

1.25Gb/s Bidirectional Single-Fiber SFP Transceiver with SC Connector

Features and Benefits

Works with Olson's Model OTDV-1250 Transport Link to provide 1.25Gb/s bidirectional data.

These SFP Modules do not include DMM monitoring..

1310nm FP Tx/1550nm Rx or 1550nm DFB Tx/1310nm Rx configurations.

Single 3.3V power supply and TTL logic interface.

Hot-pluggable SFP footprint with compact simplex SC optical connector.

Fully metallic enclosure assures low EMI.

Transmits up to 10km over a single 9/125 μ m single-mode fiber.

Ideal for SONET/SDH equipment interconnects, Fiber Channel links, and WDM Gigabit Ethernet links.

Can be used to create a very high quality video, audio, data, and Ethernet broadcast contribution/distribution network.



The Olson Model OTOLS-BI1X12-10 Bidirectional 1.25Gb/s Single-Mode Small Form Pluggable (SFP) Fiber Optic Transceiver is one of several module options available for the Model OTDV-1250 VAD+E Transport Link as well as a number of Olson fiber optic Ethernet transport products. The module is compatible with gigabit Ethernet and 1000BASE-SX and Fiber Channel FC-PH-2 for 100-M5-SN-1. The SFP 20-pin hot plug connector allows the module to be swapped in the field.

The link can be ordered in two configurations: a 1310nm FP laser transmitter and 1550nm receiver or a 1550nm DFB laser transmitter and a 1310nm receiver. The transceiver can operate up to 10km over a single 9/125 μ m single-mode fiber.

Note: These SFP modules do not include DMM monitoring.

Ordering Information

Model OTOLS-BI1312-10	Transceiver, Data, SFP, 1.25Gb/s, 10km, Single SC Connector, 1310nm Tx/1550nm Rx
Model OTOLS-BI1512-10	Transceiver, Data, SFP, 1.25Gb/s, 10km, Single SC Connector, 1550nm Tx/1310nm Rx

System Specifications

Recommended Operating Conditions

	Min	Typ	Max	Units
Absolute Max. Ratings				
Power Supply Voltage	-0.5		+3.6	V
Storage Temperature	-40		+85	°C
Normal Operating Conditions				
Operating Temperature	0		+70	°C
Power Supply Voltage	3.15	3.3	3.45	V
Power Supply Current			190	mA
Surge Current			+30	mA
Baud Rate		1.25		GBaud
Total Supply Current			+300	mA

Physical Characteristics

	Min	Typ	Max	Units
Weight		0.8		oz.
		23		g
Dimensions (L x W x H)	2.68 x 0.47 x 0.28			in.
	68 x 12 x 7			mm

Performance Specifications - Electrical

	Min	Typ	Max	Units
Transmitter				
CML/PECL Inputs (Differential) (1)	400		2500	mVp
Input Impedance (Differential) (2)	85	100	115	Ohms
Tx_Disable Input Voltage - High	2		3.45	V
Tx_Disable Input Voltage - Low	0		0.8	V
Tx_Fault Output Voltage - High (3)	V _{cc} -0.5		V _{cc} +0.3	V
Tx_Fault Output Voltage - Low (4)	0		0.5	V
Receiver				
CML Outputs (Differential)(5)	400	800	1200	mVpp
Output Impedance (Differential)	85	100	115	Ohms
Rx_LOS Output Voltage High (3)	V _{cc} -0.5		V _{cc} +0.3	V
Rx_LOS Output Voltage Low (4)	0		0.8	V

NOTES:

- 1) Ac coupled inputs.
- 2) R_N > 100 kOhms @ DC.
- 3) I_o = 400μA; Host V_{cc}.

- 4) I_o = -4.0mA.
- 5) AC coupled outputs.

Optical and Electrical Characteristics

	Min	Typ	Max	Units
Distance (9/125μm)		10		km
Data Rate		1.25		Gb/s
Transmitter				
Wavelength (1310/1550nm)	1270	1310	1350	nm
Wavelength (1550/1310nm)	1500	1550	1580	nm
Spectral Width (1310/1550nm, RMS)			4	nm
Spectral Width (1550/1310nm, -20dB)			1	nm
Optical Output Power (1310nm)	-9.0		-3.0	dBm
Optical Output Power (1550nm)	-8.0		-3.0	dBm
Extinction Ratio	9			dB
Rise/Fall Time (20%-80%)			90	ps
Output Optical Eye	IUT-T G.957 Compliant			
Data Input Swing Differential	500		2000	mV
Input Differential Impedance	90	100	110	Ohms
Enable Tx_Disable	2.0		V _{cc} +0.3	V
Disable Tx_Enable	0		0.8	V
Tx_Fault = Fault	2.0		V _{cc} +0.3	V
Tx Fault = Normal	0		0.8	V
Tx_Disable Assert Time			10	s
Receiver				
Wavelength (1310/1550nm)	1500	1550	1580	nm
Wavelength (1550/1310nm)	1270	1310	1360	nm
Sensitivity			-20	dBm
Output Differential Impedance	90	100	110	Ohms
Data Output Swing Differential	370		2000	mV
Rise/Fall Times			2.2	ns
LOS De-assert			-24	dBm
LOS Assert	-40			dBm
LOS High	2.0		V _{cc} +0.3	V
LOS Low			0.8	V