datasheet

Nevion SFPs

GbE SFP range

Gigabit Ethernet SFP transceiver

Nevion's extensive range of Gigabit Ethernet SFP transceivers are designed for CWDM and DWDM applications.

The range of transceivers supports 850nm, 1310nm, 18 channel for CWDM applications and 40 channels for DWDM applications. These optical transceivers are available with short haul or long haul receivers. Single port CWDM transceiver allows Gigabit Ethernet transport over a single fiber without the need for additional filters.

These SFP transceivers are pluggable devices that enable easy exchange or upgrade of optical ports to Nevion's Ventura, Flashlink, and Vikinx eMerge product ranges.

Applications

- Ventura
- Flashlink
- VikinX eMerge

Key features

- 850nm multi mode transceiver
- 13T transceiver
- 18 channel CWDM support
- 40 channel DWDM support
- 1270nm/1330nm CWDM single port transceiver
- upto 34dB budget

Product description

The Gigabit Ethernet SFP are small form factor pluggable transceivers that consist of an optical transmitter and an optical receiver. The transmitter and receiver technology in use is different between the different SFP products. The optical budgets specified in Table 1 for the different SFP's are defined as the link budget of a direct connection between two SFP's of equal type.

The single port SFP's are transceiver that include a built-in 2-channel CWDM filter for 1270nm and 1330nm. This technology enables bi-directional optical transport on a single fiber link without the need for external filters. Two SFP's with different optical transmitters are needed to create the link, one with a 1270nm laser and one with a 1330nm laser, both internally connected to their respective filter ports.

All SFP's have the ability to report information such as wavelength, received signal level, launch power and internal temperature. This information is available in some of Nevion's SFP based products presented through their respective element management system.

Table 1: SFP models and performance summary

Order No	Product name	Optical system	Optical budget	Wavelength	Launch power min/max	Minimum sensitivity	Receiver overload
21360	SFP-TR1 – 850-SR	Multi-mode	8dB	850nm	-9dBm/-3dBm	-17dBm	-3dBm
23034	SFP-TR1-13T-ER	Single mode	22dB	1310nm	-2dBm/+3dBm	-24dBm	-3dBm
23035	SFP-TR1-C1xxx-ER	CWDM single mode	24dB	1270nm – 1610nm	0dBm/+5dBm	-24dBm	-3dBm
23037	SFP-TR1-C1xxx-ZR	CWDM single mode	34dB	1270nm – 1610nm	+2dBm/+7dBm	-32dBm	-10dBm
23038	SFP-TR1-D15xx.xx-ER	DWDM single mode	24dB		0dBm/+5dBm	-24dBm	-3dBm
23039	SFP-TR1-D15xx.xx-ZR	DWDM single mode	32dB		0dBm/+5dBm	-32dBm	-10dBm
23040	SFP-TR1-T1270/R1330-ER	single port single mode	24dB	Tx: 1270nm Rx: 1330nm	0dBm/+5dBm	-24dBm	-3dBm
23041	SFP-TR1-T1330/R1270-ER	single port single mode	24dB	Tx: 1330nm Rx: 1270nm	0dBm/+5dBm	-24dBm	-3dBm

Specifications

Optical transmitter 850nm

Connector	LC/UPC, multi mode
Center wavelength	850nm +/- 20nm
Extinction ratio	min 9dB

Optical transmitter 1310nm

Connector	LC/UPC, single mode
Center wavelength	1310nm +/- 50nm
Extinction ratio	min 9dB

Optical transmitter CWDM

Connector	LC/UPC, single mode
Center wavelength	1270nm - 1610nm +/- 7.5nm, in 20nm steps
Extinction ratio	min 8dB

Optical transmitter DWDM

Connector	LC/UPC, single mode
Center wavelength	1530.33nm - 1561.42nm in 0.8nm steps
Extinction ratio	min 8dB

Optical multi mode receiver

Connector	LC/UPC, multi mode
Optical wavelength	840nm - 860nm

Optical single mode receiver

Connector	LC/UPC, single mode
Optical wavelength	1260nm - 1620nm

Physical and environmental

Power consumption	<1.5W
Operating temperature	0°C to 70°C
Storage temperature	-40°C to 85°C
Relative humidity	5% to 85%

Ordering options

21360 SFP-TR1-850-SR	Gigabit Ethernet SFP standard optical 850nm Multi-Mode transceiver that is well suited for short reach transmission on 50 /125 um MMF.
23034 SFP-TR1-13T-ER	Gigabit Ethernet SFP standard optical 1310nm transceiver that is well suited for short/mid haul applications.
23035 SFP-TR1-C1xxx-ER	Gigabit Ethernet SFP optical CWDM extended reach transceiver available with all 18 CWDM wavelengths. These SFPs are well suited for short/mid haul applications.
23037 SFP-TR1-C1xxx-ZR	Gigabit Ethernet SFP optical CWDM ultra extended reach transceiver available with all 18 CWDM wavelengths. These SFPs are well suited for mid/long haul applications.
23038 SFP-TR1-D15xx.xx-ER	Gigabit Ethernet SFP optical DWDM extended reach transceiver available with 40 DWDM wavelengths at 100MHz spacing. These SFPs are well suited for short/mid haul applications.
23039 SFP-TR1-D15xx.xx-ZR	Gigabit Ethernet SFP optical DWDM ultra extended reach transceiver available with 40 DWDM wavelengths at 100MHz spacing. These SFPs are well suited for mid/long haul applications.
23040 SFP-TR1-T1270/R1330-ER	Gigabit Ethernet SFP optical single port extended reach transceiver. The device has built in 1270nm/1330nm WDM filter allowing transport of GbE over a single fiber without external devices. 1270nm transmitter/ 1330nm receiver.
23041 SFP-TR1-T1330/R1270-ER	Gigabit Ethernet SFP optical single port extended reach transceiver. The device has built in 1270nm/1330nm WDM filter allowing transport of GbE over a single fiber without external devices. 1330nm transmitter/ 1270nm receiver.

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