

10G-SFPP-TWX-P-0601-PRO

Brocade® (Formerly) 10G-SFPP-TWX-P-0501 Compatible TAA 10GBase-CU SFP+ to SFP+ Direct Attach Cable (Passive Twinax, 6m)

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:

- 10G Ethernet
- 10G Fibre Channel
- Serial Data Transmission

Product Description

This is a Brocade® (Formerly) 10G-SFPP-TWX-P-0501 Compatible 10GBase-CU SFP+ to SFP+ direct attach cable that operates over passive copper with a maximum reach of 6m. 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.



General Specifications

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Notes |
|-----------------------|--------|------|---------|------------|------|-------|
| Data Rate | DR | | 10.3125 | | Gbps | 1 |
| Bit Error Rate | BER | | | 10^{-12} | | |
| Operating Temperature | Tc | 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. | Typ. | 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 \pm | | | 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 | 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 Ω to 10k Ω on the host board to a voltage between 2V and 3.6V.

Electrical Pad Layout



Block Diagram of Transceiver



Weight

| Parameter | Symbol | Typ. | 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:

- 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 $\pm 0.2\text{mm}$ 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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