

SFPP-TXM-10G

10GBASE-T, SFP+, COPPER 30M REACH TRANSCEIVER, RJ-45 CONNECTOR

Product Features

- Support 10Gbase-T / 5Gbase-T / 2.5Gbase-T / 1000base-T on line port
- Support 10Gbase-R on host port.
- Hot-pluggable SFP footprint
- Low power dissipation Max 3.6 W)
- Compact RJ 45 connector assembly
- RoHS compliant and lead-free
- Single +3.3V power supply
- 10 Gigabit Ethernet over Cat 6a cable
- Case operating temperature :
 - Commercial: 0°C to 70°C
 - Industrial: -40°C to +85°C



Product Applications

- 10G BASE-T
- 5G BASE-T
- 2.5G BASE-T
- 1000 BASE-T

I. +3.3V Volt Electrical Power Interface

SFPP-TXM-10G has an input voltage range of 3.3 V +/- 5%. The 4V maximum voltage is not allowed for continuous

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes/conditions
Supply Current	Is		900	1100	mA	3.6W max power over full range of voltage and temperature. (see note 1)
Input Voltage	Vcc	3.13	3.3	3.47	V	Referenced to GND
Maximum Voltage	Vmax			4	V	
Surge Current	Isurge		TBD		mA	Hot Plug above steady state current. (see note 1)

Notes:

1. Caution: Power consumption and surge current are higher than the specified values in the SFP MSA

II. Low-Speed Signals

MOD_DEF(1) (SCL) and MOD_DEF(2) (SDA), are open drain CMOS signals (see section VI, "Serial Communication Protocol"). Both MOD_DEF(1) and MOD_DEF(2) must be pulled up to host_Vcc.

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes/conditions
SFP Output LOW	VOL	0		0.5	V	4.7k to 10k pull-up to host_Vcc, measured at host side of connector
SFP Output HIGH	VOH	Host_Vcc-0.5		Host_Vcc+0.3	V	
SFP Input LOW	VIL	0		0.8	V	4.7k to 10k pull-up to host_Vcc, measured at SFP side of connector
SFP Input HIGH	VIH	2		Vcc+0.3	V	

III. High-Speed Electrical Interface

All High-speed signals are AC-coupled internally

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes/conditions
Transmission Line-SFP						
Line Frequency	fL		125		MHz	5-level encoding, per IEEE 802.3
Tx Output Impedance	Zout, TX		100		Ohm	Differential, for all frequencies between 1MHz and 125 MHz
Rx Input Impedance	Zin, RX		100		Ohm	
Host-SFP						
Single ended data input swing		250		1200	mV	Single ended
Single ended data output swing		350		800	mV	Single ended
Rise/Fall time	Tr/Tf		175		psec	20% to 80%
Tx Input Impedance	Zin		50		Ohm	Single ended
Rx Output Impedance	Zout		50		Ohm	Single ended

IV. General Specifications

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes/conditions
Case Operating Temperature	Tcase	0		+70	°C	Commercial
		-40		+85	°C	Industrial
Storage Temperature		-40		+85	°C	
Data Rate	BR	1		10	Gb/sec	IEEE 802.3 compatible (note 1,2)

Notes:

1. Clock tolerance is +/- 50 ppm
2. By default, SFPP-TXM-10G is a full duplex device in preferred master mode

V. Serial Communication Protocol

SFPP-TXM-10G supports the 2-wire serial communication protocol outlined in the SFP MSA. These SFPs use an MCU

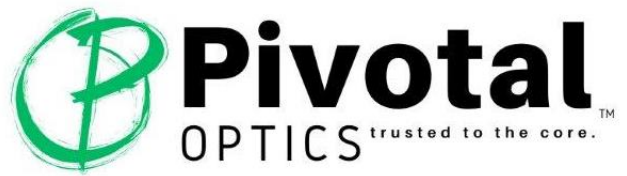
Parameter	Symbol	Min.	Typ.	Max.	Units	Notes/conditions
I ² C Clock Rate		0		200,000	Hz	

VI. Cable Length

Line Port	Cable	Reach	Host Port
10GBase-T	CAT6A	30m	10GBase-R
5GBase-T	CAT5E	100m	10GBase-R
2.5GBase-T	CAT5E	100m	10GBase-R
1000Base-T	CAT5E	100m	10GBase-R
100Base-Tx	CAT5E	100m	10GBase-R

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VII. Ordering Details

Pivotal Part Number	Description
SFPP-TXM-10G	SFP+, RJ-45, Copper 30m, 10GBase-T, C-Temp
SFPP-TXM-10G-I	SFP+, RJ-45, Copper 30m, 10GBase-T, I-Temp

Notes:

1. Please contact sales for specific OEM Platform part numbers to fit your network.

Warranty

<https://pivotaloptics.com/warranty/>

Disclaimer

External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.