



10GBASE-ER/OC-192 IR-2 XFP Transceiver 10Gb/s 40km, 1550nm P/N 4ER0P0x-1550



Applications

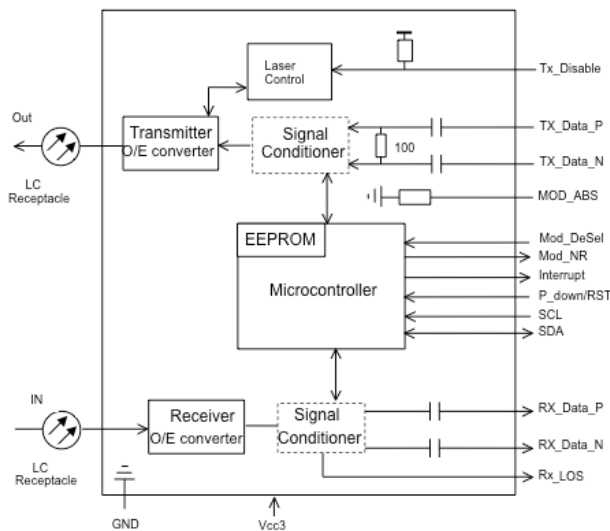
- 10GBASE-EW/ER 10G Ethernet
- 8GB/10GB Fibre Channel
- SONET OC-192 IR-2, OC-192 IR-3
- SDH STM S-64.2b, and STM S-64.3b
- Ethernet Switch or IP Router Interconnect

Features

- Hot-pluggable XFP footprint
- Support 9.95Gb/s to 11.3Gb/s bit rates
- 1550nm EML Laser transmitter
- InGaAs PIN photodiode receiver
- Power dissipation < 3.0 W
- -5°C to +70°C and -40°C to +85°C
- Duplex LC fiber connectors
- IEEE 802.3ae 10GBASE-ER/EW
- SONET OC-192 IR-2, OC-192 IR-3
- SDH STM S-64.2b, and STM S-64.3b
- Full Digital Optical Monitoring
- Metal enclosure for lower EMI
- Complies with RoHS directive (2002/95/EC)
- Compliant with XFP Electrical and Mechanical MSA INF-8077
- Laser Class 1 IEC/CDRH compliant
- Links of 40 km with 9/125 μm single mode fiber (SMF) of maximum interconnect distances

Description

Menara Networks' 4ER0P0x-1550 transceivers are designed for use in 10Gb/s to 11.1Gb/s links up to 40km over single mode fiber. The XFP module supports IEEE 802.3ae 10GBASE-ER and -EW applications along with SONET OC-192 IR-2, OC-192 IR-3, SDH STM S-64.2b, and STM S-64.3b applications for Ethernet Switches, IP Routers or SONET/SDH optical interfaces. Digital Optical Monitoring interfaces are provided via the XFP standards compliant I²C interface.



Transmitter E-O Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Operating Data Rate	-	9.95	10.3125	11.1	Gb/s	-
Center Wavelength	λ	1530	1550	1565	nm	-
Side Mode Suppression Ratio	SMSR	30	-	-	dB	-
Average Optical Output Power	Po	-1	-	+2	dBm	1
Extinction Ratio	Er	8.2	-	-	dB	-
Transmitter Enable Voltage	VEN	GND	-	0.8	V	-
Transmitter Disable Voltage	VD	2.0	-	VCC3	V	-
Differential data Inputs swing	Vinpp	120	-	820	mV	2
Output Power After Disabled	-	-	-	-30	dBm	-
Output Eye Diagram	Compliant with ITU-T and IEEE recommendation MASK					

Notes:

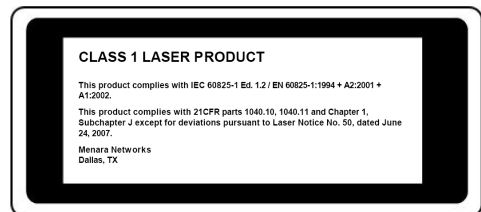
1. The optical power is launched into SMF.
2. Internally AC coupled.

Receiver O-E Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Operating Data Rate	-	9.95	10.3125	11.1	Gb/s	-
Operate Wavelength	-	1260	-	1620	nm	-
Sensitivity @ 9.95 to 10.3Gbps	Sen1			-16	dBm	1
Sensitivity @ 11.1Gbps	Sen1			-15	dBm	1
Sensitivity in OMA	Sen2	-	-	-12.6	dBm	1
Stressed Receiver Sensitivity(OMA) @ 11.1Gbps	SRS	-	-	-11.3	dBm	-
Optical Path Penalty @ 10.7Gbps	OPP			2	dB	3
Saturation	Ps	+0.5	-	-	dBm	1
LOS Asserted	-	-30	-	-	dBm	High level: Alarm
LOS De-Asserted	-	-	-	-22	dBm	
LOS Hysteresis	-	0.5	-	-	dB	
Differential data outputs swing	Voutpp	340	-	850	mV	2
LOS Low Voltage	VLout	GND	-	0.4	V	-
Receiver Optical Return Loss	-	-	-	-27	dB	-

Notes

1. Measured at PRBS 2³¹-1, NRZ, BER≤10⁻¹²
2. Internally AC coupled
3. Measured over 40km G.652 @ 18ps/nm-km



Ordering Information

Part Number	ROHS Compliant	Operating Case Temperature
4ER0P0x-1550	ROHS-6	-5 ~ +70°C
4ER0P2x-1550		-40 ~ +85°C

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