



# 125Mbps SFP Transceiver 1310nm 100BASE-LX10 P/N ALX1P0x-1310 (10km)



## Description

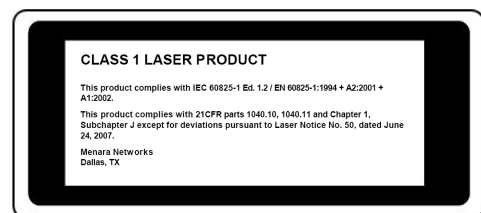
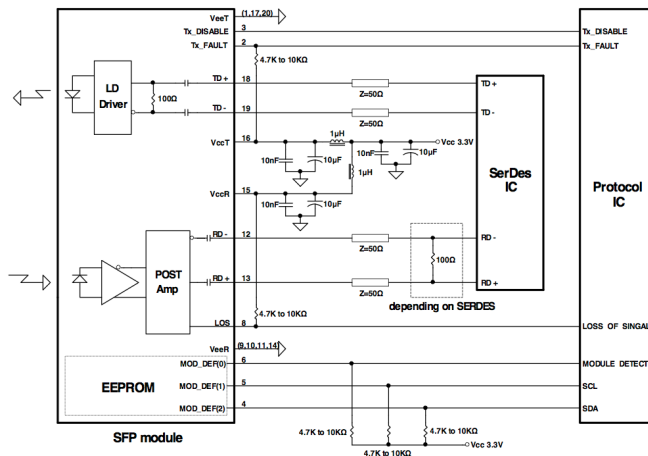
Menara Networks' ALX1P0x-1310 100Base-LX10 SFP is designed for use in single channel 100M Ethernet 1310nm links up to 10km over singlemode fiber. The SFP modules support IEEE 802.3 100BASE-LX10 applications for Ethernet Switches or IP Router optical interfaces. Digital Optical Monitoring interfaces are provided via the SFP SFF-8472 standards compliant I<sup>2</sup>C interface.

## Applications

- 10km 100M Ethernet switch transmission interconnection
- Short reach, Long distance, and Extended distance single-channel Ethernet Switch or IP Router bandwidth expansion

## Features

- Hot-pluggable SFP footprint
- Up to 125Mbps bit rates
- 1310nm FP transmitter
- Single 3.3V power supply
- Power dissipation < 1W
- 0°C to +70°C or -40°C to +85°C
- Duplex LC fiber connectors
- IEEE 802.3 100Base-LX10 compliant
- Full Digital Optical Monitoring
- Metal enclosure for lower EMI
- Complies with RoHS directive (2002/95/EC)
- Compliant with SFP MSA SFF-8472 and SFF-8074
- Laser Class 1 IEC/CDRH compliant
- Links of 10km over singlemode fiber



## Transmitter E-O Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Support data rate	-		125		Mb/s	-
Center Wavelength	$\lambda$	1260	1310	1360	nm	
Spectral Width (RMS)	$\Delta\lambda$			4	nm	
Average Optical Output Power	P <sub>o</sub>	-9	-	-3	dBm	1
Extinction Ratio	ER	9			dB	
Output Eye Diagram	Compliant with IEEE 802.3					
Optical Rise/Fall Time (20%~80%)	tr/tf			0.26	ns	
Data Input Swing Differential	V <sub>IN</sub>	400		1800	mV	2
Input Differential Impedance	Z <sub>IN</sub>	90	100	110	$\Omega$	
TX Disable	Disable	2.0		V <sub>CC</sub>	V	
	Enable	0		0.8	V	
TX Fault	Fault	2.0		V <sub>CC</sub>	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	-		125		Mb/s	-
Operating Wavelength	$\lambda$	1260	-	1580	nm	3
Receiver sensitivity	S <sub>en</sub>			-29	dBm	3
Saturation	P <sub>sat</sub>	-3			dBm	
LOS Assert	LOS <sub>A</sub>	-35			dBm	
LOS Deassert	LOS <sub>D</sub>			-30	dBm	
LOS Hysteresis		1		4	dB	
Data Output Swing Differential	V <sub>OUT</sub>	400		1800	mV	4
LOS	High	2.0		V <sub>CC</sub>	V	
	Low	0		0.8	V	

3. Measured with a PRBS 2<sup>7</sup>-1 test pattern @ 125Mbps, BER  $\leq 1 \times 10^{-12}$
4. Internally AC-coupled

## Ordering Information

Part Number	ROHS Compliant	Operating Case Temperature
ALX1P0x-1310 ALX1P2x-1310	ROHS-6	0°C ~ +70°C -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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