



Quad-Band IP68 GSM MODEM

- Quad Band for Worldwide Use
- IP68 Enclosure 'Submersible'
- Voice / Fax / SMS and Data
- GPRS Class B Class 10:
- Bundled 3V SIM Card included
- Internal Antenna (Optional External)
- RS232 Interface
- 9-24Vdc Supply
- Standard AT command set
- 36Kbps download / 24Kbps upload
- Optional internal 900maH Battery



A Plug and Play Quad-Band GSM modem for data, fax and SMS services, GPRS Class 10 is also supports for hi-speed data transfer. QUADIMODO is capable of being used throughout most of the world including The USA, Europe and ASIA for general purpose industrial applications. QUADIMODO uses the reliable Huawei MG323 GPRS/GSM engine and has a an internal antenna. It uses industry standard AT command set (available as a separate document), interface to the host user is via standard RS232 port. An optional internal rechargeable lithium backup battery is available which is automatically charged when power is present.

Ordering Information

PART No	Description
QUADIMODO	GSM GPRS Quad-Band Modem
BAT-9000	Optional Battery backup for GSM9000
PSU12V1A-IP	Power Supply IP67 (12Vdc to 110-240Vac)



Contents

Supplied with the Modem:

1. Modem
2. RS232 Cable Lead



SIM card

The unit will accept SIM cards of most types subject to the following restrictions.

Only 3 Volt or 1.8V SIM cards will be correctly read and older 5 Volt types will be ignored.

SIM cards that have been protected by means of a PIN (in a mobile phone) will not operate in the unit.

Some types of pay-as-you-go SIM cards may require regular call activity (once every three months) to remain registered.

The SIM card should be inserted into Modem before applying power

Safety Precautions

The modem generates radio frequency (RF) power. When using the modem care must be taken on safety issues related to RF interference as well as regulations of RF equipment.

Do not use your phone in aircraft, hospitals, petrol stations or in places where using GSM products is prohibited.

Be sure that the modem will not be interfering with nearby equipment. For example: pacemakers or medical equipment. The antenna of the modem should be away from computers, office equipment, home appliance, etc.

Always keep the antenna with minimum safety distance of 26.6 cm or more from human body. Do not put the antenna inside metallic box, containers, etc.

Using the modem in vehicle

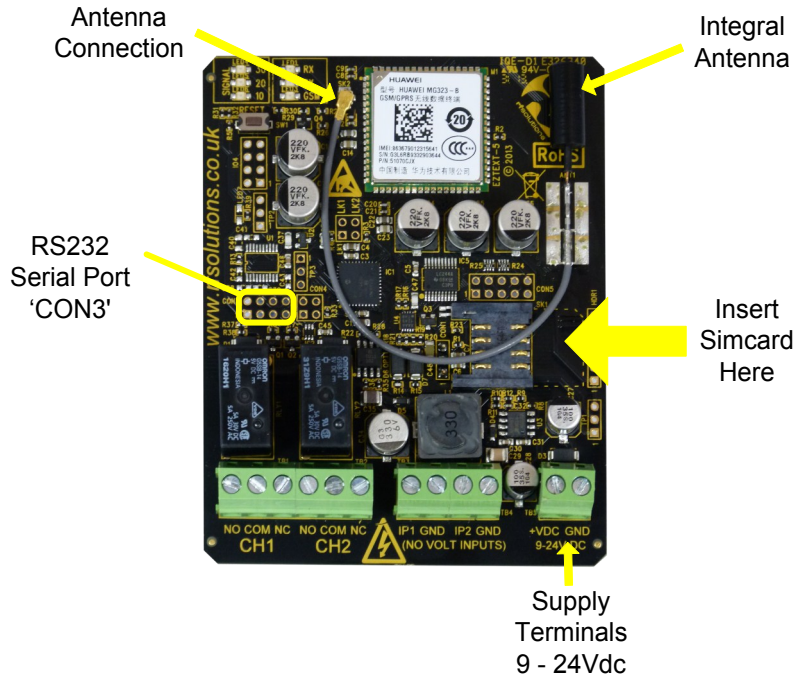
Check for any regulation or law authorizing the use of GSM in vehicle in your country before installing the modem

Install the modem by qualified personnel. Consult your vehicle dealer for any possible interference of electronic parts by the modem.

The modem should be connected to the vehicle's supply system by using a fuse-protected terminal in the vehicle's fuse box

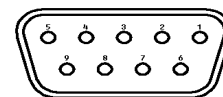
Be careful when the modem is powered by the vehicle's main battery. The battery may be drained after extended period.

Internal Connections



RS232 Cable Connections		
Connector CON3	Signal	'D'Type connector
Pin 1*	System Power supply (+3V)	N/C
Pin 2	Rx	Pin 2
Pin 3	Tx	Pin 3
Pin 4	N/C	
Pin 5	GND	Pin 5
Pin 6	N/C	
Pin 7	RTS	Pin 7
Pin 8	CTS	Pin 8

* Pin 1 is designated by a Square pad on the circuitboard



Sub-D 9

LED Indicator

- LED Flashing : Quadimodo is connected to the available network
- LED ON : Quadimodo is engaged on a Live connection

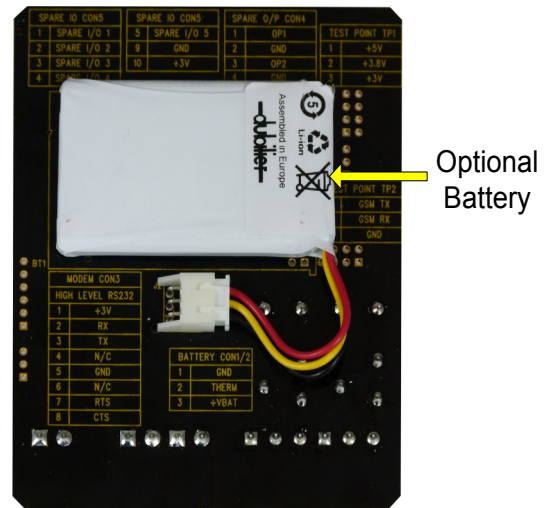
Optional Battery (880mAH)

The battery provides an automatic backup supply to continue normal operation when power fails.

The battery is recharged and maintained when power is present

Battery life depends on many parameters however as a theoretical guideline, battery life will be;

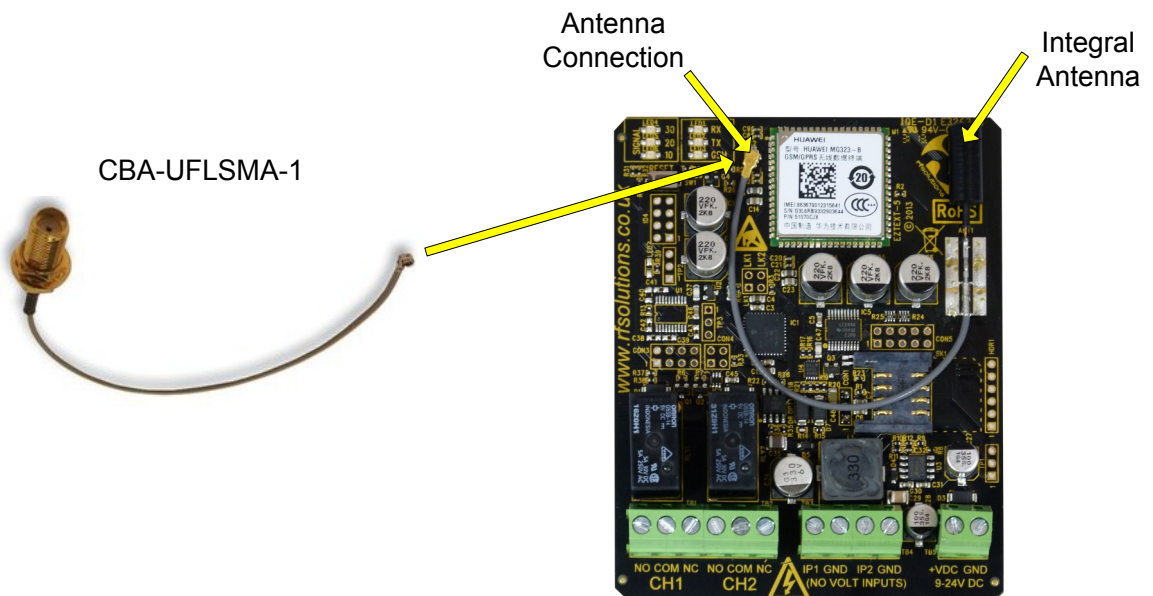
- 2 years on continuous standby
- 2 hours on continuous GPRS Data communication
- 4 hours on continuous conversation state
- Somewhere in between in practice!!



Optional External Antenna

Using an external antenna can provide a better signal reception than the internal antenna.

Unplug the Antenna Connection. Use Cable adaptor CBA-UFLSMA-1 to provide an SMA Bulkhead connector into which many alternative GSM antennas may connect



Optional Power Supply

Sealed Unit to IP67

Miniature Size 83 x 37 x 30mm

Resin Potted Unit

Input 100-240Vac

Wall Fixing Lugs

Output 12Vdc 1A

3.3m lead



Technical Specifications

Parameter	Min	Max	Unit
Working Temperature	-20	70	°C
Storage Temperature	-40	85	°C

DC Characteristics	Min	Typ	Max	Unit
Voltage	9		26	V
Temperature	-35		80	oC

Current Consumption	Min	Typ	Max	Unit
Idle state		-	4	mA
Conversation state		250	-	mA
Whilst transmitting GPRS data		460	-	mA
Power-off state		50	-	µA

Max Transmit power	GSM 850 / 900 MHz Class4 (2W) GSM 1800/1900MHz Class1 (1W)
Receiver sensitivity	< -107 dBm
Voice Services	Two analog voice channels
SMS	New Message alert, Text message receiving and text message sending Management of text messages, read / delete messages, storage status and message list
AT Commands	GSM AT commands ,V.25 AT commands Huawei extended AT commands
GPRS Data Service	GPRS Class 10
	Encoding schemes: CS 1, CS 2, CS 3, and CS 4
	Maximum Downlink Transmission rate 85.6Kbps
	Maximum uplink Transmission rate 42.8Kbps
	Packet Broadcast Control channel (PBCCH)
	Embedded with TCP/IP protocol : supports multiple links
Circuit Switched Data Service	CSD Service (maximum rae 9.6Kbits/s)

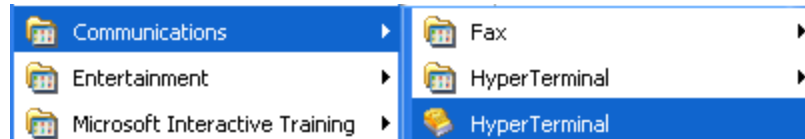
Further Specifications available via Huawei Technical Documentation, please refer to our website

Basic Setup Information

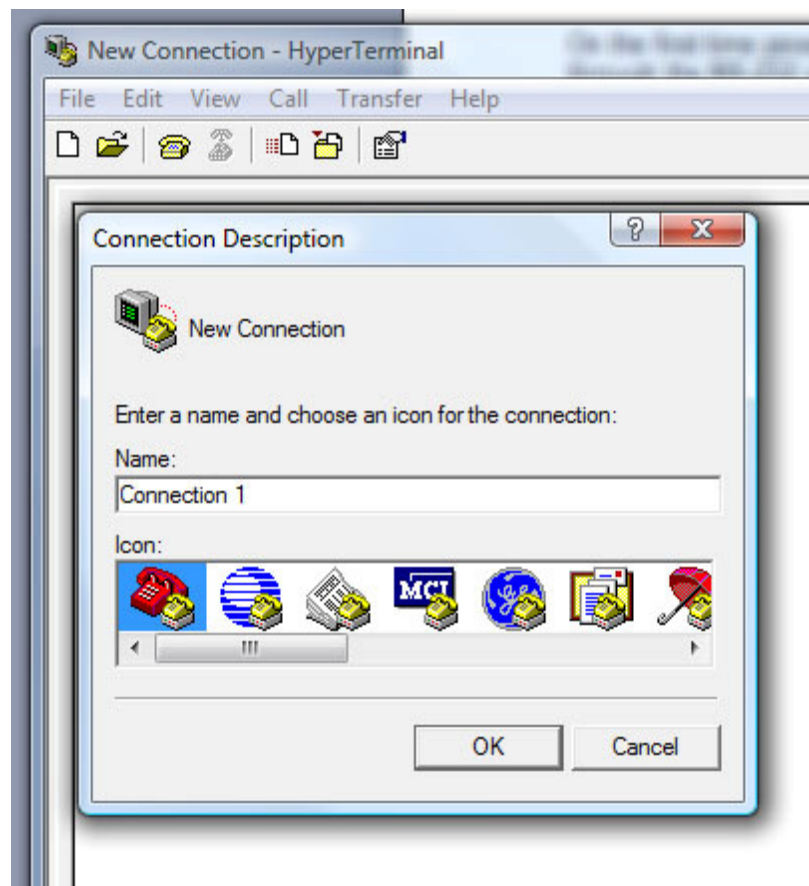
Modem functionality Test

On the first time power-up you can use terminal communications program to communicate with the modem through the RS-232 serial port. Following example is using the HyperTerminal in Windows XP.

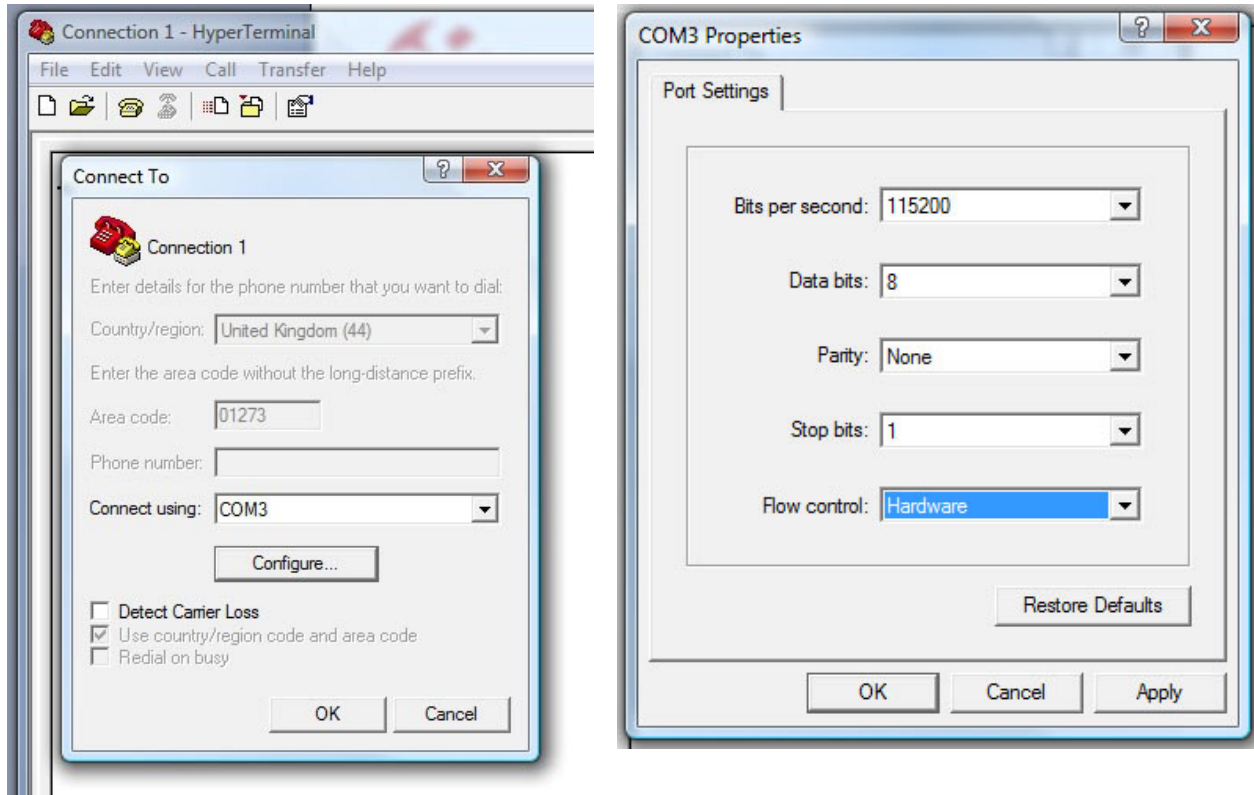
Select Hyperterminal from the Start Menu



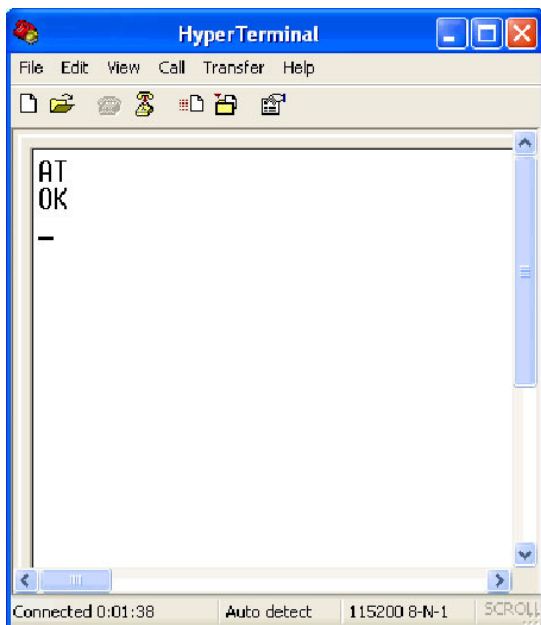
Start the HyperTerminal program and assign any name for a new session.




Choose the Com port connected to the modem. The unit features auto bauding so any baud rate from 1.2 to 115.2 Kbps can be used, 8bits, no parity bit, 1 stop bit)



On the terminal screen, type "AT" to check the "OK" response from the modem



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<p>Waste Batteries and Accumulators Directive 2006/66/EC Where batteries are fitted, before recycling the product, the batteries must be removed and disposed of at a licensed collection point.</p>

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