MSM10G-R

11.3/12.5Gbps Multirate, Multiprotocol Repeater/Converter/Transponder

- Universal Fiber Converter/Extender/Transponder module
- Dual channel or protected link, 3R operation
- Multi-rate (1-11.3Gbps/12.5Gbps)
- Multi-protocol (Ethernet, SONET/SDH, FC, CPRI)
- Loop-Back, Redundancy and Retentive testing capabilities
- CWDM/DWDM, Mobile Fronthaul applications
- Extensive diagnostics

The MSM10G-R is a high speed repeater/converter/transponder module for the **MetroStar** System. It provides the network designer with a flexible and cost effective device for MM/SM to SM conversion and network extension.

With data rates scaling up to 12.5Gbps, it becomes a cornerstone of Fibrolan WDM systems, serving as a CWDM/DWDM transponder. The module covers distances of up to 80Km (for DWDM 10GE) and supports data rate of 1Gbps to 11.3/12.5Gbps.

DS2550R1114

Universal Fiber Converter/ Transponders

The module is equipped with four Small Form-factor Pluggable slots supporting SFP, SFP+ optical transceivers for ease of deployment, maintenance and logistics.

Module's deployment is easy and does not require any settings or measurements.

The MSM10G-R is a 3R device, protocol independent for the specified transmission rates and efficiently supports Gigabit Ethernet, 10G Ethernet, 2/4/8/10G FC, OC48/STM16 and OC192/STM64, as well as CPRI. The module can be used as a multirate transponder in WDM applications.

All *MetroStar* modules are hot swappable and equipped with two self-clinching screws for easy and safe module insertion and removal.

Key Features

- Data Rate: 1Gbps to 11.3/12.5Gbps
- Network Extension: up to 120Km for GBE
- Multi-protocol, 3R conversion
- Multirate WDM transponder
- Dual channel mode
- Dual sided protection

- Remote Firmware upgrade
- Loopback
- Status and Diagnostic LEDs
- SFP management: inventory and monitoring
- Managed module
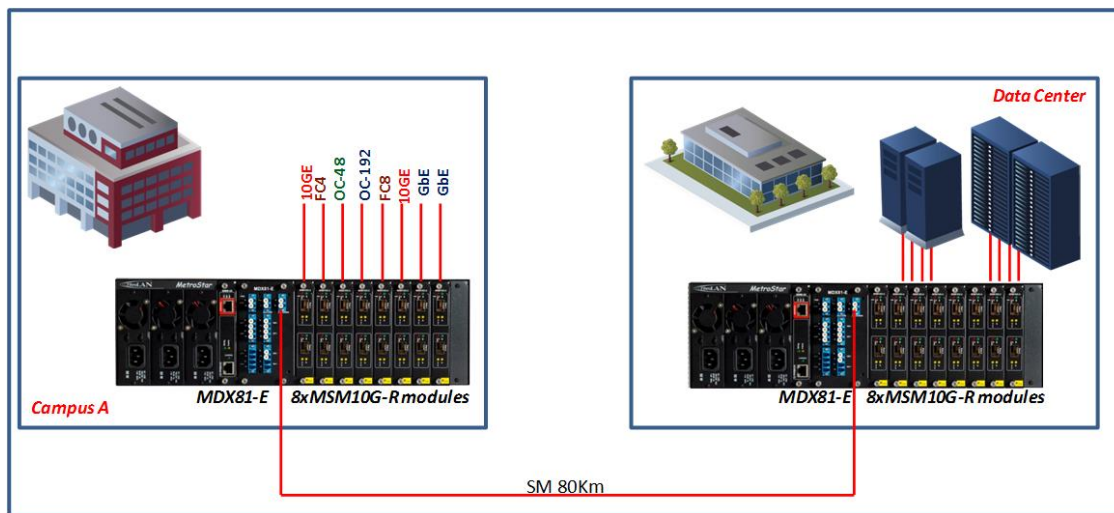
General Specifications

- Interfaces:
  4 slots for optical SFP or SFP+modules
- Diagnostic LEDs:
  Power On/Off
  Signal Detect per port
  link per port
- DIP switches (on board)
  Loopback all ports
  Redundancy and Revertive modes

- Conversion Method:
  Multi Rate, Multi-Protocol, 3R
- Standard Compliance:
  Gigabit Ethernet, 10GE, 2/4/8/10G FC, OC48/STM16, OC192/STM64
- Management:
  SNMP managed via *MetroStar* (CLI,Telnet,SSH) or Web management
- Management overrides DIP Switches settings

Management Functions

- Module status
- SFP module status (signal detect, mode, description)
- Loopback all ports enable/disable
- Redundancy mode
- Revertive mode
- SFP inventory (model, SN, range, WL, etc.)
- SFP diagnostics (per SFF-8472)
- Management implemented via the *MetroStar* management module (MMM-04)

Typical Application

Point to Point Multiservice Aggregation (WDM)

Ordering Information

Part #	Model	Description
2556	MSM10G-R	Multi-rate, Multi-protocol extender/transponder MetroStar module, 1Gbps to 11.3Gbps, 4 SFP+ slots, 3R w/ protection
2557	MSM12G-R	Multi-rate, Multi-protocol extender/transponder MetroStar module, 1Gbps to 12.5Gbps, 4 SFP+ slots, 3R w/ protection

SFP+ Transceivers		
Part #	**Model**	**Description**
3880	SFPP-85	SFP+ transceiver, multi-rate, MM, Duplex LC, 850nm, 300m
3881	SFPP-13-10	SFP+ transceiver, multi-rate, SM, Duplex LC, 1310nm/DFB, 10km, 8dB power budget
3882	SFPP-15-40	SFP+ transceiver, multi-rate, SM, Duplex LC, 1550nm/EML, 40km, 16dB power budget
3883	SFPP-15-80	SFP+ transceiver, multi-rate, SM, Duplex LC, 1550nm/EML/APD, 80km, 23dB power budget
3872	SFPP-15-100	SFP+ transceiver, multi-rate, SM, Duplex LC, 1550nm/EML/APD , 100km, 26dB power budget
3884	SFPP-S12-15	SFP+ transceiver, multi-rate, SM, single fiber, Simplex LC, Tx:1270nm/Rx:1330nm /DFB, 15km, 9dB power budget
3885	SFPP-S13-15	SFP+ transceiver, multi-rate, SM, single fiber, Simplex LC, Tx:1330nm/Rx:1270nm /DFB, 15km, 9dB power budget
3873	SFPP-S12-20	SFP+ transceiver, multi-rate, SM, single fiber, Simplex LC,Tx:1270nm/Rx:1330nm /DFB, 20km, 12dB power budget
3874	SFPP-S13-20	SFP+ transceiver, multi-rate, SM, single fiber, Simplex LC,Tx:1330nm/Rx:1270nm /DFB, 20km, 12dB power budget
3886	SFPP-S12-40	SFP+ transceiver, multi-rate, SM, single fiber, Simplex LC, Tx:1270nm/Rx:1330nm /DFB, 40km, 16dB power budget
3887	SFPP-S13-40	SFP+ transceiver, multi-rate ,SM, single fiber, Simplex, LC, Tx:1330nm/Rx:1270nm /DFB, 40km, 16dB power budget
3875	SFPP-S12-60	SFP+ transceiver, multi-rate, SM, single fiber, Simplex LC,Tx:1270nm/Rx:1330nm /DFB, 60km, 21dB power budget
3876	SFPP-S13-60	SFP+ transceiver, multi-rate, SM, single fiber, Simplex LC,Tx:1330nm/Rx:1270nm /DFB, 60km, 21dB power budget
3888-XX	SFPP-C8-XX	SFP+ transceiver, multi-rate,-CWDM, Duplex LC, 1xx0nm (1270-1330nm)/EML, 8km, 10dB power budget
3889-XX	SFPP-C10-XX	SFP+ transceiver, multi-rate, CWDM, Duplex LC, 1xx0nm (1470-1610nm)/EML, 10km, 10dB power budget
3890-XX	SFPP-C30-XX	SFP+ transceiver, multi-rate (1-10Gbps), CWDM, Duplex LC, 1xx0nm (1470-1610nm)/EML, 30km, 14dB power budget
3891-XX	SFPP-C60-XX	SFP+ transceiver, multi-rate, CWDM, Duplex LC, 1xx0nm (1470-1610nm)/EML/APD, 60km, 23dB power budget
3892-XX	SFPP-D-40-xx	SFP+ transceiver, multi-rate, DWDM, Duplex LC, C-band/ITU channel xx/100GHz/EML, 40km, 14dB power budget
3893-XX	SFPP-D-80-xx	SFP+ transceiver, multi-rate, DWDM, Duplex LC, C-band/ITU channel xx/100GHz/EML, 80km, 24dB power budget