server can be processed

Maximum fail-safety and availability

- Hot standby redundancy
- Disaster Recovery System (2x2 redundancy)
- IEC 61508 SIL 3 certified
- Certifications for PROFIsafe and PROFINET
- Certifications according to 62443 4-1 and IEC 62443 4-2

Quick and easy implementation of new processes

- Platform for customized solutions
  - Graphical user interfaces and wizards facilitate the creation of visualization interfaces
  - Installation of existing object libraries and rapid adaptation to customer requirements
  - Easy creation of new processes via NodeRED connection
- Swift adaptation of plant control and visualization to current market requirements
- Company-internal programming and in-house developments enable independence and protection of intellectual property
- Structure of standardized solutions permits continuous use
- Support of brand labeling
- Individual brand names for OEM developments
- Remote operator stations and mobile operability
  - Desktop UI
  - Mobile UI
  - ULC UX
  - Web Dashboard

Openness thanks to comprehensive driver and interface options:

- TCP/IP: SIMATIC S7, SIMATIC S7 PLUS, MQTT, PROFINET/PROFIsafe, TLS Gateway, Modbus, Ethernet/IP, SNMP, BACnet
- OPC UA: DA, AC, HA (client & server)
- OPC: DA, AE, HDA (client & server)
- Telecontrol drivers: SSI, IEC 60870-5-101, -104, DNP3, SINAUT, IEC 61850/61400, RK512
- API
- Cerberus

Seamless traceability of system states by means of high-performance archiving:

- Data archiving in value archives (internal database format)
- Data archiving in external databases:
  - Use of Oracle databases
  - Open databases that support time series (e.g. InfluxDB)
  - Databases with SQL-like query mechanisms
  - Use of archived data for reports and trends
  - Storage of archived data locally or centrally – optionally both

Extendable by means of Add-ons and Solution Frameworks:

- Add-on for integration of video management systems (VIDEO)
- Add-on for increasing availability (Redundancy in Hot Standby, Disaster Recovery System, etc.)
- Add-on for clarity in distributed systems (Plant Model overview, CNS, GIS Viewer, etc.)
- Add-on for efficient maintenance management (AMS, Maintenance, Scheduler etc.)
- Add-on for efficient building automation technology (BacNet)

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Application

The SCADA System SIMATIC WinCC Open Architecture addresses applications with a high demand for customer-specific adaptations, large and/or complex applications, as well as projects that demand special system requirements and functions.

SIMATIC WinCC Open Architecture demonstrates its high performance in networked and redundant high-end control systems in particular. Integrated, high-performance communication is guaranteed from the field level to the control station, from the machine to the company headquarters. In every situation, high availability, reliable information, fast interaction, and user friendliness are guaranteed. Applications can also be changed without interrupting the process.

Profitability, efficiency and safety are therefore always in equilibrium.
SIMATIC WinCC Open Architecture displays its reliability in a wide range of business-critical applications.

With SIMATIC WinCC Open Architecture, ideas can be quickly and easily converted into new applications.
SIMATIC WinCC Open Architecture is open for independent in-house developments and also enables own product branding.

Thanks to its special system properties, SIMATIC WinCC Open Architecture meets the highest demands especially in the case of traffic solutions, building management systems and supply systems (power, telecommunication networks, water, oil and gas, etc.).

Design

SIMATIC WinCC Open Architecture is available as a single-user runtime license, multi-user runtime license, web client license, and parameterization and development license.

With SIMATIC WinCC Open Architecture, one of the factors for determining the required license is the number of inputs and outputs (I/O), referred to as PowerTags hereafter, to be processed.

WinCC OA PowerTag licensing

In the context of WinCC OA, a PowerTag is a data point element (DPE):

- 1) For which data is either sent or received via a driver (e.g. S7 driver reads data from a PLC)
- 2) That originates from a different WinCC OA Server (distributed systems)
- 3) Whose data is exchanged with other software (third-party systems)
- 4) The number of internal data point elements (without external communication) is not limited

Notes on the PowerTag definition:

This definition is the generally valid definition of PowerTag licensing of WinCC OA systems.
The total number of calculated PowerTags must be rounded up to the next higher PowerTag license scale.

About 1): Data that is communicated via a driver can be determined based on the number of WinCC OA I/O address configs.

About 2): A hierarchically distributed system (i.e. a system that sees its own data and the data of the lower-system systems, but the lower-level systems only see their own data - see OneWay Dist) requires the total number of all licensed PowerTags of the lower-level systems plus the directly connected PowerTags. The license must be rounded up to the next higher license scale.

About 3): For the connection to external systems, all data point elements that contain data to be sent or received are counted.

About 4): The exchange of internal data point elements between WinCC systems is not counted as PowerTags. This means that all other data point elements (without I/O address config and not exchanged with external systems) are not counted as PowerTags.

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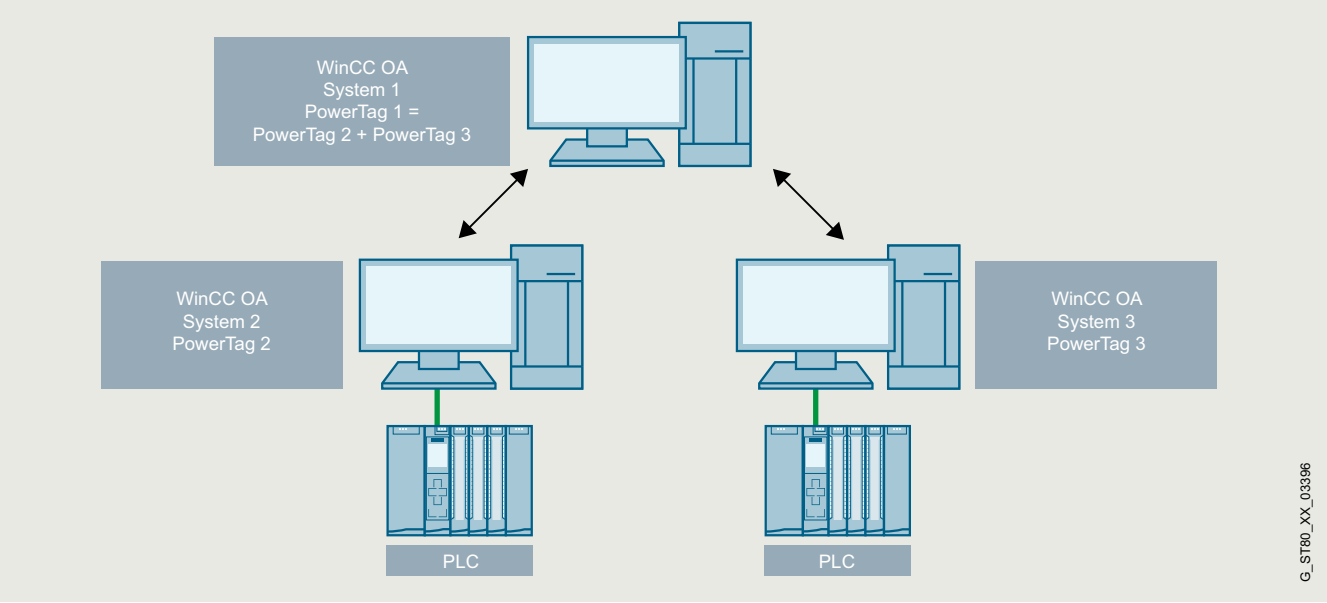
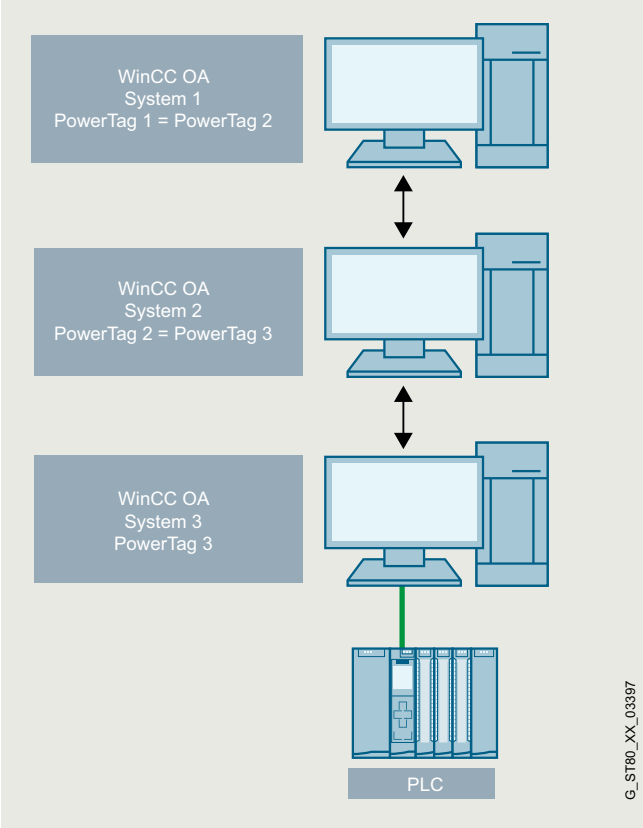
Design



WinCC OA hierarchical system example 1



WinCC OA hierarchical system example 2

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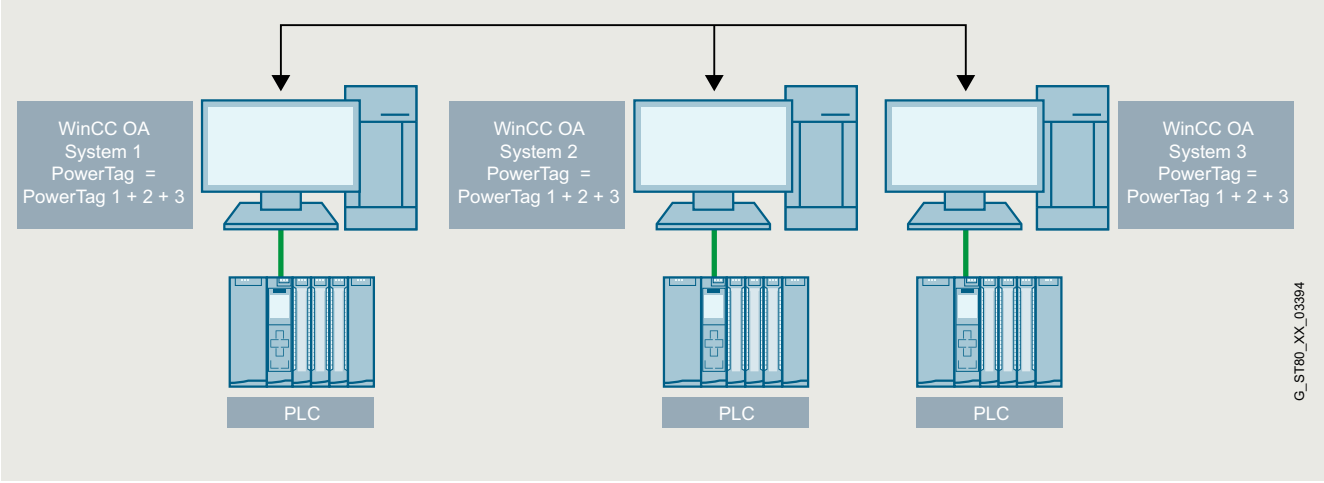
Design

With a distributed system on the same level, the PowerTags of all connected systems are added up and the next higher license scale is rounded up (this means that all systems have the same number of PowerTags for licensing).



WinCC OA example of a distributed system on the same level

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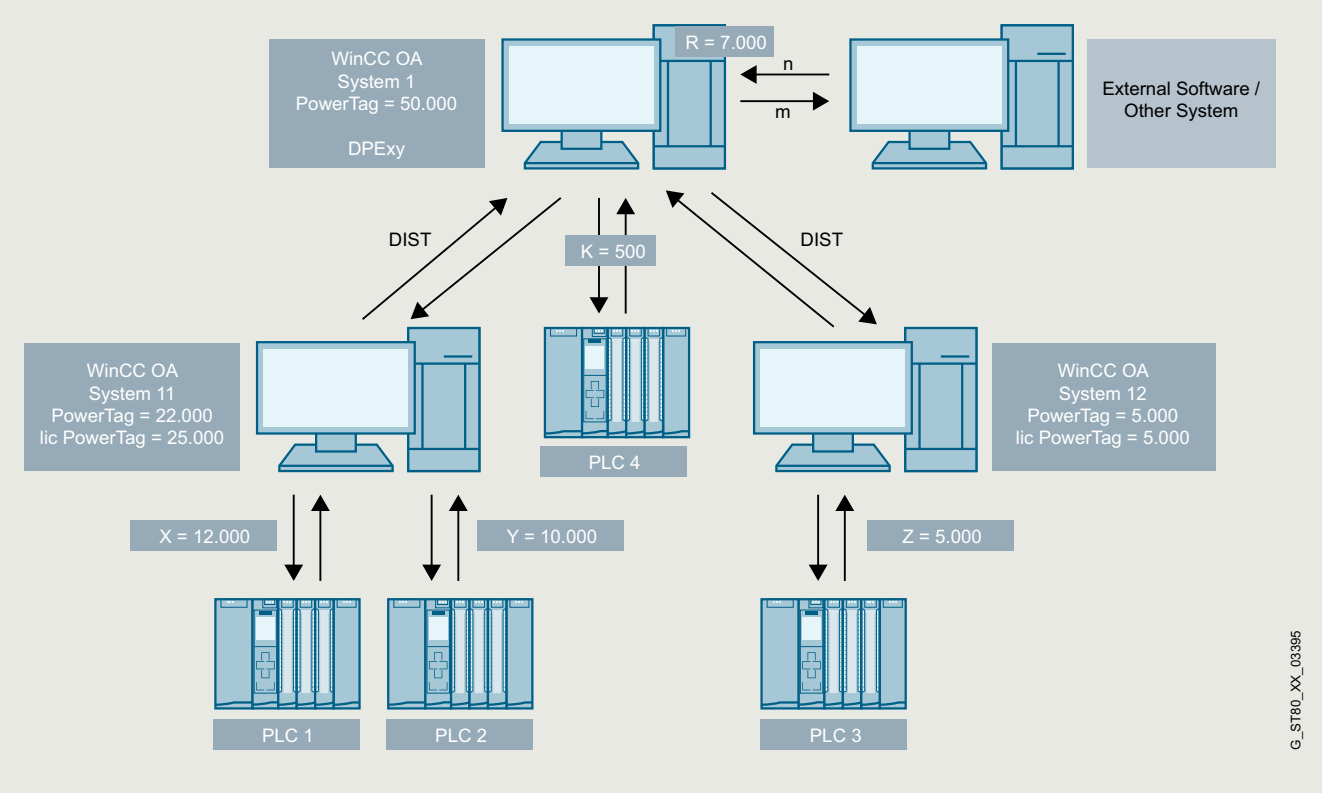
Design

To aid understanding, an example of a typical hierarchically distributed system is outlined below, consisting of 3 WinCC OA systems, a number of PLCs and an external system.



WinCC OA example of licensing in a hierarchically distributed system

Number of PowerTags of system 1:

- R = n + m ...Data from external software/other system
- K = PowerTags of PLC4
- System 1 = lic PowerTagsSystem11 + lic PowerTagsSystem12 + K + R
- System 1 = 25 000 + 5 000 + 500 + 7 000 = 37 500
- License is adapted to the next higher PowerTag package
- System 1 licenses = 50 000 PowerTags

Number of PowerTags of system 11:

- X = PowerTags of PLC 1
- X = PowerTags of PLC 2
- System 11 = X + Y
- System 11 = 12 000 + 10 000 = 22 000
- License is adapted to the next higher PowerTag package
- System 11 licenses = 25 000 PowerTags

Number of PowerTags of system 12:

- Z = PowerTags of PLC 3
- System 12 = Z = 5 000
- System 12 licenses = 5 000 PowerTags

The licenses are available either with an unlimited number of PowerTags or with graded limitations of 500 to 250 000 PowerTags.

Multi-user systems

The multi-user runtime license allows working simultaneously on different PCs, with the licensing taking place via the server. The active clients are counted in this case. Clients that can be installed natively as well as web-based user interfaces in common browsers allow visualization and operation of plant screens via an encrypted HTTP connection between the server and the respective client.

The parameterization and development licenses extend a runtime license with the option of configuration and parameterization. They each require a server license.

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Function

SIMATIC WinCC Open Architecture is a very modular SCADA system. The required functionalities are realized by specific, functional entities created for various tasks. In SIMATIC WinCC Open Architecture, these units are called "Managers" – they are also independent processes in software terms.

WinCC OA Manager	Task
Event Manager (EV)	The Event Manager (EV) is the processing center in WinCC OA. This unit provides a constantly updated image of all process tags in the memory. Every other functional unit (Manager) that wants to access the data receives it from the process image of the Event Manager and does not have to communicate directly with a PLC. Conversely, a command from an operator station is initially set only as a value change in the process image of the Event Manager. The associated driver then forwards it to the corresponding target device (e.g. PLC) automatically. The Event Manager is a kind of central data distributor, in effect the communication center for WinCC OA. Furthermore, this Manager also carries out the alarm handling and can execute various arithmetic functions autonomously.
Driver Manager (D)	The lowest level in a WinCC OA System is represented by the process connections, referred to in WinCC OA as drivers (D). These are special programs that handle the communication with the control and field level. Since numerous different forms of communication are possible with the PLCs or telecontrol nodes, there are different drivers that can be selected. In very simple terms, the driver is a unit for converting a particular protocol into the internal communication form of WinCC OA. The driver reads the current states, measured values or counter values from the field and, in the opposite direction, it forwards commands and setpoints to the lower-level PLCs (= the term "PLC" should be used here and below to represent all possible devices of the basic automation (PLC, DDC, telecontrol system, etc.)).
Data Manager (DB)	The Data Manager (DB) represents the link to the database. On one hand, it involves the parameterization data of an application that is to be stored in such a database. On the other hand, it involves the historical recording of changes in values or alarms. If a user wishes to query historical data at a later date, then the Data Manager completes this request and not the database itself.
Control Manager (CTRL)	WinCC OA has numerous options for implementing your own algorithms and processing. The two most important are the internal language Control (CTRL) and the general application programming interface (API). Control is an extremely powerful scripting language. The processing is interpretative, so that no compilation is required. The syntax is almost identical with ANSI-C, with some modifications for simplification. This is a fully developed, procedural high-level language with multi-threading (= quasi-parallel processing of individual programs; the system itself carries out the processing check). The language offers a comprehensive function library for tasks of the control and visualization technology. Control can be used as a stand-alone process (Control Manager), for animation and user interface design or for standardized, data object-oriented processing functions. The API (WinCC OA API) represents the most powerful form of functional extension. It is configured as a C++ class library and allows the software developer to implement individual functions as an independent, additional manager (forecast system, simulation, tools, proprietary databases, etc.).
User Interface Manager (UI)	The interface to the user is created by the User Interface Manager (UI). This is a graphical editor (GEDI), a database editor (PARA) or the general user interface of the application (Vision module). The user interface serves to display values, issue commands or track alarms in the alarm list. Trends and reports are also usually part of the UI. From a programming viewpoint, the user interaction in WinCC OA is completely isolated from the background processing – it is merely a view of the data of the current process image or the history.

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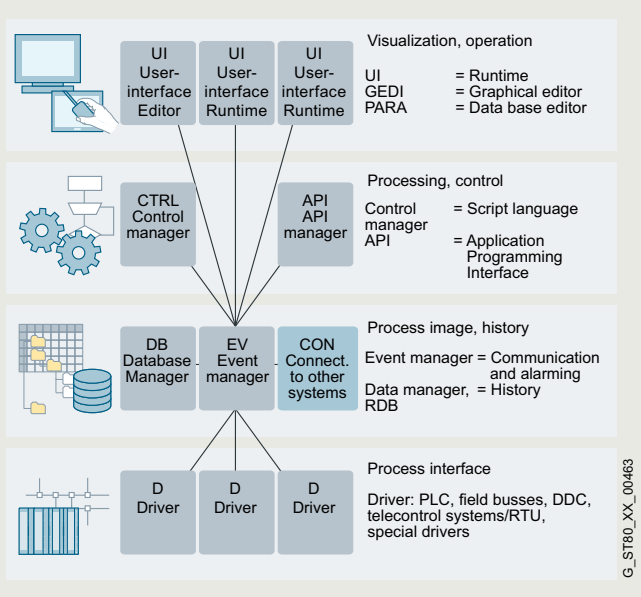
Function



A WinCC OA System consists of function-specific units, the managers.

More managers are available for special tasks such as redundancy, management for distributed systems, web server, reporting, simulation, COM etc.

The powerful configuration functions contribute to reducing the engineering and training requirements and lead to increased flexibility and operational reliability.

Additional functions	Task
Access to external databases	The database interfaces offer the possibility of access to external databases. Under Windows, the link is established via the ADO Standard. ADO (ActiveX Data Objects) is an interface developed by Microsoft for vendor-independent access to data sources of all types, primarily databases. The data source for ADO is an OLE DB Provider, although ODBC-compatible databases can also be addressed via an internal wrapper. In Linux, the Qt library is used as an interface to relational databases. Access in this case is either direct via the native DB-API or via ODBC. Additional interfaces such as RDB to Oracle or the new archiving interface to open databases such as InfluxDB support the connection of external, also freely available (open source) databases for optimal archiving and protection of the stored data.
API (Application Programming Interface)	The API offers a series of functions that enable WinCC OA to be extended with special managers. A manager is a program that communicates with the system via a protocol defined by WinCC OA.
COM (Component Object Model)	This is a specification for the development of modular software components that can be used by each COM-compatible application. COM components can easily be integrated into such applications and can even be removed from an application during runtime. COM components can be programmed in a host of different languages, although C++ is usually used for this purpose. The specifications OLE, ActiveX and DirectX are based on the COM technology.

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Function

Additional functions	Task
Control extension	Extension that allows C++ functions to be added to the programming language. Realization via API
Panel topology/ summation signal	Generation of panel hierarchies/topologies in existing or new projects and automatic creation of summation signals of the alarm data points that are located in the Panels of the topology.
Encryption of Panels and CTRL scripts/libraries	Allows your Panels or scripts to be encrypted, thereby protecting your knowledge and work.
Script Wizard	Easy-to-use tool that simplifies the creation of animated, graphical plant symbols, which saves time during engineering. It offers a large number of animation types and functional elements.
Simple Symbols	Basic Package of plant symbols, which were created with the Script Wizard and can be mapped directly to data point elements. These can be adapted quickly and easily to the specific requirements of the customer.
Easy Faceplates	Simple parameter assignment of predefined pop-up windows that display details of the associated plant symbol. Without any additional drawing outlay, several standard functions per object can be activated for the detail view (alarm display, trend display, measured value table, setpoint value table, address table, notes).
Drag and Draw	Several representative graphical objects can be defined and configured for each plant object in the data model (data point type). These are pre-configured and need only be moved to the panel via drag-and-drop when the plant pictures are drawn. This saves valuable time during engineering.

Additional functions	Task
NodeRED interface	With a new communication interface, WinCC OA supports the integration of NodeRED via a secure web socket server. The graphical editor can be used for easier process mapping and creation on a graphical interface. Pre-defined process chains can be created and modified as easily as on the drawing board. WinCC OA offers its own communication node package, and its own processes created using Node.js can also be integrated.
Multilingual capability	Thanks to the UTF-8 format as the standard for written languages it's possible to use almost all fonts and characters in projects. You can choose from 72 language options. User rights enable the definition of a standard language. In addition it is easy to change the display language during operation. Dictionaries can be made with a special tool or according to individual requirements.
Server-side authentication	The verification of logon data on the server side enables connection of third-party systems including the customer's own solutions for user authentication.
Distributed systems	Permits the coupling of two or more autonomous WinCC OA Systems via a network. Each sub-system of a distributed system can be configured either as a single-user or multi-user system, each of which may be redundant or non-redundant. A sub-system in this context means a server on which an Event Manager is running, whereby in case of redundancy both redundantly operating servers are considered as one system. All process data is mapped to local data points and each system can process data from other systems.
Redundancy (see figure below)	The failure safety in a redundant system is implemented by means of hot standby. Hot standby is a hardware-independent solution for high availability. This is a safety concept that consists of two interconnected server systems. Both servers are constantly in operation and are subject to the same functional loading (but only one server is ever active; the second synchronizes the data with the primary unit during runtime). On the failure of one unit, an "on-the-fly changeover" takes place and the previously passive server assumes the leading role. This guarantees access to data or functions at all times.

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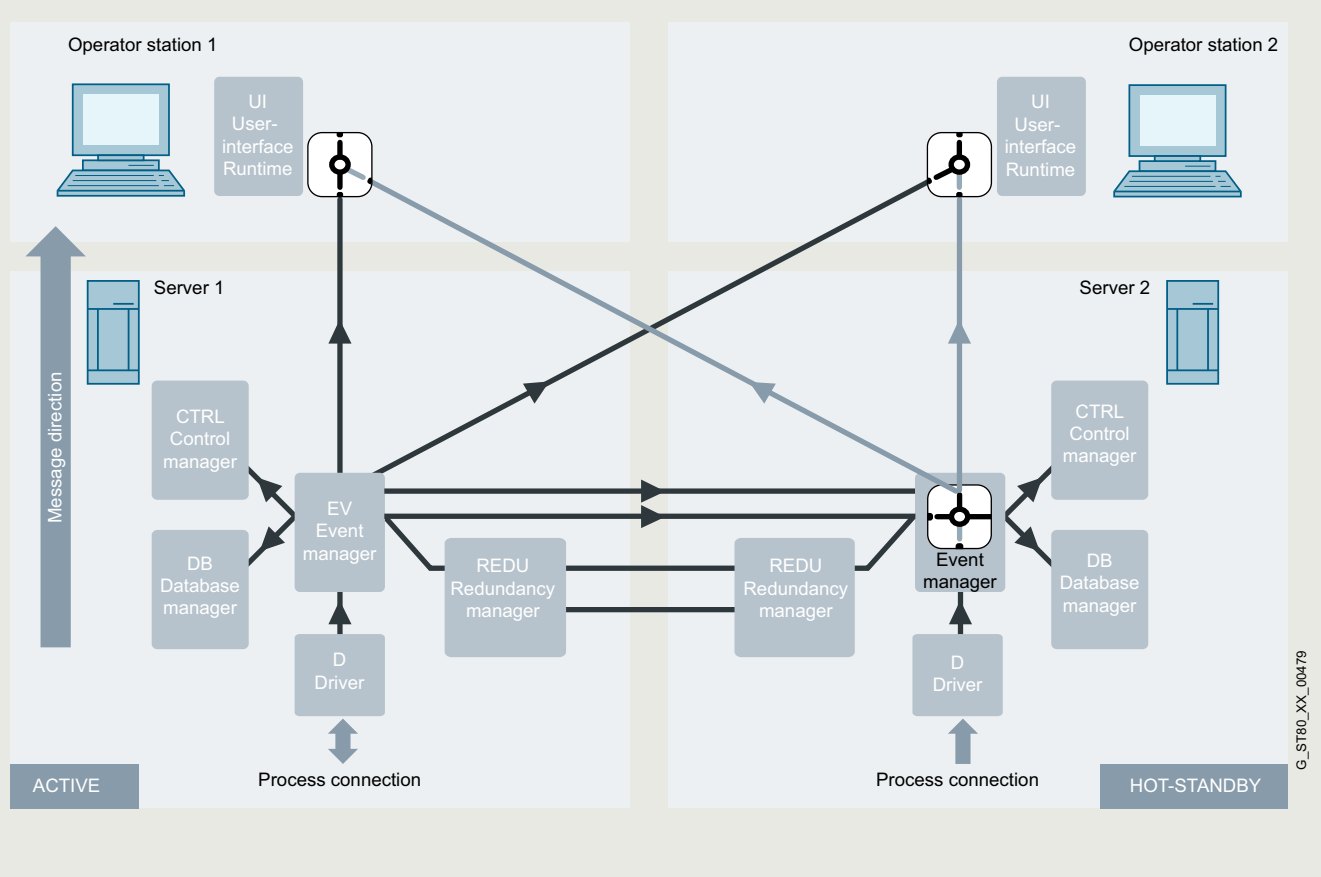
Function



The figure shows a detailed representation of the two computers: Server 1 and Server 2. Server 1 is in management mode (active) and Server 2 is in hot standby mode (passive).

In the case of redundant operation, the UIs of both operator stations are connected to both Event Managers, however only the data of the active system is displayed on both UIs.

The Event Manager of the passive system is restricted exclusively to communication with the Event Manager of the active system for synchronization of the process data (it sends no data to the connected UIs or it discards messages from the drivers – this can be seen in the figure with the switches on the UIs or on the passive Event Manager).

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Integration

Integration in automation solutions

SIMATIC WinCC Open Architecture is an open SCADA system with comprehensive drivers and flexible options for connection to other external systems.

Depending on the communications protocol and the bus hardware used, specific drivers are used in each case:

- Serial protocols: RK512, 3964R, etc.
- Ethernet: Industrial Ethernet (S7, S7 PLUS), Modbus TCP (OpenModbus), Ethernet IP (AB), etc.
- Telecontrol systems: SINAUT, SSI (Ethernet), IEC 61850/61400, IEC 60870-5-101, IEC 60870-5-104, etc.
- Vendor-independent interfaces: OPC UA, etc.
- Cloud connections: SIEMENS MindSphere Connector, MQTT

In SIMATIC WinCC Open Architecture, several drivers can be operated in parallel. These can be of the same type or also of different types. It is possible in a SIMATIC WinCC Open Architecture system, for example, to establish connections via the S7 protocol to a SIMATIC Controller, via IEC 60870-5-104 to a telecontrol system, and via OPC DA to any OPC Server at the same time.

Connection overview

Protocol	Description
S7 TCP/IP	TCP/IP driver for Siemens Industrial Ethernet
S7 PLUS	Drivers for S7 1200 and 1500; Supports alarm messages, online browsing, TIA importer for versions V13, V14 and V15
OPC Client (Data Access)	• Compatibility with specifications DA 1.0 and 2.05a • Connection to inproc, local or remote server • Connection with up to 20 servers at the same time • Monitoring of the connection to the server and automatic reconnection if the connection is interrupted. • Address browsing if supported by the server. • Benefits of the CALL-R functionality for CALL-R servers (simplified parameter assignment)
OPC Server (Data Access)	• Corresponds to Data Access 2.05a specification (reading/writing of online values). • Is to be started as a manager just like other drivers. • The provided DPEs (server -> client) can be easily and quickly defined via data point groups. • DPEs can be declared as readable (read-only access is permitted; Group OPCRead) or as writable items (Group OPCWrite). • Clients can browse the WinCC OA OPC Server hierarchically.
OPC Alarms & Events	OPC Alarms & Events (abbreviated to OPC A&E) is, in addition to Data Access, a further standard for performing central alarm management on a cross-vendor basis. OPC A&E is used to ensure the link to other control systems and the display of alarms/events in a hierarchical system.
OPC Historical Data Access	OPC Historical Data Access (OPC HDA) is used to exchange archived process data. This is in contrast to the OPC Data Access (OPC DA) specification that deals with real-time data.
OPC UA (Unified Architecture)	WinCC OA supports the OPC UA Data Access (DA), Alarms & Conditions (AC) and Historical Access (HA) standards.
Modbus TCP	Modbus/TCP is based on the serial Modbus protocol, which was adapted for TCP/IP. The Modbus/TCP driver can be used simultaneously for Modbus/TCP or UNICOS.
Ethernet/IP	Ethernet/IP is used for communication with several PLC generations and families from Rockwell Automation / Allen Bradley. The protocol is part of the application layer and is based on the standard TCP/IP network protocol.
Serial: RK512/3964R	Is used for interfacing a PLC via the 3964R/RK512 protocol
Cerberus	Cerberus is a fire, intrusion and gas alarm system. The Cerberus driver guarantees communication to and from the central fire alarm systems and building security facilities in the event of a fire, gas or intruder alarm.
SSI	Is used for the interfacing of SAT telecontrol systems. The data is exchanged via the LAN (Ethernet, IEEE 802.3); the frame formats used are the SSI formats defined by SAT. The SK 1703 telecontrol components with a suitable communication card (KE/ET) are supported.
IEC 60870-5-101, -104	IEC drivers are standardized telecontrol drivers that can process proprietary frames. IEC stands for International Electrotechnical Commission, the international standardization committee for electrical engineering. • IEC 60870-5-104 for data exchange via TCP/IP • IEC 60870-5-101 for serial connection
IEC 61850/61400	IEC 61850 and IEC 61400 Client defines an architecture for satisfying the requirements of electrical station automation. It defines a data model and the communication services for interaction with and between the elements of a substation, such as power supply units, circuit breakers, protective devices etc. A description language and a system configuration language (SCL) have been defined for technical purposes.
DNP3	The DNP3 (Distributed Network Protocol 3) driver is an open, rugged and modern protocol which exhibits characteristics and strengths similar to the IEC driver. The transfer of any number of frames with different data types takes place between the WinCC OA System (Master) and the remote stations (Slave).
SINAUT	SINAUT (SIemens Network AUTomation) is a communication protocol for automated monitoring and control of remote process stations on the basis of SIMATIC S7. Communication takes place via TCP/IP.
SNMP Manager & Agent	SNMP (Simple Network Management Protocol) is a protocol for monitoring network elements (servers, workstations, routers, switches, hubs, etc.) and their functions. • SNMP Manager supports SNMP V1, V2, and V3 • SNMP Agent supports SNMP V1 and V2
BACnet over IP – driver	BACnet (Building Automation and Control Networks) is a standardized protocol for building automation and has been set by the ASHRAE (American Society of Heating, Refrigerating and Air-conditioning Engineers) as a guideline to provide a uniform and cross-company standard for data communication within and between building automation systems. The BACnet Standard 2004 is supported in accordance with the PIC list (see product documentation)
S-Bus	The WinCC OA S-Bus driver is used to link SAIA PCD control devices to WinCC OA projects. Client mode of the SAIA S-Bus driver is used. Communication takes place over UDP; the serial version of the protocol is not supported.

Further drivers on request or via C++ API

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Technical specifications

Type	SIMATIC WinCC Open Architecture V3.18
Operating system	• Windows 10 CB Version 20H2 (64-bit) • Windows 10 LTSC 2019 (64-bit) • Windows 2019 Server (64-bit) • Windows 2019 Server LTSC (64-bit) • RedHat Enterprise • Linux 8.2 • SIEMENS Industrial OS 2.2 • Docker - Debian 10 • VMware ESXi 7 (supports all systems mentioned above) • vSphere HA Cluster - ITC V3
Mobile operating system	• Android 6 and higher • iOS 13 and higher
Supported browsers	• Firefox: 78.5.0 ESR (64-bit) • Chrome: Version 83.0 (64-bit) • Microsoft EDGE (Chromium) 83.0 (64-bit)
Supported databases	• Oracle Client version: 19c • Oracle Server version: 19c • InfluxDBv1.8.3+ • PostgreSQL V13
PC hardware requirements [1]	
Processor type	Intel Pentium or equivalent
Minimum	Intel Pentium IV 1.6 GHz (or better) [2)3)]
Recommended	• Client: Intel Pentium IV/Core2/i3, 2 GHz [2)3)] • Server: Intel Core i3 CPU Dual, 3 GHz [2)] • Server large system[4)]: Intel(R) Core(TM) i5/i7 CPU Dual / Quad, 3 GHz [2)3)]

Type	SIMATIC WinCC Open Architecture V3.18
Work memory RAM	
Minimum	2 GB [2)]
Recommended	• Client: 2 GB [2)3)] • Server: 8 GB [2)3)] • Server large system: 16 GB [2)]
Hard disk (available memory for installation)	
Minimum	HD with 800 MB available [2)]
Recommended	Server large system with local logging: SCSI LVD Controller, WIDE SCSI / LVD HDD or comparable storage system with at least 500 MB of available space [2)]
Screen and graphics card (TrueColor)	
Minimum	1024 x 768 [2)]
Recommended	1280 x 1024 [2)]
Mouse and keyboard	Mouse, keyboard
DVD drive	Possible for software installation, also via web installation or USB flash drive
Local power user rights	• For installation • For operation

1) For actual use in plants, the hardware requirements are largely dependent on the project size and the dynamic response of the process variables. Use the most rugged, high-quality hardware possible with corresponding functionalities such as redundant power supply units or RAID hard disks. WinCC OA supports dual and multi-processor mode and benefits significantly from the fact that each WinCC OA Manager can be assigned to one processor core as a system process. At the same time, however, it is important that the individual cores offer the highest possible performance (high clocking), since load-critical core processes such as the event manager run on exactly one core (for this reason, multi-core machines with many low-clocked cores are unsuitable for WinCC OA). As for RAM, CPU and HDD, the usual rule applies: more is better

2) System requirements generally only refer to the latest WinCC OA Version under the supported versions of the Windows and Linux operating systems.

3) A precondition for the minimum requirement is that the operating system used does not have any greater requirements itself

4) With a large system it is essential that the system permits not only the highest data point numbers but also a high dynamic response.

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Technical specifications

WinCC OA is ideally suited for use in very large distributed systems. The optimum design of such systems demands corresponding system knowledge of WinCC OA. Due to the event-oriented processing, individual design parameters can be increased or reduced as necessary in actual applications.

Type	SIMATIC WinCC Open Architecture
Functionality/quantity structure	
Number of messages	150 000 [2]
Message text (number of characters)	System-limited [1]
Message archive	System-limited [1]
Process values per message	1 process value + up to 32 alarm associated values per message
Constant load of messages, max.	500/s [2]
Message burst, max.	15 000/10 s every 5 min [2]
Archives	
Archive data points	Max. 250 000 per server [2]
Archive types	< 20 parallel archives, different retention period for each archive
Data storage format	Oracle or file system
Measured values per second, max.	Server/single-user station: 7 000/s [2] [3]
User archive	
Archive	System-limited [1]
Type	SIMATIC WinCC Open Architecture
Table size	System-limited by ORACLE database
Graphics system	
Number of screens	System-limited [1]
Number of objects per screen	System-limited [1]
Number of controllable fields per screen	System-limited [1]
Process tags	< 750 000 per server [2]
User administration	
User accounts	< 4096
Configuration languages	3 (en, de, ru)
Runtime languages	40 (of which 8 Asian)
Multi-user system	
Server	< 2 048 [2] [4]
Number of clients	< 244 per server [2] [5]

[1] Dependent on the available storage space

[2] Dependent on the system configuration and the system load (due to the event-oriented architecture, the system load is essentially determined by the change rates of the values to be processed)

[3] By means of high-performance hardware configuration (one archiving cluster and approx. 120 distributed systems that archive parallel values in the cluster): 200 000 archived value changes per second

[4] Physical limit: <2 048, in practice systems have already been implemented with up to 550 distributed systems

[5] Physical limit: < 244 clients per server, recommended: Max. 100 clients per server

More information

WinCC OA Software Services

Three types of continuous software services are available – POS, SUS and SMS.
In addition, a one-off Software Upgrade (UPG) can also be purchased.
The relevant MLFBs have a specific structure here, as shown in the table below.

License	MLFB
WinCC OA Software license V3.18	6AV6355-1**A**A31-8xxx
WinCC OA One-Time Upgrade (UPG) V3.18	6AV6355-1**C**A31-8xxx
WinCC OA Software Upgrade Service (SUS)	6AV6355-1**D**A00-0xxx
WinCC OA Software Maintenance Service (SMS)	6AV6355-1**F**A00-0xxx
WinCC OA Patch-Only Service (POS)	6AV6355-1**G**A00-0xxx

If these standard license services do not meet your specific project requirements, an individual license service contract can be offered.

Please contact your sales representative for this.
To obtain access to ETM Customer Care for product support, you need the license container ID in order to verify the license configuration and determine the active license services.

Overview of software services

After a license is purchased, one of the following service contracts can be entered into during the warranty period (POS/SUS/SMS).
The service period is one year and is automatically extended if it is not terminated in writing by one of the contract partners three months before the end of the contract period. (There may be exceptions for specific regions).
Invoicing for the annual contract takes place at the beginning of the service period.
WinCC OA Software Services can be agreed for the current release and the last two WinCC OA releases.
Software service MLFBs are version-independent and take on the version of the license on import.

Note:

The following applies to all orders: If a type of software service (POS/SUS/SMS/UPG) has been selected, this must be additionally specified for the entire order. A similar support option must be added for each item in the order. The license and service MLFB numbers must match exactly; otherwise, it can occur that an update cannot be installed or the license is not functional or only partially functional after an update.
Security patches which resolve security issues published on the Siemens product CERT, can also always be obtained without software service (https://www.siemens.com/cert/en/cert-security-advisories.htm).

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More information

Software service during the warranty period

The customer has the right to download software patches for one year after purchase. The right to avail of the Hotline Team does not apply, but faults can be reported via http://support.industry.siemens.com/My/ww/en/requests#createRequest.

WinCC OA Patch Only Service (POS)

Customers with a valid "Patch Only Service" are authorized to download the latest generally available patches from the WinCC OA Portal/Download area (https://www.winccoa.com) and install them on each server covered by this software service.
Switching from a POS to an SUS can be performed by procuring the discounted POS upgrade.
The POS service flat fee is not offset against any other active license services.

WinCC OA Software Upgrade Service (SUS)

The Software Upgrade Service contains all services of the POS as well as:

- Upgrade authorization to available versions of WinCC OA (major release v3.xx).

NOTICE:

The Software Upgrade Service does not include:

- WinCC OA product support by ETM Customer Care
- Individual troubleshooting
- Installation, implementation and activation of upgrades and/or updates

WinCC OA Software Maintenance Service (SMS)

The Software Maintenance Service contains all services of the SUS as well as:

- Individual troubleshooting according to WinCC OA Product Support classification
- 24/7 online submissions of product support requests via Siemens Industry Online Support (https://support.industry.siemens.com/cs/start?lc=en-BG)
- Obtaining more support hours.

You can find details on this in the WinCC OA Support node.
A predefined number of support hours is included depending on the number of licensed PowerTags.

NOTICE:

The Software Maintenance Service does not include:

- Installation, implementation and activation of upgrades and/or updates
- WinCC OA product support of versions that are no longer supported
- Project-specific issues and questions (e.g. relating to engineering). Consulting can be offered in these cases
- Telephone assistance in the development of new WinCC OA Managers with C++ and C#.
- Support, remote or on-site, to reproduce a fault. This can be provided by a WinCC OA Consultant via a separate Consulting agreement.

One-time software version upgrade / One Time Upgrade (UPG)

The One Time Upgrade for plant licenses is calculated based on the current license price of the installed WinCC OA license options and is available for all license options.

Customers who procure a One Time Upgrade have a one-time authorization as of WinCC OA Version 3.13 to upgrade to the latest version and to download patches of this version that are generally available at the time of purchase from the WinCC OA Portal/Download area (https://www.winccoa.com). These can only be installed on servers for which a One Time Upgrade has been purchased.

NOTICE:

WinCC OA Support supports the current release and the last two WinCC OA releases.
The One Time Upgrade does not include:

- WinCC OA product support by ETM Customer Care
- Individual troubleshooting
- Installation, implementation and activation of updates and/or releases

An SUS or SMS can be ordered for a license upgraded with UPG.

The warranty period of a UPG license is 12 months.

More information is available on the Internet at:

http://www.winccoa.com

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WinCC OA Single Station

Overview

A WinCC OA Single Station or Single Operator Station is a compact WinCC OA Server configuration which, in contrast to a regular WinCC OA Server license, cannot be extended by additional PowerTags or add-ons. Includes alarm messaging, extended trend, historical recording and SSL encryption.

Benefits

- Common configuration of frequently used services for small solutions
- Easy to order due to bundled product
- Simple basis for standardization through configuration options directly at the station
- Flexible use by offering open, widely used standards such as OPC and OPC UA

Application

For small, compact solutions, the single station configuration offers a quick ordering option without special requirements. Based on customer experience, this bundle was created to provide an optimal, yet open basis for simple, small solutions.

This bundle is not intended to be the basis for small stations in a system network, as there are no plans to extend for distributed systems or redundancy. A restriction to certain hardware types is not planned for this bundle. For certain hardware types, "Runtime Packages" have therefore been put together, which offer further advantages when using Siemens hardware.

Design

PowerTags

The WinCC OA Single Station contains a maximum of 500 PowerTags. In contrast to Server Basic licenses, however, Single Station licenses **cannot** be extended with additional PowerTag Packages.

UIs

The Single Station license includes a Desktop UI license and a license for one WinCC OA OPERATOR Device. More information on this can be found in the <User Interfaces> section

Drivers

A Single Station license contains technical licenses for S7 and S7 Plus (8 connections) drivers, as well as one OPC and one OPC UA Client each.More information on drivers can be found in the <Drivers> section.

Add-ons

Single Stations include an OPC Server and a WinCC OA Web Server**.** More information on options can be found in the <Add-ons> section.

WinCC OA Para Single Station

The single station can additionally be extended by a development and parameter assignment license.
The WinCC OA PARA Single Station license contains a graphical editor including symbol catalogs, a script development environment and a test framework.
An existing WinCC OA Single Station license is required for the purchase. When the PARA Single Station license is procured, the UI contained in the Single Station package can be used either for parameterization or for operator control and display functions, but not for both at the same time. This special PARA license can only be ordered in conjunction with the Single Station package.

Ordering data

Ordering data	Article No.
SIMATIC WinCC Open Architecture	
V3.18	
WinCC OA - Single Station V3.18	
License for single operator station with max. 500 PowerTags (bit, integer)	
• Single Station	**6AV6355-1AA31-8AA0**
• Single Station UPG	**6AV6355-1CA31-8AA0**
WinCC OA - Para Single Station V3.18	
Development and parameter assignment license for WinCC OA - Single Station	
• Para Single Station	**6AV6355-1AA31-8AA1**
• Para Single Station UPG	**6AV6355-1CA31-8AA1**
V3.17	
WinCC OA - Single Station V3.17	
License for single operator station with max. 500 PowerTags (bit, integer)	
• Single Station	**6AV6355-1AA31-7AA0**
• Single Station UPG	**6AV6355-1CA31-7AA0**
WinCC OA - Para Single Station V3.17	
Development and parameter assignment license for WinCC OA - Single Station	
• Para Single Station	**6AV6355-1AA31-7AA1**
• Para Single Station UPG	**6AV6355-1CA31-7AA1**
Software Services - version-independent	
WinCC OA – Single Station	
• Single Station SUS	**6AV6355-1DA00-0AA0**
• Single Station SMS	**6AV6355-1FA00-0AA0**
• Single Station POS	**6AV6355-1GA00-0AA0**
WinCC OA – Para Single Station	
• Para Single Station SUS	**6AV6355-1DA00-0AA1**
• Para Single Station SMS	**6AV6355-1FA00-0AA1**
• Para Single Station POS	**6AV6355-1GA00-0AA1**

More information

More information is available on the Internet at:

http://www.winccoa.com

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Overview

WinCC OA Server

A WinCC OA Server consists of a WinCC OA Server Basic license, the corresponding number of WinCC OA PowerTag licenses and additional options.

The WinCC OA Server Basic license contains:

- Alarm messaging
- Extended trend
- Historical recordings (NDB and NGA)
- S7 and S7 Plus (8 connections) drivers
- SSL encryption
- OPC Client
- OPC Server
- OPC UA Client
- 1 WinCC OA Web Server
- 1 WinCC OA OPERATOR (1 Device)

Other required options can be licensed in addition, unless the packages involved are not extendable.

The Server Basic License does **not** include an external data connection (PowerTags). These must be purchased for proper operation.

In contrast to previous versions, the new structure of the server licensing allows the distribution of PowerTag Packages.
This possibility enables additive ordering of several PowerTag packages on one server or separate ordering and moving of PowerTag packages to different servers by the customer.

PowerTags can also be gradually expanded using "PowerPacks".

Benefits

- Individual adaptation to the needs of the project and the customer through different PowerTag Packages
- Customer-oriented options for moving packages as required
- Possibility to let the project grow with the requirements and to quickly extend it
- A basic set of common drivers already included in the Basic Package
- Extension of server packages from single workstations to multi-server architectures

Application

Server packages are the basis of every WinCC OA project. PowerTags correspond to the previously communicated logic of the definition of I/Os where external communication is evaluated. Starting from the server package, it must also be considered how the "service" contract and the "redundancy" of the systems are defined.
More information about the maintenance agreement can be found under "Support".

The flexibility of the newly available PowerTag packages as an assignment option for different servers facilitates planning of the overall project as well as customer-oriented design based on need and changes of the packages. This method makes it possible, for example, for customers to order new PowerTag packages and then assign them to the servers in the project.

Due to the different sizes of the packages, there is also the possibility to implement solutions ranging from single stations to several 100 servers in a network.

The PowerPacks also offer a more cost-effective way to increase insufficient PowerTag packages. By purchasing such a PowerPack, you can increase the available PowerTags on the server to the next higher package size.

The technical licenses included in the Basic Package can be viewed in detail in the license tool CodeMeter WebAdmin; accordingly, the included features do not need to be ordered separately. These technical licenses are part of the bundle and therefore not individually transferable to other containers.

There are special overall solutions for specific devices – these "IPC Packages" include more services. These cannot be moved and extensions are not possible with these packages. Issuance of these special packages is always combined with the purchase of specific SIEMENS hardware. This is in addition to the license purchase – i.e. as an additional item in an order.

For small, standardized single station solutions, a (non-extendable) bundle product "Single Station" is also available, which offers advantages for our customers both in terms of price and simplified ordering.

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WinCC OA Server

Design

The WinCC OA Server Basic license includes alarm messaging, extended trend, historical recording and SSL encryption. Additional services are available as follows:

- UIs
  The WinCC OA Server Basic license includes **one** WinCC OA OPERATOR license; beyond this, no UIs are included and must be ordered separately. More information on this can be found in the <User Interfaces> section.
- Drivers
  A Server Basic license contains technical licenses for S7 and S7 Plus (8 connections) drivers, as well as one OPC and one OPC UA Client each.More information on drivers can be found in the <Drivers> section.
- Add-ons
  WinCC OA Server Basic includes a web server.

Options required in addition can also be licensed, if the basic license allows it.

More information on options can be found under <Add-ons>.

PowerTag packages (PowerTags)

PowerTag packages are extensions of WinCC OA servers by a defined number of PowerTags.
In the context of WinCC OA, a PowerTag is a data point element (DPE), the content of which is exchanged either via drivers (e.g. S7 Driver communicates with a PLC), with other WinCC OA Servers (distributed systems) or with other software systems. Internal data point elements, i.e. DPEs without communication to the outside, are not counted for the licensing.

For a redundant server configuration, both WinCC OA Server licenses must be extended to the same number of PowerTags. A PowerTag extension can only be ordered within the same WinCC OA version. The packages on a server are counted cumulatively and can be extended at a later point in time.

A single PowerTag Package **cannot** be split between several servers due to the license.

PowerPacks

PowerPacks are another possibility to increase the PowerTags of a WinCC OA Server. Purchasing a PowerPack, however, only increases the system to the next higher number of PowerTags. In this way, systems that are too small can be extended quickly and economically.
Example: A server with a 10k PowerTag Package was purchased, but it turns out that 25k is needed.
The customer can then purchase a 10k/15k PowerPack and a 15k/25k PowerPack in addition.

For a redundant server configuration, both WinCC OA Server licenses must be extended to the same number of PowerTags. Therefore, both servers need the same PowerPack extensions.

Ordering data

	Article No.
SIMATIC WinCC Open Architecture	
V3.18	
WinCC OA - Server Basic V3.18	
License for WinCC OA Server without external data connection and UIs.	
• Server Basic	**6AV6355-1AA31-8BA0**
• Server Basic UPG	**6AV6355-1CA31-8BA0**
WinCC OA - PowerTags V3.18	
Extension of a WinCC OA Server license by a fixed number of PowerTags.	
• 1k PowerTags	**6AV6355-1AA31-8BB0**
• 1k PowerTags UPG	**6AV6355-1CA31-8BB0**
• 3k PowerTags	**6AV6355-1AA31-8BB1**
• 3k PowerTags UPG	**6AV6355-1CA31-8BB1**
• 5k PowerTags	**6AV6355-1AA31-8BB2**
• 5k PowerTags UPG	**6AV6355-1CA31-8BB2**
• 10k PowerTags	**6AV6355-1AA31-8BB3**
• 10k PowerTags UPG	**6AV6355-1CA31-8BB3**
• 15k PowerTags	**6AV6355-1AA31-8BB4**
• 15k PowerTags UPG	**6AV6355-1CA31-8BB4**
• 25k PowerTags	**6AV6355-1AA31-8BB5**
• 25k PowerTags UPG	**6AV6355-1CA31-8BB5**
• 50k PowerTags	**6AV6355-1AA31-8BB6**
• 50k PowerTags UPG	**6AV6355-1CA31-8BB6**
• 75k PowerTags	**6AV6355-1AA31-8BB7**
• 75k PowerTags UPG	**6AV6355-1CA31-8BB7**
• 100k PowerTags	**6AV6355-1AA31-8BB8**
• 100k PowerTags UPG	**6AV6355-1CA31-8BB8**
• 150k PowerTags	**6AV6355-1AA31-8BC0**
• 150k PowerTags UPG	**6AV6355-1CA31-8BC0**
• 200k PowerTags	**6AV6355-1AA31-8BC1**
• 200k PowerTags UPG	**6AV6355-1CA31-8BC1**
• 250k PowerTags	**6AV6355-1AA31-8BC2**
• 250k PowerTags UPG	**6AV6355-1CA31-8BC2**
• Unlimited PowerTags	**6AV6355-1AA31-8BC3**
• Unlimited PowerTags UPG	**6AV6355-1CA31-8BC3**
WinCC OA - PowerPacks V3.18	
Extension for step-by-step increase of PowerTags	
• 1k/3k PowerPack	**6AV6355-1AA31-8BD0**
• 1k/3k PowerPack UPG	**6AV6355-1CA31-8BD0**
• 3k/5k PowerPack	**6AV6355-1AA31-8BD1**
• 3k/5k PowerPack UPG	**6AV6355-1CA31-8BD1**
• 5k/10k PowerPack	**6AV6355-1AA31-8BD2**
• 5k/10k PowerPack UPG	**6AV6355-1CA31-8BD2**
• 10k/15k PowerPack	**6AV6355-1AA31-8BD3**
• 10k/15k PowerPack UPG	**6AV6355-1CA31-8BD3**
• 15k/25k PowerPack	**6AV6355-1AA31-8BD4**
• 15k/25k PowerPack UPG	**6AV6355-1CA31-8BD4**
• 25k/50k PowerPack	**6AV6355-1AA31-8BD5**
• 25k/50k PowerPack UPG	**6AV6355-1CA31-8BD5**
• 50k/75k PowerPack	**6AV6355-1AA31-8BD6**
• 50k/75k PowerPack UPG	**6AV6355-1CA31-8BD6**
• 75k/100k PowerPack	**6AV6355-1AA31-8BD7**
• 75k/100k PowerPack UPG	**6AV6355-1CA31-8BD7**
• 100k/150k PowerPack	**6AV6355-1AA31-8BE0**
• 100k/150k PowerPack UPG	**6AV6355-1CA31-8BE0**
• 150k/200k PowerPack	**6AV6355-1AA31-8BE1**
• 150k/200k PowerPack UPG	**6AV6355-1CA31-8BE1**
• 200k/250k PowerPack	**6AV6355-1AA31-8BE2**
• 200k/250k PowerPack UPG	**6AV6355-1CA31-8BE2**
• 250k/Unlimited PowerPack	**6AV6355-1AA31-8BE3**
• 250k/Unlimited PowerPack UPG	**6AV6355-1CA31-8BE3**

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Ordering data	Article No.
SIMATIC WinCC Open Architecture	
V3.17	
WinCC OA - Server Basic V3.17	
License for WinCC OA Server without external data connection and UIs.	
• Server Basic	**6AV6355-1AA31-7BA0**
• Server Basic UPG	**6AV6355-1CA31-7BA0**
WinCC OA - PowerTags V3.17	
Extension of a WinCC OA Server license by a fixed number of PowerTags.	
• 1k PowerTags	**6AV6355-1AA31-7BB0**
• 1k PowerTags UPG	**6AV6355-1CA31-7BB0**
• 3k PowerTags	**6AV6355-1AA31-7BB1**
• 3k PowerTags UPG	**6AV6355-1CA31-7BB1**
• 5k PowerTags	**6AV6355-1AA31-7BB2**
• 5k PowerTags UPG	**6AV6355-1CA31-7BB2**
• 10k PowerTags	**6AV6355-1AA31-7BB3**
• 10k PowerTags UPG	**6AV6355-1CA31-7BB3**
• 15k PowerTags	**6AV6355-1AA31-7BB4**
• 15k PowerTags UPG	**6AV6355-1CA31-7BB4**
• 25k PowerTags	**6AV6355-1AA31-7BB5**
• 25k PowerTags UPG	**6AV6355-1CA31-7BB5**
• 50k PowerTags	**6AV6355-1AA31-7BB6**
• 50k PowerTags UPG	**6AV6355-1CA31-7BB6**
• 75k PowerTags	**6AV6355-1AA31-7BB7**
• 75k PowerTags UPG	**6AV6355-1CA31-7BB7**
• 100k PowerTags	**6AV6355-1AA31-7BB8**
• 100k PowerTags UPG	**6AV6355-1CA31-7BB8**
• 150k PowerTags	**6AV6355-1AA31-7BC0**
• 150k PowerTags UPG	**6AV6355-1CA31-7BC0**
• 200k PowerTags	**6AV6355-1AA31-7BC1**
• 200k PowerTags UPG	**6AV6355-1CA31-7BC1**
• 250k PowerTags	**6AV6355-1AA31-7BC2**
• 250k PowerTags UPG	**6AV6355-1CA31-7BC2**
• Unlimited PowerTags	**6AV6355-1AA31-7BC3**
• Unlimited PowerTags UPG	**6AV6355-1CA31-7BC3**

Ordering data	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA - PowerPacks V3.17	
Extension for step-by-step increase of PowerTags	
• 1k/3k PowerPack	**6AV6355-1AA31-7BD0**
• 1k/3k PowerPack UPG	**6AV6355-1CA31-7BD0**
• 3k/5k PowerPack	**6AV6355-1AA31-7BD1**
• 3k/5k PowerPack UPG	**6AV6355-1CA31-7BD1**
• 5k/10k PowerPack	**6AV6355-1AA31-7BD2**
• 5k/10k PowerPack UPG	**6AV6355-1CA31-7BD2**
• 10k/15k PowerPack	**6AV6355-1AA31-7BD3**
• 10k/15k PowerPack UPG	**6AV6355-1CA31-7BD3**
• 15k/25k PowerPack	**6AV6355-1AA31-7BD4**
• 15k/25k PowerPack UPG	**6AV6355-1CA31-7BD4**
• 25k/50k PowerPack	**6AV6355-1AA31-7BD5**
• 25k/50k PowerPack UPG	**6AV6355-1CA31-7BD5**
• 50k/75k PowerPack	**6AV6355-1AA31-7BD6**
• 50k/75k PowerPack UPG	**6AV6355-1CA31-7BD6**
• 75k/100k PowerPack	**6AV6355-1AA31-7BD7**
• 75k/100k PowerPack UPG	**6AV6355-1CA31-7BD7**
• 100k/150k PowerPack	**6AV6355-1AA31-7BE0**
• 100k/150k PowerPack UPG	**6AV6355-1CA31-7BE0**
• 150k/200k PowerPack	**6AV6355-1AA31-7BE1**
• 150k/200k PowerPack UPG	**6AV6355-1CA31-7BE1**
• 200k/250k PowerPack	**6AV6355-1AA31-7BE2**
• 200k/250k PowerPack UPG	**6AV6355-1CA31-7BE2**
• 250k/Unlimited PowerPack	**6AV6355-1AA31-7BE3**
• 250k/Unlimited PowerPack UPG	**6AV6355-1CA31-7BE3**

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WinCC OA Server

Ordering data	Article No.
Software services - version-independent	
WinCC OA - Server Basic	
• Server Basic SUS	**6AV6355-1DA00-0BA0**
• Server Basic SMS	**6AV6355-1FA00-0BA0**
• Server Basic POS	**6AV6355-1GA00-0BA0**
WinCC OA - PowerTags	
Extension of a WinCC OA Server license by a fixed number of PowerTags.	
• 1k PowerTags SUS	**6AV6355-1DA00-0BB0**
• 1k PowerTags SMS	**6AV6355-1FA00-0BB0**
• 1k PowerTags POS	**6AV6355-1GA00-0BB0**
• 3k PowerTags SUS	**6AV6355-1DA00-0BB1**
• 3k PowerTags SMS	**6AV6355-1FA00-0BB1**
• 3k PowerTags POS	**6AV6355-1GA00-0BB1**
• 5k PowerTags SUS	**6AV6355-1DA00-0BB2**
• 5k PowerTags SMS	**6AV6355-1FA00-0BB2**
• 5k PowerTags POS	**6AV6355-1GA00-0BB2**
• 10k PowerTags SUS	**6AV6355-1DA00-0BB3**
• 10k PowerTags SMS	**6AV6355-1FA00-0BB3**
• 10k PowerTags POS	**6AV6355-1GA00-0BB3**
• 15k PowerTags SUS	**6AV6355-1DA00-0BB4**
• 15k PowerTags SMS	**6AV6355-1FA00-0BB4**
• 15k PowerTags POS	**6AV6355-1GA00-0BB4**
• 25k PowerTags SUS	**6AV6355-1DA00-0BB5**
• 25k PowerTags SMS	**6AV6355-1FA00-0BB5**
• 25k PowerTags POS	**6AV6355-1GA00-0BB5**
• 50k PowerTags SUS	**6AV6355-1DA00-0BB6**
• 50k PowerTags SMS	**6AV6355-1FA00-0BB6**
• 50k PowerTags POS	**6AV6355-1GA00-0BB6**
• 75k PowerTags SUS	**6AV6355-1DA00-0BB7**
• 75k PowerTags SMS	**6AV6355-1FA00-0BB7**
• 75k PowerTags POS	**6AV6355-1GA00-0BB7**
• 100k PowerTags SUS	**6AV6355-1DA00-0BB8**
• 100k PowerTags SMS	**6AV6355-1FA00-0BB8**
• 100k PowerTags POS	**6AV6355-1GA00-0BB8**
• 150k PowerTags SUS	**6AV6355-1DA00-0BC0**
• 150k PowerTags SMS	**6AV6355-1FA00-0BC0**
• 150k PowerTags POS	**6AV6355-1GA00-0BC0**
• 200k PowerTags SUS	**6AV6355-1DA00-0BC1**
• 200k PowerTags SMS	**6AV6355-1FA00-0BC1**
• 200k PowerTags POS	**6AV6355-1GA00-0BC1**
• 250k PowerTags SUS	**6AV6355-1DA00-0BC2**
• 250k PowerTags SMS	**6AV6355-1FA00-0BC2**
• 250k PowerTags POS	**6AV6355-1GA00-0BC2**
• Unlimited PowerTags SUS	**6AV6355-1DA00-0BC3**
• Unlimited PowerTags SMS	**6AV6355-1FA00-0BC3**
• Unlimited PowerTags POS	**6AV6355-1GA00-0BC3**

	Article No.
WinCC OA - PowerPacks	
• 1k/3k PowerPack SUS	**6AV6355-1DA00-0BD0**
• 1k/3k PowerPack SMS	**6AV6355-1FA00-0BD0**
• 1k/3k PowerPack POS	**6AV6355-1GA00-0BD0**
• 3k/5k PowerPack SUS	**6AV6355-1DA00-0BD1**
• 3k/5k PowerPack SMS	**6AV6355-1FA00-0BD1**
• 3k/5k PowerPack POS	**6AV6355-1GA00-0BD1**
• 5k/10k PowerPack SUS	**6AV6355-1DA00-0BD2**
• 5k/10k PowerPack SMS	**6AV6355-1FA00-0BD2**
• 5k/10k PowerPack POS	**6AV6355-1GA00-0BD2**
• 10k/15k PowerPack SUS	**6AV6355-1DA00-0BD3**
• 10k/15k PowerPack SMS	**6AV6355-1FA00-0BD3**
• 10k/15k PowerPack POS	**6AV6355-1GA00-0BD3**
• 15k/25k PowerPack SUS	**6AV6355-1DA00-0BD4**
• 15k/25k PowerPack SMS	**6AV6355-1FA00-0BD4**
• 15k/25k PowerPack POS	**6AV6355-1GA00-0BD4**
• 25k/50k PowerPack SUS	**6AV6355-1DA00-0BD5**
• 50k/75k PowerPack SMS	**6AV6355-1FA00-0BD5**
• 15k/25k PowerPack POS	**6AV6355-1GA00-0BD5**
• 50k/75k PowerPack SUS	**6AV6355-1DA00-0BD6**
• 50k/75k PowerPack SMS	**6AV6355-1FA00-0BD6**
• 50k/75k PowerPack POS	**6AV6355-1GA00-0BD6**
• 75k/100k PowerPack SUS	**6AV6355-1DA00-0BD7**
• 75k/100k PowerPack SMS	**6AV6355-1FA00-0BD7**
• 75k/100k PowerPack POS	**6AV6355-1GA00-0BD7**
• 100k/150k PowerPack SUS	**6AV6355-1DA00-0BE0**
• 100k/150k PowerPack SMS	**6AV6355-1FA00-0BE0**
• 100k/150k PowerPack POS	**6AV6355-1GA00-0BE0**
• 150k/200k PowerPack SUS	**6AV6355-1DA00-0BE1**
• 150k/200k PowerPack SMS	**6AV6355-1FA00-0BE1**
• 150k/200k PowerPack POS	**6AV6355-1GA00-0BE1**
• 200k/250k PowerPack SUS	**6AV6355-1DA00-0BE2**
• 200k/250k PowerPack SMS	**6AV6355-1FA00-0BE2**
• 200k/250k PowerPack POS	**6AV6355-1GA00-0BE2**
• 250k/Unlimited PowerPack SUS	**6AV6355-1DA00-0BE3**
• 250k/Unlimited PowerPack SMS	**6AV6355-1FA00-0BE3**
• 250k/Unlimited PowerPack POS	**6AV6355-1GA00-0BE3**

More information

More information is available on the Internet at:

http://www.winccoa.com

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Overview

WinCC OA User Interfaces

User interfaces (UIs) form the interface between software and user.

WinCC Open Architecture offers a variety of such interfaces: On the one hand for creating panel files, logic operations, libraries and much more in the form of a graphical editor (GEDI), for data point configurations and value management on the other hand (PARA).

The internal, general module (Vision) offers a simple possibility for user interfaces at operator stations (operator stations, workstation stations). The user interface serves to display values, issue commands or track alarms in the alarm list. Trends and reports are also usually part of the UI. From a programming viewpoint, the user interaction in WinCC OA is completely isolated from the background processing – it is merely a view of the data of the current process image or the history.

UIs on a server are counted cumulatively and can be extended at a later point in time by purchasing additional UI licenses.

UI packages cannot be split between several servers due to license restrictions.

Benefits

The editor tools offer possibilities for self-administration that can be quickly realized:

- Simple creation and adoption of existing elements of a user interface
- Graphical project administration, integration of existing libraries and configuration of different view variants (Content Management System, Standard-based, Shop View, language switching in runtime and much more)
- Simple parameter assignment and instantiation of data points (DP) and DP groups
- Basic license for bulk recordings and multi-user configuration.

The various client versions for operating stations offer decisive added value:

- Native clients for operator stations with extended possibilities
- Operation independent of operating system and identical look and feel of the user interfaces
- App download via Google Play or App Store
- Integration of security mechanisms (encryption, user notes, Audit Trails, authentication, user management, device releases) in remote units
- Web clients (ULC UX) as an alternative without mandatory installation on the terminals

Application

User interfaces provide the optimal interface between human and machine through visual support. There is a wide range of reasons for their use.

Thanks to the extensive set of different connection options and the possibility of using modern layout tools as well as state-of-the-art extensions and the embedding of 3rd party components, WinCC OA offers the perfect basis for the most modern monitoring and control solutions, ranging from mobile phone apps to monitor walls in centralized control rooms. Thanks to the secure connection via the Internet, nothing stands in the way of opening important displays via a standard web browser.

Active user interfaces are licensed at the same time for a solution. It may make sense to plan specific measures to increase performance above a certain scale – depending on the number, content, value quantity, rate of change and role of the operator stations.

Design

Desktop UI

Operator station license for extending an existing WinCC OA Server license. Simultaneous connections from active desktop UIs are counted. Packages are counted cumulatively.

Dashboard (V3.18)

Licenses for extending an existing WinCC OA Server license by a web-based dashboard display. Simultaneous connections from active dashboards are counted. Packages are counted cumulatively. Available in standard or REDU version, as well as Mobile Dashboard version optimized for mobile devices.

UltraLightClient User eXperience (ULC UX)

Licenses for UltraLightClient User eXperience web clients to extend an existing WinCC OA Server license. Simultaneous connections from active ULC UX clients are counted. Supports a subset of the Desktop UI functionality. Packages are counted cumulatively. Available in standard or REDU version.

Mobile UI

License for WinCC OA Mobile App for iOS or Android, to extend an existing WinCC OA Server license. The supported Android and iOS versions can be found in the respective App Store. Simultaneous connections from active mobile apps are counted. Packages are counted cumulatively. Available in standard or REDU version.

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Design

Operator APP (only for WinCC OA versions < V3.18 available!)

License for connecting an Operator app (for iOS) to a WinCC OA Server. SSL secured connection. Measured values and alarms can be queried, commands and acknowledgments can be sent. Configuration is performed in WinCC OA via a wizard. Each device must be assigned a license on the server. The Operator app can be obtained free of charge from the App Store.

Para

Development and parameter assignment license for WinCC OA Server with graphical editor (incl. symbol catalogs), script development environment and test framework. Requires WinCC OA Server Basic license. The parameterization package does not occupy an existing UI license in the server configuration. Parameterization during runtime is possible.

Available in standard, REDU or remote version.

REDU

Desktop UI, ULC UX, Mobile UI, Dashboards and Para have a REDU option in addition to the standard version.
When creating a redundant system, the REDU option (x2) must be obtained for the desired UIs.
More detailed information can be found under "Redundancy" in the "Add-ons" section.

Ordering data

	Article No.
SIMATIC WinCC Open Architecture	
V3.18	
WinCC OA – Desktop UI V3.18	
Operator station licenses for extending a WinCC OA Server.	
• 1 Desktop UI	**6AV6355-1AA31-8CA0**
• 1 Desktop UI UPG	**6AV6355-1CA31-8CA0**
• 10 Desktop UI	**6AV6355-1AA31-8CA1**
• 10 Desktop UI UPG	**6AV6355-1CA31-8CA1**
• 25 Desktop UI	**6AV6355-1AA31-8CA2**
• 25 Desktop UI UPG	**6AV6355-1CA31-8CA2**
• 50 Desktop UI	**6AV6355-1AA31-8CA3**
• 50 Desktop UI UPG	**6AV6355-1CA31-8CA3**
• 100 Desktop UI	**6AV6355-1AA31-8CA4**
• 100 Desktop UI UPG	**6AV6355-1CA31-8CA4**
WinCC OA – Desktop UI REDU V3.18	
Operator station licenses for extending a WinCC OA REDU Server.	
• 1 Desktop UI REDU	**6AV6355-1AA31-8CB0**
• 1 Desktop UI REDU UPG	**6AV6355-1CA31-8CB0**
• 10 Desktop UI REDU	**6AV6355-1AA31-8CB1**
• 10 Desktop UI REDU UPG	**6AV6355-1CA31-8CB1**
• 25 Desktop UI REDU	**6AV6355-1AA31-8CB2**
• 25 Desktop UI REDU UPG	**6AV6355-1CA31-8CB2**
• 50 Desktop UI REDU	**6AV6355-1AA31-8CB3**
• 50 Desktop UI REDU UPG	**6AV6355-1CA31-8CB3**
• 100 Desktop UI REDU	**6AV6355-1AA31-8CB4**
• 100 Desktop UI REDU UPG	**6AV6355-1CA31-8CB4**
WinCC OA – ULC UX V3.18	
Licenses for UltraLightClient User eXperience web clients.	
• 1 ULC UX	**6AV6355-1AA31-8CC0**
• 1 ULC UX UPG	**6AV6355-1CA31-8CC0**
• 10 ULC UX	**6AV6355-1AA31-8CC1**
• 10 ULC UX UPG	**6AV6355-1CA31-8CC1**
• 25 ULC UX	**6AV6355-1AA31-8CC2**
• 25 ULC UX UPG	**6AV6355-1CA31-8CC2**
• 50 ULC UX	**6AV6355-1AA31-8CC3**
• 50 ULC UX UPG	**6AV6355-1CA31-8CC3**
• 100 ULC UX	**6AV6355-1AA31-8CC4**
• 100 ULC UX UPG	**6AV6355-1CA31-8CC4**
WinCC OA - ULC UX REDU V3.18	
Licenses for UltraLightClient User eXperience web clients for REDU Server.	
• 1 ULC UX REDU	**6AV6355-1AA31-8CD0**
• 1 ULC UX REDU UPG	**6AV6355-1CA31-8CD0**
• 10 ULC UX REDU	**6AV6355-1AA31-8CD1**
• 10 ULC UX REDU UPG	**6AV6355-1CA31-8CD1**
• 25 ULC UX REDU	**6AV6355-1AA31-8CD2**
• 25 ULC UX REDU UPG	**6AV6355-1CA31-8CD2**
• 50 ULC UX REDU	**6AV6355-1AA31-8CD3**
• 50 ULC UX REDU UPG	**6AV6355-1CA31-8CD3**
• 100 ULC UX REDU	**6AV6355-1AA31-8CD4**
• 100 ULC UX REDU UPG	**6AV6355-1CA31-8CD4**

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Ordering data	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA - Mobile V3.18	
Licenses for WinCC OA Mobile App for iOS or Android.	
• 1 Mobile	**6AV6355-1AA31-8CE0**
• 1 Mobile UPG	**6AV6355-1CA31-8CE0**
• 10 Mobiles	**6AV6355-1AA31-8CE1**
• 10 Mobiles UPG	**6AV6355-1CA31-8CE1**
• 25 Mobiles	**6AV6355-1AA31-8CE2**
• 25 Mobiles UPG	**6AV6355-1CA31-8CE2**
• 50 Mobiles	**6AV6355-1AA31-8CE3**
• 50 Mobiles UPG	**6AV6355-1CA31-8CE3**
• 100 Mobiles	**6AV6355-1AA31-8CE4**
• 100 Mobiles UPG	**6AV6355-1CA31-8CE4**
WinCC OA – Mobile REDU V3.18	
Licenses for WinCC OA Mobile App for iOS or Android for REDU Server.	
• 1 Mobile REDU	**6AV6355-1AA31-8CF0**
• 1 Mobile REDU UPG	**6AV6355-1CA31-8CF0**
• 10 Mobiles REDU	**6AV6355-1AA31-8CF1**
• 10 Mobiles REDU UPG	**6AV6355-1CA31-8CF1**
• 25 Mobiles REDU	**6AV6355-1AA31-8CF2**
• 25 Mobiles REDU UPG	**6AV6355-1CA31-8CF2**
• 50 Mobiles REDU	**6AV6355-1AA31-8CF3**
• 50 Mobiles REDU UPG	**6AV6355-1CA31-8CF3**
• 100 Mobiles REDU	**6AV6355-1AA31-8CF4**
• 100 Mobiles REDU UPG	**6AV6355-1CA31-8CF4**
WinCC OA - Para Standard V3.18	
Development and parameter assignment license for WinCC OA Server.	
• Para Standard	**6AV6355-1AA31-8CH0**
• Para Standard UPG	**6AV6355-1CA31-8CH0**
WinCC OA - Para Standard REDU V3.18	
Development and parameter assignment license for WinCC OA REDU Server.	
• Para Standard REDU	**6AV6355-1AA31-8CH1**
• Para Standard REDU UPG	**6AV6355-1CA31-8CH1**
WinCC OA - Para Remote V3.18	
Remote development and parameter assignment license for WinCC OA Server.	
• Para Remote	**6AV6355-1AA31-8CH2**
• Para Remote UPG	**6AV6355-1CA31-8CH2**
WinCC OA – Mobile Dashboard V3.18	
Licenses for native HTML5 dashboard display optimized for mobile devices.	
• 1 Mobile Dashboard	**6AV6355-1AA31-8CJ0**
• 1 Mobile Dashboard UPG	**6AV6355-1CA31-8CJ0**
• 10 Mobile Dashboards	**6AV6355-1AA31-8CJ1**
• 10 Mobile Dashboards UPG	**6AV6355-1CA31-8CJ1**
• 25 Mobile Dashboards	**6AV6355-1AA31-8CJ2**
• 25 Mobile Dashboards UPG	**6AV6355-1CA31-8CJ2**
• 50 Mobile Dashboards	**6AV6355-1AA31-8CJ3**
• 50 Mobile Dashboards UPG	**6AV6355-1CA31-8CJ3**
• 100 Mobile Dashboards	**6AV6355-1AA31-8CJ4**
• 100 Mobile Dashboards UPG	**6AV6355-1CA31-8CJ4**

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA – Mobile Dashboard REDU V3.18	
Licenses for web-based dashboard display on redundant server, optimized for mobile devices:	
• 1 Mobile Dashboard REDU	**6AV6355-1AA31-8CK0**
• 1 Mobile Dashboard REDU UPG	**6AV6355-1CA31-8CK0**
• 10 Mobile Dashboards REDU	**6AV6355-1AA31-8CK1**
• 10 Mobile Dashboards REDU UPG	**6AV6355-1CA31-8CK1**
• 25 Mobile Dashboards REDU	**6AV6355-1AA31-8CK2**
• 25 Mobile Dashboards REDU UPG	**6AV6355-1CA31-8CK2**
• 50 Mobile Dashboards REDU	**6AV6355-1AA31-8CK3**
• 50 Mobile Dashboards REDU UPG	**6AV6355-1CA31-8CK3**
• 100 Mobile Dashboards REDU	**6AV6355-1AA31-8CK4**
• 100 Mobile Dashboards REDU UPG	**6AV6355-1CA31-8CK4**
WinCC OA – Dashboard V3.18	
Licenses for web-based dashboard display	
• 1 Dashboard	**6AV6355-1AA31-8CL0**
• 1 Dashboard UPG	**6AV6355-1CA31-8CL0**
• 10 Dashboards	**6AV6355-1AA31-8CL1**
• 10 Dashboards UPG	**6AV6355-1CA31-8CL1**
• 25 Dashboards	**6AV6355-1AA31-8CL2**
• 25 Dashboards UPG	**6AV6355-1CA31-8CL2**
• 50 Dashboards	**6AV6355-1AA31-8CL3**
• 50 Dashboards UPG	**6AV6355-1CA31-8CL3**
• 100 Dashboards	**6AV6355-1AA31-8CL4**
• 100 Dashboards UPG	**6AV6355-1CA31-8CL4**
WinCC OA – Dashboard REDU V3.18	
Licenses for web-based dashboard display on redundant server:	
• 1 Dashboard REDU	**6AV6355-1AA31-8CM0**
• 1 Dashboard REDU UPG	**6AV6355-1CA31-8CM0**
• 10 Dashboards REDU	**6AV6355-1AA31-8CM1**
• 10 Dashboards REDU UPG	**6AV6355-1CA31-8CM1**
• 25 Dashboards REDU	**6AV6355-1AA31-8CM2**
• 25 Dashboards REDU UPG	**6AV6355-1CA31-8CM2**
• 50 Dashboards REDU	**6AV6355-1AA31-8CM3**
• 50 Dashboards REDU UPG	**6AV6355-1CA31-8CM3**
• 100 Dashboards REDU	**6AV6355-1AA31-8CM4**
• 100 Dashboards REDU UPG	**6AV6355-1CA31-8CM4**

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WinCC OA User Interfaces

Ordering data	Article No.
SIMATIC WinCC Open Architecture	
V3.17	
WinCC OA – Desktop UI V3.17	
Operator station licenses for extending a WinCC OA Server.	
• 1 Desktop UI	**6AV6355-1AA31-7CA0**
• 1 Desktop UI UPG	**6AV6355-1CA31-7CA0**
• 10 Desktop UI	**6AV6355-1AA31-7CA1**
• 10 Desktop UI UPG	**6AV6355-1CA31-7CA1**
• 25 Desktop UI	**6AV6355-1AA31-7CA2**
• 25 Desktop UI UPG	**6AV6355-1CA31-7CA2**
• 50 Desktop UI	**6AV6355-1AA31-7CA3**
• 50 Desktop UI UPG	**6AV6355-1CA31-7CA3**
• 100 Desktop UI	**6AV6355-1AA31-7CA4**
• 100 Desktop UI UPG	**6AV6355-1CA31-7CA4**
WinCC OA – Desktop UI REDU V3.17	
Operator station licenses for extending a WinCC OA REDU Server.	
• 1 Desktop UI REDU	**6AV6355-1AA31-7CB0**
• 1 Desktop UI REDU UPG	**6AV6355-1CA31-7CB0**
• 10 Desktop UI REDU	**6AV6355-1AA31-7CB1**
• 10 Desktop UI REDU UPG	**6AV6355-1CA31-7CB1**
• 25 Desktop UI REDU	**6AV6355-1AA31-7CB2**
• 25 Desktop UI REDU UPG	**6AV6355-1CA31-7CB2**
• 50 Desktop UI REDU	**6AV6355-1AA31-7CB3**
• 50 Desktop UI REDU UPG	**6AV6355-1CA31-7CB3**
• 100 Desktop UI REDU	**6AV6355-1AA31-7CB4**
• 100 Desktop UI REDU UPG	**6AV6355-1CA31-7CB4**
WinCC OA – ULC UX V3.17	
Licenses for UltraLightClient User eXperience web clients.	
• 1 ULC UX	**6AV6355-1AA31-7CC0**
• 1 ULC UX UPG	**6AV6355-1CA31-7CC0**
• 10 ULC UX	**6AV6355-1AA31-7CC1**
• 10 ULC UX UPG	**6AV6355-1CA31-7CC1**
• 25 ULC UX	**6AV6355-1AA31-7CC2**
• 25 ULC UX UPG	**6AV6355-1CA31-7CC2**
• 50 ULC UX	**6AV6355-1AA31-7CC3**
• 50 ULC UX UPG	**6AV6355-1CA31-7CC3**
• 100 ULC UX	**6AV6355-1AA31-7CC4**
• 100 ULC UX UPG	**6AV6355-1CA31-7CC4**
WinCC OA - ULC UX REDU V3.17	
Licenses for UltraLightClient User eXperience web clients for REDU Server.	
• 1 ULC UX REDU	**6AV6355-1AA31-7CD0**
• 1 ULC UX REDU UPG	**6AV6355-1CA31-7CD0**
• 10 ULC UX REDU	**6AV6355-1AA31-7CD1**
• 10 ULC UX REDU UPG	**6AV6355-1CA31-7CD1**
• 25 ULC UX REDU	**6AV6355-1AA31-7CD2**
• 25 ULC UX REDU UPG	**6AV6355-1CA31-7CD2**
• 50 ULC UX REDU	**6AV6355-1AA31-7CD3**
• 50 ULC UX REDU UPG	**6AV6355-1CA31-7CD3**
• 100 ULC UX REDU	**6AV6355-1AA31-7CD4**
• 100 ULC UX REDU UPG	**6AV6355-1CA31-7CD4**

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA - Mobile V3.17	
Licenses for WinCC OA Mobile App for iOS or Android.	
• 1 Mobile	**6AV6355-1AA31-7CE0**
• 1 Mobile UPG	**6AV6355-1CA31-7CE0**
• 10 Mobiles	**6AV6355-1AA31-7CE1**
• 10 Mobiles UPG	**6AV6355-1CA31-7CE1**
• 25 Mobiles	**6AV6355-1AA31-7CE2**
• 25 Mobiles UPG	**6AV6355-1CA31-7CE2**
• 50 Mobiles	**6AV6355-1AA31-7CE3**
• 50 Mobiles UPG	**6AV6355-1CA31-7CE3**
• 100 Mobiles	**6AV6355-1AA31-7CE4**
• 100 Mobiles UPG	**6AV6355-1CA31-7CE4**
WinCC OA – Mobile REDU V3.17	
Licenses for WinCC OA Mobile App for iOS or Android for REDU Server.	
• 1 Mobile REDU	**6AV6355-1AA31-7CF0**
• 1 Mobile REDU UPG	**6AV6355-1CA31-7CF0**
• 10 Mobiles REDU	**6AV6355-1AA31-7CF1**
• 10 Mobiles REDU UPG	**6AV6355-1CA31-7CF1**
• 25 Mobiles REDU	**6AV6355-1AA31-7CF2**
• 25 Mobiles REDU UPG	**6AV6355-1CA31-7CF2**
• 50 Mobiles REDU	**6AV6355-1AA31-7CF3**
• 50 Mobiles REDU UPG	**6AV6355-1CA31-7CF3**
• 100 Mobiles REDU	**6AV6355-1AA31-7CF4**
• 100 Mobiles REDU UPG	**6AV6355-1CA31-7CF4**
WinCC OA - Operator V3.17	
License for connecting an operator app to a WinCC OA Server.	
• 1 Device	**6AV6355-1AA31-7CG0**
• 1 Device UPG	**6AV6355-1CA31-7CG0**
• 3 Devices	**6AV6355-1AA31-7CG1**
• 3 Devices UPG	**6AV6355-1CA31-7CG1**
• 10 Devices	**6AV6355-1AA31-7CG2**
• 10 Devices UPG	**6AV6355-1CA31-7CG2**
• 25 Devices	**6AV6355-1AA31-7CG3**
• 25 Devices UPG	**6AV6355-1CA31-7CG3**
• 50 Devices	**6AV6355-1AA31-7CG4**
• 50 Devices UPG	**6AV6355-1CA31-7CG4**
WinCC OA - Para Standard V3.17	
Development and parameter assignment license for WinCC OA Server.	
• Para Standard	**6AV6355-1AA31-7CH0**
• Para Standard UPG	**6AV6355-1CA31-7CH0**
WinCC OA - Para Standard REDU V3.17	
Development and parameter assignment license for WinCC OA REDU Server.	
• Para Standard REDU	**6AV6355-1AA31-7CH1**
• Para Standard REDU UPG	**6AV6355-1CA31-7CH1**
WinCC OA - Para Remote V3.17	
Remote development and parameter assignment license for WinCC OA Server.	
• Para Remote	**6AV6355-1AA31-7CH2**
• Para Remote UPG	**6AV6355-1CA31-7CH2**

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Ordering data	Article No.
SIMATIC WinCC Open Architecture	
Software Services - version-independent	
WinCC OA – Desktop UI	
• 1 Desktop UI SUS	**6AV6355-1DA00-0CA0**
• 1 Desktop UI SMS	**6AV6355-1FA00-0CA0**
• 1 Desktop UI POS	**6AV6355-1GA00-0CA0**
• 10 Desktop UI SUS	**6AV6355-1DA00-0CA1**
• 10 Desktop UI SMS	**6AV6355-1FA00-0CA1**
• 10 Desktop UI POS	**6AV6355-1GA00-0CA1**
• 25 Desktop UI SUS	**6AV6355-1DA00-0CA2**
• 25 Desktop UI SMS	**6AV6355-1FA00-0CA2**
• 25 Desktop UI POS	**6AV6355-1GA00-0CA2**
• 50 Desktop UI SUS	**6AV6355-1DA00-0CA3**
• 50 Desktop UI SMS	**6AV6355-1FA00-0CA3**
• 50 Desktop UI POS	**6AV6355-1GA00-0CA3**
• 100 Desktop UI SUS	**6AV6355-1DA00-0CA4**
• 100 Desktop UI SMS	**6AV6355-1FA00-0CA4**
• 100 Desktop UI POS	**6AV6355-1GA00-0CA4**
WinCC OA – Desktop UI REDU	
• 1 Desktop UI REDU SUS	**6AV6355-1DA00-0CB0**
• 1 Desktop UI REDU SMS	**6AV6355-1FA00-0CB0**
• 1 Desktop UI REDU POS	**6AV6355-1GA00-0CB0**
• 10 Desktop UI REDU SUS	**6AV6355-1DA00-0CB1**
• 10 Desktop UI REDU SMS	**6AV6355-1FA00-0CB1**
• 10 Desktop UI REDU POS	**6AV6355-1GA00-0CB1**
• 25 Desktop UI REDU SUS	**6AV6355-1DA00-0CB2**
• 25 Desktop UI REDU SMS	**6AV6355-1FA00-0CB2**
• 25 Desktop UI REDU POS	**6AV6355-1GA00-0CB2**
• 50 Desktop UI REDU SUS	**6AV6355-1DA00-0CB3**
• 50 Desktop UI REDU SMS	**6AV6355-1FA00-0CB3**
• 50 Desktop UI REDU POS	**6AV6355-1GA00-0CB3**
• 100 Desktop UI REDU SUS	**6AV6355-1DA00-0CB4**
• 100 Desktop UI REDU SMS	**6AV6355-1FA00-0CB4**
• 100 Desktop UI REDU POS	**6AV6355-1GA00-0CB4**
WinCC OA – ULC UX	
• 1 ULC UX SUS	**6AV6355-1DA00-0CC0**
• 1 ULC UX SMS	**6AV6355-1FA00-0CC0**
• 1 ULC UX POS	**6AV6355-1GA00-0CC0**
• 10 ULC UX SUS	**6AV6355-1DA00-0CC1**
• 10 ULC UX SMS	**6AV6355-1FA00-0CC1**
• 10 ULC UX POS	**6AV6355-1GA00-0CC1**
• 25 ULC UX SUS	**6AV6355-1DA00-0CC2**
• 25 ULC UX SMS	**6AV6355-1FA00-0CC2**
• 25 ULC UX POS	**6AV6355-1GA00-0CC2**
• 50 ULC UX SUS	**6AV6355-1DA00-0CC3**
• 50 ULC UX SMS	**6AV6355-1FA00-0CC3**
• 50 ULC UX POS	**6AV6355-1GA00-0CC3**
• 100 ULC UX SUS	**6AV6355-1DA00-0CC4**
• 100 ULC UX SMS	**6AV6355-1FA00-0CC4**
• 100 ULC UX POS	**6AV6355-1GA00-0CC4**
WinCC OA – ULC UX REDU	
• 1 ULC UX REDU SUS	**6AV6355-1DA00-0CD0**
• 1 ULC UX REDU SMS	**6AV6355-1FA00-0CD0**
• 1 ULC UX REDU POS	**6AV6355-1GA00-0CD0**
• 10 ULC UX REDU SUS	**6AV6355-1DA00-0CD1**
• 10 ULC UX REDU SMS	**6AV6355-1FA00-0CD1**
• 10 ULC UX REDU POS	**6AV6355-1GA00-0CD1**
• 25 ULC UX REDU SUS	**6AV6355-1DA00-0CD2**
• 25 ULC UX REDU SMS	**6AV6355-1FA00-0CD2**
• 25 ULC UX REDU POS	**6AV6355-1GA00-0CD2**
• 50 ULC UX REDU SUS	**6AV6355-1DA00-0CD3**
• 50 ULC UX REDU SMS	**6AV6355-1FA00-0CD3**
• 50 ULC UX REDU POS	**6AV6355-1GA00-0CD3**
• 100 ULC UX REDU SUS	**6AV6355-1DA00-0CD4**
• 100 ULC UX REDU SMS	**6AV6355-1FA00-0CD4**
• 100 ULC UX REDU POS	**6AV6355-1GA00-0CD4**

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA – Mobile	
• 1 Mobile SUS	**6AV6355-1DA00-0CE0**
• 1 Mobile SMS	**6AV6355-1FA00-0CE0**
• 1 Mobile POS	**6AV6355-1GA00-0CE0**
• 10 Mobiles SUS	**6AV6355-1DA00-0CE1**
• 10 Mobiles SMS	**6AV6355-1FA00-0CE1**
• 10 Mobiles POS	**6AV6355-1GA00-0CE1**
• 25 Mobiles SUS	**6AV6355-1DA00-0CE2**
• 25 Mobiles SMS	**6AV6355-1FA00-0CE2**
• 25 Mobiles POS	**6AV6355-1GA00-0CE2**
• 50 Mobiles SUS	**6AV6355-1DA00-0CE3**
• 50 Mobiles SMS	**6AV6355-1FA00-0CE3**
• 50 Mobiles POS	**6AV6355-1GA00-0CE3**
• 100 Mobiles SUS	**6AV6355-1DA00-0CE4**
• 100 Mobiles SMS	**6AV6355-1FA00-0CE4**
• 100 Mobiles POS	**6AV6355-1GA00-0CE4**
WinCC OA – Mobile REDU	
• 1 Mobile REDU SUS	**6AV6355-1DA00-0CF0**
• 1 Mobile REDU SMS	**6AV6355-1FA00-0CF0**
• 1 Mobile REDU POS	**6AV6355-1GA00-0CF0**
• 10 Mobiles REDU SUS	**6AV6355-1DA00-0CF1**
• 10 Mobiles REDU SMS	**6AV6355-1FA00-0CF1**
• 10 Mobiles REDU POS	**6AV6355-1GA00-0CF1**
• 25 Mobiles REDU SUS	**6AV6355-1DA00-0CF2**
• 25 Mobiles REDU SMS	**6AV6355-1FA00-0CF2**
• 25 Mobiles REDU POS	**6AV6355-1GA00-0CF2**
• 50 Mobiles REDU SUS	**6AV6355-1DA00-0CF3**
• 50 Mobiles REDU SMS	**6AV6355-1FA00-0CF3**
• 50 Mobiles REDU POS	**6AV6355-1GA00-0CF3**
• 100 Mobiles REDU SUS	**6AV6355-1DA00-0CF4**
• 100 Mobiles REDU SMS	**6AV6355-1FA00-0CF4**
• 100 Mobiles REDU POS	**6AV6355-1GA00-0CF4**
WinCC OA – Operator	
• 1 Device SUS	**6AV6355-1DA00-0CG0**
• 1 Device SMS	**6AV6355-1FA00-0CG0**
• 1 Device POS	**6AV6355-1GA00-0CG0**
• 3 Devices SUS	**6AV6355-1DA00-0CG1**
• 3 Devices SMS	**6AV6355-1FA00-0CG1**
• 3 Devices POS	**6AV6355-1GA00-0CG1**
• 10 Devices SUS	**6AV6355-1DA00-0CG2**
• 10 Devices SMS	**6AV6355-1FA00-0CG2**
• 10 Devices POS	**6AV6355-1GA00-0CG2**
• 25 Devices SUS	**6AV6355-1DA00-0CG3**
• 25 Devices SMS	**6AV6355-1FA00-0CG3**
• 25 Devices POS	**6AV6355-1GA00-0CG3**
• 50 Devices SUS	**6AV6355-1DA00-0CG4**
• 50 Devices SMS	**6AV6355-1FA00-0CG4**
• 50 Devices POS	**6AV6355-1GA00-0CG4**
WinCC OA – Para Standard	
• Para Standard SUS	**6AV6355-1DA00-0CH0**
• Para Standard SMS	**6AV6355-1FA00-0CH0**
• Para Standard POS	**6AV6355-1GA00-0CH0**
WinCC OA – Para Standard REDU	
• Para Standard REDU SUS	**6AV6355-1DA00-0CH1**
• Para Standard REDU SMS	**6AV6355-1FA00-0CH1**
• Para Standard REDU POS	**6AV6355-1GA00-0CH1**
WinCC OA - Para Remote	
• Para Remote SUS	**6AV6355-1DA00-0CH2**
• Para Remote SMS	**6AV6355-1FA00-0CH2**
• Para Remote POS	**6AV6355-1GA00-0CH2**

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Ordering data	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA – Mobile Dashboard	
• 1 Mobile Dashboard SUS	**6AV6355-1DA00-0CJ0**
• 1 Mobile Dashboard SMS	**6AV6355-1FA00-0CJ0**
• 1 Mobile Dashboard POS	**6AV6355-1GA00-0CJ0**
• 10 Mobile Dashboards SUS	**6AV6355-1DA00-0CJ1**
• 10 Mobile Dashboards SMS	**6AV6355-1FA00-0CJ1**
• 10 Mobile Dashboards POS	**6AV6355-1GA00-0CJ1**
• 25 Mobile Dashboards SUS	**6AV6355-1DA00-0CJ2**
• 25 Mobile Dashboards SMS	**6AV6355-1FA00-0CJ2**
• 25 Mobile Dashboards POS	**6AV6355-1GA00-0CJ2**
• 50 Mobile Dashboards SUS	**6AV6355-1DA00-0CJ3**
• 50 Mobile Dashboards SMS	**6AV6355-1FA00-0CJ3**
• 50 Mobile Dashboards POS	**6AV6355-1GA00-0CJ3**
• 100 Mobile Dashboards SUS	**6AV6355-1DA00-0CJ4**
• 100 Mobile Dashboards SMS	**6AV6355-1FA00-0CJ4**
• 100 Mobile Dashboards POS	**6AV6355-1GA00-0CJ4**
WinCC OA Mobile Dashboard REDU	
• 1 Mobile Dashboard REDU SUS	**6AV6355-1DA00-0CK0**
• 1 Mobile Dashboard REDU SMS	**6AV6355-1FA00-0CK0**
• 1 Mobile Dashboard REDU POS	**6AV6355-1GA00-0CK0**
• 10 Mobile Dashboards REDU SUS	**6AV6355-1DA00-0CK1**
• 10 Mobile Dashboards REDU SMS	**6AV6355-1FA00-0CK1**
• 10 Mobile Dashboards REDU POS	**6AV6355-1GA00-0CK1**
• 25 Mobile Dashboards REDU SUS	**6AV6355-1DA00-0CK2**
• 25 Mobile Dashboards REDU SMS	**6AV6355-1FA00-0CK2**
• 25 Mobile Dashboards REDU POS	**6AV6355-1GA00-0CK2**
• 50 Mobile Dashboards REDU SUS	**6AV6355-1DA00-0CK3**
• 50 Mobile Dashboards REDU SMS	**6AV6355-1FA00-0CK3**
• 50 Mobile Dashboards REDU POS	**6AV6355-1GA00-0CK3**
• 100 Mobile Dashboards REDU SUS	**6AV6355-1DA00-0CK4**
• 100 Mobile Dashboards REDU SMS	**6AV6355-1FA00-0CK4**
• 100 Mobile Dashboards REDU POS	**6AV6355-1GA00-0CK4**

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA – Dashboard	
• 1 Dashboard SUS	**6AV6355-1DA00-0CL0**
• 1 Dashboard SMS	**6AV6355-1FA00-0CL0**
• 1 Dashboard POS	**6AV6355-1GA00-0CL0**
• 10 Dashboards SUS	**6AV6355-1DA00-0CL1**
• 10 Dashboards SMS	**6AV6355-1FA00-0CL1**
• 10 Dashboards POS	**6AV6355-1GA00-0CL1**
• 25 Dashboards SUS	**6AV6355-1DA00-0CL2**
• 25 Dashboards SMS	**6AV6355-1FA00-0CL2**
• 25 Dashboards POS	**6AV6355-1GA00-0CL2**
• 50 Dashboards SUS	**6AV6355-1DA00-0CL3**
• 50 Dashboards SMS	**6AV6355-1FA00-0CL3**
• 50 Dashboards POS	**6AV6355-1GA00-0CL3**
• 100 Dashboards SUS	**6AV6355-1DA00-0CL4**
• 100 Dashboards SMS	**6AV6355-1FA00-0CL4**
• 100 Dashboards POS	**6AV6355-1GA00-0CL4**
WinCC OA – Dashboard REDU	
• 1 Dashboard REDU SUS	**6AV6355-1DA00-0CM0**
• 1 Dashboard REDU SMS	**6AV6355-1FA00-0CM0**
• 1 Dashboard REDU POS	**6AV6355-1GA00-0CM0**
• 10 Dashboards REDU SUS	**6AV6355-1DA00-0CM1**
• 10 Dashboards REDU SMS	**6AV6355-1FA00-0CM1**
• 10 Dashboards REDU POS	**6AV6355-1GA00-0CM1**
• 25 Dashboards REDU SUS	**6AV6355-1DA00-0CM2**
• 25 Dashboards REDU SMS	**6AV6355-1FA00-0CM2**
• 25 Dashboards REDU POS	**6AV6355-1GA00-0CM2**
• 50 Dashboards REDU SUS	**6AV6355-1DA00-0CM3**
• 50 Dashboards REDU SMS	**6AV6355-1FA00-0CM3**
• 50 Dashboards REDU POS	**6AV6355-1GA00-0CM3**
• 100 Dashboards REDU SUS	**6AV6355-1DA00-0CM4**
• 100 Dashboards REDU SMS	**6AV6355-1FA00-0CM4**
• 100 Dashboards REDU POS	**6AV6355-1GA00-0CM4**

More information

More information is available on the Internet at:

http://www.winccoa.com

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Overview

WinCC OA Drivers

In WinCC OA, drivers handle communication with the control and field level.

Since numerous and very different forms of communication are possible with the PLCs or telecontrol nodes, there are several different drivers that can be selected.

The PLC used or the associated communication bus determines which WinCC OA Driver is to be used.

The driver reads current states, measured or counted values from the field and, in the other direction, directs commands and setpoints to the lower-level PLCs.

Benefits

- Simple connection of devices with various protocols
- Open system with possibilities for flexible extension
- Different devices can be addressed in a project
- Platform-independent support of different PLCs
- Everything in one system, from serial ports to cloud connectivity

Application

Due to the high number of drivers, WinCC OA is suitable for complex projects and especially for retrofitting existing systems. In addition to proven Siemens standards and generally used open standards such as OPC UA or MQTT, special industry standards such as IEC 61400 and IEC 104 are also supported.

Function

Several different drivers can run simultaneously on one server in WinCC OA. Data transmission can be event-based or polled in scan cycles.

Pre-processing of data is included:

- Scaling/conversion in both directions
- Type transformations
- Smoothing (value, time, noise reduction, etc.)
- Optimized reading:
  "Poll on use mechanisms"
- With certain drivers, different polling groups and corresponding time-shifted polling times can be desynchronized (Sync on sec) for better load distribution on the managers.

Time stamping can be obtained from the I/O.
Resolution up to 1 ms for value storage.
Regular retrieval and processing of values is based on driver-specific time periods.

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Function

Protocol	Description
S7	Includes drivers for unlimited connection of S7-3xx and S7-4xx Controllers. S7-12xx and S7-15xx Controllers can be connected for a limited time (8, 64 or 512 connections). Connection of Open Controller, PLC-Sim, symbolic addressing, all protection levels and browsing of TIA Portal projects and online browsing of S7-1xxx Controllers.
PROFINET	Driver for connecting programmable controllers that support this fieldbus. Requires a compatible PROFINET network adapter (e.g. CP1616) and enables consistent communication from the PLC to the SCADA system without protocol break.
PROFIsafe	Supports the safety-oriented PROFIsafe protocol. Requires a compatible PROFINET network adapter (e.g. CP1616). This license also includes the operation of PROFINET.
BACnet	BACnet provides an integrated BACnet-compliant online/offline engineering solution for building automation technology, including object library. Designed for heating, ventilation and air-conditioning, lighting control and safety technology. The BACnet license allows the use of the BACnet driver, diagnostics and the BACnet engineering environment. Possession of a WinCC OA Para license is a prerequisite. The engineering environment consists of BACnet object library (including faceplates), BACnet browser, EDE tool and EDE file interface. BACnet objects are intended for dedicated use with the BACnet driver. They can be expanded additively or with the help of BACnetpacks, which work in the same way as the WinCC OA PowerPacks. 5000 BACnet objects are released by default. Project-specific releases of more than 5000 BACnet objects require the following text in the release: "Errors must be reproducibly reported within the standard limits of BACnet objects."
DNP3	The DNP3 (Distributed Network Protocol 3) driver is an open, rugged and modern protocol with characteristics and strengths similar to the IEC driver. The transfer of any number of frames with different data types takes place between the WinCC OA System (Master) and the remote stations (Slave).
IEC 60870 101, 104	IEC drivers are standardized telecontrol drivers that can process proprietary frames. IEC stands for International Electrotechnical Commission, the international standardization committee for electrical engineering. • IEC 60870-5-104 for data exchange via TCP/IP • IEC 60870-5-101 for serial connection
IEC 61850/61400	IEC 61850 and IEC 61400 clients define an architecture that covers special needs in substation automation. As a driver for medium and high voltage technology, it defines a data model and the communications services for interaction with and between the elements of a substation, such as power supply units, circuit breakers, protective devices etc. A description language and a system configuration language (SCL) have been defined for technical purposes. Consists of the IEC 61850 driver (client – according to IEC 61850 Standard Part 7 & Part 8 Edition 2 & IEC 61400-25) and the IEC 61850/61400 browser.
SAIA S-Bus	The SAIA S-Bus driver is a serial driver that natively supports the SAIA S-Bus for connecting SAIA PCD control gear to WinCC OA projects.
TLS	The TLS standard (Technische Lieferbedingungen für Streckenstationen – Technical Delivery Conditions for Remote Stations) defines the use and setup of traffic control systems in Austria. The WinCC OA TLS gateway is designed for communication with TLS-compliant devices. The gateway takes over the complete communication by providing the corresponding values according to the TLS standard or by reacting to their reception. The TLS gateway obtains its parameters via configuration files that define the operating mode and TLS terminals.
SSI	The SSI (Synchronous Serial Interface) driver is used to connect SAT telecontrol systems. The data is exchanged via the LAN (Ethernet, IEEE 802.3); the frame formats used are the SSI formats defined by SAT. The SK 1703 telecontrol components with a suitable communication card (KE/ET) are supported.
Modbus	Modbus TCP is based on the serial Modbus protocol (as part of IEC 61158), which was adapted for TCP/IP. The Modbus TCP driver can also be used for Modbus TCP or UNICOS.
RK512	Serial driver for coupling via the RK512 protocol to the internal memory area of a SIEMENS S5 Controller.
SINAUT	SINAUT (**SI**emens **N**etwork **AUT**omation) is a communication protocol for automated monitoring and control of remote process stations on the basis of SIMATIC S7. Communication takes place via TCP/IP.
SNMP	SNMP (Simple Network Management Protocol) is a protocol for monitoring network elements (servers, workstations, routers, switches, hubs, etc.) and their functions. It supports SNMP V1, V2 and V3.

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Function

Cerberus	Cerberus/ DMS7000 is a fire, intrusion and gas alarm system from Siemens. The Cerberus driver guarantees communication to and from the central fire alarm systems and building security facilities in the event of a fire, gas or intruder alarm. Communication is realized via C-Bus (Cer-Ban) using the serial interface RS232 (MK 7022). This option is not available for Linux.
EIP (EtherNet/IP)	EtherNet/IP is used for communication with several PLC generations and families from Rockwell Automation / Allen Bradley. The protocol is part of the application layer and is based on the standard TCP/IP network protocol.
Omron FINS	Driver for connection to Omron external control.
OPC UA Client	OPC UA Client allows access to process data and alarms from an OPC UA Server, according to the OPC Foundation standard.
OPC Client	OPC (OLE for Process Control) is the use of OLE/COM technology for process control systems. The WinCC OA OPC Client (DA, HDA & A&E) allows access to process data and alarms of an OPC Server, according to the specifications of the OPC Foundation.
MQTT	MQTT (Message Queuing Telemetry Transport) is a message protocol based on TCP/IP and is intended for communication in networks with limited bandwidth. An MQTT communication network consists of at least one server (broker) and several clients. A client can either publish data or subscribe to data. Communication is therefore based on the publish/subscribe principle. The MQTT license allows the coupling of a WinCC OA Server with a MQTT broker for simplified data exchange with other smart devices (sensors or actuators) or for simple cloud connection (AWS, Azure, etc.). **The MQTT Broker is not included in the license!**
NTCIP	Drivers based on the NTCIP 1203 Standard enable direct communication as a gateway between WinCC OA and variable message signs from different manufacturers.
Customer Interfaces	On request, additional interfaces can be provided against specification and corresponding product planning or developed by the customer. A corresponding interface must be taken into account and ordered for the license configuration.

Further drivers on request or via C++ API

Ordering data

	Article No.
SIMATIC WinCC Open Architecture	
V3.18	
WinCC OA - Driver S7 V3.18	
Unlimited connection of S7-3x8x and S7-4xx, Limited connection of S7-12xx and S7-15xx (options for max 64, 512)	
• Driver S7 64	**6AV6355-1AA31-8DA1**
• Driver S7 64 UPG	**6AV6355-1CA31-8DA1**
• Driver S7 512	**6AV6355-1AA31-8DA2**
• Driver S7 512 UPG	**6AV6355-1CA31-8DA2**
WinCC OA - Driver PROFINet V3.18	
Connection of PROFINET-compatible devices. Required PROFINET network adapter	
• Driver PROFINet	**6AV6355-1AA31-8DA4**
• Driver PROFINet UPG	**6AV6355-1CA31-8DA4**
WinCC OA - Driver PROFIsafe V3.18	
Safety-related PROFIsafe protocol. Required PROFINET network adapter. Includes operation of PROFINET.	
• Driver PROFISafe	**6AV6355-1AA31-8DA5**
• Driver PROFISafe UPG	**6AV6355-1CA31-8DA5**
WinCC OA - BACnet V3.18	
Use of BACnet drivers, diagnostics, BACnet engineering environment (BACnet object library (incl. faceplates), BACnet browser, EDE tool, EDE file interface)	
• BACnet	**6AV6355-1AA31-8EB0**
• BACnet UPG	**6AV6355-1CA31-8EB0**
WinCC OA – BACnet objects V3.18	
Dedicated PowerTags for use with the BACnet driver.	
• BACnet objects 200	**6AV6355-1AA31-8DL1**
• BACnet objects 200 UPG	**6AV6355-1CA31-8DL1**
• BACnet objects 500	**6AV6355-1AA31-8DL2**
• BACnet objects 500 UPG	**6AV6355-1CA31-8DL2**
• BACnet objects 1k	**6AV6355-1AA31-8DL3**
• BACnet objects 1k UPG	**6AV6355-1CA31-8DL3**
• BACnet objects 3k	**6AV6355-1AA31-8DL4**
• BACnet objects 3k UPG	**6AV6355-1CA31-8DL4**
• BACnet objects 5k	**6AV6355-1AA31-8DL5**
• BACnet objects 5k UPG	**6AV6355-1CA31-8DL5**
WinCC OA - BACnetpacks V3.18	
For the step-by-step increase of BACnet objects	
• BACnetpack 200/500	**6AV6355-1AA31-8DM0**
• BACnetpack 200/500 UPG	**6AV6355-1CA31-8DM0**
• BACnetpack 500/1k	**6AV6355-1AA31-8DM1**
• BACnetpack 500/1k UPG	**6AV6355-1CA31-8DM1**
• BACnetpack 1k/3k	**6AV6355-1AA31-8DM2**
• BACnetpack 1k/3k UPG	**6AV6355-1CA31-8DM2**
• BACnetpack 3k/5k	**6AV6355-1AA31-8DM3**
• BACnetpack 3k/5k UPG	**6AV6355-1CA31-8DM3**

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WinCC OA Drivers

Ordering data	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA - Driver DNP3 V3.18 Connection of WinCC OA Server with devices via DNP3 protocol.	
• Driver DNP3	**6AV6355-1AA31-8DB2**
• Driver DNP3 UPG	**6AV6355-1CA31-8DB2**
WinCC OA - Driver IEC 101 V3.18 Serial driver according to IEC 60870-5-101	
• Driver IEC 101	**6AV6355-1AA31-8DC0**
• Driver IEC 101 UPG	**6AV6355-1CA31-8DC0**
WinCC OA - Driver IEC 104 V3.18 TCP/IP drivers according to IEC 60870-5-104	
• Driver IEC 104	**6AV6355-1AA31-8DC1**
• Driver IEC 104 UPG	**6AV6355-1CA31-8DC1**
WinCC OA - Driver IEC 61850/61400 V3.18 Medium- and high-voltage technology drivers according to IEC 61850. Consists of IEC 61850 driver and IEC 61850/61400 browser	
• Driver IEC 61850/61400	**6AV6355-1AA31-8DC2**
• Driver IEC 61850/61400 UPG	**6AV6355-1CA31-8DC2**
WinCC OA - Driver SAIA-S-Bus V3.18 Serial driver for native SAIA S-Bus support	
• Driver SAIA S-Bus	**6AV6355-1AA31-8DC3**
• Driver SAIA S-Bus UPG	**6AV6355-1CA31-8DC3**
WinCC OA - Driver TLS V3.18 TLS gateway for setting up traffic control systems in Austria.	
• Driver TLS	**6AV6355-1AA31-8DC4**
• Driver TLS UPG	**6AV6355-1CA31-8DC4**
WinCC OA - Driver SSI V3.18 Synchronous Serial Interface, driver for Ethernet communication via satellite telecontrol components.	
• Driver SSI	**6AV6355-1AA31-8DC5**
• Driver SSI UPG	**6AV6355-1CA31-8DC5**
WinCC OA - Driver Modbus V3.18 Driver for the Modbus TCP standard (as part of IEC 61158)	
• Driver Modbus	**6AV6355-1AA31-8DD0**
• Driver Modbus UPG	**6AV6355-1CA31-8DD0**
WinCC OA - Driver RK512 V3.18 Serial driver for connecting to internal memory of SIEMENS S5 via RK512 protocol	
• Driver RK512	**6AV6355-1AA31-8DE0**
• Driver RK512 UPG	**6AV6355-1CA31-8DE0**
WinCC OA - Driver SINAUT V3.18 SIemens Network AUTomation for connection via SINAUT protocol.	
• Driver SINAUT	**6AV6355-1AA31-8DF2**
• Driver SINAUT UPG	**6AV6355-1CA31-8DF2**

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA - Driver SNMP V3.18 Simple Network Management Protocol driver for network monitoring. Supports SNMP up to version V3	
• Driver SNMP	**6AV6355-1AA31-8DG0**
• Driver SNMP UPG	**6AV6355-1CA31-8DG0**
WinCC OA - Driver Cerberus V3.18 For coupling with Siemens fire alarm system DMS7000/Cerberus.	
• Driver Cerberus	**6AV6355-1AA31-8DH0**
• Driver Cerberus UPG	**6AV6355-1CA31-8DH0**
WinCC OA - Driver EIP V3.18 Ethernet/IP driver for the connection of external PLCs (e.g. Allen Bradley, etc.)	
• Driver EIP	**6AV6355-1AA31-8DJ0**
• Driver EIP UPG	**6AV6355-1CA31-8DJ0**
WinCC OA - Driver Omron FINS V3.18 Omron FINS driver for connection to Omron PLCs	
• Driver Omron FINS	**6AV6355-1AA31-8DJ1**
• Driver Omron FINS UPG	**6AV6355-1CA31-8DJ1**
WinCC OA - Driver MQTT Client V3.18 Coupling of WinCC OA Server with an MQTT Broker (not included)	
• Driver MQTT Client	**6AV6355-1AA31-8DK2**
• Driver MQTT Client UPG	**6AV6355-1CA31-8DK2**
WinCC OA - Driver NTCIP V3.18 NTCIP 1203 Standard for communication with variable message signs	
• Driver NTCIP	**6AV6355-1AA31-8DC6**
• Driver NTCIP UPG	**6AV6355-1CA31-8DC6**

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Ordering data	Article No.
SIMATIC WinCC Open Architecture	
V3.17	
WinCC OA - Driver S7 V3.17	
Unlimited connection of S7-3xx and S7-4xx, Limited connection of S7-12xx and S7-15xx (options for max 64, 512)	
• Driver S7 64	**6AV6355-1AA31-7DA1**
• Driver S7 64 UPG	**6AV6355-1CA31-7DA1**
• Driver S7 512	**6AV6355-1AA31-7DA2**
• Driver S7 512 UPG	**6AV6355-1CA31-7DA2**
WinCC OA - Driver PROFINet V3.17	
Connection of PROFINET-compatible devices. Required PROFINET network adapter	
• Driver PROFINet	**6AV6355-1AA31-7DA4**
• Driver PROFINet UPG	**6AV6355-1CA31-7DA4**
WinCC OA - Driver PROFIsafe V3.17	
Safety-related PROFIsafe protocol. Required PROFINET network adapter. Includes operation of PROFINET.	
• Driver PROFISafe	**6AV6355-1AA31-7DA5**
• Driver PROFISafe UPG	**6AV6355-1CA31-7DA5**
WinCC OA - BACnet V3.17	
Use of BACnet drivers, diagnostics, BACnet engineering environment (BACnet object library (incl. faceplates), BACnet browser, EDE tool, EDE file interface)	
• BACnet	**6AV6355-1AA31-7EB0**
• BACnet UPG	**6AV6355-1CA31-7EB0**
WinCC OA – BACnet objects V3.17	
• BACnet objects 200	**6AV6355-1AA31-7DL1**
• BACnet objects 200 UPG	**6AV6355-1CA31-7DL1**
• BACnet objects 500	**6AV6355-1AA31-7DL2**
• BACnet objects 500 UPG	**6AV6355-1CA31-7DL2**
• BACnet objects 1k	**6AV6355-1AA31-7DL3**
• BACnet objects 1k UPG	**6AV6355-1CA31-7DL3**
• BACnet objects 3k	**6AV6355-1AA31-7DL4**
• BACnet objects 3k UPG	**6AV6355-1CA31-7DL4**
• BACnet objects 5k	**6AV6355-1AA31-7DL5**
• BACnet objects 5k UPG	**6AV6355-1CA31-7DL5**
WinCC OA - BACnetpacks V3.17	
For the step-by-step increase of BACnet objects	
• BACnetpack 200/500	**6AV6355-1AA31-7DM0**
• BACnetpack 200/500 UPG	**6AV6355-1CA31-7DM0**
• BACnetpack 500/1k	**6AV6355-1AA31-7DM1**
• BACnetpack 500/1k UPG	**6AV6355-1CA31-7DM1**
• BACnetpack 1k/3k	**6AV6355-1AA31-7DM2**
• BACnetpack 1k/3k UPG	**6AV6355-1CA31-7DM2**
• BACnetpack 3k/5k	**6AV6355-1AA31-7DM3**
• BACnetpack 3k/5k UPG	**6AV6355-1CA31-7DM3**

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA - Driver DNP3 V3.17	
Connection of WinCC OA Server with devices via DNP3 protocol. (Options for max. 100, 1 000)	
• Driver DNP3 100	**6AV6355-1AA31-7DB0**
• Driver DNP3 100 UPG	**6AV6355-1CA31-7DB0**
• Driver DNP3 1000	**6AV6355-1AA31-7DB1**
• Driver DNP3 1000 UPG	**6AV6355-1CA31-7DB1**
WinCC OA - Driver IEC 101 V3.17	
Serial driver according to IEC 60870-5-101	
• Driver IEC 101	**6AV6355-1AA31-7DC0**
• Driver IEC 101 UPG	**6AV6355-1CA31-7DC0**
WinCC OA - Driver IEC 104 V3.17	
TCP/IP drivers according to IEC 60870-5-104	
• Driver IEC 104	**6AV6355-1AA31-7DC1**
• Driver IEC 104 UPG	**6AV6355-1CA31-7DC1**
WinCC OA - Driver IEC 61850/61400 V3.17	
Medium- and high-voltage technology drivers according to IEC 61850. Consists of IEC 61850 driver and IEC 61850/61400 browser	
• Driver IEC 61850/61400	**6AV6355-1AA31-7DC2**
• Driver IEC 61850/61400 UPG	**6AV6355-1CA31-7DC2**
WinCC OA - Driver SAIA-S-Bus V3.17	
Serial driver for native SAIA S-Bus support	
• Driver SAIA S-Bus	**6AV6355-1AA31-7DC3**
• Driver SAIA S-Bus UPG	**6AV6355-1CA31-7DC3**
WinCC OA - Driver TLS V3.17	
TLS gateway for setting up traffic control systems in Austria.	
• Driver TLS	**6AV6355-1AA31-7DC4**
• Driver TLS UPG	**6AV6355-1CA31-7DC4**
WinCC OA - Driver SSI V3.17	
Synchronous Serial Interface, driver for Ethernet communication via satellite telecontrol components.	
• Driver SSI	**6AV6355-1AA31-7DC5**
• Driver SSI UPG	**6AV6355-1CA31-7DC5**
WinCC OA - Driver Modbus V3.17	
Driver for the Modbus TCP standard (as part of IEC 61158)	
• Driver Modbus	**6AV6355-1AA31-7DD0**
• Driver Modbus UPG	**6AV6355-1CA31-7DD0**
WinCC OA - Driver RK512 V3.17	
Serial driver for connecting to internal memory of SIEMENS S5 via RK512 protocol	
• Driver RK512	**6AV6355-1AA31-7DE0**
• Driver RK512 UPG	**6AV6355-1CA31-7DE0**

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WinCC OA Drivers

Ordering data	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA - Driver SINAUT 50 V3.17	
SIemens Network AUTomation for connection via SINAUT protocol. (Options for max. 50, 250)	
• Driver SINAUT 50	**6AV6355-1AA31-7DF0**
• Driver SINAUT 50 UPG	**6AV6355-1CA31-7DF0**
• Driver SINAUT 250	**6AV6355-1AA31-7DF1**
• Driver SINAUT 250 UPG	**6AV6355-1CA31-7DF1**
WinCC OA - Driver SNMP V3.17	
Simple Network Management Protocol driver for network monitoring. Supports SNMP up to version V3	
• Driver SNMP	**6AV6355-1AA31-7DG0**
• Driver SNMP UPG	**6AV6355-1CA31-7DG0**
WinCC OA - Driver Cerberus V3.17	
For coupling with Siemens fire alarm system DMS7000/Cerberus.	
• Driver Cerberus	**6AV6355-1AA31-7DH0**
• Driver Cerberus UPG	**6AV6355-1CA31-7DH0**
WinCC OA - Driver EIP V3.17	
Ethernet/IP driver for the connection of external PLCs (e.g. Allen Bradley, etc.)	
• Driver EIP	**6AV6355-1AA31-7DJ0**
• Driver EIP UPG	**6AV6355-1CA31-7DJ0**
WinCC OA - Driver MQTT Client V3.17	
Coupling of WinCC OA Server with an MQTT Broker (not included)	
• Driver MQTT Client	**6AV6355-1AA31-7DK2**
• Driver MQTT Client UPG	**6AV6355-1CA31-7DK2**

	Article No.
Software Services - version-independent	
WinCC OA – Driver S7	
• Driver S7 64 SUS	**6AV6355-1DA00-0DA1**
• Driver S7 64 SMS	**6AV6355-1FA00-0DA1**
• Driver S7 64 POS	**6AV6355-1GA00-0DA1**
• Driver S7 512 SUS	**6AV6355-1DA00-0DA2**
• Driver S7 512 SMS	**6AV6355-1FA00-0DA2**
• Driver S7 512 POS	**6AV6355-1GA00-0DA2**
WinCC OA – Driver PROFINET	
• Driver PROFINet SUS	**6AV6355-1DA00-0DA4**
• Driver PROFINet SMS	**6AV6355-1FA00-0DA4**
• Driver PROFINet POS	**6AV6355-1GA00-0DA4**
WinCC OA – Driver PROFIsafe	
• Driver PROFISafe SUS	**6AV6355-1DA00-0DA5**
• Driver PROFISafe SMS	**6AV6355-1FA00-0DA5**
• Driver PROFISafe POS	**6AV6355-1GA00-0DA5**
WinCC OA – BACnet	
• BACnet SUS	**6AV6355-1DA00-0EB0**
• BACnet SMS	**6AV6355-1FA00-0EB0**
• BACnet POS	**6AV6355-1GA00-0EB0**
WinCC OA – BACnet objects	
• BACnet objects 200 SUS	**6AV6355-1DA00-0DL1**
• BACnet objects 200 SMS	**6AV6355-1FA00-0DL1**
• BACnet objects 200 POS	**6AV6355-1GA00-0DL1**
• BACnet objects 500 SUS	**6AV6355-1DA00-0DL2**
• BACnet objects 500 SMS	**6AV6355-1FA00-0DL2**
• BACnet objects 500 POS	**6AV6355-1GA00-0DL2**
• BACnet objects 1k SUS	**6AV6355-1DA00-0DL3**
• BACnet objects 1k SMS	**6AV6355-1FA00-0DL3**
• BACnet objects 1k POS	**6AV6355-1GA00-0DL3**
• BACnet objects 3k SUS	**6AV6355-1DA00-0DL4**
• BACnet objects 3k SMS	**6AV6355-1FA00-0DL4**
• BACnet objects 3k POS	**6AV6355-1GA00-0DL4**
• BACnet objects 5k SUS	**6AV6355-1DA00-0DL5**
• BACnet objects 5k SMS	**6AV6355-1FA00-0DL5**
• BACnet objects 5k POS	**6AV6355-1GA00-0DL5**
WinCC OA - BACnetpacks	
• BACnetpack 200/500 SUS	**6AV6355-1DA00-0DM0**
• BACnetpack 200/500 SMS	**6AV6355-1FA00-0DM0**
• BACnetpack 200/500 POS	**6AV6355-1GA00-0DM0**
• BACnetpack 500/1k SUS	**6AV6355-1DA00-0DM1**
• BACnetpack 500/1k SMS	**6AV6355-1FA00-0DM1**
• BACnetpack 500/1k POS	**6AV6355-1GA00-0DM1**
• BACnetpack 1k/3k SUS	**6AV6355-1DA00-0DM2**
• BACnetpack 1k/3k SMS	**6AV6355-1FA00-0DM2**
• BACnetpack 1k/3k POS	**6AV6355-1GA00-0DM2**
• BACnetpack 3k/5k SUS	**6AV6355-1DA00-0DM3**
• BACnetpack 3k/5k SMS	**6AV6355-1FA00-0DM3**
• BACnetpack 3k/5k POS	**6AV6355-1GA00-0DM3**

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Ordering data	Article No.
WinCC OA – Driver DNP3	
• Driver DNP3 SUS	**6AV6355-1DA00-0DB2**
• Driver DNP3 SMS	**6AV6355-1FA00-0DB2**
• Driver DNP3 POS	**6AV6355-1GA00-0DB2**
• Driver DNP3 100 SUS	**6AV6355-1DA00-0DB0**
• Driver DNP3 100 SMS	**6AV6355-1FA00-0DB0**
• Driver DNP3 100 POS	**6AV6355-1GA00-0DB0**
• Driver DNP3 1000 SUS	**6AV6355-1DA00-0DB1**
• Driver DNP3 1000 SMS	**6AV6355-1FA00-0DB1**
• Driver DNP3 1000 POS	**6AV6355-1GA00-0DB1**
WinCC OA – Driver IEC 101	
• Driver IEC 101 SUS	**6AV6355-1DA00-0DC0**
• Driver IEC 101 SMS	**6AV6355-1FA00-0DC0**
• Driver IEC 101 POS	**6AV6355-1GA00-0DC0**
WinCC OA – Driver IEC 104	
• Driver IEC 104 SUS	**6AV6355-1DA00-0DC1**
• Driver IEC 104 SMS	**6AV6355-1FA00-0DC1**
• Driver IEC 104 POS	**6AV6355-1GA00-0DC1**
WinCC OA – Driver IEC 61850/61400	
• Driver IEC 61850/61400 SUS	**6AV6355-1DA00-0DC2**
• Driver IEC 61850/61400 SMS	**6AV6355-1FA00-0DC2**
• Driver IEC 61850/61400 POS	**6AV6355-1GA00-0DC2**
WinCC OA – Driver SAIA S-Bus	
• Driver SAIA S-Bus SUS	**6AV6355-1DA00-0DC3**
• Driver SAIA S-Bus SMS	**6AV6355-1FA00-0DC3**
• Driver SAIA S-Bus POS	**6AV6355-1GA00-0DC3**
WinCC OA – Driver TLS	
• Driver TLS SUS	**6AV6355-1DA00-0DC4**
• Driver TLS SMS	**6AV6355-1FA00-0DC4**
• Driver TLS POS	**6AV6355-1GA00-0DC4**
WinCC OA – Driver SSI	
• Driver SSI SUS	**6AV6355-1DA00-0DC5**
• Driver SSI SMS	**6AV6355-1FA00-0DC5**
• Driver SSI POS	**6AV6355-1GA00-0DC5**
WinCC OA – Driver Modbus	
• Driver Modbus SUS	**6AV6355-1DA00-0DD0**
• Driver Modbus SMS	**6AV6355-1FA00-0DD0**
• Driver Modbus POS	**6AV6355-1GA00-0DD0**
WinCC OA – Driver RK512	
• Driver RK512 SUS	**6AV6355-1DA00-0DE0**
• Driver RK512 SMS	**6AV6355-1FA00-0DE0**
• Driver RK512 POS	**6AV6355-1GA00-0DE0**

	Article No.
WinCC OA - Driver SINAUT	
• Driver SINAUT SUS	**6AV6355-1DA00-0DF2**
• Driver SINAUT SMS	**6AV6355-1FA00-0DF2**
• Driver SINAUT POS	**6AV6355-1GA00-0DF2**
• Driver SINAUT 50 SUS	**6AV6355-1DA00-0DF0**
• Driver SINAUT 50 SMS	**6AV6355-1FA00-0DF0**
• Driver SINAUT 50 POS	**6AV6355-1GA00-0DF0**
• Driver SINAUT 250 SUS	**6AV6355-1DA00-0DF1**
• Driver SINAUT 250 SMS	**6AV6355-1FA00-0DF1**
• Driver SINAUT 250 POS	**6AV6355-1GA00-0DF1**
WinCC OA – Driver SNMP	
• Driver SNMP SUS	**6AV6355-1DA00-0DG0**
• Driver SNMP SMS	**6AV6355-1FA00-0DG0**
• Driver SNMP POS	**6AV6355-1GA00-0DG0**
WinCC OA – Driver Cerberus	
• Driver Cerberus SUS	**6AV6355-1DA00-0DH0**
• Driver Cerberus SMS	**6AV6355-1FA00-0DH0**
• Driver Cerberus POS	**6AV6355-1GA00-0DH0**
WinCC OA – Driver EIP	
• Driver EIP SUS	**6AV6355-1DA00-0DJ0**
• Driver EIP SMS	**6AV6355-1FA00-0DJ0**
• Driver EIP POS	**6AV6355-1GA00-0DJ0**
WinCC OA – Driver Omron FINS	
• Driver Omron FINS SUS	**6AV6355-1DA00-0DJ1**
• Driver Omron FINS SMS	**6AV6355-1FA00-0DJ1**
• Driver Omron FINS POS	**6AV6355-1GA00-0DJ1**
WinCC OA – Driver MQTT Client	
• Driver MQTT Client SUS	**6AV6355-1DA00-0DK2**
• Driver MQTT Client SMS	**6AV6355-1FA00-0DK2**
• Driver MQTT Client POS	**6AV6355-1GA00-0DK2**
WinCC OA NTCIP	
• Driver NTCIP SUS	**6AV6355-1DA00-0DC6**
• Driver NTCIP SMS	**6AV6355-1FA00-0DC6**
• Driver NTCIP POS	**6AV6355-1GA00-0DC6**

More information

More information is available on the Internet at:

http://www.winccoa.com

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Overview

The WinCC Open Architecture basic software forms the core for many modular extensions.

These functional extensions are available in the form of WinCC Open Architecture Add-ons.

- RDB, DB Logger, NGA, CommCenter, Custom Component, Dist System, Redundancy, Disaster Recovery System (DRS), Secure Map, Maintenance, OPC UA Server, MindSphere, Modbus Server, OPC Server, Recipe, Report, Scheduler, Web Server
- SmartSCADA
  - SmartSCADA Toolbox
  - SmartSCADA KPI Extension
  - SmartSCADA Analytics
- Video
  - Video Light
  - Video Basic
  - Video Display
  - Video Sources

Benefits

- Extensive range of additional services
- Add-ons based on customer requests: Optimally integrated through cooperation and years of experience
- Maintenance of the integrated product components is guaranteed with the product maintenance (according to maintenance contract conditions)
- Extensions to increase stability and security in the overall solution

Function

Add-on	Task
RDB	Relational database Add-on for connecting an Oracle database to a WinCC OA Server. Oracle licenses are not included in this license, but must be ordered separately. Requires one license per server.
DB Logger	Database Logger Add-on allows the export of freely selectable data from WinCC OA to an external database. The DB Logger offers parallel options for data outsourcing to allow data to be analyzed by various evaluation tools. It does not replace the RDB or the Value Archive
NGA Standard	The NGA Standard license allows use of the Next Generation Archiver in projects with up to 150 000 PowerTags. It contains the option to connect a freely selectable backend and can be extended by additional backend connections.
NGA Premium	The NGA Premium license can be used for large projects of more than 150 000 PowerTags. The connection of backends is the same as with the standard license
NGA connection	Enables the connection of another freely selectable backend for the Next Generation Archiver.
CommCenter	Modern alarm management / remote alarm messaging and communication with current standards via various media. The Communication Center creates synergies by using the various interfaces for remote alerting via the control system. Remote alarm messaging takes place via SMS and e-mail. Price per WinCC OA Server. Packaging according to the number of alarms (25, 250, 2500, unlimited). Packages are counted cumulatively and can be extended at a later point in time. Notice: These packages **cannot** be split between servers!
Custom Component	The Custom Component option extends a WinCC OA Server license by integrating a customer-specific manager, driver, script or graphic extension. One license is required for each customer-specific component. In redundant systems, a license in the REDU version must be purchased for each server.
Dist System	Permits the coupling of two or more autonomous WinCC OA Systems via a network. Each subsystem of a distributed system can be configured either as a single-user or multi-user system, each of which may be redundant or non-redundant. Up to 2048 servers can be connected. See special calculation rule for the PowerTag number of servers.

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Function

Redundancy	The failure safety in a redundant system is implemented by means of hot standby. Hot standby is a hardware independent solution for high availability with bumpless switchover. This is a safety concept that consists of two interconnected server systems. Both servers are constantly in operation and are subject to the same functional loading (but only one server is ever active; the second synchronizes the data with the primary unit during runtime). On the failure of one unit, an "on-the-fly changeover" takes place and the previously passive server assumes the leading role. This guarantees access to data or functions at all times. Both servers in a redundant system require a WinCC OA Redundancy license. Use of the license options designated by REDU is also possible only in redundant systems. License options for which there is no REDU version must be purchased twice for a redundant system.
Disaster Recovery System (DRS)	Also known as 2x2 redundancy. Enables the operation of a remote Backup Control Center, whereby the WinCC OA redundancy concept is extended by a second hot standby system. This ensures that the functionality of the system is maintained on another system, even in the event of a complete failure or shutdown during, for example, maintenance of the first hot standby system. Use of a central Oracle database and one WinCC OA RDB option per server are prerequisites for operating a DRS. Example configurations can be viewed in the online help. Each server in this constellation requires a separate WinCC OA DRS license.
Secure	Extension of a WinCC OA Server with extended protection via Kerberos-based authentication. It allows each WinCC OA component to verify the identity of another component. WinCC OA Servers can verify the identity of the clients and clients can verify the identity of the servers. Kerberos also ensures that messages are not modified during transmission (Capture Replay attacks are prevented) and makes it possible to encrypt messages.
Map	Add-on for displaying state-of-the-art cartographic information in WinCC OA. Both Open Street Map as well as your own map material can be displayed. One license per UI is required. The maps can be used in WinCC OA Desktop UI and Ultralight UX. Map material is not included in the license. Can also be operated offline. WinCC OA objects can be displayed within the map material. The map license also authorizes the use of the GIS Viewer.
Maintenance	Add-on for basic maintenance management for recording operating hours, switching cycles, message handling and notepad function. One license for each WinCC OA Server is required for the application.
OPC UA Server	This OPC Foundation-compliant server for WinCC OA allows OPC UA Clients to query data. Supported standard: 'OPC UA Server 1.03' (mandatory functions).
MindSphere	The MindSphere Connector enables native connection of a WinCC OA Server to MindSphere. The connection is guided by a wizard and the transmission and reading of data can be freely configured via scripting. This requires the operation of a valid MindSphere Tenant.
Modbus Server	Modbus/TCP server allows Modbus/TCP clients to query data from a WinCC OA System and display it within the Modbus data model.
OPC Server	OPC Foundation-compliant (legacy) server for WinCC OA allows OPC Clients to request data. Supported profiles: DA, HDA and A&E. Supported standard: "OPC 1.20" (mandatory functions). Not available under Linux.
Recipe	WinCC OA recipes allow setpoints or commands for certain data point elements to be sent simultaneously. Based on "recipe types", which define the quantity of the assigned data point elements, recipes are created that send their values to the data point elements upon activation. Add-on for creating recipe types and instances, transfer of current process values as recipe, activation/download to data points, import and export (MS Excel). License required for each server.

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Benefits

Report	Web-based reporting is implemented using the standardized Simple Object Access Protocol (SOAP) reporting interface. Third-party reporting tools can thus be used without additional workload. The BIRT templates that are also provided, as well as the predefined reporting data, further simplify the reporting. • Web-capable reporting interface (SOAP): - ECLIPSE BIRT (large number of reporting templates for ECLIPSE BIRT are also supplied) - Crystal Reports - SIMATIC Information Server - Microsoft Excel • Online values, history • Support of compressed data, SQL, alarms • Diagnostic tools • Audit Trail Reporting Clients can be purchased in the scale 1, 2, 5 or 10. Packages are counted cumulatively and can be extended at a later point in time. Notice: These packages **cannot** be split between servers! In redundant systems, a license in the REDU version must be purchased for each server.
Scheduler	Permits the creation, parameterization and management of time programs that allow the time and event-driven triggering of specific actions. Daily, weekly and monthly programs as well as individual non-periodic events can be created, taking into account holidays, priority assignment and override functions. One license for each WinCC OA Server is required for the application.
Web Server	This option enables administration of different connections between WinCC OA Servers and WinCC OA ULC UX clients. Load balancing can be activated starting with a count of >1. Multilevel architectures such as access to DMZ can be realized with remote web servers.
WebSocket connection	Extends a WinCC OA Server license by a WebSocket connection.
Load Balancing	This option enables load balancing of different connections between WinCC OA Servers and WinCC OA ULC UX clients. One license is required for each configured web server.

SmartSCADA

The WinCC OA feature SmartSCADA is a tool for root cause analysis and plant optimization and can be used to support decision-making.
This makes it easy to identify areas with potential for increasing efficiency and achieving increases in system performance and availability. Wizards for key performance indicators (KPI), data mining and classification as well as an interface to statistics tool "R" make it easy to functionally integrate statistics into WinCC OA projects and perform all calculations directly in the SCADA system without programming. By training statistical models, system data can be examined and the models can be used in the system at runtime.

SmartSCADA license needs to be purchased twice for redundant servers.

Add-on	Task
SmartSCADAToolbox	SmartSCADA Toolbox enables creation of key performance indicator definitions and key performance indicator instances in the easy-to-use formula editor or freely in CONTROL. The devices are connected by means of a context-based search in the system model or in data points. The performance indicators can be calculated manually, event-driven or cyclically. Online engineering takes place in its own wizard (no Para license included). It includes 20 KPI instances.
SmartSCADA KPI Extension	SmartSCADA KPI Extension for SmartSCADA Toolbox, extends the toolbox by another 100 KPI instances.
SmartSCADA Analytics	SmartSCADA Analytics is a time-limited license for wizard-guided data analysis of historical data and teaching of statistical models for plant classification. Numerous evaluation tools are available through the integration of the "R" statistics toolbox. No para license included. Learned models can be calculated without this license. License expires after one year.

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Function

Video

Enables the integration of a video management system in WinCC OA. Through the combination of SCADA and video monitoring in one system, the costs for separate video interfaces and the additional expense of maintenance and operation can be saved, and the period of training for operating personnel can also be reduced.

Add-on	Task
Video Light	The Video Light package allows the connection of 4 cameras/sources and an external video display. This package cannot be extended.
Video Basic	The Video Basic Package enables the native (via ONVIF) connection of cameras/sources to a WinCC OA System. All streams, recordings and playbacks are included. Video sources are counted per IP address and must be purchased separately. Linux and virtual machines are only supported to a limited extent.
Video Display	Extends the Video Basic system with an external display. A Video Display license is included in the Basic Package.
Video Sources	Extends the Video Basic system by a defined number of sources/cameras. Includes all streaming, recording and playback functions. Video sources are counted per IP address. Video Sources can be purchased in the packages of 1, 10, 25, 50, 100, 250 or 500, packages are counted cumulatively and can be extended at a later point in time. Notice: These packages **cannot** be split between servers! In redundant systems, a license in the REDU version must be purchased for each server.

Ordering data

	Article No.
SIMATIC WinCC Open Architecture	
V3.18	
WinCC OA - RDB V3.18	
For connecting the Oracle database to WinCC OA Server (Oracle licenses not included).	
• RDB	**6AV6355-1AA31-8EA0**
• RDB UPG	**6AV6355-1CA31-8EA0**
WinCC OA - DB Logger V3.18	
Allows export of data from WinCC OA to external databases.	
• DB Logger	**6AV6355-1AA31-8EA1**
• DB Logger UPG	**6AV6355-1CA31-8EA1**
WinCC OA – NGA Standard V3.18	
Enables the use of the Next Generation Archiver in projects with up to 150 000 PowerTags	
• NGA Standard	**6AV6355-1AA31-8EA2**
• NGA Standard UPG	**6AV6355-1CA31-8EA2**
WinCC OA – NGA Premium V3.18	
Enables the use of the Next Generation Archiver in large projects with more than 150 000 PowerTags	
• NGA Premium	**6AV6355-1AA31-8EA3**
• NGA Premium UPG	**6AV6355-1CA31-8EA3**
WinCC OA – NGA backend connection V3.18	
Connection of another freely selectable backend for the NGA	
• NGA backend connection	**6AV6355-1AA31-8EA4**
• NGA backend connection UPG	**6AV6355-1CA31-8EA4**
WinCC OA - CommCenter 1 V3.18	
Remote alarming Basic Package 25 alarms. Output as SMS or email possible.	
• CommCenter 1	**6AV6355-1AA31-8EC0**
• CommCenter 1 UPG	**6AV6355-1CA31-8EC0**
WinCC OA - CommCenter 2 V3.18	
Remote alarming Basic Package 250 alarms. Output as SMS or email possible.	
• CommCenter 2	**6AV6355-1AA31-8EC1**
• CommCenter 2 UPG	**6AV6355-1CA31-8EC1**
WinCC OA - CommCenter 3 V3.18	
Remote alarming Basic Package 2 500 alarms. Output as SMS or email possible.	
• CommCenter 3	**6AV6355-1AA31-8EC2**
• CommCenter 3 UPG	**6AV6355-1CA31-8EC2**
WinCC OA - CommCenter 4 V3.18	
Remote alarming Basic Package unlimited alarms. Output as SMS or email possible.	
• CommCenter 4	**6AV6355-1AA31-8EC3**
• CommCenter 4 UPG	**6AV6355-1CA31-8EC3**

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WinCC OA Add-ons

Ordering data	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA - Custom Comp V3.18 Integration of a customer-specific manager, driver, script or graphic extension.	
• Custom Comp	**6AV6355-1AA31-8ED2**
• Custom Comp UPG	**6AV6355-1CA31-8ED2**
WinCC OA - Custom Comp REDU V3.18 Integration of a customer-specific manager, driver, script or graphic extension for REDU system.	
• Custom Comp REDU	**6AV6355-1AA31-8ED3**
• Custom Comp REDU UPG	**6AV6355-1CA31-8ED3**
WinCC OA - Dist System V3.18 Extends a WinCC OA Server with the Multiserver option (up to 2 048 servers).	
• Dist System	**6AV6355-1AA31-8EE0**
• Dist System UPG	**6AV6355-1CA31-8EE0**
WinCC OA - Redundancy V3.18 High availability with bumpless switchover. Both servers need a license in REDU systems.	
• Redundancy	**6AV6355-1AA31-8EF0**
• Redundancy UPG	**6AV6355-1CA31-8EF0**
WinCC OA - DRS V3.18 Disaster Recovery System, remote Backup Control Center. 2 redundant systems (4 servers in total).	
• DRS	**6AV6355-1AA31-8EF1**
• DRS UPG	**6AV6355-1CA31-8EF1**
WinCC OA - Secure V3.18 Extended protection with Kerberos. Increases IT security level by using ticket-based authentication.	
• Secure	**6AV6355-1AA31-8EG0**
• Secure UPG	**6AV6355-1CA31-8EG0**
WinCC OA - Map V3.18 Display of maps in WinCC OA. Open Street Map as well as own map material are supported.	
• Map	**6AV6355-1AA31-8EH5**
• Map UPG	**6AV6355-1CA31-8EH5**
WinCC OA - Maintenance V3.18 Simple maintenance management. Operating hours, switching cycles, message handling and notepad function.	
• Maintenance	**6AV6355-1AA31-8EJ0**
• Maintenance UPG	**6AV6355-1CA31-8EJ0**
WinCC OA - OPC UA Server V3.18 OPC Foundation-compliant server for WinCC OA Server allows OPC UA Clients to query data.	
• OPC UA Server	**6AV6355-1AA31-8EK0**
• OPC UA Server UPG	**6AV6355-1CA31-8EK0**

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA - MindSphere V3.18 Enables connection of WinCC OA Server to MindSphere. Requires operation of a valid MindSphere Tenant.	
• MindSphere	**6AV6355-1AA31-8EK1**
• MindSphere UPG	**6AV6355-1CA31-8EK1**
WinCC OA - Modbus Server V3.18 Enables data of a WinCC OA System to be queried by Modbus/TCP clients.	
• Modbus Server	**6AV6355-1AA31-8EK2**
• Modbus Server UPG	**6AV6355-1CA31-8EK2**
WinCC OA - Recipe V3.18 Creation of any recipe types and instances, transfer of the current process values as recipe.	
• Recipe	**6AV6355-1AA31-8EL0**
• Recipe UPG	**6AV6355-1CA31-8EL0**
WinCC OA - Report V3.18 Defined number of reporting clients for evaluation of WinCC OA data using a third-party tool.	
• 1 Reporting Client	**6AV6355-1AA31-8EM0**
• 1 Reporting Client UPG	**6AV6355-1CA31-8EM0**
• 2 Reporting Clients	**6AV6355-1AA31-8EM1**
• 2 Reporting Clients UPG	**6AV6355-1CA31-8EM1**
• 5 Reporting Clients	**6AV6355-1AA31-8EM2**
• 5 Reporting Clients UPG	**6AV6355-1CA31-8EM2**
• 10 Reporting Clients	**6AV6355-1AA31-8EM3**
• 10 Reporting Clients UPG	**6AV6355-1CA31-8EM3**
WinCC OA – Report REDU V3.18 Defined number of reporting clients for evaluation of WinCC OA data using a third-party tool for REDU systems.	
• 1 Reporting Client REDU	**6AV6355-1AA31-8EM5**
• 1 Reporting Client REDU UPG	**6AV6355-1CA31-8EM5**
• 2 Reporting Clients REDU	**6AV6355-1AA31-8EM6**
• 2 Reporting Clients REDU UPG	**6AV6355-1CA31-8EM6**
• 5 Reporting Clients REDU	**6AV6355-1AA31-8EM7**
• 5 Reporting Clients REDU UPG	**6AV6355-1CA31-8EM7**
• 10 Reporting Clients REDU	**6AV6355-1AA31-8EM8**
• 10 Reporting Clients REDU UPG	**6AV6355-1CA31-8EM8**
WinCC OA - Scheduler V3.18 Scheduling of daily, weekly and monthly programs, non-periodic events, priority assignment, override function.	
• Scheduler	**6AV6355-1AA31-8EN0**
• Scheduler UPG	**6AV6355-1CA31-8EN0**
WinCC OA - SmartSCADA Toolbox V3.18 Allows creation of key figure definitions and instances via formula editor or CONTROL. Contains 20 KPI instances.	
• SmartSCADA Toolbox	**6AV6355-1AA31-8EP0**
• SmartSCADA Toolbox UPG	**6AV6355-1CA31-8EP0**

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Ordering data	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA – SmartSCADA KPI Ext. V3.18	
Extends Toolbox by 100 KPI instances	
• SmartSCADA KPI Ext.	**6AV6355-1AA31-8EP1**
• SmartSCADA KPI Ext. UPG	**6AV6355-1CA31-8EP1**
WinCC OA - SmartSCADA Analytics V3.18	
Time-limited license (1 year) for data analysis and learning of statistical models. Contains statistical toolbox "R".	
• SmartSCADA Analytics	**6AV6355-1AA31-8EP2**
• SmartSCADA Analytics UPG	**6AV6355-1CA31-8EP2**
WinCC OA - Video Light V3.18	
Allows connection of 4 cameras/sources and an external video display. Cannot be extended.	
• Video Light	**6AV6355-1AA31-8EQ0**
• Video Light UPG	**6AV6355-1CA31-8EQ0**
WinCC OA - Video Basic V3.18	
Enables native connection (ONVIF) of cameras/sources to a WinCC OA System. Includes all streaming, recording and playback functions.	
• Video Basic	**6AV6355-1AA31-8EQ1**
• Video Basic UPG	**6AV6355-1CA31-8EQ1**
WinCC OA - Video Basic REDU V3.18	
Enables native connection (ONVIF) of cameras/sources to a redundant WinCC OA System. Includes all streaming, recording and playback functions.	
• Video Basic REDU	**6AV6355-1AA31-8EU0**
• Video Basic REDU UPG	**6AV6355-1CA31-8EU0**
WinCC OA - Video Display V3.18	
Extends the Video Basic system by an external display. A Video Display license is included in the Basic Package.	
• Video Display	**6AV6355-1AA31-8EQ2**
• Video Display UPG	**6AV6355-1CA31-8EQ2**
WinCC OA - Video Display REDU V3.18	
Extends Video Basic in a REDU system by an external display. A Video Display license is included in the Basic Package.	
• Video Display REDU	**6AV6355-1AA31-8EU1**
• Video Display REDU UPG	**6AV6355-1CA31-8EU1**

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA – Video Cameras V3.18	
Extends Video Basic by a defined number of sources/cameras.	
• 1 Extension	**6AV6355-1AA31-8ER0**
• 1 Extension UPG	**6AV6355-1CA31-8ER0**
• 10 Extensions	**6AV6355-1AA31-8ER1**
• 10 Extensions UPG	**6AV6355-1CA31-8ER1**
• 25 Extensions	**6AV6355-1AA31-8ER2**
• 25 Extensions UPG	**6AV6355-1CA31-8ER2**
• 50 Extensions	**6AV6355-1AA31-8ER3**
• 50 Extensions UPG	**6AV6355-1CA31-8ER3**
• 100 Extensions	**6AV6355-1AA31-8ER4**
• 100 Extensions UPG	**6AV6355-1CA31-8ER4**
• 250 Extensions	**6AV6355-1AA31-8ER5**
• 250 Extensions UPG	**6AV6355-1CA31-8ER5**
• 500 Extensions	**6AV6355-1AA31-8ER6**
• 500 Extensions UPG	**6AV6355-1CA31-8ER6**
WinCC OA – Video Cameras REDU V3.18	
Extends Video Basic in a REDU system by a defined number of sources/cameras.	
• 1 Extension REDU	**6AV6355-1AA31-8ES0**
• 1 Extension REDU UPG	**6AV6355-1CA31-8ES0**
• 10 Extensions REDU	**6AV6355-1AA31-8ES1**
• 10 Extensions REDU UPG	**6AV6355-1CA31-8ES1**
• 25 Extensions REDU	**6AV6355-1AA31-8ES2**
• 25 Extensions REDU UPG	**6AV6355-1CA31-8ES2**
• 50 Extensions REDU	**6AV6355-1AA31-8ES3**
• 50 Extensions REDU UPG	**6AV6355-1CA31-8ES3**
• 100 Extensions REDU	**6AV6355-1AA31-8ES4**
• 100 Extensions REDU UPG	**6AV6355-1CA31-8ES4**
• 250 Extensions REDU	**6AV6355-1AA31-8ES5**
• 250 Extensions REDU UPG	**6AV6355-1CA31-8ES5**
• 500 Extensions REDU	**6AV6355-1AA31-8ES6**
• 500 Extensions REDU UPG	**6AV6355-1CA31-8ES6**
WinCC OA – Load Balancing V3.18	
Enables load balancing of connections between WinCC OA Servers and ULC UX	
• Load Balancing	**6AV6355-1AA31-8ET1**
• Load Balancing UPG	**6AV6355-1CA31-8ET1**
WinCC OA – WebSocket connection V3.18	
Enables management of connections between WinCC OA Servers and WinCC OA ULC UX clients.	
• WebSocket connection	**6AV6355-1AA31-8ET2**
• WebSocket connection UPG	**6AV6355-1CA31-8ET2**

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WinCC OA Add-ons

Ordering data	Article No.
SIMATIC WinCC Open Architecture	
V3.17	
WinCC OA - RDB V3.17	
For connecting the Oracle database to WinCC OA Server (Oracle licenses not included).	
• RDB	**6AV6355-1AA31-7EA0**
• RDB UPG	**6AV6355-1CA31-7EA0**
WinCC OA - DB Logger V3.17	
Allows export of data from WinCC OA to external databases.	
• DB Logger	**6AV6355-1AA31-7EA1**
• DB Logger UPG	**6AV6355-1CA31-7EA1**
WinCC OA - CommCenter 1 V3.17	
Remote alarming Basic Package 25 alarms. Output as SMS or email possible.	
• CommCenter 1	**6AV6355-1AA31-7EC0**
• CommCenter 1 UPG	**6AV6355-1CA31-7EC0**
WinCC OA - CommCenter 2 V3.17	
Remote alarming Basic Package 250 alarms. Output as SMS or email possible.	
• CommCenter 2	**6AV6355-1AA31-7EC1**
• CommCenter 2 UPG	**6AV6355-1CA31-7EC1**
WinCC OA - CommCenter 3 V3.17	
Remote alarming Basic Package 2 500 alarms. Output as SMS or email possible.	
• CommCenter 3	**6AV6355-1AA31-7EC2**
• CommCenter 3 UPG	**6AV6355-1CA31-7EC2**
WinCC OA - CommCenter 4 V3.17	
Remote alarming Basic Package unlimited alarms. Output as SMS or email possible.	
• CommCenter 4	**6AV6355-1AA31-7EC3**
• CommCenter 4 UPG	**6AV6355-1CA31-7EC3**
WinCC OA - Custom Comp V3.17	
Integration of a customer-specific manager, driver, script or graphic extension.	
• Custom Comp	**6AV6355-1AA31-7ED2**
• Custom Comp UPG	**6AV6355-1CA31-7ED2**
WinCC OA - Custom Comp REDU V3.17	
Integration of a customer-specific manager, driver, script or graphic extension for REDU system.	
• Custom Comp REDU	**6AV6355-1AA31-7ED3**
• Custom Comp REDU UPG	**6AV6355-1CA31-7ED3**
WinCC OA - Dist System V3.17	
Extends a WinCC OA Server with the Multiserver option (up to 2 048 servers).	
• Dist System	**6AV6355-1AA31-7EE0**
• Dist System UPG	**6AV6355-1CA31-7EE0**

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA - Redundancy V3.17	
High availability with bumpless switchover. Both servers need a license in REDU systems.	
• Redundancy	**6AV6355-1AA31-7EF0**
• Redundancy UPG	**6AV6355-1CA31-7EF0**
WinCC OA - DRS V3.17	
Disaster Recovery System, remote Backup Control Center. 2 redundant systems (4 servers in total).	
• DRS	**6AV6355-1AA31-7EF1**
• DRS UPG	**6AV6355-1CA31-7EF1**
WinCC OA - Secure V3.17	
Extended protection with Kerberos. Increases IT security level by using ticket-based authentication.	
• Secure	**6AV6355-1AA31-7EG0**
• Secure UPG	**6AV6355-1CA31-7EG0**
WinCC OA - Map V3.17	
Display of maps in WinCC OA. Open Street Map as well as own map material are supported.	
• Map	**6AV6355-1AA31-7EH5**
• Map UPG	**6AV6355-1CA31-7EH5**
WinCC OA - Maintenance V3.17	
Simple maintenance management. Operating hours, switching cycles, message handling and notepad function.	
• Maintenance	**6AV6355-1AA31-7EJ0**
• Maintenance UPG	**6AV6355-1CA31-7EJ0**
WinCC OA - OPC UA Server V3.17	
OPC Foundation-compliant server for WinCC OA Server allows OPC UA Clients to query data.	
• OPC UA Server	**6AV6355-1AA31-7EK0**
• OPC UA Server UPG	**6AV6355-1CA31-7EK0**
WinCC OA - MindSphere V3.17	
Enables connection of WinCC OA Server to MindSphere. Requires operation of a valid MindSphere Tenant.	
• MindSphere	**6AV6355-1AA31-7EK1**
• MindSphere UPG	**6AV6355-1CA31-7EK1**
WinCC OA - Modbus Server V3.17	
Enables data of a WinCC OA System to be queried by Modbus/TCP clients.	
• Modbus Server	**6AV6355-1AA31-7EK2**
• Modbus Server UPG	**6AV6355-1CA31-7EK2**
WinCC OA - Recipe V3.17	
Creation of any recipe types and instances, transfer of the current process values as recipe.	
• Recipe	**6AV6355-1AA31-7EL0**
• Recipe UPG	**6AV6355-1CA31-7EL0**

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Ordering data	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA - Report V3.17	
Defined number of reporting clients for evaluation of WinCC OA data using a third-party tool.	
• 1 Reporting Client	**6AV6355-1AA31-7EM0**
• 1 Reporting Client UPG	**6AV6355-1CA31-7EM0**
• 2 Reporting Clients	**6AV6355-1AA31-7EM1**
• 2 Reporting Clients UPG	**6AV6355-1CA31-7EM1**
• 5 Reporting Clients	**6AV6355-1AA31-7EM2**
• 5 Reporting Clients UPG	**6AV6355-1CA31-7EM2**
• 10 Reporting Clients	**6AV6355-1AA31-7EM3**
• 10 Reporting Clients UPG	**6AV6355-1CA31-7EM3**
WinCC OA – Report REDU V3.17	
Defined number of reporting clients for evaluation of WinCC OA data using a third-party tool for REDU systems.	
• 1 Reporting Client REDU	**6AV6355-1AA31-7EM5**
• 1 Reporting Client REDU UPG	**6AV6355-1CA31-7EM5**
• 2 Reporting Clients REDU	**6AV6355-1AA31-7EM6**
• 2 Reporting Clients REDU UPG	**6AV6355-1CA31-7EM6**
• 5 Reporting Clients REDU	**6AV6355-1AA31-7EM7**
• 5 Reporting Clients REDU UPG	**6AV6355-1CA31-7EM7**
• 10 Reporting Clients REDU	**6AV6355-1AA31-7EM8**
• 10 Reporting Clients REDU UPG	**6AV6355-1CA31-7EM8**
WinCC OA - Scheduler V3.17	
Scheduling of daily, weekly and monthly programs, non-periodic events, priority assignment, override function.	
• Scheduler	**6AV6355-1AA31-7EN0**
• Scheduler UPG	**6AV6355-1CA31-7EN0**
WinCC OA - SmartSCADA Toolbox V3.17	
Allows creation of key figure definitions and instances via formula editor or CONTROL. Contains 20 KPI instances.	
• SmartSCADA Toolbox	**6AV6355-1AA31-7EP0**
• SmartSCADA Toolbox UPG	**6AV6355-1CA31-7EP0**
WinCC OA – SmartSCADA KPI Ext. V3.17	
Extends Toolbox by 100 KPI instances	
• SmartSCADA KPI Ext.	**6AV6355-1AA31-7EP1**
• SmartSCADA KPI Ext. UPG	**6AV6355-1CA31-7EP1**
WinCC OA - SmartSCADA Analytics V3.17	
Time-limited license (1 year) for data analysis and learning of statistical models. Contains statistical toolbox "R".	
• SmartSCADA Analytics	**6AV6355-1AA31-7EP2**
• SmartSCADA Analytics UPG	**6AV6355-1CA31-7EP2**

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA - Video Light V3.17	
Allows connection of 4 cameras/sources and an external video display. Cannot be extended.	
• Video Light	**6AV6355-1AA31-7EQ0**
• Video Light UPG	**6AV6355-1CA31-7EQ0**
WinCC OA - Video Basic V3.17	
Enables native connection (ONVIF) of cameras/sources to a WinCC OA System. Includes all streaming, recording and playback functions.	
• Video Basic	**6AV6355-1AA31-7EQ1**
• Video Basic UPG	**6AV6355-1CA31-7EQ1**
WinCC OA - Video Display V3.17	
Extends the Video Basic system by an external display. A Video Display license is included in the Basic Package.	
• Video Display	**6AV6355-1AA31-7EQ2**
• Video Display UPG	**6AV6355-1CA31-7EQ2**
WinCC OA – Video V3.17	
Extends Video Basic by a defined number of sources/cameras.	
• 1 Extension	**6AV6355-1AA31-7ER0**
• 1 Extension UPG	**6AV6355-1CA31-7ER0**
• 10 Extensions	**6AV6355-1AA31-7ER1**
• 10 Extensions UPG	**6AV6355-1CA31-7ER1**
• 25 Extensions	**6AV6355-1AA31-7ER2**
• 25 Extensions UPG	**6AV6355-1CA31-7ER2**
• 50 Extensions	**6AV6355-1AA31-7ER3**
• 50 Extensions UPG	**6AV6355-1CA31-7ER3**
• 100 Extensions	**6AV6355-1AA31-7ER4**
• 100 Extensions UPG	**6AV6355-1CA31-7ER4**
• 250 Extensions	**6AV6355-1AA31-7ER5**
• 250 Extensions UPG	**6AV6355-1CA31-7ER5**
• 500 Extensions	**6AV6355-1AA31-7ER6**
• 500 Extensions UPG	**6AV6355-1CA31-7ER6**
WinCC OA – Video REDU V3.17	
Extends Video Basic in a REDU system by a defined number of sources/cameras.	
• 1 Extension REDU	**6AV6355-1AA31-7ES0**
• 1 Extension REDU UPG	**6AV6355-1CA31-7ES0**
• 10 Extensions REDU	**6AV6355-1AA31-7ES1**
• 10 Extensions REDU UPG	**6AV6355-1CA31-7ES1**
• 25 Extensions REDU	**6AV6355-1AA31-7ES2**
• 25 Extensions REDU UPG	**6AV6355-1CA31-7ES2**
• 50 Extensions REDU	**6AV6355-1AA31-7ES3**
• 50 Extensions REDU UPG	**6AV6355-1CA31-7ES3**
• 100 Extensions REDU	**6AV6355-1AA31-7ES4**
• 100 Extensions REDU UPG	**6AV6355-1CA31-7ES4**
• 250 Extensions REDU	**6AV6355-1AA31-7ES5**
• 250 Extensions REDU UPG	**6AV6355-1CA31-7ES5**
• 500 Extensions REDU	**6AV6355-1AA31-7ES6**
• 500 Extensions REDU UPG	**6AV6355-1CA31-7ES6**
WinCC OA - Web Server V3.17	
Enables management of connections between WinCC OA Servers and WinCC OA ULC UX clients.	
• Web Server	**6AV6355-1AA31-7ET0**
• Web Server UPG	**6AV6355-1CA31-7ET0**

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WinCC OA Add-ons

Ordering data	Article No.
SIMATIC WinCC Open Architecture	
Software Services - version-independent	
WinCC OA – RDB	
• RDB SUS	**6AV6355-1DA00-0EA0**
• RDB SMS	**6AV6355-1FA00-0EA0**
• RDB POS	**6AV6355-1GA00-0EA0**
WinCC OA – DB Logger	
• DB Logger SUS	**6AV6355-1DA00-0EA1**
• DB Logger SMS	**6AV6355-1FA00-0EA1**
• DB Logger POS	**6AV6355-1GA00-0EA1**
WinCC OA – NGA Standard	
• NGA Standard SUS	**6AV6355-1DA00-0EA2**
• NGA Standard SMS	**6AV6355-1FA00-0EA2**
• NGA Standard POS	**6AV6355-1GA00-0EA2**
WinCC OA – NGA Premium	
• NGA Premium SUS	**6AV6355-1DA00-0EA3**
• NGA Premium SMS	**6AV6355-1FA00-0EA3**
• NGA Premium POS	**6AV6355-1GA00-0EA3**
WinCC OA – NGA backend connection	
• NGA backend connection SUS	**6AV6355-1DA00-0EA4**
• NGA backend connection SMS	**6AV6355-1FA00-0EA4**
• NGA backend connection POS	**6AV6355-1GA00-0EA4**
WinCC OA - CommCenter	
• CommCenter 1 SUS	**6AV6355-1DA00-0EC0**
• CommCenter 1 SMS	**6AV6355-1FA00-0EC0**
• CommCenter 1 POS	**6AV6355-1GA00-0EC0**
WinCC OA – CommCenter 2	
• CommCenter 2 SUS	**6AV6355-1DA00-0EC1**
• CommCenter 2 SMS	**6AV6355-1FA00-0EC1**
• CommCenter 2 POS	**6AV6355-1GA00-0EC1**
WinCC OA – CommCenter 3	
• CommCenter 3 SUS	**6AV6355-1DA00-0EC2**
• CommCenter 3 SMS	**6AV6355-1FA00-0EC2**
• CommCenter 3 POS	**6AV6355-1GA00-0EC2**
WinCC OA – CommCenter 4	
• CommCenter 4 SUS	**6AV6355-1DA00-0EC3**
• CommCenter 4 SMS	**6AV6355-1FA00-0EC3**
• CommCenter 4 POS	**6AV6355-1GA00-0EC3**
WinCC OA – Custom Comp	
• Custom Comp SUS	**6AV6355-1DA00-0ED2**
• Custom Comp SMS	**6AV6355-1FA00-0ED2**
• Custom Comp POS	**6AV6355-1GA00-0ED2**
WinCC OA – Custom Comp REDU	
• Custom Comp REDU SUS	**6AV6355-1DA00-0ED3**
• Custom Comp REDU SMS	**6AV6355-1FA00-0ED3**
• Custom Comp REDU POS	**6AV6355-1GA00-0ED3**
WinCC OA – Dist System	
• Dist System SUS	**6AV6355-1DA00-0EE0**
• Dist System SMS	**6AV6355-1FA00-0EE0**
• Dist System POS	**6AV6355-1GA00-0EE0**
WinCC OA – Redundancy	
• Redundancy SUS	**6AV6355-1DA00-0EF0**
• Redundancy SMS	**6AV6355-1FA00-0EF0**
• Redundancy POS	**6AV6355-1GA00-0EF0**

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA – DRS	
• DRS SUS	**6AV6355-1DA00-0EF1**
• DRS SMS	**6AV6355-1FA00-0EF1**
• DRS POS	**6AV6355-1GA00-0EF1**
WinCC OA – Secure	
• Secure SUS	**6AV6355-1DA00-0EG0**
• Secure SMS	**6AV6355-1FA00-0EG0**
• Secure POS	**6AV6355-1GA00-0EG0**
WinCC OA – Map	
• Map SUS	**6AV6355-1DA00-0EH5**
• Map SMS	**6AV6355-1FA00-0EH5**
• Map POS	**6AV6355-1GA00-0EH5**
WinCC OA – Maintenance	
• Maintenance SUS	**6AV6355-1DA00-0EJ0**
• Maintenance SMS	**6AV6355-1FA00-0EJ0**
• Maintenance POS	**6AV6355-1GA00-0EJ0**
WinCC OA – OPC UA Server	
• OPC UA Server SUS	**6AV6355-1DA00-0EK0**
• OPC UA Server SMS	**6AV6355-1FA00-0EK0**
• OPC UA Server POS	**6AV6355-1GA00-0EK0**
WinCC OA – MindSphere	
• MindSphere SUS	**6AV6355-1DA00-0EK1**
• MindSphere SMS	**6AV6355-1FA00-0EK1**
• MindSphere POS	**6AV6355-1GA00-0EK1**
WinCC OA – Modbus Server	
• Modbus Server SUS	**6AV6355-1DA00-0EK2**
• Modbus Server SMS	**6AV6355-1FA00-0EK2**
• Modbus Server POS	**6AV6355-1GA00-0EK2**
WinCC OA – Recipe	
• Recipe SUS	**6AV6355-1DA00-0EL0**
• Recipe SMS	**6AV6355-1FA00-0EL0**
• Recipe POS	**6AV6355-1GA00-0EL0**
WinCC OA – Report	
• 1 Reporting Client SUS	**6AV6355-1DA00-0EM0**
• 1 Reporting Client SMS	**6AV6355-1FA00-0EM0**
• 1 Reporting Client POS	**6AV6355-1GA00-0EM0**
• 2 Reporting Clients SUS	**6AV6355-1DA00-0EM1**
• 2 Reporting Clients SMS	**6AV6355-1FA00-0EM1**
• 2 Reporting Clients POS	**6AV6355-1GA00-0EM1**
• 5 Reporting Clients SUS	**6AV6355-1DA00-0EM2**
• 5 Reporting Clients SMS	**6AV6355-1FA00-0EM2**
• 5 Reporting Clients POS	**6AV6355-1GA00-0EM2**
• 10 Reporting Clients SUS	**6AV6355-1DA00-0EM3**
• 10 Reporting Clients SMS	**6AV6355-1FA00-0EM3**
• 10 Reporting Clients POS	**6AV6355-1GA00-0EM3**
WinCC OA – Report REDU	
• 1 Reporting Client REDU SUS	**6AV6355-1DA00-0EM5**
• 1 Reporting Client REDU SMS	**6AV6355-1FA00-0EM5**
• 1 Reporting Client REDU POS	**6AV6355-1GA00-0EM5**
• 2 Reporting Clients REDU SUS	**6AV6355-1DA00-0EM6**
• 2 Reporting Clients REDU SMS	**6AV6355-1FA00-0EM6**
• 2 Reporting Clients REDU POS	**6AV6355-1GA00-0EM6**
• 5 Reporting Clients REDU SUS	**6AV6355-1DA00-0EM7**
• 5 Reporting Clients REDU SMS	**6AV6355-1FA00-0EM7**
• 5 Reporting Clients REDU POS	**6AV6355-1GA00-0EM7**
• 10 Reporting Clients REDU SUS	**6AV6355-1DA00-0EM8**
• 10 Reporting Clients REDU SMS	**6AV6355-1FA00-0EM8**
• 10 Reporting Clients REDU POS	**6AV6355-1GA00-0EM8**

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Ordering data	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA – Scheduler	
• Scheduler SUS	**6AV6355-1DA00-0EN0**
• Scheduler SMS	**6AV6355-1FA00-0EN0**
• Scheduler POS	**6AV6355-1GA00-0EN0**
WinCC OA – SmartSCADA Toolbox	
• SmartSCADA Toolbox SUS	**6AV6355-1DA00-0EP0**
• SmartSCADA Toolbox SMS	**6AV6355-1FA00-0EP0**
• SmartSCADA Toolbox POS	**6AV6355-1GA00-0EP0**
WinCC OA – SmartSCADA KPI Ext.	
• SmartSCADA KPI Ext. SUS	**6AV6355-1DA00-0EP1**
• SmartSCADA KPI Ext. SMS	**6AV6355-1FA00-0EP1**
• SmartSCADA KPI Ext. POS	**6AV6355-1GA00-0EP1**
WinCC OA – SmartSCADA Analytics	
• SmartSCADA Analytics SUS	**6AV6355-1DA00-0EP2**
• SmartSCADA Analytics SMS	**6AV6355-1FA00-0EP2**
• SmartSCADA Analytics POS	**6AV6355-1GA00-0EP2**
WinCC OA – Video Light	
• Video Light SUS	**6AV6355-1DA00-0EQ0**
• Video Light SMS	**6AV6355-1FA00-0EQ0**
• Video Light POS	**6AV6355-1GA00-0EQ0**
WinCC OA – Video Basic	
• Video Basic SUS	**6AV6355-1DA00-0EQ1**
• Video Basic SMS	**6AV6355-1FA00-0EQ1**
• Video Basic POS	**6AV6355-1GA00-0EQ1**
WinCC OA – Video Display	
• Video Display SUS	**6AV6355-1DA00-0EQ2**
• Video Display SMS	**6AV6355-1FA00-0EQ2**
• Video Display POS	**6AV6355-1GA00-0EQ2**
WinCC OA - Video Basis REDU	
• Video Basic REDU SUS	**6AV6355-1DA00-0EU0**
• Video Basic REDU SMS	**6AV6355-1FA00-0EU0**
• Video Basic REDU POS	**6AV6355-1GA00-0EU0**
WinCC OA - Video Display REDU	
• Video Display REDU SUS	**6AV6355-1DA00-0EU1**
• Video Display REDU SMS	**6AV6355-1FA00-0EU1**
• Video Display REDU POS	**6AV6355-1GA00-0EU1**

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA – Video Cameras	
• 1 Extension SUS	**6AV6355-1DA00-0ER0**
• 1 Extension SMS	**6AV6355-1FA00-0ER0**
• 1 Extension POS	**6AV6355-1GA00-0ER0**
• 10 Extensions SUS	**6AV6355-1DA00-0ER1**
• 10 Extensions SMS	**6AV6355-1FA00-0ER1**
• 10 Extensions POS	**6AV6355-1GA00-0ER1**
• 25 Extensions SUS	**6AV6355-1DA00-0ER2**
• 25 Extensions SMS	**6AV6355-1FA00-0ER2**
• 25 Extensions POS	**6AV6355-1GA00-0ER2**
• 50 Extensions SUS	**6AV6355-1DA00-0ER3**
• 50 Extensions SMS	**6AV6355-1FA00-0ER3**
• 50 Extensions POS	**6AV6355-1GA00-0ER3**
• 100 Extensions SUS	**6AV6355-1DA00-0ER4**
• 100 Extensions SMS	**6AV6355-1FA00-0ER4**
• 100 Extensions POS	**6AV6355-1GA00-0ER4**
• 250 Extensions SUS	**6AV6355-1DA00-0ER5**
• 250 Extensions SMS	**6AV6355-1FA00-0ER5**
• 250 Extensions POS	**6AV6355-1GA00-0ER5**
• 500 Extensions SUS	**6AV6355-1DA00-0ER6**
• 500 Extensions SMS	**6AV6355-1FA00-0ER6**
• 500 Extensions POS	**6AV6355-1GA00-0ER6**
WinCC OA – Video Cameras REDU	
• 1 Extension REDU SUS	**6AV6355-1DA00-0ES0**
• 1 Extension REDU SMS	**6AV6355-1FA00-0ES0**
• 1 Extension REDU POS	**6AV6355-1GA00-0ES0**
• 10 Extensions REDU SUS	**6AV6355-1DA00-0ES1**
• 10 Extensions REDU SMS	**6AV6355-1FA00-0ES1**
• 10 Extensions REDU POS	**6AV6355-1GA00-0ES1**
• 25 Extensions REDU SUS	**6AV6355-1DA00-0ES2**
• 25 Extensions REDU SMS	**6AV6355-1FA00-0ES2**
• 25 Extensions REDU POS	**6AV6355-1GA00-0ES2**
• 50 Extensions REDU SUS	**6AV6355-1DA00-0ES3**
• 50 Extensions REDU SMS	**6AV6355-1FA00-0ES3**
• 50 Extensions REDU POS	**6AV6355-1GA00-0ES3**
• 100 Extensions REDU SUS	**6AV6355-1DA00-0ES4**
• 100 Extensions REDU SMS	**6AV6355-1FA00-0ES4**
• 100 Extensions REDU POS	**6AV6355-1GA00-0ES4**
• 250 Extensions REDU SUS	**6AV6355-1DA00-0ES5**
• 250 Extensions REDU SMS	**6AV6355-1FA00-0ES5**
• 250 Extensions REDU POS	**6AV6355-1GA00-0ES5**
• 500 Extensions REDU SUS	**6AV6355-1DA00-0ES6**
• 500 Extensions REDU SMS	**6AV6355-1FA00-0ES6**
• 500 Extensions REDU POS	**6AV6355-1GA00-0ES6**
WinCC OA – Web Server	
• Web Server SUS	**6AV6355-1DA00-0ET0**
• Web Server SMS	**6AV6355-1FA00-0ET0**
• Web Server POS	**6AV6355-1GA00-0ET0**
WinCC OA – Load Balancing	
• Load Balancing SUS	**6AV6355-1DA00-0ET1**
• Load Balancing SMS	**6AV6355-1FA00-0ET1**
• Load Balancing POS	**6AV6355-1GA00-0ET1**
WinCC OA – WebSocket connection	
• WebSocket connection SUS	**6AV6355-1DA00-0ET2**
• WebSocket connection SMS	**6AV6355-1FA00-0ET2**
• WebSocket connection POS	**6AV6355-1GA00-0ET2**

More information

More information is available on the Internet at:

http://www.winccoa.com

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WinCC OA IPC Packages

Overview

WinCC OA IPC Packages are compact WinCC OA functional units designed for SIMATIC IPC hardware. They are sophisticated solutions which are offered as a bundle with corresponding Nanobox PCs, perfect for fast deployment.

The licenses allow the use of WinCC OA on SIMATIC IPCs of the 127, 227, and 277 series and on IOT2050. These packages cannot be extended with further WinCC OA options, except the option with 4096 PowerTags.

The general WinCC OA Software or hardware requirements apply to the IPC Packages specified above.

These packages can only be ordered in combination with the corresponding additional hardware item.

SUS contracts can be purchased for IPC Packages, but no SMS.

Benefits

- Quick to order
- Proven package concept based on numerous customer requests
- Common protocols are immediately available – without extra charge
- Lower licensing costs through product bundles

Application

In the course of the joint product lines of the SIMATIC family, an optimized ordering process was made possible for the Nanoboxes. When hardware and license are ordered at the same time, a combination package has been put together which includes as a product bundle common product extensions for small but flexible and open solutions and can therefore be used without major product configuration.

Since these are special bundled products, extension with additional services is not possible. A support extension cannot be used in this case either.

The application is suitable for single station solutions as well as for standardized extensions in an architecture network as a remote unit or subsystem.

Design

PowerTags

IPC Packages are offered with different PowerTag Packages. The staggering allows 128, 256, 512, 2048 or 4096 PowerTags. In contrast to Server Basic licenses, Runtime Package licenses **cannot** be extended with additional PowerTag Packages, except for the 4096 PowerTags option.

The PowerTags purchased here also cannot be moved to other servers. A whole range of common options is provided by ordering a package.

UIs

A UI license (Desktop UI) is includes in the package.
More information on this can be found in the <User Interfaces> section

Drivers

PowerTags	128	256	512	2 048	4 096
Included options	OPC UA / DA Server, DIST, NGA Standard	OPC UA / DA Server, DIST, RDB [3], NGA Standard	OPC UA / DA Server, DIST, RDB [3], NGA Standard	OPC UA / DA Server, DIST, RDB [3], NGA Standard	OPC UA / DA Server, DIST, RDB, NGA Standard
Included drivers	Selection of 2 desired WinCC OA Drivers [1][2]	Selection of 3 desired WinCC OA Drivers [1]	Selection of 3 desired WinCC OA Drivers [1]	Selection of 3 desired WinCC OA Drivers [1]	S7, OPC UA Client, OPC DA Client
Extendable	No	No	No	No	With all WinCC OA options
IPCs	IOT2050	IOT2050, IPC127E / IPC2x7E / IPC2x7G	IOT2050, IPC127E / IPC2x7E / IPC2x7G	IOT2050, IPC127E / IPC2x7E / IPC2x7G	IPC127E / IPC2x7E / IPC2x7G

[1] 3 instances of each available WinCC OA Driver without any additional option. Example: S7 + MQTT + IEC104

[2] Only on IOT 2050 supported drivers

[3] RDB cannot be used on IOT2050 devices

More information on drivers can be found under <Drivers>.

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Design

Add-ons

IPC Packages include a Dist option, an RDB option (except for 128 package) and an NGA standard.
More information on options can be found under <Add-ons>.

Hardware

The following hardware versions are supported by WinCC OA:

SIMATIC IPC2x7E

Hardware components	Specification
OS	Windows 10 Enterprise 2019 LTSC, 64-bit
Processor	Intel Celeron (N2807 / N2930)
RAM	2/4/8 GB
Hard disk	SSD / HDD
Graphics	Intel HD Graphics / DisplayPort
Network adapter	2x 10/100/1000 Mbps, RJ45

SIMATIC IPC2x7G

Hardware components	Specification
OS	Windows 10 Enterprise 2019 LTSC, 64-bit
Processor	Atom X6413E (4-core)
RAM	4/8/16 GB
Hard disk	SSD
Graphics	Intel HD Graphics / DisplayPort
Network adapter	3x 10/100/1000 Mbps

SIMATIC IPC127E

Hardware components	Specification
OS	Windows 10 Enterprise 2016 LTSB, 64-bit
Processor	Intel Atom (E3930 / E3940)
RAM	2/4 GB
Hard disk	SSD
Graphics	Intel HD Graphics / DisplayPort
Network adapter	2/3x Ethernet RJ45

SIMATIC IOT2050

Hardware components	Specification
OS	Industrial OS 2.1/2.2
Processor	ARM TI AM6548 HS
RAM	1/2 GB
Hard disk	SSD
Graphics	Display port
Network adapter	2x Ethernet RJ45

Detailed information about installation of WinCC OA on IOT2050 hardware can be viewed in the online documentation.

Ordering data

Ordering data	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA IPC Package V3.18	
• 128 PowerTags	**6AV6355-1AA31-8FA4**
• 256 PowerTags	**6AV6355-1AA31-8FA0**
• 512 PowerTags	**6AV6355-1AA31-8FA1**
• 2 048 PowerTags	**6AV6355-1AA31-8FA2**
• 4 096 PowerTags	**6AV6355-1AA31-8FA3**
WinCC OA IPC Package V3.17	
• 128 PowerTags	**6AV6355-1AA31-7FA4**
• 256 PowerTags	**6AV6355-1AA31-7FA0**
• 512 PowerTags	**6AV6355-1AA31-7FA1**
• 2 048 PowerTags	**6AV6355-1AA31-7FA2**
• 4 096 PowerTags	**6AV6355-1AA31-7FA3**
Software Services - version-independent	
WinCC OA IPC Package	
• 128 PowerTags SUS	**6AV6355-1DA00-0FA4**
• 128 PowerTags POS	**6AV6355-1GA00-0FA4**
• 256 PowerTags SUS	**6AV6355-1DA31-0FA0**
• 256 PowerTags POS	**6AV6355-1GA31-0FA0**
• 512 PowerTags SUS	**6AV6355-1DA00-0FA1**
• 512 PowerTags POS	**6AV6355-1GA00-0FA1**
• 2 048 PowerTags SUS	**6AV6355-1DA00-0FA2**
• 2 048 PowerTags POS	**6AV6355-1GA00-0FA2**
• 4 096 PowerTags SUS	**6AV6355-1DA00-0FA3**
• 4 096 PowerTags POS	**6AV6355-1GA00-0FA3**

More information

More information is available on the Internet at:

http://www.winccoa.com

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WinCC OA Development Packages

Overview

WinCC OA Inhouse licenses

WinCC OA Inhouse licenses are time-limited developer licenses recommended for certified partners.

This license comprises a one-year right of usage under the following conditions:

- ETM provides a WinCC OA license with unlimited PowerTags and all license options (excluding SmartSCADA, Video and BACnet).
  Two development licenses are required to create a redundant system.
  The extensions listed above can also be purchased separately.
  - This development license is for internal use and cannot be forwarded to third parties.
  - This development license cannot be used either for customer tests (e.g. SAT, FAT) or in productive plants.
- Support and problem solution, as well as remote maintenance during office hours, up to the number of hours per year included in the license package for customer's employees on WinCC OA.
  Remark
  The workload for resolving product faults that were reported and reproducible is not deducted from this number of hours.
- The license is invoiced each year in advance. The agreement is valid for one year and is then extended by a further year if neither of the contract parties cancels the contract 3 months before its expiry.

Upgrade of Inhouse Development licenses

WinCC OA Inhouse Development licenses are version-independent. They can therefore be used even after a version change.
To use new license features, customers need to upgrade their Inhouse Development licenses.

Upgrades and updates of the WinCC OA Inhouse Development license to new WinCC OA versions during the contract period must be performed by the customers themselves. They receive an email notification relating to this.

To perform the update, customers need to log into the WinCC OA license portal with their license key and upgrade the desired licenses there. They can do this any time after receiving the email notification.

Benefits

Flexible development possibilities for new solutions through open configurability of contents and interfaces

- Annual renewal and included software upgrades at no additional cost
- Included telephone support

Application

These licenses are designed for, but not limited to, developments by partners.

Innovative additional services such as video or Smart SCADA can also be used with the appropriate extensions.

Design

Inhouse DEV PARA

Extension for the Inhouse DEV Package by a full PARA license. With graphical editor (incl. symbol catalogs), script development environment and test framework.

Inhouse DEV BACnet

Extension of the WinCC OA Inhouse DEV Package by the complete BACnet development environment including EDE tool, EDE file interface, BACnet object library, BACnet driver and BACnet browser.

Inhouse DEV Video

Extension of the WinCC OA Inhouse DEV Package by a complete developer video package with unlimited video sources (cameras).

Inhouse DEV SmartSCADA

Extension of the WinCC OA Inhouse DEV Package by a complete developer package for SmartSCADA for use of the KPI framework with unlimited KPI instances.
Notice: Analytics model is not included and is not sold as a developer license. The standard Analytics Toolbox package can be added for an additional charge.

API Interface

Application programming interface. The API offers a series of functions that enable WinCC OA to be extended with special managers. A manager is a program that communicates with the system via a protocol defined by WinCC OA. The license allows the development of own drivers using C++. One license is required for each WinCC OA Para Standard. For first-time orders, participation in a WinCC OA WS - Developer Workshop is strongly recommended.

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Ordering data

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA – Inhouse DEV Package 1 WinCC OA Server license (functionally unlimited) with almost all options (except Video, BACnet, SmartSCADA), 10 hotline hours, automatically extended after one year	
• 1 Inhouse DEV Package	**6AV6355-1EA00-0GA0**
• 2 Inhouse DEV Packages	**6AV6355-1EA00-0GA1**
• 5 Inhouse DEV Packages	**6AV6355-1EA00-0GA2**
• 10 Inhouse DEV Packages	**6AV6355-1EA00-0GA3**
WinCC OA – Inhouse DEV PARA Extends WinCC OA Inhouse DEV Package by additional PARA licenses. Automatically extended after 1 year.	
• 1 Inhouse DEV PARA	**6AV6355-1EA00-0GB0**
• 2 Inhouse DEV PARA	**6AV6355-1EA00-0GB1**
• 5 Inhouse DEV PARA	**6AV6355-1EA00-0GB2**
• 10 Inhouse DEV PARA	**6AV6355-1EA00-0GB3**
WinCC OA – Inhouse DEV BACnet BACnet development environment including EDE tool, EDE file interface, BACnet object library, BACnet driver, BACnet browser, automatically extended after 1 year.	**6AV6355-1EA00-0GC0**
WinCC OA – Inhouse DEV Video Developer video package, unlimited sources/cameras, automatically extended after 1 year.	**6AV6355-1EA00-0GC1**
WinCC OA – Inhouse DEV SmartSCADA SmartSCADA developer package, KPI framework with unlimited KPI instances, automatically extended after 1 year.	**6AV6355-1EA00-0GC2**
WinCC OA – API Interface Application programming interfaces for the development of own drivers (C++).	**6AV6355-1EA00-0GD0**

More information

More information is available on the Internet at:

http://www.winccoa.com

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WinCC OA Solution Frameworks

Overview

Solution Frameworks are license packages for the implementation of specific applications at the customer. Each package contains a quota of consulting hours.

Design

Topology Package

The Topology package is an application framework for topological coloring of network representations. A qualitative statement is made as to which parts (nodes, line sections etc.) of a network are directly connected to specific feeders. This package includes one day of consulting services (WinCC OA Consulting 8h) for project-specific integration.

APM Package

The Advanced Playback Manager software offers the possibility to play back the system status of a real-time system in a test simulation system. Snapshot (time), playback (time range) and training sequence are included functions. The APM package does not include simulation of the process or the connected PLCs.

This package includes one day of consulting services (WinCC OA Consulting 8h) for project integration.

A WinCC OA RDB license (ORACLE connection) is required for the application.

AMS Packages

The Advanced Maintenance Suite (AMS) Package includes the application with a maximum number of alarm/event DPs to assigned checklists, AMS Reports and AMS Importers. All I/O DPs that are linked to a list and trigger work orders are counted. AMS Reports also requires a license for Crystal Reports 2016 (RT V13.0). One day consulting service (WinCC OA Consulting 8h) is included.

AMS Reports and Importer are not available for Linux distributions.

AMS Packages are available in different sizes (see table below). An existing WinCC OA Server is required for the application. The package does not include further support.

AMS Package	Qty. alarm/ event DP	License validity	Extendable
Starter	20	90 days	No
Starter	20	Unlimited	No
Small	100	Unlimited	No
Medium	1 000	Unlimited	No
Large	5 000	Unlimited	Yes, via WinCC OA AMS Package Extension
Unlimited	Unlimited	Unlimited	No

The WinCC OA AMS Package Extension includes an upgrade for Advanced Maintenance Station packages by 1 000 I/O each. It is only applicable to the WinCC OA AMS Package Large.

Ordering data

	Article No.
SIMATIC WinCC Open Architecture	
V3.18	
WinCC OA - Topology Package V3.18	
Application framework for topological coloring of network representations + consulting.	
• Topology Package	**6AV6355-1AA31-8HA0**
• Topology Package UPG	**6AV6355-1CA31-8HA0**
WinCC OA - APM Package V3.18	
Playback of real-time system status in test simulation system + consulting.	
• APM Package	**6AV6355-1AA31-8HB0**
• APM Package UPG	**6AV6355-1CA31-8HB0**
AMS Package Starter	**6AV6355-1AA31-8HC0**
90-day trial license for Advanced Maintenance Suite	
WinCC OA - AMS Package Entry V3.18	
Advanced Maintenance Suite with max. 20 alarm/event DP + consulting.	
• AMS Package Entry	**6AV6355-1AA31-8HC1**
• AMS Package Entry UPG	**6AV6355-1CA31-8HC1**
WinCC OA - AMS Package Small V3.18	
Advanced Maintenance Suite with max. 100 alarm/event DP + consulting.	
• AMS Package Small	**6AV6355-1AA31-8HC2**
• AMS Package Small UPG	**6AV6355-1CA31-8HC2**
WinCC OA – AMS Package Medium V3.18	
Advanced Maintenance Suite with max. 1 000 alarm/event DP + consulting.	
• AMS Package Medium	**6AV6355-1AA31-8HC3**
• AMS Package Medium UPG	**6AV6355-1CA31-8HC3**
WinCC OA – AMS Package Large V3.18	
Advanced Maintenance Suite with max. 5 000 alarm/event DP + consulting.	
• AMS Package Large	**6AV6355-1AA31-8HC4**
• AMS Package Large UPG	**6AV6355-1CA31-8HC4**
WinCC OA - AMS Package Unlimited V3.18	
Advanced Maintenance Suite with unlimited alarm/event DP + consulting.	
• AMS Package Unlimited	**6AV6355-1AA31-8HC5**
• AMS Package Unlimited UPG	**6AV6355-1CA31-8HC5**
WinCC OA – AMS Package Extension V3.18	
Upgrade for Advanced Maintenance Suite Package Large by 1 000 alarm/event DP.	
• AMS Package Extension	**6AV6355-1AA31-8HC6**
• AMS Package Extension UPG	**6AV6355-1CA31-8HC6**

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Ordering data	Article No.
V3.17	
WinCC OA - Topology Package V3.17	
Application framework for topological coloring of network representations + consulting.	
• Topology Package	**6AV6355-1AA31-7HA0**
• Topology Package UPG	**6AV6355-1CA31-7HA0**
WinCC OA - APM Package V3.17	
Playback of real-time system status in test simulation system + consulting.	
• APM Package	**6AV6355-1AA31-7HB0**
• APM Package UPG	**6AV6355-1CA31-7HB0**
WinCC OA – AMS Package Starter V3.17	**6AV6355-1AA31-7HC0**
90-day trial license for Advanced Maintenance Suite + consulting.	
WinCC OA - AMS Package Entry V3.17	
Advanced Maintenance Suite with max. 20 alarm/event DP + consulting.	
• AMS Package Entry	**6AV6355-1AA31-7HC1**
• AMS Package Entry UPG	**6AV6355-1CA31-7HC1**
WinCC OA – AMS Package Small V3.17	
Advanced Maintenance Suite with max. 100 alarm/event DP + consulting.	
• AMS Package Small	**6AV6355-1AA31-7HC2**
• AMS Package Small UPG	**6AV6355-1CA31-7HC2**
WinCC OA – AMS Package Medium V3.17	
Advanced Maintenance Suite with max. 1 000 alarm/event DP + consulting.	
• AMS Package Medium	**6AV6355-1AA31-7HC3**
• AMS Package Medium UPG	**6AV6355-1CA31-7HC3**
WinCC OA – AMS Package Large V3.17	
Advanced Maintenance Suite with max. 5 000 alarm/event DP + consulting.	
• AMS Package Large	**6AV6355-1AA31-7HC4**
• AMS Package Large UPG	**6AV6355-1CA31-7HC4**
WinCC OA - AMS Package Unlimited V3.17	
Advanced Maintenance Suite with unlimited alarm/event DP + consulting.	
• AMS Package Unlimited	**6AV6355-1AA31-7HC5**
• AMS Package Unlimited UPG	**6AV6355-1CA31-7HC5**
WinCC OA - AMS Package Extension V3.17	
Upgrade for Advanced Maintenance Suite Package Large by 1 000 alarm/event DP.	
• AMS Package Extension	**6AV6355-1AA31-7HC6**
• AMS Package Extension UPG	**6AV6355-1CA31-7HC6**

	Article No.
Software Services - version-independent	
WinCC OA – Topology Package	
• Topology Package SUS	**6AV6355-1DA00-0HA0**
• Topology Package SMS	**6AV6355-1FA00-0HA0**
• Topology Package POS	**6AV6355-1GA00-0HA0**
WinCC OA – APM Package	
• APM Package SUS	**6AV6355-1DA00-0HB0**
• APM Package SMS	**6AV6355-1FA00-0HB0**
• APM Package POS	**6AV6355-1GA00-0HB0**
WinCC OA – AMS Package Entry	
• AMS Package Entry SUS	**6AV6355-1DA00-0HC1**
• AMS Package Entry SMS	**6AV6355-1FA00-0HC1**
• AMS Package Entry POS	**6AV6355-1GA00-0HC1**
WinCC OA – AMS Package Small	
• AMS Package Small SUS	**6AV6355-1DA00-0HC2**
• AMS Package Small SMS	**6AV6355-1FA00-0HC2**
• AMS Package Small POS	**6AV6355-1GA00-0HC2**
WinCC OA – AMS Package Medium	
• AMS Package Medium SUS	**6AV6355-1DA00-0HC3**
• AMS Package Medium SMS	**6AV6355-1FA00-0HC3**
• AMS Package Medium POS	**6AV6355-1GA00-0HC3**
WinCC OA – AMS Package Large	
• AMS Package Large SUS	**6AV6355-1DA00-0HC4**
• AMS Package Large SMS	**6AV6355-1FA00-0HC4**
• AMS Package Large POS	**6AV6355-1GA00-0HC4**
WinCC OA – AMS Package Unlimited	
• AMS Package Unlimited SUS	**6AV6355-1DA00-0HC5**
• AMS Package Unlimited SMS	**6AV6355-1FA00-0HC5**
• AMS Package Unlimited POS	**6AV6355-1GA00-0HC5**
WinCC OA – AMS Package Extension	
• AMS Package Extension SUS	**6AV6355-1DA00-0HC6**
• AMS Package Extension SMS	**6AV6355-1FA00-0HC6**
• AMS Package Extension POS	**6AV6355-1GA00-0HC6**

More information

More information is available on the Internet at:

http://www.winccoa.com

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SIMATIC WinCC OA Services

Overview

SIMATIC WinCC OA Services

SIMATIC WinCC Open Architecture is a SCADA system for visualizing and operating processes, production flows, machines and plants in all industrial sectors.

This high degree of flexibility requires comprehensive support for our customers and especially our partners. WinCC OA staff are happy to provide support for a wide range of challenges.

Services are offered in the following categories:

- Support: Support for errors within the scope of maintenance and update contracts
- Consulting: Consulting and configuration activities
- Solution: Development activities based on precise, technical specifications
- Trainings: Defined trainings and hands-on trainings
- Travel costs: For consulting or trainings on site
- Trade goods: Third-party goods sold through WinCC OA

Note:

These are services of the product supplier.

More information

More information is available on the Internet at:

http://www.winccoa.com

Information about the training courses and booking training:

https://www.winccoa.com/support/training.html

Information about WinCC OA Support:

https://www.winccoa.com/support.html

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Overview

WinCC OA Support

WinCC OA support can only be purchased in addition to a currently valid Software Maintenance Service (SMS) or Inhouse Development Package.
Support requests can be submitted online around the clock, 365 days a year. Service requests cannot be submitted by email.

The customer request is received by Siemens Industry Support (1st level), further processing is performed by the WinCC OA Product Support specialists (2nd level), who are available during Austrian normal working hours, Monday to Friday 9 am to 5 pm CEST/CET.

A support agreement is concluded for 12 months and must be renewed thereafter.
The corresponding pool of hours is also available for this period. Unused hours expire and will be charged for 12 months from the date of purchase.
Support hours are for general product information and product related support.
"WinCC OA Consulting" handles specific, project-related information.

Benefits

- Competent advice on product questions from the product supplier
- Solution-oriented fault diagnostics
- Correction of the error based on best practice experience
- Possibility of future adoption through product maintenance of WinCC OA patches

Design

Online Support Requests can be made directly to the Online Support Portal via the link https://support.industry.siemens.com/My/ww/en/requests#createRequest.

Further communication in this regard take places via email. You will be contacted by WinCC OA Product Support via email when they are working on your service request. You can reply to this email if you wish to send additional information.

During the initial contact, registration of the customer master data may take some time.
A member of the WinCC OA Product Support team will then perform further processing of your support request.

You can check the status of your service request and edit your service requests on the Siemens Support Portal: http://support.industry.siemens.com/My/ww/en/requests#createRequestt.

What information is required for a service request to WinCC OA Support?

When making a service request to WinCC OA Support, the following information must always be included:

- WinCC OA version: Version number and service pack (if applicable)
- List of the installed WinCC OA patches
- Operating system
- System configuration: Single system, redundant system, distributed system
- Detailed problem description and/or step-by-step description, steps for reproducing the reported problem.
- Example:
  - WinCC OA version 3.18
    Patch level: P001
    Operating system: Windows10 64-bit
    System configuration: Redundant system
  - WinCC OA version 3.16
    Patch level: P025
    Operating system: Red Hat Enterprise 7.3
    System configuration: Distributed single system

Problem classifications:

Only registered requests can be processed with appropriate priority. WinCC OA Product Support classifies each case according to its urgency.
Information about WinCC OA versions and operating systems used is required for this.
The following problem classifications exist:

Priority	**High (A)**	**Medium (B)**	**Low (C)**
Problem type	Crash of a WinCC OA Core process, Inoperable system and similar	Limited functionality, operation only possible with time-/cost-intensive workaround solutions	Standard questions on the product and product properties, minor malfunctions
Average reaction time [1]	3 workdays	8 workdays	14 workdays

[1] The reaction time is the time between the receipt of the product support request and the first response from ETM Customer Care. Please note that the reaction times are average processing times that only apply during Austrian working hours from Monday to Friday, 9 am to 5 pm CEST, unless your contract states otherwise.

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Design

Support for current and past versions:

Standard product support for SIMATIC WinCC Open Architecture includes the current as well as the last two versions. This does not apply to customers with a corresponding maintenance agreement concluded with ETM. If required, please contact us to discuss a possible migration to a higher version.
WinCC OA Product Support supports the following versions (including Service Packs SP1 and SP2 and all official patches):

Date	Release	Supported versions		
		Current	Current-1	Current-2
May 2018	V3.16	V3.16	V3.15	V3.14
January 2020	V3.17	V3.17	V3.16	V3.15
May 2021	V3.18	V3.18	V3.17	V3.16

Notes on fault reporting:

Faults must be reported and delivered to WinCC OA Product Support in a reproducible manner - see https://www.winccoa.com/support.html

If WinCC OA Product Support receives too little information, or if the type of the fault makes it unlikely that the fault can be reproduced by WinCC OA Product Support using the WinCC OA Product Support standard test capabilities, WinCC OA Product Support may refuse to take steps to reproduce the fault.
If WinCC OA Product Support does not receive a response to a support request within 3 months, the request will be closed.
If WinCC OA Product Support does not receive any further feedback from the customer on a solution provided by WinCC OA Product Support within 28 days, the request will be closed automatically.

Total times for reproduction of faults by WinCC OA Product Support are limited by the total number of support hours.
The customer must report the fault and make it reproducible on a supported WinCC OA version with all patches installed on an operating system supported by WinCC OA. If the fault originates from a WinCC OA third-party software component, WinCC OA Product Support notifies the relevant supplier of the fault and the respective support conditions of the supplier apply.
Discontinuation of third-party software (e.g. database system) and/or operating system (e.g. Windows version) supported by WinCC OA leads automatically and immediately to the discontinuation of WinCC OA in combination with the discontinued third-party software and/or the operating system.

Access to Customer Care is reserved for customer employees trained on WinCC OA.
Support is provided by WinCC OA product specialists without customer-specific project know-how. (Specific project consulting can be provided by a WinCC OA consultant via a separate consulting agreement).

Ordering data

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA – Hotline Support Use of the hotline support to the extent of the hours ordered.	
• 10 h	**6AV6355-2AA00-0BC1**
• 15 h	**6AV6355-2AA00-0BC2**
• 20 h	**6AV6355-2AA00-0BC3**
WinCC OA replacement license issue Flat fee for issuing a replacement license.	**6AV6355-2AA00-0BC4**

More information

More information is available on the Internet at:

http://www.winccoa.com

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Overview

Consulting refers to pure consulting activities with optional configuration support within the scope of the agreements as well as within the scope of special products ("Solution Frameworks"), which are to be adapted to individual customer requirements according to existing routines.

Consulting is a service provided by WinCC OA. This is calculated at an hourly rate. It is based on 8 hours per working day during normal working hours, defined according to Austrian working days, Monday to Friday from 9 am to 5 pm CET. If this time is exceeded, the following surcharges apply:

- 50% outside of normal working hours (6 pm until 8 am) and on Saturdays
- 100% on Sundays and Austrian holidays

In the course of ordering a project, it is also possible to order a pool of hours of consulting services. Corresponding working hours are then removed from the pool.

The hourly rate refers to project-related, location-independent work – it does not require travel to the customer or to a location. If travel is desired, it must be ordered as <Travel costs>.

Travel time is viewed as working time and, if not agreed separately, is invoiced accordingly by ETM. The hours actually used, according to the timesheet, are invoiced.

"Trainings" as well as development of adapted product components ("Solutions") can be ordered separately.

Likewise, any telephone support within the scope of a maintenance contract is not linked to this contingent, but must be ordered separately (for details, see: "UPG", "SUS", "SMS"). Additional ordering of "Support" services is also possible, but is not automatically included in the consulting services.

Before making your order, please coordinate the availability of the WinCC OA trainers and consultants with ETM in good time.

Benefits

Consulting services help to put the finishing touches to your solution. With years of experience and the corresponding expert knowledge, we are available to provide advice and support for development of new, creative projects as well as advice on data security and optimization potential.

This cooperation can save valuable time and therefore money – faster implementation is possible. Faster go-to-market enables decisive advantages for your offer to the end customer.

Application

- Sector-independent
- Consulting for complex project requirements
- Consulting for new partners with little practice based on WinCC OA
- Configurations for specific solutions
- Individual packages for customer-specific topics

Ordering data

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA - Consulting	
Includes staggered number of hours of consulting services	
• Consulting 1h	**6AV6355-3AA00-0BA0**
• Consulting 8h	**6AV6355-3AA00-0BA1**
• Consulting 25h	**6AV6355-3AA00-0BA4**
• Consulting 50h	**6AV6355-3AA00-0BA2**
• Consulting 100h	**6AV6355-3AA00-0BA3**

More information

More information is available on the Internet at:

http://www.winccoa.com

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WinCC OA Solution

Overview

Solution is a customer-specific software development based on precise technical specifications.
How this development is positioned in the product, effects on maintenance responsibility and handover to the customer must be clarified in the course of planning.
Solutions are a service provided by WinCC OA. This is calculated at an hourly rate. It is based on 8 hours per working day during normal working hours, defined according to Austrian working days, Monday to Friday from 9 am to 5 pm CET.
Exceeding this time and activities outside normal working hours will be invoiced proportionately with increased costs.
The hourly rate refers to project-related, location-independent work – it does not require travel to the customer or to a location.

Trainings, as well as pure consulting and configuration activities, can be ordered separately.
In the course of project implementation, it makes sense to make use of the various services that are available as part of the support services.

Application

Whether or not and to what extent solution services are useful for a solution must be clarified in the project phase.

In any case, an appropriate concept must be available and the exact technical specifications must be clarified. Since these are very special customer applications, the hourly contingent must be determined in advance.

Ordering data

	Article No.
WinCC OA – Solution Custom Customer-specific, individually offered software development according to specification.	**6AV6355-3CA00-0BB1**
WinCC OA – Solution 1 hour 1 hour hourly rate for software development according to specification.	**6AV6355-3CA00-0BB0**

More information

More information is available on the Internet at:

http://www.winccoa.com

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Overview

Trainings for handling WinCC OA and various WinCC OA features in detail. Trainings are conducted by certified WinCC OA trainers. Price per participant.

Training courses can be booked directly on:
https://www.winccoa.com/support/training.html

Via the link, current requirements as well as additional detailed information regarding minimum hardware and software requirements can be accessed at any time.

The training courses normally take place at ETM in Eisenstadt however it is also possible to book trainings on-site at the customer's location.

The following applies for such on-site trainings:

- Longer lead times must be planned
- Minimum number of participants for trainings on site at the customer's location has increased
  - within the EU +2 (E.g. basic training minimum 5 instead of 3)
  - within the EU +3 (E.g. basic training minimum 6 instead of 3)
- Travel costs, accommodations and meals for the trainer are covered by the customer.

More information on booking is available under <Travel costs>.

Customers can also book personal online training sessions.
In this case, the minimum number of participants always increases by +2.
Travel costs, accommodations and meals for trainers do not have to be provided for online training courses.

Lunch is included in the price for trainings held at ETM in Eisenstadt. If possible, participants should bring their own notebooks to the training (64-bit operating system).

ETM reserves the right to postpone training courses to the next possible date if the minimum number of registrations is not reached.
Individual training can also be requested in addition to the training offer provided by ETM.

Cancellation conditions

The customer may withdraw from the contract in writing at any time before the agreed start of a course.
If the cancellation is not made at least 10 calendar days before the start of the course, the customer will be charged 80% of the agreed total price for the course.
If the cancellation is made earlier, the cancellation is free of charge for the customer.
If a participant does not show up for the agreed training course without prior cancellation, 100% of the order value will be charged.
The termination of a training course is possible at any time.
In this case we charge 100% of the order value.

All mandatory ECC examinations (including late registrations or changes of training participants) must be performed by the SIEMENS unit responsible for the order (if AWV category 1).

Benefits

- Proven product knowledge of WinCC Open Architecture
- In-depth knowledge of specific areas of expertise such as security, architecture
- Development opportunities through partner program and ongoing support
- Exchange of project experience of other WinCC OA partners
- Certifications prove corresponding knowledge of the employees

Application

Valuable starting points for using the software are offered for employees. As knowledge progresses, there are always opportunities to accumulate further knowledge and expand on it. Topics that are particularly in demand are also covered by our own training courses.

The standard training courses are all part of a certification and training strategy from which both partners and customers benefit and which is put together and recommended in cooperation with WinCC OA employees and years of experience.

Some partner contracts also include obligations for each partner to participate in certain training courses. Depending on the milestones achieved, various models are available for in-depth cooperation. These development paths must be agreed with the Sales department.

In the course of consulting activities in special cases, there is, of course, the possibility of organizing individual trainings and workshops tailored to the customer. In this case, this is to be clarified with "Consulting"

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Design

Certified WinCC OA Basic Training

This trainer-led course provides the participants with the necessary knowledge to successfully design and create a WinCC OA application within one week. This course is aimed at employees who want to gain initial experience in WinCC OA. Course participants require computer skills (MS Windows, keyboard and mouse) as well as knowledge of PLCs and networks. Basic knowledge in programming is advantageous. Participants should bring along a suitable laptop on which a WinCC OA Training version will be installed for practice purposes.
Minimum of 3 registrations. Training is limited to a maximum of 10 participants.

Certified WinCC OA Extended Engineer Workshop

In this three-day course, participants will gain a deeper insight into the internal mechanisms and details of WinCC OA. Topics include debugging, performance, communication between the individual managers and "Do's and Don'ts" in scripting. To get the maximum benefits from these topics, a current customer project is used as a basis for discussion and the mechanisms are shown and discussed. Additional topics (e.g. Add-ons of WinCC OA or special functions) can be selected and have to be agreed with the trainer in advance.
We recommend attending the Engineer Workshop only after initial project experiences – at the earliest 3 months after WinCC OA Basic Training.
Minimum of 2 registrations.
Training is limited to a maximum of 8 participants.

Certified WinCC OA Consultant

Over three days in this course, participants will gain the knowledge and skills required to create complex and large WinCC OA projects. Data structures, graphical references and system architectures of large, distributed and redundant systems are built, among other things. Troubleshooting and error analysis are further topics of this course. Here, too, further topics (e.g. Add-ons of WinCC OA or special functions) can be agreed with the trainer in advance.
Minimum 2 registrations.
The training is limited to max. 8 participants.

Certified WinCC OA Developer Workshop

In this three-day course, the participants obtain specialized knowledge and the skills required to use the WinCC OA API Toolkit. It shows how to design customer drivers, managers and/or CTRL extensions (dlls).

Certified WinCC OA Extended Developer Workshop

This trainer-led course provides experienced participants with the knowledge and skills necessary to use the WinCC OA API Toolkit in one week. In this course, participants will learn how to create special CTRL extensions (DLLs), managers and/or simple drivers.
Minimum 2 registrations
Training is limited to a maximum of 6 participants.

Certified WinCC OA Security Workshop

In this three-day, trainer-led workshop, experienced participants will gain the knowledge and skills required to use WinCC OA as a process control system in a secure network environment as described in the WinCC OA Security Guideline. This course offers participants an introduction to the security mechanisms available in WinCC OA.
Minimum 2 registrations.
Training is limited to a maximum of 8 participants.

Certified WinCC OA Safety Engineer Workshop

In this two-day trainer-led workshop, experienced participants will gain the specialist knowledge and the skills required to set up safety-relevant WinCC OA projects.
The specified framework and operating conditions are discussed in detail and the resulting effects on the customer project are discussed.
Minimum 2 registrations.

WinCC OA Update Training

This one-day course led by a trainer gives experienced WinCC OA specialists an insight into the latest performance features and functions of the current WinCC OA version.
This course is obligatory for "Certified Engineer" or "Certified Consultant" in order to maintain the certification status already achieved.
Minimum of 5 registrations.

WinCC OA Object-oriented Programming

This trainer-led course over 2 days provides participants with the knowledge required to successfully use the script language CTRL++ integrated in WinCC OA for realizing object-oriented concepts as well as the concept of object-oriented Panel references. This course is thus aimed at employees who autonomously program in WinCC OA, both Panel-dependent and Panel-independent.
Minimum of 2 registrations.

WinCC OA Video Training

One-day training to learn the Video option of WinCC OA.

WinCC OA Video Expert Training

This trainer-led course over 2 days provides participants with the knowledge required to plan and successfully commission plants with video cameras using WinCC OA VIDEO.
In presentations and practical exercises, the course teaches the technical basics for installing distributed video systems, installing cameras and optimizing bandwidth requirements.
This course is aimed both at technical project managers who plan SCADA systems with video and at employees who use WinCC OA to program, set up and commission such systems.

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Selection and ordering data

WinCC OA SmartSCADA Training

The two-day training course, led by a lecturer, offers experienced participants the opportunity to acquire the knowledge and skills required to use the WinCC OA SmartSCADA assistants (KPIs, data mining and classification) included in the scope of delivery of the SmartSCADA Add-on. A demo project with data for analysis serves as a training basis including exercises for participants.
Minimum of 2 registrations. Training is limited to a maximum of 8 participants.

WinCC OA BACnet Workshop

In this one and a half day training, experienced WinCC OA engineers will be familiarized with using the WinCC OA BACnet development environment. The topics covered are development environment, library, drivers and similar.

WinCC OA AMS Workshop

This three-day workshop covers the administration and customization of the Advanced Maintenance Suite (AMS), how trouble tickets are dispatched and their status can be tracked, as well as the evaluation of the achieved results using reports.

WinCC OA IOT Suite Admin Training

This one-day, trainer-led course conveys to participants the skills and knowledge required to successfully set up a Siemens Nanobox, such as an IPC227E, with Siemens Industrial OS, the IOT OPA (On Premise Administration) and the IOT Suite. Training on using the IOT Suite is also provided so that the participants can share their knowledge and train other IOT Suite users.

Ordering data	Article No.
Certified WinCC OA Basic Training Training for getting started with WinCC OA. Duration: 5 days	**6AV6355-3BA00-0BA0**
Certified WinCC OA Engineer Workshop Training for future engineers of WinCC OA. Duration: 3 days	**6AV6355-3BA00-0BB0**
Certified WinCC OA Consultant Training for creating complex systems with WinCC OA. Duration: 3 days.	**6AV6355-3BA00-0BC0**
Certified WinCC OA Developer Workshop Training to obtain basic knowledge for development with WinCC OA. Duration: 3 days.	**6AV6355-3BA00-0BC1**
Certified WinCC OA Extended Developer WS Training for detailed knowledge of the WinCC OA API. Duration: 3 days.	**6AV6355-3BA00-0BC2**
Certified WinCC OA Security Workshop Training to learn security mechanisms in WinCC OA. Duration: 3 days.	**6AV6355-3BA00-0BC3**
Certified WinCC OA Safety Engineer WS Training for future SAFETY engineers of WinCC OA. Duration: 2 days	**6AV6355-3BA00-0BC4**
WinCC OA - Update Training Training for new functionalities in WinCC OA. Duration: 1 day.	**6AV6355-3BA00-0BD0**
WinCC OA - Object-oriented Programming Training for object-oriented programming and Panels. Duration: 2 days	**6AV6355-3BA00-0BE0**
WinCC OA - Video Training Training to learn the Video option of WinCC OA. Duration: 1 day.	**6AV6355-3BA00-0BE1**
WinCC OA –Video Expert Training Training to expand knowledge on the Video option of WinCC OA. Duration: 2 days	**6AV6355-3BA00-0BE2**
WinCC OA - SmartSCADA Training Training for the use and handling of WinCC OA Add-on SmartSCADA. Duration: 2 days.	**6AV6355-3BA00-0BE3**
WinCC OA – BACnet Workshop Training to learn the BACNet option. Duration: 1.5 days	**6AV6355-3BA00-0BE4**
WinCC OA – AMS Workshop Training to learn the Advanced Maintenance Suite. Duration: 3 days	**6AV6355-3BA00-0BE5**
WinCC OA – IOT Suite Admin Training Training to learn the WinCC OA IOT Suite Duration: 1 day	**6AV6355-3BA00-0BK0**

More information

More information is available on the Internet at:

http://www.winccoa.com

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WinCC OA Travel costs

Overview

Services for "Consulting" and "Training" are charged at an hourly rate. The hourly rate refers to project-related, location-independent work – it does not require travel to the customer or to a location.

Travel costs are to be agreed upon additionally and include cost for both time and travel for WinCC OA employees involved. A definite commitment for a trip must be agreed separately.

Depending on the distance and the agreed means of transport, flat-rate travel costs for arrival and departure or freely configurable contingents – also for longer stays and customizations – are offered.

Benefits

- Better interaction within the team through getting to know one another in person
- Reduction of travel costs on the customer side
- More precise assessment of the situation and the project through on-site cooperation
- Better planning of project costs through greater transparency
- Adapted travel packages for easier travel planning

Ordering data

	Article No.
SIMATIC WinCC OA Travel costs	
WinCC OA – Travel costs Fixed price for travel allowance, including travel time and costs.	
• TC up to 100 km	**6AV6355-3DA00-0BF0**
• TC up to 300 km	**6AV6355-3DA00-0BF1**
• TC up to 500 km	**6AV6355-3DA00-0BF2**
WinCC OA – Travel costs flight EU Fixed price for travel allowance for a flight within the EU.	**6AV6355-3DA00-0BF3**
WinCC OA – Travel costs journey time Hourly rate for travel time	**6AV6355-3DA00-0BG0**
WinCC OA – Travel costs rental car Fixed price travel allowance for a rental car per day	**6AV6355-3DA00-0BG1**
WinCC OA – Travel costs overnight accom. Fixed price travel allowance for one overnight stay	**6AV6355-3DA00-0BG2**
WinCC OA – Travel costs meals Fixed price for meals for one day	**6AV6355-3DA00-0BG3**

More information

More information is available on the Internet at:

http://www.winccoa.com

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Overview

Trade goods include WinCC OA components that are purchased and distributed under the name **WinCC OA**. These include third-party products such as licenses for Oracle DB, as well as hardware dongles, data storage media and certificates.

More information about licenses and shipping under "More information".

Design

Oracle licenses

General

The WinCC OA Basic Package includes the HDB database (flat file DB). Alternatively, historical data can be archived in Oracle. The WinCC OA RDB Add-on is required for this purpose. In terms of hardware, separate computers must be provided for Oracle databases.
In the event that Oracle makes changes to the price list, availability or licensing conditions in the meantime, WinCC OA reserves the right to adjust all Oracle prices and licensing conditions stated in this offer accordingly.
This reserved right to adjustment is valid from the time the offer is made until an Oracle license agreement with the end customer is legally valid.
If the Oracle licenses are not obtained via WinCC OA, WinCC OA provides no Oracle support. WinCC OA Support services end at the RDB-Oracle interface. WinCC OA does not provide any services for Oracle installation or for setting up the WinCC OA RDB Manager.

Please observe the supported operating systems according to the WinCC OA documentation and the Oracle documentation.

ASFU

As an option, Oracle licenses can be obtained as so-called ASFU (Application Specific Full Use) licenses. However, the use of an ASFU license is subject to certain technical requirements. These are listed in the attached Oracle License Agreement. The obligations of this agreement must be passed on by WinCC OA to the complete supply chain and must therefore be signed by the end customer. Only an agreement signed by the end customer allows use as ASFU license.
WinCC OA cannot supply the ASFU license until the ASFU Oracle agreement signed by the end customer is available.
If, in exceptional cases, supply of the ASFU license by WinCC OA is necessary before a signed ASFU Oracle agreement is available, this must be communicated in writing.
If the ASFU Oracle agreement signed by the end customer is not submitted within 60 days after supply of the ASFU license via WinCC OA, 40% of the Oracle list price will be charged and the license will be upgraded to an Oracle FU license.
To be able to process the supply of the Oracle license, we need the following information with the order:
- End user name (company name)
- End user address, town, country
- End user contact details, email address
- Signed ASFU Oracle agreement

Note that Oracle Software Update License & Support is mandatory for the first year and is provided by WinCC OA. Oracle Software Update License & Support can be ordered directly for the subsequent years.

Full Use

As an option, Oracle licenses can be purchased as so-called FU (Full Use) licenses. Here, the end customer receives an email directly from Oracle with the download link. The contract (OLSA) between end customer and Oracle is confirmed by 1-click. However, the use of an FU license is subject to certain technical requirements.
To be able to process the supply of the Oracle license, we need the following information with the order:
- End user name (company name)
- End user address, town, country
- End user contact details, email address

Note that Oracle Software Update License & Support is mandatory for the first year and is provided by Oracle based on the CSI number of the license. For subsequent years, Oracle Software Update License & Support can be ordered directly from Oracle by the end customer.

Oracle configurations

All the following standard Oracle configurations are based on "Oracle Standard Edition 2" processor licenses in the selected license type (FU / ASFU).

One Single Oracle database server

Please note that the use of the "Oracle Standard Edition 2" is only permitted under the following hardware conditions:
Max. 2 CPU sockets and max. 2 CPUs per Oracle Server

Two Oracle database servers in a cluster configuration

Please note that the use of the "Oracle Standard Edition" is only permitted under the following hardware conditions:
Max. 4 CPU sockets and max. 2 CPUs per Oracle Server –
The offer includes licenses for max. 2 CPUs.
Please note that operation of a cluster database in the cluster configuration is no longer supported as of Oracle version 19c Standard Edition 2.
The database can be installed in a cluster configuration, but only operated as single instance database.
In this case, the higher availability is guaranteed by "Switchover" and "Failover" methods. The database is only active on one cluster node in the cluster configuration.

DRS with one Single Oracle database server per location

Please note that the use of the "Oracle Standard Edition 2" is only permitted under the following hardware conditions:
Max. 2 CPU sockets and max. 2 CPUs per Oracle Server –
The offer includes the license for 1 CPU.

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DRS with two Oracle database servers in a cluster configuration & one Single Oracle database server

Please note that the use of the "Oracle Standard Edition 2" is only permitted under the following hardware conditions:

- Single server: Max. 2 CPU sockets and max. 2 CPUs per Oracle Server
- Cluster: Max. 4 CPU sockets and max. 2 CPUs per Oracle Server

Please read the note in 4.2 for Oracle as of version 19c

DRS with two Oracle database servers in a cluster configuration per location

Please note that the use of the "Oracle Standard Edition 2" is only permitted under the following hardware conditions: Max. 4 CPU sockets and max. 2 CPUs per Oracle Server.
Please read the note in 4.2 for Oracle as of version 19c.

Hardware

Hardware dongles

WinCC OA offers USB hardware dongles for operation with a license bound to the dongle. Dongles can also be used to temporarily replace hardware-bound licenses of operator stations or servers.

Dongles can be purchased in three different types.

The standard and micro versions are compatible with the CodeMeter licensing procedure introduced in WinCC OA V3.17. The WIBU version must be selected to operate WinCC OA V3.16 and lower with a hardware dongle.

Data storage medium

WinCC OA installation software is available on DVD.

Other

Certificates

WinCC OA issues certificates for training graduates. Participation in WinCC OA Training conducted by a "Train-the-Trainer" certified trainer is a prerequisite.

Express delivery

A flat fee is charged for express delivery of WinCC OA goods (WinCC OA on data storage medium, WinCC OA dongle etc.).

Ordering data

	Article No.
SIMATIC WinCC Open Architecture Trade goods	
WinCC OA – ORACLE SE2 ASFU Oracle Standard Edition 2 Processor ASFU license including first year maintenance	**6AV6355-4AA00-0AA0**
WinCC OA – ORACLE SE2 ASFU SUS One year maintenance for Oracle Standard Edition 2 processor license ASFU	**6AV6355-4AA00-0AA1**
WinCC OA – ORACLE SE2 FU (full use) Oracle Standard Edition 2 Processor license SE2 full use including first year maintenance	**6AV6355-4AA00-0AA2**
WinCC OA – ORACLE SE2 FU SUS One year maintenance for Oracle Standard Edition 2 processor license full use.	**6AV6355-4AA00-0AA3**
WinCC OA Dongle USB hardware dongle for dongle-bound licenses.	
• WinCC OA – Dongle Standard	**6AV6355-4BA00-0AB0**
• WinCC OA – Dongle Standard Micro	**6AV6355-4BA00-0AB1**
• WinCC OA – Dongle (Wibukey, outdated)	**6AV6355-4BA00-0AB2**
WinCC OA – On data storage medium V3.18 WinCC OA Software DVD – Version V3.18 on data storage medium	**6AV6355-4BA31-8AB3**
WinCC OA – On data storage medium V3.17 WinCC OA Software DVD – Version V3.17 on data storage medium	**6AV6355-4BA31-7AB3**
WinCC OA – Certificates Issue and send a certificate for participants of WinCC OA Training course.	**6AV6355-4BA00-0AB4**
WinCC OA – Express delivery Flat fee for express delivery of WinCC OA Trade goods.	**6AV6355-4BA00-0AB5**

More information

More information is available on the Internet at:

http://www.winccoa.com

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Overview

SIMATIC WinCC OA IOT Suite

SIMATIC WinCC OA IOT Suite is an IoT system consisting of an IOT Box on the machine for visualizing and analyzing processes, production sequences, machines and production lines in real-time and the IOT OPA as a maintenance service provider for all connected IOT Boxes, specially developed for the food and beverage industries.

The IOT Box is based on the SCADA system SIMATIC WinCC Open Architecture V3.16, which has been on the market for many years. A highly simplified user interface enables the machine operator without special previous knowledge and in a playful way to gain deeper insights into the process sequences and to generate a new level of transparency and analysis options for optimizing the processes of a machine by entering non-machine information.

Current version:

- SIMATIC IOT Suite V1.2

Benefits

The advantages result from the intelligent combination of direct, local function and central administration unit, coupled with the greatest possible ease of operation. This ensures a high level of acceptance by the user and the greatest possible central flexibility in maintenance and expandability.

Function

SIMATIC WinCC OA IOT Suite

The advantages result from the intelligent combination of direct, local function and central administration unit, coupled with the greatest possible ease of operation.
This ensures a high level of acceptance by the user and the greatest possible central flexibility in maintenance and expandability.

Runs on:

- SIEMENS Industrial OS V2

On the hardware platforms:

- SIMATIC IPC 2xx series (e.g. Nanobox), SIMATIC IPC 4xx series (e.g. Nanobox)

SIMATIC WinCC OA IOT Box

The IOT Box is a self-contained visualization system based on IPCs, Industrial OS and SIMATIC WinCC OA, which can be commissioned by the customer (maintenance or electrician) within a few hours. The currently available functionalities (apps) for connectivity, visualization or OEE (Overall Equipment Efficiency) are easy to configure and enable machine operators themselves to find the required insights for process optimization or to collect data and/or to exchange the data within the company using publish/subscribe mechanisms. A large number of apps are already available in the basic IOT Box.

Available apps	Task
S7 App	With the S7 App, nothing stands in the way of a connection to the conventional PLCs from SIEMENS. S7-300/-400 series, S7-1200/S7-1500 series and S5, as well as S7-200, LOGO 0BA7, LOGO 0BA8 and SINUMERIK PowerLine are supported. You only need to know the (IP) address of the PLC and the type of PLC to establish a connection. Data points of the selected PLC can be imported using the I/O address or, if available, a CSV file
S7 Plus App	In contrast to the S7 App, the S7 Plus App allows access to modern SIMATIC PLCs via browsing.
OPC UA Client App	The OPC UA Client app enables you to query any data of an OPC UA Server and transfer it to the data management of the IOT Box. After selecting a server, its data management is automatically queried and displayed. Here, too, the data and their updating can be transferred to the IOT Box by simple selection.
Subscribe App	The Subscribe app is used by the IOT Box to request and retrieve data from another IOT Box, if it has been published on the source device. In general, no data is exchanged between the devices without explicit permission. This is an internal system communication with the highest security standards.
Publish App	You can use the Publish app to publish recorded, calculated or mapped data of an IOT Box to other IOT Boxes. In general, no data is exchanged between the devices without explicit permission. This is an internal system communication with the highest security standards.
Data Mapping App	The Data Mapping App enables you to map or convert collected data into importable structures. This serves to standardize data communication within a company. Pre-defined standard formats, such as OMAC, are already available. Others can be easily defined and imported via CSV files. You can also define your own data structures within the app and link their data management.

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Function

Rules App	Intelligent pre-processing of data is an essential part of data concentration. However, advanced logic can also be created and applied in the Rules app. A logical and arithmetic rule-based editor enables the creation of rules, which can also be instantiated at a later point in time. The basis is formed by a powerful scripting engine (CTRL), which executes any input of CRTL scripts. This means that not only logical or arithmetical logic operations can be realized.
OEE App	The OEE app is the heart of the IOT Box, as the first of many value-added applications to follow. Using input data from the Mapping app, this app calculates the efficiency of machines. A time reference can be introduced using a shift calendar and with the help of reasons for malfunctions (pre-defined or defined by the operator), information originating beyond the machine itself can also be included in an analysis. The user thus gains a new depth of analysis and optimization potential.
Dashboard App	The OEE app and the Dashboard app are used to display collected or calculated values. All available data can be displayed in specially structured display formats here. Using a tag browser, the data is simply dragged and dropped into the display areas, where a wide variety of display formats can be selected. The arrangement of the display elements is also freely selectable. The user is thus able to create and save required displays independently. Different images can also be created using several index tabs to allow quick access to all desired display formats and depths at runtime.
Update Center App	The Update Center manages the apps and system software on the IOT Box. Via a connection to a central IOT OPA, the latest app extensions can be easily downloaded and installed without any user interaction. The app provides information about the latest available versions and updates and also allows the user to extend or reduce functionality/apps on the IOT Box. In the system environment, user administration can be used to specify whether this should be done locally by the user or centrally by IT.
Snapshot App	The Snapshot App allows you to create snapshots of a collection of tags using various triggers. These tag snapshots are saved in the app itself and can be exported as CSV.
System Log App	The System Log App shows current and historical log entries on the IOT Box. These include system messages as well as update information and error messages.
System App	The network settings of an IOT Box and the configuration of the time synchronization servers can be performed in the System App. It is also possible to connect to the associated IOT OPA to be able to use all services such as app updates or the OPA Filestore. The entire User Management of the Box as well as the CERT Store can be found in the System App.
S5 App	The S5 App allows S5 PLCs to be connected to the IOT Suite via the H1 ISO protocol.
Ethernet IP App	The Ethernet IP App allows various PLCs that support the PCCC Standard or the Native EIP Standard to be connected to the IOT Suite.
MindSphere App	Data from the IOT Suite can be pushed to various MindSphere assets with the MindSphere App. The output data for this is individual IOT Suite tags.
Modbus App	A Modbus TCP/IP client is integrated in the IOT Suite with the Modbus App. In addition to individual registers, subindices can also be addressed.
MQTT Client App	The MQTT Client App enables the IOT Suite to connect to conventional MQTT brokers and subscribe to a wide range of topics.
MTConnect App	Data from supported CNC machines can be read out with the MT Connect App.

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Function

SIMATIC WinCC OA IOT OPA

The IOT OPA is the central core of the IOT Suite and deals exclusively with the management, administration and maintenance of the connected IOT Boxes. It is possible to operate this web-based service both within a plant and in a cloud. An Internet connection is desirable, but not mandatory. Via the IOT OPA, new devices of the IOT Suite are integrated into the system or devices that are no longer needed are removed. It provides connected systems with the latest updates and app extensions. With an existing Internet connection to its central cloud storage, it can automatically download the latest apps and make them available to the system. This is also possible without an Internet connection, but requires the manual acquisition of this data. A status model of the IOT Box and the apps enables control of the specific data that can or may be distributed to specific IOT Boxes. An IOT OPA can also remotely update, functionally extend or reduce IOT Boxes within the administration. The initial installation of an IOT Box is also made possible by the IOT OPA, because all required applications and the system software are stored in its memory.

Runs on:

- Debian Buster

On the hardware platforms:

- All common PC platforms and virtualized environments

Functions	Task
Dashboard	The dashboard displays both the current status of the IOT OPA and the installed version.
Applications	You can find all available apps under Applications, including their version and status in the OPA store. From here, apps can be distributed to devices or their status can be changed.
Devices	The device view shows all connected IOT Boxes, including their status information. You can add new IOT Boxes and change their status here.
Device Configuration	The Device Configuration view displays detailed information about the connected IOT Box. This includes information about installed software (firmware, operating system, apps, etc.) as well as an update history, its name and local location.
Backup and Restore	From this display, you can upload configurations of a selected IOT Box to the IOT OPA or restore them to the IOT Box.
Files	The OPA Filestore describes a central data store that can be read and written both via the web server and via connected IOT Boxes. In this way, for example, an app can save data retentively and store it at a central storage location.
Settings	Different templates that relate to app installations can be configured in the properties of the IOT OPA. Here you can also find settings for synchronizing the IOT OPA with its central IOT repository on the Internet, so that you can obtain the latest updates and apps from it.
Log	This view shows the processes that have been executed on the IOT OPA. This allows the state of the IOT Box or actions performed with a connected IOT Box to be traced.

More information

Important:

All offered order numbers include only the SW licenses for operating an IOT Box and/or an IOT OPA.
Hardware and operating systems are not included and must be purchased separately.

More information about hardware can be found under:

https://mall.industry.siemens.com/mall/en/WW/Catalog/Products/5101001?tree=CatalogTree

And about the operating system under:

https://mall.industry.siemens.com/mall/en/WW/Catalog/Products/10355854?tree=CatalogTree

The IOT OPA can be understood as a maintenance contract of an IOT Box in the conventional sense. The maintenance of the Box and the purchase of the latest apps and updates is ensured by commissioning the IOT OPA.

However, the IOT Boxes can also be operated without the IOT OPA, in which case they only lose the infrastructural services such as automated maintenance and extendibility, as well as the backup of a Box at a central location.

From a sustainability point of view, an internet connection is recommended both on an IOT Box and on the IOT OPA. Above all, an internet connection on the IOT OPA in connection with a Linux Repository is strongly recommended.

More information is available on the internet at:

http://www.siemens.com/wincc-oa-iot-suite

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Overview

WinCC IOT Box

The IOT Box is a self-contained visualization system based on IPCs, Industrial OS and SIMATIC WinCC OA, which can be commissioned by the customer (maintenance or electrician) within a few hours. The currently available functionalities (apps) for connectivity, visualization or OEE (Overall Equipment Efficiency) are easy to configure and enable machine operators themselves to find the required insights for process optimization or to collect data and/or to exchange the data within the company using publish/subscribe mechanisms. A large number of apps are already available in the basic IOT Box.

Benefits

- Pre-processing of data in real-time
- Standardization and bundling of communication
- Automatic updates through connection to central storage (IOT-OPA)
- Extensions can be easily created by SIMATIC WinCC OA partners, for example
- Modular separation of connection management, display and formula creation increase the field of application

All required configurations can be made directly at the box or remotely via WinCC OA Desktop UI or Web UI.

Function

Available apps	Task
S7 App	With the S7 App, nothing stands in the way of a connection to the conventional PLCs from SIEMENS. S7-300/-400 series, S7-1200/S7-1500 series and S5, as well as S7-200, LOGO 0BA7, LOGO 0BA8 and SINUMERIK PowerLine are supported. You only need to know the (IP) address of the PLC and the type of PLC to establish a connection. Data points of the selected PLC can be imported using the I/O address or, if available, a CSV file.
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Subscribe App	The Subscribe app is used by the IOT Box to request and retrieve data from another IOT Box, if it has been published on the source device. In general, no data is exchanged between the devices without explicit permission. This is an internal system communication with the highest security standards.
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Function

Rules App	Intelligent pre-processing of data is an essential part of data concentration. However, advanced logic can also be created and applied in the Rules app. A logical and arithmetic rule-based editor enables the creation of rules, which can also be instantiated at a later point in time. The basis is formed by a powerful scripting engine (CTRL), which executes any input of CRTL scripts. This means that not only logical or arithmetical logic operations can be realized.
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S5 App	The S5 App allows S5 PLCs to be connected to the IOT Suite via the H1 ISO protocol.
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MindSphere App	Data from the IOT Suite can be pushed to various MindSphere assets with the MindSphere App. The output data for this is individual IOT Suite tags.
Modbus App	A Modbus TCP/IP client is integrated in the IOT Suite with the Modbus App. In addition to individual registers, subindices can also be addressed.
MQTT Client App	The MQTT Client App enables the IOT Suite to connect to conventional MQTT brokers and subscribe to a wide range of topics.
MTConnect App	Data from supported CNC machines can be read out with the MT Connect App.

Ordering data

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA IOT - IOT Box SW	
Licenses for running the IOT Box SW on SIMATIC Nanobox (IPC2XX) and Industrial Linux	
• 1x IOT Box SW	**6AV6356-1AA31-7AA0**
• 10x IOT Box SW	**6AV6356-1AA31-7AA1**
• 20x IOT Box SW	**6AV6356-1AA31-7AA2**

More information

More information is available on the Internet at:

http://www.winccoa.com

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Overview

IOT OPA is the central core of the IOT Suite and deals exclusively with the management, administration and maintenance of the connected IOT Boxes.
It is possible to operate this web-based service both within a plant and in a cloud.

An Internet connection is desirable, but not mandatory.

Via the IOT OPA, new devices of the IOT Suite are integrated into the system or devices that are no longer needed are removed. It provides the connected systems with the latest updates and app extensions. With an existing Internet connection to its central cloud storage, it can automatically download the latest apps and make them available to the system. This is also possible without an Internet connection, but requires the manual acquisition of this data.

A status model of the IOT Box and the apps enables control of the specific data that can or may be distributed to specific IOT Boxes. An IOT OPA can also remotely update, functionally extend or reduce IOT Boxes within the administration. The initial installation of an IOT Box is also made possible by the IOT OPA, because all required applications and the system software are stored in its memory.

Runs on:

- Debian Buster
- On the hardware platforms:
  All common PC platforms and virtualized environments

OPA licenses are limited in time with a validity of 1 year from purchase. The validity of the license is automatically extended upon expiration, if not canceled 3 months before the end of the year.

Benefits

- Automatic distribution of apps and updates, including OS updates
- Simple and safe replacement of devices
- Centrally stores and manages apps and updates in the system
- Manages different statuses/versions of apps, updates and devices

Function

Functions	Task
Dashboard	The dashboard displays both the current status of the IOT OPA and the installed version.
Applications	You can find all available apps under Applications, including their version and status in the OPA store. From here, apps can be distributed to devices or their status can be changed.
Devices	The device view shows all connected IOT Boxes, including their status information. You can add new IOT Boxes and change their status here.
Device Configuration	The Device Configuration view displays detailed information about the connected IOT Box. This includes information about installed software (firmware, operating system, apps, etc.) as well as an update history, its name and local location.
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Settings	Different templates that relate to app installations can be configured in the properties of the IOT OPA. Here you can also find settings for synchronizing the IOT OPA with its central IOT repository on the Internet, so that you can obtain the latest updates and apps from it.
Log	This view shows the processes that have been executed on the IOT OPA. This allows the state of the IOT Box or actions performed with a connected IOT Box to be traced.

Ordering data

	Article No.
SIMATIC WinCC Open Architecture	
WinCC OA IOT - OPA Time-limited license (1 year). Secure administration of up to 10 WinCC OA IOT Box devices including updates	**6AV6356-1BA31-7BA0**
WinCC OA IOT - OPA Extension Time-limited license (1 year). Extension for secure administration of up to 10 additional IOT Boxes	**6AV6356-1BA31-7BA1**

More information is available on the Internet at:

http://www.winccoa.com

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Overview

The course for the industrial world of tomorrow is already being set today. With SIMATIC SCADA, you are choosing a system with a future.

SIMATIC SCADA is today already ideally equipped for the requirements of tomorrow, because the challenges facing SCADA solutions are continually growing. Enormous data volumes have to be managed and archived for the long term, while at the same time being available for flexible access at all times.
As a key to greater productivity, SIMATIC SCADA systems combine efficient engineering with high-performance archiving and maximum data security. These features provide the basis for efficient operations management and intelligent production analyses.

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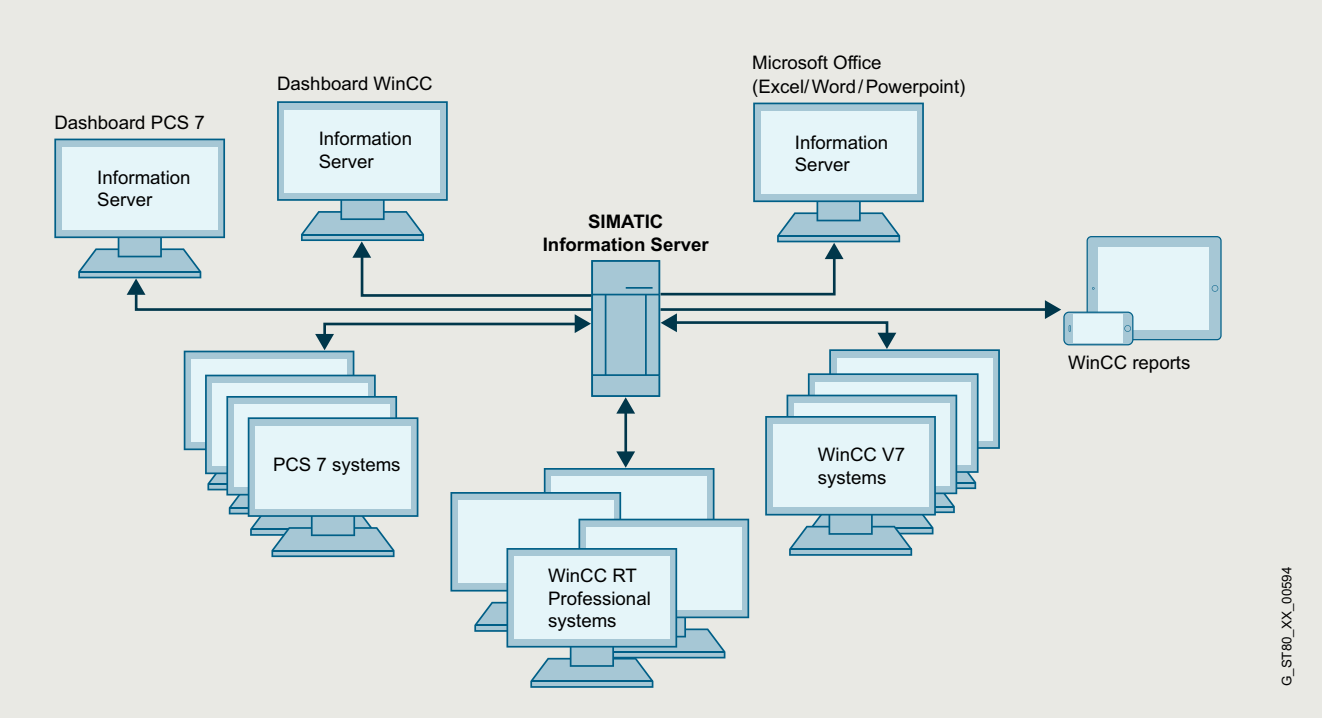
Overview



Information Server 2014 SP3

Information Server 2014 SP3 is an open, web-based reporting system for interactive areas.

Reports can be used in Internet Explorer, Excel, Word or PowerPoint, as well as for Adobe Reader (PDF).
The SIMATIC Information Server has access to archived process values and messages, and can be used either directly in conjunction with WinCC / WinCC/RT Professional / PCS 7 OS or with Process Historian 2014 SP3.

- Access to archived process values and messages from WinCC V7, WinCC RT Professional and WinCC/PerformanceMonitor according to compatibility specifications
- Process Historian 2014 SP3
- Open reporting system with report templates in RDL or Excel format
- Through add-ins for Microsoft Office environments, direct access to the archived data of the Process Historian or WinCC can be easily established.
- Reports can be integrated directly in Word and Excel, thus greatly simplifying work steps.
- Process values can be displayed in tabular or graphic form depending on various filter functions
- Support of subscriptions for a cyclical or event-driven report generation, including sending of emails
- Web-based parameter assignment of the report templates
- Use of the standard tools MS Excel, MS Word and MS PowerPoint for individual report templates
- Reporting system based on MS Reporting Services for more complex individual report templates
- Can be used for HTML5-enabled tablet PCs larger than 10.5"
- Automatic cyclic and event-based reporting (PDF, Excel, Word, PowerPoint)
- Central storage and automatic transmission of reports created by email
- Data security thanks to access protection, user administration, SSL encryption and SMTP authentication

Licenses

- Basic Packages include the program software as well as three client access licenses and a data source license. This gives access to one data source for up to three clients.
- The number of simultaneous client access operations can be incremented at any time using Information Server client access licenses.
- Additional data sources can be integrated at any time using additive data source licenses.

You can find more information on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

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Benefits

- Central, web-based reporting system as an interface for all corporate areas up to the management level.
- Easy handling thanks to the use of standard tools such as MS Word, Excel and PowerPoint
- Provision of freely configurable reports via Web-based dashboards
- Import of data from any number of WinCC, WinCC RT Professional and PCS7 applications
- Transparent access to WinCC tag and alarm archive and to the data of the SIMATIC Process Historian

Highlights

- Set of frequently used report templates for process values, messages and batches
- Open reporting system for creating any number of new report templates
- Storage of configured (parameterized) report templates for faster access
- Export of reports in common document formats
- Support of subscriptions for cyclic report generation including e-mail service
- Creation and storage of application-specific dashboards
- Role management for Windows users; supports workgroups and Active Directory; user rights can be assigned for specific projects
- Generation of reports and inserting as graphics in Microsoft Office Word documents
- Creation of Microsoft Excel, Word and PowerPoint reports for historical process values and messages as well as storage of the Excel report templates on the Information Server
- Support of subscriptions for Excel report templates
- Mobile access to reports via HTML5-enabled browser, also from tablets > 10.5”

Function

- Easy creation and individual design of own web pages
- No web page programming knowledge (html, asp) is necessary
- Creation of meaningful reports with Office knowledge
- Easy parameterization of predefined report templates
- Creation of your own report templates based on the Microsoft Reporting Services
- High flexibility due to access to numerous WinCC projects and the SIMATIC Process Historian
- Use of Microsoft Word and Excel for individual reports
- Consistent configuration of the access protection
- Installation-free in HTML5-enabled browsers on Web client or tablet > 10.5"

Ordering data

	Article No.
SIMATIC Information Server 2014 SP3 "Basic Package" • Information Server • Information Server - Client access (3) • Information Server - Data source access (1)	**6AV6361-2AA01-4AA0**
As download • Information Server • Information Server - Client access (3) • Information Server - Data source access (1)	**6AV6361-2AA01-4AH0**
SIMATIC Information Server Client and data source license, version-independent	
• 1 Client access	**6AV6361-2BD00-0AD0**
• 3 Client access	**6AV6361-2BE00-0AD0**
• 5 Client access	**6AV6361-2BF00-0AD0**
• 10 Client access	**6AV6361-2BG00-0AD0**
• 1 Data source access	**6AV6361-2CD00-0AD0**
• 3 Data source access	**6AV6361-2CE00-0AD0**
As download	
• 1 Client access	**6AV6361-2BD00-0AJ0**
• 3 Client access	**6AV6361-2BE00-0AJ0**
• 5 Client access	**6AV6361-2BF00-0AJ0**
• 10 Client access	**6AV6361-2BG00-0AJ0**
• 1 Data source access	**6AV6361-2CD00-0AJ0**
• 3 Data source access	**6AV6361-2CE00-0AJ0**
Upgrade	
Upgrade Information Server 2013 to Information Server 2014 SP3	**6AV6361-2AA01-4AE0**
As download	
Upgrade Information Server 2013 to Information Server 2014 SP3	**6AV6361-2AA01-4AK0**

More information

More information is available at:

http://www.siemens.com/simatic-information-server

You can find more information on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager:
http://www.siemens.com/simatic-licenses

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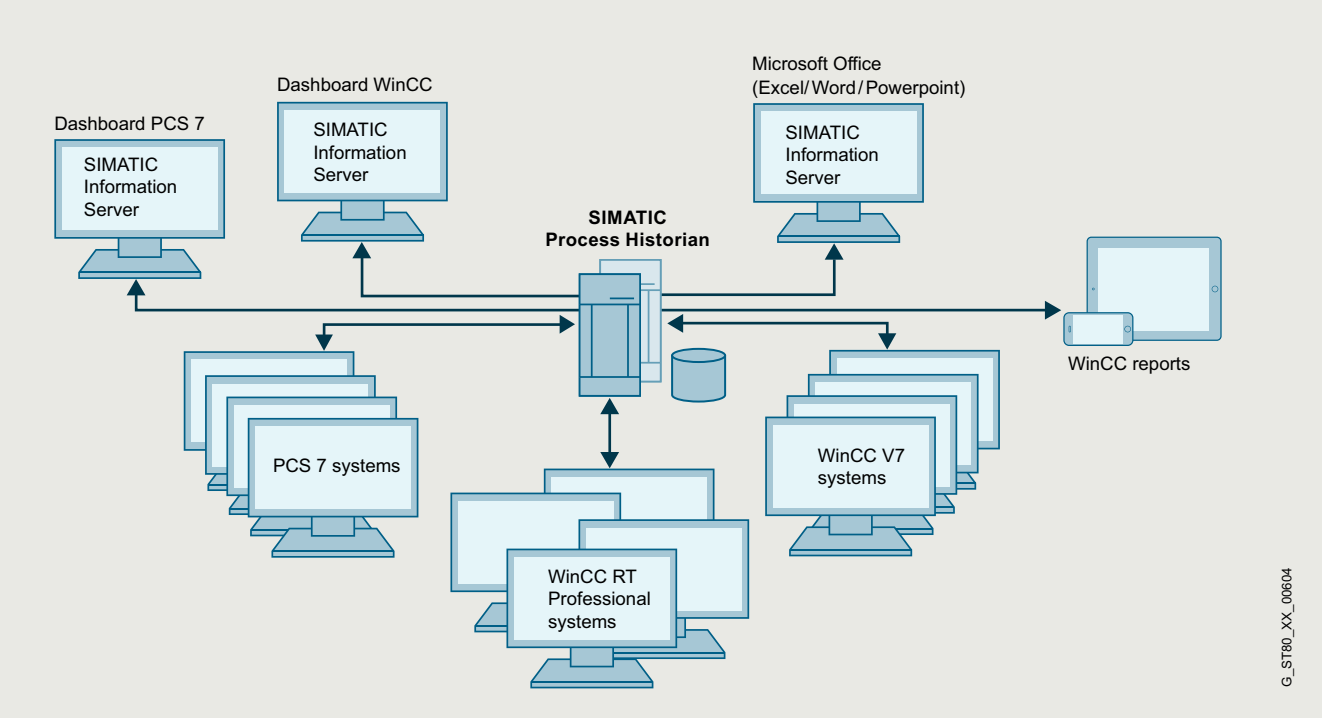
Overview



SIMATIC Process Historian

The Process Historian is a high-performance, long-term archiving server solution that stores WinCC process values and messages in a central database. The system offers full scalability for performance and scope: It records and stores data from one or more WinCC, WinCC RT Professional and PCS 7 projects.
The number of connected single stations, servers, or redundant server pairs is unrestricted. SIMATIC Process Historian is designed for use throughout your plant, and is positioned below the corporate management level (ERP, MES).

The SIMATIC Information Server is used as a reporting system for the Process Historian. It accesses the central database of the Process Historian and visualizes the data in clear, user-friendly displays on WinCC stations or office PCs. The central Process Historian database provides access to real-time data throughout the plant.
This data is the key to sustainable plant optimization measures. Since the archive system can be fully integrated, no additional engineering is required. SIMATIC Process Historian uses the integrated relational database, SQL Server from Microsoft®. No complex reconfiguration is needed because the archive system is integrated into WinCC. Selected WinCC process values or messages are archived long-term on a time or event-driven basis.

The Process Historian is used for the long-term archiving of process values and messages.

SIMATIC Process Historian 2014 SP3

- Central, plant-wide long-term archive as corporate information hub
- Real-time archiving of process values and messages from WinCC V7, WinCC RT Professional and WinCC/PerformanceMonitor according to compatibility specifications
- High performance with very large data volumes
- Data access via OPC UA server
- Migration support for data migration from WinCC/ Storage plus, CAS Storage plus and WinCC segments.
- High availability thanks to redundancy concept with observer/witness server for increasing data security
- High degree of security due to integrated, complete backup and restore of all segments (disaster recovery)
- Enhanced data security through store and forward mechanism
- Scalable without breaks in production
- Maximum data transparency
- High degree of security thanks to integrated backup system
- Simple and fast management and diagnostics with the Process Historian Management "Dashboard"
- Batch functionality in accordance with PCS 7 specifications

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Overview

Licenses

- The Basic Package includes the runtime software and the single license for one installation.
- The SIMATIC Process Historian supports archiving of any amount of data.
  The archive data is licensed at the data source, for example, in WinCC systems (archive tags for WinCC V7 or logging tags of WinCC Logging for WinCC Professional RT).
- The redundancy package is required for the redundant Process Historian; existing Basic Package installations can be converted with the redundancy option.
- The OPC UA interface needs a separate license.

You can find more information on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

Benefits

- Fully integrated archiving solution for large volumes of data
- Central, plant-wide long-term archive as corporate information hub
- Process data and messages from any number of subordinate WinCC systems can be archived
- Plant expansions can be implemented without interrupting the production process
- High availability in redundant mode
- High degree of security due to integrated backup system
- Database for analyses with the aim of optimizing the plant and thereby raising productivity

Function

- Real-time storage of the WinCC archive data (process values and messages) from any number of WinCC stations
- Visualization of the archive data on WinCC clients or WinCC single stations either directly or using the SIMATIC Information Server
- Process Historian configuration tool for fast, simple engineering
- The redundant Process Historian is based on the Microsoft SQL Server Mirroring (3rd system for controlling the availability of the redundancy)
- High degree of security due to integrated complete backup and restore of all segments
- During the initial configuration the database and the segmentation are set up
- The PH-Ready component is installed on the WinCC server for the process of archiving to the PH
- The PH automatically detects all connected WinCC server projects (via the PH-Ready component)
- The Process Historian Management "Dashboard" enables simple and fast management and diagnostics

Ordering data

Ordering data	Article No.
SIMATIC Process Historian 2014 SP3	
• Basic Package, single license Contents: Set (1x DVD + 1x USB)	**6AV6361-1AA01-4AA0**
• Redundancy Package, single license (Redundancy Complete) for 2 installations 2 x Process Historian Server 2 x Process Historian Server Redundancy contents: Set (1x DVD + 1x USB)	**6AV6361-1BA01-4AA0**
• Redundancy for BSC PCK, single license, license key on USB flash drive	**6AV6361-1CA00-0AD0**
As download	
Email address essential for delivery	
• Basic Package, single license, license key download	**6AV6361-1AA01-4AH0**
• Redundancy Package, single license (Redundancy Complete) for 2 installations 2 x Process Historian Server 2 x Process Historian Server Redundancy, license key download	**6AV6361-1BA01-4AH0**
• Redundancy for BSC PCK, single license, license key download	**6AV6361-1CA00-0AJ0**
Process Historian OPC UA Server	
• Runtime software, single license, license key on USB flash drive	**6AV6361-1HA01-4AB0**
• Runtime software, single license, SW and license key download, Email address essential for delivery	**6AV6361-1HA01-4AJ0**
Upgrades	
Upgrade of CAS (Central Archive Server)	
Upgrade of CAS V7.0 SP3 or Process Historian 2013 to Process Historian 2014 SP3	
• SW and documentation on DVD; license key on USB flash drive, contents: Set (1x DVD + 1x USB)	**6AV6361-1AA01-4AE0**
• SW and license key download, email address essential for delivery	**6AV6361-1AA01-4AK0**
SIMATIC WinCC/CAS Upgrade Central Archive Server V6.2-> V7.0 SP3	
• Upgrade from CAS V6.2 to V7.0 SP3	**6AV6371-1DQ17-0XX3**
• Upgrade from CAS V6.2 ASIA to V7.0 SP3 ASIA	**6AV6371-1DQ17-0XV3**

More information

More information is available at:

http://www.siemens.com/simatic-process-historian

You can find more information on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager:
http://www.siemens.com/simatic-licenses

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Overview

WinCC IndustrialDataBridge

- The WinCC IndustrialDataBridge option uses standard interfaces in order to connect the automation world with the world of IT and to ensure a two-way information flow.
- Using the SIMATIC WinCC IndustrialDataBridge, communication links between different data sources and data targets can be created by means of simple configuration/ parameter assignment. The IndustrialDataBridge can either be integrated into WinCC or used as a stand-alone application (not in conjunction with WinCC).
- Its use is very flexible, due to the support of different database formats and standard interfaces. On top of this, it offers easy configuration instead of programming, which permits fast and secure deployment.
- Data sources for WinCC IndustrialDataBridge can include WinCC Runtime Professional (V13 SP1 or higher).

Licenses

- WinCC/IDB basic license for 100 tags (connections between data points corresponds to one tag)
- Depending on the amount of data, the number of IDB tags can be increased through additive PowerPacks
- The licenses are additive for the number of connections as of version 7.4 (countable).

Additional information is available on the Software Update Service, license types, online software delivery and handling your software licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

Benefits

- Connection of the automation level to the IT world
- Integration of systems from different manufacturers via numerous standard interfaces (including OPC, OPC UA, OLE-DB, Office formats)
- Cost-effective and secure due to simple configuration by means of standard software without programming
- High-performance data exchange between several systems at the same time

Highlights

- No programming knowledge required
- Efficient due to transmission of individual data or block transfer (">", "<", "inside where…")
- Unicode support
- Support of Asian languages (Simplified Chinese, Japanese)
- Web Navigator; support of the WinCC IndustrialDataBridge controls in WinCC images
- WinCC IndustrialDataBridge runs as a system service, as an application in connection with WinCC Runtime Professional, or as a version-independent, standalone application

Design

The software comprises a configuration environment and a runtime environment. The different data interfaces are integrated via software modules. In each case, one module is required as the data source and one module as the data destination. The different modules can be combined in any way.

The connections between data source and data destination are created in the configuration environment. In the runtime environment, the IndustrialDataBridge establishes the connection autonomously and transfers the data of the linked variables.

Function

- WinCC IndustrialDataBridge establishes a link between the source and destination interfaces and transfers data on the basis of a change in value once a configured period of time has elapsed, or when a defined event occurs.
- WinCC IndustrialDataBridge exchanges data between the automation systems of different manufacturers.
- In WinCC it is possible to support access to tags, tag logging, alarm logging and user archive data.
- Possible storage of process data in Office formats such as Excel or Access. Databases can also be integrated for the archiving of larger aggregates.
- One of the features of WinCC IndustrialDataBridge is a send/receive interface which also enables data transfer to SIMATIC S5 or S7-300 stations or other send/receive-compatible devices.
- WinCC IndustrialDataBridge likewise enables SCADA and control systems from a variety of manufacturers to be linked via the OPC interface. In addition, communication via RFC1006 or Send/Receive is also supported.
- SQL databases are available as data destinations for production data acquisition. Data can be transferred from the data source on an event-driven basis with the OPC module or sent directly from the PLC with the Send/Receive module.
- Integration of the WinCC IndustrialDataBridge runtime control into WinCC screens when installing the WinCC IndustrialDataBridge on a WinCC station.
- Independent text-based csv, txt and HTML files are created on reaching a programmable number of entries or if the value of a WinCC tag changes.
- Block transfer for databases through the support of the operators "<" and ">" in the Select instruction.
- Available providers (data sources) can be connected to any consumers (data targets) via the WinCC IndustrialDataBridge (see table below).

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Function

Functions for configuration:

- Graphic design of links using drag & drop
- Import and export of links
- Highlighting of selected links
- Renaming of links is possible at any time
- Fast switch for the configuration of the graphic links

Interfaces:

The table below shows the possible data sources and destinations.

Provider (data sources)	Consumer (data destinations)
• MS Access 2003, 2007, 2010, 2013, 2016	• MS Access 2003, 2007, 2010, 2013, 2016
• MS SQL Server 2005, 2008, 2008 R2, 2012, 2014, 2016	• MS SQL Server 2005, 2008, 2008 R2, 2012, 2014, 2016
• MySQL 3.5, 5.1, 5.5, 5.6, 5.7	• MySQL 3.5, 5.1, 5.5, 5.6, 5.7
• Oracle 8i, 10g, 11g, 12c Release 2, 12c	• Oracle 8i, 10g, 11g, 12c Release 2, 12c
• OPC Access 3.0	• MS Excel 2003, 2007, 2010, 2013, 2016
• OPC XML 1.01	• OPC Data Access 3.0
• Send/Receive	• OPC XML 1.01
• WinCC OLE DB 7.2, 7.3, 7.4, 7.4 SP1, 7.5	• IDB OPC Server
• WinCC UserArchives 7.2, 7.3, 7.4, 7.4 SP1, 7.5	• Send/Receive
• WinCC RT Professional V13 SP1, V13 SP2, V14 SP1, V15, V15 SP1 (via OLE DB provider)	• WinCC User Archive 7.2, 7.3, 7.4, 7.4 SP1, 7.5 • Configurable file editor for TXT / HTML / XML
• OPC UA DA (1.0.3) client	• CSV, TXT file • OPC UA DA (1.0.3) server (incl. status messages) • OPC UA DA (1.0.3) client

Ordering data

	Article No.
SIMATIC WinCC IndustrialDataBridge 7.5 for WinCC	
For data exchange with databases and OPC servers; language versions: English, German, Simplified Chinese, Japanese	
• Basic package	**6AV6362-4AA07-5AA0**
• With 300 tags (countable)	**6AV6362-4AD00-0BB0**
• With 1 000 tags (countable)	**6AV6362-4AF00-0BB0**
• With 3 000 tags (countable)	**6AV6362-4AH00-0BB0**
As download	
• Basic package	**6AV6362-4AA07-5AH0**
• With 300 tags (countable)	**6AV6362-4AD00-0AH0**
• With 1 000 tags (countable)	**6AV6362-4AF00-0AH0**
• With 3 000 tags (countable)	**6AV6362-4AH00-0AH0**
SIMATIC WinCC IndustrialDataBridge 7.4 SP1 for WinCC	
For data exchange with databases and OPC servers; language versions: English, German, Simplified Chinese, Japanese	
• Basic package	**6AV6362-4AA07-4AA0**
• With 300 tags (countable)	**6AV6362-4AD00-0BB0**
• With 1 000 tags (countable)	**6AV6362-4AF00-0BB0**
• With 3 000 tags (countable)	**6AV6362-4AH00-0BB0**
As download	
• Basic package	**6AV6362-4AA07-4AH0**
• With 300 tags (countable)	**6AV6362-4AD00-0AH0**
• With 1 000 tags (countable)	**6AV6362-4AF00-0AH0**
• With 3 000 tags (countable)	**6AV6362-4AH00-0AH0**
SIMATIC WinCC IndustrialDataBridge upgrade	
• From V7.4 to V7.5	**6AV6362-4AA07-5AE1**
• From V7.2/7.3 to V7.5	**6AV6362-4AA07-5AE0**
• From V7.x to V7.4 SP1	**6AV6362-4AA07-4AE0**
• From V7.x to V7.3	**6AV6371-1DX07-3XX3**
As download	
• From V7.4 to V7.5	**6AV6362-4AA07-5AK1**
• From V7.2/7.3 to V7.5	**6AV6362-4AA07-5AK0**
• From V7.x to V7.4 SP1	**6AV6362-4AA07-4AK0**
• From V7.x to V7.3	**6AV6371-1KX07-3XX3**

More information

More information is available at:

http://www.siemens.com/idb

You can find more information on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

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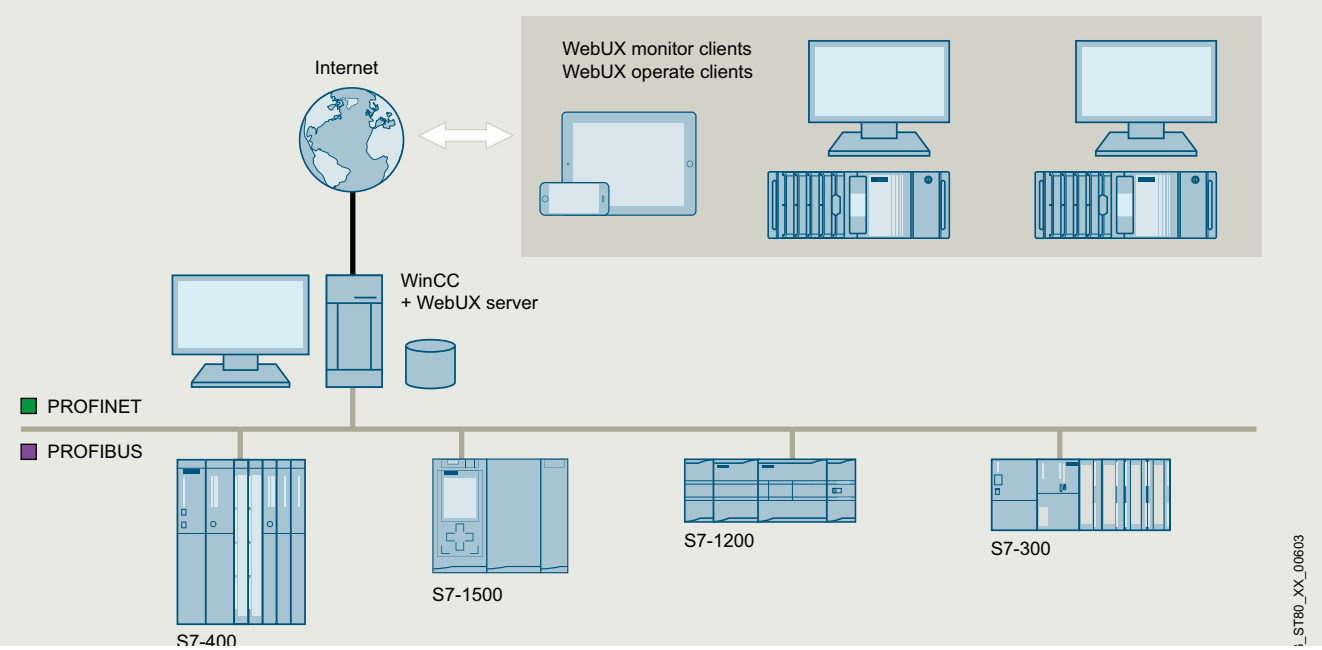
Overview



WinCC WebUX

The WinCC WebUX option permits mobile, platform and browser-independent operator control and monitoring via the Internet or the in-house intranet or LAN.

WinCC WebUX is delivered with the WinCC system. Following installation, the WinCC Runtime system operates as WinCC WebUX server.

The images for the WinCC WebUX are created using the graphic editor. The WinCC picture is stored in the corresponding format in the project through the "web-capable" picture property. Using the service platform IIS (Internet Information Server), the files are made available for the Internet.

No installation on the client is required for using the WebUX. WinCC WebUX can be used independent of the industrial sector, for example in service for the acknowledgment of alarm messages, in quality assurance for monitoring important production data, or in management for obtaining a quick overview of key production figures.

The WebUX server itself does not require a basic license. Clients that are simultaneously logged into the server are licensed. Regarding licensing, it is differentiated between Monitor Clients (read only) and Operate Clients (reading and writing of values). WinCC WebUX can be used immediately due to a free Monitor Client that is included in the WinCC package.

Licenses

- A (server-based) license is required to use the WebUX server. This is a graduated license based on the number of simultaneous web access operations and can be incremented at any time.
- We distinguish between Monitor and Operate Clients for licensing purposes.
- Flexible number of clients thanks to additive (countable) licenses (floating client)
- The WinCC/WebUX and WinCC/WebNavigator licenses can be combined, if necessary.
- The WinCC server version and version of the mobile clients do not have to be the same
- One free Monitor Client in the WinCC system

You can find more information on the Software Update Service, license types, online software delivery and handling your SW licenses with the Automation License Manager here:
http://www.siemens.com/simatic-licenses

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Benefits

WinCC Engineering

- Fast configuration using the graphic editor
- No expensive training in web technologies is required due to the use of WinCC standard tools
- Can be used without complex additional configuration on the client

Maintenance, servicing and IT

- No WinCC-specific installation on the clients required
- No WinCC-specific maintenance at the data terminal equipment required
- The WinCC WebUX server version and version of the mobile clients do not have to be the same
- Standard user authorizations on the client suffice

Line management and plant operator

- Mobile operator control and monitoring using commercially available mobile devices
- Uniform look and feel both on the mobile devices and on the WinCC station
- Secure communication via HTTPS and SSL certificates
- No entry costs, since a Monitor client is included in the WinCC package
- Flexible licensing due to additive Floating Client licenses
- Secured plant data as a basis for decision-making

Highlights

- Can be used on HTML5-capable and SVG-capable data terminal equipment without installation on the client

Function

Supported functions in WebUX of WinCC V7.4/V14:

- Language selection by setting the Web language in the User Administrator
- Support of following WinCC objects:
  - Most WinCC standard objects and WinCC pipe objects
  - WinCC Smart objects (picture window, I/O field, graphic object, status display, text list, multi-line text, combo box, list box)
  - WinCC Windows objects
- The following WinCC controls are supported:
  - WinCC AlarmControl
  - WinCC OnlineTrendControl
  - OnlineTrend Web Control
  - OnlineTable Web Control
  - Ruler Web Control
  - Slider Control
  - Digital/Analog Clock Control
  - Gauge Control
  - WebBrowser Control
- Dynamizations by means of VB script or via the dynamics dialog
- User administration via SIMATIC Logon
- System events for user logon and logoff

Note:

Browser-dependent display is occasionally possible. Minor differences in display and behavior are possible for the different browser versions.

Please also note the supported functionalities in the respective documentations.

Ordering data

	Article No.
SIMATIC WinCC WebUX	
Monitor clients:	
• 1 client (countable)	**6AV6362-2AB00-0BB0**
• 3 clients (countable)	**6AV6362-2AD00-0BB0**
• 10 clients (countable)	**6AV6362-2AF00-0BB0**
• 30 clients (countable)	**6AV6362-2AJ00-0BB0**
• 100 clients (countable)	**6AV6362-2AM00-0BB0**
As download	
• 1 client (countable)	**6AV6362-2AB00-0AH0**
• 3 clients (countable)	**6AV6362-2AD00-0AH0**
• 10 clients (countable)	**6AV6362-2AF00-0AH0**
• 30 clients (countable)	**6AV6362-2AJ00-0AH0**
• 100 clients (countable)	**6AV6362-2AM00-0AH0**
Operate clients	
• 1 client (countable)	**6AV6362-2BB00-0BB0**
• 3 clients (countable)	**6AV6362-2BD00-0BB0**
• 10 clients (countable)	**6AV6362-2BF00-0BB0**
• 30 clients (countable)	**6AV6362-2BJ00-0BB0**
• 100 clients (countable)	**6AV6362-2BM00-0BB0**
As download	
• 1 client (countable)	**6AV6362-2BB00-0AH0**
• 3 clients (countable)	**6AV6362-2BD00-0AH0**
• 10 clients (countable)	**6AV6362-2BF00-0AH0**
• 30 clients (countable)	**6AV6362-2BJ00-0AH0**
• 100 clients (countable)	**6AV6362-2BM00-0AH0**

Note:

The licenses are cumulative, i.e. one 10-client license and one 30-client license permit access by 40 clients.

Operate licenses can be used as Monitor licenses as of V14/V7.4.

Licenses from V7.3 can continue to be used in V7.4 without upgrading.

More information

You can find more information at:

https://new.siemens.com/global/en/products/automation/industry-software/automation-software/scada/scada-options.html

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Introduction

Overview

WinCC Premium Add-ons

With the proven WinCC Premium Add-ons based on the SCADA software SIMATIC WinCC, Siemens offers a modularly expandable, complete solution for the optimum interaction of processes in production, quality assurance, maintenance and system integration. The products respond to a broad spectrum of today's challenges in digitalization and are consistently directed towards comprehensive and economical solutions based on standard software components.

The following Premium Add-ons are available:

- PM-CONTROL
  is a cross-industry recipe system for user-friendly creation and management of recipes with integrated order control
- PM-QUALITY
  is a modular and sector-independent archive system for order-related or batch-related acquisition of process and production data
- PM-ANALYZE
  is used for locating sources of error or weak spots in plants by analyzing messages and process values
- PM-MAINT
  is a sector and technology-neutral maintenance system for use in preventive maintenance.
- PM-MES Interface
  is a bidirectional communication interface between PM-CONTROL, PM-QUALITY and MES systems
- PM-LOGON
  offers the operator a convenient and fast logon to the operating system using a company ID card via a card reader
- PM-OPEN EXPORT
  offers a flexible, low-cost solution for exporting current process data and archive data from WinCC into freely formatted text files
- PM-OPEN IMPORT
  enables the WinCC flexible archives to be automatically read into the WinCC system
- PM-OPEN MINDCONNECT
  allows transparent access to production reports created by PM-QUALITY and/or PM-ANALYZE via the MindSphere app
- PM-AGENT
  enables the connection of several WinCC systems to the PM-products
- UNIVERSAL PM-PACKAGE
  in combination with a supplementary agreement, provides a cost-effective way to always work with the latest versions of the PM-products for testing and configuration purposes and is therefore aimed exclusively at resellers of PM-products and OEMs
- COPYPROJECT
  is used to duplicate a complete WinCC V7 project including all Runtime archive databases during runtime
- PM-GRID CONTROL
  enables display of data from different sources and is used wherever the flexible display of tables within the WinCC Runtime environment is required

More information

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More information is available on the Internet at:

http://www.siemens.com/process-management

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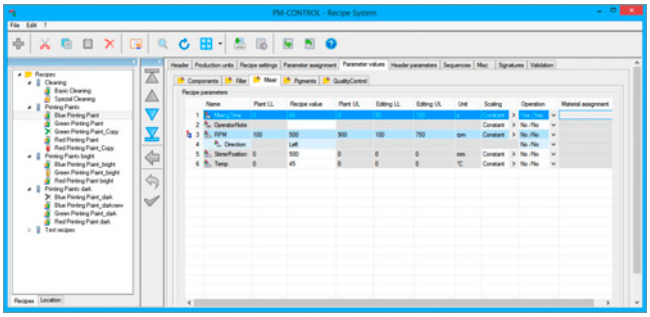
Overview



PM-CONTROL system software

Production rules, recipes or parameter data records are required as specifications for production in a wide variety of industries; they must be managed in a high-performance database, monitored for changes and clearly presented. These specifications result in production orders which are used to plan the production sequence.

With PM-CONTROL, the user has flexible parameter control at his disposal, with an operator interface that can be seamlessly integrated into the WinCC user interface.

Parameters of different types are saved in data records as recipes. The logging of recipe changes in an Audit Trail, the support of single or duplicate electronic signatures and the automatic versioning of recipe data records make PM-CONTROL an ideal tool in the regulated industry.

PM-CONTROL is equipped for complex tasks with automatic scaling of quantities, dynamic calculation of recipe values combined with convenient order scheduling and including automatic transfer of scheduled orders to the production units.

Enhancements such as the graphic planning board for order display, the rule-based check of recipe parameters as well as the option for creating a completely customized recipe editor continue the trend toward more user-friendliness, transparency and flexibility. The openness of PM-CONTROL enables problem-free connection to higher-level host systems (e.g. MRP systems) at the plant and production management level.

Customized for simple use cases with manual retrieval of recipes from the recipe database, PM-CONTROL is offered in a compact version.

Function

Integral "wizards" for setting up recipe data records and signing of production jobs, for example, provide the user with the best possible support for operation and reduce training time to an absolute minimum.

Configuration

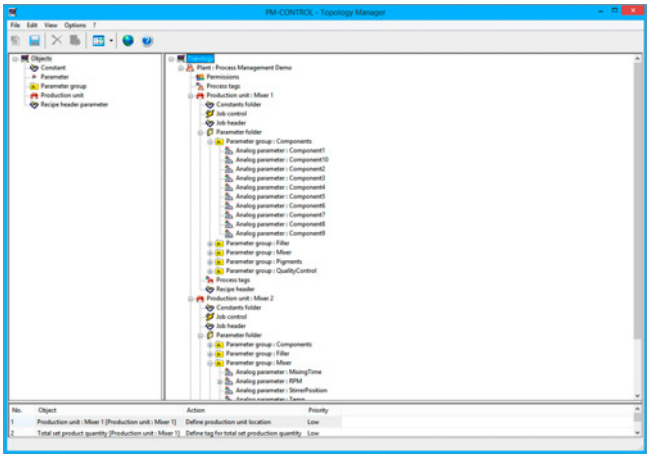
The production units for processing the orders are created in the Topology Manager with all the necessary parameters and the tag connections configured.

The settings for selecting the operating mode are determined by the input options in the job wizard:

- Jobs with / without target quantity
- Consideration of min. / max. limits
- Scheduled quantity for job distributed between multiple batches
- Individual parameter set or recipes comprise several steps

The defined authorizations and requirements for signatures have an effect on the operation of the recipe system and job control during runtime.

The integrated, central engineering library PM-LIBRARY allows the replacement and re-use of finished configurations.



PM-CONTROL topology

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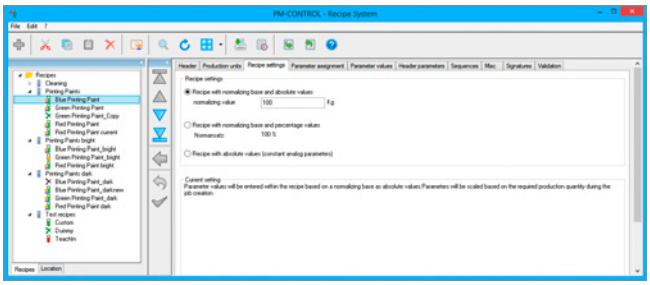
3

Function

Recipe system

The recipe data records are created based on the previously defined parameters. The recipe values are kept absolute for simple applications. In connection with PM-CONTROL job control, the recipe values can be scaled in linear fashion depending on the quantity, or they can be calculated according to a formula or depending on other recipe values, job values or current measured values. Configurable validation rules check the consistency of the recipe data. Optional definable sequence criteria point to impermissible production sequences in job planning.



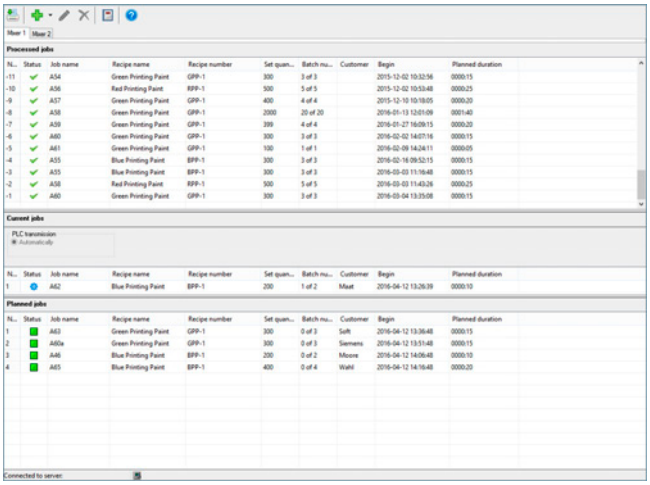
PM-CONTROL recipe system

Job display

The job display provides an overview for each production unit regarding planned, current and completed jobs. New job creation is either based on a recipe or a production unit or generated from a template. A job comprises one or more batches or recipe steps.

The job data can be loaded automatically upon request by the production unit, with specification of a start time, or manually. Setpoints can be transferred to WinCC, PCS 7 as well as over OPC DA or OPC UA even if a job includes setpoints for more of these destinations in combination.

Recipe/job values can be modified not only for planned jobs but also for currently loaded jobs with the corresponding approval. If jobs are signed electronically, the signature is requested once again following any modification. The system's own Audit Trail records the change history with time stamp, logged-on user(s), parameter name, as well as old and new values for each batch or recipe step, making the process transparent and traceable. The setting of a retention period governs the deletion of processed jobs.



PM-CONTROL job display

Planning board

The planning board display is a graphical representation of the estimated runtime for planned jobs. The time period under consideration can be adjusted as needed from the surrounding process picture so that the time period relevant for planning is always shown, for example, one day, one week, one month or only the next hour.

PM-CONTROL planning board

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Ordering data

	Article No.
PM-CONTROL system software Type S "Compact" version Single-user/multi-user system server that runs on interconnected WinCC system and comprises a topology manager, recipe system, and ActiveX Control for recipe preselection (several autonomous production units)	**9AE7110-2SS10-1AA0**
PM-CONTROL system software Type S "Standard" version Single-user/multi-user system server that runs on interconnected WinCC system and comprises a topology manager, recipe system, and order control (one production unit)	**9AE7110-2SS20-1AA0**
PM-CONTROL system software Type S "Professional" version Single-user/multi-user system server that runs on interconnected WinCC system and comprises a topology manager, recipe system, and order control (several autonomous and interlinked production units)	**9AE7110-2SS30-1AA0**
PM-CONTROL system software Type C Multi-user system client that runs with Type S system package (Compact, Standard, Professional) on an interconnected WinCC system or as thin client (without WinCC) with a recipe system and order control	**9AE7110-4SC03-1AA0**

Note:

Additional PM-CONTROL configurations available on request

More information

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WinCC Competence Center Mannheim

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More information is available on the Internet at:

http://www.siemens.com/process-management

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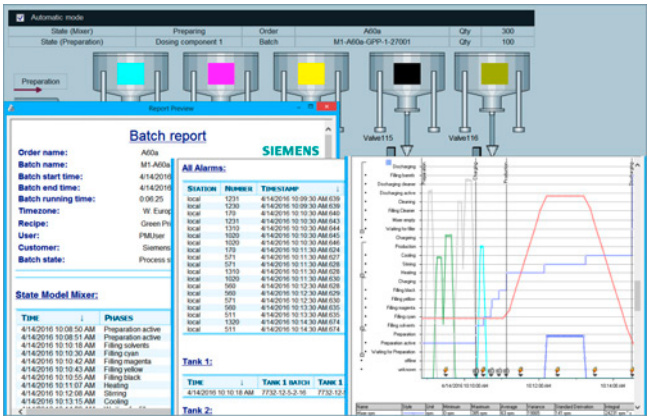
PM-QUALITY

Overview



PM-QUALITY system software

The proof of quality in the form of a manufacturing report, which is obligatory for FDA-regulated industries, is now a standard requirement in almost all industries.

The strengths of PM-QUALITY are the core functions of a comprehensive quality management system such as the complete acquisition, preparation and archiving of batch-related data such as trend curves, messages, production setpoint and actual values, Audit Trails and laboratory values.

Data from WinCC, PCS 7, WinCC (TIA) RT Professional and Advanced, via text import, OPC/DA and OPC/UA can be combined from various sources, compiled into meaningful reports and archived over a long period. PM-QUALITY ensures the required transparency, both if seamlessly integrated into the user interface of WinCC, PCS 7 or WinCC RT Professional and Advanced (TIA Portal) and as a stand-alone application.

The processing of measured values with the aid of graphical calculation rules, the integration of day, week and shift logs with an integrated shift calendar, and the creating of reports in Microsoft Excel are consistent expansions of the proven functionality of PM-QUALITY.

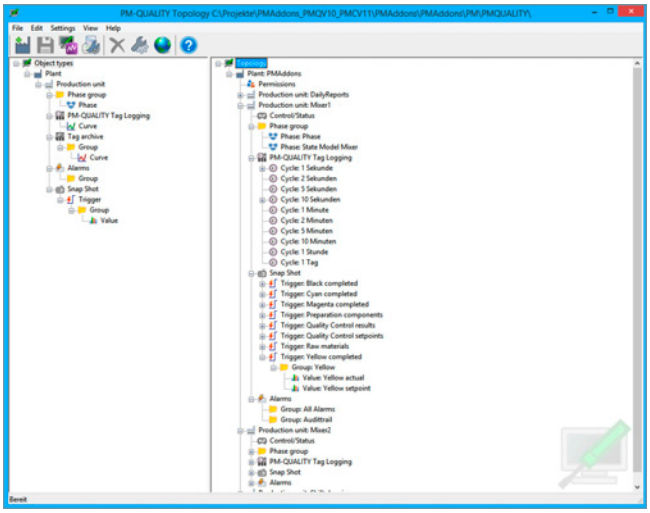
Function

Configuration

The production units are configured in a topology manager with all data to be recorded that are relevant for the report generation. These are process value logs used for continuous acquisition of process values, snap shot triggers used for event-driven acquisition of process values, and alarm logs used exclusively for alarms and Audit Trail entries.

The production process can be structured using phases and state models. The individual phases or states are archived with time stamps. For complex processes that extend over several production units, the production units can be linked to form a plant unit. The reports include the data for a production unit or for the complete plant unit.

The integrated, central engineering library PM-LIBRARY allows the replacement and re-use of finished configurations.



PM-QUALITY Topology Manager

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Overview

Data acquisition

Data acquisition is started either with a batch start or time-dependent, e.g. at the beginning of a shift, and finished after the batch or shift has been completed. A unique batch number is generated, under which the data is logged in the PM-QUALITY database.

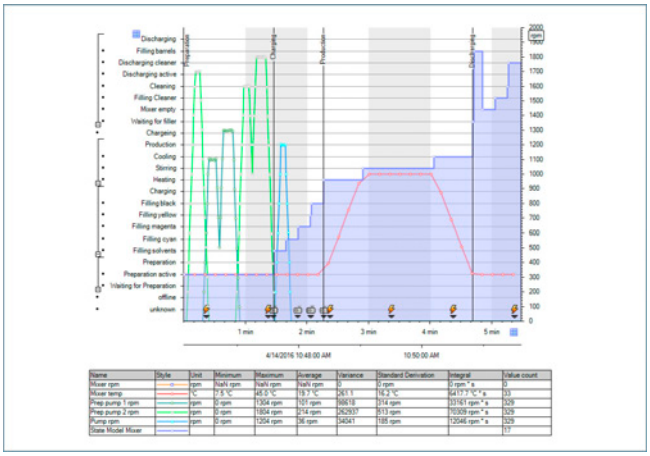
Data logging

Completed and released batches can be automatically exported for long-term archiving. Placeholders integrated in the export path ensure clear data storage. The Data View application or the PM-QUALITY Client is used to display the exported data.

Trend display in the process picture

The display of trends in which even several batch sequences can be compared becomes a comprehensive analysis tool with maximum operating convenience thanks to the simultaneous display of alarms, triggered recordings of measured values, phase lines, state models and comments. The integrated zoom function, the shifting of the axes and the display of specific time ranges enable precise evaluation of individual measuring points. Detailed information about each event is displayed in a tooltip. Comments can be subsequently inserted in time-based trend curves

The extremely flexible configuration of curve diagrams also offers the configuration of trend directions in the form f(x). The various configurations are stored in templates and can be called up again at any time. The ActiveX control is integrated in the process picture.

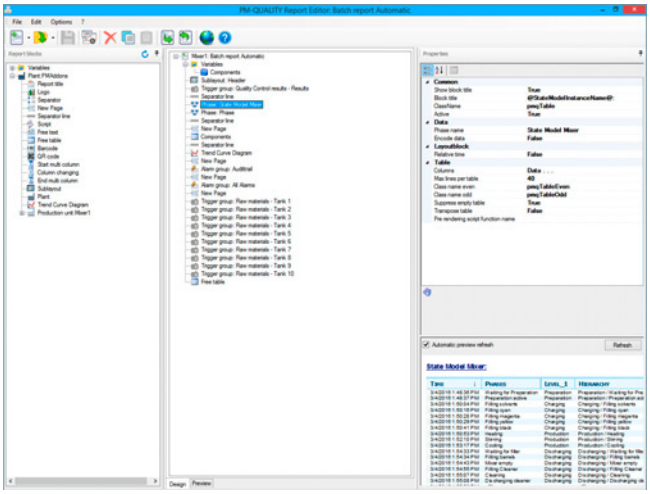


PM-QUALITY Trend Curve Control

Reporting

With the Report Layout Editor, different views of the batch archives can be conveniently implemented, conformant to existing design guidelines.

A large number of report blocks are available for design, which can be simply dragged and dropped into the report and configured. An integrated preview shows at any time the data of a selected batch based on the configured report. In addition to the standard report blocks offered, data evaluation can be inserted into the report using a VB script. A variety of style sheets is included in the scope of delivery, custom style sheets can be easily added.



PM-QUALITY Report Editor

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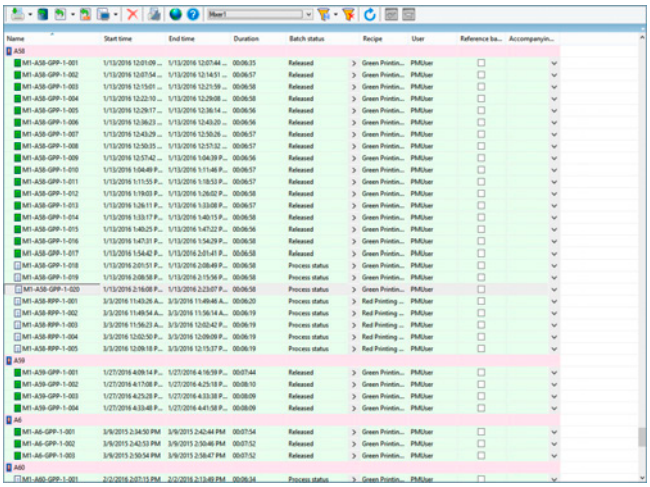
PM-QUALITY

Function

Batch table in the process picture

Batches can be found again at any time thanks to individually configurable filters. The batch data can be displayed on the screen based on the selected report, output to a printer or exported in HTML, XML or database format. The ActiveX control is integrated in the process picture.



PM-QUALITY Batch Table Control

Redundancy option

PM-QUALITY features a redundancy function with the Data Center option. The batch data is recorded on two separate computers, each with one PM-QUALITY Server. After completion of a batch, the Data Center compares the data recorded by both PM-QUALITY Servers and exports the result to an export database.

Ordering data

	Article No.
PM-QUALITY system software Type S "Standard" version Single-user/multi-user system server that runs on an interconnected WinCC system for one production unit	**9AE7111-2SS20-1AA0**
PM-QUALITY system software Type S "Professional" version without Data Center Single-user/multi-user system server that runs on an interconnected WinCC system for multiple autonomous and interlinked production units.	**9AE7111-2SS30-1AA0**
PM-QUALITY system software Type S "Professional" version with Data Center For data redundancy synchronization. The system package is to be installed on both redundant computers.	**9AE7111-2SS30-1BA0**
PM-QUALITY system software Type C Multi-user system client that runs with the Type S system package on an interconnected WinCC system or as thin client (without WinCC)	**9AE7111-4SC01-1AA0**

Note:

Additional PM-QUALITY configurations available on request.

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More information

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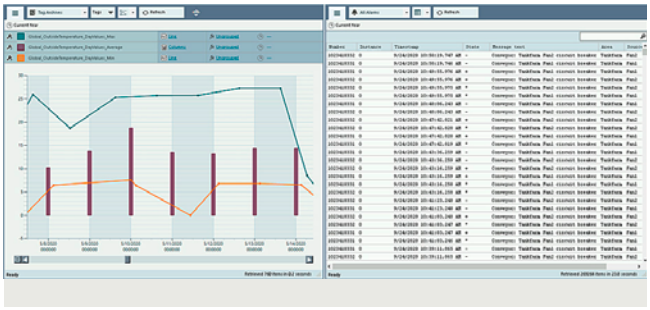
PM-ANALYZE

Overview



PM-ANALYZE

Recorded process values as well as hardware interrupts, fault, status and operation messages from various sources contain a wealth of information which often only becomes visible by means of computer-aided analysis. Reduced downtime and maintenance times, early detection of signs of wear and tear, localization of error sources or weak points are just a few examples. Problems in the production plant are signaled by alarms which are the starting point for evaluations and analyses with PM-ANALYZE.

PM-ANALYZE not only enables chronological display of process values and messages from different sources, but also offers an optimal overview with its convenient filters and analysis options, even with large amounts of data.

The process values represent the basis for the analysis and optimization of the production process. The extensive selection of charts for mapping the process values in PM-ANALYZE offers new perspectives for the representation and analysis of the production process. Problems in the production plant are signaled by alarms. Convenient filter settings limit the message display to the essential information.

One particular strength of PM-ANALYZE is simultaneous display of charts and messages in a single workspace. Alarms in tables and in statistical evaluations parallel to process values in charts show the spectrum of production data at a glance. Workspaces can either be integrated directly into process pictures or displayed and evaluated using a separate client application.

In addition, analysis events can be transferred directly to Microsoft Excel for further processing. This enables reports to be generated via Microsoft Excel, for example, where a report is generated daily and filled with data. Manual input forms can be used to add manual and laboratory values.

Function

By combining and centrally archiving of process values and messages from PCS 7, WinCC and WinCC (TIA) RT Professional, the event log of the Windows operating system, as well as any other sources by means of text import, PM-ANALYZE makes it possible to localize complex interrelations.

Configuration

The process value and alarm logs in the PM-SERVER application software included in the scope of delivery are the basis for evaluation. PM-SERVER provides the structure to merge process values and messages from different HMI systems in their own process value and alarm logs in the correct sequence or to enter them in the process value and alarm logs via text import.

Preparations for filtering in the PM-ANALYZE Client are made and the colors of the messages in the display area are configured in the PM-ANALYZE topology manager.

Process value display

The graphical representation of the process values in charts shows the course of the production process in a clear and concise manner. This can be either the process currently running or a process in the past. The process values are simply selected in a menu for display. The selection menu lists only those process values that are recorded in the configured process value log. The process values can be displayed in different charts. This includes points, lines, areas, bars and columns. A Gantt diagram can also be generated. All current messages in a selected alarm log, for example, can be displayed in a control center for monitoring. This display is updated automatically.

Configuration of the process value display

In addition to direct display of process values, PM-ANALYZE is also able to perform aggregations and display the aggregated value. To do this, the process values are grouped over a definable period of time and the selected value is calculated. PM-ANALYZE offers the following aggregations: Minimum, maximum, average, total, first value or last value.

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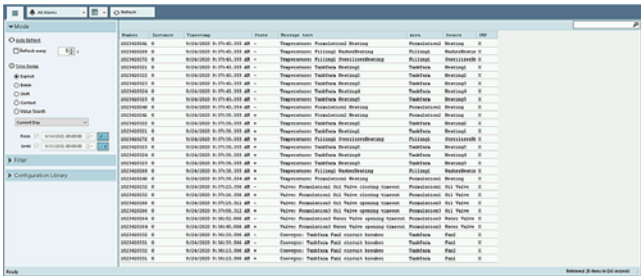
Function

Message display

All current messages in a selected alarm log, for example, can be displayed in a control center for monitoring. This display is updated automatically.



WinCC-Add-on-PM-ANALYZE reports

Filter library

PM-ANALYZE offers a convenient filter library for backup of simple or hierarchical filter settings. Hierarchical filter settings with up to four levels facilitate faster localization of relevant messages. PM-ANALYZE determines the available filter values independently from the underlying database.
Configured filter settings can either be saved globally for all users or specifically for the user that is logged in.
The list of messages can be limited even further with the integrated quick search.

Analyses

The integrated statistical analysis functions which are conducted for the selected alarm log provide support in the analysis of errors or weak points. Messages are grouped with the optional grouping function and the analysis results are displayed in a clear structure.

- Frequency analysis for determining the most frequently occurring messages; results can be listed by specifying grouping criteria, such as origin, for message columns. This way you expand the traditional range of a Top X analysis (number) to a technological Top X analysis (origin). A score is assigned according to the frequency with which a message occurs.
- Frequency analysis for analyzing message traffic within a period of time, divided into smaller intervals to localize accumulations at a specific time; this way you can break down an entire month, for example, into days.
- Message duration analysis determines the message duration of the archived messages.

Flickering analysis for localization of messages that occur very frequently within a short period of time (bursts) and then do not occur again for a longer period of time; such burst packets can be reliably determined with the flickering analysis by means of an adjustable threshold value.
The PM-ANALYZE add-in for Microsoft Excel enables access to all process values and messages. Depending on the selected time range, the defined values can be output either as unformatted raw data for further processing or directly in a desired dynamic report format. Individual Excel files can serve as template for different reports here. This allows, for example, daily, weekly, annual or event reports to be generated.

Ordering data

	Article No.
PM-ANALYZE Type S system software Single-user/multi-user system server that runs on an interconnected WinCC system	**9AE7112-1SS01-1AA0**
PM-ANALYZE Type C system software Multi-user system client that runs with system package Type S on an interconnected WinCC system or as thin client (without WinCC)	**9AE7112-4SC01-1AA0**

Note:

Additional PM-ANALYZE configurations available on request.

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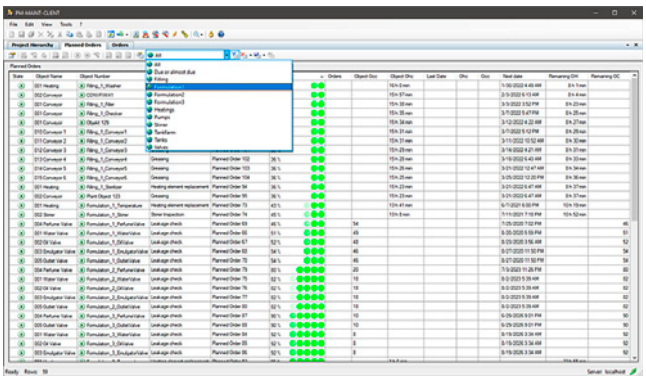
PM-MAINT

Overview



PM-MAINT

Efficient maintenance planning is of crucial importance to ensure and maintain the maximum availability of a plant.

PM-MAINT is a maintenance management system for all industries and is designed for use on the production level. By providing various connection options to the existing automation landscape, PM-MAINT enables performance-based planning that is based on real machine runtimes and machining cycles in addition to purely calendar-based planning.

PM-MAINT supports maintenance in the recording and complete documentation of unplanned repairs by means of easy and comprehensible work sequences with a high level of user-friendliness.

Maintenance information calculated by PM-MAINT, such as recommended maintenance dates, can be displayed in the existing HMI user interface for the respective aggregates. Repair requests can easily be created directly by the machine operator.

All operator actions are recorded in a log and can be traced at any time.

Function

The innovative user interface permits easy access to all maintenance-relevant information.

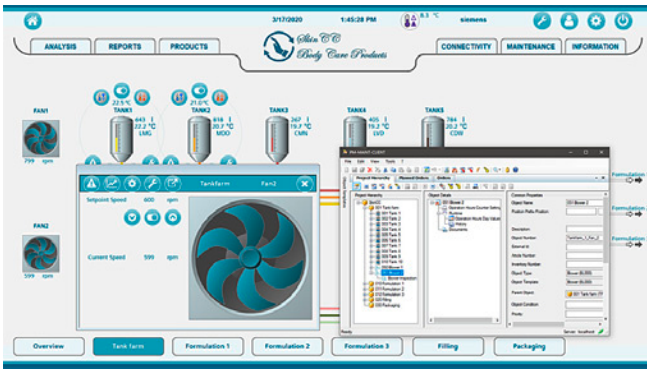
The convenient selection and filter options in the different views can be customized and adapted to suit your mode of operation. Views can be created for all users, individual user groups or separately for each user.

Configuration

An image of the maintenance-relevant units is created in the form of a tree topology in PM-MAINT. You can add your own object types to the available object types including properties. This means PM-MAINT perfectly adapts to your environment. Required actions, personnel, material, as well as special instructions are bundled into a unit in the planned task.

The maintenance interval can also be determined in parallel by runtime, number of switching cycles and/or a calendar interval. Evaluation is based on the current process values. The earliest calculated date is shown as the recommended maintenance date.

PM-MAINT comes with its own document management for backup of documents with maintenance-related information, such as technical data sheets, exploded views, photos, etc. The information can be assigned to the units and thus can be retrieved at any time.

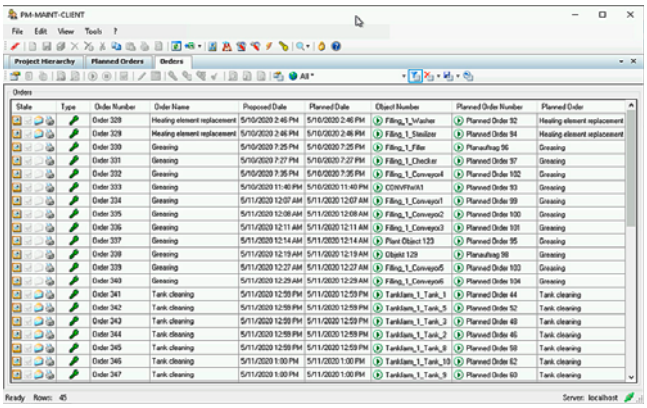


WinCC-PM-MAINT-1

Operation

The "Orders" view shows a list of all pending maintenance orders that were generated from the planned orders when the recommended maintenance date was reached. For better maintenance planning, an announcement can be created in due time prior to the order. All announcements are listed in a separate view.

The operator assigns a status to the individual orders depending on the progress of the maintenance work (in progress, feedback provided, completed). Information on the object status, the work done, expenses for personnel and material are documented in the order feedback which can also be created multiple times for any order. Formatting rules, such as the color of the different processing states increase the transparency of the view.



WinCC PM Maint jobs

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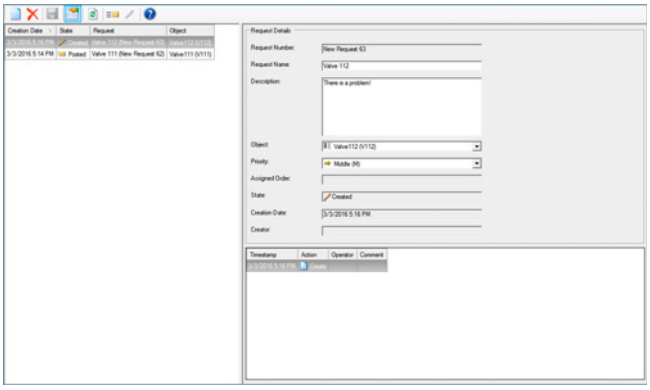
Function

Repair requests

Repair requirements of the operators on site can be documented through seamless integration into the WinCC user interface, saved centrally and synchronized with maintenance. Information from maintenance, such as remaining operating hours until the next scheduled maintenance, can be displayed directly in WinCC.



PM-Maint Request

Transparency and ease of use

The content of the different views shown here can be defined with convenient filter and formatting rules that are saved for individual users, user groups or globally. This means the familiar work environment is available every time you access PM-MAINT. Navigation between linked objects (e.g. from the maintenance object, to the planned order, to completed maintenance orders all the way to individual order feedback) offers access to all information in seconds thanks to context-dependent hyperlinks. Operating hours and switching cycles can be integrated from WinCC, PCS 7, WinCC flexible, WinCC (TIA) or via text import and OPC DA / OPC UA from additional sources for performance-based maintenance. All lists available in PM-MAINT can be forwarded directly to Microsoft Excel to make it easy to transfer maintenance information.

Ordering data

	Article No.
PM-MAINT Type S system software Single-user/multi-user system server that runs on an interconnected WinCC system	**9AE7104-2SS30-1AA0**
PM-MAINT Type C system software Multi-user system client that runs with system package Type S on an interconnected WinCC system or as thin client (without WinCC)	**9AE7104-4SC00-1AA0**

Note:

Additional PM-MAINT configurations available on request.

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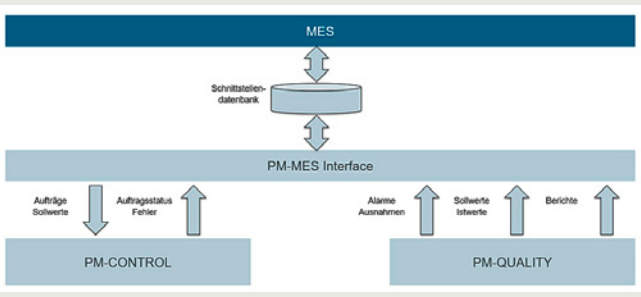
PM-MES Interface

Overview

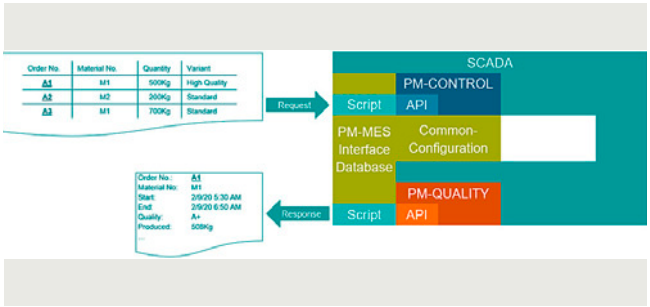


PM-MES Interface

The PM-MES interface enables seamless integration of the SCADA level with MES systems. It builds on the functionality of PM-CONTROL and PM-QUALITY to create a standardized API layer that can be used from the MES side without the need to create custom scripts on the SCADA side.

The PM-MES interface is a bidirectional communication interface between PM-CONTROL, PM-QUALITY and MES systems. Communication is implemented via a Microsoft SQL Server interface database.

Function



WinCC PM MES 1

With PM-MES Interface, a MES system can create orders in PM-CONTROL, for example, override individual parameters in PM-CONTROL for each order (version management), retrieve batch records such as trends and snapshots from PM-QUALITY or request batch reporting from PM-QUALITY to retrieve the results for embedding in the Master Batch Record.

With this approach, the fundamental differences between the concepts on the planning side and the operational SCADA level can be standardized and aligned by using proven components instead of customer-specific programming.

Ordering data

	Article No.
PM-MES Interface Single-user / multi-user system, can be run in conjunction with PM-CONTROL V11.6 and V11.7 and with PM-QUALITY V10.5 and V10.6	**9AE7110-2SX30-1AA0**

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Overview

PM-LOGON

The PM-LOGON software product offers the operator a user-friendly and fast logon to the operating system with the company ID card via a card reader. PM-LOGON assigns an RFID card to an operator and logs the operator on to the target system as soon as the operator's RFID card enters the reader field of the connected RFID reader. In this way, PM-LOGON automates manual entry of user name and password at the target system.

Function

The distributed-designed PM-LOGON supports a wide range of readers that read the Unique ID (UID) of an RFID card. Each UID is assigned to a user either in an Active Directory (domain controller) or in the Windows user administration. The user can log on to different logon services / target systems depending on the operator panel used. SIMATIC Logon, OPC DA/UA and SOAP are available among others. The logon procedure can also be configured depending on the selected logon service. This also enables logon to be performed in the background or the logon dialog to be automatically filled out with user name/password.

Ordering data

	Article No.
PM-LOGON system software Type S	**9AE7123-1SS01-1AA0**
PM-LOGON system software Type C	
License file for:	
• 10 users	**9AE7123-1SC00-1AA0**
• 50 users	**9AE7123-1SC01-1AA0**
• 100 users	**9AE7123-1SC02-1AA0**
• 500 users	**9AE7123-1SC03-1AA0**
• 1 000 users	**9AE7123-1SC04-1AA0**
• 2 000 users	**9AE7123-1SC05-1AA0**
• 5 000 users	**9AE7123-1SC06-1AA0**
• 10 000 users	**9AE7123-1SC07-1AA0**
PM-LOGON key dongle	**9AE7123-1SS01-1AA1**

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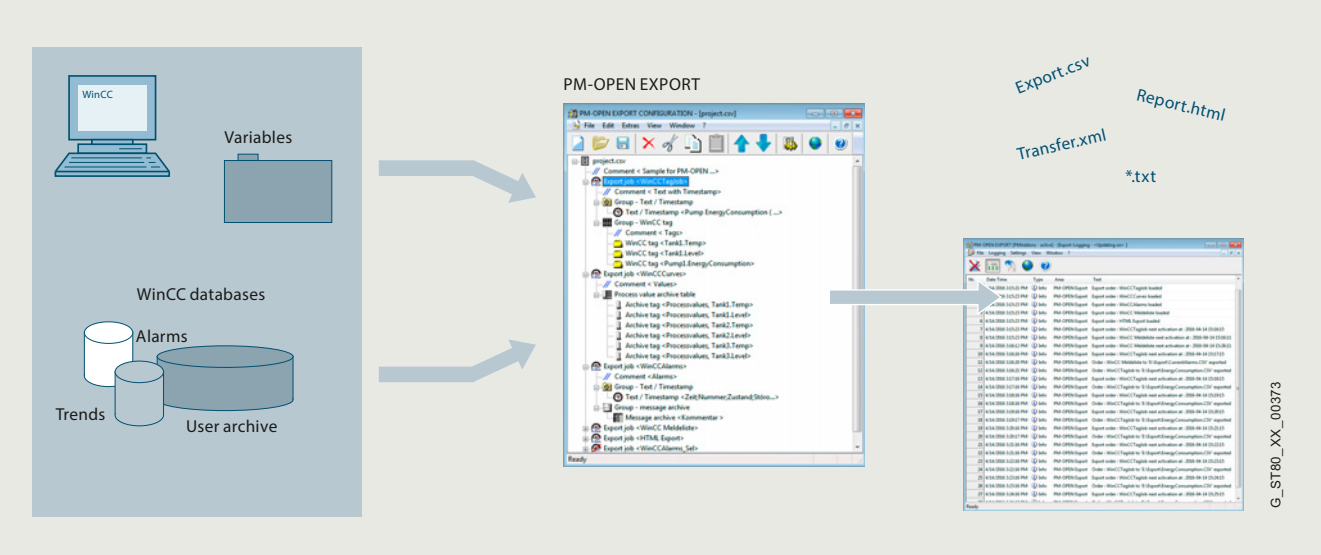
PM-OPEN EXPORT

Overview



PM-OPEN EXPORT

Flexible and low-cost solution, for exporting current process data (tags) and archive data (alarm log, process value log, user log) from WinCC / PCS 7 / WinCC RT Professional (TIA Portal) into freely formatted text files (ASCII, CSV, HTML/XML format).

Function

PM-OPEN EXPORT can export to any local memory media or to memory media shared on the network. For example, it can be used to make data available on a network server for further processing or analysis.

The configured export jobs are processed automatically in the "background". Triggering of the data export can be cyclical, time-controlled, or event-driven.

Flexible and individual structuring of the destination file is a significant benefit. As well as the exported data, the destination file can also contain, for example, static text and time stamps.

Another advantage of PM-OPEN EXPORT is the possibility of using it in redundant WinCC configurations.

Ordering data

	Article No.
PM-OPEN EXPORT system software Single-user system; can run on interconnected WinCC system	**9AE7106-1SS01-1AA0**

Note:

Additional PM-OPEN EXPORT configurations available on request.

More information

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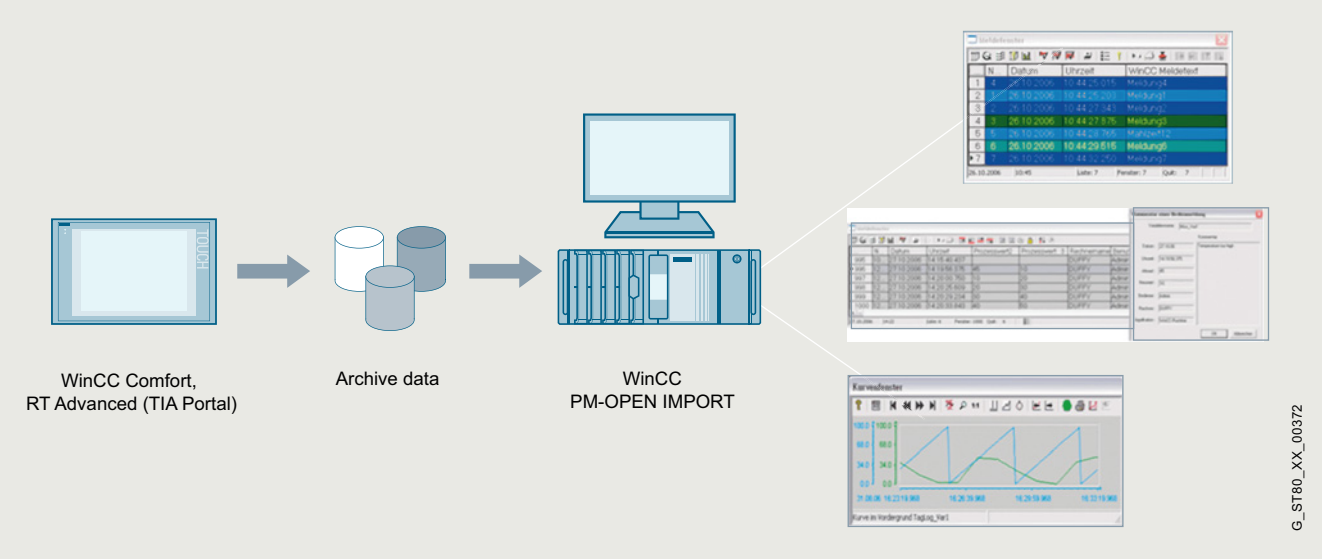
Overview



Process data (tags and messages) and operator actions (Audit Trail) are archived locally as CSV files on SIMATIC WinCC Comfort Panels or systems with WinCC RT Advanced (TIA Portal). With PM-OPEN IMPORT, this data can be centrally and chronologically compiled on a higher-level system and also be safely saved there in database format for the long term. The original time stamps are, of course, retained when importing the data into the WinCC system. The standard resources of the higher-level WinCC system (WinCC RT Professional (TIA Portal), WinCC, PCS 7) are used for display and evaluation.

With PM-OPEN IMPORT, the requirements for the safe, central and long-term archiving of relevant data in the overall automation landscape (from the panel to the higher-level SCADA system) are satisfied as per the guidelines of the Food and Drug Administration (FDA) 21 CFR Part 11 and the EU directive 178/2002.

Function

PM-OPEN IMPORT offers the following import functions:

- Import of WinCC Comfort / WinCC RT Advanced data logs
  The data logs in CSV format are imported into the WinCC Tag Logging or into the WinCC RT Professional archives and can be displayed as a table or as a trend using the standard controls.
- Import of WinCC Comfort / WinCC RT Advanced alarm logs
  The alarm logs in CSV format are imported into the WinCC Alarm Logging or into the WinCC RT Professional Messages and can be displayed as a table using the standard control
- Import of WinCC Comfort / WinCC RT Advanced Audit Trails
  Audit Trail logs in CSV format are imported into the WinCC Alarm Logging or into the WinCC RT Professional Messages and can be displayed like WinCC operating messages using the standard control. The data "User name," "Comment" and, if applicable, "Tag name," "Old value" and "New value" are also imported.

Configuration

Only one PM-OPEN IMPORT is required per WinCC PC. There is no software restriction on the number of systems that can be connected. Access on the WinCC side takes place exclusively via Ethernet on a Panel or PC Runtime with WinCC RT Advanced.

Ordering data

Ordering data	Article No.
PM-OPEN IMPORT system software Single-user system; can run on interconnected WinCC system	**9AE7114-1SS01-1AA0**

Note:

Additional PM-OPEN IMPORT configurations available on request.

More information

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PM-OPEN MINDCONNECT

Overview

PM-OPEN MINDCONNECT

PM-OPEN MINDCONNECT automatically and securely uploads production reports generated by PM-QUALITY or PM-ANALYZE into the Siemens MindSphere Cloud. To facilitate this, a communication channel is established between a virtual asset defined in MindSphere and PM-OPEN MINDCONNECT. This enables a fully customizable solution where, for example, the distribution of reports is organized according to plant area, location or other suitable criteria.

Function

To access the uploaded reports from anywhere, the MindSphere application PM-REPORT BROWSER, which is available for PM-OPEN MINDCONNECT, can be used.

PM-REPORT BROWSER

PM-REPORT BROWSER provides user-friendly access to reports that have been created on site, e.g. with PM-QUALITY and/or PM-ANALYZE, and uploaded to MindSphere and ensures an optimal overview of the production. Reports are available on any device that can display a PDF file in a standard web browser. This provides seamless global access to PM-QUALITY or PM-ANALYZE production reports.

PM-OPEN MINDCONNECT is therefore a secure and ideal extension for existing PM-QUALITY or PM-ANALYZE installations on site and represents a cost-effective solution.

Ordering data

	Article No.
PM-OPEN MINDCONNECT Single-user system, running on interconnected WinCC system with PM-ANALYZE or PM-QUALITY	**9AE7124-1SS01-1AA0**

More information

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Overview

PM-AGENT

PM-AGENT is used for communication between PM-QUALITY, PM-CONTROL, PM-MAINT, PM-ANALYZE and PM-OPEN HOST/S with the SIMATIC WinCC / RT Professional / PCS 7 systems. Data from the above systems (tags, messages) can be sent and received.

Function

PM-CONTROL, PM-QUALITY, PM-MAINT and PM-ANALYZE are all based on the same infrastructure PM-Server, which performs the acquisition, pre-processing and distribution of all production relevant information, such as hardware interrupts, process values etc.

This enables the installation structure to be extended from a WinCC single station system to a centralized management infrastructure connected to several WinCC systems, even if different SCADA system versions are used.

The PM-AGENT is required to provide a uniform interface for communication with different SCADA systems via the network with services such as the coordination of a redundant server pair that, viewed from the outside, represent a single logical communication partner or the buffering of data in the event of network interruption.

PM-AGENT is available for WinCC V7, PCS 7, WinCC Runtime Professional and WinCC Runtime Unified.

Ordering data

	Article No.
PM-AGENT	
Single-user station system; runs on interconnected WinCC system	
• Sent by email	**9AE7117-2SS01-1AA0**
• Shipped by mail	**9AE7117-2SS01-1AA1**

More information

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UNIVERSAL PM-PACKAGE

Overview

UNIVERSAL PM-PACKAGE

The UNIVERSAL PM-PACKAGE, in combination with a supplementary agreement, provides a cost-effective way to always work with the latest versions of the PM-products for testing and configuration purposes and is therefore aimed exclusively at resellers of PM-products and OEMs.

Function

The UPP consists of a USB dongle which, together with a license file on the respective product data medium, unlocks the version of the PM-product on the data storage medium for configuration, test and presentation purposes in all configuration versions.

The right of use is unlimited in time, non-exclusive and not transferable to third parties.

The UPP basic package contains single licenses for the products:

- PM-CONTROL as of V11
- PM-QUALITY as of V10
- PM-MAINT as of V10
- PM-ANALYZE as of V8
- PM-OPEN EXPORT as of V8
- PM-OPEN IMPORT as of V7
- PM-OPEN TCP/IP as of V9
- PM-OPEN HOST/S as of V8
- PM-LOGON as of V1
- PM-OPEN MINDCONNECT as of V1

This applies to all available versions, "Compact", "Standard" and "Professional".

Ordering data

	Article No.
UNIVERSAL PM-PACKAGE	**9AE7121-1AB01-0AA0**

More information

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Overview

COPYPROJECT

COPYPROJECT is used to duplicate a complete WinCC V7 project including all runtime archive databases without exiting runtime.

Backups can be made in the background either manually or automatically, e.g. according to a daily schedule, whereby COPYPROJECT dynamically adapts the names of the destination directories to indicate the time of the backup.

Function

COPYPROJECT supports three different copy modes. The main function is to copy a complete active WinCC project. However, individual Microsoft SQL Server databases or individual directories can also be copied.

Ordering data

	Article No.
COPYPROJECT	
Single-user station system; runs on interconnected WinCC system	
• Sent by email	**9AE7141-2SS01-1AA0**
• Shipped by mail	**9AE7141-2SS01-1AA1**

More information

Siemens AG
Digital Industries
WinCC Competence Center Mannheim

Tel.: +49 (0)621 1723-1010

Email: winccaddon.automation@siemens.com

More information is available on the Internet at:

http://www.siemens.com/process-management

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PM-GRID CONTROL

Overview

PM-GRID CONTROL

PM-GRID CONTROL enables display of data from different sources and is used wherever the flexible display of tables within the WinCC Runtime environment is required

Function

Data can be prepared for display in various formats within the PM-GRID CONTROL. These include the display of a value together with a physical unit, a precisely definable number of digits before and after the decimal point, and a wide variety of date and time formats, which can also be automatically adapted depending on the country.

In addition, the control allows the setting of font sizes, foreground and background colors as well as the display of graphics for displaying indicators depending on the contained column values. Each table cell can also be individually formatted using VB script. The table contents can be sorted in ascending/descending order by clicking on the column header and columns that remain an integral part of the table view can be made static when scrolling.

Ordering data

	Article No.
PM-GRID CONTROL Single station system; can run on interconnected WinCC system	**9AE7141-2SS03-1AA0**

More information

Siemens AG
Digital Industries
WinCC Competence Center Mannheim

Tel.: +49 (0)621 1723-1010

Email: winccaddon.automation@siemens.com

More information is available on the Internet at:

http://www.siemens.com/process-management

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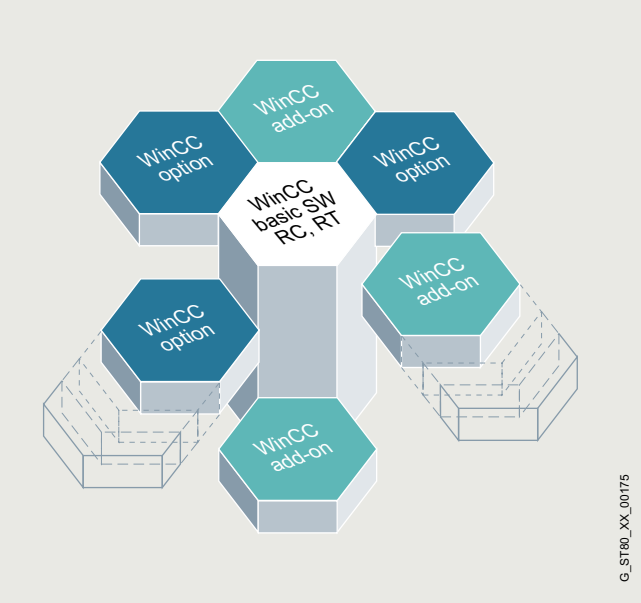
Overview



WinCC Premium Add-ons – Solutions for all sectors and technologies

The basic system is designed to be independent of any specific technology or industrial sector, to be modular and flexibly expandable and to permit not only simple single-user applications in mechanical engineering, but also complex multi-user solutions or even distributed systems with several servers and clients in plant engineering. WinCC Premium Add-ons are supplementary products that have been created by competent partners working in the specific sectors and technologies and represent interesting expansions for WinCC.

WinCC Premium Add-ons are not DF (Siemens) products, but the products of partners who are committed to complying with certain quality features and boundary conditions. The Premium Add-ons are checked, for example, in the Siemens Test Center for their compatibility with the basic WinCC system and supported in the first instance by the central hotline. As they are important application- and sector-specific add-on products for SIMATIC WinCC, they are marketed jointly by Siemens and the respective add-on suppliers. The WinCC Premium Add-on products can be found on the Internet (see More information) and in the "Online WinCC Premium Add-on Catalog".

Premium Add-ons for Connectivity:

- **PM-OPEN IMPORT system software**
  enables the WinCC flexible archives to be automatically read into the WinCC system.
- **PM-OPEN EXPORT system software**
  offers a flexible, low-cost solution for exporting current process data and archive data from WinCC into freely formatted text files.
- **PM-OPEN MINDCONNECT**
  allows transparent access to production reports created by PM-QUALITY and/or PM-ANALYZE via the MindSphere app.
- **TOP Server**
  is a proven OPC data integration platform with a large number of OPC device drivers.
- **TOP Server UCON**
  enables separate OPC device drivers to be created by Point-Click configuration.

Premium Add-on for process management:

- **PM-ANALYZE**
  is used for locating sources of error or weak spots in plants by analyzing messages and process values**.**
- **PM-CONTROL system software**
  is a cross-industry recipe system for user-friendly creation and management of recipes with integrated order control.
- **PM-QUALITY system software**
  is a modular and sector-independent archive system for order-related or batch-related acquisition of process and production data.
- **PM-MES Interface**
  Configurable bi-directional interface between WinCC in combination with PM-CONTROL/PM-QUALITY and MES systems for cost-effective implementation of vertical integration solutions without programming workload.

Premium Add-on for sector products:

- **ACRON 7 for WinCC**
  is used for long-term archiving and logging of process data for small to medium-sized plants, specifically in the water supply and treatment industry.
- **Sm@rtlib function library**
  provides function blocks for S7-300/400 as well as faceplates and icons for WinCC and WinCC flexible from the areas of process industry, HVAC, pharmaceuticals and energy.

Premium Add-on for configuration tools:

- **DCC TranslationEditor**
  for the efficient, secure translation of multilingual visualizations with in-built features for quality assurance.

Premium Add-on for diagnostics and maintenance:

- **ACC Alarm Management System**
  enables messages to be passed from the visualization system to mobile radio call receivers, such as cell phones or pagers, etc**.**
- **PM-MAINT system software**
  is a sector and technology-neutral maintenance system for use in preventive maintenance.

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WinCC Premium Add-ons

Overview

Competent partners

With SIMATIC WinCC, you not only get excellent products to suit your requirements, but we will also support you with selecting a partner for your automation solution. In our global network of Siemens Automation Solution Providers you will always find competent contacts in your area. In addition, Siemens-internal WinCC Competence Centers and WinCC Specialists support external system integrators with WinCC customer and industry-specific implementation of efficient solutions.

WinCC Competence Centers

Mannheim: Process management

- Sector-independent solutions and products in the fields of production, environment, maintenance and diagnostics
- Connectivity tools, system integration, connection to SAP R/3
- Support of FDA validation and WinCC ODK

Stuttgart: Production technology

- Solutions for maintenance management
- Alarm management

Plano, Texas (USA)

Migration of FactoryLink to SIMATIC WinCC

- Support for customers with migration projects
- Optimization of automated migration tools
- Support for FactoryLink customers with CSS contracts

More information

WinCC Competence Centers

More information is available on the Internet at
http://www.siemens.com/process-management

Siemens Solution Partners Automation

More information is available on the Internet at:
http://www.siemens.com/automation/solutionpartner

WinCC Specialists

More information is available on the Internet at:
http://www.siemens.com/wincc-specialists

WinCC Premium Add-ons

More information is available on the Internet at:
http://www.siemens.com/wincc-addons

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Overview

BRAUMAT / SISTAR

BRAUMAT / SISTAR is the tried and tested control system for the automation of recipe and batch-controlled production processes like those used in the food and beverages industry, but also in other industries.

The following industries can be cited as examples:

- Beer production
- Milk processing
- Battery manufacturing
- Mixing processes
- And other comparable batch-oriented production processes

The system software is attuned to the technological requirements of such production processes and contains the following functions, among others:

- PLC-based recipe control by processing the specified product recipes
- Operator control and monitoring system with server/client architecture
- Graphics-based recipe and order management
- Automatic weighing and dosage of raw materials and inputs
- Route control of pipe and valve-related transport procedures (e.g. in tank farms)
- Messaging and logging
- Test and diagnostics
- Engineering and configuration tools

BRAUMAT / SISTAR Lean

In addition to the BRAUMAT / SISTAR standard system ("Standard edition"), the Lean edition of BRAUMAT / SISTAR is also available.

This is especially aimed at the needs of smaller plants (e.g. microbreweries and craft breweries) or encapsulated plant units (e.g. thermal treatment such as 'short-time heating') and provides an easy and cost-effective entry-level system.

Ordering data

Ordering data	Article No.
BRAUMAT / SISTAR	
BRAUMAT / SISTAR Engineering	
BRAUMAT / SISTAR Engineering V8.0	
• As package	**6DL5210-0AX08-0YA5**
• Download [1]	**6DL5210-0AX08-0DA5**
Upgrade V7.5 -> V8.0	
• As package	**6DL5210-0AX08-0YE5**
• Download [1]	**6DL5210-0AX08-0DE5**
Upgrade V7.x -> V8.0	
• As package	**6DL5210-0AX08-0YG5**
• Download [1]	**6DL5210-0AX08-0DG5**
BRAUMAT / SISTAR Engineering V7.5	
• As package	**6DL5210-0AX57-0YA5**
• Download [1]	**6DL5210-0AX57-0DA5**
Upgrade 7.x -> V7.5	
• As package	**6DL5210-0AX57-0YE5**
• Download [1]	**6DL5210-0AX57-0DE5**
BRAUMAT / SISTAR IOS Server	
BRAUMAT / SISTAR IOS Server V8.0	
• As package	**6DL5210-1BX08-0YA0**
• Download [1]	**6DL5210-1BX08-0DA0**
Upgrade V7.5 -> V8.0	
• As package	**6DL5210-1BX08-0YE0**
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Upgrade 7.x -> V8.0	
• As package	**6DL5210-1BX08-0YG0**
• Download [1]	**6DL5210-1BX08-0DG0**
BRAUMAT / SISTAR IOS Server V7.5	
• As package	**6DL5210-1BX57-0YA0**
• Download [1]	**6DL5210-1BX57-0DA0**
Upgrade 7.x -> V7.5	
• As package	**6DL5210-1BX57-0YE0**
• Download [1]	**6DL5210-1BX57-0DE0**
BRAUMAT / SISTAR RCS Server (Route Control System)	
BRAUMAT / SISTAR RCS Server V8.0	
• As package	**6DL5210-1DX08-2YB0**
• Download [1]	**6DL5210-1DX08-2DB0**
Upgrade V7.5 -> V8.0	
• As package	**6DL5210-1DX08-2YE0**
• Download [1]	**6DL5210-1DX08-2DE0**
Upgrade 7.x -> V8.0	
• As package	**6DL5210-1DX08-2YG0**
• Download [1]	**6DL5210-1DX08-2DG0**
BRAUMAT / SISTAR RCS Server V7.5	
• As package	**6DL5210-1DX57-2YB0**
• Download [1]	**6DL5210-1DX57-2DB0**
Upgrade 7.x -> V7.5	
• As package	**6DL5210-1DX57-2YE0**
• Download [1]	**6DL5210-1DX57-2DE0**

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BRAUMAT / SISTAR

Ordering data	Article No.
BRAUMAT / SISTAR Multi Area Client	
BRAUMAT / SISTAR Multi Area Client V8.0	
• As package	**6DL5210-1CX08-0YB5**
• Download [1]	**6DL5210-1CX08-0DB5**
Upgrade V7.5 -> V8.0	
• As package	**6DL5210-1CX08-0YE5**
• Download [1]	**6DL5210-1CX08-0DE5**
Upgrade 7.x -> V8.0	
• As package	**6DL5210-1CX08-0YG5**
• Download [1]	**6DL5210-1CX08-0DG5**
BRAUMAT / SISTAR Multi Area Client V7.5	
• As package	**6DL5210-1CX57-0YB5**
• Download [1]	**6DL5210-1CX57-0DB5**
Upgrade 7.x -> V7.5	
• As package	**6DL5210-1CX57-0YE5**
• Download [1]	**6DL5210-1CX57-0DE5**
BRAUMAT / SISTAR Single Area Client	
BRAUMAT / SISTAR Single Area Client V8.0	
• As package	**6DL5210-1SX08-0YB5**
• Download [1]	**6DL5210-1SX08-0DB5**
BRAUMAT / SISTAR Conversion Single -> Multi Area Client V8.0	
• As package	**6DL5210-1SX08-0YD5**
• Download [1]	**6DL5210-1SX08-0DD5**
BRAUMAT / SISTAR PCU (Process Control Unit)	
BRAUMAT / SISTAR PCU V8.0	
• As package	**6DL5210-1EX08-0YB0**
• Download [1]	**6DL5210-1EX08-0DB0**
Upgrade V7.5 -> V8.0	
• As package	**6DL5210-1EX08-0YE0**
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Upgrade 7.x -> V8.0	
• As package	**6DL5210-1EX08-0YG0**
• Download [1]	**6DL5210-1EX08-0DG0**
BRAUMAT / SISTAR PCU V7.5	
• As package	**6DL5210-1EX57-0YB0**
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• As package	**6DL5210-1EX57-0YE0**
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BRAUMAT / SISTAR SQL Adapter IOS	
BRAUMAT / SISTAR SQL Adapter IOS V8.0	
• As package	**6DL5210-1FX08-2YB0**
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• As package	**6DL5210-1FX08-2YE0**
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BRAUMAT / SISTAR SQL Adapter IOS V7.5	
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Ordering data	Article No.
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BRAUMAT / SISTAR SQL Adapter Server V8.0	
• As package	**6DL5210-1GX08-2YB0**
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• As package	**6DL5210-1GX08-2YE0**
• Download [1]	**6DL5210-1GX08-2DE0**
Upgrade 7.x -> V8.0	
• As package	**6DL5210-1GX08-2YG0**
• Download [1]	**6DL5210-1GX08-2DG0**
BRAUMAT / SISTAR SQL Adapter Server V7.5	
• As package	**6DL5210-1GX57-2YB0**
• Download [1]	**6DL5210-1GX57-2DB0**
Upgrade 7.x -> V7.5	
• As package	**6DL5210-1GX57-2YE0**
• Download [1]	**6DL5210-1GX57-2DE0**
BRAUMAT / SISTAR MES API IOS	
BRAUMAT / SISTAR MES API IOS V8.0	
• As package	**6DL5210-1JX08-2YB0**
• Download [1]	**6DL5210-1JX08-2DB0**
Upgrade V7.5 -> V8.0	
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• Download [1]	**6DL5210-1JX08-2DE0**
Upgrade 7.x -> V8.0	
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• Download [1]	**6DL5210-1JX08-2DG0**
BRAUMAT / SISTAR MES API IOS V7.5	
• As package	**6DL5210-1JX57-2YB0**
• Download [1]	**6DL5210-1JX57-2DB0**
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BRAUMAT / SISTAR MES API Server	
BRAUMAT / SISTAR MES API Server V8.0	
• As package	**6DL5210-1KX08-2YB0**
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Upgrade 7.x -> V8.0	
• As package	**6DL5210-1KX08-2YG0**
• Download [1]	**6DL5210-1KX08-2DG0**
BRAUMAT / SISTAR MES API Server V7.5	
• As package	**6DL5210-1KX57-2YB0**
• Download [1]	**6DL5210-1KX57-2DB0**
Upgrade 7.x -> V7.5	
• As package	**6DL5210-1KX57-2YE0**
• Download [1]	**6DL5210-1KX57-2DE0**

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

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Ordering data	Article No.
BRAUMAT / SISTAR Lean	
BRAUMAT / SISTAR Lean V8.0	
• As package	**6DL5210-1HB08-0YA0**
• Download [1]	**6DL5210-1HB08-0DA0**
PowerPack +12 V8.0	
• As package	**6DL5210-1HX08-0YF0**
• Download [1]	**6DL5210-1HX08-0DF0**
BRAUMAT / SISTAR Lean V7.5	
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PowerPack +12 V7.5	
• As package	**6DL5210-1HX57-0YF0**
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BRAUMAT / SISTAR Convert Lean -> IOS	
Lean4 -> IOS V8.0	
• As package	**6DL5210-1HB08-0YD0**
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Lean16 -> IOS V8.0	
• As package	**6DL5210-1HD08-0YD0**
• Download [1]	**6DL5210-1HD08-0DD0**
Lean28 -> IOS V8.0	
• As package	**6DL5210-1HF08-0YD0**
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Lean40 -> IOS V8.0	
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Lean4 -> IOS V7.5	
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Lean28 -> IOS V7.5	
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Lean40 -> IOS V7.5	
• As package	**6DL5210-1HH57-0YD0**
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	Article No.
Upgrade Lean4 V7.5 -> V8.0	
• As package	**6DL5210-1HB08-0YE0**
• Download [1]	**6DL5210-1HB08-0DE0**
Upgrade Lean16 V7.5 > V8.0	
• As package	**6DL5210-1HD08-0YE0**
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Upgrade Lean16 V7.x > V8.0	
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Upgrade Lean28 V7.5 > V8.0	
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Upgrade Lean40 V7.5 > V8.0	
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Upgrade Lean16 V7.x > V7.5	
• As package	**6DL5210-1HD57-0YE0**
• Download [1]	**6DL5210-1HD57-0DE0**

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

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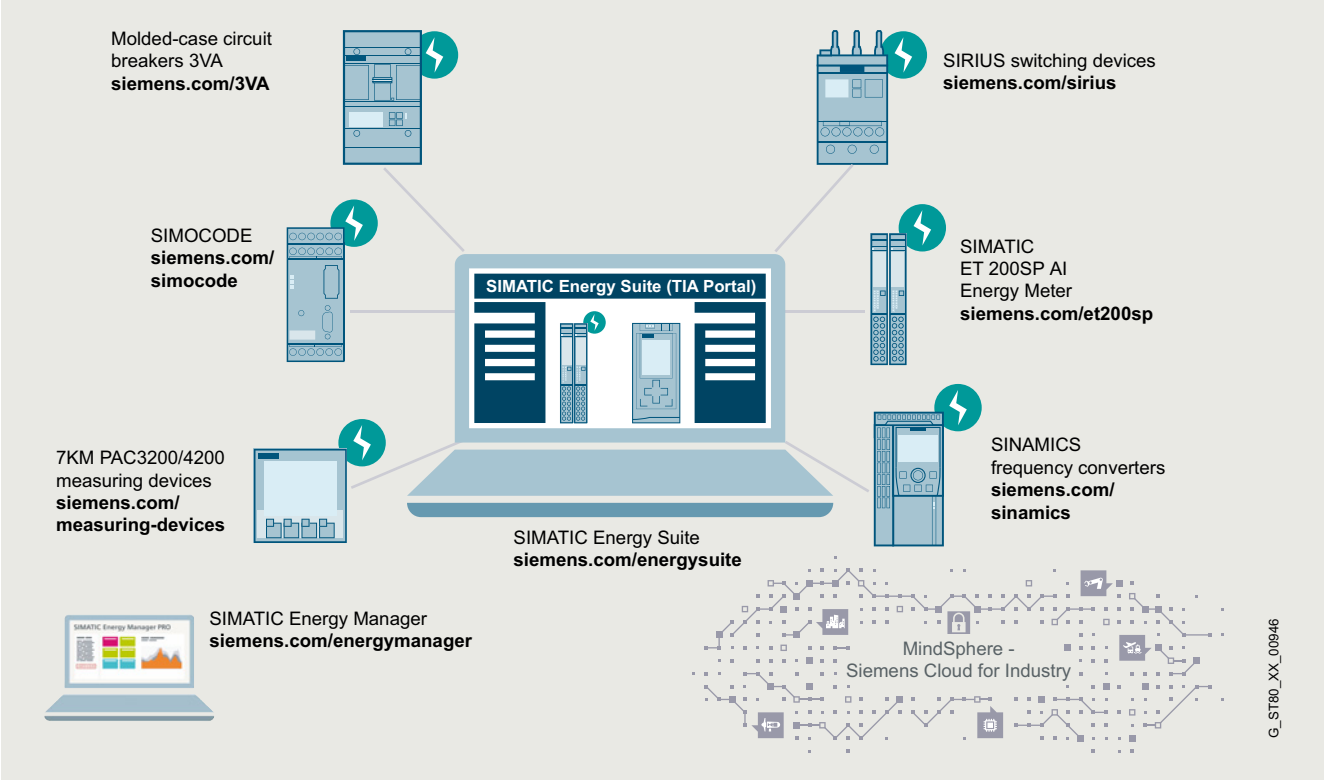
Software for energy management

Overview



Energy Management, system overview

SIMATIC offers numerous reasons for corporate energy management in industrial plants.
However, there is one in particular: It makes an important contribution towards improving plant productivity. This results in enhanced competitiveness.

Energy management with SIMATIC makes energy flows transparent in production plants. This supports the analysis and derivation of energy saving potential.

The result: Permanently increased efficiency, higher productivity and an improved cost situation.

http://www.siemens.com/simatic-energy-management

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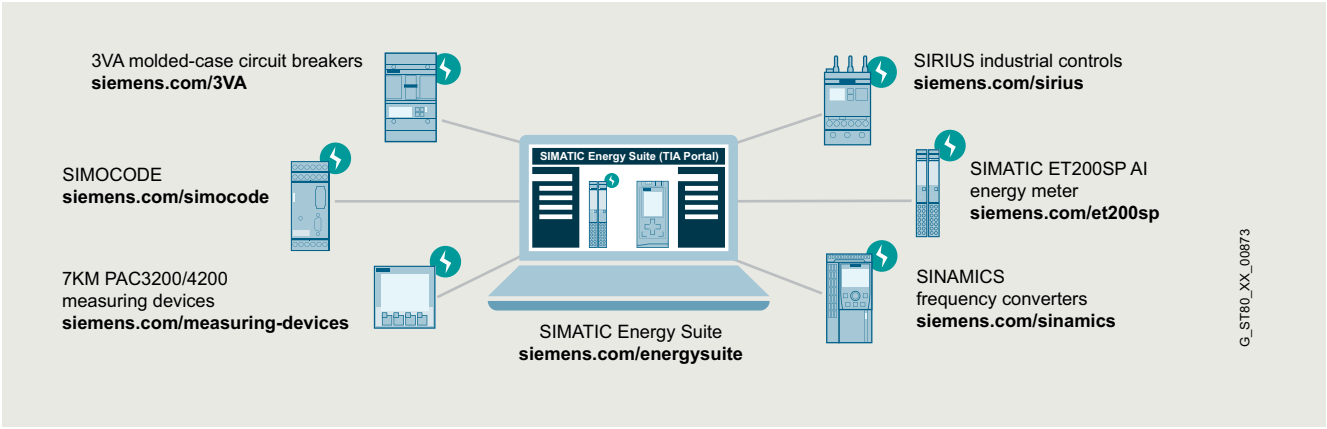
Overview



SIMATIC Energy Suite – Energy data acquisition and load management

A high energy consumption and automated production are typical for many industries. If you want to keep your energy costs under control in the long term and you are already focusing on the digital future, you will equip your plant with integrated energy measuring technology, thus anchoring your energy management in the automation of your production processes – which is where most energy is consumed.

SIMATIC Energy Suite as an integrated option for the TIA Portal efficiently links energy management with automation, thus creating energy transparency in the production system.

Functional enhancement for energy efficiency evaluation of machines:

Especially for evaluation of the product-related energy efficiency of machines, the S7 instruction "Energy efficiency monitor for machines" extends the scope of the SIMATIC Energy Suite functions.
As part of the instruction library of STEP 7 (TIA Portal), the function can be integrated in the machine control system by the machine manufacturer.
By linking the energy consumption, the production counter and the operating state, easy evaluation of the energy efficiency is possible based on energy performance indicators (EnPI).

Benefits

Highlights:

Energy measurement and load management

- Integrated into the TIA Portal and automation
- Easy and intuitive configuration of energy data recording and of load management instead of complex manual programming
- Automatic generation of the PLC energy program for S7-1500 Controllers
- Generation of Energy Suite screens with SiVArc (no SiVArc license required)
- Archiving in the tags archive of WinCC Professional or on the PLC-internal SIMATIC Memory Card

Production-related energy efficiency of machines (energy efficiency monitor for machines):

- Production-related and standardized determination of energy consumption in machines (in accordance with VDMA 34179)
- Easy integration into machine control system (S7-1500 / S7-1200) and on-site visualization of the efficiency status and the energy performance indicators (EnPI)
- Automatic long-term measurements (e.g. batch, layer)
- Creation of an efficiency log (.csv) for detailed evaluation and documentation

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Design

SIMATIC Energy Suite consists of the following components:

Engineering components (TIA Portal):

- Adds new, integrated editors to the TIA Portal for configuring the energy recording and load management system
- Library with preconfigured WinCC Professional screens for displaying energy consumption and the load management system
- Includes S7 program generator for the automatic generation of the complete S7 program
  - For acquisition, processing, buffering and archiving (WinCC Professional or SIMATIC Memory Card) of the basic energy values relevant to billing (power rating and energy)
  - For the priority-controlled connection and disconnection of loads and producers
  - Also for the extended energy values (including voltage, current, frequency) for measuring devices that offer this function and are supported within the scope of the Energy Support Library (see below).

WinCC Runtime components (toolbox for WinCC Professional):

- Export tool for exporting the energy data archived periodically in WinCC Professional in Excel files
- Transfer tool for buffered communication of the periodic energy values relevant to billing from S7-1500 CPUs to the tag archive of WinCC Professional

S7 driver block library (Energy Support Library - EnSL):

- Contains S7 blocks for simplified communication with measuring components from the product families SIMATIC, SENTRON, SINAMICS, SIRIUS and SIMOCODE.
  Installation of the Energy Support Library (EnSL) enables the supported devices to be recognized by the Energy Suite. They can then be configured as energy data sources simply by selecting the devices – making complex communication programming unnecessary.
  Details on the currently supported devices can be found here:
  http://www.siemens.com/energysuite-hardware

Function

Simple configuration direct in the TIA Portal

The SIMATIC Energy Suite is an option package for STEP 7 and WinCC (TIA Portal) which integrates new editors into the engineering HMI of the TIA Portal. These editors can be used to create and configure energy measuring points ('acquisition objects') and load management actuators ('actuator objects') in a simple manner.

Automatic program generation instead of complex programming

Following the completed configuration of all energy objects (acquisition objects and actuator objects), the S7 energy program is automatically generated by the program generator of the Energy Suite. This energy program can be downloaded to the controller (S7-1500) immediately after the compilation. The recording objects begin recording and pre-processing the energy values immediately after the start-up of the PLC.

Energy data recording and preprocessing is already carried out in the automation environment, close to the consumers

The recorded energy data is standardized and calculated according to the set archiving period, provided with a time stamp, and is ready for archiving.

Free choice of archive location

Archiving of the power rating and energy values relevant to billing can be made directly on the PLC-internal SIMATIC Memory Card or in a connected WinCC Professional archive.

- Archiving on SIMATIC Memory Card
  The energy data is directly saved on the CPU-internal SIMATIC Memory Card according to the respective archiving period. The data is always available there as a CSV file for direct downloading via the CPU's web server
- Archiving in the WinCC Professional archive
  The basic energy data (power rating and energy values) relevant to billing is saved in the archive of a connected WinCC Professional system according to the respective archiving period.
  Buffered communication
  To ensure high data quality, the basic energy data (power rating and energy values) is buffered in the WinCC archive prior to transfer. This data relevant to billing is then still available in the WinCC archive without losses or errors, even after a longer interruption in communication with the archive system (e.g. when restarting the PC or when there is a fault in the IT infrastructure).

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Function

Export tool for simple reading of energy data

The power rating and energy data (basic energy values relevant to billing) in the archive of the WinCC Professional system can be directly exported from the archive database to an Excel file using the supplied export tool. It is possible to create individual export templates with free selection of measuring points and time periods. These templates can subsequently be started fully automatically, or manually at a time selected by the user (e.g. at the beginning of each month).

Display and monitoring of the energy data

When generating the energy program, the power rating and energy data (basic energy values relevant to billing) of the individual measuring points (acquisition objects) are made available in uniform S7 blocks with standardized data structures. These data include all the relevant configuration data in addition to the current and periodic energy values. Thanks to this central and homogenized provision of data in the S7 CPU, it is very easy to implement additional real-time monitoring and evaluation (e.g. calculation of key statistics) in the control program, as well as uniform visualization of the energy data and energy parameters on HMI and SCADA screens.

New as of V16: Automatic screen generation with SIMATIC Visualization Architect (SiVArc)

Especially in larger configurations, the screens for energy recording and load management objects can be automatically generated through the use of the SiVArc option package, which saves time. To this end, an additional installation of SiVArc on the same station as Energy Suite is required. However, no SiVArc license is required for the exclusive generation of the Energy Suite screens.

New as of V16: PLC-based load management

In the corresponding editors of the TIA Portal, a load management system is first created and a recording object is assigned to it as an infeed signal. The individual actuator objects are then created in this load management system and their basic properties are configured. Actuators of the type load and producer can be configured. For each actuator type, a distinction can be made between a binary-switching (on/off) or an analog-switching (0-100%) behavior. After the S7 program has been successfully generated and downloaded to the PLC and WinCC Professional Runtime has been activated, the runtime parameters of the load management system and of the associated actuator objects are set - this primarily includes the output limit, the priorities, and the chronological limit values of the actuators. With these settings, if the set output limits are exceeded, the load management system will escalate the configured actuators based on their priority and availability (disconnection of loads or connection of producers). When the current power consumption once again drops below the output limit, the load management system de-escalates these actuators (also in accordance with the respective priorities).

Ordering data

	Article No.
Engineering package	
Includes installation medium, floating license for engineering as well as license certificates[3] for 10 energy objects[1] (2x5 EnO).	
SIMATIC Energy Suite V16 Engineering	
including 10 energy objects[1] (2x5 EnO)	
• As package	**6AV2108-0AA06-0AA5**
• Download [4]	**6AV2108-0AA06-0AH5**
SIMATIC Energy Suite Upgrade V14 or 15 to V16	
• As package	**6AV2108-3AA06-0AE5**
• Download [4]	**6AV2108-3AA06-0AK5**
Trial package	
SIMATIC Energy Suite V16 Engineering Trial (21 days)	**6AV2108-0AA06-0AA7**
As package	
SIMATIC Energy Suite Engineering Software Update Service [5]	
• Data storage medium package	**6AV2108-0AA00-0AL0**
• Download [4] Email address required for delivery	**6AV2108-0AA00-0AY0**
PLC runtime licenses [2]	
Includes license certificates[3] for activating additional energy objects[1] (EnO).	
SIMATIC Energy Suite S7-1500	
SIMATIC Energy Suite S7-1500, 5 energy objects[1] (1 x 5 EnO)	
• As package	**6AV2108-0CF00-0BB0**
• Download [4]	**6AV2108-0CF00-0BH0**
SIMATIC Energy Suite S7-1500, 10 energy objects[1] (1 x 10 EnO)	
• As package	**6AV2108-0CH00-0BB0**
• Download [4]	**6AV2108-0CH00-0BH0**
SIMATIC Energy Suite S7-1500, 10 energy objects[1] (2 x 5 EnO)	
• As package	**6AV2108-0DF00-0BB0**
• Download [4]	**6AV2108-0DF00-0BH0**
SIMATIC Energy Suite S7-1500, 50 energy objects[1] (5 x 10 EnO)	
• As package	**6AV2108-0FH00-0BB0**
• Download [4]	**6AV2108-0FH00-0BH0**
SIMATIC Energy Suite S7-1500, 100 energy objects[1] (10 x 10 EnO)	
• As package	**6AV2108-0HH00-0BB0**
• Download [4]	**6AV2108-0HH00-0BH0**
S7 Energy Efficiency Monitor for Machines	
Includes license certificate [5] for activating the S7 instruction for energy efficiency evaluation especially for machines	
S7 Energy Efficiency Monitor for Machines S7-1500 / S7-1200	
• As package	**6AV2108-1CF00-0BB0**
• Download [4]	**6AV2108-1CF00-0BH0**

[1] Energy objects (EnO) are used for licensing the recording functionality and the load management. This requires: - 1 recording object (measuring point) = 1x energy object - 1 actuator object (consumer or producer) = 3x energy objects

[2] PLC runtime licenses are countable and version-neutral

[3] The correct number of existing license certificates must be configured in the properties of the CPU hardware in the TIA Portal.

[4] For up-to-date information and download availability:http://www.siemens.com/tia-online-software-delivery

[5] The license number on the certificate is used to activate the S7 instruction; one license certificate is required for each machine.

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Technical specifications

	SIMATIC Energy Suite V16
PC hardware requirements	• In accordance with the requirement of the TIA Portal components: - SIMATIC STEP 7 (TIA Portal) - SIMATIC WinCC Professional, Advanced, Comfort, Basic
Operating system requirements	• In accordance with the requirement of the TIA Portal components: - SIMATIC STEP 7 (TIA Portal) - SIMATIC WinCC Professional, Advanced, Comfort, Basic
Supported STEP 7 version	• SIMATIC STEP 7 V16
Supported WinCC versions	• SIMATIC WinCC V16 Professional, Advanced, Comfort, Basic
Supported SIMATIC CPUs	
• SIMATIC Energy Suite	• Runs on all S7-1500 CPUs (except S7-1500S) and ET 200SP CPU; with FW V2.0 and higher.
• S7 Energy Efficiency Monitor for Machines	• Runs on all S7-1500 CPUs and ET 200SP CPUs; with FW V2.1 • Runs on all S7-1200 CPUs; with FW V4.2

More information

More information is available on the Internet at:

SIMATIC Energy Suite:
http://www.siemens.com/simatic-energy-suite

Energy Support Library (EnSL):
http://www.siemens.com/energysuite-hardware

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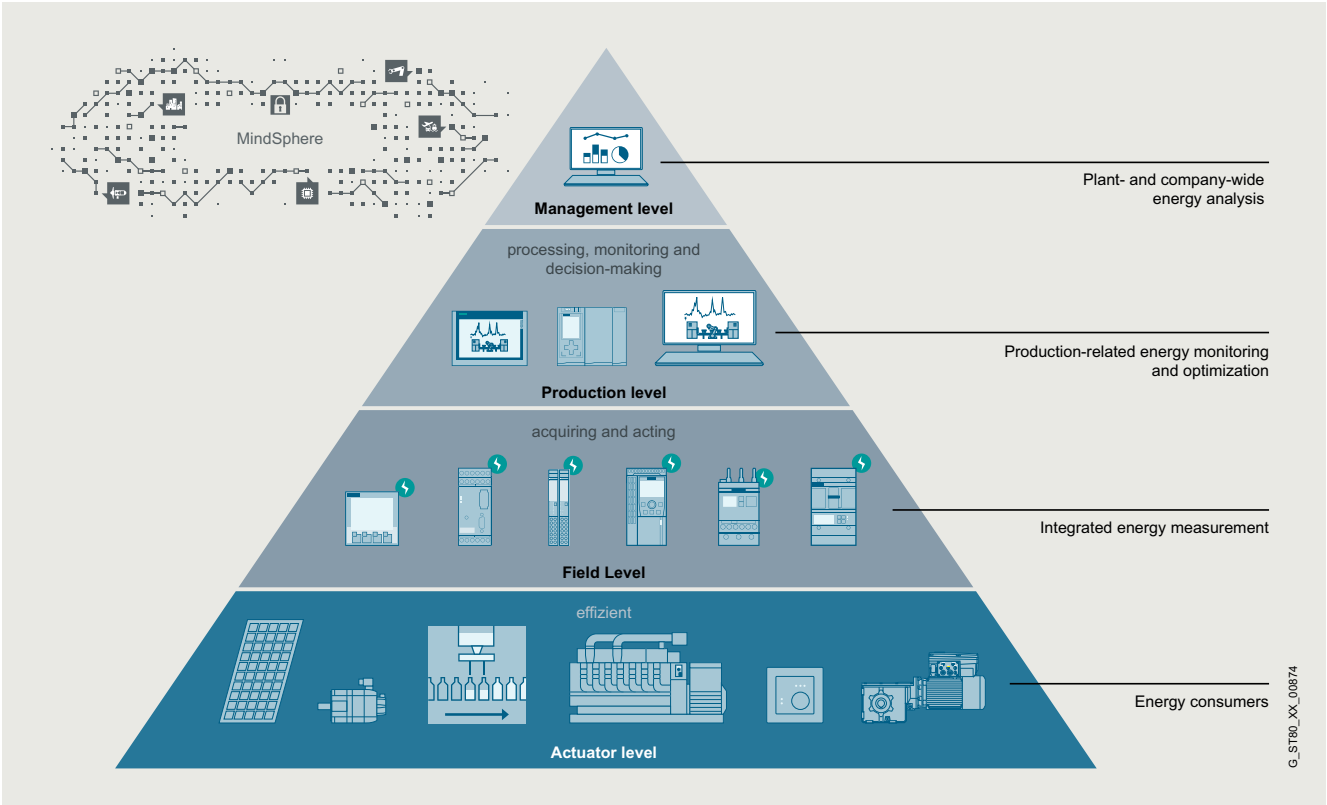
Overview



SIMATIC Energy Manager V7.3 energy management system

SIMATIC Energy Manager V7.3 makes energy flows and costs transparent – in both infrastructure and production.

SIMATIC Energy Manager provides users with a scalable, non-sector-specific energy data management system.
Its functions range from energy monitoring, energy controlling, energy invoicing, baseline management and prognosis, through to the management of energy efficiency measures.
Among other things, SIMATIC Energy Manager provides an extensive and easy-to-use report system, as well as a dynamic, widget-based web dashboard for analyzing and distributing data once it has been acquired and analyzed.

SIMATIC Energy Manager is available in a **Basic** and a **PRO version**.

Advantages:

- Appropriate energy efficiency measures can be devised based on performance indicators and display options. When implemented successfully, cost savings are achieved.
- Power monitoring offers the basis for a secure power supply
- Transparency at cost center level raises employee awareness and forms the basis for specifying clear, easy-to-understand aims, as well as for monitoring their achievement
- Technological processes and plants in production (for example: analysis based on machine status) can easily be connected and allow for energy performance evaluation
- Transparency combined with prognosis functions increases planning reliability and opens up new opportunities in energy procurement
- Energy controlling, with its flexible reporting and analysis functions, helps to ensure that efficient systems remains efficient
- Characteristic values can be freely defined to facilitate substantiated statements on increasing the efficiency of power generation systems and consumers
- Transparency – with the OPC UA (HA) server, data can be made available to additional applications
- It fulfills the legal obligations for monitoring and reporting on greenhouse gas emissions (CO_2 emissions)

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Overview

Energy Manager Basic:

- Easy configuration of dashboards, charts and reports
- With power monitoring, it is possible to analyze detail data of the measuring instruments
- Configuration of data points and the OPC UA, OPC DA, OPC HDA, Energy Suite, WinCC/PCS 7, Modbus/TCP, Modbus/TCP, Desigo CC and ASCII interfaces, as well as manual data acquisition
- Transfer of historical energy data from the PAC 2200 CLP or PAC 4200 via Modbus TCP
- Definition of derived data points in order to store performance indicators as a time series and export them, for example.
- Simple authorization concept
- Web client available in the languages DE, EN, IT, FR, ES, ZH
- Configuration of performance indicators data with a formula editor
- Configuration of parameters to display prices or factors
- Tabular overview and options for structuring data sources, data points, performance indicators and parameters
- Configuration of essential settings, e.g. email settings, backup, units, regional settings, account settings
- Provision of data with the OPC UA server

Energy Manager PRO:

- The S7 energy efficiency monitor as an instruction in the TIA Portal allows machine status-related energy data acquisition. Data is transferred to Energy Manager PRO via a communications module.
- Uniform and comparable display of efficiency indicators of machines/lines/cost centers
- Display of energy consumption and costs at machine level and cost center level
- Energy consumption and costs per workpiece or shift
- Benchmarking of same machines/workpieces from different manufacturers

Note:

Upgrading from SIMATIC Energy Manager 7.2 to SIMATIC Energy Manager 7.3 is possible at any time and is included in the SIMATIC Energy Manager SUS.

Benefits

Highlights of version 7.3

- The new search function in the web client enables the user to obtain the correct information quickly and without prior knowledge.
- The new Notification Center provides the user with an overview of the limit violations and comments entered by users.
  Here, too, the user can switch to the chart with just one click and see the entire context.
- Analysis of the batch-related data is now also possible in the web client.
  The user can simply restrict the selection by using filtering features and make a detailed analysis in the chart. In this way, the user can perform an analysis of the different batches of a product in a plant. The transparency can be used to find out why the energy consumption of a batch in which product A is produced is lower in plant X than in plant Y.
- If the user notices when analyzing data in the chart that data is not correctly acquired or displayed, the user can check with two clicks on the data point or indicator configuration to verify the settings.
- The user can switch to the chart during configuration of the data points or indicators to check whether the configuration provides the desired result.
- The following new functions for indicator calculation are available: Power, root, logarithm, energy to demand, maximum demand
- A ruler function is available to the user in the chart

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Design

SIMATIC Energy Manager V7.3

SIMATIC Energy Manager is available in a Basic and a PRO version.

Basic is the starter version and is entirely web-based. An upgrade from the Basic to PRO version is possible by means of a license key.

Both versions are supplied in a basic package to which tag packages can be added.

The **SIMATIC Energy Manager Basic** package includes:

- 50 tags
- 1 Energy Manager PRO acquisition component
- 1 Energy Manager web client

The **SIMATIC Energy Manager PRO** basic package includes:

- 50 tags
- 1 Energy Manager PRO acquisition component
- 1 Energy Manager PRO client
- 1 Energy Manager web client

Available tag packages:

- 50 tags
- 100 tags
- 250 tags
- 500 tags
- 1 000 tags
- 5 000 tags
- 30 000 tags

SIMATIC Energy Manager Software Update Service (SUS)

For each Energy Manager system there is a corresponding SUS (Software Update Service), which is dependent on the number of tags or consumer packages.

The SUS is valid for 1 year. The contract is automatically extended by 1 more year unless canceled 3 months prior to expiration.

SIMATIC Energy Manager extensions

The scope of Energy Manager can be extended with add-on packages:

- Energy Manager web clients (3, 20 or 60)
- Energy Manager PRO client
- Energy Manager PRO acquisition component
- Energy Manager PRO Planning and Forecast
- Consumer Package 1 with S7-EE monitor
- Consumer Package 5 with S7-EE monitor
- Consumer Package 25 with S7-EE monitor
- Consumer Package 1 without S7-EE monitor
- Consumer Package 5 without S7-EE monitor
- Consumer Package 25 without S7-EE monitor

The number of clients and web clients indicates the number of times simultaneous access is possible.

Function

Acquisition and pre-processing of energy and operating data

- In addition to an interface to the SIMATIC Energy Suite, SIMATIC Energy Manager also offers the latest interface standards such as WinCC, PCS 7, Desigo CC, OPC UA, OPC DA (DA, HA), OPC HDA, MODBUS TCP, ODBC, ASCII and XML, as well as machine drivers to the S7-EE monitor
- Preprocessing of energy data in a real-time calculation core that can be freely modeled including a formula editor for defining and configuring new calculation functions (heat calculations for boilers, quality for cogeneration plants, etc.)

Simple definition of performance indicators enabling rapid identification of relationships and dependencies:

- Energy Manager app for iOS and Android for mobile counter data acquisition
- Automatic plausibility check and generation of substitute values
- Long-term archive with versioning and compression functions
- Matrix editor and measured value editor for entering and processing energy and operating values
- Chart for presenting up-to-date (online) and historical load curves, as well as setpoint/actual value analyses
- Management and analysis of energy data
- Energy management dashboards for creating cross-company transparency through visualization of performance indicators and display of Sankey diagrams.

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Function

Monitoring

An important component of energy data management is the display and evaluation of operating data and performance indicators for the purpose of identifying actions for optimization and lowering costs and consumption.

Energy Manager provides the appropriate tools for displaying and evaluating operating data and performance indicators:

- Display of current and projected operating values together in one chart
- Reporting on quantities produced, consumption and costs
- Display of all relevant company data on a single dashboard

Controlling

Effective energy controlling is based on information about when and where energy is required. This is the only way that detailed information about optimization and potential savings can be provided. Reliable performance indicators form the basis for reports, such as those required for implementation of ISO 50001 requirements.

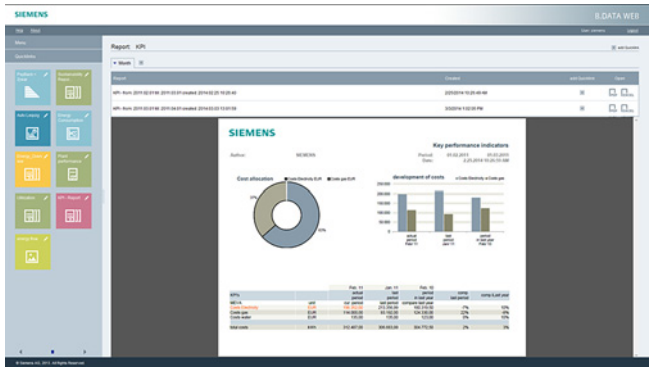
Energy Manager is the tool for effective controlling tasks:

- Freely configurable accounting of the energy flows of different media such as electricity, gas, or steam, from the main supply down to sub-distribution systems
- Determination of performance indicator values with direct reference to production batches or quantities for energy-related evaluation of production equipment
- Evaluation of energy purchase invoices for various media by entering counter readings, power and calculation parameters
- Target-performance analysis of energy consumption and costs according to predefined reference profiles or parameters
- Determination and display of statistical parameters such as time lines, distribution of hours or daily temperature figures
- Benchmarking of various plants or sites
- Machine-status-related energy analyses

Energy Manager's automatic reporting system is used for presentations:

Information is displayed in Microsoft Excel or Microsoft Word and can be prepared there as a table or diagram overview.

In this way, you can generate, for example, monthly reports with current figures in Microsoft Excel, Microsoft Word or PDF format without additional configuration effort.



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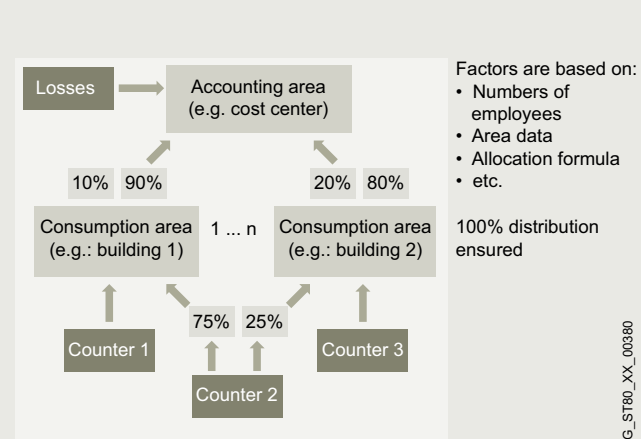
Function

Cost-center-oriented accounting

Clear allocation creates awareness for saving energy and regulates accountability. Only those who are charged directly with the costs that they cause will be willing to change their behavior. By assigning costs according to the "costs-by-cause principle" and through incentive systems, cost center managers can accelerate energy-saving measures. Energy Manager enables costs-by-cause accounting of energy and material flows as well as allocation to individual plants, customers or cost units.

- Flexible modeling of hierarchic accounting structures
- Tariff allocation of quantities, flexible price assessment with tariff and price time series
- Transfer of consumption figures/costs to the ERP system



Baseline management

The ability to calculate performance indicators is a core task of an energy data management system. However, even if performance indicators are available, the user often still has to interpret them. With baseline management, a model based on historical data can calculate a theoretical energy consumption (baseline) for any time.

This theoretical energy consumption serves as a default value for energy monitoring or energy controlling. This enables the user to see at any time whether the actual energy consumption is above or below the calculated theoretical level. If the cumulative deviation of these two values over time is calculated, it is possible to determine the efficiency of a plant.

Batch-related energy data analysis

In particular, if the energy consumption of a plant depends on the material produced, a batch-related analysis is essential. In the Energy Manager, the plants can be mapped and the indicators to be calculated can be defined, added and calculated.
The calculation of the indicators is performed immediately after data acquisition and is available to the user for further analyses. In the web client, the user can restrict the selection using a plant filter, material filter or batch filter and perform a detailed analysis in the chart for the selected batches.

Energy forecast

Energy Manager PRO places all relevant information at your fingertips to give you the most accurate forecast possible of energy demand and of the load curve for one or more sites, buildings, production areas or individual consumers.

- Generation of requirement forecasts based on production-dependent factors (production planning) and basic load profiles (typical days)
- With multi-variable regression analysis, it is simple to evaluate and model influencing factors. This model can be used to calculate the future energy demand

Management of energy efficiency measures

- All of a site's energy efficiency measures are recorded centrally in Energy Manager PRO. Each energy efficiency measure can be assigned to a certain region, department or even a specific plant
- Automatic calculation of efficiency based on potential savings and costs of each energy efficiency measure
- Predefined status for implementation progress of energy efficiency measures
- Categorization: Predefined priorities or categories help to prioritize energy efficiency measures

Power monitoring

With power monitoring, it is easy to acquire and analyze detail data of the measuring instruments in order to enhance the availability of their electrical power distribution.

- With just a few clicks, it is possible to make measured values of current, voltage and cos phi, visible.
- Should a system fail, it is possible to accurately analyze the detail data for this point in time and detect potential causes such as transients and voltage dips.

Energy reporting

- Freely parameterizable report generator for creating balances, protocols, bills
- Fully automated reporting, email dispatch and document management
- Energy Manager web client for company-wide viewing of dashboards, reports and results
- Information about discrepancies from specified parameters through KPI warning system

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SIMATIC Energy Manager

Ordering data	Article No.
SIMATIC Energy Manager V7.3	
Standard scope of supply	
• SIMATIC Energy Manager Basic incl. 50 tags [1]	**6AV6372-1DF07-3AX0**
• SIMATIC Energy Manager PRO incl. 50 tags [1]	**6AV6372-2DF07-3AX0**
• SIMATIC Energy Manager PRO PowerPack Basic -> PRO	**6AV6372-2DF07-3AX3**
• Tag Package 50 [1]	**6AV6372-2DF07-0CX0**
• Tag Package 100 [1]	**6AV6372-2DF07-0DX0**
• Tag Package 250 [1]	**6AV6372-2DF07-0EX0**
• Tag Package 500 [1]	**6AV6372-2DF07-0FX0**
• Tag Package 1 000 [1]	**6AV6372-2DF07-0GX0**
• Tag Package 5 000 [1]	**6AV6372-2DF07-0HX0**
• Tag Package 30 000 [1]	**6AV6372-2DF07-0JX0**
Download	
• SIMATIC Energy Manager Basic incl. 50 tags [1]	**6AV6372-1DF07-3AH0**
• SIMATIC Energy Manager PRO incl. 50 tags [1]	**6AV6372-2DF07-3AH0**
• SIMATIC Energy Manager PRO PowerPack Basic -> PRO	**6AV6372-2DF07-3AH3**
• Tag Package 50 [1]	**6AV6372-2DF07-0CH0**
• Tag Package 100 [1]	**6AV6372-2DF07-0DH0**
• Tag Package 250 [1]	**6AV6372-2DF07-0EH0**
• Tag Package 500 [1]	**6AV6372-2DF07-0FH0**
• Tag Package 1 000 [1]	**6AV6372-2DF07-0GH0**
• Tag Package 5 000 [1]	**6AV6372-2DF07-0HH0**
• Tag Package 30 000 [1]	**6AV6372-2DF07-0JH0**
SIMATIC Energy Manager extensions	
Standard scope of supply	
• SIMATIC Energy Manager, 3 Web Clients [4]	**6AV6372-2DF27-0AX0**
• SIMATIC Energy Manager, 20 Web Clients [4]	**6AV6372-2DF27-0BX0**
• SIMATIC Energy Manager, 60 Web Clients [4]	**6AV6372-2DF27-0CX0**
• SIMATIC Energy Manager PRO Client [4]	**6AV6372-2DF37-0AX0**
• SIMATIC Energy Manager PRO Planning and Forecast	**6AV6372-2DF47-0AX0**
• SIMATIC Energy Manager PRO Acquisition component	**6AV6372-2DF57-0AX0**
Download	
• SIMATIC Energy Manager, 3 Web Clients [4]	**6AV6372-2DF27-0AH0**
• SIMATIC Energy Manager, 20 Web Clients [4]	**6AV6372-2DF27-0BH0**
• SIMATIC Energy Manager, 60 Web Clients [4]	**6AV6372-2DF27-0CH0**
• SIMATIC Energy Manager PRO Client [4]	**6AV6372-2DF37-0AH0**
• SIMATIC Energy Manager PRO Planning and Forecast	**6AV6372-2DF47-0AH0**
• SIMATIC Energy Manager PRO Acquisition component	**6AV6372-2DF57-0AH0**

	Article No.
SIMATIC Energy Manager PRO Consumer Package	
Standard scope of supply	
• Consumer Package 1 with S7 EE monitor [3]	**6AV6372-2DF67-1AX0**
• Consumer Package 5 with S7 EE monitor [3]	**6AV6372-2DF67-1BX0**
• Consumer Package 25 with S7 EE monitor [3]	**6AV6372-2DF67-1CX0**
• Consumer Package 1 without S7-EE monitor	**6AV6372-2DF77-1AX0**
• Consumer Package 5 without S7-EE monitor	**6AV6372-2DF77-1BX0**
• Consumer Package 25 without S7-EE monitor	**6AV6372-2DF77-1CX0**
Download	
• Consumer Package 1 with S7 EE monitor [3]	**6AV6372-2DF67-1AH0**
• Consumer Package 5 with S7 EE monitor [3]	**6AV6372-2DF67-1BH0**
• Consumer Package 25 with S7 EE monitor [3]	**6AV6372-2DF67-1CH0**
• Consumer Package 1 without S7-EE monitor	**6AV6372-2DF77-1AH0**
• Consumer Package 5 without S7-EE monitor	**6AV6372-2DF77-1BH0**
• Consumer Package 25 without S7-EE monitor	**6AV6372-2DF77-1CH0**

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Ordering data

	Article No.
SIMATIC Energy Manager SUS [2]	
Standard scope of supply	
• For max. additional 50 tags and/or 1 Consumer Package[2]	**6AV6372-2DF00-0CL0**
• For max. additional 100 tags and/or 5 Consumer Packages[2]	**6AV6372-2DF00-0DL0**
• For max. additional 500 tags and/or 25 Consumer Packages[2]	**6AV6372-2DF00-0FL0**
• For max. additional 5 000 tags and/or 100 Consumer Packages[2]	**6AV6372-2DF00-0HL0**
• For more than 5 000 tags and/or 100 Consumer Packages[2]	**6AV6372-2DF70-0XL0**
Download	
• For max. additional 50 tags and/or 1 Consumer Package[2]	**6AV6372-2DF00-0CY0**
• For max. additional 100 tags and/or 5 Consumer Packages[2]	**6AV6372-2DF00-0DY0**
• For max. additional 500 tags and/or 25 Consumer Packages[2]	**6AV6372-2DF00-0FY0**
• For max. additional 5 000 tags and/or 100 Consumer Packages[2]	**6AV6372-2DF00-0HY0**
• For more than 5 000 tags and/or 100 Consumer Packages[2]	**6AV6372-2DF70-0XY0**

	Article No.
SIMATIC Energy Manager upgrades	
Standard scope of supply	
• Upgrade of systems with up to 50 tags and/or 1 Consumer Package	**6AV6372-2DF07-3CX4**
• Upgrade of systems with up to 100 tags and/or 5 Consumer Packages	**6AV6372-2DF07-3DX4**
• Upgrade of systems with up to 500 tags and/or 25 Consumer Packages	**6AV6372-2DF07-3FX4**
• Upgrade of systems with up to 5 000 tags and/or 100 Consumer Packages	**6AV6372-2DF07-3HX4**
• Upgrade of systems with more than 5 000 tags and/or more than 100 Consumer Packages	**6AV6372-2DF77-3XX4**
Download	
• Upgrade of systems with up to 50 tags and/or 1 Consumer Package	**6AV6372-2DF07-3CH4**
• Upgrade of systems with up to 100 tags and/or 5 Consumer Packages	**6AV6372-2DF07-3DH4**
• Upgrade of systems with up to 500 tags and/or 25 Consumer Packages	**6AV6372-2DF07-3FH4**
• Upgrade of systems with up to 5 000 tags and/or 100 Consumer Packages	**6AV6372-2DF07-3HH4**
• Upgrade of systems with more than 5 000 tags and/or more than 100 Consumer Packages	**6AV6372-2DF77-3XH4**
SIMATIC Energy Manager TRIAL	**6AV6372-2DF17-3AX0**
Standard scope of supply	

1) The tag packages dynamically expand the number of tags. The total number of tags is incremented by the value of the tag package in each case.

2) The SUS contract runs for 1 year. The contract is automatically extended by a further year unless canceled 3 months prior to expiration.

3) The license number on the certificate is used to activate the S7 instruction; a separate license certificate is required for each machine.

4) The Client license and Web Client license are licensing which only takes into account one simultaneous access. Example: If 5 users use the Energy Manager via the web client but only 3 work with it simultaneously, only 3 Web Client licenses are necessary. The same applies for the desktop client.

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Technical specifications

	SIMATIC Energy Manager PRO V7.3
Operating system	• Windows Server 2012 R2 (English/German) • Windows Server 2016 (English/German) • Windows Server 2019 (English/German) • Windows 10 Pro/Enterprise 64-bit (English/German) • Minimum of 16 GB RAM
Interface	In addition to an interface to WinCC, PCS 7, Desigo CC and S7 controllers, Energy Manager PRO also offers the latest interface standards such as OPC DA, OPC HDA, OPC UA, MODBUS TCP, ODBC, ASCII and XML.
WinCC versions [1]	• SIMATIC WinCC V7.4, V7.5 • SIMATIC WinCC RT Professional V14, V15, V15.1, V16, V17
PCS 7 versions [2]	• SIMATIC PCS 7 V8.2 • SIMATIC PCS 7 V9, V9.1
Virtualization	• VMWare Workstation 15, 16 • VMWare ESX 6.7, 7.0 • Microsoft Hyper-V for Windows Server 2016, 2019 • Microsoft Hyper-V Server 2016, 2019

[1] If an acquisition component is installed on a WinCC system, these requirements must also be complied with

[2] The SIMATIC Energy Manager PRO system for connection to the PCS 7 must always be installed on a separate PC

More information

More information is available on the Internet at:

http://www.siemens.com/energymanager

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4/2 Introduction

4/4 Industrial Edge Management

4/6 Industrial Edge apps
4/7 Data Service
4/8 Energy Manager
4/9 EtherNet/IP Connector
4/10 IE Flow Creator NEW
4/11 Inventory
4/12 LiveTwin
4/13 Machine Insight
4/14 Modbus TCP Connector
4/15 Notifier
4/16 Performance Insight
4/17 PROFINET IO Connector NEW
4/18 SIMATIC Automation Tool
4/19 SLMP Connector NEW
4/20 Partner apps

4/21 Industrial Edge devices
4/21 Industrial Edge Virtual Device NEW

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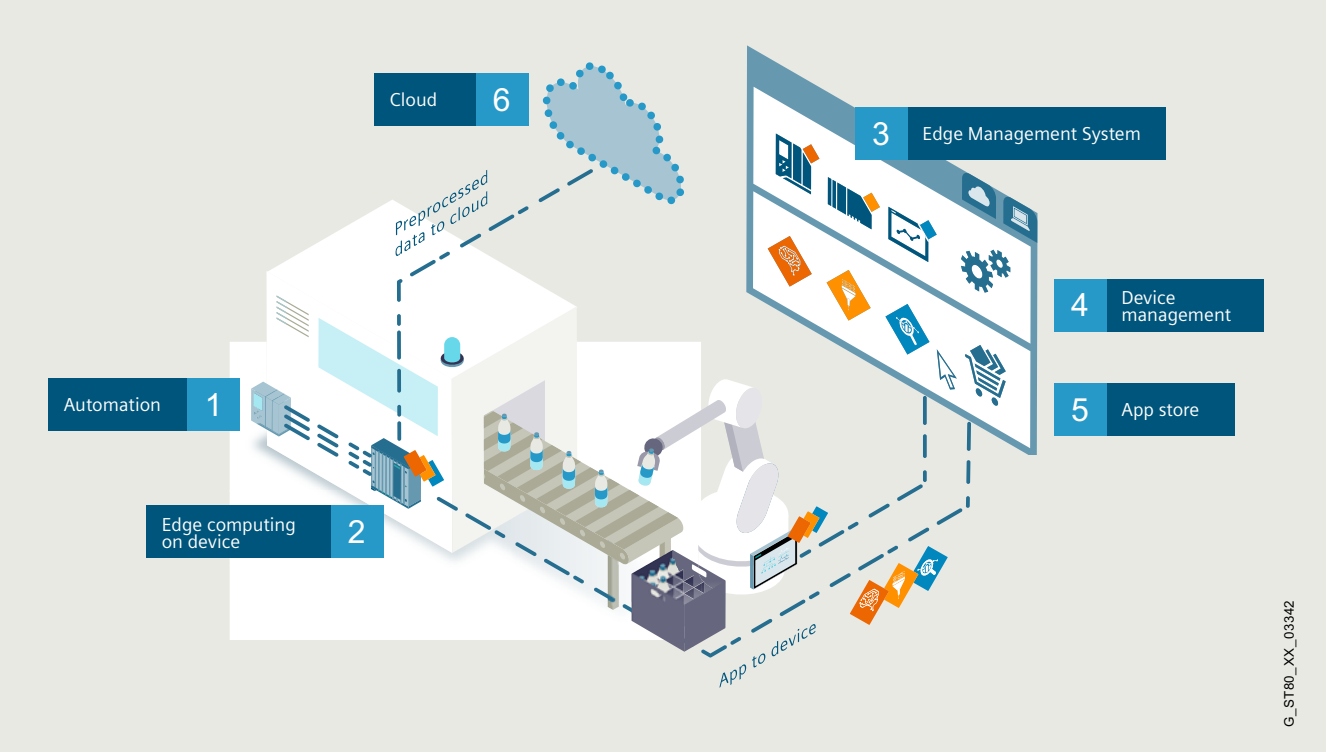
Overview



Industrial Edge

Expands the industrial automation technology with openness and flexibility for simple and intuitive processing, analysis and saving of production data.

Provides an integrated and secure runtime environment for running high-level programming language-based Edge applications (on the basis of the Docker IT standard) for local and powerful data processing and analysis at the automation level.

As compared to conventional PC-based systems, Industrial Edge enables an integrated connection to automation and cloud systems without additional programming workload and offers the option to manage Edge devices and software worldwide with one central management system. This makes data processing solutions future-proof to the maximum possible extent and enables new possible applications such as centralized software administration and versioning, for example for global recipe management.

Industrial Edge comprises the following products:

- Industrial Edge devices with Industrial Edge Runtime for running Edge applications at the automation level
- Industrial Edge applications
- Industrial Edge Management for central management of Edge devices and applications
- Industrial Edge Hub as central entry point for Edge-related software downloads and additional information, such as user documentation.

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Benefits

- Increase in flexibility and openness of existing and new automation systems allows innovative data processing concepts
- Long-term security and scalability of innovative data processing software solutions across hundreds of devices based on open application standards such as Docker
- Time savings during development of high-level programming language-based software solutions in industrial environments thanks to:
  - Security by default – Manual security hardening of open PC systems is no longer necessary
  - Integrated connectivity to field or cloud – Manual programming and implementation of connectivity, such as OPC UA or SIMATIC S7, is no longer necessary
- Time savings and reduced workload thanks to convenient central administration and diagnostics of Edge devices and Edge applications
  - Reduction of on-site service costs due to the central remote updatability of software on Edge devices
  - Time savings and reduced workload for software updates with 1-click bulk app downloads
  - Reduction of error sources through the standardization of software (apps) using integrated version management
- Decreased dependency of cloud systems and enhanced data processing intelligence in the field through native integration of Edge applications in automation systems
  - Realization of soft real time and latency-critical applications for data processing through integration of Edge Runtime in automation systems
  - Reduction of additional hardware usage through native integration in control and visualization systems (SIMATIC) and network components (SCALANCE)
- Ready-made Edge applications make for a simple start in intelligent data processing and usage

Application

Proprietary Edge applications or those developed by Siemens or third parties allow a wide variety of uses:

- Local production data processing and analysis based on high-level programming languages and artificial intelligence – can be used directly on the process without repercussions
- Local data collection, logging and archiving using object-oriented and relational databases for error localization with hitlists, directly at the process
- Production data harmonization and conversion of legacy protocols such as Modbus TCP to Industry 4.0 protocols such as OPC UA for data exchange with MES/IT systems
- IoT Gateway applications: Data transfer from automation systems to corporate IT/cloud infrastructure with local intelligence for data selection and processing
- Local production data visualization using web server, e.g. based on HTML5
- Coordinated intervention in automation systems (closed-loop) based on local, calculated analysis results, e.g. a 2D behavior simulation of machine components.

In principle, Industrial Edge is useful wherever multiple PC systems, preferably widely distributed, are used which today require more or less time-consuming manual maintenance and updating.

- Production and process automation
- Building automation
- Power engineering and distribution

More information

You can find more information on the Internet at:

http://www.siemens.com/industrial-edge

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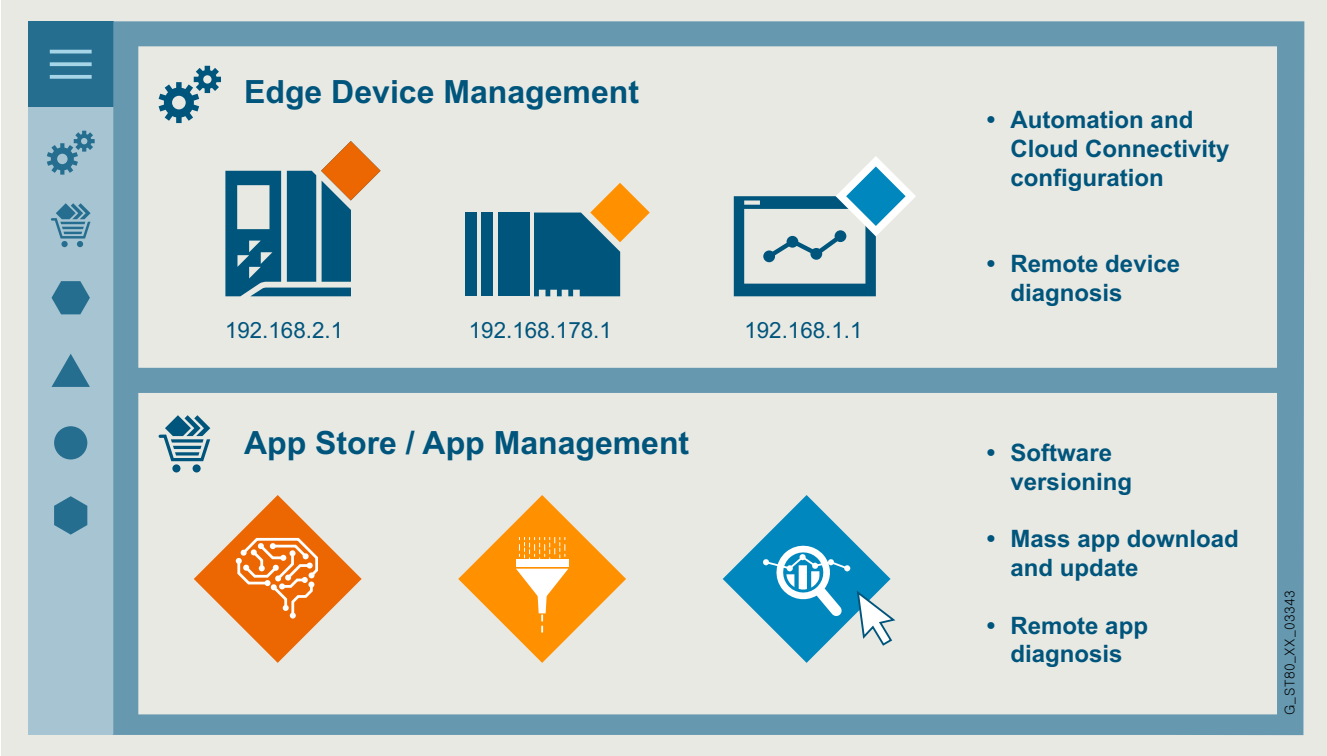
Overview



Industrial Edge Management (central Edge devices and application software management)

Industrial Edge Management is the central infrastructure with which all connected Edge devices and their software can efficiently be operated and managed over the complete lifecycle within a factory or worldwide.

Instead of having to run software updates and security patches on each device individually, you control everything centrally from one system, which can be installed on-premises, within the IT infrastructure or in private/public cloud solutions as required.

The system is offered as:

- Installation for PCs and IT cloud infrastructures via an ISO image
- Software as a service solution based on Siemens MindSphere (planned)

Moreover, Industrial Edge Management offers access to innumerable Edge applications of customers, partners and Siemens in the context of the open ecosystem.

Unified Comfort Panel with integrated Edge device management

In addition to central management of all connected Edge devices, the SIMATIC HMI Unified Comfort Panel offers the possibility to run the Edge applications and to manage, start and stop Edge applications directly on the HMI.

Licenses

Industrial Edge Hub Access:

To obtain access to the Industrial Edge Management software, you first need access to the Industrial Edge Hub, which is available globally.
This is done using the Industrial Edge Hub Access license. The Industrial Edge Hub contains all the information you need to commission an Industrial Edge solution such as documentation, software (Edge Management system, Edge App Publisher) for download.
The scope of supply includes the option of connecting and managing one (1) Edge device per Industrial Edge Management system free of charge.

Industrial Edge Management license:

An annual fee is charged for each additional Industrial Edge device that is connected with the central Edge management for the central update, firmware updates, security patches and continuous further development of the system.

Each connected device requires one (1) Industrial Edge Management license.

The previously customary one-off fee for software does not apply at all to the Industrial Edge Management. Licensing is implemented for a period of one year based on the number of connected Edge devices (software update contract).

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Benefits

- Maintenance and update work during operation, which previously had to be performed manually, e.g. using a USB flash drive on devices or remote desktop connections, is reduced due to the central software management.
- In addition, the commissioning workload (installing the operating system, security hardening, manual installation of application software, user management) for PC-based systems is reduced thanks to the ready-to-use Edge Runtime, on which any Industrial Edge applications can be installed.
- Industrial Edge allows the industrial application and use of Edge Computing on hundreds of machines and devices, also distributed globally.
- Security patches are provided by Siemens and can be rolled out to all devices in a centralized manner.
- The devices and applications can be adapted to new requirements at any time. Apps can be distributed to connected Edge devices with one click, meaning that the infrastructure grows with the customer's changes.

Ordering data

	Article No.
Industrial Edge Hub Access Enables access to additional Industrial Edge Hub and therefore to additional Industrial Edge software (Industrial Edge Management, Industrial Edge apps, and developer tools) Basic requirement for working with Industrial Edge. The scope of supply includes the option of managing one (1) Edge device per Edge management system free of charge.	**6ES7823-0EE00-4AX0**
Industrial Edge Management license License to manage one (1) additional Edge device centrally for 1 year and connect it to the Industrial Edge Management system	**6ES7823-0EE00-4AY0**

More information

You can find more information about products and solutions on the Internet at:

http://www.siemens.com/wincc-v7

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Industrial Edge apps

Overview

Industrial Edge applications

Industrial Edge apps enable information technology such as object-oriented programming, databases, data layers and artificial intelligence to be embedded in the control level.

Industrial Edge apps enable innovative applications relating to diagnostics and analysis of large, highly frequent data volumes in the automation and manufacturing environment, such as preventive maintenance. They are provided by partners and by Siemens and can be developed for specific customers based on individual requirements.

The proprietary development of Industrial Edge apps takes place based on Docker technology with programming languages such as C, C++, C#, Java, Python, Node.js. Due to the use of container technology, developed Industrial Edge apps can be scaled up to the cloud across devices.

In line with the openness concept, Industrial Edge apps can combine any applications, for example web servers, web sockets, databases, complex calculations and more, including open source-based components. Integrated apps, e.g. based on the open source framework Node-Red or Mendix, allow you to get started quickly with local data processing.

The following Industrial Edge apps are already available or will be available soon:

- Data Service
- Energy Manager
- EtherNet/IP Connector
- IE Flow Creator
- Inventory
- LiveTwin
- Machine Insight
- Modbus TCP Connector
- Notifier
- Performance Insight
- PROFINET IO Connector
- SIMATIC Automation Tool
- SLMP Connector
- Partner apps

Furthermore, a large number of applications are included in the Industrial Edge offering as standard, or can be obtained as an application example free of charge:

- Cloud Connector (available free of charge in the Industrial Edge Hub)
- SIMATIC S7 Connector incl. OPC UA (available free of charge in the Industrial Edge Hub)
- SIMOTION Trace Connector (application example)

The following Industrial Edge apps and other apps will be available at a later time:

- Device Scanner Service

Licenses

There are no additional costs for Industrial Edge applications developed by you in high-level programming languages based on Docker.

Siemens applications are licensed individually and on an annual basis with a software update contract.

More information

More information is available at:

https://new.siemens.com/global/en/products/automation/topic-areas/industrial-edge/it-specialists.html

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Overview

Data Service

Data Service is the tool to store and structure the data of the connected machine.
In addition, calculated data, such as the KPIs of Performance Insight, is stored in the Data Service.

Higher-level apps, such as Performance Insight, access the structure and data storage of the Data Service and receive their machine data from it.

Benefits

Overview of local machine and data store

- Connected – Immediately connectable with standardized connectors for industrial communication
- Fast – Easy connection to the database via an API
- Convenient – Aggregations are retrieved directly through the API
- Structured – Create and configure assets to map a structure
- Secure – Store data in a dedicated data structure

Function

Data Service connects the plant to the app. All data sent via the plant bus ends up in the Data Service and can be stored there in a structured manner. The various connectors (e.g. S7 Connector in the Industrial Edge or Open Pipe in the Unified Comfort Panel) can serve as the plant bus.

Data Service is a centrally usable element for structuring and storing data that can be used by other Edge apps via an API interface so that they do not have to implement their own data management. Functions such as aggregations, data storage and structuring are available.

Each node in the structure is referred to as an asset and helps to divide the machine into different areas. Based on the structure, it is easier to provide specific data for all higher-level apps, such as Performance Insight or other apps, even those developed in-house.

Ordering data

	Article No.
Industrial Edge app Data Service	
• 250 GB	**6AV2170-1JA00-0AA0**
• 4 TB	**6AV2170-1JA01-0AA0**
• Max.	**6AV2170-1JA02-0AA0**
Development Kit [1]	Free
Ecosystem Version (50 GB)	Free

[1] The Development Kit provides a simulation service to simulate the plant data. In addition, the data can be stored for up to one week or up to 20 GB.

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Overview

Energy Manager

Energy Manager forms the basis for energy optimization – from the machine to the entire plant.

With Energy Manager, the user can define KPIs in a few simple steps and display them in a suitable way on the dashboard.

A pre-defined dashboard enables analysis of the consumption of various media, the costs and the corresponding CO2 emission.

Integrated analysis functionality enables rapid data analysis to generate information.

Benefits

- Flexible – Individual calculation of KPIs to derive energy efficiency measures
- Adaptable – Dashboards that can be quickly changed and adapted to the requirements of the respective user group at any time
- Optimally informed – Analysis of KPIs as diagram, value, gauge, pie, heatmap and Gantt chart
- Overview of energy flows in the Sankey diagram or display of energy data in a continuous line to indicate the utilization of plants
- Expandable – Addition of KPIs, dashboards to existing plants without production downtimes

Application

The Industrial Edge app Energy Manager serves all user groups in the company interested in energy data – from the operator of individual machines, the production manager, the energy manager to the manager who keeps an eye on energy budget compliance.

The Industrial Edge app Energy Manager provides users with a scalable and industry-independent energy data management system.

Function

With the Energy Manager Industrial Edge app, the energy measured values of the plants can be processed into meaningful KPIs.
A formula editor can be used to define KPIs, and these can be displayed on the dashboard in the same way as the measured values.

The calculated KPIs are visualized by means of dashboards, which are integrated directly in the app.
The dashboards can be individually adapted, deleted and edited at any time.
All widgets that are available for visualization can be adapted to your own requirements at any time.

A pre-defined dashboard allows the user to analyze the media consumption of a plant. In addition to the energy consumption, the costs and the CO2 emissions, the user also sees the consumption per unit, the energy costs per unit and the CO2 emissions per unit.

Ordering data	Article No.
Energy Manager	
• Main Product; Basic license; this includes the "Energy Manager" app and 3x assets [1] [2]	**6AV2170-0JA20-0AA0**
• Asset	**6AV2170-0JA21-0AA0**

[1] An asset corresponds to a node in the tree structure. A node requires a license when an Energy Manager object (widget, dashboard, KPI) is used.

[2] Each additional asset used by the customer for Energy Manager must be procured by means of an additional license.

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Overview

Ethernet/IP Connector

Ethernet/IP Connector enables the connection of Ethernet/IP devices, for reading and writing process values from the automation technology.
It provides the data via IE data bus for Industrial Edge applications and services.

Industrial Edge app developers and users can use the data in their own and existing applications and services, e.g. Data Service.

Industrial Edge Connectors provide a unified data interface to reduce development work for Industrial Edge apps.
This enables innovative & modular software solutions

Industrial Edge Connectors can be combined with SIEMENS Industrial Edge apps, e.g. Performance Insight, Notifier, Energy Manager, and many more.

Benefits

- Flexible application to connect existing machines or lines to an Industrial Edge device via Ethernet/IP
- Connection of machines without or with adaptation of machines
- Modular software architecture for flexible combination with other IE apps, IE services and IE connectors

Function

- Provides data via unified payload via MQTT for Industrial Edge apps and microservices
- Unified data interface for S7 Connector, Modbus TCP Connector, Ethernet/IP Connector and PROFINET IO Connector
- The following communication partners have been tested:
  - Allen-Bradley ControlLx
  - Allen-Bradley CompactLogix
  - Allen-Bradley MicroLogix
  - Allen-Bradley GuardLogix (standard tags)
  - Allen-Bradley SLC
  - Omron (CJ1/2 and CS1)

Ordering data

	Article No.
Ethernet/IP Connector Basic license per app installation incl. connection to 16 Modbus TCP servers	**6AV2170-0KA50-0AA0**

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IE Flow Creator

Overview

IE Flow Creator

IE Flow Creator is a basic tool for implementing Industrial Edge use cases.

Based on Node-Red, IE Flow Creator uses a graphical interface to map different work steps, algorithms or functions with a simple modular principle.

A large selection of supplied blocks supports the quick entry into Industrial Edge and the implementation of digitalization use cases.

Benefits

- Easy operation using the drag-and-drop feature
- Large community for predefined blocks
- Low Coding Tool, configuring instead of programming
- Individual configuring of the flows or blocks
- Expandable: Additional loading and adding of further flows possible

Application

The IE Flow Creator app serves all Industrial Edge users. Due to simple graphical programming and ready-to-use blocks, simple as well as complex processes, functions and calculations can be implemented.

Furthermore, interfaces can be created graphically, enabling simple dashboards. This is possible without in-depth IT knowledge.

IE Flow Creator offers the ideal starting point for Industrial Edge and digitalization projects.

Function

IE Flow Creator permits the easy implementation of digitalization use cases.

Reading, processing and forwarding of data is abstracted and simplified by the graphical programming language based on Node-Red.

The included flows can be compiled individually or even extended with other publicly available flows.

Not only handling data is enabled by the IE Flow Creator, but also displaying it.

Simple dashboards and visualization can be implemented with a few clicks.

Ordering data

	Article-No.
IE Flow Creator Creation of data flows without in-depth programming knowledge for data processing from various sources and provision for further applications. Consignee email address required for delivery Restricted sales release. Requirement: Industrial Edge Access (6ES7823-0EE00-4AX0). The specific terms under https://www.siemens.com/industrial-edge-specific-terms apply exclusively	**6ES7823-0EA00-0AA0**

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Overview

Industrial Edge app Inventory

Industrial Edge app Inventory scans and visualizes the installed PROFINET & network components of a plant and machine.

The detected PROFINET & network components are aggregated in an overview, detail information displayed in a detail view, and release checks performed via whitelist/blacklist.

In addition, the installed PROFINET & network components can be started and managed centrally via MQTT.

Benefits

- Reduction of maintenance and operating costs
- Real-time overview of installed PROFINET & network components for optimization of maintenance intervals
- Check of hardware and software versions according to customer-specific releases

Application

- Suitable for a large number of industrial applications
- For new and existing systems

Function

- Integrated scan of automation components based on industrial standards
- Whitelist and blacklist support for customer-specific firmware releases
- MQTT interface for central management of installed PROFINET & network components

Ordering data

	Article No.
Industrial Edge app Inventory Basic license per app installation	**6AV2170-0JA40-0AA0**

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LiveTwin

Overview

Industrial Edge app LiveTwin enables users of Siemens Industrial Edge to easily and directly run 1D simulation models. LiveTwin Edge app can run a wide variety of 1D simulation models, such as simulations of mechatronic systems.

The following scenarios are possible:

- Export simulation models directly from MATLAB® Simulink®, Amesim, Open Modelica, and more than 100 other simulation tools and simply play them in the Siemens Edge devices. No additional engineering work is required.
- Execute simulations that were created in different domain-specific tools and wire all parts to each other.
- Use the natively supported interfaces of Siemens Industrial Edge to connect the simulation to the automation and further systems.

Benefits

Due to the proximity of Industrial Edge to the process, a high-cycle (10 ms) data connection with the PLC is possible. LiveTwin support the calculation of virtual sensors, "Model Predictive Control", status monitoring and many other simulations.

Application

For new and existing systems for:

- Process optimization
- Savings in hardware costs
- Predictive maintenance
- Reduction in downtimes

Function

Industrial Edge app LiveTwin is compatible with the FMI standard [1] and therefore compatible with the most important 1D simulation tools on the market, including Simcenter Amesim (for multi-physics models), MATLAB® Simulink®, Ansys and many others.

Industrial Edge app LiveTwin is software that is independent of the simulation tool. It is fully integrated in MATLAB® Simulink® and can run models that were exported to a destination with Simulink Coder as code in C++.

Industrial Edge app LiveTwin is integrated in the Siemens Industrial Edge ecosystem with the Industrial Edge app Flow Creator.
This integration enables the user to pre-process and collect data, among other things, with the wireframe of the Flow app and the portability of LiveTwin simulation models.

Users can import various models of different simulation tools directly into LiveTwin and create model instances, connect the models with Flow Creator, and run the various models together without additional runtime for each individual simulation software that was used originally to create the models. This shows the portability, compatibility and independence of the simulation software used.

[1] Functional mockup interface: https://fmi-standard.org/

Ordering data

	Article No.
LiveTwin Edge app	**6AV2170-0BL00-0AA0**

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Overview

Machine Insight

Machine Insight monitors industrial machines incl. automation components and provides an overview of the historical states of machines and plants.

In this way, maintenance engineers can retrospectively evaluate and analyze changes and states of the machines and resolve failure times after they have already been acknowledged.

Through this retrospective diagnostics, failure times of systems and machines can be reduced to a minimum.

Benefits

- Simple and retrospective diagnostics of machines and automation components to reduce downtimes
- Automatic logging of changes to simplify troubleshooting and trace warrantees, e.g. program updates of the SIMATIC S7 CPU
- Visualization of machine and automation information in a patented Web UI to detect error causes quickly and easily

Function

- SIMATIC S7-1200 & S7-1500 support (system diagnostics and alarms)
- Logging of machine and device states
- Configuration of customer-specific machine states
- Automatic logging of machine changes

Ordering data

	Article No.
Machine Insight	
• Basic license per app installation incl. 1 diagnostics connection	**6AV2170-0JA30-0AA0**
• 1 additional S7-1200 diagnostics connection	**6AV2170-0JA31-0AA0**
• 1 additional S7-1500 diagnostics connection	**6AV2170-0JA32-0AA0**

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Modbus TCP Connector

Overview

Modbus TCP Connector

Modbus TCP Connector enables the connection of Modbus TCP devices, for reading and writing process values from the automation technology.
It provides the data via IE data bus for Industrial Edge applications and services.

Industrial Edge app developers and users can use the data in their own and existing applications and services, e.g. Data Service.

Industrial Edge Connectors provide a unified data interface to reduce development work for Industrial Edge apps. This enables innovative & modular software solutions.

Industrial Edge Connectors can be combined with SIEMENS Industrial Edge apps, e.g. Performance Insight, Notifier, Energy Manager, and many more.

Benefits

- Flexible application to connect existing machines or lines to an Industrial Edge device via Modbus TCP
- Connection of machines without or with adaptation of machines
- Modular software architecture for flexible combination with other IE apps, IE services and IE connectors

Function

- Provides data via unified payload via MQTT for Industrial Edge apps and microservices
- Unified data interface for S7 Connector, Modbus TCP Connector, Ethernet/IP Connector and PROFINET IO Connector
- The following communication partners have been tested:
  - Modicon Compact series
  - Modicon Quantum series
  - Modicon Momentum series
  - Modicon Premium series
  - Modicon Micro series
  - Modicon M340 series

Ordering data

	Article No.
Modbus TCP Connector Industrial Edge Connector, 12-month license, For communication with 16 Modbus TCP servers Email address required for delivery Requirement: Industrial Edge Access (6ES7823-0EE00-4AX0)	**6AV2170-0KA40-0AA0**
Accessories	
Industrial Edge Access for Industrial Edge Hub For Industrial Edge Hub and initial access to Industrial Edge software components. Requirement for working with Industrial Edge platform Email address essential for delivery Limited sales release	**6ES7823-0EE00-4AX0**

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Overview

Industrial Edge app Notifier

Industrial Edge app Notifier monitors customer-specific assets and sends notifications directly to employees' smartphones or smartwatches.

As soon as an employee accepts a notification, everyone can see who is handling the notification – this also simplifies the coordination of service technicians, for example.

Due to this fast reaction time of the operators, failure times of systems and machines can be reduced to a minimum.

Benefits

- Notifications are detected without delay and not only during the next manual check of the plants
- Notifications reach employees wherever they are

Application

- Suitable for a large number of industrial applications
- For maintenance and repair personnel to streamline the alarm messaging and coordination process
- For new and existing systems

Function

- Monitoring of plant and machine data
- Notifications are based on easy-to-manage user-defined rules
- Freely selectable notification texts
- Notifications on smartphones and smartwatches [1] within a Wi-Fi network
- Supports notification types: Alert, warning and information

[1] The availability and compatibility with various devices is continuously expanded. You must check before purchasing whether the desired device and operating system are already supported.

Ordering data

	Article No.
Ind. Edge app Notifier	
• Main Product; Basic license per app installation incl. 15 notification rules	**6AV2170-0JA00-0AA0**
• Additional Notification Rules; Basic license per app installation incl. 15 notification rules + 15 additional notification rules	**6AV2170-0JA01-0AA0**

4

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Overview

Industrial Edge app Performance Insight

Industrial Edge app Performance Insight provides the option to visualize and analyze machine parameters and process data directly on the device.

Individual key performance indicators (KPIs) can be calculated and visualized with Performance Insight. Built-in data aggregations enable the evaluation of existing data.

Benefits

- Show vulnerabilities in production processes and derive potentials for optimization
- Flexible due to individual calculation of plant-specific key performance indicators in the Edge environment
- Adaptable due to quickly modifiable dashboards which can be adapted at any time to the user's requirements
- Optimally informed due to analysis of KPIs as diagram, value, gauge, pie, heatmap and Gantt chart
- Expandable through addition of KPIs to existing plants without production downtimes

Application

Serves all user groups - from the operator of single machines who quickly requires a dashboard on site to monitor individual machines, through to the management that wants to obtain an overview of the most important plant KPIs.

Function

With the Industrial Edge app Performance Insight, the measured values of the plants can be processed into meaningful KPIs.

Using the KPI definition, recurring KPIs can be stored as templates and reused multiple times at the locations where they are needed.

All calculations can be individually adapted to customer requirements using the formula editor. The calculated KPIs are visualized by means of dashboards, which are integrated directly in the app.
The dashboards can be individually adapted, deleted and edited at any time. All widgets that are available for visualization can be adapted to your own requirements at any time.

Ordering data

	Article No.
Industrial Edge app Performance Insight	
• Basic license per app installation incl. 3 assets	**6AV2170-0JA10-0AA0**
• 1 additional asset license	**6AV2170-0JA11-0AA0**

Note:

The basic license Performance Insight licenses the "Performance Insight" app and three assets [1].

Each additional asset used by the customer for Performance Insight must be procured by means of an additional license.

[1] An asset corresponds to a node in the tree structure. A node requires a license when a Performance Insight object (widget, dashboard, KPI) is used.

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Overview

PROFINET IO Connector

PROFINET IO Connector enables reading and writing of process values in automation technology by connecting PROFINET IO devices, PLCs via I-device and data couplers (e.g. PN/PN coupler). PROFINET IO Connector makes the data available for Industrial Edge applications and services via the IE data bus.

Industrial Edge app developers and Industrial Edge app users can use the data in their own and existing applications and services, e.g. Data Service.

To reduce development work for Industrial Edge apps, Industrial Edge Connector provides a unified data interface and enables innovative & modular software solutions.

Industrial Edge Connectors can be combined with SIEMENS Industrial Edge apps, e.g. Performance Insight, Notifier, Energy Manager, and many more.

Benefits

- Fast data acquisition up to 1 ms for analysis in SIEMENS and third-party applications
- Flexible application to connect existing machines or lines via additional PROFINET IO devices, PLCs via I-device and data couplers (e.g. PN/PN couplers) to an Industrial Edge device
- Connection of PROFINET IO devices from SIEMENS and third-party vendors
- Connection of machines without or with adaptation of machines
- Modular software architecture for flexible combination with other IE apps, IE services and IE connectors

Function

- Integrated PROFINET IO controller functionality with update cycles up to 1ms
- Support of cyclic and acyclic PROFINET services
- Data provision in unified payload via MQTT for Industrial Edge apps and microservices
- Unified data interface for S7 Connector, Modbus TCP Connector, Ethernet/IP Connector and PROFINET IO Connector
- Configuration of PROFINET IO devices via TIA Portal
- Support of PROFINET IO devices from SIEMENS and third-party vendors via GSMDL file

Ordering data

	Article No.
PROFINET IO Connector	
PROFINET IO Connector basic license Basic license per app installation incl. connection to 16 PROFINET IO devices	**6AV2170-0KA30-0AA0**

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SIMATIC Automation Tool

Overview

SIMATIC Automation Tool

The SIMATIC Automation Tool enables users to manage TIA automation components during commissioning, maintenance tasks and in case of service.

What makes the SIMATIC Automation Tool special is that it is based on TIA Portal projects and a CPU update can be performed independently of the engineering framework.

Benefits

- Reduction of maintenance and operating costs
- Check of hardware and software versions
- Assignment of IP address and network mask during commissioning of SIMATIC modules
- Updating firmware and TIA projects on S7-1200 and S7-1500

Function

- Integrated scan of automation components based on industrial standards
- Change of IP address and network mask for SIMATIC S7-1200 and S7-1500 modules
- Updating module firmware
- Updating module application software by transferring the TIA project file

Ordering data

	Article No.
SIMATIC Automation Tool	
• Basic license per app installation incl. 1x CPU test connection	**6AV6676-6EA00-0AA0**
• Basic license per app installation incl. 1x S7-1200 connection	**6AV6676-6EA00-0AA1**
• Basic license per app installation incl. 1x S7-1500 connection	**6AV6676-6EA00-0AA2**

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Overview

SLMP Connector

SLMP Connector enables the connection of SLMP devices for reading and writing process values from the automation technology.
It provides the data via IE data bus for Industrial Edge applications and services.

Industrial Edge app developers and users can use the data in their own and existing applications and services, e.g. Data Service.
Industrial Edge Connectors provide a unified data interface to reduce development work for Industrial Edge apps. This enables innovative and modular software solutions.

Industrial Edge Connectors can be combined with SIEMENS Industrial Edge apps, e.g. Performance Insight, Notifier, Energy Manager, and many more.

Benefits

- Flexible application to connect existing machines or lines to an Industrial Edge device via Ethernet/IP
- Connection of machines without or with adaptation of machines
- Modular software architecture for flexible combination with other IE apps, IE services and IE connectors

Function

- Provides data via unified payload via MQTT for Industrial Edge apps and microservices
- Uniform data interface for S7 Connector, Modbus TCP Connector, Ethernet/IP Connector, SLMP Connector, and PROFINET IO Connector
- The following communication partners have been tested:
  - Mitsubishi iQR Services
  - Mitsubishi iQF Services

Ordering data

Ordering data	Article No.
SLMP Connector	**6AV2170-0KA60-0AA0**

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Overview

As a customer, you can find the right app for your application from partners and Siemens in the Industrial Edge Marketplace (https://www.siemens.com/industrial-edge-marketplace). On the open Industrial Edge platform, app developers and partners can develop applications and sell them via the Industrial Edge Marketplace.

If you wish to publish applications yourself in the future, please contact us at:

industrialedge.industry@siemens.com

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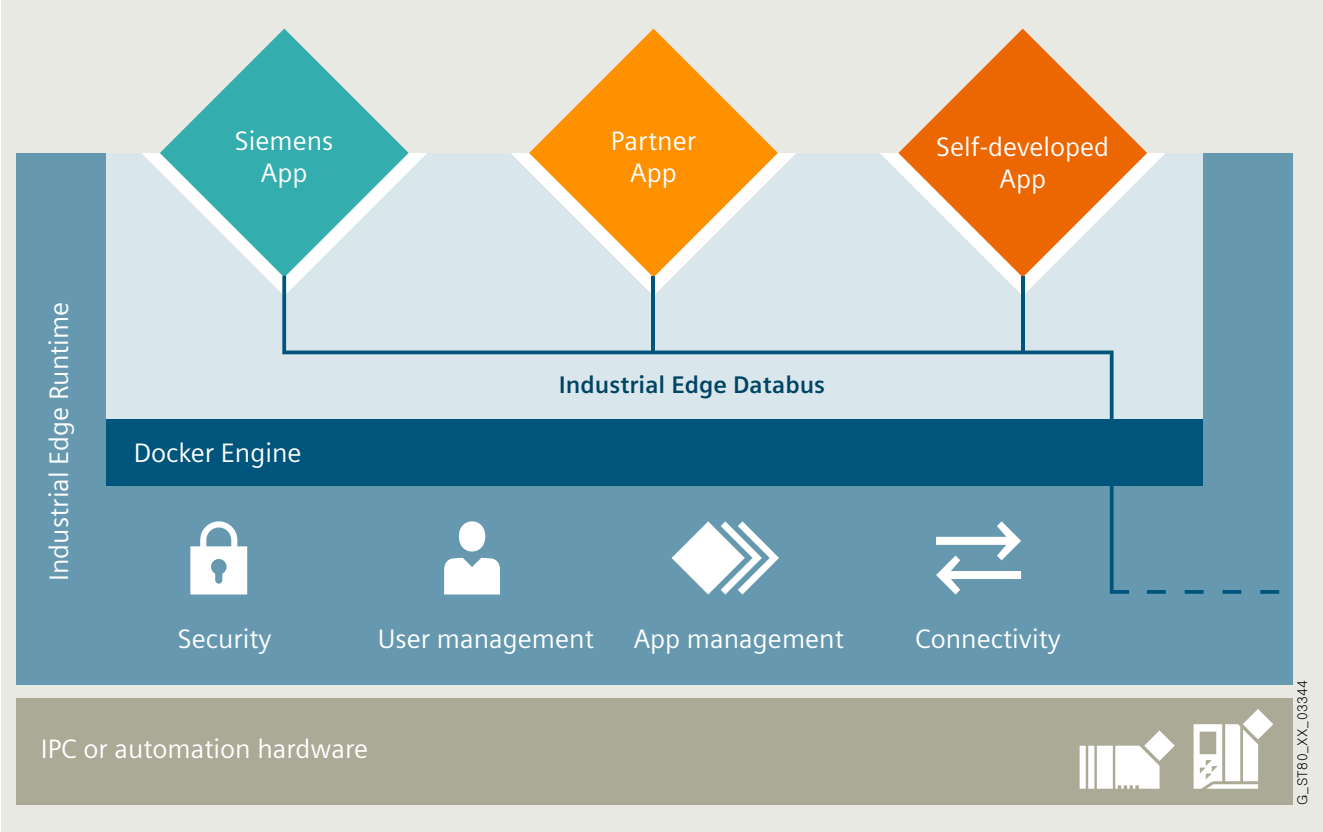
Overview



Industrial Edge Runtime

Edge devices with Industrial Edge Runtime

Industrial Edge Runtime enables secure, local execution of any number of Edge applications on different Edge systems.

- Providing the integrated connectivity of Industrial Edge Runtime to systems at the field, control and IT/cloud level reduces the software implementation workload on the customer end as compared to conventional data processing solutions based on Linux and Windows.
- Based on the open container standard Docker, Edge applications can be scaled and run on a wide range of Edge devices after being programmed once. Furthermore, this allows software to be broken up into manageable units and these units to be updated, started and stopped in a dedicated manner – remotely for maximum convenience.
- An integrated databus on Industrial Edge Runtime based on MQTT enables secure and controlled app-to-app communication as well as data exchange between external systems and Edge apps. In this way, interface dependencies are elegantly resolved – after being programmed once, apps can be integrated in various domains and automation systems.
- The Edge devices are commissioned and configured via Industrial Edge Management.

Dedicated Edge devices

Dedicated Edge devices with preinstalled Industrial Edge Runtime are supplied for the sole purpose of Edge-based data processing.

Industrial PCs of various performance classes are offered with preinstalled Edge Runtime:

- SIMATIC IPC127E (available soon)
- SIMATIC IPC227E (see "PC-based Automation -> Industrial PC -> Box PC")
- SIMATIC IPC427E (see "PC-based Automation -> Industrial PC -> Box PC")

Edge-enabled automation systems

These devices offer native support of Industrial Edge Runtime **in addition** to their technological function. This enables high-performance data processing with short latency times, as well as functional expansion through apps. By onboarding the devices to the central management system, any number of devices can be administered centrally.

The SIMATIC HMI Unified Comfort Panels are the first device family to be supplied "Edge-enabled" as standard (see "Operator panels -> Advanced HMI Panel-based -> SIMATIC HMI Unified Comfort Panels").

Licenses:

For centralized management of distributed Edge devices and the Edge applications, additional usage fees are incurred per connected device in connection with Industrial Edge Management.

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Industrial Edge Virtual Device

Overview

Industrial Edge Virtual Device

The Industrial Edge Virtual Device allows you to implement Industrial Edge use cases in an IT infrastructure as a virtual machine.

Benefits

- Fast implementation of development, test and demonstration environments for Industrial Edge
- Scalable Industrial Edge Runtime and use of availability options of the virtual infrastructure
- Use of Industrial Edge on existing IT infrastructure
- Functional compatibility with physical Industrial Edge Devices
- Uniform user experience with physical and virtual Edge Devices
- Flexible allocation of resources (CPU, RAM, storage) to the Industrial Edge Device for demand-oriented scaling

Application

- Hybrid setups of physical Industrial Edge Devices located close to the process and higher-level Industrial Edge Virtual Device – centrally managed with Industrial Edge Management
- Flexible environment for app developers and use case implementers
- Central implementation of Industrial Edge Use Cases on the IT infrastructure.

Function

Requirements:

- Virtual infrastructure:
  - VMware ESXi: Version 6.7 or higher
- Minimum hardware requirements:
  - 1 vCPU core
  - 4 GB RAM
  - 15 GB virtual disk
  - 1 virtual network adapter
  - Industrial Edge Management and valid license for device onboarding

Constraints:

- No support of hardware-specific properties (e.g. certain interfaces)
- Currently no support for applications that require a certain time-deterministic behavior

Ordering data

Ordering data	Article No.
Industrial Edge Virtual Device Lizenz License for one virtual machine with Industrial Edge Runtime; 12-month license; Email address required for delivery; Limited sales release; Only the specific terms under: https://www.siemens.com/industrial-edge-specific-terms apply Requirements: Industrial Edge Access (6ES7823-0EE00-4AX0) and Industrial Edge Management license for an Edge device (6ES7823-0EE00-4AY0)	**6ES7823-0EE10-0AA0**

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Overview

SIMATIC Industrial PC

Our reliable and innovative SIMATIC industrial PCs are the optimal PC hardware platform for PC-based Automation from Siemens.

Rack PC

Rack PCs are flexible, high-availability industrial PC systems for powerful yet compact applications using 19" technology.

Box PC

SIMATIC Box PCs provide mechanical engineers, plant engineers and control cabinet builders with particularly rugged industrial PC systems for use in powerful yet compact applications.

Panel PC

SIMATIC Panel PCs are suitable thanks to their high industrial compatibility for use in control cabinets, consoles and control panels, as well as directly on the machine. Typical areas of application can be found in both factory and process automation.

Tablet PC

The SIMATIC Industrial Tablet PC taps into new application areas within the scope of Industry 4.0. Designed for industrial use, the multiple functions of the SIMATIC ITP1000 deliver convincing results for day-to-day working. Typical applications are in maintenance/service, production and measuring and testing.

Industrial monitors and thin clients

Flexible operator input concepts can be implemented via Flat Panel monitors or thin clients. These are industry-standard LCD monitors with high-contrast displays that can be remotely located from the PC, or low-cost, rugged thin clients that offer HMI functionality over the network in larger plants spread over wide areas.

Devices for special requirements

Fully-enclosed IP65-protected devices

The fully-enclosed devices (PRO devices) are ideal for industrial applications in harsh environments due to their extremely rugged design. They are, for example, specially designed for mounting on a support arm/pedestal.

http://www.siemens.com/ip65-hmi-devices

Devices with stainless steel fronts

SIMATIC HMI offers industry-specific versions for smooth use in accordance with regulations by modifying its standard devices. For the food and beverages industry, for example, we supply devices with stainless steel fronts, and for industries facing particularly harsh ambient conditions we offer fully-enclosed, dust and splash proof devices in a rugged aluminum enclosure with high IP65 degree of protection.

Panels and Panel PCs with touch screens and stainless steel fronts are designed for machine-level operator control and monitoring in the food and beverages industry.

http://www.siemens.com/inox-hmi-devices

Devices for hazardous areas

Intrinsically safe SIMATIC Panel PCs and thin clients specially designed for hazardous areas.

http://www.siemens.com/simatic-hmi-ex

IPC software

A graded concept is available for effective early detection of potential failures and minimization of actual downtimes. It consists of hardware and software expansion options specially developed for SIMATIC IPC, which can be used to increase availability on a system-specific basis, depending on safety requirements.
The following components are available:

- SIMATIC IPC Image & Partition Creator
- SIMATIC IPC DiagMonitor
- SIMATIC IPC Remote Manager
- SIMATIC IPC FirmwareManager
- SIMATIC Industrial OS

Software packages for SIMATIC IPCs

Software packages are offered for all available SIMATIC IPCs that, when ordered, produce genuine price advantages.
All you have to do is: Select your SIMATIC IPC, configure it, and order it together with the SIMATIC WinCC RT Advanced, WinCC RT Professional and WinCC V7 software and also the SIMATIC WinAC RTX (F) Software Controller.

https://support.industry.siemens.com/cs/document/99860269/updated-list-of-software-packages-with-simatic-ipc-(april-2022)?dti=0&lc=en-AT

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Overview

Rack PCs are flexible, high-availability industrial PC systems for powerful yet compact applications using 19" technology.

Four device classes are available for different requirements:

SIMATIC IPC347 – high performance at an optimized price

SIMATIC IPC547 – latest technology and maximum performance at an attractive price

SIMATIC IPC647 – maximum compactness combined with maximum industrial functionality

SIMATIC IPC847 – maximum expandability combined with maximum industrial functionality

SIMATIC IPC1047 – maximum performance and expandability

Shared industrial functionality of the IPC series 547, 647 and 847

- Maximum system performance for complex automation tasks and computationally intensive PC tasks in the industrial environment through use of Intel Core processors
- Designed for continuous 24-hour operation
- Monitoring and diagnostics functions (e.g. temperature, fan, watchdog)
- Front LED concept for efficient self-diagnostics, e.g. monitoring of hard disks in RAID1 configurations, fans or the status display for Ethernet
- RAID1 configuration (mirror disks), optionally in Hot Swap removable trays
- Hard disks with capacities up to 2 TB for large data volumes
- SSD (solid-state drive) SATA, also as RAID1 configuration, optional
- SSD (solid-state drive) M.2 NVMe
- Redundant AC power supply, optional
- Compact dimensions for installation in control cabinets only 500 mm deep
- Dust protection thanks to overpressure ventilation concept with fan on the front and dust filter
- Lockable front door
- Service-friendly equipment design due to prepared telescopic rail mounting
- Service-friendly equipment design due, for example, to the replacement of filters/fans from the front without the need for tools, or opening of the enclosure with just one screw.
- Universal implementation as an industrial workstation or server
- Operating system preinstalled and activated for fast commissioning
- Fast restoration of the delivery status of the HDD thanks to restore DVD or USB flash drive
- High flexibility and expandability of components
- PCI and PCI Express expansion slots
- Independent industrial product design

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Overview

SIMATIC IPC347G – high performance at an optimized price

- Intel Pentium and Intel Core i processors, 6th generation
- Lockable front flap
- Uninterrupted duty at 40 °C ambient temperature without power loss
- Dust protection thanks to overpressure ventilation concept with fan on the front and dust filter
- PCI and PCI Express expansion slots
- 7 configurations available ex stock at short notice
- Availability approx. 3 years
- Guaranteed spare parts availability for at least 3 years

SIMATIC IPC547J – latest technology and maximum performance at an attractive price

- Intel Core i processors 10th generation and Xeon
- Maximum processor performance in maximum configuration without loss of power (throttling) at ambient temperatures of up to 40 °C
- Optional RAID5 configuration (striping with parity) in Hot Swap removable trays
- RAID1 and RAID5 configurations with additional Hot Spare hard disk, optional
- Low noise output thanks to controlled fans
- Availability approx. 3 years
- Guaranteed spare parts availability for at least 3 years

SIMATIC IPC647E – maximum compactness combined with maximum industrial functionality

- Maximum compactness due to 4 free PCI/PCI Express slots for installing long expansion cards
- Maximum thermal stability up to 50 °C ambient temperature, even at maximum processor performance
- High vibration/shock resistance thanks to special hard disk holders
- Intel Core i processors 8th generation and Xeon
- ECC memory, optional
- High component/design continuity
- Motherboard developed and manufactured by Siemens
- Availability for at least 5 years
- Guaranteed spare parts availability for at least 5 years

SIMATIC IPC847E – maximum expandability combined with maximum industrial functionality

- Maximum expandability due to 11 free PCI/PCI Express slots for installing long expansion cards
- Maximum thermal stability up to 50 °C ambient temperature, even at maximum processor performance
- High vibration/shock resistance thanks to special hard disk holders
- Intel Core i processors 8th generation and Xeon
- Optional RAID5 configuration (striping with parity) in Hot Swap removable trays
- RAID1 and RAID5 configurations with additional Hot Spare hard disk or SSD SATA optional
- ECC memory, optional
- High component/design continuity
- Motherboard developed and manufactured by Siemens
- Availability for at least 5 years
- Guaranteed spare parts availability for at least 5 years

SIMATIC IPC1047 – maximum performance and expandability

- Maximum computing capacity due to two Intel® Xeon® CPUs
- Maximum graphic capacity
- Product design for industrial environment

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Technical specifications

Article number	**6AG4012-2....-0.X0** SIMATIC IPC347G (Rack PC, 19, 4U)	**6AG4104-5....-....** SIMATIC IPC547J	**6AG4112-3....-....** SIMATIC IPC647E (Rack PC)	**6AG4114-3....-....** SIMATIC IPC847E (Rack PC)	**6BK1801-1....-....** SIMATIC IPC1047E (Rack PC)
Installation type/mounting					
Mounting	For horizontal and vertical mounting	For horizontal and vertical installation; prepared for telescopic rails; 19" mounting bracket can be removed externally; tower kit (optional)	For horizontal installation; prepared for telescopic rails; 19" mounting bracket can be removed externally	For horizontal and vertical installation; prepared for telescopic rails; 19" mounting bracket can be removed externally; tower kit (optional)	For horizontal rack mounting
Design	Rack PC, 19", 4U	Rack PC, 19", 4U	Rack PC, 19", 2U	Rack PC, 19", 4U	Rack PC, 19", 4U
Supply voltage					
Type of supply voltage	100 - 240 V AC	100/240 V AC (autorange) 50 / 60 Hz; optional redundant 100/240 V AC	100/240 V AC (autorange) 50 / 60 Hz; optional redundant 100/240 V AC	100/240 V AC (autorange) 50 / 60 Hz; optional redundant 100/240 V AC	110/230V AC (autorange) 50/60 Hz
Line frequency					
• Rated value 50 Hz	Yes	Yes	Yes	Yes	Yes
• Rated value 60 Hz	Yes	Yes	Yes	Yes	Yes
Mains buffering					
• Mains/voltage failure stored energy time		20 ms	20 ms	20 ms	20 ms
Processor					
Processor type	Core i7-6700 (4C/4T, 3.6 (4.0) GHz, 8 MB Cache)	Intel Xeon W-1270E (8C/16T, 3.4 (4.8) GHz, 16 MB Cache); Intel Core i9-10900E (10C/20T, 2.8 (4.7) GHz, 20 MB Cache); Intel Core i7-10700E (8C/16T, 2.9 (4.5) GHz, 16 MB Cache); Intel Core i5-10500E (6C/12T, 3.1 (4.2) GHz, 12 MB Cache); Intel Core i3-10100E (4C/8T, 3.2 (3.8) GHz, 6 MB Cache)	Intel Xeon E-2278GE (8C/16T, 3.3 (4.7) GHz, 16 MB Cache, Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Xeon E-2176G (6C/12T, 3.7 (4.7) GHz, 12 MB Cache, Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB Cache, Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i5-8500 (6C/6T, 3.0 (4.1) GHz, 9 MB Cache, Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i3-8100 (4C/4T, 3.6 GHz, 6 MB Cache, VT-x/-d-Technology)	Intel Xeon E-2278GE (8C/16T, 3.3 (4.7) GHz, 16 MB Cache, Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Xeon E-2176G (6C/12T, 3.7 (4.7) GHz, 12 MB Cache, Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB Cache, Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i5-8500 (6C/6T, 3.0 (4.1) GHz, 9 MB Cache, Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i3-8100 (4C/4T, 3.6 GHz, 6 MB Cache, VT-x/-d-Technology)	2x Intel Xeon SP Silver 4210 10C/20T - 2.2 GHz/ 3.2 GHz; 2x Intel Xeon SP Silver 4216 16C/32T - 2.1 GHz/ 3.2 GHz; 2x Intel Xeon SP Gold 6226 12C/24T - 2.7 GHz/ 3.7 GHz; 2x Intel Xeon SP Gold 6230 20C/40T - 2.1 GHz/ 3.9 GHz
Chipset	Intel H110	Intel W480E / Intel H410	Intel C246	Intel C246	Intel C621
Graphic					
Graphics controller		Intel® UHD Graphics 630	Onboard Intel UHD graphics P630/630 integrated in processor; graphics card NVIDIA Quadro P400 PCIe (x16) triple head (optional)	Onboard Intel UHD graphics P630/630 integrated in processor; graphics card NVIDIA Quadro P400 PCIe (x16) triple head (optional)	Onboard VGA / 2D controller 1 920 × 1 200 @ 60 Hz 32 bpp

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Article number	**6AG4012-2....-0.X0** SIMATIC IPC347G (Rack PC, 19, 4U)	**6AG4104-5....-....** SIMATIC IPC547J	**6AG4112-3....-....** SIMATIC IPC647E (Rack PC)	**6AG4114-3....-....** SIMATIC IPC847E (Rack PC)	**6BK1801-1....-....** SIMATIC IPC1047E (Rack PC)
Drives					
Optical drives					No
Hard disk	HDD & SSD	1 TB HDD 3.5" SATA, 2x 1 TB HDD 3.5" SATA, 1 TB HDD 3.5" SATA + 960 GB SSD 2.5" SATA, RAID1, 2x 1 TB HDD 3.5" SATA, RAID1, 2x 1 TB HDD [Enterprise] 3.5" SATA, RAID1, 2x 2 TB HDD [Enterprise] 3.5" SATA, RAID1, 2x 2 TB HDD [Enterprise] 3.5" SATA + 2 TB HDD [Enterprise] 3.5" SATA as hot spare, RAID1, 2x 2 TB HDD [Enterprise] 3.5" SATA + 960 GB SSD 2.5" SATA, RAID5, 3x 2 TB HDD [Enterprise] 3.5" SATA, RAID5, 3x 2 TB HDD [Enterprise] 3.5" SATA + 2 TB HDD [Enterprise] 3.5" SATA as hot spare	1x 1 TB 3.5" SATA HDD, 2x 1 TB 3.5" SATA HDD, RAID1 2x 1 TB 3.5" SATA HDD, RAID1 2x 1 TB 3.5" SATA HDD (Enterprise), RAID1 2x 2 TB 3.5" SATA HDD (Enterprise), RAID1 2x 2 TB 3.5" SAS HDD (Enterprise) with PCIe x8 RAID controller incl. ZMCP module	1x 1 TB 3.5" SATA HDD, 2x 1 TB 3.5" SATA HDD, RAID1 2x 1 TB 3.5" SATA HDD, RAID1 2x 1 TB 3.5" SATA HDD (Enterprise), RAID1 2x 2 TB 3.5" SATA HDD (Enterprise), RAID1 2x 2 TB 3.5" SATA HDD (Enterprise) + 2 TB 3.5" SATA HDD (Enterprise) as hot spare, RAID5 3x 2 TB 3.5" SATA HDD (Enterprise), RAID5 3x 2 TB 3.5" SATA HDD (Enterprise) + 2 TB 3.5" SATA HDD (Enterprise) as hot spare, RAID1 2x 2 TB 3.5" SAS HDD (Enterprise) with PCIe x8 RAID controller incl. ZMCP module, RAID5 3x 2 TB 3.5" SAS HDD (Enterprise) with PCIe x8 RAID controller incl. ZMCP module	4 TB & 8 TB 3.5" SATA
SSD		Yes; 480 GB 2.5" SATA SSD, 1x 960 GB 2.5" SATA SSD, 2x 480 GB 2.5" SATA SSD, RAID1 2x 480 GB 2.5" SATA SSD, RAID1 2x 960 GB 2.5" SATA SSD; 1x 512 GB M.2 NVMe SSD, 1x 1 024 GB M.2 NVMe SSD	Yes; 1x 480 GB 2.5" SATA SSD, 1x 960 GB 2.5" SATA SSD, 2x 480 GB 2.5" SATA SSD, RAID1 2x 480 GB 2.5" SATA SSD; 1x 512 GB M.2 NVMe SSD, 1x 1 024 GB M.2 NVMe SSD	Yes; 1x 480 GB 2.5" SATA SSD, 1x 960 GB 2.5" SATA SSD, 2x 480 GB 2.5" SATA SSD, RAID1 2x 480 GB 2.5" SATA SSD; 1x 512 GB M.2 NVMe SSD, 1x 1 024 GB M.2 NVMe SSD	Yes; 960 GB & 1.9 TB & 3.8 TB SATA SSD and 1 TB & 2 TB M.2 NVMe
Slot for drives		Mounting internally in vibration/shock-absorbing drive cage Type B or mounting on the front in removable trays (hot swap in RAID configurations) in drive cage Type A; mounting internally on the fixed drive cage optional			4x 3.5" HDD or 8x 2.5" SSD internal; 4x 3.5" HDD or 4x 2.5" SSD front changeable
Memory					
Type of memory					DDR4-SDRAM DIMM
Main memory	4 / 8 / 16 GB, supports up to 32 GB	4 GB to 128 GB DDR4 2933 SDRAM DIMM	4 GB to 128 GB DDR4 2666 SDRAM DIMM, ECC optional	4 GB to 128 GB DDR4 2666 SDRAM DIMM, ECC optional	64 ... 512 GB

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Hardware configuration					
Slots					
• free slots	3x PCI, 1x PCIe (x16), 1xPCIe (x4) (4 or 2 lanes), 2x PCIe (x4) (1 lane)	7 spare slots for expansions (all long); mainboard with H410 chip set: 1x PCIe (x16) (16 lane) Gen 3, 1x PCIe (x16) (1 lanes) Gen 3, 1x PCIe (x8) (1 lane) Gen 3, 1x PCIe (x4) (1 lane) Gen 3, 1x PCIe (x4) (1 lane) Gen 3, 2x PCI; mainboard with W480E chip set: 1x PCIe (x16) (16 lane) Gen 3, 1x PCIe (x16) (4 lanes) Gen 3, 1x PCIe (x8) (1 lane) Gen 3, 1x PCIe (x4) (4 lane) Gen 3, 1x PCIe (x4) (1 lane) Gen 3, 2x PCI	2 slots: 1x PCI Express (x16) (16 lanes), 1x PCI Express (x16) (4 lanes) or 4 slots: 2x PCI, 2x PCI Express (x16) (8 lanes) or 4 slots: 2x PCI Express (x16) (8 lanes), 1x PCI Express (x16) (4 lanes), 1x PCI Express (x16) (1 lane); expansion modules up to 312 mm in length can be used	9 slots: 7x PCI, 2x PCI Express (x16) (8 lanes) or 11 slots: 3x PCI, 1x PCI Express (x16) (8 lanes), 5x PCI Express (x16) (4 lanes), 2x PCI Express (x4) (4 lanes) or 11 slots: 3x PCI, 1x PCI Express (x16) (16 lanes), 3x PCI Express (x16) (4 lanes), 2x PCI Express (x16) (1 lane), 2x PCI Express (x4) (4 lanes); expansion modules up to a length of 312 mm can be used	6x PCIe slots (2x PCIe X8 + 4x PCIe X16)
Interfaces					
Interfaces/bus type		mainboard (H410 chip set): 2x Intel Gigabit Ethernet (RJ45, teaming-capable), USB 3.1 Gen 1: 2x on rear, 2x on front, USB 2.0: 4x on rear, 1x internal e.g. for software dongle with optional interlock, 1x DisplayPort V1.2, 1x DVI-D, 1x COM1, audio: line in, line out, micro; mainboard (W480E chip set): 3x Intel Gigabit Ethernet (RJ45, teaming-capable), USB 3.1 Gen 2: 4x type A, 2x type C, on rear, USB 3.1 Gen 1: 2x on front, USB 2.0: 2x internal e.g. for software dongle with optional interlock, 2x DisplayPort V1.2, 1x DVI-D, 1x COM1, audio: line in, line out, micro	1x COM1, 1x COM2 (optional), 2x DisplayPort, 1x DVI-D, audio (microphone in, line in, line out), 9x USB, 3x Gigabit Ethernet	1x COM1, 1x COM2 (optional), 2x DisplayPort, 1x DVI-D, audio (microphone in, line in, line out), 9x USB, 3x Gigabit Ethernet	2x 1 GB LAN (RJ45), COM1, IPMI, VGA
PROFIBUS/MPI			can be implemented with plug-in card	can be implemented with plug-in card	

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Technical specifications

Article number	**6AG4012-2....-0.X0**	**6AG4104-5....-....**	**6AG4112-3....-....**	**6AG4114-3....-....**	**6BK1801-1....-....**
	SIMATIC IPC347G (Rack PC, 19, 4U)	SIMATIC IPC547J	SIMATIC IPC647E (Rack PC)	SIMATIC IPC847E (Rack PC)	SIMATIC IPC1047E (Rack PC)
USB port	4x USB 3.0 on rear panel, 2x USB 2.0 on front panel, 2x USB 2.0 internal and 2x pin header USB	mainboard (H410 chip set): USB 3.1 Gen 1: 2x on rear, 2x on front, USB 2.0: 4x on rear, 1x internal e.g. for software dongle with optional interlock; mainboard (W480E chip set): USB 3.1 Gen 2: 4x type A, 2x type C, on rear, USB 3.1 Gen 1: 2x on front, USB 2.0: 2x internal e.g. for software dongle with optional interlock	4x USB 3.1 Gen. 2 Type A, 2x USB 3.1 Gen. 2 Type C on the rear; 1x USB 3.1 Gen. 2 Type A internally, e.g. for software dongle with optional interlock, 2x USB 3.1 Gen. 1 Type A on the front, can be used with door closed	4x USB 3.1 Gen. 2 Type A, 2x USB 3.1 Gen. 2 Type C on the rear; 1x USB 3.1 Gen. 2 Type A internally, e.g. for software dongle with optional interlock, 2x USB 3.1 Gen. 1 Type A on the front, can be used with door closed	2x front, 2x rear USB 3.0, 2x rear USB 2.0
Connection for keyboard/mouse	2x PS/2	USB	USB	USB	USB
serial interface	2x COM ports (RS 232, RS 422, RS 485) and 2x COM pin header	COM1: 1x RS 232 or RS 485; COM2 (optional) 1x RS 232	COM1: 1x RS 232, COM2 (optional): 1x RS 232	COM1: 1x RS 232, COM2 (optional): 1x RS 232	1x COM
Multimedia					
• Audio In/Out	Yes	Yes	Yes	Yes	No
• Microphone In	Yes	Yes	Yes	Yes	No
Video interfaces					
• Graphics interface	1x DisplayPort, 1x VGA	2x DisplayPort and 1x DVI-D onboard; 1x VGA via DP-VGA adapter cable (optional); graphics card PCIe (x16), Triple Head (3x mini DisplayPort, 2 GB graphics memory, 3x mini DisplayPort to DisplayPort adapter cable) (optional)			VGA, with optional graphics card 3x or 4x DP1.4
Industrial Ethernet					
• Industrial Ethernet interface		2x or 3x Gigabit Ethernet (IE/PN), RJ45	3x Gigabit Ethernet (IE/PN), RJ45	3x Gigabit Ethernet (IE/PN), RJ45	2x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes
Integrated Functions					
Monitoring functions					
• Temperature monitoring		Yes	Yes	Yes	Yes
• Watchdog		Yes	Yes	Yes	
• Status LEDs	POWER, HDD	POWER, HDD, ETHERNET 1, ETHERNET 2, ETHERNET 3, WATCHDOG, TEMP, FAN, HDD3 ALARM, HDD2 ALARM, HDD1 ALARM, HDD0 ALARM	Power, HDD, Ethernet 1, Ethernet 2, Ethernet 3, Watchdog, Temp, Fan, HDD1 alarm, HDD0 alarm	POWER, HDD, ETHERNET 1, ETHERNET 2, ETHERNET 3, WATCHDOG, TEMP, FAN, HDD3 ALARM, HDD2 ALARM, HDD1 ALARM, HDD0 ALARM	POWER, HDD, FAN Fail
• Fan		Yes	Yes	Yes	Yes
• Monitoring function via network		Optional	Optional	Optional	Yes (per IPMI)

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Article number	**6AG4012-2....-0.X0** SIMATIC IPC347G (Rack PC, 19, 4U)	**6AG4104-5....-....** SIMATIC IPC547J	**6AG4112-3....-....** SIMATIC IPC647E (Rack PC)	**6AG4114-3....-....** SIMATIC IPC847E (Rack PC)	**6BK1801-1....-....** SIMATIC IPC1047E (Rack PC)
EMC					
Interference immunity against discharge of static electricity					
• Interference immunity against discharge of static electricity	±4 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2				
Interference immunity against high-frequency electromagnetic fields					
• Interference immunity against high frequency radiation	10 V/m, 80 MHz to 2 GHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 GHz to 2.7 GHz, 80 % AM acc. to IEC 61000-4-3; 10 V, 10 kHz to 80 MHz, 80 % AM acc. to IEC 61000-4-6	10 V/m for 80 ... 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 80 MHz, 80% AM acc. to IEC 61000-4-6			
Interference immunity to cable-borne interference					
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric				
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-4, burst; length > 30 m; ±2 kV acc. to IEC 61000-4-5, surge; length > 30 m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m			
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst		±1 kV acc. to IEC 61000-4-4; burst, length < 3 m		
Interference immunity against voltage surge					
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric				
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric				
Interference immunity to magnetic fields					
• Interference immunity to magnetic fields at 50 Hz		30 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	
Emission of conducted and non-conducted interference					
• Interference emission via line/ AC current cables	IEC 61000-6-4, CISPR 22, FCC Class A	EN 61000-6-3; EN 61000-6-4, CAN/CSA CISPR 22 Class B, EN 55032 Class B; FCC Class A; KN32 Class B, EN 61000-3-2 Class D; EN 61000-3-3			
Compliance with line harmonic distortion limits					
• Compliance with line harmonic distortion acc. to IEC 61000-3-2, IEC 61000-3-3	Yes; EN 61000-3-2 Class D; EN 61000-3-3				
Degree and class of protection					
IP (at the front)	IP20	IP30	IP41	IP41	IP30
IP (rear)	IP20	IP20	IP20	IP20	IP20

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Technical specifications

Article number	**6AG4012-2....-0.X0**	**6AG4104-5....-....**	**6AG4112-3....-....**	**6AG4114-3....-....**	**6BK1801-1....-....**
	SIMATIC IPC347G (Rack PC, 19, 4U)	SIMATIC IPC547J	SIMATIC IPC647E (Rack PC)	SIMATIC IPC847E (Rack PC)	SIMATIC IPC1047E (Rack PC)
Standards, approvals, certificates					
CE mark		Yes; For use in industrial areas as well as domestic, business and commercial environments (emitted interference: EN 61000-6-3:2007 +A1:2011, noise immunity: EN 61000-6-2:2005)			Yes; Industry
CSA approval		Yes; CAN/CSA-C22.2 No. 61010-2-201 Second Edition			Yes; CAN/CSA-C22.2 No. 61010-2-201 Third Edition
UL approval		UL 61010-2-201 Second Edition, File E85972			Yes; UL 61010-2-201 Third Edition, File E115352 (I.T.E.)
cULus		Yes; UL 61010-2-201 Second Edition; CAN/CSA-C22.2 No. 61010-2-201 Second Edition			Yes; UL 61010-2-201 Third Edition; CAN/CSA-C22.2 No. 61010-2-201 Third Edition
RCM (formerly C-TICK)		Yes	Yes	Yes	
KC approval		Yes	Yes	Yes	No; In application process
EAC (formerly Gost-R)		Yes	Yes	Yes	
FCC					Yes
EMC		EN 61000-6-3; EN 61000-6-4, CAN/CSA CISPR 22 Class B, EN 55032 Class B; FCC Class A; KN32 Class B, EN 61000-3-2 Class D; EN 61000-3-3			
Dust protection		With front door closed: G2 EN 779, 99% of particles > 0.5 mm are filtered			
Marine approval					
• Germanischer Lloyd (GL)			Yes; Only with SSD		
• American Bureau of Shipping (ABS)			Yes; Only with SSD		
Ambient conditions					
Ambient temperature during operation					
• Ambient temperature during operation	+5 °C to +40 °C	0 °C to +40 °C with full configuration	0 °C to +50 °C with full configuration	0 °C to +50 °C with full configuration	0 °C to +40 °C with maximum configuration, up to +50 °C with basic configuration
Relative humidity					
• Relative humidity		Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)			permissible range for 0 to 31 °C: 5 ... 80 %; no condensation
• Operation, max.					80 %
Vibrations					
• Vibration resistance during operation acc. to IEC 60068-2-6		Tested according to IEC 60068-2-6, 10 cycles; 20 to 58 Hz: 0.015 mm; 58 to 200 Hz: 2 m/s² (0.2 g)	Tested according to IEC 60068-2-6: 10 cycles, 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 500 Hz: 4.9 m/s² (0.5 g)		10 - 58 Hz: amplitude 0.0375 mm; 58 ... 200 Hz: acceleration 2 m/s²
Shock testing					
• Shock load during operation		Tested according to IEC 60068-2-27; half-sine: 9.8 m/s² (1 g), 20 ms, 100 shocks per axis	Tested according to DIN IEC 60068-2-7: 50 m/s2 (5 g), 30 ms, 100 shocks	Tested according to IEC 60068-2-27, IEC 60068-2-29: half-sine: 50 m/s² (5 g), 30 ms, 100 shocks per axis	half-sine: acceleration 50 m/s², duration 30 ms

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Article number	**6AG4012-2....-0.X0**	**6AG4104-5....-....**	**6AG4112-3....-....**	**6AG4114-3....-....**	**6BK1801-1....-....**
	SIMATIC IPC347G (Rack PC, 19, 4U)	SIMATIC IPC547J	SIMATIC IPC647E (Rack PC)	SIMATIC IPC847E (Rack PC)	SIMATIC IPC1047E (Rack PC)
Operating systems					
pre-installed operating system		Windows 10 IoT Enterprise 2019 LTSC, multi-language (64-bit); Windows Server 2019 Standard Edition incl. 5 clients, multi-language (64-bit)	Windows 10 Enterprise 2016 LTSB, multi-language (64-bit); Windows 10 IoT Enterprise 2019 LTSC, multi-language (64-bit); Windows Server 2016 Standard Edition incl. 5 multi-language clients (64-bit); Windows Server 2019 Standard Edition incl. 5 multi-language clients (64-bit)	Windows 10 Enterprise 2016 LTSB, multi-language (64-bit); Windows 10 IoT Enterprise 2019 LTSC, multi-language (64-bit); Windows Server 2016 Standard Edition incl. 5 multi-language clients (64-bit); Windows Server 2019 Standard Edition incl. 5 multi-language clients (64-bit)	Yes
Additional info on operating system		Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)			
without operating system		Yes	Yes	Yes	Yes
Software					
SIMATIC Software		Optional package with SIMATIC WinCC	Optional package with SIMATIC WinCC	Optional package with SIMATIC WinCC	
Dimensions					
Width	430 mm	430 mm	430 mm	430 mm	430 mm
Height	176 mm	177 mm; 4U	88 mm; 2U	177 mm; 4U	176.6 mm; 4U
Depth	465.8 mm	446 mm; Device with short enclosure: 356 mm	444 mm	444 mm	572 mm

More information

More information is available on the Internet at:

http://www.siemens.com/simatic-pc

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Overview

SIMATIC IPC347G

SIMATIC IPC347G is an industrial PC in 19" rack design (4U).

It offers:

- Optimized price
- High performance
- 6th generation Intel Core i technology

Ordering data

	Article No.
SIMATIC IPC347G	**6AG4012 - 2 ■ ■ ■ 0 - 0 ■ X 0**
All-metal enclosure with high electromagnetic compatibility and mechanical ruggedness, dust protection through overpressure ventilation; Status LEDs: POWER, HDD; interfaces: 4x USB 3.0 on rear, 2x USB 2.0 on front, 2x USB 2.0 internal and 2x USB male connector, 2 x Gb Ethernet, 1 x DVI-DP, 1 x VGA, 2 x COM, 2 x PS/2, audio; Slots: 3x PCI, 1x PCIe (x16), 1xPCIe (x4) (4 or 2 tracks), 2x PCIe (x4) (1 track)	
Processors	
• Pentium G4400 (2C/2T, 3.3 GHz, 3 MB cache)	**A**
• Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB cache)	**B**
• Core i7-6700 (4C/4T, 3.4 (4.0) GHz, 8 MB cache)	**C**

	Article No.
SIMATIC IPC347G	**6AG4012 - 2 ■ ■ ■ 0 - 0 ■ X 0**
Drives (SATA)	
• 1 x TB HDD	**A**
• 256 GB SSD	**B**
• 512 GB SSD	**C**
Memory configuration	
• 4 GB DDR4 RAM	**1**
• 8 GB DDR4 RAM	**2**
• 16 GB DDR4 RAM	**3**
• 32 GB DDR4 RAM	**4**
Operating systems	
• Without operating system; driver and documentation on USB flash drive	**X**
• Windows 10 IoT Enterprise Value (Pentium/i3/i5)	**A**
• Windows 10 IoT Enterprise High End (i7)	**B**

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

http://www.siemens.com/ipc-configurators

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SIMATIC IPC347G

Ordering data	Article No.
Preferred variants (available at short notice ex stock)	
SIMATIC IPC347G	
Configuration 1 Pentium Dual Core G4400 (2C/2T, 3.3 GHz, 3 MB cache); 2x Gb Ethernet, 1x DP, 1x VGA, 2x USB on front, 4x USB on rear, 2x USB internal, 2x serial, 2x PS/2, audio; 1x 1 TB HDD, internal; 4 GB DDR4 (1x 4 GB), no DVD +/-RW; Windows 10 IOT Enterprise for Pentium/i3/i5; 100/240 V industrial power supply unit, without power supply cord	**6AG4012-2AA10-0AX0**
Configuration 2 Pentium Dual Core G4400 (2C/2T, 3.3 GHz, 3 MB cache); 2x Gb Ethernet, 1x DP, 1x VGA, 2x USB on front, 4x USB on rear, 2x USB internal, 2x serial, 2x PS/2, audio; 1x 1 TB HDD, internal; 4 GB DDR4 (1x 4 GB), no DVD +/-RW; without operating system; 100/240 V industrial power supply unit, without power supply cord	**6AG4012-2AA10-0XX0**
Preferred variants (available at short notice ex stock)	
SIMATIC IPC347G	
Configuration 3 Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB cache); 2x Gb Ethernet, 1x DP, 1x VGA, 2x USB on front, 4x USB on rear, 2x USB internal, 2x serial, 2x PS/2, audio; 1x 1 TB HDD, internal; 4 GB DDR4 (1x 4 GB), no DVD +/-RW; Windows 10 IOT Enterprise for Pentium/i3/i5; 100/240 V industrial power supply unit, without power supply cord	**6AG4012-2BA10-0AX0**
Configuration 4 Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB cache); 2x Gb Ethernet, 1x DP, 1x VGA, 2x USB on front, 4x USB on rear, 2x USB internal, 2x serial, 2x PS/2, audio; 1x 1 TB HDD, internal; 8 GB DDR4 (1x 8 GB), no DVD +/-RW; Windows 10 IOT Enterprise for Pentium/i3/i5; 100/240 V industrial power supply unit, without power supply cord	**6AG4012-2BA20-0AX0**
Configuration 5 Core i7 6700 (4C/8T, 3.4 (4.0) GHz, 8 MB cache); 2x Gb Ethernet, 1x DP, 1x VGA, 2x USB on front, 4x USB on rear, 2x USB internal, 2x serial, 2x PS/2, audio; 1x 1 TB HDD, internal; 8 GB DDR4 (1x 8 GB), no DVD +/-RW; Windows 10 IOT Enterprise for i7; 100/240 V industrial power supply unit, without power supply cord	**6AG4012-2CA20-0BX0**

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Technical specifications

Article number	**6AG4012-2....-0.X0** SIMATIC IPC347G (Rack PC, 19, 4U)
Installation type/mounting	
Mounting	For horizontal and vertical mounting
Design	Rack PC, 19", 4U
Supply voltage	
Type of supply voltage	100 - 240 V AC
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Processor	
Processor type	Core i7-6700 (4C/4T, 3.6 (4.0) GHz, 8 MB Cache)
Chipset	Intel H110
Drives	
Hard disk	HDD & SSD
Memory	
Main memory	4 / 8 / 16 GB, supports up to 32 GB
Capacity of main memory, max.	32 Gbyte
Hardware configuration	
Slots	
• free slots	3x PCI, 1x PCIe (x16), 1xPCIe (x4) (4 or 2 lanes), 2x PCIe (x4) (1 lane)
Interfaces	
USB port	4x USB 3.0 on rear panel, 2x USB 2.0 on front panel, 2x USB 2.0 internal and 2x pin header USB
Connection for keyboard/mouse	2x PS/2
serial interface	2x COM ports (RS 232, RS 422, RS 485) and 2x COM pin header
Multimedia	
• Audio In/Out	Yes
• Microphone In	Yes
Video interfaces	
• Graphics interface	1x DisplayPort, 1x VGA
Industrial Ethernet	
• Industrial Ethernet interface	
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Status LEDs	POWER, HDD

Article number	**6AG4012-2....-0.X0** SIMATIC IPC347G (Rack PC, 19, 4U)
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±4 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m, 80 MHz to 2 GHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 GHz to 2.7 GHz, 80 % AM acc. to IEC 61000-4-3; 10 V, 10 kHz to 80 MHz, 80 % AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-4, burst; length > 30 m; ±2 kV acc. to IEC 61000-4-5, surge; length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	IEC 61000-6-4, CISPR 22, FCC Class A
Compliance with line harmonic distortion limits	
• Compliance with line harmonic distortion acc. to IEC 61000-3-2, IEC 61000-3-3	Yes; EN 61000-3-2 Class D; EN 61000-3-3
Degree and class of protection	
IP (at the front)	IP20
IP (rear)	IP20
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	+5 °C to +40 °C
Dimensions	
Width	430 mm
Height	176 mm
Depth	465.8 mm

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Technical specifications

Article number	**6AG4012-2AA10-0AX0**	**6AG4012-2AA10-0XX0**	**6AG4012-2BA10-0AX0**	**6AG4012-2BA20-0AX0**	**6AG4012-2CA20-0BX0**
	SIMATIC IPC347G (Rack PC, 19, 4U)	SIMATIC IPC347G (Rack PC, 19, 4U)	SIMATIC IPC347G (Rack PC, 19, 4U)	SIMATIC IPC347G (Rack PC, 19, 4U)	SIMATIC IPC347G (Rack PC, 19, 4U)
Installation type/mounting					
Mounting	For horizontal and vertical mounting	For horizontal and vertical mounting	For horizontal and vertical mounting	For horizontal and vertical mounting	For horizontal and vertical mounting
Design	Rack PC, 19", 4U	Rack PC, 19", 4U	Rack PC, 19", 4U	Rack PC, 19", 4U	Rack PC, 19", 4U
Supply voltage					
Type of supply voltage	100 - 240 V AC	100 - 240 V AC	100 - 240 V AC	100 - 240 V AC	100 - 240 V AC
Line frequency					
• Rated value 50 Hz	Yes	Yes	Yes	Yes	Yes
• Rated value 60 Hz	Yes	Yes	Yes	Yes	Yes
Processor					
Processor type	Intel Pentium G4400	Intel Pentium G4400	Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB Cache)	Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB Cache)	Core i7-6700 (4C/4T, 3.6 (4.0) GHz, 8 MB Cache)
Chipset	Intel H110	Intel H110	Intel H110	Intel H110	Intel H110
Drives					
Hard disk	1 TB HDD	1 TB HDD	1 TB HDD	1 TB HDD	1 TB HDD
Memory					
Main memory	4 GB (pre-installed), support up to 32 GB	4 GB (pre-installed), support up to 32 GB	4 GB (pre-installed), support up to 32 GB	8 GB (pre-installed), support up to 32 GB	8 GB (pre-installed), support up to 32 GB
Capacity of main memory, max.	4 Gbyte	4 Gbyte	4 Gbyte	8 Gbyte	8 Gbyte
Hardware configuration					
Slots					
• free slots	3x PCI, 1x PCIe (x16), 1xPCIe (x4) (4 or 2 lanes), 2x PCIe (x4) (1 lane)	3x PCI, 1x PCIe (x16), 1xPCIe (x4) (4 or 2 lanes), 2x PCIe (x4) (1 lane)	3x PCI, 1x PCIe (x16), 1xPCIe (x4) (4 or 2 lanes), 2x PCIe (x4) (1 lane)	3x PCI, 1x PCIe (x16), 1xPCIe (x4) (4 or 2 lanes), 2x PCIe (x4) (1 lane)	3x PCI, 1x PCIe (x16), 1xPCIe (x4) (4 or 2 lanes), 2x PCIe (x4) (1 lane)
• Number of PCI slots	3	3	3	3	3
• Number of PCI slots	4	4	4	4	4
Interfaces					
Number of industrial Ethernet interfaces	2	2	2	2	2
Number of PROFINET interfaces	2	2	2	2	2
USB port	4x USB 3.0 on rear panel, 2x USB 2.0 on front panel, 2x USB 2.0 internal and 2x pin header USB	4x USB 3.0 on rear panel, 2x USB 2.0 on front panel, 2x USB 2.0 internal and 2x pin header USB	4x USB 3.0 on rear panel, 2x USB 2.0 on front panel, 2x USB 2.0 internal and 2x pin header USB	4x USB 3.0 on rear panel, 2x USB 2.0 on front panel, 2x USB 2.0 internal and 2x pin header USB	4x USB 3.0 on rear panel, 2x USB 2.0 on front panel, 2x USB 2.0 internal and 2x pin header USB
Connection for keyboard/mouse	2x PS/2	2x PS/2		2x PS/2	2x PS/2
serial interface	2x COM ports (RS 232, RS 422, RS 485) and 2x COM pin header				
Multimedia					
• Audio In/Out	Yes	Yes	Yes	Yes	Yes
• Microphone In	Yes	Yes	Yes	Yes	Yes
Video interfaces					
• Graphics interface	1x DisplayPort, 1x VGA				
Industrial Ethernet					
• Industrial Ethernet interface					
- 100 Mbps	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes
Integrated Functions					
Monitoring functions					
• Status LEDs	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD

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Technical specifications

Article number	**6AG4012-2AA10-0AX0**	**6AG4012-2AA10-0XX0**	**6AG4012-2BA10-0AX0**	**6AG4012-2BA20-0AX0**	**6AG4012-2CA20-0BX0**
	SIMATIC IPC347G (Rack PC, 19, 4U)	SIMATIC IPC347G (Rack PC, 19, 4U)	SIMATIC IPC347G (Rack PC, 19, 4U)	SIMATIC IPC347G (Rack PC, 19, 4U)	SIMATIC IPC347G (Rack PC, 19, 4U)
EMC					
Interference immunity against discharge of static electricity					
• Interference immunity against discharge of static electricity	±4 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2				
Interference immunity against high-frequency electromagnetic fields					
• Interference immunity against high frequency radiation	10 V/m, 80 MHz to 2 GHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 GHz to 2.7 GHz, 80 % AM acc. to IEC 61000-4-3; 10 V, 10 kHz to 80 MHz, 80 % AM acc. to IEC 61000-4-6				
Interference immunity to cable-borne interference					
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric				
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-4, burst; length > 30 m; ±2 kV acc. to IEC 61000-4-5, surge; length > 30 m				
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst				
Interference immunity against voltage surge					
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric	±2 kV acc. to IEC 61000-4-5, surge asymmetric	±2 kV acc. to IEC 61000-4-5, surge asymmetric		±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric				
Emission of conducted and non-conducted interference					
• Interference emission via line/ AC current cables	IEC 61000-6-4, CISPR 22, FCC Class A	IEC 61000-6-4, CISPR 22, FCC Class A	IEC 61000-6-4, CISPR 22, FCC Class A	IEC 61000-6-4, CISPR 22, FCC Class A	IEC 61000-6-4, CISPR 22, FCC Class A
Compliance with line harmonic distortion limits					
• Compliance with line harmonic distortion acc. to IEC 61000-3-2, IEC 61000-3-3	Yes; EN 61000-3-2 Class D; EN 61000-3-3				
Degree and class of protection					
IP (rear)	IP20	IP20	IP20	IP20	IP20
Ambient conditions					
Ambient temperature during operation					
• Ambient temperature during operation	+5 °C to +40 °C	+5 °C to +40 °C	+5 °C to +40 °C	+5 °C to +40 °C	+5 °C to +40 °C
Operating systems					
pre-installed operating system	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI	without operating system	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI
without operating system				No	No
pre-installed operating system					
• Windows 10 Enterprise				Yes	Yes
Dimensions					
Width	430 mm	430 mm	430 mm	430 mm	430 mm
Height	176 mm	176 mm	176 mm	176 mm	176 mm
Depth	465.8 mm	465.8 mm	465.8 mm	465.8 mm	465.8 mm

More information

More information is available on the internet at:

http://www.siemens.com/simatic-pc

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SIMATIC IPC547J

Overview

SIMATIC IPC547J

A rugged industrial PC in 19" rack design (4U).

It offers:

- Maximum performance
- Attractive price
- 10th generation Intel Core i/Xeon technology

Ordering data

	Article No.
SIMATIC IPC547J Rack PC, 19", 4 U Interfaces: 2x USB 3.1 Gen.1 at front; COM1, audio at rear; slots: 5 x PCI Express, 2 x PCI; temperature and fan monitoring; watchdog; card retainer	**6AG4104-** **5** ■ ■■■■ - ■■■■
Processor / mainboard	
• Core i3-10100E (4C/8T, 3.2 (3.8) GHz, 6 MB cache); MB (chip set H410, 2x Gb Ethernet, 1x DVI-D, 1x DisplayPort, 4x USB 2.0, 2x USB 3.1 Gen.1, 1x USB 2.0 internal)	**C**
• Core i5-10500E (6C/12T, 3.1 (4.2) GHz, 12 MB cache); MB (chip set H410, 2x Gb Ethernet, 1x DVI-D, 1x DisplayPort, 4x USB 2.0, 2x USB 3.1 Gen.1, 1x USB 2.0 internal)	**D**
• Core i7-10700E (8C/16T, 2.9 (4.5) GHz, 16 MB cache); MB (chip set H410, 2x Gb Ethernet, 1x DVI-D, 1x DisplayPort, 4x USB 2.0, 2x USB 3.1 Gen.1, 1x USB 2.0 internal)	**E**
• Core i9-10900E (10C/20T, 2.8 (4.7) GHz, 20 MB cache); MB (chip set H410, 2x Gb Ethernet, 1x DVI-D, 1x DisplayPort, 4x USB 2.0, 2x USB 3.1 Gen.1, 1x USB 2.0 internal)	**F**
• Core i3-10100E (4C/8T, 3.2 (3.8) GHz, 6 MB cache); MB (chip set W480E, 3x Gb Ethernet, 1x DVI-D, 2x DisplayPort, 6x USB 3.1 Gen.2, 2x USB 2.0 internal)	**G**
• Core i5-10500E (6C/12T, 3.1 (4.2) GHz, 12 MB cache); MB (chip set W480E, 3x Gb Ethernet, 1x DVI-D, 2x DisplayPort, 6x USB 3.1 Gen.2, 2x USB 2.0 internal, AMT)	**H**
• Core i7-10700E (8C/16T, 2.9 (4.5) GHz, 16 MB cache); MB (chip set W480E, 3x Gb Ethernet, 1x DVI-D, 2x DisplayPort, 6x USB 3.1 Gen.2, 2x USB 2.0 internal, AMT)	**J**
• Core i9-10900E (10C/20T, 2.8 (4.7) GHz, 20 MB cache); MB (chip set W480E, 3x Gb Ethernet, 1x DVI-D, 2x DisplayPort, 6x USB 3.1 Gen.2, 2x USB 2.0 internal, AMT)	**K**
• Xeon W-1270E (8C/16T, 3.4 (4.8) GHz, 16 MB cache); MB (chip set W480E, 3x Gb Ethernet, 1x DVI-D, 2x DisplayPort, 6x USB 3.1 Gen.2, 2x USB 2.0 internal, AMT)	**L**

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Ordering data

	Article No.
SIMATIC IPC547J	**6AG4104- 5 ■ ■ ■ ■ - ■ ■ ■ ■**
Drives	
• 1 TB HDD 3.5" SATA	**A**
• 1 TB HDD 3.5" SATA	**B**
• 1 TB HDD 3.5" SATA + 960 GB SSD 2.5" SATA (for operating system if M.2 SSD not ordered)	**C**
• 480 GB SSD 2.5" SATA	**D**
• 2x 480 GB SSD 2.5" SATA	**E**
• 960 GB SSD 2.5" SATA	**F**
• RAID1, 2x 1 TB HDD 3.5" SATA	**G**
• RAID1, 2x 480 GB SSD 2.5" SATA	**H**
• RAID1, 2x 960 GB SSD 2.5" SATA	**J**
• RAID1, 2x 1 TB HDD [Enterprise] 3.5" SATA	**K**
• RAID1, 2x 2 TB HDD [Enterprise] 3.5" SATA	**L**
• RAID1, 2x 2 TB HDD [Enterprise] 3.5" SATA + 2 TB HDD [Enterprise] 3.5" SATA as HotSpare	**M**
• RAID1, 2x 2 TB HDD [Enterprise] 3.5" SATA + 960 GB SSD 2.5" SATA (for operating system, if M.2 SSD not ordered)	**N**
• RAID5, 3x 2 TB HDD [Enterprise] 3.5" SATA	**P**
• RAID5, 3x 2 TB HDD [Enterprise] 3.5" SATA + 2 TB HDD [Enterprise] 3.5" SATA as HotSpare	**Q**
• Without drives	**X**
Enclosure type / drive cage	
• Enclosure (short) with drive cage Type C (for installation internal / 0.2 g vibration, 2 g shock), blue-chromated	**0**
• Enclosure with drive cage type B (for internal installation/0.2 g vibration, 2 g shock), blue chromated	**1**
• Enclosure with drive cage type B (for internal installation/0.2 g vibration, 2 g shock); coated	**2**
• Enclosure with drive cage type B (for internal installation/0.2 g vibration, 2 g shock); coated	**3**
• Enclosure with drive cage type A (for removable trays on the front), coated	**4**
Power supply unit, cable	
• 100/240 V AC industrial power supply; without power cable	**0**
• 100/240 V AC industrial power supply; power cable for Europe	**1**
• 100/240 V AC industrial power supply; power cable for USA	**2**
• 100/240 V AC industrial power supply; power cable for China	**3**
• 2 x 100/240 V AC redundant industrial power supply; without power cable	**4**
• 2 x 100/240 V AC redundant industrial power supply; 2x power cable for Europe	**5**

	Article No.
SIMATIC IPC547J	**6AG4104- 5 ■ ■ ■ ■ - ■ ■ ■ ■**
Memory configuration	
• 4 GB DDR4 SDRAM (1x 4 GB), single channel	**0**
• 8 GB DDR4 SDRAM (2x 4 GB), dual channel	**1**
• 16 GB DDR4 SDRAM (2x 8 GB), dual channel	**2**
• 32 GB DDR4 SDRAM (2x 16 GB), dual channel	**3**
• 32 GB DDR4 SDRAM (2x 16 GB), dual channel	**4**
• 64 GB DDR4 SDRAM (2x 32 GB), dual channel	**5**
Expansions / hardware	
• Without expansion	**A**
• COM2 interface	**B**
• 512 GB SSD M.2 NVMe (M.2 slot occupied) (for operating system) [only with W480E chip set]	**C**
• 512 GB SSD M.2 NVMe (M.2 slot occupied) (for operating system) [only with W480E chip set]	**D**
• PCIe x16 graphics card NVIDIA Quadro P400 (3x mDP: 3x adapter mDP on DP) (1 slot occupied)	**J**
• PCIe x16 graphics card NVIDIA Quadro P2200 (4x DP: without adapter) (1 slot occupied) [only with W480E chip set / enclosure with drive cage Type A]	**K**
Operating system (pre-installed and activated)	
• Windows 10 IoT Enterprise 2019 LTSC, multi-language (en, de, fr, it, sp), 64-bit [for Core i3/i5]	**A**
• Windows 10 IoT Enterprise 2019 LTSC, multi-language (en, de, fr, it, sp), 64-bit [for Core i7/i9/Xeon]	**B**
• Windows Server 2019 Standard Edition incl. 5 clients, 64-bit, MUI (en, de, fr, it, es) [only with W480E chip set / Xeon]	**N**
• Without operating system	**X**
Software / adapters / security expansions	
• Without expansions	**0**
• SIMATIC IPC DiagMonitor software included	**1**
• SIMATIC IPC Image & Partition Creator software included	**2**
• SIMATIC IPC DiagMonitor + Image & Partition Creator software included	**3**
• Adapter cable DP to VGA for onboard graphics / graphics card	**4**
• Adapter cable DP to DVI-D for onboard graphics / graphics card	**5**
• TPM 2.0 [1]	**8**

[1] TPM = Trusted Platform Module

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

http://www.siemens.com/ipc-configurators

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SIMATIC IPC547J

Ordering data

	Article No.
Accessories	
Memory expansions	
• 4 GB DDR4 DIMM (1x 4)	**6ES7648-2AL60-0QA0**
• 8 GB DDR4 DIMM (1x 8)	**6ES7648-2AL70-0QA0**
• 16 GB DDR4 DIMM (1x 16)	**6ES7648-2AL80-0QA0**
• 32 GB DDR4 DIMM (1x 32)	**6ES7648-2AL81-0QA0**
Removable drive bay For 3.5" hard disk (SATA/SAS) or 2.5" SSD (SATA), without drive	**6ES7648-0EH00-1BA0**
Retainer For interlocking the internal USB port	**6ES7648-1AA00-0XK0**
Mounting accessories Tower Kit for converting the rack IPC into an industrial tower PC	
• For IPC547G/IPC547J	**6ES7648-1AA01-0XC0**
• For IPC547G/IPC574J (device with short enclosure)	**6ES7648-1AA01-0XE0**
Adapter cable	
• Adapter cable DisplayPort to DVI-D for onboard graphics	**6ES7648-3AF00-0XA0**
• Adapter cable DisplayPort to VGA for onboard graphics	**6ES7648-3AG00-0XA0**

Technical specifications

Article number	**6AG4104-5....-....** SIMATIC IPC547J
Installation type/mounting	
Mounting	For horizontal and vertical installation; prepared for telescopic rails; 19" mounting bracket can be removed externally; tower kit (optional)
Design	Rack PC, 19", 4U
Supply voltage	
Type of supply voltage	100/240 V AC (autorange) 50 / 60 Hz; optional redundant 100/240 V AC
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Intel Xeon W-1270E (8C/16T, 3.4 (4.8) GHz, 16 MB Cache); Intel Core i9-10900E (10C/20T, 2.8 (4.7) GHz, 20 MB Cache); Intel Core i7-10700E (8C/16T, 2.9 (4.5) GHz, 16 MB Cache); Intel Core i5-10500E (6C/12T, 3.1 (4.2) GHz, 12 MB Cache); Intel Core Core i3-10100E (4C/8T, 3.2 (3.8) GHz, 6 MB Cache)
Chipset	Intel W480E / Intel H410
Graphic	
Graphics controller	Intel® UHD Graphics 630

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Technical specifications

Article number	**6AG4104-5....-....** SIMATIC IPC547J
Drives	
Hard disk	1 TB HDD 3.5" SATA, 2x 1 TB HDD 3.5" SATA, 1 TB HDD 3.5" SATA + 960 GB SSD 2.5" SATA, RAID1, 2x 1 TB HDD 3.5" SATA, RAID1, 2x 1 TB HDD [Enterprise] 3.5" SATA, RAID1, 2x 2 TB HDD [Enterprise] 3.5" SATA, RAID1, 2x 2 TB HDD [Enterprise] 3.5" SATA + 2 TB HDD [Enterprise] 3.5" SATA as hot spare, RAID1, 2x 2 TB HDD [Enterprise] 3.5" SATA + 960 GB SSD 2.5" SATA, RAID5, 3x 2 TB HDD [Enterprise] 3.5" SATA, RAID5, 3x 2 TB HDD [Enterprise] 3.5" SATA + 2 TB HDD [Enterprise] 3.5" SATA as hot spare
SSD	Yes; 480 GB 2.5" SATA SSD, 1x 960 GB 2.5" SATA SSD, 2x 480 GB 2.5" SATA SSD, RAID1 2x 480 GB 2.5" SATA SSD, RAID1 2x 960 GB 2.5" SATA SSD; 1x 512 GB M.2 NVMe SSD, 1x 1 024 GB M.2 NVMe SSD
Slot for drives	Mounting internally in vibration/shock-absorbing drive cage Type B or mounting on the front in removable trays (hot swap in RAID configurations) in drive cage Type A; mounting internally on the fixed drive cage optional
Memory	
Main memory	4 GB to 128 GB DDR4 2933 SDRAM DIMM
Hardware configuration	
Slots	
• free slots	7 spare slots for expansions (all long); mainboard with H410 chip set: 1x PCIe (x16) (16 lane) Gen 3, 1x PCIe (x16) (1 lanes) Gen 3, 1x PCIe (x8) (1 lane) Gen 3, 1x PCIe (x4) (1 lane) Gen 3, 1x PCIe (x4) (1 lane) Gen 3, 2x PCI; mainboard with W480E chip set: 1x PCIe (x16) (16 lane) Gen 3, 1x PCIe (x16) (4 lanes) Gen 3, 1x PCIe (x8) (1 lane) Gen 3, 1x PCIe (x4) (4 lane) Gen 3, 1x PCIe (x4) (1 lane) Gen 3, 2x PCI

Article number	**6AG4104-5....-....** SIMATIC IPC547J
Interfaces	
Interfaces/bus type	mainboard (H410 chip set): 2x Intel Gigabit Ethernet (RJ45, teaming-capable), USB 3.1 Gen 1: 2x on rear, 2x on front, USB 2.0: 4x on rear, 1x internal e.g. for software dongle with optional interlock, 1x DisplayPort V1.2, 1x DVI-D, 1x COM1, audio: line in, line out, micro; mainboard (W480E chip set): 3x Intel Gigabit Ethernet (RJ45, teaming-capable), USB 3.1 Gen 2: 4x type A, 2x type C, on rear, USB 3.1 Gen 1: 2x on front, USB 2.0: 2x internal e.g. for software dongle with optional interlock, 2x DisplayPort V1.2, 1x DVI-D, 1x COM1, audio: line in, line out, micro
USB port	mainboard (H410 chip set): USB 3.1 Gen 1: 2x on rear, 2x on front, USB 2.0: 4x on rear, 1x internal e.g. for software dongle with optional interlock; mainboard (W480E chip set): USB 3.1 Gen 2: 4x type A, 2x type C, on rear, USB 3.1 Gen 1: 2x on front, USB 2.0: 2x internal e.g. for software dongle with optional interlock
Connection for keyboard/mouse	USB
serial interface	COM1: 1x RS 232 or RS 485; COM2 (optional) 1x RS 232
Multimedia	
• Audio In/Out	Yes
• Microphone In	Yes
Video interfaces	
• Graphics interface	2x DisplayPort and 1x DVI-D onboard; 1x VGA via DP-VGA adapter cable (optional); graphics card PCIe (x16), Triple Head (3x mini DisplayPort, 2 GB graphics memory, 3x mini DisplayPort to DisplayPort adapter cable) (optional)
Industrial Ethernet	
• Industrial Ethernet interface	2x or 3x Gigabit Ethernet (IE/PN), RJ45
- 100 Mbps	Yes
- 1000 Mbps	Yes

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Technical specifications

Article number	**6AG4104-5....-....**
	SIMATIC IPC547J
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	POWER, HDD, ETHERNET 1, ETHERNET 2, ETHERNET 3, WATCHDOG, TEMP, FAN, HDD3 ALARM, HDD2 ALARM, HDD1 ALARM, HDD0 ALARM
• Fan	Yes
• Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±4 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 ... 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 80 MHz, 80% AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	30 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-3; EN 61000-6-4, CAN/CSA CISPR 22 Class B, EN 55032 Class B; FCC Class A; KN32 Class B, EN 61000-3-2 Class D; EN 61000-3-3
Compliance with line harmonic distortion limits	
• Compliance with line harmonic distortion acc. to IEC 61000-3-2, IEC 61000-3-3	Yes; EN 61000-3-2 Class D; EN 61000-3-3
Degree and class of protection	
IP (at the front)	IP30
IP (rear)	IP20

Article number	**6AG4104-5....-....**
	SIMATIC IPC547J
Standards, approvals, certificates	
CE mark	Yes; For use in industrial areas as well as domestic, business and commercial environments (emitted interference: EN 61000-6-3:2007 +A1:2011, noise immunity: EN 61000-6-2:2005)
CSA approval	Yes; CAN/CSA-C22.2 No. 61010-2-201 Second Edition
UL approval	UL 61010-2-201 Second Edition, File E85972
cULus	Yes; UL 61010-2-201 Second Edition; CAN/CSA-C22.2 No. 61010-2-201 Second Edition
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
EMC	EN 61000-6-3; EN 61000-6-4, CAN/CSA CISPR 22 Class B, EN 55032 Class B; FCC Class A; KN32 Class B, EN 61000-3-2 Class D; EN 61000-3-3
Dust protection	With front door closed: G2 EN 779, 99% of particles > 0.5 mm are filtered
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to +40 °C with full configuration
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6, 10 cycles; 20 to 58 Hz: 0.015 mm; 58 to 200 Hz: 2 m/s² (0.2 g)
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27; half-sine: 9.8 m/s² (1 g), 20 ms, 100 shocks per axis
Operating systems	
pre-installed operating system	Windows 10 IoT Enterprise 2019 LTSC, multi-language (64-bit); Windows Server 2019 Standard Edition incl. 5 clients, multi-language (64-bit)
Additional info on operating system	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)
without operating system	Yes
Software	
SIMATIC Software	Optional package with SIMATIC WinCC
Dimensions	
Width	430 mm
Height	177 mm; 4U
Depth	446 mm; Device with short enclosure: 356 mm

More information

More information is available on the internet at:

http://www.siemens.com/ipc547j

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Overview

SIMATIC IPC647E

The SIMATIC IPC647E is a very rugged, high-performance industrial PC in 19" rack design (2 U) with excellent industrial functionality.

It offers:

- Extreme compactness
- Extreme ruggedness
- Intel® Core® i / Xeon technology 8th/9th Generation

Ordering data

	Article No.
SIMATIC IPC647E Rack PC, 19", 2 U: Interfaces: 3x Gbit Ethernet (IE/PN), RJ45; 1x DVI-D; 2x DisplayPort; 1x COM1; audio; 4x USB 3.1, 2x USB 3.1 (type C) on the rear; 2x USB 3.0 on the front, 1x USB 3.1 internal. 1x M.2 slot internal; Temperature and fan monitoring, watchdog, card retainer	**6AG4112- 3** ■ ■■■■ - ■■■■
Processor / motherboard	
• Core i3-8100 (4C/4T, 3.6 GHz, 6 MB Cache, VT-d); Board 2 Slots: 1x PCIe x16 (16 L), 1x PCIe x16 (4 L);	**A**
• Core i3-8100 (4C/4T, 3.6 GHz, 6 MB Cache, VT-d); Board 4 Slots: 2x PCI, 2x PCIe x16 (8 L);	**B**
• Core i3-8100 (4C/4T, 3.6 GHz, 6 MB Cache, VT-d); Board 4 Slots: 2x PCIe x16 (8 L), 1x PCIe x16 (4 L), 1x PCIe x16 (1 L);	**C**
• Core i5-8500 (6C/6T, 3.0 (4.1) GHz, 9 MB Cache, TB, VT-d, AMT); Board 2 Slots: 1x PCIe x16 (16 L), 1x PCIe x16 (4 L);	**D**
• Core i5-8500 (6C/6T, 3.0 (4.1) GHz, 9 MB Cache, TB, VT-d, AMT); Board 4 Slots: 2x PCI, 2x PCIe x16 (8 L);	**E**
• Core i5-8500 (6C/6T, 3.0 (4.1) GHz, 9 MB Cache, TB, VT-d, AMT); Board 4 Slots: 2x PCIe x16 (8 L), 1x PCIe x16 (4 L), 1x PCIe x16 (1 L);	**F**
• Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB Cache, TB, VT-d, AMT); Board 2 Slots: 1x PCIe x16 (16 L), 1x PCIe x16 (4 L);	**G**
• Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB Cache, TB, VT-d, AMT); Board 4 Slots: 2x PCI, 2x PCIe x16 (8 L);	**H**
• Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB Cache, TB, VT-d, AMT); Board 4 Slots: 2x PCIe x16 (8 L), 1x PCIe x16 (4 L), 1x PCIe x16 (1 L);	**J**
• Xeon E-2176G (6C/12T, 3.7 (4.7) GHz, 12 MB Cache, TB, VT-d, AMT); Board 2 Slots: 1x PCIe x16 (16 L), 1x PCIe x16 (4 L);	**K**
• Xeon E-2176G (6C/12T, 3.7 (4.7) GHz, 12 MB Cache, TB, VT-d, AMT); Board 4 Slots: 2x PCI, 2x PCIe x16 (8 L);	**L**
• Xeon E-2176G (6C/12T, 3.7 (4.7) GHz, 12 MB Cache, TB, VT-d, AMT); Board 4 Slots: 2x PCIe x16 (8 L), 1x PCIe x16 (4 L), 1x PCIe x16 (1 L);	**M**
• Xeon E-2278GE (8C/16T, 3.3 (4.7) GHz, 16 MB Cache, TB, VT-d, AMT); Board 2 Slots: 1x PCIe x16 (16 L), 1x PCIe x16 (4 L)	**N**
• Xeon E-2278GE (8C/16T, 3.3 (4.7) GHz, 16 MB Cache, TB, VT-d, AMT); Board 4 Slots: 2x PCI, 2x PCIe x16 (8 L)	**Q**
• Xeon E-2278GE (8C/16T, 3.3 (4.7) GHz, 16 MB Cache, TB, VT-d, AMT); Board 4 Slots: 2x PCIe x16 (8 L), 1x PCIe x16 (4 L), 1x PCIe x16 (1 L)	**R**

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SIMATIC IPC647E

Ordering data

	Article No.		
SIMATIC IPC647E	**6AG4112-**	**3** ■ ■ ■ ■ - ■ ■ ■ ■	
Drives			
• 1 TB HDD 3.5" SATA		**A**	
• 2x 1 TB HDD 3.5" SATA		**B**	
• RAID1, 2x 1 TB HDD 3.5" SATA		**C**	
• RAID1, 2x 1 TB HDD [Enterprise] 3.5" SATA		**D**	
• RAID1, 2x 2 TB HDD [Enterprise] 3.5" SATA		**E**	
• RAID1, 2x 2 TB HDD [Enterprise] 3.5" SAS; PCIe x8 RAID controller incl. ZMCP module (1 slot occupied)		**K**	
• RAID1, 2x 2 TB HDD [Enterprise] 3.5" SAS; PCIe x8 RAID controller incl. ZMCP module (1 slot occupied) + 480 GB SSD 2.5" SATA internal		**L**	
• 1 TB HDD 3.5" SATA + 480 GB SSD 2.5" SATA (for operating system if M.2 SSD not ordered)		**P**	
• 480 GB SSD 2.5" SATA		**Q**	
• 960 GB SSD 2.5" SATA		**R**	
• 2x 480 GB SSD 2.5" SATA		**S**	
• RAID1, 2x 480 GB SSD 2.5" SATA		**T**	
• Without drives		**X**	
Type of enclosure/power supplies			
• Enclosure with drive cage type B (for internal installation/0.5 g vibration, 5 g shock); 100/240 V AC industrial power supply			**0**
• Enclosure with drive cage type A (for removable trays on the front); 100/240 V AC industrial power supply			**1**
• Enclosure with drive cage type B (for internal installation/0.5 g vibration, 5 g shock); 2x 100/240 V AC redundant industrial power supply			**2**
• Enclosure with drive cage type A (for removable frames on the front); 2x 100/240 V AC redundant industrial power supply			**3**
• Enclosure with drive cage type B (for internal installation/0.5 g vibration, 5 g shock) + COM2 port; 100/240 V AC industrial power supply			**4**
• Enclosure with drive cage type A (for removable trays on the front) + COM2 interface; 100/240 V AC industrial power supply			**5**
• Enclosure with drive cage type B (for internal installation/0.5 g vibration, 5 g shock) + COM2 port; 2x 100/240 V AC redundant industrial power supply			**6**
• Enclosure with drive cage type A (for removable frames on the front) + COM2 port; 2x 100/240 V AC redundant industrial power supply			**7**

	Article No.		
SIMATIC IPC647E	**6AG4112-**	**3** ■ ■ ■ ■ - ■ ■ ■ ■	
Memory configuration			
• 4 GB DDR4 SDRAM (1x 4 GB), single channel		**0**	
• 8 GB DDR4 SDRAM (2x 4 GB), dual channel		**1**	
• 16 GB DDR4 SDRAM (2x 8 GB), dual channel		**2**	
• 32 GB DDR4 SDRAM (2x 16 GB), dual channel		**3**	
• 64 GB DDR4 SDRAM (4x 16 GB), dual channel		**4**	
• 128 GB DDR4 SDRAM (4x 32 GB), dual channel		**5**	
• 16 GB DDR4 SDRAM (2x 8 GB), ECC, dual channel (only with Core i3/Xeon)		**6**	
• 32 GB DDR4 SDRAM (2x 16 GB), ECC, dual channel (only with Core i3/Xeon)		**7**	
• 64 GB DDR4 SDRAM (4x 16 GB), ECC, dual channel (only with Core i3/Xeon)		**8**	
Expansion hardware			
• Without expansions			**0**
• PCIe x16 graphics card (3x mDP: 3x adapter mDP on DP) (1 slot occupied)			**2**
• 512 GB SSD M.2 NVMe (M.2 slot occupied) (for operating system)			**4**
• 512 GB SSD M.2 NVMe (M.2 slot occupied) (for operating system) + PCIe x16 graphics card (3x mDP: 3x adapter mDP on DP) (1 slot occupied)			**5**
• 1 024 GB SSD M.2 NVMe (M.2 slot occupied) (for operating system)			**6**
Operating system (pre-installed and activated)			
• Windows 10 Enterprise 2016 LTSB, multi-language (en, de, fr, it, sp), 64-bit [for Core i3/i5]			**A**
• Windows 10 Enterprise 2016 LTSB, multi-language (en, de, fr, it, sp), 64-bit, for Pentium Core i7/Xeon			**B**
• Windows 10 IoT Enterprise 2019 LTSC, multi-language (en, de, fr, it, sp), 64-bit [for Core i3/i5]			**C**
• Windows 10 IoT Enterprise 2019 LTSC, multi-language (en, de, fr, it, sp), 64-bit, for Core i7/Xeon			**D**
• Windows Server 2016 Standard Edition incl. 5 clients, 64-bit, MUI (en, de, fr, it, sp)			**H**
• Windows Server 2019 Standard Edition incl. 5 clients, 64-bit, MUI (en, de, fr, it, sp)			**J**
• Without operating system			**X**

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Ordering data

	Article No.
SIMATIC IPC647E	**6AG4112- 3 ■■■■ - ■■■**
Software / adapters / security expansions	
• SIMATIC IPC DiagMonitor software included	**A**
• SIMATIC IPC Image & Partition Creator software included	**B**
• SIMATIC IPC DiagMonitor + Image & Partition Creator software included	**C**
• Adapter cable DP to VGA for onboard graphics	**H**
• Adapter cable DP to DVI-D for onboard graphics	**J**
• Without expansions	**X**
• TPM[1] 2.0 (not for China)	**Y**
Cables, country-specific versions	
• Without power supply cord	**0**
• Power supply cord for Europe	**1**
• Power supply cord for USA	**2**
• Power supply cord for China	**3**

	Article No.
Accessories	
Memory expansions	
• 4 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL60-0QA0**
• 8 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL70-0QA0**
• 16 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL80-0QA0**
• 32 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL81-0QA0**
Removable drive bay For 3.5'' hard disk or 2.5'' solid-state drive, SATA (without hard disk drive/solid-state drive)	**6ES7648-0EH00-1BA0**
Retainer For mechanically interlocking the internal USB port	**6ES7648-1AA00-0XK0**
Adapter cable	
• DisplayPort to DVI-D for onboard graphics	**6ES7648-3AF00-0XA0**
• DisplayPort to VGA for onboard graphics	**6ES7648-3AG00-0XA0**
• Mini-DisplayPort to VGA for graphics card	**6ES7648-3AL00-0XA0**
• Mini-display port to DVI-D for graphics card	**6ES7648-3AK00-0XA0**
• Mini-DisplayPort to DVI-D for graphics card (3 units per pack)	**6ES7648-3AK00-1XA0**
• Mini-DisplayPort to DisplayPort for graphics card	**6ES7648-3AJ00-0XA0**
• Mini-DisplayPort to DisplayPort for graphics card (3 units per pack)	**6ES7648-3AJ00-1XA0**

[1] TPM = Trusted Platform Module

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

http://www.siemens.com/ipc-configurators

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Technical specifications

Article number	**6AG4112-3....-....**
	SIMATIC IPC647E (Rack PC)
Installation type/mounting	
Mounting	For horizontal installation; prepared for telescopic rails; 19" mounting bracket can be removed externally
Design	Rack PC, 19", 2U
Supply voltage	
Type of supply voltage	100/240 V AC (autorange) 50 / 60 Hz; optional redundant 100/240 V AC
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Intel Xeon E-2278GE (8C/16T, 3.3 (4.7) GHz, 16 MB Cache,Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Xeon E-2176G (6C/12T, 3.7 (4.7) GHz, 12 MB Cache,Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB Cache,Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i5-8500 (6C/6T, 3.0 (4.1) GHz, 9 MB Cache,Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i3-8100 (4C/4T, 3.6 GHz, 6 MB Cache, VT-x/-d-Technology)
Chipset	Intel C246
Graphic	
Graphics controller	Onboard Intel UHD graphics P630/630 integrated in processor; graphics card NVIDIA Quadro P400 PCIe (x16) triple head (optional)
Drives	
Hard disk	1x 1 TB 3.5" SATA HDD, 2x 1 TB 3.5" SATA HDD, RAID1 2x 1 TB 3.5" SATA HDD, RAID1 2x 1 TB 3.5" SATA HDD (Enterprise), RAID1 2x 2 TB 3.5" SATA HDD (Enterprise), RAID1 2x 2 TB 3.5" SAS HDD (Enterprise) with PCIe x8 RAID controller incl. ZMCP module
SSD	Yes; 1x 480 GB 2.5" SATA SSD, 1x 960 GB 2.5" SATA SSD, 2x 480 GB 2.5" SATA SSD, RAID1 2x 480 GB 2.5" SATA SSD; 1x 512 GB M.2 NVMe SSD, 1x 1 024 GB M.2 NVMe SSD
Slot for drives	Mounting internally in vibration/shock-absorbing drive cage Type B or mounting on the front in removable trays (hot swap in RAID configurations) in drive cage Type A; mounting internally on the fixed drive cage optional

Article number	**6AG4112-3....-....**
	SIMATIC IPC647E (Rack PC)
Memory	
Main memory	4 GB to 128 GB DDR4 2666 SDRAM DIMM, ECC optional
Capacity of main memory, max.	128 Gbyte
Hardware configuration	
Slots	
• free slots	2 slots: 1x PCI Express (x16) (16 lanes), 1x PCI Express (x16) (4 lanes) or 4 slots: 2x PCI, 2x PCI Express (x16) (8 lanes) or 4 slots: 2x PCI Express (x16) (8 lanes), 1x PCI Express (x16) (4 lanes), 1x PCI Express (x16) (1 lane); expansion modules up to 312 mm in length can be used
Interfaces	
Interfaces/bus type	1x COM1, 1x COM2 (optional), 2x DisplayPort, 1x DVI-D, audio (microphone in, line in, line out), 9x USB, 3x Gigabit Ethernet
PROFIBUS/MPI	can be implemented with plug-in card
USB port	4x USB 3.1 Gen. 2 Type A, 2x USB 3.1 Gen. 2 Type C on the rear; 1x USB 3.1 Gen. 2 Type A internally, e.g. for software dongle with optional interlock, 2x USB 3.1 Gen. 1 Type A on the front, can be used with door closed
Connection for keyboard/mouse	USB
serial interface	COM1: 1x RS 232, COM2 (optional): 1x RS 232
Multimedia	
• Audio In/Out	Yes
• Microphone In	Yes
Video interfaces	
• Graphics interface	2x DisplayPort and 1x DVI-D onboard; 1x VGA via DP-VGA adapter cable (optional); graphics card PCIe (x16), Triple Head (3x mini DisplayPort, 2 GB graphics memory, 3x mini DisplayPort to DisplayPort adapter cable) (optional)
Industrial Ethernet	
• Industrial Ethernet interface	3x Gigabit Ethernet (IE/PN), RJ45
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	Power, HDD, Ethernet 1, Ethernet 2, Ethernet 3, Watchdog, Temp, Fan, HDD1 alarm, HDD0 alarm
• Fan	Yes
• Monitoring function via network	Optional

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Technical specifications

Article number	**6AG4112-3....-....**
	SIMATIC IPC647E (Rack PC)
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 ... 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 80 MHz, 80% AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst, length < 3 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-3; EN 61000-6-4, CAN/CSA CISPR 22 Class B, EN 55032 Class B; FCC Class A; KN32 Class B, EN 61000-3-2 Class D; EN 61000-3-3
Compliance with line harmonic distortion limits	
• Compliance with line harmonic distortion acc. to IEC 61000-3-2, IEC 61000-3-3	Yes; EN 61000-3-2 Class D; EN 61000-3-3
Standards, approvals, certificates	
CE mark	Yes; For use in industrial areas as well as domestic, business and commercial environments (emitted interference: EN 61000-6-3:2007 +A1:2011, noise immunity: EN 61000-6-2:2005)
CSA approval	Yes; CAN/CSA-C22.2 No. 61010-2-201 Second Edition
UL approval	Yes; UL 61010-2-201 Second Edition, File E85972
cULus	Yes; UL 61010-2-201 Second Edition; CAN/CSA-C22.2 No. 61010-2-201 Second Edition
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
EMC	EN 61000-6-3; EN 61000-6-4, CAN/CSA CISPR 22 Class B, EN 55032 Class B; FCC Class A; KN32 Class B, EN 61000-3-2 Class D; EN 61000-3-3
Dust protection	With front door closed: G2 EN 779, 99% of particles > 0.5 mm are filtered

Article number	**6AG4112-3....-....**
	SIMATIC IPC647E (Rack PC)
Degree and class of protection	
IP (at the front)	IP41
IP (rear)	IP20
Marine approval	
• Germanischer Lloyd (GL)	Yes; Only with SSD
• American Bureau of Shipping (ABS)	Yes; Only with SSD
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to +50 °C with full configuration
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6: 10 cycles, 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 500 Hz: 4.9 m/s² (0.5 g)
Shock testing	
• Shock load during operation	Tested according to DIN IEC 60068-2-7: 50 m/s2 (5 g), 30 ms, 100 shocks
Operating systems	
pre-installed operating system	Windows 10 Enterprise 2016 LTSB, multi-language (64-bit); Windows 10 IoT Enterprise 2019 LTSC, multi-language (64-bit); Windows Server 2016 Standard Edition incl. 5 multi-language clients (64-bit); Windows Server 2019 Standard Edition incl. 5 multi-language clients (64-bit)
Additional info on operating system	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)
without operating system	Yes
Software	
SIMATIC Software	Optional package with SIMATIC WinCC
Dimensions	
Width	430 mm
Height	88 mm; 2U
Depth	444 mm

More information

More information is available on the internet at:

http://www.siemens.com/simatic-pc

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SIMATIC IPC847E

Overview

SIMATIC IPC847E

SIMATIC IPC847E is a very robust, high-performance industrial PC in 19" rack design (4 U) with excellent industrial functionality.

It offers:

- Maximum expandability
- Extreme ruggedness
- Intel® Core® i / Xeon technology 8th/9th generation

Ordering data

	Article No.	
SIMATIC IPC847E	**6AG4114-**	**3 ■ ■ ■ ■ - ■ ■ ■ ■**
Rack PC, 19", 4 U Interfaces: 3x Gbit Ethernet (IE/PN), RJ45; 1x DVI-D; 2x DisplayPort; 1x COM1; audio; 4x USB 3.1, 2x USB 3.1 (type C) on the rear; 2x USB 3.0 on the front, 1x USB 3.1 internal. Temperature and fan monitoring, watchdog, card retainer		
Processors / Boards		
• Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d). Board 9 slots: 7x PCI, 2x PCIe x16 (8 L)		**A**
• Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d); Board 11 slots: 3x PCI, 1x PCIe x16 (8 L), 5x PCIe x16 (4 L), 2x PCIe x4 (4 L)		**B**
• Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d); Board 11 slots: 3x PCI, 1x PCIe x16 (16 L), 3x PCIe x16 (4 L), 2x PCIe x16 (1 L), 2x PCIe x4 (4 L)		**C**
• Core i5-8500 (6C/6T, 3.0 (4.1) GHz, 9 MB cache, TB, VT-d, AMT); Board 9 slots: 7x PCI, 2x PCIe x16 (8 L)		**D**
• Core i5-8500 (6C/6T, 3.0 (4.1) GHz, 9 MB cache, TB, VT-d, AMT); Board 11 slots: 3x PCI, 1x PCIe x16 (8 L), 5x PCIe x16 (4 L), 2x PCIe x4 (4 L)		**E**
• Core i5-8500 (6C/6T, 3.0 (4.1) GHz, 9 MB cache, TB, VT-d, AMT); Board 11 slots: 3x PCI, 1x PCIe x16 (16 L), 3x PCIe x16 (4 L), 2x PCIe x16 (1 L), 2x PCIe x4 (4 L)		**F**
• Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, TB, VT-d, AMT); Board 9 slots: 7x PCI, 2x PCIe x16 (8 L)		**G**
• Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, TB, VT-d, AMT); Board 11 slots: 3x PCI, 1x PCIe x16 (8 L), 5x PCIe x16 (4 L), 2x PCIe x4 (4 L)		**H**
• Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, TB, VT-d, AMT); Board 11 slots: 3x PCI, 1x PCIe x16 (16 L), 3x PCIe x16 (4 L), 2x PCIe x16 (1 L), 2x PCIe x4 (4 L)		**J**
• Xeon E-2176G (6C/12T, 3.7 (4.7) GHz, 12 MB cache, TB, VT-d, AMT); Board 9 slots: 7x PCI, 2x PCIe x16 (8 L)		**K**
• Xeon E-2176G (6C/12T, 3.7 (4.7) GHz, 12 MB cache, TB, VT-d, AMT); Board 11 slots: 3x PCI, 1x PCIe x16 (8 L), 5x PCIe x16 (4 L), 2x PCIe x4 (4 L)		**L**
• Xeon E-2176G (6C/12T, 3.7 (4.7) GHz, 12 MB cache, TB, VT-d, AMT); Board 11 slots: 3x PCI, 1x PCIe x16 (16 L), 3x PCIe x16 (4 L), 2x PCIe x16 (1 L), 2x PCIe x4 (4 L)		**M**
• Xeon E-2278GE (8C/16T, 3.3 (4.7) GHz, 16 MB cache, TB, VT-d, AMT); Board 9 slots: 7x PCI, 2x PCIe x16 (8 L)		**N**
• Xeon E-2278GE (8C/16T, 3.3 (4.7) GHz, 16 MB cache, TB, VT-d, AMT); Board 11 slots: 3x PCI, 1x PCIe x16 (8 L), 5x PCIe x16 (4 L), 2x PCIe x4 (4 L)		**Q**
• Xeon E-2278GE (8C/16T, 3.3 (4.7) GHz, 16 MB cache, TB, VT-d, AMT); Board 11 slots: 3x PCI, 1x PCIe x16 (16 L), 3x PCIe x16 (4 L), 2x PCIe x16 (1 L), 2x PCIe x4 (4 L)		**R**

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Ordering data

	Article No.	
SIMATIC IPC847E	**6AG4114-**	**3 ■ ■ ■ ■ - ■ ■ ■ ■**
Drives		
• 1 TB HDD 3.5" SATA		**A**
• 2x 1 TB HDD 3.5" SATA		**B**
• RAID1, 2x 1 TB HDD 3.5" SATA		**C**
• RAID1, 2x 1 TB HDD [Enterprise] 3.5" SATA		**D**
• RAID1, 2x 2 TB HDD [Enterprise] 3.5" SATA		**E**
• RAID1, 2x 2 TB HDD [Enterprise] 3.5" SATA + 2 TB HDD [Enterprise] 3.5" SATA as HotSpare		**F**
• RAID1, 2x 2 TB HDD [Enterprise] 3.5" SATA + 480 GB 2.5" SSD SATA (for operating system if M.2 SSD not ordered)		**G**
• RAID5, 3x 2 TB HDD [Enterprise] 3.5" SATA		**H**
• RAID5, 3x 2 TB HDD [Enterprise] 3.5" SATA + 2 TB HDD [Enterprise] 3.5" SATA as HotSpare		**J**
• RAID1, 2x 2 TB HDD [Enterprise] 3.5" SAS; PCIe x8 RAID controller incl. ZMCP module (1 slot occupied)		**K**
• RAID1, 2x 2 TB HDD [Enterprise] 3.5" SAS; PCIe x8 RAID controller incl. ZMCP module (1 slot occupied) + 480 GB SSD 2.5" SATA		**L**
• RAID5, 3x 2 TB HDD [Enterprise] 3.5" SAS; PCIe x8 RAID controller incl. ZMCP module (1 slot occupied)		**M**
• RAID5, 3x 2 TB HDD [Enterprise] 3.5" SAS + 2 TB HDD [Enterprise] 3.5" SAS as hot spare; PCIe x8 RAID controller incl. ZMCP module (1 slot occupied)		**N**
• 1 TB HDD 3.5" SATA + 480 GB SSD 2.5" SATA (for operating system if M.2 SSD not ordered)		**P**
• 480 GB SSD 2.5" SATA		**Q**
• 960 GB SSD 2.5" SATA		**R**
• 2x 480 GB SSD 2.5" SATA		**S**
• RAID1, 2x 480 GB SSD 2.5" SATA		**T**
• Without drives		**X**

	Article No.	
SIMATIC IPC847E	**6AG4114-**	**3 ■ ■ ■ ■ - ■ ■ ■ ■**
Type of enclosure/power supplies		
• Enclosure with drive cage type B (for internal installation/ 0.5 g vibration, 5 g shock); 100/240 V AC industrial power supply		**0**
• Enclosure with drive cage type A (for removable trays on the front); 100/240 V AC industrial power supply		**1**
• Enclosure with drive cage type B (for internal installation/ 0.5 g vibration, 5 g shock); 2x 100/240 V AC redundant industrial power supply		**2**
• Enclosure with drive cage type A (for removable trays on the front); 2x 100/240 V AC redundant industrial power supply		**3**
• Enclosure with drive cage type B (for internal installation/ 0.5 g vibration, 5 g shock) + COM2 port; 100/240 V AC industrial power supply		**4**
• Enclosure with drive cage type A (for removable trays on the front) + COM2 interface; 100/240 V AC industrial power supply		**5**
• Enclosure with drive cage type B (for internal installation/ 0.5 g vibration, 5 g shock) + COM2 port; 2x 100/240 V AC redundant industrial power supply		**6**
• Enclosure with drive cage Type A (for removable trays on the front) + COM2 port; 2x 100/240 V AC redundant industrial power supply		**7**

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Ordering data

	Article No.
SIMATIC IPC847E	**6AG4114- 3 ■ ■ ■ ■ - ■ ■ ■ ■**
Memory configuration	
• 4 GB DDR4 SDRAM (1x 4 GB), single channel	**0**
• 8 GB DDR4 SDRAM (2x 4 GB), dual channel	**1**
• 16 GB DDR4 SDRAM (2x 8 GB), dual channel	**2**
• 32 GB DDR4 SDRAM (2x 16 GB), dual channel	**3**
• 64 GB DDR4 SDRAM (4x 16 GB), dual channel	**4**
• 128 GB DDR4 SDRAM (4x 32 GB), dual channel	**5**
• 16 GB DDR4 SDRAM (2x 8 GB), ECC, dual channel (only with Core i3/Xeon)	**6**
• 32 GB DDR4 SDRAM (2x 16 GB), ECC, dual channel (only with Core i3/Xeon)	**7**
• 64 GB DDR4 SDRAM (4x 16 GB), ECC, dual channel (only with Core i3/Xeon)	**8**
Expansion hardware	
• Without expansion	**0**
• PCIe x4 adapter card for M.2 NVMe module without SSD (1 slot occupied)	**1**
• PCIe x16 graphics card (3x mDP: 3x adapter mDP on DP) (1 slot occupied)	**2**
• PCIe x4 adapter card for M.2 NVMe module without SSD (1 slot occupied) + PCIe x16 graphics card (3x mDP: 3x adapter mDP on DP) (1 slot occupied)	**3**
• 512 GB SSD M.2 NVMe on PCIe x4 adapter card (1 slot occupied) (for operating system)	**4**
• 512 GB SSD M.2 NVMe on PCIe x4 adapter card (1 slot occupied) (for operating system) + PCIe x16 graphics card (3x mDP: 3x adapter mDP on DP) (1 slot occupied)	**5**
• 1 024 GB SSD M.2 NVMe on PCIe x4 adapter card (1 slot occupied) (for operating system)	**6**

	Article No.
SIMATIC IPC847E	**6AG4114- 3 ■ ■ ■ ■ - ■ ■ ■ ■**
Operating system (pre-installed and activated)	
• Windows 10 Enterprise 2016 LTSB, multi-language (en, de, fr, it, es), 64-bit (for Core i3/i5)	**A**
• Windows 10 Enterprise 2016 LTSB, multi-language (en, de, fr, it, es), 64-bit (for Core i7/Xeon)	**B**
• Windows 10 IoT Enterprise 2019 LTSC, multi-language (en, de, fr, it, sp), 64-bit (for Core i3/i5)	**C**
• Windows 10 IoT Enterprise 2019 LTSC, multi-language (en, de, fr, it, sp), 64-bit, (for Core i7/Xeon)	**D**
• Windows Server 2016 Standard Edition incl. 5 clients, 64-bit, MUI (en, de, fr, it, es)	**H**
• Windows Server 2019 Standard Edition incl. 5 clients, 64-bit, MUI (en, de, fr, it, es)	**J**
• Without operating system	**X**
Software / adapters / security expansions	
• SIMATIC IPC DiagMonitor software included	**A**
• SIMATIC IPC Image & Partition Creator software included	**B**
• SIMATIC IPC DiagMonitor + Image & Partition Creator software included	**C**
• Adapter cable DP to VGA for onboard graphics	**H**
• Adapter cable DP to DVI-D for onboard graphics	**J**
• Without expansions	**X**
• TPM [1] 2.0 (not for China)	**Y**
Cables, country-specific versions	
• Without power supply cord	**0**
• Power supply cord for Europe	**1**
• Power supply cord for USA	**2**
• Power supply cord for China	**3**

[1] TPM = Trusted Platform Module

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

http://www.siemens.com/ipc-configurators

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Ordering data

	Article No.
Accessories	
Memory expansions	
• 4 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL60-0QA0**
• 8 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL70-0QA0**
• 16 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL80-0QA0**
• 32 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL81-0QA0**
Removable drive bay For 3.5'' hard disk or 2.5'' solid-state drive, SATA (without hard disk drive/solid-state drive)	**6ES7648-0EH00-1BA0**
Tower Kit To convert the computer into an industrial tower PC	**6ES7648-1AA01-0XC0**
Retainer For mechanically interlocking the internal USB port	**6ES7648-1AA00-0XK0**
Adapter cable	
• DisplayPort to DVI-D for onboard graphics	**6ES7648-3AF00-0XA0**
• DisplayPort to VGA for onboard graphics	**6ES7648-3AG00-0XA0**
• Mini-DisplayPort to VGA for graphics card	**6ES7648-3AL00-0XA0**
• Mini-DisplayPort to DVI-D for graphics card	**6ES7648-3AK00-0XA0**
• Mini-DisplayPort to DVI-D for graphics card (3 units per pack)	**6ES7648-3AK00-1XA0**
• Mini-DisplayPort to DisplayPort for graphics card	**6ES7648-3AJ00-0XA0**
• Mini-DisplayPort to DisplayPort for graphics card (3 units per pack)	**6ES7648-3AJ00-1XA0**

Technical specifications

Article number	**6AG4114-3....-....** SIMATIC IPC847E (Rack PC)
Installation type/mounting	
Mounting	For horizontal and vertical installation; prepared for telescopic rails; 19" mounting bracket can be removed externally; tower kit (optional)
Design	Rack PC, 19", 4U
Supply voltage	
Type of supply voltage	100/240 V AC (autorange) 50 / 60 Hz; optional redundant 100/240 V AC
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Intel Xeon E-2278GE (8C/16T, 3.3 (4.7) GHz, 16 MB Cache,Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Xeon E-2176G (6C/12T, 3.7 (4.7) GHz, 12 MB Cache,Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB Cache,Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i5-8500 (6C/6T, 3.0 (4.1) GHz, 9 MB Cache,Turbo Boost 2.0, VT-x/-d-Technology, iAMT); Intel Core i3-8100 (4C/4T, 3.6 GHz, 6 MB Cache, VT-x/-d-Technology)
Chipset	Intel C246
Graphic	
Graphics controller	Onboard Intel UHD graphics P630/630 integrated in processor; graphics card NVIDIA Quadro P400 PCIe (x16) triple head (optional)

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Technical specifications

Article number	**6AG4114-3....-....**
	SIMATIC IPC847E (Rack PC)
Drives	
Hard disk	1x 1 TB 3.5" SATA HDD, 2x 1 TB 3.5" SATA HDD, RAID1 2x 1 TB 3.5" SATA HDD, RAID1 2x 1 TB 3.5" SATA HDD (Enterprise), RAID1 2x 2 TB 3.5" SATA HDD (Enterprise), RAID1 2x 2 TB 3.5" SATA HDD (Enterprise) + 2 TB 3.5" SATA HDD (Enterprise) as hot spare, RAID5 3x 2 TB 3.5" SATA HDD (Enterprise), RAID5 3x 2 TB 3.5" SATA HDD (Enterprise) + 2 TB 3.5" SATA HDD (Enterprise) as hot spare, RAID1 2x 2 TB 3.5" SAS HDD (Enterprise) with PCIe x8 RAID controller incl. ZMCP module, RAID5 3x 2 TB 3.5" SAS HDD (Enterprise) with PCIe x8 RAID controller incl. ZMCP module
SSD	Yes; 1x 480 GB 2.5" SATA SSD, 1x 960 GB 2.5" SATA SSD, 2x 480 GB 2.5" SATA SSD, RAID1 2x 480 GB 2.5" SATA SSD; 1x 512 GB M.2 NVMe SSD, 1x 1 024 GB M.2 NVMe SSD
Slot for drives	Mounting internally in vibration/shock-absorbing drive cage Type B or mounting on the front in removable trays (hot swap in RAID configurations) in drive cage Type A; mounting internally on the fixed drive cage optional
Memory	
Main memory	4 GB to 128 GB DDR4 2666 SDRAM DIMM, ECC optional
Capacity of main memory, max.	128 Gbyte
Hardware configuration	
Slots	
• free slots	9 slots: 7x PCI, 2x PCI Express (x16) (8 lanes) or 11 slots: 3x PCI, 1x PCI Express (x16) (8 lanes), 5x PCI Express (x16) (4 lanes), 2x PCI Express (x4) (4 lanes) or 11 slots: 3x PCI, 1x PCI Express (x16) (16 lanes), 3x PCI Express (x16) (4 lanes), 2x PCI Express (x16) (1 lane), 2x PCI Express (x4) (4 lanes); expansion modules up to a length of 312 mm can be used
Interfaces	
Interfaces/bus type	1x COM1, 1x COM2 (optional), 2x DisplayPort, 1x DVI-D, audio (microphone in, line in, line out), 9x USB, 3x Gigabit Ethernet
PROFIBUS/MPI	can be implemented with plug-in card
USB port	4x USB 3.1 Gen. 2 Type A, 2x USB 3.1 Gen. 2 Type C on the rear; 1x USB 3.1 Gen. 2 Type A internally, e.g. for software dongle with optional interlock, 2x USB 3.1 Gen. 1 Type A on the front, can be used with door closed
Connection for keyboard/mouse	USB
serial interface	COM1: 1x RS 232, COM2 (optional): 1x RS 232
Multimedia	
• Audio In/Out	Yes
• Microphone In	Yes

Article number	**6AG4114-3....-....**
	SIMATIC IPC847E (Rack PC)
Video interfaces	
• Graphics interface	2x DisplayPort and 1x DVI-D onboard; 1x VGA via DP-VGA adapter cable (optional); graphics card PCIe (x16), Triple Head (3x mini DisplayPort, 2 GB graphics memory, 3x mini DisplayPort to DisplayPort adapter cable) (optional)
Industrial Ethernet	
• Industrial Ethernet interface	3x Gigabit Ethernet (IE/PN), RJ45
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	POWER, HDD, ETHERNET 1, ETHERNET 2, ETHERNET 3, WATCHDOG, TEMP, FAN, HDD3 ALARM, HDD2 ALARM, HDD1 ALARM, HDD0 ALARM
• Fan	Yes
• Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 ... 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 80 MHz, 80% AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst, length < 3 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8

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Technical specifications

Article number	**6AG4114-3....-....**
	SIMATIC IPC847E (Rack PC)
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-3; EN 61000-6-4, CAN/CSA CISPR 22 Class B, EN 55032 Class B; FCC Class A; KN32 Class B, EN 61000-3-2 Class D; EN 61000-3-3
Compliance with line harmonic distortion limits	
• Compliance with line harmonic distortion acc. to IEC 61000-3-2, IEC 61000-3-3	Yes; EN 61000-3-2 Class D; EN 61000-3-3
Degree and class of protection	
IP (at the front)	IP41
IP (rear)	IP20
Standards, approvals, certificates	
CE mark	Yes; For use in industrial areas as well as domestic, business and commercial environments (emitted interference: EN 61000-6-3:2007 +A1:2011, noise immunity: EN 61000-6-2:2005)
CSA approval	Yes; CAN/CSA-C22.2 No. 61010-2-201 Second Edition
UL approval	Yes; UL 61010-2-201 Second Edition, File E85972
cULus	Yes; UL 61010-2-201 Second Edition; CAN/CSA-C22.2 No. 61010-2-201 Second Edition
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
EMC	EN 61000-6-3; EN 61000-6-4, CAN/CSA CISPR 22 Class B, EN 55032 Class B; FCC Class A; KN32 Class B, EN 61000-3-2 Class D; EN 61000-3-3
Dust protection	With front door closed: G2 EN 779, 99% of particles > 0.5 mm are filtered

Article number	**6AG4114-3....-....**
	SIMATIC IPC847E (Rack PC)
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to +50 °C with full configuration
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6: 10 cycles, 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 500 Hz: 4.9 m/s^2 (0.5 g)
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27, IEC 60068-2-29: half-sine: 50 m/s^2 (5 g), 30 ms, 100 shocks per axis
Operating systems	
pre-installed operating system	Windows 10 Enterprise 2016 LTSB, multi-language (64-bit); Windows 10 IoT Enterprise 2019 LTSC, multi-language (64-bit); Windows Server 2016 Standard Edition incl. 5 multi-language clients (64-bit); Windows Server 2019 Standard Edition incl. 5 multi-language clients (64-bit)
Additional info on operating system	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)
without operating system	Yes
Software	
SIMATIC Software	Optional package with SIMATIC WinCC
Dimensions	
Width	430 mm
Height	177 mm; 4U
Depth	444 mm

More information

More information is available on the internet at:

http://www.siemens.com/simatic-pc

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SIMATIC IPC1047E

Overview

SIMATIC IPC1047E

Industrial PC for maximum computing, memory and graphic capacity requirements with high expandability in 19" installation design (4 U).

It offers:

- Maximum CPU performance thanks to two Intel® Xeon® SP 2nd Gen Silver/ Gold
- Maximum GPU performance with NVIDIA® Quadro® RTX5000 or up to two RTX4000 graphics cards
- High system performance with M.2 NVME SSD and up to 2 TB RAM
- A lot of space for your data with up to 32 TB HDD or SSD
- High AI performance with NVIDIA® Quadro® RTX5000 or up to two RTX4000 graphics cards
- High expandability with 6x PCIe slots and fast data transfer through direct CPU connection of the PCIe lanes
- Product design and safety requirements for industrial environment

Ordering data

| | Article No. | | |

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Ordering data

	Article No.
SIMATIC IPC1047	**6BK1801- 1 ■ ■ ■ ■ - ■ ■ ■ ■**
Power supply	
• 860 W without power supply cable	**A**
• 860 W power supply cable EU	**B**
• 860 W power supply cable US	**C**
• 860 W power supply cable China	**D**
• 700 W, redundant, without power supply cable	**E**
• 700 W, redundant, power supply cable EU	**F**
• 700 W power supply cable US	**G**
• 700 W power supply cable China	**H**
Enclosure variant	
• Holder for 4x 3.5" or 8x 2.5" SSD/HDD; internal drives	**0**
• Holder for 4x 3.5" or 4x 2.5" SSD/HDD; removable drive bay	**1**

	Article No.
Preferred versions	
SIMATIC IPC1047E CPU • 2x Xeon SP Silver 4210 10C/ 20T - 2.2GHz/ 3.2GHz • 1x SSD 1 TB M.2 NVMe • 64 GB 2933 MHz DDR4 ECC • Without graphics card (onboard VGA) • Without plug-in cards • Windows 10 Enterprise LTSB 2019 • 860 W power supply cable EU • Holder for 4x 3.5" or 8x2.5"SSD/HDD-internaldrives	**6BK1801-1AA00-0BB0**
SIMATIC IPC1047E GPU • 2x Intel Xeon SP Silver 4210 10C/ 20T - 2.2 GHz/ 3.2 GHz • 1x SSD 1 TB M.2 NVMe • 64 GB 2933 MHz DDR4 ECC • 1x Nvidia Quadro RTX4000 (1x PCIe x16 occupied) • Without plug-in cards • Windows 10 Enterprise LTSB 2019 • 860 W power supply cable EU • Holder for 4x 3.5" or 8x2.5"SSD/HDD-internaldrives	**6BK1801-1AA02-0BB0**
SIMATIC IPC1047E Virtualize • 2x Intel Xeon SP Gold 6230 20C/ 40T - 2.1 GHz/ 3.9 GHz • 1x SSD 1 TB M.2 NVMe + 4x HDD 8 TB 3.5" SATA (HW RAID 5 + hot spare) • 128 GB 2933 MHz DDR4 ECC • Without graphics card (onboard VGA) • Without plug-in cards • Windows Server 2019 - for XEON Gold 6230 (40C) • 700 W, redundant, power supply cable EU • Holder for 4x 3.5" or 4x 2.5" SSD/HDD - removable drive bay	**6BK1801-1EF10-0FF1**

Note:

For customer-specific configurations, please contact your Siemens sales specialist.

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Technical specifications

Article number	**6BK1801-1....-....**
	SIMATIC IPC1047E (Rack PC)
Installation type/mounting	
Mounting	For horizontal rack mounting
Design	Rack PC, 19", 4U
Supply voltage	
Type of supply voltage	110/230V AC (autorange) 50/60 Hz
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	2x Intel Xeon SP Silver 4210 10C/20T - 2.2 GHz/ 3.2 GHz; 2x Intel Xeon SP Silver 4216 16C/32T - 2.1 GHz/ 3.2 GHz; 2x Intel Xeon SP Gold 6226 12C/24T - 2.7 GHz/ 3.7 GHz; 2x Intel Xeon SP Gold 6230 20C/40T - 2.1 GHz/ 3.9 GHz
Chipset	Intel C621
Graphic	
Graphics controller	Onboard VGA / 2D controller 1 920 × 1 200 @ 60 Hz 32 bpp
Drives	
Optical drives	No
Hard disk	4 TB & 8 TB 3.5" SATA
SSD	Yes; 960 GB & 1.9 TB & 3.8 TB SATA SSD and 1 TB & 2 TB M.2 NVMe
Slot for drives	4x 3.5" HDD or 8x 2.5" SSD internal; 4x 3.5" HDD or 4x 2.5" SSD front changeable
Memory	
Type of memory	DDR4-SDRAM DIMM
Main memory	64 ... 512 GB
Hardware configuration	
Slots	
• free slots	6x PCIe slots (2x PCIe X8 + 4x PCIe X16)
Interfaces	
Interfaces/bus type	2x 1 GB LAN (RJ45), COM1, IPMI, VGA
USB port	2x front, 2x rear USB 3.0, 2x rear USB 2.0
Connection for keyboard/mouse	USB
serial interface	1x COM
Multimedia	
• Audio In/Out	No
• Microphone In	No
Video interfaces	
• Graphics interface	VGA, with optional graphics card 3x or 4x DP1.4
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes

Article number	**6BK1801-1....-....**
	SIMATIC IPC1047E (Rack PC)
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Status LEDs	POWER, HDD, FAN Fail
• Fan	Yes
• Monitoring function via network	Yes (per IPMI)
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±4 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Degree and class of protection	
IP (at the front)	IP30
IP (rear)	IP20
Standards, approvals, certificates	
CE mark	Yes; Industry
CSA approval	Yes; CAN/CSA-C22.2 No. 61010-2-201 Third Edition
UL approval	Yes; UL 61010-2-201 Third Edition, File E115352 (I.T.E.)
cULus	Yes; UL 61010-2-201 Third Edition; CAN/CSA-C22.2 No. 61010-2-201 Third Edition
KC approval	No; In application process
FCC	Yes
EMC	EN 61000-6-3; EN 61000-6-4, CAN/CSA CISPR 32 Class B, EN 55032 Class B; FCC Class A; KN32 Class B, EN 61000-3-2 Class D; EN 61000-3-3
Dust protection	With front door closed: G2 EN 779, 99% of particles > 0.5 mm are filtered
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to +40 °C with maximum configuration, up to +50 °C with basic configuration
Relative humidity	
• Relative humidity	permissible range for 0 to 31 °C: 5 ... 80 %; no condensation
• Operation, max.	80 %
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	10 - 58 Hz: amplitude 0.0375 mm; 58 ... 200 Hz: acceleration 2 m/s²
Shock testing	
• Shock load during operation	half-sine: acceleration 50 m/s², duration 30 ms
Operating systems	
pre-installed operating system	Yes
Additional info on operating system	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)
without operating system	Yes
Dimensions	
Width	430 mm
Height	176.6 mm; 4U
Depth	572 mm

More information

More information is available on the Internet at:

http://www.siemens.com/simatic-pc

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Overview

SIMATIC IPC1047

SIMATIC IPC1047 is an industrial PC for maximum computing and graphic capacity requirements with expansive expandability in 19" installation design (4 U).

It offers:

- Maximum CPU performance due to two Intel® Xeon® CPUs
- Maximum GPU performance with up to two NVIDIA® Quadro® P5000 graphics cards
- High degree of expandability thanks to 6 PCIe slots
- Product design for industrial environment

Ordering data

	Article No.											
SIMATIC IPC1047	**6BK1800-**	**1**	■	■	■	■	-	■	■	■	■	
Rack PC, 19", 4 U; 572 mm; 2x 1 GB LAN (RJ45); COM1; IPMI; 6 PCIe slots (3x PCIe x8 + 3x PCIe x16)												
Processor												
• 2x Xeon E56-2609v4, 1.7 GHz, 8C			**A**									
• 2x Xeon E56-2620v4, 2.1 GHz, 8C			**B**									
• 2x Xeon E56-2640v4, 2.4 GHz, 10C			**D**									
• 2x Xeon E56-2643v4, 3.4 GHz, 6C			**E**									
• 2x Xeon E56-2658v4, 2.3 GHz, 14C			**F**									
Drives/ mass storage												
• 1x SSD 480 GB 2.5" SATA (without HW RAID)				**A**								
• 1x SSD 960 GB 2.5" SATA (without HW RAID)				**B**								
• 1x SSD 1.9 TB 2.5" SATA (without HW RAID)				**C**								
• 1x SSD 480 GB (operating system) + 4x SSD 1.9 TB 2.5" SATA (HW-RAID 5 + hot spare - internal)				**D**								
• 1x SSD 1.9 TB 2.5" (OS) + 2x SSD 1.9 TB 2.5" SATA (HW-RAID 1)				**E**								
• 1x SSD 1.9 TB 2.5" (OS) + 3x SSD 1.9 TB 2.5" SATA (HW-RAID 5)				**F**								
• 1x HDD 2 TB 3.5" SATA (without HW RAID)				**G**								
• 4x HDD 2 TB 3.5" SATA (without HW RAID)				**H**								
• 1x HDD 4 TB 3.5" SATA (without HW RAID)				**J**								
• 4x HDD 4 TB 3.5" SATA (without HW RAID)				**K**								
• 1x SSD 480 GB 2.5" + 1x HDD 2 TB 3.5" SATA (without HW RAID)				**L**								
• 1x SSD 480 GB 2.5" + 1x HDD 2 TB 3.5" SATA (without HW RAID)				**M**								
• No drives				**Y**								

	Article No.											
SIMATIC IPC1047	**6BK1800-**	**1**	■	■	■	■	-	■	■	■	■	
Memory configuration												
• 32 GB 2 400 MHz DDR4					**0**							
• 64 GB 2 400 MHz DDR4					**1**							
• 128 GB 2 400 MHz DDR4					**2**							
• 192 GB 2 400 MHz DDR4					**3**							
• 256 GB 2 400 MHz DDR4					**4**							
• 384 GB 2 400 MHz DDR4					**5**							
• 512 GB 2 400 MHz DDR4					**6**							
Graphics cards												
• Without graphics card (onboard VGA)						**0**						
• 1x Nvidia Quadro P400 (1x PCIe x16 occupied)						**1**						
• 1x Nvidia Quadro P1000 (1x PCIe x16 occupied)						**2**						
• 1x Nvidia Quadro P4000 (1x PCIe x16 occupied) - only with 860 W power supply						**3**						
• 1x Nvidia Quadro P5000 (1x PCIe x16 + 1x PCIe x8 occupied) - only with 860 W power supply						**4**						
Further plug-in cards												
• Without plug-in cards								**0**				
• Adaptec RAID ASR8405 (4-port) - only with drive var. D, E, F								**1**				
• Adaptec RAID ASR8805 (8-port) - only with drive var. D, E, F								**2**				
• Intel I350-T2 (2x 1 GB LAN)								**4**				
• Intel I350-T4 (4x 1 GB LAN)								**5**				
• Intel X540-T2 (2x 10 GB LAN)								**6**				

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SIMATIC IPC1047

Ordering data

	Article No.
SIMATIC IPC1047	**6BK1800- 1 ■■■■ - ■■■**
Operating system (pre-installed and activated)	
• Without operating system	A
• Windows 10 Enterprise LTSB 2016 only with installed HDDs/ SSDs	B
• Windows Server 2016, basic license 16 C (only license + driver) for CPU E5-2609/ 2620/ 2643	C
• Windows Server 2016, basic license 16 C + additional license 4 C (only license + driver) for CPU E5-2640	D
• Windows Server 2016, basic license 24 C + additional license 4 C (only license + driver) for CPU E5-2658	E
Power supply	
• 860 W without power supply cable	A
• 860 W power supply cable for Europe	B
• 860 W power supply cable US	C
• 860 W power supply cable China	D
• 700 W, redundant, without power supply cable	E
• 700 W, redundant, power supply cable for Europe	F
• 700 W power supply cable US	G
• 700 W power supply cable China	H
Enclosure variant	
• Holder for 4x 3.5" or 8x 2.5" SSD/HDD; internal drives	0
• Holder for 4x 3.5" or 4x 2.5" SSD/HDD; removable drive bay	1

Note:

For customer-specific configurations, please contact your Siemens sales specialist.

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

https://www.siemens.com/ipc-configurators

Technical specifications

	SIMATIC IPC1047 (Rack PC)
Article No.	**6BK1800-1....-....**
Installation type/mounting	
Installation	For horizontal rack mounting
Design	Rack PC, 19", 4 U
Supply voltage	
Type of supply voltage	100/240 V AC (autorange) 50/60 Hz
Line frequency	
Rated value 50 Hz	Yes
Rated value 60 Hz	Yes
Processor	
Processor type	• 2x Xeon E56-2609v4, 1.7 GHz, 8C • 2x Xeon E56-2620v4, 2.1 GHz, 8C • 2x Xeon E56-2640v4, 2.4 GHz, 10C • 2x Xeon E56-2643v4, 3.4 GHz, 6C • 2x Xeon E56-2658v4, 2.3 GHz, 14C
Chip set	Intel PCH C612
Graphic	
Graphics controller	Onboard VGA / 2D controller 1 920 x 1 200 @ 60 Hz 32 bpp
Drives	
Hard disk	480 GB / 960 GB / 1.9 TB SATA SSD
SSD	Yes
Memory	
Type of memory	DDR4-SDRAM DIMM
Main memory	32 ... 512 GB, 2 400 MHz (configurator)
Memory capacity of main memory, max.	2 TB
Hardware configuration	
Free slots	6 slots: 3x PCIe (x16), 3x PCIe (x8)
Number of PCIe slots	6
Mains and voltage failure buffering	
Mains/voltage failure buffering time	20 ms
Interfaces	
USB interface	4x USB 3.0: 2x rear-mounted; 2x front-mounted; 2x USB 2.0: 2x on the rear

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Technical specifications

Integrated functions	
Temperature monitoring	Yes
Status LEDs	POWER, HDD, FAN Fail
Fan	Yes
Monitoring function via the network	Yes (by IPMI)
EMC	
Interference immunity to static discharge	± 4 kV contact discharge in accordance with IEC 61000-4-2; ± 8 kV air discharge in accordance with IEC 61000-4-2
Interference immunity to radiofrequency radiation	10 V/m for 80 - 1 000 MHz, 80% AM to IEC 61000-4-3; 3 V/m for 1.4 - 2 GHz, 80% AM to IEC 61000-4-3; 1 V/m for 2 - 2.7 GHz, 80% AM to IEC 61000-4-3; 10 V for 150 kHz - 80 MHz, 80% AM to IEC 61000-4-6
Interference immunity to conducted interference	
• Interference immunity on supply cables	±2 kV to IEC 61000-4-4, burst; ±1 kV to IEC 61000-4-5, symmetrical surge; ±2 kV to IEC 61000-4-5, asymmetrical surge
• Interference immunity on signal lines >30 m	±2 kV to IEC 61000-4-4, burst; ±2 kV to IEC 61000-4-5, surge
• Interference immunity on signal lines < 30 m	±1 kV to IEC 61000-4-4, burst
Interference immunity to surge voltages	
• Asymmetric interference	±2 kV to IEC 61000-4-5, asymmetrical surge
• Symmetric interference	±1 kV to IEC 61000-4-5, symmetrical surge
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; according to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via mains/AC power lines	EN 61000-6-3, FCC Class A, EN 61000-6-4, CISPR 22, EN 55022 Class B, EN 61000-3-2 Class D, EN 61000-3-3
Degree of protection and protection class	
IP on the front / IP on the rear side	IP30 / IP20
Connection for keyboard/mouse	USB
Serial interface	1x COM

Standards, approvals, certificates	
CE mark	Yes; For use in industrial areas as well as domestic, business and commercial environments (interference emission: EN 61000-6-3:2007 +A1:2011 Interference immunity: EN 61000-6-2:2005)
CSA approval	Yes
cULus	Yes
FCC	Yes
UL approval	UL 61010-2-201 Second Edition, File E115352 (I.T.E.)
KC approval	Yes
EMC	CE, EN 61000-6-3:2007 +A1:2011, EN 61000-6-2:2005
Dust protection	With closed front door: G2 EN 779, 99% of particles > 0.5 mm are held back
Ambient conditions	
Ambient temperature during operation	0 °C to +50 °C in basic configuration; 0 °C to +40 °C in maximum configuration
Ambient temperature during storage/transport	
• Min./Max.	-20 °C / 60 °C
Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30 Operation: 5% to 85% at 30 °C (no condensation), storage/transport: 5% to 95% at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation according to IEC 60068-2-6	Tested according to IEC 60068-2-6, 10 cycles; 20 to 58 Hz: 0.015 mm; 58 to 200 Hz: 2 m/s² (0.2 g)
Shock test	
• Shock loading during operation	Tested according to IEC 60068-2-27; Half sine: 9.8 m/s² (1 g), 20 ms, 100 shocks per axis
Operating systems	
Pre-installed operating system	Windows 10/ Windows Server 2016 (only license)
• Pre-installed Windows 7	Yes
Dimensions	
Width	430 mm
Height	176.6 mm; (4U)
Depth	572 mm

More information

More information is available on the internet at:

http://www.siemens.com/simatic-pc

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Overview

SIMATIC Box PCs

SIMATIC Box PCs provide mechanical engineers, plant engineers and control cabinet builders with particularly rugged industrial PC systems for use in powerful yet compact applications.

The following device classes are available for various requirements:

- SIMATIC IPC127E: The ultra-compact, flexible, rugged industrial PC and IoT gateway in one
- SIMATIC IPC227 (Nanobox PC): The Box PC with optimized performance in compact design – maintenance-free and rugged
- SIMATIC IPC327: Fanless Basic Box PC at an appealing price
- SIMATIC IPC427 (Microbox PC): The powerful embedded IPC – maintenance-free with versatile configuration
- SIMATIC IPC527: The powerful Box PC at an appealing price
- SIMATIC IPC627/IPC827 (Box PC): The high-end IPC – with maximum performance, functionality, and expansion capability

Shared industrial functionality:

- Extreme compactness
- Certification for global marketing
- System-tested with SIMATIC components
- High vibration/shock load during operation
- Wide operational temperature range
- Robust data storage with CompactFlash/CFast or solid-state drive (SSD)
- Varied mounting possibilities for flexibility with installation
- Designed for continuous 24-hour operation
- Integrated parameterizable monitoring functions (temperature, fan, watchdog)
- High service friendliness
- Operating system preinstalled and activated for fast commissioning
- Motherboard developed and manufactured by Siemens
- Availability for 3 to 6 years
- Repairs and spare parts service for 5 years
- High component/design continuity
- Long-term availability of PC components from the Intel embedded line

SIMATIC IPC127 (Nanobox PC): Ultra-compact IoT gateway for data collection, pre-processing, and forwarding of data

- High-performance gateway:
  IoT gateway for the acquisition/collection/processing/transmission of data / integration of machinery in Cloud/Edge solutions
- For retrofitting and new systems:
  Networking/retrofitting of digitizing tasks in brownfield and greenfield plants due to ultra-compact design
- Optimized price/performance ratio; ideal for high quantities

SIMATIC IPC227 (Nanobox PC): The Box PC with optimized performance in compact design – maintenance-free and rugged

- Maximum compactness with approx. 1 liter enclosure volume with integrated industrial power supply for minimum space requirements in the control cabinet
- Maximum flexibility thanks to several mounting options and interfaces on one side suitable for every installation situation
- Optimum variety of interfaces due to a large number of integrated interfaces such as a selectable serial connection and 2x or 3x teaming-capable Gigabit-Ethernet
- Maximum industrial functionality due to closed enclosure for optimum dust protection and non-volatile retentive memory
- Optimum adaptation to the application with additional PCIe slot or M.2 module slots

SIMATIC IPC327: Fanless Basic Box PC at an appealing price

- Low-cost platform for the industrial and industry-oriented field
- Flexible installation on the DIN rail or wall mounting, as well as simple connection of I/O devices due to a large number of interfaces
- Fanless industrial design
- Fast availability directly ex stock due to preferred versions

SIMATIC IPC427 (Microbox PC): The powerful embedded IPC – maintenance-free with versatile configuration

- Fan-free operation
- High performance with maximum compactness and ruggedness for direct installation in the machine
- Optimized for embedded applications
- Flexibility expandable using one or two PCIe I/O cards (optional)
- Flexible installation options including DIN rail/wall/front portrait mounting, even outside control cabinets
- NVRAM for retentive data storage (optional)

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Technical specifications

SIMATIC IPC527: The powerful Box PC at an appealing price

- High system performance for computation-intensive applications with compact dimensions
- High flexibility due to expansion options
- High degree of investment protection thanks to support of existing systems
- Industrial quality at an attractive price
- Fast availability directly ex stock due to preferred versions

SIMATIC IPC627/IPC827 (Box PC): The high-end IPC – with maximum performance, functionality, and expansion capability

- Maximum system performance for complex measuring, control and visualization tasks
- High flexibility with expansion slots and integral interfaces
- Flexible, space-saving installation with mounting brackets or portrait mounting kits
- Very rugged design for direct installation in the machine
- RAID1 controller onboard
- Maximum processor performance up to an ambient temperature of 55 °C
- High system availability
- Battery buffered SRAM as memory for WinAC data
- 4 signaling LEDs

Technical specifications

Article number	**6AG4021-0A.1.-..A0** SIMATIC IPC127E	**6ES7647-8C...-....** SIMATIC IPC227G	**6AG4022-0B...-....** SIMATIC IPC327G	**6AG4141-.....-....** SIMATIC IPC427E (MicroBOX PC)	**6ES7647-0JB00-0YA2** SIMATIC IPC520A	**6AG4025-0...0-...0** SIMATIC IPC527G (Box PC)	**6AG4131-3....-....** SIMATIC IPC627E (Box PC)
General information							
Product type designation				IPC427E			
Installation type/mounting							
Mounting	DIN rail, wall mounting, portrait mounting	DIN rail, wall mounting, portrait mounting		DIN rail, wall mounting, portrait mounting		Wall mounting, portrait mounting, desktop mounting	Wall mounting, portrait mounting
Design	Box PC, built-in unit						
Supply voltage							
Type of supply voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	100/240V AC (autorange) 50/60 Hz	100/240 V AC (autorange); 24 V DC
Line frequency							
• Rated value 50 Hz						Yes	Yes
• Rated value 60 Hz						Yes	Yes
Mains buffering							
• Mains/voltage failure stored energy time	5 ms	20 ms	20 ms	20 ms	5 ms		20 ms
Processor							
Processor type	Intel Atom E3930 / E3940	Intel Atom X6211E / X6413E / X6414RE		Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)		Core i7-6700 (4C/8T, 3.4 (4.0) GHz, 8 MB cache); Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB cache); Pentium G4400 (2C/2T, 3.3 GHz, 3 MB cache)	Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, VT-d, AMT)
Chipset	SoC	SoC		Intel C236 / Intel H110		Intel H110	Intel C246

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Graphic							
Graphics controller	Integrated	Integrated		Intel HD graphics controller	NVIDIA Volta™ GPU with 384 Cores and 48 Tensor Cores @ 800 MHz	Onboard Intel HD graphics 530/510 integrated in processor	Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron)
Drives							
Hard disk				2.5" SATA ≥ 320 GB		1 TB HDD	2.5" SATA ≥ 320 GB
SSD	Yes; 32 / 64 / 128 GB	Yes; 256 Eco		Yes; 128 / 240 / 480 GB	Yes 16 GB eMMc	Yes; Optional	Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2x SSD 2.5" SATA 480 / 960 GB in removable drive bay
Memory							
Type of memory	DDR4 onboard	DDR4 SO-DIMM	DDR4	DDR4-2400 SO-DIMM		DDR4-2133 SO-DIMM	DDR4-2666 DIMM
Main memory	2 / 4 GB RAM	2 / 4 / 8 / 16 Gbyte; inband ECC optional	8 GB (vorinstalliert)	4 / 8 / 16 GB, ECC optional	8 GB RAM	4 / 8 / 16 GB, supports up to 32 GB	4 / 8 / 16 / 32 / 64 GB
Data areas and their retentivity							
Retentive data area (incl. timers, counters, flags), max.				512 kbyte; 128 KB can be stored in the buffer time; optional			512 kbyte; 128 KB can be stored in the buffer time
Hardware configuration							
Slots							
• free slots		2x M.2	2x M.2	2x PCIe; optional: 1x PCIe (x4); 2x PCIe (x1, x4), with card retainer		1x PCIe (x16), optional 1x PCIe (x1), 2x PCI additionally	2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCI & 2x PCIe (x16, x4); 5x PCIe (1x16, 2x4, 2x1); with card retainer
Digital inputs							
Number of digital inputs					4		
Input voltage							
• Type of input voltage					24 V DC		
• for signal "0"					< 5 V DC		
• for signal "1"					> 12 V DC		
Input current							
• for signal "0", max. (permissible quiescent current)					1 mA		
• for signal "1", typ.					2.5 mA		

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Digital outputs							
Type of digital output					transistor		
Number of digital outputs					2		
Short-circuit protection					No		
Output voltage							
• Type of output voltage					DC		
• permissible voltage at output, min.					20.4 V		
• permissible voltage at output, max.					28.8 V		
Output current							
• for signal "1" rated value					0.5 A		
Switching frequency							
• with resistive load, max.					10 Hz		
• with inductive load, max.					0.5 Hz		
• mechanical, max.					10 Hz		
Interfaces							
Number of industrial Ethernet interfaces	3; Ethernet (2x RJ45, optional 3x RJ45)	3; 3x Ethernet (RJ45)	2; 2x RJ45 (independent)	3; Ethernet (2x RJ45, optional 3x RJ45)	4; 4x RJ45 (2x Support of PoE PSE IEEE 802.3af 15 W)	3; 3x Gigabit Ethernet (IE/PN), RJ45 optional; 2x Gigabit Ethernet (IE/PN), RJ45 basic configuration	3; 3x Ethernet (RJ45)
Number of PROFINET interfaces						3; 2 ports base configuration, 3 ports optional	
USB port	2x USB 3.0 / 4x USB 3.0	4x USB 3.1		4x USB 3.0		4x USB 3.0, 1x USB 2.0 internal, 2x USB 2.0 optional	6x USB 3.1 Gen. 2 (2x type C)
Connection for keyboard/mouse	USB / USB	USB / USB		USB / USB	USB / USB	USB / USB	USB / USB
serial interface		without / 1x / 2x COM (RS 232 / 485 / 422; selectable)		Without / 2x COM (RS 232 / 485 / 422; switchable)	1x COM (1x RS 232 / 422 / 485)	2x RS 232 / 485 / 422 combined, 2x RS 232 optional	1x COM
Multimedia							
• Audio In/Out						Yes	
• Microphone In						Yes	
Video interfaces							
• Graphics interface	1x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort	1x DisplayPort	1x DisplayPort, 1x VGA	2x DisplayPort; 1x DVI-D
Industrial Ethernet							
• Industrial Ethernet interface	2x / 3x Ethernet (RJ45)	3x Ethernet (RJ45)	2x Ethernet (RJ45)	3x Ethernet (RJ45)		2x Ethernet (RJ45), 1x Ethernet (RJ45) additional option	3x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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Protocols							
Protocols (Ethernet)							
• TCP/IP			Yes		Yes		
Integrated Functions							
Monitoring functions							
• Temperature monitoring	Yes	Yes	Yes	Yes	Yes		Yes
• Watchdog	Yes	Yes	Yes	Yes	Yes		Yes
• Status LEDs	1x power, 3x user	1x power, 3x user	POWER, HDD	1x power, 3x user		POWER, HDD	1x power, 3x user
• Fan	No	No	No	No	No		Yes
• Monitoring function via network	Optional	Optional		Optional			Optional
EMC							
Interference immunity against discharge of static electricity							
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2				± 6 KV contact discharge at the front in accordance with IEC 61000-4-2; ±4 kV, housing contact discharge at the back in accordance with IEC 61000-4-2; ± 8 kV air discharge in accordance with IEC 61000-4-2	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2	
Interference immunity against high-frequency electromagnetic fields							
• Interference immunity against high frequency radiation	10 V/m, 80 MHz to 2 GHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 GHz to 2.7 GHz, 80 % AM acc. to IEC 61000-4-3; 10 V, 10 kHz to 80 MHz, 80 % AM acc. to IEC 61000-4-6	10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6	10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6	10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6	10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6		10 V/m for 80 ... 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 80 MHz, 80% AM acc. to IEC 61000-4-6

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Interference immunity to cable-borne interference							
• Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4; burst); ±0,5 kV (according to IEC 61000-4-5; surge pulse/line to line); ±1 kV (according to IEC 61000-4-5; surge pulse/line to ground)	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric		±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)		±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m		±2 kV acc. to IEC 61000-4-5, surge, length > 30 m	±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge		±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m	±1 kV (5 kHz/ 100 kHz) acc. to IEC 61000-4-4; burst; length < 30 m; ±2 kV (5 kHz/ 100 kHz) acc. to IEC 61000-4-4; burst; length > 30 m		±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m	±1 kV (5 kHz/ 100 kHz) acc. to IEC 61000-4-4; burst; length < 30 m; ±2 kV (5 kHz/ 100 kHz) acc. to IEC 61000-4-4; burst; length > 30 m		±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
Interference immunity against voltage surge							
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric	±2 kV acc. to IEC 61000-4-5, surge asymmetric		±2 kV acc. to IEC 61000-4-5, surge asymmetric			±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric	±1 kV acc. to IEC 61000-4-5, surge symmetric		±1 kV acc. to IEC 61000-4-5, surge symmetric			±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields							
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8		100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8		100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference							
• Interference emission via line/AC current cables	EN 61000-6-4: 2007 +A1:2011 (industrial environments), EN 61000-6-3: 2007 +A1:2011 (residential environments), CISPR 22 Class B, FCC Class A	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A		EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A	EN 61000-6-4: 2007 +A1:2011 (industrial environments), EN 61000-6-3: 2007 +A1:2011 (residential environments), CISPR 22 Class B, FCC Class A		EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A

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Degree and class of protection							
IP (at the front)						IP20	
IP (rear)						IP20	
Standards, approvals, certificates							
CE mark	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CSA approval			Yes		in preparation	Yes; No. 61010-1-12, No. 61010-2-201	
UL approval	Yes		Yes	Yes	in preparation	Yes	Yes
• UL 508				Yes			
cULus		Yes		Yes	in preparation	Yes; UL 61010-1, UL 61010-2-201	Yes
FM approval					in preparation		
RCM (formerly C-TICK)	Yes	Yes		Yes	in preparation	Yes	Yes
KC approval		Yes	Yes	Yes	in preparation	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	in preparation	Yes	Yes
FCC	Yes	Yes	Yes	Yes		Yes	Yes
BSMI			Yes				
EMC	CE, EN 61000-6-4: 2007, EN 61000-6-2: 2005	CE, EN 61000-6-4: 2007, EN 61000-6-2: 2005		CE, EN 55022A, EN 61000-6-4, EN 61000-6-2			CE, EN 61000-6-3: 2007 +A1:2011, EN 61000-6-2: 2005
Dust protection	Protection against foreign bodies > 1 mm	Protection against foreign bodies > 1 mm	Protection against foreign bodies > 1 mm				
Use in hazardous areas							
• ATEX Zone 2				Yes; Optional			
• IECEx Zone 2				Yes; Optional			
• cULus Class I Zone 2, Division 2				Yes; Optional			
Marine approval							
• Germanischer Lloyd (GL)				Yes			
• American Bureau of Shipping (ABS)				Yes			Yes
• Bureau Veritas (BV)				Yes			
• Det Norske Veritas (DNV)				Yes			Yes
• Korean Register of Shipping (KRS)				Yes			
• Lloyds Register of Shipping (LRS)				Yes			
• Nippon Kaiji Kyokai (Class NK)				Yes			Yes

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Ambient conditions							
Ambient temperature during operation							
• Ambient temperature during operation	0 °C to 55 °C	0 °C to 55 °C	0 to +40 °C	0 °C to 55 °C	0 °C to 45 °C	0 to +45°C	+5 °C up to 55 °C
Ambient temperature during storage/transportation							
• min.	-20 °C	-20 °C	-20 °C	-40 °C	-20 °C	-20 °C	-20 °C
• max.	70 °C	60 °C	70 °C	70 °C	70 °C	60 °C	60 °C
Relative humidity							
• Relative humidity	5 ... 85 % at 30 °C, no condensation	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)	5 ... 85 % at 30 °C, no condensation	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)	5 ... 85 % at 30 °C, no condensation	8 ... 85 % at 30 °C, no condensation	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)
Vibrations							
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 6068-2-6; 5 Hz to 9 Hz: 3.5 mm, 9 Hz to 500 Hz: 9,8 m/s²	tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 200 Hz : 9.8m/s² (1 g) (except DIN Rail) 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 500 Hz: 4.9 m/s² (0.5 g) (DIN Rail)	58 Hz to 200 Hz: 4.9 m/s²; tested according to IEC 60068-2-6	tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g)	tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 500 Hz: 9.8 m/s²	tested according to IEC 60068-2-6: 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 200 Hz: 4.9 m/s²	tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s² (1 g)
Shock testing							
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s², 11 ms	Tested according to IEC 60068-2-27: 150 m/s², 11 ms	With SSD: 150 m/s², 11 ms, 5 g, 30 ms, tested according to IEC 60068-2-27	Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks	Tested according to IEC 60068-2-27: 150 m/s², 11 ms	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s², 11 ms; with HDD: 9.8 m/s², 20 ms	Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks

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	SIMATIC IPC127E	SIMATIC IPC227G	SIMATIC IPC327G	SIMATIC IPC427E (MicroBOX PC)	SIMATIC IPC520A	SIMATIC IPC527G (Box PC)	SIMATIC IPC627E (Box PC)
Operating systems							
pre-installed operating system	Windows 10 Enterprise 2016 LTSB or 2019 LTSC 64-bit, MUI	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10	No	Windows 7 Ultimate (Multi-Language) 32-bit / 64-bit; Windows 10 Enterprise 2016 LTSB	Windows 10 Enterprise 2016 LTSB or 2019 LTSC 64-bit, MUI
Additional info on operating system						Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)	
without operating system	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional		Yes	Yes; Optional
Software							
pre-installed software				Edge-SW (Simatic, Sinumerik), optional			
SIMATIC Software				Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S			Optional package with SIMATIC WinCC
Dimensions							
Width	85 mm	191 mm	254 mm	262 mm	234 mm	260 mm	314 mm
Height	85 mm	100 mm	132 mm	139.7 mm	129 mm	135 mm	93 mm; For variant 5x PCI(e): 155 mm
Depth	41 mm	64 mm	73 mm	55.5 mm	71 mm	225 mm	301 mm; incl. mounting rail

More information is available on the Internet at:

http://www.siemens.com/simatic-pc

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Overview

SIMATIC IPC127E:
Ultra-compact IoT gateway for data collection, pre-processing, and forwarding of data

Thanks to the ultra-compact enclosure, which has a volume of just 0.3 liters, the SIMATIC IPC127E can be easily – even subsequently – integrated into the control cabinet or directly on the machine with minimal space requirements.

The enclosed all-metal enclosure enables the new industrial PC to be used flexibly and maintenance-free even under harsh conditions. Thus the SIMATIC IPC127E makes it possible to reliably record / collect / process / transfer data directly in the production environment and can be flexibly used as an IoT gateway between the cloud or the corporate IT level and production. Thanks to pre-configured versions, the right product is available to users in a very short time.

Ordering data

	Article No.										
SIMATIC IPC127E	**6AG4021-**	**0**	**A**	■	**1**	■	**-**	■	■	**A**	**0**
Processor / RAM / TPM											
• Atom E3930 (2C/2T) / 2 GB RAM				**A**							
• Atom E3940 (4C/4T) / 4 GB RAM				**B**							
• Atom E3930 (2C/2T) / 2 GB RAM / TPM				**C**							
• Atom E3940 (4C/4T) / 4 GB RAM / TPM				**D**							
Box type											
• Basic version; 2x Ethernet RJ45, 2x USB 3.0					**1**						
• Extended version; 3x Ethernet RJ45, 4x USB 3.0					**2**						
Operating system											
• None								**0**			
• Windows 10 Enterprise LTSB 2016, 64-bit, MUI (de, en, es, fr, it)								**1**			
• Windows 10 Enterprise LTSC 2019, 64-bit, MUI (de, en, fr, it, es)								**2**			
Drives											
• 32 GB SSD									**A**		
• 64 GB SSD									**B**		
• 128 GB SSD									**C**		

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

http://www.siemens.com/ipc-configurators

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SIMATIC IPC127E

Ordering data

	Article No.
SIMATIC IPC127E • Processor / RAM: 2 core / 2 GB RAM • Box type: Base • Operating system: None • Drive: 32 GB SSD	
Configuration 2 • Processor / RAM: 2 core / 2 GB RAM • Box type: Extended • Operating system: None • Drive: 64 GB SSD	**6AG4021-0AA12-0BA0**
Configuration 3 • Processor / RAM: 4 core / 4 GB RAM • Box type: Base • Operating system: None • Drive: 64 GB SSD	**6AG4021-0AB11-0BA0**
Configuration 4 • Processor / RAM: 4 core / 4 GB RAM • Box type: Extended • Operating system: None • Drive: 128 GB SSD	**6AG4021-0AB12-0CA0**
Configuration 5 • Processor / RAM: 2 core / 2 GB RAM • Box type: Base • Operating system: Windows 10 Enterprise 2016 LTSB, 64-bit, MUI • Drive: 64 GB SSD	**6AG4021-0AA11-1BA0**
Configuration 6 • Processor / RAM: 4 core / 4 GB RAM • Box type: Base • Operating system: Windows 10 Enterprise 2016 LTSB, 64-bit, MUI • Drive: 64 GB SSD	**6AG4021-0AB11-1BA0**
Configuration 7 • Processor / RAM: 4 core / 4 GB RAM • Box type: Base • Operating system: Windows 10 Enterprise 2016 LTSB, 64-bit, MUI • Drive: 128 GB SSD	**6AG4021-0AB11-1CA0**
Configuration 8 • Processor / RAM: 4 core / 4 GB RAM • Box type: Extended • Operating system: Windows 10 Enterprise 2016 LTSB, 64-bit, MUI • Drive: 64 GB SSD	**6AG4021-0AB12-1BA0**
Configuration 9 • Processor / RAM: 4 core / 4 GB RAM • Box type: Extended • Operating system: Windows 10 Enterprise 2016 LTSB, 64-bit, MUI • Drive: 128 GB SSD	**6AG4021-0AB12-1CA0**

Note:

All configurations of the SIMATIC IPC127E do not include any mounting accessories. They must be ordered separately.

Mounting accessories	
DIN rail	**6AG4021-0AA20-0AA1**
Wall-mount	**6AG4021-0AA20-0AA2**
Book-mount Base	**6AG4021-0AA20-0AA3**
Book-mount Extended	**6AG4021-0AA20-0AA4**
Book-mount DIN-Rail	**6AG4021-0AA20-0AA5**

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Technical specifications

Article number	**6AG4021-0A.1.-..A0** SIMATIC IPC127E
Installation type/mounting	
Mounting	DIN rail, wall mounting, portrait mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	5 ms
Processor	
Processor type	Intel Atom E3930 / E3940
Chipset	SoC
Graphic	
Graphics controller	Integrated
Drives	
SSD	Yes; 32 / 64 / 128 GB
Memory	
Type of memory	DDR4 onboard
Main memory	2 / 4 GB RAM
Interfaces	
Number of industrial Ethernet interfaces	3; Ethernet (2x RJ45, optional 3x RJ45)
USB port	2x USB 3.0 / 4x USB 3.0
Connection for keyboard/mouse	USB / USB
Video interfaces	
• Graphics interface	1x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	2x / 3x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	1x power, 3x user
• Fan	No
• Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m, 80 MHz to 2 GHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 GHz to 2.7 GHz, 80 % AM acc. to IEC 61000-4-3; 10 V, 10 kHz to 80 MHz, 80 % AM acc. to IEC 61000-4-6

Article number	**6AG4021-0A.1.-..A0** SIMATIC IPC127E
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4; burst); ±0,5 kV (according to IEC 61000-4-5; surge pulse/line to line); ±1 kV (according to IEC 61000-4-5; surge pulse/line to ground)
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-4:2007 +A1:2011 (industrial environments), EN 61000-6-3:2007 +A1:2011 (residential environments), CISPR 22 Class B, FCC Class A
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
RCM (formerly C-TICK)	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
EMC	CE, EN 61000-6-4:2007, EN 61000-6-2:2005
Dust protection	Protection against foreign bodies > 1 mm
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to 55 °C
Relative humidity	
• Relative humidity	5 ... 85 % at 30 °C, no condensation
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 6068-2-6; 5 Hz to 9 Hz: 3.5 mm, 9 Hz to 500 Hz: 9,8 m/s²
Operating systems	
pre-installed operating system	Windows 10 Enterprise 2016 LTSB or 2019 LTSC 64-bit, MUI
without operating system	Yes; Optional
Dimensions	
Width	85 mm
Height	85 mm
Depth	41 mm

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SIMATIC IPC127E

Technical specifications

Article number	**6AG4021-0AA11-0AA0**	**6AG4021-0AA12-0BA0**	**6AG4021-0AB11-0BA0**	**6AG4021-0AB12-0CA0**
	SIMATIC IPC127E	SIMATIC IPC127E	SIMATIC IPC127E	SIMATIC IPC127E
Installation type/mounting				
Design	Box PC, built-in unit	Box PC, built-in unit	Box PC, built-in unit	Box PC, built-in unit
Supply voltage				
Type of supply voltage	24 V DC	24 V DC	24 V DC	24 V DC
Mains buffering				
• Mains/voltage failure stored energy time	5 ms	5 ms	5 ms	5 ms
Processor				
Processor type	Intel Atom E3930, 1.3 GHz, 2 cores	Intel Atom E3930, 1.3 GHz, 2 cores	Intel Atom E3940, 1.6 GHz, 4 cores	Intel Atom E3940, 1.6 GHz, 4 cores
Drives				
SSD	Yes; 32 GB	Yes; 32 GB	Yes; 32 GB	Yes; 32 GB
Memory				
Type of memory	DDR4	DDR4	DDR4	DDR4
Main memory	2 GB RAM	2 GB RAM	4 GB RAM	4 GB RAM
Interfaces				
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)	3; 3x Ethernet (RJ45)	2; 2x RJ45 (independent)	3; 3x Ethernet (RJ45)
Number of PROFINET interfaces	2	3	2	3
USB port	2x USB 3.0	4x USB 3.0	2x USB 3.0	4x USB 3.0
Connection for keyboard/mouse	USB / USB	USB / USB	USB / USB	USB / USB
Video interfaces				
• Graphics interface	1x DisplayPort	1x DisplayPort	1x DisplayPort	1x DisplayPort
Industrial Ethernet				
• Industrial Ethernet interface	2x Ethernet (RJ45)	3x Ethernet (RJ45)	2x Ethernet (RJ45)	3x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes
Protocols				
Protocols (Ethernet)				
• TCP/IP	Yes	Yes	Yes	Yes
Integrated Functions				
Monitoring functions				
• Temperature monitoring	Yes	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes	Yes
• Status LEDs	1x power, 3x user	1x power, 3x user	1x power, 3x user	1x power, 3x user
• Fan	No	No	No	No
EMC				
Interference immunity against discharge of static electricity				
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2			
Interference immunity against high-frequency electromagnetic fields				
• Interference immunity against high frequency radiation	10 V/m, 80 MHz to 2 GHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 GHz to 2.7 GHz, 80 % AM acc. to IEC 61000-4-3; 10 V, 10 kHz to 80 MHz, 80 % AM acc. to IEC 61000-4-6			

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Technical specifications

Article number	**6AG4021-0AA11-0AA0**	**6AG4021-0AA12-0BA0**	**6AG4021-0AB11-0BA0**	**6AG4021-0AB12-0CA0**
	SIMATIC IPC127E	SIMATIC IPC127E	SIMATIC IPC127E	SIMATIC IPC127E
Interference immunity to cable-borne interference				
• Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4; burst); ±0,5 kV (according to IEC 61000-4-5; surge pulse/line to line); ±1 kV (according to IEC 61000-4-5; surge pulse/line to ground)			
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m			
Interference immunity to magnetic fields				
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference				
• Interference emission via line/ AC current cables	EN 61000-6-4:2007 +A1:2011 (industrial environments), EN 61000-6-3:2007 +A1:2011 (residential environments), CISPR 22 Class B, FCC Class A			
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes
Dust protection	Protection against foreign bodies > 1 mm	Protection against foreign bodies > 1 mm	Protection against foreign bodies > 1 mm	Protection against foreign bodies > 1 mm
Ambient conditions				
Ambient temperature during operation				
• Ambient temperature during operation	0 °C up to 55 °C	0 °C up to 55 °C	0 °C up to 55 °C	0 °C up to 55 °C
Relative humidity				
• Relative humidity	5 ... 85 % at 30 °C, no condensation	5 ... 85 % at 30 °C, no condensation	5 ... 85 % at 30 °C, no condensation	5 ... 85 % at 30 °C, no condensation
Vibrations				
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 6068-2-6; 5 Hz to 9 Hz: 3.5 mm, 9 Hz to 500 Hz: 9,8 m/s^2			
Shock testing				
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s^2, 11 ms			
Operating systems				
pre-installed operating system	No	No	No	No
Dimensions				
Width	85 mm	85 mm	85 mm	85 mm
Height	85 mm	104 mm	85 mm	104 mm
Depth	41 mm	41 mm	41 mm	41 mm

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Technical specifications

Article number	**6AG4021-0AA11-1BA0**	**6AG4021-0AB11-1BA0**	**6AG4021-0AB11-1CA0**	**6AG4021-0AB12-1BA0**	**6AG4021-0AB12-1CA0**
	SIMATIC IPC127E	SIMATIC IPC127E	SIMATIC IPC127E	SIMATIC IPC127E	SIMATIC IPC127E
Installation type/mounting					
Design	Box PC, built-in unit	Box PC, built-in unit	Box PC, built-in unit	Box PC, built-in unit	Box PC, built-in unit
Supply voltage					
Type of supply voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Mains buffering					
• Mains/voltage failure stored energy time	5 ms	5 ms	5 ms	5 ms	5 ms
Processor					
Processor type	Intel Atom E3930, 1.3 GHz, 2 cores	Intel Atom E3940, 1.6 GHz, 4 cores	Intel Atom E3940, 1.6 GHz, 4 cores	Intel Atom E3940, 1.6 GHz, 4 cores	Intel Atom E3940, 1.6 GHz, 4 cores
Drives					
SSD	Yes; 32 GB	Yes; 32 GB	Yes; 32 GB	Yes; 32 GB	Yes; 32 GB
Memory					
Type of memory	DDR4	DDR4	DDR4	DDR4	DDR4
Main memory	2 GB RAM	4 GB RAM	4 GB RAM	4 GB RAM	4 GB RAM
Interfaces					
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)
Number of PROFINET interfaces	2	2	2	3	3
USB port	2x USB 3.0	2x USB 3.0	2x USB 3.0	4x USB 3.0	4x USB 3.0
Connection for keyboard/mouse	USB / USB	USB / USB	USB / USB	USB / USB	USB / USB
Video interfaces					
• Graphics interface	1x DisplayPort	1x DisplayPort	1x DisplayPort	1x DisplayPort	1x DisplayPort
Industrial Ethernet					
• Industrial Ethernet interface	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes
Protocols					
Protocols (Ethernet)					
• TCP/IP	Yes	Yes	Yes	Yes	Yes
Integrated Functions					
Monitoring functions					
• Temperature monitoring	Yes	Yes	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes	Yes	Yes
• Status LEDs	1x power, 3x user				
• Fan	No	No	No	No	No
EMC					
Interference immunity against discharge of static electricity					
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2				
Interference immunity against high-frequency electromagnetic fields					
• Interference immunity against high frequency radiation	10 V/m, 80 MHz to 2 GHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 GHz to 2.7 GHz, 80 % AM acc. to IEC 61000-4-3; 10 V, 10 kHz to 80 MHz, 80 % AM acc. to IEC 61000-4-6				

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Technical specifications

Article number	**6AG4021-0AA11-1BA0**	**6AG4021-0AB11-1BA0**	**6AG4021-0AB11-1CA0**	**6AG4021-0AB12-1BA0**	**6AG4021-0AB12-1CA0**
	SIMATIC IPC127E	SIMATIC IPC127E	SIMATIC IPC127E	SIMATIC IPC127E	SIMATIC IPC127E
Interference immunity to cable-borne interference					
• Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4; burst); ±0,5 kV (according to IEC 61000-4-5; surge pulse/line to line); ±1 kV (according to IEC 61000-4-5; surge pulse/line to ground)				
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m				
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m				
Interference immunity to magnetic fields					
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference					
• Interference emission via line/ AC current cables	EN 61000-6-4:2007 +A1:2011 (industrial environments), EN 61000-6-3:2007 +A1:2011 (residential environments), CISPR 22 Class B, FCC Class A				
Standards, approvals, certificates					
CE mark	Yes	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes	Yes
Dust protection	Protection against foreign bodies > 1 mm	Protection against foreign bodies > 1 mm	Protection against foreign bodies > 1 mm	Protection against foreign bodies > 1 mm	Protection against foreign bodies > 1 mm
Ambient conditions					
Ambient temperature during operation					
• Ambient temperature during operation	0 °C up to 55 °C	0 °C up to 55 °C	0 °C up to 55 °C	0 °C up to 55 °C	0 °C up to 55 °C
Relative humidity					
• Relative humidity	5 ... 85 % at 30 °C, no condensation	5 ... 85 % at 30 °C, no condensation	5 ... 85 % at 30 °C, no condensation	5 ... 85 % at 30 °C, no condensation	5 ... 85 % at 30 °C, no condensation
Vibrations					
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 6068-2-6; 5 Hz to 9 Hz: 3.5 mm, 9 Hz to 500 Hz: 9,8 m/s^2				
Shock testing					
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s^2, 11 ms	Tested according to IEC 60068-2-27: 150 m/s^2, 11 ms	Tested according to IEC 60068-2-27: 150 m/s^2, 11 ms	Tested according to IEC 60068-2-27: 150 m/s^2, 11 ms	Tested according to IEC 60068-2-27: 150 m/s^2, 11 ms
Operating systems					
pre-installed operating system	Windows 10 Enterprise 2016 LTSB, 64 bit, MUI	Windows 10 Enterprise 2016 LTSB, 64 bit, MUI	Windows 10 Enterprise 2016 LTSB, 64 bit, MUI	Windows 10 Enterprise 2016 LTSB, 64 bit, MUI	Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
Dimensions					
Width	85 mm	85 mm	85 mm	85 mm	85 mm
Height	85 mm	85 mm	85 mm	104 mm	104 mm
Depth	41 mm	41 mm	41 mm	41 mm	41 mm

More information is available on the internet at

http://www.siemens.com/simatic-pc

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SIMATIC IPC227G

Overview

SIMATIC IPC227G (Nanobox PC): The Box PC with optimized performance in compact design – maintenance-free, rugged and expandable

The SIMATIC IPC227G Nanobox PC is an extremely compact and flexible embedded industrial PC. Thanks to its closed, dust-protected all-metal enclosure, the IPC227G offers maximum industrial functionality for flexible use under harsh conditions – while remaining maintenance-free. Modern interfaces and the options for two M.2 slots mean this Box PC can be easily integrated into the automation system and expanded. The latest Intel Dual-Core and Quad-Core processors ensure excellent performance here in an ultra-compact design.

Ordering data

	Article No.
SIMATIC IPC227G	**6ES7647- 8 C ■ ■ ■ - ■ ■ ■ ■**
Processor	
• Atom X6211E (2-core)	**A**
• Atom X6413E (4-core)	**B**
• Atom X6414RE (4-core)	**C**
• Atom X6211E (2-core)/TPM	**D**
• Atom X6413E (4-core)/TPM	**E**
• Atom X6414RE (4-core)/TPM	**F**
Work memory	
• 4 GB	**1**
• 8 GB	**2**
• 16 GB	**3**
Hardwareconfiguration	
• Without COM	**1**
• 1x COM	**2**
• 2x COM	**3**
Mass storage	
• Without mass storage	**0**
• 256 GB Eco SSD	**1**
Hardwareextension	
• None	**A**
Software	
• Without SIMATIC Software	**A**
• Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (de, en, es, fr, it)	**B**
Mounting accessories	
• None	**0**
• DIN rail	**1**
• Wall mounting	**2**
• Portrait mounting	**3**

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

http://www.siemens.com/ipc-configurators

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Technical specifications

Article number	**6ES7647-8C...-....**
	SIMATIC IPC227G
Installation type/mounting	
Mounting	DIN rail, wall mounting, portrait mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Intel Atom X6211E / X6413E / X6414RE
Chipset	SoC
Graphic	
Graphics controller	Integrated
Drives	
SSD	Yes; 256 Eco
Memory	
Type of memory	DDR4 SO-DIMM
Main memory	2 / 4 / 8 / 16 Gbyte; inband ECC optional
Hardware configuration	
Slots	
• free slots	2x M.2
Interfaces	
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)
USB port	4x USB 3.1
Connection for keyboard/mouse	USB / USB
serial interface	without / 1x / 2x COM (RS 232 / 485 / 422; selectable)
Video interfaces	
• Graphics interface	2x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	3x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	1x power, 3x user
• Fan	No
• Monitoring function via network	Optional

Article number	**6ES7647-8C...-....**
	SIMATIC IPC227G
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; length < 30 m; ±2 kV (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; length > 30 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
EMC	CE, EN 61000-6-4:2007, EN 61000-6-2:2005
Dust protection	Protection against foreign bodies > 1 mm
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to 55 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)

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Technical specifications

Article number	**6ES7647-8C...-....**
	SIMATIC IPC227G
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 200 Hz : 9.8m/s² (1 g) (except DIN Rail) 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 500 Hz: 4.9 m/s² (0.5 g) (DIN Rail)
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s², 11 ms
Operating systems	
pre-installed operating system	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI
without operating system	Yes; Optional
Dimensions	
Width	191 mm
Height	100 mm
Depth	64 mm

More information

More information is available on the internet at:

http://www.siemens.com/simatic-pc

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

http://www.siemens.com/ipc-configurators

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Overview

SIMATIC IPC227E (Nanobox PC): The Box PC with optimized performance in compact design – maintenance-free and rugged

The SIMATIC IPC227E Nanobox PC is an extremely compact and flexible embedded industrial PC.

Thanks to its closed, dust-protected all-metal enclosure, the IPC227E offers maximum industrial functionality for flexible use under harsh conditions – while remaining maintenance-free.

Modern interfaces and the option for expansion via a PCIe slot mean this Box PC can be easily integrated into the automation system. In the version with pre-installed Industrial Edge Runtime, it also supports modern Edge architectures. In the version with pre-installed Industrial Edge Runtime, it also supports modern Edge architectures. The latest Intel Dual-Core and Quad-Core processors ensure excellent performance here in an ultra-compact design.

Ordering data

SIMATIC IPC227E	Article No. 6ES7647- 8 B ■ ■ ■ - ■ ■ ■ ■
Processor	
• Celeron N2807 (2C/2T)	A
• Celeron N2930 (4C/4T)	B
• Celeron N2807 (2C/2T)/TPM	C
• Celeron N2930 (4C/4T)/TPM	D
• Celeron E3845 ET (4C/4T)/TPM	E
Work memory/NVRAM	
• 2 GB	1
• 4 GB	2
• 8 GB	3
• 2 GB/NVRAM	4
• 4 GB/NVRAM	5
• 8 GB/NVRAM	6
• 4 GB RAM ET/NVRAM	7
Device version/interface	
• Basic without COM	1
• Basic with COM1/2	2
• PCIe without COM	3
• PCIe with COM1/2	4

SIMATIC IPC227E	Article No. 6ES7647- 8 B ■ ■ ■ - ■ ■ ■ ■
Operating system	
• Without operating system	0
• Windows Embedded Standard 7 E SP1, English, 32-bit	1
• Windows Embedded Standard 7 E SP1, English, 64-bit	2
• Windows Embedded Standard 7 P SP1, English, 32-bit	3
• Windows Embedded Standard 7 P SP1, English, 64-bit	4
• Windows 7 Ultimate SP1, 32-bit, MUI (en, de, fr, it, es)	5
• Windows 7 Ultimate SP1, 64-bit, MUI (en, de, fr, it, es)	6
• Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (de, en, es, fr, it)	7
• Windows 10 IoT Enterprise 2019 LTSC, 64-bit, MUI (de, en, es, fr, it)	8
Mass storage	
• None	A
• 256 GB Eco SSD	E
• 240 GB SSD	C
• 480 GB SSD	D
• 60 GB SSD ET	H
• 4 GB CFast	K
• 8 GB CFast	L
• 16 GB CFast	M
• 128 GB CFast	N
• 320 GB HDD	R

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SIMATIC IPC227E

Ordering data	Article No.
SIMATIC IPC227E	**6ES7647- 8 B■■■ - ■■■**
Software	
• Without SIMATIC software	**A**
• Industrial Edge Sinumerik	**V**
Mounting accessories	
• DIN rail	**1**
• Wall mounting	**2**
• Portrait mounting	**3**
• DIN rail mounting with ATEX/ IECEx Cat 3G Zone 2/cULus Class I Div. 2	**4**
• Wall mounting with ATEX/ IECEx Cat 3G Zone 2/cULus Class I Div. 2	**5**
• Portrait mounting with ATEX/ IECEx Cat 3G Zone 2/cULus Class I Div. 2	**6**

	Article No.
SIMATIC IPC227E (Nanobox PC) with pre-installed Industrial Edge Runtime 1 x DisplayPort; 2x 10/100/1000 Mbps Ethernet RJ45; 1 x USB 3.0, 3 x USB 2.0; CFast slot; 24 V DC industrial power supply Industrial Edge (SIMATIC)	**6ES7647-8BD31-0CW1**

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Technical specifications

Article number	**6ES7647-8B...-....**
	SIMATIC IPC227E (Nanobox PC)
Installation type/mounting	
Mounting	DIN rail, wall mounting, portrait mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Intel Celeron N2807 / N2930, Intel Atom E3845
Chipset	SoC
Graphic	
Graphics controller	Integrated
Drives	
Hard disk	2.5" SATA ≥ 320 GB
SSD	Yes; 256 Eco / 240 / 480 GB
Memory	
Type of memory	DDR3L SO-DIMM
Main memory	2 / 4 / 8 GB
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time; optional
Hardware configuration	
Slots	
• free slots	1x PCIe (x1) (optional)
Interfaces	
Number of industrial Ethernet interfaces	2; 2x Ethernet (RJ45)
USB port	1x USB 3.0 / 3x USB 2.0
Connection for keyboard/mouse	USB / USB
serial interface	Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS
Video interfaces	
• Graphics interface	1x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	1x power, 3x user
• Fan	No
• Monitoring function via network	Optional

Article number	**6ES7647-8B...-....**
	SIMATIC IPC227E (Nanobox PC)
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A

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Technical specifications

Article number	**6ES7647-8B...-....**
	SIMATIC IPC227E (Nanobox PC)
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
FCC	Yes
EMC	CE, EN 61000-6-4:2007, EN 61000-6-2:2005
Dust protection	Protection against foreign bodies > 1 mm
Use in hazardous areas	
• ATEX Zone 2	Yes; Optional
• IECEx Zone 2	Yes; Optional
• cULus Class I Zone 2, Division 2	Yes; Optional
Marine approval	
• Germanischer Lloyd (GL)	Yes
• American Bureau of Shipping (ABS)	Yes
• Bureau Veritas (BV)	Yes
• Det Norske Veritas (DNV)	Yes
• Korean Register of Shipping (KRS)	Yes
• Lloyds Register of Shipping (LRS)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes
• Chinese Classification Society (CCS)	Yes
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C up to 60 °C (-20 °C as option)
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g)
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s², 11 ms
Operating systems	
pre-installed operating system	Windows 7 Ultimate 32-bit / 64-bit, MUI; Windows Embedded Standard 7 E/P, 32-bit / 64-bit
Additional info on operating system	optional: SIMATIC Industrial OS
without operating system	Yes; Optional
Software	
SIMATIC Software	Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S
Dimensions	
Width	191 mm
Height	100 mm
Depth	60 mm

Article number	**6ES7647-8BD31-0CW1**
	SIMATIC IPC227E (Nanobox PC)
Installation type/mounting	
Mounting	DIN rail, wall mounting, portrait mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Intel Celeron N2930
Chipset	SoC
Graphic	
Graphics controller	Integrated
Drives	
SSD	Yes; 240 GB
Memory	
Type of memory	DDR3L SO-DIMM
Main memory	8 GB RAM
Interfaces	
Number of industrial Ethernet interfaces	2; 2x Ethernet (RJ45)
USB port	1x USB 3.0 / 3x USB 2.0
Connection for keyboard/mouse	USB / USB
serial interface	No
Video interfaces	
• Graphics interface	1x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	1x power, 3x user
• Fan	No
• Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6

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Technical specifications

Article number	**6ES7647-8BD31-0CW1** SIMATIC IPC227E (Nanobox PC)
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
Degree and class of protection	
IP degree of protection	IP40
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
• UL 508	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
FCC	Yes
EMC	CE, EN 61000-6-4:2007, EN 61000-6-2:2005
Dust protection	Protection against foreign bodies > 1 mm
Use in hazardous areas	
• ATEX Zone 2	Yes; Optional
• IECEx Zone 2	Yes; Optional
• cULus Class I Zone 2, Division 2	Yes; Optional
Marine approval	
• Germanischer Lloyd (GL)	Yes
• American Bureau of Shipping (ABS)	Yes
• Bureau Veritas (BV)	Yes
• Det Norske Veritas (DNV)	Yes
• Korean Register of Shipping (KRS)	Yes
• Lloyds Register of Shipping (LRS)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes
• Chinese Classification Society (CCS)	Yes

Article number	**6ES7647-8BD31-0CW1** SIMATIC IPC227E (Nanobox PC)
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to 50 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g)
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s², 11 ms
Operating systems	
pre-installed operating system	SIMATIC Industrial OS
Software	
SIMATIC Software	Industrial Edge - SIMATIC
Dimensions	
Width	191 mm
Height	100 mm
Depth	60 mm

More information is available on the internet at:

http://www.siemens.com/simatic-ipc

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

http://www.siemens.com/ipc-configurators

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SIMATIC IPC327G

Overview

SIMATIC IPC327G

The new SIMATIC IPC327G is a cost-optimized platform with the most up-to-date Intel® Atom processor technology.
The design with multiple interfaces can be used for different applications, for example, logistics, electronics, etc.
It is characterized in particular by a large number of interfaces for easy connection to existing and new systems, fast availability from stock, as well as a fanless industrial design.

Ordering data

	Article No.
SIMATIC IPC327G	**6AG4022- 0 B ■ ■ ■ - ■ ■ ■ ■**
2 x DisplayPort graphics interface 2x 10/100/1 000 Mbps Ethernet RJ45 4 x USB 3.0; 3 x USB 2.0; 4 x serial ports (COM)	
Processor	
• Intel Atomx6413E (4-core) / audio	**A**
• Intel Atomx6413E (4-core) / TPM / audio	**B**
• Intel Atomx6413E (4-core)	**C**
• Intel Atomx6413E (4-core) audio	**D**
Work memory	
• 4 GB RAM	**2**
• 8 GB RAM	**3**
• 16 GB RAM	**4**
Expansions/interfaces	
• 2x COM	**1**
• 4x COM	**2**
Operating system	
• None	**0**
• Windows 10 Enterprise LTSC 2019, 64-bit, MUI (de, en, fr, it, es)	**2**
Drives	
• None	**A**
• 256G Eco SSD	**B**
• 512G Eco SSD	**C**
Power supply	
• 24 V DC	**A**
Mounting accessories	
• Standard	**1**
• DIN rail	**2**

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

For an up-to-date overview, see the SIMATIC IPC online configurator at:

http://www.siemens.com/ipc-configurators

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Ordering data

	Article No.
Preferred variants (available ex stock)	
SIMATIC IPC327G	
Configuration 1 Processor: Intel Atomx6413E (up to 3.0 GHz)/ without audio Drives (SATA): without mass storage, Main memory: 4 GB DRAM (1x 4 GB), Without operating system	**6AG4022-0BC21-0AA1**
Configuration 2 Processor: Intel Atomx6413E (up to 3.0 GHz)/ without audio Drives (SATA): 256G Eco SSD, Main memory: 4 GB DRAM (1x 4 GB) Windows 10 Enterprise LTSC 2019, 64-bit, MUI (de, en, fr, it, es)	**6AG4022-0BC21-2BA1**
Configuration 3 Processor: Intel Atomx6413E (up to 3.0 GHz)/ without audio Drives (SATA): without mass storage, Main memory: 8 GB DRAM (1x 8 GB); Without operating system	**6AG4022-0BC31-0AA1**
Configuration 4 Processor: Intel Atomx6413E (up to 3.0 GHz)/ without audio Drives (SATA): 256G Eco SSD, Main memory: 8 GB DRAM (1x 8 GB) Windows 10 Enterprise LTSC 2019, 64-bit, MUI (de, en, fr, it, es)	**6AG4022-0BC31-2BA1**

Technical specifications

Article number	**6AG4022-0B...-....** SIMATIC IPC327G
Installation type/mounting	
Design	Box PC, built-in unit
Installation type/mounting	
Mounting	DIN rail or wall mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Intel Atom X6413E
Drives	
Hard disk	256 GB SSD
Memory	
Type of memory	DDR4
Capacity of main memory, max.	8GB (pre-installed)
Hardware configuration	
Slots	
• free slots	2x M.2
Interfaces	
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)
Video interfaces	
• Graphics interface	2x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Protocols	
Protocols (Ethernet)	
• TCP/IP	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	POWER, HDD
• Fan	No

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Technical specifications

Article number	**6AG4022-0B...-....**
	SIMATIC IPC327G
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±4 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
UL approval	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
BSMI	Yes
Dust protection	Protection against foreign bodies > 1 mm
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 to +40 °C
Relative humidity	
• Relative humidity	5 ... 85 % at 30 °C, no condensation
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	58 Hz to 200 Hz: 4.9 m/s^2; tested according to IEC 60068-2-6
Shock testing	
• Shock load during operation	With SSD: 150 m/s^2, 11 ms, 5 g, 30 ms, tested according to IEC 60068-2-27
Operating systems	
pre-installed operating system	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI
without operating system	Yes; Optional
Dimensions	
Width	254 mm
Height	132 mm
Depth	73 mm

More information

More information is available on the internet at
http://www.siemens.com/simatic-panel-pc

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Overview

SIMATIC IPC327E

Based on Intel Celeron process technology, the SIMATIC IPC327E Box PC represents a new IPC platform which has been specifically developed for cost-optimized, PC-based applications in industrial and industry-oriented environments.

It is above all distinguished by a large number of interfaces for easy connection to existing and new systems, fast availability from stock as well as a fanless industrial design.

Ordering data

	Article No.
SIMATIC IPC327E	**6AG4022 - 0 A ■ ■ ■ - ■ ■ ■ ■**
1 x display port graphic 1 x VGA port graphic 2x 10/100/1 000 Mbps Ethernet RJ45 2 x USB 3.0; 4 x USB 2.0; 6 x serial ports (COM)	
Processor	
• Celeron N3160 (4C/4T)	**A**
Work memory	
• 4 GB RAM	**2**
• 8 GB RAM	**3**
Expansions/interfaces	
• 1x mPCIe / 1x mSata	**1**
Operating system	
• Without operating system	**0**
• Windows Ultimate SP1, 64-bit MUI (en, de, fr, es, it)	**1**
Drives	
• None	**A**
• 500 GB HDD	**B**
• 256 GB SSD	**C**
Power supply	
• 24 V DC	**A**
Mounting accessories	
• Installation, VESA installation	**1**

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

http://www.siemens.com/ipc-configurators

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SIMATIC IPC327E

Ordering data

	Article No.
Preferred variants (available ex stock)	
SIMATIC IPC327E	
Configuration 1 Intel Celeron Quad Core N3160 (1.6 GHz) 500 GB HDD SATA, internal 4 GB RAM (1 x 4 GB) Without operating system 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 6 x USB 2.0; 2 x USB 3.0; 6 x serial, 1 x Display Port, 1 x VGA, audio	**6AG4022-0AA21-0BA1**
Configuration 2 Intel Celeron Quad Core N3160 (1.6 GHz) 500 GB HDD SATA, internal 4 GB RAM (1 x 4 GB) Windows 7 Ultimate 64-bit 24 V DC Interfaces: 2 x Gbit Ethernet (RJ45), 6 x USB 2.0; 2 x USB 3.0; 6 x serial, 1 x display port, 1 x VGA, audio	**6AG4022-0AA21-1BA1**
Configuration 3 Intel Celeron Quad Core N3160 (1.6 GHz) 256 GB SSD, internal 4 GB RAM (1 x 4 GB) Without operating system 24 V DC Interfaces: 2 x Gbit Ethernet (RJ45), 6 x USB 2.0; 2 x USB 3.0; 6 x serial, 1 x display port, 1 x VGA, audio	**6AG4022-0AA21-0CA1**
Configuration 4 Intel Celeron Quad Core N3160 (1.6 GHz) 256 GB SSD, internal 4 GB RAM (1 x 4 GB) Windows 7 Ultimate 64-bit 24 V DC Interfaces: 2 x Gbit Ethernet (RJ45), 6 x USB 2.0; 2 x USB 3.0; 6 x serial, 1 x display port, 1 x VGA, audio	**6AG4022-0AA21-1CA1**
Configuration 5 Intel Celeron Quad Core N3160 (1.6 GHz) 256 GB SSD, internal 4 GB RAM (1 x 4 GB) Windows 10 Enterprise 2016 LTSB, 64-bit, MUI 24 V DC Interfaces: 2 x Gbit Ethernet (RJ45), 6 x USB 2.0; 2 x USB 3.0; 6 x serial, 1 x display port, 1 x VGA, audio	**6AG4022-0AA21-2CA1**

Technical specifications

Article number	**6AG4022-0A...-....** SIMATIC IPC327E
Installation type/mounting	
Mounting	Standard mounting rail, wall mounting (horizontal and vertical)
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	10 ms
Processor	
Processor type	Intel Celeron N3160
Chipset	SoC
Graphic	
Graphics controller	Integrated
Drives	
Hard disk	1 TB HDD
SSD	Yes; 256 GB SSD

Article number	**6AG4022-0A...-....** SIMATIC IPC327E
Memory	
Type of memory	DDR3L
Main memory	4 GB, 8 GB
Capacity of main memory, max.	8 Gbyte
Hardware configuration	
Slots	
• free slots	1x mPCIe (half-size), 1x mSATA (full-size)
Interfaces	
Number of industrial Ethernet interfaces	2; 2x Ethernet (RJ45)
USB port	4x USB 2.0, 2x USB 3.0 (high current)
Connection for keyboard/mouse	USB / USB
serial interface	6x COM (4x RS 232, 2x RS 232 / 422 / 485 switchable)
Video interfaces	
• Graphics interface	1x DisplayPort, 1x VGA
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes

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Technical specifications

Article number	**6AG4022-0A...-....**
	SIMATIC IPC327E
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	POWER, HDD
• Fan	No
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD)
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 ... 1 000 MHz, 80 % AM according to IEC 61000-4-3; 3 V/m for 1.4 ... 6 GHz, 80 % AM according to IEC 61000-4-3
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8

Article number	**6AG4022-0A...-....**
	SIMATIC IPC327E
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
Dust protection	Protection against foreign bodies > 1 mm
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to 50 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g)
Shock testing	
• Shock load during operation	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s², 11 ms; with HDD: 9.8 m/s², 20 ms
Operating systems	
pre-installed operating system	Windows 7 Ultimate (Multi-Language), 64 bit; Windows 10 Enterprise 2016 LTSB, 64 bit
without operating system	Yes; Optional
Dimensions	
Width	254 mm
Height	140 mm
Depth	75 mm

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Technical specifications

Article number	6AG4022-0AA21-0BA1	6AG4022-0AA21-0CA1	6AG4022-0AA21-1BA1	6AG4022-0AA21-1CA1	6AG4022-0AA21-2CA1
	SIMATIC IPC327E	SIMATIC IPC327E	SIMATIC IPC327E	SIMATIC IPC327E	SIMATIC IPC327E
Installation type/mounting					
Mounting	Standard mounting rail, wall mounting (horizontal and vertical)				
Design	Box PC, built-in unit	Box PC, built-in unit	Box PC, built-in unit	Box PC, built-in unit	Box PC, built-in unit
Supply voltage					
Type of supply voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Mains buffering					
• Mains/voltage failure stored energy time	10 ms	10 ms	10 ms	10 ms	10 ms
Processor					
Processor type	Intel Celeron N3160	Intel Celeron N3160	Intel Celeron N3160	Intel Celeron N3160	Intel Celeron N3160
Drives					
Hard disk	1 TB HDD	1 TB HDD	1 TB HDD	1 TB HDD	1 TB HDD
Memory					
Type of memory	DDR3L	DDR3L	DDR3L	DDR3L	DDR3L
Main memory	4 GB (pre-installed)	4 GB (pre-installed)	4 GB (pre-installed)	4 GB (pre-installed)	4 GB (pre-installed)
Hardware configuration					
Slots					
• free slots	1x mPCIe (half-size), 1x mSATA (full-size)	1x mPCIe (half-size), 1x mSATA (full-size)	1x mPCIe (half-size), 1x mSATA (full-size)	1x mPCIe (half-size), 1x mSATA (full-size)	1x mPCIe (half-size), 1x mSATA (full-size)
• Number of PCI slots	0	0	0	0	0
Interfaces					
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)
USB port	4x USB 2.0, 2x USB 3.0 (high current)	4x USB 2.0, 2x USB 3.0 (high current)	4x USB 2.0, 2x USB 3.0 (high current)	4x USB 2.0, 2x USB 3.0 (high current)	4x USB 2.0, 2x USB 3.0 (high current)
Video interfaces					
• Graphics interface	1x DisplayPort, 1x VGA	1x DisplayPort, 1x VGA	1x DisplayPort, 1x VGA	1x DisplayPort, 1x VGA	1x DisplayPort, 1x VGA
Industrial Ethernet					
• Industrial Ethernet interface	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes
Protocols					
Protocols (Ethernet)					
• TCP/IP	Yes	Yes	Yes	Yes	Yes
Integrated Functions					
Monitoring functions					
• Temperature monitoring	Yes	Yes	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes	Yes	Yes
• Status LEDs	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD
• Fan	No	No	No	No	No
EMC					
Interference immunity against discharge of static electricity					
• Interference immunity against discharge of static electricity	±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD)				
Interference immunity against high-frequency electromagnetic fields					
• Interference immunity against high frequency radiation	10 V/m for 80 ... 1 000 MHz, 80 % AM according to IEC 61000-4-3; 3 V/m for 1.4 ... 6 GHz, 80 % AM according to IEC 61000-4-3				
Interference immunity to cable-borne interference					
• Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)				
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge				
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst				

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Technical specifications

Article number	6AG4022-0AA21-0BA1	6AG4022-0AA21-0CA1	6AG4022-0AA21-1BA1	6AG4022-0AA21-1CA1	6AG4022-0AA21-2CA1
	SIMATIC IPC327E	SIMATIC IPC327E	SIMATIC IPC327E	SIMATIC IPC327E	SIMATIC IPC327E
Interference immunity against voltage surge					
• asymmetric interference	±1 kV according to IEC 61000-4-5, surge asymmetric	±2 kV acc. to IEC 61000-4-5, surge asymmetric	±1 kV according to IEC 61000-4-5, surge asymmetric	±2 kV acc. to IEC 61000-4-5, surge asymmetric	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference		±1 kV acc. to IEC 61000-4-5, surge symmetric		±1 kV acc. to IEC 61000-4-5, surge symmetric	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields					
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8
Standards, approvals, certificates					
CE mark	Yes	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes
KC approval					Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes
FCC	Yes	Yes	Yes	Yes	Yes
BSMI					Yes
Dust protection	Protection against foreign bodies > 1 mm				
Ambient conditions					
Ambient temperature during operation					
• Ambient temperature during operation	0 to +40 °C	0 °C to 50 °C	0 to +40 °C	0 °C to 50 °C	0 °C to 50 °C
Relative humidity					
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)				
Vibrations					
• Vibration resistance during operation acc. to IEC 60068-2-6	58 Hz to 200 Hz: 4.9 m/s^2; tested according to IEC 60068-2-6	Tested in accordance with IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s^2; valid for SSD configuration	58 Hz to 200 Hz: 4.9 m/s^2; tested according to IEC 60068-2-6	Tested in accordance with IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s^2; valid for SSD configuration	
Shock testing					
• Shock load during operation	With HDD: 9.81 m/s^2, 20 ms; tested according to IEC 60068-2-27	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s^2, 11 ms; with HDD: 9.8 m/s^2, 20 ms	With HDD: 9.81 m/s^2, 20 ms; tested according to IEC 60068-2-27	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s^2, 11 ms; with HDD: 9.8 m/s^2, 20 ms	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s^2, 11 ms; with HDD: 9.8 m/s^2, 20 ms
Operating systems					
pre-installed operating system	No	No	Windows 7 Ultimate (Multi-Language) 64-bit	Windows 7 Ultimate (Multi-Language), 64 bit; Windows 10 Enterprise 2016 LTSB, 64 bit	Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
without operating system	Yes	Yes		Yes	Yes
pre-installed operating system					
• Windows 7			Yes; Ultimate 64 bit, SP1		
Dimensions					
Width	254 mm	254 mm	254 mm	254 mm	254 mm
Height	140 mm	140 mm	140 mm	140 mm	140 mm
Depth	75 mm	75 mm	75 mm	75 mm	75 mm

More information is available on the internet at:

http://www.siemens.com/simatic-pc

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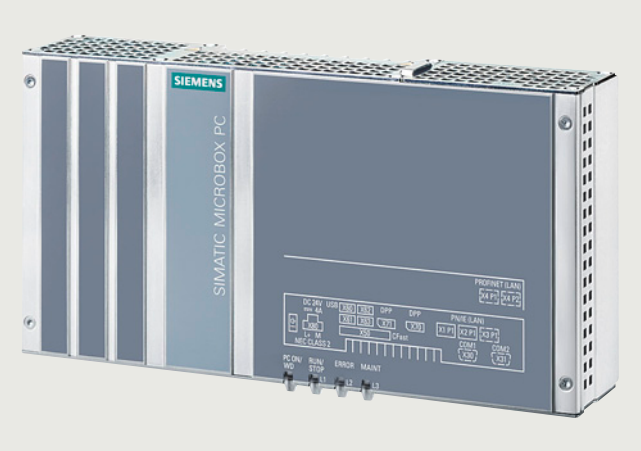
Overview



SIMATIC IPC427E (Microbox PC): The powerful embedded IPC – maintenance-free with versatile configuration

Ready-to-run, complete solution:

- Ultra-compact
- Maintenance-free
- 6th Generation Intel Core i technology

Ordering data

	Article No.					
SIMATIC IPC427E (Box PC) [1]	**6AG4141-**	■	■	■	■	- ■ ■ ■ ■
Processor and fieldbus						
• Celeron G3902E; 2 x Gigabit Ethernet (IE/PN)		**0**				
• Celeron G3902E; 3 x Gigabit Ethernet (IE/PN)		**1**				
• Core i3-6102E; 3 x Gigabit Ethernet (IE/PN)		**3**				
• Core i5-6442EQ; 3 x Gigabit Ethernet (IE/PN)		**5**				
• Xeon E3-1505L; 3 x Gigabit Ethernet (IE/PN)		**7**				
Mounting accessories/ATEX						
• DIN rail mounting			**B**			
• Wall mounting			**C**			
• Portrait mounting			**D**			
• DIN rail mounting with ATEX/IECEx Cat 3G Zone 2/ cULus Class I Div. 2			**F**			
• Wall mounting with ATEX/IECEx Cat 3G Zone 2/ cULus Class I Div. 2			**G**			
• Portrait mounting with ATEX/IECEx Cat 3G Zone 2/ cULus Class I Div. 2			**H**			
Work memory/NVRAM/ECC						
• 4 GB				**A**		
• 8 GB				**B**		
• 16 GB				**C**		
• 8 GB with ECC				**D**		
• 16 GB with ECC				**E**		
• 4 GB and NVRAM				**F**		
• 8 GB and NVRAM				**G**		
• 16 GB and NVRAM				**H**		
• 8 GB with ECC and NVRAM				**J**		
• 16 GB with ECC and NVRAM				**K**		
Expansions/interfaces						
• No RS232/RS485, without PCIe					**0**	
• No RS232/RS485 and one PCIe					**1**	
• No RS232/RS485 and two PCIe					**2**	
• Two RS232/RS485, without PCIe					**3**	
• Two RS232/RS485 and one PCIe					**4**	
• Two RS232/RS485 and two PCIe					**5**	
• Two RS232/RS485 and two PCIe (x4 and x1), PCI x4 occupied with AI Accelerator					**6**	

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Ordering data

	Article No.
SIMATIC IPC427E (Box PC) [1]	**6AG4141-** ■■■■■ - ■■■■
Operating system	
• Without operating system	0
• Windows Embedded Standard 7 SP1, English, 32-bit	1
• Windows Embedded Standard 7 SP1, English, 64-bit	2
• Windows Embedded Standard 7 SP1, English, 64-bit, multi-touch	3
• Windows 7 Ultimate SP1, 64-bit, MUI (en, de, fr, it, es)	4
• Windows 10 IoT Enterprise 2019 LTSC (64-bit) for Celeron, Core i3 and Core i5 processors	5
• Windows 10 IoT Enterprise 2019 LTSC (64-bit) for Xeon processor	6
• Windows 10 Enterprise 2016 LTSB (64-bit) for Celeron, Core i3 and Core i5 processors	7
• Windows 10 Enterprise 2016 LTSB (64-bit) for Xeon processor	8
Mass storage, externally accessible	
• Without external mass storage	0
• CFast 2 GB without operating system	1
• CFast 4 GB without operating system	2
• CFast 8 GB (only optionally with operating system/software if no internal mass storage or HDD)	3
• CFast 16 GB (only optionally with operating system/software if no internal mass storage or HDD)	4
• CFast 128 GB (only optionally with operating system/software if no internal mass storage or HDD)	5

	Article No.
SIMATIC IPC427E (Box PC) [1]	**6AG4141-** ■■■■■ - ■■■■
Mass storage, internal	
• Without internal mass storage	A
• 256 GB Eco solid-state drive	D
• 240 GB solid-state drive SATA	F
• 480 GB solid-state drive SATA	G
• 320 GB HDD	J
SIMATIC Software	
• Without SIMATIC software	A
Power supply	
• 24 V DC industrial power supply	0
• 24 V DC and TPM [2]	8

[1] For an up-to-date overview, see the SIMATIC PC Online Configurator: http://www.siemens.com/ipc-configurators

[2] TPM = Trusted Platform Module

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

http://www.siemens.com/ipc-configurators

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Technical specifications

Article number	**6AG4141-.....-....**
	SIMATIC IPC427E (MicroBOX PC)
General information	
Product type designation	IPC427E
Installation type/mounting	
Mounting	DIN rail, wall mounting, portrait mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)
Chipset	Intel C236 / Intel H110
Graphic	
Graphics controller	Intel HD graphics controller
Drives	
Hard disk	2.5" SATA ≥ 320 GB
SSD	Yes; 128 / 240 / 480 GB
Memory	
Type of memory	DDR4-2400 SO-DIMM
Main memory	4 / 8 / 16 GB, ECC optional
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time; optional
Hardware configuration	
Slots	
• free slots	2x PCIe; optional: 1x PCIe (x4); 2x PCIe (x1, x4), with card retainer
Interfaces	
Number of industrial Ethernet interfaces	3; Ethernet (2x RJ45, optional 3x RJ45)
USB port	4x USB 3.0
Connection for keyboard/mouse	USB / USB
serial interface	Without / 2x COM (RS 232 / 485 / 422; switchable)
Video interfaces	
• Graphics interface	2x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	3x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	1x power, 3x user
• Fan	No
• Monitoring function via network	Optional

Article number	**6AG4141-.....-....**
	SIMATIC IPC427E (MicroBOX PC)
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
Degree and class of protection	
IP degree of protection	IP20
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
EMC	CE, EN 55022A, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas	
• ATEX Zone 2	Yes; Optional
• IECEx Zone 2	Yes; Optional
• cULus Class I Zone 2, Division 2	Yes; Optional

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Technical specifications

Article number	**6AG4141-.....-....**
	SIMATIC IPC427E (MicroBOX PC)
Marine approval	
• Germanischer Lloyd (GL)	Yes
• American Bureau of Shipping (ABS)	Yes
• Bureau Veritas (BV)	Yes
• Det Norske Veritas (DNV)	Yes
• Korean Register of Shipping (KRS)	Yes
• Lloyds Register of Shipping (LRS)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to 55 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s² (1 g)
Shock testing	
• Shock load during operation	Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks

Article number	**6AG4141-.....-....**
	SIMATIC IPC427E (MicroBOX PC)
Operating systems	
pre-installed operating system	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10
without operating system	Yes; Optional
Software	
Pre-installed Software	Edge-SW (Simatic, Sinumerik), optional
SIMATIC Software	Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S
Dimensions	
Width	262 mm
Height	139.7 mm
Depth	55.5 mm

Article number	**6AG4141-1AA14-0FA0**	**6AG4141-1AA17-0FA0**	**6AG4141-5AB14-0FA0**	**6AG4141-5AB17-0FA0**
	SIMATIC IPC427E (MicroBOX PC)	SIMATIC IPC427E (MicroBOX PC)	SIMATIC IPC427E (MicroBOX PC)	SIMATIC IPC427E (MicroBOX PC)
Supply voltage				
Type of supply voltage	24 V DC	24 V DC	24 V DC	24 V DC
Processor				
Processor type	Celeron G3902E	Celeron G3902E	Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB cache)	Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB cache)
Interfaces				
Number of industrial Ethernet interfaces	3	3	3	3
Number of PROFINET interfaces	3	3	3	3
Operating systems				
pre-installed operating system	Windows 7 Ultimate (Multi-Language) 64-bit	Windows 10 IoT Enterprise 2016 LTSB, 64bit, MUI	Windows 7 Ultimate (Multi-Language) 64-bit	Windows 10 IoT Enterprise 2016 LTSB, 64bit, MUI
Dimensions				
Width x Height x Depth in mm	262 x 133 x 55,5	262 x 133 x 55,5	262 x 133 x 55,5	262 x 133 x 55,5

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SIMATIC IPC520A

Overview

Based on Nvidia Xavier Nx technology, the SIMATIC IPC520A Box PC represents a new IPC platform that has been specially developed for AI-based applications in industry and industrial environments.

The Box PC is characterized above all by the high CPU and GPU computing power in combination with an extremely compact, fanless design for industry.

Adapted especially for industrial applications, it features a large number of interfaces. Nvidia's extensive range of software enables numerous AI-based applications.

Ordering data

	Article No.
SIMATIC IPC520A Tensorbox Nvidia ARM Carmel (6C); 8GB RAM, Jetson NX; 4x Ethernet RJ45, 3x USB3.0; 16 GB eMMC; without mounting accessories	**6ES7647-0JB00-0YA2**

Technical specifications

Article number	**6ES7647-0JB00-0YA2** SIMATIC IPC520A
General information	
Product type designation	IPC520A
Installation type/mounting	
Mounting	DIN rail mounting, Wall mount, table mount
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	5 ms
Processor	
Processor type	NVIDIA Carmel ARM ® v8.2 64-Bit CPU, 2x @ 1,5 GHz, 4x @ 1,2 GHz
Graphic	
Graphics controller	NVIDIA Volta™ GPU with 384 Cores and 48 Tensor Cores @ 800 MHz
Drives	
SSD	Yes; 16 GB eMMc
Memory	
Type of memory	LPDDR4
Main memory	8 GB RAM
Hardware configuration	
Slots	
• free slots	1x slot for Nano SIM card
Digital inputs	
Number of digital inputs	4
Input voltage	
• Type of input voltage	24 V DC
• for signal "0"	< 5 V DC
• for signal "1"	> 12 V DC
Input current	
• for signal "0", max. (permissible quiescent current)	1 mA
• for signal "1", typ.	2.5 mA

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Technical specifications

Article number	**6ES7647-0JB00-0YA2**
	SIMATIC IPC520A
Digital outputs	
Type of digital output	transistor
Number of digital outputs	2
Short-circuit protection	No
Output voltage	
• Type of output voltage	DC
• permissible voltage at output, min.	20.4 V
• permissible voltage at output, max.	28.8 V
Output current	
• for signal "1" rated value	0.5 A
Switching frequency	
• with resistive load, max.	10 Hz
• with inductive load, max.	0.5 Hz
• mechanical, max.	10 Hz
Interfaces	
Number of industrial Ethernet interfaces	4; 4x RJ45 (2x support PoE PSE IEEE 802.3af 15W)
Connection for keyboard/mouse	USB / USB
serial interface	1x COM (1x RS 232 / 422 / 485)
Video interfaces	
• Graphics interface	1x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	
- 100 Mbps	Yes
- 1000 Mbps	Yes
Protocols	
Protocols (Ethernet)	
• TCP/IP	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Fan	No
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	± 6 KV contact discharge at the front in accordance with IEC 61000-4-2; ±4 kV, housing contact discharge at the back in accordance with IEC 61000-4-2; ± 8 kV air discharge in accordance with IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6

Article number	**6ES7647-0JB00-0YA2**
	SIMATIC IPC520A
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge
• Interference immunity on signal cables < 30m	±1 kV (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; length < 30 m; ±2 kV (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; length > 30 m
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-4:2007 +A1:2011 (industrial environments), EN 61000-6-3:2007 +A1:2011 (residential environments), CISPR 22 Class B, FCC Class A
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
UL approval	Yes
cULus	Yes
FM approval	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to 45 °C
Relative humidity	
• Relative humidity	5 ... 85 % at 30 °C, no condensation
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 500 Hz: 9.8 m/s^2
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s^2, 11 ms
Operating systems	
pre-installed operating system	No
Dimensions	
Width	234 mm
Height	129 mm
Depth	71 mm

More information

More information is available on the internet at:

http://www.siemens.com/tensorbox

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SIMATIC IPC527G

Overview

The SIMATIC IPC527G Box PC is a new product in the SIMATIC Industrial PC portfolio, which is characterized by high performance and flexibility at an extremely attractive price.

Powerful processors (Intel Core i Desktop CPUs), numerous interfaces, and the support of existing systems make the SIMATIC IPC527G a robust and low-cost platform for a wide range of industrial applications.

Ordering data

	Article No.
SIMATIC IPC527G	**6AG4025 - 0 ■ ■ ■ 0 - ■ ■ ■ 0**
All-metal enclosure for high EMC and mechanical ruggedness, flexible installation: Desktop, wall, portrait and tower mounting, opening of the enclosure cover for expansion and replacement of PC components (e.g. PC cards or HDD) without a tool, dust protection through overpressure ventilation, front LEDs: POWER, HDD	
Processor	
• Pentium G4400 ((2C/2T) 3.3 GHz, 3 MB cache)	**A**
• Core i5-6500 ((4C/4T) 3.2 (3.6) GHz, 6 MB cache)	**C**
• Core i7-6700 ((4C/4T) 3.4 (4.0) GHz, 8 MB cache)	**D**
Drives	
• 1 TB HDD	**B**
• 256 GB SSD	**E**
• 512 GB SSD	**F**
• Without drive, prepared for 1x 2.5" SATA	**L**
Work memory	
• 4 GB DDR4 RAM	**1**
• 8 GB DDR4 RAM	**2**
• 16 GB DDR4 RAM	**3**
Operating system	
• Without operating system	**0**
• Windows Ultimate SP1, 32-bit MUI (en, de, fr, es, it)	**1**
• Windows Ultimate SP1, 64-bit MUI (en, de, fr, es, it)	**2**
• Windows 10 Enterprise LTSB 2016, 64-bit MUI (en, de, fr, es, it) for Pentium, Core i5	**3**
• Windows 10 Enterprise LTSB 2016, 64-bit MUI (en, de, fr, es, it) for Pentium Core i7	**4**
• Windows 10 Enterprise LTSC 2019, 64-bit MUI (de, en, fr, sp, it) for Pentium, Core i5	**5**
• Windows 10 Enterprise LTSC 2019, 64-bit, MUI (de, en, fr, it, es) for Core i7	**6**
Expansion	
• 1x PCIe x16	**A**
• 1x PCIe x16; 1x PCIe x1; 2x PCI	**B**
• 1x PCIe x 16; 1x PCIe x4, 2x PCIe x1	**C**
Specific expansions:	
• None	**A**
• 2x RS232, 2x USB2.0 additionally	**B**
• 1x Gbit LAN additionally (1 PCIe slot occupied)	**C**
• 1 x Gbit LAN (1x PCIe slot occupied) and 2x RS232; 2x USB2.0 additionally	**D**

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

http://www.siemens.com/ipc-configurators

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Ordering data

	Article No.
SIMATIC IPC527G	
All-metal enclosure for high EMC and mechanical ruggedness, flexible installation: Desktop, wall, portrait and tower mounting, opening of the enclosure cover for expansion and replacement of PC components (e.g. PC cards or HDD) without a tool, dust protection through overpressure ventilation, front LEDs: POWER, HDD; slots: 1 x PCIe x16, 1 x PCIe x1, 2 x PCI or 1 x PCIe x16, 1 x PCIe x4, 2 x PCIe x1 interfaces: 4 x USB 3.0, 3 x USB 2.0 (2 x front, 1 x internal), 2 x GB Ethernet, 2x RS232/485/422 selectable, 2x RS232, 1x 8-bit DIO, 1x DP, 1x VGA, audio	
• Intel Pentium G4400, 4 GB RAM, 1 TB HDD mass storage	**6AG4025-0AB10-0BB0**
• Intel Core i5-6500, 8 GB RAM, 1 TB HDD mass storage	**6AG4025-0CB20-0BB0**
• Intel Core i5-6500, 8 GB RAM, 1 TB HDD mass storage, Windows 7 Ultimate	**6AG4025-0CB20-2BB0**
• Intel Core i5-6500, 8 GB RAM, 256 GB SSD mass storage, Windows 7 Ultimate	**6AG4025-0CE20-2BB0**
• Intel Core i5-6500, 8 GB RAM, 256 GB SSD mass storage, Windows 10 Enterprise LTSB 2016	**6AG4025-0CE20-3BB0**
• Intel Core i7-6700, 8 GB RAM, 512 GB SSD mass storage, Windows 7 Ultimate	**6AG4025-0DF20-2BB0**
• Intel Core i7-6700, 8 GB RAM, 512 GB SSD mass storage, Windows 10 Enterprise LTSB 2016	**6AG4025-0DF20-4BB0**
• Intel Core i5-6500, 8 GB RAM, 256 GB SSD mass storage, Windows 10 Enterprise LTSB 2019	**6AG4025-0CE20-5CA0**
• Intel Core i7-6700, 8 GB RAM, 256 GB SSD mass storage, Windows 10 Enterprise LTSB 2019	**6AG4025-0DE20-6CA0**

Technical specifications

Article number	**6AG4025-0...0-...0** SIMATIC IPC527G (Box PC)
Installation type/mounting	
Mounting	Wall mounting, portrait mounting, desktop mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	100/240V AC (autorange) 50/60 Hz
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Processor	
Processor type	Core i7-6700 (4C/8T, 3.4 (4.0) GHz, 8 MB cache); Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB cache); Pentium G4400 (2C/2T, 3.3 GHz, 3 MB cache)
Chipset	Intel H110
Graphic	
Graphics controller	Onboard Intel HD graphics 530/510 integrated in processor
Drives	
Hard disk	1 TB HDD
SSD	Yes; Optional
Memory	
Type of memory	DDR4-2133 SO-DIMM
Main memory	4 / 8 / 16 GB, supports up to 32 GB
Hardware configuration	
Slots	
• free slots	1x PCIe (x16), optional 1x PCIe (x1), 2x PCI additionally

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Technical specifications

Article number	**6AG4025-0...0-...0**
	SIMATIC IPC527G (Box PC)
Interfaces	
Number of industrial Ethernet interfaces	3; 3x Gigabit Ethernet (IE/PN), RJ45 optional; 2x Gigabit Ethernet (IE/PN), RJ45 basic configuration
Number of PROFINET interfaces	3; 2 ports base configuration, 3 ports optional
USB port	4x USB 3.0, 1x USB 2.0 internal, 2x USB 2.0 optional
Connection for keyboard/mouse	USB / USB
serial interface	2x RS 232 / 485 / 422 combined, 2x RS 232 optional
Multimedia	
• Audio In/Out	Yes
• Microphone In	Yes
Video interfaces	
• Graphics interface	1x DisplayPort, 1x VGA
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45), 1x Ethernet (RJ45) additional option
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Status LEDs	POWER, HDD
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Degree and class of protection	
IP (at the front)	IP20
IP (rear)	IP20

Article number	**6AG4025-0...0-...0**
	SIMATIC IPC527G (Box PC)
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes; No. 61010-1-12, No. 61010-2-201
UL approval	Yes
cULus	Yes; UL 61010-1, UL 61010-2-201
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 to +45°C
Relative humidity	
• Relative humidity	8 ... 85 % at 30 °C, no condensation
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	tested according to IEC 60068-2-6: 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 200 Hz: 4.9 m/s^2
Shock testing	
• Shock load during operation	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s^2, 11 ms; with HDD: 9.8 m/s^2, 20 ms
Operating systems	
pre-installed operating system	Windows 7 Ultimate (Multi-Language) 32-bit / 64-bit; Windows 10 Enterprise 2016 LTSB
Additional info on operating system	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)
without operating system	Yes
Dimensions	
Width	260 mm
Height	135 mm
Depth	225 mm

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Technical specifications

Article number	**6AG4025-0AB10-0BB0**
	SIMATIC IPC527G (Box PC)
Installation type/mounting	
Mounting	Wall mounting, portrait mounting, desktop mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	100/240V AC (autorange) 50/60 Hz
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Processor	
Processor type	Pentium G4400 (2C/2T, 3.3 GHz, 3 MB Cache)
Chipset	Intel H110
Graphic	
Graphics controller	Onboard Intel HD graphics 530/510 integrated in processor
Drives	
Hard disk	1 TB HDD
Memory	
Type of memory	DDR4-2666 SO-DIMM
Main memory	4 GB RAM
Hardware configuration	
Slots	
• free slots	1x PCIe (x16), 1x PCIe (x1), 2x PCI
Interfaces	
Number of industrial Ethernet interfaces	2; 2x Gigabit Ethernet (IE/PN), RJ45
Number of PROFINET interfaces	2
USB port	4x USB 3.0, 1x USB 2.0 internal, 2x USB 2.0 optional
Connection for keyboard/mouse	USB / USB
serial interface	2x RS 232 / 485 / 422, 2x RS 232
Multimedia	
• Audio In/Out	Yes
• Microphone In	Yes
Video interfaces	
• Graphics interface	1x DisplayPort, 1x VGA
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes

Article number	**6AG4025-0AB10-0BB0**
	SIMATIC IPC527G (Box PC)
Integrated Functions	
Monitoring functions	
• Status LEDs	POWER, HDD
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Degree and class of protection	
IP (at the front)	IP20
IP (rear)	IP20
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes; No. 61010-1-12, No. 61010-2-201
UL approval	Yes
cULus	Yes; UL 61010-1, UL 61010-2-201
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 to +40 °C
Relative humidity	
• Relative humidity	8 ... 85 % at 30 °C, no condensation
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	IEC 60068-2-6; 10 Hz to 58 Hz 0.015 mm; 58 Hz to 200Hz 1.96 m/s2
Shock testing	
• Shock load during operation	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s², 11 ms; with HDD: 9.8 m/s², 20 ms
Operating systems	
pre-installed operating system	without operating system
without operating system	Yes
Dimensions	
Width	260 mm
Height	135 mm
Depth	225 mm

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SIMATIC IPC527G

Technical specifications

Article number	6AG4025-0CB20-0BB0	6AG4025-0CB20-2BB0	6AG4025-0CE20-2BB0	6AG4025-0CE20-3BB0	6AG4025-0CE20-5CA0
	SIMATIC IPC527G (Box PC)	SIMATIC IPC527G (Box PC)	SIMATIC IPC527G (Box PC)	SIMATIC IPC527G (Box PC)	SIMATIC IPC527G (Box PC)
Installation type/mounting					
Mounting	Wall mounting, portrait mounting, desktop mounting	Wall mounting, portrait mounting, desktop mounting	Wall mounting, portrait mounting, desktop mounting	Wall mounting, portrait mounting, desktop mounting	Wall mounting, portrait mounting, desktop mounting
Design	Box PC, built-in unit	Box PC, built-in unit	Box PC, built-in unit	Box PC, built-in unit	Box PC, built-in unit
Supply voltage					
Type of supply voltage	100/240V AC (autorange) 50/60 Hz	100/240V AC (autorange) 50/60 Hz	100/240V AC (autorange) 50/60 Hz	100/240V AC (autorange) 50/60 Hz	100/240V AC (autorange) 50/60 Hz
Line frequency					
• Rated value 50 Hz	Yes	Yes	Yes	Yes	Yes
• Rated value 60 Hz	Yes	Yes	Yes	Yes	Yes
Processor					
Processor type	Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB Cache)	Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB Cache)	Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB Cache)	Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB Cache)	Core i5-6500 (4C/4T, 3.2 (3.6) GHz, 6 MB Cache)
Chipset	Intel H110	Intel H110	Intel H110	Intel H110	Intel H110
Graphic					
Graphics controller	Onboard Intel HD graphics 530/510 integrated in processor	Onboard Intel HD graphics 530/510 integrated in processor	Onboard Intel HD graphics 530/510 integrated in processor	Onboard Intel HD graphics 530/510 integrated in processor	Onboard Intel HD graphics 530/510 integrated in processor
Drives					
Hard disk	1 TB HDD	1 TB HDD	1 TB HDD	1 TB HDD	
SSD					Yes; 256 GB SSD
Memory					
Type of memory	DDR4-2666 SO-DIMM	DDR4-2666 SO-DIMM	DDR4-2666 SO-DIMM	DDR4-2666 SO-DIMM	DDR4-2666 SO-DIMM
Main memory	8 GB RAM	8 GB RAM	8 GB RAM	8 GB RAM	8 GB RAM
Hardware configuration					
Slots					
• free slots	1x PCIe (x16), 1x PCIe (x1), 2x PCI	1x PCIe (x16), 1x PCIe (x1), 2x PCI	1x PCIe (x16), 1x PCIe (x1), 2x PCI	1x PCIe (x16), 1x PCIe (x1), 2x PCI	1x PCIe (x16), 1x PCIe (x4), 2x PCIe (x1)
Interfaces					
Number of industrial Ethernet interfaces	2; 2x Gigabit Ethernet (IE/PN), RJ45	2; 2x Gigabit Ethernet (IE/PN), RJ45	2; 2x Gigabit Ethernet (IE/PN), RJ45	2; 2x Gigabit Ethernet (IE/PN), RJ45	2; 2x Gigabit Ethernet (IE/PN), RJ45
Number of PROFINET interfaces	2	2	2	2	2
USB port	4x USB 3.0, 1x USB 2.0 internal, 2x USB 2.0 optional	4x USB 3.0, 1x USB 2.0 internal, 2x USB 2.0 optional	4x USB 3.0, 1x USB 2.0 internal, 2x USB 2.0 optional	4x USB 3.0, 1x USB 2.0 internal, 2x USB 2.0 optional	4x USB 3.0, 1x USB 2.0 internal, 2x USB 2.0 optional
Connection for keyboard/mouse	USB / USB	USB / USB	USB / USB	USB / USB	USB / USB
serial interface	2x RS 232 / 485 / 422, 2x RS 232	2x RS 232 / 485 / 422, 2x RS 232	2x RS 232 / 485 / 422, 2x RS 232	2x RS 232 / 485 / 422, 2x RS 232	2x RS 232 / 485 / 422, 2x RS 232
Multimedia					
• Audio In/Out	Yes	Yes	Yes	Yes	Yes
• Microphone In	Yes	Yes	Yes	Yes	Yes
Video interfaces					
• Graphics interface	1x DisplayPort, 1x VGA	1x DisplayPort, 1x VGA	1x DisplayPort, 1x VGA	1x DisplayPort, 1x VGA	1x DisplayPort, 1x VGA
Industrial Ethernet					
• Industrial Ethernet interface	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45), 1x Ethernet (RJ45) additional option	2x Ethernet (RJ45), 1x Ethernet (RJ45) additional option	2x Ethernet (RJ45), 1x Ethernet (RJ45) additional option
- 100 Mbps	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AG4025-0CB20-0BB0**	**6AG4025-0CB20-2BB0**	**6AG4025-0CE20-2BB0**	**6AG4025-0CE20-3BB0**	**6AG4025-0CE20-5CA0**
	SIMATIC IPC527G (Box PC)	SIMATIC IPC527G (Box PC)	SIMATIC IPC527G (Box PC)	SIMATIC IPC527G (Box PC)	SIMATIC IPC527G (Box PC)
Integrated Functions					
Monitoring functions					
• Status LEDs	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD
EMC					
Interference immunity against discharge of static electricity					
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2				
Degree and class of protection					
IP (at the front)	IP20	IP20	IP20	IP20	IP20
IP (rear)	IP20	IP20	IP20	IP20	IP20
Standards, approvals, certificates					
CE mark	Yes	Yes	Yes	Yes	Yes
CSA approval	Yes; No. 61010-1-12, No. 61010-2-201	Yes; No. 61010-1-12, No. 61010-2-201	Yes; No. 61010-1-12, No. 61010-2-201	Yes; No. 61010-1-12, No. 61010-2-201	Yes; No. 61010-1-12, No. 61010-2-201
UL approval	Yes	Yes	Yes	Yes	Yes
cULus	Yes; UL 61010-1, UL 61010-2-201	Yes; UL 61010-1, UL 61010-2-201	Yes; UL 61010-1, UL 61010-2-201	Yes; UL 61010-1, UL 61010-2-201	Yes; UL 61010-1, UL 61010-2-201
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes
FCC	Yes	Yes	Yes	Yes	Yes
Ambient conditions					
Ambient temperature during operation					
• Ambient temperature during operation	0 to +40 °C	0 to +40 °C	0 to +45°C	0 to +45°C	0 to +45°C
Relative humidity					
• Relative humidity	8 ... 85 % at 30 °C, no condensation	8 ... 85 % at 30 °C, no condensation	8 ... 85 % at 30 °C, no condensation	8 ... 85 % at 30 °C, no condensation	8 ... 85 % at 30 °C, no condensation
Vibrations					
• Vibration resistance during operation acc. to IEC 60068-2-6	IEC 60068-2-6; 10 Hz to 58 Hz 0.015 mm; 58 Hz to 200Hz 1.96 m/s2	IEC 60068-2-6; 10 Hz to 58 Hz 0.015 mm; 58 Hz to 200Hz 1.96 m/s2	tested according to IEC 60068-2-6: 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 200 Hz: 4.9 m/s²	tested according to IEC 60068-2-6: 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 200 Hz: 4.9 m/s²	tested according to IEC 60068-2-6: 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 200 Hz: 4.9 m/s²
Shock testing					
• Shock load during operation	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s², 11 ms; with HDD: 9.8 m/s², 20 ms	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s², 11 ms; with HDD: 9.8 m/s², 20 ms	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s², 11 ms; with HDD: 9.8 m/s², 20 ms	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s², 11 ms; with HDD: 9.8 m/s², 20 ms	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s², 11 ms; with HDD: 9.8 m/s², 20 ms
Operating systems					
pre-installed operating system	without operating system	Windows 7 Ultimate (Multi-Language) 64-bit	Windows 7 Ultimate (Multi-Language) 64-bit	Windows 10 Enterprise 2016 LTSB, 64 bit, MUI	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI
Additional info on operating system		Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)
without operating system	Yes				
Dimensions					
Width	260 mm	260 mm	260 mm	260 mm	260 mm
Height	135 mm	135 mm	135 mm	135 mm	135 mm
Depth	225 mm	225 mm	225 mm	225 mm	225 mm

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Technical specifications

Article number	**6AG4025-0DF20-2BB0**	**6AG4025-0DF20-4BB0**	**6AG4025-0DE20-6CA0**
	SIMATIC IPC527G (Box PC)	SIMATIC IPC527G (Box PC)	SIMATIC IPC527G (Box PC)
Installation type/mounting			
Mounting	Wall mounting, portrait mounting, desktop mounting	Wall mounting, portrait mounting, desktop mounting	Wall mounting, portrait mounting, desktop mounting
Design	Box PC, built-in unit	Box PC, built-in unit	Box PC, built-in unit
Supply voltage			
Type of supply voltage	100/240V AC (autorange) 50/60 Hz	100/240V AC (autorange) 50/60 Hz	100/240V AC (autorange) 50/60 Hz
Line frequency			
• Rated value 50 Hz	Yes	Yes	Yes
• Rated value 60 Hz	Yes	Yes	Yes
Processor			
Processor type	Core i7-6700 (4C/4T, 3.6 (4.0) GHz, 8 MB Cache)	Core i7-6700 (4C/4T, 3.6 (4.0) GHz, 8 MB Cache)	Core i7-6700 (4C/4T, 3.6 (4.0) GHz, 8 MB Cache)
Chipset	Intel H110	Intel H110	Intel H110
Graphic			
Graphics controller	Onboard Intel HD graphics 530/510 integrated in processor	Onboard Intel HD graphics 530/510 integrated in processor	Onboard Intel HD graphics 530/510 integrated in processor
Drives			
Hard disk	1 TB HDD	1 TB HDD	
SSD			Yes; 256 GB SSD
Memory			
Type of memory	DDR4-2666 SO-DIMM	DDR4-2666 SO-DIMM	DDR4-2666 SO-DIMM
Main memory	8 GB RAM	8 GB RAM	8 GB RAM
Hardware configuration			
Slots			
• free slots	1x PCIe (x16), 1x PCIe (x1), 2x PCI	1x PCIe (x16), 1x PCIe (x1), 2x PCI	1x PCIe (x16), 1x PCIe (x4), 2x PCIe (x1)
Interfaces			
Number of industrial Ethernet interfaces	2; 2x Gigabit Ethernet (IE/PN), RJ45	2; 2x Gigabit Ethernet (IE/PN), RJ45	2; 2x Gigabit Ethernet (IE/PN), RJ45
Number of PROFINET interfaces	2	2	2
USB port	4x USB 3.0, 1x USB 2.0 internal, 2x USB 2.0 optional	4x USB 3.0, 1x USB 2.0 internal, 2x USB 2.0 optional	4x USB 3.0, 1x USB 2.0 internal, 2x USB 2.0 optional
Connection for keyboard/mouse	USB / USB	USB / USB	USB / USB
serial interface	2x RS 232 / 485 / 422, 2x RS 232	2x RS 232 / 485 / 422, 2x RS 232	2x RS 232 / 485 / 422, 2x RS 232
Multimedia			
• Audio In/Out	Yes	Yes	Yes
• Microphone In	Yes	Yes	Yes
Video interfaces			
• Graphics interface	1x DisplayPort, 1x VGA	1x DisplayPort, 1x VGA	1x DisplayPort, 1x VGA
Industrial Ethernet			
• Industrial Ethernet interface	2x Ethernet (RJ45), 1x Ethernet (RJ45) additional option	2x Ethernet (RJ45), 1x Ethernet (RJ45) additional option	2x Ethernet (RJ45), 1x Ethernet (RJ45) additional option
- 100 Mbps	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes
Integrated Functions			
Monitoring functions			
• Status LEDs	POWER, HDD	POWER, HDD	POWER, HDD
EMC			
Interference immunity against discharge of static electricity			
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2		
Degree and class of protection			
IP (at the front)	IP20	IP20	IP20
IP (rear)	IP20	IP20	IP20

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Technical specifications

Article number	**6AG4025-0DF20-2BB0**	**6AG4025-0DF20-4BB0**	**6AG4025-0DE20-6CA0**
	SIMATIC IPC527G (Box PC)	SIMATIC IPC527G (Box PC)	SIMATIC IPC527G (Box PC)
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
CSA approval	Yes; No. 61010-1-12, No. 61010-2-201	Yes; No. 61010-1-12, No. 61010-2-201	Yes; No. 61010-1-12, No. 61010-2-201
UL approval	Yes	Yes	Yes
cULus	Yes; UL 61010-1, UL 61010-2-201	Yes; UL 61010-1, UL 61010-2-201	Yes; UL 61010-1, UL 61010-2-201
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes
FCC	Yes	Yes	Yes
Ambient conditions			
Ambient temperature during operation			
• Ambient temperature during operation	0 to +45°C	0 to +45°C	0 to +45°C
Relative humidity			
• Relative humidity	8 ... 85 % at 30 °C, no condensation	8 ... 85 % at 30 °C, no condensation	8 ... 85 % at 30 °C, no condensation
Vibrations			
• Vibration resistance during operation acc. to IEC 60068-2-6	tested according to IEC 60068-2-6: 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 200 Hz: 4.9 m/s^2	tested according to IEC 60068-2-6: 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 200 Hz: 4.9 m/s^2	tested according to IEC 60068-2-6: 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 200 Hz: 4.9 m/s^2
Shock testing			
• Shock load during operation	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s^2, 11 ms; with HDD: 9.8 m/s^2, 20 ms	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s^2, 11 ms; with HDD: 9.8 m/s^2, 20 ms	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s^2, 11 ms; with HDD: 9.8 m/s^2, 20 ms
Operating systems			
pre-installed operating system	Windows 7 Ultimate (Multi-Language) 64-bit	Windows 10 Enterprise 2016 LTSB, 64 bit, MUI	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI
Additional info on operating system	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)	Multi-Language User Interface (MUI): 5 languages (English, German, French, Spanish, Italian)
Dimensions			
Width	260 mm	260 mm	260 mm
Height	135 mm	135 mm	135 mm
Depth	225 mm	225 mm	225 mm

More information is available on the internet at:

http://www.siemens.com/simatic-pc

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SIMATIC IPC627E

Overview

SIMATIC IPC627E (Box PC): The high-end IPC with maximum performance, functional scope, and expansion capability

It offers:

- Maximum performance in the smallest space
- Intel Core i technology
- Removable hard disks (RAID1)

Ordering data

	Article No.					
SIMATIC IPC627E (Box PC) [1]	**6AG4131-**	**3**	■	■	■	- ■ ■ ■ ■
UHD graphics onboard; 2x DP; 1x DVI-D; 3x Gigabit Ethernet (IE/PN) RJ45; 6x USB 3.1 Gen. 2; 1x serial (COM1); RAID controller onboard; watchdog, temperature/ fan monitoring						
Processor:						
• Intel Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d)			**A**			
• Intel Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); NVRAM			**B**			
• Intel Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d)			**C**			
• Intel Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d); NVRAM			**D**			
• Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, VT-d, AMT)			**G**			
• Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, VT-d, AMT); NVRAM			**H**			
Drives:						
• HDD 2.5" SATA 320 GB internal				**A**		
• SSD 2.5" SATA 480 GB internal				**C**		
• SSD 2.5" SATA 960 GB internal				**D**		
• RAID1 2x SSD 2.5" SATA 480 GB internal				**E**		
• RAID1 2x SSD 2.5" SATA 480 GB in removable drive bay				**G**		
• RAID1 2x SSD 2.5" SATA 960 GB in removable drive bay				**H**		
• M.2 SSD NVMe 512 GB				**J**		
• M.2 SSD NVMe 512 GB; HDD 2.5" SATA 320 GB internal				**K**		
• M.2 SSD NVMe 512 GB; SSD 2.5" SATA 480 GB internal				**L**		
• M.2 SSD NVMe 512 GB; SSD 2.5" SATA 960 GB internal				**M**		
• M.2 SSD NVMe 512 GB; RAID1 2x SSD 2.5" SATA 480 GB in removable drive bay				**Q**		
• M.2 SSD NVMe 512 GB; 2 removable drive bays without media				**S**		
Memory configuration:						
• 4 GB DDR4-2666 (1x 4 GB)					**0**	
• 8 GB DDR4-2666 (2x 4 GB)					**1**	
• 16 GB DDR4-2666 (2x 8 GB)					**2**	
• 32 GB DDR4-2666 (2x 16 GB)					**3**	
• 64 GB DDR4-2666 (4x 16 GB)					**4**	

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

http://www.siemens.com/ipc-configurators

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Ordering data

	Article No.
SIMATIC IPC627E (Box PC) [1]	**6AG4131- 3 ■ ■ ■ ■ - ■ ■ ■ ■**
Power supply:	
• 24 V DC industrial power supply	**0**
• 110/230 V AC industrial power supply with NAMUR; without power cable	**1**
• 110/230 V AC industrial power supply unit with NAMUR; power supply cord Europe	**2**
• 110/230 V AC industrial power supply unit with NAMUR; power supply cord USA	**3**
• 110/230 V AC industrial power supply unit with NAMUR; power supply cord China	**4**
• 24 V DC industrial power supply; device certification UL HazLoc	**5**
Operating system:	
• Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es); for Celeron and i3	**0**
• Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es), for Core i7	**1**
• Windows 10 IoT Enterprise 2019 LTSC, 64-bit, MUI (en, de, fr, it, es); for Celeron and i3	**2**
• Windows 10 IoT Enterprise 2019 LTSC, 64-bit, MUI (en, de, fr, it, sp), for Core i7	**3**
• Without operating system	**8**
Expansion (SW):	
• Without expansion	**A**
• SIMATIC IPC DiagMonitor included	**B**
• SIMATIC IPC Image & Partition Creator included	**C**
• SIMATIC IPC DiagMonitor, Image & Partition Creator included	**D**
• TPM [2] (not for Russia)	**X**
Expansion (HW):	
• Without expansion (HW)	**A**
• 2 x USB in addition (1 slot occupied)	**B**
• Device without CMOS battery (CR2450N)	**C**
2nd expansion (HW):	
• 2 x PCI	**0**
• 1 x PCIe (x16); 1 x PCI	**1**
• 1 x PCIe (x16); 1 x PCIe (x4)	**2**
• 3 x PCI, 2 x PCIe (x16, x4)	**3**
• 5 x PCIe (1 x16, 1 x4, 3 x1)	**4**
• 2 x PCI; enclosure painted	**5**
• 1 x PCIe (x16), 1 x PCI; enclosure painted	**6**
• 2 x PCIe (x16, x4); enclosure painted	**7**

[1] For an up-to-date overview, see the SIMATIC PC Online Configurator at: http://www.siemens.com/ipc-configurators

[2] TPM = Trusted Platform Module

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

http://www.siemens.com/ipc-configurators

Accessories	
Memory expansion	
• 4 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL60-0QA0**
• 8 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL70-0QA0**
• 16 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL80-0QA0**
Assembly kit for portrait mounting	
• Upward or downward interface outlet (2-slot design)	**6ES7648-1AA10-2YA0**
• Interface outlet on front (2-slot design)	**6ES7648-1AA10-2YB0**
• Upward or downward interface outlet (5-slot design)	**6ES7648-1AA30-2YA0**
• Interface outlet on front (5-slot design)	**6ES7648-1AA30-2YB0**
SIMATIC PC power cable	
For Box PC and Panel PC, 230 V AC, angled, 3 m	
• For Germany, France, Spain, the Netherlands, Belgium, Sweden, Austria, Finland	**6ES7900-1AA00-0XA0**
• For United Kingdom	**6ES7900-1BA00-0XA0**
• For Switzerland	**6ES7900-1CA00-0XA0**
• For the USA	**6ES7900-1DA00-0XA0**
• For Italy	**6ES7900-1EA00-0XA0**
• For China	**6ES7900-1FA00-0XA0**

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Technical specifications

Article number	**6AG4131-3....-....**
	SIMATIC IPC627E (Box PC)
Installation type/mounting	
Mounting	Wall mounting, portrait mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	100/240 V AC (autorange); 24 V DC
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, VT-d, AMT)
Chipset	Intel C246
Graphic	
Graphics controller	Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron)
Drives	
Hard disk	2.5" SATA ≥ 320 GB
SSD	Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2x SSD 2.5" SATA 480 / 960 GB in removable drive bay
Memory	
Type of memory	DDR4-2666 DIMM
Main memory	4 / 8 / 16 / 32 / 64 GB
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time
Hardware configuration	
Slots	
• free slots	2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); 3x PCI & 2x PCIe (x16, x4); 5x PCIe (1x16, 2x4, 2x1); with card retainer

Article number	**6AG4131-3....-....**
	SIMATIC IPC627E (Box PC)
Interfaces	
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)
USB port	6x USB 3.1 Gen. 2 (2x type C)
Connection for keyboard/mouse	USB / USB
serial interface	1x COM
Video interfaces	
• Graphics interface	2x DisplayPort; 1x DVI-D
Industrial Ethernet	
• Industrial Ethernet interface	3x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	1x power, 3x user
• Fan	Yes
• Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 ... 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 80 MHz, 80% AM acc. to IEC 61000-4-6

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Technical specifications

Article number	**6AG4131-3....-....**
	SIMATIC IPC627E (Box PC)
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
UKCA	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
EMC	CE, EN 61000-6-3:2007 +A1:2011, EN 61000-6-2:2005
Marine approval	
• American Bureau of Shipping (ABS)	Yes
• Det Norske Veritas (DNV)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes

Article number	**6AG4131-3....-....**
	SIMATIC IPC627E (Box PC)
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	+5 °C up to 55 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s^2 (1 g)
Shock testing	
• Shock load during operation	Tested to DIN IEC 60068-2-29: 50 m/s^2 (5 g), 30 ms, 100 shocks
Operating systems	
pre-installed operating system	Windows 10 Enterprise 2016 LTSB or 2019 LTSC 64-bit, MUI
without operating system	Yes; Optional
Software	
SIMATIC Software	Optional package with SIMATIC WinCC
Dimensions	
Width	314 mm
Height	93 mm; For variant 5x PCI(e): 155 mm
Depth	301 mm; incl. mounting rail

More information is available on the internet at:

http://www.siemens.com/simatic-pc

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Overview

SIMATIC Panel PCs are suitable thanks to their high industrial compatibility for use in control cabinets, consoles and control panels, as well as directly on the machine. Typical areas of application can be found in both factory and process automation.

There is a broad range of robust, high-performance SIMATIC Panel PCs available for different requirements.

Shared industrial functionality

- High-quality components and modules with a high MTBF (mean time between failure), which also ensure 24-hour operation in the extended temperature range
- High swing/shock capacity of the devices through special hard-disk suspensions, locked connectors and card retainers
- Rugged housing model with high electromagnetic compatibility (EMC) and integrated industrial power supplies (also in accordance with NAMUR)
- Service-friendly device design
- Bright, brilliant displays in different sizes from 7" to 22"
- Rugged fronts protected from dust, humidity and chemical substances (front-side IP65 degree of protection)

SIMATIC IPC277: The Panel PC with optimized performance – maintenance-free and compact with displays from 7"

- High degree of flexibility for selecting rugged widescreen fronts from 7" to 19" for a more freely configurable display area
- High resolution, large viewing angle, and up to 100% dimmable backlighting for a brilliant display with optimized power consumption
- Absolutely maintenance-free due to the use of CompactFlash/CFast or SSD as mass storage and fanless operation up to 50 °C ambient temperature
- Maximum industrial functionality due to non-volatile retentive memory (option)

SIMATIC IPC377: the industrial Basic Panel PC at an appealing price

- Low-cost platform for visualization in the industrial and industry-oriented field
- Flexible installation in the control cabinet or via VESA, as well as simple connection of I/O devices due to a large number of interfaces
- Fanless industrial design
- Available directly ex stock

SIMATIC IPC477: The powerful embedded Panel PC – maintenance-free with versatile configuration

- Compact design
- High performance with highly compact design and ruggedness
- Flexible expansion using a PCIe I/O card (optional)
- No rotating parts (without fan and hard disk)
- High security due to use of the operating system
- Windows Embedded Standard 7
- Ready-to-use devices with optionally pre-installed software
- HMI: Innovative HMI software WinCC RT Advanced (inc. logging and recipes)
- Software Controller: with real-time capable software PLC
- Retentive memory onboard (NV-RAM, can be used with software controller)
- Available as PRO version (fully-enclosed IP65 degree of protection) with multi-touch

SIMATIC IPC677: The high-end Panel PC – with maximum performance, functional scope and expansion capability

- Rugged, expandable industrial PC with choice of front panels
- Rugged design for industrial use
- Complete PC openness
- Optional PROFIBUS or PROFINET onboard
- All processors with Dual-Core

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Technical specifications

Article number	**6AV7886-0....-....**	**6AV7231-0....-...0**	**6AV7241-.....-....**	**6AV7261-.....-....**
	SIMATIC IPC277G	SIMATIC IPC377G	SIMATIC IPC 477E	SIMATIC IPC677E (Panel PC)
General information				
Product type designation		IPC377G		
Installation type/mounting				
Mounting		Panel mount and VESA, horizontal and vertical	For horizontal and vertical mounting	For horizontal and vertical mounting
Design	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit
maximum permissible installation angle +/-	45°			
Supply voltage				
Type of supply voltage	24 V DC	24 V DC	100/240 V AC (autorange) 50/60 Hz; optional 24 V DC	100/240 V AC (autorange); 24 V DC
Rated value (DC)	24 V			
Line frequency				
• Rated value 50 Hz			Yes	Yes
• Rated value 60 Hz			Yes	Yes
Mains buffering				
• Mains/voltage failure stored energy time	20 ms	10 ms	20 ms	10 ms
Processor				
Processor type	Intel Atom X6211E / X6413E / X6414RE	Intel Atom X6413E	Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)	Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, VT-d, AMT)
Chipset	SoC		Intel C236 / Intel H110	Intel C246
Graphic				
Graphics controller	Integrated		Intel HD graphics controller	Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron)
Drives				
Hard disk			2.5" SATA ≥ 320 GB	2.5" SATA ≥ 320 GB
SSD	Yes; 256 Eco / 240 / 480 GB		Yes; 128 / 240 / 480 GB	Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2x SSD 2.5" SATA 480 / 960 GB in removable drive bay
Memory				
Type of memory	DDR4 SO-DIMM	DDR4	DDR4-2400 SO-DIMM	DDR4-2666 DIMM
Main memory	4 / 8 / 16 GB; inband ECC optional	4 GB, 8 GB,16 GB	4 / 8 / 16 GB, ECC optional	4 / 8 / 16 / 32 / 64 GB
Data areas and their retentivity				
Retentive data area (incl. timers, counters, flags), max.			512 kbyte; 128 KB can be stored in the buffer time; optional	512 kbyte; 128 KB can be stored in the buffer time

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Technical specifications

Article number	**6AV7886-0....-....** SIMATIC IPC277G	**6AV7231-0....-...0** SIMATIC IPC377G	**6AV7241-.....-....** SIMATIC IPC 477E	**6AV7261-.....-....** SIMATIC IPC677E (Panel PC)
Hardware configuration				
Slots				
• free slots	2x M.2	2x M.2	1x PCIe (slot with card retainer), 1x slot for CFAST card	2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); with card retainer
Interfaces				
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)	2; 2x RJ45 (independent)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)
USB port	4x USB 3.1 Gen2 10 GB/s + 2x USB 2.0 pin header		4x USB 3.0	6x USB 3.1 Gen. 2 (2x type C)
Connection for keyboard/mouse	USB / USB		USB / USB	USB / USB
serial interface	without / 1x / 2x COM (RS 232 / 485 / 422; selectable)		Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS	1x COM
Video interfaces				
• Graphics interface	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort; 1x DVI-D
Industrial Ethernet				
• Industrial Ethernet interface	3x Ethernet (RJ45)	2x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes
Protocols				
Protocols (Ethernet)				
• TCP/IP		Yes		
Integrated Functions				
Monitoring functions				
• Temperature monitoring	Yes	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes	Yes
• Status LEDs	No	POWER, HDD		1x power, 3x user
• Fan	No	No	No	Yes
• Monitoring function via network	Optional		Optional	Optional
EMC				
Interference immunity against discharge of static electricity				
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2			
Interference immunity against high-frequency electromagnetic fields				
• Interference immunity against high frequency radiation	10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6	10 V/m for 80 ... 1 000 MHz, 80 % AM according to IEC 61000-4-3; 3 V/m for 1.4 ... 6 GHz, 80 % AM according to IEC 61000-4-3	10 V/m, 80 ... 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 ... 2.7 GHz; 10 V, 10 kHz ... 80 MHz acc. to IEC 61000-4-6	10 V/m for 80 ... 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 80 MHz, 80% AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference				
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric		±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric	
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m		±2 kV acc. to IEC 61000-4-5, surge, length > 30 m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; length < 30 m; ±2 kV (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; length > 30 m		±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m	

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Technical specifications

Article number	**6AV7886-0....-....**	**6AV7231-0....-...0**	**6AV7241-.....-....**	**6AV7261-.....-....**
	SIMATIC IPC277G	SIMATIC IPC377G	SIMATIC IPC 477E	SIMATIC IPC677E (Panel PC)
Interference immunity against voltage surge				
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric		±2 kV acc. to IEC 61000-4-5, surge asymmetric	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric		±1 kV acc. to IEC 61000-4-5, surge symmetric	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields				
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8		100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference				
• Interference emission via line/ AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A		EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
Degree and class of protection				
IP (at the front)	IP65	IP65	IP65	IP65
IP (rear)	20	IP40	IP20	IP20
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
CSA approval		Yes	Yes	
UL approval		Yes	Yes	Yes
• UL 508			Yes	
cULus	Yes		Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes
FCC	Yes	Yes	Yes	Yes
BSMI		Yes		
EMC	CE, EN 61000-6-4:2007, EN 61000-6-2:2005		CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A	CE, EN 61000-6-3:2007 +A1:2011, EN 61000-6-2:2005
Dust protection		Protection against foreign bodies > 1 mm		
Use in hazardous areas				
• ATEX Zone 2			Yes; Optional, only with Multitouch	
• IECEx Zone 2			Yes; Optional, only with Multitouch	
• cULus Class I Zone 2, Division 2			Yes; Optional, only with Multitouch	
Marine approval				
• Germanischer Lloyd (GL)			Yes	
• American Bureau of Shipping (ABS)			Yes	Yes
• Bureau Veritas (BV)			Yes	
• Det Norske Veritas (DNV)			Yes	Yes
• Korean Register of Shipping (KRS)			Yes	
• Lloyds Register of Shipping (LRS)			Yes	
• Nippon Kaiji Kyokai (Class NK)			Yes	Yes

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Technical specifications

Article number	**6AV7886-0....-....** SIMATIC IPC277G	**6AV7231-0....-...0** SIMATIC IPC377G	**6AV7241-.....-....** SIMATIC IPC 477E	**6AV7261-.....-....** SIMATIC IPC677E (Panel PC)
Ambient conditions				
Ambient temperature during operation				
• Ambient temperature during operation	0 °C to 50 °C	0 °C to 50 °C	0 °C to 45 °C	+5 °C to +45 °C with full configuration
Relative humidity				
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)		Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 °C (no condensation)	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)
• Operation, max.		85 %		
Vibrations				
• Vibration resistance during operation acc. to IEC 60068-2-6	tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 200 Hz : 9.8m/s² (1 g) (except DIN Rail) 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 500 Hz: 4.9 m/s² (0.5 g) (DIN Rail)	Tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 500 Hz: 9.8 m/s²	IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s² (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s² (hard disk)	tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s² (1 g)
Shock testing				
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s², 11 ms	Tested according to IEC 60068-2-27: 150 m/s², 11 ms, 5g, 30 ms	IEC 60068-2-27; 150 m/s², 11 ms (without hard disk); 50 m/s², 30 ms (with hard disk)	Tested to DIN IEC 60068-2-29: 50 m/s² (5 g), 30 ms, 100 shocks
Operating systems				
pre-installed operating system	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI		Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10	Windows 10 Enterprise 2016 LTSB or 2019 LTSC 64-bit, MUI
without operating system	Yes; Optional	Yes	Yes; Optional	Yes; Optional
Software				
SIMATIC Software	Optional package with SIMATIC WinCC		Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S	Optional package with SIMATIC WinCC

More information is available on the Internet at:

http://www.siemens.com/simatic-panel-pc

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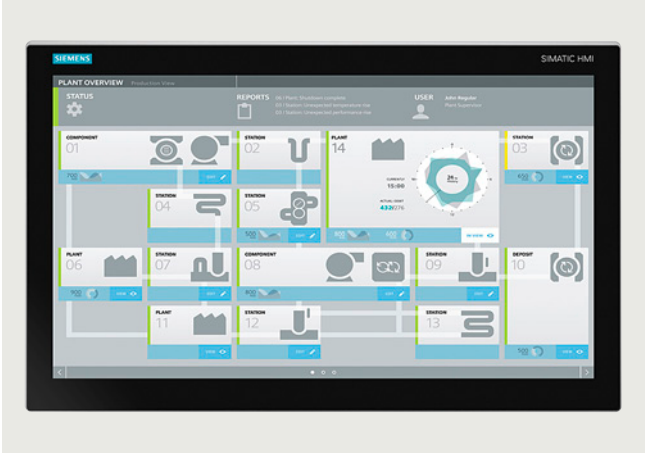
Overview



SIMATIC IPC277G: The Panel PC with optimized performance – flexible in respect of interfaces and expansions with multi-touch displays from 7" to 24"

SIMATIC IPC277G is based on the Nanobox PC IPC227G and is characterized by its robust design and maintenance-free operation.

With its integrated interfaces, expansion options and the large range of multi-touch fronts from 7" to 24", the Nanopanel PC is intended for a broad range of applications.

Ordering data

	Article No.
SIMATIC IPC277G (Nanopanel PC)	**6AV7886- 0 ■ ■ ■ ■ - ■ ■ ■ 0**
Operating unit	
• 7" multi-touch	**A**
• 10" multi-touch	**B**
• 12" multi-touch	**C**
• 15" multi-touch	**D**
• 19" multi-touch	**E**
• 22" multi-touch	**F**
• 24" multi-touch	**G**
Processor	
• Atom X6211E (2-core)	**A**
• Atom X6413E (4-core)	**B**
• Atom X6414RE (4-core)	**C**
• Atom X6211E (2-core)/TPM	**D**
• Atom X6413E (4-core)/TPM	**E**
• Atom X6414RE (4-core)/TPM	**F**
Work memory	
• 4 GB	**1**
• 8 GB	**2**
• 16 GB	**3**
Hardware configuration	
• Without COM	**1**
• 1x COM	**2**
• 2x COM	**3**
Mass storage	
• None	**1**
• 256 GB Eco SSD	**2**
Hardware extension	
• Without hardware extension	**A**
Software	
• Without SIMATIC Software	**A**
• Windows 10 IoT Enterprise 2019 LTSC	**B**

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

For an up-to-date overview, see the SIMATIC IPC online configurator at:

http://www.siemens.com/ipc-configurators

Technical specifications

Article number	**6AV7886-0....-....** SIMATIC IPC277G
Installation type/mounting	
Design	Panel PC, built-in unit
maximum permissible installation angle +/-	45°
Supply voltage	
Type of supply voltage	24 V DC
Rated value (DC)	24 V
Mains buffering	
• Mains/voltage failure stored energy time	20 ms

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Technical specifications

Article number	**6AV7886-0....-....**
	SIMATIC IPC277G
Processor	
Processor type	Intel Atom X6211E / X6413E / X6414RE
Chipset	SoC
Graphic	
Graphics controller	Integrated
Drives	
SSD	Yes; 256 Eco / 240 / 480 GB
Memory	
Type of memory	DDR4 SO-DIMM
Main memory	4 / 8 / 16 GB; inband ECC optional
Hardware configuration	
Slots	
• free slots	2x M.2
Interfaces	
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)
USB port	4x USB 3.1 Gen2 10 GB/s + 2x USB 2.0 pin header
Connection for keyboard/mouse	USB / USB
serial interface	without / 1x / 2x COM (RS 232 / 485 / 422; selectable)
Video interfaces	
• Graphics interface	2x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	3x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	No
• Fan	No
• Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; length < 30 m; ±2 kV (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; length > 30 m

Article number	**6AV7886-0....-....**
	SIMATIC IPC277G
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	20
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
EMC	CE, EN 61000-6-4:2007, EN 61000-6-2:2005
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to 50 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 200 Hz : 9.8m/s² (1 g) (except DIN Rail) 10 Hz to 58 Hz: 0.0375 mm, 58 Hz to 500 Hz: 4.9 m/s² (0.5 g) (DIN Rail)
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s², 11 ms
Operating systems	
pre-installed operating system	Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI
without operating system	Yes; Optional
pre-installed operating system	
• Windows 10 Enterprise	Yes; Windows 10 IoT Enterprise 2019 LTSC, 64 bit, MUI
Software	
SIMATIC Software	Optional package with SIMATIC WinCC

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Technical specifications

Article number	**6AV7886-0A...-....** SIMATIC IPC277G, 7" Multitouch	**6AV7886-0B...-....** SIMATIC IPC277G, 10" Multitouch	**6AV7886-0C...-....** SIMATIC IPC277G, 12" Multitouch	**6AV7886-0D...-....** SIMATIC IPC277G, 15" Multitouch	**6AV7886-0E...-....** SIMATIC IPC277G, 19" Multitouch	**6AV7886-0F...-....** SIMATIC IPC277G, 22" Multitouch	**6AV7886-0G...-....** SIMATIC IPC277G, 24" Multitouch
General information							
Product type designation				IPC277G			
Display							
Design of display	7" TFT multi-touch	10" TFT multi-touch	12" TFT multi-touch	15" TFT multi-touch	19" TFT multi-touch	22" TFT multi-touch	24" TFT multi-touch
Screen diagonal	7 in	10 in	12 in	15 in	19 in	22 in	24 in
Resolution (pixels)							
• Horizontal image resolution	800 pixel	1 280 pixel	1 280 pixel	1 920 pixel	1 920 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	480 pixel	800 pixel	800 pixel	1 080 pixel	1 080 pixel	1 080 pixel	1 080 pixel
Backlighting							
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	70 000 h	50 000 h	50 000 h	30 000 h	30 000 h
Control elements							
Touch operation							
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
Installation type/mounting							
central design	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Power loss							
In full configuration	30 W	30 W	80 W	80 W	80 W	80 W	80 W
Dimensions							
Width of the housing front	214 mm	280 mm	326 mm	398 mm	464 mm	529 mm	585 mm
Height of housing front	158 mm	205 mm	237 mm	257 mm	294 mm	331 mm	363 mm
Weights							
Weight, approx.	2.5 kg	3.2 kg	5.1 kg	5.3 kg	6.7 kg	8.1 kg	9.6 kg

More information is available on the Internet at:

http://www.siemens.com/simatic-panel-pc

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SIMATIC IPC277E

Overview

SIMATIC IPC277E: The Panel PC with optimized performance – maintenance-free and compact with displays from 7"

The SIMATIC IPC277E Nanopanel PC is a flexible embedded industrial PC with rugged and durable displays.

Technologically it is based on the IPC227E Nanobox PC and thus offers maximum industrial functionality for flexible use even under harsh conditions – all without the need for maintenance.

The Panel PC is characterized by modern interfaces and a high degree of flexibility in the selection of the display. The latest Intel Dual-Core and Quad-Core processors ensure excellent performance here for visualization and control tasks.

Ordering data

SIMATIC IPC277E (Nanopanel PC)	Article No. 6AV7882- 0 ■ ■ ■ 0 - ■ ■ ■ 0
Operating unit	
• 7" touch	A
• 9" touch	B
• 12" touch	C
• 15" touch front USB	D
• 19" touch front USB	E
• 12" multi-touch (with WES7-E only single-touch mode)	H
• 15" multi-touch (with WES7-E only single-touch mode)	F
• 19" multi-touch (with WES7-E only single-touch mode)	G
• 15" multi-touch (1 366 x 768; ATEX/IECEx/UL HazLoc; with WES7-E only single-touch mode)	J
• 19" multi-touch (1 366 x 768; ATEX/IECEx/UL HazLoc; with WES7-E only single-touch mode)	K
Processor	
• Celeron N2807 (2C/2T)	A
• Celeron N2930 (4C/4T)	B
• Celeron N2807 (2C/2T)/TPM	C
• Celeron N2930 (4C/4T)/TPM	D
Work memory/NVRAM	
• 2 GB	1
• 4 GB	2
• 8 GB	3
• 2 GB/NVRAM	4
• 4 GB/NVRAM	5
• 8 GB/NVRAM	6

SIMATIC IPC277E (Nanopanel PC)	Article No. 6AV7882- 0 ■ ■ ■ 0 - ■ ■ ■ 0
Operating system	
• Without operating system	0
• Windows Embedded Standard 7 E SP1, English, 32-bit	1
• Windows Embedded Standard 7 E SP1, English, 64-bit	2
• Windows Embedded Standard 7 P SP1, English, 32-bit	3
• Windows Embedded Standard 7 P SP1, English, 64-bit	4
• Windows 7 Ultimate SP1, 32-bit, MUI (en, de, fr, it, es)	5
• Windows 7 Ultimate SP1, 64-bit, MUI (en, de, fr, it, es)	6
• Windows 10 Enterprise 2016 LTSB	7
• Windows 10 IoT Enterprise 2019 LTSC	8
Mass storage	
• None	A
• 256 GB Eco SSD	E
• 240 GB SSD	C
• 480 GB SSD	D
• 4 GB CFast	K
• 8 GB CFast	L
• 16 GB CFast	M
• 128 GB CFast	N
Software	
• Without SIMATIC software	A

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

For an up-to-date overview, see the SIMATIC IPC online configurator at:

http://www.siemens.com/ipc-configurators

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Technical specifications

Article number	**6AV7882-0...0-...0** SIMATIC IPC277E
Installation type/mounting	
Design	Panel PC, built-in unit
maximum permissible installation angle +/-	45°
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Intel Celeron N2807 / N2930
Chipset	SoC
Graphic	
Graphics controller	Integrated
Drives	
SSD	Yes; 256 Eco / 240 / 480 GB
Memory	
Type of memory	DDR3L SO-DIMM
Main memory	2 / 4 / 8 GB
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time; optional
Interfaces	
Number of industrial Ethernet interfaces	2; 2x Ethernet (RJ45)
USB port	1x USB 3.0 / 3x USB 2.0 (7" / 9": 2x USB 2.0)
Connection for keyboard/mouse	USB / USB
serial interface	1x COM (1x RS 232 / 422 / 485), selectable in the BIOS
Video interfaces	
• Graphics interface	1x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes

Article number	**6AV7882-0...0-...0** SIMATIC IPC277E
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	No
• Fan	No
• Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m, 80 MHz to 2 GHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 GHz to 2.7 GHz, 80 % AM acc. to IEC 61000-4-3; 10 V, 10 kHz to 80 MHz, 80 % AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	Noise emission: EN 61000-6-4:2007 +A1:2011 (industrial environments), CISPR 22 Class B, FCC Class A

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Technical specifications

Article number	**6AV7882-0...0-...0**
	SIMATIC IPC277E
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
• UL 508	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
FCC	Yes
EMC	CE, EN 61000-6-4:2007 +A1:2011, EN 61000-6-2:2005
Marine approval	
• Germanischer Lloyd (GL)	Yes; 7", 9", 12" single-touch
• American Bureau of Shipping (ABS)	Yes; 7", 9", 12" ST; 12", 15", 19" MT
• Bureau Veritas (BV)	Yes; 7", 9", 12" ST; 12", 15", 19" MT
• Det Norske Veritas (DNV)	Yes; 7", 9", 12" ST; 12", 15", 19" MT
• Korean Register of Shipping (KRS)	Yes; 7", 9", 12" ST; 12", 15", 19" MT
• Lloyds Register of Shipping (LRS)	Yes; 7", 9", 12" ST; 12", 15", 19" MT
• Nippon Kaiji Kyokai (Class NK)	Yes; 7", 9", 12" ST; 12", 15", 19" MT
• Chinese Classification Society (CCS)	Yes; 7", 9", 12" ST; 12", 15", 19" MT

Article number	**6AV7882-0...0-...0**
	SIMATIC IPC277E
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to 50 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 500 Hz: 9.8 m/s^2
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27: 50 m/s^2, 30 ms
Operating systems	
pre-installed operating system	Windows 7 Ultimate 32-bit / 64-bit, MUI; Windows Embedded Standard 7 E/P, 32-bit / 64-bit
Additional info on operating system	optional: SIMATIC Industrial OS
without operating system	Yes; Optional
Software	
SIMATIC Software	Optional package with SIMATIC WinCC or WinAC RTX

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Technical specifications

Article number	**6AV7882-0A..0-...0** SIMATIC IPC277E, 7" Touch	**6AV7882-0B..0-...0** SIMATIC IPC277E, 9" Touch	**6AV7882-0C..0-...0** SIMATIC IPC277E, 12" Touch	**6AV7882-0D..0-...0** SIMATIC IPC277E, 15" Touch	**6AV7882-0E..0-...0** SIMATIC IPC277E, 19" Touch
Display					
Design of display	7" TFT touch	9" TFT touch	12" TFT touch	15" TFT touch	19" TFT touch
Screen diagonal	7 in	9 in	12 in	15 in	19 in
Resolution (pixels)					
• Horizontal image resolution	800 pixel	800 pixel	1 280 pixel	1 280 pixel	1 366 pixel
• Vertical image resolution	480 pixel	480 pixel	800 pixel	800 pixel	768 pixel
Backlighting					
• MTBF backlighting (at 25 °C)	80 000 h	80 000 h	80 000 h	80 000 h	50 000 h
Control elements					
Input device					
• Mouse, at front				Front USB 2.0 (500mA)	Front USB 2.0 (500mA)
Touch operation					
• Design as touch screen	Yes; analog, resistive	Yes; analog, resistive	Yes; analog, resistive	Yes; analog, resistive	Yes; analog, resistive
Installation type/mounting					
central design	Yes	Yes	Yes	Yes	Yes
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes
Power loss					
In full configuration	26 W	29 W	32 W	46 W	46 W
Dimensions					
Width of the housing front	214 mm	274 mm	330 mm	415 mm	483 mm
Height of housing front	158 mm	190 mm	241 mm	310 mm	337 mm
Weights					
Weight, approx.	1.5 kg	1.95 kg	2.75 kg	4 kg	5.7 kg

Article number	**6AV7882-0F..0-...0** SIMATIC IPC277E, 15" Multitouch	**6AV7882-0G..0-...0** SIMATIC IPC277E, 19" Multitouch	**6AV7882-0H..0-...0** SIMATIC IPC277E, 12" Multitouch	**6AV7882-0J..0-...0** SIMATIC IPC277E, 15" Multitouch Atex	**6AV7882-0K..0-...0** SIMATIC IPC277E, 19" Multitouch Atex
Display					
Design of display	15" TFT multi-touch	19" TFT multi-touch	12" multi-touch	15" TFT multi-touch	19" TFT multi-touch
Screen diagonal	15 in	19 in	12 in	15 in	19 in
Resolution (pixels)					
• Horizontal image resolution	1 366 pixel	1 366 pixel	1 280 pixel	1 366 pixel	1 366 pixel
• Vertical image resolution	768 pixel	768 pixel	800 pixel	768 pixel	768 pixel
Backlighting					
• MTBF backlighting (at 25 °C)	70 000 h	50 000 h	50 000 h	70 000 h	50 000 h
Control elements					
Touch operation					
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
Installation type/mounting					
central design	Yes	Yes	Yes	Yes	Yes
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes
Power loss					
In full configuration	46 W	46 W	36 W	46 W	46 W
Dimensions					
Width of the housing front	398 mm	464 mm	315 mm	398 mm	464 mm
Height of housing front	257 mm	294 mm	227 mm	257 mm	294 mm
Weights					
Weight, approx.	5.5 kg	6.5 kg	2.65 kg	5.5 kg	6.5 kg

More information is available on the internet at:

http://www.siemens.com/simatic-panel-pc

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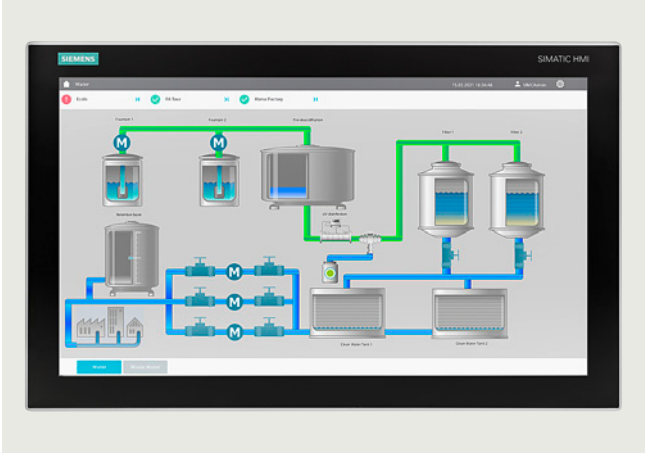
SIMATIC IPC377G

Overview



SIMATIC IPC377G

Based on Intel Atom processor technology, the SIMATIC IPC377G Panel PC represents a new IPC platform which has been specifically developed for cost-optimized, PC-based applications in industrial and industry-oriented environments.

The SIMATIC IPC377G Panel PC is characterized by a large number of interfaces.

Fast availability ex stock as well as the fanless industrial design complete the concept.

Ordering data

	Article No.
SIMATIC IPC377G	**6AV7231 - 0 ■ ■ ■ ■ - ■ ■ ■ 0**
2x DisplayPort graphics; 2x 10/100/1000 Mbps, Ethernet RJ45; 4x USB 3.0; 3x USB 2.0; 4x serial ports (COM)	
Operating unit	
• 12" touch (1 280 x 800)	**C**
• 15" touch (1 366 x 768)	**D**
• 19" touch (1 366 x 768)	**E**
• 22" touch (1 920 x 1 080)	**F**
Processor	
• Intel Atomx6413E Processor (4-core)/audio	**A**
• Intel Atomx6413E Processor (4-core)/TPM/audio	**B**
• Intel Atomx6413E Processor (4-core)	**C**
• Intel Atomx6413E Processor (4-core) audio	**D**
Work memory	
• 4 GB RAM	**2**
• 8 GB RAM	**3**
• 16 GB RAM	**4**
Expansions/interfaces	
• 2x COM	**1**
• 4x COM	**2**
Operating system	
• Without operating system	**0**
• Windows 10 Enterprise LTSC 2019, 64-bit MUI (de, en, fr, es, it)	**2**
Drives	
• None	**A**
• 256 GB SSD	**B**
• 512 SSD	**C**
Power supply	
• 24 V DC	**A**

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Ordering data	Article No.
Preferred variants (available directly ex stock)	
SIMATIC IPC377G	
12" 12" touch (1 280 x 800); Processor: Intel Atomx6413E (up to 3.0 GHz); Drives: SATA/NvME; without mass storage; Main memory: 4 GB RAM (1x 4 GB); Without operating system	**6AV7231-0CC21-0AA0**
12" 12" touch (1 280 x 800); Processor: Intel Atomx6413E (up to 3.0 GHz); Drives: SATA/NvME; 256G SSD; Main memory: 4 GB DRAM (1x 4 GB); Windows 10 Enterprise LTSC 2019, 64-bit, MUI (de, en, fr, it, es)	**6AV7231-0CC21-2BA0**
15" 15" touch (1 366 x 768); Processor: Intel Atomx6413E (up to 3.0 GHz); Drives: SATA/NvME; without mass storage; Main memory: 4 GB DRAM (1x 4 GB); Without operating system	**6AV7231-0DC21-0AA0**
15" 15" touch (1 366 x 768); Processor: Intel Atomx6413E (up to 3.0 GHz); Drives: SATA/NvME; 256G SSD; Main memory: 4 GB DRAM (1x 4 GB); Windows 10 Enterprise LTSC 2019, 64-bit, MUI (de, en, fr, it, es)	**6AV7231-0DC21-2BA0**
19" 19" touch (1 366 x 768); Processor: Intel Atomx6413E (up to 3.0 GHz); Drives: SATA/NvME; 256G SSD; Main memory: 4 GB DRAM (1x 4 GB); Windows 10 Enterprise LTSC 2019, 64-bit, MUI (de, en, fr, it, es)	**6AV7231-0EC21-2BA0**
22" 22" touch (1 920 x 1 080); built-in unit; Atom x6413E (up to 3.9 GHz); 4 GB RAM; 4x USB+2x COM; Windows10 Enterprise 2019 LTSC; 64-bit; MUI (en, de, fr, it, es); 256 GB SSD; 2x DisplayPort graphics; without audio; 2x 10/100/1000 Mbps Ethernet RJ45; 4x USB 3.1; 3x USB 2.0; 4x serial ports (COM); 2x M.2 modules; 24 V DC power supply	**6AV7231-0FC21-2BA0**
22" 22" touch (1 920 x 1 080); built-in unit; Atom x6413E (up to 3.9 GHz); 8 GB RAM; 4x USB+2x COM; Windows10 Enterprise 2019 LTSC; 64-bit; MUI (en, de, fr, it, es); 256 GB SSD; 2x DisplayPort graphics; without audio; 2x 10/100/1000 Mbps Ethernet RJ45; 4x USB 3.1; 3x USB 2.0; 4x serial ports (COM); 2x M.2 modules; 24 V DC power supply	**6AV7231-0FC31-2BA0**

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Technical specifications

Article number	**6AV7231-0....-...0** SIMATIC IPC377G
Installation type/mounting	
Mounting	Panel mount and VESA, horizontal and vertical
Design	Panel PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	10 ms
Processor	
Processor type	Intel Atom X6413E
Memory	
Type of memory	DDR4
Main memory	4 GB, 8 GB,16 GB
Hardware configuration	
Slots	
• free slots	2x M.2
Interfaces	
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)
Video interfaces	
• Graphics interface	2x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Protocols	
Protocols (Ethernet)	
• TCP/IP	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	POWER, HDD
• Fan	No

Article number	**6AV7231-0....-...0** SIMATIC IPC377G
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 ... 1 000 MHz, 80 % AM according to IEC 61000-4-3; 3 V/m for 1.4 ... 6 GHz, 80 % AM according to IEC 61000-4-3
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP40
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
UL approval	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
BSMI	Yes
Dust protection	Protection against foreign bodies > 1 mm
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to 50 °C
Relative humidity	
• Operation, max.	85 %
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 500 Hz: 9.8 m/s^2
Shock testing	
• Shock loading in operation	Tested according to IEC 60068-2-27: 150 m/s^2, 11 ms; 5 g, 30 ms
Operating systems	
without operating system	Yes

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Technical specifications

Article number	**6AV7231-0CC21-0AA0**	**6AV7231-0CC21-2BA0**	**6AV7231-0FC21-2BA0**	**6AV7231-0FC31-2BA0**
	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G
General information				
Product type designation	IPC377G	IPC377G	IPC377G	IPC377G
Installation type/mounting				
Mounting	Panel mount and VESA, horizontal and vertical	Panel mount and VESA, horizontal and vertical	Panel mount and VESA, horizontal and vertical	Panel mount and VESA, horizontal and vertical
Design	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit
Supply voltage				
Type of supply voltage	24 V DC	24 V DC	24 V DC	24 V DC
Mains buffering				
• Mains/voltage failure stored energy time	10 ms	10 ms	10 ms	10 ms
Processor				
Processor type	Intel Atom X6413E	Intel Atom X6413E	Intel Atom X6413E	Intel Atom X6413E
Memory				
Type of memory	DDR4	DDR4	DDR4	DDR4
Capacity of main memory, max.	4 GB, 8 GB,16 GB	4 GB, 8 GB,16 GB	4 GB, 8 GB,16 GB	4 GB, 8 GB,16 GB
Hardware configuration				
Slots				
• free slots	2x M.2	2x M.2	2x M.2	2x M.2
Interfaces				
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)	2; 2x RJ45 (independent)
Video interfaces				
• Graphics interface	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort
Industrial Ethernet				
• Industrial Ethernet interface	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes
Protocols				
Protocols (Ethernet)				
• TCP/IP	Yes	Yes	Yes	Yes
Integrated Functions				
Monitoring functions				
• Temperature monitoring	Yes	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes	Yes
• Status LEDs	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD
• Fan	No	No	No	No
EMC				
Interference immunity against discharge of static electricity				
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields				
• Interference immunity against high frequency radiation	10 V/m for 80 ... 1 000 MHz, 80 % AM according to IEC 61000-4-3; 3 V/m for 1.4 ... 6 GHz, 80 % AM according to IEC 61000-4-3			
Degree and class of protection				
IP (at the front)	IP65	IP65	IP65	IP65
IP (rear)	IP40	IP40	IP40	IP40

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Technical specifications

Article number	**6AV7231-0CC21-0AA0**	**6AV7231-0CC21-2BA0**	**6AV7231-0FC21-2BA0**	**6AV7231-0FC31-2BA0**
	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G	SIMATIC IPC377G
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
CSA approval	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes
FCC	Yes	Yes	Yes	Yes
BSMI	Yes	Yes	Yes	Yes
Dust protection	Protection against foreign bodies > 1 mm	Protection against foreign bodies > 1 mm	Protection against foreign bodies > 1 mm	Protection against foreign bodies > 1 mm
Ambient conditions				
Ambient temperature during operation				
• Ambient temperature during operation	0 °C to 50 °C	0 °C to 50 °C	0 °C to 50 °C	0 °C to 50 °C
Relative humidity				
• Operation, max.	85 %	85 %	85 %	85 %
Vibrations				
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 500 Hz: 9.8 m/s^2	Tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 500 Hz: 9.8 m/s^2	Tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 500 Hz: 9.8 m/s^2	Tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 500 Hz: 9.8 m/s^2
Operating systems				
without operating system	Yes	Yes	Yes	Yes

More information is available on the internet at

http://www.siemens.com/simatic-panel-pc

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Overview

SIMATIC IPC377E

Based on Intel Celeron process technology, the SIMATIC IPC377E Panel PC represents a new IPC platform which has been specifically developed for cost-optimized, PC-based applications in industrial and industry-oriented environments.

The SIMATIC IPC377E Panel PC is characterized by industrial touch displays in the sizes 12", 15" and 19" as well as a variety of interfaces. Fast availability ex stock as well as the fanless industrial design complete the concept.

Ordering data

	Article No.
SIMATIC IPC377E	**6AV7230 - 0 ■ ■ ■ ■ - ■ ■ ■ ■**
1 x display port graphic 1 x VGA port graphic; 2x 10/100/1 000 Mbps, Ethernet RJ45; 2 x USB 3.0; 2 x USB 2.0; 4 x serial ports (COM)	
Operating unit	
• 12" touch (1 280 x 800)	**C**
• 15" touch (1 366 x 768)	**D**
• 19" touch (1 366 x 768)	**E**
Processor	
• Celeron N3160 (4C/4T)	**A**
Work memory	
• 4 GB RAM	**2**
• 8 GB RAM	**3**
Expansions/interfaces	
• 1x mPCIe/1x mSata	**0**
Operating system	
• Without operating system	**0**
• Windows Ultimate SP1, 64-bit MUI (en, de, fr, es, it)	**1**
Drives	
• None	**A**
• 500 GB HDD	**B**
• 256 GB SSD	**C**
Power supply	
• 24 V DC	**A**
Mounting accessories	
• Installation, VESA installation	**0**

Note:

The SIMATIC IPC377E has a different front panel and is not directly installation-compatible with previous SIMATIC HMI devices.

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.
The SIMATIC IPC online configurator offers a current overview:

http://www.siemens.com/ipc-configurators

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Ordering data	Article No.
Preferred variants (available directly ex stock)	
SIMATIC IPC377E	
12" Configuration 1 12" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 500 GB HDD SATA, internal; 4 GB RAM (1 x 4 GB); without operating system; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0CA20-0BA0**
12" Configuration 2 12" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 500 GB HDD SATA, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultimate 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0CA20-1BA0**
12" Configuration 3 12" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); without operating system; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0CA20-0CA0**
12" Configuration 4 12" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultim. 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0CA20-1CA0**
12" Configuration 5 12" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); Windows 10 Enterprise 2016 LTSB; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0CA20-2CA0**
15" Configuration 1 15" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 500 GB HDD SATA, internal; 4 GB RAM (1 x 4 GB); without operating system; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0DA20-0BA0**
15" Configuration 2 15" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 500 GB HDD SATA, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultimate 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0DA20-1BA0**
15" Configuration 3 15" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); without operating system; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0DA20-0CA0**
15" Configuration 4 15" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultim. 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0DA20-1CA0**
15" Configuration 5 15" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); Windows 10 Enterprise 2016 LTSB; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0DA20-2CA0**

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Ordering data

	Article No.
19" Configuration 1 19" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 500 GB HDD SATA, internal; 4 GB RAM (1 x 4 GB); without operating system; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0EA20-0BA0**
19" Configuration 2 19" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 500 GB HDD SATA, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultimate 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0EA20-1BA0**
19" Configuration 3 19" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); without operating system; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0EA20-0CA0**
19" Configuration 4 19" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultim. 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0EA20-1CA0**
19" Configuration 5 19" touch (analog resistive); Intel Celeron Quad Core N3160 (1.6 GHz); 256 GB SSD, internal; 4 GB RAM (1 x 4 GB); Windows 7 Ultim. 64-bit, SP1; 24 V DC; interfaces: 2 x Gbit Ethernet (RJ45), 2 x USB 2.0; 2 x USB 3.0; 4 x serial; 1 x Display Port, 1 x VGA, audio	**6AV7230-0EA20-2CA0**

Note:

The SIMATIC IPC377E has a different front panel and is not directly installation-compatible with previous SIMATIC HMI devices.

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Technical specifications

Article number	**6AV7230-0....-....**
	SIMATIC IPC377E
Installation type/mounting	
Mounting	Panel mount and VESA, horizontal and vertical
Design	Panel PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	10 ms
Processor	
Processor type	Intel Celeron N3160
Drives	
Hard disk	1 TB HDD
SSD	Yes; 256 GB SSD
Memory	
Type of memory	DDR3L
Main memory	4 GB, 8 GB
Hardware configuration	
Slots	
• free slots	1x mPCIe (half-size), 1x mSATA (full-size)
Interfaces	
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)
USB port	2x USB 2.0, 2x USB 3.0 (high current)
Video interfaces	
• Graphics interface	1x DisplayPort, 1x VGA
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Protocols	
Protocols (Ethernet)	
• TCP/IP	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	POWER, HDD
• Fan	No
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD)
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 ... 1 000 MHz, 80 % AM according to IEC 61000-4-3; 3 V/m for 1.4 ... 6 GHz, 80 % AM according to IEC 61000-4-3

Article number	**6AV7230-0....-....**
	SIMATIC IPC377E
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP40
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
Dust protection	Protection against foreign bodies > 1 mm
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 to +45°C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s² (1 g)
Shock testing	
• Shock load during operation	Tested in accordance with IEC 60068-2-27: With SSD: 150 m/s², 11 ms; with HDD: 9.8 m/s², 20 ms
Operating systems	
pre-installed operating system	Windows 7 Ultimate (Multi-Language), 64 bit; Windows 10 Enterprise 2016 LTSB, 64 bit
without operating system	Yes

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Technical specifications

Article number	**6AV7230-0CA20-0BA0**	**6AV7230-0CA20-1BA0**	**6AV7230-0CA20-0CA0**	**6AV7230-0CA20-1CA0**	**6AV7230-0CA20-2CA0**
	SIMATIC IPC377E, 12" Touch	SIMATIC IPC377E, 12" Touch	SIMATIC IPC377E, 12" Touch	SIMATIC IPC377E, 12" Touch	SIMATIC IPC377E, 12" Touch
Installation type/mounting					
Mounting	Panel mount and VESA, horizontal and vertical				
Design	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit
Supply voltage					
Type of supply voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Mains buffering					
• Mains/voltage failure stored energy time	10 ms	10 ms	10 ms	10 ms	10 ms
Processor					
Processor type	Intel Celeron N3160	Intel Celeron N3160	Intel Celeron N3160	Intel Celeron N3160	Intel Celeron N3160
Drives					
Hard disk	1 TB HDD	1 TB HDD	1 TB HDD	1 TB HDD	1 TB HDD
Memory					
Type of memory	DDR3L	DDR3L	DDR3L	DDR3L	DDR3L
Main memory	4 GB (pre-installed)	4 GB (pre-installed)	4 GB (pre-installed)	4 GB (pre-installed)	4 GB (pre-installed)
Hardware configuration					
Slots					
• free slots	1x mPCIe (half-size),	1x mSATA (full-size)			
Interfaces					
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)				
Number of PROFINET interfaces	2	2	2	2	2
USB port	2x USB 2.0, 2x USB 3.0 (high current)				
Video interfaces					
• Graphics interface	1x DisplayPort, 1x VGA				
Industrial Ethernet					
• Industrial Ethernet interface	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes
Protocols					
Protocols (Ethernet)					
• TCP/IP	Yes	Yes	Yes	Yes	Yes
Integrated Functions					
Monitoring functions					
• Temperature monitoring	Yes	Yes	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes	Yes	Yes
• Status LEDs	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD
• Fan	No	No	No	No	No
EMC					
Interference immunity against discharge of static electricity					
• Interference immunity against discharge of static electricity	±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD)				
Interference immunity against high-frequency electromagnetic fields					
• Interference immunity against high frequency radiation	10 V/m for 80 ... 1 000 MHz, 80 % AM according to IEC 61000-4-3; 3 V/m for 1.4 ... 6 GHz, 80 % AM according to IEC 61000-4-3				
Interference immunity to cable-borne interference					
• Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)				
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge				
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst	±1 kV acc. to IEC 61000-4-4, Burst	±1 kV acc. to IEC 61000-4-4, Burst	±1 kV acc. to IEC 61000-4-4, Burst	±1 kV acc. to IEC 61000-4-4, Burst

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Technical specifications

Article number	**6AV7230-0CA20-0BA0**	**6AV7230-0CA20-1BA0**	**6AV7230-0CA20-0CA0**	**6AV7230-0CA20-1CA0**	**6AV7230-0CA20-2CA0**
	SIMATIC IPC377E, 12" Touch	SIMATIC IPC377E, 12" Touch	SIMATIC IPC377E, 12" Touch	SIMATIC IPC377E, 12" Touch	SIMATIC IPC377E, 12" Touch
Interference immunity against voltage surge					
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric				
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric				
Interference immunity to magnetic fields					
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8				
Degree and class of protection					
IP (at the front)	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP40	IP40	IP40	IP40	IP40
Standards, approvals, certificates					
CE mark	Yes	Yes	Yes	Yes	Yes
UL approval			Yes	Yes	Yes
cULus	No	No	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes
FCC	Yes	Yes	Yes	Yes	Yes
Dust protection	Protection against foreign bodies > 1 mm				
Ambient conditions					
Ambient temperature during operation					
• Ambient temperature during operation	0 to +40 °C	0 to +40 °C	0 to +45°C	0 to +45°C	0 to +45°C
Relative humidity					
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)				
Vibrations					
• Vibration resistance during operation acc. to IEC 60068-2-6	58 Hz to 200 Hz: 4.9 m/s^2; tested according to IEC 60068-2-6	58 Hz to 200 Hz: 4.9 m/s^2; tested according to IEC 60068-2-6	tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s^2 (1 g)		
Shock testing					
• Shock load during operation	With HDD: 9.81 m/s^2, 20 ms; tested according to IEC 60068-2-27		Tested according to IEC 60068-2-27: 150 m/s^2, 11 ms		
Operating systems					
pre-installed operating system	without operating system	Windows 7 Ultimate (Multi-Language) 64-bit	without operating system	Windows 7 Ultimate (Multi-Language) 64-bit	Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
without operating system	Yes	Yes	Yes		
Dimensions					
Width	320 mm	320 mm	320 mm	320 mm	320 mm
Height	225.6 mm	225.6 mm	225.6 mm	225.6 mm	225.6 mm
Depth	95.2 mm	95.2 mm	95.2 mm	95.2 mm	95.2 mm

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Technical specifications

Article number	**6AV7230-0DA20-0BA0**	**6AV7230-0DA20-1BA0**	**6AV7230-0DA20-0CA0**	**6AV7230-0DA20-1CA0**	**6AV7230-0DA20-2CA0**
	SIMATIC IPC377E, 15" Touch	SIMATIC IPC377E, 15" Touch	SIMATIC IPC377E, 15" Touch	SIMATIC IPC377E, 15" Touch	SIMATIC IPC377E, 15" Touch
Installation type/mounting					
Mounting	Panel mount and VESA, horizontal and vertical				
Design	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit
Supply voltage					
Type of supply voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Mains buffering					
• Mains/voltage failure stored energy time	10 ms	10 ms	10 ms	10 ms	10 ms
Processor					
Processor type	Intel Celeron N3160	Intel Celeron N3160	Intel Celeron N3160	Intel Celeron N3160	Intel Celeron N3160
Drives					
Hard disk	1 TB HDD	1 TB HDD	1 TB HDD	1 TB HDD	1 TB HDD
Memory					
Type of memory	DDR3L	DDR3L	DDR3L	DDR3L	DDR3L
Main memory	4 GB (pre-installed)	4 GB (pre-installed)	4 GB (pre-installed)	4 GB (pre-installed)	4 GB (pre-installed)
Hardware configuration					
Slots					
• free slots	1x mPCIe (half-size), 1x mSATA (full-size)				
• Number of PCI slots	0	0	0	0	0
Interfaces					
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)				
Number of PROFINET interfaces	2	2	2	2	2
USB port	2x USB 2.0, 2x USB 3.0 (high current)				
Video interfaces					
• Graphics interface	1x DisplayPort, 1x VGA				
Industrial Ethernet					
• Industrial Ethernet interface	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes
Protocols					
Protocols (Ethernet)					
• TCP/IP	Yes	Yes	Yes	Yes	Yes
Integrated Functions					
Monitoring functions					
• Temperature monitoring	Yes	Yes	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes	Yes	Yes
• Status LEDs	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD
• Fan	No	No	No	No	No
EMC					
Interference immunity against discharge of static electricity					
• Interference immunity against discharge of static electricity	±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD)				
Interference immunity against high-frequency electromagnetic fields					
• Interference immunity against high frequency radiation	10 V/m for 80 ... 1 000 MHz, 80 % AM according to IEC 61000-4-3; 3 V/m for 1.4 ... 6 GHz, 80 % AM according to IEC 61000-4-3				
Interference immunity to cable-borne interference					
• Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)				
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge				
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst				

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Technical specifications

Article number	**6AV7230-0DA20-0BA0**	**6AV7230-0DA20-1BA0**	**6AV7230-0DA20-0CA0**	**6AV7230-0DA20-1CA0**	**6AV7230-0DA20-2CA0**
	SIMATIC IPC377E, 15" Touch	SIMATIC IPC377E, 15" Touch	SIMATIC IPC377E, 15" Touch	SIMATIC IPC377E, 15" Touch	SIMATIC IPC377E, 15" Touch
Interference immunity against voltage surge					
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric				
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric				
Interference immunity to magnetic fields					
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8
Degree and class of protection					
IP (at the front)	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP40	IP40	IP40	IP40	IP40
Standards, approvals, certificates					
CE mark	Yes	Yes	Yes	Yes	Yes
UL approval			Yes	Yes	Yes
cULus	No	No	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes
FCC	Yes	Yes	Yes	Yes	Yes
Dust protection	Protection against foreign bodies > 1 mm				
Ambient conditions					
Ambient temperature during operation					
• Ambient temperature during operation	0 to +40 °C	0 to +40 °C	0 to +45°C	0 to +45°C	0 to +45°C
Relative humidity					
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)				
Vibrations					
• Vibration resistance during operation acc. to IEC 60068-2-6	58 Hz to 200 Hz: 4.9 m/s^2; tested according to IEC 60068-2-6		tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s^2 (1 g)		
Shock testing					
• Shock load during operation	With HDD: 9.81 m/s^2, 20 ms; tested according to IEC 60068-2-27		Tested according to IEC 60068-2-27: 150 m/s^2, 11 ms		
Operating systems					
pre-installed operating system	without operating system	Windows 7 Ultimate (Multi-Language) 64-bit	without operating system	Windows 7 Ultimate (Multi-Language) 64-bit	Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
without operating system	Yes	Yes	Yes		
Dimensions					
Width	406 mm	406 mm	406 mm	406 mm	406 mm
Height	258.1 mm	258.1 mm	258.1 mm	258.1 mm	258.1 mm
Depth	103 mm	103 mm	103 mm	103 mm	103 mm

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Technical specifications

Article number	**6AV7230-0EA20-0BA0**	**6AV7230-0EA20-1BA0**	**6AV7230-0EA20-0CA0**	**6AV7230-0EA20-1CA0**	**6AV7230-0EA20-2CA0**
	SIMATIC IPC377E, 19" Touch	SIMATIC IPC377E, 19" Touch	SIMATIC IPC377E, 19" Touch	SIMATIC IPC377E, 19" Touch	SIMATIC IPC377E, 19" Touch
Installation type/mounting					
Mounting	Panel mount and VESA, horizontal and vertical				
Design	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit	Panel PC, built-in unit
Supply voltage					
Type of supply voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Mains buffering					
• Mains/voltage failure stored energy time	10 ms	10 ms	10 ms	10 ms	10 ms
Processor					
Processor type	Intel Celeron N3160	Intel Celeron N3160	Intel Celeron N3160	Intel Celeron N3160	Intel Celeron N3160
Drives					
Hard disk	1 TB HDD	1 TB HDD	1 TB HDD		500 GB HDD
SSD				Yes; 256 GB SSD	
Memory					
Type of memory	DDR3L	DDR3L	DDR3L	DDR3L	DDR3L
Main memory	4 GB (pre-installed)	4 GB (pre-installed)	4 GB (pre-installed)	4 GB (pre-installed)	4 GB (pre-installed)
Hardware configuration					
Slots					
• free slots	1x mPCIe (half-size), 1x mSATA (full-size)				
• Number of PCI slots	0	0	0	0	0
Interfaces					
Number of industrial Ethernet interfaces	2; 2x RJ45 (independent)				
Number of PROFINET interfaces	2	2	2	2	2
USB port	2x USB 2.0, 2x USB 3.0 (high current)				
Video interfaces					
• Graphics interface	1x DisplayPort, 1x VGA				
Industrial Ethernet					
• Industrial Ethernet interface	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)	2x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes
Protocols					
Protocols (Ethernet)					
• TCP/IP	Yes	Yes	Yes	Yes	Yes
Integrated Functions					
Monitoring functions					
• Temperature monitoring	Yes	Yes	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes	Yes	Yes
• Status LEDs	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD	POWER, HDD
• Fan	No	No	No	No	No

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Technical specifications

Article number	**6AV7230-0EA20-0BA0**	**6AV7230-0EA20-1BA0**	**6AV7230-0EA20-0CA0**	**6AV7230-0EA20-1CA0**	**6AV7230-0EA20-2CA0**
	SIMATIC IPC377E, 19" Touch	SIMATIC IPC377E, 19" Touch	SIMATIC IPC377E, 19" Touch	SIMATIC IPC377E, 19" Touch	SIMATIC IPC377E, 19" Touch
EMC					
Interference immunity against discharge of static electricity					
• Interference immunity against discharge of static electricity	±6 kV contact; ±8 kV air (to IEC 1000-4-2; ESD)				
Interference immunity against high-frequency electromagnetic fields					
• Interference immunity against high frequency radiation	10 V/m for 80 ... 1 000 MHz, 80 % AM according to IEC 61000-4-3; 3 V/m for 1.4 ... 6 GHz, 80 % AM according to IEC 61000-4-3				
Interference immunity to cable-borne interference					
• Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)				
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge				
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst				
Interference immunity against voltage surge					
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric				
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric				
Interference immunity to magnetic fields					
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8
Degree and class of protection					
IP (at the front)	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP40	IP40	IP40	IP40	IP40
Standards, approvals, certificates					
CE mark	Yes	Yes	Yes	Yes	Yes
UL approval			Yes	Yes	Yes
cULus	No	No	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes
FCC	Yes	Yes	Yes	Yes	Yes
Dust protection	Protection against foreign bodies > 1 mm				

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Technical specifications

Article number	**6AV7230-0EA20-0BA0**	**6AV7230-0EA20-1BA0**	**6AV7230-0EA20-0CA0**	**6AV7230-0EA20-1CA0**	**6AV7230-0EA20-2CA0**
	SIMATIC IPC377E, 19" Touch	SIMATIC IPC377E, 19" Touch	SIMATIC IPC377E, 19" Touch	SIMATIC IPC377E, 19" Touch	SIMATIC IPC377E, 19" Touch
Ambient conditions					
Ambient temperature during operation					
• Ambient temperature during operation	0 to +40 °C	0 to +40 °C	0 to +45°C	0 to +45°C	0 to +45°C
Relative humidity					
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)				
Vibrations					
• Vibration resistance during operation acc. to IEC 60068-2-6	58 Hz to 200 Hz: 4.9 m/s^2; tested according to IEC 60068-2-6		tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s^2 (1 g)		
Shock testing					
• Shock load during operation	With HDD: 9.81 m/s^2, 20 ms; tested according to IEC 60068-2-27		Tested according to IEC 60068-2-27: 150 m/s^2, 11 ms		
Operating systems					
pre-installed operating system	without operating system	Windows 7 Ultimate (Multi-Language) 64-bit	without operating system	Windows 7 Ultimate (Multi-Language) 64-bit	Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
without operating system	Yes	Yes	Yes		
Dimensions					
Width	472.6 mm	472.6 mm	472.6 mm	472.6 mm	472.6 mm
Height	296.8 mm	296.8 mm	296.8 mm	296.8 mm	296.8 mm
Depth	103 mm	103 mm	103 mm	103 mm	103 mm

More information is available on the internet at:

http://www.siemens.com/simatic-panel-pc

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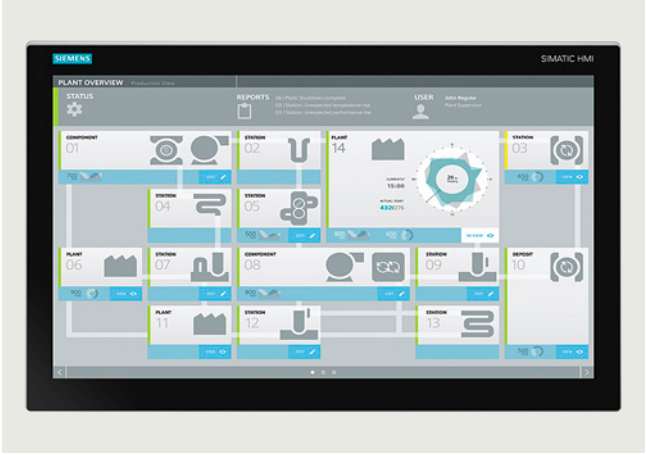
SIMATIC IPC477E

Overview



SIMATIC IPC477E: The powerful embedded Panel PC – maintenance-free with versatile configuration

- Embedded PC platform with extremely high industrial compatibility for demanding tasks in the field of PC-based automation
- Maintenance-free (no rotating components such as fan and hard disk)
- Rugged construction: The PC is resistant to even the harshest mechanical stress and extremely reliable in operation
- Compact design
- Battery-independent retentive memory onboard
- High degree of investment security
- Fast integration capability
- Built-in versions
  - 15" TFT touch
  - 19" TFT touch
  - 22" TFT touch
  - 15" TFT multi-touch
  - 19" TFT multi-touch
  - 22" TFT multi-touch
  - 24" TFT multi-touch

Ordering data

	Article No.					
SIMATIC IPC477E [1]	**6AV7241 -**	■	■	■	■	■ - ■ ■ ■ ■
Processor and fieldbus						
• Celeron G3902E; 3 x Gigabit Ethernet (IE/PN)		**1**				
• Core i3-6102E; 3 x Gigabit Ethernet (IE/PN)		**3**				
• Core i5-6442EQ; 3 x Gigabit Ethernet (IE/PN)		**5**				
• Xeon E3-1505L; 3 x Gigabit Ethernet (IE/PN)		**7**				
Operating unit						
• 15" single-touch (1 280 x 800) with front USB			**B**			
• 19" single-touch (1 366 x 768) with front USB			**D**			
• 22" single-touch (1 920 x 1 080) with front USB			**E**			
• 15" multi-touch (1 366 x 768), single-touch mode only with WES7-E			**J**			
• 19" multi-touch (1 366 x 768), single-touch mode only with WES7-E			**K**			
• 19" multi-touch (1 920 x 1 080), single-touch mode only with WES7-E			**G**			
• 22" multi-touch (1 920 x 1 080), single-touch mode only with WES7-E			**L**			
• 24" multi-touch (1 920 x 1 080), single-touch mode only with WES7-E			**R**			
Work memory/NVRAM						
• 4 GB				**A**		
• 8 GB				**B**		
• 16 GB				**C**		
• 8 GB with ECC				**D**		
• 16 GB with ECC				**E**		
• 4 GB and NVRAM				**F**		
• 8 GB and NVRAM				**G**		
• 16 GB and NVRAM				**H**		
• 8 GB with ECC and NVRAM				**J**		
• 16 GB with ECC and NVRAM				**K**		
Expansions/interfaces						
• No RS232/RS485, without PCIe					**0**	
• No RS232/RS485 and one PCIe					**1**	
• Second RS232/RS485, without PCIe					**3**	
• Second RS232/RS485 and one PCIe					**4**	
• No RS232, without PCIe with ATEX/IECEx Cat 3G Zone 2					**5**	
• No RS232 and one PCIe with ATEX/IECEx Cat 3G Zone 2					**6**	
• Two RS232 without PCIe with ATEX/IECEx Cat 3G Zone 2					**7**	
• Two RS232 and one PCIe with ATEX/IECEx Cat 3G Zone 2					**8**	

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

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Ordering data

	Article No.
SIMATIC IPC477E [1]	**6AV7241 -** ■■■■■ - ■■■■
Operating system	
• Without operating system	**0**
• Windows Embedded Standard 7 SP1, English, 32-bit	**1**
• Windows Embedded Standard 7 SP1, English, 64-bit	**2**
• Windows Embedded Standard 7 P SP1, English, 64-bit, multi-touch	**3**
• Windows 7 Ultimate SP1, 64-bit, MUI (en, de, fr, it, es)	**4**
• Windows 10 IoT Enterprise 2019 LTSC (64-bit) for Celeron, Core i3 and Core i5 processors	**5**
• Windows 10 IoT Enterprise 2019 LTSC (64-bit) for Xeon processor	**6**
• Windows 10 Enterprise 2016 LTSB (64-bit) for Celeron, Core i3 and Core i5 processors	**7**
• Windows 10 Enterprise 2016 LTSB (64-bit) for Xeon processor	**8**
Mass storage, externally accessible	
• Without external mass storage	**0**
• CFast 2 GB, without operating system	**1**
• CFast 4 GB, without operating system	**2**
• CFast 8 GB (only optionally with operating system/software if no internal mass storage or HDD)	**3**
• CFast 16 GB (only optionally with operating system/software if no internal mass storage or HDD)	**4**
• CFast 128 GB (only optionally with operating system/software if no internal mass storage or HDD)	**5**
Mass storage, internal	
• Without internal mass storage	**A**
• 256 GB Eco solid-state drive	**D**
• 240 GB solid-state drive SATA	**F**
• 480 GB solid-state drive SATA	**G**
• 320 GB HDD	**J**

	Article No.
SIMATIC IPC477E [1]	**6AV7241 -** ■■■■■ - ■■■■
SIMATIC software	
• Without SIMATIC software	**A**
Power supply:	
• 24 V DC industrial power supply	**0**
• 110/230 V AC industrial power supply with NAMUR; European power supply cord	**1**
• 110/230 V AC industrial power supply with TPM [2] (not for China or Russia) NAMUR, European power supply cord	**7**
• 24 V DC industrial power supply and TPM [2]	**8**

[1] For an up-to-date overview, see the SIMATIC PC Online Configurator: http://www.siemens.com/ipc-configurators

[2] TPM = Trusted Platform Module

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

For an up-to-date overview, see the SIMATIC IPC online configurator at:

http://www.siemens.com/ipc-configurators

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Technical specifications

Article number	**6AV7241-.....-....**
	SIMATIC IPC 477E
Installation type/mounting	
Mounting	For horizontal and vertical mounting
Design	Panel PC, built-in unit
Supply voltage	
Type of supply voltage	100/240 V AC (autorange) 50/60 Hz; optional 24 V DC
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)
Chipset	Intel C236 / Intel H110
Graphic	
Graphics controller	Intel HD graphics controller
Drives	
Hard disk	2.5" SATA ≥ 320 GB
SSD	Yes; 128 / 240 / 480 GB
Memory	
Type of memory	DDR4-2400 SO-DIMM
Main memory	4 / 8 / 16 GB, ECC optional
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time; optional
Hardware configuration	
Slots	
• free slots	1x PCIe (slot with card retainer), 1x slot for CFAST card
• Number of PCI slots	1; Optional
• Number of compact flash slots	1; CFast
Interfaces	
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)
USB port	4x USB 3.0
Connection for keyboard/mouse	USB / USB
serial interface	Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS
Video interfaces	
• Graphics interface	2x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	3x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes

Article number	**6AV7241-.....-....**
	SIMATIC IPC 477E
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Fan	No
• Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m, 80 ... 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 ... 2.7 GHz; 10 V, 10 kHz ... 80 MHz acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20

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Technical specifications

Article number	**6AV7241-.....-....**
	SIMATIC IPC 477E
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
UL approval	Yes
• UL 508	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
EMC	CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A
Use in hazardous areas	
• ATEX Zone 2	Yes; Optional, only with Multitouch
• IECEx Zone 2	Yes; Optional, only with Multitouch
• cULus Class I Zone 2, Division 2	Yes; Optional, only with Multitouch
Marine approval	
• Germanischer Lloyd (GL)	Yes
• American Bureau of Shipping (ABS)	Yes
• Bureau Veritas (BV)	Yes
• Det Norske Veritas (DNV)	Yes
• Korean Register of Shipping (KRS)	Yes
• Lloyds Register of Shipping (LRS)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes

Article number	**6AV7241-.....-....**
	SIMATIC IPC 477E
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to 45 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s^2 (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s^2 (hard disk)
Shock testing	
• Shock load during operation	IEC 60068-2-27; 150 m/s^2, 11 ms (without hard disk); 50 m/s^2, 30 ms (with hard disk)
Operating systems	
pre-installed operating system	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10
without operating system	Yes; Optional
Software	
SIMATIC Software	Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S

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Technical specifications

Article number	**6AV7241-.B...-....**	**6AV7241-.D...-....**	**6AV7241-.E...-....**	**6AV7241-.J...-....**	**6AV7241-.K...-....**	**6AV7241-.L...-....**	**6AV7241-.R...-....**
	SIMATIC IPC477E 15" ST (1280 x 800)	SIMATIC IPC477E 19" ST (1366 x 768)	SIMATIC IPC477E 22" ST (1920 x 1080)	SIMATIC IPC477E 15" MT (1366 x 768)	SIMATIC IPC477E 19" MT (1366 x 768)	SIMATIC IPC477E 22" MT (1920 x 1080)	SIMATIC IPC477E 24" MT (1920 x 1080)
Display							
Design of display	15" TFT touch	19" TFT touch	22" TFT touch	15" TFT multi-touch	19" TFT multi-touch	22" TFT multi-touch	24" TFT multi-touch
Screen diagonal	15.6 in	18.5 in	21.5 in	15.6 in	18.5 in	21.5 in	23.8 in
Resolution (pixels)							
• Horizontal image resolution	1 280 pixel	1 366 pixel	1 920 pixel	1 366 pixel	1 366 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	800 pixel	768 pixel	1 080 pixel	768 pixel	768 pixel	1 080 pixel	1 080 pixel
Backlighting							
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	30 000 h	50 000 h	50 000 h	30 000 h	30 000 h
Control elements							
Input device							
• Mouse, at front	Front USB 2.0 (500mA)	No	No	No	No	No	No
Keyboard fonts							
• Function keys	No	No	No	No	No	No	No
• alphanumeric keyboard	No	No	No	No	No	No	No
Touch operation							
• Design as touch screen	Yes; analog, resistive	Yes; analog, resistive	Yes; analog, resistive				
• Design as multi-touch screen				Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
Installation type/mounting							
Mounting	For horizontal and vertical mounting						
Design	Panel PC, built-in unit						
central design	Yes	Yes	Yes	Yes	Yes	Yes	Yes
distributed design	No	No	No	No	No	No	No
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage							
Type of supply voltage	100/240 V AC (autorange) 50/60 Hz; optional 24 V DC						
Line frequency							
• Rated value 50 Hz	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Rated value 60 Hz	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mains buffering							
• Mains/voltage failure stored energy time	20 ms	20 ms	20 ms	20 ms	20 ms	20 ms	20 ms
Power loss							
In full configuration	24 V DC: max. 65 W, PCIe APCB additionally 5 W	24 V DC: max. 65 W, PCIe APCB additionally 5 W	24 V DC: max. 74 W, PCIe APCB additionally 5 W	24 V DC: max. 88 W, 110 ... 230 V AC	24 V DC: max. 82 W, 110 ... 230 V AC	24 V DC: max. 88 W, 110 ... 230 V AC	24 V DC: max. 88 W, 110 ... 230 V AC
Processor							
Processor type	Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)						
Chipset	Intel C236 / Intel H110						
Graphic							
Graphics controller	Intel HD graphics controller						
Drives							
Hard disk	2.5" SATA ≥ 320 GB						
SSD	Yes; 128 / 240 / 480 GB						

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Technical specifications

Article number	**6AV7241-.B...-....**	**6AV7241-.D...-....**	**6AV7241-.E...-....**	**6AV7241-.J...-....**	**6AV7241-.K...-....**	**6AV7241-.L...-....**	**6AV7241-.R...-....**
	SIMATIC IPC477E 15" ST (1280 x 800)	SIMATIC IPC477E 19" ST (1366 x 768)	SIMATIC IPC477E 22" ST (1920 x 1080)	SIMATIC IPC477E 15" MT (1366 x 768)	SIMATIC IPC477E 19" MT (1366 x 768)	SIMATIC IPC477E 22" MT (1920 x 1080)	SIMATIC IPC477E 24" MT (1920 x 1080)
Memory							
Type of memory	DDR4-2400 SO-DIMM						
Main memory	4 / 8 / 16 GB, ECC optional						
Data areas and their retentivity							
Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time; optional						
Hardware configuration							
Slots							
• free slots	1x PCIe (slot with card retainer), 1x slot for CFAST card						
Interfaces							
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)
USB port	4x USB 3.0	4x USB 3.0	4x USB 3.0	4x USB 3.0	4x USB 3.0	4x USB 3.0	4x USB 3.0
Connection for keyboard/mouse	USB / USB	USB / USB	USB / USB	USB / USB	USB / USB	USB / USB	USB / USB
serial interface	Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS						
Video interfaces							
• Graphics interface	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort
Industrial Ethernet							
• Industrial Ethernet interface	3x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Integrated Functions							
Monitoring functions							
• Temperature monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Fan	No	No	No	No	No	No	No
• Monitoring function via network	Optional	Optional	Optional	Optional	Optional	Optional	Optional
EMC							
Interference immunity against discharge of static electricity							
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2						
Interference immunity against high-frequency electromagnetic fields							
• Interference immunity against high frequency radiation	10 V/m, 80 ... 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 ... 2.7 GHz; 10 V, 10 kHz ... 80 MHz acc. to IEC 61000-4-6						
Interference immunity to cable-borne interference							
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric						
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m						
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m						
Interference immunity against voltage surge							
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric						
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric						

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Technical specifications

Article number	**6AV7241-.B...-....**	**6AV7241-.D...-....**	**6AV7241-.E...-....**	**6AV7241-.J...-....**	**6AV7241-.K...-....**	**6AV7241-.L...-....**	**6AV7241-.R...-....**
	SIMATIC IPC477E 15" ST (1280 x 800)	SIMATIC IPC477E 19" ST (1366 x 768)	SIMATIC IPC477E 22" ST (1920 x 1080)	SIMATIC IPC477E 15" MT (1366 x 768)	SIMATIC IPC477E 19" MT (1366 x 768)	SIMATIC IPC477E 22" MT (1920 x 1080)	SIMATIC IPC477E 24" MT (1920 x 1080)
Interference immunity to magnetic fields							
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference							
• Interference emission via line/ AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
Degree and class of protection							
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20	IP20
Standards, approvals, certificates							
CE mark	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CSA approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• UL 508	Yes	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FCC	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A						
Use in hazardous areas							
• ATEX Zone 2	Yes; Optional, only with Multitouch						
• IECEx Zone 2	Yes; Optional, only with Multitouch						
• cULus Class I Zone 2, Division 2	Yes; Optional, only with Multitouch						
Marine approval							
• Germanischer Lloyd (GL)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• American Bureau of Shipping (ABS)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Bureau Veritas (BV)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Det Norske Veritas (DNV)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Korean Register of Shipping (KRS)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ambient conditions							
Ambient temperature during operation							
• Ambient temperature during operation	0 °C to 45 °C						
Relative humidity							
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 °C (no condensation)						
Vibrations							
• Vibration resistance during operation acc. to IEC 60068-2-6	IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s^2 (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s^2 (hard disk)						
Shock testing							
• Shock load during operation	IEC 60068-2-27; 150 m/s^2, 11 ms (without hard disk); 50 m/s^2, 30 ms (with hard disk)						

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Technical specifications

Article number	**6AV7241-.B...-....**	**6AV7241-.D...-....**	**6AV7241-.E...-....**	**6AV7241-.J...-....**	**6AV7241-.K...-....**	**6AV7241-.L...-....**	**6AV7241-.R...-....**
	SIMATIC IPC477E 15" ST (1280 x 800)	SIMATIC IPC477E 19" ST (1366 x 768)	SIMATIC IPC477E 22" ST (1920 x 1080)	SIMATIC IPC477E 15" MT (1366 x 768)	SIMATIC IPC477E 19" MT (1366 x 768)	SIMATIC IPC477E 22" MT (1920 x 1080)	SIMATIC IPC477E 24" MT (1920 x 1080)
Operating systems							
pre-installed operating system	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10
without operating system	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional
Software							
SIMATIC Software	Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S						
Dimensions							
Width of the housing front	415 mm	483 mm	560 mm	398 mm	464 mm	529 mm	585 mm
Height of housing front	310 mm	337 mm	380 mm	257 mm	294 mm	331 mm	363 mm
Weights							
Weight, approx.	6.8 kg	8.4 kg	9.5 kg	5.2 kg	6.6 kg	7.9 kg	9 kg

More information is available on the internet at:

http://www.siemens.com/simatic-pc

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SIMATIC IPC677E

Overview

SIMATIC IPC677E: The high-end Panel PC – with maximum performance, functional scope and expansion capability

Industrial PC platform with extremely high industrial compatibility for demanding tasks in the field of PC-based automation.

Rugged construction: The IPC is resistant to even the harshest mechanical stress and extremely reliable in operation.

- Compact design
- High degree of investment security
- High degree of expandability

The following widescreen front variants are available:

- 19", 22" or 24" capacitive multi-touch color display

Ordering data

	Article No.									
SIMATIC IPC677E [1]	**6AV7261-**	■	■	■	■	■	-	■	■	■	■
UHD graphics onboard; 2x DP; 1x DVI-D; 3x Gigabit Ethernet (IE/PN) RJ45; 6x USB 3.1 Gen. 2; 1x serial (COM1); RAID controller onboard; watchdog, temperature/fan monitoring										
Operating unit										
• 19" multi-touch (1 920 x 1 080)		**0**								
• 22" multi-touch (1 920 x 1 080)		**1**								
• 24" multi-touch (1 920 x 1 080)		**2**								
Processor										
• Intel Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d);			**A**							
• Intel Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); NVRAM			**B**							
• Intel Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d)			**C**							
• Intel Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d); NVRAM			**D**							
• Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, VT-d, AMT)			**G**							
• Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, VT-d, AMT); NVRAM			**H**							
Drives										
• HDD 2.5" SATA 320 GB internal				**A**						
• SSD 2.5" SATA 480 GB internal				**B**						
• SSD 2.5" SATA 960 GB internal				**D**						
• RAID1 2x SSD 2.5" SATA 480 GB internal				**E**						
• RAID1 2x SSD 2.5" SATA 480 GB in removable drive bay				**G**						
• RAID1 2x SSD 2.5" SATA 960 GB in removable drive bay				**H**						
• M.2 SSD NVMe 512 GB				**J**						
• M.2 SSD NVMe 512 GB; HDD 2.5" SATA 320 GB internal				**K**						
• M.2 SSD NVMe 512 GB; SSD 2.5" SATA 480 GB internal				**L**						
• M.2 SSD NVMe 512 GB; SSD 2.5" SATA 960 GB internal				**M**						
• M.2 SSD NVMe 512 GB; RAID1 2x SSD 2.5" SATA 480 GB in removable drive bay				**Q**						
• M.2 SSD NVMe 512 GB; 2 removable drive bays without media				**S**						

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Ordering data

	Article No.
SIMATIC IPC677E [1]	**6AV7261-** ■■■■■ - ■■■■
Memory configuration	
• 4 GB DDR4-2666 (1x 4 GB)	**0**
• 8 GB DDR4-2666 (2x 4 GB)	**1**
• 16 GB DDR4-2666 (2x 8 GB)	**2**
• 32 GB DDR4-2666 (2x 16 GB)	**3**
• 64 GB DDR4-2666 (4x 16 GB)	**4**
Power supply	
• 24 V DC industrial power supply	**0**
• 110/230 V AC industrial power supply with NAMUR; without power cable	**1**
• 110/230 V AC industrial power supply unit with NAMUR; power supply cord Europe	**2**
• 110/230 V AC industrial power supply unit with NAMUR; power supply cord USA	**3**
• 110/230 V AC industrial power supply unit with NAMUR; power supply cord China	**4**
• 24 V DC industrial power supply; device certification ATEX/IECEx/UL HazLoc	**5**
Operating system	
• Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es); for Celeron and i3	**0**
• Windows 10 Enterprise 2016 LTSB, 64-bit, MUI (en, de, fr, it, es), for Core i7	**1**
• Windows 10 IoT Enterprise 2019 LTSC, 64-bit, MUI (en, de, fr, it, es); for Celeron and i3	**2**
• Windows 10 IoT Enterprise 2019 LTSC, 64-bit, MUI (en, de, fr, it, sp), for Core i7	**3**
• Without operating system	**8**

	Article No.
SIMATIC IPC677E [1]	**6AV7261-** ■■■■■ - ■■■■
Expansion (SW)	
• Without expansion	**A**
• SIMATIC IPC DiagMonitor included	**B**
• SIMATIC IPC Image & Partition Creator included	**C**
• SIMATIC IPC DiagMonitor, Image & Partition Creator included	**D**
• TPM [2]	**X**
Expansion 1 (HW)	
• Without expansion (HW)	**A**
• 2x USB 2.0 (1 slot occupied)	**B**
• Device without CMOS battery (CR2450N)	**C**
Expansion 2 (HW)	
• 2 x PCI	**0**
• 1 x PCIe (x16); 1 x PCI	**1**
• 1 x PCIe (x16); 1 x PCIe (x4)	**2**

[1] Production and delivery as per order

[2] TPM = Trusted Platform Module

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

For an up-to-date overview, see the SIMATIC IPC online configurator at:

http://www.siemens.com/ipc-configurators

Accessories	
Memory expansion	
• 4 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL60-0QA0**
• 8 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL70-0QA0**
• 16 GB DDR4 2666 SDRAM, DIMM	**6ES7648-2AL80-0QA0**
Non-heating apparatus cable for SIMATIC Box and Panel PC SIMATIC PC power cable, 230 V AC, angled, 3 m, for:	
• Germany	**6ES7900-1AA00-0XA0**
• United Kingdom	**6ES7900-1BA00-0XA0**
• Switzerland	**6ES7900-1CA00-0XA0**
• USA	**6ES7900-1DA00-0XA0**
• Italy	**6ES7900-1EA00-0XA0**
• China	**6ES7900-1FA00-0XA0**
Touch pen	See "SIMATIC HMI accessories -> Input tools"
Expansion components	See Expansion components
Communication components	See Expansion components

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Technical specifications

Article number	**6AV7261-.....-....**
	SIMATIC IPC677E (Panel PC)
Installation type/mounting	
Mounting	For horizontal and vertical mounting
Design	Panel PC, built-in unit
Supply voltage	
Type of supply voltage	100/240 V AC (autorange); 24 V DC
Line frequency	
• Rated value 50 Hz	Yes
• Rated value 60 Hz	Yes
Mains buffering	
• Mains/voltage failure stored energy time	10 ms
Processor	
Processor type	Celeron G4900 (2C/2T, 3.1 GHz, 2 MB cache; VT-d); Core i3-8100 (4C/4T, 3.6 GHz, 6 MB cache, VT-d); Core i7-8700 (6C/12T, 3.2 (4.6) GHz, 12 MB cache, VT-d, AMT)
Chipset	Intel C246
Graphic	
Graphics controller	Intel UHD Graphics 630 (Core i); Intel UHD Graphics 610 (Celeron)
Drives	
Hard disk	2.5" SATA ≥ 320 GB
SSD	Yes; SSD M.2 NVMe 512 GB; SSD 2.5" SATA 480 / 960 GB; RAID1 2x SSD 2.5" SATA 480 / 960 GB in removable drive bay
Memory	
Type of memory	DDR4-2666 DIMM
Main memory	4 / 8 / 16 / 32 / 64 GB
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time
Hardware configuration	
Slots	
• free slots	2x PCI; optional: 1x PCI & 1x PCIe (x16); 2x PCIe (x4, x16); with card retainer
• Number of PCI slots	2; Optional
• Number of PCI slots	2; Optional
Interfaces	
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)
USB port	6x USB 3.1 Gen. 2 (2x type C)
Connection for keyboard/mouse	USB / USB
serial interface	1x COM
Video interfaces	
• Graphics interface	2x DisplayPort; 1x DVI-D
Industrial Ethernet	
• Industrial Ethernet interface	3x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes

Article number	**6AV7261-.....-....**
	SIMATIC IPC677E (Panel PC)
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Status LEDs	1x power, 3x user
• Fan	Yes
• Monitoring function via network	Optional
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 ... 2 700 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2.7 to 6 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz to 80 MHz, 80% AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A

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Technical specifications

Article number	**6AV7261-.....-....**
	SIMATIC IPC677E (Panel PC)
Degree and class of protection	
IP (at the front)	IP65
IP (rear)	IP20
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
UKCA	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
FCC	Yes
EMC	CE, EN 61000-6-3:2007 +A1:2011, EN 61000-6-2:2005
Marine approval	
• American Bureau of Shipping (ABS)	Yes
• Det Norske Veritas (DNV)	Yes
• Nippon Kaiji Kyokai (Class NK)	Yes

Article number	**6AV7261-.....-....**
	SIMATIC IPC677E (Panel PC)
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	+5 °C to +45 °C with full configuration
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5% to 80% at 25 °C (no condensation), Storage: 5% to 95% at 25 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	tested according to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm; 58 Hz to 500 Hz 9.8 m/s^2 (1 g)
Shock testing	
• Shock load during operation	Tested to DIN IEC 60068-2-29: 50 m/s^2 (5 g), 30 ms, 100 shocks
Operating systems	
pre-installed operating system	Windows 10 Enterprise 2016 LTSB or 2019 LTSC 64-bit, MUI
Software	
SIMATIC Software	Optional package with SIMATIC WinCC

Article number	**6AV7261-0....-....**	**6AV7261-1....-....**	**6AV7261-2....-....**
	SIMATIC IPC677E, 19" Multitouch	SIMATIC IPC677E, 22" Multitouch	SIMATIC IPC677E, 24" Multitouch
Display			
Design of display	19" TFT multi-touch	22" TFT multi-touch	24" TFT multi-touch
Screen diagonal	19 in	22 in	24 in
Resolution (pixels)			
• Horizontal image resolution	1 920 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	1 080 pixel	1 080 pixel	1 080 pixel
Backlighting			
• MTBF backlighting (at 25 °C)	50 000 h	30 000 h	30 000 h
Control elements			
Touch operation			
• Design as touch screen	Yes	Yes	Yes
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
Installation type/mounting			
central design	Yes	Yes	Yes
Mounting in portrait format possible	Yes	Yes	Yes
Power loss			
In full configuration	155 W	165 W	165 W
Dimensions			
Width of the housing front	464 mm	529 mm	585 mm
Height of housing front	294 mm	331 mm	363 mm
Weights			
Weight, approx.	9.5 kg	10.5 kg	12.5 kg

More information is available on the internet at:

http://www.siemens.com/simatic-pc

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SIMATIC Industrial Tablet PC

Overview

SIMATIC Industrial Tablet PC

The SIMATIC Industrial Tablet PC takes the performance of SIMATIC industry PCs to the tablet format.

With a large number of functional expansions such as a 1D/2D bar code reader or user identification by RFID, it taps diverse possibilities of use.

SIMATIC ITP1000: Industrial rugged PC

- High-quality components and modules with a high MTBF (mean time between failure), which also ensure 24-hour operation in the extended temperature range up to +45 °C
- Rugged enclosure designs with high electromagnetic compatibility (EMC)
- Hardware available in the long term

Powerful and many functions on board

- High-performance Intel Core i5-6442EQ or Intel Celeron G3902E notebook CPU
- Many interfaces on board:
  LAN, SD card reader, USB interfaces, RS232, audio
- WLAN and Bluetooth integrated
- RFID, bar code reader (1D/2D) and camera for a highly diverse range of mobile applications
- Windows 7 Ultimate 64-bit / Windows 10 IoT Enterprise 2016 LTSB (64-bit)

Ordering data

	Article No.
SIMATIC ITP1000	**6AV7880 - ■■■■■ - ■■■■**
Operating unit	
• 10" multi-touch (1 280 x 800) with 8 function keys	**0**
• 10" multi-touch (1 920 x 1 200) with 8 function keys	**2**
Extras	
• None	**A**
• Rear camera, 5 megapixels	**B**
• RFID reader	**C**
• Bar code reader (1D/2D)	**D**
• Camera and RFID	**E**
• Bar code reader and camera	**F**
• RFID and bar code reader	**G**
• Camera, RFID and bar code reader	**H**
Mass storage	
• 256 GB SSD	**A**
• 512 GB SSD	**B**
Operating system	
• None	**0**
• Windows 7 Ultimate SP1, 64-bit, MUI (en, de, fr, it, es)	**1**
• Windows10 IoT Enterprise 2016 LTSB, (64-bit) for Celeron i3 and i5 processors	**2**
CPU	
• Celeron G390 2E (2 MB cache, 1.60 GHz)	**1**
• Core i5-6442EQ (6 MB cache, up to 2.70 GHz)	**2**
RAM	
• 4 GB	**0**
• 8 GB	**1**
• 16 GB	**2**
Power supply	
• 110/230 V power supply unit, power cable for Europe	**A**
• 110/230 V power supply unit, power cable for UK	**B**
• 110/230 V power supply unit, power cable for CH	**C**
• 110/230 V power supply unit, power cable for the USA	**D**
• 110/230 V power supply unit, power cable for Italy	**E**
• 110/230 V power supply unit, power cable for China	**F**
Spare software (included)	
• None	**A**
Rechargeable battery	
• High-capacity lithium ion battery	**2**

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure suitability; we do not accept any liability for configurations compiled by users themselves.

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Technical specifications

Article number	**6AV7880-.....-...2** SIMATIC ITP1000
General information	
Design of the programming device	Tablet PC
Display	
Design of display	10" multi-touch
Resolution (pixels)	
• Horizontal image resolution	1 280 pixel; 1 920 pixels
• Vertical image resolution	800 pixel; 1 200 pixels
General features	
• Luminance	220 cd/m²; 350 cd/m²
Backlighting	
• Type of backlighting	LED
Control elements	
Keyboard fonts	
• Design	Touch
Touch operation	
• Integrated touch pad	No
Supply voltage	
Design of the power supply	External wide-range power supply; 3-pole
permissible range, lower limit (AC)	100 V; ±10 %, sinusoidal
permissible range, upper limit (AC)	240 V; ±10 %, sinusoidal
Line frequency	
• permissible range, lower limit	47 Hz
• permissible range, upper limit	63 Hz
Processor	
Processor type	Celeron G3902 (2C/2T, 1.6 GHz, 2 MB cache); Intel Core i5-6442EQ (6 MB cache, up to 2.70 GHz, iAMT)
Hyper-threading	No
Turbo Boost Technology 2.0	Yes
Graphic	
Graphics controller	Intel® HD graphics 530
Drives	
SSD	Yes
• Memory capacity	256 Gbyte; Up to 512 GB SSD
TPM Security Chip	Yes
Memory	
Type of memory	DDR4-SDRAM SO-DIMM
Work memory	
• integrated	4 Gbyte; 8 GB or 16 GB
Accumulator	
Replaceable	Yes; Lithium-ion battery
Capacity	5 900 mA·h
Battery runtime, min.	6 h; According to MobileMark 2014

Article number	**6AV7880-.....-...2** SIMATIC ITP1000
Interfaces	
Number of industrial Ethernet interfaces	1
Number of RS 232 interfaces	1
Number of USB interfaces	3; USB 3.0
• Type A	2
• Type C	1
Bluetooth radio standard	Yes; V4.0
Multimedia card/SD card slot	2 in 1 (SDHC UHS-II, MMC)
Universal Audio Jack	Yes; Audio socket for 3.5 mm jack
Video interfaces	
• DisplayPort	Yes; DP 1.2 (Mini DisplayPort)
Industrial Ethernet	
• Industrial Ethernet interface	1x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
• IAMT (Intel Active Management Technology)	Yes
WLAN	
• Type	IEEE 802.11 a/b/g/n and ac
Wireless transmission	
• Protocol for wireless transmission	Legic Prime, Legic Advant, ISO 15693, ISO 14443 A/B
• Operating frequency (rated value)	13.56 MHz
• Range, max.	30 mm; Range depends on transponder
Interrupts/diagnostics/status information	
LED status display	Battery charge level, device status, access to drive, WLAN active, SD card, application LED
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity acc. to IEC 61000-4-2	Yes; ±4 kV contact discharge (to IEC 801-2/IEC 1000-4-2; ESD), ±8 kV air discharge (to IEC 801-2/IEC 1000-4-2; ESD)
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)
• Interference immunity on signal cables	±1 kV (according to IEC 61000-4-4, burst, length < 30 m); ±2 kV (according to IEC 61000-4-4, burst, length > 30 m); ±2 kV (according to IEC 61000-4-5, surge sym./line to ground, length > 30 m)

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Technical specifications

Article number	**6AV7880-.....-...2** SIMATIC ITP1000
Degree and class of protection	
IP degree of protection	IP40
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
DIN/ISO 9001	Yes
Military use	
• Conforms to MIL-STD-810G	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	5 °C; Max. 10 °C/h (no condensation)
• max.	45 °C; Max. 10 °C/h (no condensation)
Operating systems	
Local language of operating system	Multi-Language User Interface (MUI): 6 languages (English, German, French, Spanish, Italian, Chinese)
pre-installed operating system	
• Windows 7	Yes; Ultimate 64 bit, SP1
• Windows 10	Yes; Windows 10 Enterprise 2016 LTSB, 64 bit, MUI
Software	
Preinstalled	
• STEP 7 Professional 2010	No
• STEP 7 Professional (TIA Portal)	No
• STEP 7	No
• WinCC flexible Advanced 2008	No
• WinCC Advanced (TIA Portal)	No
• STEP 5	No

Article number	**6AV7880-.....-...2** SIMATIC ITP1000
Mechanics/material	
Material of housing	metal
• Magnesium alloy	Yes
Socket for Kensington lock	Yes
rubber corner guards	Yes
Dimensions	
Width	330 mm
Height	32 mm
Depth	214 mm
Weights	
Weight, approx.	1.6 kg; incl. rechargeable battery
Scope of supply	
Accumulator	Yes
Power supply	Yes
Recovery media	Yes; Restore & Recovery

Additional information is available on the Internet at:

http://www.siemens.com/itp1000

Accessories can be found under SIMATIC HMI accessories:

https://mall.industry.siemens.com/mall/ww/en/Catalg/Products/10144445?tree=CatalogTree

Automation technology -> Operator control and monitoring systems SIMATIC HMI -> Accessories

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Overview

Docking station

A docking station is available for the SIMATIC Industrial Tablet PC. In addition to being able to charge the device, the docking station also features one Ethernet, one DisplayPort and two USB ports. With its external monitor, mouse and keyboard, the SIMATIC ITP1000 is upgraded into the equivalent of a full-scale office workplace.

The docking station is designed for users in industry. One-hand docking makes it quick and easy to insert and remove the SIMATIC ITP1000.

Ordering data

	Article No.
System components for Tablet PC	
Docking station for SIMATIC ITP1000	**6AV7676-1AB00-0AA0**

Technical specifications

Article number	**6AV7676-1AB00-0AA0** ITP1000 Docking Station
General information	
Product type designation	Docking station for ITP1000
Control elements	
Connection type	
• USB	Yes; USB 3.0 type A
Supply voltage	
Type of supply voltage	DC
Rated value (DC)	19 V
Interfaces	
Interfaces/bus type	1x Ethernet (RJ45)
Number of USB interfaces	2
HMI-side interface	1x DisplayPort
Degree and class of protection	
IP (all-round)	IP20
Standards, approvals, certificates	
CE mark	Yes
Ambient conditions	
Suited for indoor use	Yes
Suited for outdoor use	No
Mechanics/material	
Material	
• Plastic	Yes
Weights	
Weight, approx.	2.8 kg
Scope of supply	
Delivery quantity in pieces	1
Other	
Target devices	SIMATIC ITP1000

More information

More information is available on the Internet at:

http://www.siemens.com/itp1000

You can find other accessories at:

https://mall.industry.siemens.com/mall/en/en/Catalog/Products/10144445?tree=CatalogTree

Catalog -> Automation technology -> Operator control and monitoring systems SIMATIC HMI -> Accessories

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Overview

SIMATIC IFP Basic

With the SIMATIC IFP Basic product series, the range of industrial touch monitors in the SIMATIC IFP product family has been extended by cost-effective versions.

SIMATIC IFP Basic devices feature touch operation and are available in 4 display sizes: 12", 15", 19" and 22".

Ordering data

	Article No.
SIMATIC IFP Basic	
SIMATIC IFP1200 Basic Flat Panel with 12" display (16:10); Touch, 1 280 x 800 pixels Standard up to 5 m; for 24 V DC; DisplayPort / VGA interface	**6AV7862-2BC00-0AA0**
SIMATIC IFP1500 Basic Flat Panel with 15" display (16:9); Touch, 1 366 x 768 pixels Standard up to 5 m; for 24 V DC; DisplayPort / VGA interface	**6AV7862-2BD00-0AA0**
SIMATIC IFP1900 Basic Flat Panel with 19" display (16:9); Touch, 1 366 x 768 pixels Standard up to 5 m; for 24 V DC; DisplayPort / VGA interface	**6AV7862-2BE00-0AA0**
SIMATIC IFP2200 Basic Flat Panel with 22" display (16:9); Touch, 1 920 x 1080 pixels Standard up to 5 m; for 24 V DC; DisplayPort / VGA interface	**6AV7862-2BF00-0AA0**

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Technical specifications

Article number	**6AV7862-2BC00-0AA0**	**6AV7862-2BD00-0AA0**	**6AV7862-2BE00-0AA0**	**6AV7862-2BF00-0AA0**
	SIMATIC IFP1200 Basic	SIMATIC IFP1500 Basic	SIMATIC IFP1900 Basic	SIMATIC IFP2200 Basic
General information				
Product type designation	IFP1200 Basic	IFP1500 Basic	IFP1900 Basic	IFP2200 Basic
Short designation	Basic Flat Panel 12" Touch	Basic Flat Panel 15" Touch	Basic Flat Panel 19" Touch	Basic Flat Panel 22" Touch
Display				
Design of display	TFT widescreen display, LED backlighting	TFT display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	12.1 in; 12"	15.6 in; 15"	18.5 in; 19"	21.5 in; 22"
On Screen Display (OSD) configuration	No	No	No	No
Number of colors	16 000 000; 16 million	16 000 000; 16 million	16 000 000; 16 million	16 000 000; 16 million
Resolution (pixels)				
• Image resolution	1 280 x 800	1 366 x 768	1 366 x 768	1 920 x 1 080
General features				
• Detachable from computer unit	5 m	5 m	5 m	5 m
Backlighting				
• Type of backlighting	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h	50 000 h	30 000 h
• Backlight dimmable	Yes; 0-100 %	Yes; 0-100 %	Yes; 0-100 %	Yes; 0-100 %
Control elements				
Control elements	single-touch screen	single-touch screen	single-touch screen	single-touch screen
Input device				
• Integrated mouse cursor control	No	No	No	No
Touch operation				
• Design as touch screen	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive	Yes; Analog-resistive
Installation type/mounting				
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes
Supply voltage				
Rated value (DC)	24 V	24 V	24 V	24 V
Interfaces				
Number of USB interfaces	2; USB 2.0 (downstream)	2; USB 2.0 (downstream)	2; USB 2.0 (downstream)	2; USB 2.0 (downstream)
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Video interfaces				
• DisplayPort	Yes	Yes	Yes	Yes
Touch interfaces				
• USB	Yes; USB Type A	Yes; USB Type A	Yes; USB Type A	Yes; USB Type A
Degree and class of protection				
IP (at the front)	IP65	IP65	IP65	IP65
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
cULus	Yes; UL 61010-1, UL 61010-2-201	Yes; UL 61010-1, UL 61010-2-201	Yes; UL 61010-1, UL 61010-2-201	Yes; UL 61010-1, UL 61010-2-201
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes
FCC	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV7862-2BC00-0AA0** SIMATIC IFP1200 Basic	**6AV7862-2BD00-0AA0** SIMATIC IFP1500 Basic	**6AV7862-2BE00-0AA0** SIMATIC IFP1900 Basic	**6AV7862-2BF00-0AA0** SIMATIC IFP2200 Basic
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C	40 °C
Relative humidity				
• Operation, max.	85 %	85 %	85 %	85 %
Vibrations				
• Vibration load in operation	5 m/s^2	5 m/s^2	5 m/s^2	5 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
Shock testing				
• Shock load during operation	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	150 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2
Mechanics/material				
Enclosure material (front)				
• Aluminum	Yes	Yes	Yes	Yes
Dimensions				
Width of the housing front	320 mm	406 mm	473 mm	540 mm
Height of housing front	226 mm	258 mm	297 mm	334 mm
Mounting cutout, width	302 mm	388 mm	455 mm	522 mm
Mounting cutout, height	208 mm	241 mm	279 mm	317 mm
Overall depth	51 mm	59 mm	59 mm	59 mm
Weights				
Weight (without packaging)	2.7 kg	4.1 kg	5.1 kg	6.5 kg

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Overview

Industrial Flat Panels are rugged industrial monitors.
The devices are suitable as built-in devices and, in the PRO variant, for direct mounting on a support arm/pedestal.

Various display sizes of 12", 15", 19", 22" and 24" are available.

Depending on requirements, the monitors can be installed up to 100 m away from the IPC.
Convenient operation of modern user interfaces is possible thanks to multi-touch.

Ordering data

	Article No.
Industrial Flat Panel monitors	
SIMATIC IFP1200 V2	
12" multi-touch 1 280 x 800	
• Standard design, up to 5 m	**6AV7863-1MA00-2AA0**
• Neutral design	**6AV7863-1MA00-2NA0**
12" multi-touch 1 280 x 800, extended HDBase T up to 100 m	
• Standard design	**6AV7863-1MA10-2AA0**
• Neutral design	**6AV7863-1MA10-2NA0**
SIMATIC IFP1500 V2	
15" multi-touch, 1 920 x 1 080 pixels	
• Standard up to 5 m, incl. DP/USB cable 1.8 m	**6AV7863-5MA00-2AA0**
• Extended version HdBaseT up to 100 m	**6AV7863-5MA10-2AA0**
• Ethernet version up to 100 m	**6AV7863-5MA20-2AA0**
• Standard up to 5 m, neutral design	**6AV7863-5MA00-2NA0**
• Extended version, neutral design	**6AV7863-5MA10-2NA0**
• Ethernet version, neutral design	**6AV7863-5MA20-2NA0**
SIMATIC IFP1900 V2	
19" multi-touch, 1 920 x 1 080 pixels	
• Standard up to 5 m, incl. DP/USB cable 1.8 m	**6AV7863-6MA00-2AA0**
• Extended version HdBaseT up to 100 m	**6AV7863-6MA10-2AA0**
• Ethernet version up to 100 m	**6AV7863-6MA20-2AA0**
• Standard up to 5 m, neutral design	**6AV7863-6MA00-2NA0**
• Extended version, neutral design	**6AV7863-6MA10-2NA0**
• Ethernet version, neutral design	**6AV7863-6MA20-2NA0**
SIMATIC IFP2200 V2	
22" multi-touch, 1 920 x 1 080 pixels	
• Standard up to 5 m, incl. DP/USB cable 1.8 m	**6AV7863-4MA00-2AA0**
• Extended version HdBaseT up to 100 m	**6AV7863-4MA10-2AA0**
• Ethernet version up to 100 m	**6AV7863-4MA20-2AA0**
• Standard up to 5 m, neutral design	**6AV7863-4MA00-2NA0**
• Extended version, neutral design	**6AV7863-4MA10-2NA0**
• Ethernet version, neutral design	**6AV7863-4MA20-2NA0**
SIMATIC IFP2400 V2	
24" multi-touch, 1 920 x 1 080 pixels	
• Standard up to 5 m, incl. DP/USB cable 1.8 m	**6AV7863-7MA00-2AA0**
• Extended version HdBaseT up to 100 m	**6AV7863-7MA10-2AA0**
• Ethernet version up to 100 m	**6AV7863-7MA20-2AA0**
• Standard up to 5 m, neutral design	**6AV7863-7MA00-2NA0**
• Extended version, neutral design	**6AV7863-7MA10-2NA0**
• Ethernet version, neutral design	**6AV7863-7MA20-2NA0**

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Ordering data

	Article No.
Accessories	
Set with steel mounting clips	**6AV6671-8XK00-0AX3**
DisplayPort cable (industrial quality)	
• 3 m	**6AV7860-0DH30-0AA0**
• 5 m	**6AV7860-0DH50-0AA0**
DVI-D cable (industrial quality)	
• 3 m	**6AV7860-0BH30-0AA0**
• 5 m	**6AV7860-0BH50-0AA0**
USB cable (industrial quality)	
• 3 m	**6AV7860-0CH30-0AA0**
• 5 m	**6AV7860-0CH50-0AA0**

	Article No.
Accessories for HDBaseT variants	
Cable set, consisting of:	
Transceiver Unit with • Two ferrites • USB cable, length 0.5 m • Connector type A • Connector type B DisplayPort cable, length 0.5 m • Cat. 6A Ethernet cable, length see "Specification"	
• 10 m	**6AV7860-1EX21-0AB1**
• 15 m	**6AV7860-1EX21-5AB1**
• 20 m	**6AV7860-1EX22-0AB1**
• 30 m	**6AV7860-1EX23-0AB1**
Cat. 6A Ethernet cable	
• 10 m	**6AV7860-0EH01-0AA0**
• 15 m	**6AV7860-0EH01-5AA0**
• 20 m	**6AV7860-0EH02-0AA0**
• 30 m	**6AV7860-0EH03-0AA0**

Technical specifications

Article number	**6AV7863-1MA00-2AA0** SIMATIC Flat Panel 12" MT V2	**6AV7863-1MA00-2NA0** SIMATIC Flat Panel 12" MT V2	**6AV7863-1MA10-2AA0** SIMATIC Flat Panel 12" MT V2 Extended	**6AV7863-1MA10-2NA0** SIMATIC Flat Panel 12" MT V2 Extended
General information				
Product type designation	IFP1200	IFP1200	IFP1200 V2	IFP1200 V2
Short designation	Flat Panel 12" multi-touch	Flat Panel 12" multi-touch	Flat Panel 12" multi-touch ext.	Flat Panel 12" multi-touch ext.
Display				
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	12.1 in	12.1 in	12.1 in	12.1 in
Screen diagonal [cm]	30.7 cm	30.7 cm	30.7 cm	30.7 cm
On Screen Display (OSD) configuration	No	No	No	No
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	176° x 176°	176° x 176°	176° x 176°	176° x 176°
Resolution (pixels)				
• Image resolution	1 280 x 800	1 280 x 800	1 280 x 800	1 280 x 800
General features				
• Brightness/contrast	400 cd/m² / 800:1	400 cd/m² / 800:1	400 cd/m² / 800:1	400 cd/m² / 800:1
• Detachable from computer unit	5 m	5 m	100 m; HDBaseT protocol	100 m; HDBaseT protocol
Backlighting				
• Type of backlighting	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	70 000 h; At 25°C	70 000 h; At 25°C	70 000 h; At 25°C	70 000 h; At 25°C
Control elements				
Input device				
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation				
• Design as touch screen	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV7863-1MA00-2AA0**	**6AV7863-1MA00-2NA0**	**6AV7863-1MA10-2AA0**	**6AV7863-1MA10-2NA0**
	SIMATIC Flat Panel 12" MT V2	SIMATIC Flat Panel 12" MT V2	SIMATIC Flat Panel 12" MT V2 Extended	SIMATIC Flat Panel 12" MT V2 Extended
Installation type/mounting				
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Supply voltage				
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Input current				
Current consumption (rated value)	0.65 A	0.65 A	0.65 A	0.65 A
Current consumption, max.	1 A	1 A	1 A	1 A
Interfaces				
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB
Video interfaces				
• DVI-D	Yes			
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces				
• USB	Yes	Yes	Yes	Yes
Degree and class of protection				
IP (at the front)	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20
NEMA (front)				
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes
Standards, approvals, certificates				
Certificate of suitability	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding
CE mark	Yes	Yes	Yes	Yes
UL approval	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL
cULus	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508
FM approval	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas				
• ATEX Zone 2	Yes	Yes; Available soon	Yes; Available soon	Yes; Available soon
• ATEX Zone 22	Yes	Yes; Available soon	Yes; Available soon	Yes; Available soon
• IECEx Zone 2	Yes	Yes; Available soon	Yes; Available soon	Yes; Available soon
• IECEx Zone 22	Yes	Yes; Available soon	Yes; Available soon	Yes; Available soon
• FM Class I Division 2	Yes	Yes; Available soon	Yes; Available soon	Yes; Available soon

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Technical specifications

Article number	**6AV7863-1MA00-2AA0** SIMATIC Flat Panel 12" MT V2	**6AV7863-1MA00-2NA0** SIMATIC Flat Panel 12" MT V2	**6AV7863-1MA10-2AA0** SIMATIC Flat Panel 12" MT V2 Extended	**6AV7863-1MA10-2NA0** SIMATIC Flat Panel 12" MT V2 Extended
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level				
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity				
• Operation, max.	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation
Vibrations				
• Vibration load in operation	1 gn	1 gn	1 gn	1 gn
• Vibration load during transport/storage	1 gn	1 gn	1 gn	1 gn
Shock testing				
• Shock load during operation	15 gn	15 gn	15 gn	15 gn
• shock acceleration during storage/transport	15 gn	15 gn	15 gn	15 gn
Mechanics/material				
Enclosure material (front)	In standard design	With neutral design	In standard design	With neutral design
• Aluminum	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum	aluminum	aluminum
Dimensions				
Width of the housing front	326 mm	326 mm	326 mm	326 mm
Height of housing front	237 mm	237 mm	237 mm	237 mm
Mounting cutout, width	310 mm; Tolerance: +1 mm	310 mm; Tolerance: +1 mm	310 mm; Tolerance: +1 mm	310 mm; Tolerance: +1 mm
Mounting cutout, height	221 mm; Tolerance: +1 mm	221 mm; Tolerance: +1 mm	221 mm; Tolerance: +1 mm	221 mm; Tolerance: +1 mm
Overall depth	62.5 mm	62.5 mm	62.5 mm	62.5 mm
Weights				
Weight (without packaging)	3 kg	3 kg	3 kg	3 kg

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Technical specifications

Article number	6AV7863-5MA00-2AA0	6AV7863-5MA10-2AA0	6AV7863-5MA20-2AA0	6AV7863-5MA00-2NA0	6AV7863-5MA10-2NA0	6AV7863-5MA20-2NA0
	SIMATIC Flat Panel 15" MT V2	SIMATIC Flat Panel 15 MT V2 Extended	SIMATIC Flat Panel 15" MT ETH	SIMATIC Flat Panel 15" MT V2	SIMATIC Flat Panel 15" MT V2 Extended	SIMATIC Flat Panel 15" MT ETH
General information						
Product type designation	IFP1500	IFP1500 V2	IFP1500 V2 PRO	IFP1500 V2 PRO	IFP1500 V2	IFP1500 V2
Short designation	SIMATIC IFP1500 V2	Flat Panel 15" multi-touch ext.		Flat Panel 15" multi-touch	SIMATIC IFP1500 V2 ext.	
Display						
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	15.6 in; 15"	15.6 in; 15"	15.6 in	15.6 in; 15"	15.6 in; 15"	15.6 in
Screen diagonal [cm]	40 cm	40 cm	40 cm	40 cm	40 cm	40 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	178° x 178°	178° x 178°	160° x 140°	178° x 178°	178° x 178°	160° x 140°
Resolution (pixels)						
• Image resolution	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080
General features						
• Brightness/contrast	400 cd/m² / 700:1	400 cd/m² / 700:1	400 cd/m² / 700:1	400 cd/m² / 700:1	400 cd/m² / 700:1	400 cd/m² / 700:1
• non-reflective and tempered mineral glass screen	Yes	Yes	Yes	Yes	Yes	Yes
• Detachable from computer unit	5 m	100 m; HDBaseT protocol	100 m; Ethernet	5 m	100 m; HDBaseT protocol	100 m; Ethernet
Backlighting						
• Type of backlighting	LED	LED	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements						
Control elements	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen
Input device						
• Integrated mouse cursor control	Yes	Yes	Yes	Yes	Yes	Yes
Touch operation						
• Design as touch screen	Yes; Projective-capacitive					
• Design as multi-touch screen	Yes; Projective-capacitive					
• Monitor keyboard	Yes; If supported by operating system	Yes; If supported by operating system	Yes	Yes; If supported by operating system	Yes; If supported by operating system	Yes
Installation type/mounting						
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Input current						
Current consumption (rated value)	1 A	1 A	1 A	1 A	1 A	1 A
Current consumption, max.	1.3 A	1.3 A	1.3 A	1.3 A	1.3 A	1.3 A
Interfaces						
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A		2; USB 2.0 type A	2; USB 2.0 type A	
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB	USB	USB
Video interfaces						
• DVI-D	Yes	No	No	Yes	No	No
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces						
• USB	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	6AV7863-5MA00-2AA0	6AV7863-5MA10-2AA0	6AV7863-5MA20-2AA0	6AV7863-5MA00-2NA0	6AV7863-5MA10-2NA0	6AV7863-5MA20-2NA0
	SIMATIC Flat Panel 15" MT V2	SIMATIC Flat Panel 15 MT V2 Extended	SIMATIC Flat Panel 15" MT ETH	SIMATIC Flat Panel 15" MT V2	SIMATIC Flat Panel 15" MT V2 Extended	SIMATIC Flat Panel 15" MT ETH
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20		IP20	IP20	
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
Certificate of suitability	hazardous zone 2/22; shipbuilding			hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas						
• ATEX Zone 2	Yes; Available soon	Yes		Yes; Available soon	Yes	No
• ATEX Zone 22	Yes; Available soon	Yes		Yes; Available soon	Yes	No
• IECEx Zone 2	Yes; Available soon	Yes	Yes; Available soon	Yes; Available soon	Yes	Yes; Available soon
• IECEx Zone 22	Yes; Available soon	Yes	Yes; Available soon	Yes; Available soon	Yes	Yes; Available soon
• FM Class I Division 2	Yes; Available soon	Yes	Yes; Available soon	Yes; Available soon	Yes	Yes; Available soon
Ambient conditions						
Ambient temperature during operation						
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level						
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity						
• Operation, max.	90 %; no condensation					
Vibrations						
• Vibration load in operation	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
Shock testing						
• Shock load during operation	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2
Mechanics/material						
Enclosure material (front)				With neutral design	With neutral design	
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Dimensions						
Width of the housing front	398 mm	398 mm	398 mm	398 mm	398 mm	398 mm
Height of housing front	257 mm	257 mm	257 mm	257 mm	257 mm	257 mm
Mounting cutout, width	382 mm; Tolerance: +1 mm	382 mm; Tolerance: +1 mm	382 mm; Tolerance: +1 mm	382 mm; Tolerance: +1 mm	382 mm; Tolerance: +1 mm	382 mm; Tolerance: +1 mm
Mounting cutout, height	241 mm; Tolerance: +1 mm	241 mm; Tolerance: +1 mm	241 mm; Tolerance: +1 mm	241 mm; Tolerance: +1 mm	241 mm; Tolerance: +1 mm	241 mm; Tolerance: +1 mm
Overall depth	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm
Weights						
Weight (without packaging)	4 kg	4 kg	4 kg	4 kg	4 kg	4 kg

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Technical specifications

Article number	**6AV7863-6MA00-2AA0**	**6AV7863-6MA10-2AA0**	**6AV7863-6MA20-2AA0**	**6AV7863-6MA00-2NA0**	**6AV7863-6MA10-2NA0**	**6AV7863-6MA20-2NA0**
	SIMATIC Flat Panel 19" MT V2	SIMATIC Flat Panel 19 MT V2 Extended	SIMATIC Flat Panel 19" MT ETH	SIMATIC Flat Panel 19" MT V2	SIMATIC Flat Panel 19 MT V2 Extended	SIMATIC Flat Panel 19" MT ETH
General information						
Product type designation	IFP1900	IFP1900 V2	IFP1900 V2	IFP1900 V2	IFP1900 V2	IFP1900 V2
Short designation	SIMATIC IFP1900 V2	SIMATIC IFP1900 V2 ext.		SIMATIC IFP1900 V2	SIMATIC IFP1900 V2 ext.	SIMATIC IFP1900 V2
Display						
Design of display	TFT widescreen display, LED backlighting					
Screen diagonal	18.5 in; 19"	18.5 in; 19"	18.5 in	18.5 in; 19"	18.5 in; 19"	18.5 in
Screen diagonal [cm]	47 cm	47 cm	47 cm	47 cm	47 cm	47 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°
Resolution (pixels)						
• Image resolution	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080
General features						
• Brightness/contrast	350 cd/m² / 1 000:1					
• non-reflective and tempered mineral glass screen	Yes	Yes	Yes	Yes	Yes	Yes
• Detachable from computer unit	5 m	100 m; HDBaseT protocol	100 m; Ethernet	5 m	100 m; HDBaseT protocol	100 m; Ethernet
Backlighting						
• Type of backlighting	LED	LED	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements						
Control elements	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen
Input device						
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation						
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes; If supported by operating system	Yes; If supported by operating system	Yes	Yes; If supported by operating system	Yes; If supported by operating system	Yes
Installation type/mounting						
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Input current						
Current consumption (rated value)	1.2 A	1.2 A	1.2 A	1.2 A	1.2 A	1.2 A
Current consumption, max.	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A
Interfaces						
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A		2; USB 2.0 type A	2; USB 2.0 type A	
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB	USB	USB
Video interfaces						
• DVI-D	Yes	No	No	Yes	No	No
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces						
• USB	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	6AV7863-6MA00-2AA0	6AV7863-6MA10-2AA0	6AV7863-6MA20-2AA0	6AV7863-6MA00-2NA0	6AV7863-6MA10-2NA0	6AV7863-6MA20-2NA0
	SIMATIC Flat Panel 19" MT V2	SIMATIC Flat Panel 19 MT V2 Extended	SIMATIC Flat Panel 19" MT ETH	SIMATIC Flat Panel 19" MT V2	SIMATIC Flat Panel 19 MT V2 Extended	SIMATIC Flat Panel 19" MT ETH
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20		IP20	IP20	
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
Certificate of suitability	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding		hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL
cULus	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas						
• ATEX Zone 2	Yes; Available soon	Yes		Yes; Available soon	Yes	
• ATEX Zone 22	Yes; Available soon	Yes		Yes; Available soon	Yes	
• IECEx Zone 2	Yes; Available soon	Yes		Yes; Available soon	Yes	
• IECEx Zone 22	Yes; Available soon	Yes		Yes; Available soon	Yes	
• FM Class I Division 2	Yes; Available soon	Yes		Yes; Available soon	Yes	
Ambient conditions						
Ambient temperature during operation						
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level						
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity						
• Operation, max.	90 %; no condensation					
Vibrations						
• Vibration load in operation	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
Shock testing						
• Shock load during operation	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2
Mechanics/material						
Enclosure material (front)				With neutral design	With neutral design	
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum		aluminum	aluminum	aluminum
Dimensions						
Width of the housing front	462 mm	464 mm	464 mm	464 mm	464 mm	464 mm
Height of housing front	294 mm	294 mm	294 mm	294 mm	294 mm	294 mm
Mounting cutout, width	448 mm; Tolerance: +1 mm	448 mm; Tolerance: +1 mm	448 mm; Tolerance: +1 mm	448 mm; Tolerance: +1 mm	448 mm; Tolerance: +1 mm	448 mm
Mounting cutout, height	278 mm; Tolerance: +1 mm	278 mm; Tolerance: +1 mm	278 mm; Tolerance: +1 mm	278 mm; Tolerance: +1 mm	278 mm; Tolerance: +1 mm	278 mm
Overall depth	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm
Weights						
Weight (without packaging)	5 kg	5 kg	5 kg	5 kg	5 kg	5 kg

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Technical specifications

Article number	**6AV7863-4MA00-2AA0**	**6AV7863-4MA10-2AA0**	**6AV7863-4MA20-2AA0**	**6AV7863-4MA00-2NA0**	**6AV7863-4MA10-2NA0**	**6AV7863-4MA20-2NA0**
	SIMATIC Flat Panel 22" MT V2	SIMATIC Flat Panel 22 MT V2 Extended	SIMATIC Flat Panel 22" MT ETH	SIMATIC Flat Panel 22" MT V2	SIMATIC Flat Panel 22" MT V2 Extended	SIMATIC Flat Panel 22" MT ETH
General information						
Product type designation	IFP2200	IFP2200		IFP2200	IFP2200	
Short designation	SIMATIC IFP2200 V2	SIMATIC IFP2200 V2 ext.		SIMATIC IFP2200 V2	SIMATIC IFP2200 V2	SIMATIC IFP2200 V2
Display						
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	22" TFT multi-touch	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	22" TFT multi-touch
Screen diagonal	21.5 in; 22"	21.5 in; 22"	21.5 in	21.5 in; 22"	21.5 in; 22"	21.5 in
Screen diagonal [cm]	56 cm	56 cm	56 cm	56 cm	56 cm	56 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	170° x 170°	170° x 170°	178° x 178°	170° x 170°	170° x 170°	178° x 178°
Resolution (pixels)						
• Image resolution	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080
General features						
• Brightness/contrast	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1
• Detachable from computer unit	5 m	100 m; HDBaseT protocol	100 m; Ethernet	5 m	100 m; HDBaseT protocol	100 m; Ethernet
Backlighting						
• Type of backlighting	LED	LED	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements						
Control elements	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	
Input device						
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	
Touch operation						
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes; If supported by operating system	Yes; If supported by operating system		Yes; If supported by operating system	Yes; If supported by operating system	
Installation type/mounting						
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V	24 V	24 V	24 V	24 V	24 V
Input current						
Current consumption (rated value)	1 A	1 A	1 A	1 A	1 A	1 A
Current consumption, max.	1.3 A	1.3 A	1.3 A	1.3 A	1.3 A	1.3 A
Interfaces						
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A		2; USB 2.0 type A	2; USB 2.0 type A	
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse			USB			USB
Video interfaces						
• DVI-D	Yes	No	No	Yes	No	No
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces						
• USB	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	6AV7863-4MA00-2AA0	6AV7863-4MA10-2AA0	6AV7863-4MA20-2AA0	6AV7863-4MA00-2NA0	6AV7863-4MA10-2NA0	6AV7863-4MA20-2NA0
	SIMATIC Flat Panel 22" MT V2	SIMATIC Flat Panel 22 MT V2 Extended	SIMATIC Flat Panel 22" MT ETH	SIMATIC Flat Panel 22" MT V2	SIMATIC Flat Panel 22" MT V2 Extended	SIMATIC Flat Panel 22" MT ETH
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20		IP20	IP20	
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes		Yes	Yes	
• Enclosure Type 12 at the front	Yes	Yes		Yes	Yes	
Standards, approvals, certificates						
Certificate of suitability	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding		hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL
cULus					Yes	
FM approval	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2
RCM (formerly C-TICK)			Yes		Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas						
• ATEX Zone 2	Yes; Available soon	Yes		Yes; Available soon	Yes	
• ATEX Zone 22	Yes; Available soon	Yes		Yes; Available soon	Yes	
• IECEx Zone 2	Yes; Available soon	Yes	Yes; Available soon	Yes; Available soon	Yes	Yes; Available soon
• IECEx Zone 22	Yes; Available soon	Yes	Yes; Available soon	Yes; Available soon	Yes	Yes; Available soon
• FM Class I Division 2	Yes; Available soon	Yes	Yes; Available soon	Yes; Available soon	Yes	Yes; Available soon
Ambient conditions						
Ambient temperature during operation						
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Altitude during operation relating to sea level						
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity						
• Operation, max.	90 %; no condensation					
Vibrations						
• Vibration load in operation	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
Shock testing						
• Shock load during operation	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2
Mechanics/material						
Enclosure material (front)				With neutral design	With neutral design	With neutral design
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Dimensions						
Width of the housing front	529 mm	529 mm	529 mm	529 mm	529 mm	529 mm
Height of housing front	331 mm	331 mm	331 mm	331 mm	331 mm	331 mm
Mounting cutout, width	513 mm; Tolerance: +1 mm	513 mm; Tolerance: +1 mm	513 mm; Tolerance: +1 mm	382 mm; Tolerance: +1 mm	513 mm; Tolerance: +1 mm	513 mm; Tolerance: +1 mm
Mounting cutout, height	315 mm; Tolerance: +1 mm	315 mm; Tolerance: +1 mm	315 mm; Tolerance: +1 mm	241 mm; Tolerance: +1 mm	315 mm; Tolerance: +1 mm	315 mm; Tolerance: +1 mm
Overall depth	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm
Weights						
Weight (without packaging)	6.4 kg	6.4 kg	6.4 kg	6.4 kg	6.4 kg	6.4 kg

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Technical specifications

Article number	6AV7863-7MA00-2AA0	6AV7863-7MA10-2AA0	6AV7863-7MA20-2AA0	6AV7863-7MA00-2NA0	6AV7863-7MA10-2NA0	6AV7863-7MA20-2NA0
	SIMATIC Flat Panel 24" MT V2	SIMATIC Flat Panel 24 MT V2 Extended	SIMATIC Flat Panel 24" MT ETH	SIMATIC Flat Panel 24" MT V2	SIMATIC Flat Panel 24 MT V2 Extended	SIMATIC Flat Panel 24" MT ETH
General information						
Product type designation	IFP2400	IFP2400 V2		IFP2400	IFP2400 V2	
Short designation	SIMATIC IFP2400 V2	SIMATIC IFP2400 V2		SIMATIC IFP2400 V2	SIMATIC IFP2400 V2	
Display						
Design of display	TFT widescreen display, LED backlighting					
Screen diagonal	23.8 in; 24"	23.8 in; 24"	23.8 in	23.8 in; 24"	23.8 in; 24"	23.8 in
Screen diagonal [cm]	60.47 cm	60.47 cm	60.47 cm	60.47 cm	60.47 cm	60.47 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; RGB 6 bit + Hi_FRC	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; RGB 6 bit + Hi_FRC
Viewing angle	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°
Resolution (pixels)						
• Image resolution	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080
General features						
• Brightness/contrast	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1
• non-reflective and tempered mineral glass screen	Yes			Yes	Yes	Yes
• Detachable from computer unit	5 m	100 m; HDBaseT protocol	100 m; Ethernet	5 m	100 m; HDBaseT protocol	100 m; Ethernet
Backlighting						
• Type of backlighting	LED	LED	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements						
Control elements	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen
Input device						
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation						
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes; If supported by operating system	Yes; If supported by operating system		Yes; If supported by operating system	Yes; If supported by operating system	
Installation type/mounting						
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Supply voltage						
Rated value (DC)	24 V; PELV / SELV floating	24 V	24 V	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Input current						
Current consumption (rated value)	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A
Current consumption, max.	1.9 A	1.9 A	1.9 A	1.9 A	1.9 A	1.9 A
Interfaces						
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A		2; USB 2.0 type A	2; USB 2.0 type A	
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB		USB	USB	USB	USB
Video interfaces						
• DVI-D	Yes		No	Yes		No
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces						
• USB	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	6AV7863-7MA00-2AA0	6AV7863-7MA10-2AA0	6AV7863-7MA20-2AA0	6AV7863-7MA00-2NA0	6AV7863-7MA10-2NA0	6AV7863-7MA20-2NA0
	SIMATIC Flat Panel 24" MT V2	SIMATIC Flat Panel 24 MT V2 Extended	SIMATIC Flat Panel 24" MT ETH	SIMATIC Flat Panel 24" MT V2	SIMATIC Flat Panel 24 MT V2 Extended	SIMATIC Flat Panel 24" MT ETH
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20		IP20	IP20	
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
Certificate of suitability	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding		hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL
cULus	Yes	Yes		Yes	Yes	
FM approval	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2	Yes; Class I Div. 2
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas						
• ATEX Zone 2	Yes; Available soon	Yes; Available soon		Yes; Available soon	Yes; Available soon	
• ATEX Zone 22	Yes; Available soon	Yes; Available soon		Yes; Available soon	Yes; Available soon	
• IECEx Zone 2	Yes; Available soon	Yes; Available soon		Yes; Available soon	Yes; Available soon	
• IECEx Zone 22	Yes; Available soon	Yes; Available soon		Yes; Available soon	Yes; Available soon	
• FM Class I Division 2	Yes; Available soon	Yes; Available soon		Yes; Available soon	Yes; Available soon	
Ambient conditions						
Ambient temperature during operation						
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Altitude during operation relating to sea level						
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity						
• Operation, max.	90 %; no condensation					
Vibrations						
• Vibration load in operation	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
Shock testing						
• Shock load during operation	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2	250 m/s^2
Mechanics/material						
Enclosure material (front)						
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Dimensions						
Width of the housing front	585 mm	585 mm	585 mm	585 mm	585 mm	585 mm
Height of housing front	363 mm	363 mm	363 mm	363 mm	363 mm	363 mm
Mounting cutout, width	569 mm; Tolerance: +1 mm	569 mm; Tolerance: +1 mm	569 mm; Tolerance: +1 mm	569 mm; Tolerance: +1 mm	569 mm; Tolerance: +1 mm	569 mm; Tolerance: +1 mm
Mounting cutout, height	347 mm; Tolerance: +1 mm	347 mm; Tolerance: +1 mm	347 mm; Tolerance: +1 mm	347 mm; Tolerance: +1 mm	347 mm; Tolerance: +1 mm	347 mm; Tolerance: +1 mm
Overall depth	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm	63.4 mm
Weights						
Weight (without packaging)	7.9 kg	7.9 kg	7.9 kg	7.9 kg	7.9 kg	7.9 kg

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Overview

SIMATIC ITC Industrial Thin Clients are powerful operating units for flexible use in distributed visualization applications.

All devices are equipped with high-resolution, brilliant widescreen displays, and due to the diverse communication protocols they can be used both for challenging machine-level operator control & monitoring and for the connection to control systems, e.g. in the SCADA environment. They can be used as (additional) operator panels on a SIMATIC Industrial PC, Panel PC, or server, and on a SIMATIC Panel or SINUMERIK.

SIMATIC Industrial Thin Clients are also available as glass-front, capacitive multi-touch devices in display sizes 15", 19" and 22".

- SIMATIC ITC1500 V3 – 15" multi-touch 1 366 x 768
- SIMATIC ITC1900 V3 – 19" multi-touch 1 366 x 768
- SIMATIC ITC2200 V3 – 22" multi-touch 1 920 x 1 080

The following installation versions are still available with resistive single-touch:

- SIMATIC ITC1200 – 12" touch
- SIMATIC ITC1500 – 15" touch
- SIMATIC ITC1900 – 19" touch
- SIMATIC ITC2200 – 22" touch

The SIMATIC HMI Thin Client Ex is available for hazardous areas (Zone 1/11). This device differs technically from the devices mentioned above. For more details, refer to the SIMATIC Thin Client EX chapter.

Ordering data

	Article No.
Industrial Thin Client with multi-touch	
SIMATIC Industrial Thin Client V3	
Capacitive touch sensor Protocols supported: RDP, VNC, SMARTSERVER HTML5, etc., standard design, built-in unit	
• SIMATIC ITC1500 V3 15" widescreen TFT display	**6AV6646-1BA15-0AA0**
• SIMATIC ITC1900 V3 19" widescreen TFT display	**6AV6646-1BA18-0AA0**
• SIMATIC ITC2200 V3 22" widescreen TFT display	**6AV6646-1BA22-1AA0**
Industrial Thin Client	
Industrial Thin client V2	
Touch operation Protocols supported: RDP, VNC, SMARTSERVER, Web	
• SIMATIC ITC1200 12" widescreen TFT display	**6AV6646-1AA22-0AX0**
• SIMATIC ITC1500 15" widescreen TFT display	**6AV6646-1AB22-0AX0**
• SIMATIC ITC1900 19" widescreen TFT display	**6AV6646-1AC22-0AX0**
• SIMATIC ITC2200 22" widescreen TFT display	**6AV6646-1AD22-0AX0**
Accessories	See Accessories

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Technical specifications

Article number	**6AV6646-1BA15-0AA0**	**6AV6646-1BA18-0AA0**	**6AV6646-1BA22-1AA0**
	SIMATIC ITC1500 V3	SIMATIC ITC1900 V3	SIMATIC ITC2200 V3
General information			
Product type designation	ITC1500 V3	ITC1900 V3	ITC2200 V3
Display			
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	15.6 in; 15"	18.5 in; 19"	21.5 in; 22"
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Image resolution	1 366 x 768	1 366 x 768	1 920 x 1 080
General features			
• non-reflective and tempered mineral glass screen	Yes	Yes	Yes
• Detachable from computer unit	100 m	100 m	100 m
Backlighting			
• Type of backlighting	LED, dimmable	LED, dimmable	LED, dimmable
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	30 000 h; At 25°C
Control elements			
Control elements	multi-touch screen	multi-touch screen	multi-touch screen
Touch operation			
• Design as touch screen	Yes	Yes	Yes
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes	Yes	Yes
Installation type/mounting			
Design	Built-in unit	Built-in unit	Built-in unit
Supply voltage			
Type of supply voltage	DC	DC	DC
Rated value (DC)	24 V	24 V	24 V
Interfaces			
Number of industrial Ethernet interfaces	2; 2 ports (switch)	2; 2 ports (switch)	2; 2 ports (switch)
Number of USB interfaces	4; on rear	4; on rear	4; on rear
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB
Industrial Ethernet			
• Transmission rate, max.	1 000 Mbit/s	1 000 Mbit/s	1 000 Mbit/s
Degree and class of protection			
IP (at the front)	IP65	IP65	IP65
IP (rear)	IP20	IP20	
NEMA (front)		NEMA 4x (when installed)	
• Enclosure Type 4x at the front	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
FM approval	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes
Use in hazardous areas			
• ATEX Zone 2	Yes	Yes	Yes
• ATEX Zone 22	Yes	Yes	Yes
• IECEx Zone 2	Yes	Yes	Yes
• IECEx Zone 22	Yes	Yes	Yes
• cULus Class I Zone 2, Division 2	Yes	Yes	Yes
• FM Class I Division 2	Yes	Yes	Yes

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Technical specifications

Article number	**6AV6646-1BA15-0AA0** SIMATIC ITC1500 V3	**6AV6646-1BA18-0AA0** SIMATIC ITC1900 V3	**6AV6646-1BA22-1AA0** SIMATIC ITC2200 V3
Ambient conditions			
Ambient temperature during operation			
• min.	0 °C	0 °C	0 °C
• max.	50 °C	45 °C	45 °C
Relative humidity			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation
Vibrations			
• Vibration load in operation	10 m/s^2	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2	10 m/s^2
Shock testing			
• Shock load during operation	150 m/s^2	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	150 m/s^2	150 m/s^2	150 m/s^2
Software			
Web browser	Yes; HTML5, CSS	Yes; HTML5, CSS	Yes; HTML5, CSS
PDF reader	Yes	Yes	Yes
configuration / header			
Configuration			
• Local	Yes	Yes	Yes
• Remote	Yes; Via web page	Yes; Via web page	Yes; Via web page
Languages			
Online languages			
• Number of online/runtime languages	3; german / english	2; german / english	3; german / english
Peripherals/Options			
USB memory	Yes; USB storage medium can be connected	Yes; USB storage medium can be connected	Yes; USB storage medium can be connected
Mechanics/material			
Enclosure material (front)			
• Aluminum	Yes	Yes	Yes
Dimensions			
Width of the housing front	398 mm	464 mm	529 mm
Height of housing front	257 mm	294 mm	331 mm
Mounting cutout, width	382 mm	448 mm	513 mm
Mounting cutout, height	241 mm	278 mm	315 mm
Overall depth	73 mm	73 mm	73 mm
Weights			
Weight (without packaging)	5 kg	6.1 kg	7.2 kg

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Technical specifications

Article number	**6AV6646-1AA22-0AX0** SIMATIC ITC1200	**6AV6646-1AB22-0AX0** SIMATIC ITC1500	**6AV6646-1AC22-0AX0** SIMATIC ITC1900	**6AV6646-1AD22-0AX0** SIMATIC ITC2200
General information				
Product type designation	ITC1200	ITC1500	ITC1900	ITC2200
Display				
Design of display	TFT widescreen display, LED backlighting			
Screen diagonal	12.1 in; 12"	15.4 in; 15"	18.5 in; 19"	21.5 in; 22"
Number of colors	16 777 216	16 777 216	16 777 216	16 777 216
Resolution (pixels)				
• Image resolution	1 280 x 800	1 280 x 800	1 366 x 768	1 920 x 1 080
General features				
• Detachable from computer unit	100 m	100 m	100 m	100 m
Backlighting				
• Type of backlighting	LED, dimmable	LED, dimmable	LED, dimmable	LED, dimmable
• MTBF backlighting (at 25 °C)				30 000 h; At 25°C
Control elements				
Control elements	single-touch screen	single-touch screen	single-touch screen	single-touch screen
Touch operation				
• Design as touch screen	Yes	Yes	Yes	Yes
• Monitor keyboard	Yes	Yes	Yes	Yes
Installation type/mounting				
Design	Built-in unit	Built-in unit	Built-in unit	Built-in unit
Supply voltage				
Type of supply voltage	DC	DC	DC	DC
Rated value (DC)	24 V	24 V	24 V	24 V
Interfaces				
Number of industrial Ethernet interfaces	1	1	1	1
Number of USB interfaces	2; on rear	2; on rear	2; on rear	2; on rear
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB
Industrial Ethernet				
• Transmission rate, max.	1 000 Mbit/s	1 000 Mbit/s	1 000 Mbit/s	1 000 Mbit/s
Degree and class of protection				
IP (at the front)	IP65	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20	IP20
NEMA (front)				
• Enclosure Type 4 at the front				Yes
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes
Use in hazardous areas				
• ATEX Zone 2	Yes			
• ATEX Zone 22	Yes			
• cULus Class I Zone 1	No	No	No	No
• cULus Class I Zone 2, Division 2	Yes	Yes; Available soon	Yes; Available soon	Yes; Available soon
• FM Class I Division 2	Yes	Yes; Available soon	Yes; Available soon	Yes; Available soon
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	45 °C	45 °C
Relative humidity				
• Operation, max.	90 %	90 %	90 %	90 %
Software				
Web browser	Yes	Yes	Yes	Yes
PDF reader	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV6646-1AA22-0AX0**	**6AV6646-1AB22-0AX0**	**6AV6646-1AC22-0AX0**	**6AV6646-1AD22-0AX0**
	SIMATIC ITC1200	SIMATIC ITC1500	SIMATIC ITC1900	SIMATIC ITC2200
Configuration / header				
Configuration				
• Local	Yes	Yes	Yes	Yes
• Remote	Yes; With Remote Configuration Center (RCC) as of V2.0	Yes; With Remote Configuration Center (RCC) as of V2.0	Yes; With Remote Configuration Center (RCC) as of V2.0	Yes; With Remote Configuration Center (RCC) as of V2.0
Languages				
Online languages				
• Number of online/runtime languages	2; german / english	2; german / english	2; german / english	3; DE, EN, HU
Peripherals/Options				
USB memory	Yes; USB storage medium can be connected	Yes; USB storage medium can be connected	Yes; USB storage medium can be connected	Yes; USB storage medium can be connected
Mechanics/material				
Enclosure material (front)				
• Aluminum	Yes	Yes	Yes	Yes
Dimensions				
Width of the housing front	330 mm	415 mm	483 mm	560 mm
Height of housing front	241 mm	310 mm	337 mm	380 mm
Mounting cutout, width	310 mm	396 mm	465 mm	542 mm
Mounting cutout, height	221 mm	291 mm	319 mm	362 mm
Overall depth	82 mm	75 mm	75 mm	75 mm
Weights				
Weight (without packaging)	3.4 kg	5.2 kg	6.5 kg	7.1 kg

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Introduction

Overview

Fully-enclosed IP65-protected devices

The SIMATIC devices with fully-enclosed IP65 protection (SIMATIC Industrial Flat Panel PRO, SIMATIC Flat Panel PRO, SIMATIC Thin Client PRO and SIMATIC IPC477D PRO) are specially designed for mounting on a support arm/pedestal. Thanks to their extremely rugged design, the devices are ideal for industrial applications in harsh environments.

Portfolio:

- Comfort Panels PRO
- SIMATIC Industrial Flat Panel PRO
- SIMATIC Industrial Thin Client PRO
- SIMATIC IPC477E PRO (15", 19", 22" display size)
- System components for fully-enclosed IP65-protected devices:
  - Fixing elements
  - Extension Units and operator controls
  - Extension components

Devices with stainless steel front

SIMATIC devices with stainless steel fronts (SIMATIC Industrial Thin Client INOX) are designed for use in the food and beverages, pharmaceutical and fine chemicals industries and other hygienic applications for machine-level operator control and monitoring.

The fully-enclosed SIMATIC devices with stainless steel fronts (SIMATIC IPC277E 19" INOX PRO, SIMATIC IFP1900 INOX PRO) are specially designed for mounting on a support arm/pedestal. Thanks to their slim design, the devices are ideally suited to space-saving use on food and beverage machinery and packaging machinery.

Portfolio:

- SIMATIC Industrial Thin Client INOX
- SIMATIC Industrial Flat Panel IFP1900 INOX PRO
- SIMATIC Industrial Flat Panel IFP2200 INOX MT ETH
- SIMATIC IPC277E 19" INOX PRO

Devices for hazardous areas

The SIMATIC HMI Ex devices are intrinsically safe Panel PCs and thin clients that have been specially designed for "Zone 1" and "Zone 2" hazardous areas.

Portfolio:

- SIMATIC HMI Panel PC Ex NG
- SIMATIC HMI Panel PC Ex OG
- SIMATIC HMI Panel PC Ex
- SIMATIC HMI Thin Client Ex NG
- SIMATIC HMI Thin Client Ex OG
- SIMATIC HMI Thin Client Ex2

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Overview

Fully-enclosed IP65-protected devices

Fully-enclosed SIMATIC IP65-protected devices are specifically designed to be mounted to a support arm/pedestal.
Thanks to their extremely rugged design, the devices are ideal for industrial applications in harsh environments.

- Comfort Panels PRO
- SIMATIC Industrial Flat Panel PRO
- SIMATIC Industrial Thin Client PRO
- SIMATIC IPC477E PRO

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Overview

SIMATIC IFP2400 V2 PRO, standard design, front view

SIMATIC IFP PRO and SIMATIC IFP PRO ETH:
The new Industrial Flat Panels with fully-enclosed IP65 protection – the industrial widescreen monitors for harsh ambient conditions that can be installed directly on the machine

SIMATIC IFP1200 PRO

The SIMATIC IFP1200 PRO supplements the current product range of the new Industrial Flat Panels. Equipped with innovative, projected capacitive touchscreen technology for the detection of multi-touch gestures with up to ten fingers and with a brilliant widescreen display and glass front.

The devices are connected to PCs, especially SIMATIC IPCs, via the DisplayPort interface or, over greater distances, via HDBaseT and USB.
The rugged aluminum housing of the monitor enables it to be used directly at the machine and ensures durability, even in harsh and extreme operating environments.

- IP65 degree of protection – fully-enclosed
- Can be located up to 100 m from the computer unit (IFP Extended version)
- Rugged, industrial 12", 15", 19", 22" and 24" widescreen displays (multi-touch)
- Slim, modern design
- Can be adapted to support arm system of various manufacturers
- Fast integration capability
- Low energy requirement
- Small footprint and low weight
- Low wiring overhead and short maintenance times thanks to use of standard connecting cables
- Integration of operator controls in the new Extension Units
- Also available in neutral design

SIMATIC IFP PRO ETH

IFP1500 PRO ETH, IFP1900 PRO ETH and IFP2200 PRO ETH supplement the current product range of new Industrial Flat Panels with their full HD resolution (1 920 x 1 080 pixels) and neutral design fronts.

Equipped with innovative, projected capacitive touchscreen technology for the detection of multi-touch gestures with up to ten fingers and with a brilliant widescreen display and glass front.

The devices are connected by means of a DisplayPort or Ethernet and USB to PCs, in particular SIMATIC IPCs. The rugged aluminum housing of the monitor enables it to be used directly at the machine and ensures durability, even in harsh and extreme operating environments.

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Ordering data	Article No.
SIMATIC IFP1200 V2 PRO	
12" (16:10) Flat Panel, multi-touch, extended version up to 100 m via HDBaseT, 1 280 x 800 pixels, for 24 V DC DisplayPort fully-enclosed IP65 protection	
• Prepared for pedestal and extension components	**6AV7863-1MA14-2AA0**
• Prepared for support arm without extension components	**6AV7863-1MA15-2AA0**
• Prepared for support arm and extension components	**6AV7863-1MA16-2AA0**
Neutral design:	
• Prepared for pedestal and extension components	**6AV7863-1MA14-2NA0**
• Prepared for support arm without extension components	**6AV7863-1MA15-2NA0**
• Prepared for support arm and extension components	**6AV7863-1MA16-2NA0**
SIMATIC IFP1500 V2 PRO	
15" (16:9) Flat Panel, multi-touch, extended version up to 100 m via HDBaseT, 1 920 x 1 080 pixels, for 24 V DC DisplayPort fully-enclosed IP65 protection	
• Prepared for pedestal and extension components	**6AV7863-5MA14-2AA0**
• Prepared for support arm without extension components	**6AV7863-5MA15-2AA0**
• Prepared for support arm and extension components	**6AV7863-5MA16-2AA0**
Neutral design:	
• Prepared for pedestal and extension components	**6AV7863-5MA14-2NA0**
• Prepared for support arm without extension components	**6AV7863-5MA15-2NA0**
• Prepared for support arm and extension components	**6AV7863-5MA16-2NA0**
SIMATIC IFP1900 V2 PRO	
19" (16:9) Flat Panel, multi-touch, extended version up to 100 m via HDBaseT, 1 920 x 1 080 pixels, for 24 V DC DisplayPort, fully-enclosed IP65 protection	
• Prepared for pedestal and extension components	**6AV7863-6MA14-2AA0**
• Prepared for support arm without extension components	**6AV7863-6MA15-2AA0**
• Prepared for support arm and extension components	**6AV7863-6MA16-2AA0**
Neutral design:	
• Prepared for pedestal and extension components	**6AV7863-6MA14-2NA0**
• Prepared for support arm without extension components	**6AV7863-6MA15-2NA0**
• Prepared for support arm and extension components	**6AV7863-6MA16-2NA0**

Ordering data	Article No.
SIMATIC IFP2200 V2 PRO	
22" (16:9) Flat Panel, multi-touch, extended version up to 100 m via HDBaseT, 1 920 x 1 080 pixels, for 24 V DC DisplayPort, fully-enclosed IP65 protection	
• Prepared for pedestal and extension components	**6AV7863-4MA14-2AA0**
• Prepared for support arm without extension components	**6AV7863-4MA15-2AA0**
• Prepared for support arm and extension components	**6AV7863-4MA16-2AA0**
Neutral design:	
• Prepared for pedestal and extension components	**6AV7863-4MA14-2NA0**
• Prepared for support arm without extension components	**6AV7863-4MA15-2NA0**
• Prepared for support arm and extension components	**6AV7863-4MA16-2NA0**
SIMATIC IFP2400 V2 PRO	
24" (16:9) Flat Panel, multi-touch, extended version up to 100 m via HDBaseT, 1 920 x 1 080 pixels, for 24 V DC DisplayPort, fully-enclosed IP65 protection	
• Prepared for pedestal and extension components	**6AV7863-7MA14-2AA0**
• Prepared for support arm without extension components	**6AV7863-7MA15-2AA0**
• Prepared for support arm and extension components	**6AV7863-7MA16-2AA0**
• Portrait Prepared for support arm and extension components	**6AV7863-7MA17-2AA0**
Neutral design:	
• Prepared for pedestal and extension components	**6AV7863-7MA14-2NA0**
• Prepared for support arm without extension components	**6AV7863-7MA15-2NA0**
• Prepared for support arm and extension components	**6AV7863-7MA16-2NA0**
• Portrait Prepared for support arm and extension components	**6AV7863-7MA17-2NA0**

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Ordering data	Article No.
SIMATIC IFP1500 PRO HD ETH	
15" (16:9) Flat Panel, multi-touch, Ethernet up to 100 m, 1 920 x 1 080 pixels, for 24 V DC DisplayPort/Ethernet interface, fully-enclosed IP65 protection, neutral design	
• Prepared for pedestal and extension components	**6AV7466-5MA01-0AA0**
• Prepared for support arm and extension components	**6AV7466-5MA02-0AA0**
SIMATIC IFP1900 PRO HD ETH	
19" (16:9) Flat Panel, multi-touch, Ethernet up to 100 m, 1 920 x 1 080 pixels, for 24 V DC DisplayPort/Ethernet interface, fully-enclosed IP65 protection, neutral design	
• Prepared for pedestal and extension components	**6AV7466-6MA01-0AA0**
• Prepared for support arm and extension components	**6AV7466-6MA02-0AA0**

	Article No.
SIMATIC IFP2200 PRO HD ETH	
22" (16:9) Flat Panel, multi-touch, Ethernet up to 100 m, 1 920 x 1 080 pixels, for 24 V DC DisplayPort/Ethernet interface, fully-enclosed IP65 protection, neutral design	
• Prepared for pedestal and extension components	**6AV7466-8MA01-0AA0**
• Prepared for support arm and extension components	**6AV7466-8MA02-0AA0**

Note:

As in the case of the Flat Panel PRO, adaptation to support arm/pedestal systems is possible using the basic adapter. This is included in the scope of supply (only in the case of the "prepared for support arm and extension components" version is the basic adapter not included, as the connection is made via a round tube).

For the version "prepared for support arm and extension components", installation can alternatively take place with the Siemens round tube adapter or with a standard 48 mm diameter round tube.

The round tube adapter enables the transition from a round tube connection to the familiar mechanical interface of the basic adapter. This means you can combine different versions of the PRO devices with the same support arm or pedestal system.

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Technical specifications

Article number	**6AV7863-1MA14-2AA0**	**6AV7863-1MA16-2AA0**	**6AV7863-1MA15-2AA0**	**6AV7863-1MA14-2NA0**	**6AV7863-1MA15-2NA0**	**6AV7863-1MA16-2NA0**
	SIMATIC Flat Panel 12" MT V2 PRO	SIMATIC Flat Panel 12" MT V2 PRO	SIMATIC Flat Panel 12" MT V2 PRO	SIMATIC Flat Panel 12" MT V2 PRO	SIMATIC Flat Panel 12" MT V2 PRO	SIMATIC Flat Panel 12" MT V2 PRO
General information						
Product type designation	IFP1200 PRO	IFP1200 PRO	IFP1200 PRO	IFP1200 PRO	IFP1200 PRO	IFP1200 PRO
Short designation	Flat Panel 12" multi-touch ext.	Flat Panel 12" multi-touch ext.	Flat Panel 12" multi-touch ext.	Flat Panel 12" multi-touch ext.	Flat Panel 12" multi-touch ext.	Flat Panel 12" multi-touch ext.
Display						
Design of display	TFT widescreen display, LED backlighting					
Screen diagonal	12.1 in	12.1 in	12.1 in	12.1 in	12.1 in	12.1 in
Screen diagonal [cm]	30.7 cm	30.7 cm	30.7 cm	30.7 cm	30.7 cm	30.7 cm
On Screen Display (OSD) configuration	No	No	No	No	No	No
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	176° x 176°	176° x 176°	176° x 176°	176° x 176°	176° x 176°	176° x 176°
Resolution (pixels)						
• Image resolution	1 280 x 800	1 280 x 800	1 280 x 800	1 280 x 800	1 280 x 800	1 280 x 800
General features						
• Brightness/contrast	400 cd/m² / 800:1	400 cd/m² / 800:1	400 cd/m² / 800:1	400 cd/m² / 800:1	400 cd/m² / 800:1	400 cd/m² / 800:1
• Detachable from computer unit	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol
• Luminance	400 cd/m²	400 cd/m²	400 cd/m²	400 cd/m²	400 cd/m²	400 cd/m²
Backlighting						
• Type of backlighting	LED	LED	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	70 000 h; At 25°C	70 000 h; At 25°C	70 000 h; At 25°C	70 000 h; At 25°C	70 000 h; At 25°C	70 000 h; At 25°C
Control elements						
Input device						
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Design	Pedestal mounting	Support arm mounting	Support arm mounting	Pedestal mounting	Support arm mounting	Support arm mounting
Supply voltage						
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Input current						
Current consumption (rated value)	0.65 A	0.65 A	0.65 A	0.65 A	0.65 A	0.65 A
Current consumption, max.	1 A	1 A	1 A	1 A	1 A	1 A
Interfaces						
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB	USB	USB
Video interfaces						
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces						
• USB	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV7863-1MA14-2AA0**	**6AV7863-1MA16-2AA0**	**6AV7863-1MA15-2AA0**	**6AV7863-1MA14-2NA0**	**6AV7863-1MA15-2NA0**	**6AV7863-1MA16-2NA0**
	SIMATIC Flat Panel 12" MT V2 PRO	SIMATIC Flat Panel 12" MT V2 PRO	SIMATIC Flat Panel 12" MT V2 PRO	SIMATIC Flat Panel 12" MT V2 PRO	SIMATIC Flat Panel 12" MT V2 PRO	SIMATIC Flat Panel 12" MT V2 PRO
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL
cULus	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508
FM approval	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas						
• ATEX Zone 2	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon
• ATEX Zone 22	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon
• IECEx Zone 2	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon
• IECEx Zone 22	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon
• FM Class I Division 2	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon	Yes; Available soon
Ambient conditions						
Ambient temperature during operation						
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Altitude during operation relating to sea level						
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity						
• Operation, max.	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation
Vibrations						
• Vibration load in operation	1 gn	1 gn	1 gn	1 gn	1 gn	1 gn
• Vibration load during transport/storage	1 gn	1 gn	1 gn	1 gn	1 gn	1 gn
Shock testing						
• Shock load during operation	15 gn	15 gn	15 gn	15 gn	15 gn	15 gn
• shock acceleration during storage/transport	15 gn	15 gn	15 gn	15 gn	15 gn	15 gn
Mechanics/material						
Enclosure material (front)	In standard design	In standard design	In standard design	With neutral design	With neutral design	With neutral design
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Dimensions						
Width	313 mm	313 mm	313 mm	313 mm	313 mm	313 mm
Height	225 mm; Without basic adapter	225 mm; Without basic adapter	225 mm; Without basic adapter	225 mm; Without basic adapter	225 mm; Without basic adapter	225 mm; Without basic adapter
Depth	100.7 mm	162.8 mm	100.7 mm	100.7 mm	100.7 mm	162.8 mm
Width of the housing front	313 mm	313 mm	313 mm	313 mm	313 mm	313 mm
Height of housing front	225 mm	225 mm	225 mm	225 mm	225 mm	225 mm
Weights						
Weight (without packaging)	4 kg	4.4 kg	4 kg	4 kg	4 kg	4.4 kg

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Technical specifications

Article number	**6AV7466-5MA01-0AA0**	**6AV7466-5MA02-0AA0**	**6AV7466-6MA01-0AA0**	**6AV7466-6MA02-0AA0**	**6AV7466-8MA01-0AA0**	**6AV7466-8MA02-0AA0**
	SIMATIC IFP1500 PRO OEM ETH pedestal	SIMATIC IFP1500 PRO HD OEM ETH sup. arm	SIMATIC IFP1900 PRO HD OEM ETH pedestal	SIMATIC IFP1900 PRO HD OEM ETH sup. arm	SIMATIC IFP2200 PRO OEM ETH pedestal	SIMATIC IFP2200 PRO OEM ETH support arm
General information						
Product type designation	IFP1500 PRO HD	IFP1500 PRO HD	IFP1900 PRO HD	IFP1900 PRO HD	IFP2200 PRO	IFP2200 PRO
Short designation	Flat Panel 15" PRO Full HD multi-touch Ethernet monitor	Flat Panel 15" PRO Full HD multi-touch Ethernet monitor	Flat Panel 19" PRO Full HD ETH multi-touch ext.	Flat Panel 19" PRO Full HD ETH multi-touch ext.	Flat Panel 22" PRO ETH multi-touch ext.	Flat Panel 22" PRO ETH multi-touch ext.
Display						
Design of display	TFT widescreen display, LED backlighting					
Screen diagonal	15.6 in	15.6 in	18.5 in	18.5 in	22 in	22 in
Screen diagonal [cm]	40 cm	40 cm	47 cm	47 cm	56 cm	56 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	160° x 140°	160° x 140°	178° x 178°	178° x 178°	170° x 160°	170° x 160°
General features						
• Brightness/contrast	400 cd/m² / 700:1	400 cd/m² / 700:1	350 cd/m² / 1 000:1	350 cd/m² / 1 000:1	300 cd/m² / 1 000:1	300 cd/m² / 1 000:1
• non-reflective and tempered mineral glass screen	Yes	Yes	Yes	Yes	Yes	Yes
• Detachable from computer unit	100 m; Ethernet	100 m; Ethernet	100 m; Ethernet	100 m; Ethernet	100 m; Ethernet	100 m; Ethernet
Backlighting						
• Type of backlighting	LED	LED	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements						
Input device						
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive				
• Monitor keyboard	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Design	Pedestal mounting	Support arm mounting	Pedestal mounting	Support arm mounting	Pedestal mounting	Support arm mounting
Supply voltage						
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Interfaces						
Number of industrial Ethernet interfaces	1; Ethernet, 1 port, RJ45	1; Ethernet, 1 port, RJ45	1; Ethernet, 1 port, RJ45	1; Ethernet, 1 port, RJ45	1; Ethernet, 1 port, RJ45	1; Ethernet, 1 port, RJ45
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB	USB	USB
Video interfaces						
• DVI-D	No	No	No	No	No	No
• DisplayPort	Yes; DisplayPort V1.1	Yes; DisplayPort V1.1	Yes; DisplayPort V1.1	Yes; DisplayPort V1.1	Yes; DisplayPort V1.1	Yes; DisplayPort V1.1
Touch interfaces						
• USB	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4 at the front	Yes	Yes	Yes	Yes	Yes	Yes
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV7466-5MA01-0AA0**	**6AV7466-5MA02-0AA0**	**6AV7466-6MA01-0AA0**	**6AV7466-6MA02-0AA0**	**6AV7466-8MA01-0AA0**	**6AV7466-8MA02-0AA0**
	SIMATIC IFP1500 PRO OEM ETH pedestal	SIMATIC IFP1500 PRO HD OEM ETH sup. arm	SIMATIC IFP1900 PRO HD OEM ETH pedestal	SIMATIC IFP1900 PRO HD OEM ETH sup. arm	SIMATIC IFP2200 PRO OEM ETH pedestal	SIMATIC IFP2200 PRO OEM ETH support arm
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes; In application process	Yes; In application process	Yes; In application process	Yes; In application process	Yes; In application process	Yes; In application process
cULus	Yes; In application process	Yes; In application process	Yes; In application process	Yes; In application process	Yes; In application process	Yes; In application process
RCM (formerly C-TICK)	Yes; In application process	Yes; In application process	Yes; In application process	Yes; In application process	Yes; In application process	Yes; In application process
KC approval	No	No	No	No	No	No
EAC (formerly Gost-R)	Yes; In application process	Yes; In application process	Yes; In application process	Yes; In application process	Yes; In application process	Yes; In application process
Use in hazardous areas						
• ATEX Zone 2	No	No	No	No	No	No
• ATEX Zone 22	No	No	No	No	No	No
• FM Class I Division 2	No	No	No	No	No	No
Ambient conditions						
Ambient temperature during operation						
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	50 °C; Vertical installation (horizontal)	50 °C; Vertical installation (horizontal)	50 °C; Vertical installation (horizontal)	50 °C; Vertical installation (horizontal)	45 °C; Vertical installation (horizontal)	45 °C; Vertical installation (horizontal)
Relative humidity						
• Operation, max.	95 %	95 %	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation
Vibrations						
• Vibration load in operation	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2	10 m/s^2
Shock testing						
• Shock load during operation	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2	150 m/s^2
Mechanics/material						
Enclosure material (front)						
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)		aluminum				
Dimensions						
Width	396 mm	396 mm	462 mm	462 mm	527 mm	527 mm
Height	255 mm; Without basic adapter	255 mm	292 mm; Without basic adapter	292 mm	329 mm; Without basic adapter	329 mm
Depth	101 mm; Without basic adapter	163 mm	94 mm; Without basic adapter	163 mm	94 mm; Without basic adapter	163 mm
Weights						
Weight (without packaging)	4 kg	4 kg	5.7 kg	5.7 kg	6.7 kg	6.7 kg

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Technical specifications

Article number	**6AV7863-6MA14-2AA0**	**6AV7863-6MA15-2AA0**	**6AV7863-6MA16-2AA0**	**6AV7863-6MA14-2NA0**	**6AV7863-6MA15-2NA0**	**6AV7863-6MA16-2NA0**
	SIMATIC Flat Panel 19 MT V2 PRO	SIMATIC Flat Panel 19 MT V2 PRO	SIMATIC Flat Panel 19 MT V2 PRO	SIMATIC Flat Panel 19 MT V2 PRO	SIMATIC Flat Panel 19 MT V2 PRO	SIMATIC Flat Panel 19 MT V2 PRO
General information						
Product type designation	IFP1900 V2 PRO	IFP1900 V2 PRO	IFP1900 V2 PRO	IFP1900 V2 PRO	IFP1900 V2 PRO	IFP1900 V2 PRO
Short designation	Flat Panel 19" PRO multi-touch ext.	Flat Panel 19" PRO multi-touch ext.	Flat Panel 19" PRO multi-touch ext.	Flat Panel 19" PRO multi-touch ext.	Flat Panel 19" PRO multi-touch ext.	Flat Panel 19" PRO multi-touch ext.
Display						
Design of display	TFT widescreen display, LED backlighting					
Screen diagonal	18.5 in; 19"	18.5 in; 19"	18.5 in; 19"	18.5 in; 19"	18.5 in; 19"	18.5 in; 19"
Screen diagonal [cm]	47 cm	47 cm	47 cm	47 cm	47 cm	47 cm
Display width	408.96 mm	408.96 mm	408.96 mm	408.96 mm	408.96 mm	408.96 mm
Display height	230.04 mm	230.04 mm	230.04 mm	230.04 mm	230.04 mm	230.04 mm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°
Resolution (pixels)						
• Image resolution	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080
General features						
• Brightness/contrast	350 cd/m² / 1 000:1	350 cd/m² / 1 000:1	350 cd/m² / 1 000:1	350 cd/m² / 1 000:1	350 cd/m² / 1 000:1	350 cd/m² / 1 000:1
• non-reflective and tempered mineral glass screen	Yes	Yes	Yes	Yes	Yes	Yes
• Detachable from computer unit	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol
Backlighting						
• Type of backlighting	LED	LED	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements						
Control elements	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen
Input device						
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation						
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Design	Pedestal mounting	Support arm mounting	Support arm mounting	Pedestal mounting	Support arm mounting	Support arm mounting
Supply voltage						
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Input current						
Current consumption (rated value)	1.2 A	1.2 A	1.2 A	1.2 A	1.2 A	1.2 A
Current consumption, max.	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A
Interfaces						
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB	USB	USB
Video interfaces						
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces						
• USB	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	6AV7863-6MA14-2AA0	6AV7863-6MA15-2AA0	6AV7863-6MA16-2AA0	6AV7863-6MA14-2NA0	6AV7863-6MA15-2NA0	6AV7863-6MA16-2NA0
	SIMATIC Flat Panel 19 MT V2 PRO	SIMATIC Flat Panel 19 MT V2 PRO	SIMATIC Flat Panel 19 MT V2 PRO	SIMATIC Flat Panel 19 MT V2 PRO	SIMATIC Flat Panel 19 MT V2 PRO	SIMATIC Flat Panel 19 MT V2 PRO
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
Certificate of suitability	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508
FM approval	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas						
• ATEX Zone 2	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
• ATEX Zone 22	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
• IECEx Zone 2	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
• IECEx Zone 22	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
• cULus Class I Zone 2, Division 2	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
• FM Class I Division 2	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
Ambient conditions						
Ambient temperature during operation						
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Relative humidity						
• Operation, max.	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation
Vibrations						
• Vibration load in operation	1 gn	1 gn	1 gn	1 gn	1 gn	1 gn
• Vibration load during transport/storage	1 gn	1 gn	1 gn	1 gn	1 gn	1 gn
Shock testing						
• Shock load during operation	15 gn	15 gn	15 gn	15 gn	15 gn	15 gn
• shock acceleration during storage/transport	15 gn	15 gn	15 gn	15 gn	15 gn	15 gn
Mechanics/material						
Enclosure material (front)	In standard design	In standard design	In standard design	With neutral design	With neutral design	With neutral design
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Dimensions						
Width	462 mm	462 mm	462 mm	462 mm	462 mm	462 mm
Height	296 mm; Without basic adapter	296 mm; Without basic adapter	296 mm; Without basic adapter	296 mm; Without basic adapter	296 mm; Without basic adapter	296 mm; Without basic adapter
Depth	93.7 mm; Without basic adapter	93.7 mm; Without basic adapter	163 mm; Without basic adapter	93.7 mm; Without basic adapter	93.7 mm; Without basic adapter	163 mm; Without basic adapter
Width of the housing front	462 mm	462 mm	462 mm	462 mm	462 mm	462 mm
Height of housing front	292 mm	292 mm	292 mm	292 mm	292 mm	292 mm
Weights						
Weight (without packaging)	6.3 kg	6.3 kg	6.9 kg	6.3 kg	6.3 kg	6.9 kg

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Technical specifications

Article number	**6AV7863-4MA14-2AA0**	**6AV7863-4MA15-2AA0**	**6AV7863-4MA16-2AA0**	**6AV7863-4MA14-2NA0**	**6AV7863-4MA15-2NA0**	**6AV7863-4MA16-2NA0**
	SIMATIC Flat Panel 22 MT V2 PRO	SIMATIC Flat Panel 22 MT V2 PRO	SIMATIC Flat Panel 22 MT V2 PRO	SIMATIC Flat Panel 22 MT V2 PRO	SIMATIC Flat Panel 22 MT V2 PRO	SIMATIC Flat Panel 22 MT V2 PRO
General information						
Product type designation	IFP2200 PRO	IFP2200 PRO	IFP2200 V2 PRO	IFP2200 PRO	IFP2200 PRO	IFP2200 V2 PRO
Short designation	Flat Panel 22" PRO multi-touch ext.	Flat Panel 22" PRO multi-touch ext.	Flat Panel 22" PRO multi-touch ext.	Flat Panel 22" PRO multi-touch ext.	Flat Panel 22" PRO multi-touch ext.	Flat Panel 22" PRO multi-touch ext.
Display						
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	21.5 in; 22"	21.5 in; 22"	21.5 in; 22"	21.5 in; 22"	21.5 in; 22"	21.5 in; 22"
Screen diagonal [cm]	54.6 cm	54.6 cm	54.6 cm	54.6 cm	54.6 cm	54.6 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°
Resolution (pixels)						
• Image resolution	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080
General features						
• Brightness/contrast	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1
• non-reflective and tempered mineral glass screen	Yes	Yes	Yes	Yes	Yes	Yes
• Detachable from computer unit	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol
Backlighting						
• Type of backlighting	LED	LED	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	30 000 h; At 25°C	30 000 h; At 25°C	30 000 h; At 25°C	30 000 h; At 25°C	30 000 h; At 25°C	30 000 h; At 25°C
Control elements						
Control elements	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen
Input device						
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation						
• Design as touch screen	Yes	Yes	Yes	Yes	Yes	Yes
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting						
Design	Pedestal mounting	Support arm mounting	Support arm mounting	Pedestal mounting	Support arm mounting	Support arm mounting
Supply voltage						
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Input current						
Current consumption (rated value)	1 A	1 A	1 A	1 A	1 A	1 A
Current consumption, max.	1.3 A	1.3 A	1.3 A	1.3 A	1.3 A	1.3 A
Interfaces						
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB	USB	USB
Video interfaces						
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces						
• USB	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	6AV7863-4MA14-2AA0	6AV7863-4MA15-2AA0	6AV7863-4MA16-2AA0	6AV7863-4MA14-2NA0	6AV7863-4MA15-2NA0	6AV7863-4MA16-2NA0
	SIMATIC Flat Panel 22 MT V2 PRO	SIMATIC Flat Panel 22 MT V2 PRO	SIMATIC Flat Panel 22 MT V2 PRO	SIMATIC Flat Panel 22 MT V2 PRO	SIMATIC Flat Panel 22 MT V2 PRO	SIMATIC Flat Panel 22 MT V2 PRO
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)						
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
Certificate of suitability	hazardous zone 2/22; shipbuilding		hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508	Yes; Corresponds to UL 508
FM approval	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2	CE, EN 55011, EN 61000-6-4, EN 61000-6-2
Use in hazardous areas						
• ATEX Zone 2	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
• ATEX Zone 22	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
• IECEx Zone 2	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
• IECEx Zone 22	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
• cULus Class I Zone 2, Division 2	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
• FM Class I Division 2	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
Ambient conditions						
Ambient temperature during operation						
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Altitude during operation relating to sea level						
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity						
• Operation, max.	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation
Vibrations						
• Vibration load in operation	1 gn	1 gn	1 gn	1 gn	1 gn	1 gn
• Vibration load during transport/storage	1 gn	1 gn	1 gn	1 gn	1 gn	1 gn
Shock testing						
• Shock load during operation	15 gn	15 gn	15 gn	15 gn	15 gn	15 gn
• shock acceleration during storage/transport	15 gn	15 gn	15 gn	15 gn	15 gn	15 gn
Mechanics/material						
Enclosure material (front)	In standard design	In standard design	In standard design	With neutral design	With neutral design	With neutral design
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Dimensions						
Width	527 mm	527 mm	527 mm	527 mm	527 mm	527 mm
Height	329 mm; Without basic adapter	329 mm; Without basic adapter	329 mm; Without basic adapter	329 mm; Without basic adapter	329 mm; Without basic adapter	329 mm; Without basic adapter
Depth	93.7 mm; Without basic adapter	93.7 mm; Without basic adapter	162.8 mm; Without basic adapter	93.7 mm; Without basic adapter	93.7 mm; Without basic adapter	162.8 mm; Without basic adapter
Width of the housing front	527 mm	527 mm	527 mm	527 mm	527 mm	527 mm
Height of housing front	329 mm	329 mm	329 mm	329 mm	329 mm	329 mm
Weights						
Weight (without packaging)	7.6 kg	7.6 kg	8.2 kg	7.6 kg	7.6 kg	8.2 kg

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Technical specifications

Article number	**6AV7863-7MA14-2AA0**	**6AV7863-7MA15-2AA0**	**6AV7863-7MA16-2AA0**	**6AV7863-7MA17-2AA0**	**6AV7863-7MA14-2NA0**	**6AV7863-7MA15-2NA0**	**6AV7863-7MA16-2NA0**	**6AV7863-7MA17-2NA0**
	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO
General information								
Product type designation	IFP2400 V2 PRO	IFP2400 V2 PRO	IFP2400 V2 PRO	IFP2400 V2 PRO	IFP2400 V2 PRO	IFP2400 V2 PRO	IFP2400 V2 PRO	IFP2400 V2 PRO
Short designation	Flat Panel 24" PRO multi-touch ext.	Flat Panel 24" PRO multi-touch ext.	Flat Panel 24" PRO multi-touch ext.	Flat Panel 24" PRO multi-touch ext.	Flat Panel 24" PRO multi-touch ext.	Flat Panel 24" PRO multi-touch ext.	Flat Panel 24" PRO multi-touch ext.	Flat Panel 24" PRO multi-touch ext.
Display								
Design of display	TFT widescreen display, LED backlighting							
Screen diagonal	23.8 in	23.8 in	23.8 in	23.8 in	23.8 in	23.8 in	23.8 in	23.8 in
Screen diagonal [cm]	60.47 cm	60.47 cm	60.47 cm	60.47 cm	60.47 cm	60.47 cm	60.47 cm	60.47 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°	178° x 178°
Resolution (pixels)								
• Image resolution	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 080 x 1 920	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080	1 080 x 1 920
General features								
• Brightness/contrast	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1	250 cd/m² / 1 000:1
• Detachable from computer unit	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol	100 m; HDBaseT protocol
• Luminance	250 cd/m²	250 cd/m²	250 cd/m²	250 cd/m²	250 cd/m²	250 cd/m²	250 cd/m²	250 cd/m²
Backlighting								
• Type of backlighting	LED	LED	LED	LED	LED	LED	LED	LED
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements								
Control elements	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen	multi-touch screen
Input device								
• Integrated mouse cursor control	Yes; Also externally via USB							
Touch operation								
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Installation type/mounting								
Design	Pedestal mounting	Support arm mounting	Support arm mounting	Support arm mounting	Pedestal mounting	Support arm mounting	Support arm mounting	Support arm mounting
Supply voltage								
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Input current								
Current consumption (rated value)	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A	1.5 A
Current consumption, max.	1.9 A	1.9 A	1.9 A	1.9 A	1.9 A	1.9 A	1.9 A	1.9 A
Interfaces								
Number of USB interfaces	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A	2; USB 2.0 type A
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB	USB	USB	USB	USB	USB
Video interfaces								
• DisplayPort	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2	Yes; Display port V1.2
Touch interfaces								
• USB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV7863-7MA14-2AA0**	**6AV7863-7MA15-2AA0**	**6AV7863-7MA16-2AA0**	**6AV7863-7MA17-2AA0**	**6AV7863-7MA14-2NA0**	**6AV7863-7MA15-2NA0**	**6AV7863-7MA16-2NA0**	**6AV7863-7MA17-2NA0**
	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO
Degree and class of protection								
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65
NEMA (front)								
• Enclosure Type 4x at the front	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates								
Certificate of suitability	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding	hazardous zone 2/22; shipbuilding
CE mark	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL	Yes; cULus, cUL
cULus	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FM approval	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon	Available soon
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 55011, EN 61000-6-4, EN 61000-6-2							
Marine approval	Available soon							
Use in hazardous areas								
• ATEX Zone 2	Yes; Available soon							
• ATEX Zone 22	Yes; Available soon							
• IECEx Zone 2	Yes; Available soon							
• IECEx Zone 22	Yes; Available soon							
• cULus Class I Zone 2, Division 2	Yes; Available soon							
• FM Class I Division 2	Yes; Available soon							
Ambient conditions								
Ambient temperature during operation								
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C	45 °C
Altitude during operation relating to sea level								
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity								
• Operation, max.	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation	95 %; no condensation
Vibrations								
• Vibration load in operation	1 gn	1 gn	1 gn	1 gn	1 gn	1 gn	1 gn	1 gn
• Vibration load during transport/storage	1 gn	1 gn	1 gn	1 gn	1 gn	1 gn	1 gn	1 gn
Shock testing								
• Shock load during operation	15 gn	15 gn	15 gn	15 gn	15 gn	15 gn	15 gn	15 gn
• shock acceleration during storage/transport	15 gn	15 gn	15 gn	15 gn	15 gn	15 gn	15 gn	15 gn

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Technical specifications

Article number	**6AV7863-7MA14-2AA0**	**6AV7863-7MA15-2AA0**	**6AV7863-7MA16-2AA0**	**6AV7863-7MA17-2AA0**	**6AV7863-7MA14-2NA0**	**6AV7863-7MA15-2NA0**	**6AV7863-7MA16-2NA0**	**6AV7863-7MA17-2NA0**
	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO	SIMATIC Flat Panel 24 MT V2 PRO
Mechanics/material								
Enclosure material (front)	In standard design	In standard design	In standard design	In standard design	With neutral design	With neutral design	With neutral design	With neutral design
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Aluminum casting	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Glass	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front	Yes; at front
Enclosure material (rear)	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum	aluminum
Dimensions								
Width	583 mm	583 mm	583 mm	361 mm	583 mm	583 mm	583 mm	361 mm
Height	361 mm; Without basic adapter	361 mm; Without basic adapter	361 mm; Without basic adapter	583 mm; Without basic adapter	361 mm; Without basic adapter	361 mm; Without basic adapter	361 mm; Without basic adapter	583 mm; Without basic adapter
Depth	93.7 mm; Without basic adapter	93.7 mm; Without basic adapter	162.8 mm; Without basic adapter	162.8 mm; Without basic adapter	93.7 mm; Without basic adapter	93.7 mm; Without basic adapter	162.8 mm; Without basic adapter	162.8 mm; Without basic adapter
Width of the housing front	583 mm	583 mm	583 mm	361 mm	583 mm	583 mm	583 mm	361 mm
Height of housing front	361 mm	361 mm	361 mm	583 mm	361 mm	361 mm	361 mm	583 mm
Weights								
Weight (without packaging)	9.2 kg	9.2 kg	9.9 kg	9.2 kg	9.2 kg	9.2 kg	9.9 kg	9.2 kg

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Technical specifications

Article number	**6AV7466-5MA01-0AA0**	**6AV7466-5MA02-0AA0**
	SIMATIC IFP1500 PRO OEM ETH pedestal	SIMATIC IFP1500 PRO HD OEM ETH sup. arm
General information		
Product type designation	IFP1500 PRO HD	IFP1500 PRO HD
Short designation	Flat Panel 15" PRO Full HD multi-touch Ethernet monitor	Flat Panel 15" PRO Full HD multi-touch Ethernet monitor
Display		
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	15.6 in	15.6 in
Screen diagonal [cm]	40 cm	40 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	160° x 140°	160° x 140°
General features		
• Brightness/contrast	400 cd/m² / 700:1	400 cd/m² / 700:1
• non-reflective and tempered mineral glass screen	Yes	Yes
• Detachable from computer unit	100 m; Ethernet	100 m; Ethernet
Backlighting		
• Type of backlighting	LED	LED
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C
Control elements		
Input device		
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation		
• Design as touch screen	Yes	Yes
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes	Yes
Installation type/mounting		
Design	Pedestal mounting	Support arm mounting
Supply voltage		
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Interfaces		
Number of industrial Ethernet interfaces	1; Ethernet, 1 port, RJ45	1; Ethernet, 1 port, RJ45
USB on the rear	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB
Video interfaces		
• DVI-D	No	No
• DisplayPort	Yes; DisplayPort V1.1	Yes; DisplayPort V1.1
Touch interfaces		
• USB	Yes	Yes
Degree and class of protection		
IP (at the front)	IP65	IP65
IP (rear)	IP65	IP65
NEMA (front)		
• Enclosure Type 4 at the front	Yes	Yes
• Enclosure Type 4x at the front	Yes	Yes

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Technical specifications

Article number	**6AV7466-5MA01-0AA0** SIMATIC IFP1500 PRO OEM ETH pedestal	**6AV7466-5MA02-0AA0** SIMATIC IFP1500 PRO HD OEM ETH sup. arm
Standards, approvals, certificates		
CE mark	Yes	Yes
UL approval	Yes; In application process	Yes; In application process
cULus	Yes; In application process	Yes; In application process
RCM (formerly C-TICK)	Yes; In application process	Yes; In application process
KC approval	No	No
EAC (formerly Gost-R)	Yes; In application process	Yes; In application process
Use in hazardous areas		
• ATEX Zone 2	No	No
• ATEX Zone 22	No	No
• FM Class I Division 2	No	No
Ambient conditions		
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	50 °C; Vertical installation (horizontal)	50 °C; Vertical installation (horizontal)
Relative humidity		
• Operation, max.	95 %	95 %
Vibrations		
• Vibration load in operation	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2
Shock testing		
• Shock load during operation	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	150 m/s^2	150 m/s^2
Mechanics/material		
Enclosure material (front)		
• Glass	Yes; at front	Yes; at front
Enclosure material (rear)		aluminum
Dimensions		
Width	396 mm	396 mm
Height	255 mm; Without basic adapter	255 mm
Depth	101 mm; Without basic adapter	163 mm
Weights		
Weight (without packaging)	4 kg	4 kg

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Technical specifications

Article number	**6AV7466-6MA01-0AA0**	**6AV7466-6MA02-0AA0**
	SIMATIC IFP1900 PRO HD OEM ETH pedestal	SIMATIC IFP1900 PRO HD OEM ETH sup. arm
General information		
Product type designation	IFP1900 PRO HD	IFP1900 PRO HD
Short designation	Flat Panel 19" PRO Full HD ETH multi-touch ext.	Flat Panel 19" PRO Full HD ETH multi-touch ext.
Display		
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	18.5 in	18.5 in
Screen diagonal [cm]	47 cm	47 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	178° x 178°	178° x 178°
General features		
• Brightness/contrast	350 cd/m² / 1 000:1	350 cd/m² / 1 000:1
• non-reflective and tempered mineral glass screen	Yes	Yes
• Detachable from computer unit	100 m; Ethernet	100 m; Ethernet
Backlighting		
• Type of backlighting	LED	LED
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C
Control elements		
Input device		
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation		
• Design as touch screen	Yes	Yes; Projective-capacitive
• Monitor keyboard	Yes	Yes
Installation type/mounting		
Design	Pedestal mounting	Support arm mounting
Supply voltage		
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Interfaces		
Number of industrial Ethernet interfaces	1; Ethernet, 1 port, RJ45	1; Ethernet, 1 port, RJ45
USB on the rear	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB
Video interfaces		
• DVI-D	No	No
• DisplayPort	Yes; DisplayPort V1.1	Yes; DisplayPort V1.1
Touch interfaces		
• USB	Yes	Yes
Degree and class of protection		
IP (at the front)	IP65	IP65
IP (rear)	IP65	IP65
NEMA (front)		
• Enclosure Type 4x at the front	Yes	Yes

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Technical specifications

Article number	**6AV7466-6MA01-0AA0** SIMATIC IFP1900 PRO HD OEM ETH pedestal	**6AV7466-6MA02-0AA0** SIMATIC IFP1900 PRO HD OEM ETH sup. arm
Standards, approvals, certificates		
CE mark	Yes	Yes
UL approval	Yes; In application process	Yes; In application process
cULus	Yes; In application process	Yes; In application process
RCM (formerly C-TICK)	Yes; In application process	Yes; In application process
KC approval	No	No
EAC (formerly Gost-R)	Yes; In application process	Yes; In application process
Use in hazardous areas		
• ATEX Zone 2	No	No
• ATEX Zone 22	No	No
• FM Class I Division 2	No	No
Ambient conditions		
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	50 °C; Vertical installation (horizontal)	50 °C; Vertical installation (horizontal)
Relative humidity		
• Operation, max.	95 %; no condensation	95 %; no condensation
Vibrations		
• Vibration load in operation	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2
Shock testing		
• Shock load during operation	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	150 m/s^2	150 m/s^2
Mechanics/material		
Enclosure material (front)		
• Glass	Yes; at front	Yes; at front
Dimensions		
Width	462 mm	462 mm
Height	292 mm; Without basic adapter	292 mm
Depth	94 mm; Without basic adapter	163 mm
Weights		
Weight (without packaging)	5.7 kg	5.7 kg

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Technical specifications

Article number	**6AV7466-8MA01-0AA0** SIMATIC IFP2200 PRO OEM ETH pedestal	**6AV7466-8MA02-0AA0** SIMATIC IFP2200 PRO OEM ETH support arm
General information		
Product type designation	IFP2200 PRO	IFP2200 PRO
Short designation	Flat Panel 22" PRO ETH multi-touch ext.	Flat Panel 22" PRO ETH multi-touch ext.
Display		
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	22 in	22 in
Screen diagonal [cm]	56 cm	56 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit	16 777 216; 24 bit
Viewing angle	170° x 160°	170° x 160°
General features		
• Brightness/contrast	300 cd/m² / 1 000:1	300 cd/m² / 1 000:1
• non-reflective and tempered mineral glass screen	Yes	Yes
• Detachable from computer unit	100 m; Ethernet	100 m; Ethernet
Backlighting		
• Type of backlighting	LED	LED
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C
Control elements		
Input device		
• Integrated mouse cursor control	Yes; Also externally via USB	Yes; Also externally via USB
Touch operation		
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes	Yes
Installation type/mounting		
Design	Pedestal mounting	Support arm mounting
Supply voltage		
Rated value (DC)	24 V; PELV / SELV floating	24 V; PELV / SELV floating
Interfaces		
Number of industrial Ethernet interfaces	1; Ethernet, 1 port, RJ45	1; Ethernet, 1 port, RJ45
USB on the rear	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB
Video interfaces		
• DVI-D	No	No
• DisplayPort	Yes; DisplayPort V1.1	Yes; DisplayPort V1.1
Touch interfaces		
• USB	Yes	Yes
Degree and class of protection		
IP (at the front)	IP65	IP65
IP (rear)	IP65	IP65
NEMA (front)		
• Enclosure Type 4x at the front	Yes	Yes
Standards, approvals, certificates		
CE mark	Yes	Yes
UL approval	Yes; In application process	Yes; In application process
cULus	Yes; In application process	Yes; In application process
RCM (formerly C-TICK)	Yes; In application process	Yes; In application process
KC approval	No	No
EAC (formerly Gost-R)	Yes; In application process	Yes; In application process
Use in hazardous areas		
• ATEX Zone 2	No	No
• ATEX Zone 22	No	No
• FM Class I Division 2	No	No

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Technical specifications

Article number	**6AV7466-8MA01-0AA0** SIMATIC IFP2200 PRO OEM ETH pedestal	**6AV7466-8MA02-0AA0** SIMATIC IFP2200 PRO OEM ETH support arm
Ambient conditions		
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	45 °C; Vertical installation (horizontal)	45 °C; Vertical installation (horizontal)
Relative humidity		
• Operation, max.	95 %; no condensation	95 %; no condensation
Vibrations		
• Vibration load in operation	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2
Shock testing		
• Shock load during operation	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	150 m/s^2	150 m/s^2
Mechanics/material		
Enclosure material (front)		
• Glass	Yes; at front	Yes; at front
Dimensions		
Width	527 mm	527 mm
Height	329 mm; Without basic adapter	329 mm
Depth	94 mm; Without basic adapter	163 mm
Weights		
Weight (without packaging)	6.7 kg	6.7 kg

More information can be found on the Internet at:

http://www.siemens.com/ip65-hmi-devices

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Overview

SIMATIC Industrial Thin Client PRO

SIMATIC Industrial Thin Client PRO with capacitive multi-touch display is suitable for mounting directly on the support arm/pedestal.

Ordering data

	Article No.
SIMATIC Industrial Thin Client PRO	
SIMATIC ITC1500 V3 PRO	
Industrial Thin Client 15" widescreen TFT display Capacitive touch sensor Supported protocols: RDP, VNC, SMARTSERVER HTML5, etc. Standard design	
• Pedestal mounting	**6AV6646-1BB15-0AA0**
• Prepared for support arm without extension components	**6AV6646-1BC15-0AA0**
• Prepared for support arm with extension components	**6AV6646-1BD15-0AA0**
SIMATIC ITC1900 V3 PRO	
Industrial Thin Client 19" widescreen TFT display Capacitive touch sensor Supported protocols: RDP, VNC, SMARTSERVER HTML5, etc. Standard design	
• Pedestal mounting	**6AV6646-1BB18-0AA0**
• Prepared for support arm without extension components	**6AV6646-1BC18-0AA0**
• Prepared for support arm with extension components	**6AV6646-1BD18-0AA0**
SIMATIC ITC2200 V3 PRO	
Industrial Thin Client 22" widescreen TFT display Capacitive touch sensor Supported protocols: RDP, VNC, SMARTSERVER HTML5, etc. Standard design	
• Pedestal mounting	**6AV6646-1BB22-1AA0**
• Prepared for support arm without extension components	**6AV6646-1BC22-1AA0**
• Prepared for support arm with extension components	**6AV6646-1BD22-1AA0**

Note:

An adapter plate is required for mounting on the support arm systems of well-known manufacturers; see "Accessories for fully enclosed HMI devices".

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Technical specifications

Article number	**6AV6646-1BB15-0AA0**	**6AV6646-1BC15-0AA0**	**6AV6646-1BD15-0AA0**
	SIMATIC ITC1500 V3 PRO	SIMATIC ITC1500 V3 PRO	SIMATIC ITC1500 V3 PRO
General information			
Product type designation	ITC1500 V3	ITC1500 V3	ITC1500 V3
Display			
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	15.6 in; 15"	15.6 in; 15"	15.6 in; 15"
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Image resolution	1 366 x 768	1 366 x 768	1 366 x 768
General features			
• non-reflective and tempered mineral glass screen	Yes	Yes	Yes
• Detachable from computer unit	100 m	100 m	100 m
Backlighting			
• Type of backlighting	LED, dimmable	LED, dimmable	LED, dimmable
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements			
Control elements	multi-touch screen	multi-touch screen	multi-touch screen
Touch operation			
• Design as touch screen	Yes	Yes	Yes
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes	Yes	Yes
Installation type/mounting			
Design	Pedestal mounting	Support arm mounting	Support arm mounting
Supply voltage			
Type of supply voltage	DC	DC	DC
Rated value (DC)	24 V	24 V	24 V
Interfaces			
Number of industrial Ethernet interfaces	2; 2 ports (switch)	2; 2 ports (switch)	2; 2 ports (switch)
Number of USB interfaces	4; on rear	4; on rear	4; on rear
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB
Industrial Ethernet			
• Transmission rate, max.	1 000 Mbit/s	1 000 Mbit/s	1 000 Mbit/s
Degree and class of protection			
IP (at the front)	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20
NEMA (front)			
• Enclosure Type 4 at the front	Yes	Yes	Yes
• Enclosure Type 4x at the front	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes

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Technical specifications

Article number	**6AV6646-1BB15-0AA0**	**6AV6646-1BC15-0AA0**	**6AV6646-1BD15-0AA0**
	SIMATIC ITC1500 V3 PRO	SIMATIC ITC1500 V3 PRO	SIMATIC ITC1500 V3 PRO
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
FM approval	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes
Use in hazardous areas			
• ATEX Zone 2	No	No	No
• ATEX Zone 22	No	No	No
• IECEx Zone 2	No	No	No
• IECEx Zone 22	No	No	No
• cULus Class I Zone 2, Division 2	No	No	No
• FM Class I Division 2	No	No	No
Ambient conditions			
Ambient temperature during operation			
• min.	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C
Relative humidity			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation
Vibrations			
• Vibration load in operation	10 m/s^2	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2	10 m/s^2
Shock testing			
• Shock load during operation	150 m/s^2	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	150 m/s^2	150 m/s^2	150 m/s^2
Software			
Web browser	Yes; HTML5, CSS	Yes; HTML5, CSS	Yes; HTML5, CSS
PDF reader	Yes	Yes	Yes
Configuration / header			
Configuration			
• Local	Yes	Yes	Yes
• Remote	Yes; Via web page	Yes; Via web page	Yes; Via web page
Languages			
Online languages			
• Number of online/runtime languages	2; german / english	2; german / english	2; german / english
Peripherals/Options			
USB memory	Yes; USB storage medium can be connected	Yes; USB storage medium can be connected	Yes; USB storage medium can be connected
Mechanics/material			
Enclosure material (front)			
• Aluminum	Yes	Yes	Yes
Dimensions			
Width of the housing front	396 mm	396 mm	396 mm
Height of housing front	256 mm; Without basic adapter	256 mm; Without basic adapter	256 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights			
Weight (without packaging)	6.3 kg	6.3 kg	6.3 kg

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Technical specifications

Article number	**6AV6646-1BB18-0AA0**	**6AV6646-1BC18-0AA0**	**6AV6646-1BD18-0AA0**
	SIMATIC ITC1900 V3 PRO	SIMATIC ITC1900 V3 PRO	SIMATIC ITC1900 V3 PRO
General information			
Product type designation	ITC1900 V3	ITC1900 V3	ITC1900 V3
Display			
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	18.5 in; 19"	18.5 in; 19"	18.5 in; 19"
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Image resolution	1 366 x 768	1 366 x 768	1 366 x 768
General features			
• non-reflective and tempered mineral glass screen	Yes	Yes	Yes
• Detachable from computer unit	100 m	100 m	100 m
Backlighting			
• Type of backlighting	LED, dimmable	LED, dimmable	LED, dimmable
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C	50 000 h; At 25°C	50 000 h; At 25°C
Control elements			
Control elements	multi-touch screen	multi-touch screen	multi-touch screen
Touch operation			
• Design as touch screen	Yes	Yes	Yes
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes	Yes	Yes
Installation type/mounting			
Design	Pedestal mounting	Support arm mounting	Support arm mounting
Supply voltage			
Type of supply voltage	DC	DC	DC
Rated value (DC)	24 V	24 V	24 V
Interfaces			
Number of industrial Ethernet interfaces	2; 2 ports (switch)	2; 2 ports (switch)	2; 2 ports (switch)
Number of USB interfaces	4; on rear	4; on rear	4; on rear
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB
Industrial Ethernet			
• Transmission rate, max.	1 000 Mbit/s	1 000 Mbit/s	1 000 Mbit/s
Degree and class of protection			
IP (at the front)	IP65	IP65	IP65
IP (rear)	IP20	IP20	IP20
NEMA (front)	NEMA 4x (when installed)	NEMA 4x (when installed)	NEMA 4x (when installed)
• Enclosure Type 4x at the front	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes

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Technical specifications

Article number	**6AV6646-1BB18-0AA0**	**6AV6646-1BC18-0AA0**	**6AV6646-1BD18-0AA0**
	SIMATIC ITC1900 V3 PRO	SIMATIC ITC1900 V3 PRO	SIMATIC ITC1900 V3 PRO
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
FM approval	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes
Use in hazardous areas			
• ATEX Zone 2	No	No	No
• ATEX Zone 22	No	No	No
• IECEx Zone 2	No	No	No
• IECEx Zone 22	No	No	No
• cULus Class I Zone 2, Division 2	No	No	No
• FM Class I Division 2	No	No	No
Ambient conditions			
Ambient temperature during operation			
• min.	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C
Relative humidity			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation
Vibrations			
• Vibration load in operation	10 m/s^2	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2	10 m/s^2
Shock testing			
• Shock load during operation	150 m/s^2	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	150 m/s^2	150 m/s^2	150 m/s^2
Software			
Web browser	Yes; HTML5, CSS	Yes; HTML5, CSS	Yes; HTML5, CSS
PDF reader	Yes	Yes	Yes
Configuration / header			
Configuration			
• Local	Yes	Yes	Yes
• Remote	Yes; Via web page	Yes; Via web page	Yes; Via web page
Languages			
Online languages			
• Number of online/runtime languages	2; german / english	2; german / english	2; german / english
Peripherals/Options			
USB memory	Yes; USB storage medium can be connected	Yes; USB storage medium can be connected	Yes; USB storage medium can be connected
Mechanics/material			
Enclosure material (front)			
• Aluminum	Yes	Yes	Yes
Dimensions			
Width of the housing front	462 mm	462 mm	462 mm
Height of housing front	293 mm; Without basic adapter	293 mm; Without basic adapter	293 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights			
Weight (without packaging)	7.4 kg	7.4 kg	7.4 kg

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Technical specifications

Article number	**6AV6646-1BB22-1AA0**	**6AV6646-1BC22-1AA0**	**6AV6646-1BD22-1AA0**
	SIMATIC ITC2200 V3 PRO	SIMATIC ITC2200 V3 PRO	SIMATIC ITC2200 V3 PRO
General information			
Product type designation	ITC2200 V3	ITC2200 V3	ITC2200 V3
Display			
Design of display	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting	TFT widescreen display, LED backlighting
Screen diagonal	21.5 in; 22"	21.5 in; 22"	21.5 in; 22"
Number of colors	16 777 216	16 777 216	16 777 216
Resolution (pixels)			
• Image resolution	1 920 x 1 080	1 920 x 1 080	1 920 x 1 080
General features			
• non-reflective and tempered mineral glass screen	Yes	Yes	Yes
• Detachable from computer unit	100 m	100 m	100 m
Backlighting			
• Type of backlighting	LED, dimmable	LED, dimmable	LED, dimmable
• MTBF backlighting (at 25 °C)	30 000 h; At 25°C	30 000 h; At 25°C	30 000 h; At 25°C
• Backlight dimmable	Yes	Yes	Yes
Control elements			
Control elements	multi-touch screen	multi-touch screen	multi-touch screen
Touch operation			
• Design as touch screen	Yes	Yes	Yes
• Design as multi-touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
• Monitor keyboard	Yes	Yes	Yes
Installation type/mounting			
Design	Pedestal mounting	Support arm mounting	Support arm mounting
Supply voltage			
Type of supply voltage	DC	DC	DC
Rated value (DC)	24 V	24 V	24 V
Interfaces			
Number of industrial Ethernet interfaces	2; 2 ports (switch)	2; 2 ports (switch)	2; 2 ports (switch)
Number of USB interfaces	4; on rear	4; on rear	4; on rear
USB on the rear	Yes; 2x onboard	Yes; 2x onboard	Yes; 2x onboard
Connection for keyboard/mouse	USB	USB	USB
Industrial Ethernet			
• Transmission rate, max.	1 000 Mbit/s	1 000 Mbit/s	1 000 Mbit/s
Degree and class of protection			
IP (at the front)	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65
NEMA (front)			
• Enclosure Type 4x at the front	Yes	Yes	Yes
• Enclosure Type 12 at the front	Yes	Yes	Yes

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Technical specifications

Article number	**6AV6646-1BB22-1AA0**	**6AV6646-1BC22-1AA0**	**6AV6646-1BD22-1AA0**
	SIMATIC ITC2200 V3 PRO	SIMATIC ITC2200 V3 PRO	SIMATIC ITC2200 V3 PRO
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
cULus	Yes	Yes	Yes
FM approval	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes
KC approval	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes
Use in hazardous areas			
• ATEX Zone 2	No	No	No
• ATEX Zone 22	No	No	No
• IECEx Zone 2	No	No	No
• IECEx Zone 22	No	No	No
• cULus Class I Zone 2, Division 2	No	No	No
• FM Class I Division 2	No	No	No
Ambient conditions			
Ambient temperature during operation			
• min.	0 °C	0 °C	0 °C
• max.	45 °C	45 °C	45 °C
Relative humidity			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation
Vibrations			
• Vibration load in operation	10 m/s^2	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2	10 m/s^2
Shock testing			
• Shock load during operation	150 m/s^2	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	150 m/s^2	150 m/s^2	150 m/s^2
Software			
Web browser	Yes; HTML5, CSS	Yes; HTML5, CSS	Yes; HTML5, CSS
PDF reader	Yes	Yes	Yes
Configuration / header			
Configuration			
• Local	Yes	Yes	Yes
• Remote	Yes; Via web page	Yes; Via web page	Yes; Via web page
Languages			
Online languages			
• Number of online/runtime languages	2; german / english	2; german / english	2; german / english
Peripherals/Options			
USB memory	Yes; USB storage medium can be connected	Yes; USB storage medium can be connected	Yes; USB storage medium can be connected
Mechanics/material			
Enclosure material (front)			
• Aluminum	Yes	Yes	Yes
Dimensions			
Width of the housing front	527 mm	527 mm	527 mm
Height of housing front	330 mm; Without basic adapter	330 mm; Without basic adapter	330 mm; Without basic adapter
Overall depth	101 mm; Without basic adapter	101 mm; Without basic adapter	101 mm; Without basic adapter
Weights			
Weight (without packaging)	8.5 kg	8.5 kg	8.5 kg

More information is available on the Internet at:

http://www.siemens.com/itp65-hmi-devices

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Overview

SIMATIC IPC477E PRO

The fully enclosed IP65-protected SIMATIC IPC477E PRO in 15", 19" and 22" versions extends the portfolio of PRO devices.

The robust aluminum housing allows it to be used directly on the machine even in harsh environmental conditions.
The operating unit can either be mounted on a pedestal or connected to a support arm system from above.

Ordering data

	Article No.					
SIMATIC IPC477E PRO [1]	**6AV7251-**	■	■	■	■	- ■ ■ ■ ■
CPUs and fieldbus						
• Celeron G3902E; 3x Gigabit Ethernet (IE/PN)		**1**				
• Core i3-6102E; 3x Gigabit Ethernet (IE/PN)		**3**				
• Core i5-6442EQ; 3x Gigabit Ethernet (IE/PN)		**5**				
• XEON E3-1505L; 3x Gigabit Ethernet (IE/PN)		**7**				
Operating unit						
• 15" multi-touch (1 366 x 768), for support arm (not expandable, flange on top)			**B**			
• 15" multi-touch (1 366 x 768), for pedestal (expandable, flange below)			**C**			
• 15" multi-touch (1 366 x 768), for support arm (expandable, round tube)			**D**			
• 19" multi-touch (1 366 x 768), for support arm (not expandable, flange on top)			**E**			
• 19" multi-touch (1 366 x 768), for pedestal (expandable, flange below)			**F**			
• 19" multi-touch (1 366 x 768), for support arm (expandable, round tube)			**G**			
• 19" multi-touch (1 920 x 1 080), for pedestal (expandable, flange below)			**V**			
• 19" multi-touch (1 920 x 1 080), for support arm (expandable, round tube)			**W**			
• 22" multi-touch (1 920 x 1 080), for support arm (not expandable, flange on top)			**H**			
• 22" multi-touch (1 920 x 1 080), for pedestal (expandable, flange below)			**J**			
• 22" multi-touch (1 920 x 1 080), for support arm (expandable, round tube)			**K**			
• 24" multi-touch (1 920 x 1 080), for pedestal (expandable, flange below)			**X**			
• 24" multi-touch (1 920 x 1 080), for support arm (expandable, round tube)			**Y**			
Work memory/NVRAM						
• 4 GB				**A**		
• 8 GB				**B**		
• 16 GB				**C**		
• 8 GB with ECC				**D**		
• 16 GB with ECC				**E**		
• 4 GB and NVRAM				**F**		
• 8 GB and NVRAM				**G**		
• 16 GB and NVRAM				**H**		
• 8 GB with ECC and NVRAM				**J**		
• 16 GB with ECC and NVRAM				**K**		
Expansions/interfaces						
• No RS232/485, without PCIe					**0**	
• Two RS232/RS485, without PCIe					**3**	
• No RS232 without PCIe with ATEX/IECEx Cat 3G Zone 2 / cULus Class I Div. 2					**5**	
• Two RS232 without PCIe with ATEX/IECEx Cat 3G Zone 2 / cULus Class I Div. 2					**6**	

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Ordering data

	Article No.
SIMATIC IPC477E PRO [1]	**6AV7251-** ■■■■■ - ■■■■
Operating system	
• Without operating system	0
• Windows Embedded Standard 7 SP1, English, 32-bit	1
• Windows Embedded Standard 7 SP1, English, 64-bit	2
• Windows Embedded Standard 7 P SP1, MUI, 64-bit, multi-touch	3
• Windows 7 Ultimate SP1, 64-bit, MUI (en, de, fr, it, es)	4
• Windows 10 Enterprise 2019 LTSC (64-bit) for Celeron, I3 and I5	5
• Windows 10 Enterprise 2019 LTSC (64-bit) for Xeon	6
• Windows 10 IoT Enterprise 2016 LTSB (64-bit) for Celeron, I3 and I5	7
• Windows 10 IoT Enterprise 2016 LTSB (64-bit) for Xeon	8
Mass storage, external	
• Without external mass storage	0
• CFast 2 GB, without operating system	1
• CFast 4 GB, without operating system	2
• CFast 8 GB (only optionally with operating system/software if no internal mass storage or HDD)	3
• CFast 16 GB (only optionally with operating system/software if no internal mass storage or HDD)	4
• CFast 128 GB (only optionally with operating system/software if no internal mass storage or HDD)	5

	Article No.
SIMATIC IPC477E PRO [1]	**6AV7251-** ■■■■■ - ■■■■
Mass storage, internal	
• Without internal mass storage	A
• 128 GB solid-state drive SATA	D
• 240 GB solid-state drive SATA	F
• 480 GB solid-state drive SATA	G
SIMATIC software	
• Without SIMATIC software	A
Power supply	
• 24 V DC industrial power supply	0
• 24 V DC industrial power supply and TPM [2] (not for China or Russia)	8

[1] IPC477E PRO as "built to order" version (max. delivery time 15 working days).

[2] TPM = Trusted Platform Module

Note:

As with the existing 4:3 IPC477C/D PRO devices, adaptation to different support arm/pedestal systems is by means of the basic adapter. The basic adapter is included in the scope of supply (except in the case of the "prepared for support arm and extension components" version, as the connection is made via a round tube).

For the version "prepared for support arm and extension components", installation can alternatively take place with the Siemens flange mount or with a standard 48 mm diameter round tube. The flange mount enables the transition from a round tube connection to the familiar mechanical interface of the basic adapter. This means you can combine different versions of the PRO devices with the same support arm or pedestal system.

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Technical specifications

Article number	**6AV7251-.....-....**
	SIMATIC IPC477E PRO
Installation type/mounting	
Mounting	For mounting on stand or supporting bracket
Design	Panel PC on pedestal or supporting arm
maximum permissible installation angle +/-	±45 °
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
• Mains/voltage failure stored energy time	20 ms
Processor	
Processor type	Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)
Chipset	Intel C236 / Intel H110
Graphic	
Graphics controller	Intel HD graphics controller
Drives	
SSD	Yes; ≥ 128 GB optional
Memory	
Type of memory	DDR4-2400 SO-DIMM
Main memory	4 / 8 / 16 GB, ECC optional
Data areas and their retentivity	
Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time
Interfaces	
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)
USB port	4x USB 3.0 onboard (rear)
Connection for keyboard/mouse	USB / USB
serial interface	Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS
Video interfaces	
• Graphics interface	2x DisplayPort
Industrial Ethernet	
• Industrial Ethernet interface	3x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	Yes
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Watchdog	Yes
• Fan	No
• Monitoring function via network	Optional

Article number	**6AV7251-.....-....**
	SIMATIC IPC477E PRO
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m, 80 ... 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 ... 2.7 GHz; 10 V, 10 kHz ... 80 MHz acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A
Degree and class of protection	
IP65 (all-round)	Yes; IP65 fully enclosed
IP (at the front)	IP65
IP (rear)	IP65

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Technical specifications

Article number	**6AV7251-.....-....**
	SIMATIC IPC477E PRO
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
UL approval	Yes
• UL 508	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
EMC	CE, EN 61000-6-4; CISPR 22 Class A; FCC Class A
Use in hazardous areas	
• ATEX Zone 2	Yes; Optional
• IECEx Zone 2	Yes; Optional
• cULus Class I Zone 2, Division 2	Yes; Optional
Marine approval	
• Germanischer Lloyd (GL)	Yes
• American Bureau of Shipping (ABS)	Yes
• Det Norske Veritas (DNV)	Yes
• Korean Register of Shipping (KRS)	Yes
• Lloyds Register of Shipping (LRS)	Yes

Article number	**6AV7251-.....-....**
	SIMATIC IPC477E PRO
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to 45 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s^2 (1 g)
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27, IEC 60068-2-29: half-sine: 50 m/s^2 (5 g), 30 ms, 100 shocks per axis
Operating systems	
pre-installed operating system	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10
without operating system	Yes; Optional

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Technical specifications

Article number	**6AV7251-.B...-....** SIMATIC IPC477E PRO, 15 MTouch	**6AV7251-.C...-....** SIMATIC IPC477E PRO, 15 MTouch	**6AV7251-.D...-....** SIMATIC IPC477E PRO, 15 MTouch	**6AV7251-.E...-....** SIMATIC IPC477E PRO, 19 MTouch	**6AV7251-.F...-....** SIMATIC IPC477E PRO, 19 MTouch	**6AV7251-.G...-....** SIMATIC IPC477E PRO, 19 MTouch	**6AV7251-.H...-....** SIMATIC IPC477E PRO, 22 MTouch	**6AV7251-.J...-....** SIMATIC IPC477E PRO, 22 MTouch	**6AV7251-.K...-....** SIMATIC IPC477E PRO, 22 MTouch
Display									
Design of display	TFT widescreen display, LED backlighting								
Screen diagonal	15 in	15 in	15 in	19 in	19 in	19 in	22 in	22 in	22 in
Resolution (pixels)									
• Horizontal image resolution	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel	1 366 pixel	1 920 pixel	1 920 pixel	1 920 pixel
• Vertical image resolution	768 pixel	768 pixel	768 pixel	768 pixel	768 pixel	768 pixel	1 080 pixel	1 080 pixel	1 080 pixel
Control elements									
Touch operation									
• Design as touch screen	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive	Yes; Projective-capacitive
Installation type/mounting									
Mounting	For mounting on stand or supporting bracket								
Design	Panel PC on pedestal or supporting arm								
Support arm mounting	Yes; Suitable for support arm without extension components	No	Yes; Suitable for support arm and extension components (please refer to manual)	Yes; Suitable for support arm without extension components	No	Yes; Suitable for support arm and extension components (please refer to manual)	Yes; Suitable for support arm without extension components	No	Yes; Suitable for support arm and extension components (please refer to manual)
Stand mounting	No	Yes; Prepared for pedestal and extension components	No	No	Yes; Prepared for pedestal and extension components	No	No	Yes; Prepared for pedestal and extension components	No
Mounting in portrait format possible	No	No	No	No	No	No	No	No	No
maximum permissible installation angle +/-	±45 °	±45 °	±45 °	±45 °	±45 °	±45 °	±45 °	±45 °	±45 °
Supply voltage									
Type of supply voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Mains buffering									
• Mains/voltage failure stored energy time	20 ms	20 ms	20 ms	20 ms	20 ms	20 ms	20 ms	20 ms	20 ms

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Technical specifications

Article number	**6AV7251-.B...-....**	**6AV7251-.C...-....**	**6AV7251-.D...-....**	**6AV7251-.E...-....**	**6AV7251-.F...-....**	**6AV7251-.G...-....**	**6AV7251-.H...-....**	**6AV7251-.J...-....**	**6AV7251-.K...-....**
	SIMATIC IPC477E PRO, 15 MTouch	SIMATIC IPC477E PRO, 15 MTouch	SIMATIC IPC477E PRO, 15 MTouch	SIMATIC IPC477E PRO, 19 MTouch	SIMATIC IPC477E PRO, 19 MTouch	SIMATIC IPC477E PRO, 19 MTouch	SIMATIC IPC477E PRO, 22 MTouch	SIMATIC IPC477E PRO, 22 MTouch	SIMATIC IPC477E PRO, 22 MTouch
Processor									
Processor type	Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT)								
Chipset	Intel C236 / Intel H110	Intel C236 / Intel H110	Intel C236 / Intel H110	Intel C236 / Intel H110	Intel C236 / Intel H110	Intel C236 / Intel H110	Intel C236 / Intel H110	Intel C236 / Intel H110	Intel C236 / Intel H110
Graphic									
Graphics controller	Intel HD graphics controller	Intel HD graphics controller	Intel HD graphics controller	Intel HD graphics controller	Intel HD graphics controller	Intel HD graphics controller	Intel HD graphics controller	Intel HD graphics controller	Intel HD graphics controller
Drives									
SSD	Yes; ≥ 128 GB optional								
Memory									
Type of memory	DDR4-2400 SO-DIMM	DDR4-2400 SO-DIMM	DDR4-2400 SO-DIMM	DDR4-2400 SO-DIMM	DDR4-2400 SO-DIMM	DDR4-2400 SO-DIMM	DDR4-2400 SO-DIMM	DDR4-2400 SO-DIMM	DDR4-2400 SO-DIMM
Main memory	4 / 8 / 16 GB, ECC optional	4 / 8 / 16 GB, ECC optional	4 / 8 / 16 GB, ECC optional	4 / 8 / 16 GB, ECC optional	4 / 8 / 16 GB, ECC optional	4 / 8 / 16 GB, ECC optional	4 / 8 / 16 GB, ECC optional	4 / 8 / 16 GB, ECC optional	4 / 8 / 16 GB, ECC optional
Data areas and their retentivity									
Retentive data area (incl. timers, counters, flags), max.	512 kbyte; 128 KB can be stored in the buffer time	512 kbyte; 128 KB can be stored in the buffer time	512 kbyte; 128 KB can be stored in the buffer time	512 kbyte; 128 KB can be stored in the buffer time	512 kbyte; 128 KB can be stored in the buffer time	512 kbyte; 128 KB can be stored in the buffer time	512 kbyte; 128 KB can be stored in the buffer time	512 kbyte; 128 KB can be stored in the buffer time	512 kbyte; 128 KB can be stored in the buffer time
Hardware configuration									
Slots									
• Number of PCI slots	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit
• Number of PCI slots	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit	0; Different to the built-in unit
• Number of compact flash slots	1; CFast	1; CFast	1; CFast	1; CFast	1; CFast	1; CFast	1; CFast	1; CFast	1; CFast
Interfaces									
Number of industrial Ethernet interfaces	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)	3; 3x Ethernet (RJ45)
USB port	4x USB 3.0 onboard (rear)	4x USB 3.0 onboard (rear)	4x USB 3.0 onboard (rear)	4x USB 3.0 onboard (rear)	4x USB 3.0 onboard (rear)	4x USB 3.0 onboard (rear)	4x USB 3.0 onboard (rear)	4x USB 3.0 onboard (rear)	4x USB 3.0 onboard (rear)
Connection for keyboard/mouse	USB / USB	USB / USB	USB / USB	USB / USB	USB / USB	USB / USB	USB / USB	USB / USB	USB / USB
serial interface	Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS								
Video interfaces									
• Graphics interface	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort	2x DisplayPort
Industrial Ethernet									
• Industrial Ethernet interface	3x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)	3x Ethernet (RJ45)
- 100 Mbps	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
- 1000 Mbps	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Integrated Functions									
Monitoring functions									
• Temperature monitoring	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Watchdog	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Fan	No	No	No	No	No	No	No	No	No
• Monitoring function via network	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional

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Technical specifications

Article number	**6AV7251-.B...-....** SIMATIC IPC477E PRO, 15 MTouch	**6AV7251-.C...-....** SIMATIC IPC477E PRO, 15 MTouch	**6AV7251-.D...-....** SIMATIC IPC477E PRO, 15 MTouch	**6AV7251-.E...-....** SIMATIC IPC477E PRO, 19 MTouch	**6AV7251-.F...-....** SIMATIC IPC477E PRO, 19 MTouch	**6AV7251-.G...-....** SIMATIC IPC477E PRO, 19 MTouch	**6AV7251-.H...-....** SIMATIC IPC477E PRO, 22 MTouch	**6AV7251-.J...-....** SIMATIC IPC477E PRO, 22 MTouch	**6AV7251-.K...-....** SIMATIC IPC477E PRO, 22 MTouch
EMC									
Interference immunity against discharge of static electricity									
• Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2								
Interference immunity against high-frequency electromagnetic fields									
• Interference immunity against high frequency radiation	10 V/m, 80 ... 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 ... 2.7 GHz; 10 V, 10 kHz ... 80 MHz acc. to IEC 61000-4-6								
Interference immunity to cable-borne interference									
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric								
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m								
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m								
Interference immunity against voltage surge									
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric								
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric								
Interference immunity to magnetic fields									
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference									
• Interference emission via line/ AC current cables	EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A								
Degree and class of protection									
IP65 (all-round)	Yes; IP65 fully enclosed	Yes; IP65 fully enclosed	Yes; IP65 fully enclosed	Yes; IP65 fully enclosed	Yes; IP65 fully enclosed	Yes; IP65 fully enclosed	Yes; IP65 fully enclosed	Yes; IP65 fully enclosed	Yes; IP65 fully enclosed
IP (at the front)	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65	IP65
Standards, approvals, certificates									
CE mark	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CSA approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• UL 508	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EMC	CE, EN 61000-6-4; CISPR 22 Class A; FCC Class A								
Use in hazardous areas									
• ATEX Zone 2	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional
• IECEx Zone 2	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional
• cULus Class I Zone 2, Division 2	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional
Marine approval									
• Germanischer Lloyd (GL)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• American Bureau of Shipping (ABS)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Det Norske Veritas (DNV)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Korean Register of Shipping (KRS)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
• Lloyds Register of Shipping (LRS)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV7251-.B...-....**	**6AV7251-.C...-....**	**6AV7251-.D...-....**	**6AV7251-.E...-....**	**6AV7251-.F...-....**	**6AV7251-.G...-....**	**6AV7251-.H...-....**	**6AV7251-.J...-....**	**6AV7251-.K...-....**
	SIMATIC IPC477E PRO, 15 MTouch	SIMATIC IPC477E PRO, 15 MTouch	SIMATIC IPC477E PRO, 15 MTouch	SIMATIC IPC477E PRO, 19 MTouch	SIMATIC IPC477E PRO, 19 MTouch	SIMATIC IPC477E PRO, 19 MTouch	SIMATIC IPC477E PRO, 22 MTouch	SIMATIC IPC477E PRO, 22 MTouch	SIMATIC IPC477E PRO, 22 MTouch
Ambient conditions									
Ambient temperature during operation									
• Ambient temperature during operation	0 °C to 45 °C	0 °C to 45 °C	0 °C to 45 °C	0 °C to 45 °C	0 °C to 45 °C	0 °C to 45 °C	0 °C to 45 °C	0 °C to 45 °C	0 °C to 45 °C
Relative humidity									
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)								
Vibrations									
• Vibration resistance during operation acc. to IEC 60068-2-6	tested to DIN IEC 60068-2-6: 10 Hz to 58 Hz: 0.075 mm, 58 Hz to 200 Hz: 9.8 m/s^2 (1 g)								
Shock testing									
• Shock load during operation	Tested according to IEC 60068-2-27, IEC 60068-2-29: half-sine: 50 m/s^2 (5 g), 30 ms, 100 shocks per axis								
Operating systems									
pre-installed operating system	Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10								
without operating system	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional	Yes; Optional
Accessories									
Accessory components			6AV7674-1KF00-0AA0 - Flange mount for installation (refer to manual)		Basic adapter for mounting (MLFB: 6AV7674-1KA00-0AA0)	6AV7674-1KF00-0AA0 - Flange mount for installation (refer to manual)			6AV7674-1KF00-0AA0 - Flange mount for installation (refer to manual)
Dimensions									
Width of the housing front	396 mm	396 mm	396 mm	462 mm	462 mm	462 mm	527 mm	527 mm	527 mm
Height of housing front	255 mm; Without basic adapter	255 mm; Without basic adapter	255 mm	292 mm; Without basic adapter	292 mm; Without basic adapter	292 mm	329 mm; Without basic adapter	329 mm; Without basic adapter	329 mm
Weights									
Weight, approx.	6.8 kg	6.8 kg	7.5 kg	8.2 kg	8.2 kg	8.8 kg	9.3 kg	9.3 kg	9.9 kg

More information is available on the Internet at:

http://www.siemens.com/itp65-hmi-devices

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Overview

System components for fully-enclosed IP65-protected devices

System components for PRO devices are only suitable for SIMATIC HMI/IPC PRO devices. In combination with the SIMATIC HMI PRO basic devices, these components enable easy adaptation to individual customer requirements for operator control and monitoring at the machine level, as well as offering a versatile and attractive cabinet-free solution for visualization and automation.

The following system components are available:

- Fixing elements
  - Adapter sets
  - Basic adapters
  - Round tube adapter
- Extension Units and operator controls
- Extension components
  - Stainless steel keyboard
  - Tool and keyboard tray
  - USB interface for PRO devices

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Overview

Fixing elements

Adapter sets, basic adapter, round tube adapter and round tube cap

The fixing elements are required for connecting the SIMATIC HMI PRO device with the support arm head of the respective support arm system.

Since the support arm head is connected directly to the device, there is complete flexibility in the choice of support arm components.

Adapter sets are available for the VESA 75 and VESA 100 systems.

Further adapter sets can be obtained directly from the respective support arm manufacturers:

- Bernstein
- Rittal
- Rose
- Haseke and
- Rolec

For the 4:3 and 16:9 variants, basic adapters are available according to design:

- The basic adapter is included in the scope of delivery of the device for 4:3 systems (dark gray)
- The basic adapter is included in the scope of delivery of the device for 16:9 systems (silver) (the basic adapter is included in the scope of delivery as a matter of principle. It is excluded only from the version "prepared for support arm and extension components", because connection is made via a round tube.)

For the version "prepared for support arm and extension components" of the 16:9 PRO devices, installation can alternatively take place with the Siemens round tube adapter or with a standard 48 mm diameter round tube. The round tube adapter enables the transition from a round tube connection to the familiar mechanical interface of the basic adapter. This means you can combine different versions of the PRO devices with the same support arm or pedestal system.

Ordering data

	Article No.
VESA 100 adapter set[1)]	**6AV7674-0KD00-0AA0**
VESA 75 adapter set	**6AV7674-0KE00-0AA0**
Basic adapter for 16:9 systems Spare part (silver, included in the scope of delivery of the device)	**6AV7674-1KA00-0AA0**
Round tube adapter for 16:9 systems Suitable for 16:9 PRO devices of the type "prepared for support arm and extension components (round tube connection)"	**6AV7674-1KF00-0AA0**
VESA 100/75 round tube adapter For SIMATIC PRO devices. Can be mounted with a 100 mm (M6) or 75 mm (M6) VESA. IP20 cable entry directly in the round tube adapter. Suitable for all common support arm systems with corresponding VESA coupling, load capacity and hole spacing. More information is available in the technical specifications.	**6AV6881-0AD56-0AA0**
Round tube cap for PRO devices Replacement adapter for PRO devices	**6AV7674-1LB40-0AA0** **6AV7674-1LB50-0AA0**

1) The VESA 100 adapter set cannot be used in combination with the 19" Flat Panel PRO.

Note:

The 48 mm internal diameter of the support arm tubes is not suitable for feeding through the standard DVI-D cable.

Scope of delivery:

- One adapter set or basic adapter, round tube adapter
- Fittings for mounting

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Technical specifications

Article number	**6AV7674-0KD00-0AA0**	**6AV7674-0KE00-0AA0**
	Adapter Set VESA 100 Fully enclosed HMI	Adapter Set VESA 75 f. Fully Enclose HMI
General information		
Product type designation	Adapter set VESA 100	Adapter set VESA 75
Degree and class of protection		
IP (all-round)	IP65	IP65
Ambient conditions		
Suited for indoor use	Yes	Yes
Suited for outdoor use	No	No
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	55 °C	55 °C
Relative humidity		
• Operation, max.	90 %	90 %
• Condensation permissible	No	No
Scope of supply		
Delivery quantity in pieces	1	1
Other		
Merchandise	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	Not suitable for 19" 4:3 devices	Not suitable for 19" 4:3 devices

Article number	**6AV7674-1KA00-0AA0**
	Basic Adapter for HMI/IPC Pro (16:9)
General information	
Product type designation	Basic adapter
Other	
Merchandise	Yes
Manufacturer name	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany

Article number	**6AV7674-1KF00-0AA0**
	Flange Mount for Pro Devices
General information	
Product type designation	Flange mount
Installation type/mounting	
Mounting	for the transition from a size 48 round tube to a flange plate (compatible with basic adapter interface)
Degree and class of protection	
IP (all-round)	IP65 when installed
Mechanics/material	
Material	Steel, powder coating in RAL 9006

Article number	**6AV7674-1KF00-0AA0**
	Flange Mount for Pro Devices
Dimensions	
Width	76.3 mm; Width of flange plate, distance between holes 40 mm
Height	168 mm; Round tube and flange plate
Depth	80 mm; Depth of flange plate, distance between holes 63 mm
Enclosure diameter	48.3 mm; Round tube in interface area
Weights	
Weight (without packaging)	900 g
Scope of supply	
Delivery quantity in pieces	1
Other	
Target devices	Suitable for PRO devices, prepared for support arm and extension components (round tube connection)

Article number	**6AV6881-0AD56-0AA0**
	Flange mount adapter VESA 100/75
General information	
Product type designation	VESA 100/75 flange adapter
Installation type/mounting	
Mounting	VESA 100 mm / 75 mm with M6 thread
Mounting type	Support arm with VESA 100 mm or 75 mm
Degree and class of protection	
IP (at the front)	IP20 (depending on mounting)
Ambient conditions	
Suited for indoor use	Yes
Suited for outdoor use	No
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Relative humidity	
• Operation, max.	90 %
• Condensation permissible	No
Mechanics/material	
Material	steel
• Aluminum	No; Powder-coated
Dimensions	
Width	135 mm
Height	120 mm
Depth	67.5 mm
Scope of supply	
Delivery quantity in pieces	1; VESA round tube adapter 100/75 suitable for PRO devices, max. IP20 attainable
Components included	Without additional accessories
Other	
Merchandise	Yes; VESA 100/75 PRO adapter
Manufacturer name	QUERUM products UG
Manufacturer's address	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany
contacting the manufacturer	email: querumproducts@web.de
Target devices	Not suitable for 19" 4:3 devices
Note:	Max. load 35 kg, for expandable support arm mounting

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Technical specifications

Article number	**6AV7674-1LB40-0AA0** Round tube plug for PRO devices	**6AV7674-1LB50-0AA0** Exchange adapter for PRO devices
General information		
Product type designation	Round tube plug for PRO devices	Interchangeable adapter for PRO devices
Degree and class of protection		
IP (all-round)	IP65 when installed	IP65 when installed
NEMA (front)		
• Enclosure Type 4 at the front	Yes; When installed	Yes; When installed
Mechanics/material		
Material		
• Aluminum	Yes; Powder-coated, RAL 9006	Yes; Powder-coated, RAL 9006
Weights		
Weight (without packaging)	0.24 kg	0.34 kg
Scope of supply		
Delivery quantity in pieces	1	1
Components included	Round tube plug for PRO devices	Screws for attachment
Other		
Target devices	PRO devices for support arm (extendable, round tube)	PRO devices for support arm (extendable, round tube) and pedestal (extendable, flange below)

More information is available on the Internet at:
http://www.siemens.com/ip65-hmi-devices

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Overview

Extension Units

Extension Units with 12" to 22", as well as a 24" portrait version for SIMATIC HMI PRO devices, are part of the system components for fully-enclosed IP65-protected devices. They enable the expansion of the operating options on site by the installation of various operator controls. Communication can take place via PROFINET, PROFIsafe or conventional wiring.

SIMATIC Extension Unit (BTO & Advanced)

With Customized Automation, Extension Units are built to specific customer requirements and given their own customer MLFB. BTO (built to order).

Extension Units for 16:9 PRO devices

Extension Units for the 16:9 PRO devices are suitable for the flexible installation of various operator controls that extend the operating options on site easily and on an individual basis. They are coordinated with the design of the 16:9 PRO devices and can easily be mounted below the device by the customers themselves.

Additionally, the Extension Unit box is available for the flexible installation of lower operator controls.

Ordering data

	Article No.
Extension Units for 16:9 PRO devices	
Extension Unit Hardwired	
• 12"	**6AV7674-1LA31-0AA0**
• 15"	**6AV7674-1LA41-0AA0**
• 19"	**6AV7674-1LA51-0AA0**
• 22"	**6AV7674-1LA61-0AA0**
• 24"	**6AV7674-1LA71-0AA0**
• 24" portrait	**6AV7674-1LA81-0AA0**
Extension Unit PROFINET	
• 12"	**6AV7674-1LA32-0AA0**
• 15"	**6AV7674-1LA42-0AA0**
• 19"	**6AV7674-1LA52-0AA0**
• 22"	**6AV7674-1LA62-0AA0**
• 24"	**6AV7674-1LA72-0AA0**
• 24" portrait	**6AV7674-1LA82-0AA0**
Extension Unit PROFIsafe	
• 12"	**6AV7674-1LA33-0AA0**
• 15"	**6AV7674-1LA43-0AA0**
• 19"	**6AV7674-1LA53-0AA0**
• 22"	**6AV7674-1LA63-0AA0**
• 24"	**6AV7674-1LA73-0AA0**
• 24" portrait	**6AV7674-1LA83-0AA0**
Extension Unit box	
• 12"	**6AV7674-1LA30-0AA0**
• 15"	**6AV7674-1LA40-0AA0**
• 19"	**6AV7674-1LA50-0AA0**
• 22"	**6AV7674-1LA60-0AA0**
• 24"	**6AV7674-1LA70-0AA0**
• 24" portrait	**6AV7674-1LA80-0AA0**
Extension Unit Advanced PROFINET [1]	
• 12" KP12 PN	**6AV2185-8CE01-0AA0**
• 15" KP12 PN	**6AV2185-8DE01-0AA0**
• 19" KP12 PN	**6AV2185-8EE01-0AA0**
• 22" KP12 PN	**6AV2185-8FE01-0AA0**
• 12" KP24 PN	**6AV2185-8CE08-0AA0**
• 15" KP36 PN	**6AV2185-8DE08-0AA0**
• 19" KP36 PN	**6AV2185-8EE08-0AA0**
• 22" KP48 PN	**6AV2185-8FE08-0AA0**
Extension Unit Advanced PROFIsafe [1]	
• 12" KP12F PN	**6AV2185-8CF01-0AA0**
• 15" KP12F PN	**6AV2185-8DF01-0AA0**
• 19" KP12F PN	**6AV2185-8EF01-0AA0**
• 22" KP12F PN	**6AV2185-8FF01-0AA0**

[1] Max. two Extension Units possible as extension

Scope of delivery

Extension Units Hardwired:

- 1 Extension Unit
- 1 plug connector, 16-pin, for interface X12
- 1 plug connector, 12-pin, for interface X11
- 1 plug connector, 8-pin, for interface X10
- 1 power supply terminal for 24 V DC
- 4 bolts M4x20 for mounting the Extension Unit on the SIMATIC PRO device

PROFINET Extension Units:

- 1 Extension Unit
- 1 plug connector, 8-pin, for interface X10
- 1 power supply connector for 24 V DC
- 4 bolts M4x20 for mounting the Extension Unit on the SIMATIC PRO device

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Ordering data

	Article No.
Operator controls	
EMERGENCY STOP button	**6AV7674-1MA00-0AA0**
Illuminated pushbutton	
• One NO contact	**6AV7674-1MB00-0AA0**
• One NO contact and one NC contact	**6AV7674-1MG00-0AA0**
Pushbutton Safety	**6AV7674-1MG50-0AA0**
Indicator light	**6AV7674-1MC00-0AA0**
Selector switch	**6AV7674-1MD00-0AA0**
Key-operated switch	**6AV7674-1ME00-0AA0**
Keyswitch Safety	**6AV7674-1ME50-0AA0**

	Article No.
Accessories	
USB interface for front mounting in Extension Unit USB 2.0 type A, IP65 degree of protection with closed protective cover, cable and plug	**6AV7674-1MF00-0AA0**
Insert labels for self-inscription	**6AV7674-1LB30-0AA0**
Label holders for self-inscription	**6AV7674-1LB20-0AA0**

Technical specifications

Article number	**6AV7674-1LA31-0AA0**	**6AV7674-1LA41-0AA0**	**6AV7674-1LA51-0AA0**	**6AV7674-1LA61-0AA0**
	Extension Unit 12" hardwired	Extension Unit 15" hardwired	Extension Unit 19" hardwired	Extension Unit 22" hardwired
General information				
Product type designation	Extension Unit 12" Hardwired	Extension Unit 15" hardwired	Extension Unit 19" hardwired	Extension Unit 22" hardwired
Control elements				
Connection type				
• Connection type of the LED module	12-pin connector	12-pin connector	12-pin connector	12-pin connector
• Connection type of the contacts of the control elements	16-pin connector	16-pin connector	16-pin connector	16-pin connector
• Connection type of the safety-related contacts (emergency stop)	8-pin connector	8-pin connector	8-pin connector	8-pin connector
Installation type/mounting				
Mounting	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)
Mounting type	Screwed joint	Screwed joint	Screwed joint	Screwed joint
Rack mounting	No	No	No	No
Front mounting	No	No	No	No
Number of slots for command devices and signaling units	6	8	10; Max. 8 control elements + 1 emergency stop button can be mounted (refer to manual)	10; Max. 8 control elements + 1 emergency stop button can be mounted (refer to manual)
Supply voltage				
Rated value (DC)	24 V	24 V	24 V	24 V
Input current				
Current consumption (rated value)	10 mA; without load	10 mA; without load	10 mA; without load	10 mA; without load
Degree and class of protection				
IP (all-round)	IP65	IP65	IP65	IP65
NEMA (front)				
• Enclosure Type 4 at the front	Yes	Yes	Yes	Yes

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Technical specifications

Article number	**6AV7674-1LA31-0AA0**	**6AV7674-1LA41-0AA0**	**6AV7674-1LA51-0AA0**	**6AV7674-1LA61-0AA0**
	Extension Unit 12" hardwired	Extension Unit 15" hardwired	Extension Unit 19" hardwired	Extension Unit 22" hardwired
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level				
• Installation altitude above sea level, max.	2 000 m	2 000 m	2 000 m	2 000 m
Relative humidity				
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Cables				
Cable length	30 m	30 m	30 m	30 m
Mechanics/material				
Material				
• Aluminum	Yes	Yes	Yes	Yes
Enclosure material (front)				
• Aluminum	Yes; Knockout covered with black film	Yes; Knockout covered with black film	Yes; Knockout covered with black film	Yes; Knockout covered with black film
Dimensions				
Width	313 mm	396 mm	462 mm	527 mm
Height	99 mm	99 mm	99 mm	99 mm
Depth	100.65 mm			
Thickness		100.65 mm	100.65 mm	100.65 mm
Weights				
Weight (without packaging)	2.2 kg	2.5 kg	2.7 kg	2.8 kg
Scope of supply				
Delivery quantity in pieces	1	1	1	1
Components included	all connectors required for customer interfaces	all connectors required for customer interfaces	all connectors required for customer interfaces	all connectors required for customer interfaces

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Technical specifications

Article number	**6AV7674-1LA32-0AA0** Extension Unit 12" PROFINET	**6AV7674-1LA42-0AA0** Extension Unit 15" PROFINET	**6AV7674-1LA52-0AA0** Extension Unit 19" PROFINET	**6AV7674-1LA62-0AA0** Extension Unit 22" PROFINET
General information				
Product type designation	Extension Unit 12" PROFINET	Extension Unit 15" PROFINET	Extension Unit 19" PROFINET	Extension Unit 22" PROFINET
Control elements				
With parameterizable keys	Yes	Yes	Yes	Yes
Connection type				
• Connection type of the safety-related contacts (emergency stop)	8-pin connector	8-pin connector	8-pin connector	8-pin connector
Installation type/mounting				
Mounting	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)
Mounting type	Screwed joint	Screwed joint	Screwed joint	Screwed joint
Rack mounting	No	No	No	No
Front mounting	No	No	No	No
Number of slots for command devices and signaling units	6	8	10	12
RFID reader can be installed		Yes; SIMATIC RF200 Access Control Reader RF1060R	Yes; SIMATIC RF200 Access Control Reader RF1060R	Yes; SIMATIC RF200 Access Control Reader RF1060R
Supply voltage				
Rated value (DC)	24 V	24 V	24 V	24 V
Input current				
Current consumption (rated value)	150 mA; without load	150 mA; without load	150 mA; without load	150 mA; without load
Interfaces				
Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch
Number of PROFINET interfaces	2; Incl. switch	2; Incl. switch	2; Incl. switch	2; Incl. switch
Protocols				
PROFINET	Yes	Yes	Yes	Yes
Redundancy mode				
Media redundancy				
- MRP	Yes	Yes	Yes	Yes
Test commissioning functions				
Key and signal lamp test	Yes; automatically when switching on	Yes; automatically when switching on	Yes; automatically when switching on	Yes; automatically when switching on
Degree and class of protection				
IP (all-round)	IP65	IP65	IP65	IP65
NEMA (front)				
• Enclosure Type 4x at the front	Yes; All-round	Yes; All-round	Yes; All-round	Yes; All-round

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Technical specifications

Article number	**6AV7674-1LA32-0AA0** Extension Unit 12" PROFINET	**6AV7674-1LA42-0AA0** Extension Unit 15" PROFINET	**6AV7674-1LA52-0AA0** Extension Unit 19" PROFINET	**6AV7674-1LA62-0AA0** Extension Unit 22" PROFINET
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level				
• Installation altitude above sea level, max.	2 000 m	2 000 m	2 000 m	2 000 m
Relative humidity				
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Cables				
Cable length	30 m; Max. for emergency stop	30 m; Max. for emergency stop	30 m; Max. for emergency stop	30 m; Max. for emergency stop
Mechanics/material				
Material				
• Aluminum	Yes	Yes	Yes	Yes
Enclosure material (front)				
• Aluminum	Yes; Knockout covered with black film	Yes; Knockout covered with black film	Yes; Knockout covered with black film	Yes; Knockout covered with black film
Dimensions				
Width	313 mm	396 mm	462 mm	527 mm
Height	99 mm	99 mm	99 mm	99 mm
Depth	100.65 mm	100.65 mm	100.65 mm	100.65 mm
Weights				
Weight (without packaging)	2.2 kg	2.5 kg	2.7 kg	2.8 kg
Scope of supply				
Delivery quantity in pieces	1	1	1	1
Components included	Power supply connectors and 8-pole plug-in connectors for safety-related inputs	Power supply connectors and 8-pole plug-in connectors for safety-related inputs	Power supply connectors and 8-pole plug-in connectors for safety-related inputs	Power supply connectors and 8-pole plug-in connectors for safety-related inputs

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Technical specifications

Article number	**6AV7674-1LA33-0AA0** Extension Unit 12" PROFISAFE	**6AV7674-1LA43-0AA0** Extension Unit 15" PROFISAFE	**6AV7674-1LA53-0AA0** Extension Unit 19" PROFISAFE	**6AV7674-1LA63-0AA0** Extension Unit 22" PROFISAFE
General information				
Product type designation	Extension Unit 12" PROFIsafe	Extension Unit 15" PROFIsafe	Extension Unit 19" PROFIsafe	Extension Unit 22" PROFIsafe
Control elements				
With parameterizable keys	Yes	Yes	Yes	Yes
Installation type/mounting				
Mounting	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)
Mounting type	Screwed joint	Screwed joint	Screwed joint	Screwed joint
Rack mounting	No	No	No	No
Front mounting	No	No	No	No
Number of slots for command devices and signaling units	6	8	10	12
RFID reader can be installed	Yes; SIMATIC RF200 Access Control Reader RF1060R	Yes; SIMATIC RF200 Access Control Reader RF1060R	Yes; SIMATIC RF200 Access Control Reader RF1060R	Yes; SIMATIC RF200 Access Control Reader RF1060R
Supply voltage				
Rated value (DC)	24 V	24 V	24 V	24 V
Input current				
Current consumption (rated value)	150 mA; without load	150 mA; without load	150 mA; without load	150 mA; without load
Interfaces				
Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch
Number of PROFINET interfaces	2; Incl. switch	2; Incl. switch	2; Incl. switch	2; Incl. switch
Protocols				
PROFIsafe	Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor	Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor	Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor	Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor
Redundancy mode				
Media redundancy				
- MRP	Yes	Yes		
Test commissioning functions				
Key and signal lamp test	Yes; automatically when switching on	Yes; automatically when switching on	Yes; automatically when switching on	Yes; automatically when switching on
Degree and class of protection				
IP (all-round)	IP65	IP65	IP65	IP65
NEMA (front)				
• Enclosure Type 4x at the front	Yes; All-round	Yes; All-round	Yes; All-round	Yes; All-round

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Technical specifications

Article number	**6AV7674-1LA33-0AA0** Extension Unit 12" PROFISAFE	**6AV7674-1LA43-0AA0** Extension Unit 15" PROFISAFE	**6AV7674-1LA53-0AA0** Extension Unit 19" PROFISAFE	**6AV7674-1LA63-0AA0** Extension Unit 22" PROFISAFE
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level				
• Installation altitude above sea level, max.	2 000 m	2 000 m	2 000 m	2 000 m
Relative humidity				
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Mechanics/material				
Material				
• Aluminum	Yes	Yes	Yes	Yes
Enclosure material (front)				
• Aluminum	Yes; Knockout covered with black film	Yes; Knockout covered with black film	Yes; Knockout covered with black film	Yes; Knockout covered with black film
Dimensions				
Width	313 mm	396 mm	462 mm	527 mm
Height	99 mm	99 mm	99 mm	99 mm
Depth	100.65 mm	100.65 mm	100.65 mm	100.65 mm
Weights				
Weight (without packaging)	2.2 kg	2.5 kg	2.7 kg	2.8 kg
Scope of supply				
Delivery quantity in pieces	1	1	1	1
Components included	Power supply connector	Power supply connector	Power supply connector	Power supply connector

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Technical specifications

Article number	**6AV2185-8CE01-0AA0**	**6AV2185-8DE01-0AA0**	**6AV2185-8EE01-0AA0**	**6AV2185-8FE01-0AA0**
	Extension Unit 12" KP12 PN	Extension Unit 15" KP12 PN	Extension Unit 19" KP12 PN	Extension Unit 22" KP12 PN
General information				
Product type designation	Extension Unit 12" KP12 PN	Extension Unit 15" KP12 PN	Extension Unit 19" KP12 PN	Extension Unit 22" KP12 PN
Control elements				
Version of actuating element	1x Key Panel 12	1x Key Panel 12	1x Key Panel 12	1x Key Panel 12
Operating principle of the actuating element	Tactile feedback	Tactile feedback	Tactile feedback	Tactile feedback
Functional lighting	Yes; Freely configurable colors: Red, green, blue, white, yellow	Yes; Freely configurable colors: Red, green, blue, white, yellow	Yes; Freely configurable colors: Red, green, blue, white, yellow	Yes; Freely configurable colors: Red, green, blue, white, yellow
With parameterizable keys	Yes	Yes	Yes	Yes
Connection type				
• Connection type of the safety-related contacts (emergency stop)	8-pin connector	8-pin connector	8-pin connector	8-pin connector
Installation type/mounting				
Mounting	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)
Mounting type	Screwed joint	Screwed joint	Screwed joint	Screwed joint
Rack mounting	No	No	No	No
Front mounting	No	No	No	No
Number of slots for command devices and signaling units	3	5	6	8
RFID reader can be installed	Yes; SIMATIC RF200 Access Control Reader RF1060R	Yes; SIMATIC RF200 Access Control Reader RF1060R	Yes; SIMATIC RF200 Access Control Reader RF1060R	Yes; SIMATIC RF200 Access Control Reader RF1060R
Supply voltage				
Rated value (DC)	24 V	24 V	24 V	24 V
Input current				
Current consumption (rated value)	150 mA; without load	150 mA; without load	150 mA; without load	150 mA; without load
Interfaces				
Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch
Number of PROFINET interfaces	2; Incl. switch	2; Incl. switch	2; Incl. switch	2; Incl. switch
Protocols				
PROFINET	Yes	Yes	Yes	Yes
Redundancy mode				
Media redundancy				
- MRP	Yes	Yes	Yes	Yes
Degree and class of protection				
IP (all-round)	IP65	IP65	IP65	IP65

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Technical specifications

Article number	**6AV2185-8CE01-0AA0**	**6AV2185-8DE01-0AA0**	**6AV2185-8EE01-0AA0**	**6AV2185-8FE01-0AA0**
	Extension Unit 12" KP12 PN	Extension Unit 15" KP12 PN	Extension Unit 19" KP12 PN	Extension Unit 22" KP12 PN
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes; EAC	Yes; EAC	Yes; EAC	Yes; EAC
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level				
• Installation altitude above sea level, max.	2 000 m	2 000 m	2 000 m	2 000 m
Relative humidity				
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Cables				
Cable length	30 m; Max. for emergency stop	30 m; Max. for emergency stop	30 m; Max. for emergency stop	30 m; Max. for emergency stop
Mechanics/material				
Material				
• Aluminum	Yes	Yes	Yes	Yes
Enclosure material (front)				
• Aluminum	Yes; Knockout covered with black film	Yes; Knockout covered with black film	Yes; Knockout covered with black film	Yes; Knockout covered with black film
Dimensions				
Width	313 mm	396 mm	462 mm	527 mm
Height	99 mm	99 mm	99 mm	99 mm
Depth	100.65 mm	100.65 mm	100.65 mm	100.65 mm
Weights				
Weight (without packaging)	2.2 kg	2.5 kg	2.7 kg	2.8 kg
Scope of supply				
Delivery quantity in pieces	1	1	1	1
Components included	Power supply connectors and 8-pole plug-in connectors for safety-related inputs	Power supply connectors and 8-pole plug-in connectors for safety-related inputs	Power supply connectors and 8-pole plug-in connectors for safety-related inputs	Power supply connectors and 8-pole plug-in connectors for safety-related inputs

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Technical specifications

Article number	**6AV2185-8CE08-0AA0**	**6AV2185-8DE08-0AA0**	**6AV2185-8EE08-0AA0**	**6AV2185-8FE08-0AA0**
	Extension Unit 12" KP24 PN	Extension Unit 15" KP36 PN	Extension Unit 19" KP36 PN	Extension Unit 22" KP48 PN
General information				
Product type designation	Extension Unit 12" KP24 PN	Extension Unit 15" KP36 PN	Extension Unit 19" KP36 PN	Extension Unit 22" KP48 PN
Control elements				
Version of actuating element	2x Key Panel 12	3x Key Panel 12	3x Key Panel 12	4x Key Panel 12
Operating principle of the actuating element	Tactile feedback	Tactile feedback	Tactile feedback	Tactile feedback
Functional lighting	Yes; Freely configurable colors: Red, green, blue, white, yellow	Yes; Freely configurable colors: Red, green, blue, white, yellow	Yes; Freely configurable colors: Red, green, blue, white, yellow	Yes; Freely configurable colors: Red, green, blue, white, yellow
With parameterizable keys	Yes	Yes	Yes	Yes
Connection type				
• Connection type of the safety-related contacts (emergency stop)	8-pin connector	8-pin connector	8-pin connector	8-pin connector
Installation type/mounting				
Mounting	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)
Mounting type	Screwed joint	Screwed joint	Screwed joint	Screwed joint
Rack mounting	No	No	No	No
Front mounting	No	No	No	No
Number of slots for command devices and signaling units	0	0	0	0
RFID reader can be installed	No	No	No	No
Supply voltage				
Rated value (DC)	24 V	24 V	24 V	24 V
Input current				
Current consumption (rated value)	150 mA; without load	150 mA; without load	150 mA; without load	150 mA; without load
Interfaces				
Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch
Number of PROFINET interfaces	2; Incl. switch	2; Incl. switch	2; Incl. switch	2; Incl. switch
Protocols				
PROFINET	Yes	Yes	Yes	Yes
Redundancy mode				
Media redundancy				
- MRP	Yes	Yes	Yes	Yes
Degree and class of protection				
IP (all-round)	IP65	IP65	IP65	IP65

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Technical specifications

Article number	**6AV2185-8CE08-0AA0**	**6AV2185-8DE08-0AA0**	**6AV2185-8EE08-0AA0**	**6AV2185-8FE08-0AA0**
	Extension Unit 12" KP24 PN	Extension Unit 15" KP36 PN	Extension Unit 19" KP36 PN	Extension Unit 22" KP48 PN
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
CSA approval			Yes	
UL approval	Yes	Yes	Yes	Yes
cULus	Yes	Yes		Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes; EAC	Yes; EAC	Yes; EAC	Yes; EAC
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level				
• Installation altitude above sea level, max.	2 000 m	2 000 m	2 000 m	2 000 m
Relative humidity				
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Cables				
Cable length	30 m; Max. for emergency stop	30 m; Max. for emergency stop	30 m; Max. for emergency stop	30 m; Max. for emergency stop
Mechanics/material				
Material				
• Aluminum	Yes	Yes	Yes	Yes
Enclosure material (front)				
• Aluminum	Yes; Knockout covered with black film	Yes; Knockout covered with black film	Yes; Knockout covered with black film	Yes; Knockout covered with black film
Dimensions				
Width	313 mm	396 mm	462 mm	527 mm
Height	99 mm	99 mm	99 mm	99 mm
Depth	100.65 mm	100.65 mm	100.65 mm	100.65 mm
Weights				
Weight (without packaging)	2.2 kg	2.5 kg	2.7 kg	2.8 kg
Scope of supply				
Delivery quantity in pieces	1	1	1	1
Components included	Power supply connectors and 8-pole plug-in connectors for safety-related inputs	Power supply connectors and 8-pole plug-in connectors for safety-related inputs	Power supply connectors and 8-pole plug-in connectors for safety-related inputs	Power supply connectors and 8-pole plug-in connectors for safety-related inputs

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Technical specifications

Article number	**6AV2185-8CF01-0AA0**	**6AV2185-8DF01-0AA0**	**6AV2185-8EF01-0AA0**	**6AV2185-8FF01-0AA0**
	Extension Unit 12" KP12F PN	Extension Unit 15" KP12F PN	Extension Unit 19" KP12F PN	Extension Unit 22" KP12F PN
General information				
Product type designation	Extension Unit 12" KP12F PN	Extension Unit 15" KP12F PN	Extension Unit 19" KP12F PN	Extension Unit 22" KP12F PN
Control elements				
Version of actuating element	1x Key Panel 12	1x Key Panel 12	1x Key Panel 12	1x Key Panel 12
Operating principle of the actuating element	Tactile feedback	Tactile feedback	Tactile feedback	Tactile feedback
Functional lighting	Yes; Freely configurable colors: Red, green, blue, white, yellow	Yes; Freely configurable colors: Red, green, blue, white, yellow	Yes; Freely configurable colors: Red, green, blue, white, yellow	Yes; Freely configurable colors: Red, green, blue, white, yellow
With parameterizable keys	Yes	Yes	Yes	Yes
Installation type/mounting				
Mounting	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)	For mounting on a 16:9 HMI / IPC PRO device (lower part)
Mounting type	Screwed joint	Screwed joint	Screwed joint	Screwed joint
Rack mounting	No	No	No	No
Front mounting	No	No	No	No
Number of slots for command devices and signaling units	3	5	6	8
RFID reader can be installed	Yes; SIMATIC RF200 Access Control Reader RF1060R	Yes; SIMATIC RF200 Access Control Reader RF1060R	Yes; SIMATIC RF200 Access Control Reader RF1060R	Yes; SIMATIC RF200 Access Control Reader RF1060R
Supply voltage				
Rated value (DC)	24 V	24 V	24 V	24 V
Input current				
Current consumption (rated value)	150 mA; without load	150 mA; without load	150 mA; without load	150 mA; without load
Interfaces				
Number of industrial Ethernet interfaces	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch	2; For the construction of lines and rings without external switch
Number of PROFINET interfaces	2; Incl. switch	2; Incl. switch	2; Incl. switch	2; Incl. switch
Protocols				
PROFIsafe	Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor	Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor	Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor	Yes; 1x SIL 2 (two-channel) or 2x SIL 3 (single-channel) emergency stop sensor
Redundancy mode				
Media redundancy				
- MRP	Yes	Yes	Yes	Yes
Degree and class of protection				
IP (all-round)	IP65	IP65	IP65	IP65

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Technical specifications

Article number	**6AV2185-8CF01-0AA0**	**6AV2185-8DF01-0AA0**	**6AV2185-8EF01-0AA0**	**6AV2185-8FF01-0AA0**
	Extension Unit 12" KP12F PN	Extension Unit 15" KP12F PN	Extension Unit 19" KP12F PN	Extension Unit 22" KP12F PN
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
UL approval	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes
EAC (formerly Gost-R)	Yes; EAC	Yes; EAC	Yes; EAC	Yes; EAC
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level				
• Installation altitude above sea level, max.	2 000 m	2 000 m	2 000 m	2 000 m
Relative humidity				
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation	90 %; no condensation
Mechanics/material				
Material				
• Aluminum	Yes	Yes	Yes	Yes
Enclosure material (front)				
• Aluminum	Yes; Knockout covered with black film	Yes; Knockout covered with black film	Yes; Knockout covered with black film	Yes; Knockout covered with black film
Dimensions				
Width	313 mm	396 mm	462 mm	527 mm
Height	99 mm	99 mm	99 mm	99 mm
Depth	100.65 mm	100.65 mm	100.65 mm	100.65 mm
Weights				
Weight (without packaging)	2.2 kg	2.5 kg	2.7 kg	2.8 kg
Scope of supply				
Delivery quantity in pieces	1	1	1	1
Components included	Power supply connector	Power supply connector	Power supply connector	Power supply connector

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Technical specifications

Article number	**6AV7674-1MA00-0AA0**	**6AV7674-1MB00-0AA0**	**6AV7674-1MG00-0AA0**	**6AV7674-1MG50-0AA0**	**6AV7674-1MC00-0AA0**
	E-Stop Pushbutton for Ext. Unit	Illuminated Pushbutton for Ext. Unit	Illum. pushbutton for ext.unit (1NO+1NC)	Pushbutton Safety for Ext. Unit	Indicator Light for Ext. Unit
General information					
Product type designation	EMERGENCY STOP mushroom pushbutton for Extension Unit	Illuminated pushbutton for Extension Unit	Illuminated pushbutton for Extension Unit (1 NC contact / 1 NO contact)	Safety pushbutton for Extension Unit (2 NO contacts)	Indicator light for Extension Unit
Control elements					
Version of actuating element	Conical mushroom pushbutton	Pushbutton with flat button	Pushbutton with flat button	Pushbutton with flat button	Flat lens
Operating principle of the actuating element	Latching, rotate to unlatch	Momentary contact	Momentary contact	Momentary contact	
Shape of actuating element	Round	Round	Round	Round	Round
Illuminant	No; Cannot be illuminated	Yes; Can be illuminated	Yes; Can be illuminated	No; Cannot be illuminated	Yes; Can be illuminated
• Type of light source					SMT LED
• Color of light source		Translucent white (different colors are created using the colored disk supplied)			
Contact configuration	2 NC contacts	1 NO contact	1 NC contact, 1 NO contact	2 NO contacts	
Installation type/mounting					
Mounting type	Threaded ring	Threaded ring	Threaded ring	Threaded ring	Threaded ring
Front mounting	Yes; Front plate attachment in an Extension Unit for 16:9 PRO devices	Yes; Front plate attachment in an Extension Unit for 16:9 PRO devices	Yes; Front plate attachment in an Extension Unit for 16:9 PRO devices	Yes; Front plate attachment in an Extension Unit for 16:9 PRO devices	Yes; Front plate attachment in an Extension Unit for 16:9 PRO devices
Supply voltage					
Rated value (DC)	24 V	24 V	24 V	24 V	24 V
Input current					
Current consumption (rated value)	100 mA	100 mA	100 mA	100 mA	100 mA
EMC					
Emission of radio interference acc. to EN 55 011					
• Limit class A, for use in industrial areas	No	No	No	No	No
Degree and class of protection					
IP (at the front)	IP65 (on front) to EN60529 and NEMA4	IP65 (on front) to EN60529 and NEMA4	IP65 (on front) to EN60529 and NEMA4	IP65 (on front) to EN60529 and NEMA4	IP65 (on front) to EN60529 and NEMA4
Standards, approvals, certificates					
CE mark	Yes	Yes	Yes	Yes	Yes
UL approval	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit
cULus	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit
RCM (formerly C-TICK)	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit

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Technical specifications

Article number	**6AV7674-1MA00-0AA0** E-Stop Pushbutton for Ext. Unit	**6AV7674-1MB00-0AA0** Illuminated Pushbutton for Ext. Unit	**6AV7674-1MG00-0AA0** Illum. pushbutton for ext.unit (1NO+1NC)	**6AV7674-1MG50-0AA0** Pushbutton Safety for Ext. Unit	**6AV7674-1MC00-0AA0** Indicator Light for Ext. Unit
Ambient conditions					
Ambient temperature during operation					
• min.	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level					
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity					
• Operation, max.	90 %	90 %	90 %	90 %	90 %
• Condensation permissible	No	No	No	No	No
Mechanics/material					
Material					
• Plastic	Yes	Yes	Yes	Yes	Yes
Material of the actuating element	plastic	plastic	plastic	plastic	plastic
Material of the front ring	plastic	plastic	plastic	plastic	plastic
Enclosure color (front)	red	Colorless	Colorless	Colorless	Colorless
Color of the front ring	Yellow	Silver metallic	Silver metallic	Silver metallic	Silver metallic
Service life					
• Number of operating cycles, keys	50 000	1 000 000	1 000 000	1 000 000	
Dimensions					
Height of housing front	33.2 mm	9.85 mm	9.85 mm	9.85 mm	9.85 mm
Mounting diameter	22.3 mm	22.3 mm	22.3 mm	22.3 mm	22.3 mm
Weights					
Weight (without packaging)	50 g	50 g	50 g	50 g	50 g
Scope of supply					
Delivery quantity in pieces	1	1	1	1	1
Components included					
• Number of colored lenses		5; colorless, red, yellow, green, blue	5; colorless, red, yellow, green, blue	6; colorless, red, yellow, green, blue, black	5; colorless, red, yellow, green, blue
Other					
Target devices	Suitable for Extension Units of the 16:9 HMI/IPC PRO devices (refer to manual)	Suitable for Extension Units of the 16:9 HMI/IPC PRO devices (refer to manual)	Suitable for Extension Units of the 16:9 HMI/IPC PRO devices (refer to manual)	suitable for Extension Units of the 16:9 HMI/IPC PRO devices as of TIA Portal V16 (refer to manual)	Suitable for Extension Units of the 16:9 HMI/IPC PRO devices (refer to manual)
Note:				configurable as of TIA Portal V16	

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Technical specifications

Article number	6AV7674-1MD00-0AA0	6AV7674-1ME00-0AA0	6AV7674-1ME50-0AA0	6AV7674-1MF00-0AA0
	Selector Switch for Ext. Unit	Key-operated Switch for Ext. Unit	Key-operated Switch Safety for Ext. Unit	USB interface for extension unit
General information				
Product type designation	Selector switch for Extension Unit	Key-operated switch for Extension Unit	Safety keyswitch for Extension Unit	USB interface for Extension Unit
Control elements				
Version of actuating element	Rotary handle, 3 switch positions	3 switch positions (withdrawal positions)	2 switch positions (pos. 0 removal position)	
Operating principle of the actuating element	Latching	Latching	Latching	
Shape of actuating element	Round	Round	Round	
Illuminant	Yes; Can be illuminated	No; Cannot be illuminated	No; Cannot be illuminated	
• Type of light source	SMT LED			
• Color of light source	Translucent white			
Contact configuration	2 NO contacts	2 NO contacts	2 NO contacts	
Connection type				
• USB				Yes; USB 2.0 type A
• Cable length				0.7 m
Installation type/mounting				
Mounting type	Threaded ring	Threaded ring	Threaded ring	Threaded ring
Front mounting	Yes; Front plate attachment in an Extension Unit for 16:9 PRO devices	Yes; Front plate attachment in an Extension Unit for 16:9 PRO devices	Yes; Front plate attachment in an Extension Unit for 16:9 PRO devices	Yes; Front plate attachment in an Extension Unit for 16:9 PRO devices
Supply voltage				
Rated value (DC)	24 V	24 V	24 V	
Input current				
Current consumption (rated value)	100 mA	100 mA	100 mA	
EMC				
Emission of radio interference acc. to EN 55 011				
• Limit class A, for use in industrial areas	No	No	No	Yes
Degree and class of protection				
IP (all-round)				IP65 fully enclosed (when protective cover is closed)
IP (at the front)	IP65 (on front) to EN60529 and NEMA4	IP65 (on front) to EN60529 and NEMA4	IP65 (on front) to EN60529 and NEMA4	IP20 when protective cover is open
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
UL approval	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes
cULus	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes
RCM (formerly C-TICK)	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes; Only in combination with Extension Unit	Yes
KC approval				Yes
EAC (formerly Gost-R)				Yes
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	50 °C	50 °C	50 °C	50 °C
Altitude during operation relating to sea level				
• Installation altitude above sea level, max.	3 500 m	3 500 m	3 500 m	3 500 m
Relative humidity				
• Operation, max.	90 %	90 %	90 %	90 %
• Condensation permissible	No	No	No	No

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Technical specifications

Article number	**6AV7674-1MD00-0AA0**	**6AV7674-1ME00-0AA0**	**6AV7674-1ME50-0AA0**	**6AV7674-1MF00-0AA0**
	Selector Switch for Ext. Unit	Key-operated Switch for Ext. Unit	Key-operated Switch Safety for Ext. Unit	USB interface for extension unit
Operating systems				
Runs under operating system				
• other				Yes; Windows 7 Ultimate 32-bit / 64-bit, MUI; Windows Embedded Standard 7 E/P, 32-bit / 64-bit
Cables				
Cable length				0.5 m
smallest bending radius				0 mm
Mechanics/material				
Material				aluminum
• Plastic	Yes	Yes	Yes	
Material of the actuating element	plastic	plastic	plastic	
Material of the front ring	plastic	plastic	plastic	
Enclosure color (front)	gray	gray	gray	Silver metallic
Color of the front ring	Silver metallic	Silver metallic	Silver metallic	
Service life				
• Number of operating cycles, keys	300 000	50 000	50 000	1 500; Insertion cycles
Dimensions				
Height of housing front	22.24 mm	45.1 mm	45.1 mm	
Overall depth				10 mm
Mounting diameter	22.3 mm	22.3 mm	22.3 mm	22.3 mm
Weights				
Weight (without packaging)	50 g	50 g	50 g	0.13 g
Scope of supply				
Delivery quantity in pieces	1	1; Including 2 keys	1; Including 2 keys	
Components included				USB socket with cable and connector, threaded ring
Other				
Target devices	Suitable for Extension Units of the 16:9 HMI/IPC PRO devices (refer to manual)	Suitable for Extension Units of the 16:9 HMI/IPC PRO devices (refer to manual)	suitable for Extension Units of the 16:9 HMI/IPC PRO devices as of TIA Portal V16 (refer to manual)	Suitable for Extension Units of the 16:9 HMI/IPC PRO devices (refer to manual)
Note:			configurable as of TIA Portal V16	

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Technical specifications

Article number	**6AV7674-1LB20-0AA0**	**6AV7674-1LB30-0AA0**
	12 Label Holder for Self Inscription	Label Inserts for Self Inscription
General information		
Product type designation	Label holder	Insert labels
Standards, approvals, certificates		
CE mark	Yes	Yes
Ambient conditions		
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	50 °C	50 °C
Altitude during operation relating to sea level		
• Installation altitude above sea level, max.	3 500 m	3 500 m
Relative humidity		
• Operation, max.	90 %	90 %
• Condensation permissible	No	No
Mechanics/material		
Material		
• Plastic	Yes	
Dimensions		
Width	29.9 mm	
Height	50 mm	
Depth	3.6 mm	
Mounting diameter	22.3 mm	
Weights		
Weight (without packaging)	33 g	
Scope of supply		
Delivery quantity in pieces	1	1
• Number of films per sheet		54; 54 perforated insert labels per sheet
• Parts per unit	12	4; 4 sheets
Components included	12 label holders, 12 transparent covers, installation instructions	4x DIN A4 perforated sheets, installation instructions
Other		
printable with laser printer	Yes; Word template available for labeling in SIOS, writable surface area: 28 mm x 16 mm (width x height)	Yes; Word template available for labeling in SIOS
Target devices	Suitable for Extension Units of the 16:9 HMI/IPC PRO devices (refer to manual)	Suitable for Extension Units of the 16:9 HMI/IPC PRO devices (refer to manual)

More information

More information is available on the Internet at:
https://www.siemens.com/simatic-hmi-pro

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Overview

Extension components

The extension components are part of the system components for PRO devices and complement the portfolio of fully enclosed devices. These components in combination with the basic devices enable customers to implement a large variety of operating scenarios.

The following products are available as extension components:

- Keyboard shelf for PRO devices
- Keyboard tray for PRO devices
- USB keyboard INT, KV25605 INOX with IP67 USB plug
- USB keyboard GER, KV25605 INOX with IP67 USB plug
- USB interface for PRO devices
- Handles for PRO devices (12" – 22" variant and 24" variant)

Ordering data

	Article No.
Keyboard shelf for PRO devices Tiltable, incl. 2-way USB interface; color: silver	**6AV7674-1NF01-0AA0**
Keyboard tray for PRO devices Tiltable, incl. 2-way USB interface; color: silver	**6AV7674-1NG00-0AA0**
USB interface for PRO devices Cable and connector, USB 2.0 type A. IP65 degree of protection if protective cover is closed. Integrated via cover on the side of the basic adapter	**6AV7674-1LX00-0AA0**
Tray for 16:9 PRO devices Tray in RAL9006 (silver) for all fully-enclosed IP65 16:9 PRO devices	**6AV7674-1NE01-0AA0**
Handles for PRO devices For optimum handling and haptics when positioning and tilting the HMI PRO device. Universally adjustable from 12" to 22".	**6AV7674-1LB10-0AA0**
Handles for PRO devices 24"	**6AV7674-1LB15-0AA0**

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Technical specifications

Article number	**6AV7674-1LX00-0AA0**
	USB Interface for Pro Devices
General information	
Product type designation	USB interface for PRO devices
Control elements	
Connection type	
• USB	Yes; USB 2.0 type A
• Cable length	0.5 m
Installation type/mounting	
Mounting	Integrated by means of cover on the side of the basic adapter.
Degree and class of protection	
IP (all-round)	IP65 fully enclosed (when protective cover is closed)
IP (at the front)	IP20 when protective cover is open
Standards, approvals, certificates	
CE mark	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	50 °C
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	3 500 m
Relative humidity	
• Operation, max.	90 %
• Condensation permissible	No
Cables	
Cable length	0.5 m
Mechanics/material	
Material	Brass, nickel-plated
Enclosure material (front)	USB cover: Anodized aluminum, cover for basic adapter: Aluminum, powder-coated, RAL 9006
Enclosure color (front)	Silver metallic
Service life	
• Number of operating cycles, keys	1 500; Insertion cycles
Dimensions	
Enclosure diameter	22.5 mm; Hole diameter in the cover for the basic adapter
Overall depth	20 mm
Weights	
Weight (without packaging)	0.25 kg
Scope of supply	
Delivery quantity in pieces	1
Components included	USB socket with cable and connector, cover for the basic adapter, bolts for fastening

Article number	**6AV7674-1LB15-0AA0**
	Handles for HMI PRO devices 24"
General information	
Product type designation	Handles for HMI PRO devices 24"
Degree and class of protection	
IP (all-round)	IP65 when installed
NEMA (front)	
• Enclosure Type 4 at the front	Yes
Standards, approvals, certificates	
RoHS conformity	Yes
Mechanics/material	
Material	
• Aluminum	Yes; Powder-coated, RAL 9006
Weights	
Weight (without packaging)	1.9 kg
Scope of supply	
Delivery quantity in pieces	1
Components included	Screws for attachment
Other	
Target devices	PRO devices for support arm (extendable, round tube) and pedestal (extendable, flange below)

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Overview

For special requirements, the following devices with stainless steel front (EN 1672-2) are offered for use in the food, beverages and tobacco industries, for example.

- Comfort Panels INOX and INOX PCT
- SIMATIC Industrial Thin Client INOX
- SIMATIC Industrial Flat Panel IFP1900 INOX PRO
- SIMATIC Industrial Flat Panel IFP2200 INOX MT ETH

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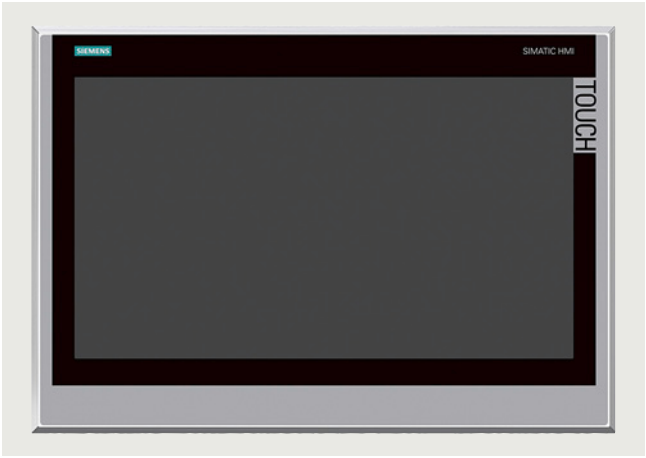
Overview



SIMATIC ITC1900 INOX

The Industrial Thin Client with touch screen and stainless steel front is designed for use in the food and beverage industry, the pharmaceuticals industry, fine chemicals and in other hygiene areas for machine-level operator control and monitoring.

For this reason, the devices with stainless steel front have been developed in compliance with EN 1672-2 "Food processing machinery – Safety and hygiene requirements".

Ordering data

	Article No.
SIMATIC ITC1900 INOX With accessory pack comprising: • Clamping frame • Device seal • Tension jack • Terminal • Installation instructions	**6AV6646-8AC10-0AA0**

The device seals can be replaced using the corresponding service packages from the accessories.

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Technical specifications

Article number	**6AV6646-8AC10-0AA0** SIMATIC ITC1900 INOX
General information	
Product type designation	ITC1900 INOX
Display	
Design of display	TFT widescreen display, LED backlighting
Screen diagonal	18.5 in
Number of colors	16 777 216
Backlighting	
• Type of backlighting	LED, dimmable
Control elements	
Touch operation	
• Design as touch screen	Yes
• Monitor keyboard	Yes
Supply voltage	
Type of supply voltage	DC
Interfaces	
Number of industrial Ethernet interfaces	1
Number of USB interfaces	2; on rear
Connection for keyboard/mouse	USB
Industrial Ethernet	
• Transmission rate, max.	1 000 Mbit/s
Degree and class of protection	
IP (at the front)	IP66K
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4x at the front	Yes; indoor use only
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
Use in hazardous areas	
• ATEX Zone 2	Yes
• ATEX Zone 22	Yes
• IECEx Zone 2	Yes
• IECEx Zone 22	Yes
• cULus Class I Zone 1	No
• cULus Class I Zone 2, Division 2	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	45 °C
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	60 °C
Relative humidity	
• Operation, max.	70 %
Software	
Web browser	Yes
PDF reader	Yes

Article number	**6AV6646-8AC10-0AA0** SIMATIC ITC1900 INOX
Configuration / header	
Configuration	
• Local	Yes
• Remote	Yes; With Remote Configuration Center (RCC) as of V2.0
Languages	
Online languages	
• Number of online/runtime languages	2; german / english
Peripherals/Options	
USB memory	Yes; USB storage medium can be connected
Mechanics/material	
Enclosure material (front)	
• Aluminum	No
• Stainless steel	Yes
Dimensions	
Width of the housing front	483 mm
Height of housing front	337 mm
Mounting cutout, width	465 mm
Mounting cutout, height	319 mm
Overall depth	73 mm
Weights	
Weight (without packaging)	8.5 kg

More information

Customized modifications

- Customized design (logo, type designation and membrane color)
- Protection against condensation and corrosive gases

Quotation preparation

Customized automation specialists define the product modifications precisely in accordance with customer requirements.

The quotation is then prepared with:

- Non-recurring costs
- Prototype costs
- Serial device prices and
- The general conditions in the form of a product agreement (e.g. minimum quantity).

The defined device can then be ordered easily using this product agreement and a customer-specific order number.

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Overview

SIMATIC IFP1900 INOX PRO

Industrial Flat Panel in fully-enclosed stainless steel housing with high degree of protection for machine-level operator control and monitoring in the food and beverage, pharmaceutical and fine chemicals industries and in other areas where hygienic requirements are high.

The device has been developed on the basis of EN 1672-2 "Food processing machinery – Safety and hygiene requirements".

With its fully enclosed design and optional expansion modules, the SIMATIC PRO devices are eminently suitable for industrial and machine-level use.

The INOX PRO devices with their stainless steel housing are compact and hygienically designed and feature integrated operating elements. They are also even better equipped to meet the high requirements presented by the food and beverage production environment. IP66K degree of protection protects against water, even with a jet strength of 100 l/min at 10 bar from a distance of 2.5 m to 3 m.

The optimized profile and minimal housing depth allow liquids to run off.

The high quality requirements in the food and beverages industry demand a high standard of the food processing machinery. There are many relevant regulations, directives, ordinances, standards and laws. Essential here is that all equipment and components are easy to clean and disinfect so that cross-contamination of foodstuffs can be avoided.

Ordering data

	Article No.
SIMATIC IFP1900 INOX PRO for pedestal mounting 19"; with accessory pack comprising: Documentation and driver CD, product information; terminals; Quickinstall Guide	**6AV7484-6AB00-0AA0**
SIMATIC IFP1900 INOX PRO for support-arm mounting 19"; with accessory pack comprising: Documentation and driver CD, product information; terminals; Quickinstall Guide	**6AV7484-6AB10-0AA0**
Accessories Mounting packages are provided as accessories for mounting the devices on the support system. The device seals can be replaced using the corresponding service packages from the accessories.	See "System components for fully-enclosed IP65-protected devices"

Technical specifications

Article number	**6AV7484-6AB00-0AA0** IFP1900 INOX PRO STAND	**6AV7484-6AB10-0AA0** IFP1900 INOX PRO ARM
General information		
Product type designation	IFP1900 INOX PRO	IFP1900 INOX PRO
Short designation	Flat Panel 19" INOX PRO ETH single-touch	Flat Panel 19" INOX PRO ETH single-touch
Display		
Design of display	18.5" TFT widescreen display	18.5" TFT widescreen display
Screen diagonal	18.5 in	18.5 in
Screen diagonal [cm]	47 cm	47 cm
Number of colors	16 000 000	16 000 000
General features		
• Brightness/contrast	400 cd/m² / 700:1	400 cd/m² / 700:1
• non-reflective and tempered mineral glass screen	No	No
• Detachable from computer unit	100 m	100 m
Backlighting		
• Type of backlighting	LED, dimmable	LED, dimmable
• MTBF backlighting (at 25 °C)	50 000 h	50 000 h
Control elements		
Control elements	single-touch screen	single-touch screen
Input device		
• Integrated mouse cursor control	No	No
Touch operation		
• Design as touch screen	Yes	Yes
• Design as multi-touch screen	No	No
• Monitor keyboard	No	No

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Technical specifications

Article number	6AV7484-6AB00-0AA0	6AV7484-6AB10-0AA0
	IFP1900 INOX PRO STAND	IFP1900 INOX PRO ARM
Installation type/mounting		
Design	Pedestal mounting	Support arm mounting
Mounting in portrait format possible	No	No
Supply voltage		
Rated value (DC)	24 V	24 V
Input current		
Current consumption (rated value)	2 A	2 A
Interfaces		
Number of industrial Ethernet interfaces	1	1
Number of USB interfaces	2	2
USB on the rear	No	No
USB at the front	No	No
Connection for keyboard/mouse	USB	USB
Video interfaces		
• DVI-D	No	No
• DisplayPort	Yes	Yes
Touch interfaces		
• USB	Yes	Yes
Industrial Ethernet		
• Transmission rate, max.	1 Mbit/s	1 Mbit/s
Degree and class of protection		
IP (at the front)	IP66	IP66
IP (rear)	IP66	IP66
NEMA (front)		
• Enclosure Type 4x at the front	No	No
• Enclosure Type 12 at the front	No	No
Standards, approvals, certificates		
CE mark	Yes	Yes
UL approval	Yes	Yes
• UL 508	Yes	Yes
cULus	Yes	Yes
FM approval	No	No
RCM (formerly C-TICK)	No	No
KC approval	No	No
EAC (formerly Gost-R)	No	No
CCC	No	No
FCC	Yes	Yes
EMC	CE, EN 61000-6-4; CISPR 22 Class A; FCC Class A	CE, EN 61000-6-4; CISPR 22 Class A; FCC Class A
Marine approval	No	No
Use in hazardous areas		
• ATEX Zone 2	No	No
• ATEX Zone 22	No	No
• IECEx Zone 2	No	No
• IECEx Zone 22	No	No
• cULus Class I Zone 2, Division 2	No	No
• FM Class I Division 2	No	No

Article number	6AV7484-6AB00-0AA0	6AV7484-6AB10-0AA0
	IFP1900 INOX PRO STAND	IFP1900 INOX PRO ARM
Ambient conditions		
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	45 °C	45 °C
Relative humidity		
• Operation, max.	85 %	85 %
Vibrations		
• Vibration load in operation	10 m/s^2	10 m/s^2
• Vibration load during transport/storage	10 m/s^2	10 m/s^2
Shock testing		
• Shock load during operation	150 m/s^2	150 m/s^2
• shock acceleration during storage/transport	250 m/s^2	250 m/s^2
configuration / header		
Configuration		
• Local	Yes	Yes
• Remote	No	No
Mechanics/material		
Enclosure material (front)	Stainless steel V2A	Stainless steel V2A
• Plastic	Yes	Yes
• Aluminum	No	No
• Stainless steel	Yes	Yes
• Aluminum casting	No	No
• Glass	No	No
Enclosure material (rear)	Stainless steel V2A	Stainless steel V2A
Dimensions		
Width	544 mm	544 mm
Height	430.7 mm	430.7 mm
Depth	136 mm	136 mm
Weights		
Weight (without packaging)	15.5 kg	15.5 kg

More information is available on the Internet at:

http://www.siemens.com/inox-pro-hmi-devices

Customized modifications

- Customized design (logo, type designation and membrane color)
- Other display sizes
- Changes to the operator controls
- Further certificates and approvals

Quotation preparation

Customized automation specialists define the product modifications precisely in accordance with customer requirements.

The quotation is then prepared with:

- Non-recurring costs
- Prototype costs
- Serial device prices and
- The general conditions in the form of a product agreement (e.g. minimum quantity).

The defined device can then be ordered easily using this product agreement and a customer-specific order number.

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Overview

SIMATIC Industrial Flat Panel IFP2200 INOX MT ETH

The Industrial Flat Panel (Ethernet monitor) with its projective-capacitive touch screen for multi-finger operation and stainless steel front is designed for use in the food and beverage, pharmaceutical, and fine chemicals industries as well as in other hygienic areas for machine level operator control and monitoring.

For this reason, these stainless steel front devices have been developed in compliance with EN 1672-2 "Food processing machinery – Safety and hygiene requirements".

Ordering data

	Article No.
SIMATIC IFP2200 INOX MT ETH With accessory pack comprising: • Clamping frame • Device seal • Mounting clamp • Terminal • Installation instructions	**6AV7485-6BE00-0AA0**

The device seals can be replaced using the corresponding service packages from the accessories.

Technical specifications

Article number	**6AV7485-6BE00-0AA0** SIMATIC FLAT PANEL 22" INOX MT ETH
General information	
Product type designation	IFP2200 INOX
Short designation	Flat Panel 22" INOX multi-touch Ethernet
Display	
Design of display	TFT widescreen display, LED backlighting
Screen diagonal	21.5 in
Screen diagonal [cm]	56 cm
On Screen Display (OSD) configuration	No; Adjustable by means of software
Number of colors	16 777 216; 24 bit
Viewing angle	170° x 170°
General features	
• Brightness/contrast	250 cd/m² / 1 000:1
Backlighting	
• Type of backlighting	LED
• MTBF backlighting (at 25 °C)	50 000 h; At 25°C
Control elements	
Input device	
• Integrated mouse cursor control	No
Touch operation	
• Design as touch screen	Yes; Projective-capacitive
• Design as multi-touch screen	Yes
• Monitor keyboard	Yes
Supply voltage	
Rated value (DC)	24 V
Interfaces	
Number of industrial Ethernet interfaces	1; Ethernet, 1 port, RJ45
USB on the rear	Yes; 2x onboard
Video interfaces	
• DisplayPort	Yes; DisplayPort V1.1
Touch interfaces	
• USB	Yes
Industrial Ethernet	
• Transmission rate, max.	1 000 Mbit/s
Degree and class of protection	
IP (at the front)	IP66 / IPx6K and IP69 / IPx9K
IP (rear)	IP20
NEMA (front)	
• Enclosure Type 4x at the front	No; Available soon

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Technical specifications

Article number	**6AV7485-6BE00-0AA0** SIMATIC FLAT PANEL 22" INOX MT ETH
Standards, approvals, certificates	
CE mark	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
KC approval	No
EAC (formerly Gost-R)	Yes
Use in hazardous areas	
• ATEX Zone 2	No; Available soon
• ATEX Zone 22	No; Available soon
• FM Class I Division 2	No; Available soon
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	45 °C; Vertical installation (horizontal)
Vibrations	
• Vibration load in operation	10 m/s^2
• Vibration load during transport/storage	10 m/s^2
Shock testing	
• Shock load during operation	150 m/s^2
• shock acceleration during storage/transport	150 m/s^2
Mechanics/material	
Enclosure material (front)	
• Glass	Yes
Dimensions	
Width of the housing front	544 mm
Height of housing front	345 mm
Mounting cutout, width	513 mm; Tolerance: +1 mm
Mounting cutout, height	315 mm; Tolerance: +1 mm
Overall depth	62.5 mm
Weights	
Weight (without packaging)	8 kg
Weight (with packaging)	9.1 kg

More information

Customized modifications

- Neutral design (black, no logo, type designation)
- Protection against condensation and corrosive gases

Quotation preparation

Customized automation specialists define the product modifications precisely in accordance with customer requirements.

The quotation is then prepared with:

- Non-recurring costs
- Prototype costs
- Serial device prices
- General conditions in the form of a product agreement (e.g. minimum quantity)

The defined device can then be ordered easily using this product agreement and a customer-specific order number.

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Overview

The SIMATIC HMI Ex devices are intrinsically safe Panel PCs and thin clients that have been specially designed for hazardous areas. The intrinsically safe design allows simple installation on site. The variety of certification allows use in many parts of the world without further approvals.

The devices are fanless and permit completely maintenance-free installation without batteries or rotating parts.

Available as HMI devices for hazardous areas "Zone 1" and "Zone 2" are:

- SIMATIC HMI Panel PC Ex NG
- SIMATIC HMI Panel PC Ex OG
- SIMATIC HMI Panel PC Ex2
- SIMATIC HMI Thin Client Ex NG
- SIMATIC HMI Thin Client Ex OG
- SIMATIC HMI Thin Client Ex2

Further SIMATIC HMI devices are also available for the "Zone 2/22" hazardous area and can be found in the "Operator panels" chapter:

- SIMATIC HMI Comfort Panels

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Overview

SIMATIC HMI Panel PC Ex NG

The new generation SIMATIC HMI Panel PC Ex NG has been specially developed for use in the pharmaceutical, chemical and life science industries, but can also be used in many other areas since it satisfies the requirements for operator control and monitoring directly in hazardous areas.

Due to the 22" and 24" display diagonals, these devices are ideal for showing plant and process information provided from systems such as PCS.
A modern Intel ATOM E3845 Quad Core processor is used with this SIMATIC HMI Panel PC Ex NG.

Highlights:

- High degree of industrial functionality and industry-compatible front panels
  - Single-touch fronts 22" (1 680 x 1 050), 24" (1 920 x 1 080) and 24" WU (1 920 x 1 200)
  - -30 °C up to 55 °C ambient temperature in operation
  - Resistive Touch Display 300 cd/m²
  - Built-in unit optional stainless steel enclosure or GMP/cleanroom
- Certificates for hazardous area
  - IECEx, ATEX Zones 1, 21 and 2, 22
  - Class 1, Division 2
  - NEC
  - CEC
  - KGS
  - TR
  - Certificates for marine applications DNV/GL
- High system performance in hazardous areas
  - Intel Bay Trail (BT) 1.91 GHz Quad Core

Ordering data

	Article No.								
SIMATIC HMI Panel PC Ex NG	**6AV7200-**	**6**	■	■	■	■	-	■	■	■	■
Display											
• 22", 1 680 x 1 050, 16:10 format, Zone 1			**A**								
• 24", 1 920 x 1 080, 16:9 format, Zone 1			**B**								
• 24", 1 920 x 1 200, 16:10 format, Zone 1			**C**								
• 22", 1 680 x 1 050, 16:10 format, Zone 2			**D**								
• 24", 1 920 x 1 080, 16:9 format, Zone 2			**E**								
• 24", 1 920 x 1 200, 16:10 format, Zone 2			**F**								
• 22", 1 680 x 1 050, 16:10 format, non-explosion protection			**G**								
• 24", 1 920 x 1 080, 16:9 format, non-explosion protection			**H**								
• 24", 1 920 x 1 200, 16:10 format, non-explosion protection			**J**								
Network											
• 10/100BaseTX - copper Ethernet				**A**							
• 2 x 10/100BaseTX - 2 x copper Ethernet				**B**							
• 1000BaseSX - fiber optic Ethernet				**C**							
• 1000BaseLX - fiber optic Ethernet				**D**							
• 100BaseFX - fiber optic Ethernet				**E**							
Mass storage/main memory/ operating system											
• 32 GB SSD, 4 GB RAM, Windows 7 Ultimate 64-bit					**0**						
• 64 GB SSD, 4 GB RAM, Windows 7 Ultimate 64-bit					**1**						
• 128 GB SSD MLD, 4 GB RAM, Windows 7 Ultimate 64-bit					**2**						
• 32 GB SSD, 4 GB RAM, Windows Embedded Standard 7 (WES 7) 64-bit					**3**						
• 64 GB SSD, 4 GB RAM, Windows Embedded Standard 7 (WES 7) 64-bit					**4**						
• 128 GB SSD MLD, 4 GB RAM, Windows Embedded Standard 7 (WES 7) 64-bit					**5**						
Touch and front design											
• Without touch, panel mount with aluminum front						**0**					
• Analog-resistive, polyester membrane with aluminum front						**1**					
• Analog-resistive, glass touch with aluminum front						**2**					

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Ordering data	Article No.
SIMATIC HMI Panel PC Ex NG	**6AV7200- 6 ■ ■ ■ ■ - ■ ■ ■ ■**
Enclosure type and material	
• No enclosure	**0**
• Cleanroom enclosure front door (CFR), SS304	**1**
• Front door enclosure (FR), SS304	**2**
• Back door enclosure (BD), SS304	**3**
Keyboard with housing/layout	
• No keyboard	**A**
• Keyboard housing SS304; layout DE	**B**
• Keyboard housing SS304; layout US	**C**
• Keyboard housing SS304; layout FR	**D**
• Keyboard housing SS304; layout CH	**E**
• Keyboard housing SS304; layout ES	**F**
• Keyboard housing SS304; layout SI	**G**
• Keyboard housing SS304; layout FR-BE	**H**
Integrated mouse/trackball	
• No mouse/trackball	**A**
• Trackball 50 mm IP54	**B**
• Trackball (SS304) 50 mm IP54	**C**
• Touchpad	**D**
• Joystick	**E**
• Mouse module	**F**
Mounting options	
• Without, front panel mounting only	**0**
• Direct wall mounting	**1**
• Fixing element for pedestal or elbow on enclosure bottom	**2**
• Fixing element for ceiling or elbow mounting on enclosure top part	**3**
Additional options	
• 24 V DC power supply	**A01**
• Outdoor up to -20 °C for enclosure	**B01**
• Outdoor up to -30 °C	**C01**
• Emergency off button 8003 right, only with enclosure	**D01**
• Emergency off button 8003 left, only with enclosure	**E01**

Accessories	Article No.
USB flash drive	
• Intrinsically safe, 16 GB	**6AV7675-0FX00-0AA0**
• Intrinsically safe, 16 GB with recovery and backup function	**6AV7675-0FX10-0AA0**
• NON-intrinsically safe, 16 GB with recovery and backup function	**6AV7675-0FX20-0AA0**
Pedestal	
• Large (88.9 mm); requires enclosure	**6AV7675-0KG00-0AA0**
• Extra large (114 mm); requires enclosure	**6AV7675-0KH00-0AA0**
Bracket (elbow)	**6AV7675-0KJ00-0AA0**
Requires enclosure	

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

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Technical specifications

	SIMATIC HMI Panel PC Ex NG
General features	
Design	Built-in unit
Fronts	
Display diagonal	• 22" (1 680 x 1 050) 16:10, • 24" (1 920 x 1 080) 16:9 and • 24" WU (1 920 x 1 200) 16:10
Resolution	1 680 x 1 050 or 1 920 x 1 080 or 1 920 x 1 200
Number of colors	16.7 million
Brightness	• Standard display 300 cd/m²
Contrast	1 000:1
MTBF backlight	LED backlight approx. 50 000 h
Single-touch	Resistive 5-wire glass or membrane touch
Computing unit	
Processor	ATOM E3845, Intel Bay Trail (BT) 1.91 GHz Quad Core
Main memory	4 GB RAM
Operating system	
Windows Embedded Standard 7 (64-bit)	Pre-installed
Windows 7 Ultimate (64-bit)	Pre-installed
Drives	
Mass storage	32 GB SSD, 64 GB SSD, 128 GB SSD MLC
Interfaces	
Ethernet	• 10/100BaseTX - copper Ethernet or • 2x 10/100BaseTX - 2x copper Ethernet or • 1000BaseSX - Fiber Optic Ethernet or • 1000BaseLX - Fiber Optic Ethernet or • 100BaseFX - Fiber Optic Ethernet
USB	2 x USB (Ex ia), 1 x USB (Ex e), 2 x USB (Ex ia) (keyboard, pointer instrument)
Serial	1 x RS 232 (Ex e)
Audio	1 x audio line out (Ex e)
Barcode	Optionally via USB
Bluetooth	Optionally via USB
Power supply • 230 V AC • 24 V DC	 • Yes (100 – 240 V AC) • Yes; optional

	SIMATIC HMI Panel PC Ex NG
Ambient conditions	
Temperature	• -20 °C ... +55 °C • -30 °C ... +55 °C with heater • Storage -40 °C ... +70 °C
Relative humidity during operation	+55 °C (±2 °C) ≥ 95%, according to IEC 60068-2-30 : 2005
Degree of protection	IP66 front, IP65 rear optionally according to GMP
Vibration	Operation: 5 to 13.2 Hz: ± 1 mm 13.2 to 100 Hz: ± 0.7 g
Shock	Operation: 15 g / 11 ms
Miscellaneous	
Power consumption at 24 V DC	Typ. 50 W / 100 W at O30 / max. 150 W (typ. 170 BTU / 341 BTU at O30 / max. 510 BTU)
Weight / Size	
Weights	
Dimensions (W x H x D)	• 22": 660 mm x 475 mm x 110 mm • 24": 660 mm x 475 mm x 110 mm
Approvals	
IECEx	• Ex e q [ia op is Ga] IIC T4 Gb • Ex tb IIIC [ia op is Da] IP65 T110 °C Db
ATEX	• II 2(1) G Ex e q [ia op is Ga] IIC T4 Gb II 2(1) D • Ex tb IIIC [ia op is Da] IP65 T110 °C Db
NEC	Class I, Zone 1 AEx e q [ia] IIC T4 Gb
CEC	Ex e q [ia] IIC T4 Gb Class I, Division 2
TR	• 1Ex e q [ia op is Ga] IIC T4 Gb X • Ex tb IIIC [ia op is Da] IP65 T110 °C Db
KGS	• Ex e q IIC T4 • Ex tb IIIC IP64 T110 °C • Ex ia IIC T4 • Ex ia IIIB T110 °C

More information

More information is available on the internet at:

http://www.siemens.com/simatic-hmi-ex

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Overview

SIMATIC HMI Panel PC Ex OG with international approvals for operator control and monitoring in hazardous areas.

Ordering data

	Article No.									
SIMATIC HMI Panel PC Ex OG	**6AV7200-**	**2**	■	■	■	■	**-**	■	■	**A 0**
Display										
• 15", 1 024 x 768, 4:3 format; Zone 1			**A**							
• 21.5" Full HD, 1 920 x 1 080, format 16:9; Zone 1			**B**							
• 15", 1 024 x 768, 4:3 format; Zone 2 and non-explosion protection			**C**							
• 21.5" Full HD, 1 920 x 1 080, format 16:9; Zone 2 and non-explosion protection			**D**							
Network										
• 1 x 1000 Base TX - copper Ethernet in combination with WLAN				**A**						
• 2 x 1000 Base TX - copper Ethernet not in combination with WLAN				**B**						
• 2 x 1000 Base FX - fiber optic Ethernet not in combination with WLAN				**C**						
Mass storage/main memory										
• 240 GB SSD, 4 GB RAM					**1**					
• 240 GB SSD, 8 GB RAM					**2**					
• 480 GB SSD, 8 GB RAM					**3**					
Operating system										
• Windows 7 Ultimate						**1**				
• WES7 P						**2**				
Display options										
• Standard TFT, not touch; for 15" display only								**1**		
• Sunlight-readable display 15", not touch								**2**		
• Sunlight-readable display 21.5", not touch								**3**		
• Standard TFT, capacitive glass touch, for 15" display only								**4**		
• Sunlight-readable display 15", capacitive glass touch								**5**		
• Sunlight-readable display 21.5", capacitive glass touch								**6**		

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Ordering data

	Article No.
SIMATIC HMI Panel PC Ex OG	**6AV7200- 2 ■ ■ ■ ■ - ■ ■ A 0**
Optional expansions [1]	
• No WLAN, no Bluetooth, no RFID	**A**
• WLAN 2.4 GHz, no Bluetooth, no RFID	**B**
• WLAN 2.4 GHz and 5 GHz, no Bluetooth, no RFID	**C**
• No WLAN, Bluetooth, no RFID	**D**
• WLAN 2.4 GHz, Bluetooth, no RFID	**E**
• WLAN 2.4 GHz and 5 GHz, Bluetooth, no RFID	**F**
• No WLAN, no Bluetooth, RFID, not for 15" display	**G**
• WLAN 2.4 GHz, no Bluetooth, RFID, not for 15" display	**H**
• WLAN 2.4 GHz and 5 GHz, no Bluetooth, RFID, not for 15" display	**J**
• No WLAN, Bluetooth, RFID, not for 15" display	**K**
• WLAN 2.4 GHz, Bluetooth, RFID, not for 15" display	**L**
• WLAN 2.4 GHz and 5 GHz, Bluetooth, RFID, not for 15" display	**M**
Additional options	
• 24 V power supply	**-A01**
• CAN bus interface open CAN Ex e	**-B01**
• VESA 200 and table pedestal and bracket SS316L material	**-C01**
• Outdoor design E01, F01, G01 and H01 now listed under accessories	**-D01**

[1] RFID option only with 21.5" display

	Article No.
Accessories	
Digital KVM for HMI Thin Client Ex monitor option With 2 x USB, 2 x PS/2, 1 x VGA/DVI-i	**6AV7675-0EX00-0AA0**
USB drive	
• Intrinsically safe, 16 GB	**6AV7675-0FX00-0AA0**
• Intrinsically safe, 16 GB with recovery function	**6AV7675-0FX10-0AA0**
• NON-intrinsically safe, 16 GB with recovery and backup function	**6AV7675-0FX20-0AA0**
Yoke Mount (fixing bracket)	**6AV7675-0KB00-0AA0**
Keyboard	
• DE layout, trackball	**6AV7675-0NA00-0AA0**
• US layout, trackball	**6AV7675-0NB00-0AA0**
• FR layout, trackball	**6AV7675-0NC00-0AA0**
• DE layout, touchpad	**6AV7675-0ND00-0AA0**
• US layout, touchpad	**6AV7675-0NE00-0AA0**
• FR layout, touchpad	**6AV7675-0NG00-0AA0**
• DE layout, joystick	**6AV7675-0NH00-0AA0**
• US layout, joystick	**6AV7675-0NJ00-0AA0**
• FR layout, joystick	**6AV7675-0NL00-0AA0**
• Desktop keyboard US Zone 1, 2, 21, 22	**6AV7675-0NK00-0AA0**
• Desktop keyboard DE Zone 1, 2, 21, 22	**6AV7675-0NM00-0AA0**
Transportation in a wooden crate	**6AV7675-0NP00-0AA0**

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

An adapter plate is required for mounting on the support arm systems of well-known manufacturers; see "System components for fully-enclosed IP65-protected devices".

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Technical specifications

	SIMATIC HMI Panel PC Ex OG
General features	
Design	Panel PC, stand-alone device for use outdoors
Front	15" 4:3 or 21.5" 16:9
Resolution	1 024 x 768 or 1 920 x 1 080
Number of colors	16.7 million
Brightness	• Standard display 350 cd/m² • Sunlight readable display 21.5", 1 000 cd/m² • Sunlight readable display 15", 1 200 cd/m²
MTBF backlight	LED backlight approx. 50 000 h (70 000 h at 25 °C)
Multi-touch	Capacitive
Keys	8 function keys (capacitive)
Computing unit	
Processor	Intel Core i7-3517UE with 1.7 GHz
Main memory	4 GB or 8 GB RAM
Operating system	
Windows 7 Ultimate	Pre-installed
WES 7 P	Pre-installed
Drives	
Mass storage	SSD with • 240 GB • 480 GB
Interfaces	
Ethernet	• 2 x Ethernet 10/100/1000 Base Tx (Ex e) or • FO 100 Base Fx 100 Mb (Ex op is)
USB	1 x USB (Ex e). 3 x USB (Ex ia)
Serial	1x RS 232/RS 422/RS 485 (Ex e)
DVI	1 x DVI Out (Ex e)
Barcode	1 x reader interface (external barcode scanner/reader)
Bluetooth	1 x (optional)
Power supply • 230 V AC • 24 V DC	 • Standard (100 - 240 V AC) • Optional
Ambient conditions	
Temperature	• Running operation: -10 °C to +65 °C • Optional: -40 °C to +65 °C • Storage: -40 °C to +70 °C
Relative humidity during operation	> 95% at +65 °C in accordance with IEC 60068-2-30
Degree of protection	IP66/4X all-round
Vibration	Operation: 3 Hz to 22 Hz: 1 mm 22 to 500 Hz: 9.8 m/s² = 1 g In accordance with EN 60068-2-6 and DNV Marine approval vibration class A
Shock	Operation: 15 g/11 mS

	SIMATIC HMI Panel PC Ex OG
Miscellaneous	
Power consumption at 24 V DC	4.6 A (6.9 A in heating mode), (recommended fuses: 12 A)
Weight/size	
Weights	15" Zone 1; < 22.6 kg 21.5" Zone 1; < 34 kg
Dimensions (W x H x D)	15": 380 x 394 x 137 mm 21.5": 553 x 458 x 141 mm
Approvals	
ATEX, IECEx	• Gas: II 2 (1) G Ex e q [ia op is Ga] IIC T4 Gb • Dust: II 2 (1) D Ex tb [ia op is Da] IIIC T115°C Db
More, such as UL, NEC, CSA, coming soon	

More information

More information is available on the internet at:

http://www.siemens.com/simatic-hmi-ex

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Overview

SIMATIC HMI Panel PC Ex with international approvals for operator control and monitoring in hazardous areas.

Caution:

Effective immediately, the SIMATIC Panel PC Ex will be supplied with a Quad-Core Intel Atom Processor E3845, thus enabling it to offer around four times the performance of the current Intel Atom N270 systems.
A new ordering configurator with the Article No. 6AV7200-4....-.... has been created:

More information on this is available on the internet at:

http://www.siemens.com/simatic-hmi-ex

And in the Industry Mall:

https://mall.industry.siemens.com

Ordering data

	Article No.
SIMATIC HMI Panel PC Ex2	**6AV7200- 4 ■ ■ ■ ■ - ■ ■ A 0**
SIMATIC HMI Panel PC Ex; 4 x USB 2.0, 2 x RS232/422; power supply 24 V DC; Intel Atom E3845; 1.91 GHz	
Design / display size	
• Zone 2: 15" touch with 8 function keys	A
• Zone 2: 19" touch with 8 function keys	B
• Zone 1: 15" touch with 8 function keys	C
• Zone 1: 19" touch with 8 function keys	D
• Zone 2: 15" touch, sunlight-readable with 8 function keys	E
• Zone 1: 15" touch, sunlight-readable with 8 function keys	F
Network	
• 10/100 base Tx, Ex e	A
• 100 base Fx FOC (SC), Ex op is	B
Mass storage	
• SSD 32 GB, 4 GB RAM	0
• SSD 128 GB MLC, 4 GB RAM	1
Operating system (pre-installed)	
• Windows 7 Ultimate 64-bit	0
• Windows 7 Embedded Standard 7 E 64-bit	1
• Without	2
Enclosure options	
• Without protective enclosure	0
• Stainless steel enclosure for:	
- Wall mounting	1
- Pedestal (incl. coupling, 300° rotatable)	2
- Suspension bracket (incl. coupling, 300° rotatable)	3
- Support arm (incl. coupling, 300° rotatable)	4
- Swivel arm from above (incl. coupling, 300° rotatable)	5

	Article No.
SIMATIC HMI Panel PC Ex2	**6AV7200- 4 ■ ■ ■ ■ - ■ ■ A 0**
External keyboard	
• Without	A
• QWERTZ keyboard, mounted on protective enclosure	B
• QWERTY keyboard, mounted on protective enclosure	C
• AZERTY keyboard, mounted on protective enclosure	D
• QWERTZ keyboard with trackball, mounted on protective enclosure	E
• QWERTY keyboard with trackball, mounted on protective enclosure	F
• AZERTY keyboard with trackball, mounted on protective enclosure	G
Further options together with stainless steel enclosure	
• Breather glands (to avoid build-up of condensation)	**-z A01**
• Heater (2 x 50 W incl. temp. controller, only in protective enclosure)	**-z B01**
• Handles, mounted (only in protective enclosure)	**-z C01**
• Front USB (bottom) (only in protective enclosure)	**-z D01**
• NPT thread for pedestal mounting (only in protective enclosure)	**-z G01**

Accessories

Digital KVM for HMI Thin Client Ex	**6AV7675-0EX00-0AA0**
USB drive	
• Intrinsically safe, 16 GB	**6AV7675-0FX00-0AA0**
• Intrinsically safe, 16 GB with recovery function	**6AV7675-0FX10-0AA0**
• Not intrinsically safe, 16 GB with recovery and backup function	**6AV7675-0FX20-0AA0**

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

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Technical specifications

	SIMATIC HMI Panel PC Ex
General features	
Design	Panel PC built-in unit, protective enclosure available as an option
Front	15" and 19", optional 15" sunlight-readable displays
Operation	Touch with 8 function keys
Processor	Intel Atom E3845 with 1.91 GHz
Main memory	4 GB DDR2 SDRAM
Operating system, preinstalled and configured	Windows 7 MUI, Windows 7 Ultimate, WES7 E
Mass storage	32 GB SSD, 128 GB SSD
Power supply	24 V DC, max. 2.1 A (19")
Interfaces	
Ethernet	10/100 Mbit Ex e, or fiber-optics 100 Mbit (SC) Ex op is
USB 2.0	2 x Ex i, 2 x Ex e (Zone 1) or 2 x Ex nA (Zone 2)
Serial	1 x RS232 or 1 x RS422/485
Ambient conditions	
Degree of protection	IP66 at front, IP65 at rear, IP66 in protective enclosure
Ambient temperature during operation	- 20 °C ... + 50 °C (cold start -10 °C) with optional auxiliary heater down to - 30 °C
Relative humidity during operation	90 % at + 40 °C, no condensation
Approvals/directives	
Devices in version "Zone 1"	
ATEX directive 94/9/EC	
• Network 10/100 Base-Tx	II 2 (2) G Ex d e ia ib mb [ia ib] IIC T4 Gb II 2 (2) D Ex ia tb [ia ib] IIIC T80°C Db IP66
• Network 10/100 Base-Fx	II 2 (2) G Ex d e ia ib mb [ia ib op is] IIC T4 Gb II 2 (2) D Ex ia tb [ia ib op is] IIIC T80°C Db IP66
IECEx	
• Network 10/100 Base-Tx	Ex d e ia ib mb [ia ib] IIC T4 Gb Ex ia tb [ia ib] IIIC T80°C Db IP66
• Network 10/100 Base-Fx	Ex d e ia ib mb [ia ib op is] IIC T4 Gb Ex ia tb [ia ib op is] IIIC T80°C Db IP66
GOST-R	
• Network 10/100 Base-Tx	2 Ex d e ia ib mb [iaib] IIC T4 DIP A21 TA80°C, IP66
• Network 10/100 Base-Fx	2 Ex d e ia ib mb [iaibopis] IIC T4 DIP A21 TA80°C, IP66
CSA	Ex d e ia ib mb [ia ib] IIC T4 Gb, Type 4X, IP66 Class II, Division 1, Groups E, F, G, T80°C Ex ia tb [ia ib] IIIC T80°C Db, IP66
KGS	Ex d e ia ib mb [ia ib] IIC T4 Ex ia tb [ia ib] IIIC T80°C Db IP66
InMetro	
• Network 10/100 Base-Tx	Ex d e ia ib mb [ia ib] IIC T4 Gb Ex ia tb [ia ib] IIIC T80°C Db IP66
• Network 10/100 Base-Fx	Ex d e ia ib mb [ia ib op is] IIC T4 Gb Ex ia tb [ia ib op is] IIIC T80°C Db IP66
Device version "UL Class 1, Division 2"	Class 1, Division 2, Groups A, B, C, D Class 2, Division 2, Groups F, G Class 3, Hazardous Locations

	SIMATIC HMI Panel PC Ex
Devices in version "Zone 2"	
ATEX directive 94/9/EC	
• Network 10/100 Base-Tx	II 3 (2/3) G Ex d e ia ib mb nA [ib Gb] [ic] IIC T4 Gc II3 (2/3) D Ex ia tc [ib Db] [ic] IIIC T80°C Dc IP66
• Network 10/100 Base-Fx	II 3 (2/3) G Ex d e ia ib mb nA [ib op is Gb] [ic] IIC T4 Gc II 3 (2/3) D Ex ia tc [ib op is Db] [ic] IIIC T80°C Dc IP66
IECEx	
• Network 10/100 Base-Tx	Ex d e ia ib mb nA [ib Gb] [ic] IIC T4 Gc Ex ia tc [ib Db] [ic] IIIC T80°C Dc IP66
• Network 10/100 Base-Fx	Ex d e ia ib mb nA [ib op is Gb] [ic] IIC T4 Gc Ex ia tc [ib op is Db] [ic] IIIC T80°C Dc IP66
GOST-R	
• Network 10/100 Base-Tx	2 Ex d e ia ib mb nA [ib][ic] IIC T4 DIP A21 TA80°C, IP66
• Network 10/100 Base-Fx	2 Ex d e ia ib mb nA [ib opis][ic] IIC T4 DIP A21 TA80°C, IP66
CSA	Ex d e ia ib mb nA [ib Gb] [ic] IIC T4 Gc, Type 4X, IP66 Class II, Division 2, Groups E, F, G, T80°C; Ex ia tc [ib ic] IIIC T80°C Dc, IP66
InMetro	
• Network 10/100 Base-Tx	Ex d e ia ib mb nA [ib Gb] [ic] IIC T4 Gc Ex ia tc [ib Db] [ic] IIIC T80°C Dc IP66
• Network 10/100 Base-Fx	Ex d e ia ib mb nA [ib op is Gb] IIC T4 Ex ia tc [ib op is Db] [ic] IIIC T80°C Dc IP66
Device version "UL Class 1, Division 2"	Class 1, Division 2, Groups A, B, C, D Class 2, Division 2, Groups F, G Class 3, Hazardous Locations
Dimensions	
Mounting dimensions (W x H x D)	15": 427.5 mm x 327.5 mm x 165 mm 19": 522.5 mm x 412.5 mm x 165 mm
Front dimensions (W x H)	15": 440 mm x 340 mm 19": 535 mm x 425 mm
Weight	15": 15 kg 19": 23 kg

More information

More information is available on the internet at:

http://www.siemens.com/simatic-hmi-ex

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Overview

SIMATIC HMI Thin Client Ex NG

The new generation SIMATIC HMI Thin Client Ex NG has been specially developed for use in the pharmaceutical, chemical and life science industries, but can also be used in many other areas since it satisfies the requirements for operator control and monitoring directly in hazardous areas.

Due to the 22" and 24" display diagonals, these devices are ideal for showing plant and process information provided from systems such as PCS.

Highlights:

- High degree of industrial functionality and industry-compatible front panels
  - Single-touch fronts 22" (1 680 x 1 050), 24" (1 920 x 1 080) and 24" WU (1 920 x 1 200)
  - -30 °C up to 55 °C ambient temperature in operation
  - Resistive Touch Display 300 cd/m²
  - Built-in unit optional stainless steel enclosure or GMP/cleanroom
- Certificates for hazardous area
  - IECEx, ATEX Zones 1, 21 and 2, 22
  - Class 1, Division 2
  - NEC
  - CEC
  - KGS
  - TR
  - Certificates for marine applications DNV/GL
- High system performance in hazardous areas
  - Intel Bay Trail (BT) 1.91 GHz Quad Core

Ordering data

	Article No.
SIMATIC HMI Thin Client Ex NG	**6AV7200- 5 ■ ■ ■ ■ - ■ ■ ■ ■**
Display	
• 22", 1 680 x 1 050, 16:10 format, Zone 1	**A**
• 24", 1 920 x 1 080, 16:9 format, Zone 1	**B**
• 24", 1 920 x 1 200, 16:10 format, Zone 1	**C**
• 22", 1 680 x 1 050, 16:10 format, Zone 2	**D**
• 24", 1 920 x 1 080, 16:9 format, Zone 2	**E**
• 24", 1 920 x 1 200, 16:10 format, Zone 2	**F**
• 22", 1 680 x 1 050, 16:10 format, non-Ex	**G**
• 24", 1 920 x 1 080, 16:9 format, non-Ex	**H**
• 24", 1 920 x 1 200, 16:10 format, non-Ex	**J**
Network	
• 10/100BaseTX - copper Ethernet	**A**
• 2 x 10/100BaseTX - 2 x copper Ethernet	**B**
• 1000BaseSX - fiber optic Ethernet	**C**
• 1000BaseLX - fiber optic Ethernet	**D**
• 100BaseFX - fiber optic Ethernet	**E**
Mass storage/main memory/ operating system	
• 64 GB SSD, 4 GB RAM, Windows 10 IoT & Remote Firmware V5	**0**
• 128 GB SSD MLC, 4 GB RAM, Windows 10 IoT & Remote Firmware V5	**1**
Touch and front design	
• Without touch, panel mount with aluminum front	**0**
• Analog-resistive, polyester membrane with aluminum front	**1**
• Analog-resistive, glass touch with aluminum front	**2**

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Ordering data

	Article No.
SIMATIC HMI Thin Client Ex NG	**6AV7200- 5 ■ ■ ■ ■ - ■ ■ ■ ■**
Enclosure type and material	
• No enclosure	**0**
• Cleanroom enclosure front door (CFR), SS304	**1**
• Front door enclosure (FR), SS304	**2**
• Back door enclosure (BD), SS304	**3**
Keyboard with housing/layout	
• No keyboard	**A**
• Keyboard housing SS304; layout DE	**B**
• Keyboard housing SS304; layout US	**C**
• Keyboard housing SS304; layout FR	**D**
• Keyboard housing SS304; layout CH	**E**
• Keyboard housing SS304; layout ES	**F**
• Keyboard housing SS304; layout SI	**G**
• Keyboard housing SS304; layout FR-BE	**H**
Integrated mouse/trackball	
• No mouse/trackball	**A**
• Trackball 50 mm IP54	**B**
• Trackball (SS304) 50 mm IP54	**C**
• Touchpad	**D**
• Joystick	**E**
• Mouse module	**F**
Mounting options	
• Without, front panel mounting only	**0**
• Direct wall mounting	**1**
• Fixing element for pedestal or elbow on enclosure bottom	**2**
• Fixing element for ceiling or elbow mounting on enclosure top part	**3**

	Article No.
SIMATIC HMI Thin Client Ex NG	**6AV7200- 5 ■ ■ ■ ■ - ■ ■ ■ ■**
Additional options	
• 24 V DC power supply	**A01**
• Outdoor up to -20 °C for enclosure	**B01**
• Outdoor up to -30 °C	**C01**
• Emergency off button 8003 right, only with enclosure	**D01**
• Emergency off button 8003 left, only with enclosure	**E01**

Accessories	
USB flash drive	
• Intrinsically safe, 16 GB	**6AV7675-0FX00-0AA0**
• Intrinsically safe, 16 GB with recovery and backup function	**6AV7675-0FX10-0AA0**
• NOT intrinsically safe, 16 GB with recovery and backup function	**6AV7675-0FX20-0AA0**
Ethernet switch	**6AV7675-0PX00-0AA0**
With FOC 4x 100Base Tx, 1x 100 Base (MTRJ), Fx Ex op is	

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

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Technical specifications

	SIMATIC HMI Thin Client Ex NG
General features	
Design	Built-in unit
Fronts	
Display diagonal	• 22" (1 680 x 1 050) 16:10, • 24" (1 920 x 1 080) 16:9 and • 24" WU (1 920 x 1 200) 16:10
Resolution	1 680 x 1 050 or 1 920 x 1 080 or 1 920 x 1 200
Number of colors	16.7 million
Brightness	• Standard display 300 cd/m²
Contrast	1 000:1
MTBF backlight	LED backlight approx. 50 000 h
Single-touch	Resistive 5-wire glass or membrane touch
Computing unit	
Processor	ATOM E3845, Intel Bay Trail (BT) 1.91 GHz Quad Core
Main memory	4 GB RAM
Operating system	
Windows 10 IoT Enterprise	Pre-installed
Image	Remote firmware
Drives	
Mass storage	64 GB SSD
Interfaces	
Ethernet	• 10/100BaseTX - copper Ethernet or • 2x 10/100BaseTX - 2x copper Ethernet or • 1000BaseSX - Fiber Optic Ethernet or • 1000BaseLX - Fiber Optic Ethernet or • 100BaseFX - Fiber Optic Ethernet
USB	2 x USB (Ex ia), 1 x USB (Ex e), 2 x USB (Ex ia) (keyboard, pointer instrument)
Serial	1 x RS 232 (Ex e)
Audio	1 x audio line out (Ex e)
Barcode	Optionally via USB
Bluetooth	Optionally via USB
Power supply	
• 230 V AC • 24 V DC	• Yes (100 – 240 V AC) • Yes; optional

	SIMATIC HMI Thin Client Ex NG
Ambient conditions	
Temperature	• -20 °C ... +55 °C • -30 °C ... +55 °C with heater • Storage -40 °C ... +70 °C
Relative humidity during operation	+55 °C (±2 °C) ≥ 95%, according to IEC 60068-2-30 : 2005
Degree of protection	IP66 front, IP65 rear optionally according to GMP
Vibration	Operation: 5 to 13.2 Hz: ± 1 mm 13.2 to 100 Hz: ± 0.7 g
Shock	Operation: 15 g / 11 ms
Miscellaneous	
Power consumption at 24 V DC	Typ. 50 W / 100 W at O30 / max. 150 W (typ. 170 BTU / 341 BTU at O30 / max. 510 BTU)
Weight / Size	
Weights	
Dimensions (W x H x D)	• 22": 660 mm x 475 mm x 110 mm • 24": 660 mm x 475 mm x 110 mm
Approvals	
IECEx	• Ex e q [ia op is Ga] IIC T4 Gb • Ex tb IIIC [ia op is Da] IP65 T110 °C Db
ATEX	• II 2(1) G Ex e q [ia op is Ga] IIC T4 Gb II 2(1) D • Ex tb IIIC [ia op is Da] IP65 T110 °C Db
NEC	Class I, Zone 1 AEx e q [ia] IIC T4 Gb
CEC	Ex e q [ia] IIC T4 Gb Class I, Division 2
TR	• 1Ex e q [ia op is Ga] IIC T4 Gb X • Ex tb IIIC [ia op is Da] IP65 T110 °C Db
KGS	• Ex e q IIC T4 • Ex tb IIIC IP64 T110 °C • Ex ia IIC T4 • Ex ia IIIB T110 °C

More information

More information is available on the internet at:

http://www.siemens.com/simatic-hmi-ex

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Overview

SIMATIC HMI Thin Client Ex OG with international approvals for operator control and monitoring in hazardous areas.

Ordering data

	Article No.									
SIMATIC HMI Thin Client Ex OG	**6AV7200-**	**3**	■	■	■	■	**-**	■	■	**A 0**
Display										
• 15", 1 024 x 768, 4:3 format; Zone 1		**A**								
• 21.5" Full HD, 1 920 x 1 080, format 16:9; Zone 1		**B**								
• 15", 1 024 x 768, 4:3 format; Zone 2		**C**								
• 21.5" Full HD, 1 920 x 1 080, format 16:9; Zone 2		**D**								
Network										
• 1 x 1000 Base TX - copper Ethernet in combination with WLAN			**A**							
• 2 x 1000 Base TX - copper Ethernet not in combination with WLAN			**B**							
• 2 x 1000 Base FX - fiber optic Ethernet not in combination with WLAN			**C**							
Mass storage/main memory										
• 60 GB SSD, 4 GB RAM				**0**						
• 80 GB SSD, 4 GB RAM				**1**						
Processor										
• AMD GX-217GA					**0**					
• Intel Core i/-3517 UE					**1**					
• Intel Core i/-3517 UE with TPM					**2**					
Display options										
• Standard TFT, not touch; for 15" display only							**0**			
• Sunlight-readable display 15", not touch							**1**			
• Sunlight-readable display 21.5", not touch							**2**			
• Standard TFT, capacitive glass touch, for 15" display only							**3**			
• Sunlight-readable display 15", capacitive glass touch							**4**			
• Sunlight-readable display 21.5", capacitive glass touch							**5**			

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Ordering data

	Article No.
SIMATIC HMI Thin Client Ex OG	**6AV7200- 3 ■ ■ ■ ■ - ■ ■ A 0**
Optional expansions [1]	
• No WLAN, no Bluetooth, no RFID	**A**
• WLAN 2.4 GHz, no Bluetooth, no RFID	**B**
• WLAN 2.4 GHz and 5 GHz, no Bluetooth, no RFID	**C**
• No WLAN, Bluetooth, no RFID	**D**
• WLAN 2.4 GHz, Bluetooth, no RFID	**E**
• WLAN 2.4 GHz and 5 GHz, Bluetooth, no RFID	**F**
• No WLAN, no Bluetooth, RFID, not for 15" display	**G**
• WLAN 2.4 GHz, no Bluetooth, RFID, not for 15" display	**H**
• WLAN 2.4 GHz and 5 GHz, no Bluetooth, RFID, not for 15" display	**J**
• No WLAN, Bluetooth, RFID, not for 15" display	**K**
• WLAN 2.4 GHz, Bluetooth, RFID, not for 15" display	**L**
• WLAN 2.4 GHz and 5 GHz, Bluetooth, RFID, not for 15" display	**M**
Additional options	
• 24 V power supply	**-A01**
• CAN bus interface open CAN Ex e	**-B01**
• VESA 200 and table pedestal and bracket SS316L material	**-C01**
• Outdoor design up to -40 °C	**-D01**

[1] RFID option only with 21.5" display

	Article No.
Accessories	
Digital KVM for HMI Thin Client Ex monitor option With 2 x USB, 2 x PS/2, 1 x VGA/DVI-i	**6AV7675-0EX00-0AA0**
USB drive	
• Intrinsically safe, 16 GB	**6AV7675-0FX00-0AA0**
• Intrinsically safe, 16 GB with recovery function	**6AV7675-0FX10-0AA0**
• NON-intrinsically safe, 16 GB with recovery and backup function	**6AV7675-0FX20-0AA0**
Yoke Mount (fixing bracket)	**6AV7675-0KB00-0AA0**
Keyboard	
• DE layout, trackball	**6AV7675-0NA00-0AA0**
• US layout, trackball	**6AV7675-0NB00-0AA0**
• FR layout, trackball	**6AV7675-0NC00-0AA0**
• DE layout, touchpad	**6AV7675-0ND00-0AA0**
• US layout, touchpad	**6AV7675-0NE00-0AA0**
• FR layout, touchpad	**6AV7675-0NG00-0AA0**
• DE layout, joystick	**6AV7675-0NH00-0AA0**
• US layout, joystick	**6AV7675-0NJ00-0AA0**
• FR layout, joystick	**6AV7675-0NL00-0AA0**
• Desktop keyboard US Zone 1, 2, 21, 22	**6AV7675-0NK00-0AA0**
• Desktop keyboard DE Zone 1, 2, 21, 22	**6AV7675-0NM00-0AA0**

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

An adapter plate is required for mounting on the support arm systems of well-known manufacturers; see "System components for fully-enclosed IP65-protected devices".

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Technical specifications

	SIMATIC HMI Thin Client Ex OG
General features	
Design	Panel PC, stand-alone device for use outdoors
Front	15" 4:3 or 21.5" 16:9
Resolution	1 024 x 768 or 1 920 x 1 080
Number of colors	16.7 million
Brightness	• Standard display 350 cd/m² • Sunlight-readable display 21.5", 1 000 cd/m² • Sunlight-readable display 15", 1 200 cd/m²
MTBF backlight	LED backlight approx. 50 000 h (70 000 h at 25 °C)
Multi-touch	Capacitive
Keys	8 function keys (capacitive)
Computing unit	
Processor	Intel Core i7-3517UE with 1.7 GHz; AMD GX-217GA
Main memory	4 GB
Operating system	
Windows 10 Enterprise 2016 LTSB	Pre-installed
Remote Firmware V5	Pre-installed
Drives	
Mass storage	SSD with • 60 GB • 80 GB
Interfaces	
Ethernet	• 2 x Ethernet 10/100/1000 Base Tx (Ex e) or • FO 100 Base Fx 100 Mb (Ex op is)
USB	1 x USB (Ex e). 3 x USB (Ex ia)
Serial	1x RS232 / RS422 / RS485 (Ex e)
DVI	1 x DVI Out (Ex e)
Barcode	1 x reader interface (external bar code scanner/reader)
Bluetooth	1 x (optional)
Power supply • 230 V AC • 24 V DC	• Standard (100 - 240 V AC) • Optional

	SIMATIC HMI Thin Client Ex OG
Ambient conditions	
Temperature	• Running operation: -10 °C to +65 °C • Optional: -40 °C to +65 °C • Storage: -40 °C to +70 °C
Relative humidity during operation	> 95% at +65 °C in accordance with IEC 60068-2-30
Degree of protection	IP66/4X fully-enclosed
Vibration	Operation: 3 Hz to 22 Hz: 1 mm 22 to 500 Hz: 9.8 m/s² = 1 g In accordance with EN 60068-2-6 and DNV Marine approval vibration class A
Shock	Operation: 15 g/11 mS
Miscellaneous	
Power consumption at 24 V DC	4.6 A (6.9 A in heating mode), (recommended fuses: 12 A)
Weight/size	
Weights	15" Zone 1; < 22.6 kg 21.5" Zone 1; < 34 kg
Dimensions (W x H x D)	15": 380 x 394 x 137 mm 21.5": 553 x 458 x 141 mm
Approvals	
ATEX, IECEx	• Gas: II 2 (1) G Ex e q [ia op is Ga] IIC T4 Gb • Dust: II 2 (1) D Ex tb [ia op is Da] IIIC T115°C Db
More, such as UL, NEC, CSA, coming soon	

More information

More information is available on the Internet at:

http://www.siemens.com/simatic-hmi-ex

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Overview

SIMATIC HMI Thin Client Ex2 with international approvals for operator control and monitoring in hazardous areas.

Ordering data

	Article No.											
SIMATIC HMI Thin Client Ex2	**6AV7200-**	**7**	■	■	**0**	■	-	■	■	■	■	
Intel Atom E3845 1.91 GHz, 24 V DC power supply												
Design/display size												
• Zone 2: 15" touch with 8 function keys			**A**									
• Zone 2: 19" touch with 8 function keys			**B**									
• Zone 1: 15" touch with 8 function keys			**C**									
• Zone 1: 19" touch with 8 function keys			**D**									
Networks												
• 10/100 BaseTX, copper Ethernet				**A**								
• 100 BaseFX, fiber optic Ethernet				**B**								
Mass storage/main memory/operating system												
• 64 GB SSD, 4 GB RAM, Windows 10 IoT & Remote Firmware V5					**0**							
Optional interfaces												
• No interfaces						**0**						
• Second serial interface						**1**						
• Intrinsically safe reader interface						**2**						
Enclosure type and material												
• No enclosure								**0**				
• Cleanroom enclosure front door (CFR), SS304								**1**				
• Front door enclosure (FR), SS304								**2**				
• Backdoor enclosure (BD), SS304; (only without wall mounting, without 240 V AC and without -30 °C options)								**3**				
Keyboard with housing; layout												
• No keyboard										**A**		
• Keyboard SS304, layout DE										**B**		
• Keyboard SS304, layout US										**C**		
• Keyboard SS304, layout FR										**D**		
• Keyboard SS304, layout DK										**E**		

	Article No.											
SIMATIC HMI Thin Client Ex2	**6AV7200-**	**7**	■	■	**0**	■	-	■	■	■	■	
Integrated mouse/trackball												
• No mouse/trackball											**A**	
• Trackball 50 mm IP54 integrated											**B**	
• Trackball 50 mm IP54 separate											**C**	
Mounting options												
• Without, front panel mounting only												**0**
• Direct wall mounting												**1**
• Mount for pedestal or bracket mounting on enclosure bottom												**2**
• Mount for ceiling or bracket mounting on enclosure top part												**3**
Additional options												
• 100 .. 240 V AC power supply, (requires enclosure)	**A01**											
• Outdoor up to -20 °C (requires enclosure, only without keyboard)	**B01**											
• -20°C (only without keyboard)	**C01**											
• Emergency off button 8003 right (only with enclosure)	**D01**											
• Emergency off button 8003 left (only with enclosure)	**E01**											
• Outdoor up to -30 °C (requires enclosure, only without keyboard)	**F01**											
• Outdoor up to -10 °C (requires enclosure, for keyboard)	**G01**											

Accessories	
Digital KVM for HMI Thin Client Ex	**6AV7675-0EX00-0AA0**
USB drive	
• Intrinsically safe, 16 GB	**6AV7675-0FX00-0AA0**
• Intrinsically safe, 16 GB with recovery function	**6AV7675-0FX10-0AA0**

Note:

Please assemble the required IPC configuration using the TIA Selection Tool or configurator in the Industry Mall in order to ensure availability; we do not accept any liability for configurations compiled by users themselves.

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Technical specifications

	SIMATIC HMI Thin Client Ex2
General features	
Design	Thin Client built-in unit, available in protective enclosure as an option
Front	15" and 19" display
Operation	Touch with 8 function keys
MTBF backlight	50 000 h
Operating system	Windows 10 Enterprise 2016 LTSB
Mass storage	integrated, 64 GB SSD
Power supply	24 V DC, max. 2.1 A (19")
Interfaces	
Ethernet	100 Mbit Ex e, or alternatively fiber-optics 100 Mbit (SC) Ex op is
USB 2.0	2 x Ex i, 2 x Ex e (Zone 1) or 2 x Ex nA (Zone 2)
Serial	1 x RS232 or 1 x RS422/485
Ambient conditions	
Degree of protection	IP66 at front, IP65 at rear, IP66 in protective enclosure
Ambient temperature during operation	-20 °C ... + 50 °C, (cold start -10 °C) with optional auxiliary heater down to -30 °C
Relative humidity during operation	90 % at 40 °C, no condensation
Approvals/directives	
Devices in "Zone 1" version	
ATEX directive 94/9/EC	
• Network 10/100 Base-Tx	II 2 (2) G Ex d e ia ib mb [ia ib] IIC T4 Gb II 2 (2) D Ex ia tb [ia ib] IIIC T80°C Db IP66
• Network 10/100 Base-Fx	II 2 (2) G Ex d e ia ib mb [ia ib op is] IIC T4 Gb II 2 (2) D Ex ia tb [ia ib op is] IIIC T80°C Db IP66
IECEx	
• Network 10/100 Base-Tx	Ex d e ia ib mb [ia ib] IIC T4 Gb Ex ia tb [ia ib] IIIC T80°C Db IP66
• Network 10/100 Base-Fx	Ex d e ia ib mb [ia ib op is] IIC T4 Gb Ex ia tb [ia ib op is] IIIC T80°C Db IP66
GOST-R	
• Network 10/100 Base-Tx	2 Ex d e ia ib mb [iaib] IIC T4 DIP A21 TA80°C, IP66
• Network 10/100 Base-Fx	2 Ex d e ia ib mb [iaibopis] IIC T4 DIP A21 TA80°C, IP66
CSA	Ex d e ia ib mb [ia ib] IIC T4 Gb, Type 4X, IP66 Class II, Division 1, Groups E, F, G, T80°C Ex ia tb [ia ib] IIIC T80°C Db, IP66
KGS	Ex d e ia ib mb [ia ib] IIC T4 Ex ia tb [ia ib] IIIC T80°C Db IP66
InMetro	
• Network 10/100 Base-Tx	Ex d e ia ib mb [ia ib] IIC T4 Gb Ex ia tb [ia ib] IIIC T80°C Db IP66
• Network 10/100 Base-Fx	Ex d e ia ib mb [ia ib op is] IIC T4 Gb Ex ia tb [ia ib op is] IIIC T80°C Db IP66

	SIMATIC HMI Thin Client Ex2
Devices in version "Zone 2"	
ATEX directive 94/9/EC	
• Network 10/100 Base-Tx	II 3 (2/3) G Ex d e ia ib mb nA [ib Gb] [ic] IIC T4 Gc II3 (2/3) D Ex ia tc [ib Db] [ic] IIIC T80°C Dc IP66
• Network 10/100 Base-Fx	II 3 (2/3) G Ex d e ia ib mb nA [ib op is Gb] [ic] IIC T4 Gc II 3 (2/3) D Ex ia tc [ib op is Db] [ic] IIIC T80°C Dc IP66
IECEx	
• Network 10/100 Base-Tx	Ex d e ia ib mb nA [ib Gb] [ic] IIC T4 Gc Ex ia tc [ib Db] [ic] IIIC T80°C Dc IP66
• Network 10/100 Base-Fx	Ex d e ia ib mb nA [ib op is Gb] [ic] IIC T4 Gc Ex ia tc [ib op is Db] [ic] IIIC T80°C Dc IP66
GOST-R	
• Network 10/100 Base-Tx	2 Ex de i a ib mb nA [ib][ic] IIC T4 DIP A21 TA80°C, IP66
• Network 10/100 Base-Fx	2 Ex de i a ib mb nA [ibopis][ic] IIC T4 DIP A21 TA80°C, IP66
CSA	Ex d e ia ib mb nA [ib Gb] [ic] IIC T4 Gc, Type 4X, IP66 Class II, Division 2, Groups E, F, G, T80°C; Ex ia tc [ib ic] IIIC T80°C Dc, IP66
InMetro	
• Network 10/100 Base-Tx	Ex d e ia ib mb nA [ib Gb] [ic] IIC T4 Gc Ex ia tc [ib Db] [ic] IIIC T80°C Dc IP66
• Network 10/100 Base-Fx	Ex d e ia ib mb nA [ib op is Gb] IIC T4 Ex ia tc [ib op is Db] [ic] IIIC T80°C Dc IP66
Protocols	RDP, RealVNC
Digital KVM switch	Input: DVI / VGA, PS/2 / USB, output: RJ45 (IP network)
Dimensions	
Mounting dimensions (W x H x D) in mm	15": 427.5 x 327.5 x 165 19": 522.5 x 412.5 x 165
Front dimensions in mm	15": 440 x 340 19": 535 x 425
Weight	15": 15 kg, 19": 23 kg

More information

More information is available on the internet at:

http://www.siemens.com/simatic-hmi-ex

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Overview

Higher system availability

A graded concept is available for effective early detection of potential failures and minimization of actual downtimes. It consists of software developed specifically for the SIMATIC IPCs, which enables system availability to be individually increased according to the safety requirements.

Reduced costs

Special backup mechanisms reduce the risk of data loss and allow the introduction of new concepts at initial or repeated commissioning.
The remote control and automatic self-diagnostics options reduce travel expenditure and time spent on on-site service calls, allowing service measures to be planned more efficiently. Downtimes are minimized or eliminated altogether.

The SIMATIC IPC software products thus help to significantly reduce the total cost of ownership (TCO) of the installation according to the motto: "Small effort, great effect".

The following components are available:

SIMATIC IPC Image & Partition Creator

- Software tool for preventive data backup of hard disk contents
- High-speed restoring of system and data partitions with bit accuracy; user software and special installations are also backed up
- Secure processing of hard disk partitions
- Creation of bootable and password-protected USB flash drives
- Secure deletion of data storage media

SIMATIC IPC DiagMonitor

- Diagnostics and alarm software for monitoring SIMATIC IPCs
- Comprehensive monitoring of temperature, fans, hard disks (SMART, RAID, CompactFlash, CFast, SSD), watchdog
- Operating hours counter for preventive maintenance
- Event logging and task planning
- Data exchange via OPC, email, text messages or SNMP
- Integrated BIOS Manager

SIMATIC IPC Remote Manager

- Efficient remote maintenance and operation of SIMATIC IPCs
- Use of the Intel Active Management Technology (Intel AMT) for SIMATIC IPCs
- Remote access to desktop, BIOS and power management
- Booting of a remote PC by means of a local ISO image

SIMATIC IPC FirmwareManager

- Display of the firmware information
- Updating the firmware
- Setting the booting behavior
- Display of the SMBIOS data
- Setting the password parameters
- Editing the setup settings (BIOS configuration)
- Insertion of a boot logo
- Setup of a secure boot

Operating systems for applications in the industrial environment

SIMATIC Industrial OS

Apart from the hardware, the operating system is the most important internal component of a computer. It can come supplied with user programs or simply provide the application resources. The SIMATIC Industrial OS with its Linux-based operating system not only constitutes an alternative to the Microsoft Windows operating systems also available for the SIMATIC IPCs, it also offers a suitable solution to the challenges listed above.

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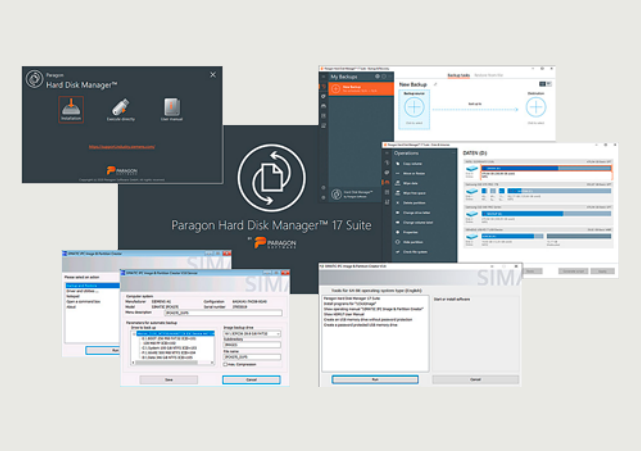
SIMATIC IPC Image & Partition Creator

Overview



SIMATIC IPC Image & Partition Creator is the software tool for easy, preventive data backup and restoring of hard disk contents (images of individual partitions or complete hard disks). This software can be ordered using the SIMATIC IPC Configurator, or separately as a single license.

- Can run on all SIMATIC IPCs, regardless of the computer configuration
- Direct starting from the USB flash drive possible (no installation required)
- Complete backup by means of a mouse double-click with "1ClickImage" (installation required)
- Independent of operating system thanks to start from bootable USB flash drive with Image & Partition Creator
- Extremely easy system restore using end user's USB flash drive
  https://support.industry.siemens.com/cs/ww/en/view/109781271

Licenses:

The SIMATIC IPC Image & Partition Creator V3.6 may only be installed on one device at a time or operated without installation. When used with multiple IPCs, a separate version is required for each IPC. This also applies if a restore is copied (multiple times) to other IPCs. A separate version is then also required for each of them.
https://support.industry.siemens.com/cs/ww/en/view/109740914

Ordering data

	Article No.
SIMATIC IPC Image & Partition Creator V3.6 Software tool for very easy preventive data backup and efficient partition management, single license for use on one SIMATIC IPC	Can be ordered using the SIMATIC IPC Configurator
• On USB flash drive	**6ES7648-6AA13-6YA0**
• As download; Consignee email address required for delivery	**6ES7648-6AA83-6YA0**

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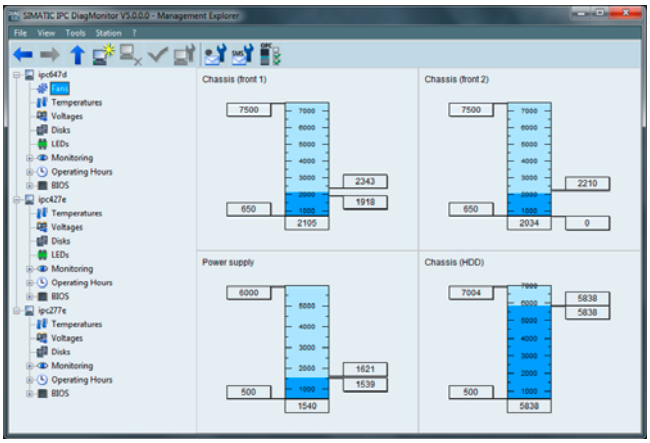
Overview



The SIMATIC IPC DiagMonitor permits intelligent and comprehensive monitoring and diagnostics of SIMATIC Industrial PCs.

It detects potential hardware and software faults at an early stage, visualizes operating states and offers various options for access and data exchange.

The SIMATIC IPC DiagMonitor supports not only local diagnostics, but also access via the network to SIMATIC IPC. When installed on a standard PC, all remote functions required for remote access are available.

Only the following SIEMENS products are supported:

- SIMATIC IPC127E
- SIMATIC IPC227G / IPC277G / IPC227E / IPC277E
- SIMATIC IPC427E / IPC477E / IPC427D / IPC477D
- SIMATIC IPC547J / IPC547G / IPC547E
- SIMATIC IPC627E / IPC677E / IPC627D / IPC677D
- SIMATIC IPC647E / IPC647D
- SIMATIC IPC827D
- SIMATIC IPC847E / IPC847D
- CPU 1515SP PC
- CPU 1515SP PC2

The software can be ordered as:

- Individual product from stock (e.g. for server applications on third-party PCs or immediate integration in new systems) on USB flash drive, as download via Online Software Delivery (OSD), or
- as option ordered according to the SIMATIC IPC Configurator (Internet, Industry Mall).

Note:

As of Version 5.1, the SIMATIC IPC DiagMonitor is delivered on a USB flash drive.

One version of SIMATIC IPC DiagMonitor is required for each monitoring PC or for each SIMATIC IPC to be monitored.

https://support.industry.siemens.com/cs/ww/en/view/109763202

Ordering data

	Article No.
SIMATIC IPC DiagMonitor V5.1	Can be ordered using the SIMATIC IPC Configurator
SIMATIC IPC DiagMonitor V5.1 Software for diagnostics/messages via Ethernet, email, SMS, OPC, web	
• On USB flash drive; single license	**6ES7648-6CA15-1YX0**
• Download via OSD; single license; software and license for download; email address required for delivery	**6ES7648-6CA85-1YX0**

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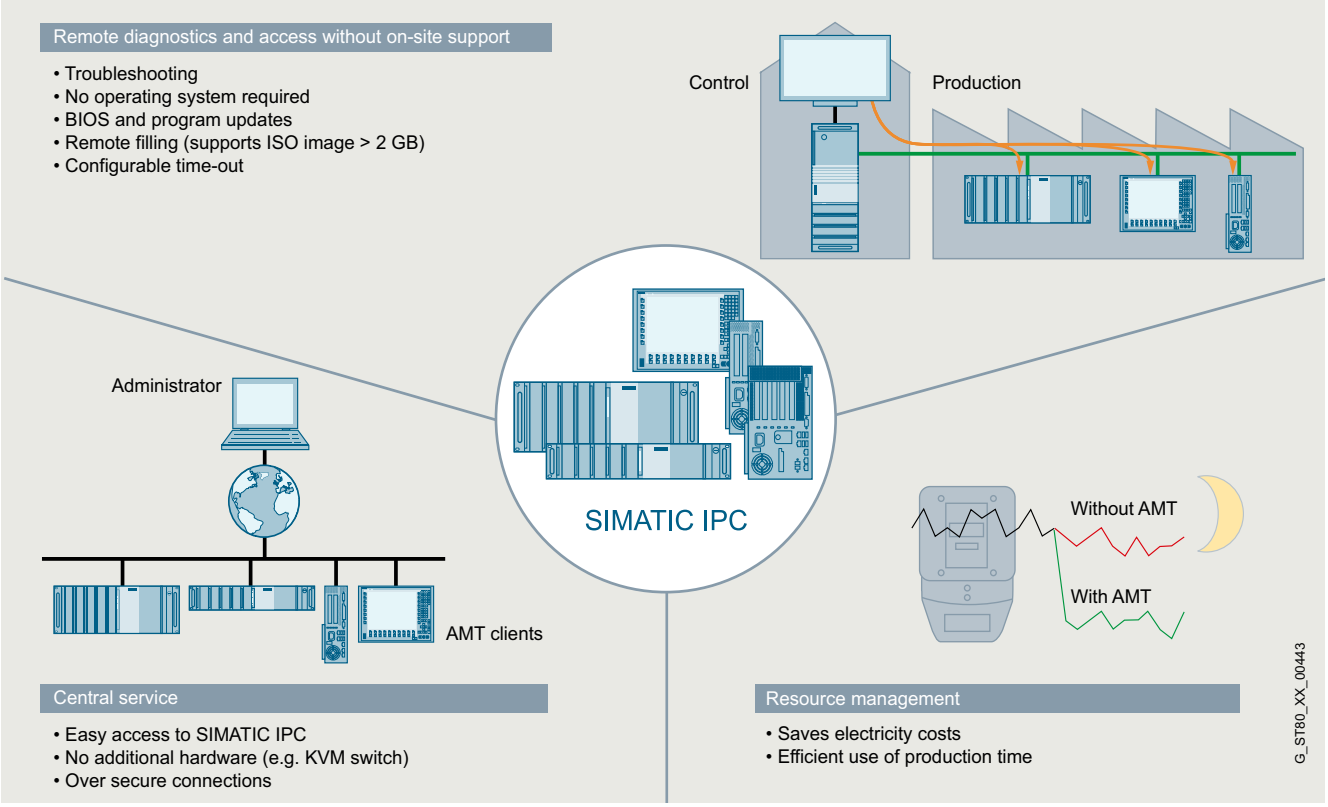
SIMATIC IPC Remote Manager

Overview



5

SIMATIC IPC Remote Manager

Efficient remote maintenance and management of SIMATIC IPCs.

With the SIMATIC IPC Remote Manager you can use functions of the Intel Active Management Technology (Intel AMT) for SIMATIC IPCs. Intel AMT is used for remote management of PCs.

Intel AMT offers a range of functions, such as:

- Remote reboot
- IDE redirection
- Keyboard video mouse redirection
- Power on/off/reset, and
- an integrated web server.

https://support.industry.siemens.com/cs/ww/en/view/109744024

Ordering data

	Article No.
SIMATIC IPC Remote Manager V1.3 Software tool for remote maintenance and management of SIMATIC IPC, incl. manual on CD-ROM (English, German), single license	**6ES7648-6EA01-3YA0**

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Overview

SIMATIC IPC FirmwareManager

The SIMATIC IPC FirmwareManager is a management tool for configuring and replacing firmware components.
The FirmwareManager is controlled via command line options.

Only the following Siemens products are supported:

- SIMATIC IPC647E, SIMATIC IPC647D, SIMATIC IPC847E, SIMATIC IPC847D
- SIMATIC IPC127E , IPC227E, SIMATIC IPC427E, SIMATIC IPC427D, SIMATIC IPC627E, SIMATIC IPC627D, SIMATIC IPC827D
- SIMATIC IPC277E, SIMATIC IPC477E, SIMATIC IPC477D, SIMATIC IPC677E, SIMATIC IPC677D
- SIMATIC Field PG M5, SIMATIC Field PG M6
- SIMATIC ITP1000

Supported operating systems:

- UEFI Shell
- Windows XP 32/64-bit
- Windows 7 32/64-bit
- Windows 10 64-bit
- Linux-based (kernel 3.x, 4.x, 5.x) 32/64-bit

The SIMATIC IPC FirmwareManager is available via online software delivery (OSD).

Licenses:

There are two license versions available for the SIMATIC IPC FirmwareManager.

- The single license is intended for use with a single IPC. It allows installation or mobile use with only one SIMATIC IPC.
- The license for 50 devices allows mobile use (via e.g. a USB flash drive) together with up to 50 IPCs. If the FirmwareManager is to be used with more than 50 IPCs, a corresponding number of licenses is required.

Ordering data

	Article No.
SIMATIC IPC FirmwareManager V4.0	
Software and license for download: Email address is essential for delivery	
• Single license; One version of the "SIMATIC IPC FirmwareManager" is required for each SIMATIC IPC on which the firmware manager is installed	**6ES7648-6FA84-0YX0**
• SIMATIC IPC FirmwareManager for 50 devices; One version of the "SIMATIC IPC FirmwareManager for 50 devices" is required for mobile use with up to 50 SIMATIC IPC	**6ES7648-6GA84-0YX0**

More information

More information is available on the internet at:

https://support.industry.siemens.com/cs/ww/en/view/109773878

https://support.industry.siemens.com/cs/ww/en/view/109778609

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SIMATIC Industrial OS

Overview

SIMATIC Industrial OS – the operating system for applications in the industrial environment

The SIMATIC Industrial OS with its Linux-based operating system constitutes an alternative to the tried-and-tested Microsoft Windows operating systems available for the SIMATIC IPCs.

The focus is on a small footprint, without unnecessary ballast, but with all components for fast commissioning and simple further development.

It was put together and tested on the SIMATIC IPCs and can be used in industrial environments and other areas of application.

Released devices:

Siemens has released the following SIMATIC IPCs for version 1.5 of SIMATIC Industrial OS:

- SIMATIC IPC127E
- SIMATIC IPC227E/277E
- SIMATIC IPC327E/377E/IPC347E
- SIMATIC IPC427E/477E
- SIMATIC IPC527G/IPC547G
- SIMATIC IPC647E
- SIMATIC IPC847E

Minimum requirements:

- USB flash drive with a memory of at least 8 GB
- SIMATIC IPC (see released devices) with at least 4 GB capacity on the target storage medium (CFast, SSD, etc.)

https://support.industry.siemens.com/cs/en/view/109766374

Ordering data

	Article No.
SIMATIC Industrial OS V1.5, based on Linux Operating system for SIMATIC IPC; single license; software and license for download; email address required for delivery	**6ES7648-6LA81-0YA8**

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Overview

Software packages

Software packages with SIMATIC WinCC (SCADA, Advanced, Professional) are available for all SIMATIC IPCs.
Additional software packages with SIMATIC S7-1500 Software Controller CPU 1507S are available for the IPC227E and IPC277E. Ordering the automation software together with an industrial PC results in significant price savings.

A software package can only be supplied if the same number of SIMATIC industrial PCs is ordered together with the software.

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Software packages for SIMATIC IPC

Overview

Software packages with SIMATIC IPC

Software packages with SIMATIC WinCC, WinCC flexible, or SIMATIC SW Controller together with the corresponding SIMATIC IPC.

Available:

- SIMATIC IPC packages with WinCC Unified PC RT (TIA Portal)
- SIMATIC IPC packages with WinCC V7
- SIMATIC IPC packages with WinCC Open Architecture – WinCC OA
- SIMATIC IPC packages with WinCC RT Advanced (TIA Portal)
- SIMATIC IPC packages with WinCC RT Professional (TIA Portal)
- SIMATIC IPC packages with SIMATIC WinCC flexible
- SIMATIC IPC packages with SIMATIC Software Controller

A software package can only be supplied if the same number of SIMATIC industry PCs is ordered together with the software. It cannot be ordered subsequently or separately.

Ordering data

	Article No.
Software packages for SIMATIC IPC	
SIMATIC WinCC Unified V17 PC Runtime [1) 2)]	
Software and documentation on DVD; incl. WinCC Unified Logging Tags and WinCC Unified Parameter Control. Single license, license key on USB flash drive for:	
• 150 PowerTags	**6AV2155-3DB01-7AA0**
• 500 PowerTags	**6AV2155-1EB01-7AA0**
• 1k PowerTags	**6AV2155-2EB01-7AA0**
• 2.5k PowerTags	**6AV2155-2MB01-7AA0**
• 5k PowerTags	**6AV2155-1FB01-7AA0**
• 10k PowerTags	**6AV2155-2MB01-7AA0**
• 50k PowerTags	**6AV2155-1GB01-7AA0**
SIMATIC WinCC Unified V16 PC Runtime [1) 2)]	
Software and documentation on DVD; incl. WinCC Unified Logging Tags and WinCC Unified Parameter Control. Single license, license key on USB flash drive for:	
• 150 PowerTags	**6AV2155-3DB01-6AA0**
• 500 PowerTags	**6AV2155-1EB01-6AA0**
• 1k PowerTags	**6AV2155-2EB01-6AA0**
• 2.5k PowerTags	**6AV2155-2MB01-6AA0**
• 5k PowerTags	**6AV2155-1FB01-6AA0**
• 10k PowerTags	**6AV2155-2FB01-6AA0**
• 50k PowerTags	**6AV2155-1GB01-6AA0**

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Ordering data	Article No.
SIMATIC WinCC Runtime Advanced V17 [1] [2]	
Software and documentation on DVD, incl. WinCC Archives and WinCC Recipes. Single license, license key on USB flash drive for:	
• 128 PowerTags	**6AV2114-2BA07-0AA0**
• 512 PowerTags	**6AV2114-2DA07-0AA0**
• 2 048 PowerTags	**6AV2114-2FA07-0AA0**
• 4 096 PowerTags	**6AV2114-2HA07-0AA0**
• 8 192 PowerTags	**6AV2114-2KA07-0AA0**
SIMATIC WinCC Runtime Advanced V16 [1] [2]	
Software and documentation on DVD, incl. WinCC Archives and WinCC Recipes. Single license, license key on USB flash drive for:	
• 128 PowerTags	**6AV2114-2BA06-0AA0**
• 512 PowerTags	**6AV2114-2DA06-0AA0**
• 2 048 PowerTags	**6AV2114-2FA06-0AA0**
• 4 096 PowerTags	**6AV2114-2HA06-0AA0**
• 8 192 PowerTags	**6AV2114-2KA06-0AA0**
SIMATIC WinCC Runtime Professional V17 [1] [2] [3]	
• WinCC Client for RT Professional	**6AV2117-2DB07-0AA0**
• 128 PowerTags	**6AV2115-2BA07-0AA0**
• 512 PowerTags	**6AV2115-2DA07-0AA0**
• 2 048 PowerTags	**6AV2115-2FA07-0AA0**
• 4 096 PowerTags	**6AV2115-2HA07-0AA0**
• 8 192 PowerTags	**6AV2115-2KA07-0AA0**
• 65 536 PowerTags	**6AV2115-2MA07-0AA0**
SIMATIC WinCC Runtime Professional V16 [1] [2] [3]	
• WinCC Client for RT Professional	**6AV2117-2DB06-0AA0**
• 128 PowerTags	**6AV2115-2BA06-0AA0**
• 512 PowerTags	**6AV2115-2DA06-0AA0**
• 2 048 PowerTags	**6AV2115-2FA06-0AA0**
• 4 096 PowerTags	**6AV2115-2HA06-0AA0**
• 8 192 PowerTags	**6AV2115-2KA06-0AA0**
• 65 536 PowerTags	**6AV2115-2MA06-0AA0**

	Article No.
Software packages for SIMATIC IPC	
SIMATIC WinCC V7.5 SP2 Runtime [1] [2]	
• WinCC RT Client	**6AV6382-2AA07-5AX0**
• 128 PowerTags	**6AV6382-2CA07-5AX0**
• 512 PowerTags	**6AV6382-2DA07-5AX0**
• 2 048 PowerTags	**6AV6382-2EA07-5AX0**
• 8 192 PowerTags	**6AV6382-2HA07-5AX0**
• 65 536 PowerTags	**6AV6382-2FA07-5AX0**
SIMATIC WinCC V7.5 SP2 Runtime ASIA [1] [2]	
• WinCC RT Client	**6AV6382-2AA07-5AV0**
• 128 PowerTags	**6AV6382-2CA07-5AV0**
• 512 PowerTags	**6AV6382-2DA07-5AV0**
• 2 048 PowerTags	**6AV6382-2EA07-5AV0**
• 8 192 PowerTags	**6AV6382-2HA07-5AV0**
• 65 536 PowerTags	**6AV6382-2FA07-5AV0**
SIMATIC WinCC Open Architecture	
V3.18	
Only offered with IPC127E and IPC227E/IPC277E. These packages cannot be extended with further WinCC OA options (restrictions according to WinCC OA documentation). N/EAR99S 9377	
• 128 PowerTags	**6AV6355-1AA31-8FA4**
• 256 PowerTags	**6AV6355-1AA31-8FA0**
• 512 PowerTags	**6AV6355-1AA31-8FA1**
• 2 048 PowerTags	**6AV6355-1AA31-8FA2**
• 4 096 PowerTags	**6AV6355-1AA31-8FA3**
V3.17	
Only offered with IPC127E and IPC227E/IPC277E. These packages cannot be extended with further WinCC OA options (restrictions according to WinCC OA documentation). N/EAR99S 9377	
• 256 PowerTags	**6AV6355-1AA31-7FA0**
• 512 PowerTags	**6AV6355-1AA31-7FA1**
• 2 048 PowerTags	**6AV6355-1AA31-7FA2**
• 4 096 PowerTags	**6AV6355-1AA31-7FA3**
SIMATIC WinCC flexible Runtime	
SW package for SIMATIC IPC; WinCC flexible Runtime current version, WinCC flexible/Archives+Recipes;	
Delivery only when ordering the same number of SIMATIC IPCs on the same order form	
• 128 PowerTags	**6AV6623-2BA00-0AA0**
• 512 PowerTags	**6AV6623-2DA00-0AA0**
• 2 048 PowerTags	**6AV6623-2FA00-0AA0**
• 4 096 PowerTags	**6AV6623-2GA00-0AA0**

[1] Only if ordered together with a SIMATIC IPC.

[2] The current version is always supplied.

[3] IPC127 only as client and single-user station for small projects, IPC227E/IPC277E and IPC327E/IPC377E only as WinCC client & single-user station.

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Software packages for SIMATIC IPC

Ordering data

	Article No.
SIMATIC S7-1500 Software Controller CPU1507S Package	
SW package only available for IPC227E/IPC277E	
• SW Controller CPU 1507S for IPC2x7E (DVD) [1) 2)]	**6ES7672-7AC01-6YA0**
• SW Controller CPU 1507S (F) for IPC2x7E (DVD) [1) 2)]	**6ES7672-7FC01-6YA0**

1) Only if ordered together with a SIMATIC IPC

2) The current version is always supplied

Note:

For ordering data for Panel PCs and accessories, see configurators in "SIMATIC Panel PCs".

More information

You can find the latest list of software packages for SIMATIC IPCs under the following SIOS notification:

https://support.industry.siemens.com/cs/at/en/view/99860269

More information is available on the internet at:

http://www.automation.siemens.com/simatic-hmi

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Overview

SIMATIC IOT2000

The SIMATIC IOT2000 is the reliable, open platform designed for the acquisition, processing and transfer of data directly in the production environment.

It is ideally suited for use as a gateway between the cloud or company IT level and production.

It can serve as an interface in both directions. It can also transfer evaluated data from the cloud to production control.
This continuous exchange of data closes the control loop for optimizing the production process. The openness of the system in supporting numerous communication protocols and programming in high-level languages enables tailored solutions.

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SIMATIC IOT2050

Overview

The SIMATIC IOT2050 is the reliable, open platform designed for the acquisition, processing and transfer of data directly in the production environment.
It is ideally suited for use as a gateway between the cloud or company IT level and production.

The openness of the system in supporting numerous communication protocols and programming in high-level languages enables tailored solutions.

Openness for industrial IOT applications

- Wide range of options for programming in high-level languages
- Implementation of flexible communication solutions with different protocols, from Modbus RTU, OPC UA to cloud protocols such as MQTT/AMQP
- Use of open source application examples and libraries
- SIMATIC Industrial OS, via OSD + free "ISAR" Debian via download

Additional information is available on the Internet at:

http://siemens.com/iot2000

Ordering data

	Article No.
SIMATIC IOT2050	
2 x GB Ethernet RJ45; Display Port; 2x USB 2.0; SD CARD slot; 24 V DC industrial power supply	
• Hard disk: 1x microSD card slot; memory: DDR4-SDRAM 1 GB	**6ES7647-0BA00-0YA2**
• Hard disk: 16 GB eMMc 1x microSD card slot; memory: DDR4-SDRAM 2 GB	**6ES7647-0BA00-1YA2**

Technical specifications

Article number	**6ES7647-0BA00-0YA2**	**6ES7647-0BA00-1YA2**
	SIMATIC IoT2050	SIMATIC IoT2050
General information		
Product type designation		IOT2050
Installation type/mounting		
Design	IoT Gateway, built-in unit	IoT Gateway, built-in unit
Supply voltage		
Type of supply voltage	12/24 V DC	12/24 V DC
Mains buffering		
• Mains/voltage failure stored energy time	5 ms	5 ms
Processor		
Processor type	ARM TI AM6528 GP	ARM TI AM6548 HS
Graphic		
Graphics controller	Integrated	Integrated
Drives		
Slot for drives	1x microSD card slot	1x microSD card slot
Memory		
Type of memory	DDR4	DDR4
Main memory	1 GB RAM	2 GB RAM
Hardware configuration		
Slots		
• free slots	1x Arduino, 1x mPCIe	1x Arduino, 1x mPCIe
Digital inputs		
Number of digital inputs	20	20
Input voltage		
• Type of input voltage	DC	DC
Digital outputs		
Number of digital outputs	20	20
Output voltage		
• Type of output voltage	DC	DC
• permissible voltage at output, min.	3.3 V	3.3 V
• permissible voltage at output, max.	5 V	5 V
Analog inputs		
Number of analog inputs		6
Input ranges		
• Voltage		Yes; 0 ... 5 V

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Technical specifications

Article number	6ES7647-0BA00-0YA2	6ES7647-0BA00-1YA2
	SIMATIC IoT2050	SIMATIC IoT2050
Interfaces		
PROFIBUS/MPI	can be implemented with plug-in card	can be implemented with plug-in card
Number of industrial Ethernet interfaces	2	2
Number of PROFINET interfaces	2	2
USB port	2x USB 2.0	2x USB 2.0
Connection for keyboard/mouse	USB	USB
serial interface	1x COM (1x RS 232 / 422 / 485)	1x COM (1x RS 232 / 422 / 485)
Video interfaces		
• Graphics interface	1x DisplayPort	1x DisplayPort
Industrial Ethernet		
• Industrial Ethernet interface	2x Ethernet (RJ45)	2x Ethernet (RJ45)
- 100 Mbps	Yes	Yes
- 1000 Mbps	Yes	Yes
Integrated Functions		
Monitoring functions		
• Temperature monitoring	Yes	Yes
• Watchdog	Yes	Yes
• Status LEDs	Yes	Yes
EMC		
Interference immunity against discharge of static electricity		
• Interference immunity against discharge of static electricity	±4 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2	±4 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields		
• Interference immunity against high frequency radiation		10 V/m for 80 ... 1 000 MHz, 80 % AM according to IEC 61000-4-3; 3 V/m for 1.4 ... 6 GHz, 80 % AM according to IEC 61000-4-3
Interference immunity to cable-borne interference		
• Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst	±1 kV acc. to IEC 61000-4-4, Burst

Article number	6ES7647-0BA00-0YA2	6ES7647-0BA00-1YA2
	SIMATIC IoT2050	SIMATIC IoT2050
Interference immunity against voltage surge		
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric	±1 kV acc. to IEC 61000-4-5, surge symmetric
Degree and class of protection		
IP (all-round)	IP20	IP20
Standards, approvals, certificates		
CE mark	Yes	Yes
UL approval	Yes	Yes
cULus	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes
KC approval	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes
FCC	Yes	Yes
EMC	CE, EN 61000-6-4:2007 +A1:2011, EN 61000-6-2:2005, CE, EN IEC 61000-6-4:2019, EN IEC 61000-6-2:2019	
Ambient conditions		
Altitude during operation relating to sea level		
• Installation altitude above sea level, max.	2 000 m	2 000 m
Relative humidity		
• Relative humidity	5 ... 85 % at 30 °C, no condensation	
• Operation, max.	85 %	85 %
Vibrations		
• Vibration resistance during operation acc. to IEC 60068-2-6	tested according to IEC 60068-2-6: 10 cycles; 5 to 8.4 Hz: deflection 3.5 mm; 8.4 to 200 Hz: acceleration 9.8 m/s²	
Shock testing		
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s², 11 ms	Tested according to IEC 60068-2-27: 150 m/s², 11 ms
Operating systems		
pre-installed operating system	No	SIMATIC Industrial OS
without operating system	Yes	No
Mechanics/material		
Enclosure material (front)	plastic	plastic
• Plastic	Yes	Yes
• Aluminum	Yes	Yes
• Stainless steel	Yes	Yes
• Glass	No	No
Dimensions		
Width	37 mm	37 mm
Height	142 mm	142 mm
Depth	100 mm	100 mm

Additional information is available on the Internet at:
http://siemens.com/iot2000

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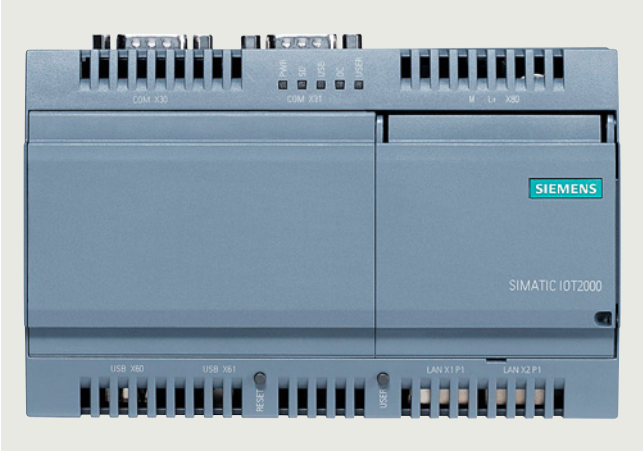
SIMATIC IOT2040

Overview



SIMATIC IOT2040

The SIMATIC IOT2040 is the reliable, open platform designed for the acquisition, processing and transfer of data directly in the production environment.

It is ideally suited for use as a gateway between the cloud or company IT level and production.

The openness of the system in supporting numerous communication protocols and programming in high-level languages enables tailored solutions.

Openness for industrial IOT applications

- Wide range of options for programming in high-level languages
- Implementation of flexible communication solutions with different protocols, from Modbus RTU, OPC UA to cloud protocols such as MQTT/AMQP
- Use of open source application examples and libraries
- Yocto Linux support

More information

More information is available on the Internet at:
http://siemens.com/iot2000

Ordering data

	Article No.
SIMATIC IOT2040 2 x 10/100 Mbps Ethernet RJ45; 1 x USB 2.0, 1 x USB client; SD card slot; 24 V DC industrial power supply	**6ES7647-0AA00-1YA2**

Technical specifications

Article number	**6ES7647-0AA00-1YA2** SIMATIC IoT2040
Installation type/mounting	
Design	IoT Gateway, built-in unit
Supply voltage	
Type of supply voltage	24 V DC (9 ... 36 V)
Mains buffering	
• Mains/voltage failure stored energy time	5 ms
Processor	
Processor type	Intel Quark X1020
Drives	
Hard disk	1x microSD card slot
Memory	
Type of memory	DDR3-SDRAM
Main memory	1 GB
Hardware configuration	
Slots	
• free slots	1x Arduino, 1x mPCIe
Interfaces	
Number of industrial Ethernet interfaces	2
Number of PROFINET interfaces	0
USB port	1x USB 2.0, 1x USB client
Connection for keyboard/mouse	USB / USB
serial interface	2x COM ports (RS 232, RS 485)
Industrial Ethernet	
• Industrial Ethernet interface	2x Ethernet (RJ45)
- 100 Mbps	Yes
- 1000 Mbps	No
Integrated Functions	
Monitoring functions	
• Temperature monitoring	No
• Watchdog	Yes
• Status LEDs	Yes
• Fan	No

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Technical specifications

Article number	**6ES7647-0AA00-1YA2**
	SIMATIC IoT2040
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±4 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 - 1 000 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 1 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 150 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±2 kV in accordance with IEC 61000-4-4, burst, length > 30 m
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-4:2007 +A1:2011
Degree and class of protection	
IP (at the front)	IP20
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
KC approval	Yes
EMC	CE, EN 61000-6-4:2007 +A1:2011, EN 61000-6-2:2005, EN 61000-6-3:2007 +A1:2011, EN 61000-6-1:2007

Article number	**6ES7647-0AA00-1YA2**
	SIMATIC IoT2040
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to 50 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6: 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 200 Hz: 9.8 m/s^2
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s^2, 11 ms
Operating systems	
pre-installed operating system	No
without operating system	Yes
Dimensions	
Width	144 mm
Height	90 mm
Depth	53 mm

More information

Additional information is available on the Internet at:

http://siemens.com/iot2000

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SIMATIC IOT2000 Input/Output Module

Overview

IO shield for SIMATIC IOT2000 Industrial IoT Gateways

The SIMATIC IOT2000 IO shield allows for direct connection of non-time-critical sensor data to the SIMATIC IOT2000 via digital and analog IOs.

Essential highlights:

- High degree of industrial functionality
- Arduino shield with 5x DI, 2x DQ, 2x AI
- Rapid installation since suitable cover and fixing accessories supplied
- Industrial design
- For use in standard industrial voltage ranges (e.g. 24 V with digital In)
- Tested environmental conditions as for IOT2040 (e.g. for 0 ... 50° C)
- Approvals as for IOT2040 (CE UL)
- Developed and tested for 24/7 operation
- Extremely versatile application creation
- Module addressing via GPIOs allows wide choice of programming language and development environment.

Target applications:

- Direct connection of
  - Sensors
  - Actuators (especially lamps, horns)
- Distribution of data to higher-level units, such as clouds

Ordering data

	Article No.
SIMATIC IOT2000 Input/Output Module 5x DI, 2x AI, 2x DO, Arduino shield for SIMATIC IOT2020 and IOT2040	**6ES7647-0KA01-0AA2**

Technical specifications

Article number	**6ES7647-0KA01-0AA2** SIMATIC IoT2000 input/output module
Installation type/mounting	
Mounting	On Arduino interface
Design	Plug-in card
Supply voltage	
Type of supply voltage	24 V DC
Digital inputs	
Number of digital inputs	5
Input voltage	
• Type of input voltage	DC
• for signal "0"	< 5 V DC
• for signal "1"	> 12 V DC
Input current	
• for signal "0", max. (permissible quiescent current)	0.9 mA
• for signal "1", typ.	2.1 mA
Input delay (for rated value of input voltage)	
for standard inputs	
- at "0" to "1", max.	1.5 ms
- at "1" to "0", max.	1.5 ms
Digital outputs	
Type of digital output	transistor
Number of digital outputs	2
Short-circuit protection	Yes
Output voltage	
• Type of output voltage	DC
• permissible voltage at output, min.	0 V
• permissible voltage at output, max.	28.8 V
Output current	
• for signal "1" rated value	0.3 A
Parallel switching of two outputs	
• for uprating	No
Switching frequency	
• with resistive load, max.	10 Hz
• with inductive load, max.	0.5 Hz

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Technical specifications

Article number	**6ES7647-0KA01-0AA2** SIMATIC IoT2000 input/output module
Analog inputs	
Number of analog inputs	2
Input ranges	
• Voltage	Yes; 0 to 10V
• Current	Yes; 0 to 20 mA
• Thermocouple	No
• Resistance thermometer	No
• Resistance	No
Input ranges (rated values), voltages	
• 0 to +10 V	Yes
Input ranges (rated values), currents	
• 0 to 20 mA	Yes
Analog value generation for the inputs	
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	9 bit
Integrated Functions	
Monitoring functions	
• Temperature monitoring	No
• Watchdog	No
• Status LEDs	No
• Fan	No
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	±4 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
• Interference immunity against high frequency radiation	10 V/m for 80 - 1 000 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 1 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 150 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
• Interference immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
• Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
• Interference immunity on signal cables < 30m	±2 kV acc. to IEC 61000-4-4, burst, length > 30 m

Article number	**6ES7647-0KA01-0AA2** SIMATIC IoT2000 input/output module
Interference immunity against voltage surge	
• asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
• symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
• Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	EN 61000-6-4:2007 +A1:2011
Degree and class of protection	
IP (at the front)	n.a.
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
KC approval	Yes; For use inside SIMATIC IoT2040
EMC	CE, EN 61000-6-4:2007 +A1:2011, EN 61000-6-2:2005, EN 61000-6-3:2007 +A1:2011, EN 61000-6-1:2007
Ambient conditions	
Ambient temperature during operation	
• Ambient temperature during operation	0 °C to 50 °C
Relative humidity	
• Relative humidity	Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6: 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 200 Hz: 9.8 m/s²
Shock testing	
• Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s², 11 ms
Operating systems	
without operating system	Yes
Dimensions	
Width	75 mm
Height	57 mm
Depth	32 mm

More information

Technical support:

Technical and application support for the SIMATIC IOT2000 Input/Output Module is exclusively via the moderated Siemens Industry Online Forum:
IOT2000 Forum link:

https://support.industry.siemens.com/tf/ww/en/search/mainsearch/?text=IOT2000

Here you can find Getting Started, FAQs etc.

Application examples are continually being added.

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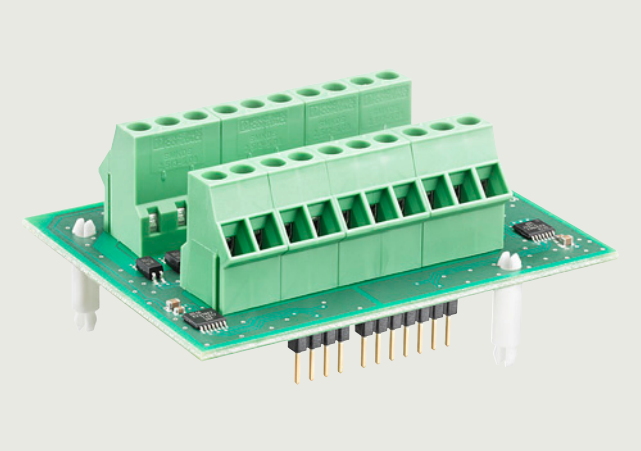
SIMATIC IOT2000 Input Module Sink/Source

Overview



IO shield for SIMATIC IOT2000 industrial IoT gateway

The SIMATIC IOT2000 IO shield allows for direct connection of non-time-critical sensor data to the SIMATIC IOT2000 via its digital IOs.

Essential highlights:

- High degree of industrial functionality
- Arduino shield with 10x DI
- Each input can be used as a sink or source, no configuration necessary
- Rapid installation since suitable cover and fixing accessories supplied
- Industrial design
- For use with standard industrial voltage ranges (e.g. 24 V with digital In)
- Tested environmental conditions as for IOT2040 (e.g. for 0 ... 50° C)
- Approvals as for IOT2040 (CE UL)
- Developed and tested for 24/7 operation
- Extremely versatile application creation
- Module addressing via GPIOs allows wide choice of programming languages and development environments.

Target applications:

- Direct connection of sensors
- Distribution of data to higher-level units, such as clouds

Ordering data

	Article No.
SIMATIC IOT2000 Input Module Sink/Source 10x DI, Arduino shield for SIMATIC IOT2020 and IOT2040	**6ES7647-0KA02-0AA2**

Technical specifications

Article number	**6ES7647-0KA02-0AA2** SIMATIC IoT2000 input module sink/source
Installation type/mounting	
Mounting	On Arduino interface
Design	Plug-in card
Supply voltage	
Type of supply voltage	24 V DC
Digital inputs	
Number of digital inputs	10
Input voltage	
• for signal "0"	< 5 V DC
• for signal "1"	> 12 V DC
Input current	
• for signal "0", max. (permissible quiescent current)	0.9 mA
• for signal "1", typ.	2.1 mA
Input delay (for rated value of input voltage)	
for standard inputs	
- at "0" to "1", max.	1.5 ms
- at "1" to "0", max.	1.5 ms
Digital outputs	
Type of digital output	without
EMC	
Interference immunity against discharge of static electricity	
• Interference immunity against discharge of static electricity	± 6 KV contact discharge at the front in accordance with IEC 61000-4-2; ±4 kV, housing contact discharge at the back in accordance with IEC 61000-4-2; ± 8 kV air discharge in accordance with IEC 61000-4-2
Interference immunity to cable-borne interference	
• Interference immunity on signal cables < 30m	±1 kV acc. to IEC 61000-4-4, Burst
Emission of conducted and non-conducted interference	
• Interference emission via line/ AC current cables	10 V/m for 80 - 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80 % AM acc. to IEC 61000-4-3
Compliance with line harmonic distortion limits	
• Compliance with line harmonic distortion acc. to IEC 61000-3-2, IEC 61000-3-3	No
Degree and class of protection	
IP (at the front)	20

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Technical specifications

Article number	**6ES7647-0KA02-0AA2** SIMATIC IoT2000 input module sink/source
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes
cULus	Yes
RCM (formerly C-TICK)	Yes
FCC	Yes
EMC	CE (industry)
Mechanics/material	
Enclosure material (front)	plastic
• Plastic	Yes
• Aluminum	No
• Stainless steel	No
• Glass	No
Dimensions	
Width	75 mm
Height	57 mm
Depth	32 mm

More information

Technical support:

Technical and application support for the SIMATIC IOT2000 Input/Output Module is exclusively via the moderated Siemens Industry Online Forum:
IOT2000 Forum link:

https://support.industry.siemens.com/tf/ww/en/search/mainsearch/?text=IOT2000

You can find Getting Started, FAQs etc. here.

Application examples are continually being added.

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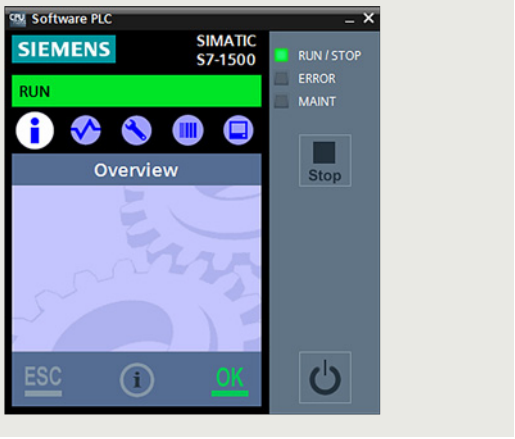
Overview



- SIMATIC S7-1500 Software Controller for implementing control tasks with SIMATIC IPC
- Very high availability thanks to innovative real-time system
- Available as standard and fail-safe version
- Improved know-how and copy protection
- Integrated Motion Control functionalities for controlling speed-controlled and positioning axes, support for external encoders, output cams / output cam tracks and measuring inputs
- Integrated web server for diagnostics with the option of creating user-defined web pages
- SIMATIC ODK 1500S for the development and integration of control functions under Windows with the high-level languages C/C++, VB and C#
- SIMATIC Target 1500™ for the development of control functions using MATLAB Simulink®

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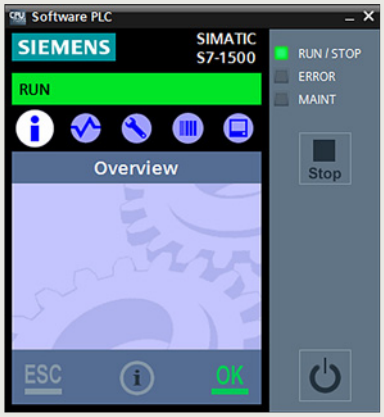
Overview



- Software Controller for implementing the functions of a SIMATIC S7-1500 Controller on a SIMATIC IPC
- For use as a PC-based controller in machines with distributed I/O via PROFINET and PROFIBUS
- For utilizing IPC onboard interfaces and PC plug-in cards for PROFINET and PROFIBUS connections
- Optimized for PC-based control tasks with the IPC427E Microbox PC and the IPC477E Panel PC
- Can also be used on the IPC227E, IPC627D, IPC627E and IPC827D Box PCs, the IPC277E, IPC677D and IPC677E Panel PCs, and the IPC647D, IPC647E, IPC847D and IPC847E Rack PCs
- Execution of functions and algorithms implemented with high-level languages under Windows (C/C++, C#, VB) and locally in the CPU 1507S (C/C++)
- Integrated Motion Control functionalities for controlling speed-controlled and positioning axes as well as synchronous operation, support for external encoders, precise position gearing between axes, output cams/cam tracks and probes
- Integrated web server for diagnostics with the option of creating user-defined web pages
- OPC UA server (data access) and client as runtime option for easy connection of the software controller to Windows applications or non-Siemens devices/systems

Ordering data

	Article No.
SIMATIC S7-1500 Software Controller CPU 1507S For implementing the function of an S7-1500 Controller on SIMATIC IPCs **Target system:** Optimized for PC-based control tasks with IPC427E Microbox PC and IPC477E Panel PC; Can also be used with IPC277E Panel PC, IPC677D Panel PC, IPC677E Panel PC, IPC227E Box PC, IPC627D Box PC, IPC627E Box PC, IPC827D Box PC, IPC647D Rack PC, IPC647E Rack PC, IPC847D Rack PC, IPC847E Rack PC **Requirement:** Windows 7 / Windows Embedded Standard 7 / Windows 10 Enterprise; for supported Windows 10 version, see technical specifications **Type of delivery:** English, German, Chinese, Italian, French, Spanish	
• Single license for one installation Software and documentation on DVD, license key on USB flash drive	**6ES7672-7AC01-0YA0**
• Single license for one installation; Software download including license key [1]	**6ES7672-7AC01-0YG0**
Accessories	
SIMATIC IPC	
• SIMATIC IPC427E Microbox PC	**6AG4141-…..-….**
• SIMATIC IPC477E Panel PC	**6AV7241-…..-….**
• SIMATIC IPC227E Nanobox PC	**6ES7647-8B…-….**
• SIMATIC IPC277E Panel PC	**6AV7882-0…0-…0**
• SIMATIC IPC677D Panel PC	**6AV7260-…..-….**
• SIMATIC IPC677E Panel PC	**6AV7261-…..-….**
• SIMATIC IPC627D Box PC	**6AG4131-2….-….**
• SIMATIC IPC627E Box PC	**6AG4131-3….-….**
• SIMATIC IPC827D Box PC	**6AG4132-2….-….**
• SIMATIC IPC647D Rack PC	**6AG4112-2….-….**
• SIMATIC IPC647E Rack PC	**6AG4112-3….-….**
• SIMATIC IPC847D Rack PC	**6AG4114-2….-….**
• SIMATIC IPC847E Rack PC	**6AG4114-3….-….**

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

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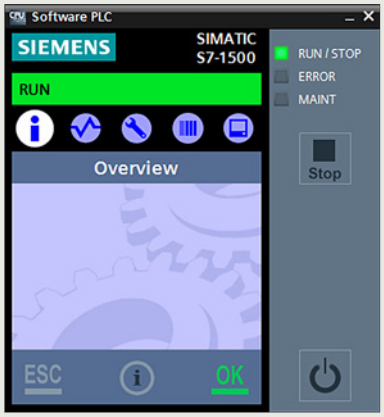
Overview



- Software Controller for implementing the functions of a SIMATIC S7-1500 Controller on a SIMATIC IPC
- For use with control applications with increased requirements for program and data memory
- For use as a PC-based controller in machines with distributed I/O via PROFINET and PROFIBUS
- For utilizing IPC onboard interfaces and PC plug-in cards for PROFINET and PROFIBUS connections
- Optimized for PC-based control tasks with the IPC627E Box PC, the IPC677E Panel PC, and the IPC647E and IPC847E Rack PCs
- Can also be used on the IPC427E, IPC627D and IPC827D Box PCs, the IPC477E and IPC677D Panel PCs, and the IPC647D and IPC847D Rack PCs
- Execution of functions and algorithms implemented with high-level languages under Windows (C/C++, C#, VB) and locally in the CPU 1508S (C/C++)
- Integrated Motion Control functionalities for controlling speed-controlled and positioning axes as well as synchronous operation, support for external encoders, precise position gearing between axes, output cams/cam tracks and probes
- OPC UA server (data access) and client as runtime option for easy connection of the software controller to Windows applications or non-Siemens devices/systems

Ordering data

	Article No.
SIMATIC S7-1500 Software Controller CPU 1508S For implementing the function of an S7-1500 Controller on SIMATIC IPCs **Target system:** Optimized for PC-based control tasks with Panel PC IPC677E, Box PC IPC627E, Rack PC IPC647E, Rack PC IPC847E; can also be used with Panel PC IPC477E, Panel PC IPC677D, Box PC IPC427E, Box PC IPC627D, Box PC IPC827D, Rack PC IPC647D, Rack PC IPC847D; **Requirement:** Windows 7 / Windows Embedded Standard 7 / Windows 10 (64-bit) **Type of delivery:** en, de, fr, it, es, zh	
• Single license for one installation Software and documentation on DVD, license key on USB flash drive	**6ES7672-8AC01-0YA0**
• Single license for one installation; Software download including license key [1]	**6ES7672-8AC01-0YG0**
Accessories	
SIMATIC IPC	
• SIMATIC IPC427E Microbox PC	**6AG4141-…..-….**
• SIMATIC IPC477E Panel PC	**6AV7241-…..-….**
• SIMATIC IPC677D Panel PC	**6AV7260-…..-….**
• SIMATIC IPC677E Panel PC	**6AV7261-…..-….**
• SIMATIC IPC627D Box PC	**6AG4131-2….-….**
• SIMATIC IPC627E Box PC	**6AG4131-3….-….**
• SIMATIC IPC827D Box PC	**6AG4132-2….-….**
• SIMATIC IPC647D Rack PC	**6AG4112-2….-….**
• SIMATIC IPC647E Rack PC	**6AG4112-3….-….**
• SIMATIC IPC847D Rack PC	**6AG4114-2….-….**
• SIMATIC IPC847E Rack PC	**6AG4114-3….-….**

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

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Overview

- For developing dynamically loadable function libraries for the S7-1500 Software Controllers and S7-1500 Advanced Controllers CPU 1518 MFP and PLCSIM Advanced:
  - Implementation of function libraries for the SIMATIC S7-1500 Software Controller that are executed under Windows with the high-level languages C/C++, C# and VB
  - Implementation of function libraries for the PLCSIM Advanced that are executed under Windows with the high-level languages C/C++
  - Implementation of function libraries that are executed in real-time in the context of the user program of the CPU with the high-level language C++
  - Implementation of applications for the C++ runtime of the CPU 1518 MFP
- "Eclipse" development environment for real-time function libraries in the CPU user program and applications for the C++ runtime in the scope of delivery.
- Development of library functions under Windows with MS Visual Studio (optional)
- Easy introduction to development by using basic projects via templates
- Automatic creation of function blocks for calling the library functions
- Simple integration of the function blocks into STEP 7 by importing.
- Simple use of the library functions in the PLC without specific high-level language know-how.

Licensing

- ODK 1500S is supplied with a floating license. The floating license allows installation of the software on any number of computers. The number of existing licenses determines the number of computers on which the software can be used simultaneously.
- The integrated development environment Eclipse, required for developing real-time libraries, is included in the scope of supply of ODK 1500S as well as templates for Visual Studio.
- SIMATIC ODK 1500S is available as a standalone product or in a bundle with SIMATIC Target 1500S™ for Simulink®.

You can find more information on the Software Update Service, license types, Online Software Delivery and handling your software licenses with the Automation License Manager here:

http://www.siemens.com/simatic-licenses

Ordering data

	Article No.
SIMATIC ODK 1500S	
Open Development Kit V2.5 for support in developing high-level language applications for SIMATIC S7-1500 Advanced Controllers; supplied on DVD, license key (floating license) on USB flash drive	**6ES7806-2CD03-0YA0**
Open Development Kit V2.5 for support in developing high-level language applications for SIMATIC S7-1500 Advanced Controllers; software download including license key (floating license) [1]	**6ES7806-2CD03-0YG0**
Email address required for delivery	

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

Technical specifications

System requirements

The SIMATIC ODK 1500S can be used on PC platforms with the following requirements:

- Operating systems Windows 7/8.1/10
- Min. 3 GB hard disk memory
- Min. 4 GB work memory
- Mouse, keyboard, monitor

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Overview

- Software Controller for implementing the functions of a SIMATIC S7-1500 Controller on a SIMATIC IPC
- For use as a PC-based controller in machines with distributed I/O via PROFINET and PROFIBUS
- For utilizing IPC onboard interfaces and PC plug-in cards for PROFINET and PROFIBUS connections
- Can be used for safety functions up to SIL 3 according to IEC 61508 and up to PL e according to ISO 13849
- Supports PROFIsafe in distributed configurations
- Optimized for PC-based control tasks with the IPC427E Microbox PC and the IPC477E Panel PC (requires configuration with NVRAM)
- Can also be used on IPC227E, IPC627D, IPC627E and IPC827D Box PCs, IPC277E, IPC677D and IPC677E Panel PCs, and IPC647E and IPC847E Rack PCs (configurations with NVRAM are required for the IPC227E, IPC427E, IPC627D, IPC827D, IPC277E, IPC477E and IPC677D PCs)
- Execution of functions and algorithms implemented with high-level languages under Windows (C/C++, C#, VB) and locally in the CPU 1507S F (C/C++)
- Integrated Motion Control functionalities for controlling speed-controlled and positioning axes as well as synchronous operation, support for external encoders, precise position gearing between axes, output cams/cam tracks and probes
- Integrated web server for diagnostics with the option of creating user-defined web pages
- OPC UA server (data access) and client as runtime option for easy connection of the software controller to Windows applications or non-Siemens devices/systems

Ordering data

	Article No.
Software Controller CPU 1507S F	
For implementing the function of a fail-safe S7-1500 Controller on SIMATIC IPCs **Target system:** Optimized for PC-based control tasks with IPC427E Microbox PC and IPC477E Panel PC; Can also be used with IPC277E Panel PC, IPC677D Panel PC, IPC677E Panel PC, IPC227E Box PC, IPC627D Box PC, IPC627E Box PC, IPC827D Box PC, IPC647E Rack PC, IPC847E Rack PC **Requirement:** Windows 7 / Windows Embedded Standard 7 / Windows 10 Enterprise LTSB with MBR boot; For supported Windows 10 versions, see Technical specifications For the IPC227E, IPC427E, IPC627D, IPC827D, IPC277E, IPC477E and IPC677D, IPC configurations with NVRAM are required) **Type of delivery:** English, German, Chinese, Italian, French, Spanish	
• Single license for one installation Software and documentation on DVD, license key on USB flash drive	**6ES7672-7FC01-0YA0**
• Single license for one installation; Software download including license key [1]	**6ES7672-7FC01-0YG0**
Accessories	
SIMATIC IPC	
• SIMATIC IPC227E Nanobox PC	**6ES7647-8B…-….**
• SIMATIC IPC427E Microbox PC	**6AG4141-…..-….**
• SIMATIC IPC627D Box PC	**6AG4131-2….-….**
• SIMATIC IPC627E Box PC	**6AG4131-3….-….**
• SIMATIC IPC827D Box PC	**6AG4132-2….-….**
• SIMATIC IPC277E Panel PC	**6AV7882-0…0-…0**
• SIMATIC IPC477E Panel PC	**6AV7241-…..-….**
• SIMATIC IPC677D Panel PC	**6AV7260-…..-….**
• SIMATIC IPC677E Panel PC	**6AV7261-…..-….**
• IPC647E Rack PC	**6AG4112-3….-….**
• IPC847E Rack PC	**6AG4114-3….-….**

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

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Overview

- Software Controller for implementing the functions of a SIMATIC S7-1500 Controller on a SIMATIC IPC
- For use with control applications with increased requirements for program and data memory
- For use as a PC-based controller in machines with distributed I/O via PROFINET and PROFIBUS
- For utilizing IPC onboard interfaces and PC plug-in cards for PROFINET and PROFIBUS connections
- Can be used for safety functions up to SIL 3 according to IEC 61508 and up to PL e according to ISO 13849
- Supports PROFIsafe in distributed configurations
- Optimized for PC-based control tasks with the IPC627E Box PC, the IPC677E Panel PC, and the IPC647E and IPC847E Rack PCs
- Can also be used on the IPC427E, IPC627D and IPC827D Box PCs and the IPC477E and IPC677D Panel PCs (configuration with NVRAM required)
- Execution of functions and algorithms implemented with high-level languages under Windows (C/C++, C#, VB) and locally in the CPU 1508S F (C/C++)
- Integrated Motion Control functionalities for controlling speed-controlled and positioning axes as well as synchronous operation, support for external encoders, precise position gearing between axes, output cams/cam tracks and probes
- Integrated web server for diagnostics with the option of creating user-defined web pages
- OPC UA server (data access) and client as runtime option for easy connection of the software controller to Windows applications or non-Siemens devices/systems

Ordering data

	Article No.
SIMATIC S7-1500 Software Controller CPU 1508S F For implementing the function of a fail-safe S7-1500 Controller on SIMATIC IPCs (IPC configuration with NVRAM required) **Target system:** Optimized for PC-based control tasks with IPC677E Panel PC, IPC627E Box PC, IPC647E Rack PC, IPC847E Rack PC; Can also be used with IPC477E Panel PC, IPC677D Panel PC, IPC427E Box PC, IPC627D Box PC, IPC827D Box PC; **Requirement:** Windows 7 / Windows Embedded Standard 7 / Windows 10 (64-bit); for supported Windows 10 versions, see technical specifications. On IPC477E, IPC677D, IPC427E, IPC627D and IPC827D, configurations with NVRAM are required **Type of delivery:** English, German, Chinese, Italian, French, Spanish	
• Single license for one installation Software and documentation on DVD, license key on USB flash drive	**6ES7672-8FC01-0YA0**
• Single license for one installation; Software download including license key [1]	**6ES7672-8FC01-0YG0**
Accessories	
SIMATIC IPC	
• SIMATIC IPC427E Microbox PC	**6AG4141-…..-….**
• SIMATIC IPC627E Box PC	**6AG4131-3….-….**
• SIMATIC IPC627D Box PC	**6AG4131-2….-….**
• SIMATIC IPC827D Box PC	**6AG4132-2….-….**
• SIMATIC IPC477E Panel PC	**6AV7241-…..-….**
• SIMATIC IPC677D Panel PC	**6AV7260-…..-….**
• SIMATIC IPC677E Panel PC	**6AV7261-…..-….**
• SIMATIC IPC647E Rack PC	**6AG4112-3….-….**
• SIMATIC IPC847E Rack PC	**6AG4114-3….-….**

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

5

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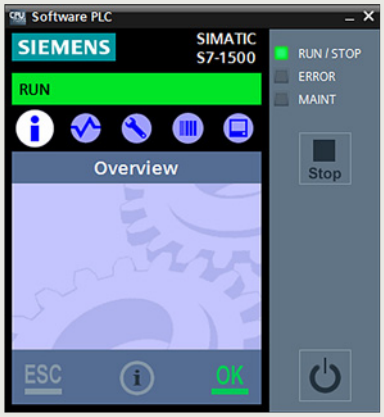
Overview



Compact and powerful

The ET 200SP Open Controller, CPU 1515SP PC (F/T/TF), is a rugged, compact control system that combines the functionality of an ET 200SP controller with a PC-based platform. It can be used to control special and series machines, or plants in a distributed configuration. As well as the standard and fail-safe variants, technology and technology fail-safe variants are also available.

The ET 200SP I/O modules can be inserted centrally and communicate via the integrated backplane bus. S7 communication can be established and distributed I/Os can be connected via the PROFINET adapter of the ET 200SP system. The PROFIBUS CM DP Module provides simple expandability for PROFIBUS communication. For additional HMI functionality, the CPU 1515SP PC (Failsafe) + HMI with pre-installed WinCC Runtime Advanced is offered.

The CPU 1515SP PC is used wherever special automation functions are to be integrated with support from SIMATIC ODK 1500S via the programming language C or C++, or if a close connection of independent applications is required in Windows for the software controller.

Characteristics	CPU 1515SP PC (F)	CPU 1515SP PC2 (F/T/TF)
DDR3 DRAM	4 GB	8 GB
CFast card	30 GB	30 GB
Operating system	WES 7E 32-bit / WES 7P 64-bit	Windows 10 Enterprise LTSB 2016
WinCC RT Advanced (optional)	Yes	Yes (not for T or TF)
Work memory for program, integrated	1 MB (1.5 MB for F)	
Work memory for data, integrated	5 MB	
Load memory	320 MB	
Command execution times		
• Bit operations	10 ns	
• Word operations	12 ns	
• Fixed-point operations	16 ns	
• Floating-point operations	64 ns	
Bit memories, timers, counters		
S7 counters/timers	2 048	
IEC counters	Any number (limited only by work memory)	
IEC timers	Any number (limited only by work memory)	
Bit memories	16 KB	
I/O address range		
Inputs	32 KB (all inputs stored in process image)	
Outputs	32 KB (all inputs stored in process image)	
Motion		
Motion Control resources	2 400	
Communication		
PtP	Yes (via CM)	
PROFINET IO	1 x PN IO IRT (BusAdapter not included in scope of delivery)	
PROFIBUS DP	Yes (via CM DP)	
Web server	Yes	
GB-Ethernet	Yes, 1 x via GB-Ethernet RJ45 interface	

More information and downloads

Manuals

The manuals for the ET 200SP Open Controller can be downloaded online for free from SIMATIC Customer Support.

https://support.industry.siemens.com/cs/ww/en/ps/13891/man

General information

http://www.siemens.com/open-controller

SIMATIC Selection Tool

http://www.siemens.com/tia-selection-tool

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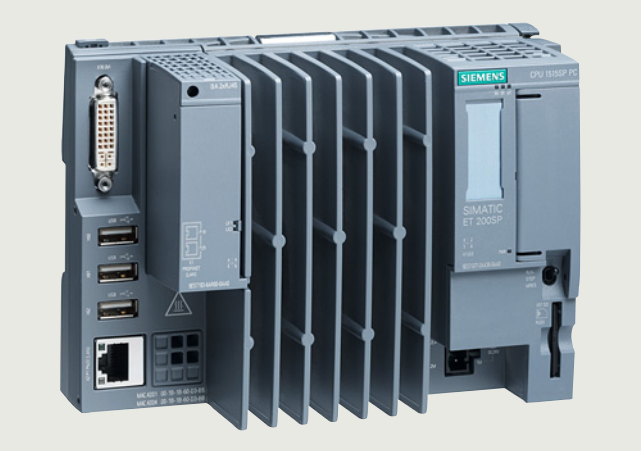
Overview



- Turnkey all-in-one solution with pre-installed SIMATIC S7-1500 Software Controller Standard and optional pre-installed WinCC Runtime Advanced
- Central expansion via ET 200SP Modules (station width up to 1 m or up to 64 modules)
- SIMATIC Hypervisor:
  for separating Windows systems from control functions
- Dual-core processor for optimal use of the Hypervisor
- Swappable flash memory (CFast card) for operating system, runtime and project data
- Integrated DVI-I graphics connection; 3x USB 2.0 connection
- 2 PROFINET interfaces: X1 via PN-IO BusAdapter (RJ45 or FC) with 2 ports; X2: GB Ethernet interface (RJ45)
- PROFINET IRT
- Open Ethernet communication (TCP/IP, UDP, ISO-on-TCP)
- Web server functionality for information, status, diagnostics and user-defined web pages
- PROFIBUS DP communication optionally via CM DP Module as DP master
- Configuration control (option handling)
- Improved know-how and copy protection; Security Integrated
- Integrated system diagnostics
- Integrated Motion Control functionalities for controlling speed-controlled and positioning axes with support for external encoders
- Trace function
- Especially suitable for high data volumes and user-specific, open applications
- Integration of control functions and applications implemented in C/C++ (using SIMATIC ODK-1500S Open Development Kit)

Ordering data

	Article No.
SIMATIC ET 200SP Open Controller CPU 1515SP PC (+ HMI)	
ET 200SP CPU with Windows Embedded Standard 7 and pre-installed SIMATIC S7-1500 Software Controller (with WinCC RT Advanced as option);	
Type of delivery: German, English, Chinese, Italian, French, Spanish	
Windows Embedded Standard 7 E 32-bit, 8 GB CFast card	
• CPU 1515SP PC (4 GB RAM)	**6ES7677-2AA31-0EB0**
Windows Embedded Standard 7 P 64-bit (multi-touch), 16 GB CFast card	
• CPU 1515SP PC (4 GB RAM)	**6ES7677-2AA41-0FB0**
• CPU 1515SP PC + HMI 128PT (4 GB RAM)	**6ES7677-2AA41-0FK0**
• CPU 1515SP PC + HMI 512PT (4 GB RAM)	**6ES7677-2AA41-0FL0**
• CPU 1515SP PC + HMI 2048PT (4 GB RAM)	**6ES7677-2AA41-0FM0**

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

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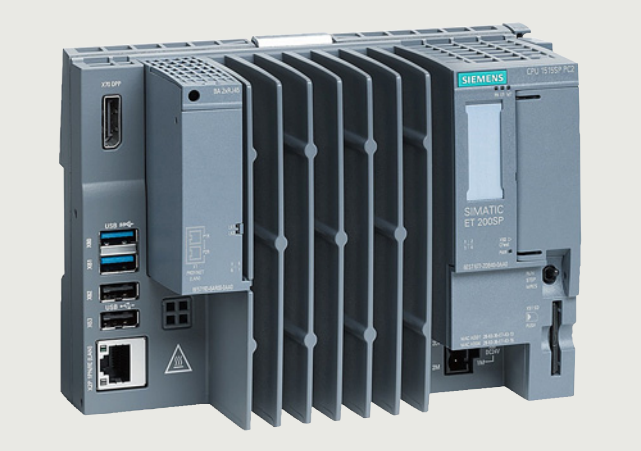
Overview



ET 200SP Open Controller, CPU 1515SP PC2, combines robustness and compact dimensions with the flexibility of centralized or decentralized communication in the highest industrial functionality. Furthermore, the CPU offers the entire value added of the ET 200SP system, the S7-1500 Controller family and the TIA world together.

- Rugged, compact control system
- Combines the functions of an ET 200SP controller with those of a PC-based platform
- Turnkey all-in-one controller
- High performance automation tasks with the use of new generation Intel Quad Core processors
- Connects high-level language applications and processes high data volumes with support from SIMATIC ODK 1500S

Ordering data

	Article No.
SIMATIC ET 200SP Open Controller CPU 1515SP PC2 (+ HMI)	
ET 200SP central module with Windows 10 IoT Enterprise 64-bit and pre-installed SIMATIC S7-1500 Software Controller (optionally with WinCC RT Advanced); 8 GB RAM, 128 GB CFast card	
Type of delivery: German, English, Chinese, Italian, French, Spanish	
• **CPU 1515SP PC2**	**6ES7677-2DB42-0GB0**
With pre-installed WinCC RT Advanced	
• **CPU 1515SP PC2 + HMI 128PT**	**6ES7677-2DB42-0GK0**
• **CPU 1515SP PC2 + HMI 512PT**	**6ES7677-2DB42-0GL0**
• **CPU 1515SP PC2 + HMI 2048PT**	**6ES7677-2DB42-0GM0**
• Floating license; software and documentation on DVD; license key on USB flash drive	**6AV2102-0AA07-0AA5**
• Floating license; software, documentation and license key for download [1]: Email address required for delivery	**6AV2102-0AA07-0AH5**

[1] For up-to-date information and download availability, see: https://www.siemens.com/tia-online-software-delivery

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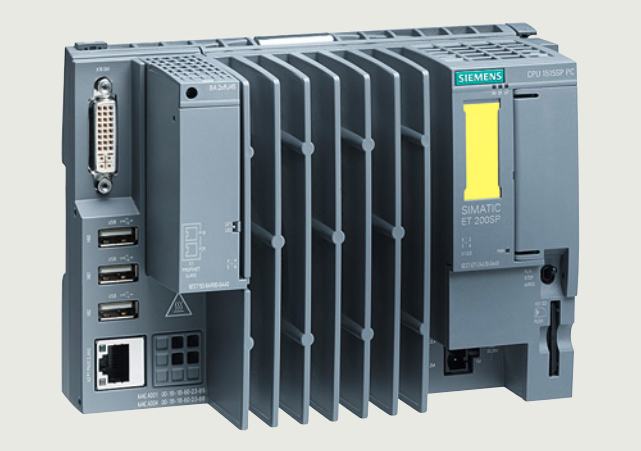
Overview



- Turnkey all-in-one solution with pre-installed fail-safe SIMATIC S7-1500 Software Controller and optional pre-installed WinCC Runtime Advanced
- Fail-safe versions make it possible to control machines or plants in a fail-safe environment. This makes it possible to address applications which require an SIL3 (Safety Integrity Level) safety class according to IEC 61508 2nd Edition or a PL e (Performance Level) according to ISO 13849.
- Central expansion via ET 200SP modules (station width up to 1 m or up to 64 modules)
- SIMATIC Hypervisor:
  for separating Windows systems from control functions
- Dual-core processor for optimal use of the Hypervisor
- Swappable flash memory (CFast card) for operating system, runtime and project data
- Integrated DVI-I graphics connection; 3x USB 2.0 connection
- 2 PROFINET interfaces: X1 via PN-IO bus adapter (RJ45 or FC) with 2 ports; X2: GB Ethernet interface (RJ45)
- PROFINET IRT
- Open Ethernet communication (TCP/IP, UDP, ISO-on-TCP)
- Web server functionality for information, status, diagnostics and user-defined web pages
- PROFIBUS DP communication optionally via CM DP module as DP master
- Configuration control (option handling)
- Improved know-how and copy protection; Security Integrated
- Integrated system diagnostics
- Integrated motion control functionalities for controlling speed-controlled and positioning axes with support for external encoders
- Trace function
- Especially suitable for high data volumes and user-specific, open applications
- Integration of control functions and applications implemented in C/C++ (using SIMATIC ODK-1500S Open Development Kit)

Ordering data

	Article No.
SIMATIC ET 200SP Open Controller CPU 1515SP PC F (+ HMI)	
Fail-safe ET 200SP CPU with Windows Embedded Standard 7 and pre-installed fail-safe SIMATIC S7-1500 Software Controller (with WinCC RT Advanced option)	
Type of delivery: German, English, Chinese, Italian, French, Spanish	
Windows Embedded Standard 7 E 32-bit, 8 GB CFast card	
• CPU 1515SP PC F (4 GB RAM)	**6ES7677-2FA31-0EB0**
Windows Embedded Standard 7 P 64-bit (multi-touch), 16 GB CFast card	
• CPU 1515SP PC F (4 GB RAM)	**6ES7677-2FA41-0FB0**
• CPU 1515SP PC F + HMI 128PT (4 GB RAM)	**6ES7677-2FA41-0FK0**
• CPU 1515SP PC F + HMI 512PT (4 GB RAM)	**6ES7677-2FA41-0FL0**
• CPU 1515SP PC F + HMI 2048PT (4 GB RAM)	**6ES7677-2FA41-0FM0**

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

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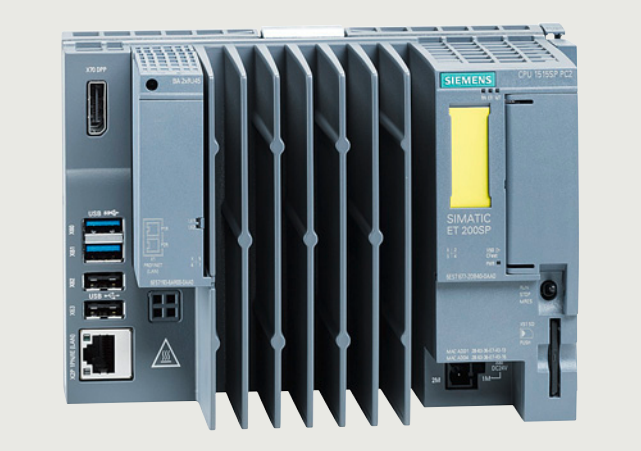
Overview



ET 200SP Open Controller, CPU 1515SP PC2 F, combines robustness and compact dimensions with the flexibility of centralized or decentralized communication in the highest industrial functionality. Furthermore, the CPU offers the entire value added of the ET 200SP system, the S7-1500 Controller family and the TIA world together.

- Rugged, compact control system
- Combines the functions of an ET 200SP controller with those of a PC-based platform
- Turnkey all-in-one controller
- Can be used up to safety class SIL3 (Safety Integrity Level) according to IEC 61508 2nd Edition or PL e (Performance Level) according to ISO 13849
- High performance automation tasks with the use of new generation Intel Quad Core processors
- Connects high-level language applications and processes high data volumes with support from SIMATIC ODK 1500S

Ordering data

	Article No.
SIMATIC ET 200SP Open Controller CPU 1515SP PC2 F (+ HMI)	
Fail-safe ET 200SP CPU with Windows 10 IoT Enterprise 64-bit and pre-installed SIMATIC S7-1500 Failsafe Software Controller (optionally with WinCC RT Advanced); 8 GB RAM, 128 GB CFast card;	
Type of delivery: German, English, Chinese, Italian, French, Spanish	
• CPU 1515SP PC2 F	**6ES7677-2SB42-0GB0**
With pre-installed WinCC RT Advanced	
• CPU 1515SP PC2 F + HMI 128PT	**6ES7677-2SB42-0GK0**
• CPU 1515SP PC2 F + HMI 512PT	**6ES7677-2SB42-0GL0**
• CPU 1515SP PC2 F + HMI 2048PT	**6ES7677-2SB42-0GM0**

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

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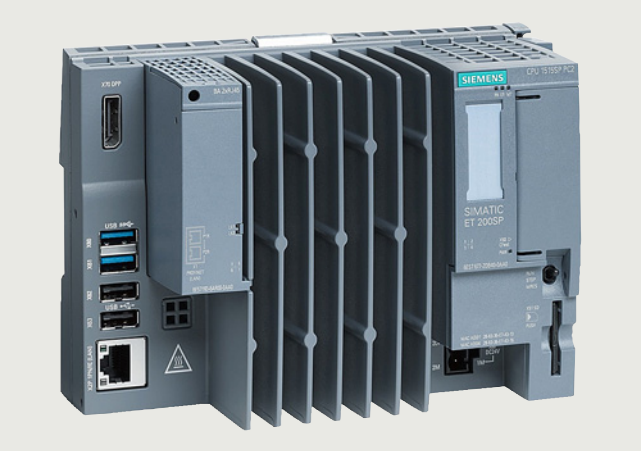
Overview



ET 200SP Open Controller CPU 1515SP PC2 T combines robustness and compact dimensions with the flexibility of centralized or decentralized communication in the highest industrial functionality. Furthermore, the CPU offers the entire value added of the ET 200SP system, the S7-1500 controller family and the TIA world together.

- Rugged, compact control system
- Combines the functions of an ET 200SP controller with those of a PC-based platform
- Turnkey all-in-one controller
- High performance automation tasks with the use of new generation Intel Quad Core processors
- Connects high-level language applications and processes high data volumes with support from SIMATIC ODK 1500S

Ordering data

	Article No.
SIMATIC ET 200SP Open Controller CPU 1515SP PC2 T	
ET 200SP central module with Windows 10 IoT Enterprise 64-bit and pre-installed SIMATIC S7-1500 Software Controller (with WinCC RT Advanced option); 8 GB RAM, 128 GB CFast card; with extended Motion Control functionality	
Type of delivery: German, English, Chinese, Italian, French, Spanish	
• CPU 1515SP PC2 T	**6ES7677-2VB42-0GB0**
With pre-installed WinCC RT Advanced	
• CPU 1515SP PC2 T + HMI 128PT	**6ES7677-2VB42-0GK0**
• CPU 1515SP PC2 T + HMI 512PT	**6ES7677-2VB42-0GL0**
• CPU 1515SP PC2 T + HMI 2048PT	**6ES7677-2VB42-0GM0**

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

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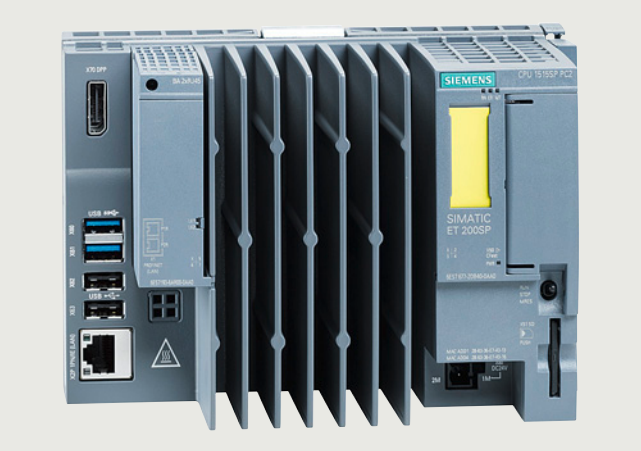
Overview



ET 200SP Open Controller, CPU 1515SP PC2 TF, combines robustness and compact dimensions with the flexibility of centralized or decentralized communication in the highest industrial functionality. Furthermore, the CPU offers the entire value added of the ET 200SP system, the S7-1500 Controller family and the TIA world together.

- Rugged, compact control system
- Combines the functions of an ET 200SP controller with those of a PC-based platform
- Turnkey all-in-one controller
- Can be used up to safety class SIL3 (Safety Integrity Level) according to IEC 61508 2nd Edition or PL e (Performance Level) according to ISO 13849
- High performance automation tasks with the use of new generation Intel Quad Core processors
- Connects high-level language applications and processes high data volumes with support from SIMATIC ODK 1500S

Ordering data

	Article No.
SIMATIC ET 200SP Open Controller CPU 1515SP PC2 TF	
Fail-safe ET 200SP central module with Windows 10 IoT Enterprise 64-bit and pre-installed fail-safe SIMATIC S7-1500 Software Controller (with WinCC RT Advanced option); 8 GB RAM, 128 GB CFast card; with extended Motion Control functionality	
Type of delivery: German, English, Chinese, Italian, French, Spanish	
• **CPU 1515SP PC2 TF**	**6ES7677-2WB42-0GB0**
With pre-installed WinCC RT Advanced	
• **CPU 1515SP PC2 TF + HMI 128PT**	**6ES7677-2WB42-0GK0**
• **CPU 1515SP PC2 TF + HMI 512PT**	**6ES7677-2WB42-0GL0**
• **CPU 1515SP PC2 TF + HMI 2048PT**	**6ES7677-2WB42-0GM0**

[1] For up-to-date information and download availability, see: http://www.siemens.com/tia-online-software-delivery

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Overview

Compact and powerful

SIPLUS ET 200SP Open Controller, SIPLUS CPU 1515SP PC (F) is a rugged, compact control system that combines the functionality of a SIPLUS ET 200SP controller with a PC-based platform. It can be used to control special-purpose and series machines, or plants in a distributed configuration.

The SIPLUS ET 200SP I/O modules can be inserted centrally and communicate via the integrated backplane bus.
S7 communication can be established and distributed I/Os can be connected via the PROFINET adapter of the SIPLUS ET 200SP system.
The PROFIBUS CM DP module provides simple expandability for PROFIBUS communication.

The SIPLUS CPU 1515SP PC is used wherever special automation functions are to be integrated with support from SIMATIC ODK 1500S via the programming language C or C++, or if a close connection of independent applications is required in Windows for the software controller.

Characteristics	SIPLUS CPU 1515SP PC (F)	SIPLUS CPU 1515SP PC2 (F)
DDR3 DRAM	4 GB	8 GB
CFast card	30 GB	30 GB
Operating system	WES 7E 32-bit / WES 7P 64-bit	Windows 10 Enterprise LTSB 2016
Work memory for program, integrated	1 MB (1.5 MB for F)	
Work memory for data, integrated	5 MB	
Load memory	320 MB	
Command runtimes		
Bit operations	10 ns	
Word operations	12 ns	
Fixed-point operations	16 ns	
Floating-point operations	64 ns	
Bit memories, timers, counters		
S7 counters/timers	2048	
IEC counter	Arbitrary (only limited by the work memory)	
IEC timer	Arbitrary (only limited by the work memory)	
Bit memories	16 KB	
I/O address range		
Inputs	32 KB (all inputs are stored in the process image)	
Outputs	32 KB (all inputs are stored in the process image)	
Motion		
Motion Control resources	2400	
Communication		
PtP	Yes (via CM)	
PROFINET IO	1 x PN IO IRT (BusAdapter not included in scope of delivery)	
PROFIBUS DP	Yes (via CM DP)	
Web server	Yes	
GB Ethernet	Yes, 1 x via GB Ethernet RJ45 interface	

Note

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were adopted from the respective standard products. SIPLUS extreme-specific information was added.

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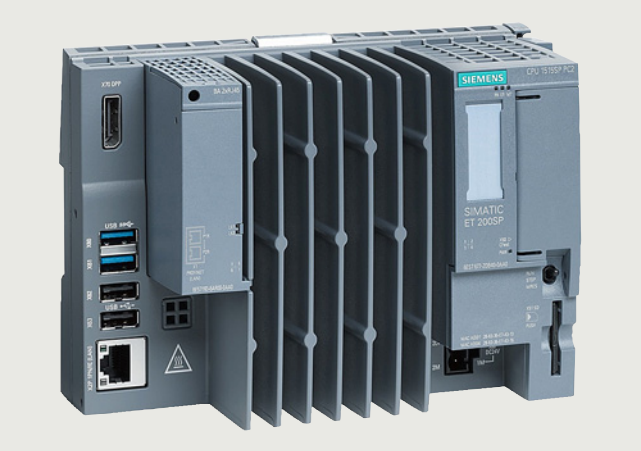
SIPLUS CPU 1515SP PC2

Overview



SIPLUS ET 200SP Open Controller, SIPLUS CPU 1515SP PC2, combines robustness and compact dimensions with the flexibility of centralized or decentralized communication in the highest industrial functionality. Furthermore, the CPU offers the entire value added of the SIPLUS ET 200SP system, the SIPLUS S7-1500 controller family and the TIA world together.

- Rugged, compact control system
- Combines the functions of a SIPLUS ET 200SP controller with those of a PC-based platform
- Turnkey all-in-one controller
- High performance automation tasks with the use of new generation Intel Quad Core processors
- Connects high-level language applications and processes high data volumes with support from SIMATIC ODK 1500S

Note

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were adopted from the respective standard products. SIPLUS extreme-specific information was added.

Ordering data

	Article No.
SIPLUS ET 200SP Open Controller CPU 1515SP PC2	
SIPLUS ET 200SP CPU with Windows 10 IoT Enterprise 64-bit and pre-installed SIMATIC S7-1500 Software Controller; 8 GB RAM, 30 GB CFast card	
Type of delivery: English, German, Chinese, Italian, French, Spanish	
• **SIPLUS ET 200SP CPU 1515SP PC2**	**6AG1677-2DB42-2GB0**
For areas with exceptional exposure to environmental substances (conformal coating); ambient temperature -40 ... +60 °C	
• **SIPLUS ET 200SP CPU 1515SP PC2 Spare**	**6AG1677-2DB40-2AA0**
Spare part, without CFast card	
• **SIPLUS ET 200SP CPU 1515SP PC2 L**	**6AG1677-2DB40-2GB0**
8 GB RAM, 128 GB CFast card, Ready4Linux,	
For areas with exceptional exposure to environmental substances (conformal coating); ambient temperature -40 ... +60 °C	

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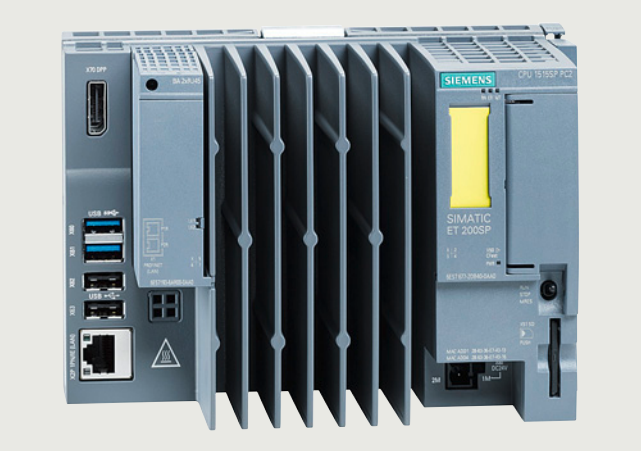
Overview



SIPLUS ET 200SP Open Controller, SIPLUS CPU 1515SP PC2 F, combines robustness and compact dimensions with the flexibility of centralized or decentralized communication in the highest industrial functionality. Furthermore, the CPU offers the entire value added of the SIPLUS ET 200SP system, the SIPLUS S7-1500 controller family and the TIA world together.

- Rugged, compact control system
- Combines the functions of a SIPLUS ET 200SP controller with those of a PC-based platform
- Turnkey all-in-one controller
- Can be used up to safety class SIL3 (Safety Integrity Level) according to IEC 61508 2nd Edition or PL e (Performance Level) according to ISO 13849
- High performance automation tasks with the use of new generation Intel Quad Core processors
- Connects high-level language applications and processes high data volumes with support from SIMATIC ODK 1500S

Note

SIPLUS extreme products are based on SIMATIC standard products. The contents listed here were taken from the respective standard products. SIPLUS extreme-specific information was added.

Ordering data

	Article No.
SIPLUS ET 200SP Open Controller CPU 1515SP PC2 F (Extended temperature range and exposure to environmental substances) Fail-safe ET 200SP CPU with Windows 10 IoT Enterprise 64-bit and pre-installed SIMATIC S7-1500 Failsafe Software Controller (with WinCC RT Advanced option); 8 GB RAM, 30 GB CFast card; **Type of delivery:** English, German, Chinese, Italian, French, Spanish	
• **SIPLUS CPU 1515SP PC2 F**	**6AG1677-2SB42-2GB0**

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SITOP PSU6200

Overview

SITOP PSU6200 family

High performance – Focused diagnostics – The all-round power supply for a wide variety of applications

The SITOP PSU6200 product family is the new standard power supply for customers with high technical requirements regarding reliability, efficiency and integration. It is suitable for many fields of application, particularly in the industrial environment, such as series machine building. The SITOP PSU6200 represents the state-of-the-art and takes the SITOP product portfolio into new dimensions of efficiency.

The slim and excellent design of the PSU6200 family combined with the push-in terminals means easy installation and wiring. The power supply units in this product family are all-rounders featuring a long service life and absolute reliability.

The high efficiency of up to 96% guarantees resource-saving energy consumption.

To further increase the 24 V availability, the SITOP PSU6200 power supplies can be combined with **buffer**, **DC UPS**, **redundancy** and **selectivity modules**.

Product highlights of the product line

- Diagnostics monitor[1)]
  - LED display for DC OK, utilization (<30%, >30%, >60%, >90%) and remaining life time
- Diagnostics interface[1)]
  - Provision of important operating parameters (e.g. output current/voltage, overload, temperature status, undervoltage and overvoltage detection at output, operating hours, device settings, etc.)
- Switchable output characteristic[1)]
  - Constant current: Power supply not switched off immediately in the event of overload
  - Parallel operation: Uniform load sharing between power supply units connected in parallel for longer service life in every scenario
- Rugged input
  - Active PFC (Power Factor Correction)[1)] for lower reactive and inrush current and protection against mains pulses
  - Optimized protection of the input circuit
  - Wide-range input
  - DC capability of 1-phase devices
  - Continuous operation possible on 2 phases of 3-phase devices
- Coordinated product family
  - For 12 V, 24 V and 48 V applications of varying power requirements
  - 24 V versions for NEC Class 2 and Ex protection applications
- Narrow overall width
  - For direct side-by-side mounting without lateral clearance requirements
  - Visually attractive design (IF Design Award 2019)
- Push-in connection system
  - Easy, time-saving installation without need for tools
  - Additional minus terminal[1)] (grounding) for wiring according to PELV (Protected Extra Low Voltage)
- High overload capability[2)]
  - Power reserves in case of overload 150% extra power for 5 s/min
  - Continuous 120% rated current up to 45 °C ambient temperature

[1)] from 24 V/10 A and 12 V/12 A

[2)] from 24 V/5 A and 12 V/7 A

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Overview

SITOP PSU6200 family 24 V, the power supplies starting at 10 A have extensive diagnostic options - see video.

Stabilized single-phase power supplies with wide-range input in six power levels with versions for NEC Class 2 requirements and explosion protection.

Product highlights

- Single-phase, 24 V DC/1.3 A, 2.5 A, 3.7 A, 5 A, 10 A and 20 A
- 1.3 A, 2.5 A and 3.7 A with 100 VA power limitation acc. to NEC Class 2
- PSU6200 24 V/5 A, 10 A and 20 A: The coating of the electronic modules also provides special protection from harmful environmental influences such as corrosive gases and salts, dust and abrasion particles, and humidity
- Enclosure
  - Attractive metal enclosure from 3.7 A, plastic enclosure with similar form and color up to 2.5 A
- Can be expanded with SITOP add-on and DC UPS modules
  - BUF1200 buffer module, SEL1200/1400 selectivity modules and RED1200 redundancy modules in the design of the SITOP PSU6200

Ordering data

	Article No.
SITOP PSU6200 1-phase, 24 V DC/1.3 A Stabilized power supply Input: 120-230 V AC/ 120-240 V DC Output: 24 V DC/1.3 A	**6EP3331-7SB00-0AX0**
SITOP PSU6200 1-phase, 24 V DC/2.5 A Stabilized power supply Input: 120-230 V AC/ 120-240 V DC Output: 24 V DC/2.5 A	**6EP3332-7SB00-0AX0**
SITOP PSU6200 1-phase, 24 V DC/3.7 A Stabilized power supply Input: 120-230 V AC/ 120-240 V DC Output: 24 V DC/3.7 A	**6EP3333-7LB00-0AX0**
SITOP PSU6200 1-phase, 24 V DC/5 A Stabilized power supply Input: 120-230 V AC/ 120-240 V DC Output: 24 V DC/5 A	**6EP3333-7SB00-0AX0**
SITOP PSU6200 1-phase, 24 V DC/10 A Stabilized power supply Input: 120-230 V AC/ 120-240 V DC Output: 24 V DC/10 A	**6EP3334-7SB00-3AX0**
SITOP PSU6200 1-phase, 24 V DC/20 A Stabilized power supply Input: 120-230 V AC/ 120-240 V DC Output: 24 V DC/20 A	**6EP3336-7SB00-3AX0**
SITOP PSU6200 Ex 1-phase, 24 V DC/5 A Stabilized power supply Input: 120-230 V AC/ 120-240 V DC Output: 24 V DC/5 A	**6EP3333-7SC00-0AX0**
SITOP PSU6200 Ex 1-phase, 24 V DC/10 A Stabilized power supply Input: 120-230 V AC/ 120-240 V DC Output: 24 V DC/10 A	**6EP3334-7SC00-3AX0**
SITOP PSU6200 Ex 1-phase, 24 V DC/20 A Stabilized power supply Input: 120-230 V AC/ 120-240 V DC Output: 24 V DC/20 A	**6EP3336-7SC00-3AX0**

[1] For more information, visit: https://www.siemens.com/sitop-ups/mall

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3-phase, 24 V DC

Overview

SITOP PSU6200 3-phase, 24 V family

Stabilized 3-phase power supplies with 400 to 500 V AC input in three power levels.

Product highlights

- 3-phase, 24 V DC/5 A, 10 A, 20 A and 40 A
- Rugged input
  - Input voltage 323 … 576 V AC, 450 … 600 V DC
  - In the event of a phase failure, continuous operation with only 2 phases possible
- Enclosure
  - Attractive metal enclosure
- Can be expanded with SITOP add-on and DC UPS modules
  - BUF1200 buffer module, SEL1200/1400 selectivity modules and RED1200 redundancy modules in the design of the SITOP PSU6200

Ordering data

	Article No.
SITOP PSU6200 3-phase, 24 V DC/5 A Stabilized power supply Input: 400-500 V 3 AC Output: 24 V DC/5 A	**6EP3433-7SB00-0AX0**
SITOP PSU6200 3-phase, 24 V DC/10 A Stabilized power supply Input: 400-500 V 3 AC Output: 24 V DC/10 A	**6EP3434-7SB00-3AX0**
SITOP PSU6200 3-phase, 24 V DC/20 A Stabilized power supply Input: 400-500 V 3 AC Output: 24 V DC/20 A	**6EP3436-7SB00-3AX0**
SITOP PSU6200, 3-phase 24 V DC/40 A Stabilized power supply Input: 400-500 V 3 AC Output: 24 V DC/40 A	**6EP3437-7SB00-3AX0**

[1] For more information, visit: https://www.siemens.com/sitop-ups/mall

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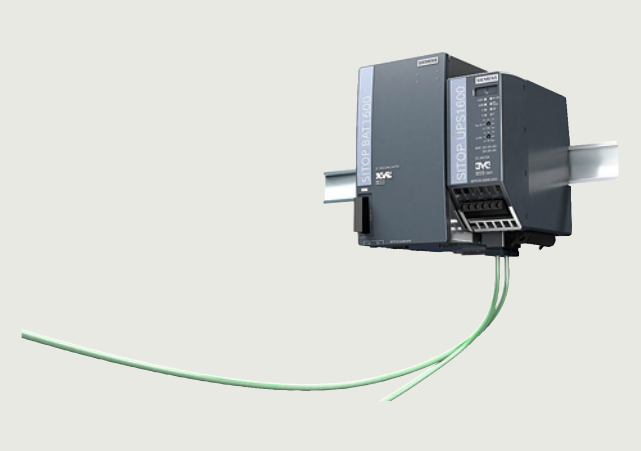
Overview



SITOP offers a comprehensive portfolio to protect against power failures with durations from a few seconds to several hours, ranging from buffer modules to system-integrated DC UPS units. Selection is based on the energy storage unit used, the associated ambient conditions, performance and functionality.

The selection matrix should help you to find the right 24 V buffering for your application:

SITOP modules for 24 V buffering	**Buffer module** [1) 2)]	**DC UPS with capacitors**	**DC UPS with rechargeable battery**		
			SITOP UPS1600 + SITOP BAT1600 battery modules	**SITOP UPS1600 + SITOP UPS1100 battery modules**	**SITOP DC UPS + battery module**
Energy storage units					
24 V buffering up to	10 s	Minutes	Hours	Hours	Hours
Storage medium	Electrolytic capacitors	Double-layer capacitors	Lead gel batteries (Pb), lithium iron phosphate (LiFePO4) batteries	Lead gel batteries (Pb), pure lead batteries (pure Pb), lithium iron phosphate (LiFePO4) batteries	Lead gel batteries, pure lead batteries (Pure Pb)
Battery service life dependent on temperature. Specified time indicates the drop of the original capacity to 80% for lead-acid batteries.	0 … +50 °C: > 8 years	0 … +50 °C: > 8 years	Pb: +20 … +40 °C: 4 ... 1 years (LiFePO4: +20 … +40 °C: 11 ... 8 years)	Pb: +20 …+40 °C: 4 ... 1 years (Pure Pb: +20 … +60 °C: > 10 ... 1 years) (LiFePO4: +20 … +40 °C: 15 ... 9 years)	+20 … +40 °C: 4 ... 1 years (Pure Pb: +20 … +60 °C: > 10 ... 1 years)
Operating temperature range of battery	0 … +60 °C	0 … +60 °C	Pb: -15 ... +50 °C LiFePO4: -10 ... +50 °C	Pb: -15 ... +50 °C Pure Pb: -40 … +60 °C	Pb: -15 ... +50 °C Pure Pb: -40 … +60 °C
Capacity selection	12 to 96 Ws	2.5 to 20 kWs	Pb: 3.2 to 228 Ah LiFePO4: 2.5 to 45 Ah	Pb: 1.2 to 72 Ah Pure Pb: 2.5 to 15 Ah LiFePO4: 5 to 30 Ah	Pb: 1.2 to 72 Ah Pure Pb: 2.5 to 15 Ah
Energy storage management	Passive	Load current limiting, buffer readiness	Temperature-controlled charging, state of health modeling, buffer readiness	Temperature-controlled charging, buffer readiness	Load current limiting, buffer readiness
Ventilation required	-	-	- LiFePO4 • Pb, pure Pb	- LiFePO4 • Pb, pure Pb	• Pb, pure Pb

1) For SITOP smart and SITOP modular power supplies

2) Technical specifications can be found under "Add-on modules/Buffer module" https://www.siemens.com/sitop-buffering/mall

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SITOP DC UPS uninterruptible power supplies

Overview

SITOP modules for 24 V buffering	Buffer module [1) 2)]	DC UPS with capacitors	DC UPS with rechargeable battery		
			SITOP UPS1600 + SITOP BAT1600 battery modules	SITOP UPS1600 + SITOP UPS1100 battery modules	SITOP DC UPS + battery module
UPS module/electronics					
Max. rated output current	40 A	15 A	40 A	40 A	40 A
Max. dynamic overload current	40 A (200 ms)	25 A (200 ms)	120 A (30 ms) / 60 A (5 s/min)	120 A (30 ms) / 60 A (5 s/min)	56 A (80 ms)
Interfaces	-	I/O, USB	I/O, USB, OPC UA Ethernet/ PROFINET	I/O, USB, OPC UA Ethernet/ PROFINET	I/O, serial, USB
Information about operation and diagnostics via					
• Signaling contact	-	•	•	•	•
• OPC servers	-	•	•	•	•
• Web server	-	-	•	•	-
• OPC UA server	-	-	•	•	-
• S7 function blocks	-	-	•	•	-
• Library for SIMATIC PCS 7	-	-	•	•	-
• WinCC faceplate	-	-	•	•	-
Shutdown of multiple PCs/PLCs	-	-	•	•	-
Starting from the battery, without supply voltage (stand-alone mode)	-	-	•	•	-
Engineering via					
• Software tool (PC)	-	•	•	•	•
• TIA Portal	-	-	•	•	-
• SIMATIC STEP 7	-	-	•	•	-
• SIMATIC PCS 7	-	-	•	•	-
Degree of protection	IP20	IP20	IP00	IP00	IP00

1) For SITOP smart and SITOP modular power supplies

2) Technical specifications can be found under "Add-on modules/Buffer module" https://www.siemens.com/sitop-buffering/mall

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Overview

SITOP 24 V power supplies can be expanded with a SITOP UPS500 uninterruptible DC power supply (DC UPS) for bridging short-term power failures in the order of minutes.

In PC-based automation solutions, the highly capacitive double-layer capacitors of the SITOP UPS500 supply enough energy to safeguard operating and application data and close software applications in a defined manner.

You can increase the buffer times using SITOP PSU501S expansion modules (up to 3).

Ordering data

	Article No.
SITOP UPS500S	
DC UPS basic device 15 A	
• With USB interface and 2.5 kWs	**6EP1933-2EC41**
• With USB interface and 5 kWs	**6EP1933-2EC51**
SITOP UPS500S Ex	
• With USB interface and 5 kWs	**6EP1933-2EC51-8AA0**
SITOP UPS501S	
Expansion module 5 kWs for UPS500S	**6EP1935-5PG01**
SITOP UPS501S Ex	
Expansion module 5 kWs for UPS500S	**6EP1935-5PG01-8AA0**

The TIA Selection Tool offers detailed selection guidance according to criteria such as the required buffer time, load current or peak current:
http://www.siemens.com/tst

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SITOP UPS1600 DC UPS modules, SITOP BAT1600 battery modules

Overview

SITOP UPS1600 DC UPS modules

By combining one SITOP UPS1600 DC UPS module with at least one BAT1600 battery module and a SITOP power supply unit, longer power failures can be bridged without any interruption whatsoever. The intelligent battery management automatically detects the BAT1600 energy storage unit, and ensures optimized temperature-specific charging and continuous monitoring. The compact DC UPS modules have overload capability, to enable the industrial PC inrush current, for example. In stand-alone mode, they support starting from the battery.

The DC UPS communicates openly over a USB or Ethernet/PROFINET. It is easily integrated into the PC or PLC environment over the two Ethernet/PROFINET ports.

Total integration in TIA provides user-friendly engineering in the TIA Portal and is supported with ready-to-use function blocks for S7 user programs and WinCC faceplates for fast visualization.

SITOP Manager also enables simple monitoring and configuration in PC systems, e.g. shutting down multiple PCs according to the master-slave principle.

The UPS1600 modules with Ethernet/PROFINET ports have an OPC UA server, with which the DC UPS can communicate with both PCs and PLCs, even from different manufacturers, thanks to the open communication standard. Parameter assignment and the diagnostics of the uninterruptible power supply is possible via the open interface.

The integrated web server supports remote monitoring of the DC UPS.

SITOP BAT1600 battery modules

The intelligent UPS1600 battery management charges the BAT1600 with the optimum temperature-controlled charging characteristics and monitors the status (operating data and diagnostic information) of the connected battery modules via the energy storage link. For longer buffer times, up to six battery modules can be connected in parallel. These can be mounted onto a DIN rail or directly to the wall.

BAT1600 family for SITOP UPS1600 DC UPS modules:

- Five batteries with different technologies and applications; 2.5 Ah & 7 Ah LiFePO, 3.2 Ah to 38 Ah lead gel batteries
- The capacity can be expanded by parallel switching of the batteries. Up to six batteries are supported
- Smart communication (Energy Storage Link - ESL) is responsible for battery management to achieve optimum performance
- Three-color status LED for easier commissioning
- State of Health (SOH) calculation for batteries
- SITOP BAT1600 2.5 Ah Li, 3.2 Ah Pb, and 7.5 Ah Li mountable on DIN rail
- SITOP BAT1600 2.5 Ah Li and 3.2 Ah Pb have the same footprint as SITOP UPS1100 1.2 Ah Pb

Ordering data

	Article No.
SITOP UPS1600	
SITOP UPS1600 24 V/ 10 A	**6EP4134-3AB00-0AY0**
• With USB interface	**6EP4134-3AB00-1AY0**
• With PROFINET/Ethernet: two RJ45 sockets (2 port switch)	**6EP4134-3AB00-2AY0**
SITOP UPS1600, 24 V/ 20 A	**6EP4136-3AB00-0AY0**
• With USB interface	**6EP4136-3AB00-1AY0**
• With PROFINET/Ethernet: two RJ45 sockets (2 port switch)	**6EP4136-3AB00-2AY0**
SITOP UPS1600 Ex 24 V/ 20 A	**6EP4136-3AC00-0AY0**
• With PROFINET/Ethernet	**6EP4136-3AC00-2AY0**
SITOP UPS1600 24 V/ 40 A	**6EP4137-3AB00-0AY0**
• With USB interface	**6EP4137-3AB00-1AY0**
• With PROFINET/Ethernet: two RJ45 sockets (2 port switch)	**6EP4137-3AB00-2AY0**
SITOP BAT1600	
2.5 Ah, LiFePO	
• Lithium battery for SITOP UPS1600 DC UPS module	**6EP4132-0JA00-0AY0**
• For air-freight suitable version with 30% loading	**6EP4132-0JA00-0AY0-ZA03**
7.5 Ah, LiFePO	
• Lithium battery for SITOP UPS1600 DC UPS module	**6EP4134-0JA00-0AY0**
• For air-freight suitable version with 30% loading	**6EP4134-0JA00-0AY0-ZA03**
Lead-acid rechargeable battery for SITOP UPS1600 DC UPS module	
SITOP BAT1600 battery module	
• 3,2 Ah, Pb	**6EP4133-0GA00-0AY0**
• 12 Ah, Pb	**6EP4135-0GE00-0AY0**
• 38 Ah, Pb	**6EP4137-0GE00-0AY0**
SITOP BAT1600 Ex battery module	
• 3,2 Ah, Pb	**6EP4133-0GD00-0AY0**
• 12 Ah, Pb	**6EP4135-0GL00-0AY0**

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Overview

Maintenance-free SITOP UPS1100 battery modules with 1.2 Ah up to 12 Ah and various types of energy storage (lead, pure lead, lithium iron phosphate = LiFePo) for SITOP UPS1600 DC UPS modules.

The intelligent UPS1600 battery management charges the UPS1100 with the optimal temperature-controlled charging characteristics and monitors the status (operating data and diagnostics information) of the connected battery modules via the energy storage link.

For longer buffer times, up to six battery modules can be connected in parallel. These can be mounted onto a DIN rail or directly on the wall.

Ordering data

	Article No.
SITOP UPS1100 battery module 1.2 Ah With maintenance-free, sealed lead-acid batteries for DC UPS module SITOP UPS1600, 10 A	**6EP4131-0GB00-0AY0**
SITOP UPS1100 battery module 3.2 Ah With maintenance-free, sealed lead-acid batteries for DC UPS module SITOP UPS1600, 10 A and 20 A	**6EP4133-0GB00-0AY0**
SITOP UPS 1100 battery module 5 Ah, LiFePo With maintenance-free, sealed lithium iron phosphate batteries for DC UPS module SITOP UPS1600, 10 A and 20 A	**6EP4133-0JB00-0AY0**
SITOP UPS1100 battery module 7 Ah With maintenance-free, sealed lead-acid batteries for DC UPS module SITOP UPS1600, 10 A, 20 A and 40 A	**6EP4134-0GB00-0AY0**
SITOP UPS1100 Ex battery module 7 Ah With maintenance-free, sealed lead-acid batteries for DC UPS module SITOP UPS1600	**6EP4134-0GL00-0AY0**
SITOP UPS1100 battery module 12 Ah With maintenance-free, sealed lead-acid batteries for DC UPS module SITOP UPS1600, 20 A and 40 A	**6EP4135-0GB00-0AY0**
SITOP UPS1100 battery module 2.5 Ah, high temperature With maintenance-free, sealed lead-acid batteries for DC UPS module SITOP UPS1600, 10 A and 20 A	**6EP4132-0GB00-0AY0**

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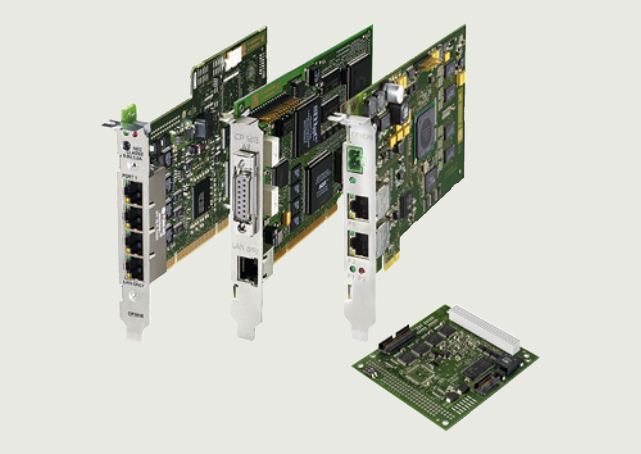
Overview

Communication processors for connecting the programming device or PC to Industrial Ethernet



CPs with an internal microprocessor

- CP 1616 (PCI)
- CP 1604 (PC/104-Plus)
- CP 1613 A2 (PCI)
- CP 1623 (PCI Express x1)
- CP 1626 (PCIe)

You can find software for the PC products under Windows on the SIMATIC NET CD for Windows operating systems including the associated manuals in PDF format and comprehensive additional information on SIMATIC NET products and communication.

The required configuration tools (e.g. STEP 7/NCM PC) are included in all software packages.

The appropriate OPC server and configuration tools are included in the scope of supply of the respective communication software.

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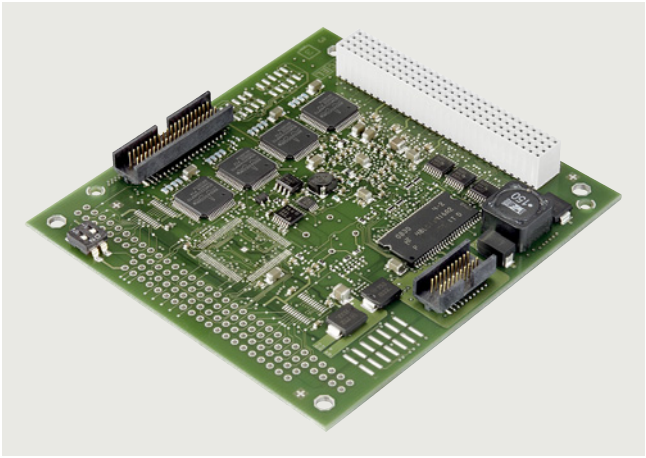
Overview



CP 1604

- PCI-104 module for connecting PCI-104 systems to PROFINET IO
- Full/half duplex with autonegotiation
- With Ethernet real-time ASIC ERTEC 400
- Integral 4-port real-time switch
- Communication services:
  - PROFINET IO controller and/or PROFINET IO device
  - Support of IRT for Motion Control applications
  - Support of PROFIenergy functionality
- High performance through direct memory access
- Integration in network management systems through the support of SNMP
- Comprehensive diagnostics possibilities for installation, commissioning and operation of the module
- Powerful configuration tools are part of the scope of delivery of the module

Ordering data

	Article No.
CP 1604 communications processor PCI-104 card (32-bit) with ASIC ERTEC 400 for connecting PCI-104 systems to PROFINET IO with 4-port real-time switch (RJ45); incl. IO-Base software for PROFINET IO Controller and NCM PC; floating license for one installation, runtime software, software and electronic manual on DVD, Class A, for 32-bit Windows XP Professional and Windows 7; other operating systems using DK-16xx PN IO Development Kit English/German	**6GK1160-4AA01**

Note:

The DK-16xx PN IO Development Kit is available on the Internet at:
https://support.industry.siemens.com/cs/ww/en/view/109794004

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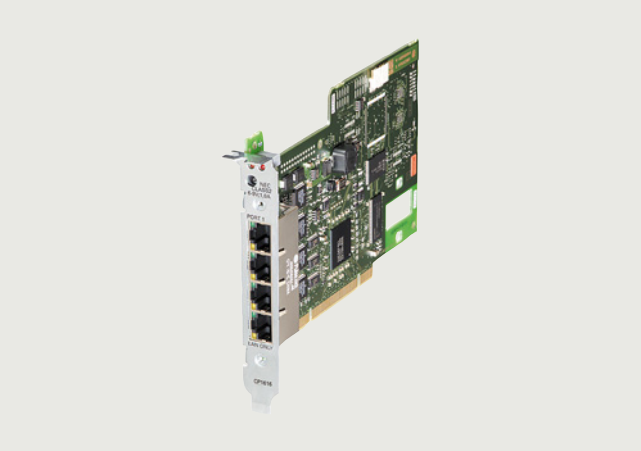
Overview



- PCI module for connecting PCs and SIMATIC PGs/PCs to PROFINET IO (universal keyed 3.3 V and 5 V; 33 MHz/66 MHz; 32-bit, runs in 64-bit PCI-X systems)
- Full/half duplex with autonegotiation
- With Ethernet real-time ASIC ERTEC 400
- Integral 4-port real-time switch
- Communication services:
  - PROFINET IO Controller and/or PROFINET IO Device
  - Support of IRT in motion control applications
- High performance through direct memory access
- Integration in network management systems through the support of SNMP
- Comprehensive diagnostics possibilities for installation, start-up and operation of the module
- Powerful configuration tools are part of the scope of delivery of the module

Ordering data

	Article No.
CP 1616 communications processor PCI card (32 bit; 3.3/5 V universal keyed) with ASIC ERTEC 400 for connecting PCs to PROFINET IO with 4-port real-time switch (RJ45); incl. IO-Base software for PROFINET IO Controller and NCM PC; floating license for one installation, runtime software, software and electronic manual on DVD, Class A, for 32-bit Windows XP Professional and Windows 7; other operating systems via Development Kit DK-16xx PN IO; English/German	**6GK1161-6AA02**

More information

The DK-16xx PN IO Development Kit is available on the Internet at:
https://support.industry.siemens.com/cs/ww/en/view/109794004

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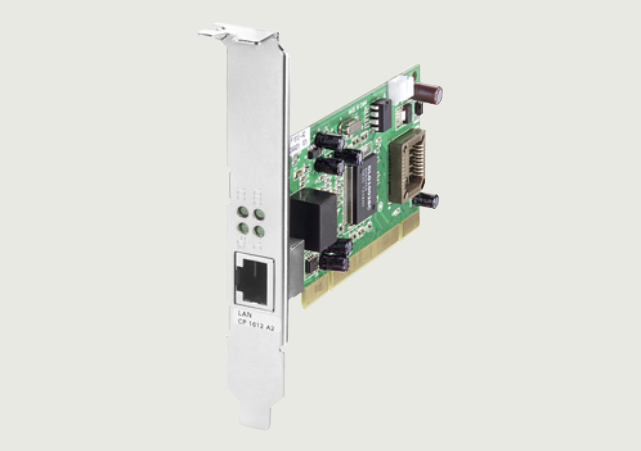
Overview



- PCI card (32 bit; 33 MHz/66 MHz; 3.3 V/5 V universal key) for the connection of PG/PC to Industrial Ethernet
- 1 x 10/100/1000 Mbps RJ45 port, electrical
- Automatic data transmission rate detection (10/100/1000 Mbps), with autosensing and autocrossover function
- Communication services via
  - PROFINET
  - ISO or TCP/IP transport protocol
  - PG/OP communication
  - S7 communication
  - Open communication (SEND/RECEIVE)
- Designed for use in industrial environments
- The appropriate OPC servers and configuration tools are included in the scope of supply of the respective communication software.

Ordering data

	Article No.
CP 1612 A2 communications processor PCI card (32 bit, 33 MHz/66 MHz; 3.3 V/5 V universal keyed) for connection to Industrial Ethernet (10/100/1 000 Mbps) with RJ45 interface, incl. driver for 32-bit Windows XP Professional SP2/3, 32/64-bit Windows 7, 2003 R2 Server SP2, Vista Business/Ultimate SP1, Windows 2008 Server; German/English	**6GK1161-2AA01**

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Overview

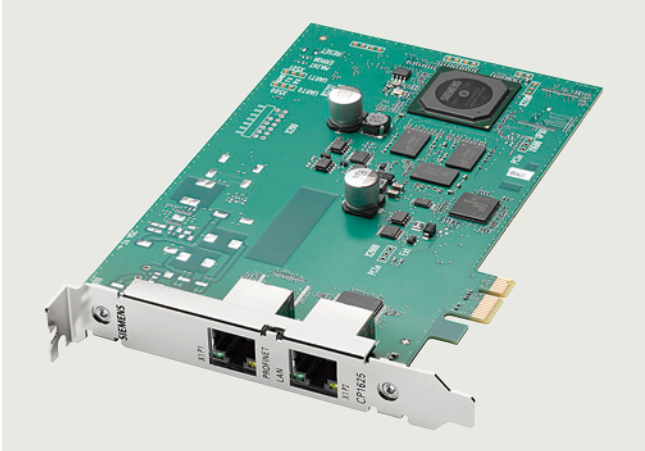
CP 1623

- PCI Express card (PCIe x1) with internal microprocessor for connection of PG/PC to Industrial Ethernet
- 10/100/1000 Mbps (autosensing/autocrossover/autonegotiation)
- Integrated 2-port switch (2 x RJ45 connection)
- Communication services via:
  - Open IE communication (TCP/IP and UDP)
  - ISO transport protocol
  - PG/OP communication
  - S7 communication
  - Open communication (SEND/RECEIVE)
- Time synchronization
- ISO and TCP/IP transport protocol on board
- Integration into network management systems through the support of SNMP (V1)
- The appropriate OPC server and configuration tools are included in the scope of supply of the respective communication software

Ordering data

	Article No.
CP 1623 communications processor PCI Express x1 card for connection to Industrial Ethernet (10/100/1 000 Mbps), with 2-port switch (RJ45) via HARDNET-IE S7 and S7-REDCONNECT. For operating system support, see SIMATIC NET Software	**6GK1162-3AA00**

Overview



CP 1625

CP 1625 is a PCIe module for connecting IPCs to Industrial Ethernet and for PROFINET IRT with CPU1500S Software Controller.

Requirement:

- TIA Portal ≥ V15
- S7-1500 Software Controller CPU 1507S (F) ≥ V2.5 is installed on the IPC

Ordering data

	Article No.
SIMATIC CP 1625 PCIe card for PROFINET IRT for CPU1500S Software Controller	**6ES7648-2CF10-1AA0**

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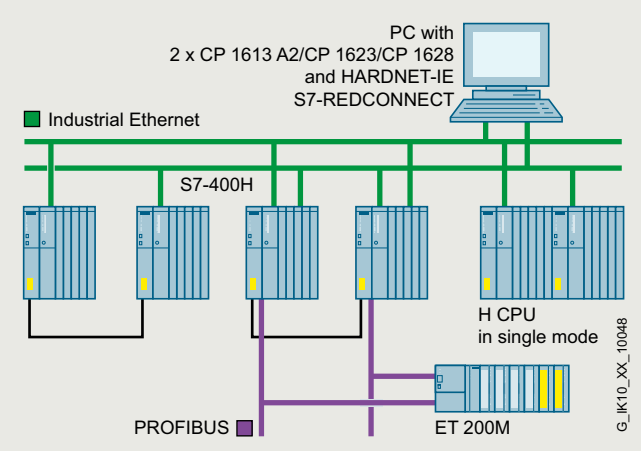
Overview

- For connecting PCs over redundant Industrial Ethernet to the SIMATIC S7-400H
- Protects against communication failures arising from a fault in the double bus or in redundant rings
- For redundant Layer 2 or Layer 3 Industrial Ethernet
- Can also be implemented in non-redundant networks
- No additional programming overhead for the PC and in H systems
- The appropriate OPC servers and configuration tools are included in the scope of supply of the respective communications software
- Enhanced redundancy over 4-way communication (STEP 7 V5.1 + SP4 and higher)



System configuration for S7-REDCONNECT

Ordering data

	Article No.
HARDNET-IE S7-REDCONNECT	
Software for fail-safe S7 communication via redundant networks, incl. S7 OPC server, HARDNET-IE S7, runtime software, software and electronic manual on DVD, license key on USB flash drive, Class A	
For 1623	
HARDNET-IE S7-REDCONNECT V17 SP1	
For 64-bit: • Windows 10 Professional/Enterprise • Windows 11 Professional/Enterprise • Windows 10 (IoT) Enterprise 2021 LTSC • Windows 10 (IoT) Enterprise 2019 LTSC • Windows 10 (IoT) Enterprise 2016 LTSB • Windows Server 2016 (Standard, Datacenter) • Windows Server 2019 (Standard, Datacenter)	
English/German; floating license for one installation	
• On DVD	**6GK1716-0HB17-0AA0**
• Download [1]	**6GK1716-0HB17-0AK0**
Software Update Service For one year with automatic extension Requirement: current software version	**6GK1716-0HB00-3AL0**
Upgrade	
• As of Edition 2006 to S7-REDCONNECT current version	**6GK1716-0HB00-3AE0**
For CP 1623	
HARDNET-IE S7-REDCONNECT Power Pack	
For expansion from HARDNET-IE S7 to HARDNET-IE S7-REDCONNECT, floating license for one installation, runtime software, software and electronic manual on DVD, license key on USB flash drive, Class A	
HARDNET-IE S7-REDCONNECT Power Pack V17 SP1	
For 64-bit: • Windows 10 Professional/Enterprise • Windows 11 Professional/Enterprise • Windows 10 (IoT) Enterprise 2021 LTSC • Windows 10 (IoT) Enterprise 2019 LTSC • Windows 10 (IoT) Enterprise 2016 LTSB • Windows Server 2016 (Standard, Datacenter) • Windows Server 2019 (Standard, Datacenter)	
English/German	
• On DVD	**6GK1716-0HB17-0AC0**
• Download [1]	**6GK1716-0HB17-0AK1**

[1] You can find more details of online software delivery here: http://www.siemens.com/tia-online-software-delivery under Ordering data.

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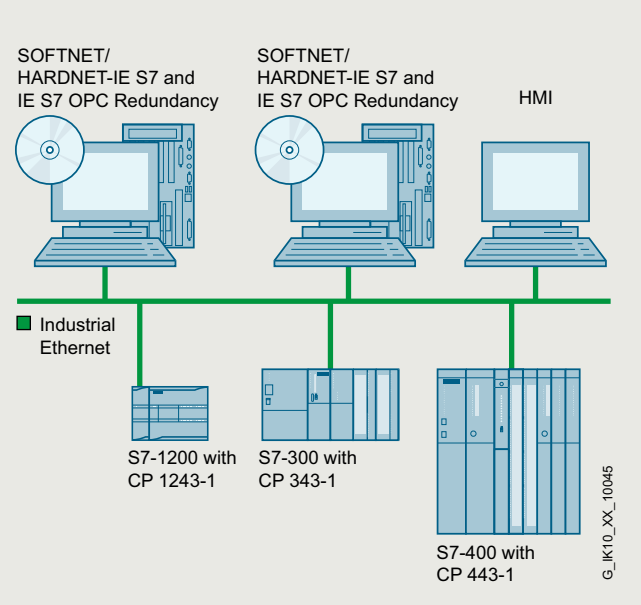
Overview



System configuration SOFTNET for Industrial Ethernet

- Software for coupling PGs/PCs/workstations to automation systems
- Communications services:
  - PG/OP communication
  - S7 communication
  - Open communication (SEND/RECEIVE)
- Can be used with
  - Layer 2 Ethernet card (PCI/PCIe), e.g. CP 1612 A2
  - Integrated Industrial Ethernet interface
  - Modem/ISDN (Remote Access Service RAS)
- Complete protocol stack as a software package
- Increased availability thanks to additional option packages such as OPC server redundancy

Ordering data

	Article No.
SOFTNET S7 for Industrial Ethernet	
Software for S7 and open communication, incl. OPC server, PG/OP communication, and NCM PC/STEP 7 Professional, runtime software, software and electronic manual on DVD, license key on USB flash drive, Class A	
SOFTNET-IE S7 V17 SP1	
For 64-bit: • Windows 10 Professional/Enterprise • Windows 11 Professional/Enterprise • Windows 10 (IoT) Enterprise 2021 LTSC • Windows 10 (IoT) Enterprise 2019 LTSC • Windows 10 (IoT) Enterprise 2016 LTSB • Windows Server 2016 (Standard, Datacenter) • Windows Server 2019 (Standard, Datacenter) English/German; up to 64 connections; floating license for one installation	
• On DVD	**6GK1704-1CW17-0AA0**
• Download [1]	**6GK1704-1CW17-0AK0**
Software Update Service For one year with automatic extension Requirement: current software version	**6GK1704-1CW00-3AL0**
Upgrade	
• As of Edition 2006 to current version	**6GK1704-1CW00-3AE0**
• From V6.0, V6.1, V6.2 or V6.3 to V13	**6GK1704-1CW00-3AE1**
SOFTNET-IE S7 REDCONNECT V17 SP1	
Software for fail-safe S7 communication via redundant networks, incl. S7 OPC server, runtime software, software and electronic manual on DVD, license key on USB flash drive, Class A	
For 64-bit: • Windows 10 Professional/Enterprise • Windows 11 Professional/Enterprise • Windows 10 (IoT) Enterprise 2021 LTSC • Windows 10 (IoT) Enterprise 2019 LTSC • Windows 10 (IoT) Enterprise 2016 LTSB • Windows Server 2016 (Standard, Datacenter) • Windows Server 2019 (Standard, Datacenter) English/German; floating license for one installation	
• On DVD	**6GK1704-0HB17-0AA0**
• Download [1]	**6GK1704-0HB17-0AK0**

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Ordering data	Article No.
SOFTNET-IE S7 Lean Edition V17 SP1	
For 64-bit: • Windows 10 Professional/Enterprise • Windows 11 Professional/Enterprise • Windows 10 (IoT) Enterprise 2021 LTSC • Windows 10 (IoT) Enterprise 2019 LTSC • Windows 10 (IoT) Enterprise 2016 LTSB • Windows Server 2016 (Standard, Datacenter) • Windows Server 2019 (Standard, Datacenter) up to eight connections; English/German; floating license for one installation	
• On DVD	**6GK1704-1LW17-0AA0**
• Download [1]	**6GK1704-1LW17-0AK0**
Software Update Service For one year with automatic extension Requirement: current software version	**6GK1704-1LW00-3AL0**
Upgrade	
• As of Edition 2006 to current version	**6GK1704-1LW00-3AE0**
• From V6.0, V6.1, V6.2 or V6.3 to V13	**6GK1704-1LW00-3AE1**

[1] You can find more details of online software delivery here: http://www.siemens.com/tia-online-software-delivery under Ordering data.

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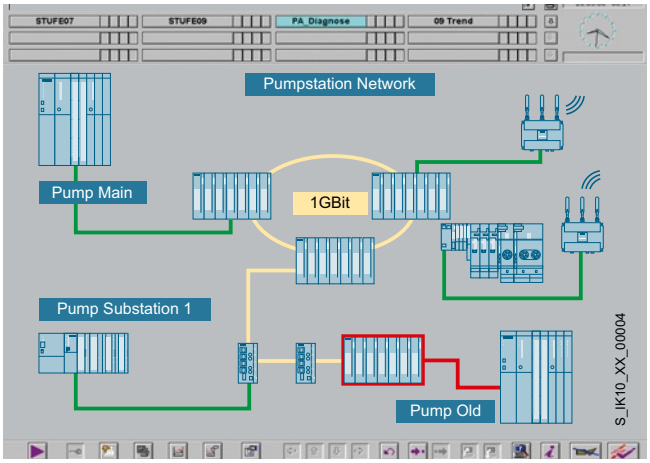
Overview



- Status monitoring of SNMP-capable devices in any OPC client systems; e.g. SIMATIC WinCC/PCS 7
- Easy access to SNMP-capable devices over the OPC interface
- Devices without SNMP agents can be monitored using the ping mechanism
- Configuration with STEP 7 (up to STEP 7 V5.7)
- Ready-to-use SNMP diagnostics profiles for Siemens devices, e.g. SCALANCE X/W
- Generation of any SNMP diagnostics profiles by means of the integral MIB compiler
- Easy setup of the monitored devices with the help of an Autodiscovery function

Ordering data

	Article No.
SNMP OPC Server	
Including MIB compiler; floating license for one installation of runtime software; software and electronic manual on DVD; license key on USB flash drive, Class A;	
SNMP OPC Server Basic	
Administration of up to 20 IP addresses	
Basic V17 SP1	**6GK1706-1NW17-0AA0**
For 64-bit: • Windows 10 Professional/Enterprise • Windows 11 Professional/Enterprise • Windows 10 (IoT) Enterprise 2021 LTSC • Windows 10 (IoT) Enterprise 2019 LTSC • Windows 10 (IoT) Enterprise 2016 LTSB • Windows Server 2016 (Standard, Datacenter) • Windows Server 2019 (Standard, Datacenter) Floating license for one installation	
Software Update Service SNMP OPC Server Basic	**6GK1706-1NW00-3AL0**
For one year with automatic extension Requirement: current software version	
Upgrade SNMP OPC Server Basic	
• As of Edition 2006 to current version	**6GK1706-1NW00-3AE0**
• From V6.0, V6.1, V6.2 or V6.3 to Edition 2008 or V13	**6GK1706-1NW00-3AE1**
SNMP OPC Server Extended	
Administration of up to 200 IP addresses	
Extended V17 SP1	**6GK1706-1NX17-0AA0**
For 64-bit: • Windows 11 Professional/Enterprise • Windows 10 (IoT) Enterprise 2021 LTSC • Windows 10 (IoT) Enterprise 2019 LTSC • Windows 10 (IoT) Enterprise 2016 LTSB • Windows Server 2016 (Standard, Datacenter) • Windows Server 2019 (Standard, Datacenter) Floating license for one installation	
Software Update Service SNMP OPC Server Extended	**6GK1706-1NX00-3AL0**
For one year with automatic extension Requirement: current software version	
Upgrade SNMP OPC Server Extended	
• As of Edition 2006 to current version	**6GK1706-1NX00-3AE0**
• From V6.0, V6.1, V6.2 or V6.3 to V13	**6GK1706-1NX00-3AE1**
SNMP OPC Server Power Pack	
For upgrade from SNMP OPC Server Basic to SNMP OPC Server Extended	
Power Pack V17 SP1	**6GK1706-1NW17-0AC0**

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Overview

The SINEC NMS software is a network management system for the central monitoring and managing of industrial networks.

SINEC NMS makes it possible to fully visualize and monitor networks with tens of thousands of nodes.

Using SNMP, SSH and HTTPS for administration and simultaneous diagnostics via SNMP, SIMATIC and PROFINET mechanisms, many aspects of plant diagnostics can be depicted in a single tool.

The SINEC NMS distributed approach enables network infrastructure expansion at any time. Captured data is stored in a long-term archive and can be evaluated and presented as required.

The network diagnostics can also be seamlessly integrated into higher-level HMI/SCADA systems (e.g. WinCC, PCS 7) via OPC UA and web mechanisms.

SINEC NMS also facilitates configuration of the network infrastructure. The policy-based approach means that configuration can take place independently of the type of devices in the network, and regular backups of the device configurations can be made in order to learn of changes to configurations.

In addition, two device configurations can be compared with one another and the differences highlighted in color. Another important advantage is the central function for a firmware update/upgrade in the network infrastructure.

Main features:

- Fault management
- Configuration management
- Accounting management
- Performance management
- Security management
- Northbound interface
- System administration

Ordering data

Ordering data	Article No.
SINEC NMS V1.0 SP1 Network management software for industrial Ethernet and PROFINET networks, runtime software, software and electronic manual on DVD (not with download), license key on USB flash drive (not with download); software for installation on PC hardware with Windows 10 Professional/Ultimate/Enterprise (64-bit), Windows Server Standard 2016 / 2019 (64-bit) English/German. Other languages possible on request.	
For 50 devices that can be identified via IP address	
• On DVD	**6GK8781-1BA01-0AA0**
• Download [1]	**6GK8781-1BA01-0AK0**
Software Update Service For 1 year, with automatic extension. Prerequisites: current software version	**6GK8781-1BA00-0AL0**
For 100 devices that can be identified via IP address	
• On DVD	**6GK8781-1DA01-0AA0**
• Download [1]	**6GK8781-1DA01-0AK0**
Software Update Service For 1 year, with automatic extension. Prerequisites: current software version	**6GK8781-1DA00-0AL0**
For 250 devices that can be identified via IP address	
• On DVD	**6GK8781-1JA01-0AA0**
• Download [1]	**6GK8781-1JA01-0AK0**
Software Update Service For 1 year, with automatic extension. Prerequisites: current software version	**6GK8781-1JA00-0AL0**
For 500 devices that can be identified via IP address	
• On DVD	**6GK8781-1TA01-0AA0**
• Download [1]	**6GK8781-1TA01-0AK0**
Software Update Service For 1 year, with automatic extension. Prerequisites: current software version	**6GK8781-1TA00-0AL0**
SINEC NMS Power Pack V1.0	
Upgrade SINEMA Server V13, V14 50 to SINEC NMS V1.0 50	
• On DVD	**6GK8781-5BA00-0AC0**
Upgrade SINEMA Server V13, V14 100 to SINEC NMS V1.0 100	
• On DVD	**6GK8781-5DA00-0AC0**
Upgrade SINEMA Server V13, V14 250 to SINEC NMS V1.0 250	
• On DVD	**6GK8781-5JA00-0AC0**
Upgrade SINEMA Server V13, V14 500 to SINEC NMS V1.0 500	
• On DVD	**6GK8781-5TA00-0AC0**

[1] For more details on online software delivery, visit: http://www.siemens.com/tia-online-software-delivery

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CP 5613 A3

Overview

- PCI card (universal keyed 5 V/3.3 V) with internal microprocessor for connection of PCs and SIMATIC PG/PC to PROFIBUS at up to 12 Mbps
- Communication services:
  - PROFIBUS DP master according to IEC 61158/61784 on one PCI card
  - PG/OP communication with STEP 7
  - S7 communication with HARDNET-PB S7 software package
  - Open communication (SEND/RECEIVE) based on the FDL interface
- Comprehensive diagnostics possibilities for installation, commissioning and operation of the module
- High performance over direct dual-port RAM access
- Event and filter mechanisms to reduce the loading on the host CPU
- Multiprotocol operation and parallel operation of up to four CPs
- Implementation in motion control applications is possible because a constant bus cycle time is supported
- The appropriate OPC servers and configuration tools are included in the scope of supply of the respective communications software

Ordering data

	Article No.
CP 5613 A3 communications processor PCI card (32-bit; 3.3/5 V; 33/66 MHz); with an interface for connecting to PROFIBUS; including Configuration Tool and DP-Base software: DP-RAM interface for DP master incl. PG and FDL protocol, single license for 1 installation, runtime software, Class A; software+manuals on DVD; 2 languages (en, de). See https://support.industry.siemens.com/cs/ww/en/view/22611503 for operating system support	**6GK1561-3AA02**

Note:

You can find the HARDNET-PB DP Development Kit on the Internet at:

http://www.siemens.com/simatic-net/dk5613

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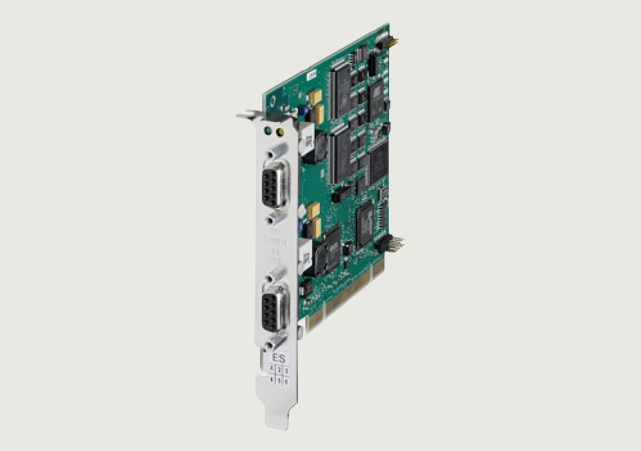
Overview



- PCI card (universal keyed 5 V/3.3 V) with own microprocessor for connection of PCs and SIMATIC PG/PC to PROFIBUS at up to 12 Mbps
- Communication services:
  - PROFIBUS DP master and slave interface according to IEC 61158/61784 on one PCI card
  - PG/OP communication with STEP 5 and STEP 7
  - S7 communication with HARDNET-PB S7 software package
  - Open communication (SEND/RECEIVE) based on the FDL interface
- Comprehensive diagnostics possibilities for installation, commissioning and operation of the module
- High performance over direct dual-port RAM access
- Event and filter mechanisms to reduce the loading on the host CPU
- Multiprotocol operation and parallel operation of up to four CPs
- Implementation of motion control applications is possible because a constant bus cycle time is supported
- The appropriate OPC servers and configuration tools are included in the scope of supply of the respective communications software

Ordering data

	Article No.
CP 5614 A3 communications processor PCI card (32-bit; 3.3/5 V; 33/66 MHz); with master and slave interface for connecting to PROFIBUS; including Configuration Tool and DP-Base software DP-RAM interface for DP master; incl. PG and FDL protocol; single license for 1 installation, runtime software, Class A; software+electr. Manuals on DVD; 2 languages (en, de) For operating system support, see SIMATIC NET software	**6GK1561-4AA02**

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Overview

- PCI Express card (PCIe x1) with internal microprocessor for connecting PCs and SIMATIC PG/PC to PROFIBUS at up to 12 Mbps
- Communication services:
  - PROFIBUS DP master Class 1 and 2 or DP slave according to IEC 61158/61784 on one PCI card
  - PG/OP communication with STEP 5 and STEP 7
  - S7 communication with HARDNET-PB S7 software package
  - Open communication (SEND/RECEIVE) based on the FDL interface
  - PROFIBUS FMS according to IEC 61158/61784 with FMS-5613 software package
- Extensive diagnostics options for installation, commissioning and operation of the module
- Event and filter mechanism for reducing the load on the host CPU
- Multiprotocol operation and parallel operation of up to four CPs
- The appropriate OPC servers and configuration tools are included in the scope of supply of the respective communication software

Ordering data

	Article No.
CP 5623 communications processor PCI Express X1 (3.3 V) for connecting to PROFIBUS; incl. DP-Base software, NCM PC: DP-RAM interface for DP master incl. PG and FDL protocol, single license for 1 installation, runtime software, Class A; software and electronic manual on CD-ROM, 2 languages (en, de) See SIMATIC NET software for operating system support	**6GK1562-3AA00**

Note:

You can find order information for software for communicating with PC systems under: System connections – Communication for PC-based systems – Software

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Overview

- PCI Express card (PCIe x1) with own microprocessor for connecting PCs and SIMATIC PG/PC to PROFIBUS at up to 12 Mbps
- Two 9-pin sub-D sockets for parallel operation as DP master and DP slave
- Communication services:
  - PROFIBUS DP master and slave interface according to IEC 61158/61784 on one PCI card
  - PG/OP communication with STEP 5 and STEP 7
  - S7 communication with HARDNET-PB S7 software package
  - Open communication (SEND/RECEIVE) based on the FDL interface
  - PROFIBUS FMS according to IEC 61158/61784 with FMS-5613 software package
- Extensive diagnostics options for installation, commissioning and operation of the module
- Event and filter mechanism for reducing the load on the host CPU
- Multiprotocol operation and parallel operation of up to four CPs
- The appropriate OPC servers and configuration tools are included in the scope of supply of the respective communication software

Ordering data

	Article No.
CP 5624 communications processor PCI Express X1 (3.3 V) M. master and slave interface to PB; incl. DP-Base software, NCM PC: DP-RAM interface for DP master incl. PG and FDL protocol, single license for 1 installation, runtime software, Class A; software and electronic manual on CD-ROM, 2 languages (en, de) See SIMATIC NET software for operating system support	**6GK1562-4AA00**

Note:

You can find order information for software for communicating with PC systems under: System connections – Communication for PC-based systems – Software

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Overview

- PCI card (universal keyed 5 V/3.3 V) for connection of PCs and SIMATIC PG/PC to PROFIBUS at up to 12 Mbps and to the MPI interface of SIMATIC S7
- Communication services:
  - PROFIBUS DP master Class 1 incl. acyclic DP expansions with SOFTNET-PB DP software package
  - PROFIBUS DP master Class 2 incl. acyclic DP expansions with SOFTNET-PB DP software package
  - PROFIBUS DP slave with SOFTNET-PB DP slave software package
  - PG/OP communication with STEP 7
  - S7 communication with SOFTNET-PB S7 software package
  - Open communication (SEND/RECEIVE on basis of FDL interface) with SOFTNET-PB DP or SOFTNET-PB S7 software package
- Can be used with:
  - STEP 7, STEP 7 Micro/Win, SIMATIC PDM (for PG/OP communication)
  - SOFTNET-PB S7 (for S7 communication)
  - SOFTNET-PB DP, SOFTNET-PB DP slave (for DP)
- Corresponding OPC servers and configuration tools are included in the scope of delivery of the respective communication software

Ordering data

	Article No.
CP 5612 communications processor PCI card for connecting a PG or PC with PCI bus to PROFIBUS or MPI, can be used under 32-bit and 64-bit operating systems (see also Entry ID 22611503)	**6GK1561-2AA00**

Note:

You can find order information for software for communicating with PC systems under: System connections – Communication for PC-based systems – Software

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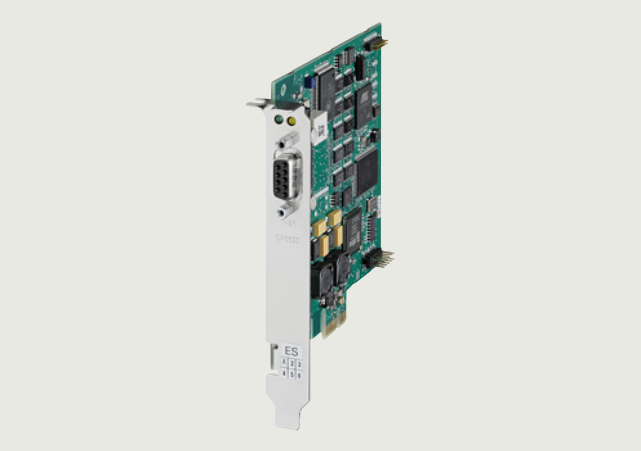
Overview



- PCI Express card (PCIe x1) for connection of PCs and SIMATIC PG/PC to PROFIBUS at up to 12 Mbps and to the MPI interface of SIMATIC S7
- Communication services:
  - PROFIBUS DP master Class 1 incl. acyclic DP expansions with SOFTNET-PB DP software package
  - PROFIBUS DP master Class 2 incl. acyclic DP expansions with SOFTNET-PB DP software package
  - PROFIBUS DP slave with SOFTNET-PB DP slave software package
  - PG/OP communication with STEP 7
  - S7 communication with SOFTNET-PB S7 software package
  - Open communication (SEND/RECEIVE on basis of FDL interface) with SOFTNET-PB DP or SOFTNET-PB S7 software package
- Can be used with:
  - STEP 7, STEP 7-Micro/Win, SIMATIC PDM (for PG/OP communication)
  - SOFTNET-PB S7 (for S7 communication)
  - SOFTNET-PB DP, SOFTNET-PB DP slave (for DP)
- Corresponding OPC servers and configuration tools are included in the scope of delivery of the respective communication software

Ordering data

	Article No.
CP 5622 communications processor PCI Express X1 card for connecting a PG or PC with PCI Express bus to PROFIBUS or MPI, can be used under 32-bit and 64-bit operating systems (see also Entry ID 22611503)	**6GK1562-2AA00**

Note:

You can find order information for software for communicating with PC systems under: System connections – Communication for PC-based systems – Software

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Overview

- USB adapter for the connection of PCs and SIMATIC PG/PC to PROFIBUS DP or MPI via USB 2.0
- Operation in extended temperature range of -20 °C to +60 °C
- Active PROFIBUS termination to supply the PROFIBUS network as the end station of a segment
- Robust USB connection due to mechanical locking of the USB plug to the CP 5711 housing
- Communication services:
  - PROFIBUS DP master Class 1 and 2 according to IEC 61158/61784 with SOFTNET-PB DP software package
  - PROFIBUS DP slave with SOFTNET-PB DP slave software package
  - PG/OP communication with STEP 5 or STEP 7 software package
  - S7 communication with SOFTNET-PB S7 software package
  - Open communication (SEND/RECEIVE on basis of FDL interface) with SOFTNET-PB DP or SOFTNET-PB S7 software package
- PROFIBUS connection with up to 12 Mbps
- Can be used with:
  - STEP 7, STEP 7 Micro/WIN, WinCC/WinCC flexible, NCM PC, SIMATIC PDM (for PG/OP communication)
  - SOFTNET-PB S7 (for S7 communication)
  - SOFTNET-PB DP, SOFTNET-PB DP slave (for DP)
- The appropriate OPC servers and configuration tools are included in the scope of supply of the respective communication software

Ordering data

	Article No.
CP 5711 communications processor USB adapter (USB 2.0) for connecting a PG or notebook to PROFIBUS or MPI; 2 m USB cable included	**6GK1571-1AA00**

Note:

You can find order information for software for communicating with PC systems under: System connections – Communication for PC-based systems – Software

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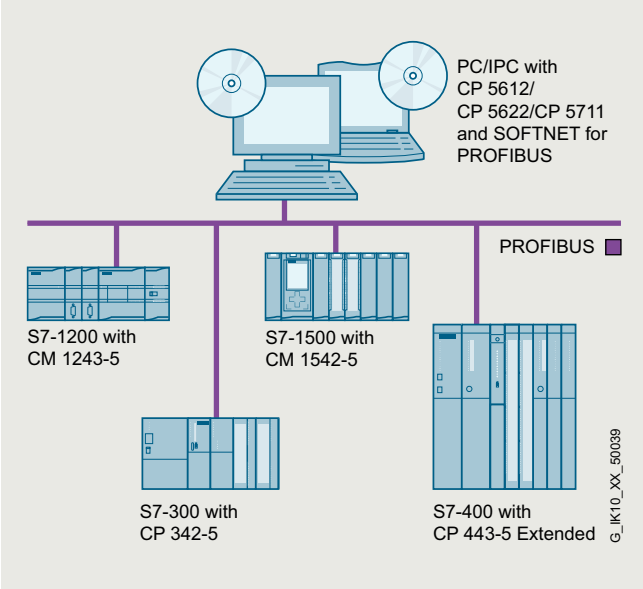
Overview



- Software for connecting PCs/PGs and notebooks to automation systems
- Communications services:
  - PROFIBUS DP master Class 1 and 2 with acyclic expansions
  - PROFIBUS DP slave
  - PG/OP communication
  - S7 communication
  - Open communication (SEND/RECEIVE) based on the FDL interface
- The appropriate OPC servers and configuration tools are included in the scope of supply of the respective communications software

Ordering data

	Article No.
SOFTNET-PB S7	
Software for S7 communication, including FDL protocol with OPC server and configuration tool, runtime software, software and electronic manual on DVD-ROM, license key on USB flash drive, Class A; for CP 5612, CP 5622, CP 5711	
SOFTNET-PB S7 V17 SP1	
For 64-bit: • Windows 10 Professional/Enterprise • Windows 11 Professional/Enterprise • Windows 10 (IoT) Enterprise 2021 LTSC • Windows 10 (IoT) Enterprise 2019 LTSC • Windows 10 (IoT) Enterprise 2016 LTSB • Windows Server 2016 (Standard, Datacenter) • Windows Server 2019 (Standard, Datacenter) English/German	
• Single license for one installation	**6GK1704-5CW17-0AA0**
Software Update Service For one year with automatic extension Requirement: current software version	**6GK1704-5CW00-3AL0**
Upgrade	
• From Edition 2006 to SOFTNET-S7 Edition 2008 or V15	**6GK1704-5CW00-3AE0**

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SOFTNET for PROFIBUS

Ordering data	Article No.
SOFTNET-PB DP	
Software for DP protocol (Master Class 1 and 2), including FDL protocol with OPC server and configuration tool; runtime software, software and electronic manual on DVD-ROM, license key on USB flash drive; for CP 5612, CP 5622, CP 5711	
SOFTNET-PB DP V17 SP1	
For 64-bit: • Windows 10 Professional/Enterprise • Windows 11 Professional/Enterprise • Windows 10 (IoT) Enterprise 2021 LTSC • Windows 10 (IoT) Enterprise 2019 LTSC • Windows 10 (IoT) Enterprise 2016 LTSB • Windows Server 2016 (Standard, Datacenter) • Windows Server 2019 (Standard, Datacenter)	
English/German	
• Single license for one installation	**6GK1704-5DW17-0AA0**
Software Update Service For one year with automatic extension Requirement: current software version	**6GK1704-5DW00-3AL0**
Upgrade	
• From Edition 2006 to SOFTNET-DP Edition 2008 or V15	**6GK1704-5DW00-3AE0**

Ordering data	Article No.
SOFTNET-PB DP Slave	
Software for DP slave, with OPC server and configuration tool, Single License for one installation, runtime software, software and electronic manual on DVD-ROM, license key on USB flash drive, Class A; for CP 5612, CP 5622, CP 5711	
SOFTNET-PB DP Slave V17 SP1	
For 64-bit: • Windows 10 Professional/Enterprise • Windows 11 Professional/Enterprise • Windows 10 (IoT) Enterprise 2021 LTSC • Windows 10 (IoT) Enterprise 2019 LTSC • Windows 10 (IoT) Enterprise 2016 LTSB • Windows Server 2016 (Standard, Datacenter) • Windows Server 2019 (Standard, Datacenter)	
English/German	
• Single license for one installation	**6GK1704-5SW17-0AA0**
Software Update Service For one year with automatic extension Requirement: current software version	**6GK1704-5SW00-3AL0**
Upgrade	
• From Edition 2006 to SOFTNET-DP Slave Edition 2008 or V15	**6GK1704-5SW00-3AE0**

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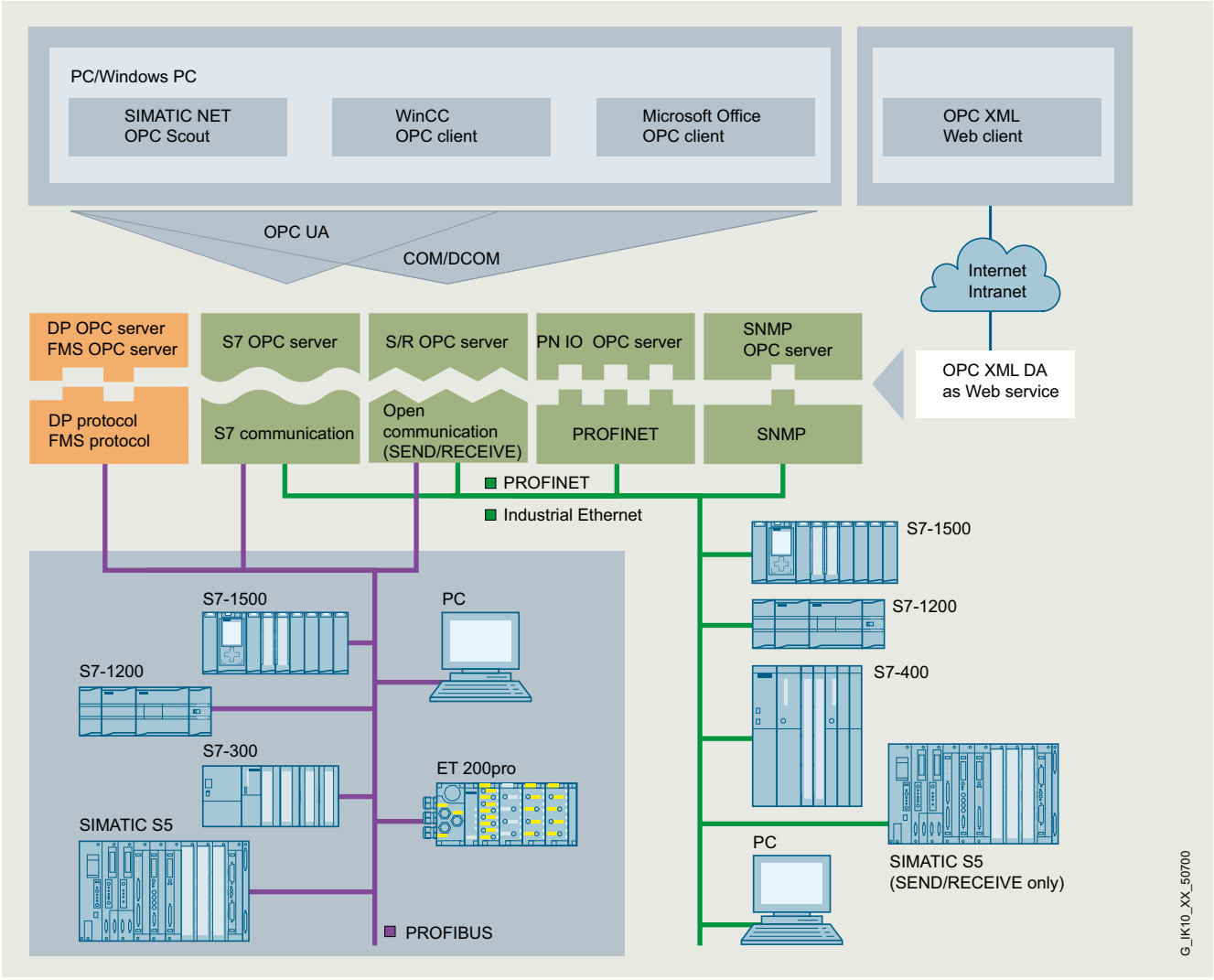
Overview

- Standardized, open multi-vendor interface
- Interfacing of OPC-capable Windows applications to DP, S7 communication and open communication (SEND/RECEIVE) based on the FDL interface
- OPC Scout with browser functionality as an OPC client. NET Data Control for simple OPC client creation
- The relevant OPC servers are supplied with each communication software package



System integration with OPC server

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PC adapter USB A2

Overview

USB adapter for the connection of PCs/notebooks and SIMATIC PG/PC to the SIMATIC S7 automation system via USB interface.

- For connection to USB 1.1, 2.0 and 3.0 interfaces
- Power supply from the USB interface
- PROFIBUS connection with up to 12 Mbps
- Support for routing
- Automatic transmission rate and profile search
- Can be used as of Windows XP SP2
- As of Windows 7, can also be used with 64-bit systems
- Scope of delivery:
  - PC adapter USB A2
  - CD with drivers for the PC adapter USB A2
  - USB cable
  - MPI cable 0.3 m

Ordering data

	Article No.
PC adapter USB A2 USB adapter (USB V2.0) for connecting a PG/PC or notebook to SIMATIC S7 via PROFIBUS or MPI, USB cable 5 m included, MPI cable 0.3 m, can be used under Windows XP/Vista/ Windows 7 32/64-bit and higher	**6GK1571-0BA00-0AA0**

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6/92	**Service sets**
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6/114	**Distribution boards**
6/115	**Additional accessories**
6/117	**Industrial Wireless LAN, Access Control with RFID**
6/117	Access points IEEE 802.11n
6/117	SCALANCE W761 RJ45 for the control cabinet
6/118	SCALANCE W774 RJ45 for the control cabinet
6/119	SCALANCE W774 M12 EEC for an extended range of ambient conditions
6/120	KEY-PLUG W700, CLP W700
6/121	Access points IEEE 802.11ax
6/121	SCALANCE WAM763-1 for use in control cabinet, SCALANCE WAM766-1 for indoor use
6/122	SCALANCE WAM766-1 EEC for an extended range of ambient conditions
6/123	Transponders
6/123	MDS D100, MDS E600
6/124	SIMATIC RF1000
6/124	RF1040R
6/125	RF1060R
6/126	RF1070R
6/127	Process coupling
6/127	Connecting cables
6/135	IE TP cord
6/136	RS485 bus connector
6/137	IE FC RJ45 plug 2 x 2, Cat5e
6/138	IE FC RJ45 plugs 4 x 2, Cat6a
6/139	IE FC TP cable 2 x 2
6/141	IE FC TP cable 4 x 2

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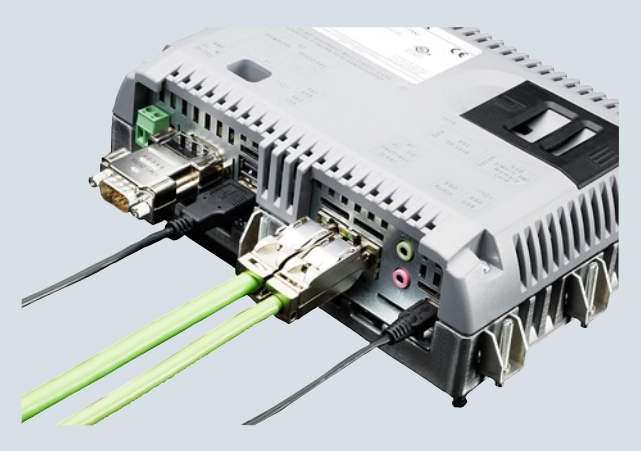
Introduction

Overview



HMI accessories, connection

SIMATIC not only offers first-class Panels, thin clients and IPCs, but also an extensive range of original accessories which harmonizes optimally with the core products.
We place the same quality requirements on our accessories as we do on our core products.

Since accessory parts are required over the entire service life of a product despite wear, everything is done to ensure that all accessories remain available throughout the entire life cycle of the core products.
In the event of deviations in exceptional cases, a relevant product announcement will be placed in the Customer Support area. We recommend subscribing to these announcements electronically.

SIMATIC accessories are intended exclusively for industrial use, such as in offices, workshops etc. In some cases, accessories can also be used with competitor products. This use is at your own responsibility.

The range of accessories includes:

- Batteries (rechargeable buffer battery, lithium batteries, main rechargeable battery, etc.)
- Fixing elements (memory card lock, wall bracket, mounting frame, mounting clips, mounting bracket, etc.)
- Labeling strips (labeling strips, front film, labeling set, protective sleeve, etc.)
- Input devices, USB cables (keyboards, mice)
- Input aids (touch pens)
- HMI connecting components (converters, connectors, adapters)
- IWLAN accessories (access points, KeyPlug, power supplies, Moby D, small parts)
- Power supply units, power cables (supply units, non-heating apparatus cables)
- Back covers (in IP20 design)
- Protective films
- Protective covers, dust caps (covers, caps, port keys, USB/RJ45)
- Service sets (spare parts package with coordinated contents)
- Storage media (MM memory card, SD memory card, PC memory card, PC memory card adapter, CF memory card, USB memory stick, USB flash drive, memory module for pushbutton Panels, memory expansions)
- Transport and storage (bags and handles)
- Distribution boards (USB HUB, USB extensions, keyboard, video, mouse switch, Ethernet switch)
- Other accessories (e.g. spare key, spare cover)
- Process coupling
  - Connecting cables
  - Bus connector DP
  - Bus connector PN

The aim is to offer accessories as new parts throughout the entire life cycle of the core product.

This cannot be guaranteed because the consumer market changes quickly.

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More information

The latest information and a "Cross list" (quick overview) of accessories suitable for specific core products can be found here:

https://support.industry.siemens.com/cs/document/40466415

Information on the delivery quantity:

Because the exact contents of an article number (MLFB) cannot be limited to a single quantity, the delivery quantity and the exact contents of an article number (MLFB) are only ever specified in the technical specifications for accessories.

Trade goods:

To be able to react quickly and flexibly to new requirements, we also use high quality accessories from major manufacturers and market these directly via our Mall.
Introducing products as trade goods saves having to perform time-consuming, in-house tests, or applying for and generating our own certificates.

Trade goods are qualified in a short power-on test (power-on test only and no system test at Siemens), as the manufacturer tests are usually sufficient.

Certificates:

On account of technical requirements placed on trade goods, technical specifications, drivers, certificates and test verification documents, etc. are provided by the manufacturer, and are partially available for downloading from the Siemens SIOS pages.

The technical properties of trade goods may differ from the assured characteristics of our own products (for example, in respect of electromagnetic compatibility, releases for application areas, etc.) and restrict the field of use of the Siemens core product when used.

Trade goods are marked as such in the relevant technical specifications. The manufacturer is always listed at the end of the technical specifications.

3D data:

3D data and technical drawings for trade goods are only available for download in the SIOS delivery release, providing the manufacturer has granted their approval.

Integration into the Siemens 3D download area is unfortunately not possible. For this reason, it is also not possible to provide a 3D (Step) file for every accessory.

The responsibility for trade good files always lies with the manufacturer. The manufacturer is always listed at the end of the technical specifications.

Note:

SIMATIC accessories are intended exclusively for industrial use, such as in offices, workshops, etc.

In some cases, accessories can also be used with competitor products. This use is at your own responsibility.

Tip:

The TIA Selection Tool automatically shows appropriate accessories for every SIMATIC product, making it even easier to find the right accessory.

In SIOS entry with entry ID: 40466415 "Accessory status", all news, changes and product discontinuations are documented. There is also a link bar here to allow direct access to additional product information.

Notice:

Photos and product images may differ from the actual product.

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Overview

HMI accessories, battery, accumulator

Batteries and accumulators

The following batteries and accumulators are available:

- Rechargeable buffer battery
- Button cell
- Main rechargeable battery

Note:

Transporting lithium batteries by air is not possible at all, or only feasible under restricted conditions.

When ordering replacements, please allow transport times of up to 6 months depending on the region (outside the EU).

Please read the notes under "More information".

Ordering data

	Article No.
Rechargeable buffer battery for Mobile Panel for wired Mobile Panels	**6AV6671-5AD00-0AX0**
Main rechargeable battery for Mobile Panel IWLAN	**6AV6671-5CL00-0AX1**
Lithium battery for SIMATIC HMI and S7	**W79084-E1001-B2**
Lithium battery, BR2450A/SCN with cables and connectors, for IPC227E, IPC277E, IPC427E, IPC477E	**A5E34345932**
Lithium battery, 550 mA with cables and connectors, for IPC427E, IPC477E	**A5E34734290**

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Technical specifications

Article number	6AV6671-5AD00-0AX0 Buffer battery Mobile Panel	6AV6671-5CL00-0AX1 Main battery Mobile Panel IWLAN	W79084E-1001B- 2 Lithium battery SIMATIC HMI and C7
General information			
Product type designation	Rechargeable back-up battery Mobile Panel	Main battery Mobile Panel IWLAN	Lithium battery
Installation type/mounting			
Wall mounting/direct mounting	Yes; in HMI devices, battery compartment	Yes; in HMI devices, battery compartment	Yes; in HMI devices, battery compartment
Supply voltage			
Rated value (DC)	3.6 V	7.2 V	3.6 V
Accumulator			
Charge status display	No	No	No
Rechargeable	Yes	Yes	Yes
Capacity	1.15 A·h	5.1 A·h	1.6 A·h
Lithium-ion	Yes; 1/CP7/34/50 01 CGA	Yes; ICR18650-26J	Yes; SL-361
Special design	Yes; flat	Yes; bent	Yes; 2/3 AA
Degree and class of protection			
IP (all-round)		IP20	
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
UL approval	Yes	Yes	
cULus	Yes	Yes	
KC approval		No; unnecessary	
EAC (formerly Gost-R)	No	No	
CCC	No	No	
RoHS conformity	Yes	Yes	Yes
China RoHS compliance	Yes		
Ambient conditions			
Ambient temperature during operation			
• min.	0 °C; Don't charge below	0 °C; Don't charge below	0 °C
• max.	55 °C	45 °C	55 °C
Relative humidity			
• Operation, max.	90 %	90 %	90 %
Accessories			
belongs to product			SIMATIC S5
Mechanics/material			
Material			
• Plastic		Yes; Enclosure, black	
Dimensions			
Width	35 mm	75 mm	
Height	50 mm	78 mm	
Thickness	10 mm	33 mm	
Length			33 mm
Diameter			14.7 nm
Weights			
Weight (without packaging)	38 g	320 g	12 g
Scope of supply			
Delivery quantity in pieces	1; incl. 65 mm connecting cable	1; with ejector	1; incl. 220 mm connecting cable

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Batteries

Technical specifications

Article number	6AV6671-5AD00-0AX0	6AV6671-5CL00-0AX1	W79084E-1001B- 2
	Buffer battery Mobile Panel	Main battery Mobile Panel IWLAN	Lithium battery SIMATIC HMI and C7
Other			
Merchandise	No; 1S1P CQA 103450A	No; 2S2P ICR18650-26J / 11273-02	Yes; SL2361 PGHK
Manufacturer name	SIEMENS AG	SIEMENS AG	Tadiran Batteries GmbH
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Industriestr. 22, 63654 Büdingen, Germany
Contacting the manufacturer	Email: simatic_hmi_panel_helpdesk.i-ia@siemens.com	Email: simatic_hmi_panel_helpdesk.i-ia@siemens.com	Email: anfrage@distrelec.de
Target devices	for Mobile Panel DP cabled, Mobile Panel PN cabled, Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN	for Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN, Mobile Panel 277 IWLAN V2, Mobile Panel 277F IWLAN V2, Mobile Panel 277F IWLAN (RFID tag)	For TD17, OP17, OP25, OP27, OP35, OP37, TP27, TP37, OP/TP270, MP270, MP270B, MP370
Note:	Dispose of battery (lithium) properly; hazardous product!	Dispose of battery (lithium) properly; hazardous product!	Dispose of battery (lithium) properly; hazardous product!

More information

Accumulators are shipped with less than 30% of their maximum charging capacity to minimize risks during transport.
Diverse certificates are required for transport and import in some regions. They can be downloaded from Industry Online Support/ Product Support.
Enter the "Article No." as the search term and select "Certificate" as the Entry type.

https://support.industry.siemens.com/cs/products

Before first use, accumulators should always be recharged; this also ensures the longest possible service life of the accumulators.

Disposal of waste batteries and old electrical and electronic devices:

The device must not be disposed of with household waste (Battery Law, WEEE Directive).
The waste bin symbol on the product, the batteries or the packaging means that the product and any batteries contained within it must not be disposed of with household waste.
You are obliged to dispose of the product at an appropriate disposal point.
You can find out more about disposing of batteries and old electrical and electronic devices from the authorities in your city or community, the responsible waste disposal company, or the manufacturer.

Notes:

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.
Industry Mall:

https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically. This facilitates selection of suitable accessories.

http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

http://support.automation.siemens.com

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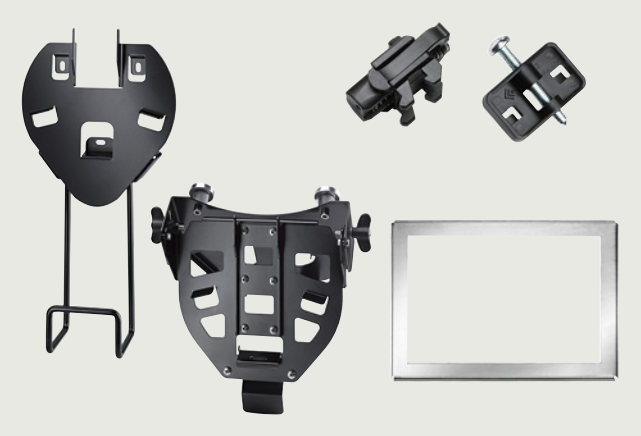
Overview



Fixing elements

All parts required to install a SIMATIC device are listed here.

Depending on the device, various fasteners are available for attaching the Panel.

- Interlock
- Wall brackets and fixing elements
- Mounting frame [1)]
- Adapter frame
- Mounting clip
- Mounting bracket
- Installation enclosure

1) The mounting frame for the USB HUB4 is contained in the service set (see "Service sets").

Mounting frames enable compliance with device-specific degrees of protection IP65, NEMA4x and NEMA12 if the thickness of the mounting plate is less than the minimum plate thickness specified in the operating instructions of the device. The mounting frames have been specially developed for thin plates.

Ordering data	Article No.
Mounts and interlocks	
Memory card lock	
• 4"	**6AV2181-4DM10-0AX0**
• 7" … 22"	**6AV2181-4XM00-0AX0**
Wall-mounting bracket for Mobile Panels	
• Type 10, for Mobile Panel and Mobile Client900, without cable storage	**6AV6574-1AF04-4AA0**
• Type 13, for KTP Mobile Panels	**6AV2181-5AG80-0AX0**
For IP65 installation of Panels in thin-walled mounting plates	
Mounting frame for stabilizing and increasing the strength of the mounting plate	
• 8" Touch	**6AV6671-3CS00-0AX0**
• 8" Key	**6AV6671-3CS01-0AX0**
• 10"/12" Touch	**6AV6671-8XS00-0AX0**
• 7" Unified Panels	**6AV6881-0GD33-0DA0**
• 10" Unified Panels	**6AV6881-0KD33-0DA0**
• 15" Unified Panels	**6AV6881-0QD33-0DA0**
• 19" Unified Panels	**6AV6881-0UD33-0DA0**
• 22" Unified Panels	**6AV6881-0VD33-0DA0**
Mounting clip/bracket for practical mounting of SIMATIC Panels, Thin Client and IPCs	
Mounting clip	
• Aluminum	**6AV6671-8XK00-0AX0**
• Spring	**6AV6671-8XK00-0AX1**
• Plastic	**6AV6671-8XK00-0AX2**
• Sheet steel	**6AV6671-8XK00-0AX3**
• Captive sheet steel	**6AV6881-6AD10-0AA0**
• Die-cast aluminum	**6AV2185-8MA00-0AA0**
• Thin Client	**6AV6671-6AP00-0AX0**
• Thin Client spring	**6AV6671-6AP00-0AX1**
Mounting bracket Steel	**6AV6671-8XK00-0AX4**
Interlock bolt Interlock bolt for PRO keyboards and keyboard trays to lock the tilt adjustment, hardened V2A	**6AV6881-4AW41-4AA0**
VESA 100/75 in IP20 / ST37 round tube adapter Can be used with all PRO devices with matching tube connector for support arm systems. ST37 partly RAL 9006, powder-coated	**6AV6881-0AD56-0AA0**
VESA 100/75 in IP20 / V2A round tube adapter Can be used with all PRO devices with matching tube connector for support arm systems.	
• 100% V2A	**6AV6881-0AD56-2CA0**
• 100% V2A with icotek cable entry	**6AV6881-0AD56-3CA0**

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Fixing elements

Ordering data

	Article No.
Adapter frame	
Adapter frame for widescreen rack mounting INOX	
For widescreen Unified Panels and ITC V3.	
• 15"	**6AV6881-6QD41-0AA0**
• 19''	**6AV6881-6UD41-0AA0**
• 22''	**6AV6881-6VD41-0AA0**
Adapter frame 19" rack	**6AV6881-6UD42-0AA0**
For installation of 19" devices (HMI Panels or IPCs) in a 19" rack structure or other structures with 19" grid size	
Installation enclosure for KP8 and KP8F:	**6AV6881-2AM12-2AA0**
Prefabricated IP65 installation enclosure for KP8 and KP8F, including 2 x 22.5 mm cutouts for long stroke keys or switches. Supplied with blanking covers. Max. of 4 cables can be connected in IP65, cable sleeves enclosed. The enclosure can be permanently mounted or used as a portable device. The Key Panel is not included in the scope of delivery.	

	Article No.
Installation enclosure KP8F	**6AV6881-2AM12-1AA0**
Prefabricated IP65 installation enclosure KP8F, including 1x 22.5 mm cutout. Supplied with an EMERGENCY OFF button Max. of 4 cables can be connected in IP65, cable sleeves enclosed. The enclosure can be permanently mounted or used as a portable device. The Key Panel is not included in the scope of delivery.	
icotek replacement grommets	
• single for 4-5 mm cable	**6AV6881-0AM62-0AD0**
• single for 5-6 mm cable	**6AV6881-0AM62-0AE0**
• single for 6-7 mm cable	**6AV6881-0AM62-0AF0**
• single for 7-8 mm cable	**6AV6881-0AM62-0AG0**
• single for 8-9 mm cable	**6AV6881-0AM62-0AH0**
• single for 9-10 mm cable	**6AV6881-0AM62-0AJ0**
• double for 6 mm cable	**6AV6881-0AM62-0AQ0**
• double for 8 mm cable	**6AV6881-0AM62-0AR0**
• single dummy grommet	**6AV6881-0AM62-0AX0**

Technical specifications

Article number	**6AV6671-8XK00-0AX2** Plastic mounting clip	**6AV6671-8XK00-0AX1** Spring mounting clip	**6AV6671-8XK00-0AX0** Aluminum mounting clip	**6AV6671-8XK00-0AX3** Steel mounting clip	**6AV6671-8XK00-0AX4** Steel mounting clamp
General information					
Product type designation	Mounting clip, plastic	Mounting clip, spring	Mounting clip, aluminum	Mounting clip, steel	Mounting bracket, steel
Installation type/mounting					
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes	Yes
Degree and class of protection					
IP (all-round)	none			none	none
Standards, approvals, certificates					
CE mark			No; No CE marking obligation		
Use in hazardous areas					
• ATEX Zone 2			Yes; Always comply with the operating instructions of the target device.		
• ATEX Zone 22			Yes; Always comply with the operating instructions of the target device.		
• IECEx Zone 2			Yes; Always comply with the operating instructions of the target device.		
• IECEx Zone 22			Yes; Always comply with the operating instructions of the target device.		

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Technical specifications

Article number	6AV6671-8XK00-0AX2 Plastic mounting clip	6AV6671-8XK00-0AX1 Spring mounting clip	6AV6671-8XK00-0AX0 Aluminum mounting clip	6AV6671-8XK00-0AX3 Steel mounting clip	6AV6671-8XK00-0AX4 Steel mounting clamp
Ambient conditions					
Suited for indoor use			Yes		
Suited for outdoor use			Yes; possible under certain conditions		
Ambient temperature during operation					
• min.	-40 °C	-40 °C	-40 °C	-40 °C	-40 °C
• max.	80 °C	80 °C	80 °C	80 °C	80 °C
Relative humidity					
• Operation, max.	90 %	90 %	90 %	90 %	90 %
Mechanics/material					
Material					
• Sheet steel			Yes		
Enclosure material (front)					
• Plastic	Yes	Yes; For 1 ... 4 mm sheet thickness			
• Sheet steel				Yes	Yes
Screw type					
• 4.5 V	Yes; Original partially Phillips screw		Yes	Yes	Yes
Torques/forces					
• Tightening torque, min.	0.18 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed			0.18 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed	0.18 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed
• Tightening torque, max.	0.2 N·m			0.2 N·m	0.2 N·m
• Tightening torque, recommended	0.2 N·m; Higher torques may damage the product			0.2 N·m; Higher torques may damage the product	0.2 N·m; Higher torques may damage the product
Dimensions					
Width	30 mm	20 mm	15 mm	20 mm	142 mm
Height	17 mm; Without screw	35 mm	21 mm; Without screw	15 mm; Without screw	18 mm; Without screw
Depth			15 mm		
Thickness	8 mm	20 mm		8 mm	8 mm

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Technical specifications

Article number	6AV6671-8XK00-0AX2 Plastic mounting clip	6AV6671-8XK00-0AX1 Spring mounting clip	6AV6671-8XK00-0AX0 Aluminum mounting clip	6AV6671-8XK00-0AX3 Steel mounting clip	6AV6671-8XK00-0AX4 Steel mounting clamp
Weights					
Weight (without packaging)	4 g; Per unit	8 g; Per unit	5 g; Per unit	4 g; Per unit	30 g; Per unit
Scope of supply					
Delivery quantity in pieces	20; Units per set	20; Spring-loaded terminals	20; Units per set	20	10
Other					
Merchandise	No	No	No	No	No
Manufacturer name		QUERUM products UG			
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany simatic_hmi_panel_helpdesk.i-ia@siemens.com	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	for TD17, OP7, OP17, OP73, OP77A/B, TP/OP17x except TP177 4", Push Button Panel, Key Panel, empty front design, KP300 Basic mono, Basic 2nd, KTP400 Comfort, USB hub, sheet thickness 2 ... 6 mm	TP177-4", TP/OP 277-6", MP177-6, MP277-10" T, MP277-8", MP277-8"T, MP277-10"K, MP377 12-19", TC 10", TC 15", KTP400 Basic mono, KTP600, KTP1000, KTP1500, KP700 Comfort, TP700 Comfort, KP900 Comfort, TP900 Comfort, KP1200 Comfort, TP1200 Comfort and IPC 277D 7, 9, 12"	TP177-4", TP/OP277-6", MP177-6, MP277-10"T, MP277-8", MP277-8"T, MP277-10"K, MP377 12"-19", TC 10", TC 15", KTP400 Basic mono, KTP600 Basic, KTP1000 Basic, TP1500 Basic, KP700 Comfort, TP700 Comfort, KP900 Comfort, TP900 Comfort, KP1200 Comfort, TP1200 Comfort and IPC277D 7", 9", 12"	15", 19" and 22" widescreen - Comfort Panels, IPCs, Flat Panels and Thin Clients. Plate thicknesses up to 6 mm	15", 19" and 22" widescreen - Comfort Panels, IPCs, Flat Panels and Thin Clients, except SCD1900 19" widescreen. Plate thicknesses up to 6 mm
Note:				Function-compatible to article number 6AV6671-8XK00-0AX4	

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Technical specifications

Article number	6AV6881-0UD33-0DA0 Mounting frame 19" Unified Panels	6AV6881-0QD33-0DA0 Mounting frame 15" Unified Panels	6AV6881-0VD33-0DA0 Mounting frame 22" Unified Panels	6AV6881-0GD33-0DA0 Mounting frame 7" Unified Panels	6AV6881-0KD33-0DA0 Mounting frame 10" Unified Panels
General information					
Product type designation	mounting frame	mounting frame	mounting frame	mounting frame	mounting frame
Display					
Suitable for screen diagonal	18.5 in	15.6 in	21.5 in	7 in	10.1 in
Installation type/mounting					
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates					
CE mark	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation
REACH	Yes; Tested	Yes; Tested	Yes; Tested	Yes; Tested	Yes; Tested
RoHS conformity	Yes; Tested / compliant	Yes; Tested / compliant	Yes; Tested / compliant	Yes; Tested / compliant	Yes; Tested / compliant
Use in hazardous areas					
• ATEX Zone 2	No	No	No	No	No
• ATEX Zone 22	No	No	No	No	No
• ATEX as target device	No	No	No	No	No
• IECEx Zone 1	No	No	No	No	No
• IECEx Zone 11	No	No	No	No	No
• IECEx Zone 2	No	No	No	No	No
• IECEx Zone 22	No	No	No	No	No
• cULus Class I Zone 1	No	No	No	No	No
• cULus Class I Zone 2, Division 2	No	No	No	No	No
• cULus Class II Division 2	No	No	No	No	No
• FM Class I Division 2	No	No	No	No	No
• FM Class II Division 2	No	No	No	No	No
Marine approval					
• Germanischer Lloyd (GL)	No	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No	No
• Chinese Classification Society (CCS)	No	No	No	No	No
• Marine approval as target device	No	No	No	No	No
Ambient conditions					
Suited for indoor use	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No	No
Ambient temperature during operation					
• min.	-40 °C	-40 °C	-40 °C	-40 °C	-40 °C
• max.	80 °C	80 °C	80 °C	80 °C	80 °C
Relative humidity					
• Operation, max.	90 %	90 %	90 %	90 %	90 %
Mechanics/material					
Enclosure material (front)					
• Sheet steel	Yes; Powder-coated	Yes; Powder-coated	Yes; Powder-coated	Yes; Powder-coated	Yes; Powder-coated

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Technical specifications

Article number	6AV6881-0UD33-0DA0	6AV6881-0QD33-0DA0	6AV6881-0VD33-0DA0	6AV6881-0GD33-0DA0	6AV6881-0KD33-0DA0
	Mounting frame 19" Unified Panels	Mounting frame 15" Unified Panels	Mounting frame 22" Unified Panels	Mounting frame 7" Unified Panels	Mounting frame 10" Unified Panels
Dimensions					
Width	477.5 mm	411.5 mm	542.5 mm	227.5 mm	293.5 mm
Height	307.5 mm	270.5 mm	344.5 mm	171.5 mm	218.5 mm
Thickness	4 mm	4 mm	4 mm	4 mm	4 mm
Weights					
Weight, approx.	1.8 kg	1.5 kg	2.1 kg	0.6 kg	0.9 kg
Scope of supply					
Delivery quantity in pieces	1; frame	1; frame	1; frame	1; frame	1; frame
Other					
Merchandise	Yes; mounting frame WFP2.3	Yes; mounting frame WFP2.3	Yes; mounting frame WFP2.3	Yes; mounting frame WFP2.3	Yes; mounting frame WFP2.3
Manufacturer name	QUERUM products UG	QUERUM products UG	QUERUM products UG	QUERUM products UG	QUERUM products UG
Manufacturer's address	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany
contacting the manufacturer	email: querumpro-ducts@web.de	email: querumpro-ducts@web.de	email: querumpro-ducts@web.de	email: querumpro-ducts@web.de	email: querumpro-ducts@web.de
Target devices	for Unified Comfort Panels to reinforce the mounting plate thickness	for Unified Comfort Panels to reinforce the mounting plate thickness	for Unified Comfort Panels to reinforce the mounting plate thickness	for Unified Comfort Panels to reinforce the mounting plate thickness	for Unified Comfort Panels to reinforce the mounting plate thickness
Note:	ensures tightness with thin mounting plates	ensures tightness with thin mounting plates	ensures tightness with thin mounting plates	ensures tightness with thin mounting plates	ensures tightness with thin mounting plates

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Technical specifications

Article number	**6AV2181-4DM10-0AX0** Memory card lock 4"	**6AV2181-4XM00-0AX0** Memory card lock 7 to 22"
General information		
Product type designation	Memory card lock 4"	Memory card lock 7" ... 22"
Installation type/mounting		
Wall mounting/direct mounting	Yes; Snap-on	Yes; Snap-on
Standards, approvals, certificates		
CE mark	Yes	Yes
Ambient conditions		
Ambient temperature during operation		
• min.	-40 °C	-40 °C
• max.	80 °C	80 °C
Relative humidity		
• Operation, max.	90 %	90 %
Mechanics/material		
Material		
• Plastic	Yes	Yes
Dimensions		
Width	25 mm	45 mm
Height	30 mm	59 mm
Thickness	10 mm	12 mm
Weights		
Weight (without packaging)	4 g; Per unit	6 g; Per unit
Scope of supply		
Delivery quantity in pieces	5	5
Other		
Merchandise	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	Comfort Panel 4"	Comfort Panels 7" ... 22"

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Technical specifications

Article number	6AV6881-6QD41-0AA0	6AV6881-6UD41-0AA0	6AV6881-6VD41-0AA0	6AV6881-6UD42-0AA0
	Adapter Frame Widescreen 15" Touch	Adapter Frame Widescreen 19" Touch	Adapter Frame Widescreen 22" Touch	Adapter frame widescreen 19" Rack
General information				
Product type designation	Adapter frame 15" touch widescreen	Adapter frame 19" touch widescreen	Adapter frame 22" touch widescreen	Adapter frame 19" rack widescreen
Display				
Suitable for screen diagonal				18.5 in
Installation type/mounting				
Mounting				Mounting on 19" standard rack
Mounting type				Provided by customer
Rack mounting				Yes; 8U
Mounting in portrait format possible	Yes	Yes	Yes	No
Mounting in landscape format possible	Yes	Yes	Yes	Yes
Standards, approvals, certificates				
CE mark	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation
REACH	Yes; Tested	Yes; Tested	Yes; Tested	Yes; Tested
RoHS conformity	Yes; Tested / compliant	Yes; Tested / compliant	Yes; Tested / compliant	Yes; Tested / compliant
Use in hazardous areas				
• ATEX Zone 2	No	No	No	No
• ATEX Zone 22	No	No	No	No
• ATEX as target device	No	No	No	No
• IECEx Zone 1	No	No	No	No
• IECEx Zone 11	No	No	No	No
• IECEx Zone 2	No	No	No	No
• IECEx Zone 22	No	No	No	No
• cULus Class I Zone 1	No	No	No	No
• cULus Class I Zone 2, Division 2	No	No	No	No
• cULus Class II Division 2	No	No	No	No
• FM Class I Division 2	No	No	No	No
• FM Class II Division 2	No	No	No	No
Marine approval				
• Germanischer Lloyd (GL)	No	No	No	No
• American Bureau of Shipping (ABS)	No	No	No	No
• Bureau Veritas (BV)	No	No	No	No
• Det Norske Veritas (DNV)	No	No	No	No
• Korean Register of Shipping (KRS)	No	No	No	No
• Lloyds Register of Shipping (LRS)	No	No	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No	No	No
• Polski Rejestr Statkow (PRS)	No	No	No	No
• Chinese Classification Society (CCS)	No	No	No	No
• Marine approval as target device	No	No	No	No

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Technical specifications

Article number	6AV6881-6QD41-0AA0 Adapter Frame Widescreen 15" Touch	6AV6881-6UD41-0AA0 Adapter Frame Widescreen 19" Touch	6AV6881-6VD41-0AA0 Adapter Frame Widescreen 22" Touch	6AV6881-6UD42-0AA0 Adapter frame widescreen 19" Rack
Ambient conditions				
Suited for indoor use	Yes	Yes	Yes	Yes
Suited for outdoor use	No	No	No	No; possible under certain conditions
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	-40 °C
• max.	50 °C	50 °C	50 °C	80 °C
Relative humidity				
• Operation, max.	90 %	90 %	90 %	90 %
• Condensation permissible				No; Condensation not permissible
Accessories				
Function description	mechanical adapter	mechanical adapter	mechanical adapter	mechanical adapter
belongs to product	MTP1500 Unified Comfort, ITC1500 V3	MTP1900 Unified Comfort, ITC1900 V3	MTP2200 Unified Comfort, ITC2200 V3	19": UCP, ITC, IFP, IPC
Mechanics/material				
Enclosure material (front)				
• Aluminum	Yes; Powder-coated	Yes; Powder-coated	Yes; Powder-coated	
• Sheet steel				Yes; Powder-coated
Dimensions				
Width	411.2 mm	480.2 mm	557.2 mm	482.6 mm
Height	306.2 mm	334.2 mm	377.2 mm	354.75 mm
Depth	32.5 mm	32.5 mm	32.5 mm	
Thickness				3 mm
Width of the housing front	382 mm; new mounting cut-out	448 mm; new mounting cut-out	513 mm; new mounting cut-out	
Height of housing front	241 mm; new mounting cut-out	278 mm; new mounting cut-out	315 mm; new mounting cut-out	
Mounting cutout, width	396 mm; existing mounting cut-out	465 mm; existing mounting cut-out	542 mm; existing mounting cut-out	449 mm
Mounting cutout, height	291 mm; existing mounting cut-out	319 mm; existing mounting cut-out	362 mm; existing mounting cut-out	279 mm
Scope of supply				
Delivery quantity in pieces	1; Adapter frame 15"	1; Adapter frame 19"	1; Adapter frame 22"	1; Adapter frame 19" rack
Components included	Without additional accessories	Without additional accessories	Without additional accessories	Without additional accessories
Other				
Merchandise	No	No	No	Yes; Adapter frame 19" rack widescreen
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG	QUERUM products UG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany
contacting the manufacturer				email: querumproducts@web.de
Target devices				19" UCP, ITC, IFP, IPC
Note:	observe the user manual	observe the user manual	observe the user manual	Observe documentation of the target device

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Technical specifications

Article number	6AV6881-0AM62-0AD0	6AV6881-0AM62-0AE0	6AV6881-0AM62-0AF0	6AV6881-0AM62-0AG0	6AV6881-0AM62-0AH0	6AV6881-0AM62-0AJ0
	IcoTek Cable grommets, 4-5	IcoTek Cable grommets, 5-6	IcoTek Cable grommets, 6-7	IcoTek Cable grommets, 7-8	IcoTek Cable grommets, 8-9	IcoTek Cable grommets, 9-10
General information						
Product type designation	icotek cable grommet, 4-5	icotek cable grommet, 5-6	icotek cable grommet, 6-7	icotek cable grommet, 7-8	icotek cable grommet, 8-9	icotek cable grommet, 9-10
Frame size/design						
• Standard	Yes; icotek cable grommet	Yes; icotek cable grommet	Yes; icotek cable grommet	Yes; icotek cable grommet	Yes; icotek cable grommet	Yes; icotek cable grommet
Degree and class of protection						
IP (all-round)	up to IP68 (acc. to EN 60529:2000-09)					
NEMA (front)	NEMA 4x (when installed)					
NEMA (rear)	NEMA 4x (when installed)					
Ambient conditions						
Ambient temperature during operation						
• min.	-40 °C	-40 °C	-40 °C	-40 °C	-40 °C	-40 °C
• max.	140 °C	140 °C	140 °C	140 °C	140 °C	140 °C
Accessories						
Function description	split grommet for cables with connector	split grommet for cables with connector	split grommet for cables with connector	split grommet for cables with connector	split grommet for cables with connector	split grommet for cables with connector
Mechanics/material						
Material						
• Plastic	Yes; polyamide, halogen-free and silicone-free					
Enclosure material (front)						
• Plastic	Yes; fire class: UL94-V0, self-extinguishing	Yes; fire class: UL94-V0, self-extinguishing	Yes; fire class: UL94-V0, self-extinguishing	Yes; fire class: UL94-V0, self-extinguishing	Yes; fire class: UL94-V0, self-extinguishing	Yes; fire class: UL94-V0, self-extinguishing
Color	gray (similar to RAL 7035)	gray (similar to RAL 7035)	gray (similar to RAL 7035)	gray (similar to RAL 7035)	gray (similar to RAL 7035)	gray (similar to RAL 7035)
Dimensions						
Width	21 mm	21 mm	21 mm	21 mm	21 mm	21 mm
Height	21 mm	21 mm	21 mm	21 mm	21 mm	21 mm
Depth	19 mm	19 mm	19 mm	19 mm	19 mm	19 mm
Diameter	4 mm; 4 ... 5 mm cable	5 mm; 5 ... 6 mm cable	6 mm; 6 ... 7 mm cable	7 mm; 7 ... 8 mm cable	8 mm; 8 ... 9 mm cable	9 mm; 9 ... 10 mm cable
Weights						
Weight, approx.	8 g; Per unit	8 g; Per unit	8 g; Per unit	8 g; Per unit	8 g; Per unit	8 g; Per unit
Weight (without packaging)	40 g	40 g	40 g	40 g	40 g	40 g
Scope of supply						
Delivery quantity in pieces	5; Units per set	5; Units per set	5; Units per set	5; Units per set	5; Units per set	5; Units per set
Other						
Merchandise	Yes	Yes	Yes	Yes	Yes	Yes
Manufacturer's address	Bischof-von-Lipp-Str. 1, 73569 Eschach, Deutschland	Bischof-von-Lipp-Str. 1, 73569 Eschach, Deutschland	Bischof-von-Lipp-Str. 1, 73569 Eschach, Deutschland	Bischof-von-Lipp-Str. 1, 73569 Eschach, Deutschland	Bischof-von-Lipp-Str. 1, 73569 Eschach, Deutschland	Bischof-von-Lipp-Str. 1, 73569 Eschach, Deutschland
Target devices	icotek cable entry and cable gland	icotek cable entry and cable gland	icotek cable entry and cable gland	icotek cable entry and cable gland	icotek cable entry and cable gland	icotek cable entry and cable gland
Note:	further information is available on the manufacturer's homepage.	further information is available on the manufacturer's homepage.	further information is available on the manufacturer's homepage.	further information is available on the manufacturer's homepage.	further information is available on the manufacturer's homepage.	further information is available on the manufacturer's homepage.

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Technical specifications

Article number	6AV6671-3CS00-0AX0 Mounting frame 8" Touch	6AV6671-3CS01-0AX0 Mounting frame 8" Key	6AV6671-8XS00-0AX0 Mounting frame 10" to 12" Touch devices
General information			
Product type designation	Mounting frame 8" touch	Mounting frame 8" key	Mounting frame 10" ... 12" touch devices
Installation type/mounting			
Mounting in portrait format possible	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes
Standards, approvals, certificates			
CE mark	Yes	Yes	No; No CE marking obligation
REACH			Yes; Tested
RoHS conformity	Yes	Yes	Yes; Tested / compliant
Use in hazardous areas			
• ATEX Zone 2			No
• ATEX Zone 22			No
• ATEX as target device			No
• IECEx Zone 1			No
• IECEx Zone 11			No
• IECEx Zone 2			No
• IECEx Zone 22			No
• cULus Class I Zone 1			No
• cULus Class I Zone 2, Division 2			No
• cULus Class II Division 2			No
• FM Class I Division 2			No
• FM Class II Division 2			No
Marine approval			
• Germanischer Lloyd (GL)			No
• American Bureau of Shipping (ABS)			No
• Bureau Veritas (BV)			No
• Det Norske Veritas (DNV)			No
• Korean Register of Shipping (KRS)			No
• Lloyds Register of Shipping (LRS)			No
• Nippon Kaiji Kyokai (Class NK)			No
• Polski Rejestr Statkow (PRS)			No
• Chinese Classification Society (CCS)			No
• Marine approval as target device			No
Ambient conditions			
Suited for indoor use			Yes
Suited for outdoor use			No
Ambient temperature during operation			
• min.	-40 °C	-40 °C	-40 °C
• max.	80 °C	80 °C	80 °C
Relative humidity			
• Operation, max.	90 %	90 %	90 %
Mechanics/material			
Material			
• Sheet steel			Yes; Powder-coated
Enclosure material (front)			
• Sheet steel	Yes	Yes	Yes; Powder-coated
Scope of supply			
Delivery quantity in pieces	1	1	1; Adapter frame 10"
Other			
Merchandise	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany		
Target devices	For MP277 8" touch	For MP277 8" key	For KTP1000 Basic, MP277 10" touch, MP377 12" touch, Thin Client 10"

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Fixing elements

Technical specifications

Article number	**6AV6574-1AF04-4AA0** Mobile Panels wall bracket, type 10	**6AV2181-5AG80-0AX0** Mobile Panels wall bracket, type 13
General information		
Product type designation	Wall-mounting bracket Mobile Panel, type 10	Wall-mounting bracket
Installation type/mounting		
Mounting in portrait format possible	Yes	Yes
Mounting in landscape format possible	No	No
Standards, approvals, certificates		
CE mark	Yes	No
RoHS conformity	Yes	Yes
Ambient conditions		
Ambient temperature during operation		
• min.	-40 °C	-40 °C
• max.	80 °C	80 °C
Relative humidity		
• Operation, max.	90 %	90 %
Mechanics/material		
Enclosure material (front)		
• Sheet steel	Yes; Powder-coated	Yes; Powder-coated
Dimensions		
Width	200 mm	230 mm
Height	230 mm	317 mm
Depth	25 mm; Constructive	125 mm
Weights		
Weight (without packaging)	550 g; Without cable holder	1.01 kg
Scope of supply		
Delivery quantity in pieces	1; Color: Black	1
Other		
Merchandise	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	Mobile Panel 170, Mobile Panel 177, Mobile Panel 277 IWLAN, Mobile Panel 277F IWLAN V1 and V2, without mounting parts	KTP400F Mobile, KTP700 Mobile, KTP700F Mobile, KTP900 Mobile, KTP900F Mobile, TP1000F without mounting parts, including cable retainer
Note:	The trickle charge is only ensured with the 6AV6671-5CE00-0AX1 charging station.	The manuals of the target devices must always be observed. Specification of the target devices may differ after product changes.

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Technical specifications

Article number	6AV6881-0AM62-0AQ0	6AV6881-0AM62-0AR0	6AV6881-0AM62-0AX0
	IcoTek Cable grommets, 6+6	IcoTek Cable grommets, 8+8	IcoTek Cable grommets, blank
General information			
Product type designation	icotek cable grommet, 6+6	icotek cable grommet, 8+8	icotek cable grommet, blank
Frame size/design			
• Standard	Yes; icotek cable grommet	Yes; icotek cable grommet	Yes; icotek cable grommet
Degree and class of protection			
IP (all-round)	up to IP68 (acc. to DIN EN 60529:2000-09)	up to IP68 (acc. to DIN EN 60529:2000-09)	up to IP68 (acc. to DIN EN 60529:2000-09)
NEMA (front)	NEMA 4x (when installed)	NEMA 4x (when installed)	NEMA 4x (when installed)
NEMA (rear)	NEMA 4x (when installed)	NEMA 4x (when installed)	NEMA 4x (when installed)
Ambient conditions			
Ambient temperature during operation			
• min.	-40 °C	-40 °C	-40 °C
• max.	140 °C	140 °C	140 °C
Accessories			
Function description	split grommet for cables with connector	split grommet for cables with connector	split grommet for cables with connector
Mechanics/material			
Material			
• Plastic	Yes; polyamide, halogen-free and silicone-free	Yes; polyamide, halogen-free and silicone-free	Yes; polyamide, halogen-free and silicone-free
Enclosure material (front)			
• Plastic	Yes; fire class: UL94-V0, self-extinguishing	Yes; fire class: UL94-V0, self-extinguishing	Yes; fire class: UL94-V0, self-extinguishing
Color	gray (similar to RAL 7035)	gray (similar to RAL 7035)	gray (similar to RAL 7035)
Dimensions			
Width	21 mm	21 mm	21 mm
Height	21 mm	21 mm	21 mm
Depth	19 mm	19 mm	19 mm
Diameter	6 mm; 2x 6 mm, cable in a grommet	8 mm; 2x 8 mm, cable in a grommet	0 mm; blank
Weights			
Weight, approx.	8 g; Per unit	8 g; Per unit	8 g; Per unit
Weight (without packaging)	40 g	40 g	40 g
Scope of supply			
Delivery quantity in pieces	5; Units per set	5; Units per set	5; Units per set
Other			
Merchandise	Yes; KT2/6gy 41201	Yes; KT2/8gy 39917	Yes; BTK gy 41251
Manufacturer name	icotek GmbH	icotek GmbH	icotek GmbH
Manufacturer's address	Bischof-von-Lipp-Str. 1, 73569 Eschach, Deutschland	Bischof-von-Lipp-Str. 1, 73569 Eschach, Deutschland	Bischof-von-Lipp-Str. 1, 73569 Eschach, Deutschland
Target devices	icotek cable entry and cable gland	icotek cable entry and cable gland	icotek cable entry and cable gland
Note:	further information is available on the manufacturer's homepage.	further information is available on the manufacturer's homepage.	further information is available on the manufacturer's homepage.

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Technical specifications

Article number	6AV6881-6AD10-0AA0 Steel mounting clip, type 2	6AV2185-8MA00-0AA0 Aluminum diecast mounting clip	6AV6671-6AP00-0AX0 Mounting clip Thin Client	6AV6671-6AP00-0AX1 Spring mounting clip Thin Client
General information				
Product type designation	Mounting clip, steel, type 2	Mounting clip, die-cast aluminum	Mounting clip, aluminum	Mounting clip, spring
Installation type/mounting				
Mounting in portrait format possible	Yes		Yes	Yes
Mounting in landscape format possible	Yes		Yes	Yes
Standards, approvals, certificates				
CE mark	No; No CE marking obligation			
RoHS conformity	Yes	Yes		Yes
Use in hazardous areas				
• ATEX Zone 2	Yes; Always comply with the operating instructions of the target device.			
• ATEX Zone 22	Yes; Always comply with the operating instructions of the target device.			
• IECEx Zone 2	Yes; Always comply with the operating instructions of the target device.			
• IECEx Zone 22	Yes; Always comply with the operating instructions of the target device.			
Ambient conditions				
Suited for indoor use	Yes			
Suited for outdoor use	Yes; possible under certain conditions			
Ambient temperature during operation				
• min.	-40 °C	-40 °C	-40 °C	-40 °C
• max.	80 °C	80 °C	80 °C	80 °C
Relative humidity				
• Operation, max.	90 %	90 %	90 %	90 %
Mechanics/material				
Material				
• Plastic	Yes; Interlock			
• Sheet steel	Yes			
Enclosure material (front)				
• Plastic				Yes; For 1 ... 4 mm sheet thickness
• Sheet steel			Yes	
• Aluminum casting		Yes		
Screw type	M4x30 round head screw			
• Cross-tip	Yes			
• 4.5 V	Yes		Yes	
• Hexagon socket		Yes		

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Technical specifications

Article number	**6AV6881-6AD10-0AA0**	**6AV2185-8MA00-0AA0**	**6AV6671-6AP00-0AX0**	**6AV6671-6AP00-0AX1**
	Steel mounting clip, type 2	Aluminum diecast mounting clip	Mounting clip Thin Client	Spring mounting clip Thin Client
Dimensions				
Width	19 mm	12 mm	15 mm	20 mm
Height	11.3 mm; Without screw	18.5 mm; Without screw	20 mm; Without screw	35 mm
Depth	15 mm			
Thickness		14 mm	15 mm	20 mm
Weights				
Weight (without packaging)	8 g	0.14 kg	4 g; Per unit	8 g; Per unit
Scope of supply				
Delivery quantity in pieces	20; Units per set	20	6; Incl. screw	6; Spring-loaded terminals
Other				
Merchandise	No	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Breslauer Strasse 5, 90766 Fürth, Germany simatic_hmi_panel_helpdesk.i-ia@siemens.com	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	Panel and IPC from 2019	Comfort Panels INOX, ITC INOX, IFP INOX	SIMATIC Thin Client	SIMATIC Thin Client
Note:				Function-compatible to article number 6AV6671-8XK00-0AX1

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Technical specifications

Article number	6AV6881-0AD56-0AA0 Round tube adapter VESA 100/75	6AV6881-0AD56-2CA0 Round tube adapter VESA 100/75 INOX
General information		
Product type designation	VESA 100/75 round tube adapter	VESA round tube adapter 100/75 INOX
Installation type/mounting		
Mounting	VESA 100 mm / 75 mm with M6 thread	VESA 100 mm / 75 mm with M6 thread
Mounting type	Support arm with VESA 100 mm or 75 mm	Support arm with VESA 100 mm or 75 mm
Degree and class of protection		
IP (at the front)	IP20 (depending on mounting)	IP20 (depending on mounting)
Ambient conditions		
Suited for indoor use	Yes	Yes
Suited for outdoor use	No	No
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	55 °C	55 °C
Relative humidity		
• Operation, max.	90 %	90 %
• Condensation permissible	No	No
Mechanics/material		
Material	steel	
• Aluminum	No; Powder-coated	
• Stainless steel		Yes; Stainless steel V2A
Dimensions		
Width	135 mm	135 mm
Height	120 mm	120 mm
Depth	67.5 mm	67.5 mm
Scope of supply		
Delivery quantity in pieces	1; VESA round tube adapter 100/75 suitable for PRO devices, max. IP20 attainable	1; VESA round tube adapter 100/75 suitable for PRO devices, max. IP20 attainable
Components included	Without additional accessories	Without additional accessories
Other		
Merchandise	Yes; VESA 100/75 PRO adapter	Yes; VESA 100/75 PRO INOX adapter
Manufacturer name	QUERUM products UG	QUERUM products UG
Manufacturer's address	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany
contacting the manufacturer	email: querumproducts@web.de	email: querumproducts@web.de
Target devices	Not suitable for 19" 4:3 devices	Not suitable for 19" 4:3 devices
Note:	Max. load 35 kg, for expandable support arm mounting	Max. load 35 kg, for expandable support arm mounting

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Technical specifications

Article number	**6AV6881-2AM12-1AA0**	**6AV6881-2AM12-2AA0**
	Switch housing KP8F	Switch housing KP8
General information		
Product type designation	Fixing element	Fixing element
Control elements		
Version of actuating element	1x emergency stop (1 NC contact / 1 NO contact)	Without, with 2x 22.5 mm blanking plugs
Operating principle of the actuating element	Latching, rotate to unlatch	
With parameterizable keys	Yes; Retrofittable with KP8F (not included in the scope of supply)	Yes; Retrofittable with KP8 or KP8F (not included in the scope of supply)
Contact configuration	1 NC contact, 1 NO contact	optionally retrofittable with switch, pushbutton, keyswitch, etc.
Installation type/mounting		
Mounting	For horizontal and vertical mounting	For horizontal and vertical mounting
Mounting type	Backplane mounting	Backplane mounting
Mounting in portrait format possible	Yes	Yes
Degree and class of protection		
IP (all-round)	IP65	IP65
Standards, approvals, certificates		
REACH	Yes	Yes
RoHS conformity	Yes; Not necessary	Yes; Not necessary
Use in hazardous areas		
• ATEX Zone 2	No	No
• ATEX Zone 22	No	No
• ATEX as target device	No	No
• IECEx Zone 1	No	No
• IECEx Zone 11	No	No
• IECEx Zone 2	No	No
• IECEx Zone 22	No	No
• cULus Class I Zone 1	No	No
• cULus Class I Zone 2, Division 2	No	No
• cULus Class II Division 2	No	No
• FM Class I Division 2	No	No
• FM Class II Division 2	No	No
Marine approval		
• Germanischer Lloyd (GL)	No	No
• American Bureau of Shipping (ABS)	No	No
• Bureau Veritas (BV)	No	No
• Det Norske Veritas (DNV)	No	No
• Korean Register of Shipping (KRS)	No	No
• Lloyds Register of Shipping (LRS)	No	No
• Nippon Kaiji Kyokai (Class NK)	No	No
• Polski Rejestr Statkow (PRS)	No	No
• Chinese Classification Society (CCS)	No	No
• Marine approval as target device	No	No

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Technical specifications

Article number	**6AV6881-2AM12-1AA0**	**6AV6881-2AM12-2AA0**
	Switch housing KP8F	Switch housing KP8
Ambient conditions		
Suited for indoor use	Yes	Yes
Suited for outdoor use	No; possible under certain conditions	No; possible under certain conditions
Ambient temperature during operation		
• min.	0 °C; Operating temperature KP8F must always be maintained	0 °C; Operating temperature KP8 or KP8F must always be maintained
• max.	40 °C; Operating temperature KP8F must always be maintained	40 °C; Operating temperature KP8 or KP8F must always be maintained
Relative humidity		
• Operation, max.	90 %	90 %
• Condensation permissible	No; Condensation not permissible	No; Condensation not permissible
Mechanics/material		
Material	aluminum	aluminum
• Aluminum	Yes; Powder-coated	Yes; Powder-coated
Dimensions		
Width	259 mm	259 mm
Height	128 mm	128 mm
Depth	90 mm	90 mm
Scope of supply		
Delivery quantity in pieces	1; Bopla #115234 aluminum enclosure	1; Bopla #115234 aluminum enclosure
Components included	1x Icotek cable entry KEL-ER B4 incl. various grommets	1x Icotek cable entry KEL-ER B4 incl. various grommets
Other		
Merchandise	Yes	Yes
Manufacturer name	Wittwer Industrielle Elektronik	Wittwer Industrielle Elektronik
Manufacturer's address	Hembacher Straße 4, 90592 Schwarzenbruck-Lindelburg, Germany	Hembacher Straße 4, 90592 Schwarzenbruck-Lindelburg, Germany
	Email: info@wittwer.com	Email: info@wittwer.com
Target devices	Suitable for the installation of KP8, KP8F, do not exceed the maximum operating temperature of the KP!	Suitable for the installation of KP8, KP8F, do not exceed the maximum operating temperature of the KP!
Note:	IP65 can only be attained if a key panel and a cable entry are properly installed.	IP65 can only be attained if a key panel and a cable entry are properly installed.

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Technical specifications

Article number	**6AV6881-4AW41-4AA0**
	Locking bolt PRO
General information	
Product type designation	PRO interlock bolts:
Installation type/mounting	
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
Degree and class of protection	
IP (all-round)	none
Ambient conditions	
Ambient temperature during operation	
• min.	-40 °C
• max.	80 °C
Relative humidity	
• Operation, max.	90 %
Mechanics/material	
Interlock design	M8 screw fastening
Enclosure material (front)	
• Plastic	Yes; mushroom knob, thermoplast, black gray
• Stainless steel	Yes; pin, hardened
Torques/forces	
• Tightening torque, min.	0.18 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed
• Tightening torque, max.	0.2 N·m
• Tightening torque, recommended	0.2 N·m; Higher torques may damage the product
Dimensions	
Length	40.5 mm; total length
Diameter	8 mm
Weights	
Weight (without packaging)	5 g; Per unit
Scope of supply	
Delivery quantity in pieces	1; Units per set
Other	
Merchandise	Yes; 03093-201004
Manufacturer name	Berner + Straller GmbH
Manufacturer's address	Wörnitzstr. 117, 90449 Nuremberg, Deutschland
	Email: nuernberg@berner-straller.de
Target devices	for locking inclination adjustments, e.g. suitable for keyboards or shelves

More information

Note:

3D data and technical drawings for trade goods are only available for download in the SIOS delivery release if the manufacturer has granted permission.
Integration into the Siemens 3D download area is unfortunately not possible. For this reason, it is also not possible to provide a 3D (Step) file for every accessory.
The responsibility for trade good files always lies with the manufacturer.
The manufacturer is listed at the end of the technical specifications for each product.

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.
Industry Mall:

https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically. This facilitates selection of suitable accessories.

http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

http://support.automation.siemens.com

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Labeling strips

Overview

Labeling strips and printable films

Labeling strips enable keys and pushbuttons to be labeled. Print templates for the Panels and IPCs are available for downloading free of charge (in SIOS entry ID: 11274631).
They enable you to create transparent films on your own printer.

Perforated labeling strips are available for some classic panels. In this case, make sure that a suitable printer is used.

The thickness of the films should be between 100 and 125 µm.

- Labeling strips
- Front film
- Labeling set
- Protective sleeve

Note:

Protective front films which are specially designed for holding labeling strips are available for Mobile Panel 2nd Generation. The labeling strips can be printed on standard film and attached to the front with adhesive pads. The protective film is then adhered evenly over the Mobile front.

Ordering data

	Article No.
Labeling strips for MP 377 Key	**6AV6574-1AB00-2BA0**
Front film TD400C blank	**6AV6671-0AP00-0AX0**
Labeling set for Mobile Panel 277	**6AV6671-5BF00-0AX0**
Widescreen labeling set	
• 4" widescreen for KTP400F Mobile 4"	**6AV2181-5DJ10-0AX0**
• 7" widescreen for KTP700 Mobile, KTP700F Mobile	**6AV2181-5GJ10-0AX0**
• 9" widescreen for KTP900 Mobile, KTP900F Mobile	**6AV2181-5JJ10-0AX0**
Protective sleeve for Mobile Panel 170/177	**6AV6574-1AB04-4AA0**

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Technical specifications

Article number	6AV6574-1AB00-2BA0 Labeling strips MP 37x Key	6AV6671-0AP00-0AX0 TD400C front film, blank	6AV6671-5BF00-0AX0 Labeling set Mobile Panel 277	6AV6574-1AB04-4AA0 Protective pouch for labeling strips
General information				
Product type designation	Labeling strip MP 37x key	Front membrane TD400C, blank	Labeling set Mobile Panel 277	Protective pouch labeling strips
Installation type/mounting				
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes
Standards, approvals, certificates				
CE mark		Yes	Yes	
RoHS conformity		Yes		
Ambient conditions				
Ambient temperature during operation				
• min.	-40 °C	-40 °C	-40 °C	-40 °C
• max.	80 °C	80 °C	80 °C	80 °C
Relative humidity				
• Operation, max.	90 %	90 %	90 %	90 %
Mechanics/material				
Enclosure material (front)				
• Plastic	Yes; DIN A4 perforated sheets			
Dimensions				
Width	210 mm	210 mm	210 mm	170 mm; Approximate dimension
Height	297 mm	297 mm	297 mm	115 mm; Approximate dimension
Thickness	0.13 mm; Max. tolerance ± 0.03 mm			
Width of the housing front		163 mm		
Height of housing front		91 mm		
Weights				
Weight (without packaging)	45 g			
Scope of supply				
Delivery quantity in pieces	1; Contains two sets	10	2; 2 sheets with 3 labeling strips each, incl. corner seals, O-ring, replacement screw, decorative film for corner seal	5
• Number of films per sheet		2	6	
• Parts per unit	2; one set comprises a set of vertical and a set of horizontal labeling strips	20	6	1
Other				
printable with laser printer	Yes; Test printer suitability beforehand. No liability for printer damage	Yes	Yes	No
Merchandise	No	No	No	Yes
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	For MP370 key, MP377 key	For TD400C	For Mobile Panel 277	For Mobile Panel 170, Mobile Panel 177
Note:	Transparent film, keys pre-printed in gray, LED area free			

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Labeling strips

Technical specifications

Article number	6AV2181-5DJ10-0AX0	6AV2181-5GJ10-0AX0	6AV2181-5JJ10-0AX0
	Labeling set 4" wide, type 13	Labeling set 7" wide, type 13	Labeling set 9" wide, type 13
General information			
Product type designation	Labeling set 4" widescreen	Labeling set 7" widescreen	Labeling set 9" widescreen
Display			
Suitable for screen diagonal	4.3 in	7 in	9 in
Installation type/mounting			
Mounting in portrait format possible	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes
Ambient conditions			
Suited for indoor use	Yes; Resistant to alcohol, dilute acids, diluted alkaline solutions, hydrocarbons, household cleaning agents	Yes; Resistant to alcohol, dilute acids, diluted alkaline solutions, hydrocarbons, household cleaning agents	Yes; Resistant to alcohol, dilute acids, diluted alkaline solutions, hydrocarbons, household cleaning agents
Ambient temperature during operation			
• min.	-40 °C	-40 °C	-40 °C
• max.	80 °C	80 °C	80 °C
Relative humidity			
• Operation, max.	90 %	90 %	90 %
Mechanics/material			
Material			
• Plastic	Yes; Autoflex EBA 130	Yes; Autoflex EBA 130	Yes; Autoflex EBA 130
Enclosure material (front)			
• Plastic	Yes; Film properties: Anti-glare 55 %, hardness 3H	Yes; Film properties: Anti-glare 55 %, hardness 3H	Yes; Film properties: Anti-glare 55 %, hardness 3H
Dimensions			
Width	168 mm	224 mm	283 mm
Height	120 mm	149 mm	178 mm
Thickness	0.125 mm	0.125 mm	0.125 mm
Weights			
Weight (without packaging)	60 g	80 g	100 g
Scope of supply			
Delivery quantity in pieces	5	5	5
Components included	including 20 double-sided adhesive dots	including 20 double-sided adhesive dots	including 20 double-sided adhesive dots
Other			
printable with laser printer	No	No	No
Merchandise	Yes	Yes	Yes
Manufacturer name	Kolb-Siebdruck GmbH & Co. KG	Kolb-Siebdruck GmbH & Co. KG	Kolb-Siebdruck GmbH & Co. KG
Manufacturer's address	Espenstraße 5, 95632 Wunsiedel, Germany	Espenstraße 5, 95632 Wunsiedel, Germany	Espenstraße 5, 95632 Wunsiedel, Germany
Target devices	KTP400F Mobile	KTP700 Mobile, KTP700F Mobile	KTP900 Mobile, KTP900F Mobile
Note:	Labeling strip SIOS entry No. 11274631	Labeling strip SIOS entry No. 11274631	Labeling strip SIOS entry No. 11274631

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More information

Notice:

The labeling strips, blank films, and protective films should be printed at a printing works. Further details on printing the films can be found in the respective Technical Specifications.

Templates can be used to create labeling strips for SIMATIC HMI devices. Alternatively, a tool for the creation of labeling strips is available.

Download templates from:

http://support.automation.siemens.com/WW/view/en/11274631
and

Label Creator Download from:

http://support.automation.siemens.com/WW/view/en/61507590

Note:

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.
Industry Mall:

https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically. This facilitates selection of suitable accessories.

http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

http://support.automation.siemens.com/

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Overview

USB keyboard GER, KV25605, INOX and keyboard tray for HMI PRO devices

Keyboard with tray

Input devices

Input devices are all those devices via which information can be supplied to a computer or panel. This enables interaction with a program.

SIMATIC HMI input devices are specially designed for operation on Panels and industrial PCs in industrial environments. Trade goods, which are identified as such in the technical specifications, have been approved by the manufacturer for typical office applications. Siemens does not always carry out in-depth industrial testing on trade goods.

The following input devices are available for use with IPCs and Panels:

- Desktop keyboards
- Built-in and mounted keyboards
- Removable keyboard
- USB mouse
- USB cables
- RFID components for user identification

RFID components make it possible to log on to a suitable HMI panel or IPC using a chip card.
The RFID reader is connected to the panel via USB.

Suitable RFID system card types:

- ISO 15693, dimensions: 85 x 54 x 0.8 mm (L x W x H)
- ISO 15693, dimensions: 50 x 3.5 mm (D x H) disc
- MOBY E (MIFARE, ISO 14443), dimensions: 85 x 54 x 0.8 mm (L x W x H)
- MOBY E (MIFARE, ISO 14443), dimensions: 85 x 54 x 2.5 mm (L x W x H)

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Ordering data	Article No.
USB keyboard TKL-105	
IP68 keyboard, black, with USB connection	
• with German layout	**6AV6881-0AU14-0AA0**
• with international US layout	**6AV6881-0AU14-1AA0**
USB keyboard TKV-086 IP65 stainless steel	
Desktop keyboard, INOX vandal-proof, also suitable for PRO system [1]. Incl. 4 plastic adhesive feet [2], cable holder/ties for fixing the USB cable.	
IP65 keyboard stainless steel with IP67 USB connection, incl. accessories	
• with German layout	**6AV6881-0AU14-0DB0**
• with international US layout	**6AV6881-0AU14-1DB0**
Tray for PRO devices	
For installation on all PRO devices with fully-enclosed IP65 protection with suitable mechanics. With 2x USB connection sockets including USB cable. Unused socket can be sealed to IP65	
• Tray in RAL9023 (gray) for all 4:3 PRO devices with fully-enclosed IP65 protection	**6AV7674-0NE01-0AA0**
Membrane keyboard IP65	
with touchpad, PS/2	
• with German layout	**6GF6710-2AC**
• with international US layout	**6GF6710-2BC**
Removable keyboard	
19" removable keyboard with trackball, PS/2	
• with German layout	**6GF6710-3BJ**
• with international US layout	**6GF6710-3BK**
Built-in keyboard, touchpad	
19" built-in keyboard, 4U with touchpad, PS/2	
• with German layout	**6GF6710-3AE**
• with international US layout	**6GF6710-3BE**
Built-in keyboard, trackball, international	**6GF6710-3BG**
Built-in keyboard with trackball, PS/2	
USB 2.0 mouse	**6AV2181-8AT00-0AX0**
For HMI Panels, programming devices and IPCs with corresponding interfaces. Color: Anthracite	

	Article No.
USB cables [3]	
USB cable 2.0	
• Type A female USB A, IP20 / male USB A, IP20, length 2.5 m	**6AV6881-0AF21-0LB0**
• Type B with M20 screw sealing, female USB A, IP67 / male USB A, IP20, length 0.8 m	**6AV6881-0AF22-0DC0**
• Type C with M20 screw sealing, female USB A, IP67 / male USB A, IP20, length 2.5 m	**6AV6881-0AF22-0LC0**
• Type D female, USB A, IP67 / male USB A, IP20, length 2.5 m	**6AV6881-0AF21-0LC0**
SIMATIC RF1060R Access Control Reader	**6GT2831-6AA50**
Access control reader with USB interface; can only be used to a limited extent in outdoor environments -25 to +55 °C; incl. 1.8 m connecting cable	
SIMATIC RF200 card holder	**6GT2890-0CA00**
Optional, for clipping onto the RF1060R Access Control Reader card. Can be temporarily stored on the reader.	
RFID D400 replacement cards	**6GT2600-4AD00**
Transponder MDS, ISO 15693: Minimum order quantity 50 units	
RFID E600 replacement cards	**6GT2300-0AA00**
MOBY E (MIFARE, ISO 14443) Minimum order quantity 50 units	

[1] Further mechanical attachment parts (keyboard tray, etc.) are required for use on PRO systems. Observe the respective specifications of the target systems!

[2] Plastic adhesive feet can be attached on the underside of the keyboard at the marked locations.

[3] With specification IP20, the connector type specified on the cable corresponds to a standard USB connector. With specification IP67, it corresponds to a connector with IP67-protected screw connection. IP67 connectors are fitted with a cover to ensure degree of protection IP67 even when the connector is unplugged and the cover is unscrewed. In some cases a M20 screw sealing is already part of the cable. This version can be used for IP65 transitions (PRO system/control cabinet). The IP67 sockets are also suitable for standard USB connectors, however in those cases the degree of protection is reduced to IP20.
Note: A maximum cable length of 3 m should not be exceeded!

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Technical specifications

Article number	6AV6881-0AU14-0DB0 USB keyboard GER, KV25605, INOX	6AV6881-0AU14-1DB0 USB keyboard INT, KV25605, INOX
General information		
Product type designation	USB keyboard GERMAN	USB keyboard international US
Control elements		
Version of actuating element	Long-stroke key with 2 mm contact travel	Long-stroke key with 2 mm contact travel
Operating principle of the actuating element	Carbon pellet on gold-plated PCB	Carbon pellet on gold-plated PCB
Input device		
• Scroll wheel	No; Cursor control possible, left and right mouse button	No; Cursor control possible, left and right mouse button
• Movement tracking	Capacitive touchpad	Capacitive touchpad
Keyboard fonts		
• Design	Keyboard with long-stroke keys	Keyboard with long-stroke keys
• Keyboard assignment	86 (Germany QWERTZ)	86 (International QWERTY, US version)
• Color of the buttons	Stainless steel	Stainless steel
• Color of the key inscription	Black, laser-inscribed	Black, laser-inscribed
• Key illumination	No	No
• Function keys	Yes	Yes
- Number of function keys	12	12
- Number of function keys with LEDs	0	0
- Programmable	No	No
• Number pad	Yes; Integrated into key layout	Yes; Integrated into key layout
• status LED displays	Yes; Num, FN, Shift, Scroll lock	Yes; Num, FN, Shift, Scroll lock
- for number pad	Yes	Yes
- for Shift keys	Yes	Yes
Connection type		
• USB	Yes; USB 2.0 type A	Yes; USB 2.0 type A
• PS/2	No	No
• Cable length	0 m; See cable length	0 m; See cable length
Frame size/design		
• Standard	Yes; For industrial applications	Yes; For industrial applications
Installation type/mounting		
Mounting	Desktop, PRO support arm, drawer	Desktop, PRO support arm, drawer
Mounting type	Suitable for PRO devices	Suitable for PRO devices
Supply voltage		
Rated value (DC)	5 V; 4.35 V to 5.25 V (USB)	5 V; 4.35 V to 5.25 V (USB)
Input current		
Current consumption (rated value)	55 mA; including touchpad and LED	55 mA; including touchpad and LED
Battery		
Battery-operated	No; maintenance-free	No; maintenance-free
Interfaces		
Number of USB interfaces	1; USB 2.0 (IP67 plug enclosure)	1; USB 2.0 (IP67 plug enclosure)
Degree and class of protection		
IP (all-round)	IP65	IP65
IP (at the front)	USB plug, meets IP67 with screws, if only inserted then without IP	USB plug, meets IP67 with screws, if only inserted then without IP
Standards, approvals, certificates		
CE mark	Yes	Yes
UL approval	Yes; Available soon	Yes; Available soon
cULus	Yes; Available soon	Yes; Available soon
EAC (formerly Gost-R)	Yes; Available soon	Yes; Available soon
CCC	No; not necessary	No; not necessary
BIS	No; required for export to India	No; required for export to India
RoHS conformity	Yes	Yes
China RoHS compliance	Yes; Available soon	Yes; Available soon
Suitable for safety functions	No	No

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Technical specifications

Article number	6AV6881-0AU14-0DB0	6AV6881-0AU14-1DB0
	USB keyboard GER, KV25605, INOX	USB keyboard INT, KV25605, INOX
Ambient conditions		
Suited for indoor use	Yes	Yes
Suited for outdoor use	No; > 0 °C possible under certain conditions	No; > 0 °C possible under certain conditions
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	60 °C	60 °C
Relative humidity		
• Operation, max.	80 %; no condensation	80 %; no condensation
• Condensation permissible	No	No
Operating systems		
Runs under operating system		
• Windows CE	Yes	Yes
• Windows Vista	Yes	Yes
• Windows XP	Yes	Yes
• Windows 7	Yes	Yes
• Windows 8	Yes	Yes
• Windows 10	Yes	Yes
Cables		
Cable length	0.4 m; USB	0.4 m; USB
Mechanics/material		
Material		
• Stainless steel	Yes; Front stainless steel AISI 304	Yes; Front stainless steel AISI 304
Enclosure material (rear)	aluminum	aluminum
Material of the front ring	Generally silicone-free PORON seal	Generally silicone-free PORON seal
Enclosure color (front)	INOX AISI 304	INOX AISI 304
Enclosure color (rear)	Aluminum paint	Aluminum paint
Torques/forces		
• Breakdown torque	1.5 N·m; Switching force buttons 1.5 N to 1.8 N	1.5 N·m; Switching force buttons 1.5 N to 1.8 N
Service life		
• Number of operating cycles, keys	20 000 000; Operations (minimum)	20 000 000; Operations (minimum)
Dimensions		
Width	369 mm	369 mm
Height	18 mm	18 mm
Depth	130 mm; Without cable outlet (with + 3 cm)	130 mm; Without cable outlet (with + 3 cm)
Scope of supply		
Delivery quantity in pieces	1	1
Other		
printable with laser printer	No; Layout change possible, one-off costs around € 2 000	No; Layout change possible, one-off costs around € 2 000
Merchandise	Yes; GETT KV25605 / VES001681	Yes; GETT KV27610 / VES001681
Manufacturer name	GETT Gerätetechnik GmbH	GETT Gerätetechnik GmbH
Manufacturer's address	Mittlerer Ring 1, 08233 Treuen (Vogtland), Germany	Mittlerer Ring 1, 08233 Treuen (Vogtland), Germany
contacting the manufacturer	Phone +49 37468 660-0, email: info@gett.de	Phone +49 37468 660-0, email: info@gett.de
Target devices	For SIMATIC HMI devices and IPCs with the appropriate slot	For SIMATIC HMI devices and IPCs with the appropriate slot

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Technical specifications

Article number	6AV6881-0AU14-0AA0	6AV6881-0AU14-1AA0
	USB keyboard GER, TKL-105	USB keyboard INT, TKL-105
General information		
Product type designation	USB keyboard GERMAN	USB keyboard international US
Control elements		
Version of actuating element	Long-stroke key with 4 mm contact travel	Long-stroke key with 4 mm contact travel
Operating principle of the actuating element	Keyboard with long-stroke keys with membrane switching contacts	Keyboard with long-stroke keys with membrane switching contacts
Input device		
• Scroll wheel	No	No
• Movement tracking	none	none
Keyboard fonts		
• Design	Keyboard with long-stroke keys	Keyboard with long-stroke keys
• Keyboard assignment	105 keys, German layout	105 keys, international US layout
• Color of the buttons	Black	Black
• Color of the key inscription	White	White
• Key illumination	No	No
• Function keys	Yes	Yes
- Number of function keys	12	12
- Number of function keys with LEDs	0	0
- Programmable	No	No
• Number pad	Yes; Free-standing	Yes; Free-standing
• status LED displays	Yes; Num, Caps and Scroll	Yes; Num, Caps and Scroll
- for number pad	Yes	Yes
- for Shift keys	Yes	Yes
Connection type		
• USB	Yes; USB 2.0 type A	Yes; USB 2.0 type A
• PS/2	No	No
• Cable length	0 m; See cable length	0 m; See cable length
Frame size/design		
• Standard	Yes; For industrial applications	Yes; For industrial applications
Installation type/mounting		
Mounting	Desktop	Desktop
Mounting type	none	none
Supply voltage		
Rated value (DC)	5 V; via USB	5 V; via USB
Battery		
Battery-operated	No; maintenance-free	No; maintenance-free
Interfaces		
Number of USB interfaces	1; USB 2.0	1; USB 2.0
Degree and class of protection		
IP (all-round)	IP68 all-round and dishwasher safe	IP68 all-round and dishwasher safe
IP (at the front)	USB connector without degree of protection	USB connector without degree of protection
Standards, approvals, certificates		
CE mark	Yes	Yes
UL approval	Yes; cUL	Yes; cUL
cULus	Yes; cUL	Yes; cUL
KC approval	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes
BIS	No; required for export to India	No; required for export to India
RoHS conformity	Yes	Yes
Suitable for safety functions	No	No

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Technical specifications

Article number	6AV6881-0AU14-0AA0	6AV6881-0AU14-1AA0
	USB keyboard GER, TKL-105	USB keyboard INT, TKL-105
Ambient conditions		
Suited for indoor use	Yes	Yes
Suited for outdoor use	No; possible under certain conditions	No; possible under certain conditions
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	70 °C	70 °C
Relative humidity		
• Operation, max.	80 %; no condensation	80 %; no condensation
• Condensation permissible	No	No
Operating systems		
Runs under operating system		
• Windows CE	Yes	Yes
• Windows Vista	Yes	Yes
• Windows XP	Yes	Yes
• Windows 7	Yes	Yes
• Windows 8	Yes	Yes
• Windows 10	Yes	Yes
Cables		
Cable length	1.5 m; USB	1.5 m; USB
Mechanics/material		
Material		
• Plastic	Yes; Black	Yes; Black
Enclosure material (front)		
• Plastic	Yes; ABS with antimicrobial coating	Yes; ABS with antimicrobial coating
Enclosure color (front)	Black	Black
Enclosure color (rear)	Black	Black
Torques/forces		
• Breakdown torque	0.53 N·m; Switching force buttons	0.53 N·m; Switching force buttons
Service life		
• Number of operating cycles, keys	10 000 000; Operations (minimum)	10 000 000; Operations (minimum)
Dimensions		
Width	459 mm	459 mm
Height	35 mm	35 mm
Depth	174 mm	174 mm
Weights		
Weight (without packaging)	800 g	800 g
Scope of supply		
Delivery quantity in pieces	1	1
Other		
printable with laser printer	No; Layout change possible, one-off costs around € 2 000	No; Layout change possible, one-off costs around € 2 000
Merchandise	Yes; GETT TKL-105	Yes; GETT TKL-105
Manufacturer name	GETT Gerätetechnik GmbH	GETT Gerätetechnik GmbH
Manufacturer's address	Mittlerer Ring 1, 08233 Treuen (Vogtland), Germany	Mittlerer Ring 1, 08233 Treuen (Vogtland), Germany
contacting the manufacturer	Phone +49 37468 660-0, email: info@gett.de	Phone +49 37468 660-0, email: info@gett.de
Target devices	For SIMATIC HMI devices and IPCs with the appropriate slot	For SIMATIC HMI devices and IPCs with the appropriate slot
Note:	Corresponds to KL21203	Corresponds to KL24603

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Technical specifications

Article number	6AV7674-0NE01-0AA0 Shelf for 4:3 PRO devices
General information	
Product type designation	Tray incl. 2x USB
Control elements	
Connection type	
• USB	Yes; USB 2.0
• PS/2	No
• Cable length	500 mm; Typical
Frame size/design	
• Standard	Yes; For industrial applications
• Ergonomic	Yes; 90° adjustable / tiltable
Ergonomics	
• Trackball rest	No
• Adjustable height	Yes; By adjusting inclination angle 0° to 90°
Installation type/mounting	
Mounting	Max. load bearing capacity of 2 kg
Mounting type	Suitable for PRO devices
maximum permissible angle of inclination without external ventilation	90°; Between 0° and 90° in steps of 15°
Interfaces	
Number of USB interfaces	2; USB 2.0
Degree and class of protection	
IP (all-round)	IP65 fully enclosed (when protective cover is closed)
Standards, approvals, certificates	
RoHS conformity	Yes

Article number	6AV7674-0NE01-0AA0 Shelf for 4:3 PRO devices
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	45 °C
Relative humidity	
• Operation, max.	80 %; no condensation
• Condensation permissible	No; Condensation not permissible
Mechanics/material	
Material	
• Aluminum	Yes; Powder-coated, RAL 9023
Dimensions	
Width	500 mm
Height	64 mm
Depth	200 mm
Weights	
Weight (without packaging)	3 000 g
Scope of supply	
Delivery quantity in pieces	1; With support arm bracket, without keyboard
Other	
Merchandise	Yes; Sasse no. 1580.9906124
Manufacturer name	Sasse Elektronik GmbH
Manufacturer's address	Berliner Straße 12, 91126 Schwabach, Germany
Target devices	Merchandise suitable for 4:3 PRO devices

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Technical specifications

Article number	6AV6881-0AF21-0LB0	6AV6881-0AF22-0DC0	6AV6881-0AF22-0LC0	6AV6881-0AF21-0LC0
	USB cable Typ A	USB cable Typ B	USB cable Typ C	USB cable Typ D
General information				
Product type designation	Connecting cable USB	Connecting cable USB	Connecting cable USB	Connecting cable USB
Control elements				
Connection type				
• USB	Yes; USB 2.0 Typ A IP20 to Typ A IP20	Yes; USB 2.0 Typ x IP67 to Typ A IP20	Yes; USB 2.0 Typ x IP67 to Typ A IP20	Yes; USB 2.0 Typ x IP67 to Typ A IP20
Degree and class of protection				
IP (all-round)	IP20	On the female side up to IP65 screw connection, then IP20	On the female side up to IP65 screw connection, then IP20	On the female side up to IP65 screw connection, then IP20
Standards, approvals, certificates				
CE mark	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation
RoHS conformity	Yes	Yes	Yes	Yes
Ambient conditions				
Suited for indoor use	Yes; Always comply with the operating instructions of the target device.	Yes; Always comply with the operating instructions of the target device.	Yes; Always comply with the operating instructions of the target device.	Yes; Always comply with the operating instructions of the target device.
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	55 °C	55 °C	55 °C	55 °C
Relative humidity				
• Operation, max.	95 %	95 %	95 %	95 %
Cables				
Cable length	2.5 m	2.5 m	2.5 m	0.8 m
smallest bending radius	0 mm; 10x d (cable diameter)	0 mm; 10x d (cable diameter)	0 mm; 10x d (cable diameter)	0 mm; 10x d (cable diameter)
Color of cable sheath	Black	Black	Black	Black
Mechanics/material				
Enclosure material (front)				
• Plastic	Yes; Connector enclosure	Yes; Connector enclosure	Yes; Connector enclosure	Yes; Connector enclosure
Torques/forces				
• Tightening torque, min.		1 N·m; Hand-tight	1 N·m; Hand-tight	1 N·m; Hand-tight
• Tightening torque, max.		1.5 N·m; Hand-tight	1.5 N·m; Hand-tight	1.5 N·m; Hand-tight
Scope of supply				
Delivery quantity in pieces	1; USB 2.0 cable (max. 500 mA)	1; USB 2.0 cable (max. 500 mA)	1; USB 2.0 cable (max. 500 mA)	1; USB 2.0 cable (max. 500 mA)
Other				
Merchandise	Yes; USB-IP20-2500-C7294-Siemens	Yes; USB-IP67-2500M-C7294-Siemens	Yes; USB-IP67-2500-C7294-Siemens	Yes; USB-IP67-800M-C7294-Siemens
Manufacturer name	GETT Gerätetechnik GmbH	GETT Gerätetechnik GmbH	GETT Gerätetechnik GmbH	GETT Gerätetechnik GmbH
Manufacturer's address	Mittlerer Ring 1, 08233 Treuen (Vogtland), Germany	Mittlerer Ring 1, 08233 Treuen (Vogtland), Germany	Mittlerer Ring 1, 08233 Treuen (Vogtland), Germany	Mittlerer Ring 1, 08233 Treuen (Vogtland), Germany
Target devices	For Panels and PC systems with suitable interface; observe operating instructions of the target device!	For Panels and PC systems with suitable interface; observe operating instructions of the target device!	For Panels and PC systems with suitable interface; observe operating instructions of the target device!	For Panels and PC systems with suitable interface; observe operating instructions of the target device!
Note:	Request certificates and drawings from manufacturer	Request certificates and drawings from manufacturer	Request certificates and drawings from manufacturer	Request certificates and drawings from manufacturer

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Technical specifications

Article number	**6GF6710-2AC** PS2 foil keyboard GER, touchpad	**6GF6710-2BC** PS2 foil keyboard INT, touchpad
General information		
Product type designation	PS/2 membrane keyboard GER	PS/2 membrane keyboard INT
Control elements		
Keyboard fonts		
• Design	Membrane keyboard	Membrane keyboard
• Keyboard assignment	B3F, 101/102 or 104/105 OMRON	B3F, 101/102 or 104/105 OMRON
• Key illumination	No	No
• Function keys		
- Number of function keys	12	12
- Programmable	Yes	Yes
• Number pad	Yes	Yes
• status LED displays	Yes; Num, Caps and Scroll	Yes; Num, Caps and Scroll
- for number pad	Yes	Yes
- for Shift keys	Yes	Yes
Connection type		
• USB	Yes; With PS/2 USB adapter (not included in the scope of supply)	Yes; With PS/2 USB adapter (not included in the scope of supply)
• PS/2	Yes	Yes
• Cable length	1.75 m	1.75 m
Frame size/design		
• Standard	Yes; For industrial applications	Yes; For industrial applications
Installation type/mounting		
Rack mounting	No; Desktop housing	No; Desktop housing
Input current		
Current consumption (rated value)	25 mA; Typical	25 mA; Typical
Battery		
Battery-operated	No; maintenance-free	No; maintenance-free
Degree and class of protection		
IP (all-round)	IP65	IP65
Splashproof	Yes	Yes
Standards, approvals, certificates		
CE mark	Yes	Yes
RoHS conformity	Yes	Yes
Ambient conditions		
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	40 °C	40 °C
Relative humidity		
• Operation, max.	90 %; no condensation	90 %; no condensation
• Condensation permissible	No	No

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Technical specifications

Article number	**6GF6710-2AC** PS2 foil keyboard GER, touchpad	**6GF6710-2BC** PS2 foil keyboard INT, touchpad
Operating systems		
Runs under operating system		
• Windows CE	Yes	Yes
• Windows Vista	Yes	Yes
• Windows XP	Yes	Yes
• Windows 7	Yes	Yes
• Windows 10	Yes	Yes
Mechanics/material		
Material		
• Plastic	Yes; AUTOTEX (R) V150	Yes; AUTOTEX (R) V150
• Sheet steel	No	No
Enclosure material (front)		
• Plastic	Yes; AUTOTEX (R) V150	Yes; AUTOTEX (R) V150
Service life		
• Number of operating cycles, keys	1 000 000; Operations (minimum)	1 000 000; Operations (minimum)
Dimensions		
Width	478.5 mm	478.5 mm
Height	28 mm	28 mm
Depth	180 mm	180 mm
Weights		
Weight (without packaging)	2 260 g	2 260 g
Scope of supply		
Delivery quantity in pieces	1; Membrane keyboard with mouse pad	1; Membrane keyboard with mouse pad
Other		
Merchandise	Yes; TIPRO no. K-547	Yes; TIPRO no. K-547
Manufacturer name	TIPRO Representative Office	TIPRO Representative Office
Manufacturer's address	Vogelweg 20, 31785 Hameln, Germany	Vogelweg 20, 31785 Hameln, Germany
Target devices	Suitable for IPC and HMI devices with the corresponding interfaces (see manual)	Suitable for IPC and HMI devices with the corresponding interfaces (see manual)
Note:	Suitable PS/2 USB adapter (keyboard/mouse): 1x USB 1.1, plug A on 2x PS/2 sockets, 0.20 m, black; manufacturer: Renkforce; supply by Conrad Elektronik, order no.: 1360251 - 62	Suitable PS/2 USB adapter (keyboard/mouse): 1x USB 1.1, plug A on 2x PS/2 sockets, 0.20 m, black; manufacturer: Renkforce; supply by Conrad Elektronik, order no.: 1360251 - 62

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Technical specifications

Article number	**6GF6710-3BJ** PS2 keyboard 19" GER Trackb.	**6GF6710-3BK** PS2 keyboard 19" INT Trackb.
General information		
Product type designation	PS/2 withdrawable keyboard GER	PS/2 withdrawable keyboard INT
Control elements		
Keyboard fonts		
• Design	Membrane keyboard	Membrane keyboard
• Keyboard assignment	84 (Germany (QWERTZ))	84 (US version)
• Color of the buttons	light gray	light gray
• Color of the key inscription	dark gray	dark gray
• Key illumination	No	No
• Function keys		
- Number of function keys	12	12
• Number pad	Yes; Integrated into key layout	Yes; Integrated into key layout
• status LED displays	Yes; Num, Caps, Scroll and Pad	Yes; Num, Caps, Scroll and Pad
- for number pad	Yes	Yes
- for Shift keys	Yes	Yes
Connection type		
• Bluetooth radio standard	No	No
• USB	No	No
• PS/2	Yes	Yes
• Cable length	1.5 m	1.5 m
Frame size/design		
• Standard	Yes; For industrial applications	Yes; For industrial applications
• 19" keyboard	Yes	Yes
Installation type/mounting		
Rack mounting	Yes	Yes
Front mounting	No	No
Wall mounting/direct mounting	No	No
maximum permissible angle of inclination without external ventilation	0°	0°
Supply voltage		
Design of the power supply	via PS/2	via PS/2
Input current		
Current consumption (rated value)	10 mA; Typical	10 mA; Typical
Battery		
Battery-operated	No; maintenance-free	No; maintenance-free
Degree and class of protection		
Splashproof	No	No
Standards, approvals, certificates		
CE mark	Yes	Yes
RoHS conformity	Yes	Yes
Ambient conditions		
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	50 °C	50 °C
Relative humidity		
• Operation, max.	80 %; no condensation	80 %; no condensation
• Condensation permissible	No	No

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Technical specifications

Article number	6GF6710-3BJ PS2 keyboard 19" GER Trackb.	6GF6710-3BK PS2 keyboard 19" INT Trackb.
Operating systems		
Runs under operating system		
• Windows CE	Yes	Yes
• Windows Vista	Yes	Yes
• Windows XP	Yes	Yes
• Windows 7	Yes	Yes
• Windows 8	Yes	Yes
• Windows 10		Yes
connection method / header		
Connector type	PS/2	PS/2
Mechanics/material		
Material		
• Plastic	Yes; Keyboard itself	Yes; Keyboard itself
• Sheet steel	Yes; Powder-coated drawer	Yes; Powder-coated drawer
Service life		
• Number of operating cycles, keys	20 000 000; Operations (approx.)	20 000 000; Operations (approx.)
Dimensions		
Width	370 mm; Keyboard	370 mm; Keyboard
Height	20 mm; Keyboard	20 mm; Keyboard
Depth	138.5 mm; Keyboard	138.5 mm; Keyboard
Width of the housing front	485 mm; Keyboard incl. drawer	485 mm; Keyboard incl. drawer
Height of housing front	45 mm; Keyboard incl. drawer	45 mm; Keyboard incl. drawer
Enclosure diameter	465 mm; Mounting depth drawer	465 mm; Mounting depth drawer
Weights		
Weight (without packaging)	8 000 g; Without accessories	8 000 g; Without accessories
Scope of supply		
Delivery quantity in pieces	1; Keyboard incl. drawer	1; Keyboard incl. drawer
Other		
Merchandise	Yes	Yes
Manufacturer name	ZF Friedrichshafen AG, Cherry GmbH, Electronic Systems	ZF Friedrichshafen AG, Cherry GmbH, Electronic Systems
Manufacturer's address	Cherrystr., 91275 Auerbach/OPf., Germany	Cherrystr., 91275 Auerbach/OPf., Germany
Target devices	Suitable for IPC and HMI devices with the corresponding interfaces (see manual)	Suitable for IPC and HMI devices with the corresponding interfaces (see manual)

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Technical specifications

Article number	6GF6710-3AE PS2 keyboard 19" GER, touch pad	6GF6710-3BG PS2 keyboard 19" INT, track ball	6GF6710-3BE PS2 keyboard 19" INT, touch pad
General information			
Product type designation	PS/2 built-in keyboard GER	PS/2 built-in keyboard INT	PS/2 built-in keyboard INT
Control elements			
Keyboard fonts			
• Design	Membrane keyboard	Membrane keyboard	Membrane keyboard
• Keyboard assignment	B3F, 101/102 or 104/105 OMRON	B3F, 101/102 or 104/105 OMRON	B3F, 101/102 or 104/105 OMRON
• Color of the buttons		light gray	
• Color of the key inscription		Black	
• Key illumination	No	No	No
• Function keys			
- Number of function keys	12	12	12
- Programmable	Yes	Yes	Yes
• Number pad	Yes	Yes; Free-standing	Yes
• status LED displays	Yes; Num, Caps and Scroll	Yes; Num, Caps and Scroll	Yes; Num, Caps and Scroll
- for number pad	Yes	Yes	Yes
- for Shift keys	Yes	Yes	Yes
Connection type			
• USB	Yes; With PS/2 USB adapter (not included in the scope of supply)	Yes; With PS/2 USB adapter (not included in the scope of supply)	Yes; With PS/2 USB adapter (not included in the scope of supply)
• PS/2	Yes	Yes	Yes
Frame size/design			
• Standard	Yes; For industrial applications	Yes; For industrial applications	Yes; For industrial applications
• 19" keyboard	Yes	Yes	Yes
Installation type/mounting			
Rack mounting	No; Built-in keyboard, 19" rack	No	No; Built-in keyboard, 19" rack
Front mounting		Yes	
Wall mounting/direct mounting		No	
Input current			
Current consumption (rated value)	25 mA; Typical	35 mA; Typical	25 mA; Typical
Battery			
Battery-operated	No; maintenance-free	No; maintenance-free	No; maintenance-free
Degree and class of protection			
IP (all-round)		IP65 when the ball is actuated; mouse only IP55	
IP (at the front)	IP65		IP65
IP (rear)	IP20		IP20
Splashproof	Yes	Yes	Yes
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
RoHS conformity	Yes	Yes	Yes
Ambient conditions			
Ambient temperature during operation			
• min.	0 °C	0 °C	0 °C
• max.	40 °C	40 °C	40 °C
Relative humidity			
• Operation, max.	90 %; no condensation	90 %; no condensation	90 %; no condensation
• Condensation permissible	No	No	No

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Technical specifications

Article number	6GF6710-3AE PS2 keyboard 19" GER, touch pad	6GF6710-3BG PS2 keyboard 19" INT, track ball	6GF6710-3BE PS2 keyboard 19" INT, touch pad
Operating systems			
Runs under operating system			
• Windows CE	Yes	Yes	Yes
• Windows Vista	Yes	Yes	Yes
• Windows XP	Yes	Yes	Yes
• Windows 7	Yes	Yes	Yes
• Windows 10	Yes	Yes	Yes
Mechanics/material			
Material			
• Sheet steel	Yes	Yes	Yes
Enclosure material (front)			
• Plastic	Yes; AUTOTEX (R) V150	Yes; AUTOTEX (R) V150	Yes; AUTOTEX (R) V150
Service life			
• Number of operating cycles, keys	1 000 000; Operations (minimum)	1 000 000; Operations (minimum)	1 000 000; Operations (minimum)
Dimensions			
Width	482.6 mm	482.6 mm	482.6 mm
Height	42.5 mm	38 mm	42.5 mm
Depth	177.8 mm	177.8 mm	177.8 mm
Weights			
Weight (without packaging)	1 480 g	1 490 g	1 480 g
Scope of supply			
Delivery quantity in pieces	1; Built-in keyboard rack mounting	1; Built-in keyboard with stud bolts	1; Built-in keyboard rack mounting
Other			
Merchandise	Yes; TIPRO no. K-647 (K-847)	Yes; TIPRO no. K-842 (K-642)	Yes; TIPRO no. K-647 (K-847)
Manufacturer name	TIPRO Representative Office	TIPRO Representative Office	TIPRO Representative Office
Manufacturer's address	Vogelweg 20, 31785 Hameln, Germany	Vogelweg 20, 31785 Hameln, Germany	Vogelweg 20, 31785 Hameln, Germany
Target devices	Suitable for IPC and HMI devices with the corresponding interfaces (see manual)	Suitable for IPC and HMI devices with the corresponding interfaces (see manual)	Suitable for IPC and HMI devices with the corresponding interfaces (see manual)
Note:	Suitable PS/2 USB adapter (keyboard/mouse): 1x USB 1.1, plug A on 2x PS/2 sockets, 0.20 m, black; manufacturer: Renkforce; supply by Conrad Elektronik, order no.: 1360251 - 62		

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Technical specifications

Article number	6AV2181-8AT00-0AX0 USB 2.0 mouse
General information	
Product type designation	USB mouse
Control elements	
With parameterizable keys	No; 5 including scroll wheel
Input device	
• Scroll wheel	Yes; Vertical and horizontal scrolling
• Movement tracking	Microsoft - proprietary BlueTrack™ Technology
• Movement resolution	1 000 dpi; 8 000 images/second
• Speed	1 829 mm/s; 1.829 m/s
Connection type	
• USB	Yes; USB 2.0 type A
Frame size/design	
• Standard	Yes; For industrial applications
Supply voltage	
Rated value (DC)	5 V; via USB
Input current	
Current consumption (rated value)	100 mA; USB-compatible
Battery	
Battery-operated	No; Without battery
Interfaces	
Number of USB interfaces	1
Standards, approvals, certificates	
CE mark	Yes; WEEE (European Union) available
cULus	Yes; ICES-003 (Canada) available
RCM (formerly C-TICK)	No; EIP / EPUP available
KC approval	Yes
FCC Class B	Yes; FCC ID available
BSMI	Yes
Suitable for safety functions	No
Marine approval	
• Nippon Kaiji Kyokai (Class NK)	No; Only VCCI available

Article number	6AV2181-8AT00-0AX0 USB 2.0 mouse
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	40 °C
Relative humidity	
• Operation, max.	80 %; 65 % for storage
• Condensation permissible	No
Operating systems	
Runs under operating system	
• Windows CE	Yes; Not all functions are available
• Windows Vista	Yes
• Windows XP	Yes; SP2 and higher
• Windows 7	Yes
• Windows 8	Yes
• Windows 10	Yes
Cables	
Cable length	1 930 mm
smallest bending radius	10 mm
Color of cable sheath	
• Gray	Yes
Mechanics/material	
Material	
• Plastic	Yes; anthracite
Dimensions	
Width	67.9 mm
Height	42.3 mm
Depth	116 mm
Weights	
Weight (without packaging)	131 g
Scope of supply	
Delivery quantity in pieces	1
Other	
Merchandise	Yes; 4EH-0002
Manufacturer name	Microsoft Deutschland GmbH
Manufacturer's address	Walter-Gropius-Straße 5, 80807 Munich, Germany
Target devices	Suitable for HMI Panels and IPCs with USB interface

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More information

Certificates:

Import/export certificates are available for downloading from Industry Online Support/Product Support:

https://support.industry.siemens.com/cs/products

Enter the "Article No." as the search term and select "Certificate" as the Entry type.

You can always find the current certification for trade goods on the manufacturer's home page.
The manufacturer data appear at the end of the technical specifications.

Notes:

The degree of protection stated for input media does not apply to the USB connection pieces.

IP20 is typical for use with USB interfaces, without any particular degree of protection.

If you need to modify or supplement the products described here, we'll be pleased to provide the necessary information at: "Custom made products".

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.
Industry Mall:

https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically. This facilitates selection of suitable accessories.

http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

http://support.automation.siemens.com

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Overview

Touch pen system ELO for capacitive or resistive touch screen pen ELO, including holder for 22.5 mm

Input tools

Input tools facilitate operation and input in difficult environments.

Touch pens are often extremely useful when operating touch displays, particularly if you are wearing gloves, because you can operate small buttons or entry fields precisely despite the gloves.

Touch pens also protect the display from dirt and scratching during operation and when used in extreme environments.

The following input tools are available for operating the touch display:

- Touch pen
- Touch pen holder
- Spare caps for touch pens

Please be sure to note the correct touch system when ordering (resistive or capacitive).

Not all touch pens are compatible with all touch types. There are touch pens available for both resistive and capacitive touch systems.

Note:

Continuous operation with hard touch pens on the same part of the display can significantly reduce the service life of a touch screen.

A longer service life can be achieved by using soft, wide-tip pens and variable-position entry fields.

Ordering data

	Article No.
Touch pen, thin, resistive For purely resistive touch screens, incl. retaining cord.	**6AV6645-7AB14-0AS1**
Touch pen system ELO For capacitive and resistive touch screens, pen black anodized and suitable for industrial use, incl. adhesive or screw-on holder. Alternatives to "Touch pen system, aluminum, classic" and "Touch pen, thick, resistive"	**6AV6881-0AV21-0AA0**
Touch pen system V2A, food-safe For capacitive and resistive touch screens, pen V2A high-gloss polished and food-safe, incl. adhesive or screw-on holder. Alternative to touch pen system ELO.	**6AV6881-0AV22-0AA0**
Touch pen caps, classic Replacement caps for touch pen systems for capacitive and resistive touch screens. Only suitable for touch pen system classic!	**6AV2181-8AV60-0AX0**
Touch pen caps ELO Replacement caps for touch pen systems for capacitive and resistive touch screens. Only suitable for touch pen system ELO!	**6AV6881-0AV61-0AA0**
Touch pen caps V2A Replacement caps for touch pen systems for capacitive and resistive touch screens. Not suitable for touch pen system classic!	**6AV6881-0AV62-1AA0**
Touch pen caps RES Replacement caps for touch pen systems optimized exclusively for resistive touch screens. Only suitable for touch pen system ELO and touch pen system V2A!	**6AV6881-0AV63-0BA0**

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Technical specifications

Article number	6AV6645-7AB14-0AS1 Touch pen, thin, ALU resistive	6AV6881-0AV21-0AA0 Touch pen system ELO	6AV6881-0AV22-0AA0 Touch pen system V2A
General information			
Product type designation	touch pen, thin, aluminum, resistive technology	universal touch pen system (resistive/capacitive), including support	universal touch pen system (resistive/capacitive), including support
Control elements			
Touch operation			
• operator help touch operation design (resistive)	Yes	Yes	Yes
• operator help touch operation design (capacitive)	No	Yes	Yes
Frame size/design			
• Standard	Yes; For industrial applications	Yes; For industrial applications	Yes; For industrial applications
• Exceptional		Yes; Spare caps can be stowed in the pen	Yes; Spare caps can be stowed in the pen
• Ergonomic		Yes; With holder	Yes; With holder
Installation type/mounting			
Mounting type		Wall-mounting bracket can be mounted with mounting disk, 2x M3 screw or adhesive pads	Wall-mounting bracket can be mounted with mounting disk, 2x M3 screw or adhesive pads
Mounting position		Horizontal	Horizontal
Front mounting		Yes; also optimized for PRO Extension Unit 22.5 mm opening (from HS01)	Yes; also optimized for PRO Extension Unit 22.5 mm opening (from HS01)
Wall mounting/direct mounting	Yes	Yes	Yes
Degree and class of protection			
IP (at the front)		IP65 (depending on mounting)	IP65 (depending on mounting)
Standards, approvals, certificates			
CE mark	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation
REACH	Yes	Yes; Threaded insert screw tip - according to Article 33 of the REACH Regulation, we hereby inform you that the threaded insert supplied by us contains a substance included on the REACH Candidate List (SVHC). The substance in question is lead. CAS number: 7439-92-1 / EC number: 231-100-4	Yes; Threaded insert screw tip - according to Article 33 of the REACH Regulation, we hereby inform you that the threaded insert supplied by us contains a substance included on the REACH Candidate List (SVHC). The substance in question is lead. CAS number: 7439-92-1 / EC number: 231-100-4
RoHS conformity	Yes	Yes	Yes
FDA-compliant			Yes; the included adhesive pads are RoHS compliant, but not FDA§177.2600 compliant
Ambient conditions			
Suited for indoor use	Yes	Yes	Yes
Suited for outdoor use	Yes	Yes; only suitable under certain conditions due to different environmental conditions; replacement cycle can be increased	Yes; only suitable under certain conditions due to different environmental conditions; replacement cycle can be increased
Ambient temperature during operation			
• min.	-40 °C	-40 °C; at temperatures below 10 °C and above 30 °C, the use of suitable gloves is recommended	
• max.	80 °C	80 °C; at temperatures below 10 °C and above 30 °C, the use of suitable gloves is recommended	
Relative humidity			
• Operation, max.	90 %	95 %	95 %

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Technical specifications

Article number	6AV6645-7AB14-0AS1 Touch pen, thin, ALU resistive	6AV6881-0AV21-0AA0 Touch pen system ELO	6AV6881-0AV22-0AA0 Touch pen system V2A
Mechanics/material			
Material			
• Plastic		Yes; Attachment cord	Yes; Attachment cord
• Aluminum	Yes; pen, anodized	Yes; pen, anodized	
• Stainless steel			Yes; food safe, suitable for F&B
Enclosure material (front)			
• Plastic		Yes; pen holder	Yes; pen holder
Color		black, anodized	stainless steel, polished
Enclosure color (front)		Black	Black
Dimensions			
Length	125 mm	150 mm	150 mm
Diameter	8 mm	14 mm	14 mm
Enclosure diameter		37 mm; Diameter wall-mounting bracket	37 mm; Diameter wall-mounting bracket
Mounting cutout, height		39 mm; Height wall-mounting bracket	39 mm; Height wall-mounting bracket
Weights			
Weight (without packaging)		0.13 kg	0.13 kg
Scope of supply			
Delivery quantity in pieces	5; Incl. retaining cord for Mobile Panel 277 10"	1; 1x touch pen, 1x attachment cord, 1x resistive/capacitive cap, 1x resistive cap (in the touch pen), 1x complete wall bracket	1; 1x touch pen, 1x attachment cord, 1x resistive/capacitive cap, 1x resistive cap (in the touch pen), 1x complete wall bracket
Other			
Merchandise	Yes; touch pen, thin, aluminum, resistive technology	Yes; ELO touch pen, small	Yes; touch pen V2A
Manufacturer name	QUERUM products UG	QUERUM products UG	QUERUM products UG
Manufacturer's address	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany
contacting the manufacturer	email: querumproducts@web.de	email: querumproducts@web.de	email: querumproducts@web.de
Target devices	for resistive touch screens	For common capacitive and resistive touch systems	For common capacitive and resistive touch systems
Note:	length of the interconnecting lead approx. 35 cm	length of the interconnecting lead approx. 55 cm ... 62 cm	length of the interconnecting lead approx. 55 cm ... 62 cm

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Technical specifications

Article number	6AV2181-8AV60-0AX0	6AV6881-0AV61-0AA0	6AV6881-0AV62-1AA0	6AV6881-0AV63-0BA0
	Touch pen caps	Touch pen caps ELO	Touch pen caps V2A	Touch pen caps RES
General information				
Product type designation	Touch pen caps	Touch pen caps	Touch pen caps	Touch pen caps
Control elements				
Frame size/design				
• Standard	Yes; Special cap for capacitive touch pens	Yes; threaded special cap for universal touch system	Yes; threaded special cap for universal touch system	Yes; special cap only for resistive touch systems
Installation type/mounting				
Wall mounting/direct mounting	Yes; Capacitive touch system	Yes; can be used for touch pen system ELO	Yes; can be used for touch pen system ELO and V2A	Yes; can be used for touch pen system ELO and V2A
Standards, approvals, certificates				
CE mark			No; No CE marking obligation	No; No CE marking obligation
RoHS conformity		Yes; Threaded insert screw tip - according to Article 33 of the REACH Regulation, we hereby inform you that the threaded insert supplied by us contains a substance included on the REACH Candidate List (SVHC). The substance in question is lead. CAS number: 7439-92-1 / EC number: 231-100-4	Yes; FDA§177.2600 compliant	Yes; FDA§177.2600 compliant
FDA-compliant			Yes; FDA§177.2600 compliant	Yes; FDA§177.2600 compliant
Ambient conditions				
Suited for indoor use		Yes	Yes	Yes
Suited for outdoor use	Yes; only suitable under certain conditions due to different environmental conditions; replacement cycle can be increased	Yes; only suitable under certain conditions due to different environmental conditions; replacement cycle can be increased	Yes; only suitable under certain conditions due to different environmental conditions; replacement cycle can be increased	Yes; only suitable under certain conditions due to different environmental conditions; replacement cycle can be increased
Ambient temperature during operation				
• min.	-40 °C; at temperatures below 10 °C and above 30 °C, the use of suitable gloves is recommended	-40 °C; at temperatures below 10 °C and above 30 °C, the use of suitable gloves is recommended	-40 °C; at temperatures below 10 °C and above 30 °C, the use of suitable gloves is recommended	-40 °C; at temperatures below 10 °C and above 30 °C, the use of suitable gloves is recommended
• max.	80 °C; at temperatures below 10 °C and above 30 °C, the use of suitable gloves is recommended	80 °C; at temperatures below 10 °C and above 30 °C, the use of suitable gloves is recommended	80 °C; at temperatures below 10 °C and above 30 °C, the use of suitable gloves is recommended	80 °C; at temperatures below 10 °C and above 30 °C, the use of suitable gloves is recommended
Relative humidity				
• Operation, max.	95 %	95 %	95 %	95 %
Accessories				
belongs to product		can be used for touch pen system ELO	can be used for touch pen system ELO and V2A	can be used for touch pen system ELO and V2A
Mechanics/material				
Material				
• Plastic	Yes	Yes; special cap only for resistive and capacitive touch systems	Yes; special cap only for resistive and capacitive touch systems	Yes; special cap only for resistive touch systems
• Aluminum		Yes		
• Stainless steel			Yes; food safe, suitable for F&B	
Color		Aluminum paint	stainless steel, polished	light beige
Torques/forces				
• Tightening torque, max.		Hand-tight	Hand-tight	Hand-tight

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More information

Article number	6AV2181-8AV60-0AX0 Touch pen caps	6AV6881-0AV61-0AA0 Touch pen caps ELO	6AV6881-0AV62-1AA0 Touch pen caps V2A	6AV6881-0AV63-0BA0 Touch pen caps RES
Dimensions				
Height	8 mm	8 mm	8 mm	8 mm
Diameter	8 mm	8 mm	8 mm	8 mm
Weights				
Weight (without packaging)	0.8 g	0.8 g	0.8 g	0.8 g
Scope of supply				
Delivery quantity in pieces	10; Caps for touch pen	5; Caps for touch pen	5; Caps for touch pen	5; Caps for touch pen
Other				
Merchandise	Yes; Function depending on touch sensitivity, not suitable for Ceran cooktops, MP377 Daylight, possibly others	Yes; touch replacement cap ELO	Yes; touch replacement cap V2A	Yes; touch replacement cap RES
Manufacturer name	QUERUM products UG	QUERUM products UG	QUERUM products UG	QUERUM products UG
Manufacturer's address	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany
contacting the manufacturer		email: querumproducts@web.de	email: querumproducts@web.de	email: querumproducts@web.de
Target devices	For common capacitive and resistive touch systems	For common capacitive and resistive touch systems	For common capacitive and resistive touch systems	For common capacitive and resistive touch systems
Note:	only usable for touch pen 6AV2181-8AV20-0AX0	for Business	food safe, suitable for F&B	food safe, suitable for F&B

More information

Note:

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.
Industry Mall:

https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically.
This facilitates selection of suitable accessories.

http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

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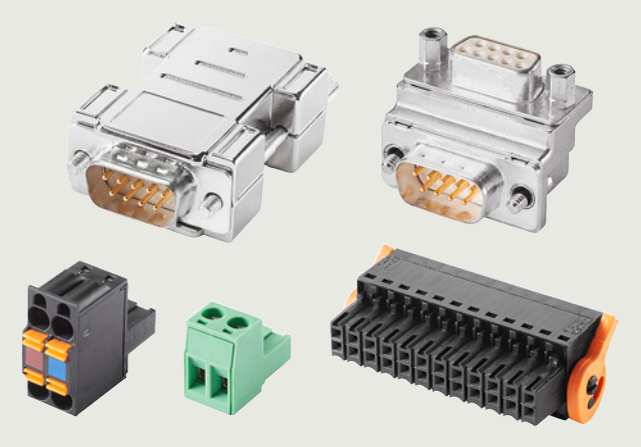
Overview



HMI connecting components

The following HMI connecting components are available for our operator panels and industrial PCs:

- Converters
  change signals from one physical system to another.
  Example: An RS 232 V.24 signal is converted to a TTY 20mA signal. The transmitted data is not affected.
- Connectors
  are used for connecting devices or expansion components to the power supply, data cables or I/O devices.
- Adapters
  can modify the pinning, as well as the output direction of a connector attached to the core product. It is also possible to implement transitions from "n"-pin" to "x"-pin.

Ordering data

	Article No.
Converters	
RS422 to RS232 converter 9-pin male contact (on HMI) to 9-pin male contact, to be screwed onto HMI RS422 interface, cable outlet 180 degrees, for connection of non-Siemens PLC	**6AV6671-8XE00-0AX0**
RS422 to TTY converter 9-pin male contact (on HMI) to 15-pin socket, to be screwed onto HMI RS422 interface, 180 degree cable outlet, for the connection to SIMATIC S5	**6AV6671-8XJ00-0AX0**
Plugs	
24 V DC plug (2-pin) For all SIMATIC HMI Panels, without screw fixing, loop-through not possible. Approved for all SIMATIC HMI Panels except Key Panels.	**6AV6671-8XA00-0AX0**
24 V DC plug (2-pin) (can be looped through) For all SIMATIC HMI Panels, without screw fixing, loop through possible, even with unconnected plug. Approved for Key Panels.	**6ES7193-4JB00-0AA0**
8-pin connection plug 8-pin, 24 V DC for Extension Unit, etc.	**6AV6881-0HE20-0AA0**
12-pin connection plug 12-pin, 24 V DC for SIMATIC HMI Key Panel KP8 PN	**6AV6671-3XY38-4AX0**
16-pin connection plug 16-pin, 24 V DC for SIMATIC HMI Key Panel KP8F PN and Key Panel KP32F PN	**6AV6671-3XY48-4AX0**
24-pin connection plug 24-pin, 24 V DC for SIMATIC HMI Key Panel KP32F PN	**6AV6671-3XY58-4AX0**
Adapters	
90 degree angle adapter 9-pin male contact (on HMI) to 9-pin socket, 1:1 connection, to be screwed onto the RS485/422/232 HMI interface, or any other suitable interface	**6AV6671-8XD00-0AX0**
VGA and DVI adapters For onboard interfaces and PCI-Express graphics card NVS 295	
• Display port to VGA adapter	**6ES7648-3AG00-0XA0**
• Display port to DVI-D adapter	**6ES7648-3AF00-0XA0**

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Technical specifications

Article number	**6AV6671-8XE00-0AX0**	**6AV6671-8XJ00-0AX0**
	RS422 to RS232 converter	RS422 to TTY converter
General information		
Product type designation	Converter, RS 422 to RS 232	Converter RS 422 to TTY
Installation type/mounting		
Wall mounting/direct mounting	Yes; Can be screwed onto the HMI	Yes; Can be screwed onto the HMI
Interfaces		
HMI-side interface		
• Number of pins HMI-side	9; Male (RS 422)	9; Male (RS 422)
Device-side interface		
• Number of pins device-side	9; Female (RS 232)	15; Female (TTY)
Degree and class of protection		
IP (all-round)	none	none
Standards, approvals, certificates		
CE mark	Yes	Yes
RoHS conformity	Yes	Yes
China RoHS compliance	Yes	Yes
Ambient conditions		
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	55 °C	55 °C
Relative humidity		
• Operation, max.	95 %	95 %
Mechanics/material		
Enclosure material (front)		
• Plastic	Yes	Yes
Screw type		
• 4.5 V	Yes; HMI page	Yes; HMI page
Torques/forces		
• Tightening torque, min.	0.18 N·m; Insufficient torque can lead to loosening of the screws	0.18 N·m; Insufficient torque can lead to loosening of the screws
• Tightening torque, max.	0.2 N·m	0.2 N·m
• Tightening torque, recommended	0.2 N·m; Higher torques may damage the product	0.2 N·m; Higher torques may damage the product
Dimensions		
Width	31 mm	42 mm
Height	50 mm	62 mm
Thickness	11 mm	11 mm
Weights		
Weight (without packaging)	26 g	28 g
Scope of supply		
Delivery quantity in pieces	1	1
Other		
Merchandise	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	suitable for all SIMATIC HMI RS 422 interfaces, for details refer to the operating instructions of the respective device	suitable for all SIMATIC HMI RS 422 interfaces, for details refer to the operating instructions of the respective device

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Technical specifications

Article number	6AV6671-8XA00-0AX0 Connector, female, 2-pin, type 1
General information	
Product type designation	Connector, female, 2-pin, type 1
Control elements	
Frame size/design	
• Standard	Yes; Z shape
Installation type/mounting	
Wall mounting/direct mounting	Yes; can be plugged into SIMATIC HMI device
Supply voltage	
Rated value (DC)	24 V
Interfaces	
HMI-side interface	
• Number of pins HMI-side	2; Male
Device-side interface	
• Number of pins device-side	2; Female, screw terminals
Standards, approvals, certificates	
RoHS conformity	Yes
China RoHS compliance	Yes
Use in hazardous areas	
• ATEX Zone 2	Yes; Device-dependent, see operating instructions
• ATEX Zone 22	Yes; Device-dependent, see operating instructions
• IECEx Zone 2	Yes; Device-dependent, see operating instructions
• IECEx Zone 22	Yes; Device-dependent, see operating instructions
• cULus Class I Zone 1	Yes; Device-dependent, see operating instructions
• cULus Class I Zone 2, Division 2	Yes; Device-dependent, see operating instructions
• FM Class I Division 2	Yes; Device-dependent, see operating instructions

Article number	6AV6671-8XA00-0AX0 Connector, female, 2-pin, type 1
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Relative humidity	
• Operation, max.	95 %
Mechanics/material	
Material	
• Plastic	Yes; green
Enclosure material (front)	
• Plastic	Yes; Contact spacing 5.08 mm
Screw type	
• 4.5 V	Yes; Screw terminals
Dimensions	
Width	10 mm
Height	15 mm
Thickness	27 mm
Scope of supply	
Delivery quantity in pieces	10
Other	
Merchandise	No
Manufacturer name	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	for Comfort Panel, IPC, Flat Panel, Thin Client

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Technical specifications

Article number	6ES7193-4JB00-0AA0 Connector, female, 2x2-pin
General information	
Product type designation	Connector, female, 2x2-pin
Installation type/mounting	
Wall mounting/direct mounting	Yes; can be plugged into SIMATIC HMI device
Supply voltage	
Type of supply voltage	DC
Rated value (DC)	24 V
Interfaces	
HMI-side interface	
• Number of pins HMI-side	2; Outgoing side jumpered internally, color-coded
Device-side interface	
• Number of pins device-side	4; Female, spring-loaded terminals 0.75 mm^2
Standards, approvals, certificates	
CE mark	Yes
RoHS conformity	Yes
China RoHS compliance	Yes

Article number	6ES7193-4JB00-0AA0 Connector, female, 2x2-pin
Ambient conditions	
Ambient temperature during storage/transportation	
• min.	-20 °C
• max.	70 °C
Mechanics/material	
Design of housing	plastic
Dimensions	
Width	10 mm
Height	22 mm
Thickness	25 mm
Scope of supply	
Delivery quantity in pieces	10
Other	
Merchandise	No
Manufacturer name	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Note:	For ET 200S, interface module, KP32F, PN/PN coupler

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Technical specifications

Article number	6AV6881-0HE20-0AA0	6AV6671-3XY38-4AX0	6AV6671-3XY48-4AX0	6AV6671-3XY58-4AX0
	Connector, female, 8-pin	Connector, female, 12-pin	Connector, female, 16-pin	Connector, female, 24-pin
General information				
Product type designation	Connector, female, 8-pin	Connector, female, 12-pin	Connector, female, 16-pin	Connector, female, 24-pin
Installation type/mounting				
Mounting type		Conductor cross-section 0.14 to 1.5 mm^2	Conductor cross-section 0.14 to 1.5 mm^2	
Wall mounting/direct mounting	Yes; can be plugged into SIMATIC HMI device	Yes; can be plugged into SIMATIC HMI device	Yes; can be plugged into SIMATIC HMI device	Yes; can be plugged into SIMATIC HMI device
Supply voltage				
Rated value (DC)	24 V	24 V	24 V	24 V
Input current				
Current consumption (rated value)		9 A; Typical, maximum value	9 A; Typical, maximum value	
Interfaces				
HMI-side interface				
• Number of pins HMI-side	8; Female	12; Female, spring-loaded terminals, 3.5 mm grid	16; Female, spring-loaded terminals, 3.5 mm grid	24; Female
Device-side interface				
• Number of pins device-side	8; Female, spring-loaded terminals	12; Female, spring-loaded terminals	16; Female, spring-loaded terminals 0.75 mm^2	24; Female, spring-loaded terminals 0.75 mm^2
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
CSA approval	Yes	Yes; 200039-1121690	Yes; 200039-1121690	
UL approval	Yes; E60693	Yes; E60693	Yes; E60693	
cULus		Yes; cURus	Yes; cURus	
EAC (formerly Gost-R)	Yes	Yes	Yes	
RoHS conformity	Yes	Yes	Yes	Yes
China RoHS compliance				Yes
Use in hazardous areas				
• ATEX Zone 2		Yes; Device-dependent, see operating instructions		
• ATEX Zone 22		Yes; Device-dependent, see operating instructions		
• IECEx Zone 2		Yes; Device-dependent, see operating instructions		
• IECEx Zone 22		Yes; Device-dependent, see operating instructions		
• cULus Class I Zone 1		Yes; Device-dependent, see operating instructions		
• cULus Class I Zone 2, Division 2		Yes; Device-dependent, see operating instructions		
• FM Class I Division 2		Yes; Device-dependent, see operating instructions		
Marine approval				
• Germanischer Lloyd (GL)		Yes; Always comply with the operating instructions of the target device.		
• American Bureau of Shipping (ABS)		Yes; Always comply with the operating instructions of the target device.		
• Bureau Veritas (BV)		Yes; Always comply with the operating instructions of the target device.		
• Det Norske Veritas (DNV)		Yes; Always comply with the operating instructions of the target device.		
• Korean Register of Shipping (KRS)		Yes; Always comply with the operating instructions of the target device.		
• Lloyds Register of Shipping (LRS)		Yes; Always comply with the operating instructions of the target device.		
• Nippon Kaiji Kyokai (Class NK)		Yes; Always comply with the operating instructions of the target device.		
• Polski Rejestr Statkow (PRS)		Yes; Always comply with the operating instructions of the target device.		
• Chinese Classification Society (CCS)		Yes; Always comply with the operating instructions of the target device.		

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Technical specifications

Article number	6AV6881-0HE20-0AA0	6AV6671-3XY38-4AX0	6AV6671-3XY48-4AX0	6AV6671-3XY58-4AX0
	Connector, female, 8-pin	Connector, female, 12-pin	Connector, female, 16-pin	Connector, female, 24-pin
Ambient conditions				
Suited for indoor use		Yes; Flammability class according to UL 94-V0	Yes; Flammability class according to UL 94-V0	
Suited for outdoor use		Yes; possible under certain conditions	Yes; possible under certain conditions	
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	55 °C	55 °C	55 °C	55 °C
Relative humidity				
• Operation, max.	80 %	80 %	80 %	95 %
Mechanics/material				
Material				
• Plastic	Yes; PA 66 GF 30	Yes; Insulating material PA66 GF30, actuators PA66/6	Yes; Insulating material PA66 GF30, actuators PA66/6	
Enclosure material (front)				
• Plastic	Yes; Spring-loaded terminals 1.5 mm^2	Yes; Spring-loaded terminals 1.5 mm^2	Yes; Spring-loaded terminals 1.5 mm^2	Yes; Spring-loaded terminals 1.5 mm^2
Enclosure color (front)	RAL 9011 (black)	Black	Black	
Enclosure color (rear)	RAL 9011 (black)			
Service life				
• Mechanical service life (mating cycles)		25	25	
Dimensions				
Width	10.5 mm; 8-pin connector	21 mm; 12-pin connector	28 mm; 16-pin connector	16 mm
Height	20 mm	15.2 mm	15.2 mm	54 mm
Depth		26.25 mm	26.25 mm	
Thickness	20 mm			20 mm
Weights				
Weight, approx.		7.9 g	10.5 g	
Weight (without packaging)	5.3 g; Per unit			
Scope of supply				
Delivery quantity in pieces	10; Without ejector	10; Without ejector	10; Without ejector	4; with ejector
Other				
Merchandise	Yes; B2CF 3.50/08/180 SN BK BX O/N:1277480000	Yes	No	No
Manufacturer name	Weidmüller Interface GmbH & Co. KG	Weidmüller Interface GmbH & Co. KG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Klingenbergstraße 16, 32758 Detmold, Germany	Klingenbergstraße 16, 32758 Detmold, Germany	Klingenbergstraße 16, 32758 Detmold, Germany	Klingenbergstraße 16, 32758 Detmold, Germany
Target devices	suitable for all appropriate interfaces	for KP8 PN	for KP8F PN, KP32F PN	for KP32F PN

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Technical specifications

Article number	6AV6671-8XD00-0AX0 90 degree bracket adapter, 1:1
General information	
Product type designation	90 degree angle adapter, 1:1
Installation type/mounting	
Wall mounting/direct mounting	Yes; Can be screwed onto the HMI
Interfaces	
HMI-side interface	
• Number of pins HMI-side	9; Male
Device-side interface	
• Number of pins device-side	9; Female
Degree and class of protection	
IP (all-round)	none
Standards, approvals, certificates	
CE mark	Yes
RoHS conformity	Yes
China RoHS compliance	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	55 °C
Relative humidity	
• Operation, max.	95 %

Article number	6AV6671-8XD00-0AX0 90 degree bracket adapter, 1:1
Mechanics/material	
Enclosure material (front)	
• Aluminum casting	Yes
Screw type	
• 4.5 V	Yes; HMI page
Torques/forces	
• Tightening torque, min.	0.18 N·m; Insufficient torque can lead to loosening of the screws
• Tightening torque, max.	0.2 N·m
• Tightening torque, recommended	0.2 N·m; Higher torques may damage the product
Dimensions	
Width	31 mm
Height	25 mm
Thickness	25 mm
Weights	
Weight (without packaging)	34 g
Scope of supply	
Delivery quantity in pieces	1
Other	
Merchandise	No
Manufacturer name	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	suitable for all appropriate interfaces

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More information

Article number	6ES7648-3AG00-0XA0 Displayport to VGA adapter	6ES7648-3AF00-0XA0 Displayport to DVI-D Adapter
General information		
Product type designation	Adapter	Adapter
Interfaces		
Interfaces/bus type	DisplayPort to VGA adapter	DisplayPort to DVI-D adapter
Device-side interface	For onboard interfaces and PCI graphics card NVS 295	For onboard interfaces and PCI Express graphics card NVS 295
Standards, approvals, certificates		
CE mark	Yes	Yes
KC approval		Yes
FCC Class B	Yes	Yes
RoHS conformity	Yes	Yes
Ambient conditions		
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	50 °C	50 °C
Relative humidity		
• Condensation permissible	No	No
Cables		
Cable length	178 mm; incl. connector	203 mm; incl. connector
Mechanics/material		
Material		
• Plastic	Yes; PVC	Yes; PVC
Color	PBT, blue / LCP, black	
Dimensions		
Width	36 mm; widest point	44 mm; widest point
Height	11.9 mm; Highest point	20 mm; Highest point
Length	178 mm; total length	203 mm; total length
Width of the housing front	36 mm	
Height of housing front	19 mm	
Scope of supply		
Delivery quantity in pieces	1; Quantity	1; Quantity
Other		
Merchandise	Yes; 117G0-038482-R1 / KS10073-172	Yes; 11720009 / KS10009-172
Manufacturer name	BizLink Technology, Inc.	BizLink Technology, Inc.
Manufacturer's address	47211 Bayside Parkway, Fremont, CA 94538, USA	47211 Bayside Parkway, Fremont, CA 94538, USA
contacting the manufacturer	Phone +1 510 252 0786, email: sales@bizlinktech.com	Phone +1 510 252 0786, email: sales@bizlinktech.com
Target devices	SIMATIC Rack IPC427D, IPC477D, IPC547D, IPC547E, IPC627D, IPC647C, IPC647D, IPC677D, IPC827D, IPC847C, IPC847D	SIMATIC Rack IPC227E, IPC277E, IPC427D, IPC477D, IPC547D, IPC547E, IPC627D, IPC647C, IPC647D, IPC677D, IPC827D, IPC847C, IPC847D

More information

Note:

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.
Industry Mall:

https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically. This facilitates selection of suitable accessories.

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Data sheets and manufacturer declarations are available for downloading in the Online Support area.

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Overview

HMI accessories, power supply units, cables, series

Power supply unit and connecting cables

The external power supply unit is intended for laboratory and office operation only.

The following power supply units and non-heating apparatus cables are available:

- Mobile Panel IWLAN power supply unit without non-heating apparatus cable
- Mobile Panel IWLAN power supply unit with non-heating apparatus cable
- Non-heating apparatus cable for Box and Panel PCs

Ordering data

	Article No.
Power supply units	
Power supply unit, external, Mobile Panel IWLAN without non-heating apparatus cable Suitable only for operation under laboratory/office conditions.	**6AV6671-5CN00-0AX3**
Power supply unit, external, Mobile Panel IWLAN with 90° non-heating apparatus cable Suitable only for operation under laboratory/office conditions.	
• Power supply unit with non-heating apparatus cable for Germany, France, Spain, the Netherlands, Belgium, Sweden, Austria, Finland	**6AV2181-5AL10-0AX0**
• Power supply unit with non-heating apparatus cable for the United Kingdom	**6AV2181-5AL20-0AX0**
• Power supply unit with non-heating apparatus cable for Switzerland	**6AV2181-5AL30-0AX0**
• Power supply unit with non-heating apparatus cable for USA	**6AV2181-5AL40-0AX0**
• Power supply unit with non-heating apparatus cable for Italy	**6AV2181-5AL50-0AX0**
• Power supply unit with non-heating apparatus cable for China	**6AV2181-5AL60-0AX0**
Power supply cable	
Power supply cable 230 V AC, angled 90° For Box PCs and Panel PCs	
• For Germany, France, Spain, the Netherlands, Belgium, Sweden, Austria, Finland	**6ES7900-1AA00-0XA0**
• For the United Kingdom	**6ES7900-1BA00-0XA0**
• For Switzerland	**6ES7900-1CA00-0XA0**
• For the USA	**6ES7900-1DA00-0XA0**
• For Italy	**6ES7900-1EA00-0XA0**
• For China	**6ES7900-1FA00-0XA0**
Power supply cable 230 V AC, straight 180° For Box PCs and Panel PCs	
• For Germany, France, Spain, the Netherlands, Belgium, Sweden, Austria, Finland	**6ES7900-0AA00-0XA0**
• For the United Kingdom	**6ES7900-0BA00-0XA0**
• For Switzerland	**6ES7900-0CA00-0XA0**
• For the USA	**6ES7900-0DA00-0XA0**
• For Italy	**6ES7900-0EA00-0XA0**
• For China	**6ES7900-0FA00-0XA0**

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Technical specifications

Article number	**6AV6671-5CN00-0AX3** Power supply AC/DC, external
General information	
Product type designation	Power supply unit
Control elements	
Functional lighting	Yes; LED indicator for power on
Frame size/design	
• Standard	Yes; For industrial applications
Supply voltage	
Type of supply voltage	AC
Rated value (AC)	100 - 240 V AC
Input current	
Current consumption (rated value)	1.4 A; 50 - 60 Hz
output voltage / header	
Rated value (DC)	12 V
Output current	
Current output (rated value)	5 A
Standards, approvals, certificates	
CE mark	Yes; TÜV EN 60950-1, BSMI CNS14336
CSA approval	Yes; CSA C22.2
UL approval	Yes; UL 60950-1
cULus	Yes
KC approval	Yes; KC K60950-1
EAC (formerly Gost-R)	Yes; Approved EAC TP TC 004
CCC	Yes; CCC GB4943
FCC Class B	Yes; EN 55032 (CISPR 32), FCC PART 15 / CISPR 22, CAN ICES-3(B)/NMB-3(B), CNS13438, GB17625.1, EAC TP TC 020, MSIP KN32
China RoHS compliance	Yes
Ambient conditions	
Suited for indoor use	Yes
Suited for outdoor use	No
Ambient temperature during operation	
• min.	-30 °C
• max.	50 °C; Up to 70 °C, see manufacturer's data sheet
Relative humidity	
• Operation, max.	90 %; Non-condensing (max. 95% humidity for storage)

Article number	**6AV6671-5CN00-0AX3** Power supply AC/DC, external
Cables	
Cable length	
• Input side	0 m; 3-pole AC inlet IEC320-C14, Class power unit
• Output side	1 m; With ferrite core
Color of cable sheath	Black
connection method / header	
Connector type	Connector 5.5 mm jack (-) / 2.1 mm pin (+) 12 V DC
Mechanics/material	
Material	
• Plastic	Yes
Color	Black
Service life	
• Mechanical service life (mating cycles)	1; See manufacturer's data sheet
Dimensions	
Width	125 mm
Height	50 mm
Thickness	31.5 mm
Weights	
Weight (without packaging)	305 g
Weight (with packaging)	445 g
Scope of supply	
Delivery quantity in pieces	1; Incl. DC cable with P1J jack connector, excl. 3-pin AC connecting cable IEC320-C14
Other	
Merchandise	Yes; MeanWell GST60A12-P1J
Manufacturer name	Elpro GmbH Importeur (MEAN WELL)
Manufacturer's address	Marzahner Straße 34, 13053 Berlin, Germany
Target devices	Standard power supply, e.g. suitable for Mobile Panel IWLAN (always see the Operating Instructions for the target device)
Note:	Manufacturer's address = importer's address (for manufacturer, see commercial goods information text)

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Technical specifications

Article number	6AV2181-5AL10-0AX0	6AV2181-5AL20-0AX0	6AV2181-5AL30-0AX0	6AV2181-5AL40-0AX0	6AV2181-5AL50-0AX0	6AV2181-5AL60-0AX0
	Power supply, ext., Mobile P. IWLAN DE	Power supply, ext., Mobile P. IWLAN UK	Power supply, ext., Mobile P. IWLAN SW	Power supply, ext., Mobile P. IWLAN US	Power supply, ext., Mobile P. IWLAN IT	Power supply, ext., Mobile P. IWLAN CN
General information						
Product type designation	External power supply unit	External power supply unit	External power supply unit	External power supply unit	External power supply unit	External power supply unit
Supply voltage						
Type of supply voltage	AC	AC	AC	AC	AC	AC
Rated value (AC)	100 - 240 V AC	100 - 240 V AC	100 - 240 V AC	100 - 240 V AC	100 - 240 V AC	100 - 240 V AC
Input current						
Current consumption (rated value)	1.4 A; 50 - 60 Hz	1.4 A; 50 - 60 Hz	1.4 A; 50 - 60 Hz	1.4 A; 50 - 60 Hz	1.4 A; 50 - 60 Hz	1.4 A; 50 - 60 Hz
output voltage / header						
Rated value (DC)	12 V	12 V	12 V	12 V	12 V	12 V
Output current						
Current output (rated value)	5 A	5 A	5 A	5 A	5 A	5 A
Standards, approvals, certificates						
CE mark	Yes; UL 69950, TÜV EN 600950-1, BSMI CNS14336, CCC GB4942 approved	Yes; UL 69950, TÜV EN 600950-1, BSMI CNS14336, CCC GB4942 approved	Yes; UL 69950, TÜV EN 600950-1, BSMI CNS14336, CCC GB4942 approved	Yes; UL 69950, TÜV EN 600950-1, BSMI CNS14336, CCC GB4942 approved	Yes; UL 69950, TÜV EN 600950-1, BSMI CNS14336, CCC GB4942 approved	Yes; UL 69950, TÜV EN 600950-1, BSMI CNS14336, CCC GB4942 approved
CCC	Yes	Yes	Yes	Yes	Yes	Yes
Ambient conditions						
Ambient temperature during operation						
• min.	-10 °C	-10 °C	-10 °C	-10 °C	-10 °C	-10 °C
• max.	50 °C	50 °C	50 °C	50 °C	50 °C	50 °C
Relative humidity						
• Operation, max.	90 %	90 %	90 %	90 %	90 %	90 %
Cables						
Cable length						
• Input side	3 m	3 m	3 m	3 m	3 m	3 m
• Output side	0.9 m	0.9 m	0.9 m	0.9 m	0.9 m	0.9 m
Color of cable sheath	Black	Black	Black	Black	Black	Black
Connection method / header						
Connector type	Connector 5.5 mm jack (-) / 2.1 mm pin (+) 12 V DC	Connector 5.5 mm jack (-) / 2.1 mm pin (+) 12 V DC	Connector 5.5 mm jack (-) / 2.1 mm pin (+) 12 V DC	Connector 5.5 mm jack (-) / 2.1 mm pin (+) 12 V DC	Connector 5.5 mm jack (-) / 2.1 mm pin (+) 12 V DC	Connector 5.5 mm jack (-) / 2.1 mm pin (+) 12 V DC
Mechanics/material						
Material						
• Plastic	Yes	Yes	Yes	Yes	Yes	Yes
Color	Black	Black	Black	Black	Black	Black
Dimensions						
Width	125 mm	125 mm	125 mm	125 mm	125 mm	125 mm
Height	50 mm	50 mm	50 mm	50 mm	50 mm	50 mm
Thickness	31.5 mm	31.5 mm	31.5 mm	31.5 mm	31.5 mm	31.5 mm
Weights						
Weight (without packaging)	540 g	560 g	525 g	540 g	520 g	540 g
Scope of supply						
Delivery quantity in pieces	1; Incl. AC and DC connecting cable	1; Incl. AC and DC connecting cable	1; Incl. AC and DC connecting cable	1; Incl. AC and DC connecting cable	1; Incl. AC and DC connecting cable	1; Incl. AC and DC connecting cable
• Parts per unit	1; AC cable for DE, FR, ES, NL, BE, SE, AT, FI	1; AC cable for GB	1; AC cable for CH	1; AC cable for US	1; AC cable for IT	1; AC cable for CN
Other						
Merchandise	Yes	Yes	Yes	Yes	Yes	Yes
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany					
Target devices	for Mobile Panel IWLAN	for Mobile Panel IWLAN	for Mobile Panel IWLAN	for Mobile Panel IWLAN	for Mobile Panel IWLAN	for Mobile Panel IWLAN

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Technical specifications

Article number	6ES7900-0AA00-0XA0	6ES7900-0BA00-0XA0	6ES7900-0CA00-0XA0	6ES7900-0DA00-0XA0	6ES7900-0EA00-0XA0	6ES7900-0FA00-0XA0
	Power cord, Germany and others	Power cord, United Kingdom,	Power cord, Switzerland	Power cord, USA, Canada	Power cord, Italy type L	Power cord, China GB 1002 and others
General information						
Product type designation	Cable for non-heating apparatus	Cable for non-heating apparatus	Cable for non-heating apparatus	Cable for non-heating apparatus	Cable for non-heating apparatus	Cable for non-heating apparatus
Interfaces						
Interfaces/bus type	Line-side, country-specific connector: Type CEE 7/7 Schuko	Line-side, country-specific connector: Type BS 1363 (Commonwealth connector)	Line-side, country-specific connector: Type J (SEV 1011)	Line-side, country-specific connector: Type B (NEMA 5-15)	Line-side, country-specific connector: Type L (CEI 23-50)	Line-side, country-specific connector: Type I: GB 1002 (China), AS 3112 (Australia), IRAM 2073 (Argentina)
Device-side interface						
• Number of pins device-side	3; Female, C13 connector type	3; Female, C13 connector type	3; Female, C13 connector type	3; Female, C13 connector type	3; Female, C13 connector type	3; Female, C13 connector type
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
Ambient conditions						
Suited for indoor use	Yes; Max. 10 A	Yes; Equipped with internal 13 A melting fuse	Yes; Max. 10 A	Yes; Max. 10 A	Yes; Max. 10 A	Yes; Max. 10 A
Ambient temperature during operation						
• min.	-10 °C	-10 °C	-10 °C	-10 °C	-10 °C	-10 °C
• max.	50 °C	50 °C	50 °C	50 °C	50 °C	50 °C
Relative humidity						
• Operation, max.	90 %	90 %	90 %	90 %	90 %	90 %
Cables						
Cable length	3 m	3 m	3 m	3 m	3 m	3 m
Color of cable sheath	Black	Black	Black	Black	Black	Black
Weights						
Weight, approx.	290 g	300 g	260 g	230 g	255 g	280 g
Scope of supply						
Delivery quantity in pieces	1; AC cable for DE, FR, ES, NL, BE, SE, AT, FI	1; AC cable for GB	1; AC cable for CH	1; AC cable for US	1; AC cable for IT	1; AC cable for CN
Other						
Merchandise	Yes; VII-H05V-VF3G100-C13/3,00M SW9005 (L50/PROD)	Yes; BS13/13-H05V-VF3G100-C13/3,00M SW9005	Yes; 12G-H05V-VF3G100-C13/3,00M SW9005	Yes; 498G-SVT3X18AWG-C13/3,00M SW9005 (GNSWWS)	Yes; I/3G-H05V-VF3G100-C13/3,00M SW9005	Yes; PRC/3-H05V-VF3G100-C13/3,00M SW9005
Manufacturer name	FELLER GmbH	FELLER GmbH	FELLER GmbH	FELLER GmbH	FELLER GmbH	FELLER GmbH
Manufacturer's address	Wärndorferstraße 3, 2525 Günselsdorf, Austria; email: sales@feller-at.com					
Target devices	Suitable for all appropriate DC interfaces	Suitable for all appropriate DC interfaces	Suitable for all appropriate DC interfaces	Suitable for all appropriate DC interfaces	Suitable for all appropriate DC interfaces	Suitable for all appropriate DC interfaces
Note:	http://www.feller-at.com					

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More information

Article number	6ES7900-1AA00-0XA0	6ES7900-1BA00-0XA0	6ES7900-1CA00-0XA0	6ES7900-1DA00-0XA0	6ES7900-1EA00-0XA0	6ES7900-1FA00-0XA0
	Power cord, Germany	Power cord, United Kingdom,	Power cord, Switzerland	Power cord, USA	Power cord, Italy	Power cord, China
General information						
Product type designation	Cable for non-heating apparatus					
Interfaces						
Interfaces/bus type	Line-side, country-specific connector: Type CEE 7/7 Schuko	Line-side, country-specific connector: Type BS 1363 (Commonwealth connector)	Line-side, country-specific connector: Type J (SEV 1011)	Line-side, country-specific connector: Type B (NEMA 5-15)	Line-side, country-specific connector: Type L (CEI 23-50)	Line-side, country-specific connector: Type I: GB 1002 (China), AS 3112 (Australia), IRAM 2073 (Argentina)
Device-side interface						
• Number of pins device-side	3; Female, C13 connector type					
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
Ambient conditions						
Suited for indoor use	Yes; Max. 10 A	Yes; Equipped with internal 13 A melting fuse	Yes; Max. 10 A	Yes; Max. 10 A	Yes; Max. 10 A	Yes; Max. 10 A
Ambient temperature during operation						
• min.	-10 °C	-10 °C	-10 °C	-10 °C	-10 °C	-10 °C
• max.	50 °C	50 °C	50 °C	50 °C	50 °C	50 °C
Relative humidity						
• Operation, max.	90 %	90 %	90 %	90 %	90 %	90 %
Cables						
Cable length	3 m	3 m	3 m	3 m	3 m	3 m
Color of cable sheath	Black	Black	Black	Black	Black	Black
Weights						
Weight, approx.	290 g	300 g	260 g	230 g	255 g	280 g
Scope of supply						
Delivery quantity in pieces	1; AC cable for DE, FR, ES, NL, BE, SE, AT, FI	1; AC cable for GB	1; AC cable for CH	1; AC cable for US	1; AC cable for IT	1; AC cable for CN
Other						
Merchandise	Yes; VII-H05V-VF3G100-C13W/3,00M SW9005 (L53)	Yes; BS13/13-H05VVF3G100-C13W/3,00M SW9005	Yes; 12G-H05V-VF3G100-C13W/3,00M SW9005	Yes; 498G-SVT3X18AWG-C13W/3,00M SW9005 (GNSWWS)	Yes; I/3G-H05V-VF3G100-C13W/3,00M SW9005	Yes; PRC/3-H05V-VF3G100-C13W/3,00M SW9005
Manufacturer name	FELLER GmbH	FELLER GmbH	FELLER GmbH	FELLER GmbH	FELLER GmbH	FELLER GmbH
Manufacturer's address	Wärndorferstraße 3, 2525 Günselsdorf, Austria; email: sales@feller-at.com					
Target devices	Suitable for all appropriate DC interfaces					
Note:	http://www.feller-at.com					

More information

Notice:

The technical specifications remain unchanged; however, the power supply cable now has to be ordered separately.

Suitable SITOP power supplies are available for use with machinery and plants.

Network cables for the connection of IPC systems for various countries are also available.

The replacement type has the article number:
6AV6671-5CN00-0AX3

Note:

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.
Industry Mall:

https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically. This facilitates selection of suitable accessories.

http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

http://support.automation.siemens.com

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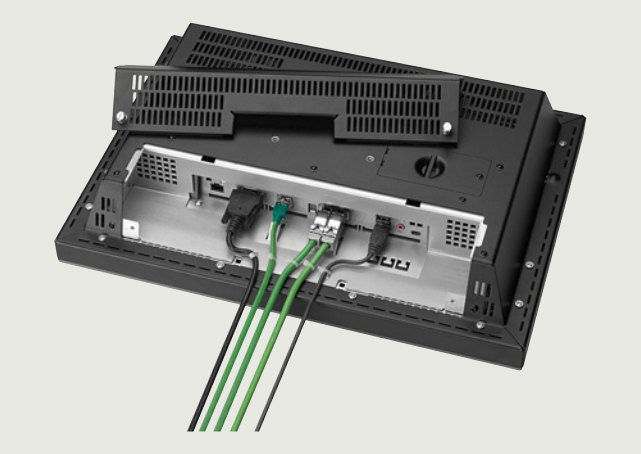
Back covers

Overview



Back cover IP20, partly installed

The back covers in IP20 design are ideal for simple mounting of Panels, Panel PCs, Flat Panels and industrial Thin Clients on VESA 100 brackets.

They are screwed onto the device and implement low-cost wall-mounting or connection to a supporting arm system.

Back covers are available for display size 15", 19" and 22" for the following SIMATIC HMI devices:

- Touch Panels
- Panel PC IPC477D [1] and IPC277D
- Flat Panels
- Thin Clients

[1] IPC477D 15" is only available as a single touch version.

Ordering data

	Article No.
Back covers IP20	
15" devices	
• IPC277D 15"	**6AV7675-1RB00-0AA0**
• IPC477D 15" [1]	**6AV7675-2RB00-0AA0**
• IPC477D 15" MT [1]	**6AV7675-2RH00-0AA0**
• IFP1500	**6AV7675-4RB00-0AA0**
• IFP1500 MT	**6AV7675-4RH00-0AA0**
• TP1500 / ITC1500	**6AV7675-8RB00-0AA0**
19" devices	
• IPC277D 19"	**6AV7675-1RD00-0AA0**
• IPC477D 19" [1]	**6AV7675-2RD00-0AA0**
• IFP1900, black	**6AV7675-4RD00-0AA0**
• IFP1900, gray	**6AV7675-4RD00-0AA1**
• TP1900 / ITC1900	**6AV7675-8RD00-0AA0**
22" devices	
• IPC477D 22" [1]	**6AV7675-2RE00-0AA0**
• IFP2200	**6AV7675-4RE00-0AA0**
• TP2200 / ITC2200	**6AV7675-8RE00-0AA0**

[1] Without DVD/PCIe expansion

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Technical specifications

Article number	6AV7675-1RB00-0AA0 BACK COVER IP20 15" (IPC277D/E)	6AV7675-2RB00-0AA0 BACK COVER IP20 15" (IPC477D)	6AV7675-2RH00-0AA0 BACK COVER IP20 15" (IPC477D MT)	6AV7675-4RB00-0AA0 BACK COVER IP20 15" (IFP1500)	6AV7675-4RH00-0AA0 BACK COVER IP20 15" (IFP1500 MT)	6AV7675-8RB00-0AA0 Backplane cover IP20 15" (TP/ITC1500)
General information						
Product type designation	Backplane cover	Backplane cover	Backplane cover	Backplane cover	Backplane cover	Backplane cover
Installation type/mounting						
Mounting type	VESA	VESA	VESA	VESA	VESA	VESA
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (rear)	IP20	IP20	IP20	IP20	IP20	IP20
Standards, approvals, certificates						
CE mark	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity
cULus	Yes; UL 60950-1, file number E115352	Yes; UL 60950-1, file number E115352	Yes; UL 60950-1, file number E115352	Yes; UL 60950-1, file number E115352	Yes; UL 60950-1, file number E115352	Yes; UL 60950-1, file number E115352
RoHS conformity	Yes	Yes	Yes	Yes	Yes	Yes
China RoHS compliance	Yes	Yes	Yes	Yes	Yes	Yes
Ambient conditions						
Ambient temperature during operation						
• min.					0 °C	0 °C
• max.	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Relative humidity						
• Operation, max.	95 %	95 %	95 %	95 %	95 %	95 %
• Condensation permissible	No	No	No	No	No	No
Mechanics/material						
Material						
• Aluminum	Yes	Yes	Yes	Yes	Yes	Yes
Screw type						
• Torx	Yes; T10	Yes; T10	Yes; T10	Yes; T10	Yes; T10	Yes; T10
Dimensions						
Width	415 mm	415 mm	416.5 mm	415 mm	416.5 mm	415 mm
Height	310 mm	310 mm	298 mm	310 mm	298 mm	310 mm
Depth	90 mm	90 mm	89 mm	89 mm	89 mm	90 mm
Weights						
Weight (without packaging)	1.6 kg	1.6 kg	1.6 kg	1.6 kg	1.6 kg	1.6 kg

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Back covers

Technical specifications

Article number	6AV7675-1RD00-0AA0 BACK COVER IP20 19" (IPC277D/E)	6AV7675-2RD00-0AA0 back cover IP20 19" (IPC477x)	6AV7675-4RD00-0AA0 BACK COVER IP20 19" (IFP1900)	6AV7675-8RD00-0AA0 Backplane cover IP20 19" (TP/ITC1900)
General information				
Product type designation	Backplane cover	Backplane cover	Backplane cover	Backplane cover
Installation type/mounting				
Mounting type	VESA	VESA	VESA	VESA
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes
Degree and class of protection				
IP (rear)	IP20	IP20	IP20	IP20
Standards, approvals, certificates				
CE mark	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity
cULus	Yes; UL 60950-1, file number E115352	Yes; UL 60950-1, file number E115352	Yes; UL 60950-1, file number E115352	Yes; UL 60950-1, file number E115352
RoHS conformity	Yes	Yes	Yes	Yes
China RoHS compliance	Yes	Yes	Yes	Yes
Ambient conditions				
Ambient temperature during operation				
• min.				0 °C
• max.	40 °C	40 °C	40 °C	40 °C
Relative humidity				
• Operation, max.	95 %	95 %	95 %	95 %
• Condensation permissible	No	No	No	No
Mechanics/material				
Material				
• Aluminum	Yes	Yes	Yes	Yes
Screw type				
• Torx	Yes; T10	Yes; T10	Yes; T10	Yes; T10
Dimensions				
Width	483 mm	483 mm	483 mm	483 mm
Height	337 mm	337 mm	337 mm	337 mm
Depth	89 mm	89 mm	89 mm	89 mm
Weights				
Weight (without packaging)	1.9 kg	1.9 kg	1.9 kg	1.9 kg

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More information

Article number	6AV7675-2RE00-0AA0 back cover IP20 22" (IPC477x)	6AV7675-4RE00-0AA0 Backplane cover IP20 22" (IFP2200)	6AV7675-8RE00-0AA0 Backplane cover IP20 22" (TP/ITC2200)
General information			
Product type designation	Backplane cover	Backplane cover	Backplane cover
Installation type/mounting			
Mounting type	VESA	VESA	VESA
Mounting in portrait format possible	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes
Degree and class of protection			
IP (rear)	IP20	IP20	IP20
Standards, approvals, certificates			
CE mark	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity	Yes; CE marking / EC Declaration of Conformity
cULus	Yes; UL 60950-1, file number E115352	Yes; UL 60950-1, file number E115352	Yes; UL 60950-1, file number E115352
RoHS conformity	Yes	Yes	Yes
China RoHS compliance	Yes	Yes	Yes
Ambient conditions			
Ambient temperature during operation			
• min.		0 °C	0 °C
• max.	40 °C	40 °C	40 °C
Relative humidity			
• Operation, max.	95 %	95 %	95 %
• Condensation permissible	No	No	No
Mechanics/material			
Material			
• Aluminum	Yes	Yes	Yes
Screw type			
• Torx	Yes; T10	Yes; T10	Yes; T10
Dimensions			
Width	560 mm	560 mm	560 mm
Height	380 mm	380 mm	380 mm
Depth	89 mm	89 mm	89 mm
Weights			
Weight (without packaging)	2.2 kg	2.2 kg	2.2 kg

More information

Note:

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.
Industry Mall:

https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically. This facilitates selection of suitable accessories.

http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

http://support.automation.siemens.com

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Overview

Protective films

Protective films are available for almost all SIMATIC HMI devices. They protect the display from dirt and scratching during operation and in harsh environments. The SIMATIC protective films are non-reflective. This ensures that the display is always easy to read, even when using protective films. The protective film can be removed without leaving any adhesive residue on the front. Adhesive-edged protective films are now available for resistive touch systems (membrane touch). For multi-touch systems (typically with glass fronts), full-width adhesive protective films are available. Full-width adhesive films should not be used on single-touch systems, as the touch system could be damaged when removing the film. All full-width adhesive films can be trimmed to any size, this does not affect the quality of the film. Adhesive-edged films should not be trimmed, as this would lead to the loss of the adhesive edge.

For complete protection of the front side in harsh environments, protective covers are also available for some devices.

Benefits of protective films/protective covers:

- Reduced reflections
- Lightweight, thin and frameless design
- Simple and fast to attach
- Residue-free removal
- Dust-resistant
- Antibacterial coating, e.g. for medical area or food and beverage (please note: only variants with BAC [1] marking)

The protective film does not always need to cover the whole front. For compatibility reasons, not all protective films extend as far as the edge of the enclosure. This does not in any way impair the function of protecting the display.

[1] BAC stands for antibacterial coating. These films are suitable in particular for the F&B and pharmaceuticals industries, or wherever hygiene is a priority.

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Ordering data

	Article No.
Protective films 4"	
• Touch devices	**6AV6671-2EC00-0AX0**
• Widescreen	**6AV2124-6DJ00-0AX0**
• Widescreen, Type 13	**6AV2181-5DJ00-0AX0**
Protective films 6"	
• Touch devices, Type 1	**6AV6574-1AD00-4AX0**
• Touch devices, Type 2	**6AV6574-1AD00-4DX0**
• Touch devices, Type 4	**6AV6671-2XC00-0AX0**
• Touch devices, Type 10	**6AV6574-1AD04-4AA0**
Protective films 7"	
• Widescreen	**6AV2124-6GJ00-0AX0**
• Widescreen, Type 5 Unified / IPC	**6AV6881-0GJ22-0AA0**
• Widescreen, Type 5 BAC[1] Unified / IPC	**6AV6881-0GJ22-1AA0**
• Widescreen, Type 13	**6AV2181-5GJ00-0AX0**
Protective films 8"	
• Touch devices, Type 1	**6AV6671-3CC00-0AX0**
• Touch devices, Type 2	**6AV6671-3CC00-0AX5**
• Touch devices, Type 10	**6AV6671-5BC00-0AX0**
Protective films 9"	
• Widescreen, Type 1	**6AV2124-6JJ00-0AX0**
• Widescreen, Type 2	**6AV2181-3JJ20-0AX0**
• Widescreen, Type 13	**6AV2181-5JJ00-0AX0**
Protective films 10"	
• Touch devices, Type 1	**6AV6671-3DC00-0AX0**
• Touch devices, Type 2	**6AV6671-3DC00-0AX5**
• Widescreen "full-surface bonding", Type 4	**6AV6881-0AJ21-0AA0**
• Widescreen, Type 5 Unified / IPC	**6AV6881-0KJ22-0AA0**
• Widescreen, Type 5 BAC[1] Unified / IPC	**6AV6881-0KJ22-1AA0**
• Touch devices, Type 10	**6AV6645-7AB15-0AS0**
Protective films for 10" to 12" touch devices	**6AV6574-1AD00-4CX0**

	Article No.
Protective films 12"	
• Widescreen, Type 1	**6AV2124-6MJ00-0AX0**
• Widescreen, Type 2	**6AV2181-3MJ20-0AX0**
• Widescreen, Type 5 Unified / IPC	**6AV6881-0MJ22-0AA0**
• Widescreen, Type 5 BAC[1] Unified / IPC	**6AV6881-0MJ22-1AA0**
• Protective film, Type 6 IFP	**6AV6881-7MJ13-2AA0**
Protective films 15"	
• Touch devices	**6AV6574-1AD00-4EX0**
• Widescreen	**6AV2124-6QJ00-0AX1**
• Widescreen, Type 5 Unified / IPC	**6AV6881-0QJ22-0AA0**
• Widescreen, Type 5 BAC[1] Unified / IPC	**6AV6881-0QJ22-1AA0**
• Protective film, Type 6 IFP	**6AV6881-7QJ13-2AA0**
Protective films 19"	
• Touch devices	**6AV7672-1CE00-0AA0**
• Widescreen	**6AV2124-6UJ00-0AX1**
• Widescreen "full-surface bonding"	**6AV6881-0UJ20-0AA0**
• Widescreen, Type 5 Unified / IPC	**6AV6881-0UJ22-0AA0**
• Widescreen, Type 5 BAC[1] Unified / IPC	**6AV6881-0UJ22-1AA0**
• Protective film, Type 6 IFP	**6AV6881-7UJ13-2AA0**
Protective films 22"	
• Widescreen	**6AV2124-6XJ00-0AX1**
• Widescreen, Type 5 Unified / IPC	**6AV6881-0VJ22-0AA0**
• Widescreen, Type 5 BAC [1] Unified / IPC	**6AV6881-0VJ22-1AA0**
• Protective film, Type 6 IFP	**6AV6881-7VJ13-2AA0**
Protective films 24"	
• Widescreen, Type 5 Unified / IPC	**6AV6881-0WJ22-0AA0**

[1] BAC stands for antibacterial coating. These films are suitable in particular for the F&B and pharmaceuticals industries, or wherever hygiene is a priority.

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Protective films

Technical specifications

Article number	6AV6671-2EC00-0AX0 Protect. Film 4" Touch Device	6AV2124-6DJ00-0AX0 Protect. Film 4" Widescreen	6AV2181-5DJ00-0AX0 Protect. film 4" widescreen, type 13
General information			
Product type designation	Protective film 4"	Protective film 4" widescreen	Protective film 4" widescreen
Installation type/mounting			
Mounting in portrait format possible	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
RoHS conformity	Yes	Yes	
Ambient conditions			
Ambient temperature during operation			
• min.	-40 °C	-40 °C	-40 °C
• max.	80 °C	80 °C	80 °C
Relative humidity			
• Operation, max.	90 %	90 %	90 %
• Condensation permissible		No	No
Mechanics/material			
Material			
• Plastic	Yes; Nonreflecting	Yes; Nonreflecting	Yes; Nonreflecting
Dimensions			
Width	120 mm	131.4 mm	110.1 mm
Height	105 mm	107.4 mm	68.9 mm
Thickness	0.125 mm	0.125 mm	0.125 mm
Scope of supply			
Delivery quantity in pieces	10	10	10
Other			
printable with laser printer	Yes	Yes	No
Merchandise	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	for TP 177B 4", KTP 400 Basic	For KTP400 Basic, KTP400 Basic 2nd, KTP400 Comfort, KTP400F Mobile	KTP400F Mobile 4"

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Technical specifications

Article number	6AV6671-3DC00-0AX0	6AV6671-3DC00-0AX5	6AV6881-0AJ21-0AA0	6AV6881-0KJ22-0AA0	6AV6881-0KJ22-1AA0	6AV6645-7AB15-0AS0	6AV6574-1AD00-4CX0
	Protect. Film 10" Touch Device, Type 1	Protect. Film 10" Touch Device, Type 2	Protect. film 10" widescreen, type 4	Protect. film 10" front, type 5	Protect. film 10 BAC front, type 5	Protect. film 10" Touch device, type10	Protect. Film 10" to 12" Touch Device
General information							
Product type designation	Protective film 10"	Protective film 10"	Protective film 10" widescreen, type 4	Protective film 10" front, surface, type 5	Protective film 10" front, surface, type 5	Protective film 10"	Protective film 10" ... 12"
Installation type/mounting							
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates							
CE mark	Yes	Yes	No; No CE marking obligation			Yes	Yes
REACH			Yes; Tested				
EAC (formerly Gost-R)				Yes	Yes		
RoHS conformity		Yes	Yes; unnecessary	Yes; unnecessary	Yes; unnecessary		
Ambient conditions							
Suited for indoor use			Yes	Yes; Processing temperature 5 °C to 32 °C, empirical value			
Suited for outdoor use			No; possible under certain conditions	No; possible under certain conditions	No; possible under certain conditions		
Ambient temperature during operation							
• min.	-40 °C	-40 °C	0 °C	-20 °C	-20 °C	-40 °C	-40 °C
• max.	80 °C	80 °C	55 °C	80 °C	80 °C	80 °C	50 °C
Relative humidity							
• Operation, max.	90 %	90 %	50 %	50 %	50 %	90 %	90 %
Accessories							
Function description					antibacterial		
Mechanics/material							
Material			Polyester with functional hard layer, dirt-repellant, URM55, silicone adhesive layer				
• Plastic	Yes; Nonreflecting	Yes; Nonreflecting	Yes; Non-reflecting, matte, can be removed without residue, hard-coated, dirt-repellant			Yes; Nonreflecting	Yes; Polyester; non-reflecting
• PET			Yes; Non-antistatic, non-reflecting, scratch-resistant, can be removed without residue				
Enclosure material (front)			Scratching hardness 2H, adhesive force 0.011 N/25 mm	Scratch resistance 2H (acc. to JIS K 5600), adhesive force 0.011 N/25 mm (acc. to JIS Z 0237)			
• Plastic				Yes; Haze 11.9% acc. to JIS K 7136 and transmission 90.5% acc. to JIS K 7361-1			
• PET				Yes; Basic foil, storage life > 1 year			
Dimensions							
Width	292 mm	299.8 mm	216.96 mm	277 mm	277 mm	223.17 mm	297.4 mm
Height	248 mm	259.9 mm	135.6 mm	198 mm	198 mm	170.37 mm	254.4 mm
Thickness	0.125 mm	0.125 mm	0.225 mm; Corners radius 0 mm	0.225 mm; Corners radius 3.1 mm	0.225 mm; Corners radius 3.1 mm	0.3 mm	0.125 mm
Weights							
Weight (without packaging)			30 g; Per unit	16 g; Per unit	16 g; Per unit		

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Technical specifications

Article number	6AV6671-3DC00-0AX0	6AV6671-3DC00-0AX5	6AV6881-0AJ21-0AA0	6AV6881-0KJ22-0AA0	6AV6881-0KJ22-1AA0	6AV6645-7AB15-0AS0	6AV6574-1AD00-4CX0
	Protect. Film 10" Touch Device, Type 1	Protect. Film 10" Touch Device, Type 2	Protect. film 10" widescreen, type 4	Protect. film 10" front, type 5	Protect. film 10 BAC front, type 5	Protect. film 10" Touch device, type10	Protect. Film 10" to 12" Touch Device
Scope of supply							
Delivery quantity in pieces	10	10	5; Units per set	5; Units per set	5; Units per set	10	10
Components included			5x removers, 5x cleaning cloths, 5x spatulas for applying				
Other							
printable with laser printer	Yes	Yes; Test printer suitability beforehand. No liability for printer damage	No; suitable for screen printing or UV printing	No	No	Yes	Yes
Merchandise	No	No	Yes; URM55 reflection shield, matte	Yes; URM55 reflection shield, matte	Yes; URM55 reflection shield, matte		No
Manufacturer name	SIEMENS AG	SIEMENS AG	Bedifol GmbH	Bedifol GmbH	Bedifol GmbH	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany		Byk-Gulden-Straße 2 // F22, 78467 Constance, Germany			Gleiwitzerstraße 555, 90475 Nuremberg, Germany	
contacting the manufacturer			Phone +49 (7531) 12738 10, email: info@bedi-fol.com	phone: +49 (7531) 12738-60, email: shop@schutzfolien24.de			
Target devices			SIMATIC ITP1000	Panels and IPC with start of delivery from 2020 (WFP2.3)		for Mobile Panel 277 10"	
Note:			Surface-adhesive film, can be trimmed, printable, observe target device manual before attaching, limited suitability for resistive touch systems	Surface-adhesive film, can be trimmed, printable, observe target device manual before attaching, limited suitability for resistive touch systems			

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Technical specifications

Article number	6AV6574-1AD00-4AX0 Protect. Film 6" Touch Device, Type 1	6AV6574-1AD00-4DX0 Protect. Film 6" Touch Device, Type 2	6AV6671-2XC00-0AX0 Protect. Film 6" Touch Device, Type 3	6AV6574-1AD04-4AA0 Protect. Film 6" Touch Device, Type 10
General information				
Product type designation	Protective film 6"	Protective film 6"	Protective film 6"	Protective film 6"
Installation type/mounting				
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
Ambient conditions				
Ambient temperature during operation				
• min.	-40 °C	-40 °C	-40 °C	-40 °C
• max.	50 °C	50 °C	80 °C	80 °C
Relative humidity				
• Operation, max.	90 %	90 %	90 %	90 %
Mechanics/material				
Material				
• Plastic	Yes; Nonreflecting	Yes; Nonreflecting	Yes; Nonreflecting	Yes; Nonreflecting
Dimensions				
Width	118.4 mm	178.4 mm	179.4 mm	120.5 mm
Height	89 mm	135.4 mm	141.4 mm	91 mm
Thickness	0.125 mm	0.125 mm	0.125 mm	0.125 mm
Scope of supply				
Delivery quantity in pieces	10	10	10	10
Other				
printable with laser printer	Yes	Yes	Yes	Yes
Merchandise	No	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	For TP070, TP170micro, TP170A/B, C7-635 touch	For TP270 6", TP277 6", MP177 6" touch, MP270B 6" touch	for TP 177micro, TP 177A, TP 177B, OP 177B, KTP 600 Basic	For Mobile Panel 170, Mobile Panel 177

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Technical specifications

Article number	6AV2181-5GJ00-0AX0	6AV2124-6GJ00-0AX0	6AV6881-0GJ22-0AA0	6AV6881-0GJ22-1AA0
	Protect. film 7" widescreen, type 13	Protect. film 7" widescreen	Protect. film 7" front, type 5	Protect. film 7 BAC front, type 5
General information				
Product type designation	Protective film 7" widescreen	Protective film 7" widescreen	Protective film 7" front, surface, type 5	Protective film 7" front, surface, type 5
Installation type/mounting				
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes
Standards, approvals, certificates				
CE mark	Yes	Yes	No; No CE marking obligation	No; No CE marking obligation
EAC (formerly Gost-R)			Yes	Yes
RoHS conformity		Yes	Yes; unnecessary	Yes; unnecessary
Ambient conditions				
Suited for indoor use			Yes; Processing temperature 5 °C to 32 °C, empirical value	Yes; Processing temperature 5 °C to 32 °C, empirical value
Suited for outdoor use			No; possible under certain conditions	No; possible under certain conditions
Ambient temperature during operation				
• min.	-40 °C	-40 °C	-20 °C	-20 °C
• max.	80 °C	80 °C	80 °C	80 °C
Relative humidity				
• Operation, max.	90 %	90 %	50 %	50 %
• Condensation permissible	No	No		
Accessories				
Function description				antibacterial
Mechanics/material				
Material			Polyester with functional hard layer, dirt-repellant, URM55, silicone adhesive layer	
• Plastic	Yes; Nonreflecting	Yes; Nonreflecting	Yes; Non-reflecting, matte, can be removed without residue, hard-coated, dirt-repellant	
• PET			Yes; Non-antistatic, non-reflecting, scratch-resistant, can be removed without residue	
Enclosure material (front)			Scratch resistance 2H (acc. to JIS K 5600), adhesive force 0.011 N/25 mm (acc. to JIS Z 0237)	
• Plastic			Yes; Haze 11.9% acc. to JIS K 7136 and transmission 90.5% acc. to JIS K 7361-1	
• PET			Yes; Basic foil, storage life > 1 year	
Dimensions				
Width	169.5 mm	205.4 mm	206 mm	206 mm
Height	108.5 mm	149.4 mm	150 mm	150 mm
Thickness	0.125 mm	0.125 mm	0.225 mm; Corners radius 3.1 mm	0.225 mm; Corners radius 3.1 mm
Weights				
Weight (without packaging)			8 g; Per unit	8 g; Per unit

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Technical specifications

Article number	**6AV2181-5GJ00-0AX0**	**6AV2124-6GJ00-0AX0**	**6AV6881-0GJ22-0AA0**	**6AV6881-0GJ22-1AA0**
	Protect. film 7" widescreen, type 13	Protect. film 7" widescreen	Protect. film 7" front, type 5	Protect. film 7 BAC front, type 5
Scope of supply				
Delivery quantity in pieces	10; Units per set	10	5; Units per set	5; Units per set
Components included	10x protective films without additional accessories/components		5x removers, 5x cleaning cloths, 1x spatula for applying	5x removers, 5x cleaning cloths, 1x spatula for applying
Other				
printable with laser printer	No	No; digital UV printing	No	No
Merchandise	No	No	Yes; URM55 reflection shield, matte	Yes; URM55 reflection shield, matte
Manufacturer name	SIEMENS AG	SIEMENS AG	Bedifol GmbH	Bedifol GmbH
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Byk-Gulden-Straße 2 // F22, 78467 Constance, Germany	Byk-Gulden-Straße 2 // F22, 78467 Constance, Germany
contacting the manufacturer			phone: +49 (7531) 12738-60, email: shop@schutzfolien24.de	
Target devices	KTP700 Mobile, KTP700F Mobile	for KTP700 Basic 2nd, TP700 Comfort, IPC277D	Panels and IPC with start of delivery from 2020 (WFP2.3)	Panels and IPC with start of delivery from 2020 (WFP2.3)
Note:		Edge-adhesive film, can be trimmed to a limited extent, printable, observe target device manual before attaching, high suitability for resistive touch systems, limited suitability for glass fronts	Surface-adhesive film, can be trimmed, printable, observe target device manual before attaching, limited suitability for resistive touch systems	

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Protective films

Technical specifications

Article number	6AV6671-3CC00-0AX0 Protect. Film 8" Touch Device, Type 1	6AV6671-3CC00-0AX5 Protect. Film 8" Touch Device, Type 2	6AV6671-5BC00-0AX0 Protect. film 8" Touch device, type 10
General information			
Product type designation	Protective film 8"	Protective film 8"	Protective film 8"
Installation type/mounting			
Mounting in portrait format possible	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
RoHS conformity		Yes	
Ambient conditions			
Ambient temperature during operation			
• min.	-40 °C	-40 °C	-40 °C
• max.	80 °C	80 °C	80 °C
Relative humidity			
• Operation, max.	90 %	90 %	90 %
Mechanics/material			
Material			
• Plastic	Yes; Nonreflecting	Yes; Nonreflecting	Yes; Nonreflecting
Dimensions			
Width	207 mm	217 mm	155.5 mm
Height	165 mm	217 mm	117.7 mm
Thickness	0.125 mm	0.125 mm	0.3 mm
Scope of supply			
Delivery quantity in pieces	10	10	2
Other			
printable with laser printer	Yes	Yes	Yes
Merchandise	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	For MP277 8" touch up to product version "ES 14"	For MP277 8" touch in product version "ES 15" and later	for Mobile Panel 277 8"

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Technical specifications

Article number	**6AV2124-6JJ00-0AX0**	**6AV2181-3JJ20-0AX0**	**6AV2181-5JJ00-0AX0**
	Protect. Film 9" Widescreen	Protect. Film 9" Widescreen, Type 2	Protect. film 9" widescreen, type 13
General information			
Product type designation	Protective film 9" widescreen	Protective film 9" widescreen	Protective film 9" widescreen
Installation type/mounting			
Mounting in portrait format possible	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
RoHS conformity	Yes		
Ambient conditions			
Ambient temperature during operation			
• min.	-40 °C	-40 °C	-40 °C
• max.	80 °C	80 °C	80 °C
Relative humidity			
• Operation, max.	90 %	90 %	90 %
• Condensation permissible	No	No	No
Mechanics/material			
Material			
• Plastic	Yes; Nonreflecting	Yes; Nonreflecting	Yes; Nonreflecting
Dimensions			
Width	265.4 mm	258.4 mm	214.6 mm
Height	181.4 mm	173.4 mm	134.6 mm
Thickness	0.125 mm	0.125 mm	0.125 mm
Scope of supply			
Delivery quantity in pieces	10	10	10
Other			
printable with laser printer	Yes	Yes	No
Merchandise	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	for TP900 Comfort, IPC277D	for KTP900 Basic	KTP900 Mobile, KTP900F Mobile

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Protective films

Technical specifications

Article number	6AV6881-0MJ22-1AA0	6AV2124-6MJ00-0AX0	6AV2181-3MJ20-0AX0	6AV6881-0MJ22-0AA0
	Protect. film 12 BAC front, type 5	Protect. Film 12" Widescreen	Protect. Film 12" Widescreen, Type 2	Protect. film 12" front, type 5
General information				
Product type designation	Protective film 12" front, surface, type 5	Protective film 12" widescreen	Protective film 12" widescreen	Protective film 12" front, surface, type 5
Installation type/mounting				
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes
Standards, approvals, certificates				
CE mark	No; No CE marking obligation	Yes	Yes	No; No CE marking obligation
EAC (formerly Gost-R)	Yes			Yes
RoHS conformity	Yes; unnecessary	Yes		Yes; unnecessary
Ambient conditions				
Suited for indoor use	Yes; Processing temperature 5 °C to 32 °C, empirical value			Yes; Processing temperature 5 °C to 32 °C, empirical value
Suited for outdoor use	No; possible under certain conditions			No; possible under certain conditions
Ambient temperature during operation				
• min.	-20 °C	-40 °C	-40 °C	-20 °C
• max.	80 °C	80 °C	80 °C	80 °C
Relative humidity				
• Operation, max.	50 %	90 %	90 %	50 %
• Condensation permissible		No	No	
Accessories				
Function description	antibacterial			
Mechanics/material				
Material	Polyester with functional hard layer, dirt-repellant, URM55, silicone adhesive layer			Polyester with functional hard layer, dirt-repellant, URM55, silicone adhesive layer
• Plastic	Yes; Non-reflecting, matte, can be removed without residue, hard-coated, dirt-repellant	Yes; Nonreflecting	Yes; Nonreflecting	Yes; Non-reflecting, matte, can be removed without residue, hard-coated, dirt-repellant
• PET	Yes; Non-antistatic, non-reflecting, scratch-resistant, can be removed without residue			Yes; Non-antistatic, non-reflecting, scratch-resistant, can be removed without residue
Enclosure material (front)	Scratch resistance 2H (acc. to JIS K 5600), adhesive force 0.011 N/ 25 mm (acc. to JIS Z 0237)			Scratch resistance 2H (acc. to JIS K 5600), adhesive force 0.011 N/ 25 mm (acc. to JIS Z 0237)
• Plastic	Yes; Haze 11.9% acc. to JIS K 7136 and transmission 90.5% acc. to JIS K 7361-1			Yes; Haze 11.9% acc. to JIS K 7136 and transmission 90.5% acc. to JIS K 7361-1
• PET	Yes; Basic foil, storage life > 1 year			Yes; Basic foil, storage life > 1 year
Dimensions				
Width	318 mm	321.4 mm	321.4 mm	318 mm
Height	229 mm	232.4 mm	236.8 mm	229 mm
Thickness	0.225 mm; Corners radius 3.1 mm	0.125 mm	0.125 mm	0.225 mm; Corners radius 3.1 mm
Weights				
Weight (without packaging)	22 g; Per unit			22 g; Per unit

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Technical specifications

Article number	**6AV6881-0MJ22-1AA0**	**6AV2124-6MJ00-0AX0**	**6AV2181-3MJ20-0AX0**	**6AV6881-0MJ22-0AA0**
	Protect. film 12 BAC front, type 5	Protect. Film 12" Widescreen	Protect. Film 12" Widescreen, Type 2	Protect. film 12" front, type 5
Scope of supply				
Delivery quantity in pieces	5; films per package	10	10	5; films per package
Components included	5x removers, 5x cleaning cloths, 1x spatula for applying			5x removers, 5x cleaning cloths, 1x spatula for applying
Other				
printable with laser printer	No	Yes	Yes	No
Merchandise	Yes; URM55 reflection shield, matte	No	No	Yes; URM55 reflection shield, matte
Manufacturer name	Bedifol GmbH	SIEMENS AG	SIEMENS AG	Bedifol GmbH
Manufacturer's address	Byk-Gulden-Straße 2 // F22, 78467 Constance, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Byk-Gulden-Straße 2 // F22, 78467 Constance, Germany
contacting the manufacturer	phone: +49 (7531) 12738-60, email: shop@schutzfolien24.de			phone: +49 (7531) 12738-60, email: shop@schutzfolien24.de
Target devices	Panels and IPC with start of delivery from 2020 (WFP2.3)	for TP1200 Comfort, IPC277D	for KTP1200 Basic	Panels and IPC with start of delivery from 2020 (WFP2.3)
Note:	Surface-adhesive film, can be trimmed, printable, observe target device manual before attaching, limited suitability for resistive touch systems			Surface-adhesive film, can be trimmed, printable, observe target device manual before attaching, limited suitability for resistive touch systems

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Protective films

Technical specifications

Article number	6AV2124-6QJ00-0AX1	6AV6574-1AD00-4EX0	6AV6881-0QJ22-0AA0	6AV6881-0QJ22-1AA0
	Protect. Film 15" Widescreen	Protect. Film 15" Touch Device	Protect. film 15" front, type 5	Protect. film 15 BAC front, type 5
General information				
Product type designation	Protective film 15" widescreen	Protective film 15", 4:3	Protective film 15" front, surface, type 5	Protective film 15" front, surface, type 5
Installation type/mounting				
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes
Standards, approvals, certificates				
CE mark		Yes	No; No CE marking obligation	No; No CE marking obligation
EAC (formerly Gost-R)			Yes	Yes
RoHS conformity			Yes; unnecessary	Yes; unnecessary
Ambient conditions				
Suited for indoor use	Yes		Yes; Processing temperature 5 °C to 32 °C, empirical value	Yes; Processing temperature 5 °C to 32 °C, empirical value
Suited for outdoor use	No		No; possible under certain conditions	No; possible under certain conditions
Ambient temperature during operation				
• min.	-40 °C	-40 °C	-20 °C	-20 °C
• max.	80 °C	50 °C	80 °C	80 °C
Relative humidity				
• Operation, max.	90 %	90 %	50 %	50 %
Accessories				
Function description				antibacterial
Mechanics/material				
Material			Polyester with functional hard layer, dirt-repellant, URM55, silicone adhesive layer	
• Plastic	Yes; Nonreflecting	Yes; Nonreflecting	Yes; Non-reflecting, matte, can be removed without residue, hard-coated, dirt-repellant	
• PET			Yes; Non-antistatic, non-reflecting, scratch-resistant, can be removed without residue	
Enclosure material (front)			Scratch resistance 2H (acc. to JIS K 5600), adhesive force 0.011 N/25 mm (acc. to JIS Z 0237)	
• Plastic			Yes; Haze 11.9% acc. to JIS K 7136 and transmission 90.5% acc. to JIS K 7361-1	
• PET			Yes; Basic foil, storage life > 1 year	Yes; Basic foil, storage life > 1 year
Dimensions				
Width	368 mm	362 mm	390 mm	390 mm
Height	259 mm	289 mm	249 mm	249 mm
Thickness	0.125 mm	0.125 mm	0.225 mm; Corners radius 5.5 mm	0.225 mm; Corners radius 3.1 mm
Weights				
Weight (without packaging)	26 g; Per unit		150 g; Per unit	150 g; Per unit

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Technical specifications

Article number	**6AV2124-6QJ00-0AX1**	**6AV6574-1AD00-4EX0**	**6AV6881-0QJ22-0AA0**	**6AV6881-0QJ22-1AA0**
	Protect. Film 15" Widescreen	Protect. Film 15" Touch Device	Protect. film 15" front, type 5	Protect. film 15 BAC front, type 5
Scope of supply				
Delivery quantity in pieces	10; Units per set	10	5; films per package	5; films per package
Components included			5x removers, 5x cleaning cloths, 1x spatula for applying	5x removers, 5x cleaning cloths, 1x spatula for applying
Other				
printable with laser printer	Yes	Yes	No; Suitable for screen printing	No; Suitable for screen printing
Merchandise	No	No	Yes; URM55 reflection shield, matte	Yes; URM55 reflection shield, matte
Manufacturer name	SIEMENS AG	SIEMENS AG	Bedifol GmbH	Bedifol GmbH
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Byk-Gulden-Straße 2 // F22, 78467 Constance, Germany	Byk-Gulden-Straße 2 // F22, 78467 Constance, Germany
contacting the manufacturer			Phone +49 (7531) 12738 10, email: info@bedifol.com	phone: +49 (7531) 12738-60, email: shop@schutzfolien24.de
Target devices	for Comfort Panel, IPC, Flat Panel, Thin Client		Panels and IPC with start of delivery from 2020 (WFP2.3)	Panels and IPC with start of delivery from 2020 (WFP2.3)
Note:	not suitable for multi-touch (glass front)	Not suitable for widescreen	Surface-adhesive film, can be trimmed, printable, observe target device manual before attaching, limited suitability for resistive touch systems	Surface-adhesive film, can be trimmed, printable, observe target device manual before attaching, limited suitability for resistive touch systems

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Technical specifications

Article number	6AV7672-1CE00-0AA0	6AV2124-6UJ00-0AX1	6AV6881-0UJ20-0AA0	6AV6881-0UJ22-0AA0	6AV6881-0UJ22-1AA0
	Protect. Film 19" Touch Device	Protect. Film 19" Widescreen	Protect. film 19" glass front, type 1	Protect. film 19" front, type 5	Protect. film 19 BAC front, type 5
General information					
Product type designation	Protective film 19", 4:3	Protective film 19" widescreen	Protective film, 19" glass front	Protective film 19" front, surface, type 5	Protective film 19" front, surface, type 5
Installation type/mounting					
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates					
CE mark	Yes		No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation
REACH			Yes; Tested		
EAC (formerly Gost-R)				Yes	Yes
RoHS conformity			Yes; unnecessary	Yes; unnecessary	Yes; unnecessary
Ambient conditions					
Suited for indoor use		Yes	Yes	Yes; Processing temperature 5 °C to 32 °C, empirical value	
Suited for outdoor use		No	No; possible under certain conditions	No; possible under certain conditions	No; possible under certain conditions
Ambient temperature during operation					
• min.	-40 °C	-40 °C	0 °C	-20 °C	-20 °C
• max.	80 °C	80 °C	55 °C	80 °C	80 °C
Relative humidity					
• Operation, max.	90 %	90 %	50 %	50 %	50 %
Accessories					
Function description					antibacterial
Mechanics/material					
Material			Polyester with functional hard layer, dirt-repellant, URM55, silicone adhesive layer	Polyester with functional hard layer, dirt-repellant, URM55, silicone adhesive layer	Polyester with functional hard layer, dirt-repellant, URM55, silicone adhesive layer
• Plastic	Yes; Nonreflecting	Yes; Nonreflecting	Yes; Non-reflecting, matte, can be removed without residue, hard-coated, dirt-repellant	Yes; Non-reflecting, matte, can be removed without residue, hard-coated, dirt-repellant	Yes; Non-reflecting, matte, can be removed without residue, hard-coated, dirt-repellant
• PET			Yes; Non-antistatic, non-reflecting, scratch-resistant, can be removed without residue	Yes; Non-antistatic, non-reflecting, scratch-resistant, can be removed without residue	Yes; Non-antistatic, non-reflecting, scratch-resistant, can be removed without residue
Enclosure material (front)			Scratching hardness 2H, adhesive force 0.011 N/25 mm	Scratch resistance 2H (acc. to JIS K 5600), adhesive force 0.011 N/25 mm (acc. to JIS Z 0237)	Scratch resistance 2H (acc. to JIS K 5600), adhesive force 0.011 N/25 mm (acc. to JIS Z 0237)
• Plastic				Yes; Haze 11.9% acc. to JIS K 7136 and transmission 90.5% acc. to JIS K 7361-1	Yes; Haze 11.9% acc. to JIS K 7136 and transmission 90.5% acc. to JIS K 7361-1
• PET				Yes; Basic foil, storage life > 1 year	Yes; Basic foil, storage life > 1 year
Dimensions					
Width	378 mm	451 mm	409 mm	456 mm	456 mm
Height	302.5 mm	285 mm	231 mm	286 mm	286 mm
Thickness	0.2 mm	0.125 mm	0.225 mm; Corners radius 0.5 mm	0.225 mm; Corners radius 5.5 mm	0.225 mm; Corners radius 3.1 mm
Weights					
Weight (without packaging)		34 g; Per unit	34 g; Per unit	190 g; Per unit	190 g; Per unit

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Technical specifications

Article number	6AV7672-1CE00-0AA0	6AV2124-6UJ00-0AX1	6AV6881-0UJ20-0AA0	6AV6881-0UJ22-0AA0	6AV6881-0UJ22-1AA0
	Protect. Film 19" Touch Device	Protect. Film 19" Widescreen	Protect. film 19" glass front, type 1	Protect. film 19" front, type 5	Protect. film 19 BAC front, type 5
Scope of supply					
Delivery quantity in pieces	10	10; Units per set	5; Units per set	5; films per package	5; films per package
Components included			5x removers, 5x cleaning cloths, 5x spatulas for applying	5x removers, 5x cleaning cloths, 1x spatula for applying	5x removers, 5x cleaning cloths, 1x spatula for applying
Other					
printable with laser printer	Yes	Yes	No; suitable for screen printing or UV printing	No; Suitable for screen printing	No; Suitable for screen printing
Merchandise	No	No	Yes; URM55 reflection shield, matte	Yes; URM55 reflection shield, matte	Yes; URM55 reflection shield, matte
Manufacturer name	SIEMENS AG	SIEMENS AG	Bedifol GmbH	Bedifol GmbH	Bedifol GmbH
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Byk-Gulden-Straße 2 // F22, 78467 Constance, Germany	Byk-Gulden-Straße 2 // F22, 78467 Constance, Germany	Byk-Gulden-Straße 2 // F22, 78467 Constance, Germany
contacting the manufacturer			Phone +49 (7531) 12738 10, email: info@bedifol.com	Phone +49 (7531) 12738 10, email: info@bedifol.com	phone: +49 (7531) 12738-60, email: shop@schutzfolien24.de
Target devices		for Comfort Panel, IPC, Flat Panel, Thin Client	For 19" widescreen flat panels, can also be cut to size for smaller, glass front displays, not suitable for membrane fronts	Panels and IPC with start of delivery from 2020 (WFP2.3)	Panels and IPC with start of delivery from 2020 (WFP2.3)
Note:	Not suitable for widescreen	not suitable for multi-touch (glass front)	Surface-adhesive film, can be trimmed, printable, observe target device manual before attaching, limited suitability for resistive touch systems	Surface-adhesive film, can be trimmed, printable, observe target device manual before attaching, limited suitability for resistive touch systems	Surface-adhesive film, can be trimmed, printable, observe target device manual before attaching, limited suitability for resistive touch systems

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Technical specifications

Article number	6AV2124-6XJ00-0AX1	6AV6881-0VJ22-0AA0	6AV6881-0VJ22-1AA0	6AV6881-0WJ22-0AA0
	Protect. Film 22" Widescreen	Protect. film 22" front, type 5	Protect. film 22 BAC front, type 5	Protect. film 24" front, type 5
General information				
Product type designation	Protective film 22" widescreen	Protective film 22" front, surface, type 5	Protective film 22" front, surface, type 5	Protective film 24" front, surface, type 5
Installation type/mounting				
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes
Standards, approvals, certificates				
CE mark		No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation
EAC (formerly Gost-R)		Yes	Yes	Yes
RoHS conformity		Yes; unnecessary	Yes; unnecessary	Yes; unnecessary
Ambient conditions				
Suited for indoor use	Yes	Yes; Processing temperature 5 °C to 32 °C, empirical value	Yes; Processing temperature 5 °C to 32 °C, empirical value	Yes; Processing temperature 5 °C to 32 °C, empirical value
Suited for outdoor use	No	No; possible under certain conditions	No; possible under certain conditions	No; possible under certain conditions
Ambient temperature during operation				
• min.	-40 °C	-20 °C	-20 °C	-20 °C
• max.	80 °C	80 °C	80 °C	80 °C
Relative humidity				
• Operation, max.	90 %	50 %	50 %	50 %
Accessories				
Function description			antibacterial	
Mechanics/material				
Material		Polyester with functional hard layer, dirt-repellant, URM55, silicone adhesive layer	Polyester with functional hard layer, dirt-repellant, URM55, silicone adhesive layer	Polyester with functional hard layer, dirt-repellant, URM55, silicone adhesive layer
• Plastic	Yes; Nonreflecting	Yes; Non-reflecting, matte, can be removed without residue, hard-coated, dirt-repellant	Yes; Non-reflecting, matte, can be removed without residue, hard-coated, dirt-repellant	Yes; Non-reflecting, matte, can be removed without residue, hard-coated, dirt-repellant
• PET		Yes; Non-antistatic, non-reflecting, scratch-resistant, can be removed without residue	Yes; Non-antistatic, non-reflecting, scratch-resistant, can be removed without residue	Yes; Non-antistatic, non-reflecting, scratch-resistant, can be removed without residue
Enclosure material (front)		Scratch resistance 2H (acc. to JIS K 5600), adhesive force 0.011 N/ 25 mm (acc. to JIS Z 0237)	Scratch resistance 2H (acc. to JIS K 5600), adhesive force 0.011 N/ 25 mm (acc. to JIS Z 0237)	Scratch resistance 2H (acc. to JIS K 5600), adhesive force 0.011 N/ 25 mm (acc. to JIS Z 0237)
• Plastic		Yes; Haze 11.9% acc. to JIS K 7136 and transmission 90.5% acc. to JIS K 7361-1	Yes; Haze 11.9% acc. to JIS K 7136 and transmission 90.5% acc. to JIS K 7361-1	Yes; Haze 11.9% acc. to JIS K 7136 and transmission 90.5% acc. to JIS K 7361-1
• PET		Yes; Basic foil, storage life > 1 year	Yes; Basic foil, storage life > 1 year	Yes; Basic foil, storage life > 1 year
Dimensions				
Width	518 mm	521 mm	521 mm	577 mm
Height	334 mm	323 mm	323 mm	355 mm
Thickness	0.125 mm	0.225 mm; Corners radius 5.5 mm	0.225 mm; Corners radius 3.1 mm	0.225 mm; Corners radius 5.5 mm
Weights				
Weight (without packaging)	44 g; Per unit	220 g; Per unit	220 g; Per unit	240 g; Per unit

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Technical specifications

Article number	6AV2124-6XJ00-0AX1	6AV6881-0VJ22-0AA0	6AV6881-0VJ22-1AA0	6AV6881-0WJ22-0AA0
	Protect. Film 22" Widescreen	Protect. film 22" front, type 5	Protect. film 22 BAC front, type 5	Protect. film 24" front, type 5
Scope of supply				
Delivery quantity in pieces	10; Units per set	5; films per package	5; films per package	5; films per package
Components included		5x removers, 5x cleaning cloths, 1x spatula for applying	5x removers, 5x cleaning cloths, 1x spatula for applying	5x removers, 5x cleaning cloths, 1x spatula for applying
Other				
printable with laser printer	Yes	No; Suitable for screen printing	No; Suitable for screen printing	No; Suitable for screen printing
Merchandise	No	Yes; URM55 reflection shield, matte	Yes; URM55 reflection shield, matte	Yes; URM55 reflection shield, matte
Manufacturer name	SIEMENS AG	Bedifol GmbH	Bedifol GmbH	Bedifol GmbH
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Byk-Gulden-Straße 2 // F22, 78467 Constance, Germany	Byk-Gulden-Straße 2 // F22, 78467 Constance, Germany	Byk-Gulden-Straße 2 // F22, 78467 Constance, Germany
contacting the manufacturer		Phone +49 (7531) 12738 10, email: info@bedifol.com	phone: +49 (7531) 12738-60, email: shop@schutzfolien24.de	Phone +49 (7531) 12738 10, email: info@bedifol.com
Target devices	for Comfort Panel, IPC, Flat Panel, Thin Client	Panels and IPC with start of delivery from 2020 (WFP2.3)	Panels and IPC with start of delivery from 2020 (WFP2.3)	Panels and IPC with start of delivery from 2020 (WFP2.3)
Note:	not suitable for multi-touch (glass front)	Surface-adhesive film, can be trimmed, printable, observe target device manual before attaching, limited suitability for resistive touch systems	Surface-adhesive film, can be trimmed, printable, observe target device manual before attaching, limited suitability for resistive touch systems	Surface-adhesive film, can be trimmed, printable, observe target device manual before attaching, limited suitability for resistive touch systems

More information

Note:

Suitable target devices and contents can be found at the end of the technical specifications of each protective film.

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.
Industry Mall:

https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically. This facilitates selection of suitable accessories.

http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

http://support.automation.siemens.com

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INOX frames, protective covers, dust caps

Overview

HMI accessories, protective covers, dust caps

INOX frames 12" and 15"

INOX frames

When INOX frames with protective films are used, areas are enclosed in which enhanced frontal protection up to IP69 degree of protection is required. INOX frames can be used for installation of Unified Comfort Panels, Industrial Thin Clients, Industrial Flat Panels and Industrial PCs.

Protective covers

With a protective cover the complete panel front can be additionally protected. This gives IP65 degree of protection to the complete panel front.

Protective covers with IP65 degree of protection provide complete frontal protection of the panel and IPC against dirt and scratches. If the protective cover is now attacked by corrosive substances, the actual front of the device remains unaffected. If it is damaged, the protective cover can easily be replaced at any time.

Self-adhesive protective films are available for simple display protection. The protective covers can be kept clean using high-pressure cleaning equipment. Ready-made templates can be downloaded to help you create and print out your own low-cost frame designs between panel and protective cover.

Unfortunately, no protective covers are available for the Basic and Comfort Panels, or the IPCs.

Dust caps

It is also possible to dustproof unused or rarely used interfaces on the back or underside of the device.

For this purpose we offer dust caps.

Ordering data

	Article No.
INOX frame Can be used for e.g. Unified Comfort Panels, Industrial Thin Clients and Industrial Flat Panels. The Panel front is completely covered and protected. The degree of protection increases to IP69. Attention: not approved for hazardous and marine environments! The protective film set (antibacterial or standard) must be ordered separately. **INOX frames:**	
• 7" Type 1, without mounting frame	**6AV6881-0GH21-2AA0**
• 10" Type 1, without mounting frame	**6AV6881-0KH21-2AA0**
• 12" Type 1, without mounting frame	**6AV6881-0MH21-2AA0**
• 15" Type 1, without mounting frame	**6AV6881-0QH21-2AA0**
• 19" Type 1, without mounting frame	**6AV6881-0UH21-2AA0**
• 22" Type 1, without mounting frame	**6AV6881-0VH21-2AA0**
INOX frame sets INOX frame and required mounting frame in set. Only the protective film set (antibacterial or standard) must still be ordered separately. Caution: not approved for hazardous and marine environments!	
• 7" Type 1, with mounting frame	**6AV6881-0GH21-2BA0**
• 10" Type 1, with mounting frame	**6AV6881-0KH21-2BA0**
• 12" Type 1, with mounting frame	**6AV6881-0MH21-2BA0**
• 15" Type 1, with mounting frame	**6AV6881-0QH21-2BA0**
• 19" Type 1, with mounting frame	**6AV6881-0UH21-2BA0**
• 22" Type 1, with mounting frame	**6AV6881-0VH21-2BA0**
Protective covers for 6" touch devices for TP 070, TP 170micro, TP 177micro, TP 170A/B, TP 177A/B, TP 270 6", TP 277 6" MP 177 6" touch, MP 270 6" touch	**6AV6574-1AE00-4AX0**
Protective covers for OP 77 for OP77 and OP77B	**6AV6671-1AJ00-0AX0**
Protective covers for OP 177 for OP177B	**6AV6671-2DJ00-0AX0**
Protective covers for MP 277 8" touch devices Only suitable for MP 277 8" touch up to E14 [1] (for devices with a narrow frame geometry)	**6AV6671-3CK01-0AX0**
Protective covers for MP 277 10" touch devices Only suitable for MP 277 10" touch up to E14 [1] and 10" Thin Client up to E03 [2] (for devices with a narrow frame geometry)	**6AV6671-3CK00-0AX0**
Dust protection set for USB and RJ45 interfaces SIMATIC PC, dust protection set accessory for Panel interfaces, Thin Clients and IPCs with suitable USB or RJ45 (LAN) interface	**6ES7648-1AA50-0XG0**

[1] E14 = Product version 14

[2] E03 = Product version 03

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Technical specifications

Article number	6AV6881-0MH21-2AA0	6AV6881-0GH21-2AA0	6AV6881-0QH21-2AA0	6AV6881-0UH21-2AA0	6AV6881-0KH21-2AA0	6AV6881-0VH21-2AA0
	INOX frame 12", type 1	INOX frame 7", type 1	INOX frame 15", type 1	INOX frame 19", type 1	INOX frame 10", type 1	INOX frame 22", type 1
General information						
Product type designation	protective frame INOX	protective frame INOX	protective frame INOX	protective frame INOX	protective frame INOX	protective frame INOX
Display						
Suitable for screen diagonal	12.1 in	7 in	15.6 in	18.5 in	10.1 in	21.5 in
Installation type/mounting						
Mounting type	screw fixing	screw fixing	screw fixing	screw fixing	screw fixing	screw fixing
Mounting position	Any, dependent on target device	Any, dependent on target device	Any, dependent on target device	Any, dependent on target device	Any, dependent on target device	Any, dependent on target device
Front mounting	Yes	Yes	Yes	Yes	Yes	Yes
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP69	IP69	IP69	IP69	IP69	IP69
Splashproof	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
responsibility with the manufacturer	Yes	Yes	Yes	Yes	Yes	Yes
CE mark	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation
UL approval	No	No	No	No	No	No
REACH	Yes	Yes	Yes	Yes	Yes	Yes
RoHS conformity	Yes	Yes	Yes	Yes	Yes	Yes
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	Yes; Always comply with the operating instructions of the target device.	Yes; Always comply with the operating instructions of the target device.	Yes; Always comply with the operating instructions of the target device.	Yes; Always comply with the operating instructions of the target device.	Yes; Always comply with the operating instructions of the target device.	Yes; Always comply with the operating instructions of the target device.
Ambient temperature during operation						
• min.	-40 °C	-40 °C	-40 °C	-40 °C	-40 °C	-40 °C
• max.	80 °C	80 °C	80 °C	80 °C	80 °C	80 °C
Relative humidity						
• Operation, max.	95 %	95 %	95 %	95 %	95 %	95 %
Mechanics/material						
Material	Matte	Matte	Matte	Matte	Matte	Matte
• Stainless steel	Yes; V2A 1.4300	Yes; V2A 1.4300	Yes; V2A 1.4300	Yes; V2A 1.4300	Yes; V2A 1.4300	Yes; V2A 1.4300
Enclosure material (rear)	Stainless steel V2A	Stainless steel V2A	Stainless steel V2A	Stainless steel V2A	Stainless steel V2A	Stainless steel V2A
Screw type						
• Torx	Yes	Yes	Yes	Yes	Yes	Yes
Torques/forces						
• Tightening torque, min.	12 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed	12 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed	12 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed	12 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed	12 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed	12 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed
• Tightening torque, max.	14 N·m	14 N·m	14 N·m	14 N·m	14 N·m	14 N·m

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INOX frames, protective covers, dust caps

Technical specifications

Article number	6AV6881-0MH21-2AA0	6AV6881-0GH21-2AA0	6AV6881-0QH21-2AA0	6AV6881-0UH21-2AA0	6AV6881-0KH21-2AA0	6AV6881-0VH21-2AA0
	INOX frame 12", type 1	INOX frame 7", type 1	INOX frame 15", type 1	INOX frame 19", type 1	INOX frame 10", type 1	INOX frame 22", type 1
Dimensions						
Width	353.2 mm	241.2 mm	425.2 mm	491.2 mm	307.2 mm	556.2 mm
Height	264.2 mm	185.2 mm	284.2 mm	321.2 mm	232.2 mm	358.2 mm
Depth	16 mm	16 mm	16 mm	16 mm	16 mm	16 mm
Scope of supply						
Delivery quantity in pieces	1; 1x protective frame INOX	1; 1x protective frame INOX	1; 1x protective frame INOX	1; 1x protective frame INOX	1; 1x protective frame INOX	1; 1x protective frame INOX
• Parts per unit	1; 1x protective frame INOX incl. screws and seals (mounting frame and protective films can be ordered separately)	1; 1x protective frame INOX incl. screws and seals (mounting frame and protective films can be ordered separately)	1; 1x protective frame INOX incl. screws and seals (mounting frame and protective films can be ordered separately)	1; 1x protective frame INOX incl. screws and seals (mounting frame and protective films can be ordered separately)	1; 1x protective frame INOX incl. screws and seals (mounting frame and protective films can be ordered separately)	1; 1x protective frame INOX incl. screws and seals (mounting frame and protective films can be ordered separately)
Other						
Merchandise	Yes; INOX frame	Yes; INOX frame	Yes; INOX frame	Yes; INOX frame	Yes; INOX frame	Yes; INOX frame
Manufacturer name	QUERUM products UG					
Manufacturer's address	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany					
contacting the manufacturer	email: querumproducts@web.de					
Target devices	Unified Comfort Panels, Industrial Thin Clients, Industrial Flat Panels and Industrial Pcs with suitable dimensions	Unified Comfort Panels, Industrial Thin Clients, Industrial Flat Panels and Industrial Pcs with suitable dimensions	Unified Comfort Panels, Industrial Thin Clients, Industrial Flat Panels and Industrial Pcs with suitable dimensions	Unified Comfort Panels, Industrial Thin Clients, Industrial Flat Panels and Industrial Pcs with suitable dimensions	Unified Comfort Panels, Industrial Thin Clients, Industrial Flat Panels and Industrial Pcs with suitable dimensions	Unified Comfort Panels, Industrial Thin Clients, Industrial Flat Panels and Industrial Pcs with suitable dimensions
Note:	Not released for hazardous areas and marine applications!	Not released for hazardous areas and marine applications!	Not released for hazardous areas and marine applications!	Not released for hazardous areas and marine applications!	Not released for hazardous areas and marine applications!	Not released for hazardous areas and marine applications!

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Technical specifications

Article number	6AV6881-0VH21-2BA0	6AV6881-0KH21-2BA0	6AV6881-0QH21-2BA0	6AV6881-0GH21-2BA0	6AV6881-0MH21-2BA0	6AV6881-0UH21-2BA0
	INOX frame 22", type 1, SET	INOX frame 10", type 1, SET	INOX frame 15", type 1, SET	INOX frame 7", type 1, SET	INOX frame 12", type 1, SET	INOX frame 19", type 1, SET
General information						
Product type designation	protective frame INOX SET	protective frame INOX SET	protective frame INOX SET	protective frame INOX SET	protective frame INOX SET	protective frame INOX SET
Display						
Suitable for screen diagonal	21.5 in	10.1 in	15.6 in	7 in	12.1 in	18.5 in
Installation type/mounting						
Mounting type	screw fixing	screw fixing	screw fixing	screw fixing	screw fixing	screw fixing
Mounting position	Any, dependent on target device	Any, dependent on target device	Any, dependent on target device	Any, dependent on target device	Any, dependent on target device	Any, dependent on target device
Front mounting	Yes	Yes	Yes	Yes	Yes	Yes
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes	Yes	Yes
Degree and class of protection						
IP (at the front)	IP69	IP69	IP69	IP69	IP69	IP69
Splashproof	Yes	Yes	Yes	Yes	Yes	Yes
Standards, approvals, certificates						
responsibility with the manufacturer	Yes	Yes	Yes	Yes	Yes	Yes
CE mark	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation
UL approval	No	No	No	No	No	No
REACH	Yes	Yes	Yes	Yes	Yes	Yes
RoHS conformity	Yes	Yes	Yes	Yes	Yes	Yes
FDA-compliant	Yes					Yes
Ambient conditions						
Suited for indoor use	Yes	Yes	Yes	Yes	Yes	Yes
Suited for outdoor use	Yes; Always comply with the operating instructions of the target device.	Yes; Always comply with the operating instructions of the target device.	Yes; Always comply with the operating instructions of the target device.	Yes; Always comply with the operating instructions of the target device.	Yes; Always comply with the operating instructions of the target device.	Yes; Always comply with the operating instructions of the target device.
Ambient temperature during operation						
• min.	-40 °C	-40 °C	-40 °C	-40 °C	-40 °C	-40 °C
• max.	80 °C	80 °C	80 °C	80 °C	80 °C	80 °C
Relative humidity						
• Operation, max.	95 %	95 %	95 %	95 %	95 %	95 %
Accessories						
Function description	contains further article numbers	contains further article numbers	contains further article numbers	contains further article numbers	contains further article numbers	contains further article numbers
Mechanics/material						
Material	Matte	Matte	Matte	Matte	Matte	Matte
• Sheet steel	Yes	Yes	Yes	Yes	Yes	Yes
• Stainless steel	Yes; V2A 1.4300	Yes; V2A 1.4300	Yes; V2A 1.4300	Yes; V2A 1.4300	Yes; V2A 1.4300	Yes; V2A 1.4300
Enclosure material (rear)	Stainless steel V2A	Stainless steel V2A	Stainless steel V2A	Stainless steel V2A	Stainless steel V2A	Stainless steel V2A
Screw type						
• Torx	Yes	Yes	Yes	Yes	Yes	Yes
Torques/forces						
• Tightening torque, min.	12 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed	12 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed	12 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed	12 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed	12 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed	12 N·m; If there is not enough torque, the degree of protection on the front may not be guaranteed
• Tightening torque, max.	14 N·m	14 N·m	14 N·m	14 N·m	14 N·m	14 N·m

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Technical specifications

Article number	6AV6881-0VH21-2BA0	6AV6881-0KH21-2BA0	6AV6881-0QH21-2BA0	6AV6881-0GH21-2BA0	6AV6881-0MH21-2BA0	6AV6881-0UH21-2BA0
	INOX frame 22", type 1, SET	INOX frame 10", type 1, SET	INOX frame 15", type 1, SET	INOX frame 7", type 1, SET	INOX frame 12", type 1, SET	INOX frame 19", type 1, SET
Dimensions						
Width	556.2 mm	307.5 mm	425.2 mm	241.2 mm	353.2 mm	491.2 mm
Height	358.2 mm	232.2 mm	284.2 mm	185.2 mm	264.2 mm	321.2 mm
Depth	16 mm	16 mm	16 mm	16 mm	16 mm	16 mm
Scope of supply						
Delivery quantity in pieces	1	1	1	1	1	1
Components included	complete MLFB (set) contains other article numbers	complete MLFB (set) contains other article numbers	complete MLFB (set) contains other article numbers	complete MLFB (set) contains other article numbers	complete MLFB (set) contains other article numbers	complete MLFB (set) contains other article numbers
Other						
Merchandise	Yes; INOX front frame panel	Yes; INOX front frame panel	Yes; INOX front frame panel	Yes; INOX front frame panel	Yes; INOX front frame panel	Yes; INOX front frame panel
Manufacturer name	QUERUM products UG					
Manufacturer's address	Wirtsstr. 23, 85110 Kipfenberg-Böhming, Germany					
contacting the manufacturer	email: querumproducts@web.de					
Target devices	Unified Panels and IPC with suitable dimensions	Unified Panels and IPC with suitable dimensions	Unified Panels and IPC with suitable dimensions	Unified Panels and IPC with suitable dimensions	Unified Panels and IPC with suitable dimensions	Unified Panels and IPC with suitable dimensions
Note:	not released for hazardous areas and marine applications! increase of the degree of protection only when using the clamping frame	not released for hazardous areas and marine applications! increase of the degree of protection only when using the clamping frame	not released for hazardous areas and marine applications! increase of the degree of protection only when using the clamping frame	not released for hazardous areas and marine applications! increase of the degree of protection only when using the clamping frame	not released for hazardous areas and marine applications! increase of the degree of protection only when using the clamping frame	not released for hazardous areas and marine applications! increase of the degree of protection only when using the clamping frame

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Technical specifications

Article number	6AV6574-1AE00-4AX0	6AV6671-1AJ00-0AX0	6AV6671-2DJ00-0AX0	6AV6671-3CK01-0AX0	6AV6671-3CK00-0AX0	6ES7648-1AA50-0XG0
	Protective Cover 6" Touch Devices	Protective Cover OP 77	Protective Cover OP 177	Protective Cover MP 277-8" Touch	Protective Cover MP 277 10" Touch	Dust protection set interfaces
General information						
Product type designation	Protective cover 6" touch devices	Protective cover	Protective cover	Protective cover MP277 8" touch	Protective cover MP277 10" touch	Dust protection set interfaces
Installation type/mounting						
Mounting in portrait format possible	Yes	Yes	Yes	Yes	Yes	
Mounting in landscape format possible	Yes	Yes	Yes	Yes	Yes	
Degree and class of protection						
IP (at the front)	IP65	IP65	IP65	IP65	IP65	
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	
Ambient conditions						
Ambient temperature during operation						
• min.	-40 °C	-40 °C	-40 °C	-40 °C	-40 °C	
• max.	80 °C	80 °C	80 °C	80 °C	80 °C	
Relative humidity						
• Operation, max.	95 %	95 %	95 %	95 %	95 %	
Mechanics/material						
Material						
• Plastic	Yes	Yes	Yes	Yes	Yes	
Dimensions						
Width	242.3 mm	178.6 mm	274.3 mm	270.8 mm	355.8 mm	
Height	186.3 mm	214.6 mm	243.26 mm	211 mm	294 mm	
Thickness	10 mm	7.8 mm	7.8 mm	7.8 mm	7.8 mm	
Mounting cutout, width	198 mm	135 mm	229 mm	226 mm	310 mm	
Mounting cutout, height	142 mm	171 mm	196 mm	166 mm	248 mm	
Weights						
Weight (without packaging)	750 g	750 g	750 g	750 g	750 g	
Scope of supply						
Delivery quantity in pieces						
• Parts per unit	2; 2 cover frames, 2 base frames, 2 protective covers, molded (for TP070, TP170micro, TP170A/B), 2 protective covers, smooth (for TP177micro, TP177A/B, TP270 6", MP177 6" touch, MP270 6" touch)	2; 2 cover frames, 2 base frames, 2 protective covers	2; 2 cover frames, 2 base frames, 2 protective covers	2; 2 cover frames, 2 base frames, 2 protective covers	2; 2 cover frames, 2 base frames, 2 protective covers	
Other						
Merchandise	No	No	No	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany					
Target devices	For TP070, TP170A, TP170B, TP170micro, TP177micro, TP177A, TP177B, TP270 6", TP277 6", MP270 6" touch	for OP 77A, OP 77B	For OP177B	For MP277 8" touch as far as product version "ES 14" with narrow frame	For MP277 10" touch up to product version "ES 14 ", Thin Client 10" up to "ES 03" (6AV6646-0AA21-2AX0) with narrow frame	

Note:

Industry Mall: https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically. This facilitates selection of suitable accessories.

http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

http://support.automation.siemens.com

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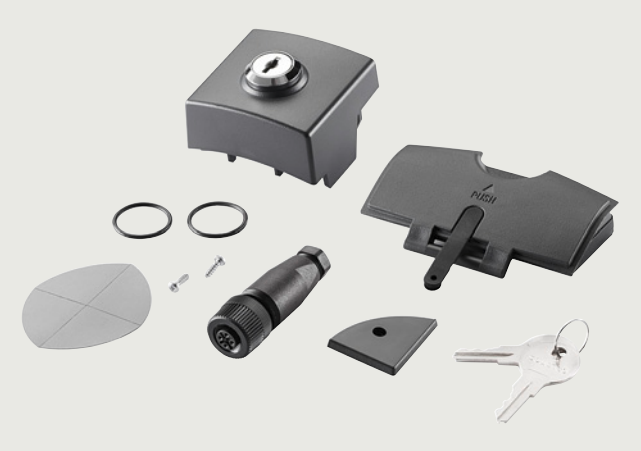
Overview



Service sets

A service set contains all the typical parts that are required for a core product.

If several identical parts are required, e.g. mounting clips, it makes more sense to order these separately.

Detailed information and quantities can be obtained from the relevant technical specifications. The number and contents are optimized in terms of functionality and cost. For this reason, accessories can only be obtained in the specified pack sizes.

Ordering data	Article No.
Service sets For contents and matching devices, see technical specifications in the Mall	
For 4" and 6" devices Service set for KTP400 Basic, KTP600 Basic, TP 177B 4"	**6AV6671-2EA00-0AX0**
For 6" devices, type 1 Service set for TP 070, TP 170A/B, OP 170B, TP 170micro, OP 270, TP 270B, MP 270B touch	**6AV6574-1AA00-4AX0**
For 6" devices, type 2 Service set for TP 070, TP 170A/B, OP 170B, TP 170micro, TP/OP 270 6", MP 270B 6" touch	**6AV2181-8XA80-0AX0**
For 6" devices, type 3 Service set for TP 177micro, TP 177A/B, OP 177B	**6AV6671-2XA00-0AX0**
For 6" to 10" devices Service set for TP/OP 277 6", MP 277 8" touch, MP 277 8" key, MP 277 10" key and MP 277 10" touch devices up to product version "ES 14"	**6AV6671-3XA01-0AX0**
For 8" to 10" devices Service set for MP 277 8" touch and key devices from product version "ES 15", MP 277 10" touch devices from product version "ES 15"	**6AV6671-3XA01-0AX1**
For 10", type 1 Service set for OP 270 10", MP 270B key devices	**6AV6574-1AA00-2DX0**
For 10" devices, type 2 Service set for MP 277 10" touch devices with stainless steel front	**6AV6675-3AA00-0AX0**
For 10" to 15" devices Service set for C7-636 touch, TP 270 10", MP 270B 10" touch, MP 370 12"/15" touch devices	**6AV6574-1AA00-2CX0**

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Ordering data	Article No.
For 12" devices Service set suitable for MP 370 12"/15" touch/key devices and TP37	**6AV6574-1AA00-2BX0**
For 12" to 19" devices Service set for MP 377 12" touch and key devices, MP 377 15" touch, MP 377 19" touch devices	**6AV6671-4XA00-0AX0**
For 15" devices Service set for MP 377 15" touch devices with stainless steel front	**6AV6671-4CA00-0AX0**
For Mobile Panel 177/277	**6AV6574-1AA04-4AA0**
For Mobile Panel 277(F) IWLAN V1	**6AV6671-5CA00-0AX1**
For Mobile Panel 277(F) IWLAN V2	**6AV6671-5CA00-0AX2**
For Industrial USB Hub 4	**6AV6671-3EA01-0AX0**

	Article No.
For Pushbutton Panels Service set for PP7, PP17I, PP17 II, PP17 mounting gasket, 5x mounting clamps, 2-pin 24 V DC plug, 3-pin 24 V DC plug, 4-pin plug, 16-pin plug	**6AV3678-3XC30**
For TD17, OP7/17 Service set for OP7/OP17 and TD17; TD17 mounting gasket, OP7 mounting gasket, OP17 mounting gasket 5x mounting clamps	**6AV3678-1CC10**
For OP73 micro, OP73, OP77 Service set for OP73micro, OP 73, OP 77A, OP 77B	**6AV6671-1XA00-0AX0**
KTP Mobile covers complete set Cable clamp, USB cover incl. M3x10 screws.	**6AV6881-5AA00-0AA2**
KTP Mobile covers Cable clamp, USB cover	**6AV6881-5AA00-0AA1**
KTP Mobile screw set M3x10 M3x10 screws	**6AV6881-0AG11-0AA0**

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Service sets

Technical specifications

Article number	6AV6671-2EA00-0AX0	6AV6574-1AA00-4AX0	6AV2181-8XA80-0AX0	6AV6671-2XA00-0AX0	6AV6671-3XA01-0AX0	6AV6671-3XA01-0AX1
	Service set for 4" and 6" devices	Service set for 6" devices, type 1	Service set for 6" devices, type 2	Service set for 6" devices, type 3	Service set for 6" to 10" devices	Service set for 8" to 10" devices
General information						
Product type designation	Service set			Service set	Service set 6" ... 10"	Service set 8" ... 10"
Standards, approvals, certificates						
CE mark	Yes	Yes	Yes	Yes	Yes	Yes
RoHS conformity	Yes		Yes			Yes
Ambient conditions						
Ambient temperature during operation						
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	55 °C	55 °C	55 °C	55 °C	55 °C	55 °C
Relative humidity						
• Operation, max.	95 %	95 %	95 %	95 %	95 %	95 %
Scope of supply						
Delivery quantity in pieces						
• Parts per unit	1; Content: 2x seal KTP 400-TP 177B 4", 2x seal for KTP 600, 7x aluminum mounting clip, 1x 2-pin female connector	1; Content: 3x mounting seal, 2x labeling strip, 7x plastic mounting clip, 1x 2-pin female connector	1; Content: 3x mounting seal, 2x labeling strip, 7x plastic mounting clip, 20x aluminum mounting clip, 1x 2-pin female connector	1; Content: 1x mounting seal TP 177, 1x mounting seal OP 177, 7x plastic mounting clip, 1x 2-pin female connector	1; Content: 6x device-specific seals, 15x aluminum mounting clips, 1x 2-pin female connector, 1x product information clamp	1; Content: 14x spring mounting clip, 1x 2-pin female connector
Other						
Merchandise	No	No	No	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	for KTP 400 Basic, KTP 600 Basic, TP 177B 4"	For TP070, TP170A/B, OP170B, TP170micro, OP270 6", TP270 6", MP270B 6" touch	For TP070, TP170A/B, OP170B, TP170micro, OP/TP270 6", MP177 6"T, MP270B 6" touch	for TP 177micro, TP 177A, TP 177B, OP 177B	For TP/OP277 6", MP277 8" touch, MP277 8" key, MP277 10" key product version "ES 14" and later, MP277 10" touch product version "ES 14" and later	For MP277 8" touch, MP277 8" key product version "ES 15" and later, MP277 10" touch product version "ES 15" and later

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Technical specifications

Article number	6AV6574-1AA00-2DX0 Service set for 10" devices, type 1	6AV6675-3AA00-0AX0 Service set for 10" devices, type 2	6AV6574-1AA00-2CX0 Service set for 10" to 15" devices	6AV6574-1AA00-2BX0 Service set for 12" devices
General information				
Product type designation		Service set 10"		Service set, 12" ... 15"
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
Ambient conditions				
Ambient temperature during operation				
• min.		0 °C		0 °C
• max.		55 °C		55 °C
Relative humidity				
• Operation, max.	95 %	95 %	95 %	95 %
Mechanics/material				
Screw type				
• Hexagon socket				Yes; 2.5 mm
Scope of supply				
Delivery quantity in pieces				
• Parts per unit	1; Content: 1x slide-in label strip for OP270 10" and MP270 10" key, 1x installation seal for OP270 10" and MP270 10" key, 10x cast aluminum mounting clips, 1x 2-pin female connector, 1x Allen key	1; Content: 1x installation seal, 10x cast aluminum mounting clips, 1x 2-pin female connector, 1x Allen key	1; Content: 10x aluminum mounting clips, 1x 2-pin female connector, 1x CF card interlock, 1x PC card interlock, 1x installation seal, C7-636, TP/MP270(B), MP370-12"T, 1x installation seal for MP370-15"T, all other panels have a non-replaceable foam seal	1; Content: 1x mounting gasket sold by the meter, 2x memory card lock wide, 2x memory card lock narrow, 10x mounting clip cast aluminum, 6x mounting bracket, 1x female connector 2-pole 90 degrees, 1x female connector 2-pole 180 degrees, 2x Allen key and labeling strips for Key Panel
Other				
Merchandise	No		No	No
Manufacturer name	SIEMENS AG		SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany		Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	for OP270 10", MP270B key	For MP277 10" touch with stainless steel front	For C7-636 touch, TP270 10", MP270B 10" touch, MP370 12" touch, MP370 15" touch	For MP370 12" ... 15" Touch/Key and TP37

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Service sets

Technical specifications

Article number	**6AV6671-4XA00-0AX0** Service set for 12" to 19" devices	**6AV6671-4CA00-0AX0** Service set for 15" devices
General information		
Product type designation	Service set 12" ... 19"	Service set 15"
Standards, approvals, certificates		
CE mark	Yes	Yes
RoHS conformity	Yes	Yes
Ambient conditions		
Ambient temperature during operation		
• min.	0 °C	0 °C
• max.	55 °C	55 °C
Relative humidity		
• Operation, max.	95 %	95 %
Mechanics/material		
Screw type		
• 4.5 V	Yes	
Scope of supply		
Delivery quantity in pieces		
• Parts per unit	1; Content: 1x mounting seal MP377 12" key, 1x mounting seal MP377 12" touch, 1x mounting seal MP377 15" touch, 1x mounting seal MP377 19" touch, 18x aluminum mounting clip, 1x 2-pin female connector	1; Content: 1x mounting seal, 1x memory card lock, 12x cast aluminum mounting clip, 1x 2-pin female connector, 1x Allen key
Other		
Merchandise	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	For MP377 12" key, MP377 12" touch, MP377 15" touch, MP377 19" touch	For MP377 15" touch with stainless steel front

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Technical specifications

Article number	6AV6574-1AA04-4AA0	6AV6671-5CA00-0AX1	6AV6671-5CA00-0AX2
	Service set Mobile Panel	Service set Mobile Panel Wireless V1	Service set Mobile Panel Wireless V2
General information			
Product type designation		Service set Mobile Panel 277 (F) IWLAN V1	Service set Mobile Panel 277 (F) IWLAN V2
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
Ambient conditions			
Ambient temperature during operation			
• min.		0 °C	0 °C
• max.		55 °C	55 °C
Relative humidity			
• Operation, max.	95 %	95 %	95 %
Scope of supply			
Delivery quantity in pieces			
• Parts per unit	1; Content: 1x blanking plug, 2x PG cable gland A-box, 1x screw set cover A-box, 2x 12-pin terminal box, 1x 3-pin terminal box, 1x dummy cap A-box, 2x corner seal l/r and O-ring, 4x decorative film corner seal l/r	1; Content: 2x covers for charging station l/r, 1x connector for charging station, 2x corner seals l/r, 2x gasket corner seals, 4x decorative film corner seals l/r, 1x backup battery 3.6 V / 1.5 Ah including cover, 1x spare key for charging cradle	1; Content: 1x battery slot cover device with seal, 2x cover charging station l/r, 1x circular connector charging station, 2x corner seal l/r, 2x O-ring seal, 4x decorative foil, 1x charging tray spare key incl. lock and lock holder, screws
Other			
Merchandise	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	For Mobile Panel 170, Mobile Panel 177	for Mobile Panel 277 IWLAN V1, Mobile Panel 277F IWLAN V1	for Mobile Panel 277 IWLAN V2, Mobile Panel 277F IWLAN V2

Article number	6AV6671-3EA01-0AX0	6AV3678-3XC30	6AV3678-1CC10	6AV6671-1XA00-0AX0
	Service set Industrial USB Hub 4	Service Package F: PP7, PP17 I, PP17 II	Service Package f.OP7/17 and TD17	OP73Micro, OP73, OP77 Service Set
General information				
Product type designation	Service set	Service pack	Service pack	Service set
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
RoHS conformity	Yes			
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	55 °C	55 °C	55 °C	55 °C
Relative humidity				
• Operation, max.	95 %	95 %	95 %	95 %
Scope of supply				
Delivery quantity in pieces				
• Parts per unit	1; Content: 1x mounting seal, 1x mounting frame, 5x plastic mounting clip, 1x 2-pin female connector	1; Content: 1x mounting seal PP7, 1x mounting seal PP17, 5x plastic mounting clip, 1x 2-pin female connector, 1x 3-pin female connector, 1x 4-pin female connector, 2x 16-pin female connector	1; Content: 1x mounting seal TD17, 1x mounting seal OP7, 1x mounting seal TD/OP17, 5x plastic mounting clip	1; Content: 1x mounting seal OP73, 1x mounting seal OP77, 4x plastic mounting clip, 1x 2-pin female connector
Other				
Merchandise	Yes			
Manufacturer name	SIEMENS AG			
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany			
Target devices	For the Industrial USB Hub 4			
Note:		for PP7, PP17-I, PP17-II	for TD17, OP7, OP17	for OP73micro, OP73, OP77A, OP77B

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Service sets

Technical specifications

Article number	6AV6881-5AA00-0AA1 Service set KTP Mobile covers	6AV6881-5AA00-0AA2 Service set KTP Mobile covers	6AV6881-0AG11-0AA0 Service set KTP Mobile screws M3
General information			
Product type designation	Mobile Panel Cover Set without M3	Mobile Panel Cover Set incl. M3	Mobile Panel M3 screw
Standards, approvals, certificates			
CE mark	No; No CE marking obligation	No; No CE marking obligation	No; No CE marking obligation
RoHS conformity	Yes; unnecessary	Yes; unnecessary	Yes; unnecessary
Ambient conditions			
Suited for indoor use	Yes	Yes	Yes
Suited for outdoor use	No; possible under certain conditions	No; possible under certain conditions	No; possible under certain conditions
Ambient temperature during operation			
• min.	0 °C	0 °C	0 °C
• max.	55 °C	55 °C	55 °C
Relative humidity			
• Operation, max.	95 %	95 %	95 %
Mechanics/material			
Material			general requirement according to DIN ISO 8992
• Plastic	Yes; Misc. parts	Yes; Misc. parts	
• Sheet steel	Yes; Miscellaneous screws	Yes; Miscellaneous screws	
Screw type			
• Cross-tip	Yes; Cross-tip including slot	Yes; Cross-tip including slot	Yes; Cross-tip including slot
Dimensions			
Height			12 mm; Overall
Depth			10 mm; Up to underside of screw head
Thickness			11 mm; Screw head
Weights			
Weight (without packaging)	40 g	45 g	2.2 g
Scope of supply			
Delivery quantity in pieces	1; 5x plastic cable clamps, 5x USB covers	1; 5x plastic cable clamps, 5x USB covers, and 5x (M3x10) screws	5; Combination cross-tip collar screw (M3x10)
Components included	5x plastic cable clamps, 5x USB covers	5x plastic cable clamps, 5x USB covers, and 5x (M3x10) screws	Screws for attachment
Other			
Merchandise	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	Wired Mobile Panel (PROFIBUS and PROFINET)	Wired Mobile Panel (PROFIBUS and PROFINET)	Wired Mobile Panel (PROFIBUS and PROFINET)
Note:	Observe documentation of the target device	Observe documentation of the target device	Observe documentation of the target device

More information

Note:

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.
Industry Mall:

https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically. This facilitates selection of suitable accessories.

http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

http://support.automation.siemens.com

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Overview

Storage media

Storage media which has been tested and approved by Siemens ensure the best possible functionality and compatibility. SIMATIC HMI storage media are suitable for industry and optimized for the requirements in industrial environments. Special formatting and write algorithms ensure fast read/write cycles and a long service life of the memory cells.

MultiMediaCards can also be used in operator panels with SD slots. Detailed information on usability can be found in the storage media and panels technical specifications.

The actual memory capacity of the memory cards or USB flash drives may change depending on production factors. This means that the specified memory capacity may not always be 100% available to the user. When selecting or searching for core products using the SIMATIC selection guide, accessories appropriate to the core product are always automatically displayed or offered.

Due to the nature of the technology used, the reading/writing speed can diminish over time. This is always dependent on the environment, the size of the files saved, the extent to which the card is filled and a number of additional factors. SIMATIC memory cards, however, are always designed so that typically all of the data is reliably written to a card even when the device is being switched off.
More information can be taken from the operating instructions of the respective devices.

The following storage media are available:

- Multi Media Card
- Secure Digital Memory Card
- SD memory card Outdoor
- PC memory card (PC Card)
- PC memory card adapter (PC Card Adapter)
- CompactFlash Card
- CFast memory card
- SIMATIC HMI USB memory stick
- SIMATIC HMI USB FlashDrive
- Pushbutton Panel memory module
- IPC memory expansions

Note:

SIMATIC S7 memory cards from S7 controllers **may not** be used in HMI devices or PC systems.
If used in this way, the memory cards lose their functionality and can then no longer be used with S7 controllers.

SIMATIC HMI system cards **must not be formatted** because this irrevocably deletes system files, and **they can then no longer be used for their usual functions,** or may even become totally worthless.

Cyclic archiving may place very high stress on the memory and could lead to failure. In this case, it is necessary to calculate the write cycles in respect of the frequency and size of the data volume in advance. Network drives are more suitable for archiving larger data volumes at short to very short intervals.

In cases of doubt, please clarify with your Siemens contact person. Failure to comply rules out any repair or replacement.

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Storage media

Ordering data	Article No.
Memory cards [1]	
Indoor use only	
SIMATIC MM memory card 128 MB	**6AV6671-1CB00-0AX2**
SIMATIC SD memory card 512 MB	**6AV6671-8XB10-0AX1**
SIMATIC SD memory card 2 GB	**6AV2181-8XP00-0AX0**
SIMATIC SD memory card 32 GB [2]	**6AV6881-0AP40-0AA0**
SIMATIC CF memory card 512 MB	**6AV6574-2AC00-2AA1**
PC memory card, 512 MB (PCMCIA)	**6AV6574-2AC00-2AF1**
PC card adapter for CF memory card	**6AV6574-2AF00-8AX0**
Can be used indoors and outdoors	
SIMATIC SD memory card, outdoor 2 GB	**6AV6881-0AQ10-0AA0**
SIMATIC SD memory card, outdoor 32 GB	**6AV6881-0AQ40-0AA0**
USB flash drive [3] 32 GB, USB 3.0, metal enclosure, boot capability, without software, for current and new SIMATIC HMI Panels and IPCs.	**6AV6881-0AS42-0AA1**
SIMATIC HMI USB FlashDrive EX1	
• 32 GB, explosion protection, for HMI devices and IPCs with the corresponding slot.	**6AV7675-0FX00-0AA0**
• 32 GB, explosion protection, for HMI devices and IPCs with the corresponding slot, with recovery function	**6AV7675-0FX10-0AA0**
SIMATIC IPC CompactFlash	
• 2 GB	**6ES7648-2BF02-0XF0**
• 4 GB	**6ES7648-2BF02-0XG0**
• 8 GB	**6ES7648-2BF02-0XH0**
• 16 GB	**6ES7648-2BF02-0XJ0**
SIMATIC IPC CFast	
• 2 GB	**6ES7648-2BF10-0XF0**
• 4 GB	**6ES7648-2BF10-0XG0**
• 8 GB	**6ES7648-2BF10-0XH0**
• 16 GB	**6ES7648-2BF10-0XJ0**
• 30 GB	**6ES7648-2BF10-0XK1**
• 128 GB	**6ES7648-2BF10-0XM1**
SIMATIC PP memory module	**6ED1056-1BA00-0AA0**

1) Not all memory is compatible with every target device. Please observe the current technical specifications of the memory. For compatibility and innovations, see SIMATIC Support pages, search term "Status Accessories" or entry "40466415"

2) For compatibility and innovations, see SIMATIC Support pages, entry 109759104

3) Note: This memory stick does not support Classic Panels such as TPs, OPs, and Multi Panels. The following software in SIOS is available for download for IPC systems. SIMATIC IPC Image & Partition Creator V3.3.2 and SIMATIC IPC BIOS-Manager V3.3 (Win PE) pre-installed, incl. CD.

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Technical specifications

Article number	6AV6671-1CB00-0AX2 SIMATIC MM memory card 128 MB	6AV6671-8XB10-0AX1 SIMATIC SD memory card 512 MB	6AV2181-8XP00-0AX0 SIMATIC SD memory card 2 GB	6AV6881-0AP40-0AA0 SIMATIC SD indoor card 32 GB
General information				
Product type designation	MM memory card	SD memory card	SD memory card	SD memory card
Control elements				
Frame size/design				
• Standard	Yes; Typically 10 000 insertion cycles	Yes; Typically 10 000 insertion cycles	Yes; Typically 10 000 insertion cycles	Yes; Typically 10 000 insertion cycles
• Flat	Yes	Yes	Yes	Yes
Installation type/mounting				
Mounting in portrait format possible	Yes	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes	Yes
Supply voltage				
Rated value (DC)	3.3 V; Max 3.6 V	3.3 V; Max 3.6 V	3.3 V; Max 3.6 V	3.3 V; Max 3.6 V
Input current				
Current consumption (rated value)	80 mA; Typical, maximum value	100 mA; Typical, maximum value	100 mA; Typical, maximum value	100 mA; Typical, maximum value
Memory				
Type of memory	MultiMediaCard	Secure Digital memory card	Secure Digital memory card	Secure Digital memory card
Memory size	128 Mbyte	512 Mbyte	2 Gbyte	32 Gbyte
Transmission rate for reading, max.	0 kbit/s; No value available	1.6 Mbit/s; Minimum, typical for newly formatted memory	600 Mbit/s; Typical	600 Mbit/s; Typical
Transmission rate for writing, max.	300 kbit/s; Minimum, typical for newly formatted memory	1.6 Mbit/s; Minimum, typical for newly formatted memory	600 Mbit/s; Typical	600 Mbit/s; Typical
Wear leveling (distributed writing)	Yes; > 100 000 write/read cycles per cell and > 3 000 000 write/read cycles per card	Yes; > 100 000 write/read cycles per cell and > 3 000 000 write/read cycles per card	Yes	Yes
Write protection switch	No	Yes; Effectiveness depends on the device	Yes; Effectiveness depends on the device	Yes; Effectiveness depends on the device
Interfaces				
Device-side interface				
• Number of pins device-side	7	9	9	9
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
UL approval		Yes	Yes	Yes
cULus		Yes	Yes	Yes
KC approval		Yes	Yes	Yes
EAC (formerly Gost-R)		Yes	Yes	Yes
RoHS conformity		Yes	Yes	Yes
China RoHS compliance		Yes	Yes	Yes
Marine approval	Yes; Passive component, therefore dependent on target device	Yes; Passive component, therefore dependent on target device	Yes; Passive component, therefore dependent on target device	Yes; Passive component, therefore dependent on target device

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Technical specifications

Article number	6AV6671-1CB00-0AX2 SIMATIC MM memory card 128 MB	6AV6671-8XB10-0AX1 SIMATIC SD memory card 512 MB	6AV2181-8XP00-0AX0 SIMATIC SD memory card 2 GB	6AV6881-0AP40-0AA0 SIMATIC SD indoor card 32 GB
Use in hazardous areas				
• ATEX Zone 2	Yes; Always comply with the operating instructions of the target device.			
• ATEX Zone 22	Yes; Always comply with the operating instructions of the target device.			
• IECEx Zone 2	Yes; Always comply with the operating instructions of the target device.			
• IECEx Zone 22	Yes; Always comply with the operating instructions of the target device.			
• cULus Class I Zone 2, Division 2	Yes; Always comply with the operating instructions of the target device.			
• FM Class I Division 2	Yes; Always comply with the operating instructions of the target device.			
Marine approval				
• Germanischer Lloyd (GL)	Yes; Always comply with the operating instructions of the target device.			
• American Bureau of Shipping (ABS)	Yes; Always comply with the operating instructions of the target device.			
• Bureau Veritas (BV)	Yes; Always comply with the operating instructions of the target device.			
• Det Norske Veritas (DNV)	Yes; Always comply with the operating instructions of the target device.			
• Lloyds Register of Shipping (LRS)	Yes; Always comply with the operating instructions of the target device.			
• Nippon Kaiji Kyokai (Class NK)	Yes; Always comply with the operating instructions of the target device.			
• Polski Rejestr Statkow (PRS)	Yes; Always comply with the operating instructions of the target device.			
• Chinese Classification Society (CCS)	Yes; Always comply with the operating instructions of the target device.			
• Compass working clearance	5 m	5 m	5 m	5 m
Ambient conditions				
Suited for indoor use	Yes	Yes	Yes	Yes
Suited for outdoor use		No	No	No
Ambient temperature during operation				
• min.	0 °C; Indoor	0 °C; Indoor	0 °C	0 °C
• max.	50 °C; Indoor	50 °C; Indoor	55 °C	55 °C
Relative humidity				
• Operation, max.	90 %	90 %	95 %	95 %; no condensation
• Condensation permissible	No; Condensation not permissible	No; Condensation not permissible	No; Condensation not permissible	No; Condensation not permissible
Operating systems				
pre-installed operating system				
• Windows CE			No; Preinstalled system files	No; Preinstalled system files
Runs under operating system				
• Windows CE	Yes	Yes	Yes	Yes
• Windows Vista	Yes	Yes	Yes	Yes
• Windows XP	Yes	Yes	Yes	Yes
• Windows 7	Yes	Yes	Yes	Yes
• Windows 8	Yes	Yes	Yes	Yes
• Windows 10	Yes	Yes	Yes	Yes
• Linux	No	No	Yes	Yes
• other	Yes; Card must not be formatted!	Yes; Card must not be formatted!	Yes; Card must not be formatted!	Yes; Card must not be formatted!

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Technical specifications

Article number	**6AV6671-1CB00-0AX2** SIMATIC MM memory card 128 MB	**6AV6671-8XB10-0AX1** SIMATIC SD memory card 512 MB	**6AV2181-8XP00-0AX0** SIMATIC SD memory card 2 GB	**6AV6881-0AP40-0AA0** SIMATIC SD indoor card 32 GB
Mechanics/material				
Enclosure material (front)				
• Plastic	Yes; Gold contacts	Yes; Gold contacts	Yes; Gold contacts	Yes; Gold contacts
Enclosure color (front)	RAL 6034 (color deviation possible)	RAL 6034 (color deviation possible)	RAL 6034 (color deviation possible)	RAL 6034 (color deviation possible)
Service life				
• Number of operating cycles, keys	10; Min. data storage without loss (in years)	10; Min. data storage without loss (in years)	10; Min. data storage without loss (in years)	10; Min. data storage without loss (in years)
Dimensions				
Width	24 mm	24 mm	24 mm	24 mm
Height	32 mm	32 mm	32 mm	32 mm
Thickness	2.1 mm	2.1 mm	2.1 mm	2.1 mm
Weights				
Weight (without packaging)	3 g	3 g	3 g	3 g
Scope of supply				
Delivery quantity in pieces	1	1	1	1
Other				
Merchandise	No	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	for OP77B, TP177B, OP177B, TP277, OP277, C7-635, MP177, MP277, MP377, Mobile Panel 177, Mobile Panel 277, Comfort Panel	for MP177, MP277, MP377 and Mobile Panel 277, WinCC flexible 2008 SP1 and higher for OP77, TP/OP177, TP/OP277, Mobile Panel 177, with SD/MMC slot	Especially for KTP Mobile Panels 2nd Generation, MP377 and Comfort Panels, but also for all other panels (other than Classic Panels) and PCs with suitable slot	Storage medium especially for indoor areas, suitable for Panels as of TIA V16 (observe manual for target panel) but also for PCs with a suitable slot. Formatting destroys the system properties of the card
Note:		MP377 only up to and including FS:04 or ES:04 - Alternatively 2 GB SD card	Not suitable for MP177, MP277, Mobile Panel 277, OP77, TP/OP177, TP/OP277 and Mobile Panel 177	can only be used with WinCC V16 or later, panel firmware must be upgraded if necessary (cannot be used in Classic Panels)

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Technical specifications

Article number	6AV6574-2AC00-2AA1	6AV6574-2AC00-2AF1	6AV6574-2AF00-8AX0
	SIMATIC HMI CF memory card, 512 MB	PC memory card 512 MB	PC card adapter for CF memory card
General information			
Product type designation	CompactFlash card	PC memory card	PC card adapter
Control elements			
Connection type			
• USB		No	
Frame size/design			
• Standard	Yes	Yes	Yes
• Flat	Yes	Yes	Yes
Installation type/mounting			
Mounting in portrait format possible	Yes	Yes	Yes
Mounting in landscape format possible	Yes	Yes	Yes
Supply voltage			
Type of supply voltage	DC	DC	
Rated value (DC)	3.3 V; Selectable power supply: 3.3 V ±10% or 5.0 V ±10%	3.3 V	
Input current			
Current consumption (rated value)	75 mA; Typical, maximum value	75 mA	0 mA; No additional power consumption
Memory			
Type of memory	CompactFlash memory CF type I	Personal computer memory card type II	Personal computer memory card type II
Design	CompactFlash		
Memory size	512 Mbyte	512 Mbyte	0 byte; Only adapter
SLC flash write cycles	2; Millions, consumer quality		
Write protection switch	No	No	No
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
UL approval	No		No
cULus	No		No
KC approval	No		No
EAC (formerly Gost-R)	No		No
RoHS conformity	Yes	Yes	Yes
China RoHS compliance	Yes	Yes	Yes
Marine approval	Yes; Passive component, therefore dependent on target device		Yes; Passive component, therefore dependent on target device
Use in hazardous areas			
• ATEX Zone 2	Yes; Always comply with the operating instructions of the target device.		
• ATEX Zone 22	Yes; Always comply with the operating instructions of the target device.		
• IECEx Zone 2	Yes; Always comply with the operating instructions of the target device.		
• IECEx Zone 22	Yes; Always comply with the operating instructions of the target device.		
• cULus Class I Zone 2, Division 2	Yes; Always comply with the operating instructions of the target device.		
• FM Class I Division 2	Yes; Always comply with the operating instructions of the target device.		
Marine approval			
• Germanischer Lloyd (GL)	Yes; Always comply with the operating instructions of the target device.		
• American Bureau of Shipping (ABS)	Yes; Always comply with the operating instructions of the target device.		
• Bureau Veritas (BV)	Yes; Always comply with the operating instructions of the target device.		
• Det Norske Veritas (DNV)	Yes; Always comply with the operating instructions of the target device.		
• Lloyds Register of Shipping (LRS)	Yes; Always comply with the operating instructions of the target device.		
• Nippon Kaiji Kyokai (Class NK)	Yes; Always comply with the operating instructions of the target device.		
• Polski Rejestr Statkow (PRS)	Yes; Always comply with the operating instructions of the target device.		
• Chinese Classification Society (CCS)	Yes; Always comply with the operating instructions of the target device.		
• Compass working clearance	5 m		5 m

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Technical specifications

Article number	**6AV6574-2AC00-2AA1**	**6AV6574-2AC00-2AF1**	**6AV6574-2AF00-8AX0**
	SIMATIC HMI CF memory card, 512 MB	PC memory card 512 MB	PC card adapter for CF memory card
Ambient conditions			
Suited for indoor use	Yes		Yes
Ambient temperature during operation			
• min.	0 °C; Any mounting angle	0 °C	0 °C; Indoor
• max.	50 °C; Any mounting angle	50 °C	50 °C; Indoor
Relative humidity			
• Operation, max.	90 %	90 %	90 %
• Condensation permissible	No; Condensation not permissible	No	No; Condensation not permissible
Operating systems			
Runs under operating system			
• Windows CE	Yes	Yes	Yes
• Windows Vista	Yes	Yes	Yes
• Windows XP	Yes	Yes	Yes
• Windows 7	Yes	Yes	Yes
• Windows 8	Yes	Yes	Yes
• Linux	No	No	No
• other	Yes; Card must not be formatted!		No
Mechanics/material			
Enclosure material (front)			
• Plastic	Yes	Yes	
• Sheet steel			Yes
Service life			
• Number of operating cycles, keys	10; Min. data storage without loss (in years)		
Dimensions			
Width	42.8 mm	54 mm	54 mm
Height	36.4 mm	85.6 mm	85.6 mm
Thickness	3.3 mm	5 mm	5 mm
Weights			
Weight (without packaging)	10 g	34 g	24 g
Scope of supply			
Delivery quantity in pieces	1	1; Content: CF memory card, 512 MB, and PC card adapter	1
Other			
Merchandise	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	for SIMATIC HMI devices with CF slot	for SIMATIC HMI devices with PC card slot	for SIMATIC HMI devices with PC card slot

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Technical specifications

Article number	6AV6881-0AQ10-0AA0 SIMATIC SD outdoor card 2 GB	6AV6881-0AQ40-0AA0 SIMATIC SD outdoor card 32 GB
General information		
Product type designation	SD memory card	SD memory card
Control elements		
Frame size/design		
• Standard	Yes; Typically 10 000 insertion cycles	Yes; Typically 10 000 insertion cycles
• Flat	Yes	Yes
Installation type/mounting		
Mounting in portrait format possible	Yes	Yes
Mounting in landscape format possible	Yes	Yes
Supply voltage		
Rated value (DC)	3.3 V; Max 3.6 V	3.3 V; Max 3.6 V
Input current		
Current consumption (rated value)	100 mA; Typical, maximum value	100 mA; Typical, maximum value
Memory		
Type of memory	Secure Digital memory card	Secure Digital memory card
Memory size	2 Gbyte	32 Gbyte
Transmission rate for reading, max.	600 Mbit/s; Typical	600 Mbit/s; Typical
Transmission rate for writing, max.	600 Mbit/s; Typical	600 Mbit/s; Typical
Wear leveling (distributed writing)	Yes	Yes
Write protection switch	Yes; Effectiveness depends on the device	Yes; Effectiveness depends on the device
Interfaces		
Device-side interface		
• Number of pins device-side	9	9
Standards, approvals, certificates		
CE mark	Yes	Yes
UL approval	Yes	Yes
cULus	Yes	Yes
KC approval	Yes	Yes
EAC (formerly Gost-R)	Yes	Yes
RoHS conformity	Yes	Yes
China RoHS compliance	Yes	Yes
Marine approval	Yes; Passive component, therefore dependent on target device	Yes; Passive component, therefore dependent on target device
Use in hazardous areas		
• ATEX Zone 2	Yes; Always comply with the operating instructions of the target device.	
• ATEX Zone 22	Yes; Always comply with the operating instructions of the target device.	
• IECEx Zone 2	Yes; Always comply with the operating instructions of the target device.	
• IECEx Zone 22	Yes; Always comply with the operating instructions of the target device.	
• cULus Class I Zone 2, Division 2	Yes; Always comply with the operating instructions of the target device.	
• FM Class I Division 2	Yes; Always comply with the operating instructions of the target device.	
Marine approval		
• Germanischer Lloyd (GL)	Yes; Always comply with the operating instructions of the target device.	
• American Bureau of Shipping (ABS)	Yes; Always comply with the operating instructions of the target device.	
• Bureau Veritas (BV)	Yes; Always comply with the operating instructions of the target device.	
• Det Norske Veritas (DNV)	Yes; Always comply with the operating instructions of the target device.	
• Lloyds Register of Shipping (LRS)	Yes; Always comply with the operating instructions of the target device.	
• Nippon Kaiji Kyokai (Class NK)	Yes; Always comply with the operating instructions of the target device.	
• Polski Rejestr Statkow (PRS)	Yes; Always comply with the operating instructions of the target device.	
• Chinese Classification Society (CCS)	Yes; Always comply with the operating instructions of the target device.	
• Compass working clearance	5 m	5 m

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Technical specifications

Article number	6AV6881-0AQ10-0AA0 SIMATIC SD outdoor card 2 GB	6AV6881-0AQ40-0AA0 SIMATIC SD outdoor card 32 GB
Ambient conditions		
Suited for indoor use	Yes	Yes
Suited for outdoor use	Yes	Yes
Ambient temperature during operation		
• min.	-30 °C; Indoor/outdoor	-30 °C; Indoor/outdoor
• max.	60 °C; Indoor/outdoor	60 °C; Indoor/outdoor
Relative humidity		
• Operation, max.	95 %; no condensation	95 %; no condensation
• Condensation permissible	No; Condensation not permissible	No; Condensation not permissible
Operating systems		
pre-installed operating system		
• Windows CE	No; Preinstalled system files	No; Preinstalled system files
Runs under operating system		
• Windows CE	Yes	Yes
• Windows Vista	Yes	Yes
• Windows XP	Yes	Yes
• Windows 7	Yes	Yes
• Windows 8	Yes	Yes
• Windows 10	Yes	Yes
• Linux	Yes	Yes
• other	Yes; Card must not be formatted!	Yes; Card must not be formatted!
Mechanics/material		
Enclosure material (front)		
• Plastic	Yes; Gold contacts	Yes; Gold contacts
Enclosure color (front)	RAL 6034 (color deviation possible)	RAL 6034 (color deviation possible)
Service life		
• Number of operating cycles, keys	10; Min. data storage without loss (in years)	10; Min. data storage without loss (in years)
Dimensions		
Width	24 mm	24 mm
Height	32 mm	32 mm
Thickness	2.1 mm	2.1 mm
Weights		
Weight (without packaging)	3 g	3 g
Scope of supply		
Delivery quantity in pieces	1	1
Other		
Merchandise	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	Storage medium especially for outdoor or indoor areas, suitable for Panels as of TIA V16 (observe manual for target panel) but also for PCs with a suitable slot. Formatting destroys the system properties of the card	Storage medium especially for outdoor or indoor areas, suitable for Panels as of TIA V16 (observe manual for target panel) but also for PCs with a suitable slot. Formatting destroys the system properties of the card
Note:	can only be used with WinCC V16 or later, panel firmware must be upgraded if necessary (cannot be used in Classic Panels)	can only be used with WinCC V16 or later, panel firmware must be upgraded if necessary (cannot be used in Classic Panels)

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Technical specifications

Article number	6AV6881-0AS42-0AA1 USB flash drive, 32 GB
General information	
Product type designation	USB flash drive (without software)
Control elements	
Connection type	
• USB	Yes; USB 3.0 type A
Frame size/design	
• Standard	Yes
• Flat	Yes
Installation type/mounting	
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
Supply voltage	
Type of supply voltage	DC
Rated value (DC)	5 V
Input current	
Current consumption (rated value)	100 mA; Typical
Memory	
Type of memory	Multi-level cell (MLC)
Memory size	32 Gbyte
Speed class	Up to: read: 75 MB/s, write: 21 MB/s
File format	FAT32
Write cycles MLC flash	3 000; Program/Erase cycle
Write protection switch	No
Interfaces	
Number of USB interfaces	1; USB 3.0 type A
Standards, approvals, certificates	
CE mark	Yes

Article number	6AV6881-0AS42-0AA1 USB flash drive, 32 GB
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C
• max.	50 °C
Relative humidity	
• Operation, max.	85 %
• Condensation permissible	No
Operating systems	
pre-installed operating system	
• Windows CE	Yes
Runs under operating system	
• Windows CE	Yes
• Windows Vista	No
• Windows XP	Yes
• Windows 7	Yes
• Windows 8	Yes
• Windows 10	Yes
• Linux	Yes
Mechanics/material	
Enclosure material (front)	
• Aluminum	Yes
Dimensions	
Width	16.7 mm
Height	59.1 mm
Thickness	7 mm
Weights	
Weight (without packaging)	12 g
Scope of supply	
Delivery quantity in pieces	1; Without content
Other	
Merchandise	No
Manufacturer name	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	Suitable for IPC and HMI devices with the corresponding interfaces (see manual)
Note:	TP1500 Comfort Outdoor, TP700 Comfort Outdoor: Observe the temperature range

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Technical specifications

Article number	6AV7675-0FX00-0AA0 SIMATIC USB flash drive 32 GB, Ex	6AV7675-0FX10-0AA0 SIMATIC USB flash drive 32 GB, Ex
General information		
Product type designation	USB flash drive	USB flash drive
Control elements		
Connection type		
• USB	Yes	Yes
Frame size/design		
• Standard	No; Special enclosure for screw mounting	No; Special enclosure for screw mounting
• Flat	No	No
• Space-saving	Yes; Suitable for hazardous zones with locking screw	Yes; Suitable for hazardous zones with locking screw
Installation type/mounting		
Mounting in portrait format possible	Yes	Yes
Mounting in landscape format possible	Yes	Yes
Supply voltage		
Rated value (DC)	5.9 V	5.9 V
Input current		
Current consumption (rated value)	3 A	3 A
Power		
Active power input, typ.	6 W	6 W
Memory		
Type of memory	USB drive	USB drive
Memory size	32 Gbyte	32 Gbyte
Write protection switch	No	No
Degree and class of protection		
IP (all-round)	IP20	IP20
Standards, approvals, certificates		
CE mark	Yes	Yes
CSA approval	Yes	Yes
RoHS conformity	Yes	Yes
Use in hazardous areas		
• ATEX Zone 2	Yes	Yes
• ATEX Zone 22	Yes	Yes
• IECEx Zone 1	Yes; Up to Zone 1, TÜV (German Technical Inspectorate) 06 ATEX 7342, IECEx TUR 13.0005	Yes; Up to Zone 1, TÜV (German Technical Inspectorate) 06 ATEX 7342, IECEx TUR 13.0005
• IECEx Zone 11	Yes; Up to Zone 1, TÜV (German Technical Inspectorate) 06 ATEX 7342, IECEx TUR 13.0005	Yes; Up to Zone 1, TÜV (German Technical Inspectorate) 06 ATEX 7342, IECEx TUR 13.0005
• IECEx Zone 2	Yes	Yes
• IECEx Zone 22	Yes	Yes
• cULus Class I Zone 1	Yes; CSA Class II No. 2649448	Yes; CSA Class II No. 2649448
• cULus Class I Zone 2, Division 2	Yes; CSA Class II No. 2649448	Yes; CSA Class II No. 2649448
• FM Class I Division 2	Yes; CSA Class II No. 2649448	Yes; CSA Class II No. 2649448
• FM Class II Division 2	Yes; CSA, Group F and G; T 130 °C	Yes; CSA, Group F and G; T 130 °C
Ambient conditions		
Suited for indoor use	Yes	Yes
Suited for outdoor use	No	No
Ambient temperature during operation		
• min.	-20 °C	-20 °C
• max.	70 °C	70 °C
Relative humidity		
• Condensation permissible	No	No

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Storage media

Technical specifications

Article number	**6AV7675-0FX00-0AA0**	**6AV7675-0FX10-0AA0**
	SIMATIC USB flash drive 32 GB, Ex	SIMATIC USB flash drive 32 GB, Ex
Operating systems		
Runs under operating system		
• Windows CE	No	No
• Windows Vista	Yes	Yes
• Windows XP	Yes	Yes
• Windows 7	Yes	Yes
• Windows 8	Yes	Yes
• Linux	No	No
Mechanics/material		
Material		
• Aluminum	Yes	Yes
Dimensions		
Width	25 mm	25 mm
Height	110 mm	110 mm
Thickness	15 mm	15 mm
Weights		
Weight (without packaging)	70 g	70 g
Scope of supply		
Delivery quantity in pieces	1	1
Components included	USB flash drive (encapsulated) screw fastening and leather casing	USB flash drive (encapsulated) screw fastening and leather casing
Other		
Merchandise	Yes; USBi drive, 16 GB	Yes; USBi drive, 16 GB recovery
Manufacturer name	R. Stahl HMI Systems GmbH	R. Stahl HMI Systems GmbH
Manufacturer's address	Adolf-Grimme-Allee 8, 50829 Cologne, Germany	Adolf-Grimme-Allee 8, 50829 Cologne, Germany
Target devices	ATEX certified for operating on xx6 USB Ex-i and non-Ex interfaces, Zones 1, 2, 21<(>&<)>22 Gas Zones: II 2 G Ex is IIC T4 Dust Zones: II 2 D Ex ibD 21 T110 degrees C	ATEX certified for operating on xx6 USB Ex-i and non-Ex interfaces, Zones 1, 2, 21<(>&<)>22 Gas Zones: II 2 G Ex is IIC T4 Dust Zones: II 2 D Ex ibD 21 T110 degrees C
Note:	Suitable for IPC and HMI devices with the corresponding interfaces (see manual)	Suitable for IPC and HMI devices with the corresponding interfaces (see manual)

More information

Note:

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.
Industry Mall:

https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically. This facilitates selection of suitable accessories.

http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

http://support.automation.siemens.com

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Overview

Tablet PC transport case

Tablet PC additional case

Tablet PC storage case

Transport and storage cases

Transport and storage cases are perfectly suited for tablet PCs and industrial tablet PCs such as the ITP100.

The basic transport case was created especially for mobile operation of a tablet PC with all of the required accessories, such as a power supply unit, mouse, keyboard, etc. It can be modularly expanded. Various expansion pockets are available for this purpose.

Additional expansion pockets can easily be connected to the basic case. Covered holes allow the tablet to be connected to the power supply unit even during transport without the cable visibly hanging out of the case. This ensures particularly fast access times when used. The basic case features a hook-and-loop strip and a wrist rest for using an optional Bluetooth keyboard. The rear part of the transport case can be opened to allow the tablet PC to be optimally set up in the case as well. The outer fabric straps can be used for securing anything from tools to writing materials, meaning that everything is at your fingertips during a service call.

Optimal ventilation during operation is also provided for. Thick, elastic material ribs not only protect against small impacts, but also against over-heating. A rugged shoulder strap, a double carrying handle, and side reflective strips round off the well thought out transport case.

A case with all-round protection meant purely for storage purposes is also available for tablet PCs.

Note:

The expansion module pockets must be ordered separately. 1 to 3 small expansion pockets or 1 small and 1 medium expansion pocket can be attached to one basic case at the same time.

Ordering data

	Article No.
Basic transport bag for tablet PC: Multifunctional transport bag, suitable, for example, for the tablet PC ITP1000 or other tablet PCs, laptops. Can be expanded. Can be used as stand, with carrying strap.	**6AV6881-0AW11-3AA0**
Small expansion pocket for tablet PC Expansion pocket, small, suitable for transport bag ITP1000.	**6AV6881-0AW12-3AA0**
Medium expansion pocket for tablet PC Expansion pocket, medium-size, suitable for transport bag ITP1000. Can be used instead of 2 small ones.	**6AV6881-0AW13-3AA0**
Storage bag for tablet PC Universal storage bag, suitable for all tablet PCs.	**6AV6881-0AW11-2AA0**
Tablet PC support with handle for ITP1000	**6AV6881-0AW21-3AA0**
Tablet PC carrying strap for ITP1000	**6AV6881-0AW31-3AA0**

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Technical specifications

Article number	6AV6881-0AW11-3AA0	6AV6881-0AW12-3AA0	6AV6881-0AW13-3AA0	6AV6881-0AW11-2AA0	6AV6881-0AW21-3AA0	6AV6881-0AW31-3AA0
	Transport bag Basic Tablet	Additional pocket small Tablet	Additional pocket medium Tablet	Storage bag Tablet	Tablet PC support with handle	Tablet PC carrying strap
General information						
Product type designation	Transport pouch basic	Transport pouch small	Transport pouch medium	Transport pouch storage	Tablet PC holder with handle	Tablet PC carrying strap
Control elements						
Frame size/design						
• Exceptional	Yes; Integrated ventilation, laying of cables possible	No	Yes; With integrated cable opening	No	Yes; Optimized for tablet PC, ITP1000	Yes; Optimized for tablet PC, ITP1000
Ergonomics						
• Trackball rest	Yes	No	No	No	No; Adjustable handle with hook-and-loop connection, any useful angle can be set	No; Carrying strap with adjustable shoulder pad
• Adjustable height	No; Case with stand function	No	No	No	No	No; Strap can be adjusted for length
Installation type/mounting						
Mounting type					Real assembly with provided screws	Rear lug mounting, also suitable as a belt strap
Degree and class of protection						
IP (all-round)					none	none
Standards, approvals, certificates						
CE mark					No; No CE marking obligation	No; No CE marking obligation
Ambient conditions						
Suited for indoor use	Yes; Washable	Yes; Washable	Yes; Washable	Yes; Washable	Yes	Yes
Suited for outdoor use	Yes; Washable	Yes; Washable	Yes; Washable	Yes; Washable	Yes	Yes
Ambient temperature during operation						
• min.	-30 °C; Indoor/outdoor	-30 °C; Indoor/outdoor	-30 °C; Indoor/outdoor	-30 °C; Indoor/outdoor	0 °C	0 °C
• max.	60 °C; Indoor/outdoor	60 °C; Indoor/outdoor	60 °C; Indoor/outdoor	60 °C; Indoor/outdoor	50 °C	50 °C
Relative humidity						
• Operation, max.	95 %	95 %	95 %	95 %	90 %	90 %
• Condensation permissible	Yes; Applies only for case, not for contents	Yes; Applies only for case, not for contents	Yes; Applies only for case, not for contents	Yes; Applies only for case, not for contents		
Mechanics/material						
Material						
• Plastic	Yes; 420 HD nylon	Yes; 420 HD nylon	Yes; 420 HD nylon	Yes; 420 HD nylon		
Torques/forces						
• Tightening torque, min.					1 N·m; Insufficient torque can lead to loosening of the screws	1 N·m; Insufficient torque can lead to loosening of the screws
• Tightening torque, max.					1.5 N·m	1.5 N·m

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Technical specifications

Article number	6AV6881-0AW11-3AA0	6AV6881-0AW12-3AA0	6AV6881-0AW13-3AA0	6AV6881-0AW11-2AA0	6AV6881-0AW21-3AA0	6AV6881-0AW31-3AA0
	Transport bag Basic Tablet	Additional pocket small Tablet	Additional pocket medium Tablet	Storage bag Tablet	Tablet PC support with handle	Tablet PC carrying strap
Dimensions						
Width	40 cm; Approximate dimension	18 cm; Approximate dimension	25 cm; Approximate dimension	35 cm; Approximate dimension		
Height	30 cm; Approximate dimension	12 cm; Approximate dimension	18 cm; Approximate dimension	24 cm; Approximate dimension		
Depth	10 cm; Approximate dimension	5 cm; Approximate dimension	5 cm; Approximate dimension	5 cm; Approximate dimension		
Mounting cutout, width	33 cm; Max. device width	10 cm; Max. device width	20 cm; Max. device width	33 cm; Max. device width		
Mounting cutout, height	23 cm; Max. device height	14 cm; Max. device height	14 cm; Max. device height	23 cm; Max. device height		
Overall depth	3 cm; Max. device depth	3 cm; Max. device depth	3 cm; Max. device depth	3 cm; Max. device depth		
Weights						
Weight (without packaging)	280 g	35 g	50 g	50 g	0.4 kg	0.25 kg
Weight (with packaging)	300 g	40 g	60 g	60 g	0.53 kg	0.29 kg
Scope of supply						
Delivery quantity in pieces	1	1	1	1	1; 1x mounting plate with 4 lugs, 1x handle with hook-and-loop pad, 4x M4 screws, 4x washers	1; 1x carrying strap, adjustable length with snap hooks, 2 lugs, 2x M4 screws, 2x washers
Other						
Merchandise	Yes; Tatonka 6540.040	Yes; Tatonka 6541.040	Yes; Tatonka 6542.040	Yes; Tatonka 6539.040	Yes	Yes
Manufacturer name	TATONKA GmbH	TATONKA GmbH	TATONKA GmbH	TATONKA GmbH	ADViTEX GmbH	ADViTEX GmbH
Manufacturer's address	Robert-Bosch-Straße 3, 86451 Dasing, Germany	Robert-Bosch-Straße 3, 86451 Dasing, Germany	Robert-Bosch-Straße 3, 86451 Dasing, Germany	Robert-Bosch-Straße 3, 86451 Dasing, Germany	Eisenbahnstraße 40, 75228 Ispringen, Germany	Eisenbahnstraße 40, 75228 Ispringen, Germany
Target devices	Suitable laptops and tablets, or similar	Suitable laptops and tablets, or similar	Suitable laptops and tablets, or similar	Suitable laptops and tablets, or similar	suitable for all appropriate interfaces	suitable for all appropriate interfaces
Note:	Integrated cable inlets for power supply unit, hard disks etc. - simply flip open to get started	Integrated cable inlets for power supply unit, hard disks etc. - simply flip open to get started	Integrated cable inlets for power supply unit, hard disks etc. - simply flip open to get started	Integrated cable inlets for power supply unit, hard disks etc. - simply flip open to get started	Commodity, can be used for ITP1000	Commodity, can be used for ITP1000

More information

Note:

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.

Industry Mall:

https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically. This facilitates selection of suitable accessories.

http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

http://support.automation.siemens.com

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Overview

Distribution boards

Industrial distribution boards are used for extending and/or multiplying interfaces. The distribution boards offered here are optimized for SIMATIC devices and intended for industrial use.

This also includes the interface extensions. A USB device interface with IP65 [1] degree of protection is provided on the front of the control cabinet or console.

[1] The stated degree of protection always refers to the closed interface. The stated degree of protection can differ significantly from the stated value when using the USB interfaces.

USB extension

Installation of an external USB interface is practical if external input devices or mass storage devices are frequently connected to a SIMATIC HMI PRO device. The USB interface can optionally be mounted at the top or bottom of the device. Use of the USB interface increases the availability of the system to be operated. It is also no longer necessary to open the backplane of the SIMATIC HMI PRO device to connect I/O.

Further benefits:

- Accessible to any operator without the need for tools
- Also suitable for retrofitting in enclosure
- Mountable on the front
- Increased degree of protection at front if protective cover is closed

Ordering data

	Article No.
1-port USB interface set RAL9023 RAL9023 (gray), with USB 2.0 socket, type A, for basic adapter for PRO devices, max. current consumption USB with thin client, MP377 and flat panel must be observed	**6AV7674-0LX00-0AA0**
2-port USB interface set RAL9023 RAL9023 (gray), with USB 2.0 socket, type A, for basic adapter for PRO devices, max. current consumption USB with thin client, MP377 and flat panel must be observed	**6AV7674-0LX01-0AA0**

Technical specifications

Article number	**6AV7674-0LX00-0AA0** 1 port USB interface set RAL9023	**6AV7674-0LX01-0AA0** 2 port USB interface set RAL9023
General information		
Product type designation	USB port	USB port
Standards, approvals, certificates		
CE mark	No; No CE marking obligation	No; No CE marking obligation
RoHS conformity	Yes	Yes
Scope of supply		
Delivery quantity in pieces	1	1
Other		
Merchandise	Yes; 1-port USB interface	
Manufacturer name	RITTAL GmbH & Co. KG	
Manufacturer's address	Auf dem Stützelberg, 35745 Herborn, Germany	
Note:	for general use or for PRO devices with a suitable USB interface	

More information

Note:

Modifications or additions to the products described here can be found and ordered under "Customer-specific products". It is also still possible to request special sector-specific products for customer-specific modification and adaptation.

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.
Industry Mall:

https://mall.industry.siemens.com

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Overview

SIMATIC small components are also perfected for the industrial environment and optimally matched to the SIMATIC HMI devices.

In order to achieve attractive prices, it is only possible in some cases to order packages containing larger quantities.

Note:

Keys for KTP Mobile come with a preset breaking point. This ensures that a key can still always be removed from a KTP Mobile lock even if it breaks off.

Ordering data

	Article No.
Spare key for Mobile Panel, Type 10 For key-operated switch of the Mobile Panel.	**6AV6574-1AG04-4AA0**
Spare key for Mobile Panel, Type 13 For key-operated switch of the Mobile Panel 2nd Generation.	**6AV2181-5AR80-0AX0**
Spare key PRO, Type 14 For Extension Unit	**6AV6881-4AR23-0AA0**
Spare key PRO, Safety, Type 14 For Extension Unit	**6AV6881-4AR23-1AA0**
Battery compartment lid for all IWLAN Mobile Panels with Article No. 6AV6645-0…	**6AV6881-5AM52-0AA0**

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Additional accessories

Technical specifications

Article number	6AV6574-1AG04-4AA0 Spare key Mobile Panel, type 10	6AV2181-5AR80-0AX0 Spare key Mobile Panel, type 13	6AV6881-5AM52-0AA0 Battery cover IWLAN Mobile Panel
General information			
Product type designation	Spare key Mobile Panel 1st Generation	Spare key	Battery compartment cover
Standards, approvals, certificates			
CE mark	Yes	No; No CE marking obligation	No; No CE marking obligation
RoHS conformity	Yes		
Ambient conditions			
Ambient temperature during operation			
• min.	-40 °C	-40 °C	-40 °C
• max.	80 °C	80 °C	80 °C
Relative humidity			
• Operation, max.	90 %	90 %	90 %
Mechanics/material			
Material			
• Plastic			Yes; Incl. seal
• Sheet steel	Yes; Handle made of plastic	Yes; Handle made of plastic	
Dimensions			
Width	35 mm	15 mm	8 mm; Approximate dimension
Height	18 mm	35 mm	10 mm; Approximate dimension
Depth			5 mm; Approximate dimension
Thickness	4 mm	4 mm	
Weights			
Weight (without packaging)	30 g	5 g	22 g
Scope of supply			
Delivery quantity in pieces	10; Coupled with key ring	5	1
Other			
Merchandise	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Target devices	For Mobile Panel 1st Generation	For Mobile Panel 2nd Generation	For Mobile Panel 2nd Generation
Note:			Only required for IWLAN

More information

Note:

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory.
Industry Mall:

https://mall.industry.siemens.com

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http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

http://support.automation.siemens.com

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Overview

- Space-saving access point, suitable for applications where the device is to be mounted in the control cabinet

Ordering data

	Article No.
SCALANCE W761 access points	
IWLAN access point(s) with built-in wireless interface; wireless networks IEEE 802.11a/b/g/h/n at 2.4/5 GHz up to 150 Mbps; WPA2/AES; IP20 degree of protection (0 °C to +55 °C); scope of delivery: Mounting hardware, 3-pin screw terminal for 24 V DC; manual on CD-ROM; German/English	
SCALANCE W761-1 RJ45	
IWLAN access point(s) with one built-in wireless interface	
• Country approvals for operation outside the USA	**6GK5761-1FC00-0AA0**
• Country approvals for operation within the USA[1)]	**6GK5761-1FC00-0AB0**

[1)] Note country-specific approvals under http://www.siemens.com/wireless-approvals

More information

Selection Tool:

To support the selection of SCALANCE network components, the TIA Selection Tool is available at:

http://www.siemens.com/tst

Wireless approvals:

Current approvals can be found on the Internet at:
http://www.siemens.com/wireless-approvals

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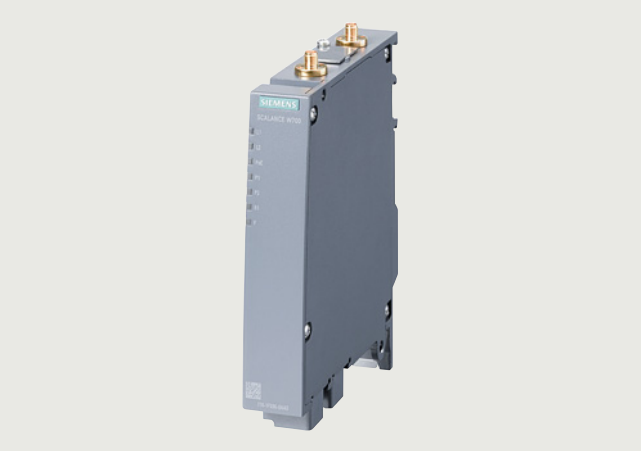
SCALANCE W774 RJ45 for the control cabinet

Overview



- Access points in SIMATIC S7-1500 design are suitable for applications where the device is to be mounted in the control cabinet

Ordering data

	Article No.
SCALANCE W774 access points	
IWLAN access points with built-in wireless interface for establishing radio connections with iFeatures; wireless networks IEEE 802.11a/b/g/h/n at 2.4/5 GHz up to 300 Mbps; WPA2/AES; integrated 2-port switch; Power over Ethernet (PoE), IP30 degree of protection (-20? to +60°C); scope of delivery: Mounting hardware; 4-pin screw terminal for 24 V DC; manual on CD-ROM; English/German	
SCALANCE W774-1 RJ45	
IWLAN access point(s) with one built-in wireless interface	
• Country approvals for operation outside the USA	**6GK5774-1FX00-0AA0**
• Country approvals for operation within the USA [1]	**6GK5774-1FX00-0AB0**
• Country approvals for operation in Israel [1]	**6GK5774-1FX00-0AC0**

[1] Note country-specific approvals under http://www.siemens.com/wireless-approvals

More information

Selection Tool:

To support the selection of SCALANCE network components, the TIA Selection Tool is available at:

http://www.siemens.com/tst

Wireless approvals:

Current approvals can be found on the Internet at:
http://www.siemens.com/wireless-approvals

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SCALANCE W774 M12 EEC for an extended range of ambient conditions

Overview

- Suitable for use in industrial and automation applications in general, but especially in railway applications where the access point is to be mounted in the control cabinet

Ordering data

	Article No.
SCALANCE W774 M12 EEC access points	
IWLAN Access points with built-in wireless interface; wireless networks IEEE 802.11a/b/g/h/n at 2.4/5 GHz up to 300 Mbps; railway approval in accordance with EN 50155; conformal coating; WPA2/AES; Power over Ethernet (PoE), IP20 degree of protection; scope of delivery: Mounting hardware; manual on CD-ROM, English/German	
SCALANCE W774-1 M12 EEC	
IWLAN access point with one integrated wireless interface	
• Country approvals for operation outside the USA	**6GK5774-1FY00-0TA0**
• Country approvals for operation within the USA[1)]	**6GK5774-1FY00-0TB0**

[1)] Note country-specific approvals under http://www.siemens.com/wireless-approvals

More information

Selection Tool:

To support the selection of SCALANCE network components, the TIA Selection Tool is available at:

http://www.siemens.com/tst

Wireless approvals:

Current approvals can be found on the Internet at:
http://www.siemens.com/wireless-approvals

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KEY-PLUG W700, CLP W700

Overview KEY-PLUG W700

- Removable data storage medium with which iFeatures and security features are enabled
- If a fault occurs, it allows fast and simple device replacement of SCALANCE W components without a PG
- Can be used in all SCALANCE W700 IEEE 802.11n products with a PLUG compartment
- For the automatic backup of configuration data

Ordering data

	Article No.
KEY-PLUG W780 iFeatures Removable data storage medium for enabling additional iFeatures, for simple device replacement in the event of a fault, and for storing configuration data. Can be used in SCALANCE W access points with a PLUG slot	**6GK5907-8PA00**
KEY-PLUG W740 iFeatures Removable data storage medium for enabling additional iFeatures, for simple device replacement in the event of a fault, and for storing configuration data. Can be used in SCALANCE W client modules with a PLUG slot	**6GK5907-4PA00**
KEY-PLUG W700 Security Removable data storage medium for enabling security features for SCALANCE W700, for simple device replacement in the event of a fault, and for storing configuration data.	**6GK5907-0PA00**

More information

Selection Tool:

To support the selection of SCALANCE network components, the TIA Selection Tool is available at:

http://www.siemens.com/tst

Overview CLP W700

- Removable data storage medium with which iFeatures and security features are enabled
- If a fault occurs, it allows fast and simple device replacement of SCALANCE W components without a PG
- Can be used in all SCALANCE W700 IEEE 802.11ac and IEEE 802.11ax products with a CLP slot
- For the automatic backup of configuration data

Ordering data

	Article No.
SCALANCE CLP 2GB W700 Client iFeatures Removable data storage medium for enabling iFeatures for SCALANCE W in client mode, enables easy device replacement in the event of a fault, as well as storage of configuration data or engineering and application data, for all SCALANCE W1700 devices.	**6GK5907-4UA00-0AA0**
SCALANCE CLP 2GB W700 AP iFeatures Removable data storage medium for enabling iFeatures for SCALANCE W in access point mode, enables easy device replacement in the event of a fault, as well as storage of configuration data or engineering and application data, for all SCALANCE W1700 devices.	**6GK5907-8UA00-0AA0**

More information

Selection Tool:

The TIA Selection Tool supports the selection of corresponding network components and software and is available at:

http://www.siemens.com/tst

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SCALANCE WAM763-1 for use in control cabinet, SCALANCE WAM766-1 for indoor use

Overview

Industrial access point according to IEEE 802.11ax (WiFi 6):

SCALANCE WAM763-1 for use in control cabinet

- Especially suitable for industrial applications where the device is to be mounted in the control cabinet

SCALANCE WAM766-1 for indoor use

- Particularly suitable for industrial applications with cabinet-free setup

Ordering data

	Article No.
SCALANCE WAM763-1 access points IWLAN access point, 1 radio, 2.4/5 GHz, IEEE 802.11ax (WiFi 6), 2 RSMA connectors, iFeatures support via CLP, 1 201 Mbps (gross), 4x10/100/1 000 Mbps RJ45 port, redundant 24 V DC, terminal block, IP30, -30...+60°C, CLP slot, DI/DQ, terminal block, observe national approvals! CERT ID: MSAX-W1-RJ-E2 operation outside USA/Israel Scope of delivery: Manuals on DVD, English/German, 3x terminal block	**6GK5763-1AL00-7DA0**
SCALANCE WAM766-1 access points IWLAN access point; 1 radio, 2.4/5 GHz, 2 N-Connect connectors, iFeatures support via CLP, IEEE 802.11ax (WiFi 6), 1 201 Mbps (gross) per radio, 1x10/100/1 000 Mbps M12 port, redundant 24 V DC, M12 L-coded, PoE, IP65 (non-EEC variant: -30°C to +60°C; EEC variant: -30°C to +75°C), CLP slot, DI/DQ, A-coded, observe national approvals! CERT ID: MSAX65-W1-M12-E2, FCCID: LYHMSAX* Scope of delivery: Manuals on DVD, English/German Sealing caps for connectors	
SCALANCE WAM766-1	
• Country approvals for operation outside the USA/Israel	**6GK5766-1GE00-7DA0**
• Country approvals for operation within the USA	**6GK5766-1GE00-7DB0**

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SCALANCE WAM766-1 EEC for an extended range of ambient conditions

Overview

SCALANCE WAM766-1 EEC for an extended range of ambient conditions

- Particularly suitable for industrial applications with cabinet-free setup

Ordering data

	Article No.
SCALANCE WAM766-1 access points IWLAN access point; 1 radio, 2.4/5 GHz, 2 N-Connect connectors, iFeatures support via CLP, IEEE 802.11ax (Wi-Fi 6), 1 201 Mbps (gross) per radio, 1x10/100/1 000 Mbps M12 port, redundant 24 V DC, M12 L-coded, PoE, IP65 (non-EEC variant: -30°C to +60°C; EEC variant: -30°C to +75°C), CLP slot, DI/DQ, A-coded, observe national approvals! CERT ID: MSAX65-W1-M12-E2, FCCID: LYHMSAX*, scope of delivery: Manuals on DVD, English/German, sealing caps for connectors	
SCALANCE WAM766-1 EEC	
• Country approvals for operation outside the USA/Israel	**6GK5766-1GE00-7TA0**
• Country approvals for operation within the USA	**6GK5766-1GE00-7TB0**

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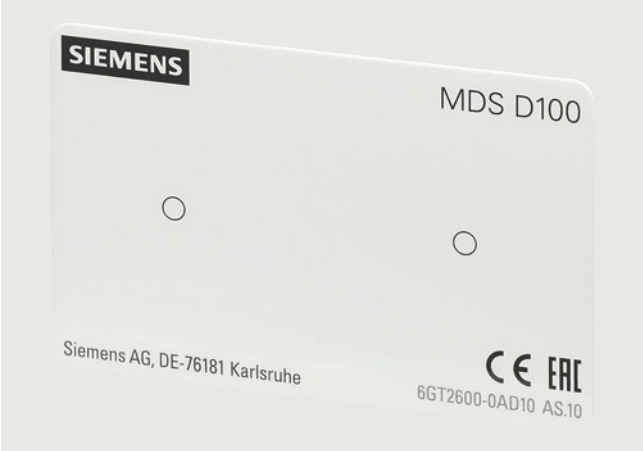
Overview



This transponder in credit card format can be used for the RFID system MOBY D as well as for the SIMATIC RF200, SIMATIC RF300 (ISO mode) and SIMATIC RF1000.

Ordering data

Ordering data	Article No.
Transponder MDS D100 112 bytes EEPROM Ordering quantity 50 units or a multiple thereof.	**6GT2600-0AD10**

Overview

Universal data memory (752 bytes EEPROM) in credit card format (85 mm × 54 mm × 0.8 mm), degree of protection IP68, temperature range up to +60 °C and max. read/write distance of 70 mm.

Ordering data

Ordering data	Article No.
Transponder MDS E600 MOBY E Mobile data storage unit MDS E600 ISO card, 752 byte EEPROM, IP68, -25 ... +60 °C, 85× 54× 0.8 mm • For RF300, MOBY E • Minimum order quantity: 50 units	**6GT2300-0AA00**

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RF1040R

Overview

SIMATIC RF1040R Reader with card holder

The SIMATIC RF1040R Reader allows individual control of access rights on machinery and systems. The reader operates primarily in the LF range with 125 kHz and supports conventional standards for employee IDs (Hitag 1/2/S, EM41xx, Cotag, EKS).
Transponders with ISO 14443 A/B (MIFARE) and ISO 15693 standards can also be read.

SIMATIC RF1000 readers feature a USB interface for connection to Windows-based computers and third-party HMIs (1.8 m cable with USB plug, type A).
Due to its rugged, compact design and shallow installation depth, the reader is ideally suited for applications where mounting space is at a premium or in harsh industrial environments, such as in panels.

The RF1040R Reader features an additional RS232 interface. This allows the reader to be easily integrated into a wide range of system environments:

- PROFINET via RF18xC/CI
- S7-1200 via RF120C
- PROFIBUS via RF166C
- ET 200pro via RF170C
- ET 200SP, PCs, third-party HMI, other control systems

The reader features a 3-color LED status display as well as an acoustic signaling element.

Ordering data

	Article No.
SIMATIC RF1040R Reader Access control reader (LF 125 kHz) for HITAG 1/2/S, EM41xx/45xx, EKS as well as (HF 13.56 MHz) for ISO14443 A/B (MIFARE), ISO15693, with USB connection (incl. 1.8 m connecting cable) and RS232	**6GT2831-6CA50**

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Overview

SIMATIC RF1060R Reader with card holder

The SIMATIC RF1060R Reader makes it easy to use existing employee IDs (ISO 14443 A/B and ISO 15693 standards) for the operation of machines and plants. The RF1060R Reader features a USB interface (1.8 m cable with USB plug, type A) for connection to Windows-based computers.

Due to its compact design and shallow installation depth, the reader is ideally suited for applications where mounting space is at a premium, such as in panels.

Ordering data

	Article No.
SIMATIC RF1060R Reader Access control reader (13.56 MHz) for ISO 14443 A/B (MIFARE) and ISO 15693, with USB connection (incl. 1.8 m connecting cable)	**6GT2831-6AA50**

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Overview

SIMATIC RF1070R Reader with card holder

The SIMATIC RF1070R Reader allows individual control of access rights on machinery and systems. In addition to ISO 14443 A/B (MIFARE) and ISO 15693, the reader also complies with the LEGIC Prime and LEGIC Advant standards, thus enabling the use of existing employee IDs.

Readers of the SIMATIC RF1000 series feature a USB interface for connection to Windows-based computers and third-party HMIs (1.8 m cable with USB plug, type A). Due to its rugged, compact design and shallow installation depth, the reader is ideally suited for applications where mounting space is at a premium or in harsh industrial environments, such as in panels.

The RF1070R Reader features an additional RS232 interface. This allows the reader to be easily integrated into a wide range of system environments:

- PROFINET via RF18xC/CI
- S7-1200 via RF120C
- PROFIBUS via RF166C
- ET 200pro via RF170C
- ET 200SP, PCs, third-party HMI, other control systems

The reader features a 3-color LED status display as well as an acoustic signaling element.

The reader is also available as RF1070R OEM version with neutral front film. In addition to the supplied neutral front film, you can also create your own design and attach this to the reader. Please note that the OEM version does not have ATEX approval.

Ordering data

	Article No.
SIMATIC RF1070R Reader Access control reader (13.56 MHz) for ISO 14443 A/B (MIFARE), ISO 15693, Legic Prime, Legic Advant, with USB connection (incl. 1.8 m connecting cable) and RS232	**6GT2831-6BA50**
SIMATIC RF1070R OEM Reader Access control reader (13.56 MHz) for ISO 14443 A/B (MIFARE), ISO 15693, Legic Prime, Legic Advant, with USB connection (incl. 1.8 m connecting cable) and RS232 with supplied neutral front film	**6GT2831-6BA50-0AX0**

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Overview

Connecting cables

Connecting cable PN (PROFINET) for Mobile Panels

Connecting cable DP (PROFIBUS) for Mobile Panels

Key

P = PROCESS COUPLING

K = Optional process coupling (option required)

D = DOWNLOAD (update operating system, project, …)

U = Booting (factory setting in the case of a missing or damaged operating system)

MBP = Mobile Panel

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Connecting cables

Overview

Overview of SIMATIC HMI connection options

	RS 232 external (15/9-pin)	TD-PPI (incl. voltage)	RS 232 Null modem	RS 232/PPI multi-master cable	USB/PPI multi-master cable	MPI (PG-S7) up to 187.5 kbaud
	6XV1440-2Kxxx	6ES7901-3EB10-0XA0	6ES7901-1BF00-0XA0	6ES7901-3CB30-0XA0	6ES7901-3DB30-0XA0	6ES7901-0BF00-0AA0
Key Panel KP8/KP8F, KP32F	-	-	-	-	-	-
PP7, PP17-I, PP17-II	-	-	-	-	-	-
KTP400 Basic mono PN	-	-	-	-	-	-
KTP600 Basic mono PN	-	-	-	-	-	-
KTP600 Basic color DP	-	-	-	D/U	D/U	P/D
KTP600 Basic color PN	-	-	-	-	-	-
KTP1000 Basic color DP	-	-	-	D/U	D/U	P/D
KTP1000 Basic color PN	-	-	-	-	-	-
KTP1500 Basic color PN	-	-	-	-	-	-
K(T)P400 Comfort	-	-	-	-	-	P/D
K(T)P700 - KP1500 Comfort	-	-	-	-	-	P/D
TP700 -TP2200 Comfort	-	-	-	-	-	P/D
MBP 177	-	-	-	D/U	-	-
MBP 277	-	-	-	D/U	-	-
TD200	-	P	-	D/U	-	P
TD400C	-	P	-	D/U	-	P
OP73micro	-	P	-	D/U	D/U	P
TP177micro	-	-	-	D/U	D/U	-
OP73	-	P	-	D/U	D/U	P/D
OP77A	-	-	-	D/U	D/U	P/D
OP77B	P	-	D/U	-	-	P/D
TP177A	-	-	-	D/U	D/U	P/D
TP177B	P [1)]	-	-	D/U	-	P/D
TP177B 4"	P [1)]	-	D	D	-	P/D
OP177B	P [1)]	-	-	D/U	-	P/D
TP277-6	P [1)]	-	-	D/U	-	P/D
OP277-6	P [1)]	-	-	D/U	-	P/D
MP177-6 T	P [1)]	-	-	D/U	-	P/D
MP277-8 T	P [1)]	-	-	D/U	-	P/D
MP277-10 T	P [1)]	-	-	D/U	-	P/D
MP377-12 T	P [1)]	-	-	D	-	P/D
MP377-15 T	P [1)]	-	-	D	-	P/D
MP377-19 T	P [1)]	-	-	D	-	P/D

[1)] Only in conjunction with the RS 422/232 converter

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Overview

	DP PtP	DP Standard	DP (Mobile Panel)	PN (cross cable) [1] Point-to-point	PN (standard cable) [1]	PN (Mobile Panel)	RS 422 to RS 232 converter	RS 232 to TTY converter (20 mA)	90° angular (9-pin 1:1)
	6XV1830-0Axxx	Standard PROFIBUS (2-pin)	6XV1440-4Axxx	6XV1870-3RH20	Standard Ethernet CAT5	6XV1440-4Bxxx	6AV6671-8XE00-0AX0	6ES5734-1BD20	6AV6671-8XD00-0AX0
Key Panel KP8/KP8F, KP32F	-	-	-	P/D	P/D	-	-	-	-
PP7, PP17-I, PP17-II	P	P	-	-	-	-	-	-	-
KTP400 Basic mono PN	-	-	-	P/D/U	P/D/U	-	-	-	-
KTP600 Basic mono PN	-	-	-	P/D/U	P/D/U	-	-	-	-
KTP600 Basic color DP	P/D	P/D	-	-	-	-	-	-	P/D/U
KTP600 Basic color PN	-	-	-	P/D/U	P/D/U	-	-	-	-
KTP1000 Basic color DP	P/D	P/D	-	-	-	-	-	-	P/D/U
KTP1000 Basic color PN	-	-	-	P/D/U	P/D/U	-	-	-	-
KTP1500 Basic color PN	-	-	-	P/D/U	P/D/U	-	-	-	-
K(T)P400 Comfort	P/D	P/D	-	P/D/U	P/D/U	-	-	-	P/D/U
K(T)P700 - TP1500 Comfort	P/D	P/D	-	P/D/U	P/D/U	-	-	-	P/D/U
TP700 -TP2200 Comfort	P/D	P/D	-	P/D/U	P/D/U	-	-	-	P/D/U
MBP 177 DP	P/D	P/D	P/D	-	-	-	-	-	-
MBP 177 PN	-	-	-	-	-	P/D	-	-	-
MBP 277	P/D	P/D	P/D	-	-	P/D	-	-	-
TD200	-	-	-	-	-	-	-	-	-
TD400C	-	-	-	-	-	-	-	-	-
OP73micro	P	-	-	-	-	-	-	-	-
TP177micro	P	P	-	-	-	-	-	-	P/D/U
OP73	P	P	-	-	-	-	-	-	-
OP77A	P	P	-	-	-	-	-	-	P/D/U
OP77B	P/D	P/D	-	-	-	-	-	P	P/D/U
TP177A	P	P	-	-	-	-	-	-	P/D/U
TP177B DP	P/D	P/D	-	-	-	-	P	P [2]	P/D/U
TP177B PN/DP	P/D	P/D	-	P/D	P/D	-	P	P [2]	P/D/U
TP177B 4"	P/D	P/D	-	P/D/U	P/D/U	-	P	P [2]	P/D/U
OP177B DP	P/D	P/D	-	-	-	-	P	P [2]	P/D/U
OP177B PN/DP	P/D	P/D	-	P/D	P/D	-	P	P [2]	P/D/U
TP277-6	P/D	P/D	-	P/D	P/D	-	P	P [2]	P/D/U
OP277-6	P/D	P/D	-	P/D	P/D	-	P	P [2]	P/D/U
MP177-6 T	P/D	P/D	-	P/D	P/D	-	P	P [2]	P/D/U
MP277-8 T	P/D	P/D	-	P/D	P/D	-	P	P [2]	P/D/U
MP277-8 K	P/D	P/D	-	P/D	P/D	-	P	P [2]	P/D/U
MP277-10 T	P/D	P/D	-	P/D	P/D	-	P	P [2]	P/D/U
MP277-10 K	P/D	P/D	-	P/D	P/D	-	P	P [2]	P/D/U
MP377-12 T	P/D	P/D	-	P/D/U	P/D/U	-	P	P [2]	P/D
MP377-12 K	P/D	P/D	-	P/D/U	P/D/U	-	P	P [2]	P/D
MP377-15 T	P/D	P/D	-	P/D/U	P/D/U	-	P	P [2]	P/D
MP377-19 T	P/D	P/D	-	P/D/U	P/D/U	-	P	P [2]	P/D

Note:
This table is for basic orientation only. Technical characteristics are described in the communication manual or the respective user manual.

[1] PROFINET IRT (isochronous runtime); isochronous mode only possible with IRT-enabled switch

[2] WinCC flexible 2008 SP2 and higher

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Connecting cables

Ordering data	Article No.
Connecting cables	
SIMATIC S7 connecting cables	
MPI cable between SIMATIC S7 and programming device via MPI max. 187.5 kBaud, standard length 5.0 m	**6ES7901-0BF00-0AA0**
Connecting cable between HMI adapter and PC/TS Adapter (RS 232 cable/ null-modem cable) for OP 77B, TP 177A/B, OP 177B, standard length 5.0 m	**6ES7901-1BF00-0XA0**
PROFIBUS connecting cable 830-1T For connection of data terminals, pre-assembled with two sub-D connectors, 9-pin terminated at both ends for PP, OP 73micro, OP 73, TP 177micro, OP 77A/B, TP 177A, TP/OP 177B	
• 1.5 m	**6XV1830-1CH15**
• 3.0 m	**6XV1830-1CH30**
PROFIBUS FC Standard Cable [2]	**6XV1830-0E…**
For connection to PPI; standard type with special design for quick mounting, 2-wire, shielded, sold by the meter, max. delivery unit 1000 m, minimum ordering quantity 20 m	
Industrial Ethernet TP XP Cord RJ45/RJ45 Crossed TP cable 4 x 2, pre-assembled with 2 x RJ45 connectors	
• 0.5 m	**6XV1870-3RE50**
• 1.0 m	**6XV1870-3RH10**
• 2.0 m	**6XV1870-3RH20**
• 6.0 m	**6XV1870-3RH60**
• 10.0 m	**6XV1870-3RN10**
DP connecting cable (MPI/PROFIBUS) For wired Mobile Panels 177, Mobile Panels 277, standard lengths	
• 2 m	**6XV1440-4AH20**
• 5 m	**6XV1440-4AH50**
• 8 m	**6XV1440-4AH80**
• 10 m	**6XV1440-4AN10**
• 15 m	**6XV1440-4AN15**
• 20 m	**6XV1440-4AN20**
• 25 m [1]	**6XV1440-4AN25**
PN connecting cable (PROFINET) For wired Mobile Panels 177, Mobile Panels 277, standard lengths	
• 2 m	**6XV1440-4BH20**
• 5 m	**6XV1440-4BH50**
• 8 m	**6XV1440-4BH80**
• 10 m	**6XV1440-4BN10**
• 15 m	**6XV1440-4BN15**
• 20 m	**6XV1440-4BN20**
• 25 m [1]	**6XV1440-4BN25**

	Article No.
Connecting cable for KTP Mobile Panels	
• 2 m	**6AV2181-5AF02-0AX0**
• 5 m	**6AV2181-5AF05-0AX0**
• 8 m	**6AV2181-5AF08-0AX0**
• 10 m	**6AV2181-5AF10-0AX0**
• 15 m	**6AV2181-5AF15-0AX0**
• 20 m	**6AV2181-5AF20-0AX0**
• 25 m	**6AV2181-5AF25-0AX0**
USB connecting cable Optional 0.5 m USB cable (type A connector) female to male, can be used as extension for USB cable with type "A" connector	**6GT2891-0UE50**

[1] Instead of using longer cables, we recommend that you use additional connection boxes.

[2] See length code.

Length key for connecting cables

With connecting cables whose length is freely selectable according to the following lists, the blanks (…) in the Article No. must be completed in accordance with the length codes given. The different length keys must be taken into account here! Other lengths on request.

Length key for 6XV connecting cables

6XV. ... connecting cables	
Length of the connecting cable = Multiplier x length key	**Article No. supplement of the connecting cable** **6XV….-…..**
Multiplier	
• 0.01 m	**6XV….-..E..**
• 0.1 m	**6XV….-..H..**
• 1.0 m	**6XV….-..N..**
• 10.0 m	**6XV….-..T..**
• 100.0 m	**6XV….-..U..**
Length digit	
• 10	**6XV….-…10**
• 12	**6XV….-…12**
• 15	**6XV….-…15**
• 16	**6XV….-…16**
• 20	**6XV….-…20**
• 25	**6XV….-…25**
• 32	**6XV….-…32**
• 40	**6XV….-…40**
• 50	**6XV….-…50**
• 60	**6XV….-…60**
• 63	**6XV….-…63**
• 80	**6XV….-…80**

Ordering example:

The 6XV1404-0A… connecting cable must be 16 m long. Multiplier 1.0 m (N) x length digit 16 (16) gives a length of 16 m. The Article No. supplement is N16. Enter this in the blank spaces of the Article No.
The complete Article No. for the 16-m-long connecting cable is then: **6XV1404-0AN16**.

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Technical specifications

Article number	**6XV1440-4AH20** Connecting cable MOBILE PANELS, 2M	**6XV1440-4AH50** Connecting cable MOBILE PANELS, 5M	**6XV1440-4AH80** Connecting cable MOBILE PANELS, 8M	**6XV1440-4AN10** Connecting cable MOBILE PANELS, 10M	**6XV1440-4AN15** Connecting cable MOBILE PANELS, 15M	**6XV1440-4AN20** Connecting cable MOBILE PANELS, 20M	**6XV1440-4AN25** Connecting cable MOBILE PANELS, 25M
General information							
Product type designation	MPI/DP connecting cable	MPI/DP connecting cable	MPI/DP connecting cable	MPI/DP connecting cable	MPI/DP connecting cable	MPI/DP connecting cable	MPI/DP connecting cable
Supply voltage							
Rated value (DC)	24 V; DC	24 V; DC	24 V; DC		24 V; DC	24 V; DC	24 V; DC
Degree and class of protection							
IP (at the front)	IP65	IP65	IP65		IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65		IP65	IP65	IP65
Standards, approvals, certificates							
CE mark	Yes	Yes	Yes		Yes	Yes	Yes
Ambient conditions							
Ambient temperature during operation							
• min.	0 °C	0 °C	0 °C		0 °C	0 °C	0 °C
• max.	55 °C	55 °C	55 °C		55 °C	55 °C	55 °C
Relative humidity							
• Operation, max.	85 %	85 %	85 %		85 %	85 %	85 %
Cables							
Cable length	2 m	5 m	8 m	10 m	15 m	20 m	25 m
smallest bending radius	45 mm	45 mm	45 mm		45 mm	45 mm	45 mm
Color of cable sheath	red	red	red		red	red	red
Oil resistance of outer sheath	Yes; Hydrolysis-resistant and oil-resistant acc. to VDE 0472 Part 803/B, also resistant to commercially available lubricants and hydraulic oils	Yes; Hydrolysis-resistant and oil-resistant acc. to VDE 0472 Part 803/B, also resistant to commercially available lubricants and hydraulic oils	Yes; Hydrolysis-resistant and oil-resistant acc. to VDE 0472 Part 803/B, also resistant to commercially available lubricants and hydraulic oils		Yes; Hydrolysis-resistant and oil-resistant acc. to VDE 0472 Part 803/B, also resistant to commercially available lubricants and hydraulic oils	Yes; Hydrolysis-resistant and oil-resistant acc. to VDE 0472 Part 803/B, also resistant to commercially available lubricants and hydraulic oils	Yes; Hydrolysis-resistant and oil-resistant acc. to VDE 0472 Part 803/B, also resistant to commercially available lubricants and hydraulic oils
Resistance to MEK, xylene, toluene, isopropanol	Yes	Yes	Yes		Yes	Yes	Yes
Mechanics/material							
Material of cable sheath	Special PUR, flame-resistant acc. to VDE 0472 Part 804 Test Type B, Shore A 88 Flame-Retardant UR Style 20963	Special PUR, flame-resistant acc. to VDE 0472 Part 804 Test Type B, Shore A 88 Flame-Retardant UR Style 20963	Special PUR, flame-resistant acc. to VDE 0472 Part 804 Test Type B, Shore A 88 Flame-Retardant UR Style 20963		Special PUR, flame-resistant acc. to VDE 0472 Part 804 Test Type B, Shore A 88 Flame-Retardant UR Style 20963	Special PUR, flame-resistant acc. to VDE 0472 Part 804 Test Type B, Shore A 88 Flame-Retardant UR Style 20963	Special PUR, flame-resistant acc. to VDE 0472 Part 804 Test Type B, Shore A 88 Flame-Retardant UR Style 20963
Dimensions							
Thickness	9 mm	9 mm	9 mm		9 mm	9 mm	9 mm
Scope of supply							
Delivery quantity in pieces	1	1	1		1	1	1
Other							
Merchandise	No	No	No	No	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany						
Contacting the manufacturer	simatic_hmi_panel_helpdesk.i-ia@siemens.com						

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Technical specifications

Article number	**6XV1440-4BH20**	**6XV1440-4BH50**	**6XV1440-4BH80**
	Conn. cable PN for MOBILE PANELS, 2M	Conn. cable PN for MOBILE PANELS, 5M	Conn. cable PN for MOBILE PANELS, 8M
General information			
Product type designation	PN connecting cable	PN connecting cable	PN connecting cable
Supply voltage			
Rated value (DC)	24 V	24 V	24 V
Degree and class of protection			
IP (at the front)	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65
Standards, approvals, certificates			
CE mark	Yes	Yes	Yes
Ambient conditions			
Ambient temperature during operation			
• min.	0 °C	0 °C	0 °C
• max.	55 °C	55 °C	55 °C
Relative humidity			
• Operation, max.	85 %	85 %	85 %
Cables			
Cable length	2 m	5 m	8 m
smallest bending radius	45 mm	45 mm	45 mm
Color of cable sheath	green	green	green
Oil resistance of outer sheath	Yes; Hydrolysis-resistant and oil-resistant acc. to VDE 0472 Part 803/B, also resistant to commercially available lubricants and hydraulic oils	Yes; Hydrolysis-resistant and oil-resistant acc. to VDE 0472 Part 803/B, also resistant to commercially available lubricants and hydraulic oils	Yes; Hydrolysis-resistant and oil-resistant acc. to VDE 0472 Part 803/B, also resistant to commercially available lubricants and hydraulic oils
Resistance to MEK, xylene, toluene, isopropanol	Yes	Yes	Yes
Mechanics/material			
Material of cable sheath	Special PUR, flame-resistant acc. to VDE 0472 Part 804 Test Type B, Shore A 88 Flame-Retardant UR Style 20963	Special PUR, flame-resistant acc. to VDE 0472 Part 804 Test Type B, Shore A 88 Flame-Retardant UR Style 20963	Special PUR, flame-resistant acc. to VDE 0472 Part 804 Test Type B, Shore A 88 Flame-Retardant UR Style 20963
Dimensions			
Thickness	9 mm	9 mm	9 mm
Scope of supply			
Delivery quantity in pieces	1	1	1
Other			
Merchandise	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Contacting the manufacturer	simatic_hmi_panel_helpdesk.i-ia@siemens.com		

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Technical specifications

Article number	**6XV1440-4BN10**	**6XV1440-4BN15**	**6XV1440-4BN20**	**6XV1440-4BN25**
	Conn. cable PN for MOBILE PANELS,10M	Conn. cable PN for MOBILE PANELS,15M	Conn. cable PN for MOBILE PANELS,20M	Conn. cable PN for MOBILE PANELS,25M
General information				
Product type designation	PN connecting cable	PN connecting cable	PN connecting cable	PN connecting cable
Supply voltage				
Rated value (DC)	24 V	24 V	24 V	24 V
Degree and class of protection				
IP (at the front)	IP65	IP65	IP65	IP65
IP (rear)	IP65	IP65	IP65	IP65
Standards, approvals, certificates				
CE mark	Yes	Yes	Yes	Yes
Ambient conditions				
Ambient temperature during operation				
• min.	0 °C	0 °C	0 °C	0 °C
• max.	55 °C	55 °C	55 °C	55 °C
Relative humidity				
• Operation, max.	85 %	85 %	85 %	85 %
Cables				
Cable length	10 m	15 m	20 m	25 m
smallest bending radius	45 mm	45 mm	45 mm	45 mm
Color of cable sheath	green	green	green	green
Oil resistance of outer sheath	Yes; Hydrolysis-resistant and oil-resistant acc. to VDE 0472 Part 803/B, also resistant to commercially available lubricants and hydraulic oils			
Resistance to MEK, xylene, toluene, isopropanol	Yes	Yes	Yes	Yes
Mechanics/material				
Material of cable sheath	Special PUR, flame-resistant acc. to VDE 0472 Part 804 Test Type B, Shore A 88 Flame-Retardant UR Style 20963			
Dimensions				
Thickness	9 mm	9 mm	9 mm	9 mm
Scope of supply				
Delivery quantity in pieces	1	1	1	1
Other				
Merchandise	No	No	No	No
Manufacturer name	SIEMENS AG	SIEMENS AG	SIEMENS AG	SIEMENS AG
Manufacturer's address	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany	Gleiwitzerstraße 555, 90475 Nuremberg, Germany
Contacting the manufacturer	simatic_hmi_panel_helpdesk.i-ia@siemens.com			

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Connecting cables

Technical specifications

Article number	6AV2181-5AF02-0AX0	6AV2181-5AF05-0AX0	6AV2181-5AF08-0AX0	6AV2181-5AF10-0AX0	6AV2181-5AF15-0AX0	6AV2181-5AF20-0AX0	6AV2181-5AF25-0AX0
	Connecting Cable 2 M KTP Mobile	Connecting Cable 5 M KTP Mobile	Connecting Cable 8 M KTP Mobile	Connecting Cable 10 M KTP Mobile	Connecting Cable 15 M KTP Mobile	Connecting Cable 20 M KTP Mobile	Connecting Cable 25 M KTP Mobile
General information							
Product type designation	Connecting cable	Connecting cable	Connecting cable	Connecting cable	Connecting cable	Connecting cable	Connecting cable
Standards, approvals, certificates							
CE mark	Yes	Yes	Yes	Yes	Yes	Yes	Yes
cULus	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RCM (formerly C-TICK)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KC approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ambient conditions							
Ambient temperature during operation							
• min.	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C
• max.	55 °C	55 °C	55 °C	55 °C	55 °C	55 °C	55 °C
Cables							
Cable length	2 m	5 m	8 m	10 m	15 m	20 m	25 m
Maximum tensile load	300 N	300 N	300 N	300 N	300 N	300 N	300 N
Color of cable sheath							
• green	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Scope of supply							
Delivery quantity in pieces	1	1	1	1	1	1	1
Other							
Merchandise	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Manufacturer name	On request	On request	On request	On request	On request	On request	On request

More information

Note:

Cable pin assignments can be found on the Internet in the Online Help of WinCC flexible and under FAQs.

http://support.automation.siemens.com

Photos and product images may differ from the actual product.

Detailed technical specifications, content information, quantities and compatible core products are listed online in the technical specifications of the respective accessory. Industry Mall:

https://mall.industry.siemens.com

If you use the TIA Selection Tool (selection guide) to find your core product, the appropriate accessories are also displayed automatically. This facilitates selection of suitable accessories.

http://www.siemens.com/tia-selection-tool

Data sheets and manufacturer declarations are available for downloading in the Online Support area.

http://support.automation.siemens.com

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Overview

- Patch cable, available fully assembled
- With 4 x 2 cores for 10/100/1 000 Mbps Ethernet
- Small cable diameter
- Cat6_A (4 x 2) of the ISO/IEC 11801 and EN 50173 international cabling standards

Ordering data

	Article No.
IE TP cord RJ45/RJ45	
TP cable 4 x 2 with 2 RJ45 plugs	
• 0.3 m	**6XV1870-3QE30**
• 0.5 m	**6XV1870-3QE50**
• 1 m	**6XV1870-3QH10**
• 2 m	**6XV1870-3QH20**
• 3 m	**6XV1870-3QH30**
• 4 m	**6XV1870-3QH40**
• 6 m	**6XV1870-3QH60**
• 10 m	**6XV1870-3QN10**
• 15 m	**6XV1870-3QN15**
• 20 m	**6XV1870-3QN20**
• 25 m	**6XV1870-3QN25**
• 30 m	**6XV1870-3QN30**
• 35 m	**6XV1870-3QN35**
• 40 m	**6XV1870-3QN40**
• 45 m	**6XV1870-3QN45**
• 50 m	**6XV1870-3QN50**
IE TP XP cord RJ45/RJ45	
Twisted pair line 4 x 2 with 2 RJ45 plugs	
• 0.5 m	**6XV1870-3RE50**
• 1 m	**6XV1870-3RH10**
• 2 m	**6XV1870-3RH20**
• 6 m	**6XV1870-3RH60**
• 10 m	**6XV1870-3RN10**
IE FC RJ45 outlet	**6GK1901-1FC00-0AA0**
For connection of Industrial Ethernet FC cables and TP cords; graded prices from 10 and 50 units	

	Article No.
IE FC standard cable GP 2x2 (AWG22)	**6XV1840-2AH10**
(PROFINET type A), TP installation cable for connection to IE FC RJ45 2x2/IE FC RJ45 outlet, for universal applications, 4-wire, shielded CAT5e; sold by the meter; max. delivery unit 4 000 m, minimum order quantity 20 m	
IE FC TP flexible cable, GP 2x2 (AWG22/7)	**6XV1870-2B**
(PROFINET type B), TP installation cable with flexible cores, PROFINET type B, 4-wire, shielded, CAT5; sold by the meter; max. delivery unit 2 500 m, minimum order quantity 20 m	
IE FC RJ45 modular outlet	
FastConnect RJ45 outlet for Industrial Ethernet with interface for a replaceable insert;	
• **With 2FE insert**; replaceable insert for 2 x 100 Mbps interfaces	**6GK1901-1BE00-0AA1**
• **With 1GE insert**; replaceable insert for 1 x 1 000 Mbps interfaces	**6GK1901-1BE00-0AA2**
• **With power insert**; replaceable insert for 1 x 24 V DC and 1 x 100 Mbps interface	**6GK1901-1BE00-0AA3**
IE FC TP standard cable 4x2 (AWG22)	**6XV1870-2E**
IE FC TP standard cable 4x2, TP installation cable CAT6 for connecting to FC RJ45 modular outlet; sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	

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RS485 bus connector

Overview

- Used for connecting PROFIBUS nodes to the PROFIBUS bus cable
- Easy installation
- FastConnect plugs ensure extremely short assembly times due to their insulation-displacement technology
- Integrated terminating resistors (not in the case of 6ES7972-0BA30-0XA0)
- Connectors with D-sub sockets permit PG connection without the additional installation of network nodes

Ordering data

	Article No.
RS485 bus connector with axial cable outlet (180°)	**6GK1500-0EA02**
For industrial PC, SIMATIC HMI OP, OLM; max. transmission rate 12 Mbps	
PROFIBUS FastConnect RS485 bus connector plug 180	**6GK1500-0FC10**
With 180° cable outlet, insulation displacement	
SIPLUS DP PB RS485 plug with axial cable outlet (180°)	**6AG1500-0EA02-2AA0**
For exposure to environmental substances; Based-on 6GK1 500-0EA02	
RS485 bus connector with cable outlet (90°)	
With screw-terminals, max. transmission rate 12 Mbps	
• Without programming device interface	**6ES7972-0BA12-0XA0**
• With programming device interface	**6ES7972-0BB12-0XA0**
SIPLUS DP PB RS485 plug with 90° cable outlet	
For extended temperature range -25 … +60 °C	
• Without programming device interface Based on 6ES7 972-0BA12-0XA0	**6AG1972-0BA12-2XA0**
• With programming device interface Based on 6ES7 972-0BB12-0XA0	**6AG1972-0BB12-2XA0**
RS485 bus connector with angled cable outlet (35°)	
With screw-terminals, max. transmission rate 12 Mbps	
• Without programming device interface	**6ES7972-0BA42-0XA0**
• With programming device interface	**6ES7972-0BB42-0XA0**

	Article No.
SIPLUS DP PB RS485 plug with angled cable outlet (35°)	
For extended temperature range -25 … +60 °C	
• Without programming device interface Based on 6ES7 942-0BA42-0XA0	**6AG1972-0BA42-7XA0**
• With programming device interface Based on 6ES7 942-0BB42-0XA0	**6AG1972-0BB42-7XA0**
RS485 bus connector with cable outlet (30°)	**6ES7972-0BA30-0XA0**
With screw-terminals, low-cost variant, max. transmission rate 1.5 Mbps	
PROFIBUS RS485 bus connector with FastConnect technology	
PROFIBUS FastConnect RS485 bus connector with 90° cable outlet	
With insulation displacement, max. transmission rate 12 Mbps	
Without programming device interface	
• 1 unit	**6ES7972-0BA52-0XA0**
• 100 units	**6ES7972-0BA52-0XB0**
With programming device interface	
• 1 unit	**6ES7972-0BB52-0XA0**
• 100 units	**6ES7972-0BB52-0XB0**
Without programming device interface, grounding via control cabinet cover	
• 1 unit	**6ES7972-0BA70-0XA0**
With programming device interface, grounding via control cabinet cover	
• 1 unit	**6ES7972-0BB70-0XA0**
PROFIBUS FastConnect RS485 bus connector with angled cable outlet (35°)	
With insulation displacement, max. transmission rate 12 Mbps	
• Without programming device interface	**6ES7972-0BA61-0XA0**
• With programming device interface	**6ES7972-0BB61-0XA0**

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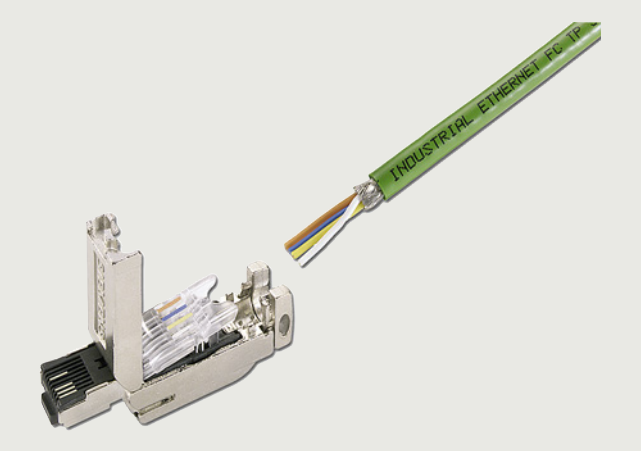
Overview



- Implementation of direct device connections of up to 100 m with Industrial Ethernet FC installation cable 2 x 2 without using patch technology
- Easy connection (insulation displacement contacts) for 4-wire Twisted Pair installation cables (100 Mbps) without the need for special tools
- Error-minimizing connection system thanks to visible connection area as well as colored insulation displacement termination
- Industrial design (rugged metal enclosure, no easily lost small parts)
- Good EMC shielding and discharge (metal enclosure)
- Integrated strain relief for installation cables
- Compatible with the EN 50173 (RJ45) / ISO IEC 11801 standard
- Additional strain and bending relief of plug-in connection possible through latching of plug on device enclosure, e.g. with SCALANCE X, SCALANCE S, SCALANCE M, SIMATIC CPs, SIMATIC S7-1500.

Ordering data

	Article No.
IE FC RJ45 plugs	
RJ45 plug connector for Industrial Ethernet with a rugged metal enclosure and integrated insulation displacement contacts for connecting Industrial Ethernet FC installation cables	
IE FC RJ45 plug 180	
180° cable outlet; for network components and CPs/CPUs with Industrial Ethernet interface	
• 1 pack = 1 unit	**6GK1901-1BB10-2AA0**
• 1 pack = 10 units	**6GK1901-1BB10-2AB0**
• 1 pack = 50 units	**6GK1901-1BB10-2AE0**
IE FC RJ45 plug 90	
90° cable outlet; e.g. for ET 200S	
• 1 pack = 1 unit	**6GK1901-1BB20-2AA0**
• 1 pack = 10 units	**6GK1901-1BB20-2AB0**
• 1 pack = 50 units	**6GK1901-1BB20-2AE0**
IE FC RJ45 plug 145	
145° cable outlet; e.g. for SIMOTION and SINAMICS	
• 1 pack = 1 unit	**6GK1901-1BB30-0AA0**
• 1 pack = 10 units	**6GK1901-1BB30-0AB0**
• 1 pack = 50 units	**6GK1901-1BB30-0AE0**

More information

You can order supplementary components for the SIMATIC NET cabling range from your local contact. Technical advice on this subject is available from:

J. Hertlein
DI PA DCP IWA
Tel.: +49 (172) 3172810
Email: juergen.hertlein@siemens.com

Selection Tool:

The TIA Selection Tool is available to assist you in selecting cabling systems for SIMATIC NET at:

http://www.siemens.com/tst

Ordering overview:

You can find more information on the FastConnect range in the ordering overview
https://support.industry.siemens.com/cs/document/109766358/ordering-overview-cabling-technology-for-communication-networks-in-industry?dti=0&lc=en-DE

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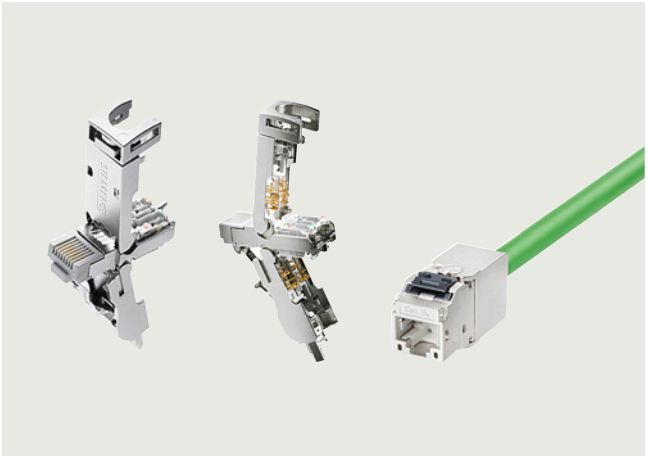
IE FC RJ45 plugs 4 x 2, Cat6a

Overview



- Implementation of direct device connections of up to 100 m using IE FC RJ45 plug 4x2 with Industrial Ethernet FC installation cable 4 x 2 without patch technology
- Connection of rack switches (e.g. SCALANCE XR-500) in a 19" cabinet by means of FC installation cables 4x2 and patch cable via IE FC Keystone RJ45 4x2 in 19" racks
- Easy connection (insulation displacement contacts) for 8-core twisted pair installation cables (10/100/1 000/10 000 Mbps) without the need for special tools
- Error-minimizing connection system thanks to visible connection area as well as color-coded insulation displacement contacts
- Industrial design (rugged metal enclosure, no easily lost small parts)
- Good EMC shielding and discharge (metal enclosure)
- Integrated strain relief for installation cables
- Compatible with the EN 50173 (RJ45) / ISO IEC 11801 standard
- Additional strain and bending relief of the plug-in connection possible by latching of the IE FC RJ45 plug 4x2 onto the device enclosure, e.g. with SCALANCE X, SCALANCE S, SCALANCE W.

Ordering data

	Article No.
IE FC RJ45 plug 4 x 2	
RJ45 plug connector for Industrial Ethernet (10/100/1 000/10 000 Mbps, Cat6$_A$) with a rugged metal housing and integrated insulation displacement contacts for connecting Industrial Ethernet FC installation cables; 180° cable outlet; for network components and CPs/CPUs with Industrial Ethernet interface	
• 1 pack = 1 unit	**6GK1901-1BB12-2AA0**
• 1 pack = 10 units	**6GK1901-1BB12-2AB0**
• 1 pack = 50 units	**6GK1901-1BB12-2AE0**
IE FC Keystone RJ45 4x2	
RJ45 socket for Industrial Ethernet (10/100/1 000/10 000 Mbps, Cat 6$_A$) with a rugged metal housing and integrated insulation displacement contacts for connecting Industrial Ethernet FC installation cables; 180° cable outlet; for mounting on DIN rails and 19" racks	
• 1 pack = 1 unit	**6GK1901-0BE10-0AA0**

More information

You can order supplementary components for the SIMATIC NET cabling range from your local contact. Technical advice on this subject is available from:

J. Hertlein
DI PA DCP IWA
Tel.: +49 (172) 3172810
Email: juergen.hertlein@siemens.com

Selection Tool:

The TIA Selection Tool is available to assist you in selecting cabling systems for SIMATIC NET at:

http://www.siemens.com/tst

Ordering overview:

You can find more information on the FastConnect range in the ordering overview
https://support.industry.siemens.com/cs/document/109766358/ordering-overview-cabling-technology-for-communication-networks-in-industry?dti=0&lc=en-DE

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Overview

- 4-wire FastConnect installation cables for structured Fast Ethernet cabling with special design for fast installation
- Easy stripping with the FastConnect stripping tool; the protective jacket and the braided shield are stripped accurately in one step
- Connection to FastConnect products using insulation displacement
- Exceeds Category 5 (Cat5e) of the international cabling standards ISO/IEC 11801 and EN 50173
- PROFINET-compatible
- UL approval
- Different variants for different application areas (e.g. trailing, food, marine, railways)
- High interference immunity thanks to double shielding
- Easy length measurement thanks to printed meter markings

Ordering data

	Article No.
IE FC TP standard cable GP 2 x 2 (type A)	
4-wire, shielded TP installation cable for connection to IE FC RJ45 outlet/IE FC RJ45/IE FC M12 plug PRO; PROFINET-compatible; with UL approval	
Sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1840-2AH10**
Preferred length	
• 20 m	**6XV1840-2AN20**
• 50 m	**6XV1840-2AN50**
• 100 m	**6XV1840-2AT10**
• 200 m	**6XV1840-2AT20**
• 500 m	**6XV1840-2AT50**
• 1 000 m	**6XV1840-2AU10**
IE FC TP robust cable GP 2 x 2 (type A)	
4-wire, shielded TP installation cable with TPE protective jacket for connection to IE FC RJ45 outlet/IE FC RJ45/IE FC M12 plug PRO; PROFINET-compatible; with UL approval	
Sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1841-2A**
IE FC TP flexible cable GP 2 x 2 (type B)	
4-wire, shielded TP installation cable for connection to IE FC RJ45 outlet/ IE FC RJ45/IE FC M12 plug PRO for occasional movement; PROFINET-compatible; with UL approval	
Sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1870-2B**
Preferred length	
• 1 000 m	**6XV1870-2BU10**
IE FC TP robust flexible cable GP 2 x 2 (type B)	
4-wire, shielded TP installation cable with TPE protective jacket for connection to IE FC RJ45 outlet/IE FC RJ45/IE FC M12 plug PRO for occasional movement; PROFINET-compatible; with UL approval	
Sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1841-2B**

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IE FC TP cable 2 x 2

Ordering data	Article No.
IE FC TP FRNC cable GP 2 x 2 (type B) 4-wire, shielded, halogen-free TP installation cable for connection to IE FC RJ45 outlet/IE FC RJ45/ IE FC M12 plug PRO for occasional movement; PROFINET-compatible; with UL approval; sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1871-2F**
IE FC TP trailing cable GP 2 x 2 (type C) 4-wire, shielded TP installation cable for connection to IE FC RJ45 outlet/IE FC RJ45/IE FC M12 plug PRO for use in cable carriers; PROFINET-compatible; with UL approval; sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1870-2D**
IE FC TP trailing cable 2 x 2 (type C) 4-wire, shielded TP installation cable for connection to IE FC RJ45 outlet/IE FC RJ45/IE FC M12 plug PRO for use in cable carriers; PROFINET-compatible; with UL approval; sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1840-3AH10**
IE FC TP festoon cable GP 2 x 2 (type B) 4-wire, shielded TP installation cable for connection to IE FC RJ45 outlet/IE FC RJ45/IE FC M12 plug PRO for use in festoon applications; PROFINET-compatible; with UL approval; sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1871-2S**
IE TP torsion cable 2 x 2 (type C) 4-wire, shielded TP installation cable for connection to IE FC RJ45 outlet/IE FC RJ45/IE FC M12 plug PRO for use with robots; PROFINET-compatible; with UL approval; sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1870-2F**
IE FC TP food cable GP 2 x 2 (type C) 4-wire, shielded TP installation cable for connection to IE FC RJ45 outlet/IE FC RJ45/IE FC M12 plug PRO for the food and beverages industry; PROFINET-compatible; sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1871-2L**
IE FC TP robust food cable GP 2 x 2 (type B) 4-wire, shielded TP installation cable for connection to IE FC RJ45 outlet/IE FC RJ45/IE FC M12 plug PRO for the food and beverages industry (IP69); PROFINET-compatible; with UL approval; sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1881-2A**
IE FC TP marine cable 2 x 2 (type B) 4-wire, shielded TP installation cable for connection to IE FC RJ45 outlet/IE FC RJ45/IE FC M12 plug PRO for marine applications; sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1840-4AH10**
IE TP ground cable 2 x 2 (type C) 4-wire, shielded TP installation cable for connection to IE FC RJ45 outlet/IE FC RJ45/IE FC M12 plug PRO (additional protective jacket must be removed) for laying in soil; sold by the meter, max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1871-2G**
IE TP robust ground cable 4-wire, shielded TP installation cable for connection to IE FC RJ45 outlet/IE FC RJ45/IE FC M12 plug PRO (additional protective jacket must be removed) for laying in soil, with metallic rodent protection; sold by the meter, max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1871-2N**
IE TP train cable 2 x 2 (type C) 4-wire, shielded TP installation cable for connection to IE FC RJ45 plug and IE FC M12 plug PRO; sold by the meter; max. delivery unit 1 000 m, minimum order quantity 20 m	**6XV1871-2T**
IE hybrid cable 2x2 + 4x0.34 Flexible cable, 4 x Cu Cat5, shielded (0.75 mm) and 4 x Cu (0.34 mm^2) with IE FC modular outlet and power insert and IP67 hybrid plug connector; sold by the meter; max. delivery unit 1 000 m; minimum order quantity 20 m	**6XV1870-2J**

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Overview

- 8-wire FastConnect installation cables for cabling system with Gigabit capability (AWG22 and AWG24 variants)
- Easy stripping with the FastConnect stripping tool; the protective jacket and the braided shield are stripped accurately in one step
- Connection to IE FC RJ45 modular outlet (AWG22), IE FC RJ45 plug 4 x 2 (AWG24) or IE FC M12 plug PRO 4x2 (X-coded, AWG24) using insulation displacement method
- Satisfies Category 6 ($Cat6_A$) of the international cabling standards ISO/IEC 11801 and EN 50173
- UL approval
- Easy length measurement thanks to printed meter markings

Ordering data	Article No.
IE FC TP standard cable GP 4 x 2	
8-wire, shielded TP installation cable for universal applications; with UL approval; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m	
• AWG24, for connection to IE FC RJ45 plug 4 x 2, IE FC M12 plug PRO 4 x 2	**6XV1878-2A**
• Preferred length 1000 m	**6XV1878-2AU10**
• AWG22, for connection to IE FC modular outlet	**6XV1870-2E**
IE FC TP flexible cable GP 4 x 2	
8-wire, shielded TP installation cable for occasional movement; with UL approval; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m	
• AWG24, for connection to IE FC RJ45 plug 4 x 2, IE FC M12 plug PRO 4 x 2	**6XV1878-2B**
IE FC TP trailing cable GP 4 x 2	
8-wire, shielded TP trailing cable; with UL approval; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m	
• AWG24, for connection to IE FC RJ45 plug 4 x 2, IE FC M12 plug PRO 4 x 2	**6XV1878-2C**
IE TP ground cable 4 x 2	
8-wire, shielded TP installation cable for occasional movement; with UL approval; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m	
• AWG24, for connecting to IE FC RJ45 plug 4 x 2, IE FC M12 plug PRO 4 x 2 (after removing the additional PE protective jacket)	**6XV1878-2G**
IE TP train cable GP 4 x 2	
8-wire, shielded TP installation cable for use in trains; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m	
• AWG24, for connection to IE M12 RJ45 plug PRO 4 x 2	**6XV1878-2T**
IE FC TP FRNC cable GP 4 x 2	
8-wire, shielded; halogen-free TP installation cable for fixed routing in buildings; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m	
• AWG24, for connection to IE FC RJ45 plug 4 x 2, IE FC M12 plug PRO 4 x 2	**6XV1878-2F**

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Notes

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SITRAIN – Digital Industry Academy

Introduction

The Future of Learning starts now

Globalization, digitalization, new work, Internet of Things, new business models – our way of working, living and learning is changing rapidly. With SITRAIN, the future of learning begins today: SITRAIN stands for a modern learning culture that focuses on the needs of learners and the demands of innovative companies.
With SITRAIN – Digital Industry Academy, the future of learning is yours.

Face-to-face training or digital training, location-independent, 24/7, on-demand or learning at fixed dates and course times? With a personal learning consultant, in a team, or on your own responsibility? Everything is possible. SITRAIN offers a wide range of different learning options with the "Learning Journey", "Learning Membership" and "Learning Event".

The three learning formats of SITRAIN – Digital Industry Academy

Learning Journey

The combination for sustainable learning success

- The optimal mix of self-study units and guided live modules
- Includes a Learning Membership to work through the self-study modules and access on-demand content
- The SITRAIN learning consultant is available for questions and one-on-one consultations
- Ideal integration into the daily work routine and adaptation to one's own learning pace..

Learning Membership

Securing knowledge through continuous learning on your own responsibility

- With access to the comprehensive and constantly growing range of self-study units on SITRAIN access, the digital learning platform
- Search and find specific learning content or simply have a look around – anytime and anywhere
- A modern learning culture through continuous learning on your own responsibility and transparency about your learning success in the team or company.

Learning Event

Acquire theoretical and practical knowledge in a compact and guided format

- You achieve a defined learning goal in the shortest possible time
- The learning consultant guides you through the practical exercises and is also exclusively available to you during the theoretical sessions for the entire duration
- Focused learning, outside of the daily work routine, in a protected learning environment – virtually, in the training center, or at your company.

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Introduction

Expand your knowledge, apply what you have learned, develop future skills

The SITRAIN Digital Industry Academy combines didactically effective methods and modular options.

The four building blocks of SITRAIN – Digital Industry Academy

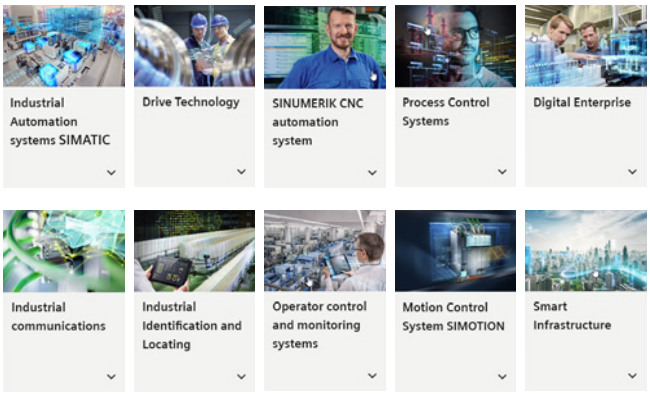
Different methods for maximum learning success:

- Live
- On your own responsibility
- On demand
- Individual

Learn the way you want to learn. For learning success that takes you further.

Education and training directly from the manufacturer

For individual knowledge building, the following topics concerning the industrial product and solution portfolio of Siemens are available. Experience the new learning culture with SITRAIN.



Training cases catalog

https://www.siemens.com/sitrain-catalog-training-cases

Find your local offer here

SITRAIN – Digital Industry Academy worldwide

You will find the regional knowledge offer in the country selection. One click will take you to the corresponding website.

SITRAIN – Digital Industry Academy

www.siemens.com/sitrain

- SITRAIN Learning Journey: www.siemens.com/sitrain-learning-journey
- SITRAIN Learning Membership: www.siemens.com/sitrain-learning-membership
- SITRAIN Learning Event: www.siemens.com/sitrain-learning-event

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Standards and approvals

Operating system licenses for SIMATIC PC/PG

The accompanying operating system license is only valid for installation on the supplied SIMATIC PC/PG.

Installation can only be performed on these SIMATIC systems in accordance with Microsoft OEM licensing regulations.

Standards UL (U) and CSA (C)

All HMI products comply with the standards UL (U) and CSA (C), or the approval procedure has been applied for.

Products which have no approval are specially marked (see ordering data of the products).

CE marking

The electronic products described in this catalog comply with the requirements and protection objectives of the following EC-directives insofar as they relate to the product concerned. They also comply with the corresponding harmonized European standards (EN) published for these products in the Official Journals of the European Community.

- Directive 2004/108/EC of the European Parliament and Council on the approximation of the laws of the Member States relating to electromagnetic compatibility (EMC Directive)
- Directive 2006/95/EC of the European Parliament and of the Council on the harmonization of the laws of the Member States relating to electrical equipment designed for use within certain voltage limits (Low Voltage Directive)
- Directive 94/9/EC of the European Parliament and the Council on approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres (ATEX Directive)
- Directive 1999/5/EC of the European Parliament and of the Council on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (RTTE Directive)

The originals of the declarations of conformity are kept available for the responsible supervisory authorities at:

SIMATIC PLC / HMI:

Siemens Aktiengesellschaft
DF FA MF QM
Postfach 4848
90327 Nürnberg
Germany

SIMATIC IPC:

Siemens Aktiengesellschaft
DF FA AS DH KHE
Oestliche Rheinbrueckenstr. 50
76187 Karlsruhe
Germany

SIMATIC NET:

Siemens Aktiengesellschaft
Industry Sector
PD PA CI
Postfach 4848
90327 Nürnberg
Germany

Note on the Directives:

The installation instructions in the manuals must be adhered to when installing and operating the products described in this catalog. These contain, for example, important information on installation in cabinets and on the use of shielded cables.

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Overview

The WinCC Competence Centers are Siemens-internal partners. They offer a wide range of products and services designed to make optimal economic and system-oriented use of the openness and integration capability of WinCC.

In addition to the development of standard solutions/add-on products, they are authorized to implement customized/industry-specific solutions in the areas of application development and system integration on the basis of WinCC.

The portfolio is rounded off with consulting services, project-related training, and workshops for decision-makers and users.

Sector competence in addition to automation expertise and WinCC system know-how ensure professional and efficient solutions. The software is, of course, developed in compliance with recognized standards on the basis of certified quality management in accordance with ISO 9001.

More information is available on the internet at:
www.siemens.com/process-management

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Teaching made easy - Comprehensive support on the way to Industry 4.0

Knowledge & technology – the keystones to success in digitalization

Digitalization is quickly and radically changing our world. What does this mean for education?

In the world of Industry 4.0, companies can expect a host of new opportunities and challenges. New systems are verified on the spot through simulations. Automated mass production processes can make every product on the conveyor belt a unique product.

New products are now market-ready much faster. Siemens is shaping this transformation as a technology leader in the field of automation and process lifecycle management (PLM).

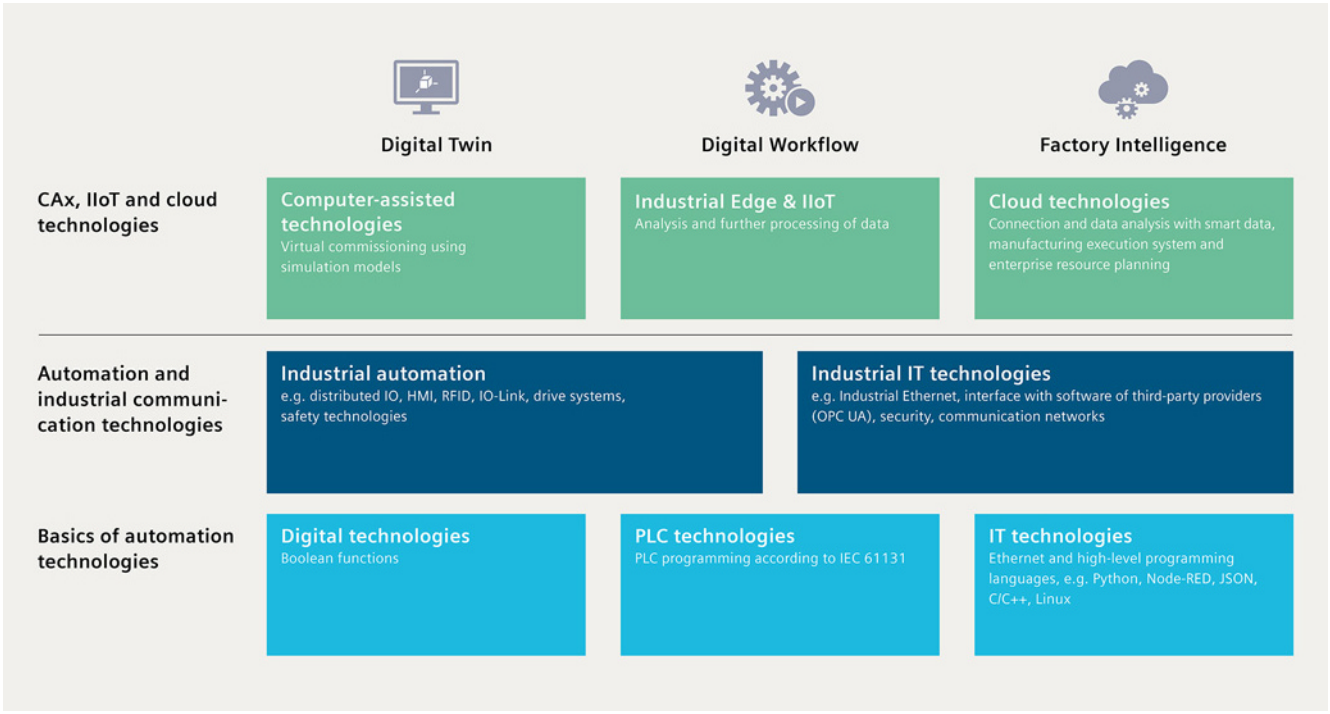
These new digitalization processes are changing the know-how requirements for employees. Many educational institutions are facing the challenge of conveying Industry 4.0 know-how as part of their teaching and training. The Siemens Automation Cooperates with Education (SCE) program is supporting educators on the way to Industry 4.0.

The SCE digitalization concept for educators

The SCE digitalization concept presented here shows how digitalization can be implemented in educational institutions – from vocational schools to universities.

Digitalization (or Industry 4.0) know-how is now introduced through computer aided technology, Industrial Edge and IIoT as well as Cloud technologies. It is founded on the basics of automation, such as digital technologies, PLC and information technologies, and on advanced automation and industrial communication technologies.

The level of digitalization knowledge can be weighted, depending on the vocational field or branch of study – e.g. mechanical engineering, automation engineering or computer science.



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The SCE digitalization concept for educators (continued)

As part of their project work, students at Vocational School 2 in Wolfsburg, Germany, have implemented the three levels of the SCE Industry 4.0 concept. A virtual twin created with the Siemens NX Mechatronics Designer (MCD) CAD software was used for the design and virtual commissioning. This enables fast and efficient assembly of the real automation system, e.g. with SIMATIC S7-1500/ET 200SP/RFID, for use in classes. Production data, such as the number of bottles filled, production date and system parameters, are uploaded to a cloud using SIMATIC IOT2000.

siemens.com/sce/iot2000

siemens.com/nx

The SCE offers

Learning and training documents

More than 100 didactically prepared learning and training documents are available through SCE and incorporate the digitalization concept. They are designed for use in classes, but can also be customized or used for individual study. These documents are available for free download, most of them in 7 languages.

siemens.com/sce/documents

Educator courses

Excellent teaching content is needed to introduce students to digitalization. For this purpose, SCE holds educator courses in certain regions. Based on our learning and training documents and through practical exercises, educators acquire the latest Industry 4.0 know-how.

siemens.com/sce/courses

Trainer packages

The 90 SCE trainer packages help educators teaching and implementing the SCE digitalization concept. Trainer packages comprise specially compiled, genuine Siemens hardware and software products. The trainer packages are based on the learning and training documents and are offered to schools, colleges and universities at special terms.

siemens.com/sce/tp

Support for your projects / textbooks

We support you on selected projects with advice and assistance from SCE contact partners.

As a special service, we support textbook authors. We maintain a list of textbooks on the SCE website.

siemens.com/sce/contact

siemens.com/sce/books

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Partnerships for proliferation of Industry 4.0 in education

Partnership with WorldSkills

As a technology powerhouse, we support vocational training of students around the world. Since 2010, we have partnered with WorldSkills as a Global Industry Partner in order to amplify this cause.

WorldSkills is an international organization whose mission is to raise the profile and recognition of skilled people, and show how important vocational skills are in achieving economic growth and personal success. Every two years, WorldSkills hosts the world championships of skills.

Siemens provides the competitors with automation products, such as SIMATIC S7-1500 and LOGO!, for the disciplines: industrial control, electrical installations, Polymechanics/Automation and manufacturing technology.

Additionally, we support selected continental and regional competitions.

siemens.com/worldskills

Partnerships with educators

We provide support to educators and educational organizations in the form of one-on-one advice through SCE contact partners and Siemens experts as well as long-term cooperation.

siemens.com/sce/contact

Partnerships with producers of learning systems

For practical training in classrooms and labs, numerous producers of learning systems offer a wide range of complete didactic solutions based on SCE trainer packages.

siemens.com/sce/learningsystems

Information portal

To facilitate your teaching assignment and/or for selfstudy, we offer educators and students a comprehensive SCE information portal. At this portal you have quick access to all SCE offers, e.g. learning and training documents including projects, Getting Started information, videos, manuals, trial software and newsletters.

siemens.com/sce

Global Industry Partner

worldskills

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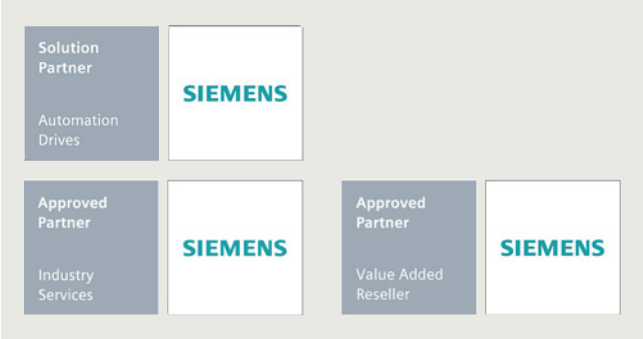
Overview

Siemens Solution and Approved Partner – Partners for your success



Highest competence in automation and drive technology

Siemens works closely together with selected partner companies around the world in order to ensure that customer requirements for all aspects of automation and drives are fulfilled as best as possible – wherever you are, and whatever the time.

We place great value on our customers acting in accordance with the same ideals which characterize Siemens as a whole: Competence, professionalism and quality. That is why continuous development through qualification and certification measures in line with global standards is a central aspect of our Partner Program. This means that with our partners, you benefit from the same high quality standards all over the world.
The partner emblem is the symbol for tried and tested quality.

The partner network for industry

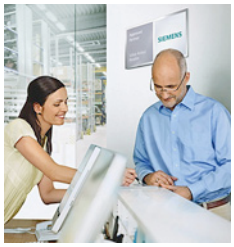
The Siemens Partner Program offers you expertise and experience close at hand.

Within our global network, we distinguish between Solution Partners and Approved Partners. We currently work with more than 1,500 Solution Partners around the world. Our network of over 150 Approved Partners continues to grow. In more than 80 countries worldwide.

Siemens Solution Partner – Automation Drives

At present we are working with more than 1,500 Solution Partners worldwide. They are characterized by extensive application, system and sector knowledge, as well as proven project experience, and are able to implement future-proof tailored solutions of the highest quality, based on our product and system portfolio.

Siemens Approved Partner – Value Added Reseller



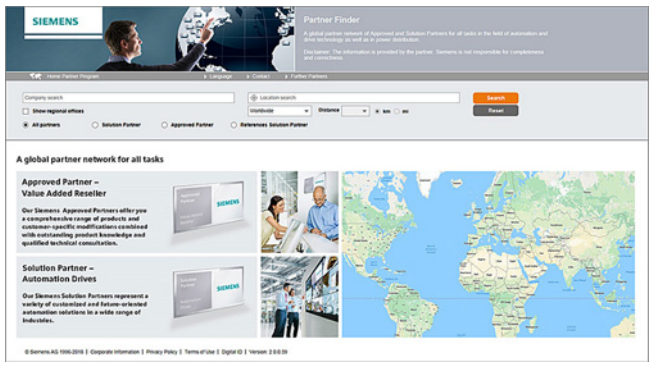
With their detailed technical knowledge, Siemens Approved Partners – Value Added Resellers offer a combination of products and services that range from specialist technologies and customized modifications to the provision of high-quality system and product packages. They also provide qualified technical support and assistance.

Siemens Approved Partner – Industry Services

Siemens Approved Partner – Industry Services put their unique expertise entirely at the service of enhancing your productivity and can be instrumental in ensuring the availability of your plants.

Partner Finder

The ideal partner for your task is just a mouse click away!



In the Siemens global Solution Partner Program, customers are certain to find the optimum partner for their specific requirements – with no great effort. The Partner Finder is basically a comprehensive database that showcases the profiles of all our partners.

Easy selection:
Set filters in the search screen form according to the criteria that are relevant to you. You can also directly enter the name of an existing partner.

Skills at a glance:
Gain a quick insight into the specific competencies of any particular partner with the reference reports.

Direct contact option:
Use our electronic query form:

www.siemens.com/partnerfinder

Additional information of the Siemens Parners for industry is available online at:

www.siemens.com/partnerprogram

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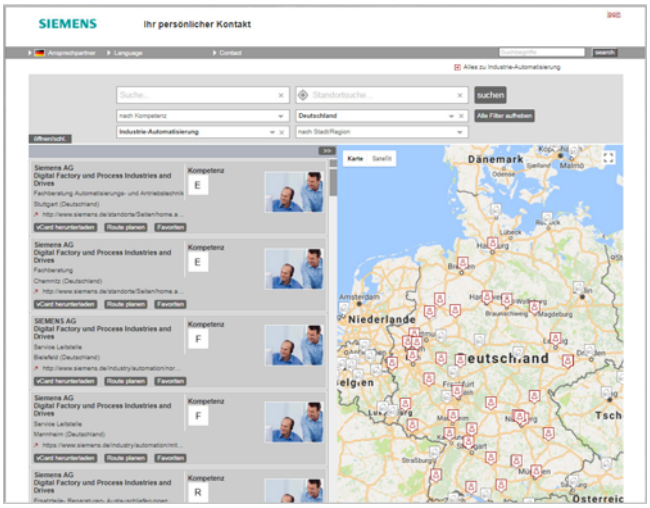
Partners at Siemens



At your service locally, around the globe for consulting, sales, training, service, support, spare parts on the entire portfolio of Siemens.

Your partner can be found in our Personal Contacts Database at:
www.siemens.com/automation-contact

You start by selecting

- the required competence,
- products and branches,
- a country and a city

or by a

- location search or free text search.

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Siemens Service Option for SIMATIC IPC

The expanded hardware service for SIMATIC IPC products

Purchasing and registering this additional agreement for a SIMATIC IPC extends the time period for free repairs of this device to 36 or 48 months after delivery.

Scope of services of the service option within the period of service (36/48 months):

- Free[1] repair during the period of service at one of our authorized repair centers near you
  The addresses of our worldwide partners can be found on the Internet at www.siemens.com/asis
- Within the agreed contractual period, Siemens will bear the costs that are incurred in the repair center (labor and materials/replacement parts), which are needed to restore the functions[2] of the hardware
- Siemens will also assume the return shipping costs of the repaired device from the repair center to the customer

[1] Wear and tear as well as problems that arise due to improper handling of the devices are not included.

[2] For hard disk defects that require the system to be restored, the repair service will only cover restoring the installation to its original condition exworks. The uploading of additional application software, drivers and setting up the operating software are not covered by the free repair service.

Product family	Article No. Service Option	Article designation
SIMATIC Rack PC	**6ES7648-4AB36-0AA0**	**36** or
• SIMATIC IPC347	**6ES7648-4AB48-0AA0**	**48** months service option for SIMATIC Rack PCs and Box PCs
• SIMATIC IPC547		
• SIMATIC IPC647		
• SIMATIC IPC847		
SIMATIC Box PC		
• SIMATIC IPC227		
• SIMATIC IPC327		
• SIMATIC IPC427		
• SIMATIC IPC627		
• SIMATIC IPC827		
SIMATIC Panel PC	**6ES7648-4AP36-0AA0**	**36** or
• SIMATIC IPC277	**6ES7648-4AP48-0AA0**	**48** months service option for SIMATIC Panel PC
• SIMATIC IPC377		
• SIMATIC IPC477		
• SIMATIC IPC577		
• SIMATIC IPC677		

Ordering and registering the additional agreement:

- Select the appropriate article number for the optional package based on the product family and place your order
- Scope of supply:
  Description of services in 4 languages + service device label with a license number for identifying the additional agreement on the device
- Activation of the service license number for a SIMATIC PC/SIMATIC PG via the Internet (https://id.login.siemens.com/about/faq?&lang=en):
  The registration must be completed within the first 90 days after initial delivery of the device!

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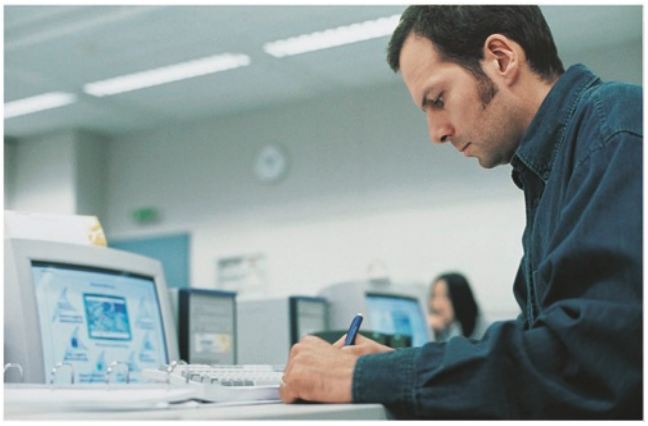
Expertise and services relating to all aspects of PC-based Automation

Overview

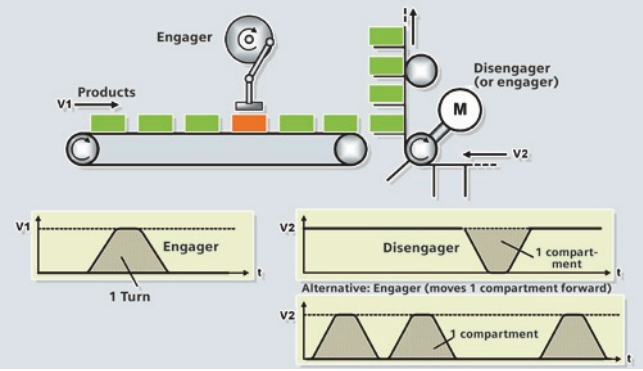


Expertise and services relating to all aspects of PC-based Automation

Do you require support with the dimensioning and options of a PC-based Automation project, or even engineering support?

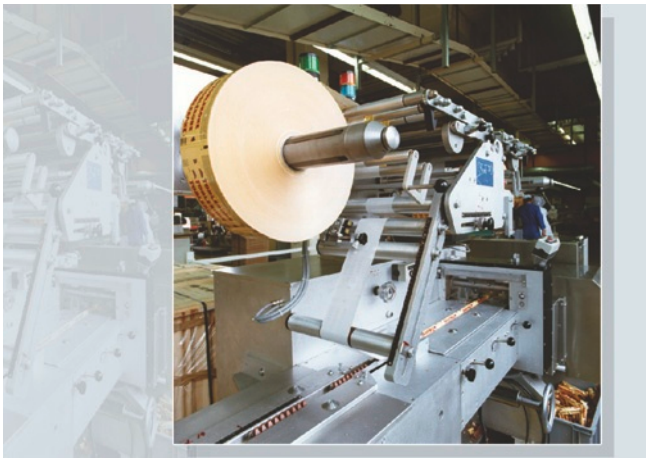
Specifically for this purpose, Siemens has established a team of specialists in Cologne and Milan who work closely with Development and Product Marketing and can thus provide our sales departments worldwide with competent support in PC-based Automation.

Our core competencies



- Design of PC-based Automation systems from Siemens
- Integrated, customer-specific technology (add-ons) using high-level languages (C++) in Windows or real-time environments
- Knowledge transfer/workshops for the integration of third-party components, as well as for applications using the Open Development Kit (ODK)
- Technology and application know-how
- Development of add-ons for WinAC and WinCC flexible

Reference applications



- Fast recording of measured values
- Software blocks for drives library
- Customer-specific communications via Ethernet (OPC/ActiveX, TCP socket)
- Synchronous operation, flying shear, table interpolation for electric and hydraulic axes
- Integration of PCI cards into PC-based Automation applications (e.g. WinAC and ASi-Bus)
- Customer-specific development and integration of C++ programs
- Database connections
- Integration of complex control algorithms

Contacts

Activation of the Competence Centers for your application via your regional contact.

If you do not yet have a contact person in your region, just go to:
http://www.siemens.com/automation/partner

The latest information about the workshops offered can be found on the internet:
http://www.siemens.com/pc-based

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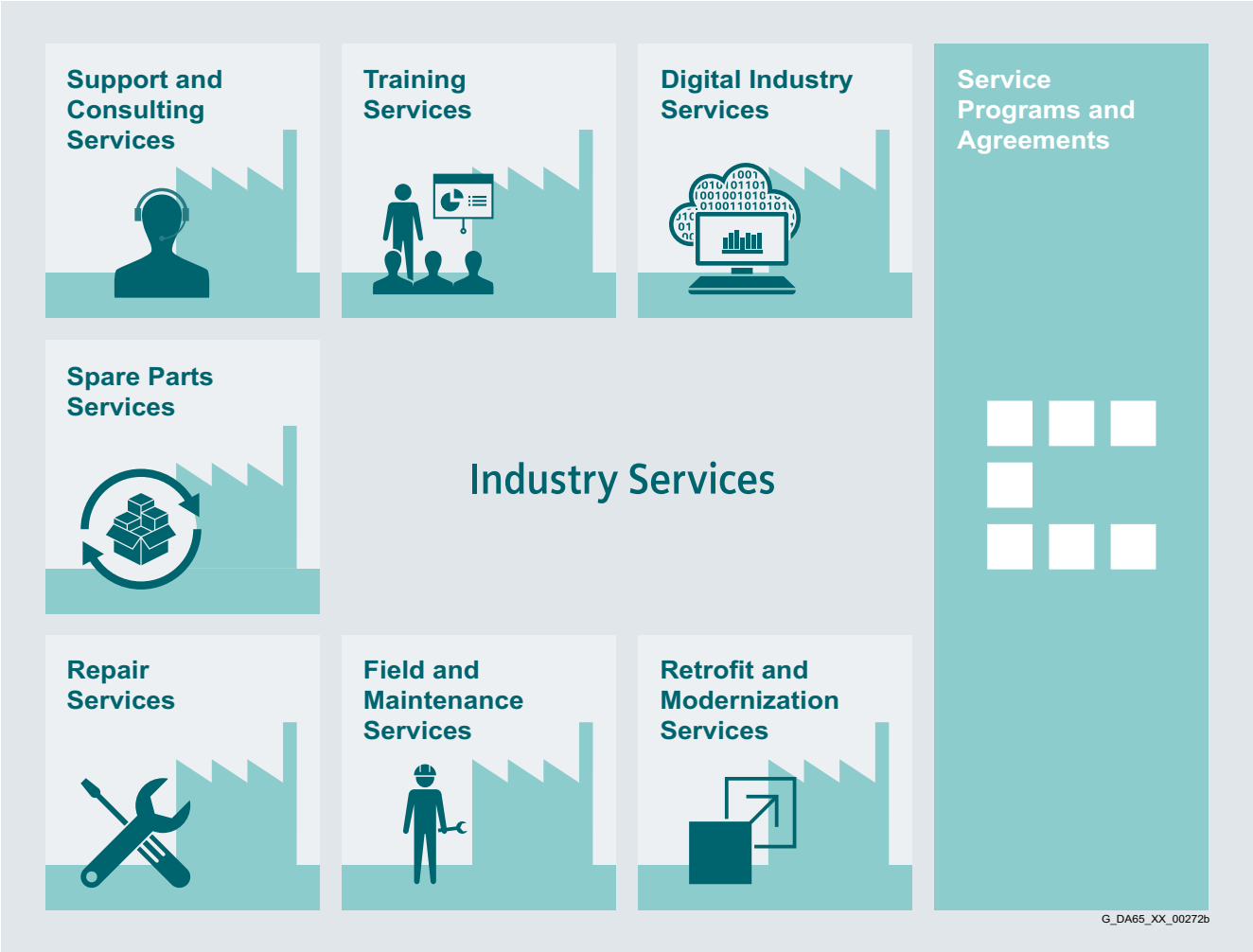
Overview



Keep your business running and shaping your digital future – with Industry Services

Optimizing the productivity of your equipment and operations can be a challenge, especially with constantly changing market conditions. Working with our service experts makes it easier. We understand your industry's unique processes and provide the services needed so that you can better achieve your business goals.

You can count on us to maximize your uptime and minimize your downtime, increasing your operations' productivity and reliability. When your operations have to be changed quickly to meet a new demand or business opportunity, our services give you the flexibility to adapt. Of course, we take care that your production is protected against cyber threats. We assist in keeping your operations as energy and resource efficient as possible and reducing your total cost of ownership. As a trendsetter, we ensure that you can capitalize on the opportunities of digitalization and by applying data analytics to enhance decision making: You can be sure that your plant reaches its full potential and retains this over the longer lifespan.

You can rely on our highly dedicated team of engineers, technicians and specialists to deliver the services you need – safely, professionally and in compliance with all regulations. We are there for you, where you need us, when you need us.

www.siemens.com/industryservices

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Industry Services – Portfolio overview

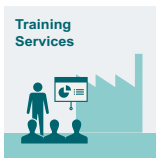
Overview

Digital Industry Services

Digital Industry Services make your industrial processes transparent to gain improvements in productivity, asset availability, and energy efficiency.

Production data is generated, filtered and translated with intelligent analytics to enhance decision-making.

This is done whilst taking data security into consideration and with continuous protection against cyber-attack threats.
www.siemens.com/global/en/products/services/industry/digital-industry-services.html



Training Services

From the basics and advanced to specialist skills, SITRAIN courses provide expertise right from the manufacturer – and encompass the entire spectrum of Siemens products and systems for the industry.

Worldwide, SITRAIN courses are available wherever you need a training course in more than 170 locations in over 60 countries.
https://support.industry.siemens.com/cs/ww/en/sc/2226

Support and Consulting Services

Industry Online Support site for comprehensive information, application examples, FAQs and support requests.

Technical and Engineering Support for advice and answers for all inquiries about functionality, handling, and fault clearance. The Service Card as prepaid support for value added services such as Priority Call Back or Extended Support offers the clear advantage of quick and easy purchasing.

Information & Consulting Services, e.g. SIMATIC System Audit; clarity about the state and service capability of your automation system or Lifecycle Information Services; transparency on the lifecycle of the products in your plants.
https://support.industry.siemens.com/cs/ww/en/sc/2235

Spare Parts

Spare Parts Services are available worldwide for smooth and fast supply of spare parts – and thus optimal plant availability. Genuine spare parts are available for up to ten years. Logistic experts take care of procurement, transport, custom clearance, storage and order management. Reliable logistics processes ensure that components reach their destination as needed.

Since not all spare parts can be kept in stock at all times, Siemens offers a preventive measure for spare parts provisioning on the customer's premises with optimized **Spare Parts Packages** for individual products, custom-assembled drive components and entire integrated drive trains – including risk consulting.

Asset Optimization Services help you design a strategy for parts supply where your investment and carrying costs are reduced and the risk of obsolescence is avoided.
https://support.industry.siemens.com/cs/ww/en/sc/2110

Repair Services

Repair Services are offered on-site and in regional repair centers for fast restoration of faulty devices' functionality.

Also available are extended repair services, which include additional diagnostic and repair measures, as well as emergency services.
https://support.industry.siemens.com/cs/ww/en/sc/2154

Field and Maintenance Services

Siemens specialists are available globally to provide expert field and maintenance services, including commissioning, functional testing, preventive maintenance and fault clearance.

All services can be included in customized service agreements with defined reaction times or fixed maintenance intervals.
https://support.industry.siemens.com/cs/ww/en/sc/2265

Retrofit and Modernization Services

Provide a cost-effective solution for the expansion of entire plants, optimization of systems or upgrading existing products to the latest technology and software, e.g. migration services for automation systems.

Service experts support projects from planning through commissioning and, if desired over the entire extended lifespan, e.g. Retrofit for Integrated Drive Systems for an extended lifetime of your machines and plants.
https://support.industry.siemens.com/cs/ww/en/sc/2286

Service Programs and Agreements

A technical Service Program or Agreement enables you to easily bundle a wide range of services into a single annual or multi-year agreement.

You pick the services you need to match your unique requirements or fill gaps in your organization's maintenance capabilities.

Programs and agreements can be customized as KPI-based and/or performance-based contracts.
https://support.industry.siemens.com/cs/ww/en/sc/2275

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Overview

Siemens Industry and Online Support with some 1.7 million visitors per month is one of the most popular web services provided by Siemens. It is the central access point for comprehensive technical know-how about products, systems and services for automation and drives applications as well as for process industries.

In connection with the challenges and opportunities related to digitalization you can look forward to continued support with innovative offerings.

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Software licenses

Overview

Software types

Software requiring a license is categorized into types.
The following software types have been defined:

- Engineering software
- Runtime software

Engineering software

This includes all software products for creating (engineering) user software, e.g. for configuring, programming, parameterizing, testing, commissioning or servicing.

Data generated with engineering software and executable programs can be duplicated for your own use or for use by third-parties free-of-charge.

Runtime software

This includes all software products required for plant/machine operation, e.g. operating system, basic system, system expansions, drivers, etc.

The duplication of the runtime software and executable programs created with the runtime software for your own use or for use by third-parties is subject to a charge.

You can find information about license fees according to use in the ordering data (e.g. in the catalog). Examples of categories of use include per CPU, per installation, per channel, per instance, per axis, per control loop, per variable, etc.

Information about extended rights of use for parameterization/configuration tools supplied as integral components of the scope of supply can be found in the readme file supplied with the relevant product(s).

License types

Siemens Industry Automation & Drive Technologies offers various types of software license:

- Floating license
- Single license
- Rental license
- Rental floating license
- Trial license
- Demo license
- Demo floating license

Floating license

The software may be installed for internal use on any number of devices by the licensee. Only the concurrent user is licensed. The concurrent user is the person using the program. Use begins when the software is started.
A license is required for each concurrent user.

Single license

Unlike the floating license, a single license permits only one installation of the software per license.

The type of use licensed is specified in the ordering data and in the Certificate of License (CoL). Types of use include for example per instance, per axis, per channel, etc.

One single license is required for each type of use defined.

Rental license

A rental license supports the "sporadic use" of engineering software. Once the license key has been installed, the software can be used for a specific period of time (the operating hours do not have to be consecutive).
One license is required for each installation of the software.

Rental floating license

The rental floating license corresponds to the rental license, except that a license is not required for each installation of the software. Rather, one license is required per object (for example, user or device).

Trial license

A trial license supports "short-term use" of the software in a non-productive context, e.g. for testing and evaluation purposes. It can be transferred to another license.

Demo license

The demo license support the "sporadic use" of engineering software in a non-productive context, for example, use for testing and evaluation purposes. It can be transferred to another license. After the installation of the license key, the software can be operated for a specific period of time, whereby usage can be interrupted as often as required.

One license is required per installation of the software.

Demo floating license

The demo floating license corresponds to the demo license, except that a license is not required for each installation of the software. Rather, one license is required per object (for example, user or device).

Certificate of License (CoL)

The CoL is the licensee's proof that the use of the software has been licensed by Siemens. A CoL is required for every type of use and must be kept in a safe place.

Downgrading

The licensee is permitted to use the software or an earlier version/release of the software, provided that the licensee owns such a version/release and its use is technically feasible.

Delivery versions

Software is constantly being updated.
The following delivery versions

- PowerPack
- Upgrade

can be used to access updates.

Existing bug fixes are supplied with the ServicePack version.

PowerPack

PowerPacks can be used to upgrade to more powerful software. The licensee receives a new license agreement and CoL (Certificate of License) with the PowerPack. This CoL, together with the CoL for the original product, proves that the new software is licensed.
A separate PowerPack must be purchased for each original license of the software to be replaced.

Upgrade

An upgrade permits the use of a new version of the software on the condition that a license for a previous version of the product is already held.
The licensee receives a new license agreement and CoL with the upgrade. This CoL, together with the CoL for the previous product, proves that the new version is licensed.
A separate upgrade must be purchased for each original license of the software to be upgraded.

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Overview

ServicePack

ServicePacks are used to debug existing products. ServicePacks may be duplicated for use as prescribed according to the number of existing original licenses.

License key

Siemens Industry Automation & Drive Technologies supplies software products with and without license keys.

The license key serves as an electronic license stamp and is also the "switch" for activating the software (floating license, rental license, etc.).

The complete installation of software products requiring license keys includes the program to be licensed (the software) and the license key (which represents the license).

Software Update Service (SUS)

As part of the SUS contract, all software updates for the respective product are made available to you free of charge for a period of one year from the invoice date. The contract will automatically be extended for one year if it is not canceled three months before it expires.

The possession of the current version of the respective software is a basic condition for entering into an SUS contract.

You can download explanations concerning license conditions from https://mall.industry.siemens.com/legal/ww/en/terms_of_trade_en.pdf

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General Provisions, Prices, Additional Terms and Conditions

1. General Provisions

By using this catalog you can purchase products (hardware, software and services) described therein from Siemens Aktiengesellschaft subject to the following Terms and Conditions of Sale and Delivery (hereinafter referred to as "T&C"). Please note that the scope, the quality and the conditions for supplies and services, including software products, by any Siemens entity having a registered office outside Germany, shall be subject exclusively to the General Terms and Conditions of the respective Siemens entity. The following T&C apply exclusively for orders placed with Siemens Aktiengesellschaft, Germany.

1.1 For customers with a seat or registered office in European Union

For customers with a seat or registered office in European Union, the following terms and conditions apply subordinate to T&C:

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for stand-alone software products and software products forming a part of a product or project, the "General License Conditions for Software Products for Automation and Drives for Customers with a Seat or registered Office in Germany"[1)] and/or
- for consulting services the “Allgemeine Geschäftsbedingungen für Beratungsleistungen der Division DF – Deutschland” (available only in German) and/or
- for other services, the „Supplementary Terms and Conditions for Services (“BL”)[1)] and/or
- for other supplies the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"[1)].
  In case such supplies should contain Open Source Software, the conditions of which shall prevail over the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"[1)], a notice will be contained in the scope of delivery in which the applicable conditions for Open Source Software are specified. This shall apply mutatis mutandis for notices referring to other third party software components.

1.2 For customers with a seat or registered office outside European Union

For customers with a seat or registered office outside European Union, the following terms and conditions apply subordinate to T&C:

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for consulting services the "Standard Terms and Conditions for Consulting Services of the Division DF for Customers with a Seat or Registered Office Outside of Germany"[1)] and/or
- for other services the "International Terms & Conditions for Services"[1)] supplemented by "Software Licensing Conditions"[1)] and/or
- for other supplies of hard- and software the "International Terms & Conditions for Products"[1)] supplemented by "Software Licensing Conditions"[1)]

1.3 For customers with master or framework agreement

To the extent our supplies and/or services offered are covered by an existing master or framework agreement, the terms and conditions of that agreement shall apply instead of T&C.

2. Prices

The prices are in € (Euro) ex point of delivery, exclusive of packaging.

The sales tax (value added tax) is not included in the prices. It shall be charged separately at the respective rate according to the applicable statutory legal regulations.

Prices are subject to change without prior notice. We will charge the prices valid at the time of delivery.

To compensate for variations in the price of raw materials (e.g. silver, copper, aluminum, lead, gold, dysprosium and neodym), surcharges are calculated on a daily basis using the so-called metal factor for products containing these raw materials.
A surcharge for the respective raw material is calculated as a supplement to the price of a product if the basic official price of the raw material in question is exceeded.

The metal factor of a product indicates the basic official price (for those raw materials concerned) as of which the surcharges on the price of the product are applied, and with what method of calculation.

An exact explanation of the metal factor can be downloaded at:

https://mall.industry.siemens.com/legal/ww/en/terms_of_trade_en.pdf

To calculate the surcharge (except in the cases of dysprosium and neodym), the official price from the day prior to that on which the order was received or the release order was effected is used.

To calculate the surcharge applicable to dysprosium and neodym ("rare earths"), the corresponding three-month basic average price in the quarter prior to that in which the order was received or the release order was effected is used with a one-month buffer (details on the calculation can be found in the explanation of the metal factor).

3. Additional Terms and Conditions

The dimensions are in mm. In Germany, according to the German law on units in measuring technology, data in inches apply only to devices for export.

Illustrations are not binding.

Insofar as there are no remarks on the individual pages of this catalog – especially with regard to data, dimensions and weights given – these are subject to change without prior notice.

[1)] The text of the Terms and Conditions of Siemens AG can be downloaded at
https://mall.industry.siemens.com/legal/ww/en/terms_of_trade_en.pdf

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4. Export Regulations

We shall not be obligated to fulfill any agreement if such fulfillment is prevented by any impediments arising out of national or international foreign trade or customs requirements or any embargoes and/or other sanctions.

Export may be subject to license. We shall indicate in the delivery details whether licenses are required under German, European and US export lists.

Our products are controlled by the U.S. Government (when labeled with "ECCN" unequal "N") and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations. Products labeled with "AL" unequal "N" are subject to European / national export authorization.

The export indications can be viewed in advance in the description of the respective goods on the Industry Mall, our online catalog system. Only the export labels "AL" and "ECCN" indicated on order confirmations, delivery notes and invoices are authoritative.

Products without label, with label "AL:N" / "ECCN:N", or label "AL:9X9999" / "ECCN: 9X9999" may require authorization from responsible authorities depending on the final end-use, or the destination.

If you transfer goods (hardware and/or software and/or technology as well as corresponding documentation, regardless of the mode of provision) delivered by us or works and services (including all kinds of technical support) performed by us to a third party worldwide, you shall comply with all applicable national and international (re-)export control regulations. In any event of such transfer of goods, works and services you shall comply with the (re-) export control regulations of the Federal Republic of Germany, of the European Union and of the United States of America.

Prior to any transfer of goods, works and services provided by us to a third party you shall in particular check and guarantee by appropriate measures that

- there will be no infringement of an embargo imposed by the European Union, by the United States of America and/ or by the United Nations by such transfer, by brokering of contracts concerning those goods, works and services or by provision of other economic resources in connection with those goods, works and services, also considering the limitations of domestic business and prohibitions of by-passing those embargos;
- such goods, works and services are not intended for use in connection with armaments, nuclear technology or weapons, if and to the extent such use is subject to prohibition or authorization, unless required authorization is provided;
- the regulations of all applicable Sanctioned Party Lists of the European Union and the United States of America concerning the trading with entities, persons and organizations listed therein are considered.

If required to enable authorities or us to conduct export control checks, you, upon request by us, shall promptly provide us with all information pertaining to the particular end customer, the particular destination and the particular intended use of goods, works and services provided by us, as well as any export control restrictions existing.

You acknowledge that under the EU embargo regulations against Iran, Syria and Russia respectively the sale of certain listed goods and related services is subject to authorization by the competent export control authorities of the European Union. If (i) the goods or services ordered by you are destined for Iran, Syria or Russia, and (ii) the contract for our supplies and/or services is subject to prior authorization of the competent export control authorities of the European Union, the contract between you and us shall come into force in this respect only upon granting of such authorization.

The products listed in this catalog may be subject to European/German and/or US export regulations. Any export requiring approval is therefore subject to authorization by the relevant authorities.

Errors excepted and subject to change without prior notice.

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Notes

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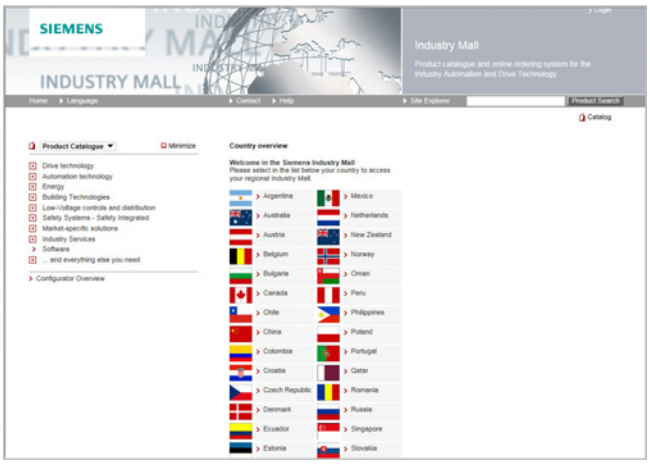
Easy product selection and ordering: Industry Mall



Industry Mall

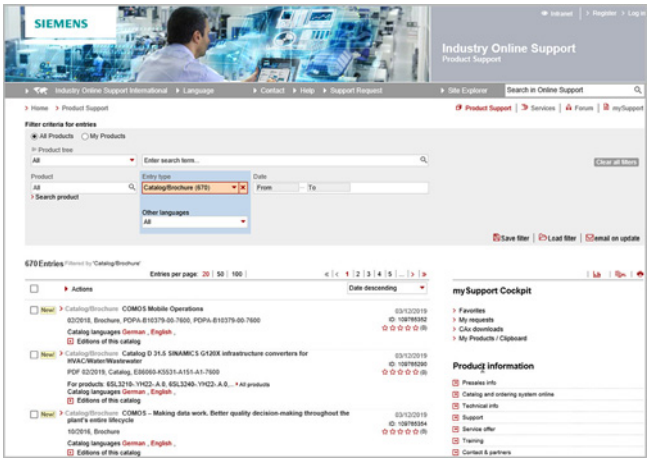
The Industry Mall is a Siemens AG Internet ordering platform. It provides you with online access to a comprehensive product spectrum that is presented in an informative, well-organized way.

Powerful search functions help you select the required products, while configurators enable you to configure complex product and system components quickly and easily. CAx data are also available for you to use.

Data transfer allows the entire procedure, from selection through ordering to tracking and tracing, to be carried out online. Availability checks, individual customer discounting, and quotation preparation are also possible.

www.siemens.com/industrymall

Downloading catalogs



Siemens Industry Online Support

You can download catalogs and brochures in PDF format from Siemens Industry Online Support without having to register.

The filter box makes it possible to perform targeted searches.

www.siemens.com/industry-catalogs

Ordering printed catalogs

Please contact your local Siemens branch if you are interested in ordering printed catalogs.
Addresses can be found at
www.siemens.com/automation-contact

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Security Information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit **https://www.siemens.com/industrialsecurity.**

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used.
Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under **https://www.siemens.com/industrialsecurity.**

Subject to changes and errors. The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products.
The requested performance features are binding only when they are expressly agreed upon in the concluded contract.

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