

SO-SFP-1000BASE-EZXD & EZXD-I

SFP, 1.0625/1.25Gbps, 1550nm, SM, DDM, 32dB, 120km, C-temp & I-temp

OVERVIEW

SO-SFP-1000BASE-EZXD is a 1550nm SFP high performance transceiver for SingleMode (SM) fiber for Gigabit Ethernet (GbE) and 1G Fiber Channel (1G FC) services. The optical performance provides a bridgeable distance of up to 120 km.

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 being the Industrial temperature range (I-temp): -40°C to 85°C (-40°F to 185°F).

TECHNICAL DATA

| Parameter | Value |
|--------------------------|-------------------------------------|
| Technology | Grey SFP |
| Transmission media | SM (2x LC) |
| Typical reach | 120km |
| Nominal wavelength Tx/Rx | 1x 1550nm |
| Bit rate support | 1.0625Gbps / 1.25Gbps |
| Protocol support | GbE 1G FC |
| Power budget | 15 – 32dB |
| Dispersion penalty | Max 1dB |
| Power consumption | < 1.0W |
| Operating temperature | 0°C to +70°C -40°C to +85°C (-I) |
| Storage temperature | -40°C to +85°C |

| Parameter | Value |
|--------------------------|---------------------------------------------------------|
| Transmitter data: | |
| Output power | Min: 0.0dBm ¹⁾ Max: +5.0dBm ¹⁾ |
| Transmit wavelength | 1500 – 1580nm |
| Receiver data: | |
| Minimum input power | -32.0dBm ^{1) 2)} |
| Overload (max power) | -10.0dBm ^{1) 2)} |
| Wavelength range | 1260 – 1600nm |
| LOS Assert | Min -45dBm |
| LOS De-assert | Max -33dBm |
| LOS Hysteresis | Min 0.5dB |
| DDM | Yes |
| MSA compliance | SFF-8431, -8432, -8472 |

¹⁾ Average power.

²⁾ @ 1.25Gbps, BER ≤ 1x10⁻¹², PRBS 2⁷-1, back-to-back.

Safety/regulatory compliance:

TUV/UL/FDA (contact Smartoptics for latest certification information)

RoHS compliance

ORDERING INFORMATION

| Ordering code | Description |
|------------------------|-------------------------------------------------------------|
| SO-SFP-1000Base-EZXD | SFP, 1G Ethernet, 1G FC, SM 1550nm, 120km, 32dB, LC |
| SO-SFP-1000Base-EZXD-I | SFP, 1G Ethernet, 1G FC, SM 1550nm, 120km, 32dB, I-temp, LC |

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 100G 4WDM-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): 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. |

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