

10G SFP+ LR 10km with CDR

10G Eth, FC, SFP+, LR, 10km, LC, 1310nm, SM

CPP-10E-LD-CDF02

OVERVIEW

The CPP-10E-LD-CDF02 is a single mode SFP+ transceiver with built-in TX and RX CDR designed for 10 Gigabit Ethernet and optical communication applications. It uses a 1310nm DFB laser transmitter and a PIN photodiode receiver and supports transmission distances up to 10km on single mode fiber.

The module supports data rates up to 11.3Gbps and is compliant with the SFP+ Multi-Source Agreement and SFF-8472 Digital Diagnostics Monitoring standard. Real time diagnostics provide monitoring of temperature, supply voltage, transmit power, receive power, and bias current.

The transceiver operates over a commercial temperature range of 0°C to +70°C and is suitable for 10G Ethernet, SONET/SDH, LTE, and other optical communication systems.

KEY SPECIFICATIONS

- 10G SFP+ transceiver with duplex LC connector
- Built-in TX and RX CDR
- 1310nm DFB laser and PIN photodiode receiver
- Supports up to 11.3Gbps data rates
- 10GBASE-LR at 10.3125Gbps
- 10GBASE-LW at 9.953Gbps
- Up to 10km transmission distance over single mode fiber
- Compliant with SFP+ MSA and SFF-8472
- Operating temperature range: 0°C to +70°C

TECHNICAL DATA

Parameter	Value	Parameter	Value
Form Factor	SFP+	Transmitter Data:	
Transmission Media	SM (LC)	Tx Power	-6.5 to -0.5dBm ¹⁾
Typical Reach	10km	Tx Wavelength	1270-1350nm
Nominal Wavelength	1310nm	Extinction Ratio	≥ 3.5dB
Data Rate Support	9.953Gbps to 11.3Gbps	Receiver Data:	
Protocol Support	10GbE	Rx Sensitivity	-14.4dBm ^{1) 2)}
Power Consumption	<1.6W	Rx Overload, max	0.5dBm ²⁾
Operating Temperature	0°C to 70°C	Rx Wavelength	1260-1600nm
Storage Temperature	-40°C to 85°C	LOS Assert	-30dBm
DDM	Yes	LOS De-assert	-15.5dBm
		LOS Hysteresis	0.5dB

¹⁾ Average Power

²⁾ @ 10.3Gbps. Measured with PRBS 2³¹-1@ BER 1E-12

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	0.5dBm

ORDERING INFORMATION

Ordering Code	Description
CPP-10E-LD-CDF02	10G SFP+, LR, 10km, Tx and Rx CDR, LC, 1310nm, SM, 0 to 70C

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