

### PRO-SCISAR-PDAC7M

Cisco<sup>®</sup> SFP-H10GB-CU7M to Arista Networks<sup>®</sup> CAB-SFP-SFP-7M Compatible 10GBase-CU SFP+ Direct Attach Cable (Passive Twinax, 7m)

#### Features

- Up to 10 Gbps bi-directional data links
- Compliant with SFF-8431
- Compliant with 10GFC
- 100 Ohm differential impedance
- Enhanced EMI design
- AC coupled inputs and outputs
- Operating Temperature Range: 0 to 70 Celsius
- Single 3.3V power supply
- RoHS Compliant and Lead-Free



## Applications:

- 10GBase Ethernet
- 10G Fiber Channel
- Serial Data Transmission

## **Product Description**

This Cisco<sup>®</sup> SFP-H10GB-CU7M to Arista Networks<sup>®</sup> CAB-SFP-SFP-7M dual oem compatible 10GBase-CU SFP+ to SFP+ passive direct attach cable has a maximum reach of 7.0m (23.0ft). It is 100% Cisco<sup>®</sup> to Arista Networks<sup>®</sup> compatible and has been programmed, uniquely serialized, data-traffic and application tested to ensure that it is compliant and functional. This cable will initialize and perform identically to Cisco<sup>®</sup> and Arista Networks<sup>®</sup>'s individual cables and is built to meet or exceed OEM specifications. This product complies with MSA (Multi-Source Agreement) standards and is TAA (Trade Acts Agreement) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

Proline's 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.



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# **General Specifications**

| Parameter             | Symbol | Min. | Тур.    | Max.  | Unit | Notes |
|-----------------------|--------|------|---------|-------|------|-------|
| Data Rate             | DR     |      | 10.3125 |       | Gbps | 1     |
| Bit Error Rate        | BER    |      |         | 10-12 |      |       |
| Operating Temperature | Тс     | 0    |         | 70    | °C   | 2     |
| Storage Temperature   | Tstg   | -40  |         | 85    | °C   | 3     |
| Power Supply Voltage  | Vcc    | 3.14 | 3.30    | 3.46  | V    | 4     |

# Notes:

- 1. IEEE 802.3ae.
- 2. Case Temperature.
- 3. Ambient Temperature.
- 4. For the electrical power interface.

# **Cable Specifications**

| Parameter                | Symbol | Min. | Тур.  | Max. | Unit |
|--------------------------|--------|------|-------|------|------|
| Wire Gauge               |        |      | 24AWG |      | AWG  |
| Cable Impedance          | Z      | 90   | 100   | 110  | Ω    |
| Cable Diameter           | OD     |      | 6.0   |      | mm   |
| Minimum Bending Radius   | R      |      | 28    |      | mm   |
| Tolerance Range <u>+</u> |        |      | 6     |      | cm   |

# **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 | Not Used. The signal turns off the module transmitter when it is "high" or "open." |       |
| 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   | RSO        | 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. Should be pulled up with  $4.7k\Omega$  to  $10k\Omega$  on the host board to a voltage between 2V and 3.6V.

#### **Electrical Pad Layout**



# **Block Diagram of Transceiver**



Weight

| Parameter            | Symbol | Тур. | Unit  | Notes |
|----------------------|--------|------|-------|-------|
| 24AWG Product Weight | GD24   | 96   | g/PCS | 1     |
| 24AWG Cable Weight   | GC24   | 50   | g/M   |       |
| Dust Cap Weight      | GS     | 0.80 | g/PCS |       |

### Notes:

1. For example, the weight of a 6m cable with 24AWG is 96+50\*(6-1) + 0.80\*2=347.6g.

# **Mechanical Specifications**



All Dimensions are ±0.2mm Unless Otherwise Specified Unit: mm

## About Us:

Proline Options is one of North America's leading providers of transceivers and high speed cabling. With a reputation for quality, tested products that cover the connectivity spectrum, Proline Options has a solution for you regardless of the specification.

At Proline Options, every product is tested in its intended application - never batch or spec tested only. We run bandwidth, distance and IOS network tests. We have documented an impressive 0.03% failure rate over the last 10 years. To continue this rate of success we invest millions annually in our own on-site testing lab.



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