

SFP-10G-NBASE-T-C

10/100/1000/2500/5000/10000NBase-T SFP+ Transceiver (Copper, 30m (10Gb), 100m (>5Gb), RJ-45)

Features:

- SFF-8432 Compliance
- RJ-45 Connector
- Copper Media Type
- Commercial Temperature 0 to 70 Celsius
- Hot Pluggable
- Metal with Lower EMI
- Excellent ESD Protection
- RoHS Compliant and Lead Free



Applications:

- 10GBase Ethernet
- Access and Enterprise

Product Description

This MSA Compliant SFP+ transceiver provides 10GBase-TX throughput up to 100m over a copper connection via a connector. This TX module supports 10GBase auto-negotiation and can be configured to fit your needs. It is built to MSA standards and is uniquely serialized and data-traffic and application tested to ensure that they will integrate into your network seamlessly. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

ProLabs' transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S. – made or designated country end products."



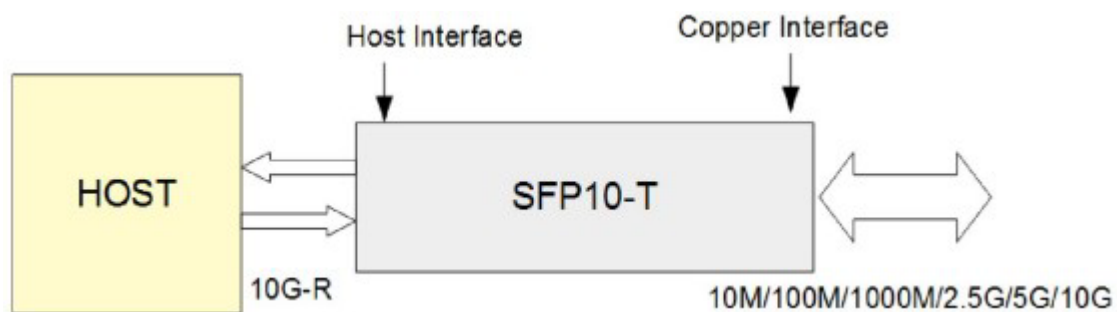
General Specifications

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|----------------------------|--------|------|------|-------------------|------|-------|
| Maximum Supply Voltage | Vmax | -0.5 | | 4 | V | |
| Storage Temperature | TS | -40 | | 85 | °C | 1 |
| Operating Case Temperature | Tc | 0 | | 70 | °C | 1 |
| Operating Humidity | RH | 5 | | 95 | % | |
| Data Rate | DR | | 10 | | Gbps | 3 |
| Bit Error Rate | BER | | | 10 ⁻¹² | | |
| Supply Current | Icc | | 700 | 750 | mA | 4 |
| Input Voltage | Vcc | 3.14 | 3.3 | 3.46 | V | |

Notes:

1. Ambient temperature
2. Case temperature
3. IEEE 802.3ae
4. Test at 10Gbps rate using 30m CAT 6A cable

Compatible with Multiple Rates



1. Host Interface: Compatible with 10G rate, only be used on 10G switch port.
2. Copper Interface: Compatible with 10/100/1000M/2.5G/5G/10G, auto-negotiates with remote module rate.
3. Supports 10GBase-T up to 30m using Cat 6A/7 cable.
4. Supports 5GBase-T up to 70m using Cat 5E cable.
5. Supports 2.5GBase-T up to 100m using Cat 5E cable.
6. Supports 10/100/1000Base-T up to 100m using Cat 5E cable.

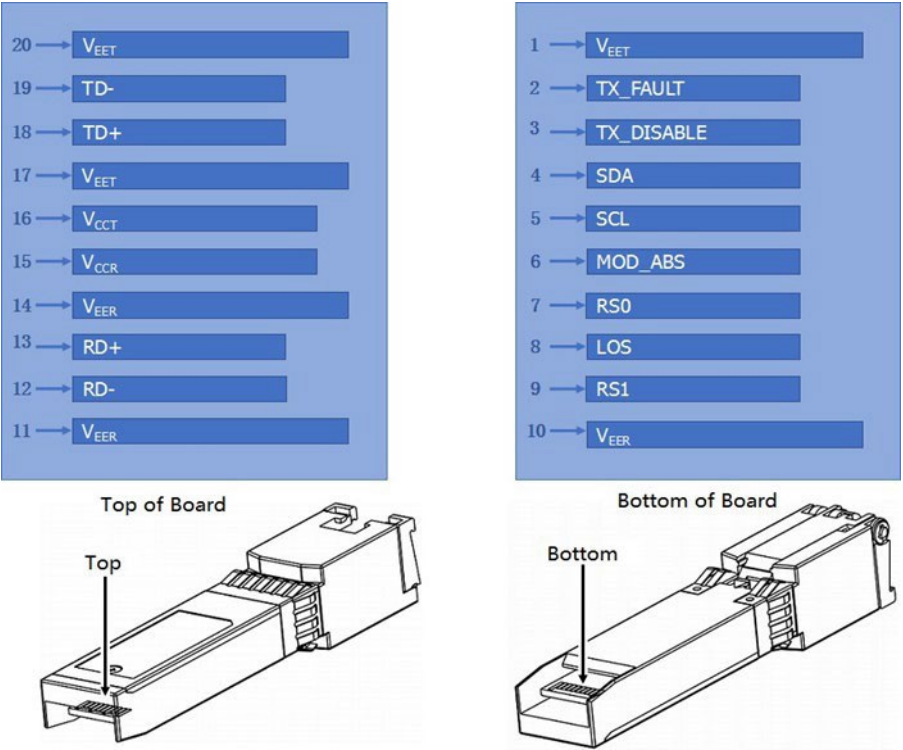
Pin Descriptions

| Pin | Symbol | Name/Descriptions | Ref. |
|-----|------------------|----------------------------------------------------------------|------|
| 1 | V _{EET} | Transmitter ground (common with receiver ground) | 1 |
| 2 | TX_FAULT | Transmitter Fault. Not supported | |
| 3 | TX_DISABLE | Transmitter Disable. PHY disabled on high or open | 2 |
| 4 | SDA | 2-wire Serial Interface Data Line | 3 |
| 5 | SCL | 2-wire Serial Interface Clock Line | 3 |
| 6 | MOD_ABS | Module Absent. Grounded within the module | 3 |
| 7 | RS0 | No Connection Required | |
| 8 | LOS | Loss of Signal indication. Logic 0 indicates normal operation. | 4 |
| 9 | RS1 | No Connection Required | |
| 10 | V _{EER} | Receiver ground (common with transmitter ground) | 1 |
| 11 | V _{EER} | Receiver ground (common with transmitter ground) | 1 |
| 12 | RD ⁻ | Receiver Inverted DATA out. AC coupled | 5 |
| 13 | RD ⁺ | Receiver Non-inverted DATA out. AC coupled | 5 |
| 14 | V _{EER} | Receiver ground (common with receiver ground) | 1 |
| 15 | V _{CCR} | Receiver power supply | |
| 16 | V _{CCT} | Transmitter power supply | |
| 17 | V _{EET} | Transmitter ground (common with receiver ground) | 1 |
| 18 | TD ⁺ | Transmitter Non-Inverted DATA in. AC coupled | |
| 19 | TD ⁻ | Transmitter Inverted DATA in. AC coupled | |
| 20 | V _{EET} | Transmitter ground (common with receiver ground) | 1 |

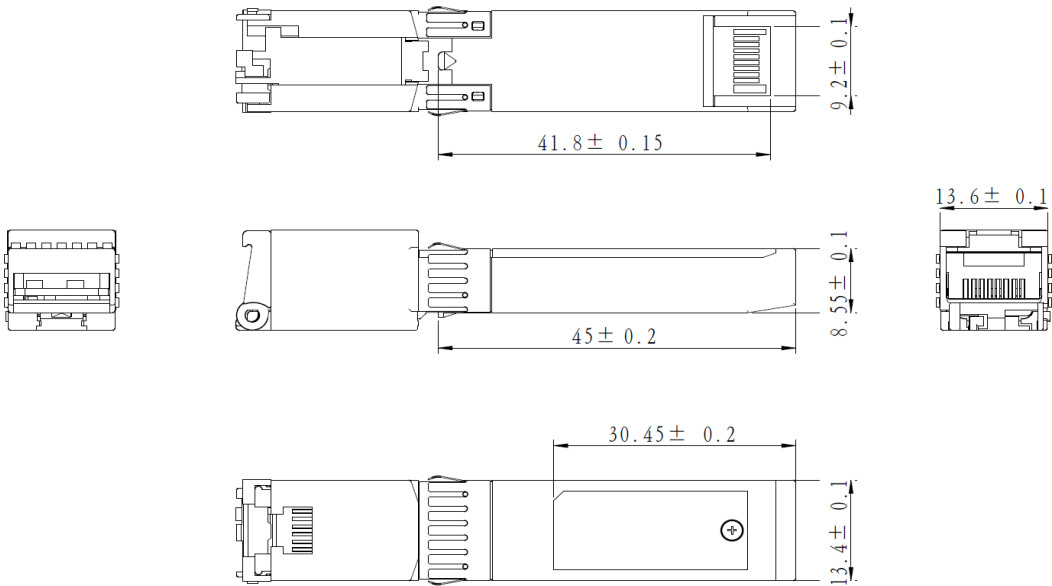
Notes:

1. Circuit ground is connected to chassis ground
2. Disabled: T_{DIS}>2V or open, Enabled: T_{DIS}<0.8V
3. Should Be pulled up with 4.7k –10k ohm on host board to a voltage between 2V and 3.6V
4. The LOS pin can indicate the connection status of the copper interface. When the copper interface is connected to the far end through the network cable, the LOS is low. Otherwise, when the network cable is disconnected, the LOS is high.
5. RD[±] has squelch function. When the copper interface is connected to the far end through a network cable, RX[±] is working normally. If the network cable is disconnected, RX[±] has no signal output.

Electrical Pad Layout



Mechanical Specifications



ALL DIMENSIONS ARE ± 0.2 mm UNLESS OTHERWISE SPECIFIED
UNIT: mm

About ProLabs

Our experience comes as standard; for over 15 years ProLabs has delivered optical connectivity solutions that give our customers freedom and choice through our ability to provide seamless interoperability. At the heart of our company is the ability to provide state-of-the-art optical transport and connectivity solutions that are compatible with over 90 optical switching and transport platforms.

Complete Portfolio of Network Solutions

ProLabs is focused on innovations in optical transport and connectivity. The combination of our knowledge of optics and networking equipment enables ProLabs to be your single source for optical transport and connectivity solutions from 100Mb to 400G while providing innovative solutions that increase network efficiency. We provide the optical connectivity expertise that is compatible with and enhances your switching and transport equipment.

Trusted Partner

Customer service is our number one value. ProLabs has invested in people, labs and manufacturing capacity to ensure that you get immediate answers to your questions and compatible product when needed. With Engineering and Manufacturing offices in the U.K. and U.S. augmented by field offices throughout the U.S., U.K. and Asia, ProLabs is able to be our customers best advocate 24 hours a day.



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