

#### SFP-TWNACT-3M-PRO

EMC® SFP-TWNACT-3M Compatible TAA 10GBase-CU SFP+ to SFP+ Direct Attach Cable (Active Twinax, 3m, 30AWG)

#### Features

- Up to 10Gbps bi-directional data links
- Industry Standard small form pluggable
- Dual SFP Connectors
- Single Power Supply 3.3V
- Operating Temperature: 0 to 70 Celsius
- Hot Pluggable
- RoHS Compliant and Lead-Free



Applications:

- 10G Ethernet
- 10G Fibre Channel

## **Product Description**

This is a EMC<sup>®</sup> SFP-TWNACT-3M Compatible 10GBase-CU SFP+ to SFP+ direct attach cable that operates over active copper with a maximum reach of 3m. It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. We stand behind the quality of our products and proudly offer a limited lifetime warranty. This cable is TAA (Trade Agreements Act) compliant and is built to comply with MSA (Multi-Source Agreement) standards.

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.



Rev. 041024

# **General Specifications**

| Parameter                  | Symbol | Min  | Тур.    | Max.  | Unit  | Notes |
|----------------------------|--------|------|---------|-------|-------|-------|
| Data Rate                  | DR     |      | 10.3125 |       | Gbps  | 1     |
| Bit Error Rate             | BER    |      |         | 10-12 |       |       |
| Operating Case Temperature | Тс     | 0    |         | 70    | °C    | 2     |
| Storage Temperature        | Tstg   | -40  |         | 85    | °C    | 3     |
| Input Voltage              | Vcc    | 3.14 | 3.3     | 3.46  | V     | 4     |
| Supply Current             | lcc    |      | 100     | 300   | mA    | 4     |
| Cable Impedance            | Z      | 90   | 100     | 110   | Ω     |       |
| Product Weight             | GD     |      | 72      |       | g/PCS |       |
| Cable Weight               | GC     |      | 26      |       | G/M   |       |
| Dust Cap Weight            | GS     |      | 0.80    |       | g/PCS |       |
| Wire Gauge                 |        |      | 30      |       | AWG   |       |
| Tolerance Range            |        |      | 4       |       | ±cm   |       |

## Notes:

- 1. IEEE 802.3ae compatible.
- 2. Case temperature.
- 3. Ambient temperature.
- 4. For electrical power interface.

| Pin | Symbol     | Name/Description                                                | Notes |
|-----|------------|-----------------------------------------------------------------|-------|
| 1   | VeeT       | Transmitter ground. Common with receiver ground.                | 1     |
| 2   | Tx_Fault   | Transmitter Fault.                                              |       |
| 3   | Tx_Disable | Transmitter Disable. Laser output disabled on "high" or "open." | 2     |
| 4   | SDA        | Data line for Serial ID.                                        | 3     |
| 5   | SCL        | Clock line for Serial ID.                                       | 3     |
| 6   | MOD_ABS    | Module absent. Grounded within the module.                      | 3     |
| 7   | RSO        | No connection required.                                         |       |
| 8   | LOS        | Loss of Signal. Logic 0 indicated normal operation.             | 4     |
| 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 Non0inverted DATA out. AC coupled.                     |       |
| 14  | VeeR       | Receiver ground. Common with transmitter ground.                |       |
| 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     |

## **Pin Descriptions**

# Notes:

- 1. Circuit ground is isolated from chassis ground.
- 2. Disabled: Tdis>2V or open, Enabled Tdis<0.8V.
- 3. Should be pulled up with  $4.7k\Omega$ -10k $\Omega$  on host board to a voltage between 2V and 3.6V.
- 4. LOS is open collector output.

#### **Electrical Pad Layout**



# **Block Diagram**



# **Mechanical Specifications**





## 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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