

SO-QSFP28-SR-BD

QSFP28, 100G Ethernet, BiDi, MM, 850nm / 910nm, 150m, 1.5dB, LC

OVERVIEW

The SO-QSFP28-SR-BD is a pluggable QSFP28 transceiver designed for high capacity 100 Gigabit Ethernet (100GbE) Data Center Interconnect (DCI) applications up to 150m over a multimode fiber.

The transceiver provides 100 Gbps transport by integrating the four electrical data lanes (CAUI-4) in each direction at 25Gbps into two optical lanes at 50Gbps using PAM4 modulation technique. Each electrical lane operates at 25.78125 Gbps and conforms to the 100GE CAUI4 interface with host FEC turned off. The two wavelength channels operate at the nominal wavelengths of 850nm and 910nm.

The transceiver incorporates a FEC encoder/decoder and diagnostic monitors.

TECHNICAL DATA

Technology	Grey QSFP28
Transmission media	MM (2x LC)
Typical reach	70m@ OM3 100m@OM4 150m@OM5
Nominal wavelength	850 nm 910 nm
Bit rate range	103.12 Gbps ¹⁾ 4x 25.78125 ²⁾
Protocols Eth:	100GbE
Power budget	0.5 – 1.5 dB
Temperature range	10°C to +70°C ³⁾
Power consumption	< 3.5 W

¹⁾ aggregated line rate 100GbE

²⁾ per lane

³⁾ case temperature

Transmitter data	Output power, per lane	Min: -6.0 dBm Max: +4.0 dBm
	Tx wavelength:	847 – 863 nm 900 – 916 nm
Receiver data	Minimum input power:	-7.5 dBm ²⁾
	Overload (max power):	+3.5 dBm ²⁾
	Wavelength range (nm):	847 – 863 nm 900 – 916 nm
DDM		Yes
MSA compliance		SFF-8665 SFF-8636 SFF-8661 SFF-8679

Safety	(IEC) EN60825-1:1994 +A11 +A2 (IEC) EN60825-2:1994 +A1 (IEC) EN60950:1992 +A1 +A2 +A3 +A4 +A11 US FDA CDRH AEL Class 1
EMI	FCC Part 15 Class A, EN55022 Class A
ESD	EN61000-4-2, Test Level 4, Criterion A
RoSH	RoHS 6

Storage temp.	-40°C to +85°C
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Note! See “Definitions” below.

ORDERING INFORMATION

Part number	Description
SO-QSFP28-SR-BD	QSFP28, 100G Ethernet, BiDi, MM, 850nm / 910nm, 150m, 1.5dB, LC

Subject to change without notice.

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DEFINITIONS

Technology:	Grey; Transceiver type for non-WDM applications. Electrical or optical. CWDM; Transceiver type for CWDM applications using G.694.2 channel grid. DWDM; Transceiver type for DWDM applications using G.694.1 channel grid. BiDi; Transceiver pair using two different wavelength channels operating on a single-fiber. DAC: Direct Attach Cable. Electrical or optical cable with attached connectors.
Transmission Media:	Type of fiber, e.g. Multimode (MM) or Singlemode (SM). Number of and connector type within brackets (e.g. 2x LC, 1x MPO).
Typical reach:	Nominal distance performance based on dispersion and power budget properties, i.e. w/o dispersion compensation and optical amplification.
Bit rate range:	Supported bit rate range in Gigabit or Megabit per second (Gbps or Mbps).
Protocols:	Protocols within supported bit rate range.
Nominal wavelength:	Typical wavelength from transmitter.
Interface standards:	Referenced interface standards e.g. IEEE 802.3 standard for 10GbE services.
Power budget:	Min and max power budget between Transmitter and Receiver. Excluding any dispersion penalty.
Dispersion tolerance/penalty:	Maximum amount of tolerated dispersion and required reduction of power budget to maintain BER better than $1E^{-12}$. Defined at a specific bit rate.
Temperature range:	Max operating case temperature range. Standard temperature range: Typically 0°C to +70°C (32°F to +158°F) Extended temperature range (E-temp): Typically -20°C to +75°C (-4°F to +167°F) Industrial temperature range (I-temp): -40°C to +85°C (-40°F to +185°F)
Power consumption:	Worst case power consumption.
Transmitter Output power:	Average output power. Provided in min and max values.
Receiver minimum input power:	Minimum average input power at specified BER, normally $1E^{-12}$.
Receiver max input power:	Maximum average input power at specified BER, normally $1E^{-12}$.
DDM:	Digital Diagnostic Monitoring functionality as defined in SFF-8472 MSA.