

**The Reflex Photonics 100Gbps / OTU4
CFP Gen II Transceiver Module**



CP-X12-C11801-02

Product Summary

The CFP Gen II full-duplex modules offer 10 independent transmit and receive channels, each capable of up to 11.2 Gbps operation per lane for an aggregate bandwidth of up to 11.2 Gbps over 100 meters of OM3 optical fiber. Designed for 100 Gbps Ethernet applications, the Reflex Photonics CFP Gen II module has a single MPO port which connects to an industry standard 2 x12 multi-mode fiber cable.

The Reflex CFP Gen II transceiver incorporates CDR re-timers on all TX and RX channels for additional electrical signal robustness.

The CFP Gen II modules integrate LightABLE™ packaging technology. The modules offer very high functionality and feature integration, accessible via an MDIO interface.

Applications

- Data center aggregation and core router links
- Test equipment

Specification and Feature Highlights

- CFP MSA compliant
- Compliant to IEEE 802.3ba specification for 100GBASE-SR10 links
- MDIO digital diagnostic and control capabilities
- Compliant to CFP MSA Management Interface Specification, Draft 1.4.
- Aggregate Bandwidth of >100 Gbps
- 10 Independent full-duplex channels
- TX input and RX output CDR re-timing
- Up to 11.2 Gbps per channel bandwidth, supports OTU4

- Independent channel re-timing
- CXP inter-operable
- Next Generation, LightABLE™ VCSEL/PD array optical sub-assembly technology
- Single +3.3V power supply through 148 pin electrical connector
- Power class 1 (< 8W max)
- CML compatible electrical I/O
- Capable of over 100 m transmission on high bandwidth 50µm multi-mode OM3 ribbon fiber
- Available also as single 40 Gbps and dual 40 Gbps versions of CFP (see PN table)
- Angle housing front face version available

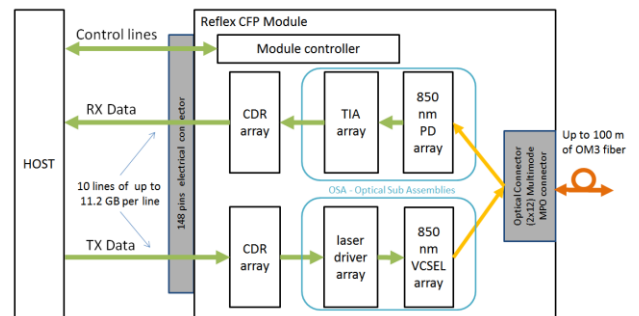
CFP Gen II Improvement Highlights

- In-Rush current suppression improved
- Low power mode supported (< 300 mW)
- Lane-by-lane received power monitoring
- Loss of Lock (LOL) supported
- Electrical Signal Pre/De-emphasis supported (as per MSA specification)
- Network Lane BOL Measurement Registers supported(*)
- MDIO Password feature(*)
- Nickel-plated housing
- (*) see data spec for details

Additional CFP Gen II Features

- CDR disable function
- Squelch disable/enable function
- Extended version of emphasis control
- Under Voltage Protection / Over Voltage Protection (UVP/OVP) feature
- Additional Optical Sub- Assembly (OSA) temperature monitoring

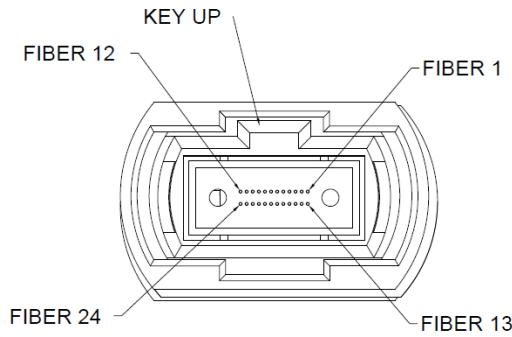
Functional Diagram



Functional Diagram of CFP Gen II

Optical Interface Lanes

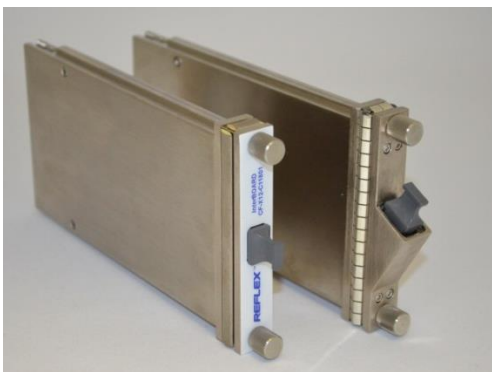
The figure and table below show the orientation of the multi-mode fiber facets of the optical connector and the lane assignment respectively.



Outside view of the CFP Gen II module MPO receptacle

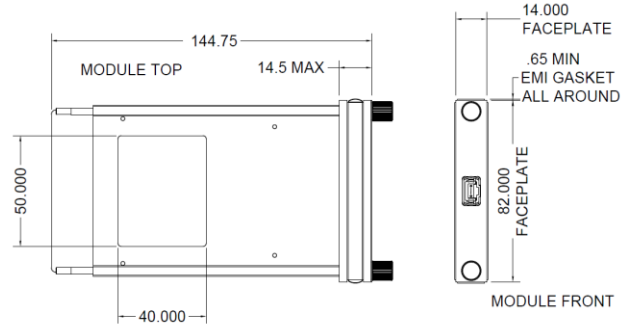
| Fiber # | Lane Assignment | Fiber # | Lane Assignment |
|---------|-----------------|---------|-----------------|
| 1 | Unused | 13 | Unused |
| 2 | RX0 | 14 | TX0 |
| 3 | RX1 | 15 | TX1 |
| 4 | RX2 | 16 | TX2 |
| 5 | RX3 | 17 | TX3 |
| 6 | RX4 | 18 | TX4 |
| 7 | RX5 | 19 | TX5 |
| 8 | RX6 | 20 | TX6 |
| 9 | RX7 | 21 | TX7 |
| 10 | RX8 | 22 | TX8 |
| 11 | RX9 | 23 | TX9 |
| 12 | Unused | 24 | Unused |

Note: table valid for 100G modules

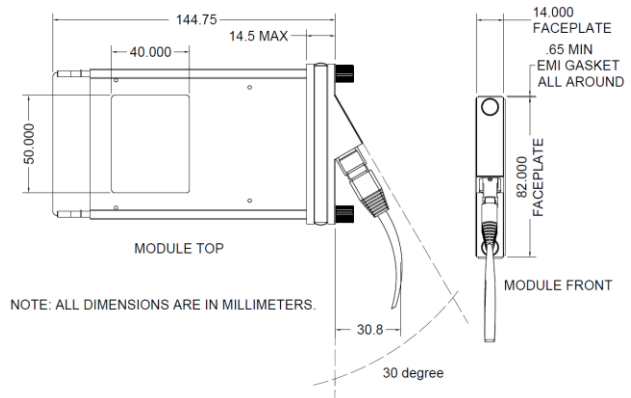


For more information on this or other products:
 Contact sales at
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 or by email at sales@reflexphotonics.com

Mechanical



NOTE: ALL DIMENSIONS ARE IN MILLIMETERS.



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CFP Gen II modules dimensions

Ordering Information:

| Part Number | Description |
|------------------|---|
| CP-X12-C11801-02 | 100G Ethernet, CFP Gen II Fiber Optic Transceiver Module (100 Gbps, 10.3 Gbps per channel/RX and TX). |
| CP-X12-C11901-02 | 100G / OTU4, CFP Gen II Fiber Optic Transceiver Module (100 Gbps, 10.3 and 11.2 Gbps per channel/RX and TX). |
| CP-X08-C11801-02 | Dual 40G Ethernet, CFP Gen II Fiber Optic Transceiver Module (Dual 40 Gbps, 10.3 Gbps per channel/RX and TX). |
| CP-X08-C11901-02 | Dual 40G / OTU3, CFP Gen II Fiber Optic Transceiver Module (Dual 40 Gbps, 10.3 and 11.2 Gbps per channel/RX and TX). |
| CP-X04-C11801-02 | Single 40G Ethernet, CFP Gen II Fiber Optic Transceiver Module (40 Gbps, 10.3 Gbps per channel/RX and TX). |
| CP-X04-C11901-02 | Single 40G / OTU3, CFP Gen II Fiber Optic Transceiver Module (40 Gbps, 10.3 and 11.2 Gbps per channel/RX and TX). |

Note: For list of all part numbers see product data sheet.