



J9100B-OPC

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. This bidirectional unit must be used with another transceiver or network appliance of complementing wavelengths. It can operate at temperatures between 0 and 70C. Our transceiver is built to meet or exceed OEM specifications and is guaranteed to be 100% compatible with HP®. It has been programmed, uniquely serialized, and tested for data-traffic and application to ensure that it will initialize and perform identically. All of our transceivers comply with Multi-Source Agreement (MSA) standards to provide seamless network integration. Additional product features include Digital Optical Monitoring (DOM) support which allows 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.

OptioConnect's transceivers are RoHS compliant and lead-free.

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.

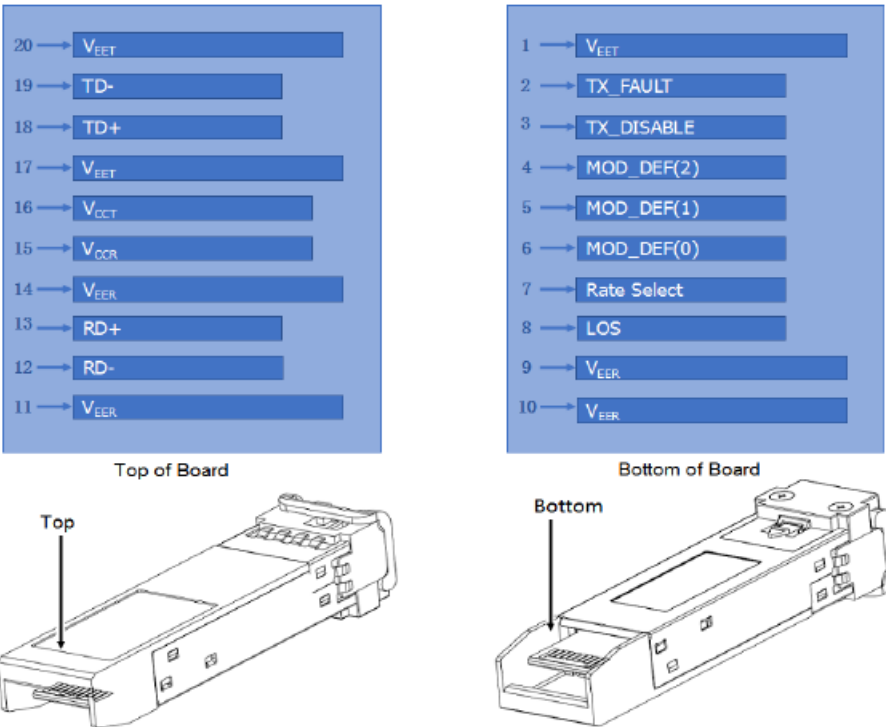
Pin Descriptions

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

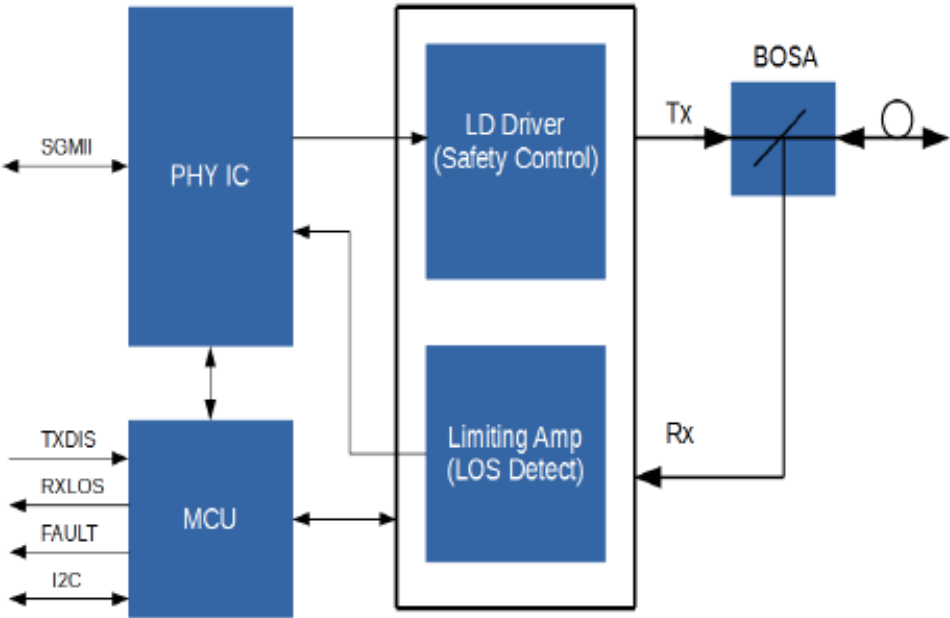
Notes:

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.

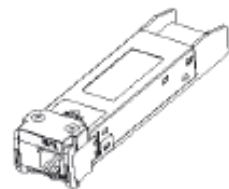
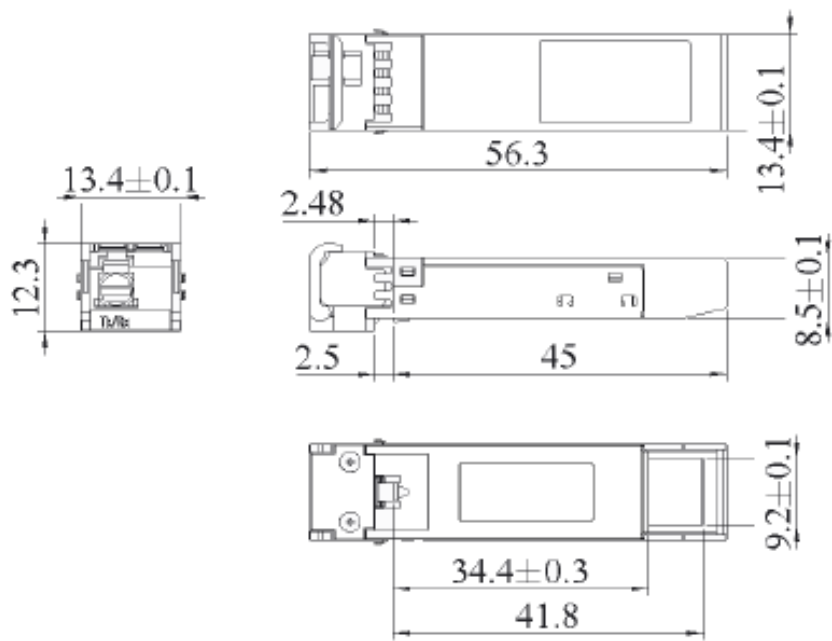
Electrical Pad Layout



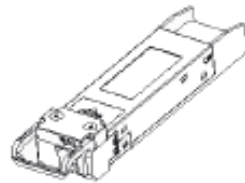
Block Diagram of Transceiver



Mechanical Specifications



LATCHED



UNLATCHED

OptioConnect

Innovation for the Future of High-Speed Networking

Who We Are

OptioConnect is reshaping the landscape of communication and high-speed networking through intelligent technology. With a core focus on cutting edge technology, we deliver smarter fiber optic solutions for enterprise networks, data centers, and next-gen telecom infrastructures.

What We Do

At OptioConnect, we fuse advanced engineering with intelligent automation to drive the future of networking. Our AI-integrated solutions are designed to optimize performance and streamline operations with:

- Superior Performance
- Network and traffic optimization
- Intelligent energy management
- Seamless OEM compatibility
- Scalable cost-efficiency

Smarter Networks by Design

Innovation isn't just a goal—it's our process. We embed AI and machine learning across our R&D and product lines, enabling adaptive performance, automated tuning, and faster deployment cycles. The result? Networks that don't just work—they learn, evolve, and outperform.

Our Team

Our engineers, data scientists, and network architects bring decades of experience and a future-focused mindset. We provide hands-on support with intelligent insights that turn complex challenges into simple solutions.

Our Mission

To deliver AI-enhanced connectivity that reduces cost, increases speed, and maximizes efficiency—empowering our partners to operate at the forefront of a rapidly evolving digital world.

Let's Connect

Discover how OptioConnect's intelligent infrastructure solutions can power your network's next leap forward.

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