

1G SFP SX 550m

1G Eth, FC, SFP, SX, 550m, LC, 850nm, MM

CP-GB-SX-xDF02

OVERVIEW

The CP-GB-SX-xDF02 is a multimode transceiver solution designed for short-reach Gigabit Ethernet (GbE) and 1G Fiber Channel (1G FC) applications. It operates over multimode fiber using an 850nm VCSEL laser transmitter and a PIN photodiode receiver, enabling transmission distances up to 550 meters on OM3/OM4 MMF.

The module supports data rates up to 1.25Gbps and complies with the SFP Multi-Source Agreement (MSA) and the DDMI as per SFF-8472 MSA. The diagnostics interface provides real-time monitoring of temperature, voltage, transmit power, receive power, and bias current.

The transceiver is available in Commercial (0°C to +70°C) and Industrial (–40°C to +85°C) temperature ranges, ensuring reliable operation in wide environmental conditions.

KEY SPECIFICATIONS

- 1G SFP transceiver with duplex LC connector
- 850nm VCSEL transmitter and PIN photodiode receiver
- Supports 1.25Gbps Ethernet and 1.063Gbps Fiber Channel applications
- Up to 550m transmission distance over multimode fiber
- Less than 1.0W power consumption
- Temp operating conditions: C-temp (0°C to +70°C) & I-temp (–40°C to +85°C)

TECHNICAL DATA

Parameter	Value	Parameter	Value
Form Factor	SFP	Transmitter Data:	
Transmission Media	MM (LC)	Tx Power	-9 to 0dBm ¹⁾
Typical Reach	550m	Tx Wavelength	830-870nm
Nominal Wavelength	850nm	Extinction Ratio	≥ 9dB
Data Rate Support	100Mbps to 1.25Gbps	Receiver Data:	
Protocol Support	GbE, 1G FC	Rx Sensitivity	-18dBm ^{1) 2)}
Power Consumption	<1.0W	Rx Overload, max	-1dBm ²⁾
Operating Temperature	0°C to 70°C / -40°C to 85°C	Rx Wavelength	830-870nm
Storage Temperature	-40°C to 85°C	LOS Assert	-38dBm
DDM	Yes	LOS De-Assert	-19dBm
		LOS Hysteresis	0.5dB

¹⁾ Average Power

²⁾ @ 1.25Gbps, BER ≤ 1x10⁻¹², PRBS 2⁷-1

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	-1dBm

ORDERING INFORMATION

Ordering Code	Description
CP-GB-SX-CDF02	1G SFP, SX, 550m, LC, 850nm, MM, 0 to 70C
CP-GB-SX-IDF02	1G SFP, SX, 550m, LC, 850nm, MM, -40 to 85C

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