AT-MC104XL
Fast Ethernet Media Converters

AT-MC104XL
Fiber SC multi-mode to fiber SC single-mode media converters

Fiber Connections
The Allied Telesis range of Fast Ethernet media converters provide a complete family of conversion devices, allowing users to extend the size of UTP and multi-mode fiber networks with the use of single-mode fiber cabling. Supporting SC connected single-mode fiber, these converters can be used to extend networks up to a distance of 40km.

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 fiber link will be signalled to the switch, allowing the second link to become active.

Simple Installation
The media converters allow the installer to test the integrity of 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-mount
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.

Hassle Free Support
Allied Telesis Fast Ethernet media converters offer free technical support, ensuring trouble-free installation.

Key Features
- EnergyStar power adapters save customers a minimum of 20% power consumption*
- Half and full-duplex operation
- Transparent to IEEE 802.1Q packets
- Rack-mountable using optional AT-MCR12, AT-TRAY4 or AT-TRAY1 chassis
- Wall-mountable using AT-WLMT
- MissingLink
- Link test
- RoHS compliant

* Compared to previous models
The link test is a fast and easy way for you to test the connections between the media converter ports and the end-nodes that are connected to the ports. If a network problem occurs, you can perform a link test to determine which port is experiencing a problem, and be able to focus your troubleshooting efforts on the cable or end-node where the problem resides.

The MissingLink feature enables the two ports on the media converter to pass the ‘Link’ status of their connections to each other. When the media converter detects a loss of connection to an end-node, the media converter shuts down the connection to the other port, thus notifying the end-node that the connection has been lost.

### Technical Specifications

#### Status Indicators

<table>
<thead>
<tr>
<th>Port Type (Connector)</th>
<th>Cable Distance</th>
<th>Optical Frequency</th>
<th>Launch Power (dBm)</th>
<th>Receive Power (dBm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Max.</td>
<td>Avg.</td>
</tr>
<tr>
<td>100FX MMF (2km)</td>
<td>2km</td>
<td>1310nm</td>
<td>-14.0</td>
<td>-16.8</td>
</tr>
<tr>
<td>100FX SFF (15km)</td>
<td>15km</td>
<td>1310nm</td>
<td>-8.0</td>
<td>-11.5</td>
</tr>
<tr>
<td>100FX SFF (40km)</td>
<td>40km</td>
<td>1310nm</td>
<td>0.0</td>
<td>-3.0</td>
</tr>
</tbody>
</table>

#### Link Test

- External power supply: 120V AC, 60Hz (US model)
- Input supply voltage: 12V DC
- Max current: 500mA
- 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-C, CSA/CSA, NRTL, TUV, CE compliant

### Ordering Information

- AT-MC104XL-xx
  - Multi-mode fiber to single-mode SC (15km) fiber
  - 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

### Associated Products

- AT-TRAY1
  - Rack-mounting tray for one media converter
- AT-TRAY4
  - Rack-mounting tray for up to four media converters
- AT-WLMT
  - Wall-mount bracket for one media converter
- AT-MCR12
  - 12 slot AC/DC powered chassis for media converters

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**Packet Transmission Characteristics**

- Round trip delay: 0.4µs maximum
- Bit Error Rate (BER): <10-12

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