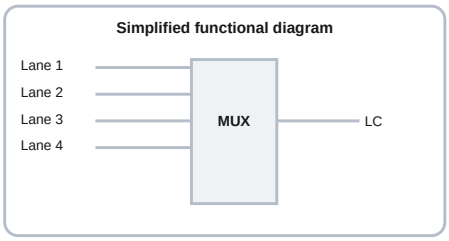
QSFP28-LR4-I

QSFP28, 100GbE-LR4, 4x25.8 Gbps, 10km

1310nm, 6dB, SM, LC I-Temp

1. Product overview

Industrial-temperature 100GBASE-LR4 QSFP28 transceiver. Four LAN-WDM channels are multiplexed over duplex LC single-mode fiber for up to 10 km.



2. Key features

- QSFP28 MSA compliant
- 103.1 Gb/s aggregate data rate
- 10 km on single-mode fiber
- IEEE 802.3ba LR4 optical specification
- CAUI-4 / SFF-8679 electrical interfaces
- Industrial feature temperature: -40°C to +70°C

3. Applications

- 100GBASE-LR4 Ethernet links

4. Technical data

Parameter	Value	Parameter	Value
Technology	100G QSFP28 LR4	Media	SMF, duplex LC
Reach	10 km	Wavelengths	1295.56/1300.05/1304.58/1309.14 nm
Aggregate rate	103.1 Gb/s	Budget	6 dB
Power	3.5 W table / <4 W feature	DDM	SFF-8636

5. Recommended operating conditions

Parameter	Value
Operating case temperature - feature	-40 to +85 °C
Supply voltage	3.14 to 3.46 V
Power consumption	3.5 W
Low-power mode	1.5 W

QSFP28-LR4-I

6. Optical characteristics

Parameter	Specification
Signaling rate, each lane	25.78125±
100 ppm Gb/s	
Lane Wavelength Range	
Lane	0 1294.53 / 1296.59 nm
Lane	1 1299.02 / 1301.09 nm
Lane	2 1303.54 / 1305.63 nm
Lane	3 1308.09 / 1310.19 nm
Average Optical Power per lane	-4.3 4.5 dBm
Total Average Launch Power	10.5 dBm
Optical Modulation Amplitude (OMA), each lane	-1.3 4.5 dBm
Launch Power in OMA minus TDP , each lane	-2.3 dBm
Transmitter and Dispersion Penalty TDP) each lane	2.2 dB
Average Launch Power per Lane @ TX Off State	-30 dBm
Extinction Ratio	4 dB
Relative Intensity Noise (OMA)	-130 dB/Hz
Side-Mode Suppression Ration (SMSR)	30 dB
Optical Return Loss Tolerance	20 dB
Transmitter Reflectance	-12 dB
100GBASE-LR4 OPERATION	

Parameter	Specification
Signaling rate, each lane	27.9525±
20 ppm Gb/s	
Average launch Power per channel	-0.6 4 dBm
Total Average Launch Power	10 dBm
Channel power difference	5 dB
Extinction Ratio	4 7 dB
Optical Return Loss	20 dB
Transmitter Output Power Monitoring Accuracy	-3 3 dB
Transmitter Eye Mask Definition {Xl, X2, X3, Yl, Y2Z Y3) (	0.25, 0.4, 0.45, 0.25, 0.28, 0.4) 1
Signaling rate, each lane	27.9525± 20 ppm Gb/s
Average Input Power per Channel	-6.9 4.0 dBm
Total Average Input Power	10.0 dBm
Optical Path penalty	1.5 dB
Channel Power Difference	5.5 dB
Receiver Reflectance	-26.0 dB
Equivalent Sensitivity per Channel	-8.4 dBm
Receive Power Monitor Accuracy	-3.0 3.0 dB
0TU4 4i1-9D1F OPERATION	

7. Digital diagnostics and management

Parameter	Specification
Management interface	2-wire serial / I2C through QSFP28 management interface
Digital diagnostics	Temperature, supply voltage, TX bias/power and RX power where implemented
Module controls	ModSelL, ResetL, LPMode, ModPrsL and IntL as applicable
Form factor	Hot-pluggable QSFP28, 38-pin host interface

8. Safety and regulatory

RoHS compliance and normal ESD handling precautions apply. Where stated in the source specification, the optical module is a Class 1 laser product and must be handled in accordance with applicable laser-safety requirements.

9. Ordering information

Ordering number	Product description
Q100GLR4-I	QSFP28, 100GbE-LR4, 4x25.8 Gbps, 10km; 1310nm, 6dB, SM, I-Temp

10. General notes

Specifications in this two-page summary are condensed from the supplied GLOBALfiber source data sheet. Values and terminology are retained from the source; no external specifications have been substituted.

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