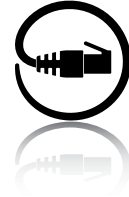


# Stride SE2 Series Managed Industrial Ethernet Switches



## Stride SE2 Series Managed Models

Part Number	Price	Ethernet Ports	Fiber Ports	Input Power (max)
<a href="#"><u>SE2-SW8M</u></a>		8	–	8.1 W
<a href="#"><u>SE2-SW8M-2P</u></a>		6	2 GbE SFP*	9.1 W
<a href="#"><u>SE2-SW8M-2C1</u></a>			2 SC	8.1 W
<a href="#"><u>SE2-SW8M-2T1</u></a>			2 ST	
<a href="#"><u>SE2-SW16M</u></a>		16	–	18W
<a href="#"><u>SE2-SW18MG-2P</u></a>		16, 2 GbE combo	2 GbE SFP combo*	

\*Optional SFP modules sold separately.

## Features

- Modbus TCP management capability
- EtherNet/IP management capability
- Wide temp range
- DIN-rail mount with optional panel mount accessory
- Metal housing
- 12, 24 VDC redundant input
- Gigabit Ethernet (GbE) models
- Haz Loc
- 5-year warranty

## Panel Mounting Brackets

- Stride SE2 series DIN-rail mounted switches can be panel mounted with the addition of the optional panel mounting brackets [SE2-PM1](#) or [SE2-PM3](#).

## SE2-Series Panel Mounting Brackets

Part Number	Price	For use with switch model
<a href="#"><u>SE2-PM1</u></a>		SE2-SW5Ux, SE2-SW8U-x, and SE2-MCx
<a href="#"><u>SE2-PM3</u></a>		SE2-SWPx, SE2-SW8UG-T, SE2-SW10UG-2P-T, SE2-SW16U-T, SE2-SW18U-2G-T and all SE2 managed switches



# Stride SE2 Series Managed Industrial Ethernet Switches

## Specifications

General Specifications	
<b>Operating Mode</b>	Store and forward wire speed switching, non-blocking
<b>Devices Supported</b>	All IEEE 802.3 compliant devices are supported
<b>MAC Addresses</b>	8K 16K for SE2-SW8M-2P
<b>Ethernet Protocols Supported</b>	SNMPv1 / v2 / v3, RMON, DHCP, SNTP, TFTP, STP, RSTP, QoS / DS, IGMPv1 / v2, VLAN (tag and port based), HTTP, HTTPS (SSL and TLS), Telnet, SSH and more
<b>Industrial Protocols Supported</b>	Modbus TCP, EtherNet/IP, PROFINet, Foundation Fieldbus HSE and others
<b>Packet Forwarding Rate</b>	1.4 Mpps – SE2-SW8M 1.4 Mpps–SE2-SW8M-2C1 1.4 Mpps–SE2-SW8M-2T1 5.5 Mpps–SE2-SW8M-2P 5.4 Mpps–SE2-SW16M 5.4 Mpps–SE2-SW18MG-2P
<b>Latency</b>	< 10 $\mu$ s
<b>Operating Temperature Range</b>	-40 to +75°C [-40 to +167°F]
<b>Storage Temperature Range</b>	-40 to +85°C [-40 to +185°F]
<b>Humidity (non-condensing)</b>	5 to 95% RH
<b>Environmental Air</b>	No corrosive gases permitted
<b>Vibration, Shock &amp; Freefall</b>	IEC60068-2-6, -27, -32
<b>EMI Emissions</b>	FCC CFR47 Part 15, EN55032/CISPR32, Class A
<b>EMS</b>	IEC61000-4-2 (ESD): $\pm$ 8kV (contact), $\pm$ 15kV (air) IEC61000-4-3 (RS): 10V/m (80MHz ~ 2GHz) IEC61000-4-4 (EFT): Power Port $\pm$ 4kV; Data Port: $\pm$ 2kV IEC61000-4-5 (Surge): Power Port: $\pm$ 2kV/DM, $\pm$ 4kV/CM; Data Port $\pm$ 2kV IEC61000-4-6 (CS): 10V (150kHz ~ 80MHz)
<b>RoHS and WEEE</b>	RoHS (Pb free) and WEEE compliant
<b>Packaging and Protection</b>	Metal case, IP40
<b>Hazardous Locations</b>	ANSI/ISA 12.12.01-2015 & CSA22.2 No. 213-15 (Class I, Div.2) (file #E200031)
<b>Agency Approvals</b>	UL/cUL 508, CE

SC or ST Fiber Port: (100BaseFX multimode)	
<b>100BaseFX Ports</b>	2
<b>Fiber Port Connector</b>	ST or SC, by model
<b>Optimal Fiber Cable</b>	50/125 or 62.5/125 $\mu$ m
<b>Center Wavelength</b>	1300 nm
<b>Multimode</b>	Links up to 4 km typ.; > Transmitter power (dBm): -21 min, -17 typ, -14 max > Receiver sensitivity (dBm): -34 typ, -31 max
<b>Nominal Max. Distance (full duplex)</b>	4 km
<b>Eye Safety (laser)</b>	IEC 60825-1, Class 1; FDA 21 CFR 1040.10 and 1040.11

RJ45 Ports	
<b>Port Type</b>	Shielded RJ45
<b>Ethernet Compliance</b>	IEEE 802.3i, 802.3u, 802.3x for 10/100 Ethernet IEEE 802.3ab, 802.3z for Gigabit Ethernet
<b>Auto-Crossover</b>	Yes, allows you to use straight-through or crossover wired cables
<b>Auto-Sensing Operation</b>	Yes, full and half duplex
<b>Auto-Negotiating Speed</b>	Yes
<b>Flow Control</b>	Automatic
<b>Cable Requirements</b>	Twisted pair (Cat5e or better) (shielded recommended)
<b>Max. Cable Distance</b>	100 meters

SFP Ports	
SFP (pluggable) ports accept Mini-GBIC (SFP) transceivers with a speed of 1000Mbps or 100Mbps	
See SFP datasheet for optional fiber transceiver specification	

Console ports: USB	
<b>Management Interfaces</b>	Browser, Text (Telnet and SSH), CLI (command line interface) and SNMP (see the user manual for supported MIBs)

Power Details	
<b>Power Input</b>	Redundant Input Terminals
<b>Input Voltage</b>	Class 2 Power Supply: 12-24 VDC
<b>Reverse Power Protection</b>	Yes
<b>Wire Size and Torque</b>	18-12 AWG, max wire length 3m [9.84 ft]; Wire strip length 7mm; Torque: 3.5 lb-in [0.4 N·m]
<b>Power Consumption</b>	Refer to Stride SE2 Series Managed Models table

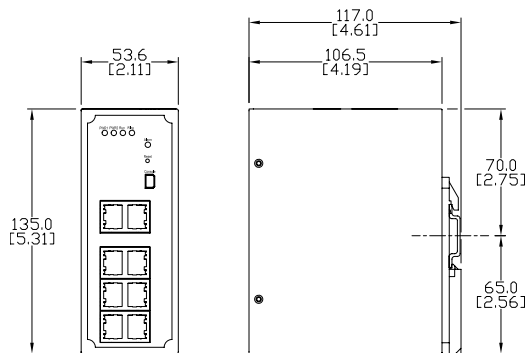
# Stride SE2 Series Managed Industrial Ethernet Switches

## SE2 Series DIN Rail mounted switches

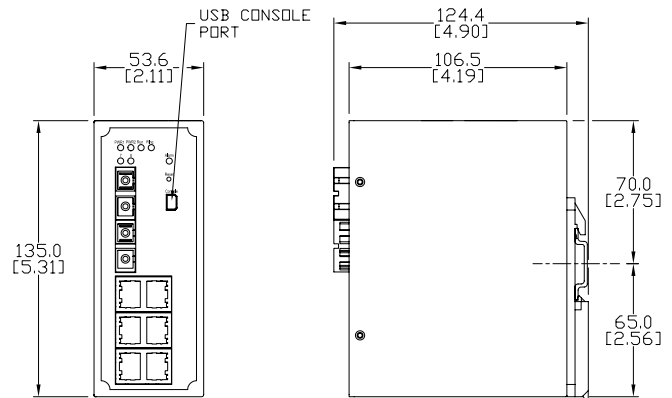
Allow 20mm [0.79"] clearance around the switch for cooling

## Dimensions

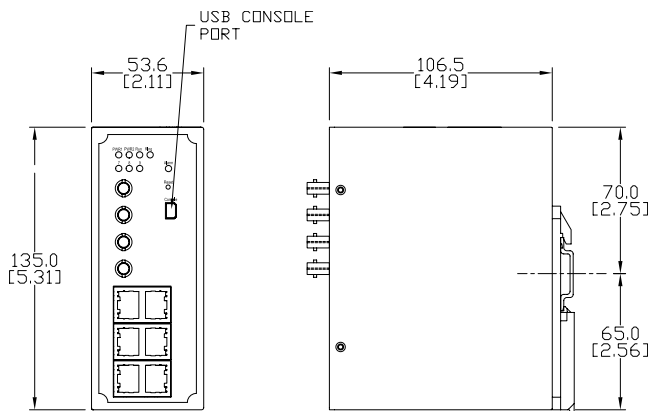
mm [inches]



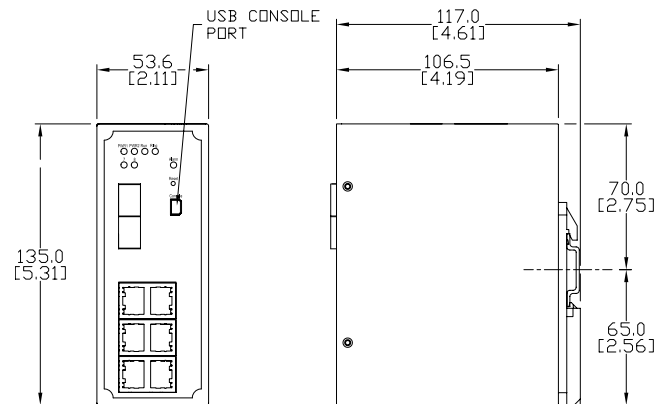
**SE2-SW8M**



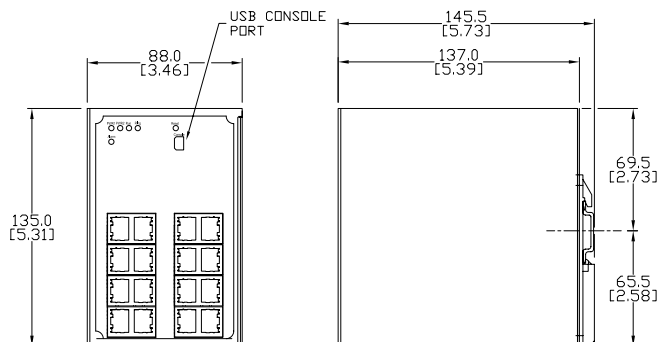
**SE2-SW8M-2C1**



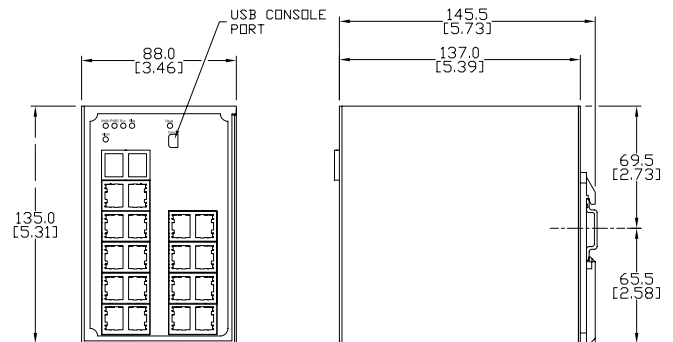
**SE2-SW8M-2T1**



**SE2-SW8M-2P**



**SE2-SW16M**



**SE2-SW18MG-2P**

See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.

# Stride Industrial Ethernet Fiber Transceivers

## Fast Ethernet

### Description:

STRIDE 100Mb Small Form Factor Pluggable (SFP) transceiver modules (Transmit/Receive). Hot Swappable. 1310nm wavelength. Data transmission up to 4km multimode fiber (SFP-4K-FMF) or 30km singlemode fiber (SFP-30K-FSF). LC duplex receptacle, SFP Multi-Source Agreement compliant.



**NOTE:** Port speed settings for the Stride switch must be manually set to 100 Mbps.

Part Number	Mode	Light Source	Max Trans. Distance	Price
<b>SFP-4K-FMF</b>	Multi-mode	1310 nm, FP	4km	
<b>SFP-30K-FSF</b>	Single-mode		30 km	

**Note:** Use only Gigabit speed SFPs with SE2-SW10UG-2P-T

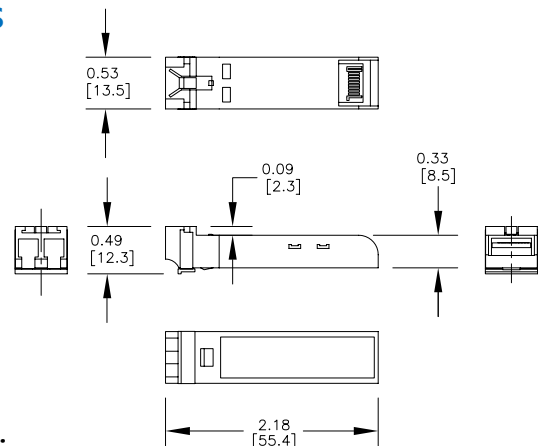
Transmitter Optical characteristics				
Parameter (unit)		Minimum	Typical	Maximum
Output optical power (dBm)	SFP-4K-FMF	-9		0
	SFP-30K-FSF	-15		-8
Extinction Ratio (dB)	SFP-4K-FMF	8.2		
	SFP-30K-FSF			
Center Wavelength (nm)	SFP-4K-FMF	1261	1310	1360
	SFP-30K-FSF			
Spectral width - RMS (nm)	SFP-4K-FMF			7
	SFP-30K-FSF			4
Rise / Fall Time - 10% - 90% (ns)	SFP-4K-FMF			2
	SFP-30K-FSF			

Receiver Optical characteristics			
Parameter (unit)		Minimum	Maximum
Sensitivity (dBm)	SFP-4K-FMF		-30
	SFP-30K-FSF		-34
Operating Wavelength (nm)	SFP-4K-FMF	1260	1620
Loss of Signal - Deasserted (dBm)	SFP-4K-FMF		-30
	SFP-30K-FSF		-35
Loss of Signal - Asserted (dBm)	SFP-4K-FMF	-45	
	SFP-30K-FSF		
Loss of Signal - Hysteresis (dB)	SFP-4K-FMF	0.5	
	SFP-30K-FSF		

General Specifications		
Connector Type		Type LC connector with bail latch
Operating Temperature range		-40 to +85 °C [-40 to +185 °F]
Storage temperature range		-40 to +85 °C [-40 to +185 °F]
Humidity (non-condensing)		5 to 95% RH
Link Speed		Gigabit Ethernet
Laser Type		FP laser diode (Class 1 laser safety standard IEC 60825 compliant)
Media	SFP-4K-FMF	Multi-mode Fiber
	SFP-30K-FSF	Single-mode Fiber
Fiber	SFP-4K-FMF	62.5 / 125 µm
	SFP-30K-FSF	9 / 125 µm
Code	SFP-4K-FMF	FX5
	SFP-30K-FSF	100LX
Distance	SFP-4K-FMF	4km
	SFP-30K-FSF	30 km
Compliances	SFP-4K-FMF	125Mbps IEEE802.3u 100BASE-FX compliant 125Mbps FDDI ISO/IEC 9314-1 compliant
	SFP-30K-FSF	125Mbps IEEE802.3ah 100BASE-LX10 compliant 155Mbps ITU-T G957 STM S-1.1/L-1.1 compliant 155Mbps SONET OC-3 IR-1/LR-1 compliant
Inputs / Outputs		AC-coupled differential inputs and outputs

### Dimensions

Inches [mm]



### Safety Standards:



# Stride Industrial Ethernet Fiber Transceivers

## Gigabit Ethernet

### Description:

STRIDE Gigabit (1.25GB) Small Form Factor Pluggable (SFP) transceiver module (Transmit/Receive). Hot Swappable. Short or long wavelength of 850nm or 1310nm, dependant on model. Supports data transmission up to 550 meters, 2km, 10 km, or 30 km on a single-mode or multi-mode fiber, dependant on model. LC duplex receptacle, SFP Multi-Source Agreement compliant.



Part Number	Mode	Light Source	Max Trans. Distance	Price
<b>SFP-500-GMF</b>	Multi-mode	850 nm, VCSEL	550m	
<b>SFP-2K-GMF</b>				
<b>SFP-10K-GSF</b>	Single-mode	1310 nm, FP	10 km	
<b>SFP-30K-GSF</b>				
		1310 nm, DFB	30 km	

Note: Use only Gigabit speed SFPs with SE2-SW10UG-2P-T

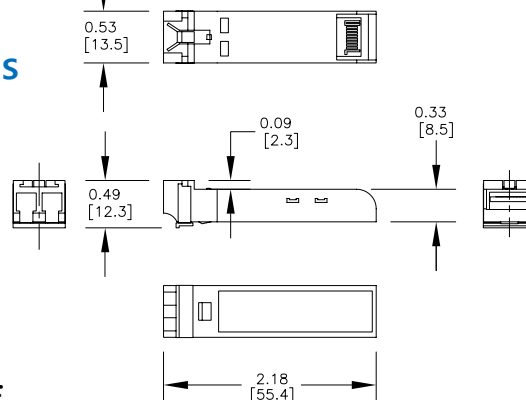
Transmitter Optical characteristics				
Parameter (unit)		Minimum	Typical	Maximum
Output optical power (dBm)	SFP-500-GMF	-9.5		-4
	SFP-2K-GMF	-9		-1
	SFP-10K-GSF	-9.5		-3
	SFP-30K-GSF	-2	1	3
Extinction Ratio (dB)	SFP-500-GMF	9		
	SFP-2K-GMF			
	SFP-10K-GSF			
	SFP-30K-GSF			
Center Wavelength (nm)	SFP-500-GMF	830	850	860
	SFP-2K-GMF	1270		1355
	SFP-10K-GSF	1285		1343
	SFP-30K-GSF	1270		1355
Spectral width - RMS (nm)	SFP-500-GMF			0.85
	SFP-2K-GMF			4
	SFP-10K-GSF			2.8
	SFP-30K-GSF			1
Rise / Fall Time - 20% - 80% (ps)	SFP-500-GMF			260
	SFP-2K-GMF			
	SFP-10K-GSF			
	SFP-30K-GSF			

Receiver Optical characteristics			
Parameter (unit)		Minimum	Maximum
Sensitivity (dBm)	SFP-500-GMF		-17
	SFP-2K-GMF		-19
	SFP-10K-GSF		-20
	SFP-30K-GSF		-23
Operating Wavelength (nm)	SFP-500-GMF	770	860
	SFP-2K-GMF	1260	1610
	SFP-10K-GSF	1270	1355
	SFP-30K-GSF		1580
Return Loss (dB)	SFP-500-GMF	12	
	SFP-2K-GMF		
	SFP-10K-GSF		
	SFP-30K-GSF		
Loss of Signal - Deasserted (dBm)	SFP-500-GMF		-17.5
	SFP-2K-GMF		-19
	SFP-10K-GSF		-20
	SFP-30K-GSF		-23
Loss of Signal - Asserted (dBm)	SFP-500-GMF	-35	
	SFP-2K-GMF		
	SFP-10K-GSF		
	SFP-30K-GSF		
Loss of Signal - Hysteresis (dB)	SFP-500-GMF	0.5	
	SFP-2K-GMF		
	SFP-10K-GSF		
	SFP-30K-GSF		

General Specifications	
<b>Connector Type</b>	Type LC connector with bail latch
<b>Operating Temperature range</b>	-40 to +85 °C [-40 to +185 °F]
<b>Storage temperature range</b>	-40 to +85 °C [-40 to +185 °F]
<b>Humidity (non-condensing)</b>	5 to 95% RH
<b>Link Speed</b>	Gigabit Ethernet
<b>Laser Type</b>	SFP-500-GMF VCSEL laser diode (Class 1 laser safety standard IEC 60825 compliant)
	SFP-2K-GMF FP laser diode (Class 1 laser safety standard IEC 60825 compliant)
	SFP-10K-GSF DFB laser diode (Class 1 laser safety standard IEC 60825 compliant)
	SFP-30K-GSF DFB laser diode (Class 1 laser safety standard IEC 60825 compliant)
<b>Media</b>	SFP-500-GMF Multi-mode Fiber
	SFP-2K-GMF Single-mode Fiber
	SFP-10K-GSF Single-mode Fiber
	SFP-30K-GSF Single-mode Fiber
<b>Fiber</b>	SFP-500-GMF 50 / 125 μm and 62.5 / 125 μm
	SFP-2K-GMF 9 / 125 μm
	SFP-10K-GSF 9 / 125 μm
	SFP-30K-GSF 9 / 125 μm
<b>Code</b>	SFP-500-GMF SX
	SFP-2K-GMF SX2
	SFP-10K-GSF LX
	SFP-30K-GSF Lhx
<b>Distance</b>	SFP-500-GMF 550m
	SFP-2K-GMF 2km
	SFP-10K-GSF 10 km
	SFP-30K-GSF 40 km
<b>Compliances</b>	SFP-500-GMF 1.0625Gbps Fiber Channel FC-PI 100-M5-SN-I compliant 1.0625Gbps Fiber Channel FC-PI 100-M6-SN-I compliant 1.25Gbps IEEE 802.3z 1000BASE-SX compliant 1.25Gbps IEEE 802.3ah 1000BASE-SX compliant
	SFP-2K-GMF IEEE 802.3 1000BASE-SX+ compliant
	SFP-10K-GSF 1.0625Gbps Fiber Channel FC-PI 100-SM-LC-L compliant 1.25Gbps IEEE 802.3 1000BASE-LX compliant
	SFP-30K-GSF 1.25Gbps Gigabit Ethernet compliant
<b>Inputs / Outputs</b>	AC-coupled differential inputs and outputs

### Dimensions

Inches [mm]



### Safety Standards:



# Stride<sup>®</sup> Managed Industrial Ethernet Switches

## Industrial Hardened Full Feature Layer 2 Switch



• For detailed specifications on all models, see following pages

		SE Series	SE2 Series
<b>Price</b>			
<b>Full Feature Layer 2 Switch</b>			
		✓	✓
<b>Industrial Temperature Ranges</b>			
	Wide Temp	-40 to +75°C	-40 to +75°C
<b>Ethernet Connectivity</b>			
	RJ45 Ports	up to 1000 Mbps	up to 1000 Mbps
	Fiber Optic Ports	✓	✓
	SFP Ports	✓	✓
<b>Port Count</b>			
		5,8,10,16	8,16,18
<b>Industrial Protocol Management</b>			
	Modbus TCP	Read	Full Management
	EtherNet/IP	—	Full Full Management
<b>Network Redundancy</b>			
	STP/RSTP	✓	✓
	Proprietary Fast Recovery	Real-Time Ring	AD-Ring/AD-RP
<b>Mounting</b>			
	DIN Rail Mount	✓	✓
	Panel Mount	Integrated	Optional accessory
<b>Input Power</b>			
	Redundant Power Inputs	✓	✓
	Reverse Polarity Protection	✓	✓
	Power LED	✓	✓
	Power Alarm	✓	✓
<b>Agency Approvals</b>			
	UL508 / 61010	✓	✓
	Haz Loc—Class 1 Div 2	✓	✓
	ATEX Zone 2	✓	—
	CE	✓	✓
<b>Warranty</b>			
		5 years	5 years