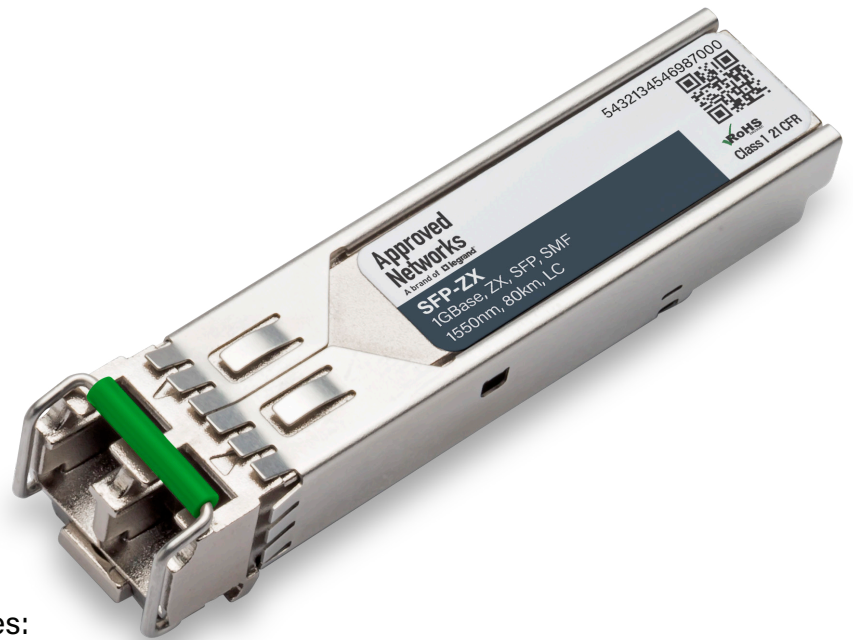


Features

- Up to 1.25Gb/s Data Links
- Hot-Pluggable
- Duplex LC connector
- Up to 80km on 9/125µm SMF
- 1550nm DFB laser transmitter
- Single +3.3V Power Supply
- Low power dissipation <1W typically
- Available operating temperature ranges:
 - Industrial: -40°C to 85°C
 - Extended: -5°C to 85°C
 - Commercial: 0°C to 70°C



- RoHS compliant and Lead Free
- Metro/Access Networks

Applications

- 1.25 Gb/s 1000Base-ZX Ethernet
- 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	Industrial	TC	-40	85	°C
	Extended	TC	-10	85	°C
	Commercial	TC	0	70	°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

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	R _{in}	90	100	110	Ohm	1
Single ended data input swing	V _{in PP}	250		1200	mVpp	
Transmit Disable Voltage	VD	V _{cc} -1.3		V _{cc}	V	2
Transmit Enable Voltage	VEN	V _{ee}		V _{ee} +0.8	V	
Transmit Disable Assert Time	T _{dassert}			10	us	
Receiver						
Single ended data output swing	V _{out,pp}	250		800	mv	3
LOS Fault	V _{losfault}	V _{cc} -0.5		V _{CC_host}	V	5
LOS Normal	V _{losnorm}	V _{ee}		V _{ee} +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

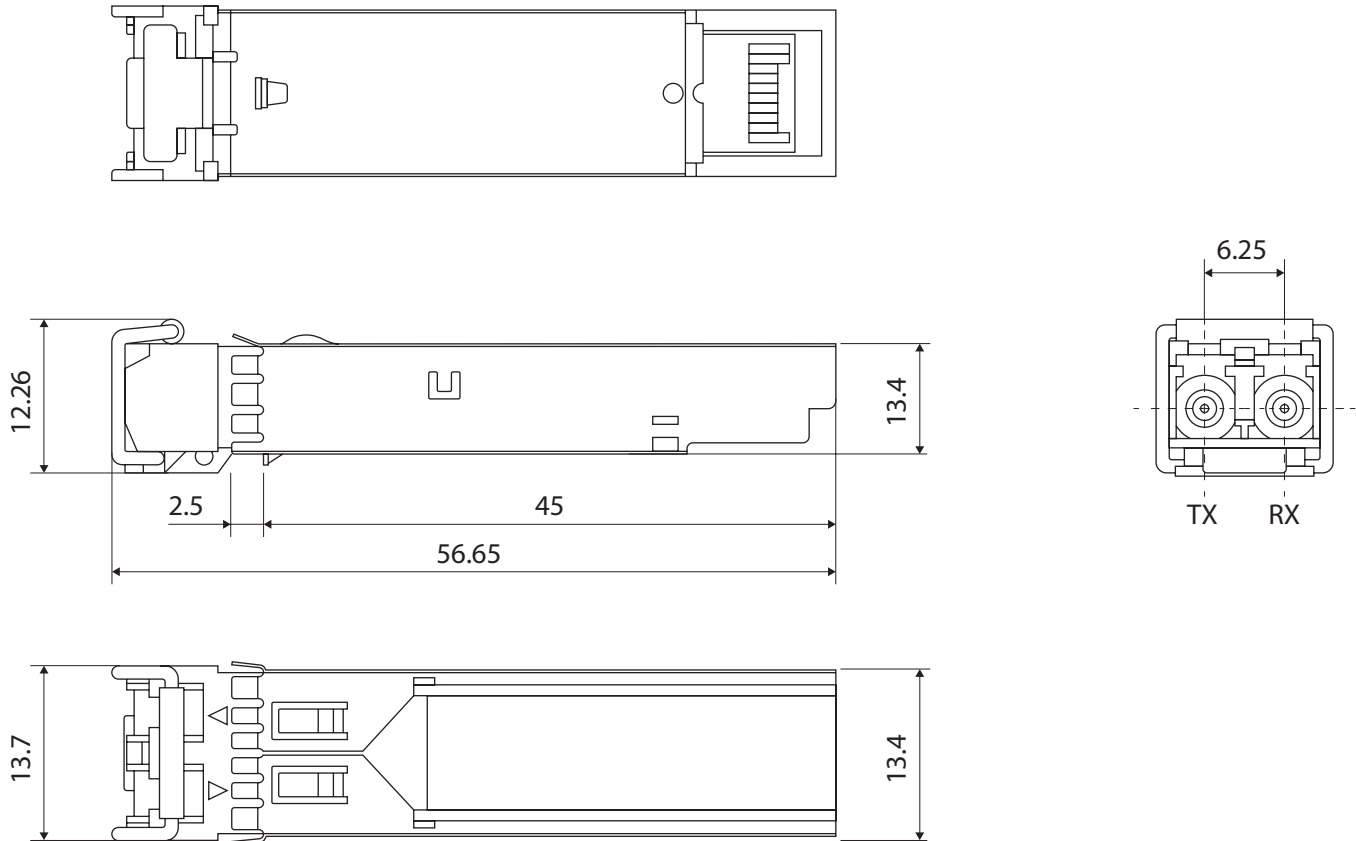
(TOP = -40 to 85°C, VCC = 3.135 to 3.465 Volts)

Parameter	Symbol	Min	Typ	Max	Unit	Notes
Transmitter						
Center Wavelength	λ_c	1530	1550	1570	nm	
Spectral Width	σ			1	nm	
Side Mode Supression Ratio	SMSR	30			dB	
Optical Output Power	Pout	-2		+3	dBm	1
Extinction Ratio	ER	9			dB	
Optical Rise/Fall Time	tr / tf			260	ps	2
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	1270		1610	nm	
Receiver Overload	Pol	-3			dBm	4
RX Sensitivity	Sen			-24	dBm	4
RX_LOS Assert	LOS A	-40			dBm	
RX_LOS De-assert	LOS D			-25	dBm	
RX_LOS Hysteresis	LOS H	0.5			dB	
General						
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		80		m	
Total System Budget	LB	22			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

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	Part Number	OEM	Part Number
Accedian	7SR-000-A	Cisco	SFP-GE-Z-A
Adtran	1184562PG5-A	Cisco	GLC-ZX-SMD-C1
Adtran	1184562P5-A	Cisco	GESFP-ZX-CSC
Adtran	1200481E1-70K-A	Cisco	GESFP-ZXI-CSC
ADVA	1061705852-02-A	Dell	407-BBOY-A
Adva	61004014-A	Edgecore	ET4201-ZX-A
Alcatel-Lucent	3HE00029CA-A	Extreme	10053-A
Alcatel-Lucent	3FE25776AA-A	Finisar	FTLF1519P1XCL-A
Alcatel-Lucent	ISFP-GIG-LH70-A	Finisar	FTLF1518P1BTL-A
Alcatel-Lucent	3HE00029CA-C1	Finisar	FTRJ1519P1XNL-A

Arista	SFP-1G-ZX-A	Fortinet	FR-TRAN-ZX-A
Avaya	AA1419051-E6-A	H3C	2312173-A
Avaya	AA1419052-E6-A	Juniper	SRX-SFP-1GE-LH-A
Brocade-Foundry	E1MG-LHA-OM-A	Juniper	SFP-1GE-LH-A
Brocade-Foundry	E1MG-LHA-OM-T-A	Juniper	EX-SFP-1GE-LH-A
Calix	100-01664-A	Juniper	EX-SFP-1GE-LH-120-A
Ciena	XCVR-080Y55-A	Juniper	EX-SFP-1GE-LH-C1
Ciena	GESFP-ZXI-CIE	Moxa	SFP-1GZXLC-A
Ciena	XCVR-080Y55-C1	Moxa	SFP-1GZXLC-T-A
Cisco	ONS-SE-GE-ZX-A	MSA	AN-SFP-ZX-I
Cisco	ONS-SI-GE-ZX-A	MSA	AN-SFP-ZX
Cisco	ONS-GC-GE-ZX-A	OnePort	OP-SFP-ZXD
Cisco	GLC-ZX-SMD-A	Overture	3000-168-A
Cisco	GLC-ZX-SM-A	Palo Alto	PAN-SFP-ZX-A
Cisco	GLC-ZX-SM-RGD-A	Tellabs	0410-044X-A
Cisco	GLC-ZX-SMD-RGD-A	Zhone	SFP-GE-ZX-1550-DLC-A

7. Contact Information

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Web: <http://www.approvednetworks.com>