

1G SFP BiDi 40km

1G Eth, SFP, BiDi, 40km, LC, 1310/1490nm, SM

CB-GB-40-xyyy02

OVERVIEW

The CB-GB-40-xx4302 and CB-GB-40-xx3402 are single-fiber bidirectional transceiver solutions designed for Gigabit Ethernet (GbE) and 1G Fiber Channel (1G FC) applications. These modules operate over single-mode fiber with complementary wavelength pairs, one variant transmitting at 1490nm and receiving at 1310nm, and the other transmitting at 1310nm and receiving at 1490nm enabling full-duplex communication on a single optical fiber.

Both variants support link distances up to 40km and comply with the SFP Multi-Source Agreement (MSA) and SFF-8472 Digital Diagnostics specification. Digital Diagnostics Monitoring (DDM) provides real-time visibility of parameters such as temperature, supply voltage, transmit power, receive power, and bias current.

Each transceiver integrates a DFB laser and PIN photodiode to deliver stable long-reach optical performance. The modules are available in Commercial (0°C to +70°C) temperature grade to support wide deployment environments.

KEY SPECIFICATIONS

- 1G BiDi SFP transceivers with single LC connector
- Two wavelength options:
 - 1490nm TX / 1310nm RX
 - 1310nm TX / 1490nm RX
- Supports 1.25Gbps Ethernet and 1.063Gbps Fiber Channel applications
- Up to 40km transmission distance over single-mode fiber
- Less than 1.0W power consumption
- Temp operating conditions: C-temp (0°C to +70°C)

TECHNICAL DATA

Parameter	Value	Parameter	Value
Form Factor	SFP BiDi	Transmitter Data:	
Transmission Media	SM (LC)	Tx Power	-5 to 0dBm ³⁾
Typical Reach	40km	Tx Wavelength	1260 – 1360nm ¹⁾ 1470 – 1510nm ²⁾
Nominal Wavelength	Tx:1310nm Rx:1490nm ¹⁾ Tx:1490nm Rx:1310nm ²⁾	Extinction Ratio	≥9dB
Data Rate Support	10Mbps to 1.25Gbps	Receiver Data:	
Protocol Support	GbE, 1G FC	Rx Sensitivity	-23dBm ^{3) 4)}
Power Consumption	<1.0W	Rx Overload, max	-1dBm ⁴⁾
Operating Temperature	0°C to 70°C	Rx Wavelength	1470 – 1510nm ¹⁾ 1260 – 1360nm ²⁾
Storage Temperature	-40°C to 85°C	LOS Assert	-38Bm
DDM	Yes	LOS De-assert	-24dBm
		LOS Hysteresis	0.5dB

¹⁾ CB-GB-40-CD3402 – Blue-coloured latch

²⁾ CB-GB-40-CD4302 – Purple-coloured latch

³⁾ Average Power

⁴⁾ @1250 Mbps, BER ≤ 1x10⁻¹², PRBS 2⁷-1

Safety/Regulatory Compliance

- Class 1 Laser
- RoHS

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	-1dBm

ORDERING INFORMATION

Ordering Code	Description
CB-GB-40-CD3402	1G SFP, BiDi, 40km, LC, 1310/1490nm, SM, 0 to 70C
CB-GB-40-CD4302	1G SFP, BiDi, 40km, LC, 1490/1310nm, SM, 0 to 70C

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