

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

SFP, 1000Base-T, 100m, RJ45

## OVERVIEW

The SO-SFP-1000BASE-T 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 1000 Megabit Ethernet (GbE) over LAN cable.

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

This transceiver provides digital diagnostic functions via a 2-wire serial interface as defined by the SFF-8472 specification. The transceiver module is compliant to RoHS-6/6.

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 <sup>1)</sup>
<b>Interface standards</b>	1000BASE-T IEEE 802.3
<b>Protocols</b> Eth:	1000M Ethernet (GbE)
<b>Temperature range</b>	0°C to +70°C (-T) -40°C to +85°C (-T-I)
<b>Power consumption</b>	< 1W

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

<b>Misc. features</b>	Autoneg
<b>DDM</b>	No
<b>MSA compliance</b>	SFP MSA

### 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-T	SFP, 1000Base-T, 100m, RJ45
SO-SFP-1000Base-T-I	SFP, 1000Base-T, 100m, RJ45, I-temp.

## 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.