QSFP-56G-PCxM

56Gbps QSFP+ to QSFP+ Direct Attach Cables

0.5M, 1M, 2M, 3M, 4M, 5M Reach

Product Features

- Compliant with SFF- 8436.
- Up to 14.3125Gbps data rate per channel
- Up to 7m transmission
- Single 3.3V power supply
- RoHS compliant
- Cost-effective copper solution
- Lowest total system power solution
- Lowest total system EMI solution
- Optimized design for Signal Integrity
- Operating temperature: 0~+70℃

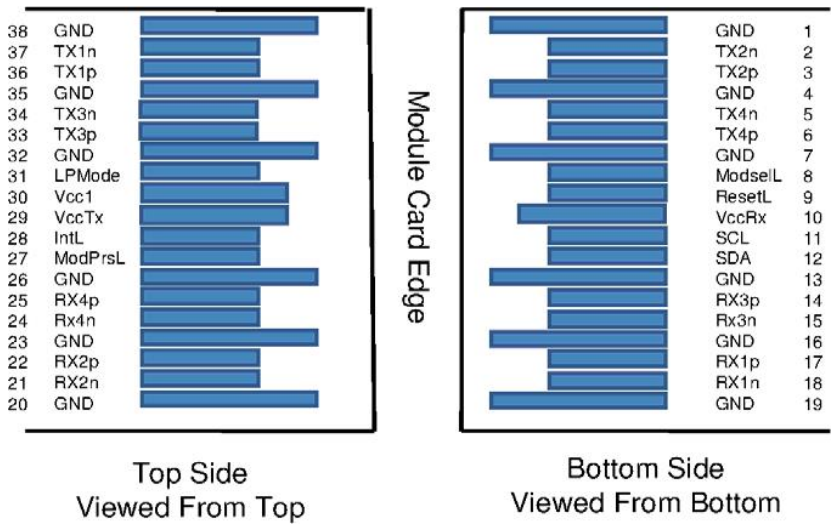
Applications

- 56G InfiniBand

Description

QSFP+ Direct Attach Cables are compliant with the SFF-8436 specifications. Various choices of wire gauge are available from 30 to 24 AWG with various choices of cable length (up to 7m).

Pin Descriptions



Pin	Logic	Symbol	Description
1		GND	Ground
2	CML-I	Tx2n	Transmitter Inverted Data Input
3	CML-I	Tx2p	Transmitter Non-Inverted Data Input
4		GND	Ground
5	CML-I	Tx4n	Transmitter Inverted Data Input
6	CML-I	Tx4p	Transmitter Non-Inverted Data Input
7		GND	Ground
8	LVTTL-I	ModSelL	Module Select
9	LVTTL-I	ResetL	Module Reset
10		Vcc Rx	+3.3V Power Supply Receiver
11	LVCMOS-I/O	SCL	2-wire serial interface clock
12	LVCMOS-I/O	SDA	2-wire serial interface data
13		GND	Ground
14	CML-O	Rx3p	Receiver Non-Inverted Data Output
15	CML-O	Rx3n	Receiver Inverted Data Output
16		GND	Ground
17	CML-O	Rx1p	Receiver Non-Inverted Data Output
18	CML-O	Rx1n	Receiver Inverted Data Output
19		GND	Ground
20		GND	Ground

General Product Characteristics

QSFP+ DAC Specifications	
Number of Lanes	Tx & Rx
Channel Data Rate	14.3125 Gbps
Operating Temperature	0 to + 70°C
Storage Temperature	-40 to + 85°C
Supply Voltage	3.3 V nominal
Electrical Interface	38 pins edge connector
Management Interface	Serial, I^2C

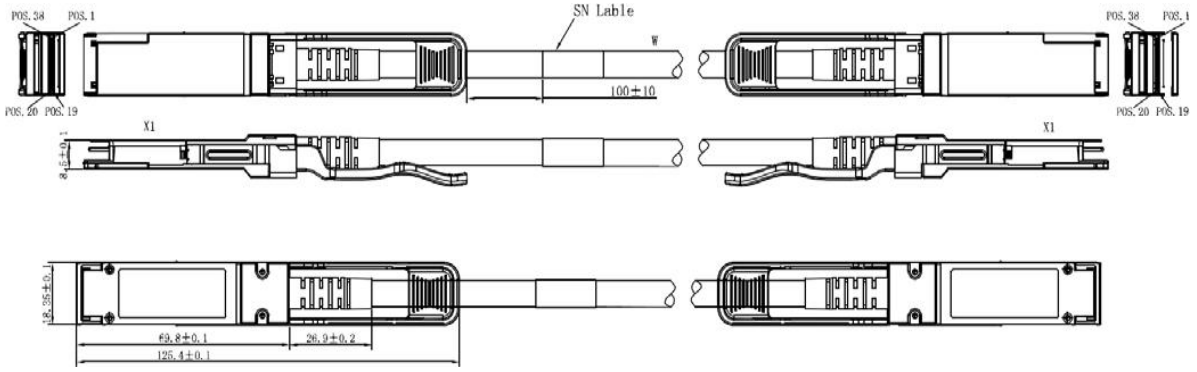
High Speed Characteristics

Parameter	Symbol	Min	Typical	Max	Units	Notes
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	

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

Mechanical Dimensions



Ordering Information

Part Number	Product Description
QSFP-56G-PC50CM	56G QSFP+ to QSFP+ Direct Attach Cables, 0.5m (1.6ft), AWG 30, 0 ~+70ºC
QSFP-56G-PC1M	56G QSFP+ to QSFP+ Direct Attach Cables, 1m (3ft), AWG 30, 0 ~+70ºC
QSFP-56G-PC2M	56G QSFP+ to QSFP+ Direct Attach Cables, 2m (7ft), AWG 30, 0 ~+70ºC
QSFP-56G-PC3M	56G QSFP+ to QSFP+ Direct Attach Cables, 3m (10ft), AWG 30, 0 ~+70ºC
QSFP-56G-PC4M	56G QSFP+ to QSFP+ Direct Attach Cables, 4m (13ft), AWG 26, 0 ~+70ºC
QSFP-56G-PC5M	56G QSFP+ to QSFP+ Direct Attach Cables, 5m (16ft), AWG 26, 0 ~+70ºC