Fiber Optic Transceiver, SFP, BiDi, 1000Base DDM, Ciena Compatible

FXC-SFB-wwxx-1G-CAN

Features

- Operating Data Rates up to 1.25 Gbps
- Distance Range 10, 40, 60 & 80 km
- Pluggable Bi-Directional SFP Simplex LC Connectors
- Standard Temperature Range (available in Industrial Operating Temperatures)
- Compliant with Ciena system level specifications

Applications

- Telecommunication Service Providers
- Metro Ethernet
- OTN And Other Optical Links
- Transport Networks
- Enterprise Optical Networks
- Carrier Ethernet

Description

The L-com FXC-SFB-wwxx-1G-CAN is the highest quality Bi-Directional SFP transceiver series in the industry that delivers a dependable 1G Ethernet data rates. This SFP BiDi transceiver series has been designed, programmed and tested to be 100% compliant with the Ciena system level specifications. The L-com FXC-SFB-wwxx-1G-CAN series has different distances options of 10, 40, 60 & 80 km to meet current and future networking requirements. The L-com FXC-SFB-wwxx-1G-CAN series features digital diagnostics for performance monitoring of this BiDi transceiver. The L-com FXC-SFB-wwxx-1G-CAN series is one of thousands of fiber optic connectivity products available with in-stock inventory and ready to ship. Contact our technical support and sales staff with your questions on fiber optic connectivity or other L-com products.

Configuration

Data Rate	1 Gbps
Form Factor	SFP
Connector	LC
Connector Mode	Simplex
Mfg Platform Compatibility	Ciena

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Power Supply Voltage	3.15	3.3	3.45	V
Power Supply Current			300	mA

*See table below

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications:
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Optical Specifications

Base Part Number	Distance (km)	Wavelength pair designator (ww)	Transmitter center wavelength (nm)	Receiver center wavelength (nm)	Transmitter Output (min/max) dBm	Receiver Sensitivity (min) dBm
FXC-SFBww10-1G	10	34	1310	1490	-9/-3	-22
		43	1490	1310	-9/-3	-22
FXC-SFB-ww40-1G	40	34	1310	1490	-5/0	-24
		43	1490	1310	-5/0	-24
FXC-SFB-ww10-1G	10	35	1310	1550	-9/3	-21
		53	1550	1310	-9/3	-21
FXC-SFB-ww-40-1G	40	35	1310	1550	-3/2	-23
		53	1550	1310	-3/2	-23
FXC-SFB-ww-80-1G	80	45	1490	1550	-5/0	-24
		54	1550	1490	-5/0	-24

Size

Length	1.755 in [44.58 mm]
Weight	0.05 lbs [22.68 g]

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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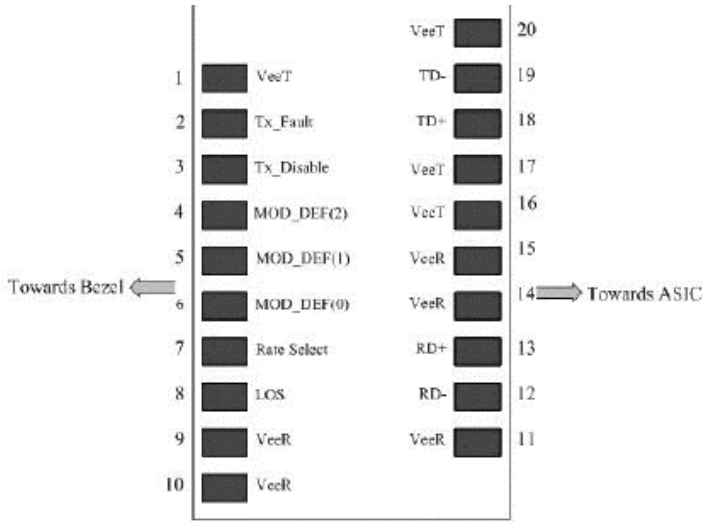

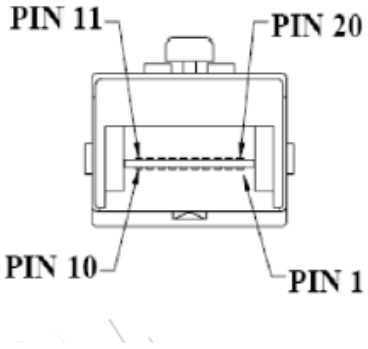

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Pin Function Definitions

Pin Num.	Name	FUNCTION	Plug Seq.	Notes
1	VeeT	Transmitter Ground	1	5)
2	TX Fault	Transmitter Fault Indication	3	1)
3	TX Disable	Transmitter Disable	3	2), Module disables on high or open
4	MOD-DEF2	Module Definition 2	3	3) 2 wire serial ID interface.
5	MOD-DEF1	Module Definition 1	3	3) 2 wire serial ID interface.
6	MOD-DEF0	Module Definition 0	3	3), Grounded within the module.
7	Rate Select	Not Connect	3	Function not available
8	LOS	Loss of Signal	3	4)
9	VeeR	Receiver Ground	1	5)
10	VeeR	Receiver Ground	1	5)
11	VeeR	Receiver Ground	1	5)
12	RD-	Inv. Received Data Out	3	6)
13	RD+	Received Data Out	3	7)
14	VeeR	Receiver Ground	1	5)
15	VccR	Receiver Power	2	3.3 ± 5%, 7)
16	VccT	Transmitter Power	2	3.3 ± 5%, 7)
17	VeeT	Transmitter Ground	1	5)
18	TD+	Transmit Data In	3	8)
19	TD-	Inv. Transmit Data In	3	8)
20	VeeT	Transmitter Ground	1	5)

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Notes:

1) TX Fault is an open collector/drain output, which should be pulled up with a 4.7K – 10KΩ resistor on the host board. Pull up voltage between 2.0V and VccT, R+0.3V. When high, output indicates a laser fault of some kind. Low indicates normal operation. In the low state, the output will be pulled to < 0.8V.

2) TX disable is an input that is used to shut down the transmitter optical output. It is pulled up within the module with a 4.7 – 10 K Ω resistor. Its states are:
Low (0 – 0.8V): Transmitter on
(>0.8, < 2.0V): Undefined
High (2.0 – 3.465V): Transmitter Disabled
Open: Transmitter Disabled

3) Mod-Def 0,1,2. These are the module definition pins. They should be pulled up with a 4.7K – 10KΩresistor on the host board. The pull-up voltage shall be VccT or VccR. Mod-Def 0 is grounded by the module to indicate that the module is present Mod-Def 1 is the clock line of two wire serial interface for serial ID Mod-Def 2 is the data line of two wire serial interface for serial ID

4) LOS (Loss of Signal) is an open collector/drain output, which should be pulled up with a 4.7K – 10KΩ resistor. Pull up voltage between 2.0V and VccT, R+0.3V. When high, this output indicates the received optical power is below the worst-case receiver sensitivity (as defined by the standard in use). Low indicates normal operation. In the low state, the output will be pulled to < 0.8V.

5) VeeR and VeeT may be internally connected within the SFP module.

6) RD-/+: These are the differential receiver outputs. They are AC coupled 100Ω differential lines which should be terminated with 100Ω (differential) at the user SERDES. The AC coupling is done inside the module and is thus not required on the host board. The voltage swing on these lines will be between 370 and 2000 mV differential (185 –1000 mV single ended) when properly terminated.

7) VccR and VccT are the receiver and transmitter power supplies. They are defined as 3.3V ±5% at the SFP connector pin. Maximum supply current is 300mA. Recommended host board power supply filtering is shown below. Inductors with DC resistance of less than 1 ohm should be used in order to maintain the required voltage at the SFP input pin with 3.3V supply voltage. When the recommended supply-filtering network is used, hot plugging of the SFP transceiver module will result in an inrush current of no more than 30mA greater than the steady state value. VccR and VccT may be internally connected within the SFP transceiver module.

8) TD-/+: These are the differential transmitter inputs. They are AC-coupled, differential lines with 100Ω differential termination inside the module. The AC coupling is done inside the module and is thus not required on the host board. The inputs will accept differential swings of 400 – 2000 Mv (250 – 1200Mv single-ended), though it is recommended that values between 500 and 1200 Mv differential (250 – 600Mv single-ended) be used for best EMI performance.

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Fiber Optic Transceiver, SFP, BiDi, 1000Base DDM, Ciena 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.

L-com CAD Drawing