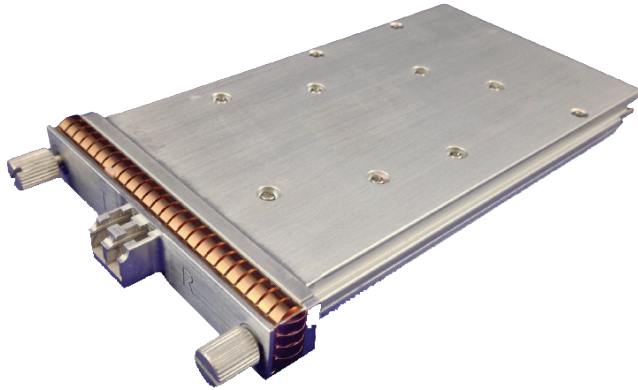




# 40km MSA Compliant 10x10G CFP 100GBASE-ER10 Transceiver



## Description

Menara Networks' 6ER0A0x-0008 CFP transceivers are designed for use in 103.125 Gbps 100GE to 111.809 Gbps OTU-4 links up to 40km over single mode G.652 or G.655 fiber pair. The CFP module supports 10 C-band wavelengths, each operating from 10.3125 Gbps to 11.1809 Gbps line rates for Ethernet Switches, IP Routers or ODU switch optical interfaces. Digital Optical Monitoring interfaces are provided via the 10x10 MSA standards compliant MDIO interface.

## Management

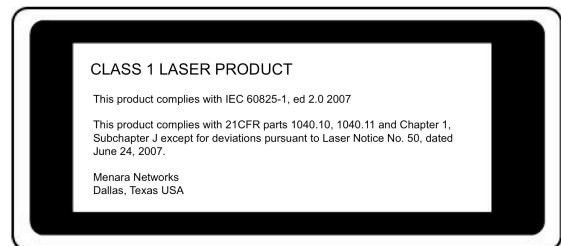
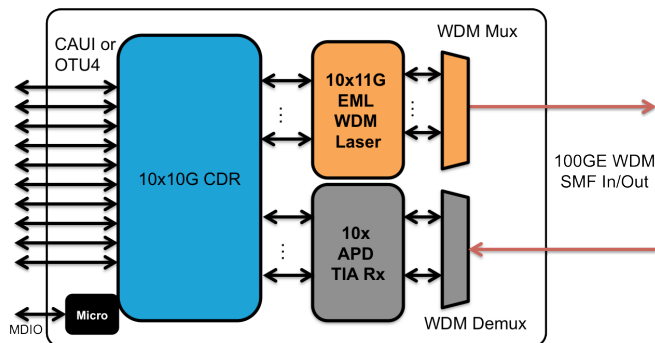
Management of the 40km CFP is provided via the CFP MSA MDIO interface, which supports digital diagnostic monitoring, alarms and loop backs.

## Applications

- IP/MPLS and Ethernet Switches and Routers
- ODU Switches
- High Capacity Datacenter Interconnection
- Access and Metro Carrier Ethernet Networks

## Features

- Compliant with CFP MSA and 10x10 MSA
- 10x11G C-band fiber input and output
- 400GHz wavelength spacing
- 100GE CAUI and OTU4 host interface
- 100GBASE-ER10 support
- Fully transparent 100GE and OTU4 transport
- $\leq 24$  Watts Consumption



## General Optical Specifications

Parameter	Symbol	Min	Typical	Max	Units
Host Native Nominal Bit Rate		10 x 10.3125 (CAUI) 10 x 11.1809 (OTU4)			Gbps
Line Interface Bit Rate		10 x 10.3125 (CAUI) 10 x 11.1809 (OTU4)			Gbps
Interface Bit Rate Deviation		+/- 100 (100GE) +/- 20 (OTU4)			ppm
Maximum Fiber Distance		40 <sup>1</sup>			km
Operating Case Temperature	T <sub>C</sub>	-5	-	70	°C
Storage Temperature	T <sub>stg</sub>	-40	-	85	°C

## Transmit Optical Specifications

Parameter	Symbol	Min	Typical	Max	Units
Channel Spacing	f <sub>SPACING</sub>	400			GHz
Average Output Power	P <sub>AVG</sub>			1.7	dBm
Optical Modulation Amplitude	OMA	-4.0	-2.8		dBm
OMA minus TDP	OMA-TDP	-4.4	-3.8		dBm
Transmitter and Dispersion Penalty	TDP			3.0	dB
Extinction Ratio	ER	6.0			dB
Side Mode Suppression Ratio	SMSR	30			dB
Optical Mask		Compliant with 10GBASE-ER			
Average Output Power with Tx Off	P <sub>OFF</sub>	-30			dBm
Relative Intensity Noise	RIN <sub>OMA</sub>	-130			dB/Hz

## Receive Optical Specifications

Parameter	Symbol	Min	Typical	Max	Units
Optical Central Wavelength		1523		1565	nm
Sensitivity in OMA	OMA			-16.4	dBm
Stressed Sensitivity in OMA	OMA <sub>STR</sub>			-13.6	dBm
Vertical eye closure for stressed sensitivity test	VECP	2.7			dB
J2 Jitter for stressed sensitivity test	J2	0.3			UI
Maximum Receive Overload				-4.0	dBm
Receiver Reflectance				-27	dB

## Frequency Channel Plan (nm)

Channel	Symbol	Min	Typical	Max
1	$\lambda_1$	1532.68	1533.47	1534.25
2	$\lambda_2$	1535.82	1536.61	1537.40
3	$\lambda_3$	1538.98	1539.77	1540.56
4	$\lambda_4$	1542.14	1542.94	1543.73
5	$\lambda_5$	1545.32	1546.12	1546.92

Channel	Symbol	Min	Typical	Max
6	$\lambda_6$	1548.51	1549.32	1550.12
7	$\lambda_7$	1551.72	1552.52	1553.33
8	$\lambda_8$	1554.94	1555.75	1556.55
9	$\lambda_9$	1558.17	1558.98	1559.79
10	$\lambda_{10}$	1561.42	1562.23	1563.05

## Voltage Power Supply

Parameters		Symbol	Min	Typical	Max	Unit
Absolute Maximum Power Supply Voltage		VCC			3.6	V
Operating Power Supply	Voltage	VCC	3.2	3.3	3.4	V
	Current	ICC	-	-	7	A
Total Power Dissipation		P <sub>LOW</sub>		20	24	W
Low Power Mode Dissipation		P <sub>W</sub>			2	W
Inrush Current		I <sub>INRUSH</sub>			100	mA/μsec
Turn-off Current		I <sub>TURNOFF</sub>	-100			mA/μsec
Power Supply Noise		V <sub>RIP</sub>			2% 3%	DC – 1MHz 1 - 10MHz

## Ordering Information

Part Number	ROHS Compliant	Operating Case Temperature
6ER0A0x-0008	ROHS-6	-5 ~ +70°C

All specifications are preliminary.

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