

#### 10G-SFPP-TWX-0401-PRO

Brocade® (Formerly) Compatible TAA 10GBase-CU SFP+ to SFP+ Direct Attach Cable (Active Twinax, 4m, 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 Brocade<sup>®</sup> (Formerly) Compatible 10GBase-CU SFP+ to SFP+ direct attach cable that operates over active copper with a maximum reach of 4m. 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.

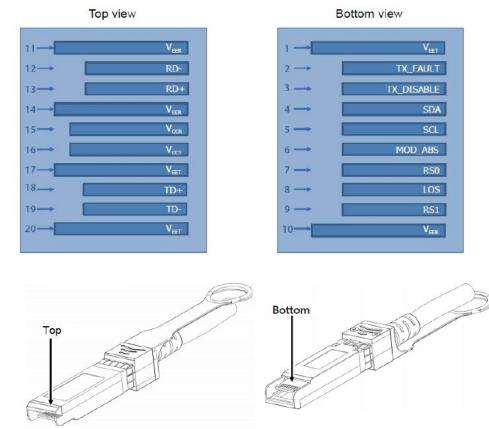
Pin	Symbol	Name/Description	Notes
1	VeeT	Transmitter ground. Common with receiver ground.	1
2	Tx_Fault	Transmitter Fault.	
3	Tx_Disable	Transmitter Disable. Laser output disabled on "high" or "open."	2
4	SDA	Data line for Serial ID.	3
5	SCL	Clock line for Serial ID.	3
6	MOD_ABS	Module absent. Grounded 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**

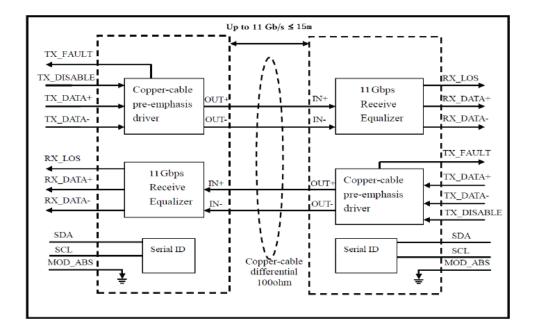
## Notes:

- 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.

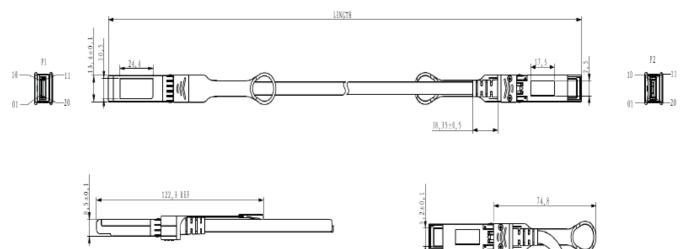
#### **Electrical Pad Layout**



## **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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