



1.25Gbps SFP Transceiver Bi-Directional 1310nm Tx/1490nm Rx 40km P/N AEX0P0x-3149



Description

Menara Networks' AEX0P0x-3149 bi-directional transceivers are designed for use in links of 40km over a single strand of single mode fiber. The SFP module supports Gigabit Ethernet applications as specified in IEEE 802.3ah along with Fiber Channel 1x. In addition, it is compliant with SONET OC-12 and SONET OC-3 standards.

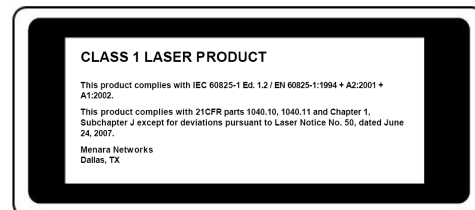
Digital Optical Monitoring interfaces are provided via the SFP SFF-8472 standards compliant I2C interface. The receiver features differential ac-coupled data outputs and LVTTTL for LOS (Loss of Signal) output. Circuit ground is internally isolated from frame ground.

Applications

- 40km 1G bi-directional Gigabit Ethernet
- CPRI: 614Mb/s, 1.22Gb/s
- OBSAI: 768Mb/s

Features

- Hot-pluggable SFP footprint
- RoHS compliant
- Bi-directional optical data links over a single strand of single mode fiber
- Compliant with SFP MSA
- Digital diagnostic SFF-8472 compliant
- 1310nm DFB transmitter
- 1490nm wavelength specific receiver
- Compliant with CPRI and OBSAI signal
- Very low jitter
- Metal package for lower EMI
- Single power supply voltage : +3.3V
- Low power dissipation
- LC diplexer connector
- Laser Class 1 IEC/CDRH compliant
- Distances of 40km



Transmitter E-O Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Support data rate	-	0.155	1.25	1.35	Gb/s	
Center Wavelength	λ	1280	1310	1360	nm	
Spectral Width (RMS)	$\Delta\lambda$			1.0	nm	
Side Mode Suppression Ratio	SMSR	30			dB	
Average Optical Output Power	P _o	-5		-0	dBm	1
Extinction Ratio	Er	9			dB	
Optical Rise/Fall Time (20%~80%)	tr/tf			0.26	ns	
Output Eye Diagram	Compliant with Eye Mask Defined in IEEE802.3ah standard					
Data Input Swing Differential	V _{IN}	400		1800	mV	2
Input Differential Impedance	Z _{IN}	90	100	110	Ω	
TX Disable	Disable	2.0		V _{CC}	V	
	Enable	0		0.8	V	
TX Fault	Fault	2.0		V _{CC}	V	
	Normal	0		0.8	V	

1. The optical power is launched into SMF.
2. PECL input, internally AC-coupled and terminated

Receiver O-E Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Support data rate	-	0.155	1.25	1.35	Gb/s	
Operating Wavelength	λ	1470	1490	1510	nm	
Receiver sensitivity	S _{en}			-23	dBm	3
Saturation	P _{sat}	-3			dBm	3
Receiver Optical Return Loss	-			-27	dB	
LOS Assert	LOS _A	-35			dBm	
LOS Deassert	LOS _D			-24	dBm	
LOS Hysteresis		1		4	dB	
Data Output Swing Differential	V _{OUT}	400		1800	mV	4
LOS	High	2.0		V _{CC}	V	
	Low	0		0.8	V	

3. Measured with a PRBS 2⁷-1 test pattern @ 1250Mbps, BER $\leq 1 \times 10^{-12}$
4. Internally AC-coupled

Ordering Information

Part Number	ROHS Compliant	Operating Case Temperature
AEX0P0x-3149	ROHS-6	0°C ~ +70°C
AEX0P2x-3149		-40°C ~ +85°C

x = J for Juniper
x = C for Cisco
x = A for Alcatel
x = O for Cisco ONS



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