10G SFP+ Direct Attach Passive Copper Cable

Features

- Wire AWG:AWG30,AWG28,AWG26,AWG24
- Cable type:Passive Copper Twinax Cable
- Up to 10.3125Gbps data rate
- Low power consumption<0.5W
- Power supply:+3.3V
- Small diameter cable design
- Hot pluggable
- Operating case temperature: 0~+70°C
- RoHS compliant

Applications

- High-speed storage area networks
- Custom high-speed data pipes
- LTE optical repeater application

Compliance

- 1/2/4/8G Fibre Channel
- Compliant with MSA SFF-8472
- Compliant with MSA SFF-8431、SFF-8432

Description

The SFP+ passive cable assemblies are high performance, cost effective I/O solutions for 10G Ethernet and 10G Fiber Chan nel applications. SFP+ copper modules allow hardware manufactures to achieve high port density, configurability and utilizati on at a very low cast and reduced power budget. The high speed cable assemblies meet and exceed Gigabit Ethernet and Fiber Channel industry standard requirements for performance and reliability.

General Product Characteristics

SFP+ DAC Specifications	
Number of Lanes	Tx & Rx
Channel Data Rate	10.3125Gbps
Operating Temperature	0 to + 70°C
Storage Temperature	-40 to + 85°C
Supply Voltage	3.3 V nominal
Electrical Interface	20 pins edge connector
Management Interface	Serial, I^2C

High Speed Characteristics

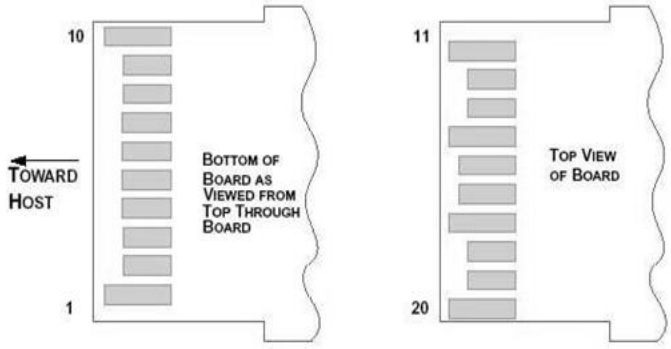
Table1-High Speed Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit	Note
Differential Impedance	Zd	90	100	110	Ω	
Differential Input Return Loss	SDDXX	<12+2* SQRT (f) with f in GHz			dB	0.01~4.1GHz
		<-6.3+13* Log10/(f/5.5) with f in GHz			dB	4.1~11.1GHz
Common Mode Output Return Loss	SCCXX	<-7+1.6*f with f in GHz			dB	0.01~2.5GHz
				-3	dB	2.5~11.1GHz
Difference Waveform Distortion Penalty	dWDPc			6.75	dB	
VMA Loss	L			4.4	dB	
VMA Loss to Crosstalk Ratio	VCR	32.5			dB	

Pin Descriptions

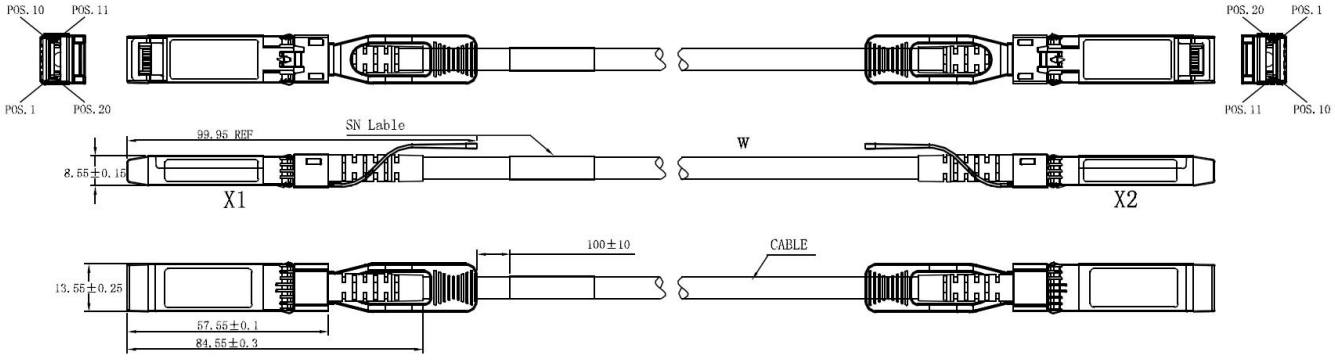
Table2- Pin Function Definition

Pin	Logic	Symbol	Description
1		VeeT	Module Transmitter Ground
2	LVTTL-O	Tx_Fault	Module Transmitter Fault
3	LVTTL-I	Tx_Disable	Transmitter disable; Turns off transmitter laser output
4	LVTTL-I/O	SDA	2-wire Serial Interface Data Line (Same as MOD-DEF2 in INF-8074i)
5	LVTTL-I/O	SCL	2-wire Serial Interface Clock (Same as MOD-DEF1 in INF-8074i)
6		Mod_ABS	Module Absent, connected to VeeT or VeeR in the module
7	LVTTL-I	RS0	Rate Select 0, optionally controls SFP+ module receiver
8	LVTTL-O	Rx_LOS	Receiver Loss of Signal Indication (In FC designated as Rx_LOS and in Ethernet designated as Signal Detect)
9	LVTTL-I	RS1	Rate Select 1, optionally controls SFP+ module transmitter
10		VeeR	Module Receiver Ground
11		VeeR	Module Receiver Ground
12	CML-O	RD-	Receiver Inverted Data Output
13	CML-O	RD+	Receiver Non-Inverted Data Output
14		VeeR	Module Receiver Ground
15		VccR	Module Receiver 3.3 V Supply
16		VeeT	Module Transmitter 3.3 V Supply
17		VeeT	Module Transmitter Ground
18	CML-I	TD+	Transmitter Non-Inverted Data Input
19	CML-I	TD-	Transmitter Inverted Data Input
20		VeeT	Module Transmitter Ground



Mechanical Specifications

The connector is compatible with the SFF-8432 specification.



Length (m)	Cable AWG
1	30
3	30
5	24
7	24

Regulatory Compliance

Feature	Test Method	Performance
Electrostatic Discharge (ESD) to the Electrical Pins	MIL-STD-883C Method 3015.7	Class 1(>2000 Volts)
Electromagnetic Interference(EMI)	FCC Class B	Compliant with Standards
	CENELEC EN55022 Class B	
	CISPR22 ITE Class B	
RF Immunity(RFI)	IEC61000-4-3	Typically Show no Measurable Effect from a 10V/m Field Swept from 80 to 1000MHz
RoHS Compliance	RoHS Directive 2011/65/EU and it's Amendment Directives 6/6	RoHS 6/6 compliant