

## 10GBASE-T SFP+ Copper RJ-45 30m Transceiver

P/N: QT-SFP-10G-T



### FEATURES

- Supports Links up to 30m using Cat 6a/7 Cable
- SFF-8431 and SFF-8432 MSA Compliant
- IEEE 802.3az Compliant
- Low Power Consumption (2.5W max @ 30m)
- Fast Retrain EMI Cancellation Algorithm
- Low EMI Emissions
- I2C 2 Wire Serial Interface for Serial Id and Phy Registers
- Auto-negotiates with other 10GBase-T-NC PHYs
- Automatic Detection and Correction of Wiring and Polarity Swaps
- Robust Die Cast Housing
- Bail Latch Style ejector mechanism
- Unshielded and Shielded cable support

### DESCRIPTION

The QSFPTEK QT-SFP-10G-T copper transceiver module is a high performance integrated duplex data link for bi-directional communication over copper cable. It is specifically designed for high speed communication links that require 10Gigabit Ethernet over Cat 6a/7 cable. This is the first SFP+ transceiver that offers 10Gb/s communication over this type of media.

## General Specification

<i>Parameter</i>	<i>Symbol</i>	<i>Min</i>	<i>Typ</i>	<i>Max</i>	<i>Unit</i>	<i>Remarks</i>
Bit Error Rate	<i>BER</i>			10 <sup>-12</sup>		
Operating Temperature	<i>T<sub>OP</sub></i>	-5		85	°C	Case temperature
Storage Temperature	<i>T<sub>STD</sub></i>	-40		85	°C	Ambient temperature
Operating Humidity	-	5		95	%	Non condensing
Power @30m	<i>I<sub>S</sub></i>		2.3	2.5	W	
Input Voltage	<i>V<sub>CC</sub></i>	3	3.3	3.6	V	

## 1. Pin Assignment

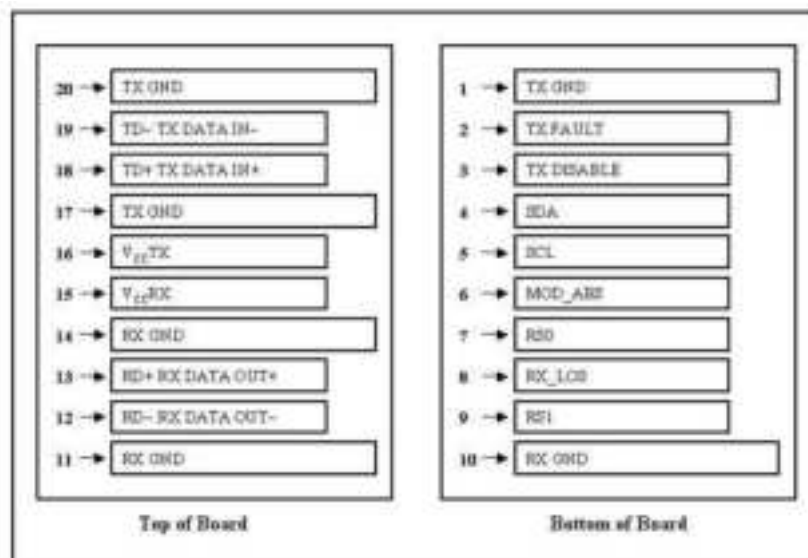
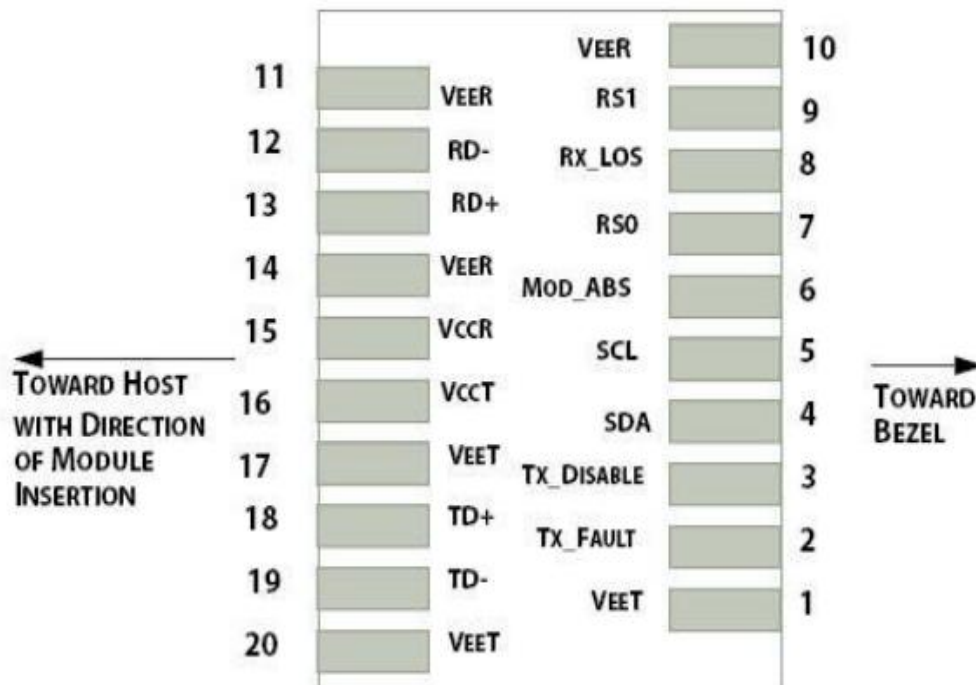
<i>PIN #</i>	<i>Symbol</i>	<i>Description</i>
1	<i>V<sub>EET</sub></i>	Transmitter ground (common with receiver ground)
2	<i>T<sub>FAULT</sub></i>	Transmitter Fault.
3	<i>T<sub>DIS</sub></i>	Transmitter Disable. Laser output disable on high or open
4	<i>SDA</i>	Data line for serial ID
5	<i>SCL</i>	Clock line for serial ID
6	<i>MOD_ABS</i>	Module Absent. Grounded within the module
7	<i>RS0</i>	No connection required
8	<i>LOS</i>	Loss of Signal indication. Logic 0 indicates normal operation
9	<i>RS1</i>	No connection required
10	<i>V<sub>EER</sub></i>	Receiver ground (common with transmitter ground)
11	<i>V<sub>EER</sub></i>	Receiver ground (common with transmitter ground)
12	<i>RD-</i>	Receiver Inverted DATA out. AC coupled
13	<i>RD+</i>	Receiver Non-inverted DATA out. AC coupled
14	<i>V<sub>EER</sub></i>	Receiver ground (common with transmitter ground)
15	<i>V<sub>CCR</sub></i>	Receiver power supply
16	<i>V<sub>CCT</sub></i>	Transmitter power supply
17	<i>V<sub>EET</sub></i>	Transmitter ground (common with receiver ground)
18	<i>TD+</i>	Transmitter Non-Inverted DATA in. AC coupled
19	<i>TD-</i>	Transmitter Inverted DATA in. AC coupled
20	<i>V<sub>EET</sub></i>	Transmitter ground (common with receiver ground)

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Note:

1. IEEE standard 802.3ae. IEEE Standard Department, 2005.
2. Enhanced 8.5 and 10 Gigabit Small Form Factor Pluggable Module “SFP+” – SFF-8431
3. Digital Diagnostics Monitoring Interface for Optical Transceivers – SFF-8472.

## 2. Electrical Pad Layout



### 3. Mechanical Specifications

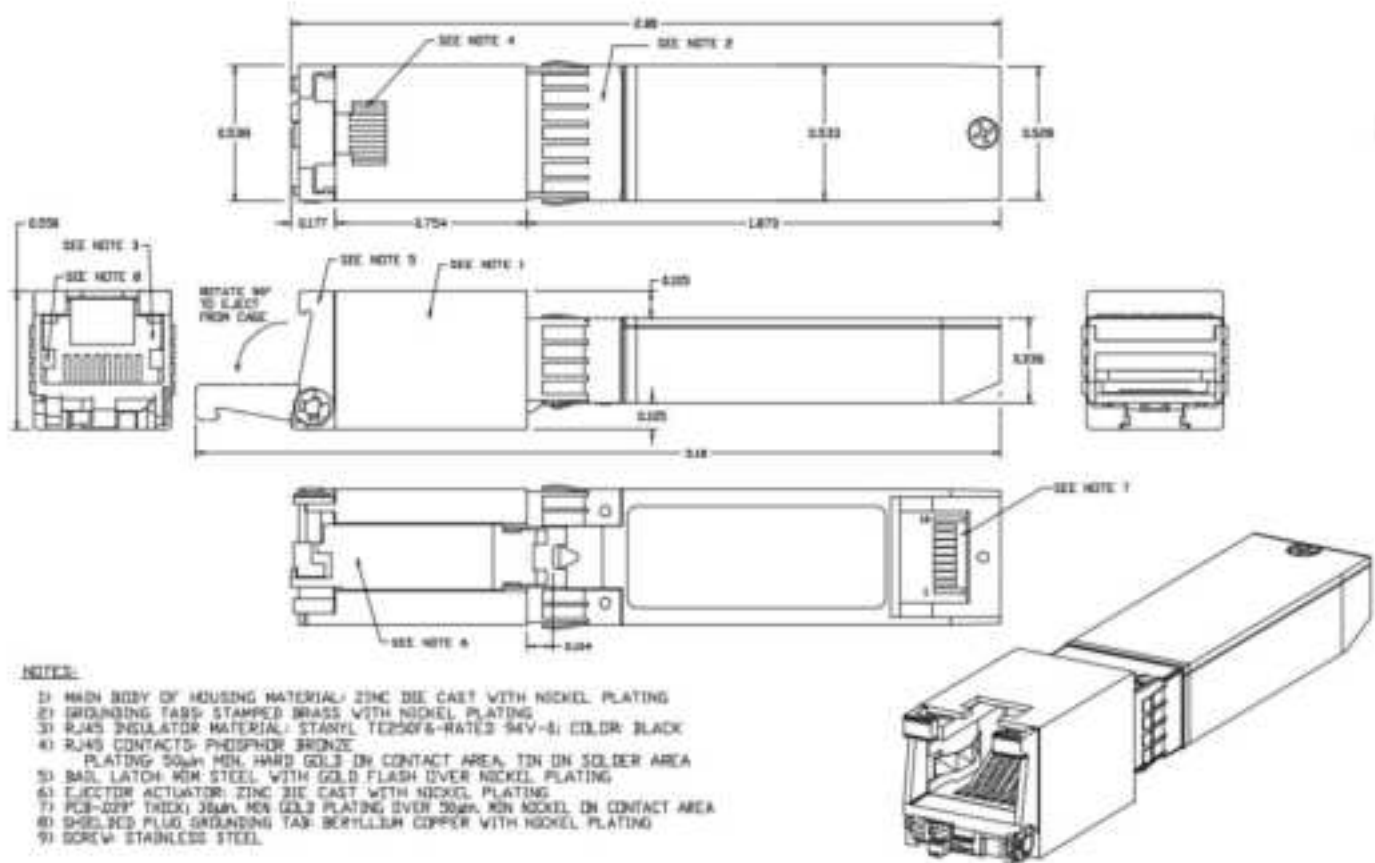


Figure. QT-SFP-10G-T mechanical dimensions

### 4. Ordering information

Part number	Operating Case temperature
QT-SFP-10G-T	Copper SFP, 10.125 Gb/s, RJ-45 connector, 30M, 0°C to +70°C
QT-SFP-M	Copper SFP, 1000M, RJ-45 connector, 100M, 0°C to +70°C
QT-SFP-T	Copper SFP, 10/100/1000M, RJ-45 connector, 100M, 0°C to +70°C