

400G QSFP-DD SR4 100m

400G Eth, QSFP-DD, PAM4, SR4, 100m, MPO-12, 850nm, MM

CDD-4E4-SR-CDF02

OVERVIEW

This product is a 400Gb/s QSFP-DD 400G SR4 optical module designed for 100m optical communication applications. The module converts 8 channels of 50Gb/s (PAM4) electrical input data to 4 channels of parallel optical signals, each capable of 100Gb/s operation for an aggregate data rate of 400Gb/s. On the receiver side, the module converts four 100Gb/s parallel optical signals into eight (PAM4) electrical output data, each running at 50Gb/s, for a total data rate of 400Gb/s.

An optical fiber cable with an MTP/MPO-12 connector can be plugged into the QSFP-DD 400G SR4 module receptacle. Host FEC is required to support up to 100m fiber transmission.

KEY SPECIFICATIONS

- 400G QSFP-DD optical transceiver with MPO-12 Receptacle
- 8x53.125Gb/s electrical interface (400GAUI-8)
- Up to 100m transmission with OM4 MMF
- Maximum power consumption 9W
- MPO-12 Receptacle
- Temp operating conditions: Commercial (0°C to +70°C)
- Compliant with CMIS 4.0

TECHNICAL DATA

Parameter	Value	Parameter	Value
Form Factor	QSFP-DD	Transmitter Data:	
Transmission Media	MM (MPO)	Tx Power	-4.6 to +4dBm ³⁾
Typical Reach	100m	Tx Amplitude, OMA	-2.6 to +3.5dBm
Nominal Wavelength	850nm	Tx Wavelength	840-860nm
Data Rate Support	400Gbps ¹⁾ 53.125Gbps (PAM4) ²⁾	Extinction Ratio	≥ 2.5dB
Protocol Support	400G Ethernet	Receiver Data:	
Power Consumption	<9W	Rx Sensitivity	-6.4dBm ^{3) 4)}
Operating Temperature	0°C to 70°C /	Rx Sensitivity, OMA	-4.6dBm ³⁾
Storage Temperature	-40°C to 85°C	Rx Overload, Max	4dBm ^{3) 4)}
DDM	Yes	Rx Wavelength	840-860nm
		LOS Assert	-15dBm
		LOS De-assert	-8.9 dBm
		LOS Hysteresis	1.5dB

¹⁾ Aggregated line rate 400GbE

²⁾ Line data rate

³⁾ Average power, per lane

⁴⁾ Per 53.125 Gbps lane. Specified @BER 2.4E-4

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 3.6V	Relative Humidity	85%
Storage Temp	-40°C to 85°C	Max Rx Optical Power	+5dBm per lane

ORDERING INFORMATION

Ordering Code	Description
CDD-4E4-SR-CDF02	400G QSFP-DD, PAM4, SR4, 100m, MPO-12, 850nm, MM, 0 to 70C

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