

SO-XFP-10GE-BX20D-2733/-3327

XFP, BiDi, 10G Multirate, 1270/1330nm, DDM, 12dB, 20km

OVERVIEW

The SO-XFP-10GE-BX20D is a bi-directional transceiver solution operating directly on a single-fiber without the need for a separate optical filter. This is achieved by having two transceivers that inject different wavelengths into the same single-fiber. The solution thus consists of two transceivers; SO-XFP-10GE-BX20D-2733 and SO-XFP-10GE-BX20D-3327, operating at 1270nm and 1330nm respectively. Using a single-fiber solution provides a cost-efficient solution for interconnect and it simplifies the patching since no separate transmit/receive direction has to be taken into account.

The optical performance of the transceiver pair exceeds the IEEE 802.3ae LR/LW-standard, providing a bridgeable distance of up to 20km for 10GbE-LAN (10GBASE-LR) and 10GbE-WAN (10GBASE-LW) services.

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

TECHNICAL DATA

Technology	BiDi XFP
Transmission media	SM (1x LC)
Typical reach	20 km
Nominal wavelength	1270 nm ¹⁾ & 1330 nm ²⁾
Interface standards	10GBASE-LR 10GBASE-LW 1200-SM-LL-L 10G FC
Bit rate range	9.95 - 11.1 Gbps
Protocols	Eth: 10GbE-LAN 10GbE-WAN OTN: OTU2 OTU2e SDH/SONET: STM-64/OC-192 FC: 10G FC CPRI: Opt 8 (10.1376 Gbps)
Power budget	2.5 - 12.0 dB
Temperature range	0°C to +70°C
Power consumption	< 2W

Transmitter data	Output power:	Min: -2.0 dBm Max: +3.0 dBm
	Tx wavelength:	1260 - 1280 nm ¹⁾ 1320 - 1340 nm ²⁾
Receiver data	Minimum input power:	-14.0 dBm ³⁾
	Overload (max power):	+0.5 dBm
	Wavelength range:	1320 - 1340 nm ¹⁾ 1260 - 1280 nm ²⁾
DDM		Yes
MSA compliance		SFF-8431 SFF 8472

¹⁾ SO-XFP-10GE-BX20D-2733

²⁾ SO-XFP-10GE-BX20D-3327

³⁾ @ 10.3Gbps

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.

Note: IEEE 802.3ae 10GBASE-LR/LW is defined only at 1310 nm. The standard is referred to from bridgeable distance perspective.

ORDERING INFORMATION

Part number	Description
SO-XFP-10GE-BX20D-2733	XFP, BiDi, 10G Multirate, TX/RX=1270/1330nm, DDM, 12dB, 20km
SO-XFP-10GE-BX20D-3327	XFP, BiDi, 10G Multirate, TX/RX=1330/1270nm, DDM, 12dB, 20km

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.