



SFT00P10GE0A - SFP Copper Transceiver Copper / 100m / 1000Base-T

For your product safety, please read the following information carefully before any manipulation of the transceiver:









This transceiver is specified as ESD threshold 1kV for SFI pins and 2kV for all others electrical input pins, tested per MIL-STD-883G, Method 3015.4 /JESD22-A114-A (HBM). However, normal ESD precautions are still required during the handling of this module.

1. Overview

SFT00P10GE0A is a high performance transceiver module for Gigabit Ethernet data links over Category 5 UTP cable. The maximum reach¹ is 100m. The transceiver supports 1000BASE-T operation in host systems.

This transceiver module is compliant with the Small Form-factor Pluggable (SFP) Multisource Agreement (MSA) and hot pluggable. Always contact Skylane Optics commercial agents for compatibility with different equipment platforms.

2. Features

- SFP Multi-Source Agreement compliant (SFF-8074)
- Hot-Pluggable SFP Footprint
- Serial ID functionality supported according to (SFF-8074)
- Compact RJ-45 Connector Assembly
- Fully Metallic Enclosure for Low EMI
- Access to Physical Layer IC via 2-Wire Serial Bus
- 100m reach over Cat5 UTP cable
- Support 1000BASE-T Operation in Host Systems
- Operating Case Temperature: 0°C 70°C
- Low Power Dissipation (<1.2W)
- Auto-negotiation function implemented



Figure 1. SFP Copper (non-binding illustration)

3. Applications

- LAN 1000Base-T
- Gigabit Ethernet over Cat 5 Cable
- Switch to Switch Interface
- Router/Server Interface





4. Technical parameters

4.1. Recommended Operating Conditions					
Parameter	Min	Тур	Max	Units	Notes
Storage temperature	-40		85	°C	
Operating Case Temperature	0		70	°C	
Relative Humidity	5		85	%	Non-Condensing
Power Supply Voltage	3.13	3.3	3.47	٧	
Power Supply Current		300	350	mA	

4.2. General Specifications					
Parameter	Min	Тур	Max	Units	Notes
Data Rate		1000		Mbps	
Distance			100	m	1

^{1.} Category 5 UTP cable, BER≤10-12

4.3. High-speed Electrical Interface, Host to SFP					
Parameter	Min	Тур	Max	Units	Notes
TD+, TD- Input voltage Swing	250		1200	mV	3
RD+, RD- Output voltage Swing	350		800	mV	3
Rise/Fall Time		175		ps	2
Tx Input Impedance		50		Ω	3
Rx Output Impedance		50		Ω	3

^{2. 20%} to 80% value

^{3.} Single ended

4.4. High-speed Electrical Interface, Cable to SFP					
Parameter	Min	Тур	Max	Units	Notes
Transmission Frequency		125		MHz	4
Tx Output Impedance		100		Ω	5
Rx Output Impedance		100		Ω	5

^{4.} Five-level coding as per IEEE 802.3

5. Transceiver Electrical Pad Layout

Towards BEZEL \leftarrow

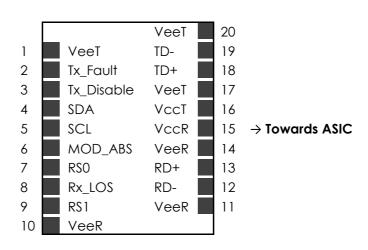


Figure 2. Transceiver Electrical Pad Layout

^{5.} Differential, 1 to 125MHz





6. Pin Functions Definitions

Pin Number	Name	Function			
1	VeeT	Transmitter Ground			
2	TX_Fault	Transmitter Fault Indication			
3	TX_ Disable	Transmitter Disable			
4	SDA	2-Wire Serial Interface Data (SDA)			
5	SCL	2-Wire Serial Interface Clock (SCL)			
6	MOD_ABS	Grounded within the module			
7	RSO	Not Connected			
8	Rx_LOS	Loss of signal			
9	RS1	Receiver Ground			
10	VeeR	Receiver Ground			
11	VeeR	Receiver Ground			
12	RD-	Inverted received data output			
13	RD+	Received data output			
14	VeeR	Receiver Ground			
15	VccR	Receiver Power			
16	VccT	Transmitter Power			
17	VeeT	Transmitter Ground			
18	TD+	Transmit data input			
19	TD-	Inverted transmit data input			
20	VeeT	Transmitter Ground			

7. EEPROM

MSA compliant (SFF-8074)

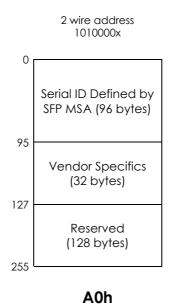


Figure 3. EEPROM of a SFP Copper





8. Ordering information

Part Number	Description
SFT00P10GE0A	SFP copper, RJ45 connector, protocols: 1000Base-T, max reach 100m on Cat 5 UTP cable, 0°C to 70°C

