

40Gbps QSFP+ ZR4 80km Transceiver

CLQSFP40GZR4

Product Features:

- Hot-pluggable QSFP+ form factor
- Supports 41.3 Gb/s aggregate bit rate
- Power dissipation < 5W
- RoHS-6 compliant
- Commercial case temperature range 0°C to 70°C
- Single 3.3V power supply
- Maximum link length of 80km on Single Mode Fiber (SMF)
- Uncooled 4x10Gb/s LWDM transmitter +4x10Gb/s APD
- XLPPI electrical interface
- Duplex LC receptacles
- Built-in digital diagnostic functions, including Tx/Rx power monitoring

Functional Characteristics (Optical)

The following tables list the performance specifications for the various functional blocks of the integrated optical transceiver module.

Table 1 – Transmitter Optical Specifications

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Signaling Speed per Lane			10.3125		GBd	1
Lane center wavelengths (range)		1294.53 – 1296.59 1299.02 – 1301.09 1303.54 – 1305.63 1304.09 – 1310.19			nm	
Total Average Launch Power	POUT			15	dBm	
Transmit OMA per Lane	TxOMA	4		7	dBm	
Average Launch Power per Lane	TXPx	4		6	dBm	2
Difference in launch power between any two lanes (OMA)				4.7	dB	
Transmitter Dispersion Penalty	TDP			2	dB	
Launch power (OMA) minus TDP per lane		-0.5			dBm	
Optical Extinction Ratio	ER	8			dB	
Sidemode Suppression ratio	SSRmin	30			dB	
Average launch power of OFF transmitter, per lane				-30	dBm	
Relative Intensity Noise	RIN			-128	dB/Hz	3
Optical Return Loss Tolerance				20	dB	
Transmitter Reflectance				-12	dB	
Transmitter eye mask definition {X1, X2,		{0.25, 0.4, 0.45, 0.25, 0.28, 0.4}				

X3, Y1, Y2, Y3}				
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Table 2 – Receiver Optical Specifications

Parameter	Symbol	Min	Typ	Max	Unit	Ref.
Signaling Speed per Lane			10.3125		GBd	4
Lane center wavelengths (range)		1294.53 – 1296.59 1299.02 – 1301.09 1303.54 – 1305.63 1304.09 – 1310.19			nm	
Receive Power (OMA) per Lane	RxOMA			-4.0	dBm	
Average Receive Power per Lane	RXPx	-24		-4.5	dBm	5, 6
Receiver Sensitivity (OMA) per Lane	Rxsens			-22	dBm	
Stressed Receiver Sensitivity (OMA) per Lane	SRS			-20	dBm	
Damage Threshold per Lane	PMAX	-4.5			dBm	
Return Loss	RL			-26	dB	
Vertical eye closure penalty, per lane				2.2	dB	
Receive electrical 3 dB upper cutoff frequency, per lane				12.3	GHz	
LOS De-Assert	LOSD			-25	dBm	
LOS Assert	LOSA	-35			dBm	
LOS Hysteresis			1		dB	

Ordering Information

Table 3 - Ordering Information

Part No.	Data Rate	DDM	Wave	Fiber Type	Dist.	Temp.	Optical Interface
CLQSFP40GZR4	40Gbps	yes	1310nm	SMF	80km	0~70°C	LC

CONTACT:

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