

Fiber Optic Transceiver Series, XFP, CWDM,  
40 km, 10G DDM, MSA Compatible



## FXC-XFPCxx-ER10G-MSA

### Features

- Operating Data Rates up to 11.1 Gbps
- Distance Range 40KM
- Pluggable XFP Duplex LC Connectors
- Standard and Industrial Operating Temperatures
- Compliant with MSA Specification

### Applications

- Telecom (Service Providers)
- Datacom
- Enterprise Networks
- Government
- Fiber to the Home / Business

### Description

The L-com FXC-XFPCxx-ER10G-MSA is the highest quality XFP transceiver series in the industry that delivers a dependable 10G data rate at operating wavelengths from 1470 to 1610 nm. This XFP CWDM transceiver series has been designed, programmed and tested to be 100% compliant with the MSA system level specifications. The L-com FXC-XFPCxx-ER10G-MSA series supports a distance up to 40 km to meet current and future networking requirements. The L-com FXC-XFPCxx-ER10G-MSA series features digital diagnostics for performance monitoring of the transceiver. The L-com FXC-XFPCxx-ER10G-MSA series is one of thousands of fiber optic connectivity products available from L-com's in-stock inventory and ready to ship. Contact our knowledgeable technical support and sales staff with your questions on fiber optic connectivity or other L-com products.

### Configuration

|                            |             |
|----------------------------|-------------|
| Data Rate                  | 11.1 Gbps   |
| Form Factor                | XFP         |
| Connector                  | LC          |
| Connector Mode             | Duplex      |
| Mode                       | Single Mode |
| Distance                   | 40 km       |
| Mfg Platform Compatibility | MSA         |

### Electrical Specifications

| Description                 | Minimum | Typical | Maximum | Units |
|-----------------------------|---------|---------|---------|-------|
| Power Supply Voltage (Vcc3) | 3.13    | 3.3     | 3.45    | V     |
| Power Supply Current (Icc3) |         |         | 300     | mA    |
| Module Total Power          |         |         | 3.5     | W     |
| Power Supply Voltage (Vcc5) | 4.75    | 5       | 5.25    | V     |
| Power Supply Current (Icc5) |         |         | 750     | mA    |

### Optical Specifications

| Description          | Minimum         | Typical     | Maximum           | Units |
|----------------------|-----------------|-------------|-------------------|-------|
| TX Center Wavelength | $\lambda_c - 6$ | $\lambda_c$ | $\lambda_c + 7.5$ | nm    |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications:  
[FXC-XFPCxx-ER10G-MSA](#)

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|                         |      |      |      |
|-------------------------|------|------|------|
| TX Data Rate            | 9.95 | 11.1 | Gbps |
| TX Average Output Power | -0.9 | 4    | dBm  |
| TX Extinction Ratio     | 8.2  |      | dB   |
| RX Center Wavelength    | 1260 | 1620 | nm   |
| RX Receiver Sensitivity |      | -15  | dBm  |

\*See table below

**Wavelength Channel No.**

| ITU Channel No. | Wavelength | Latch color by wavelength |
|-----------------|------------|---------------------------|
| (xx)            | nm         |                           |
| 47              | 1471       | Light Gray                |
| 49              | 1491       | Purple                    |
| 51              | 1511       | Dark Blue                 |
| 53              | 1531       | Green                     |
| 55              | 1551       | Yellow                    |
| 57              | 1571       | Orange                    |
| 59              | 1591       | Red                       |
| 61              | 1611       | Brown                     |

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### 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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**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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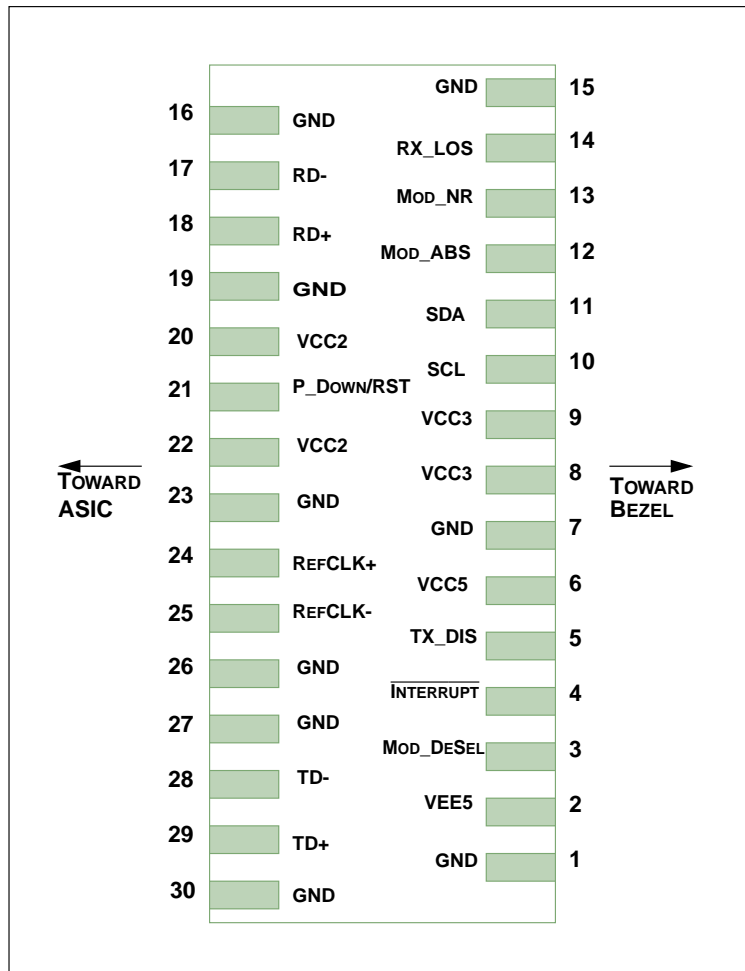


Figure 1 Host PCB XFP Pinout Top View

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Fiber Optic Transceiver Series, XFP, CWDM, 40 km, 10G DDM, MSA Compatible 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.

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L-com CAD Drawing

