

QSFP28 100G/OTU4 ZR4 100KM CLOTU4QSFPXZR4

Product Features:

- Compliant with QSFP28 Standard:
 - SFF-8661 Rev 2.5, SFF-8636 Rev 2.10a
- High speed I/O electrical interface (CAUI-4) compliant with IEEE 802.3bm-2015
- 100/112GBASE-ZR4 point-to-point Ethernet links
- Rx sensitivity of -28dBm with enabled KR4 FEC in host for up to 100KM SMF
- Single 3.3V Supply Voltage
- Maximum power consumption 5.5W
- 0-70 °C Case Operating Temperature
- LAN WDM EML laser and SOA+PIN Receiver
- Universal QSFP28 MSA package with duplex LC connector
- Two Wire Serial Interface with Digital Diagnostic Monitoring
- Complies with EU Directive 2011/65/EU (RoHS compliant)
- Class 1 Laser

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.	Typical	Max.	Unit	Notes
Wavelength L0	λ_{C0}	1294.53	1295.56	1296.59	nm	
Wavelength L1	λ_{C1}	1299.02	1300.05	1301.09	nm	
Wavelength L2	λ_{C2}	1303.54	1304.58	1305.63	nm	
Wavelength L3	λ_{C3}	1308.09	1309.14	1310.19	nm	
Side-mode suppression ratio	SMSR	30			dB	
Total Average Optical Launch Power	POUT	-	-	12.5	dBm	
Average Launch Power Tx_Off (Each Lane)	POUT_OFF	-	-	-30	dBm	
Average Optical Launch Power (Each Lane)	POUTL	4	-	6.5	dBm	
Extinction Ratio	ER	8	-	-	dB	
Spectral Width	$\Delta\lambda$	-	-	1	nm	
Optical Modulation Amplitude (Each Lane)	OMA	3.5	-	7	dBm	
Transmitter and Dispersion Penalty (Each Lane)	TDP	-	-	2.2	dB	
Launch Power in OMA minus TDP (Each Lane)	OMA-TDP	1.5	-	-	dBm	
Difference in launch power between any two lanes (OMA)	DT_OMA	-	-	4	dB	

Optical Return Loss Tolerance	ORLT	-	-	20	dB	
RIN20OMA	RIN	-	-	-130	dB/Hz	
Transmitter Reflectance	TR	-	-	-26	dB	
Transmitter Eye Mask Definition	-	IEEE 802.3bs-2010 {0.25, 0.4, 0.45, 0.25, 0.28, 0.4}				

Table 2 – Receiver Optical Specifications

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Wavelength L0	$\lambda C0$	1294.53	1295.56	1296.59	nm	
Wavelength L1	$\lambda C1$	1299.02	1300.05	1301.09	nm	
Wavelength L2	$\lambda C2$	1303.54	1304.58	1305.63	nm	
Wavelength L3	$\lambda C3$	1308.09	1309.14	1310.19	nm	
Receiver Sensitivity (OMA) per Lane (25.78G)				-30	dBm	Note
Receiver Sensitivity (OMA) per Lane (27.95G)				-28	dBm	Note
Stressed Receiver Sensitivity Test Conditions:						
Stressed Eye J2 Jitter (Each Lane)	-	-	0.33	-	UI	
Stressed Eye J9 Jitter (Each Lane)	-	-	0.48	-	UI	
Vertical Eye Closure Penalty	-	-	2	-	dB	
Damage Threshold for Receiver	Pin, damage	-2.5	-	-	dBm	
Average Receive Power (Each Lane)	-	-28	-	-5	dBm	Note
Receive Power in OMA (Each Lane), Overload	OMA	-	-	-4.5	dBm	
Receiver Reflectance	RXR	-	-	-26	dB	
LOS Assert	LOSA	-40	-	-	dBm	
LOS De-assert	LOSD	-	-	-30	dBm	
LOS hysteresis	LOSH	0.5	-	-	dB	

Note: Measured with conformance test signal at TP3 for the BER = 5x10⁻⁵

Ordering Information

Table 3 - Ordering Information

Part No.	Application	Data Rate	Laser Source	Fiber Type
CLOTU4QSFPXZR4	100GE/OTU4	100G/ 112G	LAN WDM EML	Single Mode Fiber

CONTACT:

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