

PAN-SFP-PLUS-CU-3M-C

Palo Alto Networks® PAN-SFP-PLUS-CU-3M Compatible TAA Compliant 10GBase-CU SFP+ Direct Attach Cable (Passive Twinax, 3m)

Features

- True broadband – operates from 1 to 10.5Gb/s
- Support hot-pluggable
- 3m Length
- 30 AWG wire gauge
- 360 degree cable braid crimp and enhanced EMI skirt
- Low insertion loss and low crosstalk
- Single 3.3V power supply
- RoHS Compliant and Lead-Free
- Compliant with SFF-8472 Rev11.1
- Compliant with SFP+ MSA: SFF-8431 Rev4.1
- Wire/Cable Type Twinax



Applications

- 1/10GbE
- 1/2/4/8x FC
- InfiniBand 1X SDR DDR QDR
- Proprietary Interconnects

Product Description

This is a Palo Alto Networks® PAN-SFP-PLUS-CU-3M compatible 10GBase-CU SFP+ to SFP+ direct attach cable that operates over passive copper with a maximum reach of 3.0m (9.8ft). It has been programmed, uniquely serialized, and data-traffic and application tested to ensure it is 100% compliant and functional. This direct attach cable is TAA (Trade Agreements Act) compliant, and is built to comply with MSA (Multi-Source Agreement) standards. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

ProLabs' direct attach cables 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."



Regulatory Compliance

- ESD to the Electrical PINs: compatible with MIL-STD-883E Method 3015.4
- ESD to the LC Receptacle: compatible with IEC 61000-4-3
- EMI/EMC compatible with FCC Part 15 Subpart B Rules, EN55022:2010
- Laser Eye Safety compatible with FDA 21CFR, EN60950-1& EN (IEC) 60825-1,2
- RoHS compliant with EU RoHS 2.0 directive 2015/863/EU

Recommended Operating conditions

| Parameter | Symbol | Min | Typ. | Max. | Unit |
|----------------------------|--------|------|------|-------------------|------|
| Power Supply Voltage | Vcc | 3.13 | 3.30 | 3.47 | V |
| Power Supply Current | Icc | | | 30 | mA |
| Operating Case Temperature | Tc | -5 | | +70 | °C |
| Data Rate, each Lane | | | | 10.5 | Gbps |
| Bit Error Rate | BER | | | 10 ⁻¹² | |

Cable Specifications

| Parameter | Symbol | Min | Typ. | Max. | Unit |
|-------------------------------|--------|-----|------|------|------|
| Cable Diameter(30AWG) | DIA | | 4.5 | | mm |
| Time Delay Skew (Within Pair) | Tds | | | 10 | ps/m |
| Cable Time Delay | Td | | 4.3 | | ns/m |
| Cable Impedance | Z | 90 | 100 | 110 | Ω |

Systems

| Parameter | Media |
|--|--|
| 10 Gb/s line speed, full duplex Bit error rate: better than 10E-12 | Hot-pluggable, industry-standard Small Form-Factor Pluggable (SFP+) copper cable, available as 7m. |

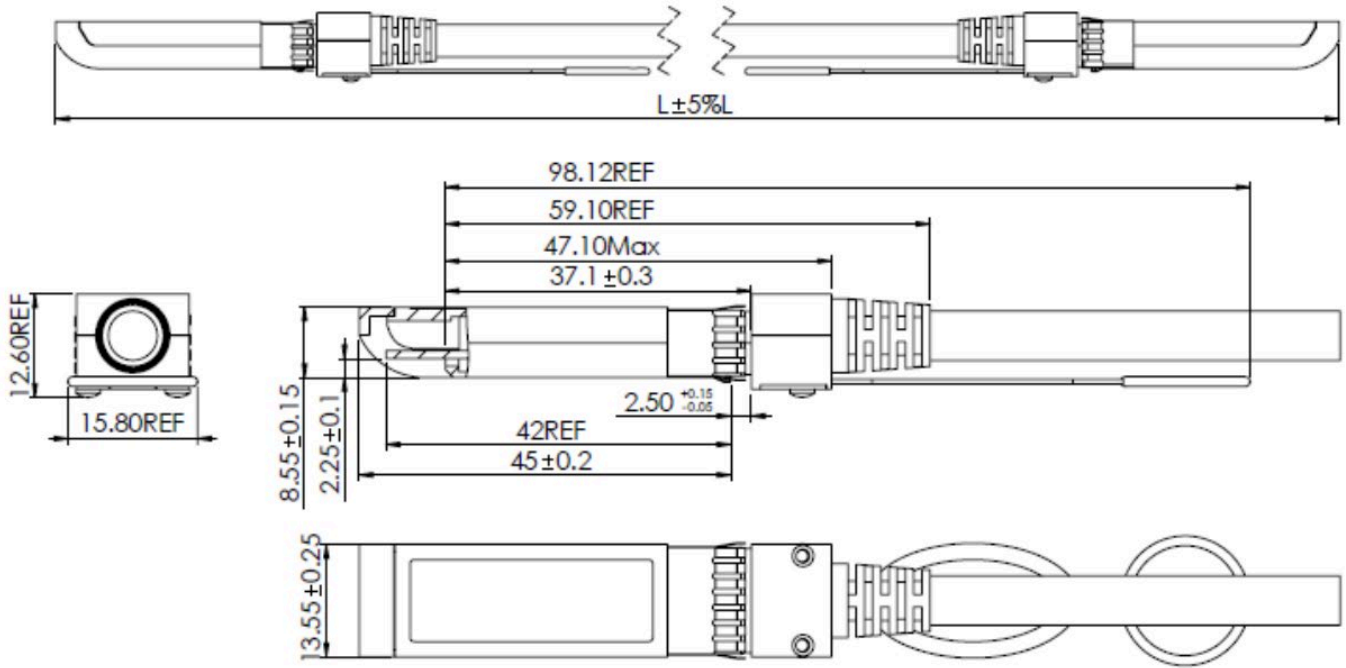
Pin Descriptions

| 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. | |

Notes:

1. Signals not supported in SFP+ Copper pulled-down to VeeT with 30K ohms resistor.
2. Passive Cable assemblies do not support LOS and TX_DIS.

Mechanical Specification



About ProLabs

Our experience comes as standard; for over 15 years ProLabs has delivered optical connectivity solutions that give our customers freedom and choice through our ability to provide seamless interoperability. At the heart of our company is the ability to provide state-of-the-art optical transport and connectivity solutions that are compatible with over 90 optical switching and transport platforms.

Complete Portfolio of Network Solutions

ProLabs is focused on innovations in optical transport and connectivity. The combination of our knowledge of optics and networking equipment enables ProLabs to be your single source for optical transport and connectivity solutions from 100Mb to 400G while providing innovative solutions that increase network efficiency. We provide the optical connectivity expertise that is compatible with and enhances your switching and transport equipment.

Trusted Partner

Customer service is our number one value. ProLabs has invested in people, labs and manufacturing capacity to ensure that you get immediate answers to your questions and compatible product when needed. With Engineering and Manufacturing offices in the U.K. and U.S. augmented by field offices throughout the U.S., U.K. and Asia, ProLabs is able to be our customers best advocate 24 hours a day.

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