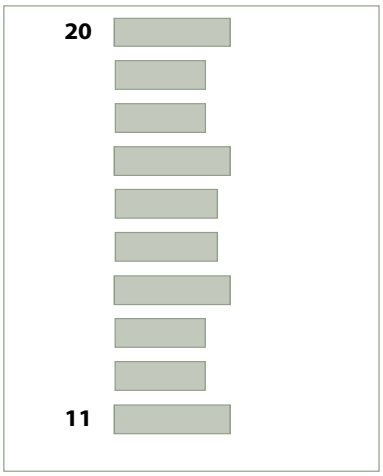
10G BASE-T RJ45 SFP+ Module

MODEL: TL-SM5310-T

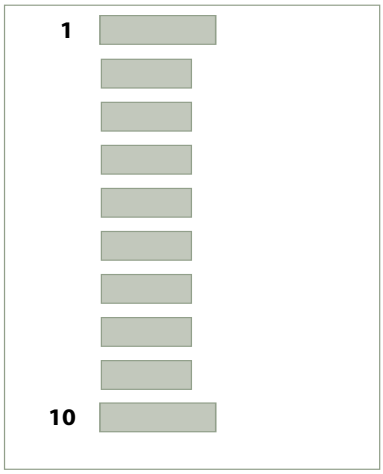
Overview

- Support 10G BASE-T Operation in Host Systems
- Support TX Disable function
- Support DDM (Temperature and Voltage)
- Distance (100BASE-TX: UTP cat.5 or above (max. 100m), 10GBASE-T: UTP cat.6a or above (max. 30m), 1000BASE-T/2.5GBASE-T/5GBASE-T: UTP cat.5e or above (max. 100m))
- Hot-Pluggable SFP+ Footprint Features
- Commercial Product Operating Temperature Range: 0-70°C
- Compliant with IEEE Std 802.3, 802.3ab, 802.3bz, 802.3an and RoHS
- Fully Metallic Enclosure for Low EMI
- Low Power Dissipation

Pin Assignment



Top of Board



Bottom of Board

Pin Description

Pin	Signal Name	Description	Plug Seq.
1	VEET	Transmitter Ground	1
2	TX FAULT	Unsupported	3
3	TX DISABLE	Transmitter Disable	3
4	MOD_DEF(2)	SDA Serial Data Signal	3
5	MOD_DEF(1)	SCL Serial Clock Signal	3
6	MOD_DEF(0)	Absent, Connected to the ground inside the module	3
7	Rate Select	Unsupported	3
8	LOS	Loss of Signal	3
9	Rate Select 1	Unsupported	3
10	VEER	Receiver Ground	1
11	VEER	Receiver Ground	1
12	RX-	Inv. Received Data Out	3
13	RX+	Received Data Out	3
14	VEER	Receiver Ground	1
15	VCCR	Receiver Power Supply	2
16	VCCT	Transmitter Power Supply	2
17	VEET	Transmitter Ground	1
18	TX+	Transmit Data In	3
19	TX-	Inv. Transmit Data In	3
20	VEET	Transmitter Ground	1

Specifications

Parameter	Symbol	Typ.	Min.	Max.	Units	Notes
Data rate	—	—	—	10.3125	Gbps	
Distance	—	—	—	30 / 100	m	100BASE-TX: UTP cat .5 or above (max. 100m) 1000BASE-T/2.5GBASE-T/5GBASE-T: UTP cat.5e or above (max. 100m) 10GBASE-T: UTP cat.6a or above (max. 30m)
Product Operating Temperature	—	—	0	70	°C	+3.3 Volt Electrical Power Interface
Storage Temperature	Ts		-40	85	°C	
Supply Current	Icc	—	—	750	mA	
Recommend Input Voltage Range	Vcc	3.3	3.2	3.4	V	
SFP Output LOW	VOL	—	0	0.5	V	Low-Speed Signals, Electronic Characteristics
SFP Output HIGH	VOH	—	host_Vcc – 0.5	host_Vcc + 0.3	V	
SFP Input LOW	VIL	—	0	0.8	V	
SFP Input HIGH	VIH	—	2	Vcc + 0.3	V	
Line Frequency	fL	—	—	—	MHz	High-Speed Electrical Interface,Transmission Line-SFP
Tx Output impedance	Zout, TX	100	—	—	Ohm	
Rx Input Impedance	Zin, RX	100	—	—	Ohm	
input swing	Vin-pp	—	200	1000	mV	High-Speed Electrical Interface, Host-SFP
output swing	Vout-pp	—	800	2000	mV	
Output Rise/Fall Time	Tr, Tf (0.2~0.8)	—	—	—	psec	
Tx Input Impedance	Zin-diff	100	—	—	Ohm	
Rx Output Impedance	Zout-diff	100	—	—	Ohm	

Disclaimer:
All the above parameters are measured in a laboratory environment under specific conditions.

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