

JL485A-PRO

HP® JL485A Compatible TAA Compliant 25GBase-SR SFP28 Transceiver (MMF, 850nm, 400m, DOM, 0 to 70C, LC)

Features

- SFF-8402 and SFF-8472 Compliance
- Duplex LC Connector
- Commercial Temperature 0 to 70 Celsius
- Multi-mode Fiber
- Hot Pluggable
- Excellent ESD Protection
- Metal with Lower EMI
- RoHS Compliant and Lead Free



Applications:

- 25GBase Ethernet
- Access and Enterprise

Product Description

This HP® JL485A compatible SFP28 transceiver provides 25GBase-SR throughput up to 400m over multi-mode fiber (MMF) using a wavelength of 850nm 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.

Proline'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.



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.		Max.	Unit
Maximum Supply Voltage	V _{CC}	-0.5		4.0	V
Storage Temperature	T _S	-40		85	°C
Operating Case Temperature	T _C	0	25	70	°C
Operating Humidity	RH	5		85	%
Receiver Power	R _{MAX}			2.5	dBm
Data Rate		10.3	25.78		Gbps

Electrical Characteristics (TOP=25°C, V_{CC}=3.3Volts)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes	
Power Supply Voltage	V _{CC}	3.135	3.3	3.465	V		
Power Supply Current	I _{CC}			290	mA		
Power Consumption	P _{DISS}			1000	mW		
Transmitter							
Differential data input swing	V _{in,p-p}	180		700	mVp-p		
Input differential impedance	Z _{in}		100		Ω		
TX_FAULT	Transmitter Fault	V _{OH}	2.0		V _{CC}	V	TX_FAULT
	Normal Operation	V _{OL}	0		0.8	V	
TX_DISABLE	Transmitter Disable	V _{IH}	2.0		V _{CC}	V	TX_DISABLE
	Transmitter Enable	V _{IL}	0		0.8	V	
Receiver							
Output Differential Impedance	Z _O		100		Ω		
Differential Data Output Swing	V _{OUT, P-P}	300		850	mVp-p	1	
Data Output Rise Time, Fall Time	t _r , t _f		30		ps	2	
RX_LOS	Loss of signal (LOS)	V _{OH}	2.0		V _{CC}	V	RX_LOS
	Normal Operation	V _{OL}	0		0.8	V	

Notes:

1. Internally AC coupled, but requires a external 100Ω differential load termination.
2. 20–80%.
3. LOS is an open collector output. Should be pulled up with 4.7KΩ on the host board.

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Launch Optical Power	P _o	-7.6		+2.4	dBm	1
Extinction Ratio	ER	2			dB	
Center Wavelength Range	λ _c	840	850	860	nm	
Transmitter Dispersion Penalty @25.78Gb/s	TWDP			4.3	dB	
Spectral Width (RMS) @25.78Gb/s	Δλ			0.6	nm	
Optical Return Loss Tolerance	ORLT			12	dB	
Pout @TX-Disable Asserted	P _{off}			-30	dBm	1
Receiver						
Center Wavelength	λ _c	840	850	860	nm	
Receiver Sensitivity (P _{avg})	S			-10.3	dBm	2
Receiver Sensitivity (P _{avg})	S			-11.0	dBm	3
Receiver Overload (P _{avg})	P _{OL}	2.5			dBm	
Optical Return Loss	ORL	12			dB	
LOS De-Assert	LOS _D			-11	dBm	
LOS Assert	LOS _A	-30			dBm	
LOS Hysteresis		0.5			dB	

Notes:

1. 50/125μm fiber with NA = 0.2.
2. Measured with PRBS 2³¹-1 at 5e-5 BER @25.78Gb/s.
3. Measured with PRBS 2³¹-1 at 5e-5 BER @10.3Gb/s.

Pin Descriptions

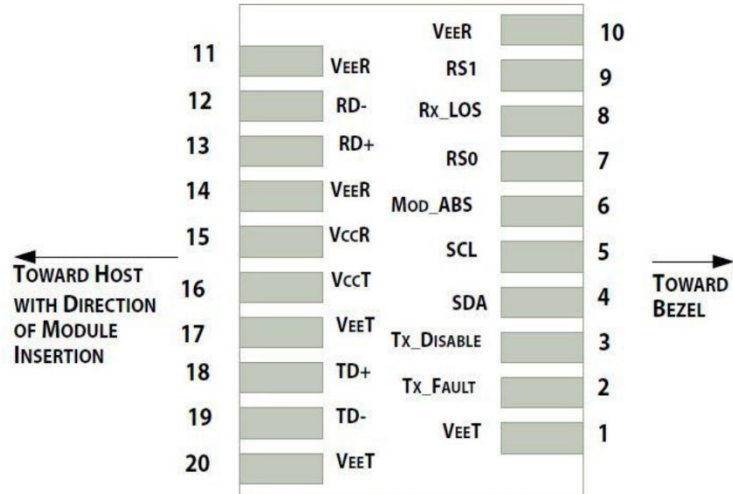
Pin	Symbol	Name/Descriptions	Ref.
1	VeeT	Transmitter Ground	1
2	TX_Fault	Transmitter Fault (LVTTTL-O) - High indicates a fault condition	2
3	TX_Disable	Transmitter Disable (LVTTTL-I) – High or open disables the transmitter	3
4	SDA	Two wire serial interface Data Line (LVCMOS-I/O) (MOD-DEF2)	4
5	SCL	Two wire serial interface Clock Line (LVCMOS-I/O) (MOD-DEF1)	4
6	MOD_ABS	Module Absent (Output), connected to VeeT or VeeR in the module	5
7	RS0	Rate Select 0 – Not used, Presents high input impedance	6
8	RX_LOS	Receiver Loss of Signal (LVTTTL-O)	2
9	RS1	Rate Select 1 – Not used, Presents high input impedance	6
10	VeeR	Receiver Ground	1
11	VeeR	Receiver Ground	1
12	RD-	Inverse Received Data out (CML-O), AC Coupled	
13	RD+	Received Data out (CML-O), AC Coupled	
14	VeeR	Receiver Ground	
15	VccR	Receiver Power - +3.3V	
16	VccT	Transmitter Power - +3.3 V	
17	VeeT	Transmitter Ground	1
18	TD+	Transmitter Data In (CML-I), AC Coupled	
19	TD-	Inverse Transmitter Data In (CML-I), AC Coupled	
20	VeeT	Transmitter Ground	1

Notes:

1. The module signal grounds are isolated from the module case.
2. This is an open collector/drain output that on the host board requires a 4.7KΩ to 10KΩ pull-up resistor to VccHost.
3. This input is internally biased high with a 4.7KΩ to 10KΩ pull-up resistor to VccT.
4. Two-Wire Serial interface clock and data lines require an external pull-up resistor dependent on the capacitance load.
5. This is a ground return that on the host board requires a 4.7KΩ to 10KΩ pull-up resistor to VccHost.
6. Rate select can also be set through the 2-wire bus in accordance with SFF-8472 v. 10.2, Rx Rate Select is set at Bit 3, Byte 110,

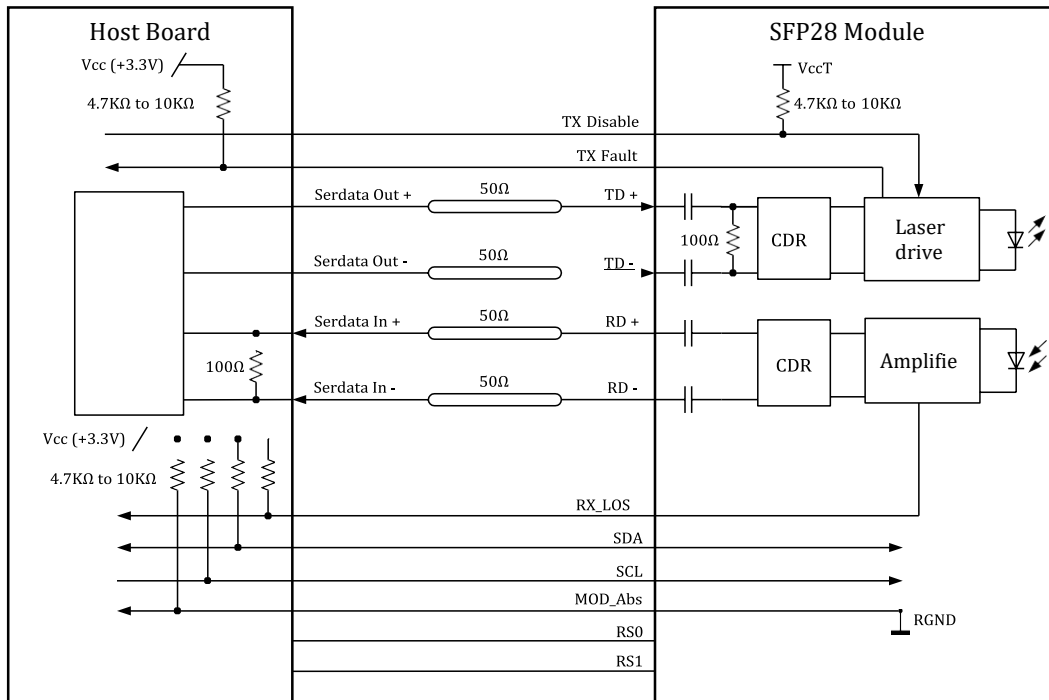
Address A2h. Tx Rate Select is set at Bit 3, Byte 118, Address A2h.

Note: writing a “1” selects maximum bandwidth operation. Rate select is the logic OR of the input state of Rate Select Pin and 2-wire bus.

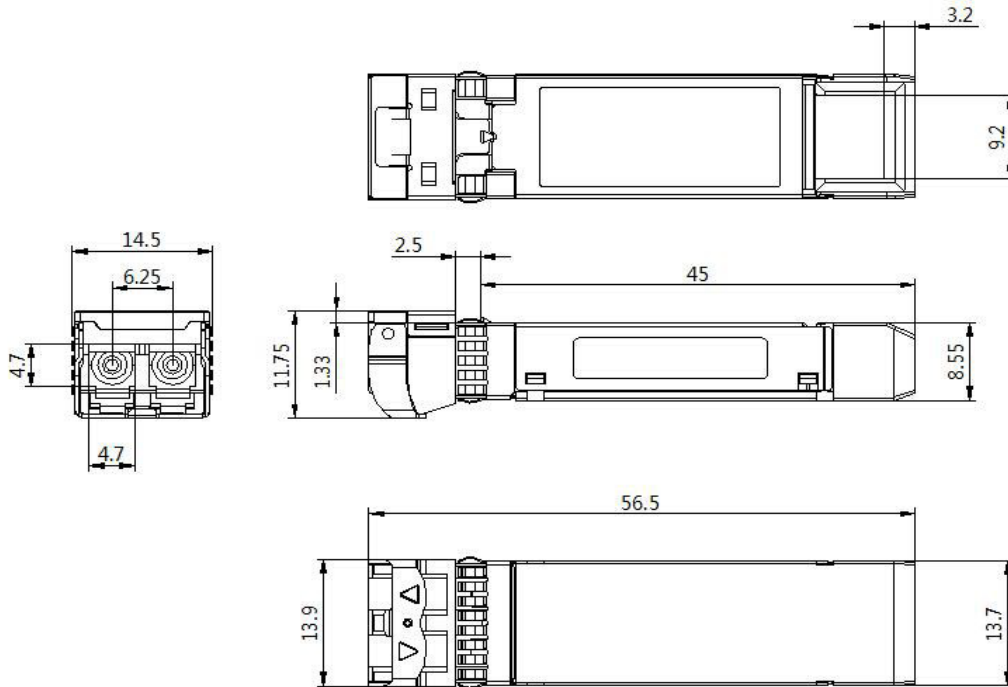


Pin-out of connector Block on Host board

Recommended Application Interface Block Diagram

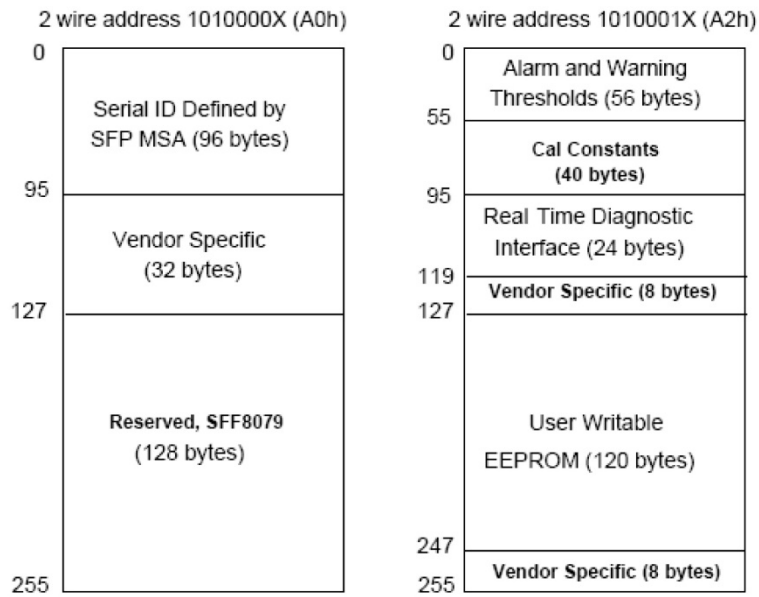


Mechanical Specifications



EEPROM Information

EEPROM memory map specific data field description is as below:



About Us:

Proline Options is one of North America's leading providers of transceivers and high speed cabling. With a reputation for quality, tested products that cover the connectivity spectrum, Proline Options has a solution for you regardless of the specification.

At Proline Options, every product is tested in its intended application - never batch or spec tested only. We run bandwidth, distance and IOS network tests. We have documented an impressive 0.03% failure rate over the last 10 years. To continue this rate of success we invest millions annually in our own on-site testing lab.



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