

# STRIDE® SE2 SERIES INDUSTRIAL UNMANAGED ETHERNET SWITCHES



**NOTE: FOR ADDITIONAL PRODUCT DETAILS, A USER MANUAL, SE2-USER-M, IS AVAILABLE AS A DOWNLOADABLE PDF FILE FROM THE ONLINE DOCUMENTATION AREA OF THE AUTOMATIONDIRECT WEBSITE.**

1-800-633-0405

www.AutomationDirect.com

Stride SE2 Unmanaged Models					
Part Number	RJ45 10/100	RJ45 GbE	Fiber	Input power (max.)	Operating Temp
SE2-MC2U-C1-T	1	-	1 SC	3.4 W	-40 to +75°C (-40 to +167°F)
SE2-MC2U-T1-T	1	-	1 ST		
SE2-SW5U	5	-	-	4.5 W	-10 to +60°C (+14 to +140°F)
SE2-SW5U-T		-	-		
SE2-SW5UG-T	-	5	-	3.4 W	-40 to +75°C (-40 to +167°F)
SE2-SW5U-1C1-T	4	-	1 SC		
SE2-SW5U-1T1-T	4	-	1 ST	4.6 W	-10 to +60°C (+14 to +140°F)
SE2-SW8U	8	-	-		
SE2-SW8U-T		-	-	-	
SE2-SW8U-2C1-T	6	-	2 SC	10W	-40 to +75°C (-40 to +167°F)
SE2-SW8U-2T1-T		-	2 ST		
SE2-SW8UG-T	-	8	-	8W	-40 to +75°C (-40 to +167°F)
SE2-SW10UG-2P-T	-	-	2 GbE SFP*		
SE2-SW16U-T	16	-	-	8W	-40 to +75°C (-40 to +167°F)
SE2-SW18U-2G-T	16	2	-		

\* Optional SFP modules sold separately. Use only Gigabit speed SFPs with SE2-SW10UG-2P-T.

Power Details	
Power Input	Redundant Input Terminals
Input Voltage	Class 2 Power Supply: 12-48 VDC, 18-30 VAC 50/60 Hz
Reverse Power Protection	Yes
Power Consumption	Refer to Models table

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

SFP Ports	
SFP (pluggable) ports accept 1000 Mbps Mini-GBIC (SFP) transceivers	
See SFP datasheet for optional fiber transceiver specifications	

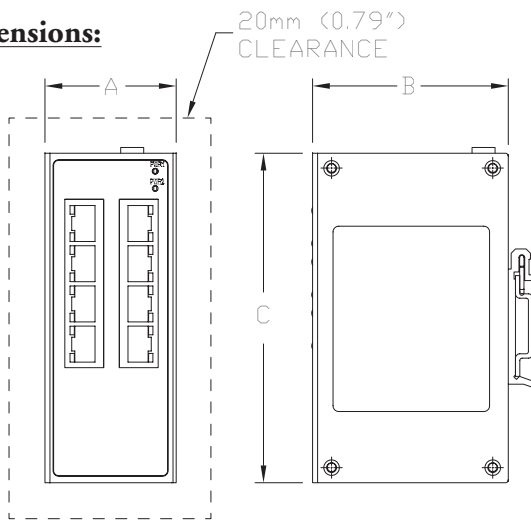
General Specifications	
Operating Mode	Store and forward wire speed switching, non-blocking
Devices Supported	All IEEE 802.3 compliant devices are supported
MAC Addresses	8K for SE2-SWxG-T, SE2-SW16U-T, SE2-SW18U-2G-T 2K
Packet Forwarding Rate	0.75 Mpps - SE2-MC2U-x, SE2-SW5U & SE2-SW5U-x 1.2 Mpps - SE2-SW8U-x 7.4 Mpps - SE2-SW5UG-T 14.9 Mpps - SE2-SW8UG-T & SE2-SW10UG-2P-T 5.7 Mpps - SE2-SW16U-T & SE2-SW18U-2G-T
Broadcast Storm Protection*	DIP switch enabled (DIP switch I ON)
Jumbo Frame Support	DIP switch enabled for SE2-SW5UG-T, SE2-SW8UG-T, SE2-SW10UG-2P-T and SE2-SW18U-2G-T only (DIP switch II ON)**
Latency	< 10 µs
Storage Temperature Range	-40 to +85 °C (-40 to +185 °F)
Humidity (non-condensing)	5 to 95% RH
Environmental Air	No corrosive gases permitted
Vibration, Shock & Freefall	IEC60068-2-6, -27, -32
EMI Emissions	FCC CFR47 Part 15, EN55032/CISPR32, Class A
EMS	IEC61000-4-2 (ESD): +/- 6kV (contact), +/- 8kV (air) IEC61000-4-3 (RS): 10V/m (80MHz ~ 2GHz) IEC61000-4-4 (EFT): Power Port +/- 2kV; Data Port: +/- 1kV IEC61000-4-5 (Surge): Power Port: +/- 1kV/DM, +/- 2kV/CM; Data Port +/- 1kV (+/- 2kV for 16 and 18 port models) IEC61000-4-6 (CS): 10V (150kHz ~ 80MHz)
RoHS and WEEE	RoHS (Pb free) and WEEE compliant
Packaging and Protection	Metal case, IP30
Hazardous Locations	ANSI/ISA 12.12.01-2015 & CSA 22.2 No. 213-15 (Class I, Div 2) (file #E200031); UL/cUL 61010-1 and 61010-2-201, Class 1, Div. 2, Groups A, B, C, D, (UL file #E200031) CE
Agency Approvals	UL/cUL 61010-1 and 61010-2-201, Class 1, Div. 2, Groups A, B, C, D, (UL file #E200031) CE

\* Broadcast storm threshold value is 2 packets/100ms for 10 Mbps port or 2 packets/10ms for 100 Mbps and 1000 Mbps ports.  
\*\* DIP switch II is unused on the 10/100 models.

Front Panel LEDs		
LED	State	Description
PWR1 LED	On	Power 1 connected and operational
	Off	Power 1 no voltage
PWR2 LED	On	Power 2 connected and operational
	Off	Power 2 no voltage
ACT/LNK LED	On	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
	Blinking	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
	Off	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.
Speed LED 10/100 Models	On	A 100 Mbps (100BaseT) connection is detected.
	Off	A 10 Mbps (10BaseT) connection is detected.
Speed LED 10/100/1000 Models	On	A 1000 Mbps (1000BaseT) connection is detected
	Off	A 100 or 10 Mbps (100BaseT or 10BaseT) connection is detected

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

## Dimensions:



Dimensions				
Part No.	Weight kg [lb]	Width (A)	Depth (B)	Height (C)
		mm [inches]		
SE2-MC2U-x	0.25 [0.55]	29.6 [1.17]	68.0 [2.68]	114.5 [4.51]
SE2-SW5Ux				
SE2-SW8U	0.30 [0.66]	45.6 [1.80]		
SE2-SW8U-T				
SE2-SW8U-2C1-T				
SE2-SW8U-2T1-T	0.50 [1.10]	53.6 [2.11]		
SE2-SW8UG-T				
SE2-SW10UG-2P-T	0.70 [1.54]	80.0 [3.15]		
SE2-SW16U-T				
SE2-SW18U-2G-T				

## Power Wiring:

The switch can be powered from the same DC source that is used to power your other devices. To maintain the UL listing, this must be a Class 2 power supply. A DC voltage in the range of 12 to 48 VDC needs to be applied between the P1+ terminal and the P1- terminal as shown below. The chassis screw terminal should be tied to panel or chassis ground. To reduce down time resulting from power loss, the switch can be powered redundantly with a second power supply as shown below. A recommended DC power supply is [AutomationDirect.com](http://AutomationDirect.com) part number PSL-24-030.

## Safety Standards:



RoHS Compliant

## Installation – DIN Rail Mounting:

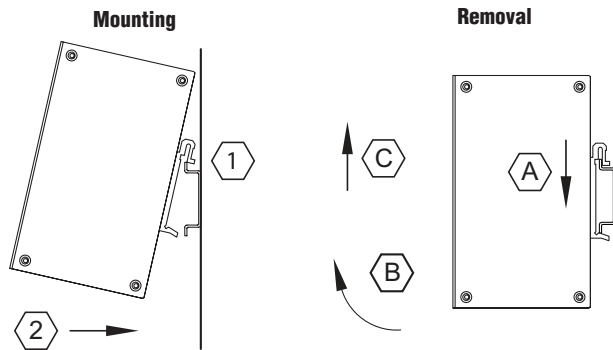
These devices are open-type and are meant to be installed in an enclosure which is only accessible with the use of a tool and suitable for the environment when installed in Class 1, Division 2 Hazardous Locations. The switch can be snapped onto a standard 35 mm x 7.5 mm height DIN rail (Standard: CENELEC EN50022) and can be mounted either vertically or horizontally. Allow 20mm (0.79") clearance between an SE2 switch and other equipment on the DIN rail.

DIN rail mounting steps:

1. Hook top back of unit over the DIN rail.
2. Push bottom back onto the DIN rail until it snaps into place.

DIN rail removal steps:

- A. Push the unit down to free the bottom of the DIN rail.
- B. Rotate the bottom of the unit away from the DIN rail.
- C. Unhook top of unit from DIN rail.



**WARNING:** The following information applies when operating this device in hazardous locations:



Suitable for use in Class I, Division 2, Groups A, B, C and D Hazardous Locations, or nonhazardous locations only.

Cet appareillage est utilisable dans les emplacements de Classe I, Division 2, Groupes A, B, C et D, ou dans les emplacements non dangereux seulement.

**WARNING: EXPLOSION HAZARD**

- Do not disconnect equipment while the circuit is live or unless the area is known to be free of ignitable concentrations.
- Substitution of any component may impair suitability for Class I, Division 2.

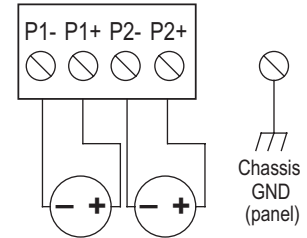
**AVERTISSEMENT: RISQUE D'EXPLOSION**

- Avant de deconnecter l'equipement, couper le courant ou s'assurer que l'emplacement est designe non dangereux.
- La substitution de composants peut rendre ce materiel inacceptable pour les emplacements de Classe I, Division 2.

## Redundant DC Power

**Required terminal screw torque is 4.5 to 5.0 lb-in (0.51 to 0.57 N-m).**

**Wire Size Range 24 – 12 AWG  
Wire Strip Length 7mm**



Optional Dual DC Supplies

## Communication Ports Wiring:

The switch provides connections to standard Ethernet devices such as PLCs, Ethernet I/O, industrial computers and much more. Use data-quality (not voice-quality) twisted pair cable rated Cat5e (or better) with standard RJ45 connectors. Straight-through or crossover RJ45 cable can be used for all devices the switch is connected to as all the ports are capable of auto-mdi/mdix-crossover detection.

The RJ45 Ethernet port connector bodies on the switch are metallic and connected to the Chassis GND terminal. Therefore, shielded cables may be used to provide further protection. To prevent ground loops, the cable shield should be tied to the metal connector body at one end of the cable only. Electrical isolation is also provided on the Ethernet ports for increased reliability.

**NOTE: THE FOLLOWING AUTOMATIONDIRECT PLC ETHERNET MODULES ARE NOT COMPATIBLE WITH THE STRIDE ETHERNET SWITCHES AND MEDIA CONVERTER WITH FIBER OPTIC CONNECTIONS BECAUSE THE MODULES HAVE A SPEED OF 10BASEF (FIBER OPTIC) ONLY:**

- ETHERNET COMMUNICATIONS MODULE, P/N H2-ECOM-F & H4-ECOM-F
- ETHERNET BASE CONTROLLER MODULE, P/N H2-EBC-F & H4-EBC-F
- ETHERNET REMOTE MASTER MODULE, P/N H2-ERM-F & H4-ERM-F

**NOTE: SIGNAL OUTPUT RATED VOLTAGE IS <30V.**

## Additional Help and Support

- For additional product support, specifications, and installation, a User Manual, SE2-USER-M, is available as a downloadable PDF file from the Online Documentation area of [www.AutomationDirect.com](http://www.AutomationDirect.com)
- For additional technical support and questions, call our Technical Support team @ 770-844-4200.

