



# SyRotech Optical Transceiver



# **GOXP-CAB-10G SFP-PXM**

10G SFP+ to 10G SFP+ Direct Attach Passive Copper Cables

Description:

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## Datasheet



#### Overview:

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

#### Features:

- · Support for multi-gigabit data rates up to10Gb/s
- Data rates backward compatible to 1Gb/s
- Hot-pluggable SFP 20PIN footprint
- Improved Pluggable Form Factor(IPF) compliant for enhanced EMI/EMC performance
- Low Power Consumption < 0.2W
- Power Supply: +3.3V
- Compatible to SFP+ MSA
- Compatible to SFF-8431, SFF8432
- Temperature Range: 0~ 70°C
- RoHS Compatible

#### Applications:

- High Passive 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

#### **Recommended Operating Conditions:**

| Parameter                   | Symbol | Min  | Typical | Max  | Unit |
|-----------------------------|--------|------|---------|------|------|
| Storage Ambient Temperature |        | -40  |         | +85  | °C   |
| Operating Case Temperature  | Тс     | 0    |         | +70  | °C   |
| Power Supply Voltage        | Vcc3   | 3.14 | 3.3     | 3.47 | V    |
| Power Dissipation           | PD     |      |         | 0.2  | W    |

#### **Recommended Operating Conditions:**

| Performance                        | Media                             | Operating parameters       |
|------------------------------------|-----------------------------------|----------------------------|
| 10.5Gpbs line speed, full duplex   | Hot-pluggable, industry-standard  | Supply voltage: 3.3V Power |
| Bit error rate: better than 10E-12 | Small Form-Factor Pluggable       | consumption (per end):     |
|                                    | (SFP+) copper cable, available as | max 0.2W                   |
|                                    | 1m,3m or 5m                       |                            |



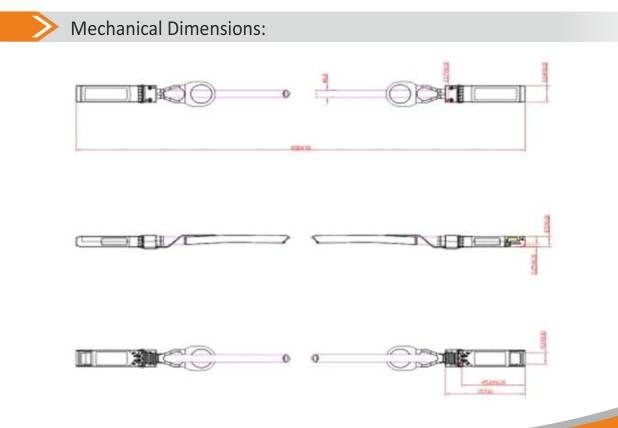
## Datasheet

### 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              |       |

Signals not supported in SFP+ Copper pulled-down to VeeT with 30K ohms resistor Passive cable assemblies do not support LOS and TX\_DIS •

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### Ordering information:

| Part Number     | GOXP-CAB-10GSFP-PXM |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----------------|---------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Length (meter)  | 1                   | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 |
| Wire gauge(AWG) | 30                  | 30 | 30 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |

#### **Regulatory Compliance:**

| Feature                            | Reference                 | Performance               |
|------------------------------------|---------------------------|---------------------------|
| Electrostatic discharge(ESD)       | IEC/EN 61000-4-2          | Compatible with standards |
| Electromagnetic Interference (EMI) | FCC Part 15 Class B       | Compatible with standards |
|                                    | EN 55022 Class B          |                           |
|                                    | (CISPR 22A)               |                           |
| Laser Eye Safety                   | FDA 21CFR 1040.10,        | Class 1 laser product     |
|                                    | 1040.11 IEC/EN 60825-1, 2 |                           |
| Component Recognition              | IEC/EN 60950, UL          | Compatible with standards |
| ROHS                               | 2002/95/EC                | Compatible with standards |
| EMC                                | EN61000-3                 | Compatible with standards |

