SO-QSFP-SR-BD

QSFP+, 40GBase, BiDi, duplex MM, 6.1dB, 100m@OM3, 150m@OM4

OVERVIEW

The SO-QSFP-SR-BD is a QSFP+ (Quad Small Form-factor Pluggable Plus) transceiver for 40 Gbps applications.

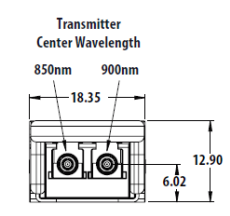
The transceiver is a high-performance module for short-range duplex data communication and interconnect applications. It integrates four electrical data lanes in each direction into transmission over a single LC duplex fiber optic cable. Each electrical lane operates at 10.3125 Gbps and conforms to the 40GE XLPPI interface.

The transceiver internally multiplexes the four 10G flows into two 20Gb/s optical channels over one simplex LC fiber using bi-directional optics. This results in an aggregate bandwidth of 40Gbps into a duplex LC cable. This allows reuse of the installed LC duplex cabling infrastructure for 40GbE application. Link distances up to 100 m using OM3 and 150m using OM4 optical fiber are supported.

SO-QSFP-SR-BD is designed to operate over multimode fiber systems using a nominal wavelength of 850nm and 900nm.

TECHNICAL DATA

Technology		Grey QSFP+
Transmission media		MM (2x LC)
Typical reach		150 m @ OM4 fiber 100 m @ OM3 fiber
Nominal wavelength		850 / 900 nm
Bit rate range		2x 20.625 Gbps
Protocols	Eth:	40GbE
Power budget		0 - 6.1 dB
Temperature range		+10°C to +70°C
Power consumption		< 3.5W



Transmitter data	Output power:	Min: -4.0 dBm [1] Max: +5.0 dBm [1]
	Tx wavelength:	832 - 868 nm [2] 882 - 918 nm [3]
Receiver data	Minimum input power:	-10.1 dBm [1]
	Overload (max power):	+5.0 dBm
	Wavelength range:	840 - 860 nm
DDM		Yes
MSA compliance		QSFP+ MSA SFF-8436

[1] Per lane
[2] Lane 1 (850nm)
[3] Lane 2 (900nm)

Regulatory compliance

EMC ESD	GR1089, EN 61000-4-3 FCC Part 15 CENELEC EN55022
RoHS	RoHS 6
Safety	EN 60825-1:2007 EN 60825-2:2004+A1+A2:2010

Storage temp.	-40°C to +85°C

Note! See “Definitions” below.

ORDERING INFORMATION

Part number	Description
SO-QSFP-SR-BD	QSFP+, 40GBase, BiDi, duplex MM, 6.1dB, 100m@OM3, 150m@OM4

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.