

## GLC-BX-D-LNX

Cisco® GLC-BX-D SFP Transceiver Compatible 1000Base-BX 1490nmTx/1310nmRx, 10km, SMF, DOM, LC, TAA, RoHS



### Features

- INF-8074 and SFF-8472 Compliance
- Simplex LC Connector
- Uncooled DFB transmitter and PIN receiver
- Single-mode Fiber
- Commercial Temperature 0 to 70 Celsius
- Hot Pluggable
- Metal with Lower EMI
- Excellent ESD Protection
- RoHS Compliant and Lead Free

### Product Description

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### Applications

- 1000Base-BX Ethernet
- 1x Fibre Channel
- Access (FTTx) and Enterprise

All Linxait's transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C & 2501-2581), which is intended to foster fair and open international trade. TAA requires that U.S. Government may acquire only "U.S. - made or designated country end products."



### Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Maximum Supply Voltage	V <sub>CC</sub>	-0.5	4.0	V
Storage Temperature	T <sub>S</sub>	-40	85	°C
Operating Case Temperature	T <sub>C</sub>	0	70	°C
Operating Humidity	RH	5	85	%
Receiver Power	R <sub>MAX</sub>		-3	dBm
Maximum Bitrate	B <sub>max</sub>		1.25	Gbps

### Electrical Characteristics (TOP=25°C, V<sub>CC</sub>=3.3Volts)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Power Supply Voltage	V <sub>CC</sub>	3.15	3.30	3.43	V	
Power Supply Current	I <sub>CC</sub>			303	mA	
Power Consumption	P <sub>DISS</sub>			1	W	
Transmitter						
Differential data input swing	V <sub>in,pp</sub>	120		850	mV	
Input differential impedance	Z <sub>in</sub>	80	100	120	Ω	
Receiver						
Differential data output swing	V <sub>out, pp</sub>	300		850	mV	
Output differential impedance	Z <sub>in</sub>	80	100	120	Ω	

### Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Optical Power (average)	P <sub>AVE</sub>	-9		-3	dBm	1
Optical Extinction Ratio	ER	9			dB	
Optical Wavelength	Tλ	1480	1490	1500	nm	
Insertion loss	IL		1.2			
Receiver						
Receiver Sensitivity (average)	R <sub>AVE</sub>			-19.5	dBm	2
Receiver overload	P <sub>max</sub>	-3			dBm	3
Receiver wavelength	Rλ	1260		1360	nm	

**Notes:**

1. Coupled into a Single-mode fibre
2. Average power, back-to-back, @1.25Gbps, BER 1E-12, PRBS 231-1.
3. Exceeding the Receiver overload can physically damage the module. Please use appropriate attenuation.

**Pin Descriptions**

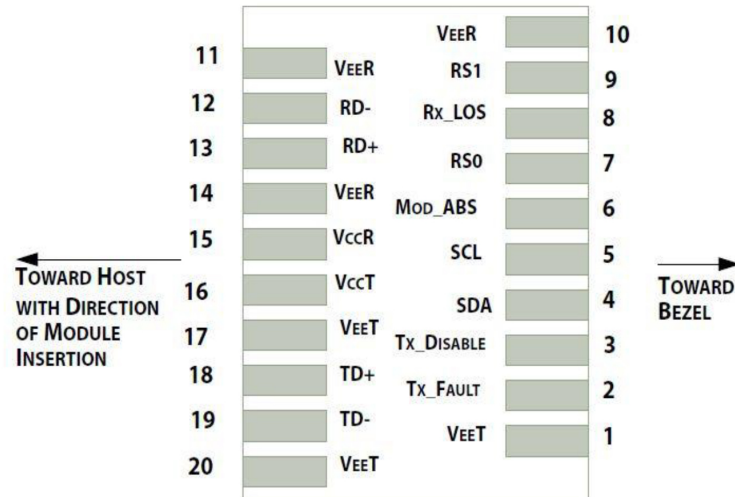
Pin	Symbol	Name/Descriptions	Ref.
1	VeeT	Transmitter Ground (Common with Receiver Ground).	1
2	TX Fault	Transmitter Fault. LVTTTL-O	2
3	TX Disable	Transmitter Disable. Laser output disabled on high or open. LVTTT-I.	3
4	SDA	2-Wire Serial Interface Data Line (Same as MOD-DEF2 in INF-8074i). LVTTTL-I/O.	
5	SCL	2-Wire Serial Interface Data Line (Same as MOD-DEF2 in INF-8074i). LVTTTL-I.	
6	MOD_ABS	Module Absent, Connect to VeeT or VeeR in Module.	4
7	RS0	Rate Select 0. Not used	5
8	LOS	Loss of Signal indication. Logic 0 indicates normal operation. LVTTTL-O.	2
9	RS1	Rate Select 1. Not used	5
10	VeeR	Receiver Ground (Common with Transmitter Ground).	1
11	VeeR	Receiver Ground (Common with Transmitter Ground).	1
12	RD-	Receiver Inverted DATA out. AC Coupled. CML-O.	
13	RD+	Receiver Non-inverted DATA out. AC Coupled. CML-O.	
14	VeeR	Receiver Ground (Common with Transmitter Ground).	1
15	VccR	Receiver Power Supply.	
16	VccT	Transmitter Power Supply.	
17	VeeT	Transmitter Ground (Common with Receiver Ground).	1
18	TD+	Transmitter Non-Inverted DATA in. AC Coupled. CML-I.	
19	TD-	Transmitter Inverted DATA in. AC Coupled. CML-O.	
20	VeeT	Transmitter Ground (Common with Receiver Ground).	1

**Notes:**

1. The module signal ground contacts, VeeR and VeeT, should be isolated from the module case.
2. This contact is an open collector/drain output and should be pulled up to the Vcc\_Host with resistor in the range 4.7KΩ to 10KΩ. Pull ups can be connected to one or several power supplies, however the host board design shall ensure that no module contract has voltage exceeding module VccT/R +0.5.V.
3. Tx\_Disable is an input contact with a 4.7KΩ to 10KΩ pull-up resistor to VccT inside module.
4. Mod\_ABS is connected to VeeT or VeeR in the SFP+ module. The host may pull the contract up to Vcc\_Host with a resistor in the range from 4.7KΩ to 10KΩ. Mod\_ABS is asserted "High" when the SFP+

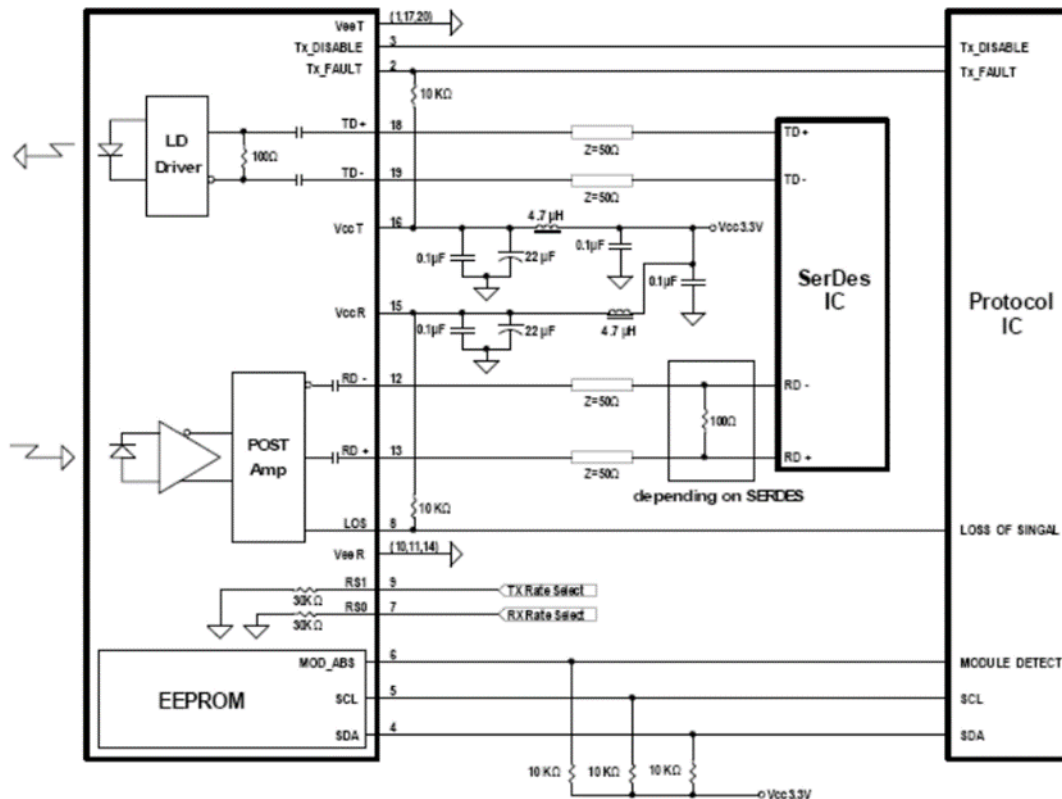
module is physically absent from a host slot.

- Internally pulled down per SFF-8431



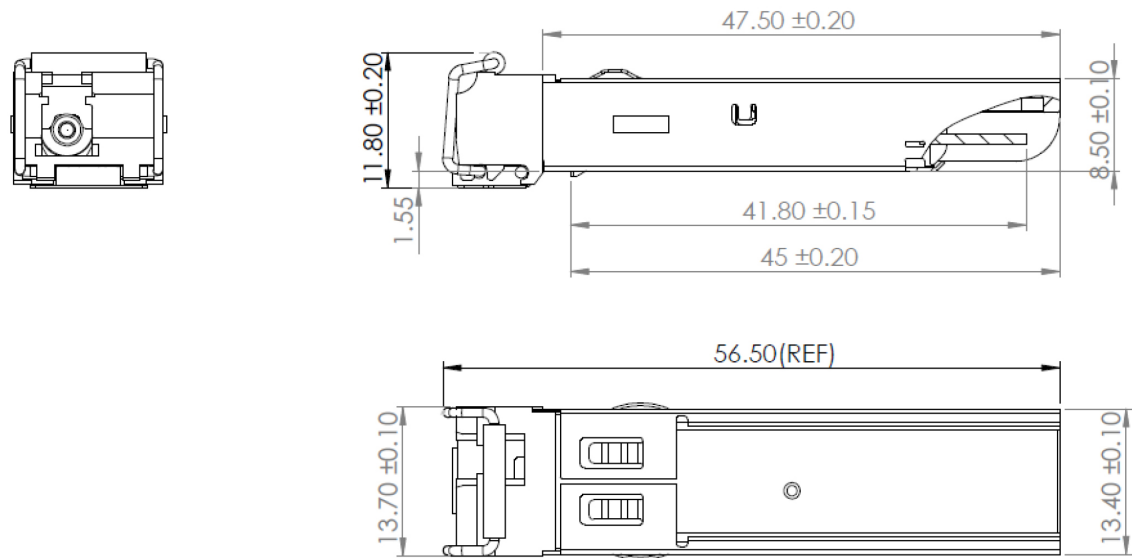
Pin-out of connector Block on Host board

## Recommended Circuit Schematic



**Mechanical Specifications**

Small Form Factor Pluggable (SFP) transceivers are compatible with the dimensions defined by the SFP Multi-Sourcing Agreement (MSA).



**EEPROM Information**

EEPROM memory map specific data field description is as below:

2 wire address 1010000X (A0h)	2 wire address 1010001X (A2h)
0	0
Serial ID Defined by SFP MSA (96 bytes)	Alarm and Warning Thresholds (56 bytes)
95	55
Vendor Specific (32 bytes)	Cal Constants (40 bytes)
127	95
Reserved, SFF8079 (128 bytes)	Real Time Diagnostic Interface (24 bytes)
	119
	Vendor Specific (8 bytes)
	127
	User Writable EEPROM (120 bytes)
	247
	Vendor Specific (8 bytes)
255	255

**About Us:**

At Linxit, we believe that you truly can have the best of both worlds. We go great lengths to supply high quality transceivers that avoid the compatibility drawbacks commonly associated with low cost third-party optics, but without the price tag of OEM branded hardware. Competitive pricing doesn't have to be mutually exclusive to high quality, consistent reliability, and best-in-class service, and we're here to prove it.

We carry our "quality without compromise" concept at the forefront of everything we do, from our products to our outstanding service and lightning quick U.S. based shipping. We stand by our commitment to this principle in every transceiver that leaves our facility and every email or call we address. Your connectivity is our priority, and we ensure it shines through in every facet of our organization.

**Contact Information:**

Linxit, LLC  
15151 Woodlawn Ave.  
Tustin, CA 92780

Phone: +1 (855) 531-3639  
General Inquiry: [sales@linxit.com](mailto:sales@linxit.com)  
Customer Service: [support@linxit.com](mailto:support@linxit.com)  
Website: <http://www.linxit.com>