

SF-T1T01C

10GBase-T Copper SFP+ Transceiver

Product Features

- Up to 10Gb/s bi-directional data links
- Hot-pluggable SFP+ footprint
- Fully metallic enclosure for low EMI
- Low power dissipation
- Compact RJ-45 connector assembly
- Access to physical layer IC via 2-wire serial bus
- Supports Links up to 30m using Cat 6a/7 Cable
- RoHS Compliant
- Operating case temperature: 0°C to 70°C

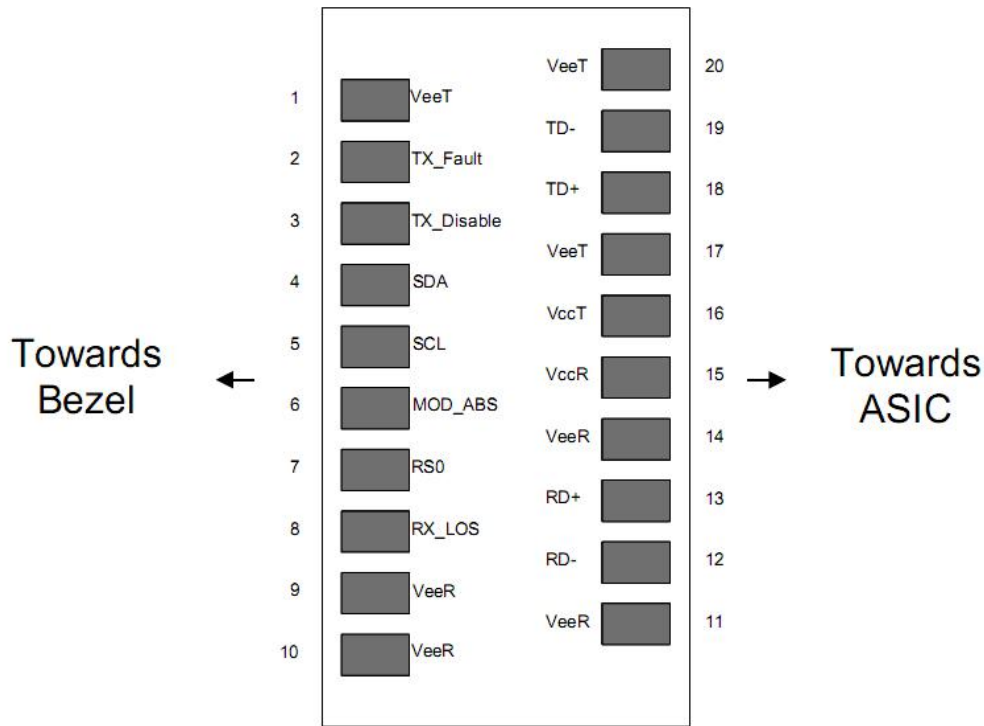
Applications

- 10 Gigabit Ethernet over Cat 6a/7 cable

Description

SF-T1T01C Copper Small Form Pluggable (SFP) transceivers are high performance, cost effective module compliant with the 10G Ethernet and 10GBASE-T standards as specified in IEEE 802.3az, which supporting 10Gbps data- rate up to 30 meters reach over unshielded twisted-pair category 6a/7 cables. The module provides standard serial ID information compliant with SFP+ MSA, which can be accessed with address of A0h via the 2wire serial EEPROM protocol. The physical IC can also be accessed via 2wire serial bus at address A0h.

Pin Descriptions



Pin	Signal Name	Description	Plug Seq.	Notes
1	V _{EE} T	Transmitter Ground	1	
2	TX_FAULT	Transmitter Fault Indication	3	Not supported
3	TX_DISABLE	Transmitter Disable	3	
4	SDA	SDA Serial Data Signal	3	
5	SCL	SCL Serial Clock Signal	3	
6	MOD_ABS	Module Absent. Grounded within the module	3	
7	RS0	Not Connected	3	
8	LOS	Loss of Signal	3	
9	V _{EE} R	Receiver ground	1	
10	V _{EE} R	Receiver ground	1	
11	V _{EE} R	Receiver ground	1	
12	RD-	Inv. Received Data Out	3	
13	RD+	Received Data Out	3	
14	V _{EE} R	Receiver ground	1	
15	V _{CC} R	Receiver Power Supply	2	
16	V _{CC} T	Transmitter Power Supply	2	
17	V _{EE} T	Transmitter Ground	1	
18	TD+	Transmit Data In	3	
19	TD-	Inv. Transmit Data In	3	
20	V _{EE} T	Transmitter Ground	1	

+3.3V Volt Electrical Power Interface

The SF-T1T01C has an input voltage range of +3.3V +/- 5%.

Table 1. +3.3V Volt electrical power interface

+3.3V volt Electrical Power Interface						
Parameter	Symbol	Min	Typ	Max	Units	Notes/Conditions
Supply Current	I _s		700	750	mA	2.5W max power over full range of voltage and temperature. See caution note below
Input Voltage	V _{cc}	3.13	3.3	3.47	V	Referenced to GND
Maximum Voltage	V _{max}			4	V	
Surge Current	I _{surge}			30	mA	Hot plug above steady state current. See caution note below

General Specifications

Table 2. General specifications

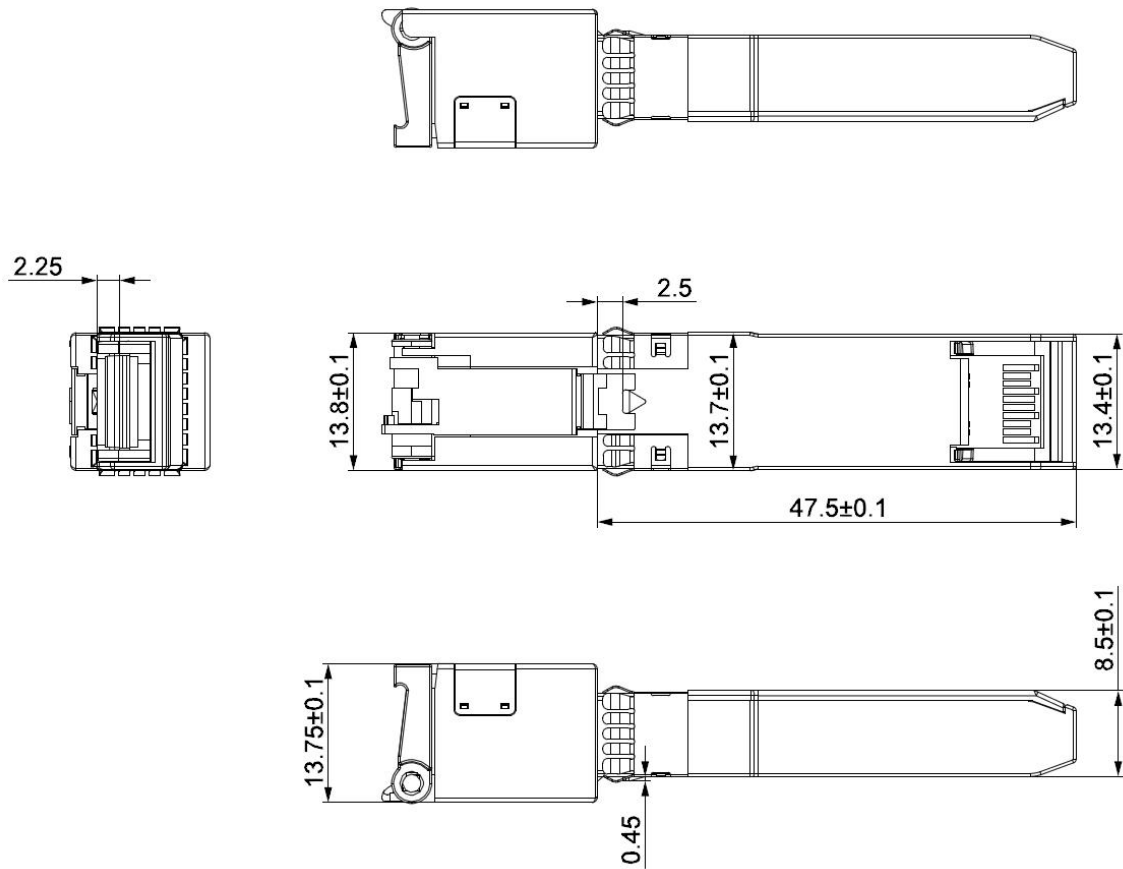
General						
Parameter	Symbol	Min	Typ	Max	Units	Notes/Conditions
Data Rate	BR		10.3		Gb/sec	IEEE 802.3 compatible.
Cable Length	L			30	m	Category 6a/7 UTP. BER <10 ⁻¹²

Environmental Specifications

Table 3. Environmental specifications

Environmental Specifications						
Parameter	Symbol	Min	Typ	Max	Units	Notes/Conditions
Operating Temperature	T _{op}	0		70	°C	Case temperature
Storage Temperature	T _{sto}	-40		85	°C	Ambient temperature

Mechanical Specifications



Ordering information

Part Number	Tx_DIS	Link Indicator on Rx_LOS Pin	Temp.
SF-T1T01C	Yes	Yes	0~70°C