# 800G OSFP to 4x200G OSFP RHS breakout Direct Attach Cable

## P/N: FWU4U-800xxxxxC

### Features

- ✓ Hot-plug OSFP CTHS and OSFP RHS form factor
- ✓ Support 8x 50/100Gb/s PAM4 modulation
- ✓ Commercial case temperature range of 0°C to 70°C
- ✓ 26 AWG ~30 AWG support up to 2m length above
- ✓ Contain EEPROM & programmable to customized

### Applications

- ✓ Data storage and communication industry
- ✓ Switch / Router / HBA/NIC
- ✓ Enterprise network
- ✓ Data Center Network
- ✓ Infiniband

### STANDARDS COMPLIANCE

- ✓ IEEE P802.3ck D3.0
- ✓ OSFP MSA HW Rev 4.1
- ✓ ROHS

### Description

FIBERSTAMP's 800G OSFP to 4x200G OSFP cable assembly splitter is effective alternative to fiber optics. The cable connects data signals from each of the 16 pairs on the single OSFP end to the quad OSFP RHS ends, each pair operates at data rates of up to 100Gb/s, each OSFP/OSFP RHS port can be addressed by EEPROM to provide product information, which can be read or write by I2C interface.

FIBERSTAMP's FWU4U-800xxxxxC cable assembly splitter is compliant with the OSFP-MSA and IEEE 802.3ck, it's a high performance, lowest-cost &latency &power consumption I/O solutions for LAN, HPC and SAN. The high speed cable assemblies meet and exceed 800 Gigabit Ethernet, InfiniBand EDR /HDR/NDR and temperature requirements for performance and reliability.

The height of OSFP CTHS (Close Top Heat Sink) is fully compliant with OSFP finned top, OSFP RHS(Riding Heat Sink) also can be called flat top, it's a little bit lower than OSFP CTHS.

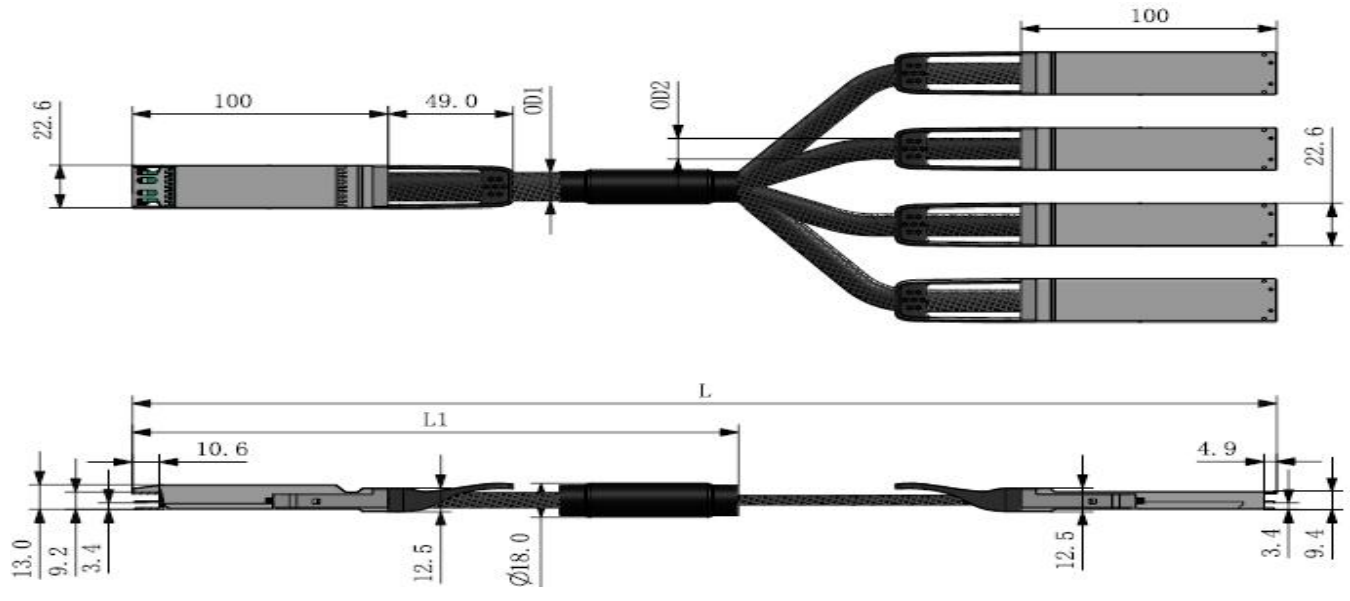
### Absolute Maximum Ratings

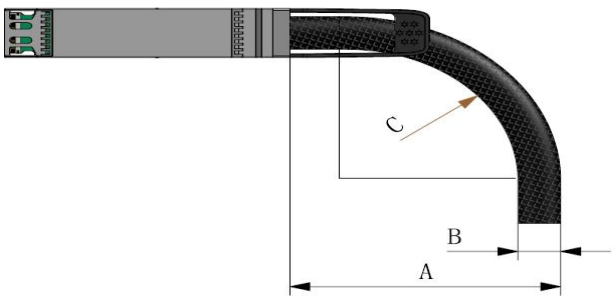
| Parameter | Symbol | Min | Max | Unit |
|---|---|---|---|---|
| Storage Temperature | $T_s$ | -20 | 85 | °C |
| Case Operating Temperature | $T_c$ | 0 | 70 | °C |
| Humidity (non-condensing) | Rh | 5 | 95 | % |

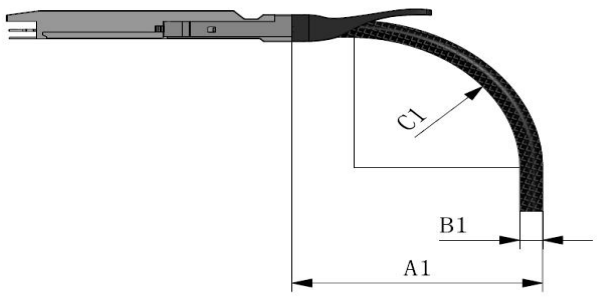
### Recommended Operating Conditions

| Parameter | Symbol | Min | Typical | Max | Unit |
|---|---|---|---|---|---|
| Operating Case Temperature | $T_c$ | 0 | | 70 | °C |
| Baud Rate per Lane (PAM4) | fd | | 53.125 | | GBaud/s |
| Humidity | Rh | 5 | | 85 | % |

## Mechanical Dimensions



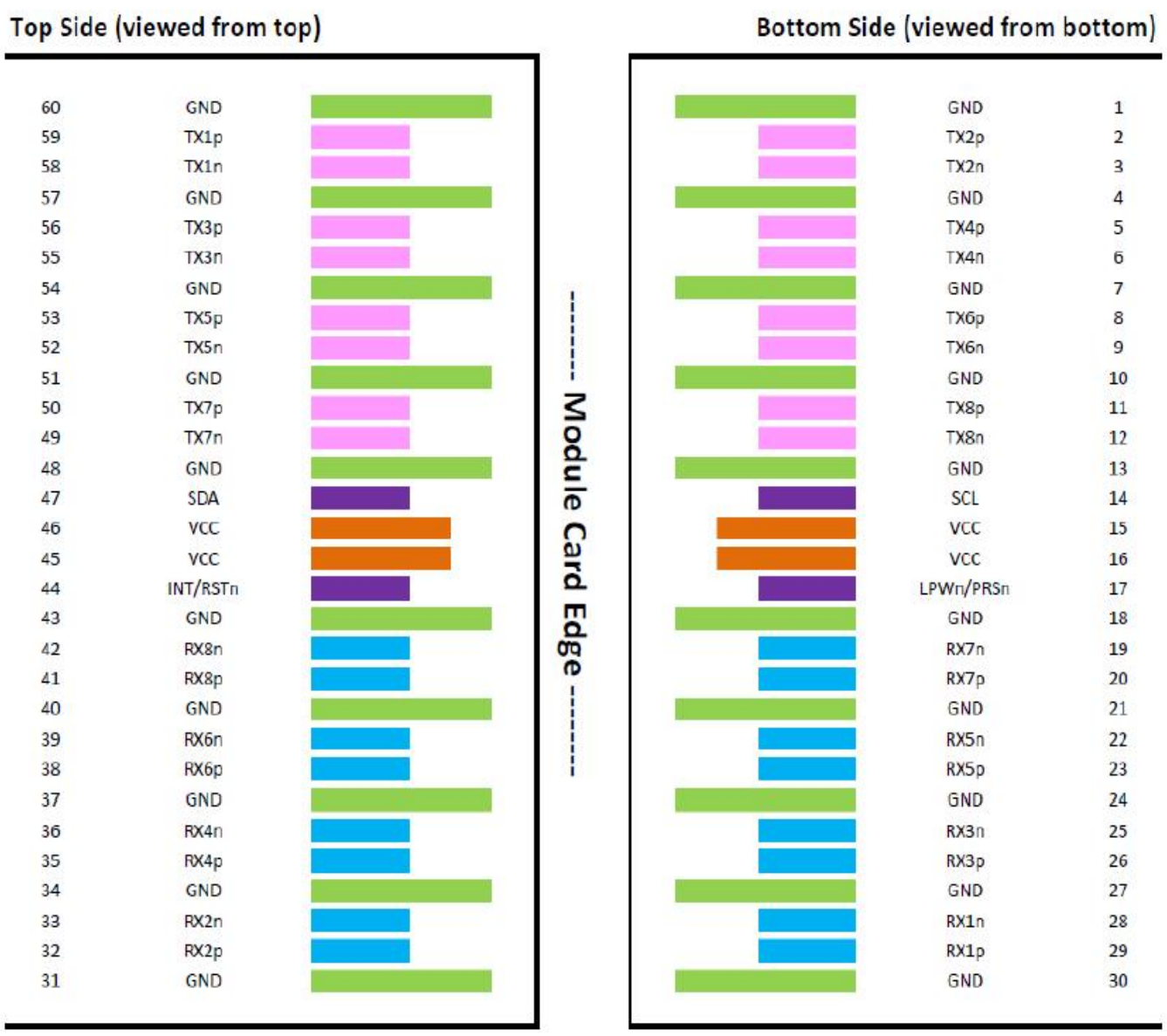




| OSFP Horizontal Direction | | | |
|---|---|---|---|
| CABLE GUAGE | DIAMETER"B" | MIN BEND RADIUS"C" | MIN BEND RADIUS"A" |
| 26AWG | 11MM | 55MM | 65MM |

| OSFP RHS Vertical Direction | | | |
|---|---|---|---|
| CABLE GUAGE | DIAMETER"B1" | MIN BEND RADIUS"C1" | MIN BEND RADIUS"A1" |
| 26AWG | 8MM | 40MM | 50MM |

## OSFP Electrical pinout




## Electrical pin list and description

| Pin# | Symbol | Description | Logic | Direction | Plug Sequence | Notes |
|---|---|---|---|---|---|---|
| 1 | GND | Ground | | | 1 | |
| 2 | TX2p | Transmitter Data Non-Inverted | CML-I | Input from Host | 3 | |
| 3 | TX2n | Transmitter Data Inverted | CML-I | Input from Host | 3 | |
| 4 | GND | Ground | | | 1 | |
| 5 | TX4p | Transmitter Data Non-Inverted | CML-I | Input from Host | 3 | |
| 6 | TX4n | Transmitter Data Inverted | CML-I | Input from Host | 3 | |
| 7 | GND | Ground | | | 1 | |
| 8 | TX6p | Transmitter Data Non-Inverted | CML-I | Input from Host | 3 | |
| 9 | TX6n | Transmitter Data Inverted | CML-I | Input from Host | 3 | |
| 10 | GND | Ground | | | 1 | |
| 11 | TX8p | Transmitter Data Non-Inverted | CML-I | Input from Host | 3 | |
| 12 | TX8n | Transmitter Data Inverted | CML-I | Input from Host | 3 | |
| 13 | GND | Ground | | | 1 | |
| 14 | SCL | 2-wire Serial interface clock | LVCMOS-I/O | Bi-directional | 3 | Open-Drain with pull-up resistor on Host |
| 15 | VCC | +3.3V Power | | Power from Host | 2 | |
| 16 | VCC | +3.3V Power | | Power from Host | 2 | |
| 17 | LPWn/PRSn | Low-Power Mode / Module Present | Multi-Level | Bi-directional | 3 | See pin description for required circuit |
| 18 | GND | Ground | | | 1 | |
| 19 | RX7n | Receiver Data Inverted | CML-O | Output to Host | 3 | |
| 20 | RX7p | Receiver Data Non-Inverted | CML-O | Output to Host | 3 | |
| 21 | GND | Ground | | | 1 | |
| 22 | RX5n | Receiver Data Inverted | CML-O | Output to Host | 3 | |
| 23 | RX5p | Receiver Data Non-Inverted | CML-O | Output to Host | 3 | |
| 24 | GND | Ground | | | 1 | |
| 25 | RX3n | Receiver Data Inverted | CML-O | Output to Host | 3 | |
| 26 | RX3p | Receiver Data Non-Inverted | CML-O | Output to Host | 3 | |
| 27 | GND | Ground | | | 1 | |
| 28 | RX1n | Receiver Data Inverted | CML-O | Output to Host | 3 | |
| 29 | RX1p | Receiver Data Non-Inverted | CML-O | Output to Host | 3 | |
| 30 | GND | Ground | | | 1 | |
| 31 | GND | Ground | | | 1 | |
| 32 | RX2p | Receiver Data Non-Inverted | CML-O | Output to Host | 3 | |

| Pin# | Symbol | Description | Logic | Direction | Plug Sequence | Notes |
|---|---|---|---|---|---|---|
| 33 | RX2n | Receiver Data Inverted | CML-O | Output to Host | 3 | |
| 34 | GND | Ground | | | 1 | |
| 35 | RX4p | Receiver Data Non-Inverted | CML-O | Output to Host | 3 | |
| 36 | RX4n | Receiver Data Inverted | CML-O | Output to Host | 3 | |
| 37 | GND | Ground | | | 1 | |
| 38 | RX6p | Receiver Data Non-Inverted | CML-O | Output to Host | 3 | |
| 39 | RX6n | Receiver Data Inverted | CML-O | Output to Host | 3 | |
| 40 | GND | Ground | | | 1 | |
| 41 | RX8p | Receiver Data Non-Inverted | CML-O | Output to Host | 3 | |
| 42 | RX8n | Receiver Data Inverted | CML-O | Output to Host | 3 | |
| 43 | GND | Ground | | | 1 | |
| 44 | INT/RSTn | Module Interrupt / Module Reset | Multi-Level | Bi-directional | 3 | See pin description for required circuit |
| 45 | VCC | +3.3V Power | | Power from Host | 2 | |
| 46 | VCC | +3.3V Power | | Power from Host | 2 | |
| 47 | SDA | 2-wire Serial interface data | LVCMOS-I/O | Bi-directional | 3 | Open-Drain with pull-up resistor on Host |
| 48 | GND | Ground | | | 1 | |
| 49 | TX7n | Transmitter Data Inverted | CML-I | Input from Host | 3 | |
| 50 | TX7p | Transmitter Data Non-Inverted | CML-I | Input from Host | 3 | |
| 51 | GND | Ground | | | 1 | |
| 52 | TX5n | Transmitter Data Inverted | CML-I | Input from Host | 3 | |
| 53 | TX5p | Transmitter Data Non-Inverted | CML-I | Input from Host | 3 | |
| 54 | GND | Ground | | | 1 | |
| 55 | TX3n | Transmitter Data Inverted | CML-I | Input from Host | 3 | |
| 56 | TX3p | Transmitter Data Non-Inverted | CML-I | Input from Host | 3 | |
| 57 | GND | Ground | | | 1 | |
| 58 | TX1n | Transmitter Data Inverted | CML-I | Input from Host | 3 | |
| 59 | TX1p | Transmitter Data Non-Inverted | CML-I | Input from Host | 3 | |
| 60 | GND | Ground | | | 1 | |

**Ordering information**

| Part Number | GQD-PC801-XXXC | | |
|---|---|---|---|
| Length (meter) | 0.5 | 1 | 2 |
| Wire gauge (AWG) | 30 | 30 | 26 |

If length(meter) is decimal, PN should be as GOS-4OP801-DXXC,above 2m reach also can be customized.

**Important Notice**

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**Revision History**

| Revision | Date | Description |
|---|---|---|
| V0 | Jun-21-2024 | Advance Release. |