

# Media Converters

## AT-MC103/4 Series, Fast Ethernet Media Converters

### AT-MC103 family

UTP to fibre SC single-mode media converters

### AT-MC104 family

Fibre SC multi-mode to fibre SC single-mode media converters

### 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 and multi-mode fibre networks with the use of single-mode fibre cabling. Supporting SC connected single-mode fibre, these converters can be used to extend networks up to a distance of 100km.

### Auto-negotiation & 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

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 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 rackmount

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

# AT-MC100 Series, Fast Ethernet Media Converters

## 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

	Min.	Typical	Max.
UTP Differential Output Voltage	950mv	980mv	1050mv
Overshoot Voltage		4%	5%
Single Amplitude Symmetry	0.98	1.0062	1.02
Rise and Fall Time:			
Rise	3.0ns	4.6ns	5.0ns
Fall	3.0ns	4.2ns	5.0ns
Rise and Fall Time Symmetry	0.4ns	0.5ns	

## POWER CHARACTERISTICS

External Power Supply	100-240V AC, 50-60Hz +/-3%
Input Supply Voltage	12VDC +/-5%
Max Current	0.5
Power Consumption	6W

## ENVIRONMENTAL SPECIFICATIONS

Operating Temp	0°C to 40°C (32°F to 104°F)
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 compliant	UL-Cul, CSA/CSA, NRTL, TUV, CE compliant

## ORDERING INFORMATION

<b>AT-MC103XL-xx</b>	UTP to single-mode (15km) fibre
<b>AT-MC103LH-xx</b>	UTP to single-mode (40km) fibre
<b>AT-MC103SC/FS3-xx</b>	UTP to single-mode (75km) fibre
<b>AT-MC103SC/FS4-xx</b>	UTP to single-mode (100km) fibre
<b>AT-MC104XL-xx</b>	Multi-mode fibre to single-mode (15km) fibre
<b>AT-MC104LH-xx</b>	Multi-mode fibre to single-mode (40km) fibre
<b>AT-MC104SC/FS3-xx</b>	Multi-mode fibre to single-mode (75km) fibre
<b>AT-MC104SC/FS4-xx</b>	Multi-mode fibre to single-mode (100km) fibre
Where xx =	10 for U.S. power cord 20 for no power cord 30 for U.K. power cord 40 for Australian power cord 50 for European power cord

Port Type (Connector)	Cable Distance	Optical Frequency	Launch Power (dBm)			Receive Power (dBm)		
			Max.	Avg.	Min.	Min. Sensitivity	Typical Sensitivity	Saturation
10T UTP Copper	100m							
102 Coax Copper	185m							
10FL MMF	2km	850nm	-10.0	-12.0	-15.0	-41.4	-43.0	-7.6
10FL SMF	15km	1310nm	-17.0	-21.0	-23.0	-41.5	-45.0	-14.0
100TX UTP Copper	100m							
100FX MMF	2km	1310nm	-14.0	-16.8	-19.0	-31.8	-34.5	-14.0
100SX MMF	300m	850nm	-10.0	-12.0	-15.0	-41.4	-43.0	-7.6
100FX SMF (15km)	15km	1310nm	-8.0	-11.5	-15.0	-31.0	-31.0	-8.0
100FX SMF (40km)	40km	1310nm	0.0	-3.0	-5.0	-35.0	-38.0	0.0
100FX SMF (75km)	75km	1310nm	0.0	-2.0	-4.0	-37.0	-37.0	-3.0
100FX SMF (100km)	100km	1550nm	0.0	-1.5	-3.0	-37.0	-37.0	-3.0
1000T UTP Copper	100m							
1000SX MMF	220-550m	850nm	-4.0	-7.0	-10.0	-16.0	-16.0	0.0
1000LX SMF (10km)	10km	1310nm	-3.0	-6.3	-9.5	-20.0	-20.0	-3.0
1000LX SMF (20km)	20km	1310nm	0.0	-1.5	-3.0	-24.0	-24.0	-3.0
1000LX SMF (50km)	50km	1550nm	0.0	-2.5	-5.0	-24.0	-24.0	-3.0
1000LX 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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