

# 10G SFP+ Direct Attach Passive Copper Cables

## FWB-E10xxxxxC

### Features

- Support for multi-gigabit data rates up to 10 Gb/s
- Data rates backward compatible to 1 Gb/s
- Hot-pluggable SFP 20PIN footprint
- Improved Pluggable Form Factor(IPF) compliant for enhanced EMI/EMC performance
- Compatible to SFP+ MSA
- Compatible to SFF-8431,SFF-8432
- Temperature Range: 0~ 70°C
- RoHS Compatible



### Applications

- 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

### Product Description

The SFP+ passive cable assemblies are high performance, cost effective I/O solutions for 10G Ethernet and 10G Fiber Channel applications. SFP+ copper modules allow hardware manufactures to achieve high port density, configurability and utilization at a very low cost and reduced power budget. The high speed cable assemblies meet and exceed Gigabit Ethernet and Fiber Channel industry standard requirements for performance and reliability.

### Recommended Operating Conditions

| Parameter                            | Symbol | Min | Typical | Max | Unit |
|--------------------------------------|--------|-----|---------|-----|------|
| Storage Ambient Temperature          |        | -40 |         | +85 | °C   |
| Operating Case Temperature           | Tc     | 0   |         | +70 | °C   |
| Relative Humidity (non-condensation) | RS     | -   |         | 85  | %    |
| Mating Force                         |        |     |         | 50  | N    |
| Un-mating Force                      |        |     |         | 25  | N    |



### Systems

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

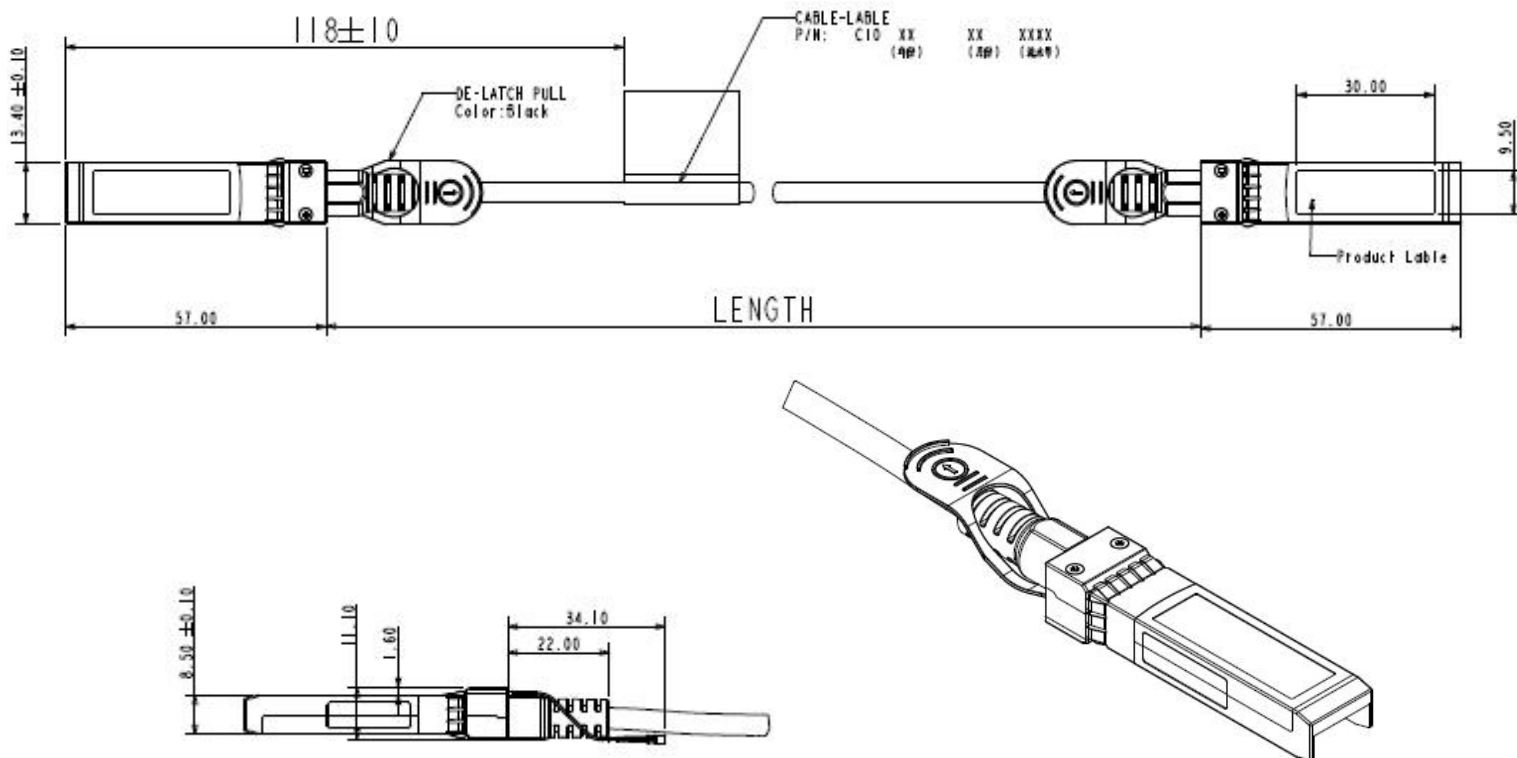
### Pin Descriptions

| 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      | Tow Wire Serial Data            |       |
| 5   | LV-TTL-I   | SCL      | Tow 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     | Reciever Ground                 |       |
| 11  |            | VeeR     | Reciever Ground                 |       |
| 12  | CML-O      | RD-      | Reciever Data Inverted          |       |
| 13  | CML-O      | RD+      | Reciever Data Non-Inverted      |       |
| 14  |            | VeeR     | Reciever Ground                 |       |
| 15  |            | VccR     | Reciever 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              |       |

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 Dimensions**



**Ordering information**

Note: You can be customized diameter and distance.

| Part Number      | FWB-E10xxxxxC |    |    |    |    |    |    |
|------------------|---------------|----|----|----|----|----|----|
| Length (meter)   | 1             | 2  | 3  | 4  | 5  | 6  | 7  |
| Wire gauge (AWG) | 30            | 30 | 30 | 24 | 24 | 24 | 24 |

**Important Notice**

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