

10G SFP+ BiDi 60km

10G Eth, SFP+, BiDi, 60km, LC, 1270/1330nm, SM

CB-10E-60-xyyy02

OVERVIEW

The CB-10E-60-CD2302 and CB-10E-60-CD3202 are long-reach, single-fiber bidirectional SFP+ transceivers designed for 10 Gigabit Ethernet (10GbE) and 10G Fiber Channel (10G FC) applications. They operate over single-mode fiber using complementary wavelength pairs one variant transmitting at 1270nm and receiving at 1330nm, and the other transmitting at 1330nm and receiving at 1270nm enabling full-duplex operation on a single optical fiber.

Both modules support transmission distances up to 60km and data rates ranging from 10.3Gbps to 10.7Gbps. They are compliant with the SFP+ Multi-Source Agreement (MSA) and the SFF-8472 Digital Diagnostics Monitoring (DDM) standard. The DDM interface provides real-time monitoring of temperature, supply voltage, transmit optical output power, receive optical input power, and laser bias current.

Each transceiver uses a DFB laser transmitter and an APD receiver to ensure high sensitivity and stable performance for long-distance links. The modules are available in Commercial (0°C to +70°C) temperature ranges to support deployment in demanding environments.

KEY SPECIFICATIONS

- 10G BiDi SFP+ transceivers with single LC connector
- Two wavelength options:
 - 1270nm TX / 1330nm RX
 - 1330nm TX / 1270nm RX
- Supports 10.3Gbps to 10.7Gbps data rates
- Up to 60km transmission distance over single-mode fiber
- APD receiver for enhanced sensitivity
- Typical power consumption below 1.6W
- Temp operating conditions: Commercial (0°C to +70°C)

TECHNICAL DATA

Parameter	Value	Parameter	Value
Form Factor	BiDi SFP+	Transmitter Data:	
Transmission Media	SM (LC)	Tx Power	+1 to +6dBm ³⁾
Typical Reach	60km	Tx Wavelength	1260 -1280nm ¹⁾ 1320 -1340nm ²⁾
Nominal Wavelength	Tx:1270nm Rx:1330nm ¹⁾ Tx:1330nm Rx:1270nm ²⁾	Extinction Ratio	≥ 3.5dB
Data Rate Support	1Gbps to 10.7Gbps	Receiver Data:	
Protocol Support	10GbE	Rx Sensitivity	-20dBm ³⁾⁴⁾
Power Consumption	<1.6W	Rx Overload, max	-6dBm ⁴⁾
Operating Temperature	0°C to 70°C	Rx Wavelength	1320 - 1340nm ¹⁾ 1260 - 1280nm ²⁾
Storage Temperature	-40°C to 85°C	LOS Assert	-35dBm
DDM	Yes	LOS De-assert	-21dBm
		LOS Hysteresis	0.5dB

¹⁾ CB-10E-60-CD2302 – Red-coloured latch

²⁾ CB-10E-60-CD3202 – White-coloured latch

³⁾ Average power

⁴⁾ @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 4.5V	Relative Humidity	85%
Storage Temp	-40°C to 85°C	Max Rx Optical Power	-6dBm

ORDERING INFORMATION

Ordering Code	Description
CB-10E-60-CD2302	10G SFP+, BiDi, 60km, LC, 1270/1330nm, SM, 0 to 70C
CB-10E-60-CD3202	10G SFP+, BiDi, 60km, LC, 1330/1270nm, SM, 0 to 70C

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