SO-SFP-10G-ZR100

SFP+ 10G Multirate 0.6-11.3Gbps 1550nm 100km 26dB

OVERVIEW

The SO-SFP-10G-ZR100 is an SFP+ form-factor transceiver for multiple applications. The transceiver supports a bit rate range from 600Mbps to 11.3Gbps enabling a wide span of protocols to be carried. The optical performance supports distances up to 100km over a SingleMode (SM) fiber without dispersion compensation.

SO-SFP-10G-ZR100 provides digital diagnostic functions via a 2-wire serial interface as defined by the SFF-8472 specification. The transceiver supports the commercial temperature range (C-temp): 0°C to +70°C (32°F to +158°F).

TECHNICAL DATA

Parameter	Value
Technology	Grey SFP+
Transmission media	SM (2x LC)
Typical reach	100km
Nominal wavelength	1550nm
Bit rate support	0.6Gbps to 11.3Gbps
Protocol support	GbE, 10GbE-LAN, 10GbE-WAN
	STM-64/OC192
	STM-4/OC12, STM-16/OC48
	OTU1, OTU2, OTU2e
	1G, 2G, 4G, 8G, 10G FC
	CPRI Opt 1, 2, 3, 4, 5, 6, 7, 7A, 8
	OBSAI 1x, 2x, 4x, 8x
Power budget	13 – 26dB
Dispersion penalty	Max 3dB
Power consumption	< 1.5 W
Operating temperature	0°C to +70°C
Storage temperature	-40°C to +85°C

Parameter	Value
Transmitter data:	
Output power	Min: +1.0dB [1]
	Max: +5.0dBm [1]
Transmit wavelength	1520 – 1580nm
Receiver data:	
Minimum input power	-25.0dBm [1] [2]
Overload (max power)	-8.0dBm [1] [2]
Wavelength range	1260 – 1600nm
LOS assert	Min -26dBm
LOS de-assert	Max -38dBm
DDM	Yes
MSA compliance	SFF-8431, 8432, 8472

[1] Average power

[2] At BER 10^{-12}, 10.3Gbps $PRBS2^{31}$-1

Safety/regulatory compliance:
TUV/UL/FDA (contact Smartoptics for latest certification information)
RoHS compliance

ORDERING INFORMATION

Parameter	Value
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GENERAL DEFINITIONS

Parameter	Description
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 cable with attached connectors. AOC: Active Optical Cable. 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 typical fiber dispersion, fiber loss and power budget properties, i.e. w/o dispersion compensation and optical amplification. Actual distance is dependent on actual optical path loss and dispersion properties.
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(s) from transmitter.
Interface standards	Referenced interface standards or MSA's, e.g. IEEE 802.3 standard for 10GbE services or 100G4WDM-10 etc.
Power budget	Min and max power budget between Transmitter and Receiver w/o optical path penalties.
Dispersion tolerance/penalty	Maximum amount of tolerated dispersion and required reduction of power budget to maintain stipulated Bit Error Rate (BER) and at a given bit rate.
Temperature range	Max operating case temperature range. Standard temperature range (C-temp): 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. Will vary over temperature.
Transmitter Output power	Average output power. Provided in min and max values.
Receiver minimum input power	Minimum average input power at specified BER, normally $1E^{-12}$. Note that some protocols require FEC to achieve sufficient BER.
Receiver max input power	Maximum average input power giving a BER, normally $1E^{-12}$.
DDM	Digital Diagnostic Monitoring functionality as defined in e.g. SFF-8472 MSA.