# SI305 – SI306 Industrial Gigabit PoE Ethernet Switch Quick Installation Guide

## Overview

The lite/unmanaged (PoE) Industrial Gigabit Ethernet Switch solutions are designed for supporting standard industrial applications without complex setup to make the network truly plug-and-play.

## Package Checklist

Please verify that the box contains the following items :

| Item | Quantity |
|---|---|
| Xentino Industrial Ethernet Switch | 1 |
| Wall-mount plates | 2 |
| DIN-Rail CLIP | 1 |
| M4 Screws (for the wall mount plates & DIN CLIP) | 4 |
| DC power terminal block | 1 |

## Safety Instructions

When a connector is removed during installation, testing, or servicing, or when an energized fiber is broken, a risk of ocular exposure to optical energy that may be potentially hazardous occurs, depending on the laser output power.

The primary hazards of exposure to laser radiation from an optical-fiber communication system are:

- Damage to the eye by accidental exposure to a beam emitted by a laser source.
- Damage to the eye from viewing a connector attached to a broken fiber or an energized fiber.

## Documentation Conventions

The following conventions are used in this quick installation guide to emphasize information that will be of interest to the reader.

**Danger** — The described activity or situation might or will cause *personal injury*.

**Warning** — The described activity or situation might or will cause *equipment damage*.

**Caution** — The described activity or situation might or will cause *service interruption*.

**Note** — The information supplements the text or highlights important points.

# Technical Specifications

The lite/unmanaged (PoE) Industrial Gigabit Ethernet Switch solutions are designed for supporting standard industrial applications without complex setup to make the network truly plug-and-play.

| Model | SI305 | SI306 |
|---|---|---|
| **Ethernet** | | |
| **Copper RJ45 Ports (POE)** | 4 x 10/100/1000 Mbps speed auto-negotiation; MDI/MDIX Auto-crossover | 4 x 10/100/1000 Mbps speed auto-negotiation; MDI/MDIX Auto-crossover |
| **Copper RJ45 Ports(Non POE)** | 1 x 10/100/1000 Mbps speed auto-negotiation; MDI/MDIX Auto-crossover | - |
| **SFP (pluggable) Ports** | - | 100/1000BaseSFP slot |
| **Fiber port connector** | - | LC typically for fiber |
| **PoE** | IEEE 802.3at/af PoE PSE | |
| **Power** | | |
| **Power input** | Redundant Input Terminals Reverse power protection | |
| **Input voltage range** | 12-58 VDC, 54-58V for PoE+, 48-58V for PoE | |
| **Environmental and Compliances** | | |
| **Operating temperature range** | -40 to +75°C (cold startup at -40°C) | |
| **Storage temperature range** | -40 to +85 °C | |
| **Humidity** | 5 to 95% RH (non-condensing) | |
| **Mechanical** | | |
| **Ingress protection** | IP30 | |
| **Dimension** | 136mm(H) x 29mm (W) x 106mm (D) (without DIN rail clip) | |
| **Weight** | 375g | |
| **Installation option** | DIN-Rail mounting Wall mounting | |

# Dimension Illustration
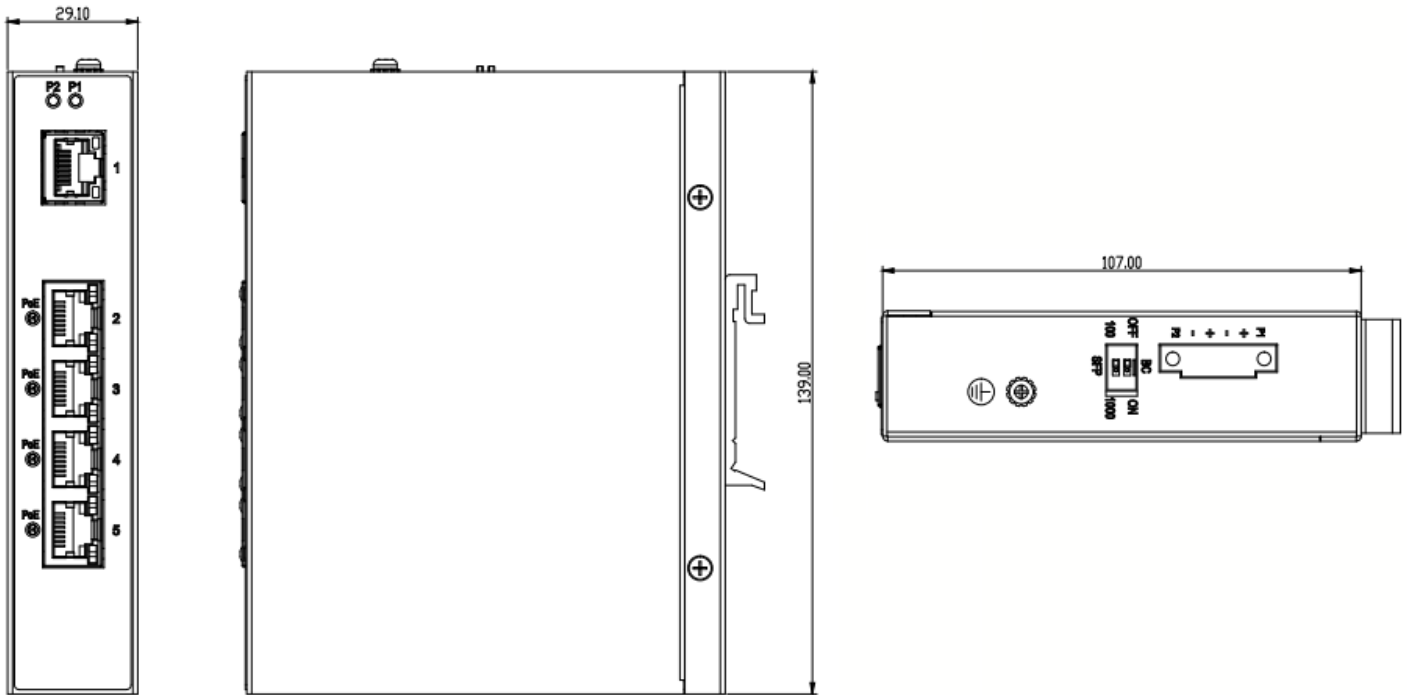


# DIN-Rail Mounting

Mounting step:

1.  Screw the DIN-Rail bracket on with the bracket and screws in the accessory kit.
2.  Hook the unit over the DIN rail.
3.  Push the bottom of the unit towards the DIN Rail until it snaps into place.
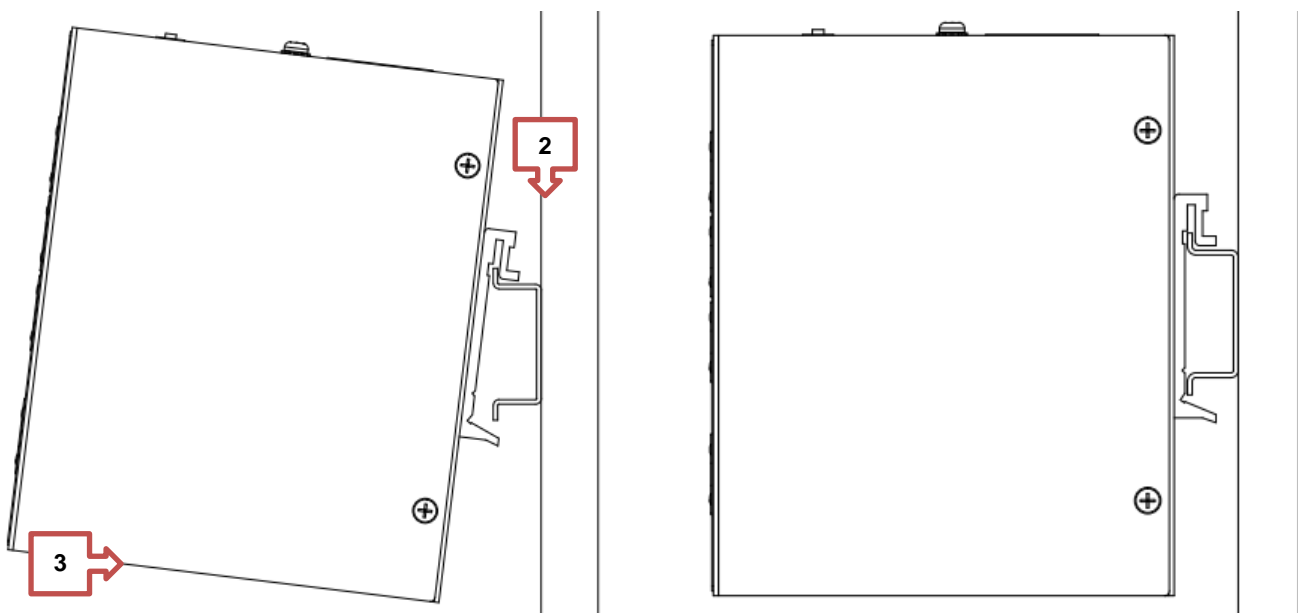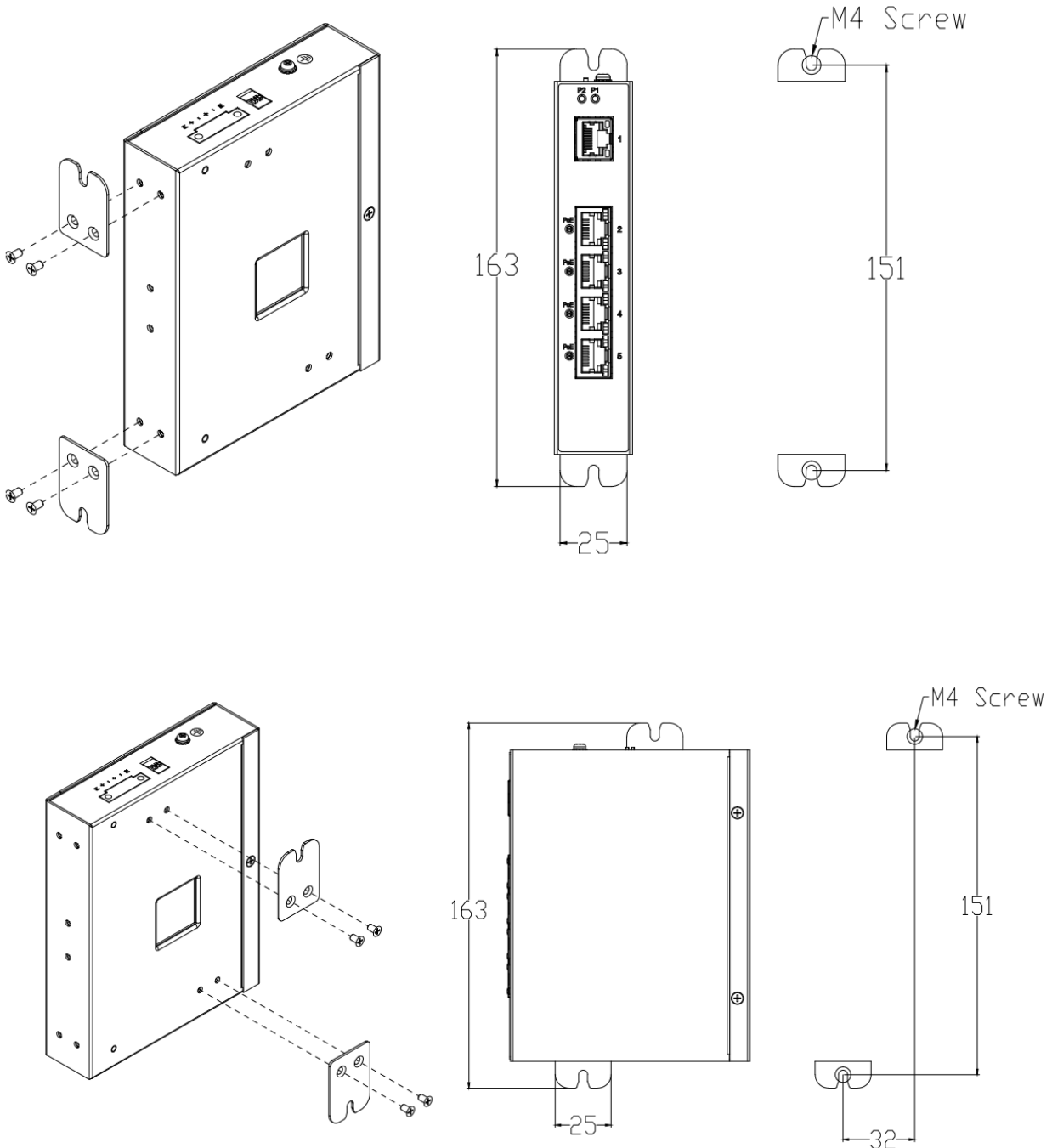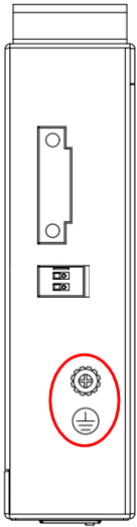
# Wall Mounting

Mounting step:

1.  Screw on the wall-mount plate on with the plate and screws in the accessory kit.

# Ground Connecting

Xentino SI Series switch must be properly grounded for optimum system performance.

# Ethernet Interface Connecting (RJ45 Ethernet)

The switches provide two types of electrical (RJ45) and optical (mini-GBIC) interfaces.

Connecting the Ethernet interface via RJ45:

- To connect to a PC, use a straight-through or a cross-over Ethernet cable,
- To connect the Xentino SI Series switch to an Ethernet device, use UTP (Unshielded Twisted Pair) or STP (Shielded Twisted Pair) Ethernet cables.

The pin assignment of RJ-45 connector is shown in the following figure and table.
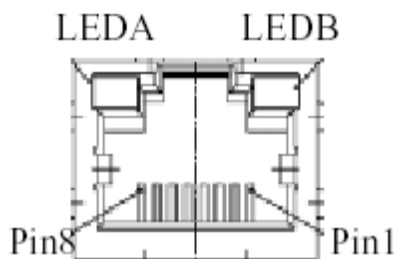
| Pin | Assignment | PoE Assignment |
|-----|------------|----------------|
| 1,2 | T/Rx+,T/Rx- | Positive $V_{Port}$ |
| 3,6 | T/Rx+,T/Rx- | Negative $V_{Port}$ |
| 4,5 | T/Rx+,T/Rx- | X |
| 7,8 | T/Rx+,T/Rx- | X |

# Ethernet Interface Connecting the (Fiber, SFP)

For a 100 Mbps fiber port available, please prepare the LC connectors or SC connectors (with the use of an optional SC-to-LC adapter). They are also available with multimode, single mode, long-haul (for connections up to 120+ km) or special-application transceivers.

For a 1000 Mbps fiber port available, please use the mini-GBIC SFP (small form pluggable). These accept plug in fiber transceivers that typically have an LC style connector. They are available with multimode, single mode, long-haul (for connections up to 80+ km) or special-application transceivers.

For each fiber port there is a transmit (TX) and receive (RX) signal. Please make sure that the transmit (TX) port of the switch connects to the receive (RX) port of the other device, and the receive (RX) port of the switch connects to the transmit (TX) port of the other device when making your fiber optic connections.

**DANGER:**   Never attempt to view optical connectors that might be emitting laser energy.

Do not power up the laser product without connecting the laser to the optical fiber and putting the cover in position, as laser outputs will emit infrared laser light at this point.

# Power Connecting

The switch can be powered from two power supply (input range 12V – 58V). Insert the positive and negative wires into V+ and V- contact on the terminal block and tighten the wire-clamp screws to prevent the wires from being loosened.

**Note:**   1.   The DC power should be connected to a well-fused power supply.

2.   Input power should be within the range of 54~58VDC for PoE+ compliant, or 48-58VDC for PoE compliant.

# DIP Switch Setting

| Pin No# | Status | 5-Port with PoE (4TX+1TX-PoE) | 5-Port (4TX+1SFP) with PoE |
|---------|--------|-------------------------------|----------------------------|
| Pin 1 | ON | To enable Broadcast storm rate limit | To enable Broadcast storm rate limit |
| | OFF | To disable Broadcast storm rate limit | To disable Broadcast storm rate limit |
| Pin 2 | ON | NOT USED | NOT USED |
| | OFF | NOT USED | NOT USED |

# LED Status Indications

| LED Name | Indicator / Color | Condition |
|---|---|---|
| PoE | On Green | PoE is working |
| | Off | PoE is not working |
| P1 | On Green | P1 power line has power |
| | Off | P1 power line disconnect or does not have supply power |
| P2 | On Green | P2 power line has power |
| | Off | P2 power line disconnect or does not have supply power |
| Alarm | On Red | Power failure alarm occurs |
| | Off | No power failure alarm |
| Copper 1 to N port Link/Act | On Green | Ethernet link up but no traffic is detected |
| | Flashing Green | Ethernet link up and there is traffic detected |
| | Off | Ethernet link down |
| Copper 1 to N port Speed | On Yellow | A 1000Mbps connection is detected |
| | Off | No link, a 10Mbps or 100 Mbps connection is detected |
| SFP 1 to N port (N=0,1,2) Link/Act | On Green | Ethernet link up |
| | Off | Ethernet link down |
| SFP 1 to N port (N=0,1,2) Speed | On Yellow | SFP port speed 1000Mbps connection is detected. |
| | Off | No link or a SFP port speed 100Mbps connection is detected. |

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