

### SFP-56G-PDAC2M-C

MSA and TAA Compliant 50GBase-CU SFP56 to SFP56 Direct Attached Cable (Passive Twinax, 2m)

#### Features

- Compliant with SFP56 MSA Specification
- Electrical interface specifications per SFF-8431
- Management interface specifications per SFF-8472
- Supports 56Gbps
- 30AWG Wire Gauge
- PAM4 modulation
- Cable Color: Black
- Round Jacketed
- I2C for EEPROM communication
- ROHS-6 Compliant



#### Applications

- Servers
- Switches
- Routers
- Data Centers
- High Performance Computing

#### Product Description

This is an MSA compliant 50GBase-CU SFP56 to SFP56 direct attach cable that operates over passive copper with a maximum reach of 2.0m (6.6ft). It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. This direct attach cable is TAA (Trade Agreements Act) compliant, and is built to comply with MSA (Multi-Source Agreement) standards. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

ProLabs' direct attach cables are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S. – made or designated country end products."



## Regulatory Compliance

Certification	Standard
EU RoHS Directive 2011/65/EU	Compliant
EU ELV Directive 2000/53/EC	Compliant
RoHS 2 Directive MIIT Order No 32, 2016	No Restricted Materials Above Threshold
EU REACH Regulation (EC) No. 1907/2006	Current ECHA Candidate List: JUN 2020 (209) Candidate List Declared Against: JAN 2019 (197) SVHC > Threshold
Halogen Content	Not Low Halogen - contains Br or Cl > 900 ppm.

## Mechanical Characteristics

Length	Wire Gauge	Wire Size	Overall Outside Cable Diameter	Flammability Rating
2m	30AWG	.051 mm <sup>2</sup>	4.37 mm	CL2

## Characteristics

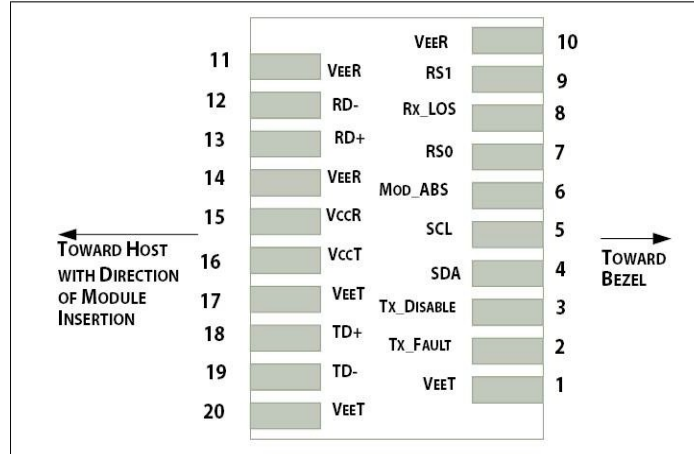
Parameter	Specification
Impedance	100 Ω
Data Rate	56Gb/s
Assembly Color	Black
Number of Pluggable I/O Cable Assembly Positions	2-Pair
Number of Signal Positions	4
Cable Assembly Category	High Speed

## SFP56 Pin Definitions

Pin	Symbol	Name/Descriptions	Notes
1	VeeT	Transmitter Ground	1
2	TX_Fault	Transmitter Fault (LVTTTL-O) - High indicates a fault condition	2
3	TX_Disable	Transmitter Disable (LVTTTL-I) – High or open disables the transmitter	3
4	SDA	Two wire serial interface Data Line (LVCMOS-I/O) (MOD-DEF2)	4
5	SCL	Two wire serial interface Clock Line (LVCMOS-I/O) (MOD-DEF1)	4
6	MOD_ABS	Module Absent (Output), connected to VeeT or VeeR in the module	5
7	RS0	NA	6
8	RX_LOS	Receiver Loss of Signal (LVTTTL-O)	2
9	RS1	NA	6
10	VeeR	Receiver Ground	1
11	VeeR	Receiver Ground	1
12	RD-	Inverse Received Data out (CML-O)	
13	RD+	Received Data out (CML-O)	
14	VeeR	Receiver Ground	
15	VccR	Receiver Power - +3.3V	
16	VccT	Transmitter Power - +3.3 V	
17	VeeT	Transmitter Ground	1
18	TD+	Transmitter Data In (CML-I)	
19	TD-	Inverse Transmitter Data In (CML-I)	
20	VeeT	Transmitter Ground	1

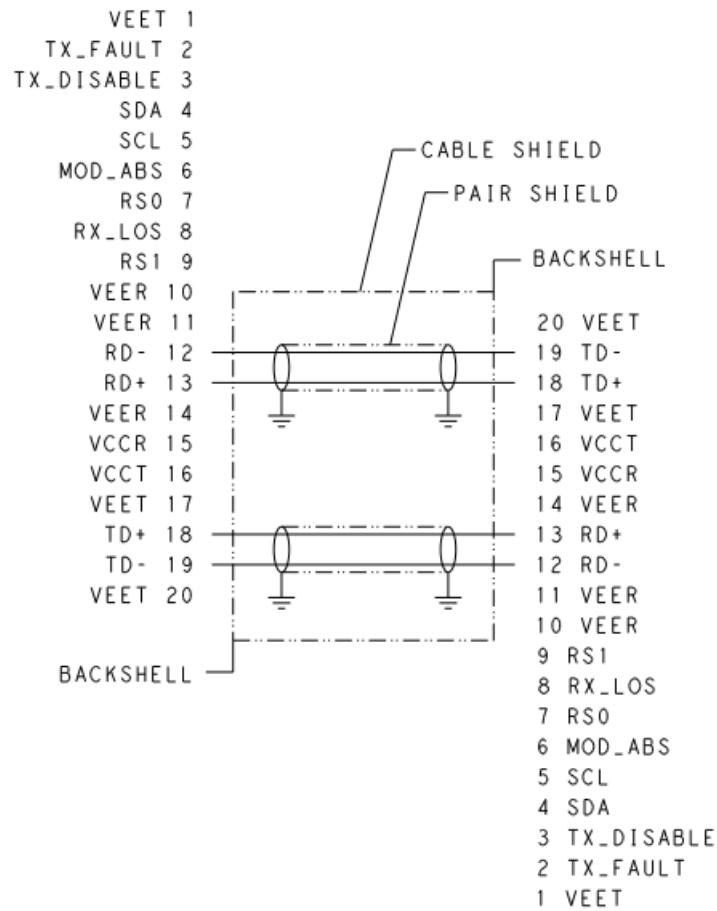
### Notes:

1. The module signal grounds are isolated from the module case.
2. This is an open collector/drain output that on the host board requires a 4.7KΩ to 10KΩ pull-up resistor to Vcc-Host.
3. This input is internally biased high with a 4.7KΩ to 10KΩ pull-up resistor to VccT.
4. Two-Wire Serial interface clock and data lines require an external pull-up resistor.
5. This is a ground return that on the host board requires a 4.7KΩ to 10KΩ pull-up resistor to Vcc-Host.
6. Rate select not available

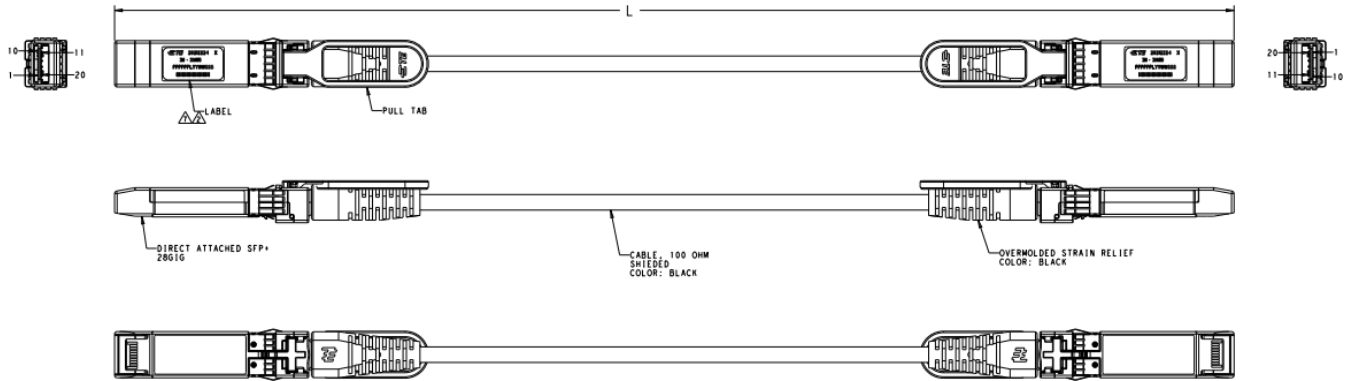


Host PCB SFP56 Pad Assignment Top View

### Wiring Schematic



## Mechanical Specifications



**Characteristic Impedance:  $100 \pm 10$  OHMS**

### **About ProLabs**

Our experience comes as standard; for over 15 years ProLabs has delivered optical connectivity solutions that give our customers freedom and choice through our ability to provide seamless interoperability. At the heart of our company is the ability to provide state-of-the-art optical transport and connectivity solutions that are compatible with over 90 optical switching and transport platforms.

### **Complete Portfolio of Network Solutions**

ProLabs is focused on innovations in optical transport and connectivity. The combination of our knowledge of optics and networking equipment enables ProLabs to be your single source for optical transport and connectivity solutions from 100Mb to 400G while providing innovative solutions that increase network efficiency. We provide the optical connectivity expertise that is compatible with and enhances your switching and transport equipment.

### **Trusted Partner**

Customer service is our number one value. ProLabs has invested in people, labs and manufacturing capacity to ensure that you get immediate answers to your questions and compatible product when needed. With Engineering and Manufacturing offices in the U.K. and U.S. augmented by field offices throughout the U.S., U.K. and Asia, ProLabs is able to be our customers best advocate 24 hours a day.

### **Contact Information**

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