

Product Datasheet

XBR-TWX-0501-C

Brocade® Compatible 10Gb/s SFP+ Direct Attach Cable Copper, Active, 5m

FEATURES

- Available lengths 1m to 15m
- Supports multi-gigabit data rates up to 10.5Gbps
- Supports 1x, 2x, 4x and 8x Fiber Channel data rates
- Hot-pluggable SFP 20PIN footprint
- I/O Connector designed for high-speed differential signal applications
- EMI/EMC performance
- Low Power Consumption < 0.5W
- Power Supply: +3.3V
- Compliant to SFP+ MSA
- Temperature Range: 0~ 70 °C
- ROHS

APPLICATIONS

- Storage Area Networks (SAN), Network Attached Storage and Storage Servers
- 1G/2G/4G/8G Fiber Channel
- High capacity I/O in Storage Area Networks, Network Attached Storage, and Storage Servers
- Switched fabric I/O such as ultra-high bandwidth switches and routers
- Data center cabling infrastructure
- High density connections between networking equipment

DESCRIPTION

ATGBICS Compatible XBR-TWX-0501 SFP+ Active Copper Cable assemblies are high-performance, cost effective I/O solutions for 10Gb Ethernet and 10G Fiber Channel applications. SFP+ Active copper modules allow hardware manufacturers to achieve high port density, configurability and utilization at a very low cost and to reduce power budget. The high-speed cable assemblies meet and exceed the performance and reliability requirements stipulated by Gigabit Ethernet and Fiber Channel industry standard.

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Recommended Operating Environment:

| Parameter | Symbol | Min | Typical | Max | Unit |
|-----------------------------|--------|------|---------|------|------|
| Storage Ambient Temperature | | -40 | | +85 | ° |
| Operating Case Temperature | Tc | 0 | | +70 | ° |
| Power Supply Voltage | VCC | 3.14 | 3.3 | 3.47 | V |
| Power Dissipation | PD | | | 0.5 | W |

Systems

| Performance | Media |
|---|--|
| 10.5 Gpbs line speed, full duplex Bit error rate: better than 10E-12 | Hot-pluggable, industry-standard Small Form-Factor |

Specifications (Tested under recommended operating conditions, unless otherwise noted)

| Parameter | Symbol | Min | Type | Max | Units | Notes |
|---|--------|-----|------|------|-------|-------|
| Electrical characteristics | | | | | | |
| Supply Current | Icc | - | - | 100 | mA | 1 |
| Transmitter Differential Input Voltage (PECL) | VIN | 250 | - | 1200 | mVpp | |
| Receiver Differential Output Voltage (PECL) | VO | 185 | - | 1000 | mVpp | |
| Impedance | Zcable | 90 | 100 | 110 | Ohms | |
| MOD-DEF1, 2 | VIH | 2.0 | - | Vcc | V | |

Note:

1. The supply current includes SFP Module's supply current and test board working current.

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Physical Data

| Parameter | Description | 30AWG | 24AWG | Units |
|-----------------------|------------------------|-------|-------|-------|
| Cable Diameter | OD | 4.5 | 6.5 | mm |
| Bend Radius | Minimum Sustained Bend | 25 | 35 | mm |

AWG Information

| Reach @ 10Gb/s (m) | AWG |
|--------------------|-----|
| 7 | 28 |
| 10 | 28 |
| 12 | 24 |
| 15 | 24 |

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Pin Descriptions

| Pin | Logic | Symbol | Name/Description | Notes |
|-----|------------|----------|---------------------------------|-------|
| 1 | | VeeT | Transmitter Ground | |
| 2 | LV-TTL-O | TX_Fault | N/A | 1 |
| 3 | LV-TTL-I | TX_DIS | Transmitter Disable | 2 |
| 4 | LV-TTL-I/O | SDA | Two Wire Serial Data | |
| 5 | LV-TTL-I | SCL | Two Wire Serial Clock | |
| 6 | | MOD_DEF0 | Module present, connect to VeeT | |
| 7 | LV-TTL-I | RS0 | N/A | 1 |
| 8 | LV-TTL-O | LOS | LOS of Signal | 2 |
| 9 | LV-TTL-I | RS1 | N/A | 1 |
| 10 | | VeeR | Receiver Ground | |
| 11 | | VeeR | Receiver Ground | |
| 12 | CML-O | RD- | Receiver Data Inverted | |
| 13 | CML-O | RD+ | Receiver Data Non-Inverted | |
| 14 | | VeeR | Receiver Ground | |
| 15 | | VccR | Receiver Supply 3.3V | |
| 16 | | VccT | Transmitter Supply 3.3V | |
| 17 | | VeeT | Transmitter Ground | |
| 18 | CML-I | TD+ | Transmitter Data Non-Inverted | |
| 19 | CML_I | TD- | Transmitter Data Inverted | |
| 20 | | VeeT | Transmitter Ground | |

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Mechanical Information

