# DAC-10G-xM Direct Attach Cable 10G SFP+ Direct Attach Cable, DAC 1-7m Features

- Up to 10.3125Gbps data rate per channel
- Up to 7m transmission
- Single +3.3V power supply
- RoHS Compliant
- Operating temperature 0° C to +70° C

# **Application**

• 10G Ethernet

## **Standard**

Compliant with MSA SFP+ specification(SFF-8432)

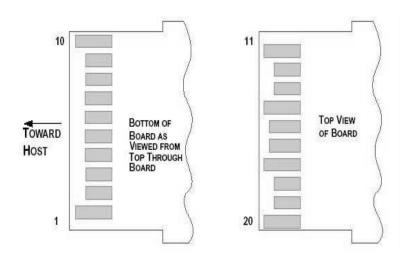
# **General Product Characteristics**

| SFP+ DAC Specifications |                          |  |  |  |  |
|-------------------------|--------------------------|--|--|--|--|
| Number of Lanes         | Tx & Rx                  |  |  |  |  |
| Channel Data Rate       | 10.3125 Gbps             |  |  |  |  |
| Operating Temperature   | 0 to + 70°C              |  |  |  |  |
| Storage Temperature     | -40 to + 85°C            |  |  |  |  |
| Supply Voltage          | 3.3 V nominal            |  |  |  |  |
| Electrical Interface    | 20 pins edge connector   |  |  |  |  |
| Management Interface    | Serial, I <sup>2</sup> C |  |  |  |  |

# **High Speed Characteristics**

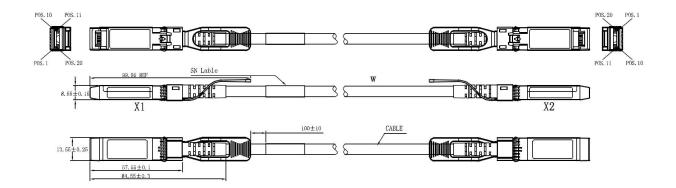
| Parameter                              | Symbol | Min                                      | Тур | Max  | Units       | Notes       |
|--|--------|--|-----|------|-------------|-------------|
| Differential Impedance                 | Zd     | 90                                       | 100 | 110  | Ω           |             |
| Differential Input Return Loss         | SDDXX  | <-12+2* SQRT (f) with f in GHz           |     |      | dB          | 0.01~4.1GHz |
|  |        | <-6.3+13*<br>Log10/(f/5.5) with f in GHz |     | dB   | 4.1~11.1GHz |             |
| Common Mode Output Return Loss         | SCCXX  | < -7+1.6*f with f in GHz                 |     | dB   | 0.01~2.5GHz |             |
|  |        |  |     | -3   | dB          | 2.5~11.1GHz |
| Difference Waveform Distortion Penalty | dWDPc  |  |     | 6.75 | dB          |             |
| VMA Loss                               | L      |  |     | 4.4  | dB          |             |
| VMA Loss to Crosstalk Ratio            | VCR    | 32.5                                     |     |      | dB          |             |

# **Pin Definitions**



| Pin         | Logic     | Symbol   | Description   |
|-------------|-----------|--|---|
| 1           |           | VeeT   | Module Transmitter Ground                                     |
| 2           | LVTTL-O   | TX_Fault   | Module Transmitter Fault                                      |
| 3           | LVTTL-I   | TX_Disable   | Transmitter disable; Turns off transmitter laser output       |
| 4 LVTTL-I/O | SDA       | 2-wire Serial Interface Data Line (Same as MOD-DEF2 in         |   |
|             |           | INF-8074i)   |   |
| 5           | LVTTL-I/O | SCL  | 2-wire Serial Interface Clock (Same as MOD-DEF1 in INF-8074i) |
| 6           |           | Mod_ABS  | Module Absent, connected to VeeT or VeeR in the module        |
| 7           | LVTTL-I   | RS0  | Rate Select 0, optionally controls SFP+ module receiver       |
| 8 LVTTL-O   | RX_LOS    | Receiver Loss of Signal Indication (In FC designated as Rx_LOS |   |
|             |           | and in Ethernet designated as Signal Detect)                   |   |
| 9 LVTTL-I   | RS1       | Rate Select 1, optionally controls SFP+ module                 |   |
|             |           | transmitter  |   |
| 10          |           | VeeR   | Module Receiver Ground  |
| 11          |           | VeeR   | Module Receiver Ground  |
| 12          | CML-O     | RD-  | Receiver Inverted Data Output                                 |
| 13          | CML-O     | RD+  | Receiver Non-Inverted Data Output                             |
| 14          |           | VeeR   | Module Receiver Ground  |
| 15          |           | VccR   | Module Receiver 3.3 V Supply                                  |
| 16          |           | VccT   | Module Transmitter 3.3 V Supply                               |
| 17          |           | VeeT   | Module Transmitter Ground                                     |
| 18          | CML-I     | TD+  | Transmitter Non-Inverted Data Input                           |
| 19          | CML-I     | TD-  | Transmitter Inverted Data Input                               |
| 20          |           | SDA  | Module Transmitter Ground                                     |

## **Mechanical Dimensions**



| Length (m) | Cable AWG |
|------------|-----------|
| 1          | 30        |
| 2          | 30        |
| 3          | 30        |
| 5          | 24/26     |
| 7          | 24        |

# **Ordering information**

| Model No.           | Product Description                           |
|---------------------|---|
| DAC-10G-xM          | 10G SFP+ to SFP+ Direct Attach Cable DAC 1-7m |
| x: 1,2,3,5,7 meters |   |



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