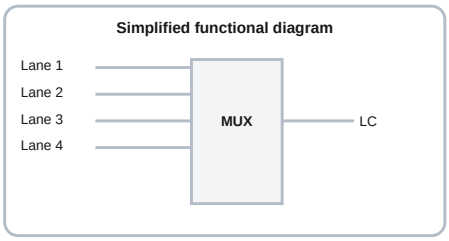
QSFP28-eCWDM4-100G

QSFP28, 100GbE-CWDM4, 10 km

CWDM 1270-1330nm, 7dB, SM, LC

1. Product overview

Extended CWDM4 QSFP28 transceiver designed for low-cost 10 km optical links. Four 25 Gb/s electrical channels are converted to four CWDM optical lanes at 1271, 1291, 1311 and 1331 nm and multiplexed onto a duplex LC single-mode interface. Host RS-FEC is required for the stated maximum distance.



2. Key features

- Extended CWDM4 MSA design with four CWDM lanes
- 103.1 Gb/s aggregate bit rate
- Up to 10 km on SMF with RS-FEC
- 4x25G OIF CEI-28G-VSR electrical interface
- Maximum power consumption 3.5 W
- Duplex LC connector; 0°C to +70°C

3. Applications

- Data Center
- 100G Ethernet
- 100G Campus Link
- Enterprise networking

4. Technical data

Parameter	Value	Parameter	Value
Technology	100G QSFP28 eCWDM4	Media	SMF, duplex LC
Reach	10 km with host FEC	Wavelengths	1271/1291/1311/1331 nm
Host	4x25G	Budget	7 dB
Power	3.5 W	DDM	QSFP28 management

5. Recommended operating conditions

Parameter	Specification
Power consumption	3.5 W
Supply current	1.06 A
Operating case temperature	0°C to +70°C
FEC	Required for maximum distance

QSFP28-eCWDM4-100G

6. Optical characteristics

Parameter	Specification
Wavelength assignment	
Lane L0	1264.5 / 1271 / 1277.5 nm
Lane L1	1284.5 / 1291 / 1297.5 nm
Lane L2	1304.5 / 1311 / 1317.5 nm
Lane L3	1324.5 / 1331 / 1337.5 nm
Transmitter	
Side-mode suppression ratio	30 dB
Total average launch power	8.5 dBm max
Average launch power per lane	-6.5 to +2.5 dBm
OMA per lane	-4.0 to +2.5 dBm
Launch power in OMA minus TDP	-5.0 dBm
Difference in launch power between any two lanes	6.0 dB max
TDP per lane	3.0 dB max
Extinction ratio	3.5 dB min
Optical return loss tolerance	20 dB
Transmitter reflectance	-20 dB

Parameter	Specification
Average launch power TX off	-30 dBm
Transmitter eye optical mask	{0.31,0.4,0.45,0.34,0.38,0.4}
Receiver	
Damage threshold per lane	+3.5 dBm
Average receive power per lane	-13.0 to +2.5 dBm
Receive power OMA per lane	+2.5 dBm max
Receiver sensitivity OMA per lane	-11.5 dBm @ BER=5x10^-5
Stressed receiver sensitivity OMA per lane	-8.6 dBm
Receiver reflectance	-26 dB
LOS assert	-30 dBm
LOS de-assert	-15 dBm
LOS hysteresis	0.5 dB
Vertical eye closure penalty per lane	2.6 dB
Stressed eye J2 jitter per lane	0.33 UI
Stressed eye J4 jitter per lane	0.48 UI
SRS eye mask	{0.39,0.5,0.5,0.39,0.39,0.4}

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-eCWDM4	QSFP28, 100GbE-CWDM4, 10 km; CWDM 1270-1330nm, 7dB, SM

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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