antaira

Industrial PoE Splitter for 10/100/1000T

Wide Operating Temperature

User Manual

FCC Warning

This Equipment 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 in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. It may cause harmful interference to radio communications if the equipment is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CE Mark Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Content

Introduction

The Industrial Power over Ethernet Splitter receives a unified PoE signal (data and power) via UTP/STP cable, and then separates the data and power onto two different outputs for non-PoE devices which is not compliant with IEEE802.3af standard. The network device can accept the power and Ethernet data from the Splitter.

Features

- Supports 10/100/1000T for PoE in and Data out
- Power Isolation and Short circuit protection for power output
- Auto disconnection for over power voltage input
- Supports Output power up to 12.95W at $24V_{DC}$
- Wide-range Power Design
- IP-30 Protection
- DIN Rail and Wall Mount Design
- Provides EFT protection $3,000V_{DC}$ for power line
- Supports $6,000 \, V_{DC}$ Ethernet ESD protection

Package Contents

Please refer to the package content to verify them against the checklist below.

- Industrial PoE Splitter x 1
- Pluggable block connector x 1
- Wall-Mount rack x 2
- User manual x 1

Compare the contents with the standard checklist above. If any item is damaged or missing, please contact your local dealer for service.
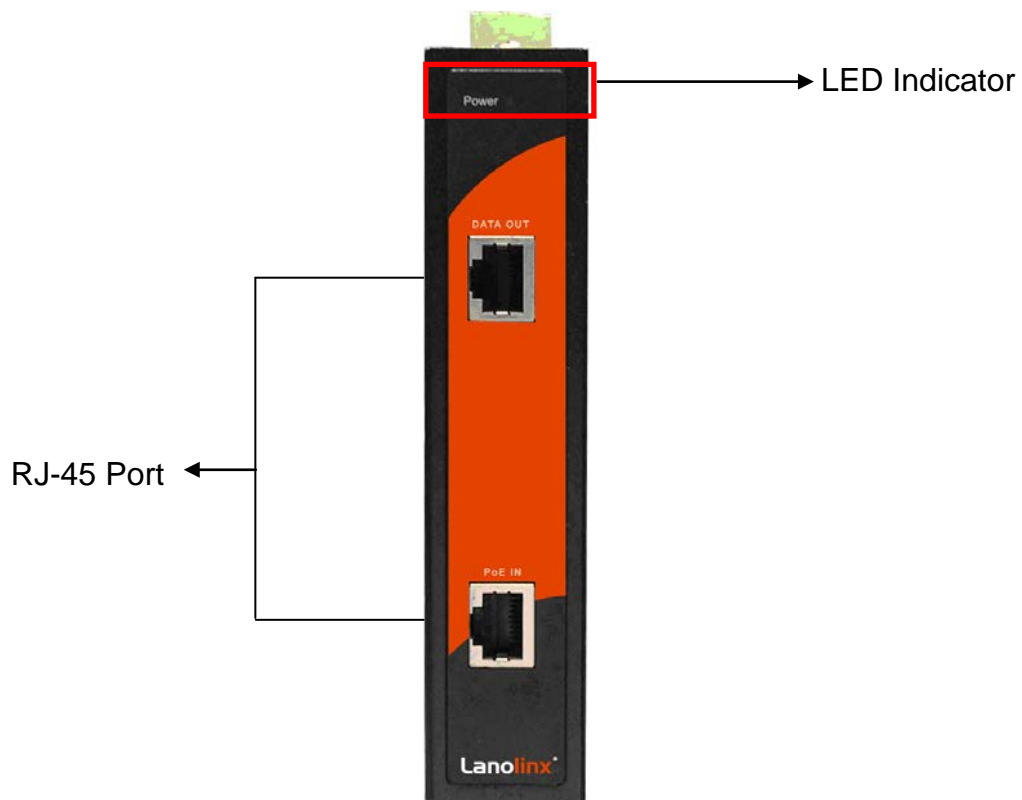
Hardware Description

In this paragraph, we will introduce the hardware spec, port, cabling information, and wiring installation.

Physical Dimension

Industrial PoE Splitter dimension (W x D x H) is **30mm x 95mm x 140mm**
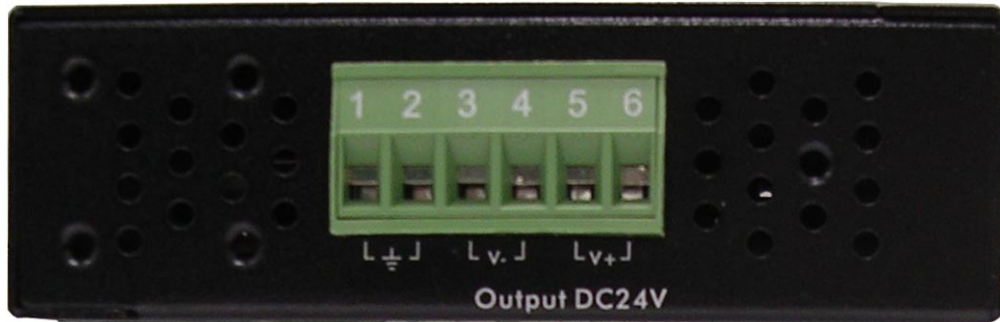
Front Panel

The Front Panel of the Industrial PoE Splitter is shown as below.

Front Panel of the Industrial PoE Splitter

Top View

The top panel of the Industrial PoE Splitter has one terminal block connector of two DC power outputs.

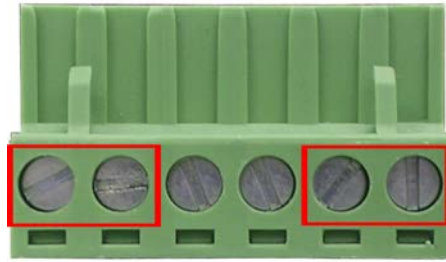Top Panel of the Industrial PoE Splitter

Wiring the Power Outputs

Please follow the steps below to insert the power wire.

Insert the positive and negative wires into the V+ and V- contacts on the terminal block connector.

Note   *The wire gauge for the terminal block should be in the range between 12~24 AWG.*

Tighten the wire-clamp screws for preventing the wires from loosing.

LED Indicators

LED	Status	Meaning
Power	Green	Power is active
	Off	No power inputs

Ports

RJ-45 ports: 10/100/1000Mbps ports are auto-sensing for 10Base-T, 100Base-TX, or 1000Base-T connections.

Data pins for PoE IN port: 1, 2, 3, 6, 4, 5, 7, and 8
Power pins for PoE IN port: 4, 5 (V+); 7, 8 (V-) or 1, 2 (V+); 3, 6 (V-);

Data pins for DATA OUT port: 1, 2, 3, 6, 4, 5, 7, and 8

Power output (located on the top side): 1 x 6 pin terminal block

Cabling

Use the four twisted-pair, Category 5e cabling for RJ-45 port connection. The cable between the splitter and the non-PoE device must be less than 100 meters (328 ft.) long.

Mounting Installation

DIN-Rail Mounting

The DIN-Rail is screwed on the Industrial PoE Splitter when out of factory. If the DIN-Rail is not screwed on the Industrial PoE Splitter, please see the following pictures to screw the DIN-Rail on the splitter. Follow the steps below to hang the Industrial PoE Splitter.
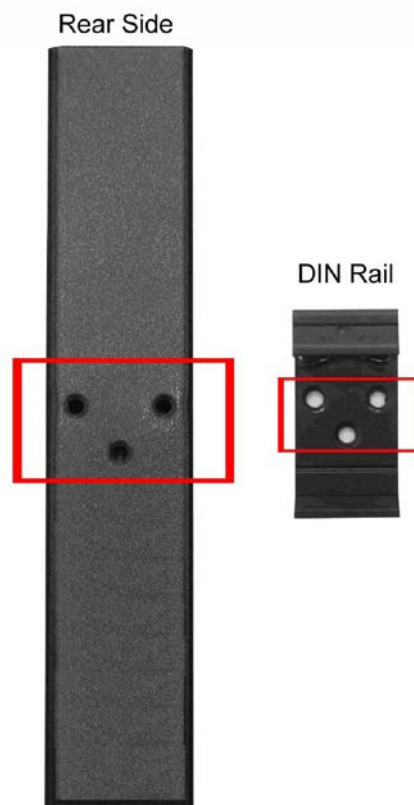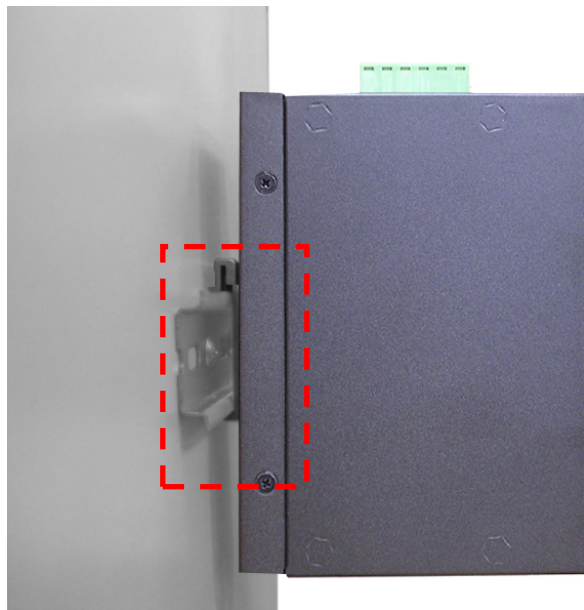

1. Use the screws to screw the DIN-Rail on the rear side of the Industrial PoE Splitter.
2. To remove the DIN-Rail, reverse step 1.

3. Insert the top of DIN-Rail into the track.

4. Then, lightly push the button of DIN-Rail into the track.

5. Check the DIN-Rail is tightly on the track.
6. To remove the Industrial PoE Splitter from the track, reverse steps above.

Wall Mount Plate Mounting

Follow the steps below to mount the Industrial PoE Splitter with wall mount plate.

1. Remove the DIN-Rail from the Industrial PoE Splitter; loose the screws to remove the DIN-Rail.
2. Place the wall mount plates on the top & bottom side of the Industrial PoE Splitter.
3. Use the screws to screw the wall mount plates on the Industrial PoE Splitter.
4. Use the hook holes at the corners of the wall mount plates to hang the Industrial PoE Splitter on the wall.
5. To remove the wall mount plates, reverse steps above.
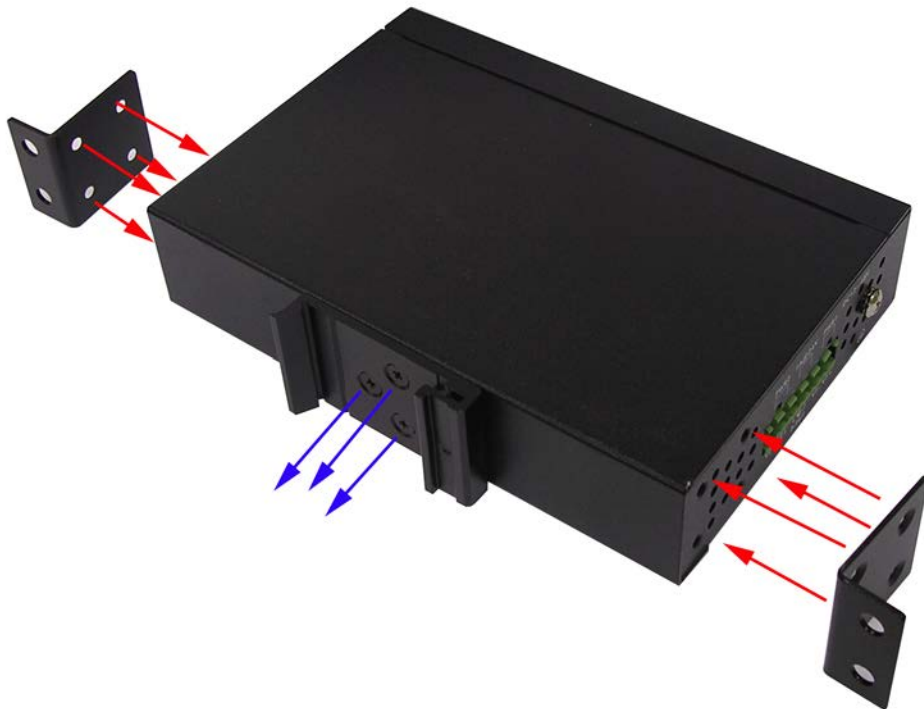
Hardware Installation

In this paragraph, we will describe how to install the Industrial PoE Splitter and the installation points for the attention.

Installation Steps

1. Unpack the Industrial PoE Splitter packing.
2. Check if the DIN-Rail is screwed on the Industrial PoE Splitter or not. If the DIN-Rail is not screwed on the Industrial PoE Splitter, please refer to **DIN-Rail Mounting** section for DIN-Rail installation. If the user wants to wall mount the Industrial PoE Splitter, please refer to **Wall Mount Plate Mounting** section for wall mount plate installation.
3. To hang the Industrial PoE Splitter on the DIN-Rail track or wall, please refer to the **Mounting Installation** section.
4. Connect the UTP/STP cable between the PoE hub and the Industrial PoE Splitter and the power LED on the Industrial PoE Splitter will light up. Please refer to the **LED Indicators** section for indication of LED lights.
5. Prepare the twisted-pair, straight through Category 5e/above cable for Ethernet connection.
6. Insert one side of the RJ-45 cable into the Industrial PoE Splitter DATA OUT port and another side to the non-PoE device.

Network Application

This segment provides the sample application to help user to have more actual idea of Industrial PoE Splitter application. A sample application of the Industrial PoE Splitter is shown as below.
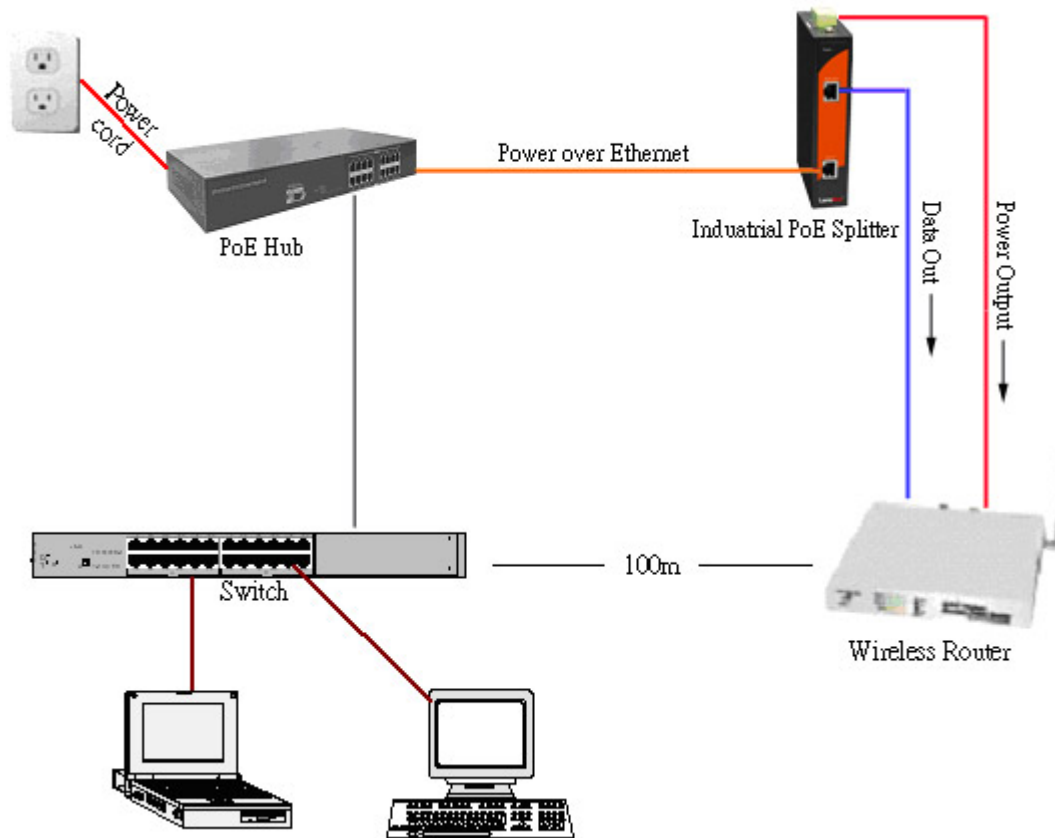
Troubles shooting

- Select the proper UTP/STP cable to construct user network. Use unshielded twisted-pair (UTP) or shielded twisted-pair (STP) cable for RJ-45 connections: 100Ω Category 3, 4 or 5 cable for 10Mbps connections, 100Ω Category 5 cable for 100Mbps connections, or 100Ω Category 5e cable for 1000Mbps connections. Also be sure that the length of any twisted-pair connection does not exceed 100 meters (328 feet).

- **Diagnosing LED Indicators:** To assist in identifying problems, the Industrial PoE Splitter can be easily monitored through panel indicators, which describe common problems the user may encounter and where the user can find possible solutions.

- If the power indicator does not light up when the power cable is plugged in, you may have a problem with power cable. Then check for loose power connections and power losses. If you still cannot resolve the problem, please contact the local dealer for assistance.

- If the Industrial PoE Splitter LED indicators are normal and the connected cables are correct but the packets still cannot transmit. Please check your system's Ethernet devices configuration or status.

Technical Specification

The Industrial PoE Splitter technical specifications are as follows.

Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T IEEE 802.2af Power over Ethernet

Connector	**Data and power in**:
	1 x RJ-45 data pin 1, 2, 3, 6, 4, 5, 7, 8
	               Power pin 4, 5 (V+), 7, 8 (V-);
	                      1, 2 (V+), 3, 6 (V-)
	(Note: This PoE port should not be connected to TNV-1 circuits.)
	
	Data out:
	1 x RJ-45 data pin 1, 2, 3, 6, 4, 5, 7, 8
	Power out:
	1 x 6-pin Terminal Block

Power Input	44 ~ 72V_{DC}
Power Output	12.95W max. (0.539A @ 24V_{DC})
Power Output Protection	Power Isolation, Short Circuit Protection
Overload Current Protection	Present
LED	Power (Green)

Network Cable	**10/100Base-TX:** 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m) **1000Base-T:** 4-pair UTP/STP Cat. 5e cable EIA/TIA-568 100-ohm (100m)
Power Consumption	17.76 Watts@ $48V_{DC}$
Install	Provides DIN rail kit and wall mount design
Operating Temperature	-40°C to 75°C
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40°C to 85°C
Case Dimension	Metal case IP-30, 30 mm (W) x 95 mm (D) x 140mm (H)
EMI	FCC Class A, CE EN61000-4-2 (ESD), CE EN61000-4-3 (RS), CE EN-61000-4-4 (EFT), CE EN61000-4-6 (CS), CE EN61000-4-8, CE, CE EN61000-6-2, CE EN61000-6-4
Stability testing	IEC60068-2-32 (Free fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)
Safety	UL, cUL, CE/EN60950-1