

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

### P/N: AE-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 AERECH AE-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	$BER$			$10^{-12}$		
Operating Temperature	$T_{OP}$	-5		85	°C	Case temperature
Storage Temperature	$T_{STO}$	-40		85	°C	Ambient temperature
Operating Humidity	-	5		95	%	Non condensing
Power @30m	$I_S$		2.3	2.5	W	
Input Voltage	$V_{CC}$	3	3.3	3.6	V	

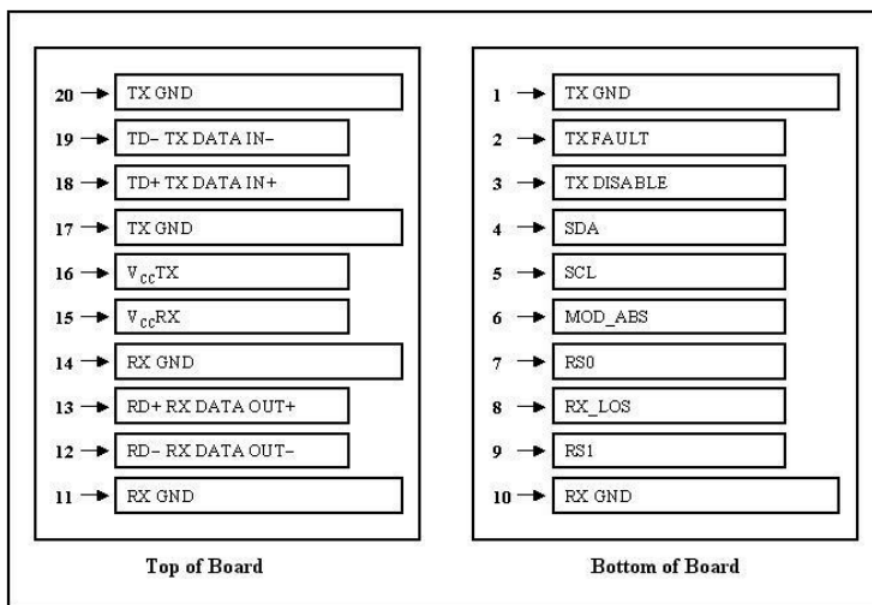
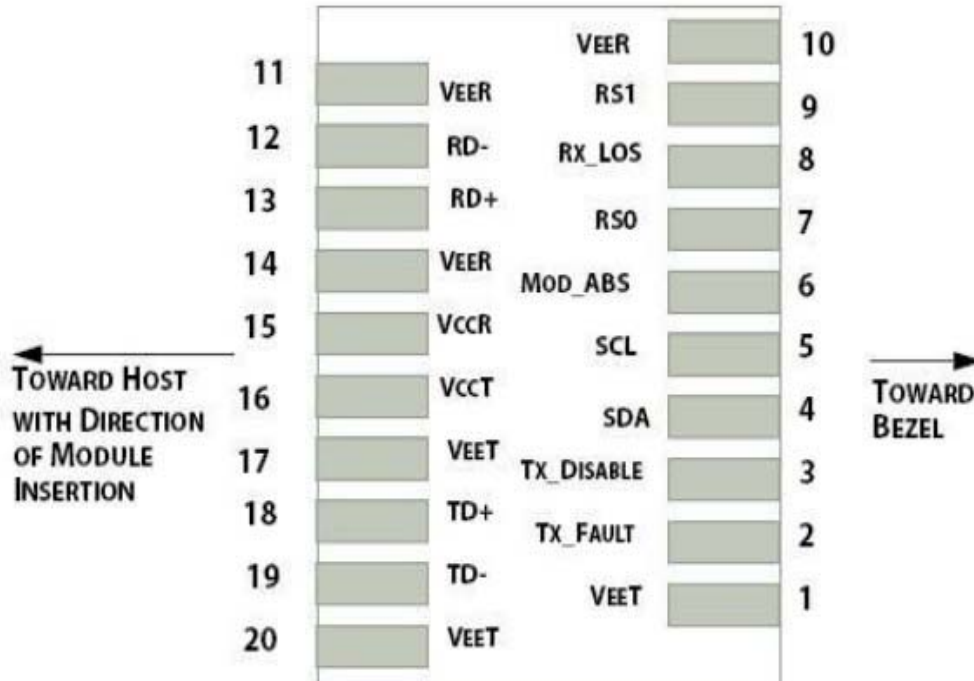
## I. Pin Assignment

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

**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.

## II. Electrical Pad Layout



### III. Ordering information

Part Number	Product Description
AE-SFP-10G-T	Copper SFP, 10.125 Gb/s, RJ-45 connector, 30M, 0°C to +70°C