

### PRO-S28JUS28MX-PDAC3M

Juniper Networks® JNP-SFP-25G-DAC-3M to Mellanox® MCP2M00-A003 Compatible 25GBase-CU SFP28 Direct Attach Cable (Passive Twinax, 3m)

#### Features

- Up to 25Gbps bi-directional data links
- Hot-pluggable
- Compliant with SFF-8402
- 100 Ohm differential impedance
- Enhanced EMI design
- AC coupled inputs and outputs
- Operating Temperature: 0 to 70 Celsius
- Single power supply 3.3V
- RoHS Compliant and Lead-Free



#### Applications:

- 25GBase Ethernet

#### Product Description

This Juniper Networks® JNP-SFP-25G-DAC-3M to Mellanox® MCP2M00-A003 dual oem compatible 25GBase-CU SFP28 to SFP28 passive direct attach cable has a maximum reach of 3.0m (9.8ft). It is 100% Juniper Networks® to Mellanox® 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 Juniper Networks® and Mellanox®'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.



## General Specifications

| Parameter             | Symbol | Min. | Typ. | Max.              | Unit  | Notes |
|-----------------------|--------|------|------|-------------------|-------|-------|
| Data Rate             | DR     |      | 25   |                   | Gbps  | 1     |
| Bit Error Rate        | BER    |      |      | 10 <sup>-12</sup> |       |       |
| Operating Temperature | Tc     | 0    |      | 70                | °C    | 2     |
| Storage Temperature   | Tstg   | -40  |      | 85                | °C    | 3     |
| Supply Current        | Icc    |      |      | 4                 | mA    | 4     |
| Input Voltage         | Vcc    | 3.14 | 3.3  | 3.46              | V     | 4     |
| Cable Impedance       | Z      | 90   | 100  | 110               | Ω     |       |
| Product Weight        | GD     |      | 84   |                   | g/PCS | 5     |
| Cable Weight          | GC     |      | 38   |                   | G/M   |       |
| Dust Cap Weight       | GS     |      | 0.80 |                   | g/PCS |       |

### Notes:

1. IEEE 802.3by.
2. Case temperature.
3. Ambient temperature.
4. For electrical power interface.

## Cable Dimensions and Insertion Loss Level

| Length | Standard Wire Gauge AWG | Cable Diameter OD (mm) | Minimum Bending Radius R (mm) | Insertion Loss Level (Note 1) | Tolerance Range (±cm) |
|--------|-------------------------|------------------------|-------------------------------|-------------------------------|-----------------------|
| 3m     | 28AWG                   | 5.0                    | 28                            | CA-25G-S                      | 4                     |

### Notes:

1. Cable insertion loss classification standard IEEE 802.3by 110-10.

## 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   | 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. 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



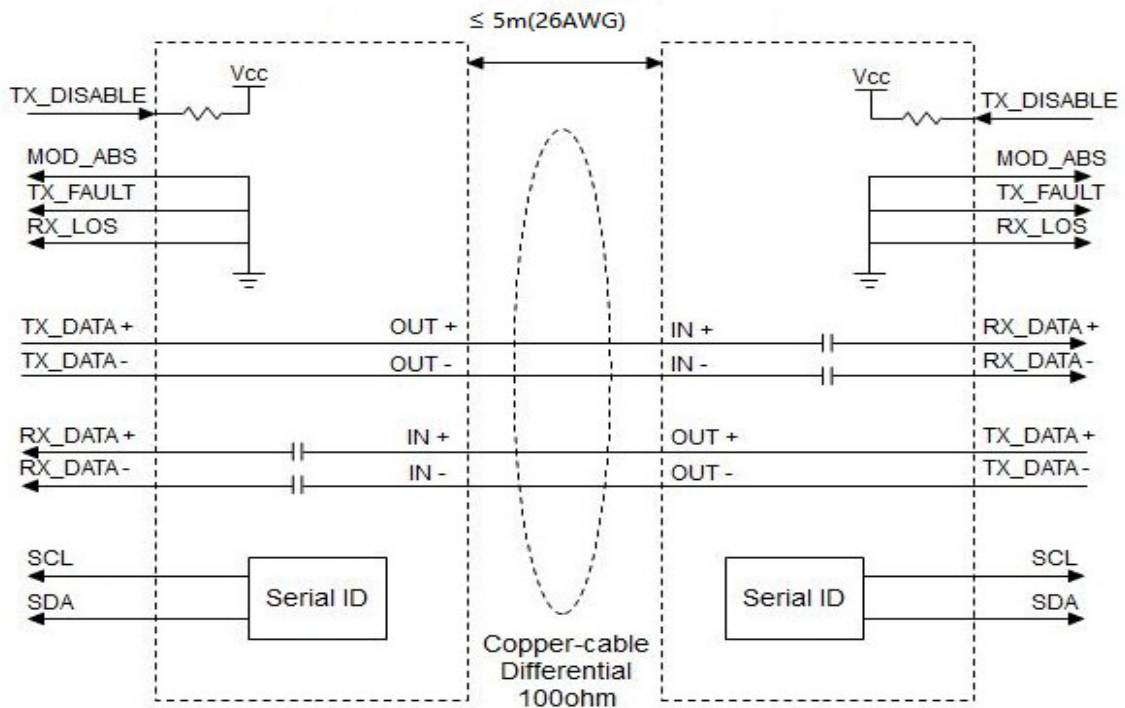
Top of Board



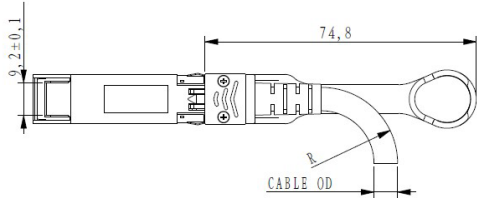
Bottom of Board



## Block Diagram of Transceiver



**Mechanical Specifications**



Unmarked Tolerance  $\pm 0.2$   
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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