

40G QSFP+ ZR4 80km

40G Eth, QSFP+, LWDM, ZR4, 80km, LC ,1310nm, SM

CPQ-10E-ZR-CDF02

OVERVIEW

The CPQ-10E-ZR-CDF02 is a long reach QSFP+ transceiver designed for 40 Gigabit Ethernet and InfiniBand applications. The module integrates four LWDM lanes in both transmit and receive paths. Each lane uses an EML laser and an APD photodiode and supports data rates up to 11.2Gbps which results in a full duplex 40Gbps link.

The transceiver supports up to 80km over single mode fiber. It follows the QSFP+ Multi-Source Agreement and supports real time Digital Diagnostics Monitoring through a standard 2 wire interface. The module operates from a single 3.3V supply and includes an LC duplex interface for long distance optical connectivity.

The device is available in Commercial (0°C to +70°C) temperature variant which makes it suitable for carrier networks, metro links and 40GBASE-ZR4 deployments.

KEY SPECIFICATIONS

- QSFP+ transceiver with LC connector
- Typical reach 80km over a single-mode fiber
- Support for 40G Ethernet (40GBASE-ZR4) and OTU3
- Four CWDM lanes at 1271nm, 1291nm, 1311nm and 1331nm
- Less than 5W power consumption
- C-temp operating conditions - 0°C to +70°C

TECHNICAL DATA

Parameter	Value	Parameter	Value
Form Factor	QSFP+	Transmitter Data:	
Transmission Media	SM (LC)	Tx Power	+3 to +7dBm ³⁾
Typical Reach	80km	Tx Power, OMA	0.3 to 5.0dBm
Nominal Wavelength	1295.56/1300.05/ 1304.58/1309.14nm	Tx Wavelength	1294.53-1296.59nm 1299.02-1301.09nm 1303.54-1305.63nm 1308.09-1310.19nm
Data Rate Support	10.3125 / 11.2 Gbps ¹⁾ 40 Gbps ²⁾	Extinction Ratio	≥ 5.5dB
Protocol Support	40GbE	Receiver Data:	
Power Consumption	<5W	Rx Sensitivity	-23dBm ³⁾
Operating Temperature	0°C to 70°C	Rx Overload, max	-6dBm
Storage Temperature	-40°C to 85°C	Rx Wavelength	1294.53-1296.59nm 1299.02-1301.09nm 1303.54-1305.63nm 1308.09-1310.19nm
DDM	Yes	LOS Assert	-35dBm
		LOS De-assert	-24dBm
		LOS Hysteresis	

¹⁾ Line rate per 10.31Gbps lane

²⁾ Aggregated data rate 40GbE

³⁾ Average Power, per lane

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	-0.5V to 4.5V	Relative Humidity	85%
Storage Temp	-40°C to 85°C	Max Rx Optical Power	0dBm

ORDERING INFORMATION

Ordering Code	Description
CPQ-10E-ZR-CDF02	40G QSFP+, LWDM, ZR4, 80km, LC ,1310nm, SM, 0 to 70C

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