

Fiber Optic Transceiver, XFP, 1310nm, LR SMF  
10km 10G/2km OC-192 DDM, MSA



## FXC-XFP-LR10G-MSA

### Features

- Operating Data Rate up to 11.30 Gbps
- Distance Range 10KM
- Single 3.3V Power Supply and TTL Logic Interface
- Pluggable XFP Duplex LC Connector
- Standard and Industrial Operating Temperature
- Compliant with MSA XFP Specification

### Applications

- Telecom (Service Provider)
- Datacom
- Enterprise Networks
- Government
- Fiber to the home/business

### Description

The L-com FXC-XFP-LR10G-MSA is an XFP form-factor transceiver, supporting 10G Ethernet/OC-192 data rates. The L-com FXC-XFP-LR10G-MSA supports 10KM distance and it is MSA compliant transceiver. The L-com FXC-XFP-LR10G-MSA features digital diagnostics for performance monitoring of the transceiver. The L-com FXC-XFP-LR10G-MSA is one of thousands of fiber optic connectivity products available from L-com in-stock and ready to ship. Contact our knowledgeable technical support and sales staff for your answers on fiber optic connectivity or other L-com products.

### Configuration

|                            |             |
|----------------------------|-------------|
| Data Rate                  | 10 Gbps     |
| Form Factor                | XFP         |
| Connector                  | LC          |
| Connector Mode             | Duplex      |
| Mode                       | Single Mode |
| Distance                   | 10 km       |
| Mfg Platform Compatibility | MSA         |

### Electrical Specifications

| Description              | Minimum | Typical | Maximum | Units |
|--------------------------|---------|---------|---------|-------|
| Wattage                  |         |         | 2.5     | W     |
| Power Supply Voltage Vcc | 3.13    | 3.3     | 3.45    | V     |
| Power Supply Current Icc |         |         | 720     | mA    |

### Optical Specifications

| Description             | Minimum | Typical | Maximum | Units |
|-------------------------|---------|---------|---------|-------|
| TX Center Wavelength    | 1290    | 1310    | 1330    | nm    |
| TX Data Rate            | 9.6     |         | 11.3    | Gbps  |
| TX Spectral Width       |         |         | 1       | nm    |
| TX Average Output Power | -6      |         | 0       | dBm   |
| TX Extinction Ratio     | 6       |         |         | dB    |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications:  
[Fiber Optic Transceiver, XFP, 1310nm, LR SMF 10km 10G/2km OC-192 DDM, MSA FXC-XFP-LR10G-MSA](#)

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## FXC-XFP-LR10G-MSA

|                         |       |      |     |
|-------------------------|-------|------|-----|
| RX Center Wavelength    | 1270  | 1600 | nm  |
| RX Receiver Sensitivity | -14.5 |      | dBm |
| RX Receiver Overload    |       | 0.5  | dBm |

### Environmental Specifications

#### Temperature

Operating Range

0 to +70 deg C

Storage Range

-40 to +85 deg C

Notes:

**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

Notes:

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## FXC-XFP-LR10G-MSA

**Table 1 Module Electrical Pin Definition**

| Pin                                                                                                                                | Logic     | Symbol     | Name/Description                                                                                                                                                                                                                                                                                  | Note |
|------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 1                                                                                                                                  |           | GND        | Module Ground                                                                                                                                                                                                                                                                                     | 1    |
| 2                                                                                                                                  |           | VEE5       | Optional -5.2V Power Supply                                                                                                                                                                                                                                                                       |      |
| 3                                                                                                                                  | LVTTL-I   | Mod_DeSel  | Module De-select; When held low allows module to respond to 2-wire serial interface                                                                                                                                                                                                               |      |
| 4                                                                                                                                  | LVTTL-O   | Interrupt  | Interrupt; Indicates presence of an important condition which can be read over the 2-wire serial interface                                                                                                                                                                                        | 2    |
| 5                                                                                                                                  | LVTTL-I   | TX_DIS     | Transmitter Disable; Turns off transmitter laser output                                                                                                                                                                                                                                           |      |
| 6                                                                                                                                  |           | VCC5       | +5V Power Supply                                                                                                                                                                                                                                                                                  |      |
| 7                                                                                                                                  |           | GND        | Module Ground                                                                                                                                                                                                                                                                                     | 1    |
| 8                                                                                                                                  |           | VCC3       | +3.3V Power Supply                                                                                                                                                                                                                                                                                |      |
| 9                                                                                                                                  |           | VCC3       | +3.3V Power Supply                                                                                                                                                                                                                                                                                |      |
| 10                                                                                                                                 | LVTTL-I/O | SCL        | 2-Wire Serial Interface Clock                                                                                                                                                                                                                                                                     | 2    |
| 11                                                                                                                                 | LVTTL-I/O | SDA        | 2-Wire Serial Interface Data Line                                                                                                                                                                                                                                                                 | 2    |
| 12                                                                                                                                 | LVTTL-O   | Mod_Abs    | Indicates Module is not present. Grounded in the Module                                                                                                                                                                                                                                           | 2    |
| 13                                                                                                                                 | LVTTL-O   | Mod_NR     | Module Not Ready; Indicating Module Operational Fault                                                                                                                                                                                                                                             | 2    |
| 14                                                                                                                                 | LVTTL-O   | RX_LOS     | Receiver Loss Of Signal Indicator                                                                                                                                                                                                                                                                 | 2    |
| 15                                                                                                                                 |           | GND        | Module Ground                                                                                                                                                                                                                                                                                     | 1    |
| 16                                                                                                                                 |           | GND        | Module Ground                                                                                                                                                                                                                                                                                     | 1    |
| 17                                                                                                                                 | CML-O     | RD-        | Receiver Inverted Data Output                                                                                                                                                                                                                                                                     |      |
| 18                                                                                                                                 | CML-O     | RD+        | Receiver Non-Inverted Data Output                                                                                                                                                                                                                                                                 |      |
| 19                                                                                                                                 |           | GND        | Module Ground                                                                                                                                                                                                                                                                                     | 1    |
| 20                                                                                                                                 |           | VCC2       | +1.8V Power Supply                                                                                                                                                                                                                                                                                | 3    |
| 21                                                                                                                                 | LVTTL-I   | P_Down/RST | Power down; When high, requires the module to limit power consumption to 1.5W or below. 2-Wire serial interface must be functional in the low power mode.<br>Reset; The falling edge initiates a complete reset of the module including the 2-wire serial interface, equivalent to a power cycle. |      |
| 22                                                                                                                                 |           | VCC2       | +1.8V Power Supply                                                                                                                                                                                                                                                                                | 3    |
| 23                                                                                                                                 |           | GND        | Module Ground                                                                                                                                                                                                                                                                                     | 1    |
| 24                                                                                                                                 | PECL-I    | RefCLK+    | Reference Clock Non-Inverted Input, AC coupled on the host board                                                                                                                                                                                                                                  |      |
| 25                                                                                                                                 | PECL-I    | RefCLK-    | Reference Clock Inverted Input, AC coupled on the host board                                                                                                                                                                                                                                      |      |
| 26                                                                                                                                 |           | GND        | Module Ground                                                                                                                                                                                                                                                                                     | 1    |
| 27                                                                                                                                 |           | GND        | Module Ground                                                                                                                                                                                                                                                                                     | 1    |
| 28                                                                                                                                 | CML-I     | TD-        | Transmitter Inverted Data Input                                                                                                                                                                                                                                                                   |      |
| 29                                                                                                                                 | CML-I     | TD+        | Transmitter Non-Inverted Data Input                                                                                                                                                                                                                                                               |      |
| 30                                                                                                                                 |           | GND        | Module Ground                                                                                                                                                                                                                                                                                     | 1    |
| 1. Module ground pins Gnd are isolated from the module case and chassis ground within the modul                                    |           |            |                                                                                                                                                                                                                                                                                                   |      |
| 2. Shall be pulled up with 4.7K-1 ohms to a voltage between 3.15V and 3.45V on the host board.                                     |           |            |                                                                                                                                                                                                                                                                                                   |      |
| 3. The 1.8 V wer supply can be optionally programmed to voltages lower than 1.8 V in modules supporting the variable power supply. |           |            |                                                                                                                                                                                                                                                                                                   |      |

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## FXC-XFP-LR10G-MSA

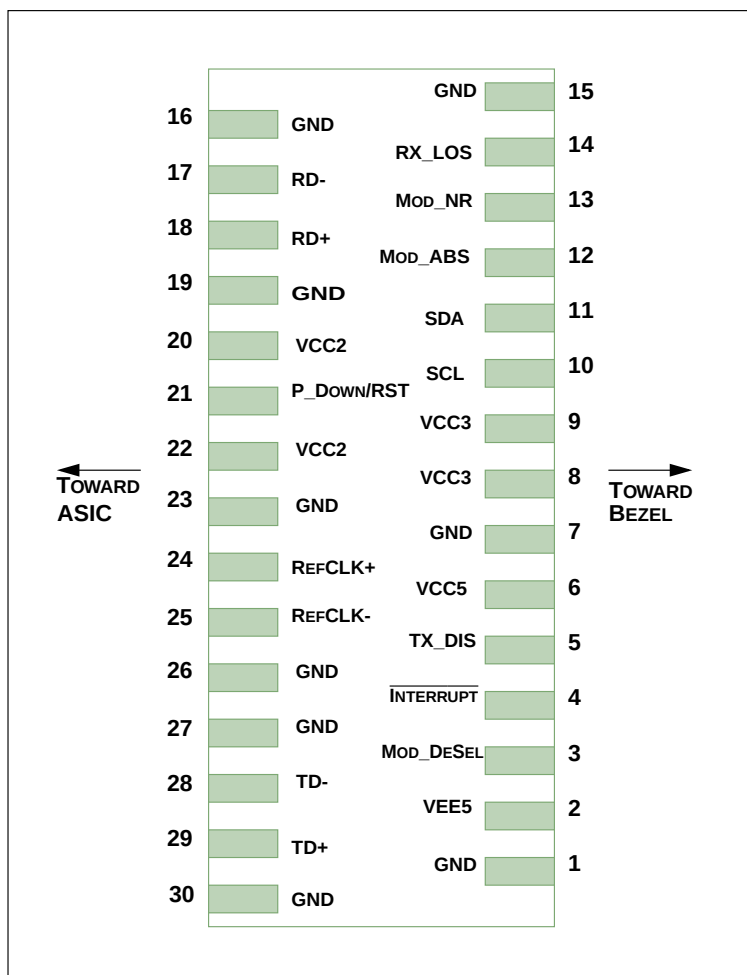


Figure 1 Host PCB XFP Pinout Top View

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Fiber Optic Transceiver, XFP, 1310nm, LR SMF 10km 10G/2km OC-192 DDM, MSA from L-com has same day shipment for domestic and International orders. Our portfolio includes coaxial cable assemblies, connectors, adapters and custom products as well as lightning and surge protectors, NEMA rated enclosures, and an RF product line which includes antennas, amplifiers, passive, and active components.

The information contained within this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part in order to implement improvements. L-com reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. L-com does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and L-com does not assume liability arising out of the use of any part or document.

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