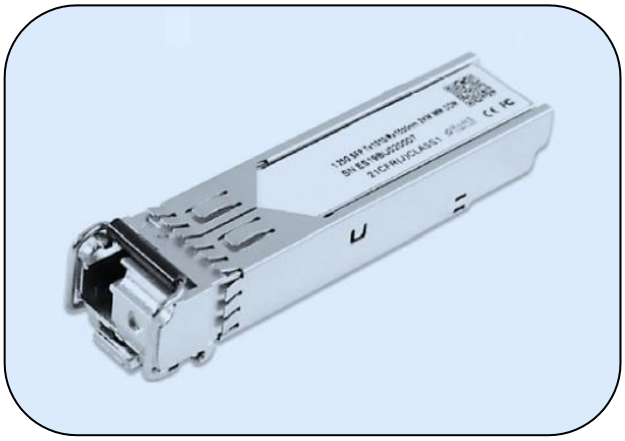
XSI531-02Lx

SFP BiDi 1.25 Gbps 2 km Reach

Tx 1550 nm/Rx 1310 nm Transceiver



Features

- Dual data-rate of 1.25 Gbps/1.063 Gbps operation
- 1550 nm FP laser and PIN photodetector for 2 km transmission over MMF
- Compliant with SFP MSA and SFF-8472 with simplex LC receptacle
- Digital Diagnostic Monitoring: Internal Calibration or External Calibration
- Compatible with SONET OC-24-LR-1
- +3.3 V single power supply
- Operating Case Temperature Range
  0 °C to 75 °C (Commercial)
  -40 °C to 85 °C (Industrial)
- RoHS 6 compliant

Applications

- Gigabit Ethernet
- Fiber Channel
- Switch to Switch interface
- Switched backplane applications
- Router/Server interface
- Other optical transmission systems

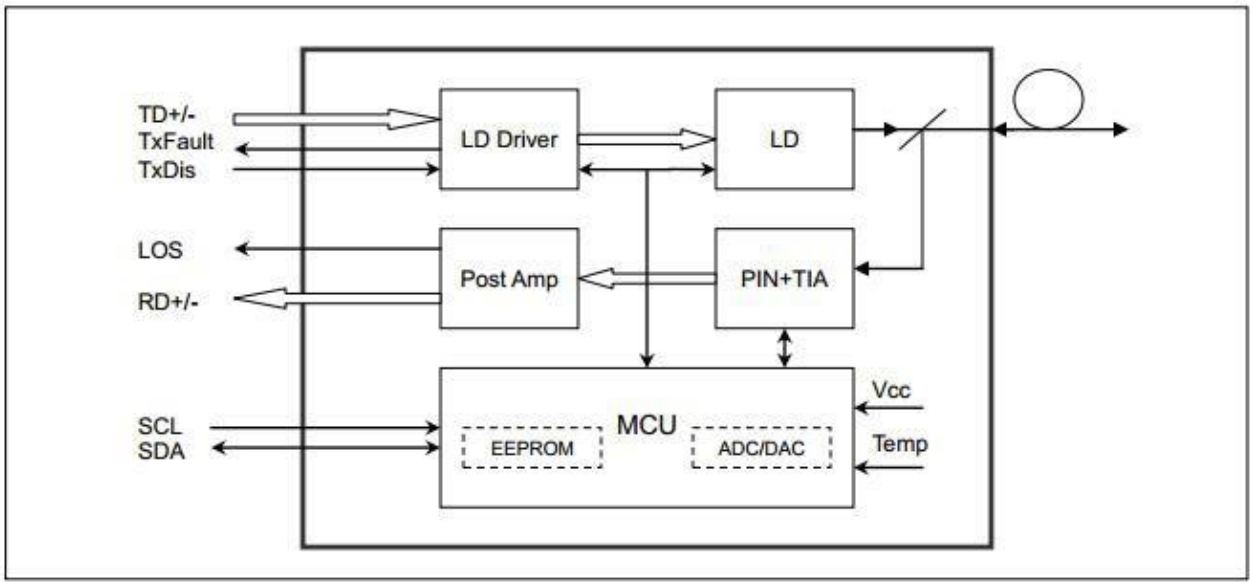
Description

The SFP-BIDI transceivers are high performance, cost effective modules supporting dual data-rate of 1.25 Gbps/1.0625 Gbps and 2 km transmission distance with MMF.

The transceiver consists of three sections: an FP laser transmitter, a PIN photodiode integrated with a trans-impedance preamplifier (TIA) and MCU control unit. All modules satisfy class I laser safety requirements.

The transceivers are compatible with SFP Multi-Source Agreement (MSA) and SFF-8472. For further information, please refer to SFP MSA.

Block Diagram



Absolute Maximum Ratings

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Storage Temperature	Ts	-40		85	°C	
Maximum Supply Voltage	Vcc	-0.5		4.7	V	
Operating case temperature	TOP	0		70	°C	

Electrical Characteristics

Parameter		Symbol	Min.	Typ.	Max.	Unit	Note
Transmitter							
Diff. input voltage swing			120		820	mVpp	1
Tx Disable input	H	VIH	2.0		Vcc+0.3	V	
	L	VIL	0		0.8		
Tx Fault output	H	VOH	2.0		Vcc+0.3	V	2
	L	VOL	0		0.8		
Input Diff. Impedance		Zin		100		Ω	
Receiver							
Diff. output voltage swing			340	650	800	mVpp	3
Rx LOS Output	H	VOH	2.0		Vcc+0.3	V	2
	L	VOL	0		0.8		

Notes

1. TD+/- are internally AC coupled with 100 Ω differential termination inside the module.
2. Tx Fault and Rx LOS are open collector outputs, which should be pulled up with 4.7 k to 10 kΩ resistors on the host board. Pull up voltage between 2.0 V and Vcc+0.3 V.
3. RD+/- outputs are internally AC coupled, and should be terminated with 100 Ω (differential) at the user SERDES

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Transmitter						
Operating Wavelength	λC	1530	1550	1570	nm	
Ave. output power (Enabled)	Po	-10		-4	dBm	1
Extinction Ratio	ER	10			dB	1
RMS spectral width	Δλ			4	nm	
Rise/Fall time (20%~80%)	Tr/Tf			0.26	ps	2
Output Eye Mask	Telcordia GR-253-CORE and ITU-T G.957 compatible					
Receiver						
Operating Wavelength		1260		1360	nm	
Sensitivity	Psen			-22	dBm	3
Min. overload	Pimax	-3			dBm	
LOS Assert	Pa	-36			dBm	
LOS De-assert	Pd			-24	dBm	4
LOS Hysteresis	Pd-Pa	0.5		6	dB	

Notes

1. Measure at 2^{23}-1 NRZ PRBS pattern
2. Transmitter eye mask definition
3. Measured with Light source 1550 nm (1310 nm), ER=10 dB; BER =<10^{-12} @PRBS=2^{23}-1 NRZ.
4. When LOS de-asserted, the RX data+/- output is signal output.

Ordering information[1]

Part number	Product Description
XSI531-02LY	SFP BiDi, 1.25 Gbps, 2 km reach, LC, Tx 1550/Rx 1310 nm, 0°C~70°C, DDMI
XSI531-02LM	SFP BiDi, 1.25 Gbps, 2 km reach, LC, Tx 1550/Rx 1310 nm, -40°C~70°C, DDMI

Notes

[1] For accurate order specification please contact XenOpt reseller before placing an order. The content of this document is subject to change without notice. XenOpt does not guarantee errorless or outdated information.
Please specify any compatibility requirements at time of ordering. Standard MSA compatible pluggable components may not work or some function of these components may not be available in devices that require customized compatible devices. Pluggable components compatible with one type of communications equipment may not work in other type of communications equipment.

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The product image is only for reference purpose

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