Industrial 4-port 10/100/1000T 802.3at PoE + 2-port 100/1000/2500X SFP Ethernet Switch

IGS-624HPT

User's Manual

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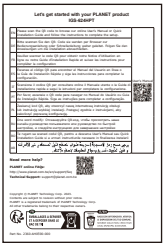
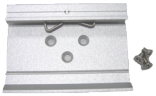
1. Packet Contents

Thank you for purchasing PLANET Industrial 4-Port 10/100/1000T 802.3at PoE + 2-Port 100/1000/2500X SFP Ethernet Switch, IGS-624HPT. In the following sections, the term **"Industrial Gigabit PoE+ Switch"** means the IGS-624HPT.

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

Industrial Gigabit PoE+ Switch x 1	User's Manual Sheet x 1
	
SFP Dust Cap x 2	RJ45 Dust Cap x 4
	
DIN-rail Kit	Wall-mounting Kit
	

If any of these are missing or damaged, please contact your dealer immediately; if possible, retain the carton including the original packing material, and use them again to repack the product in case there is a need to return it to us for repair.

2. Hardware introduction

2.1 Switch Front Panel

The front panel of the Industrial Gigabit PoE+ Switch consists of Ethernet interfaces and LED indicators.

■ Front View

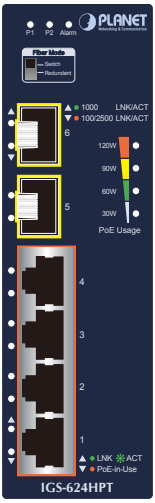
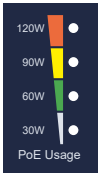


Figure 1: IGS-624HPT Front View

■ PoE Power Usage LED

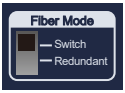
The front panel of the Industrial Gigabit PoE+ Switch has four LEDs which indicate **PoE Power Usages of 30W, 60W, 90W** and **120W**. With these LED indications, you can monitor the current PoE power in use status of Industrial Gigabit PoE+ Switch easily and efficiently.



■ DIP Switch

The front panel of the Industrial Gigabit PoE+ Switch provides one DIP Switch which is for configuring fiber redundant function.

The DIP Switch settings and descriptions:



	Fiber Mode (DIP Switch)
Switch (Default Mode)	This mode allows the Industrial Gigabit PoE+ Switch to use 6 ports.
Redundant	This mode allows one of the two SFP ports to be redundant while the other 5 ports are in operation.

■ Redundancy Overview

The Industrial Gigabit PoE+ Switch provides rapid fiber redundancy of link for highly critical Ethernet applications; the redundant mode supports auto-recover function. If the link of the destination port of a packet is down, it will forward the packet to the other port of the backup pair. The following figure shows the redundant functions.

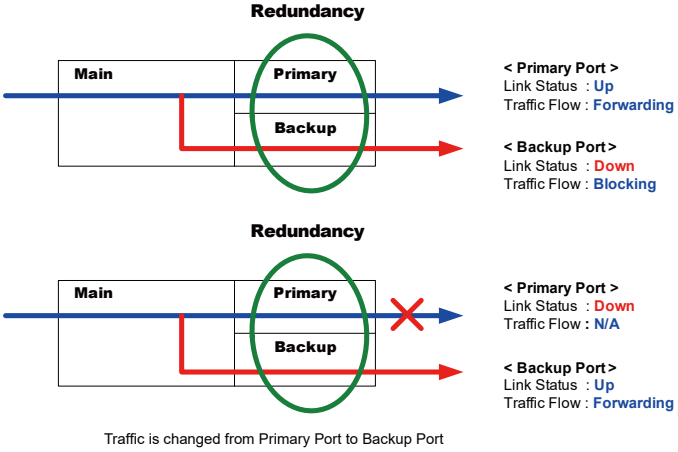


Figure 2: Redundancy Behavior Topology

- Auto-detects link status and redundant dual ports with the same connector type
- When Primary Port is active, the Backup Port is blocked.
- When Primary Port link fails, the traffic swaps to Backup Port automatically.
- Once the Primary Port status is connected, the traffic will swap from Backup Port to Primary Port.
- Using the Redundant mode, port 5 is defined as Primary Port and port 6 as Backup Port.


Note

Using the **Redundant mode**, port 5 is defined as **Primary Port** and port 6 as **Backup Port**.

2.2 LED Definition:

■ System

LED	Color	Function
P1	Green	**Light:** Indicates power 1 has power.
P2	Green	**Light:** Indicates power 2 has power.
Alarm	Red	**Light:** Indicates either power 1 or power 2 has no power.

■ Per 802.3at PoE+10/100/1000BASE-T Interface (Port 1 to Port 4)

LED	Color	Function
LNK/ACT	Green	**Light:** Indicates the Industrial Gigabit PoE+ Switch is successfully connecting to the network at 10/100/1000Mbps.
		Blink: Indicates that the Industrial Gigabit PoE+ Switch is actively sending or receiving data over that port.
PoE-in-Use	Amber	**Light:** Indicates the port is providing DC in-line power.
		Off: Indicates the connected device is not a PoE powered device (PD).

■ **Per 100/1000/2500BASE-X Interface (Port 5 to Port 6)**

LED	Color	Function
1000 LNK/ACT	Green	**Light:** Indicates the port is running at 1000Mbps and successfully established.
		Blink: Indicates that the Industrial Gigabit PoE+ Switch is actively sending or receiving data over that port.
100/2500 LNK/ACT	Amber	**Lights** to indicate the port is successfully established at 100/2500Mbps
		Blinks to indicate that the Switch is actively sending or receiving data over that port.

■ **Per PoE Power Usage (Unit: Watt) (Lower LED to upper LED)**

LED	Color	Function
30W	Amber	**Off** to indicate the PoE usage is less than 14W. **Blinks** to indicate that the PoE usage is around 15W to 29W. **Lights** to indicate the PoE usage is around/over 30W.
60W	Amber	**Blinks** to indicate that the PoE usage is around 45W to 59W. **Lights** to indicate the PoE usage is around/over 60W.
90W	Amber	**Blinks** to indicate that the PoE usage is around 75W to 89W. **Lights** to indicate the PoE usage is around/over 90W.
120W	Amber	**Blinks** to indicate that the PoE usage is around 100W to 119W. **Lights** to indicate the PoE usage is at the maximum.

2.3 Switch Upper Panel

The upper panel of the Industrial Gigabit PoE+ Switch consists of one terminal block connector within two DC power inputs. Figure 3 shows the upper panel of the Industrial Gigabit PoE+ Switch.

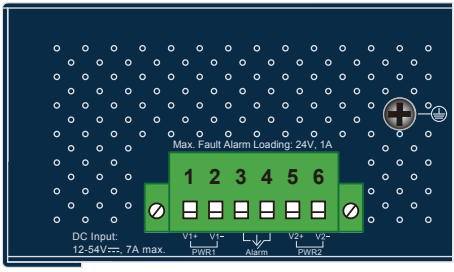


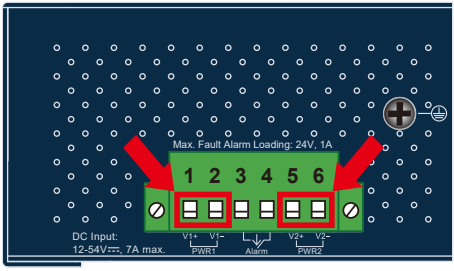
Figure 3: Industrial Gigabit PoE Switch Upper Panel

2.4 Wiring the Power Inputs

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

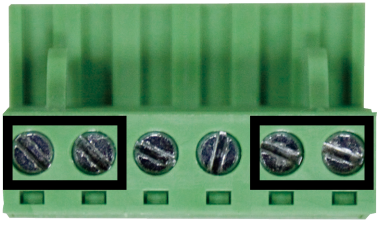
When performing any of the procedures like inserting the wires or tightening the wire-clamp screws, make sure the power is OFF to prevent from getting an electric shock.

1. Insert positive and negative DC power wires into contacts 1 and 2 for POWER 1, or contacts 5 and 6 for POWER 2.



V1+ V1- V2+ V2-

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

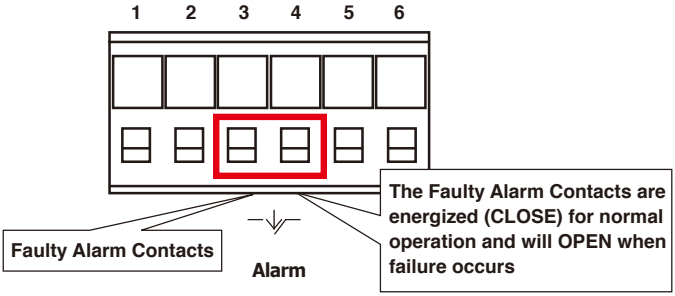


Caution

PWR1 and PWR2 must provide the same DC voltage for power load balance while operating with dual power input.

2.5 Wiring the Faulty Alarm Contact

The faulty alarm contacts are in the middle of the terminal block connector as the picture shows below. Inserting the wires, the Industrial Gigabit 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 faulty alarm contacts.



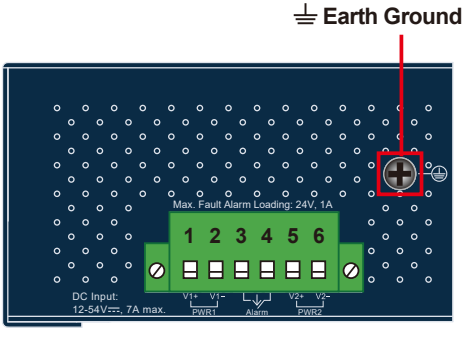
Insert the wires into the fault alarm contacts

Note

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

2.6 Grounding the Device

Users **MUST** complete grounding wired with the device; otherwise, a sudden lightning could cause fatal damage to the device.



Note

EMD (Lightning) DAMAGE IS NOT COVERED UNDER WARRANTY.

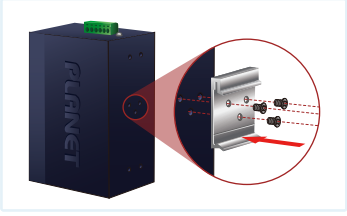
3. Installation

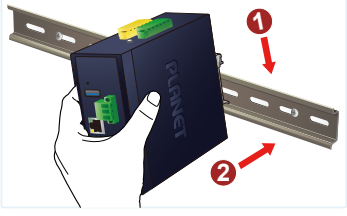
This section describes the functionalities of the Industrial Gigabit PoE+ Switch's components and guides you to installing it on the DIN rail and wall. Please read this chapter completely before continuing.

Note

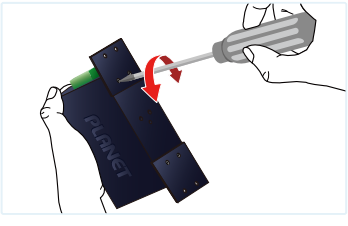
The following pictures show how to install the device. However, the device in the picture is not IGS-624HPT.

3.1 DIN-rail Mounting Installation

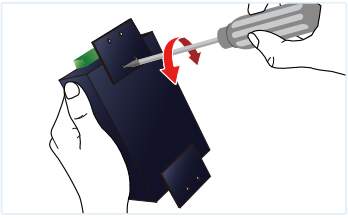




3.2 Wall-mount Plate Mounting



3.3 Side Wall-mount Plate Mounting



Caution

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.

4. Product Specifications

This section describes the functionalities of the Industrial Gigabit PoE+ Switch's components and guides you to installing the Switch.

Model	IGS-624HPT
Hardware Specifications	
Copper Ports	4 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports
PoE Injector Ports	Four ports with 802.3at PoE+ injector function (Port 1 to Port 4)
SFP Slots (Auto Detection)	Two 1000/2500BASE-SX/LX/BX SFP interface (Port 5 to Port 6) Compatible with 100BASE-FX SFP
DIP Switch	Switch (default)/fiber redundant mode
Connector	Removable 6-pin terminal block Pin 1/2 for Power 1; Pin 3/4 for fault alarm; Pin 5/6 for Power 2
Power Requirements	12~54V DC, 7A (max.) Redundant power with reverse polarity protection
Alarm	Provides one relay output for power failure Alarm relay current carry ability: 1A @ 24V DC
Power Consumption	Max. 7.56 watts/25.77BTU (Ethernet Full Loading) Max. 140 watts/477.4BTU (Ethernet + PoE Full Loading)
Dimensions (W x D x H)	50 x 87 x 135 mm
Weight	635g
Enclosure	IP40 metal case
Installation	DIN-rail kit and wall-mount kit
ESD Protection	6KV

LED	System: Power 1 (Green) Power 2 (Green) Fault Alarm (Red) Per 10/100/1000T RJ45 PoE+ Ports (Port 1~Port 4) LNK/ACT (Green) PoE-in-Use (Amber) Per SFP Interface: (Port 5~Port 6) 1000 LNK/ACT (Green) 100/2500 LNK/ACT (Amber) PoE Usage: 30W, 60W, 90W, 120W (Amber)
Switch Specifications	
Switch Architecture	Store-and-Forward
Switch Fabric	18Gbps
Throughput (packet per second)	13.39Mpps@64bytes
Address Table	4K entries
Buffer Memory	1M bits on-chip buffer memory
Jumbo Frame	12.2Kbytes
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex
Power over Ethernet	
PoE Standard	IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus PSE
PoE Power Supply Type	End-span
Power Pin Assignment	1/2(+), 3/6(-)
PoE Power Output	IEEE 802.3af Standard - Per port 48V~51V DC (depending on the power supply), max. 15.4 watts IEEE 802.3at Standard - Per port 51V~54V DC (depending on the power supply), max. 36 watts

PoE Power Budget (max.)	60W@12V DC input 90W@24V DC input 120W@48V-54V DC input
Max. Number of Class 4 PDs	4
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC 60068-2-32 (free fall) IEC 60068-2-27 (shock) IEC 60068-2-6 (vibration)
Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3az Gigabit SX/LX IEEE 802.3x Full-Duplex Flow Control IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus PSE IEEE 802.1p Class of Service
Environment	
Temperature	Operating: -40~75 degrees C Storage: -40~75 degrees C
Humidity (non-condensing)	Operating: 5~90% Storage: 5~90%

5. Customer Support

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

PLANET online FAQs:
http://www.planet.com.tw/en/support/faq

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

FCC Warning

This equipment has been tested and found to comply with the regulations 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 equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

CE Mark Warning

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

WEEE Warning

To avoid the potential effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment, end users of electrical and electronic equipment should understand the meaning of the crossed-out wheeled bin symbol. Do not dispose of WEEE as unsorted municipal waste and have to collect such WEEE separately.