



# 155Mb/s SFP Transceiver IR1

## P/N AI12P0x-1310 (20km)



### Description

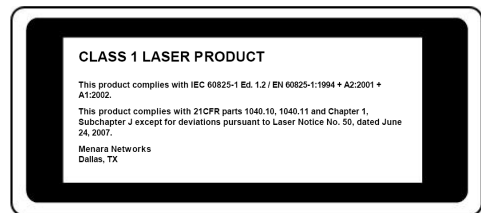
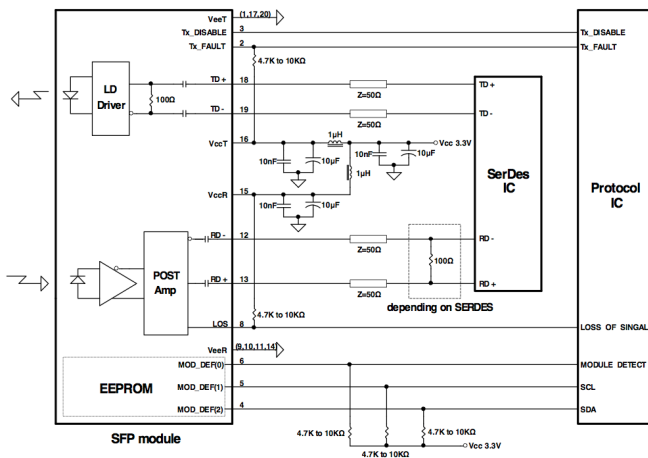
Menara Networks' 155Mb/s AI12P0x-1310 SFP is designed for use in OC-3 SONET IR1 and STM-1 S-1.1 1310nm links up to 20km over 9/125µm singlemode fiber. The use of a 1310nm transmitter provides a low cost interconnect optic option for SONET/SDH transport. Digital Optical Monitoring interfaces are provided via the SFP SFF-8472 standards compliant I<sup>2</sup>C interface.

### Applications

- 155Mb/s 20km transmission distance over 9/125µm singlemode fiber
- SONET/SDH transport

### Features

- Hot-pluggable SFP footprint
- 155Mb/s bit rates
- 1310nm Fabry Perot transmitter
- Single 3.3V power supply
- Power dissipation < 1W
- 0°C to +70°C or -40°C to +85°C
- Duplex LC fiber connectors
- SONET OC-3 IR-1 compliance
- SDH STM-1 S-1.1 compliance
- 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 20km over 9/125µm singlemode fiber



### Transmitter E-O Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Support data rate	-		155		Mb/s	
Center Wavelength	$\lambda$	1260	1310	1360	nm	
Spectral Width (RMS)	$\Delta\lambda$			4	nm	
Average Optical Output Power	P <sub>o</sub>	-14	-	-8	dBm	1
Extinction Ratio	E <sub>r</sub>	9			dB	
Optical Rise/Fall Time (20%~80%)	tr/tf			1.3	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	-		155		Mb/s	
Operating Wavelength	$\lambda$	1260		1580	nm	
Receiver sensitivity	S <sub>en</sub>			-32	dBm	3
Saturation	P <sub>sat</sub>	-3			dBm	3
LOS Assert	LOS <sub>A</sub>	-45			dBm	
LOS Deassert	LOS <sub>D</sub>			-34	dBm	
LOS Hysteresis		1		4	dB	
Data Output Swing Differential	V <sub>OUT</sub>	370		1800	mV	4
LOS	High	2.0		V <sub>CC</sub>		
	Low	0		0.8	V	

3. Measured with a PRBS 2<sup>23</sup>-1 test pattern @ 155Mbps, BER  $\leq 1 \times 10^{-10}$
4. Internally AC coupled

### Ordering Information

Part Number	ROHS Compliant	Operating Case Temperature
AI12P0x-1310	ROHS-6	0°C ~ +70°C
AI12P2x-1310		-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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