SO-SFP-16GFC-SD

SFP+, 16/8/4 Gbps FC/FICON, 850nm, MM, DDM, 4.2dB, 125m@OM4

OVERVIEW

The SO-SFP-16GFC-SD is a versatile tri-rate 850nm transceiver for MultiMode (MM) fiber and 4G, 8G and 16G Fiber channel services. The optical performance provides a bridgeable distance of up to 125 m when using OM4 grade fiber.

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.

TECHNICAL DATA

Parameter	Value
Technology	Grey SFP+
Transmission media	MM (2x LC)
Typical reach	25m @ OM2 fiber, 16G FC
	100m @ OM3 fiber, 16G FC
	125m @ OM4 fiber, 16G FC
Nominal wavelength	850nm
Bit rate support	4.25 / 8.5 / 14.025Gbps
Interface standards	16G FC 1600-SM-LC-L
Protocol support	4G, 8G, 16G FC
Power budget	0 - 2.7dB for 16G FC
	0 - 3.2dB for 8G FC
	0 - 4.2dB for 4G FC
Power consumption	< 1.0W
Operating temperature	-0°C to +70°C
Storage temperature	-40°C to +85°C

Parameter		Value
Transmitter data:		
Output power		Min: -7.8dBm [1]
		Max: +2.0dBm [1]
Transmit wavelength		840nm – 860nm
Receiver data:		
Minimum input power	16G FC	-10.5dBm [1] [2]
	8G FC	-11dBm [1] [2]
	4G FC	-12dBm [1] [2]
Overload (max power)		+2.0dBm [1] [2]
Wavelength range		840nm – 860nm
LOS Assert		Min -25dBm
LOS De-assert		Max -12.5dBm
LOS Hysteresis		Min 0.5dB
DDM		Yes
MSA compliance		SFF-8431, -8472

[1] Average power.

[2] @ BER $1x10^{-12}$, back-to-back.

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

ORDERING INFORMATION

Ordering code	Description
SO-SFP-16GFC-SD	SFP+, 16G/8G/4G FC, MM 850nm, 100m@OM3, 150m@OM4, 4.2dB, 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.