Overview

The GE Security transceiver module is specifically designed to accommodate high-performance optical fiber, including integrated duplex data link over single mode. Compliant with the SFP Multisource Agreement (MSA), these transceiver modules feature hot-plug capability for easy installation without interrupting host equipment operating online. The SFP transceiver can install into GE Security switch products with 100Base-FX or 1000Base-SX/LX SFP interface.

With the data, long-reach fiber capability and PoE from one unit, the MC100FX-TX-PoE will reduce cables and eliminate the need for dedicated electrical outlets on the wall, ceiling or any unreachable place. It frees the security IP camera and wireless AP deployment from restrictions due to power outlet locations. Power and data switching are integrated into one unit and delivered over a single cable, eliminating costs for additional AC wiring and reducing installation time.

Standard Features

- SFP multi-source agreement compliant
- Data rate 100Mbps to 1.25Gbps, varies on module
- Class 1 laser safety standard IEC 60825 compliant
- LC duplex receptacle
- Low power dissipation
- Plug-and-play capability for easy installation

SFP1000SX-220

SFP100FX1310-TSC-2Km

SFP1000LX-10Km

SFP100FX1310-TSC-20Km

SFP1000LX-30KM

SFP1000LX-70Km

Small Format Pluggables Transceiver Modules

Specifications

Absolute Maximum Ratings					
Parameter		**Symbol**	**Min.**	**Max.**	**Unit**
Storage Temperature		T_S	-40	+85	℃
Supply Voltage		$V_{CC}T$ $V_{CC}R$	-0.5	4.0	V
Storage Relative Humidity		RH	5	95	%
Data Rate GbE	SFP1000SX-220 SFP1000LX-10km	DR	-	1250	Mbps
Data Rate Fast Ethernet	SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	DR	-	125	Mbps

Recommended Operating Conditions						
Parameter		**Symbol**	**Min.**	**Type**	**Max.**	**Unit**
Case Operating Temperature		T_C	0	—	70	℃
Supply Voltage		V_{CC}	3.1	3.3	3.5	V
Supply Current	SFP1000SX-220 SFP1000LX-10km SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	$I_{TX} + I_{RX}$	- - - -	160 180 150 150	300 300 300 300	mA

Transmitter Electro-Optical Interface (over Case Operating Temperature)						
Parameter		**Symbol**	**Min.**	**Type**	**Max.**	**Unit**
Transmitter Differential Input Voltage		TD +/-	400		2400	mV
Optical Output Power	SFP1000SX-220 SFP1000LX-10km SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	P_O	-9.5 -9.5 -20 -15	- - -	-4 -3 -14 -8	dBm
Optical Extinction Ratio	SFP1000SX-220 SFP1000LX-10km SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	E_R	9 9 10 8.2	- - - -	- - - -	dB
Center Wavelength	SFP1000SX-220 SFP1000LX-10km SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	□C	830 1285 1270 1261	850 1310 - -	860 1343 1380 1360	nm
Spectral Width (RMS)	SFP1000SX-220 SFP1000LX-10km SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	Δ□	- - - -	- - - -	0.85 2.8 7.7 4	nm
Optical Rise/Fall Time	SFP1000SX-220 SFP1000LX-10km SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	t_r / t_f	- - 0.6 -	- - -	260 260 3.0 2	ns
Total Jitter	SFP1000SX-220 SFP1000LX-10km	TJ	- -	- -	227 227	ps
Random Jitter	SFP1000SX-220 SFP1000LX-10km	RJ			0.76 0.76	ns

Transmitter Electro-Optical Interface (over Case Operating Temperature)						
Parameter		Symbol	Min.	Type	Max.	Unit
Transmitter Differential Input Voltage		TD +/-	400		2400	mV
Tx_Fault - High		V_{Fault_H}	2	-	V_{CC}	V
Tx_Fault - Low	SFP1000SX-220 SFP1000LX-10km SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	V_{Fault_L}	V_{ee} V_{ee} V_{ee}	- - -	V_{ee}+0.8 V_{ee}+0.5 V_{ee}+0.8	V
Tx_Disable - High		$V_{Disable\_H}$	2	-	V_{CC}	V
Tx_Disable - Low		$V_{Disable\_L}$	V_{ee}	-	V_{ee}+0.8	V
Receiver Differential Output Voltage		RD +/-	400	-	2000	mV
Receiver Overload (Maximum)	SFP1000SX-220 SFP1000LX-10km SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	P_{INMAX}	-3 -3 -8 -5	- - - -	- - - -	dBm
Receiver Sensitivity (Minimum)	SFP1000SX-220 SFP1000LX-10km SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	P_{INMIN}	- - - -	- - - -	-17 -20 -32 -34	dBm
Operating Center Wavelength	SFP1000SX-220 SFP1000LX-10km SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	□C	770 1260 1270 1260	- - - -	860 1620 1380 1620	nm
Receiver Loss of Signal - TTL Low (Assert)	SFP1000SX-220 SFP1000LX-10km SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	$P_{RX\_LOS\ D}$	- - - -	- - - -	-17.5 -22 -32 -34	dBm
Receiver Loss of Signal - TTL High (De-assert)	SFP1000SX-220 SFP1000LX-10km SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	$P_{RX\_LOS\ A}$	-35 -35 -45 -45	- - - -	- - - -	dBm
Receiver Loss of Signal Hysteresis	SFP1000SX-220 SFP1000LX-10km SFP100FX1310-TSC-2Km SFP100FX1310-TSC-20Km	$P_{RX\_LOS\ H}$	0.5 0.5 1.5 1	- - - -	- - - -	dB

Environmental Specifications	
Operating	
Temperature	0~70°C
Relative Humidity	5%~95% (non-condensing)
Storage	
Temperature	-40~85°C
Relative Humidity	5%~95% (non-condensing)

Electrical Specification
Input Voltage: 3.3V DC
AS/NZS CISPR 22 : 2006

Reliability

MTBF > 50,000 hrs @ 25°C

Note: Vcc=3.1 V to 3.5 V to 3.5 V, TBAB=0P P°C to 70P P°C

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Specifications subject to
change without notice.

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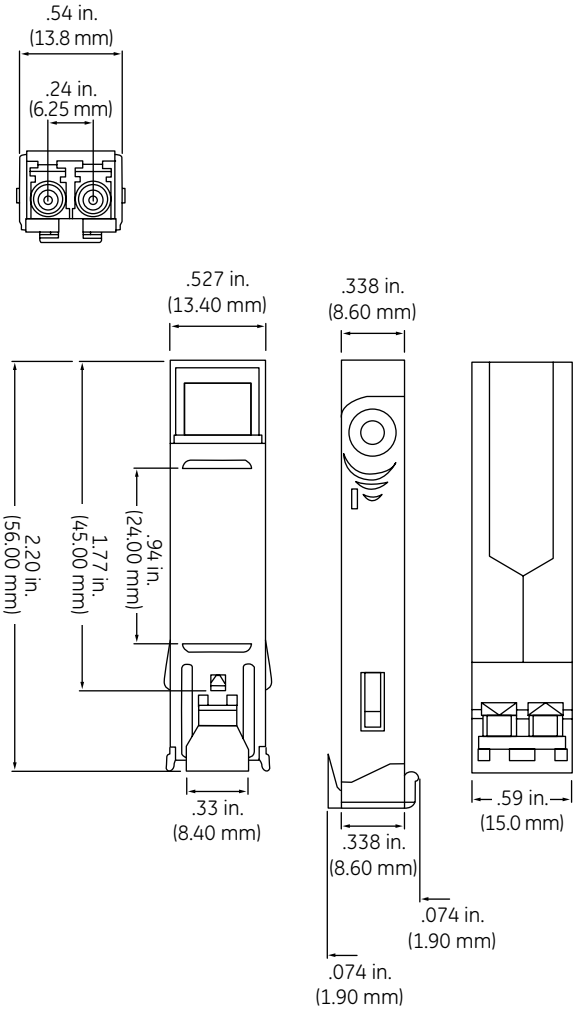
Ordering Information

SFP1000SX-220	1000 Base-SX SFP Module - 220m
SFP100FX1310-TSC-2km	100 Base-FX SFP Module - 2km
SFP1000LX-10km	1000 Base-LX SFP Module - 10km
SFP100FX1310-TSC-20km	100 Base-FX SFP Module - 20km
SFP1000LX-30km	1000 Base-LxSFP Module - 30km
SFP1000LX-70km	1000 Base-LxSFP Module - 70km

Dimensional Diagrams



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