The GigaTech Products **844477-B21-GT** direct attach copper cables are based on the 25G Ethernet IEEE 802.3by standard and are programmed to be fully compatible and functional with all intended HP switching devices. The passive design has no signal amplification. The passive SFP28 cable is a low cost alternative for short reach application.

Features

- Up to 25 GBd bi-directional data links
- Hot-pluggable SFP+ footprint
- AC coupled inputs and outputs
- 100 Ohm differential impedance
- Enhanced EMI design
- Single power supply 3.3V
- Operating temperature range: 0℃ to 70℃

Compliance

- MSA SFF-8402
- RoHS Compliant

Applications

- 25GBASE Ethernet

Warranty:

GigaTech Branded Cables- Lifetime Warranty

Part Numbers

Part Number	*AWG*	*Description*
844471-B21-GT	30	25Gb SFP28 to SFP28 Direct Attach Copper Cable HPE Compatible- 50CM
844474-B21-GT	30	25Gb SFP28 to SFP28 Direct Attach Copper Cable HPE Compatible- 1M
844474-B21-150CM-GT	30	25Gb SFP28 to SFP28 Direct Attach Copper Cable HPE Compatible- 1.5M
844474-B21-2M-GT	30	25Gb SFP28 to SFP28 Direct Attach Copper Cable HPE Compatible- 2M
844474-B21-250CM-GT	28	25Gb SFP28 to SFP28 Direct Attach Copper Cable HPE Compatible- 2.5M
844477-B21-GT	28	25Gb SFP28 to SFP28 Direct Attach Copper Cable HPE Compatible- 3M
844474-B21-4M-GT	26	25Gb SFP28 to SFP28 Direct Attach Copper Cable HPE Compatible- 4M
844480-B21-GT	26	25Gb SFP28 to SFP28 Direct Attach Copper Cable HPE Compatible- 5M

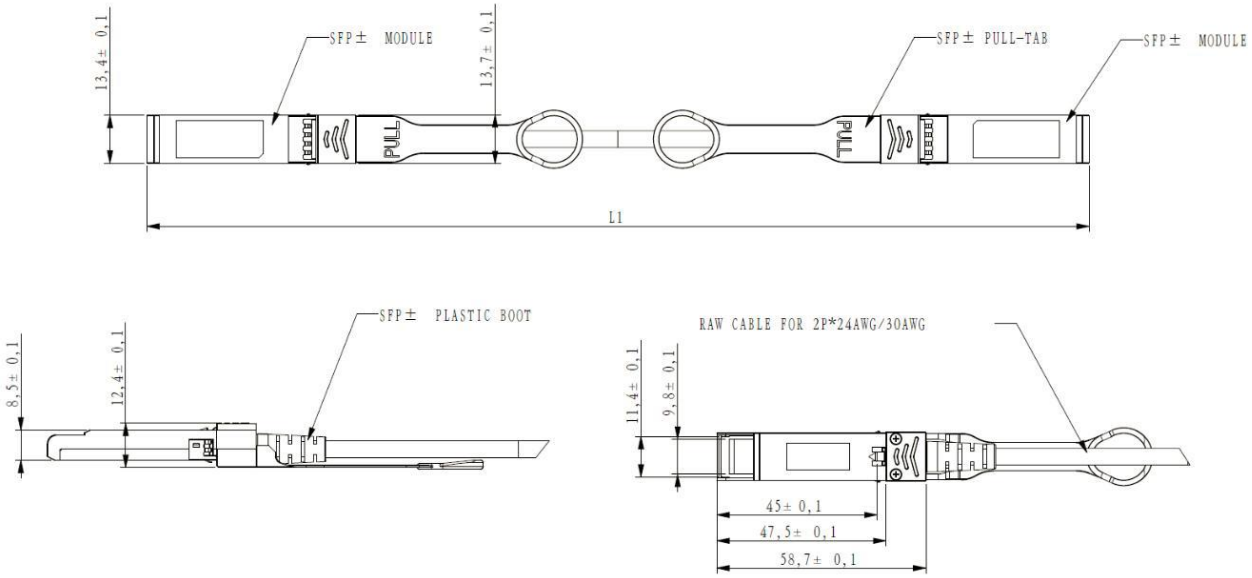
General Specifications

Parameter	*Symbol*	*Min*	*Typ*	*Max*	*Unit*	*Remarks*
Data Rate	*DR*		25		GBd	IEEE 802.3by
Bit Error Rate	*BER*			10^{-12}		
Input Voltage	V_{CC3}	3	3.3	3.6	V	
Maximum Voltage	V_{MAX}	-0.5		4	V	Electric Power Interface
Supply Current	I_S			4	mA	Electric Power Interface
Operating Temperature	T_{OP}	0		70	℃	Case Temperature
Storage Temperature	T_{STO}	-40		85	℃	Ambient Temperature

Cable Mechanical Specifications

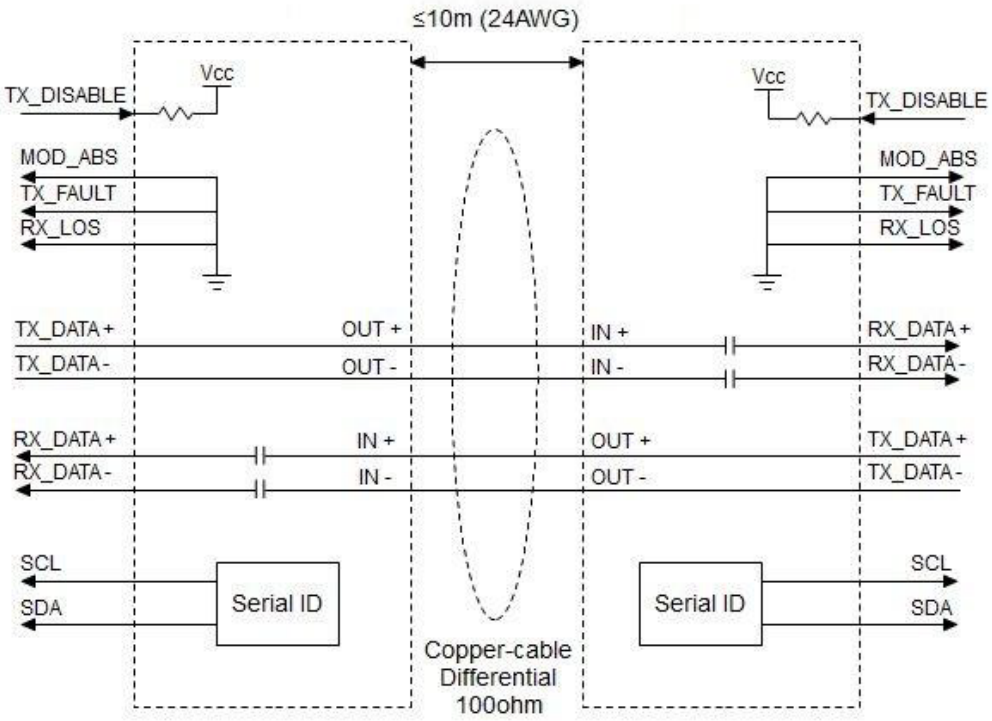
Parameter	*Symbol*	*Min*	*Typ*	*Max*	*Unit*	*Remarks*
Time Delay Skew	T_{DS}			100	Ps/10M	
Cable Time Delay	T_D		4.3		ns/m	
Cable Insertion Loss	L_O		10		dB/10m	
Cable Impedance	Z_C	95	100	105	Ohm	

Dimensions

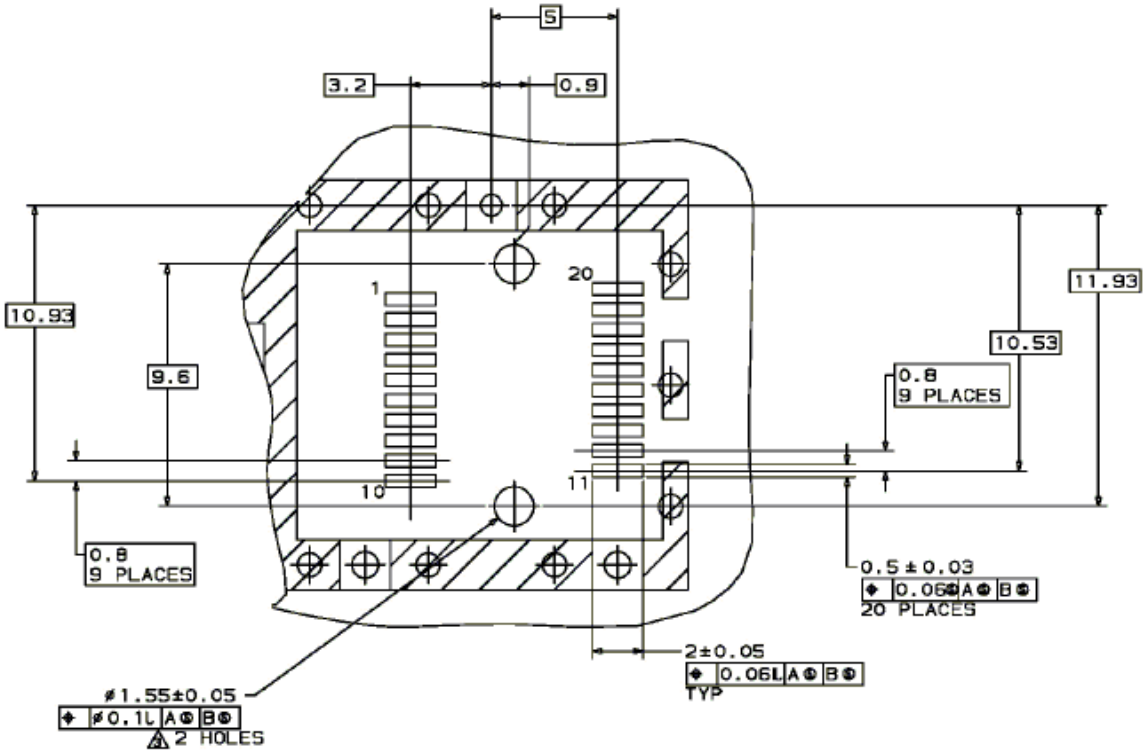


ALL DIMENSIONS ARE ±0.2mm UNLESS OTHERWISE SPECIFIED UNIT: mm

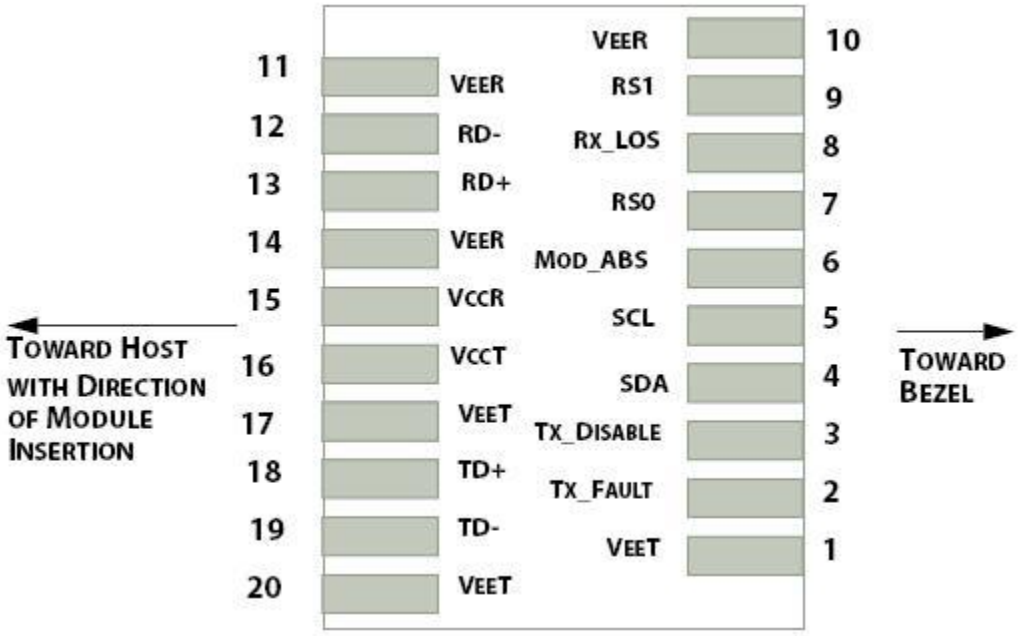
Block Diagram of Transceiver

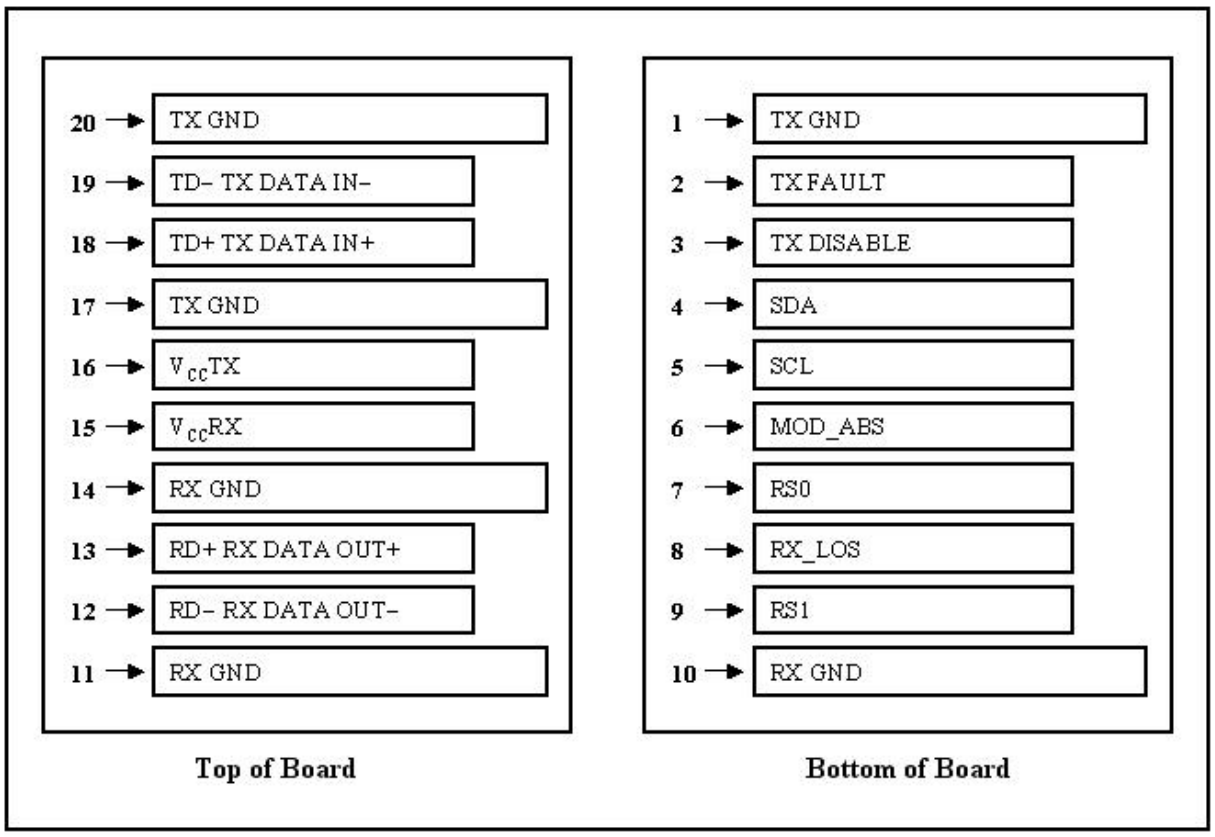


PCB Layout Recommendation



Electrical Pad Layout





Pin Assignment

PIN #	*Symbol*	*Description*	*Remarks*
1	VEET	Transmitter ground (common with receiver ground)	Circuit ground is isolated from chassis ground
2	TFAULT	Transmitter Fault	
3	TDIS	Transmitter Disable. Laser output disable on high or open	Disabled: TDIS>2V or open Enabled: TDIS<0.8V
4	SDA	Data line for serial ID	Should Be pulled up with 4.7k – 10k ohm on host board to a voltage between 2V and 3.6V
5	SCL	Clock line for serial ID	
6	MOD_ABS	Module Absent. Ground within the module	
7	RS0	No Connection required	
8	LOS	Loss of Signal indication. Logic 0 indicates normal operation	LOS is open collector output
9	RS1	+3.3V Power Supply	Circuit ground is isolated from chassis ground
10	VEER	Receiver ground (common with transmitter ground)	
11	VEER	Receiver ground (common with transmitter ground)	
12	RD-	Receiver Inverted DATA out. AC coupled	
13	RD+	Receiver Non-inverted DATA out. AC coupled	
14	VEER	Receiver ground (common with transmitter ground)	Circuit ground is isolated from chassis ground
15	VCCR	Receiver power supply	
16	VCCT	Transmitter power supply	Same as Pin# 1
17	VEET	Transmitter ground (common with receiver ground)	Circuit ground is connected to chassis ground
18	TD+	Transmitter Non-inverted DATA out. AC coupled	
19	TD-	Transmitter Inverted DATA out. AC coupled	
20	VEET	Transmitter ground (common with receiver ground)	Circuit ground is connected to chassis ground

References

1. IEEE standard 802.3by. IEEE Standard Department.