

DATASHEET 5.0

SO-XFP-SR & -SR-E

XFP, 10G Multirate, 850nm, MM, DDM, 3.8dB, 300m@OM3

OVERVIEW

The SO-XFP-SR is an 850nm XFP transceiver for MultiMode fiber supporting traffic formats between 9.95 Gbps to 11.3 Gbps. The optical performance is in accordance with the IEEE 802.3ae SR/SW-standard, providing a bridgeable distance of up to 300m for 10GbE-LAN (10GBASE-SR) and 10GbE-WAN (10GBASE-SW) services. Apart from being ideally suited for 10 GbE datacom applications, it is also well suited for storage area network (SAN/NAS) applications based on 10G Fiber Channel standards.

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. An OM3 or higher-grade fiber shall be used to avoid distance issues.

This transceiver provides digital diagnostic functions via a 2-wire serial interface as defined by the SFF-8472 specification. The transceiver is available in two temperature range options, one supporting an extended temperature range -20°C to 85°C (-4°F to 185°F).

TECHNICAL DATA

Technology	Grey XFP										
Transmission Media	MM (2x LC)										
Typical reach	300 m @ OM3 fiber										
Nominal wavelength	850 nm										
Interface standards	10GBASE-SR 10GBASE-SW 1200-M5-SN-I 1200-M5E-SN-I 1200-M6-SN-I										
Bit rate range	9.95 - 11.3 Gbps										
Protocols	<table border="1"> <tr> <td>Eth:</td> <td>10GbE-LAN, 10GbE-WAN</td> </tr> <tr> <td>OTN:</td> <td>OTU2e, OTU2</td> </tr> <tr> <td>SDH/SONET:</td> <td>STM-64/OC-192</td> </tr> <tr> <td>FC:</td> <td>10G FC</td> </tr> <tr> <td>CPRI:</td> <td>Opt 8 (10.1376 Gbps)</td> </tr> </table>	Eth:	10GbE-LAN, 10GbE-WAN	OTN:	OTU2e, OTU2	SDH/SONET:	STM-64/OC-192	FC:	10G FC	CPRI:	Opt 8 (10.1376 Gbps)
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Power budget	0 - 3.8 dB						
Dispersion tolerance	0°C to +70°C (SR) -20°C to +85°C (SR-E)						
Power consumption	< 1.0W						
Transmitter data	<table border="1"> <tr> <td>Output power:</td> <td>Min: -7.3 dBm Max: -1.0 dBm</td> </tr> <tr> <td>Tx wavelength:</td> <td>Min: 840 nm Max: 860 nm</td> </tr> </table>	Output power:	Min: -7.3 dBm Max: -1.0 dBm	Tx wavelength:	Min: 840 nm Max: 860 nm		
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Overload (max power):	-1.0 dBm						
Wavelength range:	840-860 nm						
DDM	Yes						
MSA compliance	SFF-8431 SFF-8472						

¹⁾@ 10.3Gbps

Regulatory Compliance

EMC / CE	EN 55022:2010 EN 55024:2010
UL/Safety FCC	UL 60950-1 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-XFP-SR	XFP, 10G Multirate, 850nm, MM, DDM, 3.8dB, 300m@OM3
SO-XFP-SR-E	XFP, 10G Multirate, 850nm, MM, DDM, 3.8dB, 300m@OM3, E-temp

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.