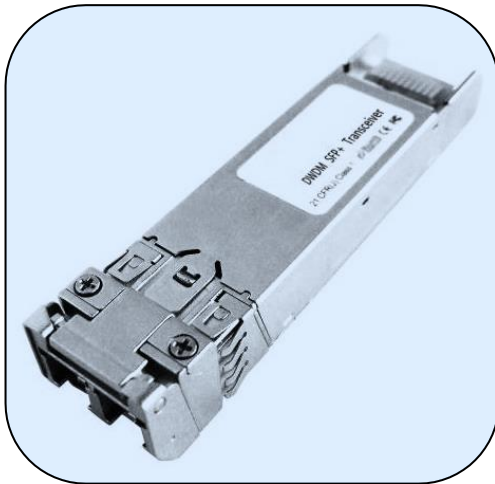


XTDxx8-40LY

SFP+ DWDM 40 km Optical Transceiver



Applications

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

Description

The XTDxx8-40LY transceiver consists of two sections: The transmitter section incorporates a cooled EML laser and the receiver section consists of a PIN photodiode integrated with a TIA. 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, SFF-8432 and IEE802.3ae
- 10GBASE-ER, and 2G/4G/ 8G/10G Fiber Channel applications.
- Suitable for use in 100GHz channel spacing DWDM systems
- Cooled EML transmitter and PIN receiver
- Link length up to 40 km
- Low Power Dissipation 1.5 W Maximum
- Diagnostic Performance Monitoring of module temperature, supply Voltages, laser bias current, transmit optical power, receive optical power
- Operating case temperature: -5°C to 70°C
- Single 3.3 V power supply
- RoHS compliant and lead free

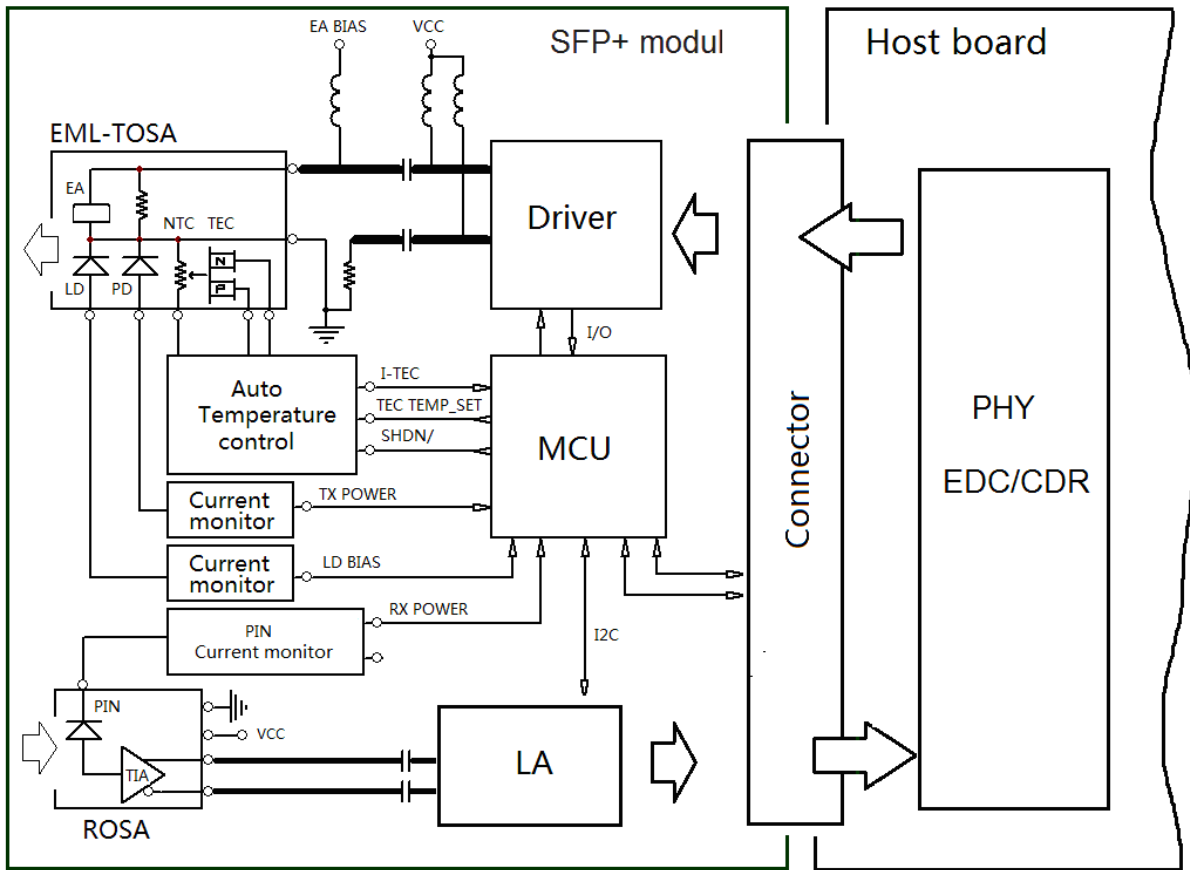


Figure 1. Module Block Diagram

Absolute Maximum Ratings

Parameters	Symbol	Min.	Max.	Unit
Supply Voltage	V _{CC}	-0.5	3.8	V
Storage Temperature	T _{st}	-40	85	°C
Humidity	R _h	0	85	%

Recommended Operating Conditions

Parameter	Symbol	Min.	Typical	Max	Unit
Supply Voltage	V _{CC}	3.13	3.3	3.46	V
Supply Current	I _{CC}	-	360	450	mA
Operating Case Temperature	T _{ca}	-5	-	70	°C
Module Power Dissipation	P _m	-	1.2	1.5	W

Electrical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Transmitter					
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					
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

Optical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Transmitter					
Center Wavelength-Start of Life [1]	λ_c	$\lambda_c - 25$	λ_c	$\lambda_c + 25$	pm
Center Wavelength-End of life [1]	λ_c	$\lambda_c - 100$	λ_c	$\lambda_c + 100$	pm
Spectral Width (-20 dB)	$\Delta\lambda_{20}$	-	-	0.3	nm
Average Optical Power	Po	-1	-	+3	dBm
Side Mode Suppression Ratio	SMSR	30	-	-	dB
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					
Input Operating Wavelength	λ	1260	-	1600	nm
Average receive power	Pavg	-15.8	-	-1.0	dBm
Receiver sensitivity in 9.95 G~11.1 Gbps (OMA)	Rsen1	-	-	-14.1	dBm
Stressed receiver sensitivity in 9.95G~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

Notes

- [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.

Ordering information¹

PN	Description
XTDxx8-40LY	SFP+ DWDM 10 Gbps, 40 km, 0°C ~ +70°C, DDM, xx = ITU grid 17 ~ 61

Notes:

¹ Specification may change without notice. For accurate specification please contact XenOpt reseller before placing an order. The content of this document is subject to change without notice. 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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