

SO-QSFP28-LR4-10L

QSFP28, 100GBASE-LR4, 1310nm, SM, DDM, 6.3dB, 10km

OVERVIEW

The SO-QSFP28-LR4-10L is a QSFP28 form-factor transceiver for 100 Gbps Ethernet (100GBASE-LR4) applications. It is intended for use in inter- and intra-connect applications within and between data centers between switches, routers, storage equipment etc. The optical performance is in accordance with the 100GBASE-LR standard, i.e. for optical distances up to 10km over a SingleMode (SM) fiber.

SO-QSFP28-LR4-10L uses four channels/lanes @ 25.78 Gbps to transport the Ethernet signal. Digital diagnostics functions are available via an I2C interface, as specified by the QSFP28 MSA.

TECHNICAL DATA

Technology	Grey QSFP28
Transmission media	SM (2x LC)
Typical reach	10 km
Nominal wavelength	Lane 1: 1295.56 nm Lane 2: 1300.05 nm Lane 3: 1304.58 nm Lane 4: 1309.14 nm
Interface standards	100GBASE-LR4
Bit rate range	103.12 Gbps ¹⁾ 25.78 Gbps ²⁾
Protocols Eth:	100GbE
Power budget	0 - 6.3 dB
Temperature range	0°C to +70°C
Power consumption	< 3.5 W

Transmitter data	Output power, tot:	Max: +10.5 dBm ³⁾
	Output power, per lane	Min: -4.3 dBm ⁸⁾ Max: +4.5 dBm ⁸⁾
	Tx wavelength (nm):	1294.53 – 1296.59 ⁴⁾ 1299.02 – 1301.09 ⁵⁾ 1303.54 – 1305.63 ⁶⁾ 1308.09 – 1310.19 ⁷⁾
Receiver data	Minimum input power:	-10.6 dBm ⁸⁾
	Overload (max power):	+4.5 dBm ⁸⁾
	Wavelength range:	1294.53 – 1296.59 ⁴⁾ 1299.02 – 1301.09 ⁵⁾ 1303.54 – 1305.63 ⁶⁾ 1308.09 – 1310.19 ⁷⁾
DDM		Yes
MSA compliance		QSFP28 MSA

¹⁾ Aggregated line rate (100GbE)

²⁾ Per lane line rate (100GbE)

³⁾ Total power (all lanes)

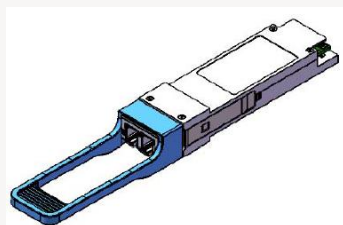
⁴⁾ Lane 1

⁵⁾ Lane 2

⁶⁾ Lane 3

⁷⁾ Lane 4

⁸⁾ Per lane @ 25.78 Gbps (100GbE)



EMC CE	EN 55032:2012, EN 55032:2015 EN 55024:2010, EN 55024:2010+A1
UL/Safety	UL 60950-1
FCC	47 CFR PART 15 OCT, 2013
RoHS	RoHS 6
TUV	EN 60950-1:2006+A11+A1+A12+A2 EN 60825-1:2014 EN 60825-2:2004+A1+A2

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

ORDERING INFORMATION

Part number	Description
SO-QSFP28-LR4-10L	QSFP28, 100GBASE-LR4, 1310nm, SM, DDM, 6.3dB, 10km

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 (DAC). 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 giving a BER, normally $1E^{-12}$.
DDM:	Digital Diagnostic Monitoring functionality as defined in SFF-8472 MSA.