



FIBEROPTIC NETWORKING

# MetroStar™ Modules

# MCM1000T

## 1000Base-T to 1000Base-SX/LX Converter Module

This module provides conversion from a copper GBE interface (1000Base-T) to a Multi-Mode (1000Base-SX) or Single Mode Link (1000Base-LX) to allow extension of up to 80km. As most of the low cost GBE switches come with multiple RJ-45 ports, combining such with a *MetroStar* loaded with MCM1000T modules provides the most flexible and cost effective way to extend their reach over fiber. The MCM1000T is based on a full digital technology: Analog signals from the copper port are converted to digital electrical signals, fully retimed then converted again to F/O transmitted from the second port. This design provides a resilient and steady conversion, advanced control /diagnostic features and Management. It negotiates duplex mode at both ports but it may be forced (to FDX) by means of a DIP switch or management. Selective Fault Propagation from the copper port to the F/O port allows end-to-end link integrity verification. A Loop-Back function (F/O port) simplifies troubleshooting of link problems. Each port provides separate Link and Activity indications for enhanced diagnostics. Like other *MetroStar* modules, the MCM is fully SNMP managed. All *MetroStar* modules are hot swappable and equipped with two self-clinching screws for easy and safe module insertion and removal. A special LED indicates that the module is well inserted in its slot and "alive" even before links are connected.

## General Specifications

<b>Standard Compliance:</b> IEEE802.3 2000edition, 1000Base-SX, 1000Base-LX, IEEE802.3z, IEEE802.3ab	<b>Conversion Method:</b> Direct Digital with Fault Propagation, duplex mode transparent
<b>Management:</b> SNMP via <i>MetroStar</i> Management module	<b>Ports :</b> F/O :mmf (62.5/50) or smf, Duplex SC, see table below Copper: Shielded RJ-45, Auto-Cross, 100m over Cat.6
<b>LEDs:</b> Per module - Power ON F/O Port - F/O SD, Activity, Test mode RJ-45- Link, Activity, Test mode	<b>DIP switches (on board):</b> Per port - Normal/Test modes (FP ON/OFF) Loop-Back ON/OFF Per module: Duplex mode (A/N or FDX forced)

## Ordering Information and F/O port Specifications

Part #	Model	Min. Output power	Typical Receive Sensitivity	Wavelength	Suggested Distance
2600	MCM1000T-S	-9.5dbm	-17dbm	850nm	220m/500m
2601	MCM1000T-LX1	-13dbm	-20dbm	1310nm	0-10km
2602	MCM1000T-LX2	-5dbm	-20dbm	1310nm	5-20km
2603	MCM1000T-LX3	-8dbm	-23dbm	1550nm/DFB	10-40km
2604	MCM1000T-LX4	0dbm	-24dbm	1550nm/DFB	25-80km

*Specifications subject to change without prior notice*

DS2600Rev1002