Datasheet

TM-D4GSFP - LambdaDriver® 1,2 & 4.25 Gigabit Fiber Channel Transponder Module

Features

- ITU-T grid (G.694.1) wavelengths for 100 GHz or 200 GHz spacing for DWDM
- Works on standard G.652 / G.655 fiber
- 2R/3R options selection
- 1.06, 2.12 & 4.25 Gigabit fiber channel
- SFP access interface for highest flexibility
- SFP digital diagnostics as per SFF-8472 support
- Compatibility with any SFP vendor according to MSA SFF-8074i
- Link Integrity motification (LIN)
- Power Monitoring
- Y Cable protection support
- Loop-back
- Automatic Laser Shutdown (ALS)
- Hot swappable module
- SNMP manageable by LambdaDriver management module
- 80km maximum distance without dispersion and power compensation

TM-D4GSFP

Overview

The TM-D4GSFP transponder is part of the LambdaDriver product line and can be hosted by the LD400, LD800 and LD1600 chassis.

The transponders are single slot modules that interface between the DWDM multiplexers and the terminal equipment. These modules provide light paths at ITU-T grid DWDM wavelength, which can carry Fibre Channel 4.

The terminal equipment interface possesses an SFP (Small Form Factor Pluggable) receptacle, thus providing the highest flexibility in terminal equipment interface selection.
Using SFP transceivers enables the customer to easily change the type of optical interface according to the different needs of terminal equipment. SFP transceivers are pluggable, and can easily be reused at different locations for different applications, thus maximizing the return on investment in optics and equipment, and reducing the need for on-hand parts inventory.

Transponders are operated completely independently of the other parts of the system and can be hot swapped without having to interrupt other services running through the same system.

For laser safety requirements, all transponders are equipped with the Automatic Laser Shutdown (ALS) functionality, which reduces the optical power of the transmitters automatically in case of a broken link. The ALS functionality is implemented on both ports of the transponders (WDM side and Terminal equipment side).
The local and remote loop-back as well as the Remote Laser Shutdown functions assist in troubleshooting the network and provide a cost effective way of pinpointing a problem.

The Link Integrity Notification function allows the terminal equipment to detect the link failure in the path between the two terminal equipments regardless of the location of the failure. The link failure is propagated throughout the network until it reaches the terminal equipment, by disabling the transmission immediately upon failure detection at the opposite port of the transponder.

The TM - D4GSFP transponders provide power monitoring on the DWDM port in addition to Digital Diagnostics supplied from the SFP port. This function provides a dB value of transmitting and receiving optical signal at the transponder, giving the network manager an additional tool per analyzing the quality of the fiber optic network.
The TM - D4GSFP transponders support Y-Cable protection protocol, used in cases of full hardware protection of the transport equipment with only one terminal port for every service. In this protection mode each two adjacent transponders in LambdaDriver® chassis run proprietary protocols in order to maintain "operational" and "standby" transponders operation.

The DWDM transponders achieve distances of:
- up to   80 km without dispersion and power compensation for 4.25 Gbps Fiber Channel
- up to 100 km without dispersion and power compensation for 2.125 Gbps Fiber Channel
- up to 120 km without dispersion and power compensation for 1.0625 Gbps Fiber Channel

Technical Specifications

Physical dimensions	W: 26.93mm (1.06 In); H:130.7 (5.145 In); D:227.5mm (8.956 In)
Weight	0.55 kg (1.21 lb)
Optical connector	MiniSC (MU) - WDM port; SFP -Terminal equipment port
Data rate	1.0625, 2.125 or 4.25 Gbps fiber channel
WDM grid	DWDM: ITU-T - G.694.1
Minimum laser power	DWDM +3.5 dBm
Minimum receiver sensitivity	1.06 Gbps -32 dBm 2.12 Gbps -28 dBm 4.25 Gbps -22 dBm
Maximum receiver power	-5 dBm +/- 1 dBm
Dispersion penalty	20 dB at 1800 ps/nm

Order Info	**1,2 & 4.25 Gigabit Fiber Channel Transponder Module**	
	TM-D4GSFP/xx	1.06 ,2.12 & 4.25 Gigabit Fiber Channel Transponder Module

* xx - Represents the wavelength 21-59 for DWDM

Note: For additional information on Fiber Channel SFP transceiver types, please refer to MRV Plug-ins documentation