SO-SFP-GE-FE-LX

SFP, 100Base, SGMII, 1310, SM, 16dB, 10km

OVERVIEW

SO-SFP-GE-FE-LX is a 1310nm SFP transceiver for MultiMode fiber for Fast Ethernet (100M) services. The transceiver is aimed for e.g. switched backplane applications using Serial Gigabit Media Independent Interfaces (SGMII). The optical performance provides a bridgeable distance of up to 10 km.

SGMII is a connection bus for Ethernet MACs and PHYs defined by Cisco Systems. The transceiver supports More Link Status Monitor, such as CRC, Package counter and Far End Fault Indication (FEFI).

TECHNICAL DATA

Technology		Grey SFP
Transmission media		SM (2x LC)
Typical reach		10 km
Nominal wavelength		1310 nm
Interface standards		100BASE-LX
Bit rate range		100 / 125 Mbps
Protocols	Eth:	100M Ethernet
Power budget		0 - 16 dB [1]
Temperature range		0°C to +70°C
Power consumption		< 1.0W

Transmitter data	Output power:	Min: -15.0 dBm Max: -8.0 dBm
	Tx wavelength:	Min: 1260 nm Max: 1360 nm
Receiver data	Minimum input power:	-31.0 dBm [1]
	Overload (max power):	-8.0 dBm
	Wavelength range:	1260 - 1600 nm
MCU		no
MSA compliance		SFP MSA SFF-8472

[1] @ 125 Mbps & BER 1E-12

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

Note! See “Definitions” below.

ORDERING INFORMATION

Part number	Description
SO-SFP-GE-FE-LX	SFP, 100Base, SGMII, 1310, SM, 16dB, 10km

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.

CIRCUIT SCHEMATICS