

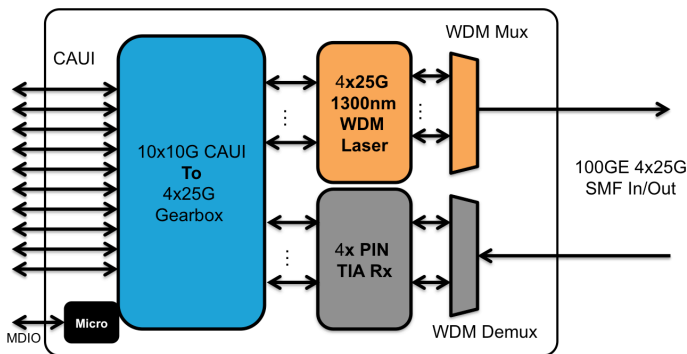


# 10km MSA Compliant 4x25G CFP 100GBASE-LR4 Transceiver



## Description

Menara Networks' 6LR0P0x-1300 CFP transceivers are designed for use in 103.125 Gbps 100GE links up to 10km over single mode G.652 fiber pair. The 802.3ba-2010 100GBase-LR4 standard CFP module supports four wavelengths centered around 1300nm, each operating at 25.78125 Gbps line rates. The product is ideal for the interconnection of Ethernet Switches, IP Routers or optical cross connects optical interfaces. Digital Optical Monitoring interfaces are provided via the CFP MSA standards compliant MDIO interface.



## Management

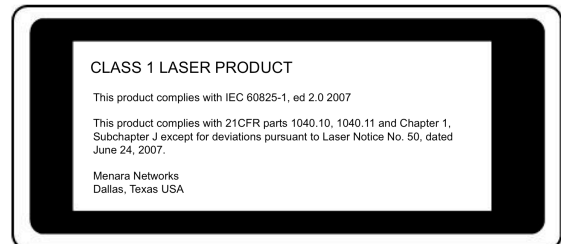
Management of the 10km CFP is provided via the CFP MSA MDIO interface version 1.4, which supports digital diagnostic monitoring, alarms and loop backs.

## 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
- 802.3ba-2010 100GBase-LR4 compliant for single-mode fiber links up to 10km
- 100GE CAUI host interface
- Fully transparent 100GE transport
- CFP MSA compliant MDIO management interface
- $\leq 24$  Watts Consumption
- Compatible with all major router and switch vendors



### General Optical Specifications

Parameter	Symbol	Min	Typical	Max	Units
Host Native Nominal Bit Rate		10 x 10.3125 (CAUI)			Gbps
Line Interface Bit Rate		4 x 25.78125 (CAUI)			Gbps
Interface Bit Rate Deviation		+/- 100			ppm
Maximum Fiber Distance		10 <sup>1</sup>			km
Operating Case Temperature	T <sub>C</sub>	0	-	70	°C
Storage Temperature	T <sub>stg</sub>	-40	-	85	°C

<sup>1</sup> ITU-T G.652 fiber type

### Transmit Optical Specifications

Parameter	Symbol	Min	Typical	Max	Units
Channel Spacing	f <sub>SPACING</sub>	4.5			nm
Average Output Power per Lane	P <sub>AVG</sub>	-4.3		+4.5	dBm
Average Output Power Aggregate	P <sub>AGG</sub>			+10.5	dBm
OMA Output Power Difference per Lane	P <sub>DIFF</sub>			+5	dB
Optical Modulation Amplitude	OMA	-1.3		+4.5	dBm
OMA minus TDP	OMA-TDP	-2.3			dBm
Transmitter and Dispersion Penalty	TDP			2.2	dB
Extinction Ratio	ER	6.0			dB
Side Mode Suppression Ratio	SMSR	30			dB
Optical Mask		Compliant with 100GBASE-LR4			
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		1290		1315	nm
Sensitivity in Average Power, per Lane	R <sub>IN</sub>	+4.5		-10.6	dBm
Sensitivity in OMA, per Lane	R <sub>OMA</sub>			-8.6	dBm
Stressed Sensitivity in OMA, per Lane	OMA <sub>STR</sub>			-6.8	dBm
Vertical Eye Closure for Stressed Sensitivity Test	VECP	1.8			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	Max
1	$\lambda_1$	1294.53	1296.59
2	$\lambda_2$	1299.02	1301.09
3	$\lambda_3$	1303.54	1305.63
4	$\lambda_4$	1308.09	1310.19

### 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	-	-	8	A
Total Power Dissipation		P <sub>LOW</sub>			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 - 10MH

### Ordering Information

Part Number	ROHS Compliant	Operating Case Temperature
6LR0P0x-1300	ROHS-6	0 ~ +70°C

All specifications are preliminary.

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