

SFP-SXD-I

1GBASE, SFP, SX, MMF TRANSCEIVER

850nm, 550m REACH, REACH, DUPLEX LC CONNECTOR



Features

- Up to 1.25Gb/s Data Links
- Hot-Pluggable
- Duplex LC connector
- Up to 550m on 50/125µm MMF
- 850nm VCSEL laser transmitter
- Single +3.3V Power Supply
- Low power dissipation <1W typically
- Industrial operating temperature range: -40°C to 85°C
- RoHS compliant and Lead Free

Applications

- 1.25 Gb/s 1000Base-SX Ethernet
- Metro/Access Networks
- 1×Fibre Channel
- Other Optical Links

1. Absolute Maximum Ratings

Operation in excess of any absolute maximum ratings might cause permanent damage to this module.

Parameter	Symbol	Min	Typ	Max	Units
Storage Temperature	TS	-40		+85	°C
Power Supply Voltage	VCC	-0.5		4	V
Relative Humidity	RH	0		85	%

2. Recommended Operating Environment

Parameter	Symbol	Min	Typ	Max	Unit
Case Operating Temperature	TC	-40		85	°C
Supply Voltage	VCC	3.135		3.465	V
Supply Current	Icc			300	mA
Inrush Current	I _{surge}			I _{cc} +30	mA
Maximum Power	P _{max}			1	W

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3. Electrical Characteristics

(TOP = -40 to 85°C, VCC = 3.135 to 3.465 Volts)

Parameter	Symbol	Min	Typ	Max	Unit	Note
Transmitter						
Input differential impedance	Rin	90	100	110		1
Single ended data input swing	Vin PP	250		800	mVpp	
Transmit Disable Voltage	VD	Vcc -1.3		Vcc	V	2
Transmit Enable Voltage	VEN	Vee		Vee+0.8	V	
Transmit Disable Assert Time	Tdessert			10	us	
Receiver						
Single ended data output swing	Vout,pp	250		800	mv	3
LOS Fault	Vlosfault	Vcc -0.5		VCC_host	V	5
LOS Normal	Vlos-norm	Vee		Vee+0.5	V	5
Power Supply Rejection	PSR	100			mVpp	6

Notes:

1. AC coupled.
2. Or open circuit.
3. Into 100 ohm differential termination.
4. 20 – 80 %
5. LOS is LVTTTL. Logic 0 indicates normal operation; logic 1 indicates no signal detected.
6. All transceiver specifications are compliant with a power supply sinusoidal modulation of 20 Hz to 1.5MHz up to specified value applied through the power supply filtering network shown on page 23 of the Small Form-factor Pluggable (SFP) Transceiver Multi-Source Agreement (MSA), September 14, 2000.

4. Optical Parameters

(TOP = -40 to 85°C, VCC = 3.135 to 3.465 Volts)

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter						
Center Wavelength	λ_c	840	850	860	nm	
Spectral Width	σ			0.85	nm	
Optical Output Power	Pout	-9		-3	dBm	1
Extinction Ratio	ER	9			dB	
Optical Rise/Fall Time	tr / tf			260	ps	2

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Relative Intensity Noise	RIN			-120	dB/Hz	
Output Eye Mask	Compliant with IEEE802.3 z (class 1 laser safety)					
Receiver						
Optical Input Wavelength	λ_c	770		860	nm	
Receiver Overload	Pol	0			dBm	4
RX Sensitivity	Sen			-17	dBm	4
RX_LOS Assert	LOS A	-35			dBm	
RX_LOS De-assert	LOS D			-18	dBm	
RX_LOS Hysteresis	LOS H	0.5			dB	
General Specifications						
Data Rate	BR		1.25		Gb/s	
Bit Error Rate	BER			10^{-12}		
Max. Supported Link Length on 9/125 μ m SMF@1.25Gb/s	LMAX		550		m	
Total System Budget	LB	8			dB	

Notes:

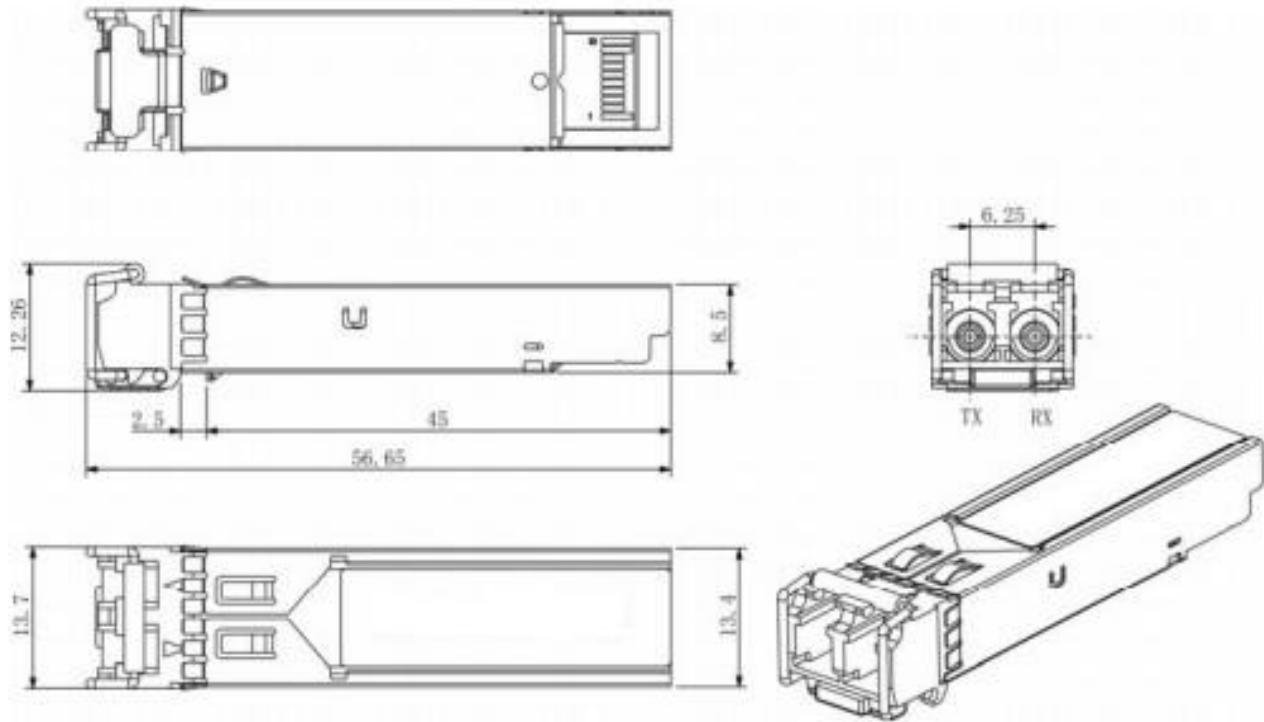
1. The optical power is launched into SMF.
2. 20-80%.
3. Jitter measurements taken using Agilent OMNIBERT 718 in accordance with GR-253.
4. Measured with PRBS 2⁷⁻¹ at 10⁻¹² BER

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5. Mechanical Diagram



Note: External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.

6. Ordering Information

OEM	PartNumber	OEM	PartNumber
Accedian	7SM-100-L	F5 Networks	F5-UPG-SFP-R-L
Adtran	1200480L1-L	Finisar	FTRJ-8519-7D-2.5-L
Adtran	12004800-L	Finisar	FTLF8519P2BTL-L
Adtran	1200482G1-L	Finisar	FTLF8519P2XNL-L
Adtran	1184561P3-L	Finisar	FTLF8519P2BNL-L
Adtran	1184561PG3-L	Finisar	FTRJ8519P1BNLMC-L
ADVA	61004008-L	Fortinet	FG-TRAN-SX-L
ADVA	1061705854-01-L	Fortinet	FN-TRAN-SX-L
ADVA	0061705844-03-L	Fortinet	FR-TRAN-SX-L
Alcatel	109570606-L	Gigamon	SFP-502-L
Alcatel-Lucent	3FE25773AA-L	HP	J4858B-L
Alcatel-Lucent	3HE00027AA-L	HP	J4858C-L

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Alcatel-Lucent	3HE00027CA-L	HP	J4858D-L
Alcatel-Lucent	SFP-GIG-SX-L	HP	JW088A-L
Allen-Bradley	1783-SFP1GSX-L	HP	Q8N53A-L
Allied Telesis	SPSX-L	HP	3CSFP91-L
Allied Telesis	AT-SPSX-L	Huawei	ESFP-GE-SX-MM850-L
Arista	SFP-1G-SX-L	Huawei	LS-SFP-SX-L
Aruba	SFP-SX-L	Infinera	TOM-1G-SX-A-L
Avaya	108873241-L	JDSU	AC-SFP-1000SX-L
Avaya	AA1419048-E6-L	Juniper	EX-SFP-1GE-SX-L
Brocade-Foundry	E1MG-SX-L	Juniper	EX-SFP-1GE-SX-ET-L
Brocade-Foundry	E1MTG-SX-L	Juniper	QFX-SFP-1GE-SX-L
Brocade-Foundry	E1MG-SX-OM-L	Juniper	SFP-1GE-SX-L
Brocade-Foundry	E1MG-SX-OM-T-L	Juniper	SRX-SFP-1GE-SX-L
BTI	BP3AD1SS-L	Linksys	MGBSX1-L
Calix	100-01660-L	Luxul	1G-MM-DX-LC-L
Check Point	CPAC-TR-1SX-L	Meraki	SFP-1GB-SX-L
Ciena	NTTP01AF-L	Meraki	MA-SFP-1GB-SX-L
Ciena	XCVR-B00G85-L	MRV	SFP-DGD-SX-L
Ciena	B-700-1016-001-L	MSA	SFP-SX-L
Ciena	XCVR-A00G85-L	MSA	SFP-SX-I-L
Cisco	GLC-SX-MM-L	MSA	SFP-SX-RGD-L
Cisco	ONS-GX-2FC-MMI-L	MSA	LN-SFP-SXD-I
Cisco	GLC-SX-MMD-L	Netgear	AGM731F-L
Cisco	GLC-SX-MM-RGD-L	NetScout	321-0435-L
Cisco	ONS-SE-G2F-SX-L	Nortel	AA1419013-E5-L
Cisco	ONS-SI-GE-SX-L	Nortel	AA1419014-E5-L
Cisco	SFP-GE-S-L	Omnitron	7206-0-L
Cyan	280-0045-00-L	OnePort	OP-SFP-SXD-L
Cyan	280-0182-00-L	Palo Alto	PAN-SFP-SX-L
D-Link	DEM-311GT-L	Samsung	SLS-BB1150EGEX-L
Dell	331-5308-L	Signamax	065-79SXMG-H-L
Dell	320-2881-L	Sonicwall	01-SSC-9789-L
Dell	407-BBOR-L	Tellabs	0410-0447-L

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Dell Force10	GP-SFP2-1S-L	TP-Link	TL-SM311LM-L
Edgecore	ET4201-SX-L	Transition Networks	TN-SFP-SXD-L
EnGenius	SFP2185-05-L	TRENDnet	TEG-MGBSX-L
Enterasys	MGBIC-LC01-L	Ubiquiti Networks	UF-MM-1G-L
Ericsson	RDH90120/42009-L	Zhone	SFP-GE-SX-850-DLC-L
Extreme	10051H-L		