Product Features

- ✧ Up to 25.78125 Gbps data rate
- ✧ Up to 5 meter transmission
- ✧ Hot-pluggable SFP 20PIN footprint
- ✧ Improved Pluggable Form Factor(IPF) compliant for enhanced EMI/EMC performance
- ✧ Compatible to SFP28 MSA
- ✧ Compatible to SFF-8402 and SFF-8432
- ✧ Temperature Range: 0~ 70 °C
- ✧ RoHS Compatible

Applications

- ✧ 25 Gigabit Ethernet

Ordering Information

Part Number	Number
FH-DP2TxxSSyy	25GE SFP28 Direct Attach Passive Copper Cables

General

The SFP28 passive cable assemblies are high performance, cost effective I/O solutions for 25G Ethernet. SFP28 copper cables allow hardware manufactures to achieve high port density, configurability and utilization at a very low cast and reduced power budget.

Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Storage Ambient Temperature		-40		+85	°C
Operating Case Temperature	Tc	0		+70	°C
Power Supply Voltage	VCC3	3.14	3.3	3.47	V
Data Rate Per Lane		1		25.78	Gb/s

High Speed Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Note
Differential Impedance	*RIN,P-P*	90		110	Ω	
Insertion loss	*SDD21*			22.48	dB	At 12.8906 GHz
Differential Return Loss	*SDD11*			See 1	dB	At 0.05 to 4.1 GHz
	SDD22			See 2	dB	At 4.1 to 19 GHz
Common-mode to common-mode output return loss	*SCC11*	2			dB	At 0.2 to 19 GHz
	SCC22					
Differential to common-mode return loss	*SCD11*			See 3	dB	At 0.01 to 12.89 GHz
	SCD22			See 4		At 12.89 to 19 GHz
Differential to common Mode Conversion Loss	*SCD21*			10	dB	At 0.01 to 12.89 GHz
				See 5		At 12.89 to 15.7 GHz

				6.3		At 15.7 to 19 GHz
Channel Operating Margin	*COM*	3			dB	

Notes:

1. Reflection Coefficient given by equation SDD11(dB) < 16.5 - 2 × SQRT(f), with f in GHz
2. Reflection Coefficient given by equation SDD11(dB) < 10.66 - 14 × log10(f/5.5), with f in GHz
3. Reflection Coefficient given by equation SCD11(dB) < 22 - (20/25.78)*f, with f in GHz
4. Reflection Coefficient given by equation SCD11(dB) < 15 - (6/25.78)*f, with f in GHz
5. Reflection Coefficient given by equation SCD21(dB) < 27 - (29/22)*f, with f in GHz

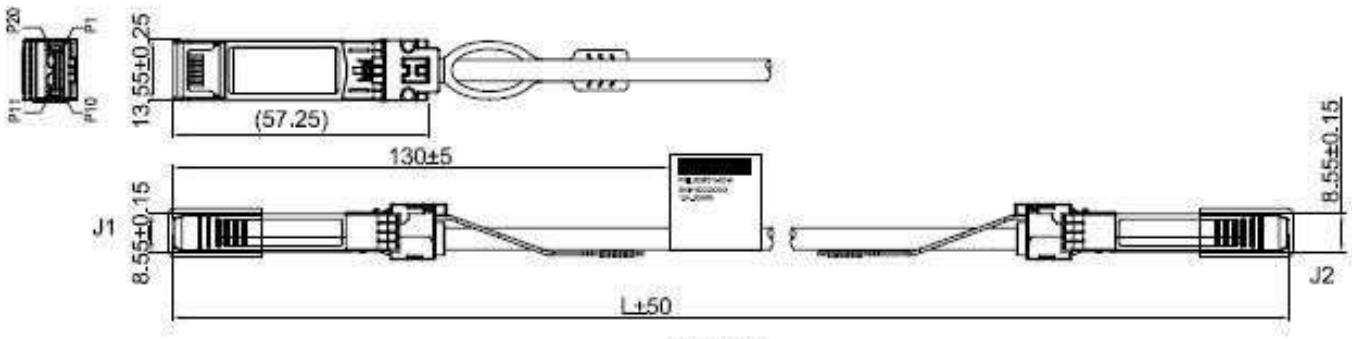
Pin Definitions And Functions

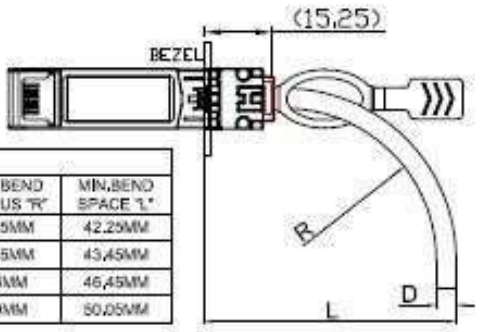
Pin	Logic	Symbol	Name/Description	Note
1		VeeT	Transmitter Ground	
2	LV-TTL-O	TX_Fault	N/A	1
3	LV-TTL-I	TX_DIS	Transmitter Disable	2
4	LV-TTL-I/	SDA	Tow Wire Serial Data	
5	LV-TTL-I	SCL	Tow Wire Serial Clock	
6		MOD_DEF	Module present, connect to	
7	LV-TTL-I	RS0	N/A	1
8	LV-TTL-O	LOS	LOS of Signal	2
9	LV-TTL-I	RS1	N/A	1
10		VeeR	Reciever Ground	
11		VeeR	Reciever Ground	
12	CML-O	RD-	Reciever Data Inverted	
13	CML-O	RD+	Reciever Data Non-Inverted	
14		VeeR	Reciever Ground	
15		VccR	Reciever Supply 3.3V	
16		VccT	Transmitter Supply 3.3V	
17		VeeT	Transmitter Ground	
18	CML-I	TD+	Transmitter Data	
19	CML_I	TD-	Transmitter Data Inverted	
20		VeeT	Transmitter Ground	

Note

1. Signals not supported in SFP+ Copper pulled-down to VeeT with 30K ohms resistor
2. Passive cable assemblies do not support LOS and TX_DIS

Management Interface





SFP28			
CABLE GUAGE	DIAMETER "D"	MIN.BEND RADIUS "R"	MIN.BEND SPACE "L"
30AWG	4.5MM	22.5MM	42.25MM
28AWG	4.7MM	23.5MM	43.45MM
26AWG	5.2MM	26MM	46.45MM
24AWG	5.8MM	29MM	50.05MM

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