

Fiber Optic Transceiver Series, SFP+, DWDM,
80 km, 10G DDM, Ekinops Compatible



FXC-SFPPDxxZR10G-EKS

Features

- Operating Data Rates up to 11.3 Gbps
- Distance Range 80 km
- Pluggable SFP+ Duplex LC Connectors
- Standard and Industrial Operating Temperatures
- Compliant with Ekinops Specification

Applications

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

Description

The L-com FXC-SFPPDxxZR10G-EKS is the highest quality SFP+ transceiver series in the industry that delivers a dependable 10G data rate at operating wavelengths from 1530.33 to 1561.42 nm. This SFP+ DWDM transceiver series has been designed, programmed and tested to be 100% compliant with the Ekinops system level specifications. The L-com FXC-SFPPDxxZR10G-EKS series supports a distance up to 80 km to meet current and future networking requirements. The L-com FXC-SFPPDxxZR10G-EKS series features digital diagnostics for performance monitoring of the transceiver. The L-com FXC-SFPPDxxZR10G-EKS 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 | 11.3 Gbps |
| Form Factor | SFP+ |
| Connector | LC |
| Connector Mode | Duplex |
| Mode | Single Mode |
| Distance | 80 km |
| Mfg Platform Compatibility | Ekinops |

Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|----------------------|---------|---------|---------|-------|
| Power Supply Voltage | 3.15 | 3.3 | 3.45 | V |
| Power Supply Current | | 300 | 435 | mA |
| Module Total Power | | | 1.5 | W |

Optical Specifications

| Description | Minimum | Typical | Maximum | Units |
|-------------------------|---------|---------|---------|-------|
| TX Center Wavelength | 1530 | | 1562 | nm |
| TX Data Rate | 0.614 | | 11.3 | Gbps |
| TX Average Output Power | 0 | | 5 | dBm |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications:
[FXC-SFPPDxxZR10G-EKS](#)

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| | | | |
|-------------------------|-----|-----|-----|
| TX Extinction Ratio | 3.5 | | dB |
| RX Receiver Sensitivity | | -23 | dBm |
| RX Receiver Overload | -8 | | dBm |

*See table below

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Wavelength Channel No.

| Channel | Frequency | Wavelength | | Channel | Frequency | Wavelength |
|---------|-----------|------------|--|---------|-----------|------------|
| xx | THz | nm | | xx | THz | nm |
| 20 | 192.0 | 1561.41 | | 40 | 194.0 | 1545.32 |
| 21 | 192.1 | 1560.61 | | 41 | 194.1 | 1544.53 |
| 22 | 192.2 | 1559.79 | | 42 | 194.2 | 1543.73 |
| 23 | 192.3 | 1558.98 | | 43 | 194.3 | 1542.94 |
| 24 | 192.4 | 1558.17 | | 44 | 194.4 | 1542.14 |
| 25 | 192.5 | 1557.36 | | 45 | 194.5 | 1541.35 |
| 26 | 192.6 | 1556.55 | | 46 | 194.6 | 1540.56 |
| 27 | 192.7 | 1555.75 | | 47 | 194.7 | 1539.77 |
| 28 | 192.8 | 1554.94 | | 48 | 194.8 | 1538.98 |
| 29 | 192.9 | 1554.13 | | 49 | 194.9 | 1538.19 |
| 30 | 193.0 | 1553.33 | | 50 | 195.0 | 1537.4 |
| 31 | 193.1 | 1552.52 | | 51 | 195.1 | 1536.61 |
| 32 | 193.2 | 1551.72 | | 52 | 195.2 | 1535.82 |
| 33 | 193.3 | 1550.92 | | 53 | 195.3 | 1535.04 |
| 34 | 193.4 | 1550.12 | | 54 | 195.4 | 1534.25 |
| 35 | 193.5 | 1549.32 | | 55 | 195.5 | 1533.47 |
| 36 | 193.6 | 1548.51 | | 56 | 195.6 | 1532.68 |
| 37 | 193.7 | 1547.72 | | 57 | 195.7 | 1531.9 |
| 38 | 193.8 | 1546.92 | | 58 | 195.8 | 1531.12 |
| 39 | 193.9 | 1546.12 | | 59 | 195.9 | 1530.33 |

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Environmental Specifications

Temperature

Operating Range

0 to +70 deg C

Storage Range

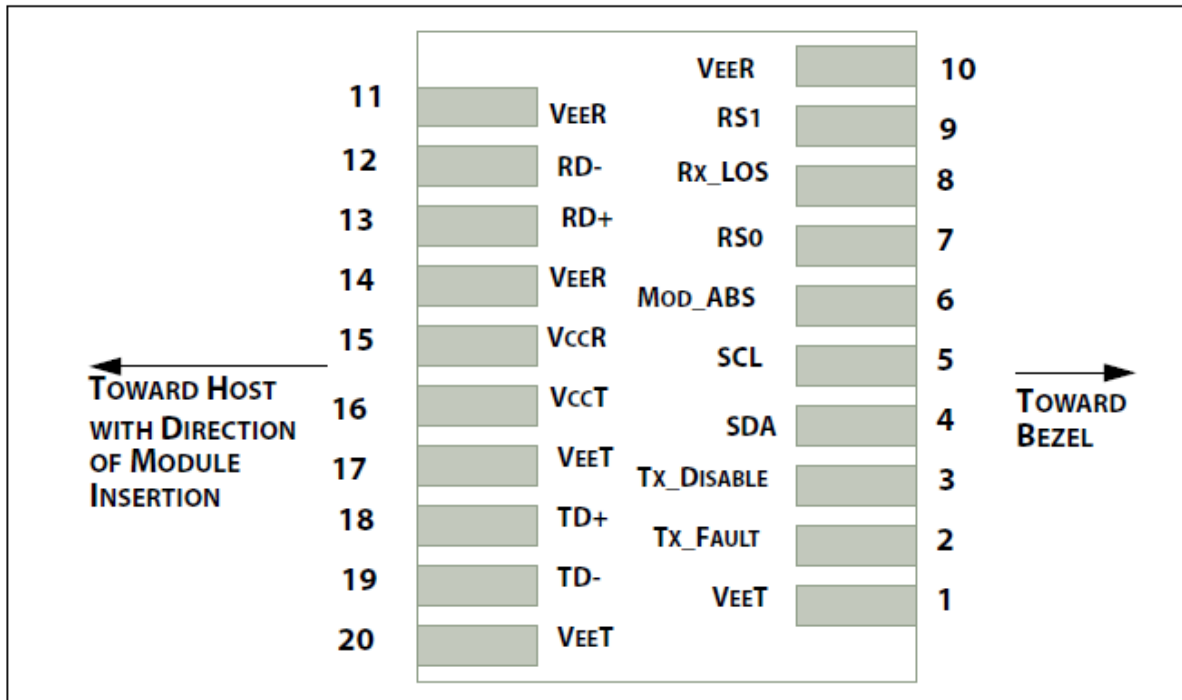
-40 to +85 deg C

Notes:

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

Plotted and Other Data

Notes:



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| Contacts | Logic ¹ | Symbol | Power Sequence Order | Name/Description | Note |
|----------|--------------------|------------|----------------------|---|------|
| case | | case | See 2 | Module case | |
| 1 | | VeeT | 1st | Module Transmitter Ground | 3 |
| 2 | LVTTTL-O | Tx_Fault | 3rd | Module Transmitter Fault | 4 |
| 3 | LVTTTL-I | Tx_Disable | 3rd | Transmitter Disable; Turns off transmitter laser output | 5 |
| 4 | LVTTTL-I/O | SDA | 3rd | 2-wire Serial Interface Data Line (Same as MOD-DEF2 in INF-8074i) | 6 |
| 5 | LVTTTL-I/O | SCL | 3rd | 2-wire Serial Interface Clock (Same as MOD-DEF1 in INF-8074i) | 6 |
| 6 | | Mod_ABS | 3rd | Module Absent, connected to VeeT or VeeR in the module | 7 |
| 7 | LVTTTL-I | RS0 | 3rd | Rate Select 0, optionally controls SFP+ module receiver. | 8 |
| 8 | LVTTTL-O | Rx_LOS | 3rd | Receiver Loss of Signal Indication (In FC designated as Rx_LOS and in Ethernet designated as Signal Detect) | 4 |
| 9 | LVTTTL-I | RS1 | 3rd | Rate Select 1, optionally controls SFP+ module transmitter | 8 |
| 10 | | VeeR | 1st | Module Receiver Ground | 3 |
| 11 | | VeeR | 1st | Module Receiver Ground | 3 |
| 12 | CML-O | RD- | 3rd | Receiver Inverted Data Output | |
| 13 | CML-O | RD+ | 3rd | Receiver Non-Inverted Data Output | |
| 14 | | VeeR | 1st | Module Receiver Ground | 3 |
| 15 | | VccR | 2nd | Module Receiver 3.3 V Supply | |
| 16 | | VccT | 2nd | Module Transmitter 3.3 V Supply | |
| 17 | | VeeT | 1st | Module Transmitter Ground | 3 |
| 18 | CML-I | TD+ | 3rd | Transmitter Non-Inverted Data Input | |
| 19 | CML-I | TD- | 3rd | Transmitter Inverted Data Input | |
| 20 | | VeeT | 1st | Module Transmitter Ground | 3 |

1. Labeling as inputs (I) and outputs (O) are from the perspective of the module
2. The case makes electrical contact to the cage before any of the board edge contacts are made.
3. The module signal ground contacts, VeeR and VeeT, should be isolated from the module case.
4. This contact is an open collector/drain output contact and shall be pulled up on the host see [2.4.1](#) and [2.4.6](#). Pull ups can be connected to one of several power supplies, however the host board design shall ensure that no module contact has voltage exceeding module VccT/R + 0.5 V.
5. Tx_Disable is an input contact with a 4.7 kΩ to 10 kΩ pullup to VccT inside the module.
6. See [4.2](#).
7. See [2.4.4](#).
8. For SFF-8431 rate select definition see section [2.4.3](#) and [2.5](#). (If implementing SFF-8079 contact 7 and 9 in SFF-8431 are used for AS0 and AS1 respectively).

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L-com CAD Drawing

