1. Package Contents

Thank you for purchasing PLANET 5-Port Industrial Ethernet Switch with 4-Port PoE, ISW-504PT/ISW-514PTF. The interfaces of these models are shown below:

Model Name	10/100Mbps RJ45 Ports	100FX SFP Slots	PoE Ports
ISW-504PT	5	-	4
ISW-514PTF	4	1	4

In the following section, the term **"Industrial PoE+ Switch"** means the ISW-504PT/ISW-514PTF.

Open the box of the Industrial PoE+ Switch and carefully unpack it. The box should contain the following items:

Industrial PoE+ Switch x 1	User's Manual x 1
Dust Cap x 5	Wall-mount Kit x 1

If any of these are missing or damaged, please contact your dealer immediately.

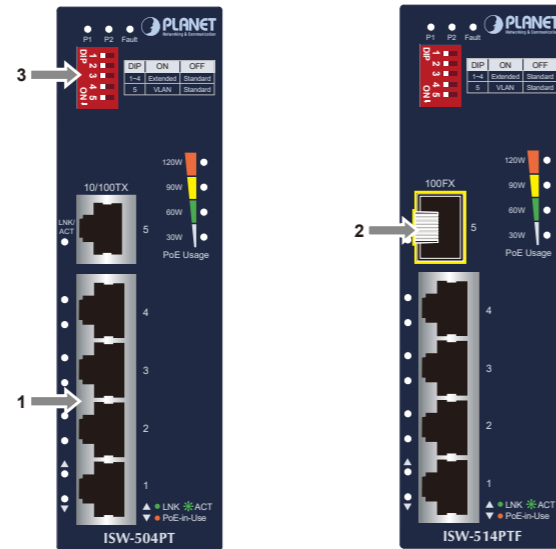# 2. Hardware Introduction

2.1 Switch Front Panel

Figure 2-1:
ISW-504PT front panel

Figure 2-2:
ISW-514PTF front panel

1. Fast Ethernet TP Interfaces

10/100BASE-TX copper, RJ45 twisted-pair: Up to 100 meters.

2. 100BASE-FX SFP Slot (ISW-514PTF)

100BASE-FX mini-GBIC slot, SFP (small form-factor pluggable) transceiver module: From 2 kilometers (multi-mode fiber) to 20/40/60 kilometers (single-mode fiber).

3. DIP Switch

The Industrial PoE+ Switch provides one DIP switch for **Standard, VLAN** and **Extended** mode selections. The detailed descriptions are shown in the following table.

DIP Switch Mode	Function
Standard	**Switches 1 to 5 are off.** This mode makes the Industrial PoE+ Switch operate as a general switch and all PoE ports operate at 10/100Mbps auto-negotiation.
VLAN	**Switch 5 is on.** This mode makes the Industrial PoE+ Switch operate as a VLAN isolation switch and 1. Ports 1 to 4 will isolate respectively. 2. Ports 1 to 4 can only communicate with Port 5. **Note:** After adjusting VLAN DIP switch, reboot the Industrial PoE+ Switch to make the change take effect.
Extended	**Any of switches 1 to 4 is on.** This mode makes the Industrial PoE+ Switch operate on a per-port basis at 10Mbps full duplex operation but can support IEEE 802.3af PoE power output over a distance of up to **250 meters** overcoming the 100m limit on Ethernet UTP cable.

2.2 LED Indicators

➢ System

LED	Color	Function
P1	Green	**Lights:** indicates power 1 has power.
P2	Green	**Lights:** indicates power 2 has power.
FAULT	Red	**Lights:** indicates either power 1 or power 2 has no power.
30W	Amber	**Off:** indicates the PoE usage is less than 14W. **Blinks:** indicates that the PoE usage is around 15W to 29W. **Lights:** indicates the PoE usage is around/over 30W.
60W	Amber	**Blinks:** indicates that the PoE usage is around 45W to 59W. **Lights:** indicates the PoE usage is around/over 60W.
90W	Amber	**Blinks:** indicates that the PoE usage is around 75W to 89W. **Lights:** indicates the PoE usage is around/over 90W.
120W	Amber	**Blinks:** indicates that the PoE usage is around 100W to 119W. **Lights:** indicates the PoE usage is at the maximum.

➢ Per 802.3at PoE+ 10/100BASE-TX Interface (Port 1 to Port 4)

LED	Color	Function
LNK/ACT	Green	**Lights:** indicates the link through that port is successfully established at 10Mbps or 100Mbps. **Blinking:** indicates that the switch is actively sending or receiving data over that port.
PoE-in-Use	Amber	**Lights:** indicates the port is providing DC in-line power. **Off:** indicates the connected device is not a PoE powered device (PD).

➢ Per 10/100BASE-TX Interface (Port 5 of ISW-504PT)

LED	Color	Function
LNK/ACT	Green	**Lights:** indicates the link through that port is successfully established at 10/100Mbps. **Blinking:** indicates that the switch is actively sending or receiving data over that port.

➢ Per 100FX SFP Slot (Port 5 of ISW-514PTF)

LED	Color	Function
LNK/ACT	Green	**Lights:** indicates the link through that port is successfully established at 100Mbps. **Blinks:** indicates that the switch is actively sending or receiving data over that port.

2.3 Switch Upper Panel

The upper panel of the Industrial PoE+ Switch consists of one terminal block connector within two DC power inputs.

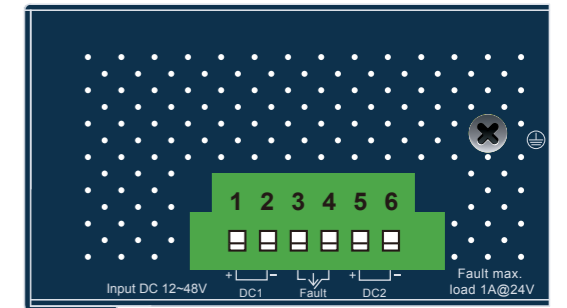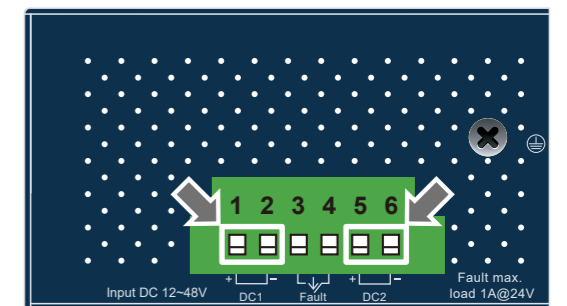Figure 2-3 shows the upper panel of the Industrial PoE+ Switch.

Figure 2-3: Industrial PoE+ Switch Upper Panel

2.4 Wiring the Power Inputs

The 6-contact terminal block connector on the top panel of Industrial PoE+ Switch is used for two DC redundant power inputs. Please follow the steps below to insert the power wire.

⚠️ When performing any of the procedures like inserting the wires or tightening the wire-clamp screws, make sure the power is OFF to prevent from getting an electric shock.
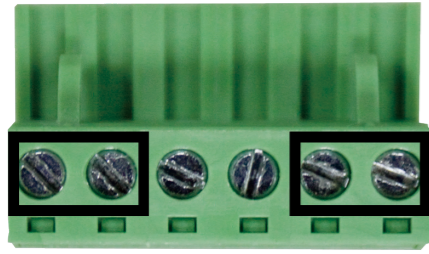
1. The DC power input range is **12V ~ 48V DC**. Please insert positive and negative DC power wires into contacts 1 and 2 for POWER 1, or 5 and 6 for POWER 2.

DC Input	Max. PoE Budget
12V	60W
24V	90W
48V	120W

📝 **Note** To avoid damage, please use the Industrial PoE+ Switch under its specification.

2. Tighten the wire-clamp screws for preventing the wires from loosening.

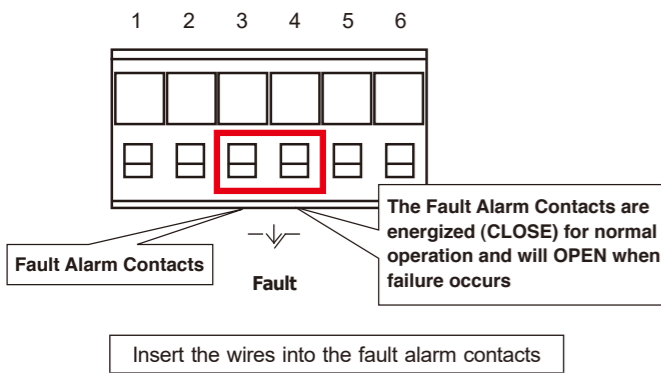| 1	2	3	4	5	6
Power 1		Fault		Power 2	
+	-			+	-

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

2.5 Wiring the Fault Alarm Contact

The fault alarm contacts are in the middle of the terminal block connector as the picture shows below. Inserting the wires, the Industrial PoE+ Switch will detect the fault status of the power failure and then forms an open circuit. The following illustration shows an application example for wiring the fault alarm contacts.

1	2	3	4	5	6

Fault Alarm Contacts

Fault

The Fault Alarm Contacts are energized (CLOSE) for normal operation and will OPEN when failure occurs

Insert the wires into the fault alarm contacts

Note
1. The wire gauge for the terminal block should be in the range between 12 and 24 AWG.
2. Alarm relay circuit accepts up to 24V, max. 1A currents.

2.6 Grounding the Device

Uses **MUST** complete grounding wired with the device; otherwise, a sudden lightning could cause fatal damage to the device. EMD (Lightning) DAMAGE IS NOT CONVERED UNDER WARRANTY.

3. Installation

This section describes the functionalities of the Industrial PoE+ Switch's components and guides you to installing it on the DIN-rail and wall. Basic knowledge of networking is assumed. Please read this chapter completely before continuing.

Note
The installation procedures of the ISW-504PT and ISW-514PTF are the same as they are shown below.

3.1 DIN-rail Mounting Installation

3.2 Wall-mount Plate Mounting

3.3 Side Wall-mount Plate Mounting

PLANET
Networking & Communication

Industrial 5-Port Fast Ethernet Switch with 4-Port PoE+

ISW-504PT/ISW-514PTF

PLANET Technology Corp.
10F., No. 96, Minquan Rd., Xindian Dist., New Taipei City 231, Taiwan

Warning:
This device is compliant with Class A of CISPR 32.
In a residential environment this device may cause radio interference.

2350-AH0230-003

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4. Troubleshooting

This chapter contains information to help you solve issues. If the Industrial PoE+ Switch is not functioning properly, make sure the Industrial PoE+ Switch was set up according to instructions in this manual.

➢ **What is the operating temperature of the device?**

Solution:
The operating temperature is from -40 to 75 degrees C.

➢ **What is the IP code of the device?**

Solution:
The device has a rugged IP40 metal housing

➢ **Per port LED is lit, but the traffic is irregular**

Solution:
Check whether the attached device is not set to dedicated full duplex. Some devices use a physical or software switch to change duplex modes. Auto-negotiation may not recognize this type of full-duplex setting.

➢ **Why the Industrial PoE+ Switch doesn't connect to the network**

Solution:
Check each port LED on the Industrial PoE+ Switch. Try another port on the Industrial PoE+ Switch. Make sure the cable is installed properly and the right type. Turn off the power. After a while, turn on the power again.

➢ **I connected a PoE powered device to the Industrial POE+ Switch, why it could not be powered on**

Solution:
1. Please check the cable type of the connection from Industrial POE+ Switch (port 1 to port 4) to the other end. The cable should be an 8-wire UTP, Category 5e or above, EIA568 cable within 100 meters. A cable with only 4-wire, short loop or over 100 meters will affect the power supply.
2. Please check and assure the PoE powered device is fully complied with IEEE 802.3at standard.

5. Customer Support

Thank you for purchasing PLANET products. You can browse our online FAQ resource at the PLANET Web site first to check if it could solve your issue. If you need more support information, please contact PLANET support team.

PLANET online FAQs:
https://www.planet.com.tw/en/support/faq?method=category&c1=3

Support team mail address:
support@planet.com.tw