X86-TDC

Tunable Dispersion Compensator

Features

- The TDC provides dispersion compensation over the range of dispersion values
- Latency is less than 25 ns
- Two versions of tunable dispersion compensators are available: with tuning range ±800 ps/nm and ±1200 ps/nm
- It can be used in 50 GHZ or 100 GhZ networks
- Does not change the optical signal
- Simple maintenance

Applications

- 50 GHz or 100 GHz networks
- G.652 Standard Single-Mode Fiber Long Distance Communication System

Description

XenOpt's X86-TDC (tunable dispersion compensator) card is used for dispersion compensation of high-speed transmission systems that are sensitive to chromatic dispersion like 10 to 40 Gb transmission with NRZ signaling. TDC allows setting of precise chromatic dispersion correction in range up to ±1200 ps (80km of G.652 fiber). TDC module is therefore especially suitable for connections that require precise CD correction like PAM4 DWDM transceivers and can be used in any high speed DWDM system.

Environmental parameters

Parameter	Min	Max
Operating Temperature Range	-5℃	70℃
Storage Temperature Range	-40℃	85℃
Environment/Reliability Test	Compliance with Telcordia GR-285 and GR-1221 Standard	

Product diagram

Product Specification

Function	Description	
Working wavelength range	C band: 1528 nm~1568 nm	
Channel spacing	50 GHz	
Dispersion compensation range	±800 ps/nm	±1200 ps/nm
Absolute dispersion accuracy	±25 ps/nm	±60 s/nm
Introduction loss	＜4 dB	
PDL	＜0.3 dB	
PMD	＜1 ps	
Max input optical power	+27 dBm	
Dispersion setting resolution	±10 ps/nm	
Button and display function	Support local button operation dispersion compensation range setting, with the display that can visually display the current status	
Network management function	Support real-time monitoring of TDC optical power, remote setting of dispersion compensation range, etc.	
Occupied slot number	Support X86-OTNS8600 series chassis	
Optical interface	LC/UPC	
Max power consumption	5 W	
MTBF	＞100000 hours	

Notes

(1) Specified insertion loss is the max IL value within C - band (1525nm-1565nm).

(2) PMD is the average differential group delay within C - band measured by Jones Matrix method

(3) Values of parameters for intermediate lengths increase linearly with compensation distance, see ordering for for available compensation distances

(4) Modules for other distances/compensation dispersion can be produced on request.

Ordering information

PN	Description
X86-TDC-800	Tunable DCM with ±800 ps range, -5℃～+70℃
X86-TDC-1200	Tunable DCM with ±1200 ps range, -5℃～+70℃

Notes

[1] Up to 10 DCM modules (typically 2 to 4)

[2] Custom versions with multiple Bragg Grating chromatic compensation are also available