

QSFP28 100G DCO ZR

100G Ethernet DCO Transceiver

DRAFT

DESCRIPTION

The QSFP28 100G Digital Coherent Optical (DCO) ZR transceiver is a 100 Gbit/s pluggable module for 100GBASE Ethernet optical data communication. The transceiver operates with dual polarization quadrature phase shift keying modulation (DP-DQPSK) and Staricase (SC) FEC to achieve up to 80 km reach without the requirement of Erbium-Doped Fiber Amplifier (EDFA) or Dispersion Compensation Module (DCM).

The module is fully compliant with QSFP28 related MSA standards. Digital Diagnostic functions are available through an I2C interface. QSFP28-DCO complies with IEEE 802.3 and 100Gbase-ZR.



APPLICATIONS

- 100GBASE-ZR
- Data Center Interconnection

FEATURES

- Up to 80 km transmission on singlemode fiber
- Up to 300 km transmission on singlemode fiber with EDFA
- Hot-Pluggable QSFP28 footprint
- Duplex LC/UPC interface for fiber pair operation
- QSFP28 MSA compatible
- ITU-T C-band 100 GHz spacing Tunable DWDM (48 channels)
- ITU-T C-band 50 GHz spacing Tunable DWDM (96 channels)
- Digital Diagnostics monitoring interface
- Operating Case Temperature: Standard: 0°C to 70°C
- Power dissipation < 5.5 W

LASER SAFETY

This transceiver is a Class 1 laser product. It complies with IEC-60825 and FDA 21 CFR 1040.10 and 1040.11. The transceiver must be operated within the specified temperature and voltage limits. The optical ports of the module need to be terminated with an optical connector or a dust plug.

TECHNICAL DATA

Parameter	Unit	Value
Fiber type		Singlemode
Wavelength grid		ITU-T G.694.1 DWDM C-band 50/100GHz
Transmitter frequency range	THz	191.3 to 196.1
Center wavelength accuracy	nm	+/- 0.02
Transceiver start up time	s	< 120
Channel Tuning speed	s	< 30
Optical output power	dBm	-8 to -4
Output power accuracy	dB	+/- 1.5
Modulation type		DP-DQPSK
Transmitter OSNR (Inband)	dB/0.1nm	> 40
OSNR Tolerance	dB/0.1nm	16.5
Optical receiver sensitivity	dBm	-30
RX Optical Maximum Input Power	dBm	1
Power budget	dB	22
Chromatic Dispersion Tolerance (ZR100)	ps/nm	2 400
FEC type		Staircase (SC)
OSNR penalty tolerance	dB	0.5
Power dissipation	W	< 5.5
Operating temperature	°C	0 to +70
Storage temperature	°C	-40 to +85
Mechanical form factor		QSFP28

ORDERING INFORMATION

Product number	Description
QSFP28-DCO	QSFP28, 100ZR, 80km, DCO Tunable, DWDM 50/100GHz C-Band, 22dB, SM