

100G QSFP28 ER4L 40km

100G Eth, QSFP28, ER4L, 1310nm, LC, 40km, SM

CPQ-CE-ER-CDF02

OVERVIEW

The CPQ-CE-ER-CDF02 is a single mode QSFP28 transceiver designed for 100 Gigabit Ethernet and 100GBASE-ER4 applications. It uses four LAN WDM lanes for both transmit and receive functions. Each lane uses a 1310nm DFB LAN-WDM transmitter and supports 25.78Gbps which provides a combined full duplex data rate of 103.125Gbps.

The module supports transmission distances up to 40km on standard single mode fiber. It complies with the QSFP28 Multi-Source Agreement and supports Digital Diagnostics Monitoring through a two-wire serial interface. The transceiver operates from a single 3.3V supply and uses a duplex LC optical connector.

The product is available in Commercial (0°C to +70°C) operating temperature ranges. It is suitable for metro networks, long distance optical links, and 100G 4WDM-40 applications.

KEY SPECIFICATIONS

- 100G QSFP28 transceiver with duplex LC connector
- Four lane LAN WDM DFB transmitters
- Supports 25.78Gbps per lane for an aggregate 100Gbps link
- Up to 40km transmission distance over single mode fiber
- Typical power consumption is less than 5W
- Temp operating conditions: Commercial (0°C to +70°C)

TECHNICAL DATA

Parameter	Value	Parameter	Value
Form Factor	QSFP28	Transmitter Data:	
Transmission Media	SM (LC)	Tx Power	-2.5 to +6.5dBm ³⁾
Typical Reach	40km	Tx Amplitude, OMA	+0.5 to +6.5dBm
Nominal Wavelength	1295.56nm 1300.05nm 1304.58nm 1309.14nm	Tx Wavelength	1294.53 – 1296.59nm 1299.02 – 1301.09nm 1303.54 – 1305.63nm 1308.09 – 1310.19nm
Data Rate Support	103.125Gbps ¹⁾ 25.78Gbps ²⁾	Extinction Ratio	≥4dB
Protocol Support	100GbE	Receiver Data:	
Power Consumption	<5W	Rx Sensitivity	-20dBm ^{3) 4)}
Operating Temperature	0°C to 70°C	Rx Sensitivity, OMA	-18.5dBm ⁴⁾
Storage Temperature	-40°C to 85°C	Rx Overload, Max	-4dBm ^{3) 4)}
DDM	Yes	Rx Wavelength	1294.53 – 1296.59nm 1299.02 – 1301.09nm 1303.54 – 1305.63nm 1308.09 – 1310.19nm
		LOS Assert	-35dBm
		LOS De-assert	-23dBm
		LOS Hysteresis	0.5dB

¹⁾ Aggregated line rate 100GbE

²⁾ Line rate per 25.78Gbps lane

³⁾ Average power, per lane

⁴⁾ Per 25.78Gbps lane. Specified @ BER 5E-5

Safety/Regulatory Compliance

- Class 1 laser safe
- RoHS Compliance

ABSOLUTE MAX RATING

Exceeding these limits can cause permanent damage to the transceiver

Parameter	Value	Parameter	Value
Supply Voltage	-0.3V to 3.6V	Relative Humidity	85%
Storage Temp	-40°C to 85°C	Max Rx Optical Power	-4dBm per lane

ORDERING INFORMATION

Ordering Code	Description
CPQ-CE-ER-CDF02	100G QSFP28, ER4L, 30km, LC, 1310nm, SM, 0 to 70C

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