OTR16_S3-BX53-C

ECI Telecom® OTR16_S3-BX53 Compatible TAA 2.5GBase-BX SFP Transceiver (SMF, 1550nmTx/1310nmRx, 10km, LC, DOM)

Features:

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

Applications:

- 2GBase-BX Ethernet
- Access and Enterprise

Product Description

This ECI Telecom® OTR16_S3-BX53 compatible SFP transceiver provides 2.5GBase-BX throughput up to 10km over single-mode fiber (SMF) using a wavelength of 1550nmTx/1310nmRx via an LC connector. It is guaranteed to be 100% compatible with the equivalent ECI Telecom® transceiver. This easy to install, hot swappable transceiver has been programmed, uniquely serialized and data-traffic and application tested to ensure that it will initialize and perform identically. Digital optical monitoring (DOM) support is also present to allow access to real-time operating parameters. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

ProLabs' 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 the U.S. Government may acquire only "U.S. – made or designated country end products."

TAA COMPLIANT

Rev. 091624

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate	DR		2.5		GB/s	
Bit Error Rate	BER			10^{-12}		
Storage Temperature	Tstg	-40		85	°C	1
Operating Case Temperature	Tc	0		70	°C	2
Maximum Voltage	Vcc	-0.5		4	V	3

Notes:

1. Case temperature.
2. Ambient temperature.
3. For electrical power interface.

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Input Voltage	V_{CC}	3.14	3.3	3.46	V	
Supply Current	Icc			300	mA	1
Transmitter						
Input Differential Impedance	RIN	90	100	110	Ω	
Single ended data input swing	Vin_pp	250		1200	mV	
Transmit disable voltage	VD	Vcc-1.3		Vcc	V	
Transmit enable voltage	Ven	Vee		Vee+0.8	V	
Receiver						
Single ended data output swing	Vout_pp	250		800	mV	
Data output rise/fall time (20%-80%)	Tr/tf			300	ps	
LOS Fault	VLOS_A	Vcc-0.5		Vcc_host		
LOS Normal	VLOS_D	Vee		Vee+0.5		

Notes:

1. For electrical power interface.

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Output Optical Power	Ptx	-5		0	dBm	
Optical Center Wavelength	λc	1520	1550	1580	nm	
Extinction Ratio	ER	8.2			dB	
Spectral Width (RMS)	Δλ			1	nm	
Optical Rise/Fall Time (20%-80%)	tr/tf			260	ps	
Receiver						
Receiver Overload	Pol	0		dBm		
Optical Center Wavelength	λc	1270	1310	1360	nm	
Receiver Sensitivity	Rx_sen			-18	dBm	
LOS Assert	LOSA	-32			dBm	
LOS De-Assert	LOSD			-20	dBm	
LOS Hysteresis	LOSH	0.5			dB	

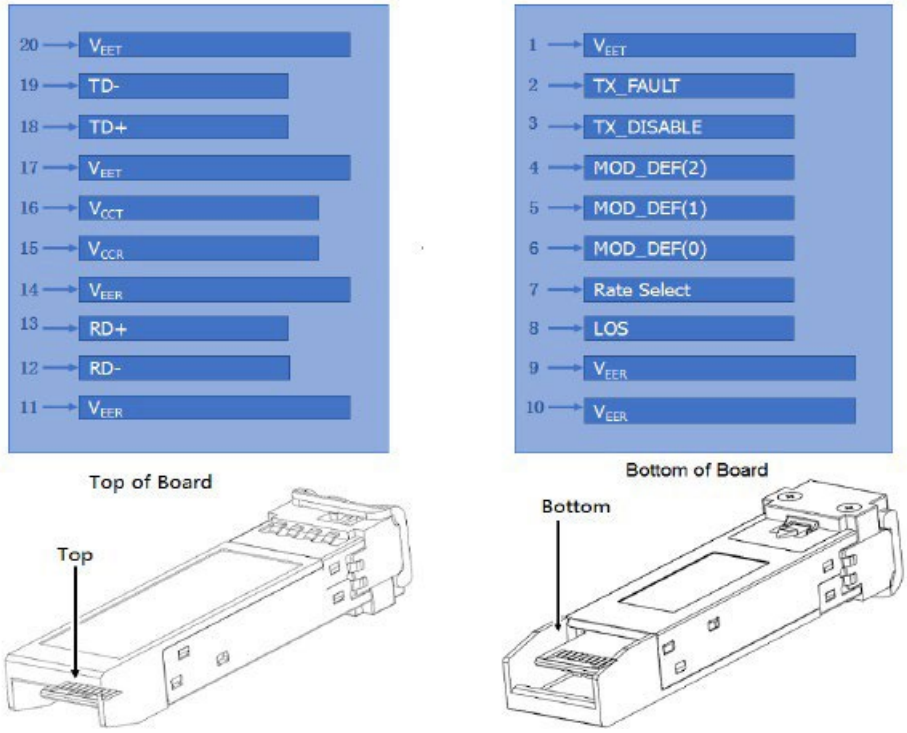
Pin Descriptions

Pin	Symbol	Description	Ref.
1	VeeT	Transmitter Ground (Common with Receiver Ground).	1
2	TX_Fault	Transmitter Fault. Not supported.	
3	TX_Disable	Transmitter Disable. Laser output disabled on high or open.	2
4	MOD_DEF(2)	Module Definition 2. Data line for serial ID.	3
5	MOD_DEF(1)	Module Definition 1. Clock line for serial ID.	3
6	MOD_DEF(0)	Module Definition 0. Grounded within the module.	3
7	Rate Select	No Connection Required.	
8	LOS	Loss of Signal Indication, Logic 0 indicated normal operation.	4
9	VeeR	Receiver Ground (Common with Transmitter Ground).	1
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.	
13	RD+	Receiver Non-Inverted DATA Out. AC coupled.	
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.	
19	TD-	Transmitter Inverted DATA In. AC Coupled.	
20	VeeT	Transmitter Ground (Common with Receiver Ground).	1

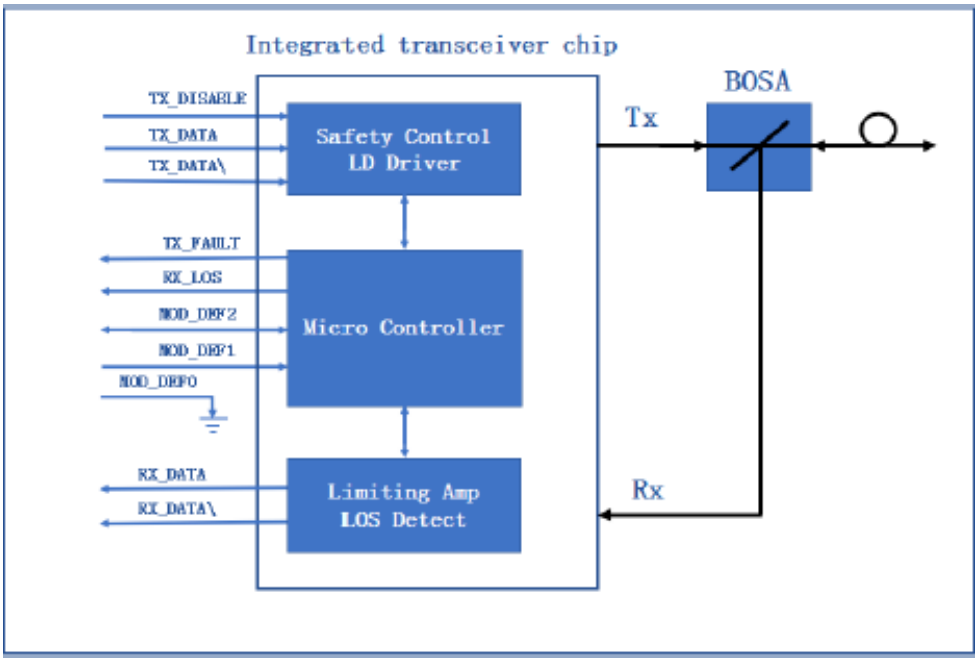
Notes:

1. Circuit ground is isolated form chassis ground.
2. Disabled: T_{DIS}>2Vor open, Enabled: T_{DIS}<0.8V
3. Should be pulled up with 4.7KΩ-10KΩ on host board to a voltage between 2V and 3.6V.
4. LOS is open collector output.

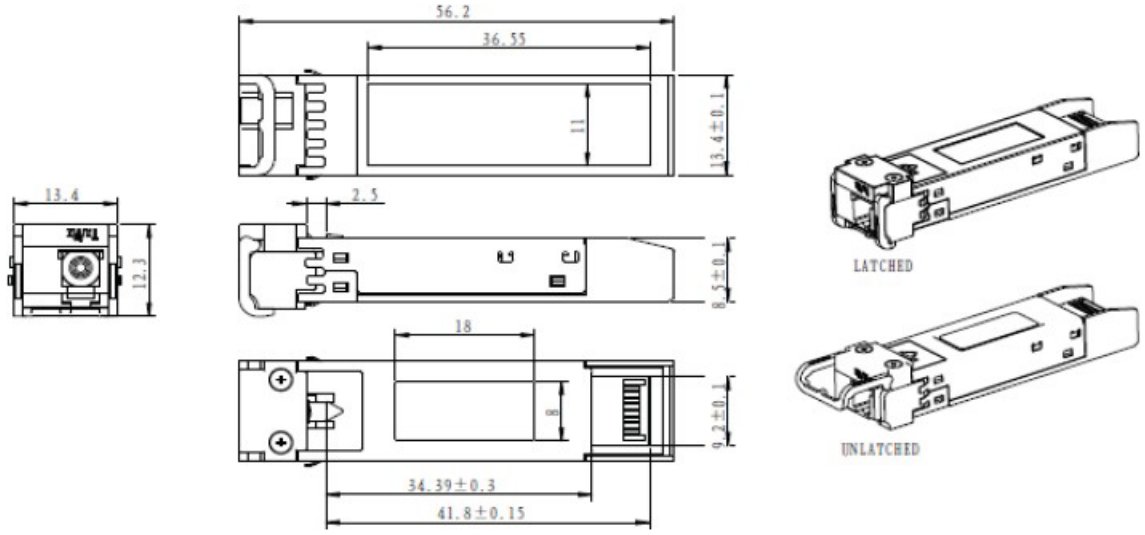
Electrical Pad Layout



Block Diagram of Transceiver



Mechanical Specifications



About ProLabs

Our experience comes as standard; for over 15 years ProLabs has delivered optical connectivity solutions that give our customers freedom and choice through our ability to provide seamless interoperability. At the heart of our company is the ability to provide state-of-the-art optical transport and connectivity solutions that are compatible with over 90 optical switching and transport platforms.

Complete Portfolio of Network Solutions

ProLabs is focused on innovations in optical transport and connectivity. The combination of our knowledge of optics and networking equipment enables ProLabs to be your single source for optical transport and connectivity solutions from 100Mb to 400G while providing innovative solutions that increase network efficiency. We provide the optical connectivity expertise that is compatible with and enhances your switching and transport equipment.

Trusted Partner

Customer service is our number one value. ProLabs has invested in people, labs and manufacturing capacity to ensure that you get immediate answers to your questions and compatible product when needed. With Engineering and Manufacturing offices in the U.K. and U.S. augmented by field offices throughout the U.S., U.K. and Asia, ProLabs is able to be our customers best advocate 24 hours a day.

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