

10Gb/s 40Km DWDM SFP+ Transceivers RTXM228-2XX

The RTXM228-2XX transceivers are designed to transmit and receive serial optical data over 40km single mode optical fiber.

They are compliant with SFF-8431, SFF-8432, 10GFC, ITU-T G.691 and 10GBASE-ER/EW. The transmitter converts serial CML electrical data into serial optical data compliant with the IEEE 802.3ae standard. The receiver converts serial optical data into serial CML electrical data. Digital diagnostics functions are available via a 2-wire serial interface, as specified in SFF-8472.

Specifications

(Tc=-5 °C to 70 °C and Vcc= 3.14 to 3.46V)

Parameter	Symbol	Unit	Min	Typ	Max	Note
Transmitter						
Nominal Wavelength		nm	1528.77		1563.05	
Center wavelength Spacing		GHz	-	100	-	
Wavelength Tolerance		pm	-50		50	
Side Mode Suppression Ratio	SMSR	dB	30			
Spectral Width(-20dB)	Δ	nm			0.3	
Optical Output Power	Pav	dBm	-1		2	
Extinction Ratio	ER	dB	8.2			
Transmitter and Dispersion Penalty	TDP	dB			3	1
Average Launch Power of OFF Transmitter	POFF	dBm			-30	
Receiver						
Center Wavelength		nm	1260		1620	
Receiver Sensitivity	RSEN	dBm			-15.8	2
Receiver Sensitivity(OMA)	RSEN	dBm			-14.1	2
Overload		dBm	0.5			
Optical Return Loss		dB	27		-	
LOS Assert	LOSA	dBm	-30			
LOS De-Assert LOS	LOSD	dBm			-17	
LOS Hysteresis		dB	0.5		6	

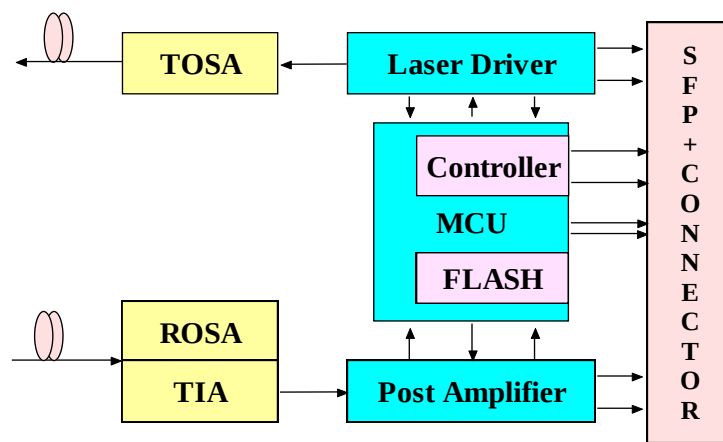
Applications

- 10G SONET&SDH
- 10GBASE-ER/EW
- 10G Fiber Channel

Dispersion Penalty at BER=1×10⁻¹² , 10.3125Gbps ,PRBS ,
40km Fiber.

Ordering Information

Block diagram



Absolute Maximum Ratings

Recommended Operating Conditions

Electric Ports Definition

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Pin configuration diagram for the ATmega328P microcontroller. The diagram shows pins 11 through 17 on the left, labeled "TOWARD HOST", and pins 3 through 10 on the right, labeled "TOWARD BEZEL". Each pin is connected to a specific function:

- Pin 11: VEER
- Pin 12: RD- and RX_LOS
- Pin 13: RD+ and RS0
- Pin 14: VEER and MOD-ABS
- Pin 15: VccR and SCL
- Pin 16: VccT and SDA
- Pin 17: VEET and TX_DISABLE
- Pins 3, 4, 5, 6, 7, 8, 9, and 10 are shown as green rectangles without labels.

Figure 2.Pin function definitions

Pin Number	Symbol	Name	Description
1,17,20	VeeT	Transmitter Signal Ground	These pins should be connected to signal ground on the host

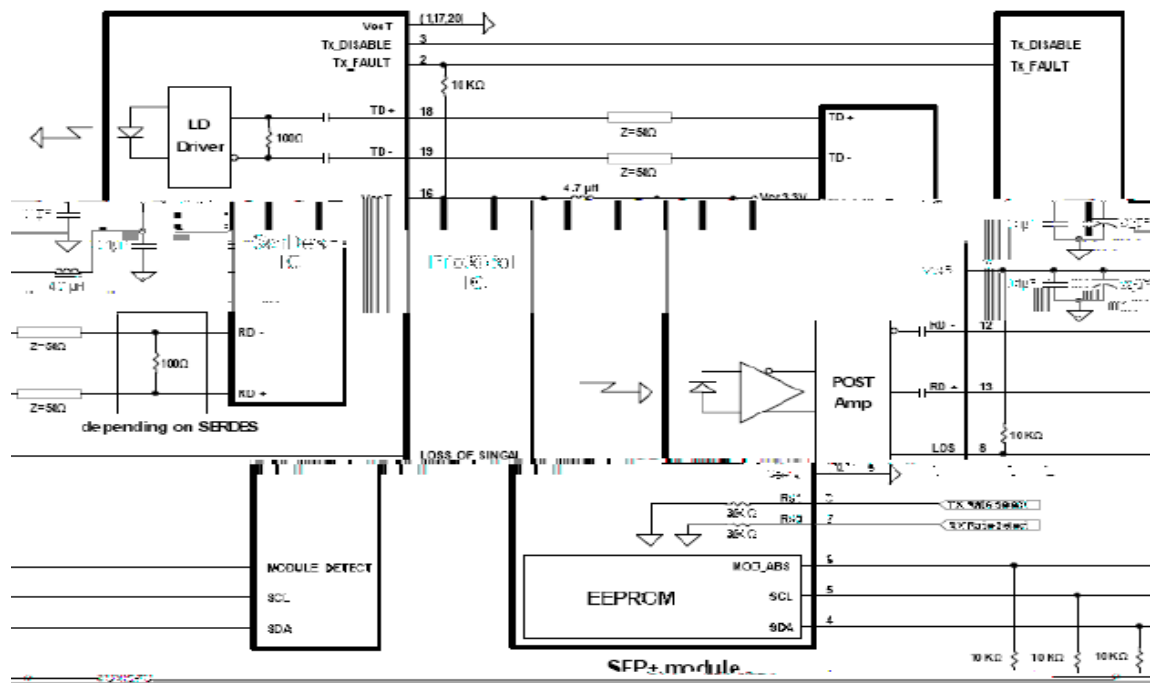
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RTXM228-2XX

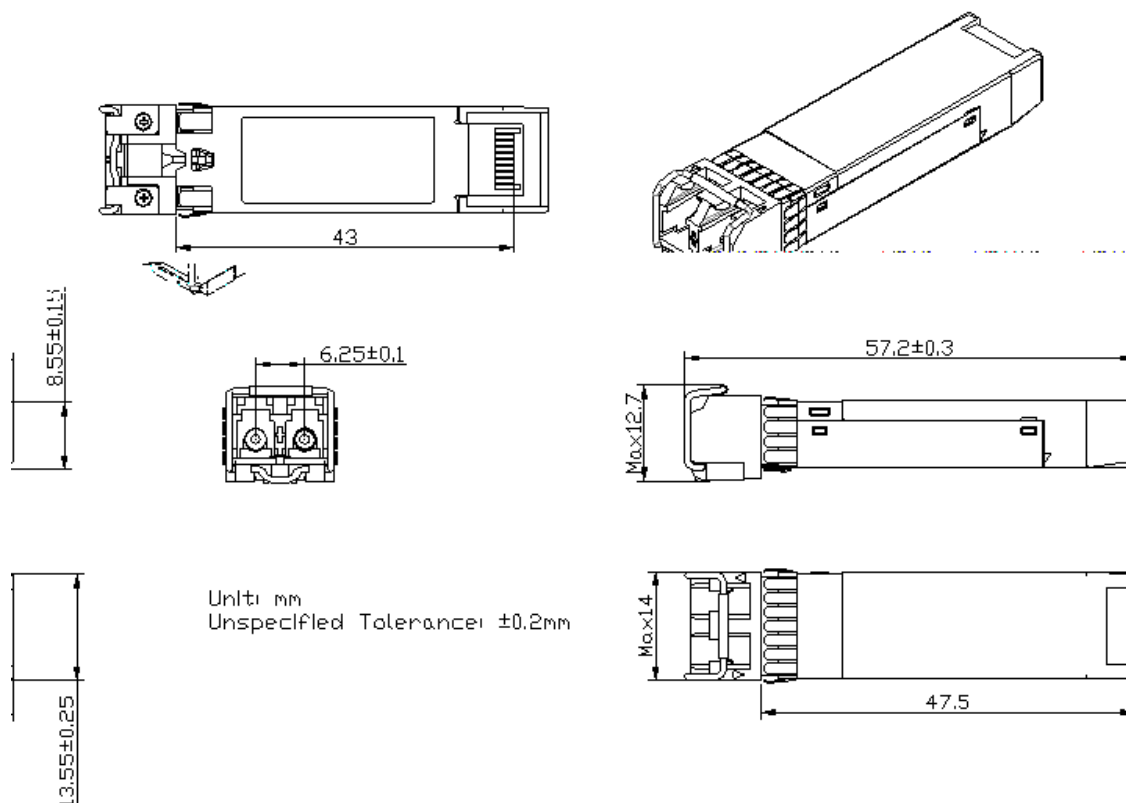
board.		
2	TX Fault	Transmitter Fault Out (OC)
3	TX Disable	Transmitter Disable In (LVTTL)

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Typical Application Circuit



Package Outline



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