

J9100B-C

HP® J9100B Compatible TAA 100Base-BX SFP Transceiver (SMF, 1310nmTx/1550nmRx, 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:

- 100Base Ethernet
- Access and Enterprise

Product Description

This HP® J9100B compatible SFP transceiver provides 100Base-BX throughput up to 10km over single-mode fiber (SMF) using a wavelength of 1310nmTx/1550nmRx via an LC connector. It is guaranteed to be 100% compatible with the equivalent HP® 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."



Regulatory Compliance

- ESD to the Electrical PINs: compatible with MIL-STD-883E Method 3015.4
- ESD to the LC Receptacle: compatible with IEC 61000-4-3
- EMI/EMC compatible with FCC Part 15 Subpart B Rules, EN55022:2010
- Laser Eye Safety compatible with FDA 21CFR, EN60950-1& EN (IEC) 60825-1,2
- RoHS compliant with EU RoHS 2.0 directive 2015/863/EU

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate	DR		125		Mbps	
Bit Error Rate	BER			10^{-12}		
Storage Temperature	Tstg	-40		85	°C	
Operating Case Temperature	Tc	0		70	°C	1
Maximum Voltage	Vcc	-0.5		4	V	
Total Power Consumption	P			1	W	

Notes:

1. Case temperature.

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Supply Voltage	V _{CC}	3.15	3.3	3.45	V	1
Supply Current	I _{CC}			300	mA	
Transmitter						
Input Differential Impedance	R _{IN}		100		Ω	
Differential data input swing	V _{in_pp}	250		1200	mV	
Transmit disable voltage	V _D	2		V _{CC}	V	
Transmit enable voltage	V _{en}	GND		GND +0.8	V	
Transmit disable assert time				10	us	
Receiver						
Differential data output swing	V _{out_pp}	300	500	800	mV	
Data output rise time (20%-80%)	t _r			300	ps	
Data output fall time (20%-80%)	t _f			300	ps	
LOS Fault	V _{LOS_A}	V _{CC} -0.5		V _{CC_host}	V	
LOS Normal	V _{LOS_D}	GND		GND+0.5	V	

Notes:

1. The voltage required for the module to work normally.

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Optical Center Wavelength	λ_c	1260	1310	1360	nm	
Output Optical Power	Ptx	-14		-8	dBm	1
Extinction Ratio	ER	9	11	15	dB	
Spectral Width	$\Delta\lambda$			2.5	nm	
Relative Intensity Noise	RIN			-120	dB/Kz	
Transmitter Jitter	According to IEEE 802.3 requirement					
Receiver						
Central Wavelength Range	λ_c	1530	1550	1570	nm	
Receiver Sensitivity	Rx_sen	-28.2		-3	dBm	2
LOS Assert	LOSA	-40			dBm	
LOS De-Assert	LOSD			-28.2	dBm	
LOS Hysteresis	LOSH	0.5		4.5	dB	

Notes

1. Average.
2. Measured with worst ER: BER<10⁻¹²;2³¹-1 PRBS.

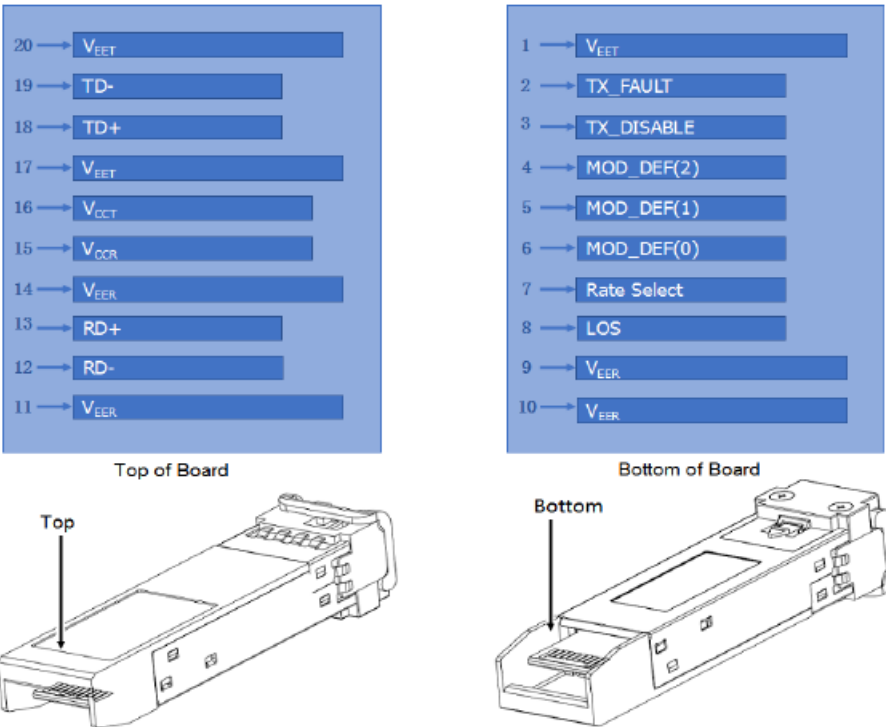
Pin Descriptions

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. SGMII interface.	
13	RD+	Receiver Non-Inverted DATA Out. AC coupled. SGMII interface.	
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. SGMII interface.	
19	TD-	Transmitter Inverted DATA In. AC Coupled. SGMII interface.	
20	VeeT	Transmitter Ground (Common with Receiver Ground).	1

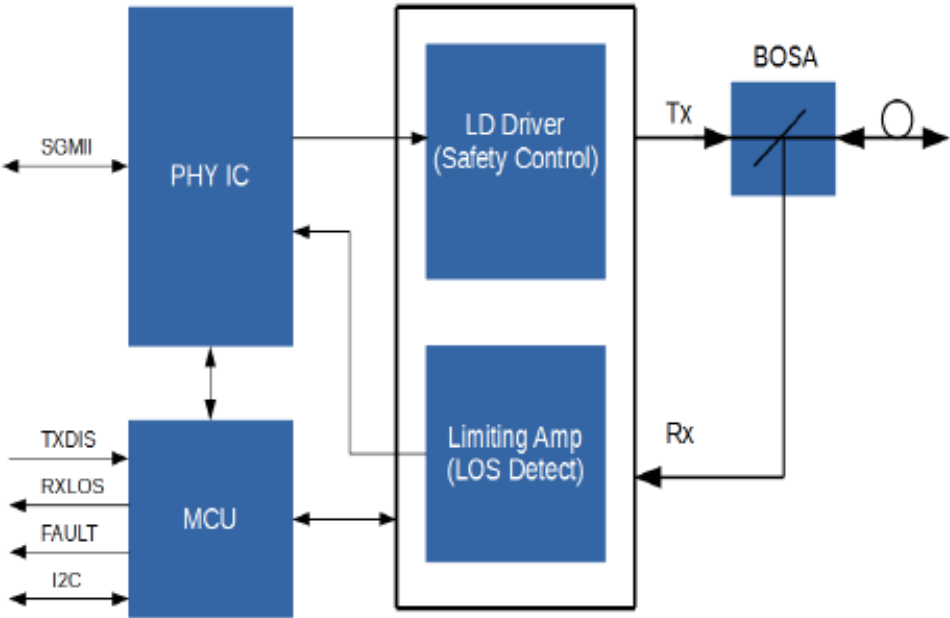
Notes:

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

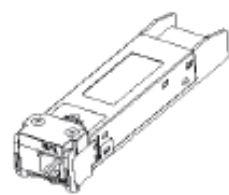
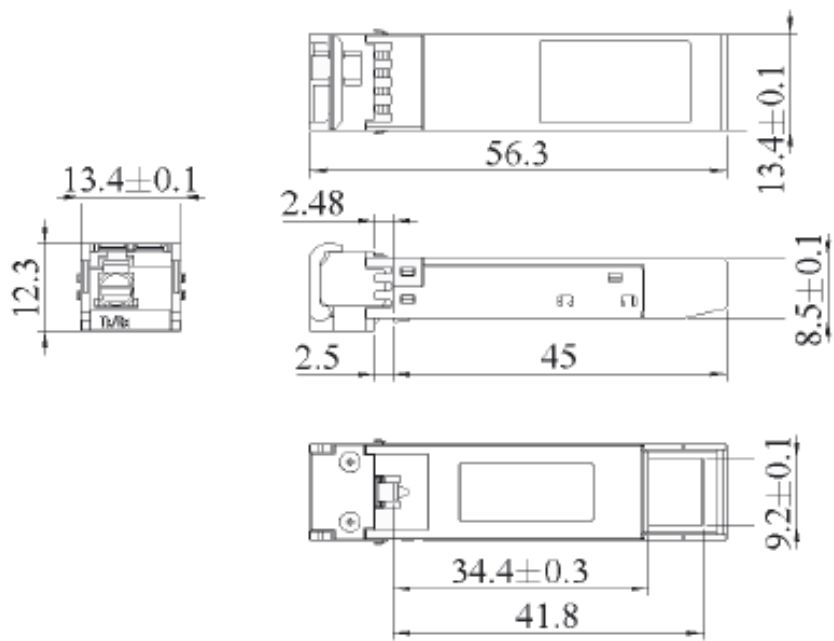
Electrical Pad Layout



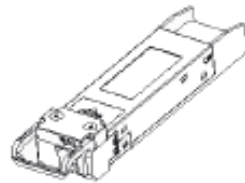
Block Diagram of Transceiver



Mechanical Specifications



LATCHED



UNLATCHED

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.

Contact Information

ProLabs US

Email: sales@prolabs.com

Telephone: 952-852-0252

ProLabs UK

Email: salessupport@prolabs.com

Telephone: +44 1285 719 600