



SISPM1040-xxxx-L3

Layer 3 Managed Hardened PoE + Switch family

SISPM1040-3248-L3 and SISPM1040-3166-L3

Install Guide

Part Number 33855

Revision B August 2023

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Revision History

Date	Rev	Notes
6/13/22	A	Initial Lantronix preliminary release at FW v8.90.884, PoE Firmware V 200-211, HW v1.02, Mech v1.01, and Bootloader v1_5-38e0421.
8/21/23	B	Add application example, change contact info, add Power Supply 25104 and remove PS-DC-DUAL-5624T. Change EN 60950 to EN 62368-1. FW v 8.10.0086: view release notes for latest firmware information.

Contents

Product Description	5
Ordering Information	5
About This Manual	6
Related Manuals	6
Features	6
Specifications	7
Application Examples	8
Pre-Installation	9
Safety	9
Unpacking	9
Package Contents.....	9
Front Panels	10
LED Descriptions	11
Reset Button	13
Back Panel	13
Device and Box Labels	14
Installing the Switch	14
Safety Instructions for Rack Mount Installations.....	14
Grounding	15
Mounting the Switch in a 19-inch Rack.....	16
Mounting the Switch on Desk or Shelf.....	16
Installing SFP/SFP+ Modules	17
Installing DAC Cables	17
Connecting Powered Devices (PDs).....	18
Connecting to AC Power.....	18
Connect the DC Power Wires	19
Power Disconnection	19
Connecting the DI/DO Relay Wires	20
Digital Input and Digital Output Use Case.....	21
Power Supply Information.....	22
25160 - 480W Din Rail Power Supply (SDR-480-48)	22
Power Supply Pin Descriptions (25160).....	25
25104 Industrial DIN Rail Mounted Power Supply	26
Initial Switch Configuration	28
Initial Switch Configuration via Web Browser	28
Initial Switch Configuration via CLI	28
Troubleshooting	29
Basic Troubleshooting	29
PoE Troubleshooting.....	29
Troubleshooting Table	30
LED Troubleshooting	31

Compliance and Safety Information 33
Declaration of Conformity 33
FCC Regulations 33
High Risk Activities Disclaimer..... 34
Cautions and Warnings..... 34
Electrical Safety Warnings 35

Product Description

The Lantronix SISPM1040-xxxx-L3 are next generation Industrial L3+ managed GbE switches. They are affordable managed switches that provide a reliable infrastructure for your business network. These switches deliver the intelligent features you need to improve the availability of your critical business applications, protect your sensitive information, and optimize your network bandwidth to deliver information and applications more effectively. They provide the ideal combination of affordability and capabilities for entry level networking including small business or enterprise applications and help you create a more efficient, better-connected workforce.

Ordering Information

Model	Description
SISPM1040-3248-L3	Rack mountable hardened L3 switch with 136Gbps switching capacity, twenty-four 10/100/1000 PoE+ ports, four 100/1000 dual speeds SFP ports, and four 1G/10G SFP+ slots.
SISPM1040-3166-L3	Rack mountable hardened L3 switch with 80Gbps switching capacity, sixteen 10/100/1000 PoE+ ports, four 100/1000 dual speed SFP ports and two 1G/10G SFP+ slots.
Optional Accessories (order separately)	
DAC-10G-SFP-01M	Direct Attached Copper Cable Assembly for 10G Networks
25160	Input: 90-264 VAC, 127-370 VDC; Output: 48 ~ 55 VDC, 10A, 340 Watts
25104	Optional Industrial DIN Rail Mounted Power Supply. Input: 85-264 VAC, 124-370 VDC. Output: 48~55 VDC, 5.0A, 240 Watts
SISPM1040-3248-L-xx	Optional Power Cord; order separately where xx = NA, JP, etc.
LEVEL-x-yYEAR	Technical Support Services, Level 1, 2 or 3 and 1, 3 or 5 year subscription.

About This Manual

This manual describes how to install, configure, and troubleshoot the SISPM1040-xxxx-L3, including how to:

- Install the switch
- Check switch status by reading the LED behavior
- Reset the switch or restore the switch to factory defaults
- Use a Web browser or the CLI to initially configure the switch
- Troubleshoot the switch

Related Manuals

A printed Quick Start Guide is shipped with each SISPM1040-xxxx-L3 switch. Note that this manual provides links to third party web sites for which Lantronix is not responsible. Related manuals include:

1. Product Support Postcard, 33504
2. SISPM1040-xxxx-L3 Quick Start Guide, 33584
3. SISPM1040-xxxx-L3 Web User Guide, 33586
4. SISPM1040-xxxx-L3 CLI Reference, 33587
5. Release Notes (firmware version specific)

Note: Information in this document is subject to change without notice. All information was deemed accurate and complete at the time of publication. This manual documents the latest software/firmware version. While all screen examples may not display the latest version number, all the descriptions and procedures reflect the latest software/firmware version, as noted in the [Revision History](#) on page 2.

Features

The SISPM1040-xxxx-L3 includes these features:

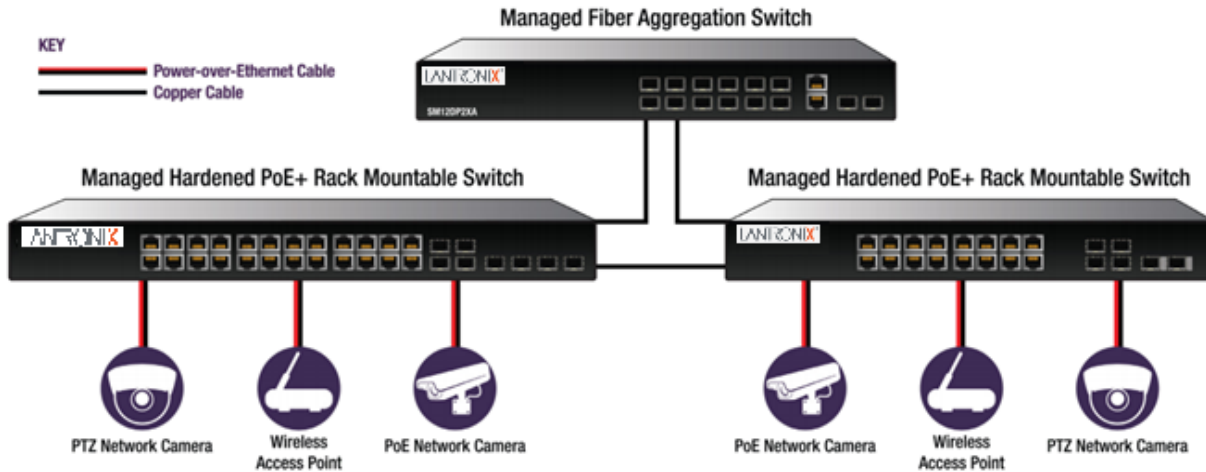
- L3+ features for better manageability, security, QoS, and performance (Router, OSPF, OSPFv3, RIP)
- Device Management System (DMS) built in
- PoE (IEE 802.3af/at/bt Power over Ethernet)
- PoE Power Delay, PoE Auto Checking, and PoE Scheduling
- IPv4/IPv6 dual stack management
- SSH/SSL secured management
- SNMP v1/v2c/v3
- RMON groups 1,2,3,9
- Diagnostics (Ping v4 and v6, Traceroute v4 and v6, Cable Diagnostics, Mirroring, sFlow)
- IGMP v1/v2/v3 Snooping and MLD v1/v2 Snooping
- RADIUS and TACACS+ authentication
- IP Source Guard
- DHCPv4 and v6 Snooping, DHCPv4 and v6 Relay (Option 82)
- ACL and QCL traffic filtering
- Spanning Tree - 802.1d (STP), 802.1w (RSTP) and 802.1s (MSTP)
- LACP and static link aggregation
- Q-in-Q double tag VLAN
- GVRP dynamic VLAN
- CFM (IEEE 802.1ag Connectivity Fault Management)
- APS (ITU-T G.8031 Automatic Protection Switching)
- ERPS (ITU-T G.8032 Ethernet Ring Protection Switching)
- Rapid Ring (3166-L3 and 3248-L3 only)
- MRP (Media Redundancy Protocol) (3166-L3 and 3248-L3 only)
- PTP (Precision Time Protocol) (IEEE 1588, ITU-T G.8265, G.8265.1, and IEEE 802.1AS)
- First Time Wizard requires default password change on initial startup

Specifications

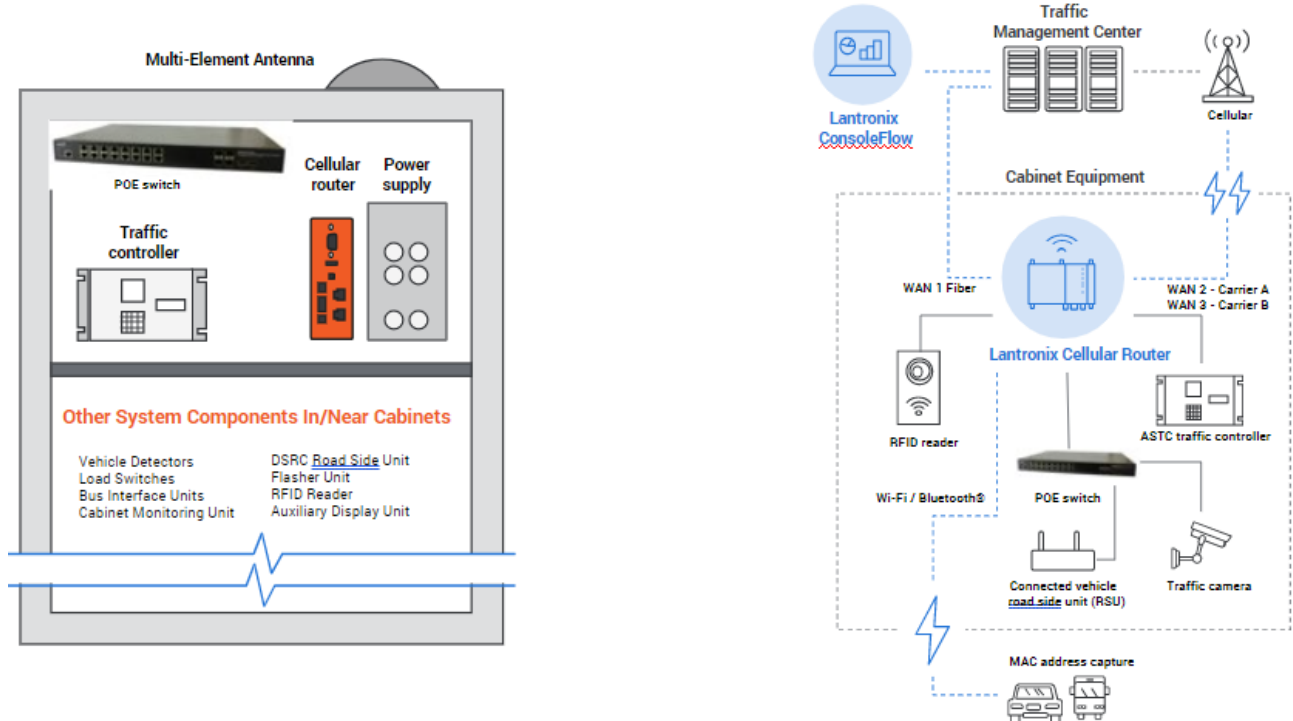
IEEE / Network Standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3z, IEEE 802.3ae, IEEE 802.3x, IEEE 802.3ad, IEEE 802.1D, IEEE 802.1w, IEEE 802.1s, IEEE 802.1Q, IEEE 802.1p, IEEE 802.1ad, IEEE 802.1AB, IEEE 802.3af, IEEE 802.3at, IEEE 802.3az, IEEE 802.3ah, IEEE 802.1ag, IEC 62439-2, IEEE 802.1X, IEEE 802.1v, IEEE 1588v2 PTP
Max. Power Consumption	35 W max (without PoE) for AC input 38.76 W max (without PoE) for DC input
Power Input	52 - 57VDC Dual Input Terminal Block or Single Input 100-250VAC
Dimensions	W 17.4" [442 mm] D 11.8" [300 mm] H 1.7" [44 mm]
Weight	SISPM1040-3248-L3: 11 Lbs. (5 Kg.) SISPM1040-3166-L3: 10.5 Lbs. (4.56 Kg.)
Operating Temperature	-40 to +167 deg. F (-40 to +75 deg. C)
Storage Temperature	-40 to +185 deg. F (-40 to +85 deg. C)
Altitude	< 10,000 ft. (< 3000 meters)
Operating Humidity	10% to 90% (non-condensing)
Data Rate	59.523 Mpps
Max. Frame Size	10056 Bytes
MTBF GB, GC - Ground Benign, Controlled	SISPM1040-3166-L3: 280,148 Hrs. @ 25.00 deg. C SISPM1040-3166-L3: 58,933 Hrs. @ 75.00 deg. C SISPM1040-3248-L3: 222,123 Hrs. @ 25.00 deg. C SISPM1040-3248-L3: 45,463 Hrs. @ 75.00 deg. C
Certifications	FCC Part 15 Class A, CE (LVD with EN 62368-1); NDAA and TAA Compliant
Standards	CCN: NWGQ, NWGQ7 (Information Technology Equipment Including Electrical Business Equipment) Complementary CCN: N/A
Rating(Input)	100-240 Vac, 50-60 Hz, 0.39 A or 52-57 Vdc, 9.6 A for model SISPM1040-3248-L, SISPM1040-3248-L3 100-240 Vac, 50-60 Hz, 0.3 A or 52-57 Vdc, 6.4 A for model SISPM1040-3166-L, SISPM1040-3166-L3

Application Examples

- High-resolution IP camera, IP PTZ camera
- High-performance wireless access points
- Intelligent Transportation System (ITS)
- Oil and gas field sites
- Where routing between VLANs is needed where different areas (e.g., intersections) or types of data (video, images, signals) must be partitioned
- Where OSPF and RIP routing protocol support is required for optimal network routing
- Where support for L3 IPv4/IPv6 unicast or multicast routing can improve networks latency



Application Example 1



Application Example 2

Pre-Installation

Safety

See [Electrical Safety Warnings](#) on page 35 for safety information in multiple languages.

- Do not use this product near water, for example, in a wet basement or near a swimming pool.
- Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

Warning: This product contains lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling.

Unpacking

1. Carefully unpack all SISPM1040-xxxx-L3 contents.
2. Verify receipt of all SISPM1040-xxxx-L3 components; see “[Package Contents](#)” below.
3. Place the SISPM1040-xxxx-L3 and related materials in the desired install location.
4. Save the SISPM1040-xxxx-L3 shipping carton and packing materials for possible future use.

Package Contents

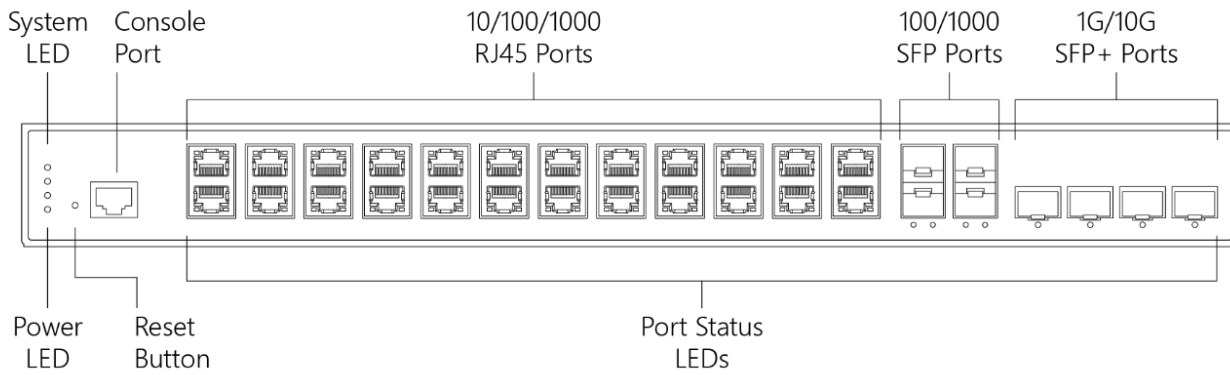
Make sure you received the items listed below. Contact your sales representative if any item is missing or damaged.

- One Switch
- An AC Power cord* (Option)
- Four adhesive rubber feet
- One printed Quick Start Guide
- A Mounting kit (Option)
- One RJ45 to DB9 Serial Console Cable (Option)

* **Power Cord included:** to order the corresponding country specific power cord add an extension below to the end of the SKU. Country Codes: -xx = Country Code (-NA = North America, -LA = Latin America, -EU = Europe, -UK = United Kingdom, -SA = South Africa, -JP = Japan, -OZ = Australia, -BR = Brazil).

Front Panels

The switch front panel provides the LEDs, ports, and Reset button as shown and described below.



SISPM1040-3248-L3



SISPM1040-3166-L3

LED Descriptions

The front panel LEDs provide switch status checking and monitoring. There are three types of LEDs as follows:

System LED: Indicates if the switch is powered up correctly or not, or, indicates if there is a system alarm triggered for troubleshooting.

LED	Color	State	Description
SYS (System)	Green	On	The switch is powered ON correctly.
		Off	The switch is not receiving power.
	Red	On	An abnormal state, such as exceeding operating temperature range, was detected in the switch.

Power LEDs (P1/P2: DC LED, P3: AC LED): Indicates if the switch is powered up correctly or not.

LED	Color	State	Description
P1/P2 (Power1/Power2)	Green	On	The switch is powered ON correctly.
		Off	The switch is not receiving power from DC power.
Power3	Green	On	The switch is powered ON correctly.
		Off	The switch is not receiving power from AC power.

Port Status LEDs: Indicate the current status of each port.

LED	Color	State	Description
RJ45 Ports Left side	Green	On	The port is enabled and established a link to connected device, and the connection speed is 1000Mbps.
	Green	Blinking	The port is transmitting/receiving packets, and the connection speed is 1000Mbps.
	Amber	On	The port is enabled and established a link to connected device, and the connection speed is 10/100Mbps.
	Amber	Blinking	The port is transmitting/receiving packets, and the connection speed is 10/100Mbps.
	--	Off	The port has no active network cable connected, or it has not established a link to connected device. Otherwise, the port may have been disabled via the switch user interface.

RJ45 Ports Right Side	Green	On	The port is enabled and supplying power to connected device.
	Amber	On	An abnormal state, such as overload status, was detected in the switch.
	--	Off	The port has no active network cable connected, or it is not connected a PoE PD device. Otherwise, the port may have been disabled via the switch user interface.
SFP Ports	Green	On	The port is enabled and established a link to connected device, and the connection speed is 1000Mbps.
	Green	Blinking	The port is transmitting/receiving packets, and the connection speed is 1000Mbps.
	Amber	On	The port is enabled and established a link to connected device, and the connection speed is 100Mbps.
	Amber	Blinking	The port is transmitting/receiving packets, and the connection speed is 100Mbps.
	--	Off	The port has no active network cable connected, or it has not established a link to connected device. Otherwise, the port may have been disabled via the switch user interface.
SFP+ Ports	Blue	On	The port is enabled and established a link to connected device, and the connection speed is 10Gbps.
	Blue	Blinking	The port is transmitting/receiving packets, and the connection speed is 10Gbps.
	Green	On	The port is enabled and established a link to connected device, and the connection speed is 1Gbps.
	Green	Blinking	The port is transmitting/receiving packets, and the connection speed is 1Gbps.
	--	Off	The port has no active network cable connected, or it has not established a link to connected device. Otherwise, the port may have been disabled via the switch user interface.

Reset Button

By pressing the Reset button for certain period of time, you can perform these tasks:

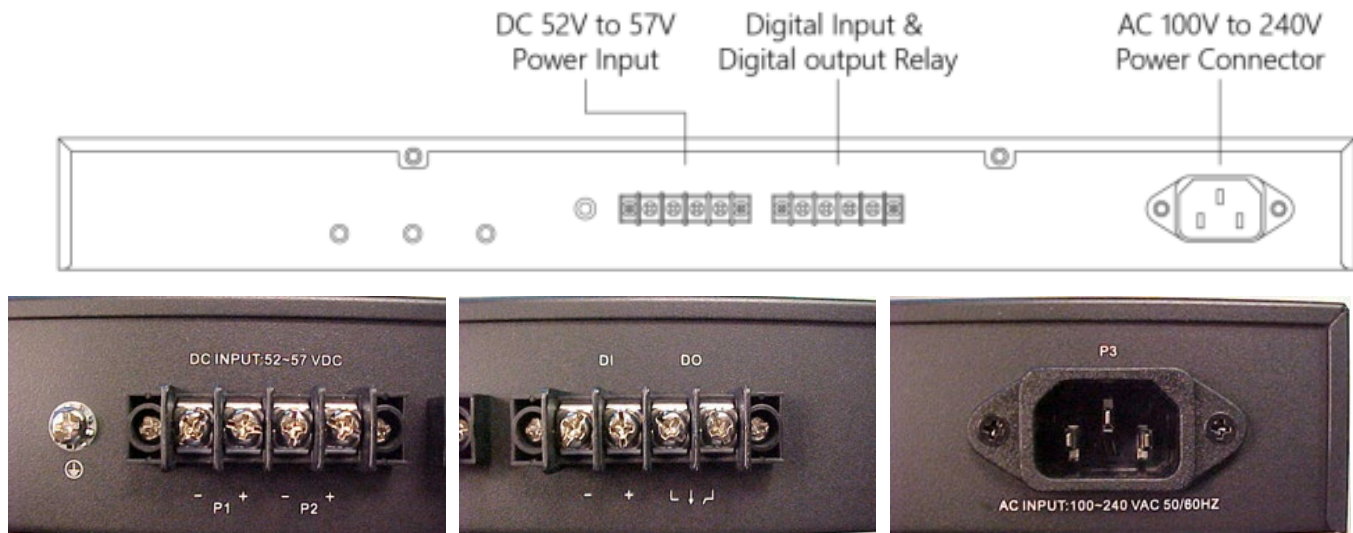
Reset the switch: To reboot and get the switch back to the previous configuration settings saved.

Restore the switch to Factory Defaults: To restore the switch back to its original factory default settings.

Note: Based on the table below, users can easily judge which task is being performed by reading the LED behaviors while pressing the Reset button. When the LED behaviors are correctly displayed, just release the button.

Task to Perform	Press Button for	SYS LED Behavior	Port Status LED Behavior
Reset the Switch	2 ~ 7 seconds	Blinking Green	All LEDs Light OFF
Restore to Defaults	7 ~ 12 seconds	Blinking Green	All LEDs Stay ON

Back Panel



Device and Box Labels

The device and box labels provide information to help identify your switch to the Tech Support Specialist.



Installing the Switch

Note: the unit is to be connected only to networks without routing to the outside plant.

Note: The switch is an indoor device. If you need to use it to connect outdoor devices such as outdoor IP cameras or outdoor WiFi APs with cable, then you must install an arrester on the cable between outdoor device and the switch.



Adding an arrester between outdoor device and this switch

Safety Instructions for Rack Mount Installations

The instructions below (or similar) are intended for rackmount installation environments:

1. Elevated Operating Ambient Temperature: if installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may exceed room ambient. Install the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified.
2. Reduced Air Flow: install the equipment in a rack so that the amount of air flow required for safe operation is not compromised.
3. Mechanical Loading: Mount the equipment in the rack so that a hazardous condition does not occur due to uneven mechanical loading (weight distribution/rack balance).
4. Circuit Overloading: give consideration to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Consider all equipment nameplate ratings when addressing this concern.
5. Reliable Earthing: maintain reliable earthing of rack-mounted equipment; pay particular attention to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

Grounding

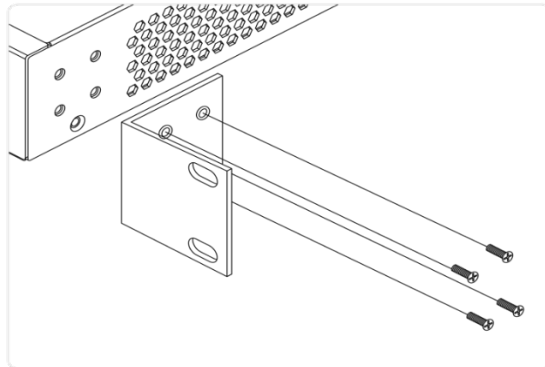
The switch has a grounding screw provided for grounding. Equipment grounding is vital to ensure safe operation. The installer must ensure that the switch is properly grounded during and after installation.

After the Switch is mounted and connected, the front panel grounding screw can be used for grounding. Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screw to the grounding surface before connecting devices.



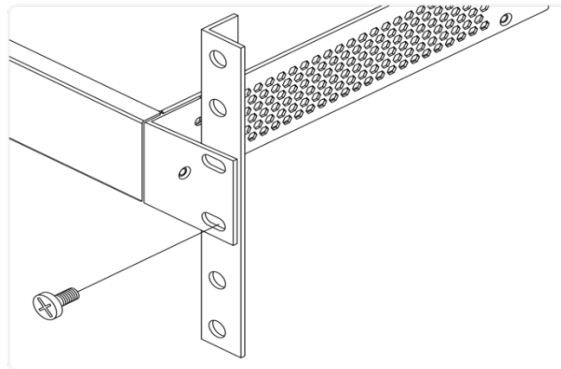
Mounting the Switch in a 19-inch Rack

1. Attach the mounting brackets to both sides of the chassis. Insert screws and tighten them with a screwdriver to secure the brackets.



Attaching Brackets to the Switch

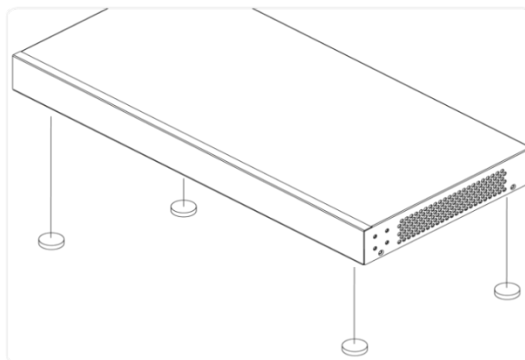
2. Place the switch on a rack shelf in the rack. Push it in until the oval holes in the brackets align with the mounting holes in the rack posts.
3. Attach the brackets to the posts. Insert screws and tighten them.



Attaching Brackets to the Rack Post

Mounting the Switch on Desk or Shelf

1. Verify that the workbench is sturdy and reliably grounded.
2. Attach the four adhesive rubber feet to the bottom of the switch.



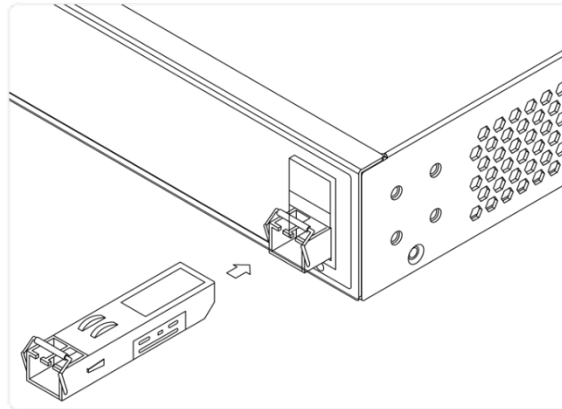
Attaching the Rubber Feet

Installing SFP/SFP+ Modules

You can install or remove a mini-GBIC SFP/SFP+ module from an SFP/SFP+ port without having to power off the switch. **Note:** The SFP/SFP+ ports should use UL Listed Optional Transceiver product, Rated 3.3Vdc, Laser Class 1.

Step 1: Insert the module into the SFP/SFP+ port.

Step 2: Press firmly to ensure that the module seats into the connector.



Installing an SFP/SFP+ Module into a SFP/SFP+ Port

Installing DAC Cables

You can install or remove DAC-1m, DAC-2m, DAC-3m, and DAC-5m cables in ports 29-32.

These copper 10 Gigabit Ethernet cables come in either an active or passive Twinax (twin axial) cable assembly and connect directly into an SFP+ housing. An active Twinax cable has active electronic components in the SFP+ housing to improve the signal quality; a passive Twinax cable is mainly just a straight "wire" and contains few components. Generally, Twinax cables shorter than 7 meters are passive and those longer than 7 meters are active, but this may vary between vendors. SFP+ Direct Attach Copper (DAC) is a popular choice for 10G Ethernet reaches up to 10 meters due to low latency and low cost.

One major application is connecting network hardware via their SFP+ interfaces. This type of connection is able to transmit at 10 Gbps full duplex over 5 meter distances. This setup offers 15 to 25 times lower transceiver latency than current 10GBASE-T Cat 6/Cat 6a/Cat 7 cabling systems: 0.1 μ s for Twinax with SFP+ versus 1.5 to 2.5 μ s for current 10GBASE-T specification. The power draw of Twinax with SFP+ is around 0.1 watts, which is also much better than 4–8 watts for 10GBASE-T.

As with all cabling, one consideration point is the bit error ratio (BER). Twinax copper cabling has a BER of better than 10⁻¹⁸, and thus is acceptable for applications in critical environments.

Cables must not be bent below their minimum bend radius, which depends on cable size (in AWG). The table below summarizes minimum values typical for SFP+ sustained bend radiuses:

AWG cable size	Sustained bend radius
24	1.5 inches (38 mm)
26	1.3 inches (33 mm)
28	1.0 inch (25 mm)
30	0.9 inches (23 mm)



Connecting Powered Devices (PDs)

Note that this device does not comply with IEEE 802.3at at 48-51.4 VDC, or with IEE 802.3bt at 48-53.4 VDC. This device drops ~1.3V from V_{in} to PSEout. IEEE requires these PSEout voltages at the PSE output into the cable:

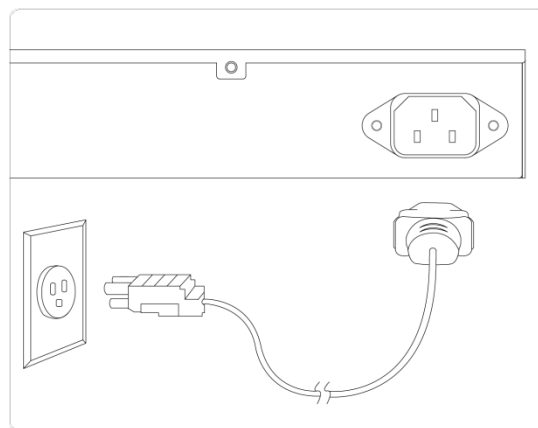
- 802.3af: 44VDC
- 802.3at: 50VDC
- 802.3bt: 52VDC

Not meeting this PSEout requirement may cause power up failures or power cycling with devices drawing maximum power with maximum cable loss.

Power can be from either of the two power sources (AC input or DC input) or site source DC. **Note** that DC power is required for PoE operation.

Connecting to AC Power

1. Connect the AC power cord to the AC power receptacle of switch.
2. Connect the other end of the AC power cord to the AC power outlet.
3. Check the SYS LED. If it is ON, the power connection is correct.

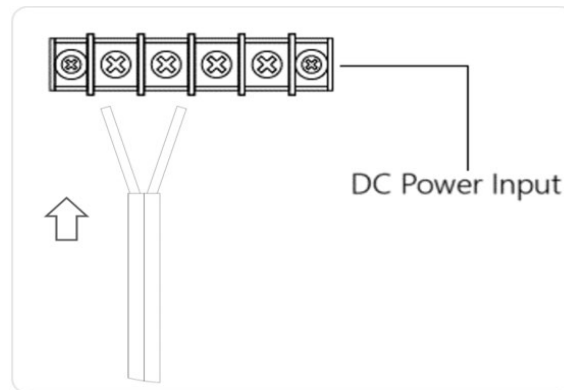


Connecting AC power cord

Connect the DC Power Wires

Warning: Connect the power supply to the switch first, and then connect the power supply to power. Otherwise, catastrophic product failure may occur.

1. Place an appropriate safety flag and lockout device at the source power circuit breaker or place a piece of adhesive tape over the circuit breaker handle to prevent accidental power restoration while you are working on the circuit.
2. Insert the negative/positive DC wires into the V-/V+ DC Power Input terminals, respectively.
3. Use a small flat-blade screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.
4. Connect the power supply to power.
5. Check the SYS LED. If it is ON, the power connection is correct.



Connecting to DC Power

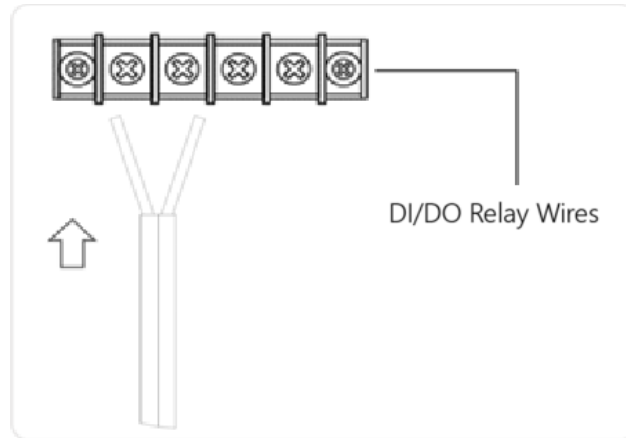
Power Disconnection

To disconnect power from the switch after it is powered on:

1. Turn off power to the switch.
2. Disconnect the cables.

Connecting the DI/DO Relay Wires

1. Insert the negative (ground)/positive DI/DO Relay wires into the +/- terminals, respectively.
2. To keep the DI/DO Relay wires from pulling loose, use a small flat-blade screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.



Connecting DI/DO Relay Wires

Note:

- Digital output (relay): 24VDC/1A
- Digital input: level 0 (Low) -> 0V to 6V, level 1 (High) -> 10V to 24V

FAULT: The two contacts of the terminal block connector are used to detect user-configured events. The two wires attached to the fault contacts form an open circuit when a user-configured event is triggered. If a user-configured event does not occur, the fault circuit remains closed.

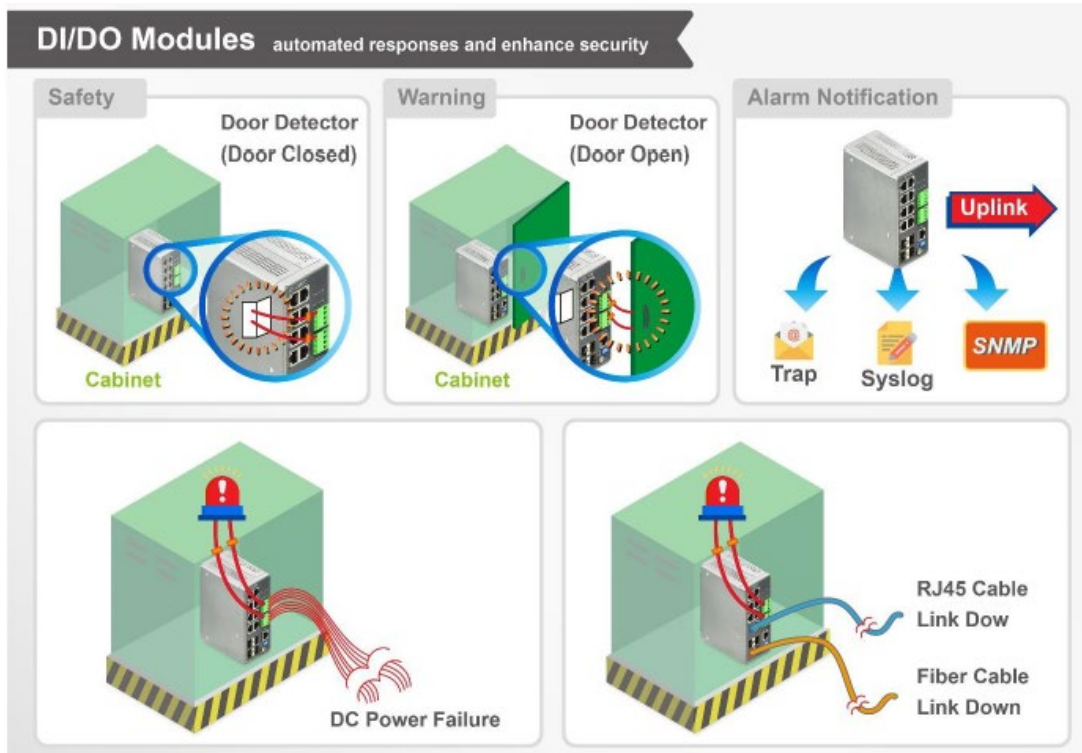
Digital Input and Digital Output Use Case

The switch supports Digital Input and Digital Output. The Digital Input enables the switch to detect and log external device status (such as door intrusion detector). The Digital Output could be used to tell administrators if the switch port shows link down, link up or power failure.

Note:

Digital output (relay): 24VDC/1A

Digital input: level 0(Low) -> 0V to 6V, level 1 (High) -> 10V to 24V



DI: Use to receive external signal and trigger DO. You may set the voltage input as high or low as DI normal; when DI stays in normal (assume it's set as low), then DO will not response. But the voltage input change to high, DI will show high/ abnormal and at the same time, DO will automatically switch to "abnormal" and send a signal to connected devices, switch will have system recorded.

For example, a water level application:

Setting: low water level: DI normal. High water level: DI abnormal, DIO connected to external alarm notification.

DI will show "normal" when the water level is low. DI will not send signal to DO.

DI will show "abnormal" when sensor senses high water level and will send signal to DO at the same time. DO will turn to abnormal and send signal to external alarm notification to trigger the alarm LED.

DI is used for connecting external alarm devices and once it is triggered the switch can send the trap. An external alarm device (for example: power supply, IP camera) can activate this input pin.

Level 0 (Low): 0V to 6V

Level 1 (High): 10V to 24V

For DO, it's similar but the switch is the alarm device, when the switch has temperature or voltage alarm, it will trigger the digital output (24V/1A) to the external device such as a contact relay.

Power Supply Information

Power supply options include the 25160 and 25104 as shown and described below. **Note:** When both AC and DC power inputs are connected, the DC input will supply power since the DC input is higher voltage than the AC input. **Note** that a DC power connection is required for PoE operation. AC power alone can be used to power the switch for data only (no PoE available).

25160 - 480W Din Rail Power Supply (SDR-480-48)

Part number: 25160; see the [25160 webpage](#) for product details.

Features

- 94% High Efficiency
- 150% Peak Load
- Protected against Short Circuit, Overload, Over Voltage, Overheating
- Convection air cooling
- DIN rail mountable
- UL 508 approved
- Full load burn in test
- RoHS compliant

Specifications

Output

- Output Voltage: 48VDC
- Current Rating: 5A
- Power Rating: 480 Watts
- Ripple & Noise Max: 120mVp-p
- Voltage Range: 48~55VDC
- Voltage Tolerance: $\pm 1.0\%$
- Line Regulation: $\pm 0.5\%$
- Load Regulation: $\pm 1.0\%$
- Setup, Rise Time: 300ms, 60ms
- Hold Up Time: 20ms

Input

- Voltage Range Switch Selectable: 90~264VAC, 127~370VDC
- Frequency Range: 47~63Hz
- Efficiency: 94%
- AC Current (Typical): 5A@115VAC, 2.5A@230VAC
- Inrush Current (Cold): 40A@115VAC, 80A@230VAC

Protection

- Overload: 110~160%
- Overvoltage: 57.6~64.8V

Dimensions: Width: 3.37" [85.5 mm] x Depth: 5.06" [128.5 mm] x Height: 5.99" [152.2 mm]

Environment

- Operating: -25°C to +70°C
- Storage: -40°C to +85°C
- Humidity: 20% to 90% (non-condensing)

Weight: 3.53 lbs. [1.6 kg]

MTBF: 112.9 Khrs

Certifications

- Safety: UL508, TUV EN62368-1; IEC60068-2-6 (Vibration)
- EMC Emission: EN55011, EN5032(CISPR32), EN61204-3 Class B, EN61000-3-2, EN61000-3-3;
- EMC Immunity: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, EN55024, EN61000-6-2, EN50082-2, EN61204-3, SEMI F47, GL Approved

Warranty: 5 Year

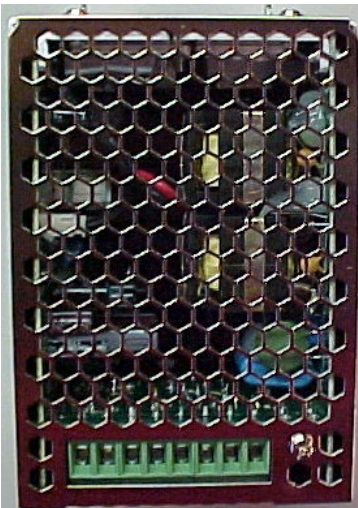
Power Supply Views (25160)



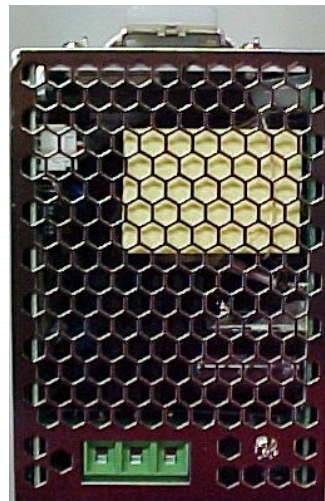
Front:



Back:



Top:



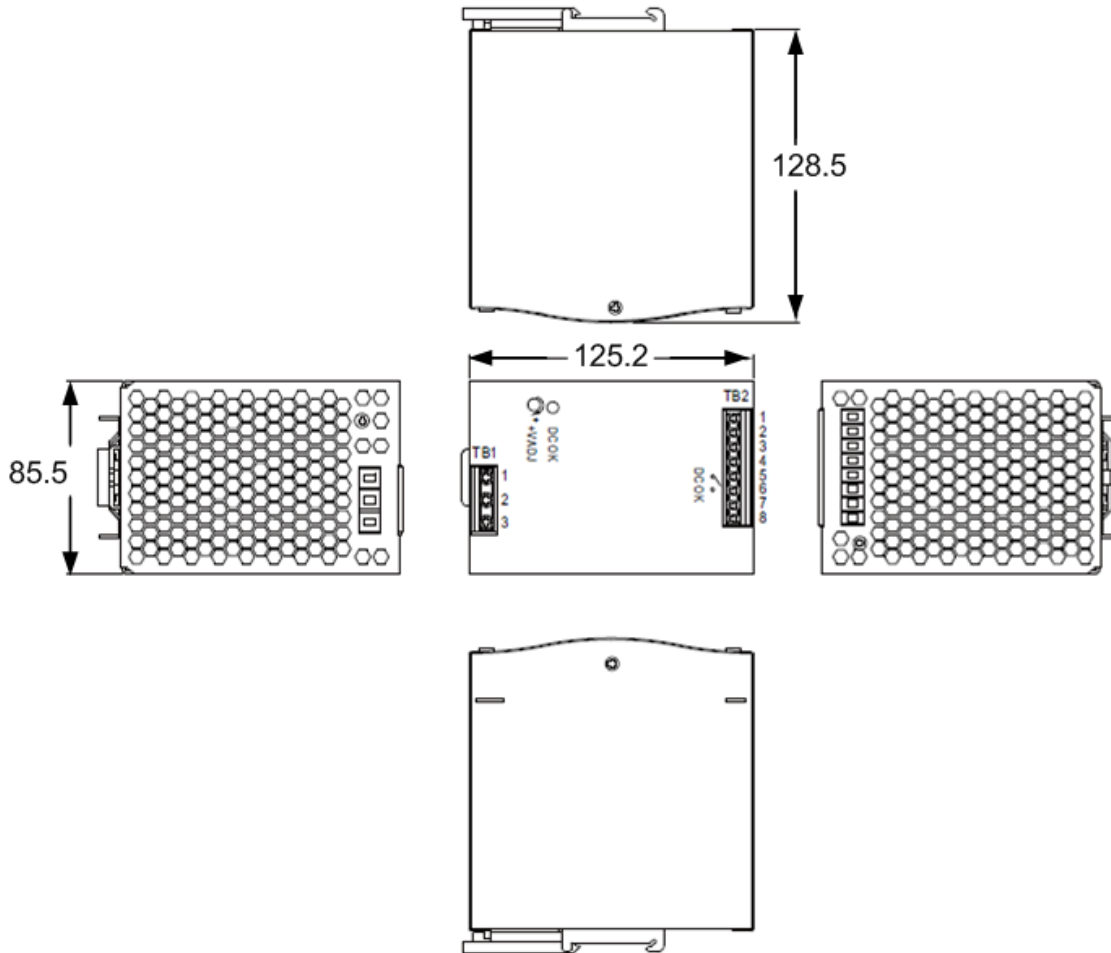
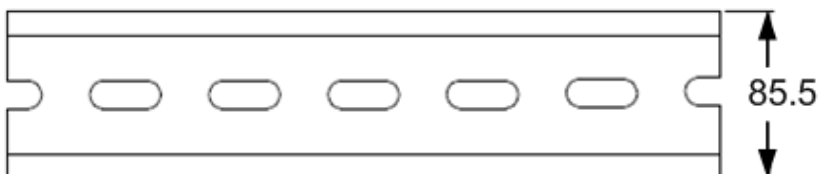
Bottom:

Power Supply Dimensions (25160)


Width: 85.5 mm (3.36 in.)

Height: 125.2 mm (4.92 in.)

Depth: 128.5 mm (5.05 in.)

**ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15**

Power Supply Pin Descriptions (25160)**Terminal Pin No. Assignment (TB1)**

Pin No.	Assignment
1	FG 
2	AC/N
3	AC/L

Terminal Pin No. Assignment (TB2)

Pin No.	Assignment
1,2	DC OUTPUT +V
3,4	DC OUTPUT -V
5,6	Relay Contact
7,8	NC

DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

25104 Industrial DIN Rail Mounted Power Supply

See the 25104 Power Supply product webpage at <https://www.lantronix.com/products/25104-2/> for more information.

Features

- 94% High Efficiency
- 150% Peak Load
- Protected against Short Circuit, Overload, Over Voltage, Overheating
- Convection air cooling
- DIN rail mountable
- UL 508 approved
- Full load burn in test
- RoHS compliant

Power Output

- Output Voltage 48VDC
- Current Rating 5A
- Power Rating 240 Watts
- Ripple & Noise Max 120mVp-p
- Voltage Range 48~55VDC
- Voltage Tolerance $\pm 1.0\%$
- Line Regulation $\pm 0.5\%$
- Load Regulation $\pm 1.0\%$
- Setup, Rise Time 300ms, 60ms
- Hold Up Time 20ms

Power Input

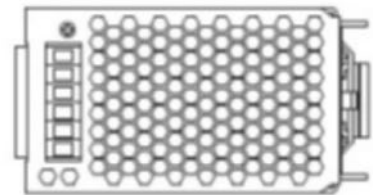
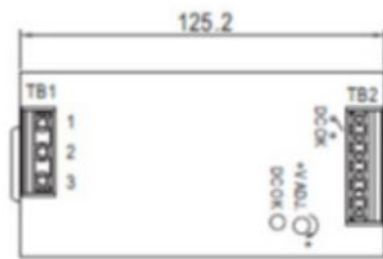
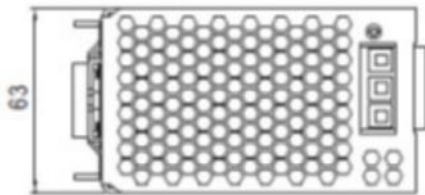
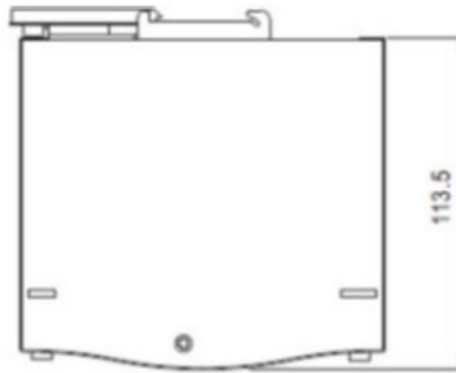
- Voltage Range - Switch Selectable: 88~132VAC; 124~370VDC
- Frequency Range 47~63Hz
- Efficiency 94%
- AC Current (Typical) 2.6A@115VAC; 1.3A@230VAC
- Inrush Current (Cold) 33A@115VAC; 65A@230VAC

Protection

- Overload 105~160%
- Overvoltage 56~65V
- Dimensions: Width: 2.48" [63 mm] x Depth: 5.26" [113.5 mm] x Height: 4.93" [125.2 mm]
- Environment:
 - Operating: -25°C to $+60^{\circ}\text{C}$
 - Storage: -40°C to $+85^{\circ}\text{C}$
 - Humidity: 20% to 95% (non-condensing)
- Weight: 2.27 lbs. [1.03 kg]
- MTBF: 169.3 Khrs
- Certifications
 - Safety: UL508, TUV EN60950-1
 - IEC60068-2-6 (Vibration)
 - EMC Emission: EN55022, CISPR22 Class B, EN61000-3-2
 - EN61000-3-3; EMC Immunity: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5,
 - EN61000-4-6, EN61000-4-8, EN61000-4-11, EN55024, EN61000-6-2, EN50082-2,
 - EN61204-3, SEMI F47, GL Approved
- Warranty: Lifetime



25104 Views and Dimensions



Initial Switch Configuration

Initial Switch Configuration via Web Browser

After powering up the switch for the first time, you can perform the initial switch configuration using a web browser. For managing other switch features, refer to the Web User Guide for details.

To begin with the initial configuration stage, you must reconfigure your PC's IP address and subnet mask so as to make sure the PC can communicate with the switch. After changing PC's IP address (e.g., 192.168.1.250), you can then access the switch Web UI using the switch's default IP address as shown below.

The initial switch configuration procedure is as follows:

Note: The switch factory default IP address is 192.168.1.77. The default Subnet Mask is 255.255.255.0.

1. Power up the PC that you will use for the initial configuration. Make sure the PC has the Ethernet RJ45 connector to be connected to the switch via standard Ethernet LAN cable.
2. Reconfigure the PC's IP address and Subnet Mask as below, so that it can communicate with the switch.
3. Power up the switch to be initially configured, and wait until it has finished its start-up processes.
4. Connect the PC to any port on the switch using a standard Ethernet cable, and check the port LED on the switch to make sure the link status of the PC's is OK.
5. Run your Web browser on the PC and enter the factory default IP address to access the switch's Web interface.

If your PC is configured correctly, you will see the switch Login page as shown below.



Web UI login page

If you do not see the above Login page, perform the following steps:

- Refresh the web page.
 - Check to see if there is an IP conflict issue.
 - Clean browser cookies and temporary internet files.
 - Check your PC settings again and repeat step 2.
6. Enter the factory default username and password in login page and click "Login" to log into the switch.
Note: The factory default Username and Password are both **admin**. See the *Web User Guide* for details.

Initial Switch Configuration via CLI

1. Use an RJ-45 cable to connect a terminal or PC/terminal emulator to the switch port to access the CLI.
2. Attach the RJ-45 serial port on the switch front panel to the cable for Telnet/CLI configuration.
3. Attach the other end of the DB-9 cable to a PC running Telnet or a terminal emulation program such as HyperTerminal or TeraTerm.
4. After powering up the switch for the first time, you can perform the initial switch configuration using the CLI (Command Line Interface). For managing other switch features, see the *CLI Reference* for details.

Troubleshooting

Basic Troubleshooting

1. Make sure your switch model supports the feature or function attempted; see [Features](#) on page 6 and check the Release Notes for your particular firmware version.
2. Verify the install process; see [Installing the Switch](#) on page 14.
3. Verify the initial switch configuration; see [Initial Switch Configuration](#) on page 28.
4. Troubleshoot connected network devices to pinpoint the problem to the switch.
5. Run the System Diagnostics. See the *Web User Guide* or the *CLI Reference*.
6. Reset the switch; see [Reset Button](#) on page 13.
7. Restore the switch to its factory default settings; see [Reset Button](#) on page 13.
8. If using the CLI, try configuring via the Web UI and vice versa. See the *Web User Guide* or the *CLI Reference*.

PoE Troubleshooting

1. Note that PoE devices initially draw more power during their boot up sequence than during normal operation.
2. Turn LLDP off and turn CDP on.
3. Verify that PoE capability is enabled for the interface.
4. Make sure the cable is properly seated in the port socket.
5. Ensure that you have the right and qualified Cat 5 or above Ethernet cable plugged into the right port on the PD, and that the length of the Ethernet cable is not over 100m.
6. Confirm the power supply mode (Alternative A vs. Alternative B) with the PD vendor. **Note** that PoE support requires a DC power supply. AC power alone can be used to power the switch for data only (no PoE available).
7. For PD power up failures or power cycling, verify that the power supply is set to Vout of 56V. See [Power Supply](#) on page 22.

Troubleshooting Table

The following table provides information for users to easily troubleshoot problems by taking actions based on the suggested solutions within.

Symptom	Possible Cause	Suggested Solutions
SYSTEM LED is Off	The switch is not receiving power.	<ol style="list-style-type: none"> 1. Check if correct power cord is connected firmly to the switch and to the AC/DC outlet socket. 2. Power cycle the switch by unplugging and plugging the power cord back into the switch. 3. If the LED is still off, plug power cord into a different AC/DC outlet socket to make sure correct AC/DC source is supplied.
SYSTEM LED is RED	An abnormal state has been detected by the switch.	Check the system log within the switch from WEB UI to understand the abnormal state (e.g. exceeding operating temperature range) and take corresponding actions to resolve.
RJ45 Ports left side SFP Ports SFP+ Ports LED is Off	The port is not connected or the connection is not working.	<ol style="list-style-type: none"> 1. Check if the cable connector plug is firmly inserted and locked into the port at both the switch and the connected device. 2. Make sure the connected device is up and running correctly. 3. If the symptom still exists, try different cable or different port, in order to identify if it is related to the cable or specific port. 4. Check if the port is disabled in the configuration settings via WEB user interface.
RJ45 Ports right side LED is Off	The port is not supplying power	<ol style="list-style-type: none"> 1. Check if the cable connector plug is firmly inserted and locked into the port at both the switch and the connected device. 2. Make sure the correct Ethernet cables are used. 3. If the symptom still exists, try different cable or different port, in order to identify if it is related to the cable or specific port. 4. Check if the port is disabled in the configuration settings via WEB user interface.

LED Troubleshooting

LED	Color	State	Description
RJ45 Ports Left side	Green	On	The port is enabled and established a link to connected device, and the connection speed is 1000Mbps.
	Green	Blinking	The port is transmitting/receiving packets, and the connection speed is 1000Mbps.
	Amber	On	The port is enabled and established a link to connected device, and the connection speed is 10/100Mbps.
	Amber	Blinking	The port is transmitting/receiving packets, and the connection speed is 10/100Mbps.
	--	Off	The port has no active network cable connected, or it has not established a link to connected device. Otherwise, the port may have been disabled via the switch user interface.
RJ45 Ports Right Side	Green	On	The port is enabled and supplying power to connected device.
	Amber	On	An abnormal state, such as overload status, has been detected in the switch.
	--	Off	The port has no active network cable connected, or it is not connected a PoE PD device. Otherwise, the port may have been disabled via the switch user interface.
SFP Ports	Green	On	The port is enabled and established a link to connected device, and the connection speed is 1000Mbps.
	Green	Blinking	The port is transmitting/receiving packets, and the connection speed is 1000Mbps.
	Amber	On	The port is enabled and established a link to connected device, and the connection speed is 100Mbps.
	Amber	Blinking	The port is transmitting/receiving packets, and the connection speed is 100Mbps.
	--	Off	The port has no active network cable connected, or it has not established a link to connected device. Otherwise, the port may have been disabled via the switch user interface.
	Blue	On	The port is enabled and established a link to connected device, and the connection speed is 10Gbps.
	Blue	Blinking	The port is transmitting/receiving packets, and the connection speed is 10Gbps.

LED	Color	State	Description
	Green	On	The port is enabled and established a link to connected device, and the connection speed is 1Gbps.
	Green	Blinking	The port is transmitting/receiving packets, and the connection speed is 1Gbps.
	--	Off	The port has no active network cable connected, or it has not established a link to connected device. Otherwise, the port may have been disabled via the switch user interface.

Compliance and Safety Information

Declaration of Conformity

Manufacture's Name: Lantronix, Inc.

Manufacture's Address:

48 Discovery, Suite 250, Irvine, CA 92618, USA

Declares that the products: SISPM1040-3166-L3 and SISPM1040-3248-L3

Conform to the following Product Regulations:

Emission: EN 55032: 2015+A11:2020, CISPR 32: 2015+COR1:2016, EN IEC 61000-3-2:2019, EN 6100-3-3: 2013+A1: 2019, AS/NZS CISPR 32: 2015.

Immunity: EN 55024: 2010+A1: 2015. EN55035: 2017+A11: 2020 (IEC 61000-4-2: 2008; IEC 61000-4-3: 2020; IEC 61000-4-4: 2012 ; IEC 61000-4-5: 2014+A1:2017; IEC 61000-4-6: 2013+COR1: 2015; IEC 61000-4-8: 2009; IEC 61000-4-11: 2020).

EN 62368-1:2014+A11:2017

NEMA TS 2-2016 (2.2.7 Test Procedure: Transients, Temperature and Humidity) (2.2.8 Vibration Test) (2.2.9 Shock Test).

Relevant Standard(s) / Specifications: EN 55032: 2015+A11:2020 (Class A); CISPR 32: 2015+COR1:2016 (Class A); EN 55024: 2010+A1: 2015; EN 55035: 2017+A11: 2020; EN IEC 61000-3-2: 2019; EN 61000-3-3: 2013+A1: 2019.

Measurement Procedures and Standards Used: 47 CFR FCC Part 15 Subpart B; ANSI C63.4: 2014; ICES-03 Issue 7; ANSI C63.4a: 2017.

With the technical construction on file at the above address, this product carries the CE Mark

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standards(s).

Place: Minnetonka, Minnesota

Date: June 6, 2022

Signature: *Eric Bass*

Full Name: Eric Bass

Position: Vice President of Engineering

FCC Regulations

FCC, Class A: This product has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this product in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference.
- 2) This device must accept any interference received, including interference that may cause undesired operation.

CE MARK DECLARATION OF CONFORMANCE FOR EMI AND SAFETY (EEC): This equipment has been tested and found to comply with the protection requirements of European Emission Standard EN55022/EN61000-3 and the Generic European Immunity Standard EN55024.

High Risk Activities Disclaimer

Components, units, or third-party products used in the product described herein are NOT fault-tolerant and are NOT designed, manufactured, or intended for use as on-line control equipment in the following hazardous environments requiring fail-safe controls: the operation of Nuclear Facilities, Aircraft Navigation or Aircraft Communication Systems, Air Traffic Control, Life Support, or Weapons Systems ("High Risk Activities"). Lantronix and its supplier(s) specifically disclaim any expressed or implied warranty of fitness for such High Risk Activities.

Cautions and Warnings

Definitions

Cautions indicate that there is the possibility of poor equipment performance or potential damage to the equipment. **Warnings** indicate that there is the possibility of injury to person. Cautions and Warnings appear here and may appear in this manual where appropriate. Failure to read and understand the information identified by this symbol could result in poor equipment performance, damage to the equipment, or injury to persons.

Caution

While installing or servicing the power module, wear a grounding device and observe all electrostatic discharge precautions. Failure to observe this caution could result in damage to, or failure of the power module.

Warnings

Warning: Do not connect the power module to an external power source before installing it into the chassis. Failure to observe this warning could result in an electrical shock, even death.

WARNING: The power module has a provision for grounding. Equipment grounding is vital to ensure safe operation. The installer must ensure that the power module is properly grounded during and after installation. Failure to observe this warning could result in an electric shock, even death.

WARNING: A readily accessible, suitable National Electrical Code (NEC) or local electrical code approved disconnect device and branch-circuit protector must be part of the building's installed wiring to accommodate permanently connected equipment. Failure to observe this warning could result in an electric shock, even death.

WARNING: Turn the external power source OFF and ensure that the power module is disconnected from the external power source before performing any maintenance. Failure to observe this warning could result in an electrical shock, even death.

WARNING: Ensure that the disconnect device for the external power source is OPEN (*turned OFF*) before disconnecting or connecting the power leads to the power module. Failure to observe this warning could result in an electric shock, even death.

Electrical Safety Warnings

Electrical Safety

IMPORTANT: This equipment must be installed in accordance with safety precautions.

Elektrische Sicherheit

WICHTIG: Für die Installation dieses Gerätes ist die Einhaltung von Sicherheitsvorkehrungen erforderlich.

Elektrisk sikkerhed

VIGTIGT: Dette udstyr skal installeres i overensstemmelse med sikkerhedsadvarslerne.

Elektrische veiligheid

BELANGRIJK: Dit apparaat moet in overeenstemming met de veiligheidsvoorschriften worden geïnstalleerd.

Sécurité électrique

IMPORTANT: Cet équipement doit être utilisé conformément aux instructions de sécurité.

Sähköturvallisuus

TÄRKEÄÄ: Tämä laite on asennettava turvaohjeiden mukaisesti.

Sicurezza elettrica

IMPORTANTE: questa apparecchiatura deve essere installata rispettando le norme di sicurezza.

Elektrisk sikkerhet

VIKTIG: Dette utstyret skal installeres i samsvar med sikkerhetsregler.

Segurança eléctrica

IMPORTANTE: Este equipamento tem que ser instalado segundo as medidas de precaução de segurança.

Seguridad eléctrica

IMPORTANTE: La instalación de este equipo deberá llevarse a cabo cumpliendo con las precauciones de seguridad.

Elsäkerhet

OBS! Alla nödvändiga försiktighetsåtgärder måste vidtas när denna utrustning används.

**Lantronix Corporate Headquarters**

48 Discovery, Suite 250

Irvine, CA 92618, USA

Toll Free: 800-526-8766

Phone: 949-453-3990

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Technical Support

Online: <https://www.lantronix.com/technical-support/>

Sales Offices

For a current list of our domestic and international sales offices, go to the Lantronix web site at www.lantronix.com/about/contact.