

MMC Series

Copper to Fiber Mini Media and Rate Converters

Mini media converters offer a smaller size and smaller carbon footprint to help the environment and save space in the office.



Overview

The Allied Telesis MMC Series of mini media converters leverages its smaller size to not only help the environment with a small carbon footprint, but also to save space in its working environment. Despite its compact size, the MMC Series delivers all the power and functionality of standard size media converters.

Extend Networks

The MMC Series are available in 100Mbps or 1000Mbps models. Depending on the model chosen, the fiber-optic port has options for fixed SC, ST, LC or SFP connectors capable of multi-mode or single-mode fiber connectivity. The twisted-pair copper port has an RJ-45 connector supporting either 100Mbps or 1000Mbps, with a maximum operating distance of 100 meters (328 feet).

VLAN Support

Many new backbone switch products now support the industry-standard IEEE 802.1Q specification for Virtual LANs (VLANs) that send extra-long data packets on the network. The MMC Series are fully compatible with these long packets, enabling them to be used in modern networks. Media converters not supporting this feature discard these extra long packets, making them unsuitable for modern networks.

Small and Flexible

The smaller size and external power supply of the MMC Series allows them to be used almost anywhere.

Smart MissingLink (SML)

The Smart MissingLink™ (SML) feature monitors network connections and provides notification when network segments fail, allowing network managers to quickly identify the source and location of failed segments and minimize downtime.

Smart Link Restoration

Smart Link restoration allows the devices, in cases of power failure, link loss or other interrupted service, to automatically restore the link without the need to restart/reset them.

Power Saving

The MMC Series continues the Allied Telesis commitment to the environment with over 50% power savings.* With just 1.7W of power usage, the MMC Series media converters are some of the most efficient in the market today.

Link Test

The link test is a fast and easy way for you to test the connections between the media converter ports and the connected end nodes. If a network problem occurs, you can perform a link test to determine which port is experiencing a problem, and focus your troubleshooting efforts on the right cable or end node.

New Features

- ▶ Convert speed as well as media type
- ▶ 2K MAC address tables
- ▶ Store-and-forward switching mode
- ▶ Transparent to IEEE 802.1Q packets
- ▶ Auto Negotiation and Auto MDI/MDIX on copper port
- ▶ EEE support on copper port
- ▶ Far End Fault on Fiber
- ▶ 10K byte Jumbo packets
- ▶ Link/Activity LED per port
- ▶ Smart MissingLink
- ▶ Fixed SC/ST/LC or SFP (100MB or 1000MB) optics
- ▶ 12VDC power supply
- ▶ Wall-mountable using MMCWLMT
- ▶ Locking power supply jack to prevent accidental power disconnects
- ▶ Available in Trade Agreement Act (TAA) models

*Over previous models

| PRODUCT | FIBER TYPE | FIBER OPTIC DIAMETER | OPTICAL WAVELENGTH (nm) | LAUNCH POWER (dBm) | | EFFECTIVE POWER (dBm) | | | MAX DISTANCE |
|--------------|------------|----------------------|-------------------------|--------------------|-----|-----------------------|---------|------------|--------------|
| | | | | Min | Max | Min | Typical | Saturation | |
| MMC200/xx | FDDI/OM1 | 62.5/125 | 1310 | -20 | -14 | -32 | -34 | -3 | 2 km |
| MMC200LX/xx | OS2 | 9/125 | 1310 | -15 | -5 | -32 | -34 | -3 | 20 km |
| | OS1 | 9/125 | 1310 | -15 | -5 | -32 | -34 | -3 | 15 km |
| MMC2000/xx | OM2 | 50/125 | 850 | -9.5 | -4 | -17 | -20 | -3 | 500 m |
| | FDDI/OM1 | 62.5/125 | 850 | -9 | -4 | -17 | -20 | -3 | 220 m |
| MMC2000LX/xx | OS2 | 9/125 | 1310 | -10 | -1 | -22 | -24 | -1 | 20 km |
| | OS1 | 9/125 | 1310 | -10 | -1 | -22 | -24 | -1 | 10 km |

Specifications

Status LEDs

| | |
|-------|----------|
| Power | |
| ON | Power |
| OFF | No power |

| | |
|----------|-------------------------------|
| SYS | |
| ON | System operating normally |
| OFF | System not operating normally |
| Blinking | Fault condition |

| | |
|-----------------------|------------------------|
| LAN fiber port (Left) | |
| OFF | No link is established |
| ON | Link is established |
| Blinking | Activity is detected |

| | |
|-------------------------|------------------------|
| LAN copper port (Right) | |
| OFF | No link is established |
| ON | Link is established |
| Blinking | Activity is detected |

Operational Characteristics

| | |
|---------------------------|----------------------------------------------------------------------------|
| SW1 (left): | LOW = Link test |
| | HIGH = Smart MissingLink disabled |
| SW2 (right): | LOW = Auto-negotiation (normal operation) |
| | HIGH = Disable auto-negotiation on copper port - force 100Mbps Full Duplex |
| MAC address table | 2k addresses |
| Forwarding/filtering rate | 1,488,000 for 1000Mbps |
| | 148,880pps for 100Mbps |
| | 14,880pps for 10Mbps |
| Latency | 14.3µsec (64 byte packet, 100Mbps full-duplex) |

Physical Specifications

| | |
|-------------|-----------------------------|
| Dimensions | 5.6 cm × 10.16 cm × 2.18 cm |
| (W × D × H) | 2.16 in × 4 in × 0.86 in |
| Weight | 6 oz |

Power Characteristics

| | |
|-------------------|-------------------|
| Power consumption | 140mA@12V typical |
|-------------------|-------------------|

Environmental Specifications

| | |
|-----------------------|----------------------------------------------|
| Operating temperature | 0°C to 50°C (32°F to 122°F) |
| Operating humidity | 5% to 95% relative humidity (non-condensing) |
| Storage temperature | -30°C to 70°C (-22°F to 158°F) |
| Storage humidity | 5% to 95% relative humidity (non-condensing) |
| Altitude | Up to 3048 m (10000 ft) |

Electrical and Mechanical Approvals

| | |
|-----------------|----------------------------------------------------------------------|
| Safety | UL60950-1 EN60950-1 |
| Emissions (EMI) | FCC Class A EN55022 Class A CISPR 22 Class A C-TICK VCCI |

Ordering Information

AT-MMC200/SC-xx
10/100TX to 100FX/SC Multi Mode Mini Media and Rate Converter

AT-MMC200/ST-xx
10/100TX to 100FX/ST Multi Mode Mini Media and Rate Converter

AT-MMC200/LC-xx
10/100TX to 100FX/LC Multi Mode Mini Media and Rate Converter

AT-MMC200LX/SC-TAA-60
10/100TX to 100X/SC Single Mode Mini Media and Rate Converter

AT-MMC200LX/ST
10/100TX to 100X/ST Single Mode Mini Media and Rate Converter

AT-MMC2000/SC-xx
10/100/1000T to 1000SX/SC Multi Mode Mini Media and Rate Converter

AT-MMC2000/ST-xx
10/100/1000T to 1000SX/ST Multi Mode Mini Media and Rate Converter

AT-MMC2000/LC-xx
10/100/1000T to 1000SX/LC Multi Mode Mini Media and Rate Converter

AT-MMC2000LX/SC-TAA-60
10/100/1000T to 1000LX/SC Single Mode Mini Media and Rate Converter, 10 km

AT-MMC2000LX/LC-TAA-60
10/100/1000T to 1000LX/LC Single Mode Mini Media and Rate Converter, 10 km

AT-MMC2000/SP-xx
10/100/1000T to 100/1000X SFP Media and Rate Converter

Where xx =
60 for AC power supply, multi-region (US, UK, AU, EU)
90 for AC power supply, US power cord, FED

Associated Components

AT-MMCR18
18-slot chassis for MMC Series media converters

AT-MMCWLMT-05
Wall mount for MMC Series media converters (5 pack)

AT-MMCTRAY6
1RU rack-mount tray for up to 6 MMC Series media converters

SFP Modules
SFP modules are only compatible with the SFP ports on the AT-MMC2000/SP

AT-SPFX/2
100FX multi-mode 1310 nm fiber up to 2 km

AT-SPFX/2-90
2km, 100FX (LC), 1310 nm, TAA Compliant

AT-SPSX
1000SX GbE multi-mode 850 nm fiber up to 550 m

AT-SPSX-90
1000SX GbE multi-mode 850 nm fiber up to 550 m

AT-SPLX10
1000LX GbE single-mode 1310 nm fiber up to 10 km

AT-SPLX40
1000LX GbE single-mode 1310 nm fiber up to 40 km

AT-SPZX80
1000ZX GbE single-mode 1310 nm fiber up to 80 km

AT-SPBD10-xx
1000LX GbE Bi-Di fiber up to 10 km

AT-SPBD20LC-xx
1000BX GbE Bi-Di fiber up to 20 km

AT-SPTX
1000T 100 m copper

AT-SPEX
1000X GbE multi-mode 1310 nm fiber up to 2 km