

AT-MC13

Media Converter UTP to Fibre "ST"

AT-MC14

Media Converter UTP to Fibre "SC"

AT-MC15

Media Converter UTP to BNC

AT-MC16

Media Converter Fibre "ST" SingleMode

AT-MC17

Media Converter Fibre "ST" MultiMode to  
Fibre "ST" SingleMode



10 mbps Ethernet

## Media Converters

### Complete Range of Fibre Connections

The Allied Telesyn range of Ethernet Media converters provides a complete family of conversion devices, allowing users to extend the size of UTP networks with the use of Fibre cabling. Supporting all major fibre connectors, with support for both Multi and Single Mode fibre, these converters can be used to extend networks with up to 15km of fibre.

### Auto-Negotiation and "Missing Link"

When connecting Media Converters to Auto-negotiating Fast Ethernet Switches, these media converters will automatically connect the link in either Ethernet Full or Half-Duplex mode, allowing the link to be established with the greatest bandwidth. In addition, the "Missing Link" except AT-MC15 feature allows switches or hubs with redundant link capability to be inter-connected with these media converters, as a failure in one fibre link will be signalled to the switch, allowing the second link to become active.

### Simple Installation

All the media converters with a UTP connection feature an internal MDI/MDIX switch, allowing the converter to be connected to either a PC, hub or switch, with a simple UTP cable. The media converters also allow the installer to test the integrity of fibre connection, by forcing the converters to communicate over the fibre cable. This "Link test" feature allows installers to check for cable faults without the need for expensive fibre optic test equipment.

### Standalone or Rackmounted

Each small media converter is powered by an external power supply unit for use in standalone applications. Where multiple media converters are being used, up to 12 standalone devices can be inserted into a low cost rackmount chassis, allowing all the converters to be powered by a single internal power supply. In critical applications, a second load sharing internal power supply can be installed into the rackmount chassis.

### Hassle Free Support

All Allied Telesyn Ethernet Media Converters have lifetime warranty, and have free technical support, ensuring hassle free installation.

Product	Port 1	Port 2	MDI/MDIX	Missing Link	Link Test	Half/Full-Duplex
AT-MC13	MM Fibre ST	UTP	Yes	Yes	Yes	Yes
AT-MC14	MM Fibre SC	UTP	Yes	Yes	Yes	Yes
AT-MC15	BNC	UTP	Yes	N/A	N/A	Half
AT-MC16	SM Fibre ST	UTP	Yes	Yes	Yes	Yes
AT-MC17	SM Fibre SC	MM Fibre SC	-	Yes	Yes	Yes
AY-MCR12	12 Slot rackmount chassis					
AT-PWR4	Optional Load Sharing Power Supply for MCR12 Chassis					

## Specifications

### Status Indicators

Front Panel:	
Quantity	Six
Power (PWR)	Indicates power is applied to the converter
Link (LNK) (2)	Indicates a valid receive link exists
Receive (REC) (2)	Indicates valid data is being received by the converter
Normal (NML)	Indicates product is working in normal mode
On Line	Indicates BNC port is connected to an active 10Base2 segment (MC15 only)
Collision (COL)	Indicates BNC port is sensing a collision signal (MC15 only)

### Packet Transmission Characteristics

Round Trip Delay	0.4µs Maximum
Bit Error Rate (BER)	<10 <sup>-12</sup>

### Max Cable Distance

10Base-T	100M
10Base 2	185M
10Base-FL MM	2000M (Full Duplex Operation)
	412M (Half Duplex Operation)
10Base-FL SM	15km
10Base2	185M

### Coaxial Interface

Input Impedance	>100KΩ
Coaxial Tap Capacitance	<6 pf

### Input/Output Voltage

	Typical:	Range:
DC Offset	0.1V	-0.5 to 0V
AC Offset		
Transmit Rise/Fall Time		

### Fibre Optic Interface (MultiMode)

Optical:	Typical	Range
Wavelength	830nm	+20nm
Sensitivity	-30 dBm ave	
Saturation	170uW (-7.6dBm)	150uW (-8.2dBm)
<b>Transmitter:</b>		
Output power		
62.5/125mM	-12 dBm	-15.0 dBm
100/140mM	-6.5 dBm	-9.5 dBm
50/125mM	-16.5 dBm	-19.5 dBm

### European Offices

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### Fibre Optic Interface (SingleMode)

Optical:	Typical	Range
Wavelength	1300nm	1261nm 1360nm
Sensitivity	-32.5dBm	
Transmitter	typ	worst.
Output Power	?	?

### Twisted Pair Interface

Transmitter:	Typical	Worst
Peak Differential Signal Amplitude	2.5V	2.2 to 2.8V
Transmitter Jitter	±3.2 ns	
Harmonics Content Common Mode	27dB below fundamental 4 V	
<b>Output Voltage:</b>		
Silence	0 V	+50 mV
Link Test Pulse	130ns	105 to 135 ns
Output Impedance	100Ω	85 to 115Ω
UTP Length	100 m	
<b>Receiver:</b>		
Receiver Threshold	-400 mV	-300 to 585 mV
Differential Noise	300 mV	

### Physical Characteristics

**Dimensions:** 10.5 cm x 9.5 cm x 2.5 cm  
(4.12 in x 3.75 in x 1.0 in)

**Weight:** 294 g (10.4oz)

**Temperature:**  
*Operating* 0° to 50° C  
*Storage* -20° to 80° C

**Relative Humidity:** 5% to 80% non-condensing

**Electrical/Mechanical Approvals:**  
EMC FCC Class A, IC Class A,  
Safety UL, CSA, TUV, IEC 825-1, CE Compliant

### Power Characteristics

**Input Voltage (Auto Ranging):**  
External Power Supply  
Input Supply Voltage 12 VDC +/- 5%  
Max Current .5  
Power Consumption 6W

### Ordering Information

Part Number	Description
AT-MC13-x0	UTP to fibre media converter with ST fibre connectors
AT-MC14-x0	UTP to fibre media converter with ST fibre connectors
AT-MC15-x0	UTP to BNC Media Converter
AT-MC16-x0	UTP to fibre media converter with ST SingleMode fibre connectors
AT-MC17-x0	Fibre MultiMode to fibre SingleMode with ST connector
Where 'x' is	1 for 100-120v with US power adapter 2 for 200-240v with Continental Europe power adapter 3 for 200-240v with United Kingdom power adapter

## Product Range

Allied Telesyn provides the full range of networking devices from cards, hubs or switches for both 10 and 100Mbps in either copper or fibre media.



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