J9100B-AO

HP® J9100B Compatible TAA 100Base-BX SFP Transceiver (SMF, 1310nmTx/1550nmRx, 10km, LC, DOM)

Features

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

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

TAA COMPLIANT

Rev. 102722

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	Icc			300	mA	
Transmitter						
Input Differential Impedance	RIN		100		Ω	
Differential data input swing	Vin_pp	250		1200	mV	
Transmit disable voltage	VD	2		Vcc	V	
Transmit enable voltage	Ven	GND		GND +0.8	V	
Transmit disable assert time				10	us	
Receiver						
Differential data output swing	Vout_pp	300	500	800	mV	
Data output rise time (20%-80%)	tr			300	ps	
Data output fall time (20%-80%)	tf			300	ps	
LOS Fault	VLOS_A	Vcc-0.5		Vcc_host	V	
LOS Normal	VLOS_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	λc	1260	1310	1360	nm	
Output Optical Power	Ptx	-14		-8	dBm	1
Extinction Ratio	ER	9	11	15	dB	
Spectral Width	Δλ			2.5	nm	
Relative Intensity Noise	RIN			-120	dB/Kz	
Transmitter Jitter	According to IEEE 802.3 requirement					
Receiver						
Central Wavelength Range	λc	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};2^{31}-1 PRBS.

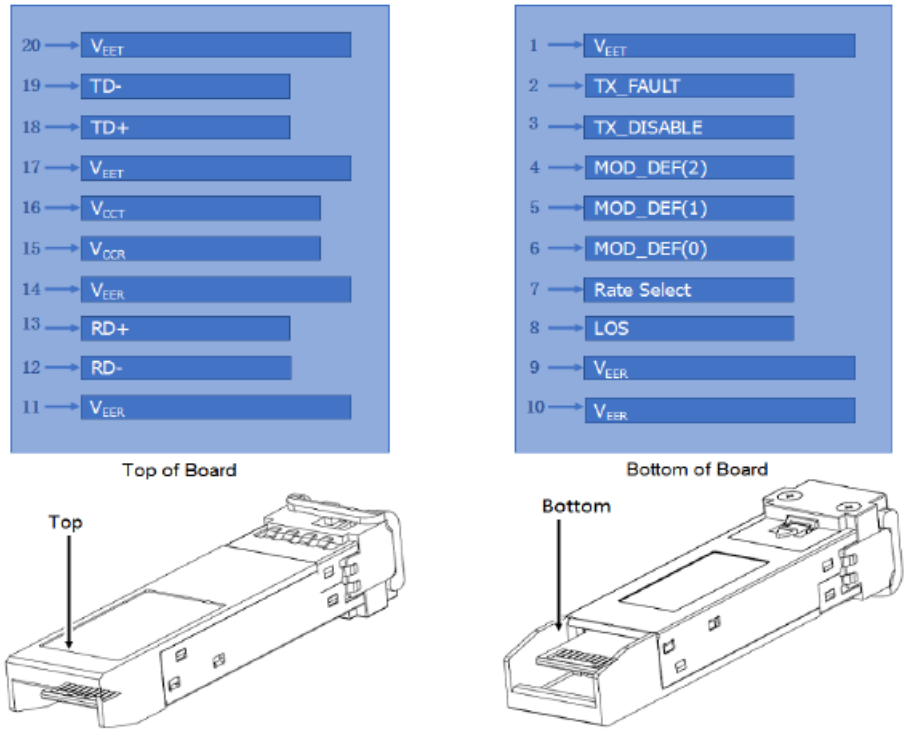
Pin Descriptions

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

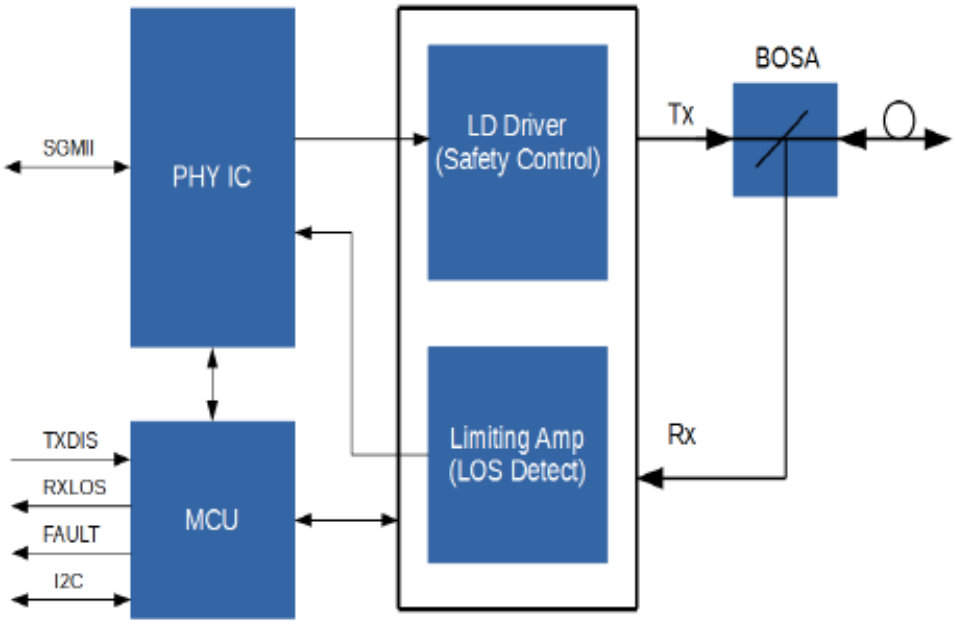
Notes:

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 4.7KΩ-10KΩ on host board to a voltage between 2V and 3.6V.
4. LOS is open collector output.

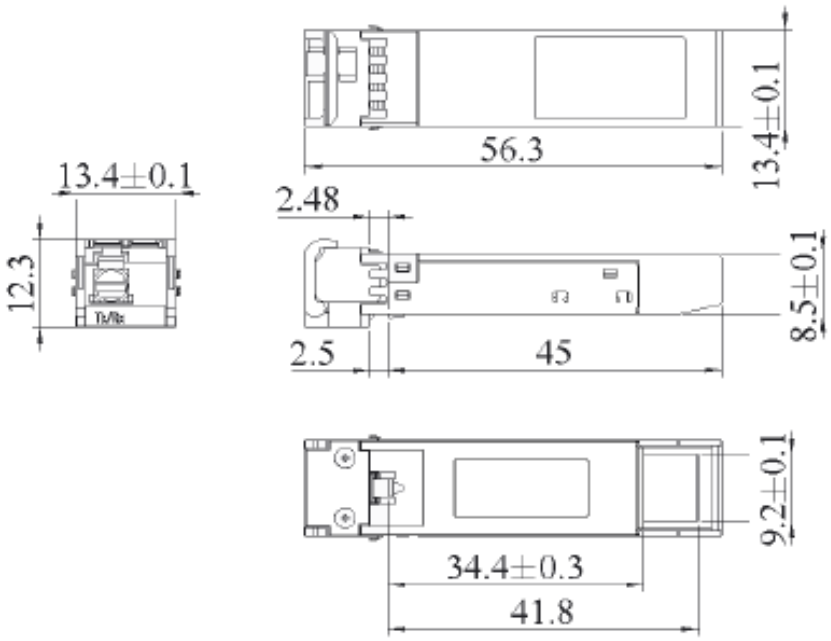
Electrical Pad Layout

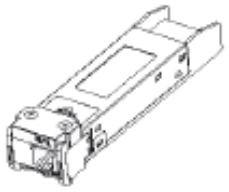


Block Diagram of Transceiver



Mechanical Specifications





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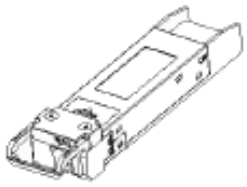

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About AddOn Networks

In 1999, AddOn Networks entered the market with a single product. Our founders fulfilled a severe shortage for compatible, cost-effective optical transceivers that compete at the same performance levels as leading OEM manufacturers. Adhering to the idea of redefining service and product quality not previously had in the fiber optic networking industry, AddOn invested resources in solution design, production, fulfillment, and global support.

Combining one of the most extensive and stringent testing processes in the industry, an exceptional free tech support center, and a consistent roll-out of innovative technologies, AddOn has continually set industry standards of quality and reliability throughout its history.

Reliability is the cornerstone of any optical fiber network and is in engrained in AddOn's DNA. It has played a key role in nurturing the long-term relationships developed over the years with customers. AddOn remains committed to exceeding industry standards with certifications from ranging from NEBS Level 3 to ISO 9001:2005 with every new development while maintaining the signature reliability of its products.

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