

SO-CFP-LR4

CFP, 103/112 Gbps, 1310nm, SM, DDM, 6.3dB, 10km

OVERVIEW

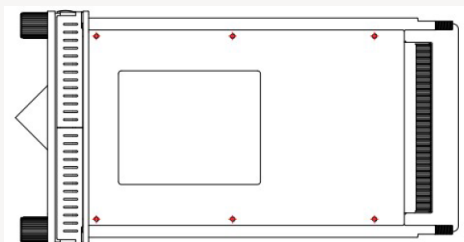
The SO-CFP-LR4 is a CFP (C Form-factor Pluggable) transceiver for 100 Gbps Ethernet (100GBASE-LR4) and OTN (OTU4) applications. It is intended for use in inter- and intra-connect applications within and between data centers between switches, routers, storage equipment etc. The optical performance is in accordance with the 100GBASE-LR standard, i.e. for optical distances up to 10km over a SingleMode (SM) fiber.

SO-100GBASE-LR4 uses four channels/lanes @ 25.78 Gbps and 27.95 Gbps to transport an Ethernet and OTN signal, respectively.

TECHNICAL DATA

Technology	Grey CFP
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 OTU4 4I1-9D1F
Bit rate range	103.12 / 111.81 Gbps ¹⁾ 25.78 / 27.95 Gbps ²⁾
Protocols	Eth: 100GbE OTN: OTU4
Power budget	0 - 6.3 dB (100GbE) 0 - 7.8 dB (OTU4)
Temperature range	-10°C to +75°C
Power consumption	< 16W

- ¹⁾ Aggregated line rate (100GbE / OTU4)
- ²⁾ Per lane line rate (100GbE / OTU4)
- ³⁾ Total power (all lanes)
- ⁴⁾ Lane 1
- ⁵⁾ Lane 2
- ⁶⁾ Lane 3
- ⁷⁾ Lane 4
- ⁸⁾ Per lane @ 25.78 Gbps (100GbE)
- ⁹⁾ Per lane @ 27.95 Gbps (OTU4)



Transmitter data	Output power, tot:	Max: +10.5 dBm ⁸⁾ Max: +8.9 dBm ⁹⁾
	Output power, per lane	Min: -4.3 dBm ⁸⁾ Max: +4.5dBm ⁸⁾ Min: -2.5 dBm ⁹⁾ Max: +2.9dBm ⁹⁾
	Wavelength range:	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⁾ -10.3 dBm ⁹⁾
	Overload (max power): Wavelength range:	+4.5 dBm ⁸⁾ ⁹⁾ 1294.53 – 1296.59 ⁴⁾ 1299.02 – 1301.09 ⁵⁾ 1303.54 – 1305.63 ⁶⁾ 1308.09 – 1310.19 ⁷⁾
DDM		Yes
MSA compliance		CFP MSA

Regulatory compliance

EMC CE	EN 55022:2010 EN 55024:2010
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-CFP-LR4	CFP, 103/112 Gbps, 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. 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.