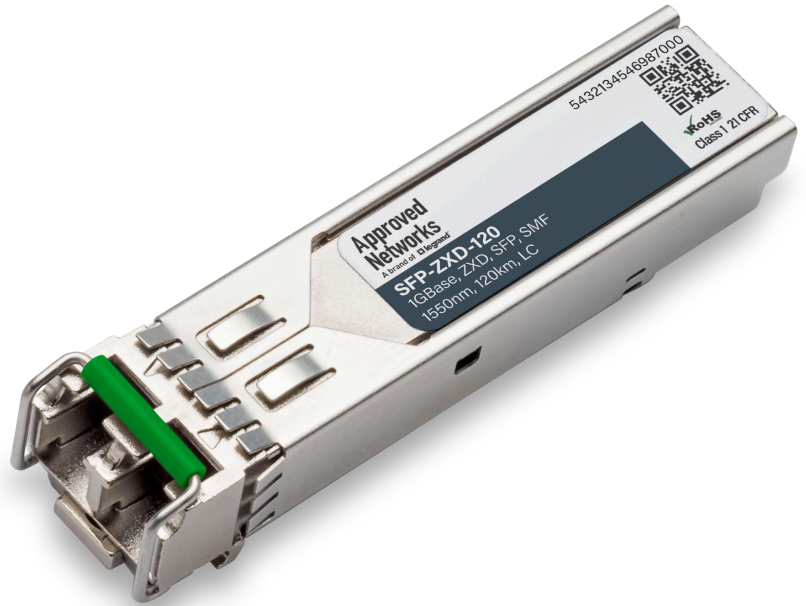


## Features:

- Up to 155Mb/s Data Links
- Hot-Pluggable
- Duplex LC connector
- Up to 120km on 9/125µm SMF
- 1550nm DFB laser transmitter
- Single +3.3V Power Supply
- Low power dissipation <1W typically
- Available operating case temperature ranges:
  - Industrial: -40 to 85°C
  - Extended: -5 to 85°C
  - Commercial: 0 to 70°C
- RoHS compliant and Lead Free



## Applications:

- SONET OC-3/SDH STM-1
- Fast Ethernet
- Other Optical Links

## 1. Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Storage Temperature	TS	-40		+85	°C
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
		-5		85	°C
		0		+70	°C
Supply Voltage	VCC	3.135		3.465	V

Supply Current	Icc			300	mA
Inrush Current	I <sub>surge</sub>			I <sub>cc</sub> +30	mA
Maximum Power	P <sub>max</sub>			1	W

### 3. Electrical Characteristics

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
<b>Transmitter</b>						
Input differential impedance	R <sub>in</sub>	90	100	110	Ohm	1
Single ended data input swing	V <sub>in PP</sub>	250		1200	mVp-p	
Transmit Disable Voltage	VD	V <sub>cc</sub> - 1.3		V <sub>cc</sub>	V	2
Transmit Enable Voltage	VEN	V <sub>ee</sub>		V <sub>ee</sub> + 0.8	V	
Transmit Disable Assert Time	T <sub>dessert</sub>			10	us	
<b>Receiver</b>						
Single ended data output swing	V <sub>out,pp</sub>	300		800	mv	3
Data output rise time	t <sub>r</sub>			500	ps	4
Data output fall time	t <sub>f</sub>			500	ps	4
LOS Fault	V <sub>losfault</sub>	V <sub>cc</sub> - 0.5		V <sub>CC_host</sub>	V	5
LOS Normal	V <sub>los norm</sub>	V <sub>ee</sub>		V <sub>ee</sub> +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

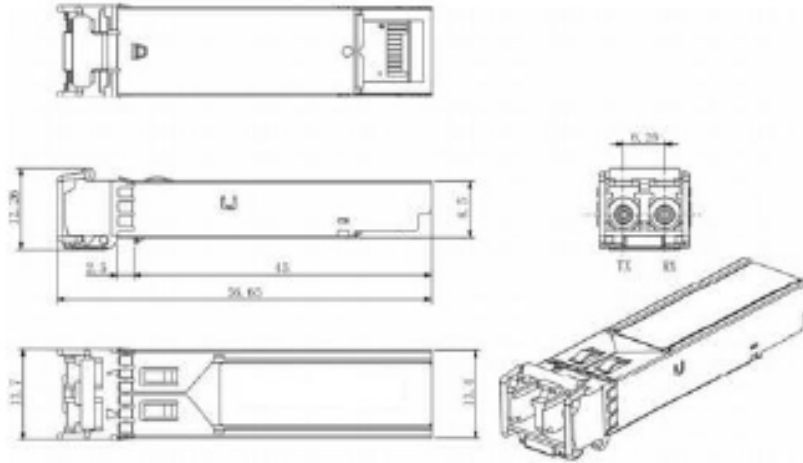
(TOP = -40 to 85°C, VCC = 3.135 to 3.465 Volts)

Parameter	Symbol	Min.	Typ	Max.	Unit	Note
<b>Transmitter</b>						
Center Wavelength	$\lambda_c$	1530	1550	1570	nm	
Spectral Width	$\sigma$			1	nm	
Optical Output Power	Pout	0		5	dBm	1
Optical Rise/Fall Time	tr / tf			500	ps	2
Extinction Ratio	ER	10			dB	
Generated Jitter (peak to peak)	JTXp-p			0.07	UI	3
Generated Jitter (rms)	JTXrms			0.007	UI	3
Eye Mask for Optical Output	Compliant with G.957(class 1 laser safety)					
<b>Receiver</b>						
Optical Input Wavelength	$\lambda_c$	1260		1600	nm	
Receiver Overload	Pol	-10			dBm	4
RX Sensitivity	Sen			-34	dBm	4
RX_LOS Assert	LOS A	-45			dBm	
RX_LOS De-assert	LOS D			-35	dBm	
RX_LOS Hysteresis	LOS H	0.5			dB	
<b>General</b>						
Data Rate	BR		155		Mb/s	
Bit Error Rate	BER			10-12		
Max. Supported Link Length on 9/125 $\mu$ m SMF@155Mb/s	LMAX		120		km	
Total System Budget	LB	34			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	7SS-000-A	Cisco	GLC-ZX-SMD-120-A
Adtran	1184562P5-120KM-A	Cisco	GLC-ZX-SM-120-A
Alcatel	3HE01389CA-A	Cisco	GLC-ZX-SM-120-RGD-A
Alcatel	3FE25776AA-120-A	Cisco	GLC-ZX-SM-120-C1
Alcatel	3HE01389AA-A	Comtrend	3190041-A
Alcatel-Lucent	SFP-GIG-120-A	Fortinet	FR-TRAN-ZX-120-A
Alcatel-Lucent	3HE00029AA-120-A	Juniper	SFP-1GE-LH-120-A
Alcatel-Lucent	SFP-GIG-LH120-A	Juniper	SFP-1GE-LH-120-C1
Alcatel-Lucent	3HE00029AA-120-A	Moxa	SFP-1GEZXLC-120-A
Arista	SFP-1G-ZX-120-ARISTA-A	MRV	SFP-GD-EZX-A
Avaya	AA1419052-E6-120KM-A	MSA	AN-SFP-ZX-120
Brocade-Foundry	E1MG-LHB-A	MSA Champion ONE	1000SFP120
Calix	100-01665-CTEMP-A	OnePort	OP-SFP-ZXD-120
Calix	100-01665-A	Transition Networks	TN-SFP-LX12-A
Ciena	XCVR-080Y55-120-A	ZTE	SFP-GE-S120K-A
Ciena	XCVR-080Y55-120-C1		

## 7. Contact Information

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