



The 1270nm/1330nm 10Gb/s 20km bidirectional transceiver is designed to transmit and receive serial optical data links up from 2.5 to 10.3 Gb/s data rate over G.652 single mode fiber. The transceiver is compliant with SFF-8432, and applicable portions of SFF-8431. Digital diagnostics functions are available via a 2-wire serial interface, as specified in SFF-8472.

Features

- Compliant to SFP+ MSA
- Fully RoHS compliant
- Operating data rate 2.5 to 10.3Gb/s
- Transmission distance up to 20km
- 1270nm/1330nm DFB laser
- LC single connector
- Hot pluggable 20pin connector
- Wide temperature range
- Low power consumption <1W
- Single +3.3V±5% power supply
- Digital monitoring SFF-8472 Rev 10 compliant

Applications

- 10GBASE-LR/LW
- 10G Ethernet
- OBSAI rates 3.072 Gb/s, 6.144Gb/s
- CPRI rates 2.4576 Gb/s, 4.9152Gb/s, 6.144Gb/s, 9.8304 Gb/s

Standards

- IEEE 802.3ae 10GBASE-LR
- SFF-8431 Rev 4
- SFF-8472 Rev 10

Specifications

(Tested under recommended operating conditions, unless otherwise noted)

Parameter		Symbol	Unit	Min	Typ	Max	Note
Optical Transmitter Characteristics							
Data Rate		-	Gbps	2.5		10.3	
Transmission Distance		L	km			20	
Center Wavelength		λ	nm	1260	1270	1280	
				1320	1330	1340	
Spectral Width(-20dB)		$\Delta\lambda_{rms}$	nm			1	1
SMSR		-	dB	30			
Optical Output Power		P_O	dBm	-2		+5	2
Average Launch Power of OFF Transmitter		P_{OFF}	dBm			-30	
Extinction Ratio		ER	dB	3.5			
Relative Intensity Noise		R_{IN}	dB/Hz			-128	
Optical Output Eye		-	-	Compliant with IEEE 802.3ae			
Optical Receiver Characteristics							
Data Rate		-	Gbps	2.5		10.3	
Center Wavelength		λ_C	nm	1320	1330	1340	
				1260	1270	1280	
Receiver Sensitivity		R_{SEN}	dBm			-14.4	3
Receiver Overload		-	dBm	0.5			3
Receiver Reflectance		R_{REFL}	dB			-12	
LOS	Optical Assert	LOS_A	dBm	-30			
	Optical Dessert	LOS_D	dBm			-15	
LOS Hysteresis		-	dB	0.5		6	
Note 1: Spectral width has to be defined over -20dBm.							
Note 2: Minimum output optical level is at end of life.							
Note 3: Sensitivity for PRBS 2 ³¹ -1 and BER better than or equal to 10 ⁻¹² .							

Ordering Information

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max

Recommended Operating Conditions

Parameter	Symbol	Unit	Min	Typ	Max

Principle diagram

