



## MC1x Series

### Ethernet Media Converters

#### AT-MC13

UTP to fiber ST Ethernet media converter

#### AT-MC14

UTP to fiber SC Ethernet media converter

#### AT-MC15

UTP to BNC Ethernet media converter

#### AT-MC16

UTP to fiber ST single-mode Ethernet media converter

#### Fiber Connections

The Allied Telesis 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 fiber cabling. Supporting all major fiber connectors, with support for both multi and single-mode fiber, these converters can be used to extend networks with up to 15km of fiber.

#### Auto-Negotiation and MissingLink™

When connecting media converters to auto-negotiating Fast Ethernet switches, these media converters (except the AT-MC13 and AT-MC14) 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 MissingLink™ feature (except AT-MC15) allows switches or hubs with redundant link capability to be inter-connected with these media converters, as a failure in one fiber 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/MDI-X 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 the fiber connection, by forcing the converters to communicate over the fiber cable. This 'Link Test' feature allows installers to check for cable faults without the need for expensive fiber optic test equipment.

#### Standalone or Rack-mounted

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 rack-mount 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 rack-mount chassis.

#### Key Features

- Half and full-duplex operation (excluding AT-MC15, half-duplex only)
- Rack-mountable using optional AT-MCR12, AT-TRAY4 or AT-TRAY1 chassis
- MDI/MDI-X
- MissingLink™ (excluding AT-MC15, N/A)
- Link Test (excluding AT-MC15, N/A)

## Technical Specifications

### Status Indicators

#### Front Panel

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

### Packet Transmission Characteristics

Round Trip Delay	0.4 $\mu$ s Maximum
Bit Error Rate (BER)	<10 <sup>-12</sup>

### Twisted Pair Interface

Transmitter	Typical	Worst
Peak Differential Signal Amplitude	2.5v	2.2 to 2.8v
Transmitter Jitter	$\pm 3.2$ ns	
Harmonics Content Common Mode	27dB below fund	4v

#### Output Voltage:

Silence	0v	+50mv
Link Test Pulse	130ns	105 to 135ns
Output Impedance	100 $\Omega$	85 to 115 $\Omega$
UTP Length	100m	

#### Receiver:

Receiver Threshold	-400mv	-300 to 585mv
Differential Noise	300mv	

## Power Characteristics

External Power Supply	100-240V AC, 50/60Hz $\pm$ 1-3%
Input Supply Voltage	12vDC $\pm$ 1-5%
Max Current	.5
Power Consumption	6W

## Environmental Specifications

External Power Supply	120V AC, 60Hz (US model) 240V AC, 50Hz (European models)
Input Supply Voltage	12vDC
Max Current	500mA
Power Consumption	6W

## Physical Characteristics

Dimensions (W x D x H)	10.5cm x 9.5cm x 2.5cm (4.12" x 3.75" x 1.0")
Weight	294g (10.4oz)

## Electrical/Mechanical Approvals

EMC	FCC Class A
Safety	UL-Cul, CSA/CSA, NRTL, TUV, CE compliant

## Ordering Information

### AT-MC13-xx

UTP to fiber Media Converter with ST fiber connectors

### AT-MC14-xx

UTP to fiber Media Converter with SC fiber connectors

### AT-MC15-xx

UTP to BNC Media Converter

### AT-MC16-xx

UTP to fiber Media Converter with ST single-mode fiber connectors

Where xx = 10 AC Power supply, US power cord  
20 AC Power supply, European power cord  
30 AC Power supply, UK power cord  
40 AC Power supply, Australian power cord

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