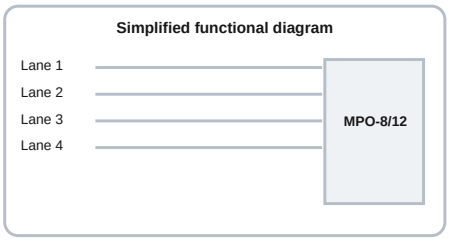
QSFP28-PSM4-100G

QSFP28, 100GbE-PSM4, 4x25.8 Gbps, 2km

1310nm, 4.5dB, SM, MPO-8/12

1. Product overview

Parallel single-mode 100G QSFP28 optical transceiver with four independent full-duplex channels. The module supports an aggregate 100 Gb/s data rate over up to 2 km of G.652 single-mode fiber through an MTP/MPO interface.



2. Key features

- 4 independent full-duplex optical channels
- Up to 28 Gb/s data rate per channel
- QSFP28 MSA and IEEE 802.3bm PSM4 compliant
- Up to 2 km over G.652 SMF
- Maximum power consumption 3.5 W
- 3.3 V supply, 0°C to +70°C

3. Applications

- 100G Ethernet links
- InfiniBand QDR and DDR interconnects

4. Technical data

Parameter	Value	Parameter	Value
Technology	100G QSFP28 PSM4	Media	SMF, MPO-8/12
Reach	2 km	Wavelength	1310 nm
Host lanes	4x25 Gb/s	Budget	4.5 dB
Power	3.5 W max	DDM	I2C / QSFP28 MSA

5. Recommended operating conditions

Parameter	Value
Operating case temperature	0 to +70 °C
Supply voltage	3.3 V
Power consumption	3.5 W max
Reach	2 km G.652 SMF

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6. Optical characteristics

Parameter	Specification
Transmitter	
Center Wavelength λC	1295 1310 1325 nm
Side Mode Suppression Ratio SMSR	30 dB
Total Average Launch Power PT	8.0 dBm
Average Launch Power, each Lane PAVG	-5.5 2.0 dBm
Optical Modulation Amplitude (OMA), each Lane POMA	-3.5 2.2 dBm 1
Difference in Launch Power between any Two Lanes (OMA) Ptx,diff	5 dB
Launch Power in OMA minus Transmitter and Dispersion	
Penalty (TDP), each Lane	-4.3 dBm
TDP , each Lane TDP	2.9 dB
Extinction Ratio ER	3.5 dB
Relative Intensity Noise RIN	-128 dB/Hz
Optical Return Loss Tolerance TOL	20 dB
Transmitter Reflectance RT	-12 dB
Average Launch Power OFF Transmitter, each Lane Poff	-30 dBm
Transmitter Eye Mask Definition {X1, X2, X3, Y1, Y2, Y3} {	0.31, 0.4, 0.45, 0.34,
Receiver	

Parameter	Specification
Damage Threshold, each Lane THd	4.5 dBm 3
Average Receive Power, each Lane	-10.2 2.0 dBm
Receive Power (OMA), each Lane	2.2 dBm
Receiver Sensitivity (OMA), each Lane SEN1	-9.0 dBm 4
Receiver Sensitivity (OMA), each Lane SEN2	-12.0 dBm 5
Receiver Reflectance RR	-26 dB
Difference in Receive Power between any Two Lanes(OMA) Prx,diff	5.5 dB
OPTICAL CHARACTERISTICS	
PRBS3	1 data pattern unless otherwise specified.
LOS Assert LOSA	-20 dBm
LOS Deassert LOSD	-18 dBm
LOS Hysteresis LOSH	0.5 dB
Receiver Electrical	3 dB upper Cutoff Frequency, each Lane Fc 31 GHz
Receiver Sensitivity (OMA) per lane	-8.6 dBm 2
Stressed receiver sensitivity(OMA)zeach lane	-6.8 dBm 3
Receive Power Monitor Accuracy	-3.0 3.0 dB

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
Q100G-PSM4	QSFP28, 100GbE-PSM4, 4x25.8 Gbps, 2km; 1310nm, 4,5dB, SM, MPO-8/12

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.