

SO-SFP-1G-10G-SR

SFP+, 1000Base-SX / 10GBase-SR, 850nm, MM, DDM, 300m

OVERVIEW

The SO-SFP-1G-10G-SR is a versatile 850nm SFP+ transceiver for MultiMode (MM) fiber with a rate select between GbE and 10GbE-LAN/-WAN services. The optical performance is in accordance with the IEEE 802.3ae standard, providing a bridgeable distance of up to 300m for 10GbE-LAN (10GBASE-SR), 10GbE-WAN (10GBASE-SW) and 1000BASE-SX (GbE) services.

The transceiver has no minimum distance (i.e. no minimum attenuation) which is ideal for intra-office connections since extra attenuators need not be considered.

This transceiver provides digital diagnostic functions via a 2-wire serial interface as defined by the SFF-8472 specification.

TECHNICAL DATA

Technology	Grey SFP+
Transmission media	MM (2x LC)
Typical reach	300 m @ G.651
Nominal wavelength	850 nm
Interface standards	10GBASE-SR 10GBASE-SW 1000BASE-SX
Bit rate range	9.953 - 10.312 Gbps 1.25 Gbps
Protocols	Eth: 10GbE-LAN 10GbE-WAN GbE
	SDH/SONET STM-64/OC-192
Power budget	0 - 5.1 dB ¹⁾ 0 - 7.5 dB ²⁾
Temperature range	0°C to 70°C
Power consumption	< 1.0W

Transmitter data	Output power:	Min: -6.0 dBm ¹⁾ Max: -1.0 dBm ¹⁾
		Min: -9.5 dBm ²⁾ Max: -1.0 dBm ²⁾
	Tx wavelength:	Min: 840 nm Max: 860 nm
Receiver data	Minimum input power:	-11.1 dBm ¹⁾ -17.0 dBm ²⁾
	Overload (max power):	-1.0 dBm
	Wavelength range:	840 - 860 nm
DDM		Yes
MSA compliance		SFF-8431 SFF-8472

¹⁾ @ 10.3 Gbps (10GbE-LAN)

²⁾ @ 1.25 Gbps (GbE)

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-SFP-1G-10G-SR	SFP+, 1/10GBase-SR, 850nm, MM, DDM, 7.5dB@1.25Gbps, 5.1dB@10.3Gbps, 300m

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.