

10G SFP+ ER 40km

10G Eth, FC, SFP+, ER, 40km, LC, 1550nm, SM

CPP-10E-ER-xDF02

OVERVIEW

The CPP-10E-ER-xDF02 is a single mode SFP+ transceiver designed for 10 Gigabit Ethernet and 10G Fiber Channel links over extended reach optical networks. It uses a cooled 1550nm EML transmitter and a PIN photodiode receiver and supports transmission distances up to 40km on standard single mode fiber.

The module supports data rates from 1.0Gbps to 10.7Gbps and meets the requirements of the SFP+ Multi-Source Agreement and the SFF-8472 Digital Diagnostics Monitoring specification. The digital diagnostics interface provides real time monitoring of temperature, voltage, transmit optical power, receive optical power, and laser bias current.

The transceiver is available in Commercial (0°C to +70°C) and Industrial (-40°C to +85°C) operating temperature ranges. This makes it suitable for metro, backhaul, and long-distance access applications.

KEY SPECIFICATIONS

- 10G SFP+ transceiver with duplex LC connector
- 1550nm cooled EML transmitter and PIN photodiode receiver
- Supports 1.0Gbps to 10.7Gbps data rates
- Up to 40km transmission distance over single mode fiber
- Typical power consumption around 1.9W
- Temp operating conditions: Commercial (0°C to +70°C) and Industrial (-40°C to +85°C)

TECHNICAL DATA

Parameter	Value	Parameter	Value
Form Factor	SFP+	Transmitter Data:	
Transmission Media	SM (LC)	Tx Power	-1 to +2dBm ¹⁾
Typical Reach	40km	Tx Wavelength	1530 - 1565nm
Nominal Wavelength	1550nm	Extinction Ratio	≥ 8.2dB
Data Rate Support	1Gbps to 10.7Gbps	Receiver Data:	
Protocol Support	10GbE, 10GbE-LAN, 10GBASE-EW	Rx Sensitivity	-15.8dBm ^{1) 2)}
Power Consumption	<1.9W	Rx Overload, max	0.5dBm ²⁾
Operating Temperature	0°C to 70°C / -40°C to 85°C	Rx Wavelength	1260 - 1600nm
Storage Temperature	-40°C to 85°C	LOS Assert	-28dBm
DDM	Yes	LOS De-assert	-17dBm
		LOS Hysteresis	0.5dB

¹⁾ Average power

²⁾ @10.31Gbps, BER ≤ 1x10⁻¹², PRBS 2³¹-1

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 3.75V	Relative Humidity	85%
Storage Temp	-40°C to 85°C	Max Rx Optical Power	0.5dBm

ORDERING INFORMATION

Ordering Code	Description
CPP-10E-ER-CDF02	10G SFP+, ER, 40km, LC, 1550nm, SM, 0 to 70C
CPP-10E-ER-IDF02	10G SFP+, ER, 40km, LC, 1550nm, SM, -40 to 85C

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