

40G QSFP+ LR4 10km

40G Eth, CWDM, LR4, 10km, LC, 1310nm, SM

CPQ-10E-LR-CDF02

OVERVIEW

The CPQ-10E-LR-CDF02 is a single mode QSFP+ transceiver designed for 40 Gigabit Ethernet and 40G Fiber Channel applications. It uses four CWDM lanes in both the transmit and receive paths. Each lane operates with a DFB laser and PIN receiver and supports data rates up to 11.3Gbps which gives a total 40Gbps full duplex link.

The module uses a CWDM MUX and DEMUX design and supports transmission distances up to 10km over standard single mode fiber. It follows the QSFP+ Multi-Source Agreement and supports real time Digital Diagnostics Monitoring according to SFF-8472. The module is powered by a single 3.3V supply.

The transceiver is available in Commercial (0°C to +70°C) operating temperature variant. It is suitable for 40GBASE-LR4 networks, data center interconnects and long reach optical links.

KEY SPECIFICATIONS

- QSFP+ transceiver with LC connector
- Typical reach 10km over a single-mode fiber
- Support for 40G Ethernet (40GBASE-LR4) and OTU3
- Four CWDM lanes at 1271nm, 1291nm, 1311nm and 1331nm
- Less than 3.5W 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	-7 to 2.3dBm ³⁾
Typical Reach	10km	Tx Wavelength	1264.5-1277.5nm 1284.5-1297.5nm 1304.5-1317.5nm 1324.5-1337.5nm
Nominal Wavelength	1271/1291/1311/1331nm	Extinction Ratio	≥ 3.5dB
Data Rate Support	10.3125/11.3Gbps ¹⁾ 40 Gbps ²⁾	Receiver Data:	
Protocol Support	40GbE	Rx Sensitivity	-13.7dBm ³⁾
Power Consumption	<3.5W	Rx Overload, max	2.3dBm
Operating Temperature	0°C to 70°C	Rx Wavelength	1264.5-1277.5nm 1284.5-1297.5nm 1304.5-1317.5nm 1324.5-1337.5nm
Storage Temperature	-40°C to 85°C	LOS Assert	-30dBm
DDM	Yes	LOS De-assert	-15dBm
		LOS Hysteresis	0.5dB

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	3.3dBm

ORDERING INFORMATION

Ordering Code	Description
CPQ-10E-LR-CDF02	40G QSFP+, CWDM, LR4, 10km, LC, 1310nm, SM, 0 to 70C

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