INDEPENDENT DATA SOLUTIONS

smartoptics

DATASHEET 5.0

SO-CFP-SR10

CFP, 100GBASE-SR10, MM, DDM, 1.9dB, 100m, MPO

OVERVIEW

The SO-CFP-SR10 is a CFP (C Form-factor Pluggable) transceiver for 100 Gbps Ethernet (100GBASE-SR10) applications. It is intended for use in inter- and intra-connect applications within data centers between switches, routers, storage equipment etc. The optical performance is in accordance with the 100GBASE-SR standard, i.e. for optical distances up to 150m over a MultiMode (MM) OM4-grade ribbon fiber.

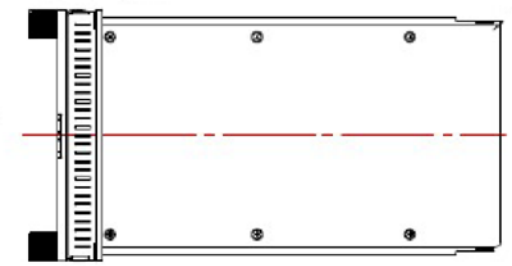
SO-CFP-SR10 uses 10x channels @ 10.3125 Gbps to transport an 100G Ethernet. These lanes can also be used to transport 10x 10GbE services via a break-out cable. The transceiver has a single 24/20 lane optical fiber MPO-connector.

[1] Aggregated line rate (100GbE)

[2] Per channel line rate (10GbE)

[3] Total power (all lanes)

[4] Per lane @ 10.3125 Gbps



TECHNICAL DATA

Technology		Grey CFP
Transmission media		SM (1x MPO)
Typical reach		100 m @ OM3
		150 m @ OM4
Nominal wavelengths		850 nm
Interface standards		100GBASE-SR10
Bit rate range		103.125 Gbps [1]
		10.3125 Gbps [2]
Protocol support	Eth:	100GbE
		10x 10 GbE
Power budget		0 - 1.9 dB
		0 - 7.8 dB (OTU4)
Temperature range		-0°C to +70°C
Power consumption		< 8W
Transmitter data:		
Output power, per lane		Min: +7.6 dBm [4]
		Max : + 2.4 dBm [4]
Wavelength range		840 – 860 nm [4]
Receiver data:		
Minimum input power		-9.5 dBm [4]
		-10.3 dBm [4]
Overload (Max power)		+2.4 dBm [4]
Wavelength range		840 – 860 nm [4]
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

ORDERING INFORMATION

Part Number	Descriptio n
SO-CFP-SR10	CFP, 100GBASE-SR10, MM, DDM, 1.9dB, 100m, MPO

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

OPTICAL INTERFACE