

# Media Converters

## AT-MC100XL Series, Fast Ethernet Media Converters

### AT-MC101XL

TX to FX Fast Ethernet media converter with ST fibre connectors

### AT-MC102XL

TX to FX Fast Ethernet media converter with SC fibre connectors



### Fibre connections

The Allied Telesyn range of Fast 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 both SC and ST fibre connectors, these converters can be used to extend networks with up to 2km of fibre.

### Auto-negotiation and MissingLink™

When connecting media converters to auto-negotiating Fast Ethernet switches, these media converters will automatically connect the link in either Full or Half-Duplex mode, allowing the link to be established with the greatest bandwidth. Alternatively, the MissingLink feature allows accurate reporting to network management systems as well as allowing devices 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

Both media converters 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 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 fibreoptic 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

Allied Telesyn Fast Ethernet media converters have a lifetime warranty and free technical support, ensuring trouble-free installation.

### Key features

- Half & full-Duplex operation
- Transparent to 802.1Q packets
- Rackmountable using optional AT-MCR12, TRAY4 or TRAY1 chassis
- MDI/MDI-X
- MissingLink™
- Link Test

### Ordering information

#### AT-MC101XL-xx

TX to FX media converter with ST fibre connectors

#### AT-MC102XL-xx

TX to FX media converter with SC fibre connectors

Where xx =

- 10 (US mains lead)
- 20 (European mains lead)
- 30 (UK mains lead)
- 40 (Australian mains lead)

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## STATUS INDICATORS

### Front Panel:

Power	Indicates power is applied to the converter
Link (2)	Indicates a valid receive link exists
Receive (2)	Indicates valid data being received by converter
Normal/Test	Fibre test or normal operation

## PACKET TRANSMISSION CHARACTERISTICS

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

## TWISTED PAIR INTERFACE

### UTP Differential Output

Voltage	Typical	Min	Max
	980mv	950mv	1050mv

### Overshoot Voltage

Typical	Max
4%	5%

### Single Amplitude Symmetry

Typical	Min	Max
1.0062	0.98	1.02

### Rise and Fall Time

	Typical	Min	Max
Rise	4.6ns	3.0ns	5.0ns
Fall	4.2ns	3.0ns	5.0ns

### Rise and Fall Time Symmetry

Typical	Max
0.4ns	0.5ns

## POWER CHARACTERISTICS

External Power Supply	100-240VAC, 50/60Hz +/- 3%
Input Power Supply	12VDC +/- 5%
Max Current	.5
Power Consumption	6W

## ENVIRONMENTAL SPECIFICATIONS

Operating Temp	0°C to 40°C
Storage Temp.	-20°C to 80°C
Relative Humidity	5% to 95% non-condensing
Operating Altitude	0 to 10,000 feet

## PHYSICAL CHARACTERISTICS

Dimensions	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

Port Type (Connector)	Cable Distance	Optical Frequency	Launch Power (dBm)			Receive Power (dBm)		
			Max.	Avg.	Min.	Min. Sensitivity	Typical Sensitivity	Saturation
I0T UTP Copper	100m							
I02 Coax Copper	185m							
I0FL MMF	2km	850nm	-10.0	-12.0	-15.0	-41.4	-43.0	-7.6
I0FL SMF	15km	1310nm	-17.0	-21.0	-23.0	-41.5	-45.0	-14.0
I00TX UTP Copper	100m							
I00FX MMF	2km	1310nm	-14.0	-16.8	-19.0	-31.8	-34.5	-14.0
I00SX MMF	300m	850nm	-10.0	-12.0	-15.0	-41.4	-43.0	-7.6
I00FX SMF (15km)	15km	1310nm	-8.0	-11.5	-15.0	-31.0	-31.0	-8.0
I00FX SMF (40km)	40km	1310nm	0.0	-3.0	-5.0	-35.0	-38.0	0.0
I00FX SMF (75km)	75km	1310nm	0.0	-2.0	-4.0	-37.0	-37.0	-3.0
I00FX SMF (100km)	100km	1550nm	0.0	-1.5	-3.0	-37.0	-37.0	-3.0
I000T UTP Copper	100m							
I000SX MMF	220-550m	850nm	-4.0	-7.0	-10.0	-16.0	-16.0	0.0
I000LX SMF (10km)	10km	1310nm	-3.0	-6.3	-9.5	-20.0	-20.0	-3.0
I000LX SMF (20km)	20km	1310nm	0.0	-1.5	-3.0	-24.0	-24.0	-3.0
I000LX SMF (50km)	50km	1550nm	0.0	-2.5	-5.0	-24.0	-24.0	-3.0
I000LX SMF (70km)	70km	1550nm	5.5	2.8	0.0	-24.0	-24.0	-3.0



Only nature can do better

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