

Introduction:

The MC-1000SCMM & MC-1000SCSM is Optix Solutions answer to expanding existing Gigabit networks, a compact and reliable solution with high performance for the migration from copper to fiber based networks. The easy implementation and expansion of 1000Base-T/SX or LX networks can be further assured with this converter. The converter boasts enhanced with such features as remote and local loopback testing, and auto-negotiation for total reliability. It also features four DIP switches for manual activation of the enhanced features. This gives the MC-1000-MM/ MC-1000-SM the ability to be quickly integrated into a network configuration.



Extra distances are possible with the long haul single mode version delivering up to 80km connectivity.

Product Summary & Benefits:

The MC-1000SC-MM / MC-1000SC-SM media converters were specifically designed to offer network designers the tools for migration from copper based Gigabit to fiber Gigabit. Now, migration or expansion of existing networks can be achieved with minimum cost and complexity. The converters are completely transparent when installed so the network performs exactly the way it did before - only now, it can migrate both copper and fiber medium.

Expands the Size of an Existing Network - Provides fiber connectivity to Gigabit segments for even further networking expansion between extended workgroups. They also provide building-to-building connectivity without the need to employ expensive and MIS intensive routers.

Enhances the Distance between Networking Devices - Connecting the MC-1000-MM & MC-1000-SM to fiber segments can further extend distances of up to 80Km between networking nodes. This can be achieved by a direct connection between the converter and a fiber networking device.

Loopback Test - Once enabled via a DIP-switch, the Remote or Local Loopback test feature allows the administrator to instantly determine the status of the cable connection. This offers a simpler approach to troubleshooting; no more manual inspection of cables and wiring closets.

Support NWay - The MC-1000-MM & MC-1000-SM takes advantage of intelligent connection technology to support auto-negotiation, thereby eliminating the hassle of manually configuring or monitoring the settings. This ensures a plug-n-play operability.

Cabling Flexibility - Allows network managers to put fiber cabling anywhere within a network without changing the arrangement of copper based Gigabit. Their compact size allows the converter to be easily deployed in any narrow desktop location or used in wall-mount installation. Several converters can be simultaneously installed by using the MC-1600C-12 12-slot 19" rack-mount chassis, MC-1600C-4 4-slot rack-mount chassis.

Main Features:

- ◆ Complies with IEEE 802.3ab 1000Base-T and IEEE 802.3z 1000Base-SX/LX standard
- ◆ Auto MDI/MDI-X support RJ-45 port
- ◆ Auto polarity correction RJ-45 port
- ◆ Auto-negotiation, NWay support on Fiber port
- ◆ Local and Remote loopback test for first time installation and troubleshooting
- ◆ Low power consumption
- ◆ Extends distances up to 500m for multi-mode SX (80km with long haul single mode) under full-duplex mode
- ◆ Compatible with other Gigabit 1000Base-T/SX/LX devices
- ◆ Status LEDs for easy monitoring of device status
- ◆ External and internal power supply options
- ◆ FCC Class A & CE approved RoHS compliant

Based on 1300nm Fiber and 1550nm is also available upon special request



Quick Reference

Connector #	Con. 1	Con.2
Type	RJ-45	SC
Protocol	100Base-T	100Base-SX/LX
Cable Type	STP	Fiber
Distance		
Multi-mode F D	100 m	220 m
Single Mode F D	100 m	80,000 m
Bandwidth		
Full Duplex(FD)	200 Mbps	200 Mbps
Half Duplex(HD)	100 Mbps	100 Mbps

MC-1000SC-MM & MC-1000SC-SM

Gigabit 1000Base-T to SX/LX Converter

Specifications:

<p>Standard: IEEE 802.3ab 1000Base-T & 802.3z 1000Base-SX/LX</p> <p>Connector: 1x shielded RJ-45, 1x SC (MC-1000SC-MM) 1x shielded RJ-45, 1x SC (MC-1000SC-SM)</p> <p>Max. Distance: UTP: 100 meters (Cat. 5) Fiber: 220 meters (multi-mode SX 62.5/125 μm) 500 meters (multi-mode SX 50/125 μm) 10Km (single mode LX 9/125) 80 Km (long haul single mode LX 9/125))</p> <p>Unit LED: PWR: Illuminated for normal operation FD: Illuminated when copper port operating in full-duplex mode LNK: Illuminated when receiving link pulses from compliant devices RCV: Illuminated or flashing when data packets are being received</p> <p>MDI/MDI-X: Auto Selection</p> <p>Power: Voltage: AC voltage to 12V DC 0.8A power adapter</p>	<p>Frequency: 47Hz to 63Hz</p> <p>Temperature: Operating: 0°C to 50°C Storage: -20°C to 70°C</p> <p>Humidity: Operating: 10% to 80% RH Storage: 5% to 90% RH</p> <p>Emissions: FCC Part 15 of Class A & CE approved</p> <p>Dimensions: 109.2 x 73.8 x 23.4mm (LxWxH)</p> <p>Weight: 160g</p> <p>Switches: DIP 1 - LLBK: Tx port local loop back Enable or Disable (On: Enable – Off: Disable) DIP 2 - RLBK: Fiber port remote loop back Enable or Disable (On: Enable – Off: Disable)</p>
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Fiber Optic Data:

Product	Cable Type (μ m)	Connector Type	Wavelength	Min. TX PWR	Max. TX PWR	RX Sens.	Min. PWR Budget	Max. PWR Budget	Typical Distance
MC-1000SC-MM	62.5/125 50/125	SC	850nm	-9.5dBm	-4dBm	-12.5dBm	3 dB	8.5 dB	500m
MC-1000SC-SM	9/125	SC	1310nm	-9.5dBm	-3dBm	-20dBm	10.5 dB	17 dB	10Km
MC-1000SC-SM40	9/125	SC	1550nm	-4dBm	+1dBm	-23dBm	19 dB	24 dB	40Km
MC-1000SC-SM80	9/125	SC	1550nm	+1dBm	+5dBm	-25dBm	26 dB	30 dB	80Km

Note: Fiber optic data specifications are accurate at the time of printing and are subject to change without prior notice.

Applications:

MC-1000SC-MM & MC-1000SC-SM

Gigabit 1000Base-T to SX/LX Converter

The following illustrates typical applications for the MC-1000-MM/MC-1000-SM series. The actual distances will depend on several factors including the quality of cables used and the terminal equipment employed.

Ordering Information:

MC-1000SC-MM:

1000Base-T to SX Multi-mode Converter

MC-1000SC-SM:

1000Base-T to LX Single Mode Converter (10km)

MC-1000SC-SM40:

1000Base-T to LX Single Mode Converter (40km)

MC-1000SC-SM80:

1000Base-T to LX Single Mode Converter (80km)

Rack mount chassis available

MC-1600C-4 4 Bay

MC-1600C-12 12 BAY

