E-SFP-10G-T

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

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 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.

1. General Specification

Parameter	*Symbol*	*Min*	*Typ*	*Max*	*Unit*	*Remarks*
Bit Error Rate	*BER*			10^{-12}		
Operating Temperature	T_{OP}	-5		85	℃	Case temperature
Storage Temperature	T_{STO}	– 40		85	℃	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	

2. Pin Assignment

PIN #	Symbol	Description
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.

3. Electrical Pad Layout