

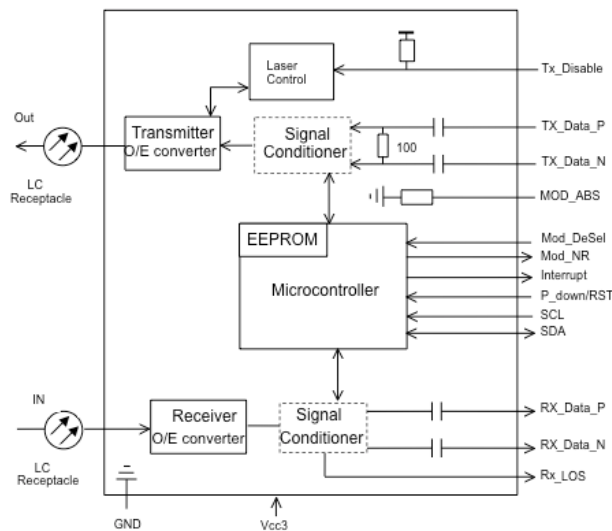


CWDM 10GBASE-ZR/OC-192 LR-2 XFP Transceiver 10Gb/s 70km P/N 4ZR0A0x-CWyy



Description

Menara Networks' 4ZR0A0x-CWyy transceivers are designed for use in 10Gb/s to 11.1Gb/s CWDM links up to 70km over single mode fiber. The XFP module supports 10GBASE-ZR and -ZW applications along with SONET OC-192 LR-2 and SDH STM-64 ITU-T G.959.1 P1L1-2D2 applications for Ethernet Switches, IP Routers or SONET/SDH optical interfaces. Digital Optical Monitoring interfaces are provided via the XFP standards compliant I²C interface.

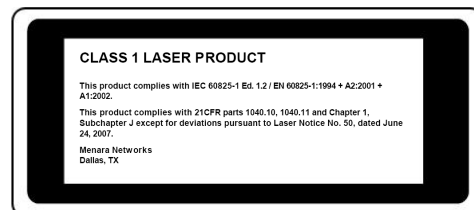


Applications

- CWDM 10GBASE-ZW/ZR 10GEthernet
- 8GB/10GB Fibre Channel
- SONET OC-192 LR-2
- SDH STM-64 ITU-T G.959.1 P1L1-2D2
- Ethernet Switch or IP Router Interconnect

Features

- Hot-pluggable XFP footprint
- CWDM ITU-T fixed wavelength
- Support 9.95Gb/s to 11.3Gb/s bit rates
- CWDM EML laser
- APD photodiode receiver
- Power dissipation < 3.5 W
- -5°C to +70°C and -40°C to +85°C
- Duplex LC fiber connectors
- 10GBASE-ZR/ZW
- SONET OC-192 LR-2
- SDH STM-64 ITU-T G.959.1 P1L1-2D2
- 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 80 km with 9/125 μm single mode fiber (SMF) of maximum interconnect distances



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	1270	-	1610	nm	-
Spectral Width (RMS)	$\Delta\lambda$	-	-	0.20	nm	-
Wavelength Stability after Startup	$\Delta\lambda_{EOL}$	$\lambda_i - 5.5$	-	$\lambda_i + 7.5$	nm	-
Average Optical Output Power	Po	-1	-	+3	dBm	1
Extinction Ratio	Er	9.0	-	-	dB	-
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					

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			-23	dBm	1
Sensitivity @ 11.1Gbps	Sen1			-22	dBm	1
Saturation	Ps	-7	-	-	dBm	1
Optical Path Penalty @ 9.95Gbps 1600ps/nm	OPP1			2	dB	1
Optical Path Penalty @ 10.7Gbps 1600ps/nm	OPP2			3	dB	1
Optical Path Penalty @ 11.1Gbps 1450ps/nm	OPP3			3	dB	1
LOS Asserted	-	-37	-	-	dBm	High level: Alarm
LOS De-Asserted	-	-	-	-30	dBm	
LOS Hysteresis	-	0.5	-	-	dB	

Notes

1. Measured at PRBS 2³¹-1, NRZ, BER \leq 10⁻¹²

2. Internally AC coupled

Ordering Information

Part Number	ROHS Compliant	Operating Case Temperature
4ZR0A0x-CWyy	ROHS-6	0 ~ +70°C
4ZR0A1x-CWyy		-10 ~ +85°C
4ZR0A2x-CWyy		-40 ~ +85°C

yy = CWDM Wavelength. See bold in table below for details.

x = Router compatibility; J = Juniper, A = Alcatellucent, C = Cisco, O = Cisco ONS

CWDM Wavelength	Latch Color
1470	Gray
1490	Violet
1510	Blue
1530	Green

CWDM Wavelength	Latch Color
1550	Yellow
1570	Orange
1590	Red
1610	Brown

menarainfo@menaranet.com

www.menaranet.com