

# SO-SFP-1000BASE-TR & -TR-I

SFP, 1G Ethernet, 100m@CAT5, RJ45

## OVERVIEW

The SO-SFP-1000BASE-TR is a transceiver with a high-performance integrated duplex data link for bidirectional communication over copper cable. It is specifically designed for high speed communication links that require 1G Ethernet over LAN cable.

SO-SFP-1000BASE-TR is a solution for 1000 Mbps Ethernet (GbE) connections within racks and across adjacent racks where the interconnected equipment uses SFP interfaces instead of RJ45.

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

<b>Technology</b>	Grey SFP
<b>Transmission media</b>	Electrical (1x RJ45)
<b>Typical reach</b>	100m
<b>Interface standards</b>	1000BASE-T IEEE 802.3
<b>Protocols</b> Eth:	GbE
<b>Temperature range</b>	0°C to +70°C (-TR) -40°C to +85°C (-TR-I)
<b>Power consumption</b>	< 1W

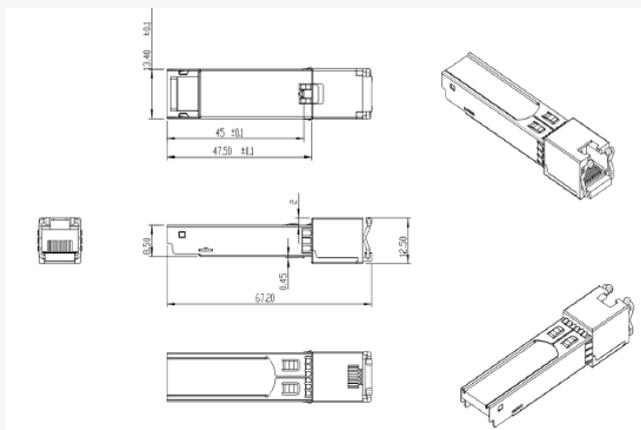
<b>Distance</b>	1000BASE-T	100m <sup>1)</sup>
<b>Auto-neg</b>		No
<b>Rx-LOS</b>		Yes
<b>MSA compliance</b>		SFP MSA

<sup>1)</sup> Using CAT 5 cable or better

### Regulatory compliance

<b>EMC CE</b>	EN 55022:2010 EN 55024:2010
<b>UL/Safety</b>	UL 60950-1
<b>FCC</b>	47 CFR PART 15 OCT, 2013
<b>RoHS</b>	RoHS 6
<b>TUV</b>	EN 60950-1:2006+A11+A1+A12+A2

<b>Storage temp.</b>	-40°C to +85°C
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## ORDERING INFORMATION

Part number	Description
SO-SFP-1000Base-TR	SFP 1G Eth 100m RJ45
SO-SFP-1000Base-TR-I	SFP, 1G Ethernet, 100m@CAT5, I-temp, RJ45

## 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.
Transmission Media:	DAC: Direct Attach Cable. Electrical or optical cable with attached connectors. 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.