

### **AA1403021-E6-OPC**

Avaya/Nortel® AA1403021-E6 Compatible TAA Compliant 10GBase-CU SFP+ Direct Attach Cable (Active Twinax, 15m)

#### **Features**

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



#### **Applications:**

- 10G Ethernet
- 10G Fibre Channel

#### **Product Description**

This is an Avaya/Nortel® AA1403021-E6 compatible 10GBase-CU SFP+ to SFP+ direct attach cable that operates over active copper with a maximum reach of 15.0m (49.2ft). 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.

## General Specifications

| Parameter                  | Symbol           | Min  | Typ.    | Max.              | Unit  | Notes |
|----------------------------|------------------|------|---------|-------------------|-------|-------|
| Data Rate                  | DR               |      | 10.3125 |                   | Gbps  | 1     |
| Bit Error Rate             | BER              |      |         | 10 <sup>-12</sup> |       |       |
| Operating Case Temperature | T <sub>c</sub>   | 0    |         | 70                | °C    | 2     |
| Storage Temperature        | T <sub>stg</sub> | -40  |         | 85                | °C    | 3     |
| Input Voltage              | V <sub>cc</sub>  | 3.14 | 3.3     | 3.46              | V     | 4     |
| Supply Current             | I <sub>cc</sub>  |      | 100     | 300               | mA    | 4     |
| Cable Impedance            | Z                | 90   | 100     | 110               | Ω     |       |
| Product Weight             | GD               |      | 96      |                   | g/PCS |       |
| Cable Weight               | GC               |      | 50      |                   | G/M   |       |
| Dust Cap Weight            | GS               |      | 0.80    |                   | g/PCS |       |
| Wire Gauge                 |                  |      | 24      |                   | AWG   |       |
| Tolerance Range            |                  |      | 8       |                   | ±cm   |       |

### Notes:

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

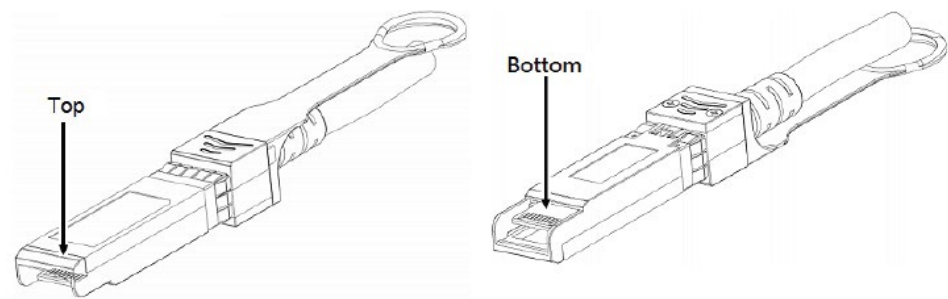
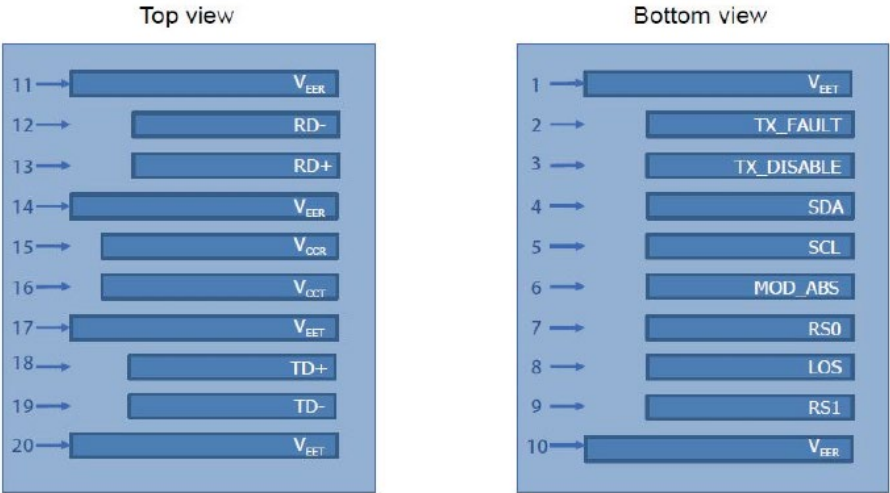
## Pin Descriptions

| 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   | RS0        | 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 NonInverted 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     |

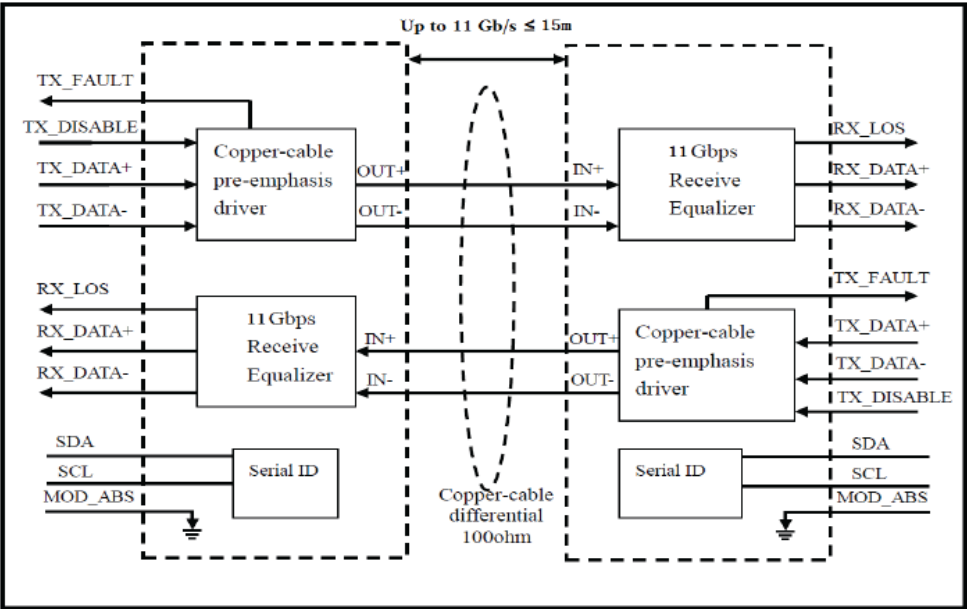
### Notes:

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

Electrical Pad Layout



Block Diagram



Mechanical Specifications

