

SFP56-50GB-PDAC2M-C

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

Features:

- Up to 50Gbps Bi-Directional Data Links
- Hot-Pluggable
- Compliant with SFF-8402
- Enhanced EMI Design
- Single 3.3V Power Supply
- Operating Temperature: 0 to 70 Celsius
- RoHS Compliant and Lead-Free



Applications:

- 50GBase Ethernet

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' transceivers 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.")



Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate	DR		50		Gbps	1
Bit Error Rate	BER			10^{-12}		
Operating Temperature	Tc	0		70	°C	2
Storage Temperature	Tstg	-40		85	°C	3
Supply Voltage	Vcc	3.14	3.3	3.46	V	4
Supply Current	Icc			4	mA	4
Product Weight	GD		78		g/PCS	5
Cable Weight	GC		32		g/M	
Dust Cap Weight	GS		0.80		g/PCS	

Notes:

1. IEEE 802.3cd.
2. Case temperature.
3. Ambient temperature.
4. For the electrical power interface.
5. The total weight of the cable. For example, the weight of a 3M cable is $90 + 44*(3-1) + 0.80*2 = 179.6g$.

Cable Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Wire Gauge				30	AWG	
Cable Impedance	Z	90	100	110	Ω	

Cable Dimension and Nominal Length

Standard Wire Gauge (AWG)	Cable Diameter OD (mm)	Minimum Bending Radius R (mm)	Nominal Length (m)	Tolerance Range $\pm$ (cm)
30	4.6	26	Length $\leq$ 2	2

Pin Descriptions

Pin	Symbol	Name/Description	Notes
1	VeeT	Transmitter Ground (Common with Receiver Ground).	1
2	Tx_Fault	Transmitter Failure Alarm. Not Used.	
3	Tx_Disable	The signal turns off the module transmitter when it is “high” or “open.” Not Used.	
4	SDA	Data Line for Serial ID.	2
5	SCL	Clock Line for Serial ID.	2
6	MOD_ABS	Module Absent. Grounded within the module.	2
7	RS0	No Connection Required.	
8	LOS	Loss of Signal Indication. “Logic 0” indicates normal operation.	
9	RS1	No Connection Required.	
10	VeeR	Receiver Ground (Common with Transmitter Ground).	1
11	VeeR	Receiver Ground (Common with Transmitter Ground).	1
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).	1
15	VccR	Receiver Power Supply.	
16	VccT	Transmitter Power Supply.	
17	VeeT	Transmitter Ground (Common with Receiver Ground).	1
18	TD+	Transmitter Non-Inverted Data In. AC Coupled.	
19	TD-	Transmitter Inverted Data In. AC Coupled.	
20	VeeT	Transmitter Ground (Common with Receiver Ground).	1

Notes:

1. The circuit ground is isolated from the chassis ground.
2. SFF-8472 specification for management interface for SFP+.

Electrical Pin-Out Details



Block Diagram of Transceiver



Mechanical Specifications



All dimensions are $\pm 0.2\text{mm}$ unless otherwise specified.
Unit: mm

About ProLabs

Our extensive experience comes as standard. For over 20 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 more than 100 optical switching and transport platforms.

A 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 1.6T 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.

The Trusted Partner

Customer service is our number one value. ProLabs has invested in people, labs and manufacturing capacity to ensure compatible products, and immediate answers to your questions. 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.



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