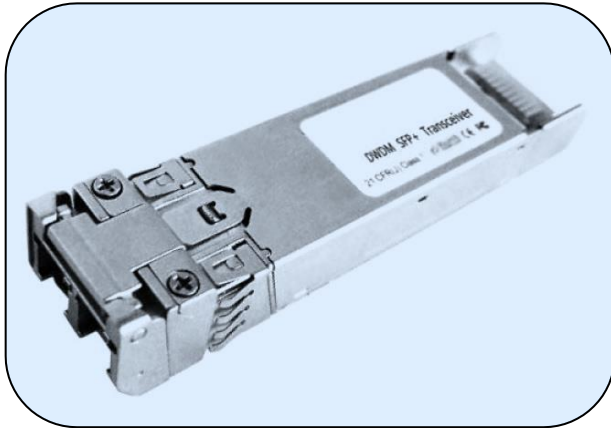


XTDxxA-80LY

SFP+ DWDM 10 Gbps 80 km
Transceiver



Applications

- 10G Ethernet (with/without FEC)
- SDH (STM64)/SONET (OC-192)/OTN
- 10G Fiber Channel
- ITU-T G.698.1 DS100S1-2Dz(C)

Description

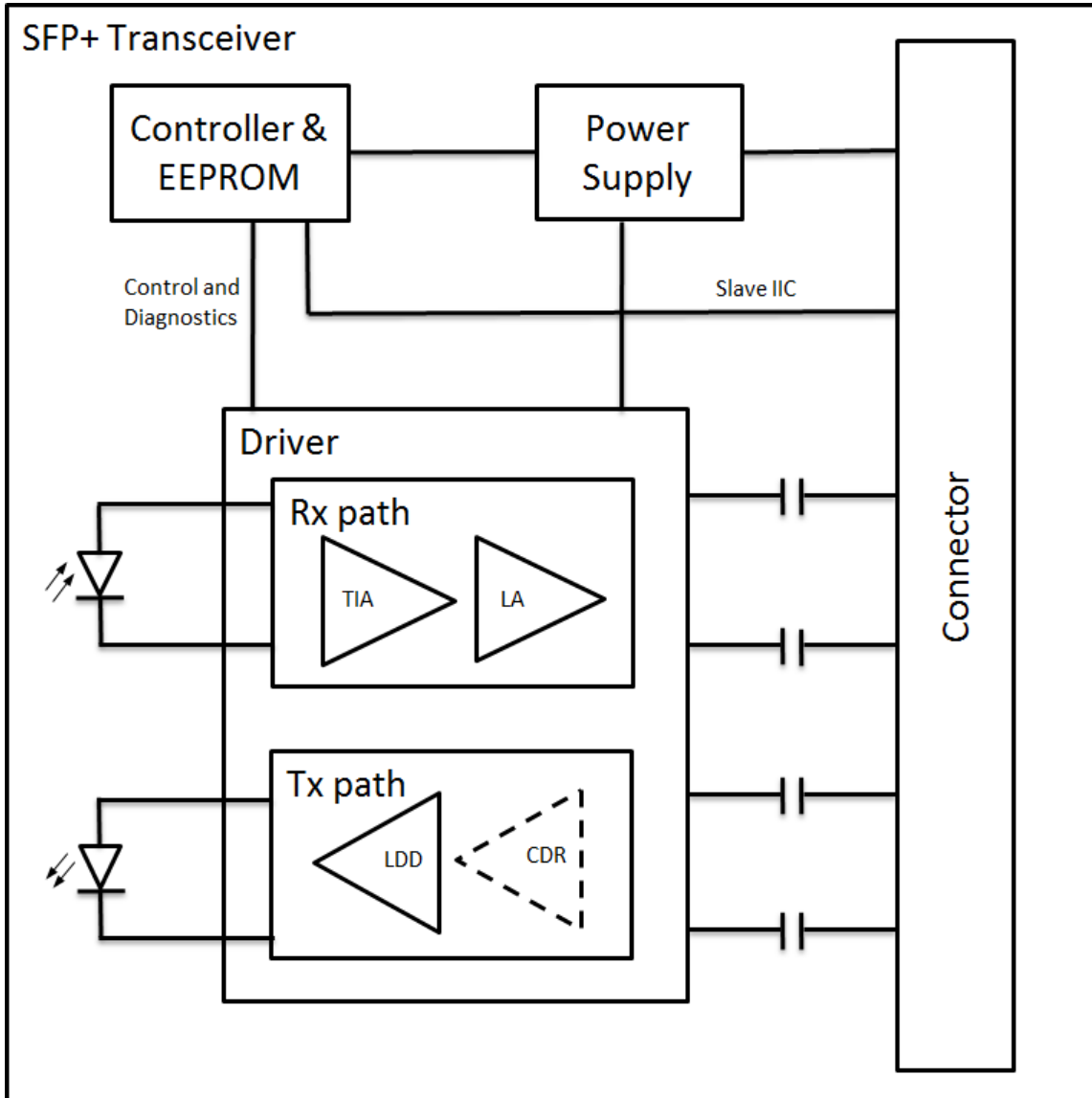
The SFP+ ZR DWDM Transceiver is designed for SONET OC-192, SDH STM-64, 10 Ethernet ZR, OTU2, OTU2e and 10G Fiber Channel applications over 80 km G.652 SMF.

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

- Hot pluggable SFP+ footprint
- Supports 9.8 to 11.3 Gbps
- Suitable for use in 100 GHz channel spacing DWDM systems
- Cooled EML transmitter and APD receiver
- Link length up to 80 km on G.652D SMF
- Maximum power dissipation <1.8 W (Typical 1.4 W)
- Single +3.3 V power supply
- Duplex LC connector
- Built-in digital diagnostic interface
- RoHS compatible and lead free
- Operating case temperature range -5 °C to +75 °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	%
Max Link Length	Lmax	-	80	km

Note

1. Non-condensing

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Operating Case Temperature	Tca	-5	-	+75	°C
Power Supply Voltage	Vcc	3.13	3.30	3.47	V
Power Supply Current	Icc	-	420	550	mA
Module Power Dissipation	Pm	-	1.4	1.8	W

Transmitter Optical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
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 ²	AOP	0	-	4	dBm
Optical Transmit Power (Disabled)	Poff	-	-	-30	dBm
Extinction Ratio	ER	8.2	-	-	dB
Relative Intensity Noise	RIN	-	-	-128	dB/Hz
Optical Return Loss Tolerance	Orl	-	-	21	dB

Notes

1. Wavelength stability is achieved within 60 seconds (max) of power up
2. Minimum OMA = -2.4 dBm

Receiver Optical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Input Operating Wavelength	λ	1260	-	1620	nm
Average receive power	Pavg	-24	-	-5	dBm
Sensitivity (0 km, 9.95~10.7 G) ²	Rsen1	-	-	-24	dBm
Sensitivity (80 km, 9.95~10.7 G) ²	Rsen2	-	-	-22	dBm
Sensitivity (0 km, 11.1~11.3 G) ³	Rsen3	-	-	-27	dB
Sensitivity (80 km, 11.1~11.3 G) ³	Rsen4	-	-	-24	dB
Maximum Input Power	RX-overload	-5	-	-	dB
Loss of Signal Asserted	LOS _A	-34	-	-	dBm
LOS De-Asserted	LOS _D	-	-	-24	dBm
LOS Hysteresis	LOS _H	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.
2. Measured with worst ER=8.2dB; $2^{31} - 1$ PRBS. BER < $1E^{-12}$
3. PRBS $2^{31} - 1$ and BER < $1E^{-4}$

Transmitter Electrical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Bit Rate	BR	9.8	-	11.3168	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	μ s

Receiver Electrical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Bit Rate	BR	9.8	10.3	11.3168	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-80LY	SFP+ DWDM Transceiver, 10 Gbps, 80 km, LC, DDM, -5 °~75 °C, xx=ITU Grid 18~61

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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