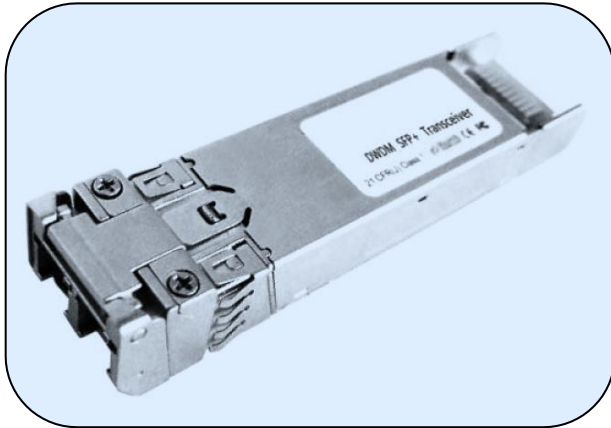


XTDxxA-40LY

SFP+ DWDM 10 Gbps 40 km
Transceiver



Applications

- 10GBASE-E (with/without FEC)
- 10G Fiber Channel

Description

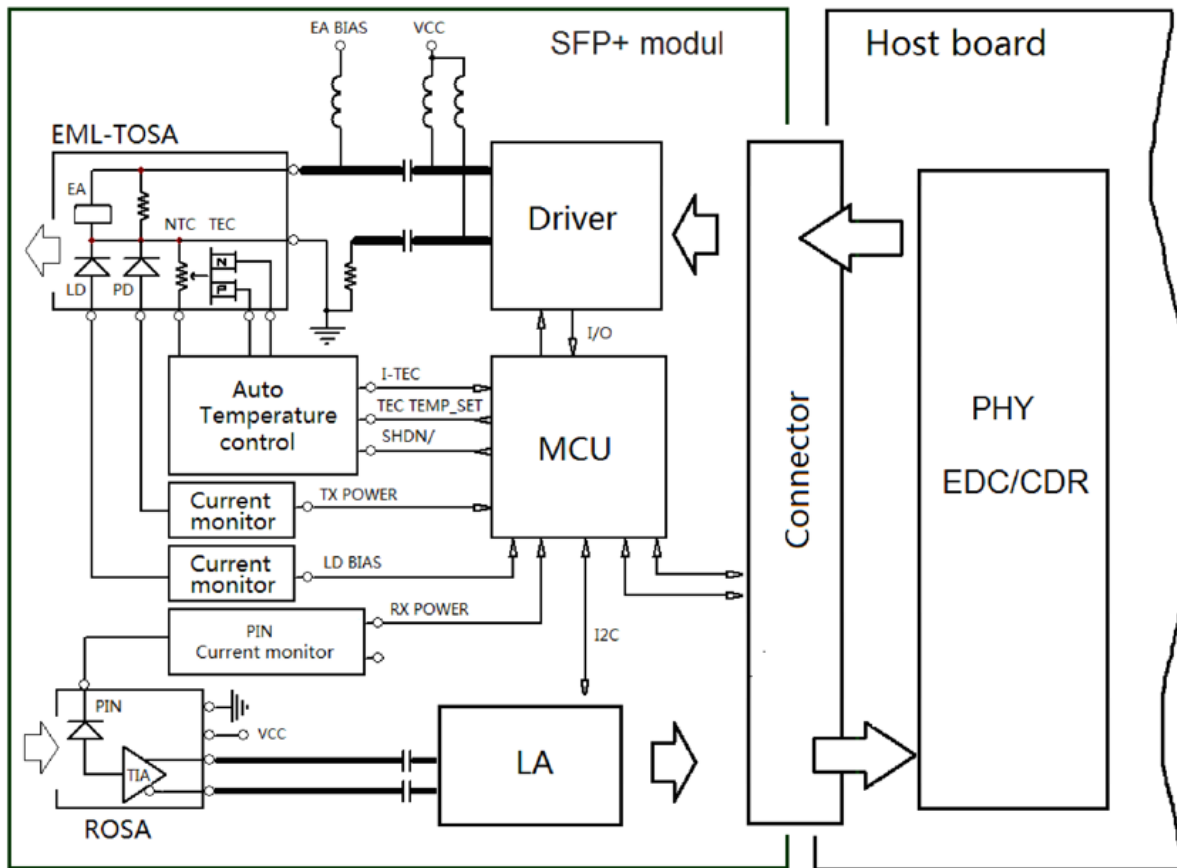
The SFP+ ER DWDM Transceiver is designed for 10GBASE-ER, and 2G/4G/8G/10G Fiber-Channel applications.

The transceiver consists of two sections: The transmitter section incorporates a cooled EML laser and the receiver section consists of a PIN photo diode integrated with a TIA. All modules satisfy class I laser safety requirements. Digital diagnostics functions are available via a 2-wire serial interface, as specified in SFF-8472, which allows real-time access to device operating parameters such as transceiver temperature, laser bias current, transmitted optical power, received optical power and transceiver supply voltage.

Features

- Compliant with SFF-8431 and IEE802.3ae
- 10GBASE-ER, and 2G/4G/ 8G/10G Fiber Channel applications
- Suitable for use in 100 GHz channel spacing DWDM systems
- Cooled EML transmitter and PIN receiver
- Link length up to 40 km
- Low Power Dissipation 1.5 W Maximum
- Single +3.3 V power supply
- Diagnostic Performance Monitoring of module temperature, supply Voltages, laser bias current, transmit optical power, receive optical power
- RoHS compatible and lead free
- Operating case temperature range -5 °C to +70 °C (Standard)

Functional Diagram



Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage	Vcc	-0.5	3.8	V
Storage Temperature	Tst	-40	85	°C
Relative Humidity	Rh	0	85	%

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Operating Case Temperature	Tca	-5	-	+70	°C
Power Supply Voltage	Vcc	3.13	3.30	3.46	V
Power Supply Current ¹	Icc	-	360	450	mA
Module Power Dissipation	Pm	-	1.2	1.5	W

Transmitter Optical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Centre Wavelength - Start of Life ¹	λ_c	λ_c-25	λ_c	λ_c+25	pm
Centre Wavelength - End of Life ¹	λ_c	λ_c-100	λ_c	λ_c+100	pm
Spectral Width (-20 dB)	$\Delta\lambda_{20}$	-	-	0.3	nm
Side-Mode Suppression Ratio	SMSR	30	-	-	dB
Average Output Power	P_o	-1	-	3	dBm
Optical Transmit Power (disabled)	PTX-DISABLE	-	-	-30	dBm
Extinction Ratio	ER	8.2	-	-	dB
Relative Intensity Noise	RIN	-	-	-128	dB/Hz
Optical Return Loss Tolerance	Orl	-	-	21	dB

Receiver Optical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Input Operating Wavelength	λ	1260	-	1600	nm
Average receive power	P_{avg}	-15.8	-	-1.0	dBm
Receiver sensitivity in 9.95 Gbps~11.1 Gbps (OMA)	Rsen1	-	-	-14.1	dBm
Stressed receiver sensitivity in 9.95 Gbps~11.1 Gbps (OMA)	Rsen2	-	-	-11.3	dBm
Dispersion penalty (800 ps/nm) PRBS 2 ³¹ -1@9.95~11.1 Gbps	DP	-	-	2	dB
Reflectance	Rrx	-	-	-26	dB
LOS Asserted	Lsa	-28	-	-	dBm
LOS De-Asserted	Lda	-	-	-19	dBm
LOS Hysteresis	Lh	0.5	-	-	dB

Note

1. Measured with conformance test signal for BER = 10⁻¹². The stressed sensitivity values in the table are for system level BER measurements which include the effects of CDR circuits. It is recommended that at least 0.4 dB additional margin be allocated if component level measurements are made without the effects of CDR circuits.

Transmitter Electrical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Data Rate	Mra	0.6	10.3	11.3	Gbps
Input differential impedance	Rim	-	100	-	Ω
Differential data Input	VtxDIFF	120	-	850	mV
Transmit Disable Voltage	VD	2.0	-	Vcc3+0.3	V
Transmit Enable Voltage	Ven	0	-	+0.8	V
Transmit Disable Assert Time	Vn	-	-	100	us

Receiver Electrical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Data Rate	Mra	0.6	10.3	11.3	Gbps
Differential Output Swing	Vout P-P	350	-	850	mV
Rise/Fall Time	Tr/Tf	24	-	-	ps
Loss of Signal –Asserted	VOH	2	-	Vcc3+0.3-	V
Loss of Signal –Negated	VOL	0	-	+0.4	V

Ordering information¹

Part number	Product Description
XTDxxA-40LY	SFP+ DWDM Transceiver, 10 Gbps, 40 km, LC, DDM, -5 °~70 °C, xx=ITU Grid 17~61

Notes

¹ For accurate order specification please contact XenOpt reseller before placing an order. The content of this document is subject to change without notice. XenOpt does not guarantee errorless or outdated information.

Please specify any compatibility requirements at time of ordering. Standard MSA compatible pluggable components may not work or some function of these components may not be available in devices that require customized compatible devices. Pluggable components compatible with one type of communications equipment may not work in other type of communications equipment.

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