1. Package Contents

Thank you for purchasing PLANET 16/24-Port 10/100/1000T 802.3at PoE+ Ethernet Switch, GSW-1600HP and GSW-2620HP. **"802.3at PoE+ Switch"** mentioned in this Guide refers to the GSW-1600HP and GSW-2620HP.

Open the box of the 802.3at PoE+ Switch and carefully unpack it. The box should contain the following items:

The 802.3at PoE+ Switch x 1	User's Manual x 1	SFP Dust Cap x 2
		(GSW-2620HP only)
Two Rack-mounting Brackets with Attachment Screws x 8	Power Cord x 1	Rubber Feet x 4

If any of these pieces 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.

- 1 -

2. Product Features

■ **Physical Port**

➤ 16/24-port 10/100/1000BASE-T Gigabit RJ45 copper

➤ 2 1000BASE-X mini-GBIC/SFP slots (GSW-2620HP only)

■ **Power over Ethernet**

➤ Complies with IEEE 802.3at Power over Ethernet Plus

➤ Complies with IEEE 802.3af Power over Ethernet

➤ Up to 16/24 ports of IEEE 802.3af/802.3at devices powered

➤ Supports PoE Power up to 30.8 watts for each PoE port

➤ Each port supports 52V DC power to PoE powered device

➤ 220-watt PoE budget

➤ Auto detects powered device (PD)

➤ Circuit protection prevents power interference between ports

➤ Remote power feeding up to 100m

■ **Switching**

➤ Hardware based 10/100/1000Mbps auto-negotiation and auto MDI/MDI-X

- 2 -

➤ Flow control for full duplex operation and back pressure for half duplex operation

➤ Integrates address look-up engine, supporting 8K absolute MAC addresses

➤ 9K Jumbo frame supports all speeds (10/100/1000Mbps)

➤ IEEE 802.1Q VLAN transparency

➤ Automatic address learning and address aging

➤ Supports Energy-Efficient Ethernet (EEE) function (IEEE 802.3az)

■ **Hardware**

➤ 19-inch desktop size, 1U height

➤ LED indicators for PoE ready and PoE activity

➤ Ethernet Link Energy-saving technology

➤ Link down power saving

➤ Intelligent scale power based on cable length

- 3 -

3. Product Specifications

Model	GSW-1600HP	GSW-2620HP
Hardware Specifications		
10/100/1000BASE-T Copper Ports	16 auto-MDI/MDI-X ports	24 auto-MDI/MDI-X ports
802.3af/802.3at PoE+ Injector Port	16	24
1000BASE-X SFP/mini-GBIC Slots	NA	2
Switch Architecture	Store-and-Forward	
Switch Fabric	32Gbps/non-blocking	52Gbps/non-blocking
Switch Throughput@64bytes	23.8Mpps	38.6Mpps
MAC Address Table	8K entries	
Jumbo Frame	9216 bytes	
Flow Control	IEEE 802.3x pause frame for full duplex; back pressure for half duplex	
LED	**System:** Power (Green) ➤ **10/100/1000T RJ45 Interfaces** 1000 LNK/ACT (Green), 10/100 LNK/ACT (Amber), PoE (Amber)	
	—	➤ **1000X SFP Interfaces** 1000 LNK/ACT (Green)

- 4 -

Dimensions (W x D x H)	445 x 207 x 45 mm (1U height)	
Enclosure	Metal	
Weight	2.65kg	2.85kg
Power Requirements	AC 100~240V, 50/60Hz, 3.5A max.	100~240V AC, 50/60Hz, 4A max.
Power Consumption/Dissipation	Max. 260 watts/887 BTU	
Thermal Fan	2	
Power over Ethernet		
PoE Standard	IEEE 802.3af Power over Ethernet/PSE IEEE 802.3at Power over Ethernet Plus/PSE	
PoE Power Supply Type	End-span: 1/2 (+), 3/6 (-)	End-span: 1/2 (+), 3/6 (-)
PoE Power Output	Per port 52V DC, 300mA. max. 15.4 watts (IEEE 802.3af) Per port 52V DC, 600mA. max. 30 watts (IEEE 802.3at)	
PoE Power Budget	220 watts	
Number of PDs, 7 watts	16	24
Number of PDs, 15.4 watts	14	14
Number of PDs, 30 watts	7	7

- 5 -

Standards Conformance		
Regulatory Compliance	FCC Part 15 Class A, CE	
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab Gigabit 1000BASE-T IEEE 802.3z Gigabit SX/LX IEEE 802.3x flow control and back pressure IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3az Energy-Efficient Ethernet	
Environment		
Operating	Temperature: 0 ~ 50 degrees C Relative Humidity: 5 ~ 95% (non-condensing)	
Storage	Temperature: -10 ~ 70 degrees C Relative Humidity: 5 ~ 95% (non-condensing)	

- 6 -

4. Hardware Introduction

4.1 Front Panel

The Front Panel of the 802.3at PoE+ Switch consists of 16/24 auto-sensing 10/100/1000Mbps Ethernet RJ45 ports. The LED Indicators are also located on the front panel of the 802.3at PoE+ Switch.

Figure 4-1: GSW-1600HP Switch Front Panel

Figure 4-2: GSW-2620HP Switch Front Panel

4.2 LED Indicators

■ **System**

LED	Color	Function
PWR	Green	**Lights** to indicate the Switch has power.

- 7 -

■ **Per 10/100/1000BASE-T Port**

LED	Color	Function
1000 LNK/ACT	Green	**Lights** to indicate the link through that port is successfully established at 1000Mbps. **Blinks** to indicate that the Switch is actively sending or receiving data over that port.
10/100 LNK/ACT	Amber	**Lights** to indicate the link through that port is successfully established at 10/100Mbps. **Blinks** to indicate that the Switch is actively sending or receiving data over that port.
PoE in Use	Amber	**Lights** to indicate the port is providing 52V DC in-line power.

■ **Per 1000BASE-X SFP Interface (GSW-2620HP only)**

LED	Color	Function
1000 LNK/ACT	Green	**Lights** to indicate the link through that port is successfully established at 1000Mbps. **Blinks** to indicate that the Switch is actively sending or receiving data over that port.

- 8 -

4.3 Rear Panel

The rear panel of the 802.3at PoE+ Switch indicates an AC power socket, which accepts input power from 100 to 240V AC, 50-60Hz, 3.5A/4A.

Figure 4-3: GSW-1600HP Switch Rear Panel

Figure 4-4: GSW-2620HP Switch Rear Panel

■ AC Power Receptacle

Power Notice	The device is a power-required device, which means it will not work till it is powered. If your networks should be active all the time, please consider using UPS (Uninterrupted Power Supply) for your device. It will prevent you from network data loss or network downtime.
Power Notice	In some areas, installing a surge suppression device may also help to protect your 802.3at PoE+ Switch from being damaged by unregulated surge or current to the 802.3at PoE+ Switch or the power adapter.

5. Hardware Installation

5.1 Rack Mounting

To install the 802.3at PoE+ Switch in a 19-inch standard rack, follow the instructions described below.

Step 1: Place your 802.3at PoE+ Switch on a hard flat surface, with the front panel positioned towards your front side.

Step 2: Attach a rack-mount bracket to each side of the 802.3at PoE+ Switch with supplied screws attached to the package. Figure 5-1 shows how to attach brackets to one side of the 802.3at PoE+ Switch.

Figure 5-1: Attaching the Brackets to the 802.3at PoE+ Switch.

⚠	You must use the screws supplied with the mounting brackets. Damage caused to the parts by using incorrect screws would invalidate the warranty.

Step 3: Secure the brackets tightly.

Step 4: Follow the same steps to attach the second bracket to the opposite side.

Step 5: After the brackets are attached to the 802.3at PoE+ Switch, use suitable screws to securely attach the brackets to the rack, as shown in Figure 5-2.
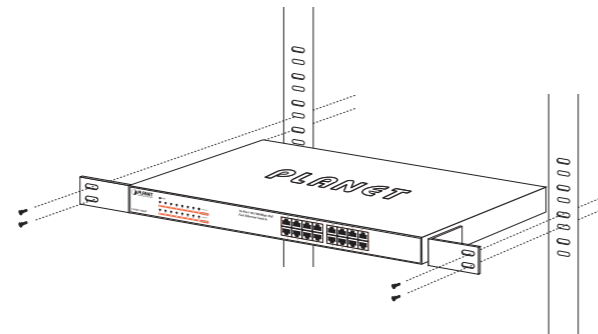
Figure 5-2: Mounting the 802.3at PoE+ Switch in a Rack

Step 6: Connect your 802.3at PoE+ Switch to 802.3af/802.3at complied PDs and other network devices.

A. Connect one end of a standard network cable to the 10/100/1000BASE-T RJ45 ports on the front panel of the 802.3at PoE+ Switch.

B. Connect the other end of the cable to the network devices such as printer servers, workstations or routers, etc.

Step 7: Supply power to the 802.3at PoE+ Switch.

A. Connect one end of the power cable to the 802.3at PoE+ Switch.

B. Connect the power plug of the power cable to a standard wall outlet.

When the 802.3at PoE+ Switch receives power, the Power LED should remain solid Green.

5.2 Installing the SFP Transceiver (GSW-2620HP only)

The sections describe how to insert an SFP transceiver into an SFP slot of the GSW-2620HP.

The SFP transceivers are hot-pluggable and hot-swappable. You can plug in and out the transceiver to/from any SFP port without having to power down the GSW-2620HP, as the Figure 5-3 shows.
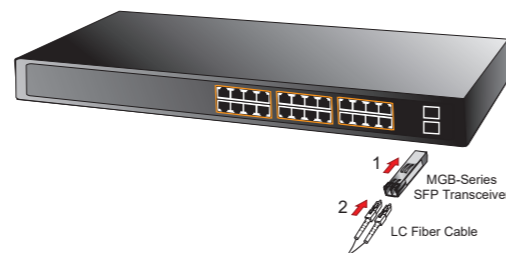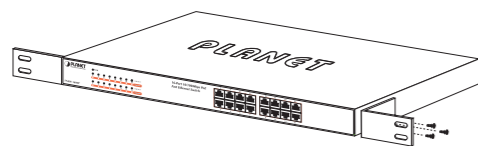
Figure 5-3: Plug In the SFP Transceiver

■ Approved PLANET SFP Transceivers

PLANET GSW-2620HP supports both single mode and multi-mode SFP transceiver. The following website link of approved PLANET SFP transceivers is correct at the time of publication:
http://www.planet.com.tw/en/product/product.php?id=11027

Note	It is recommended to use PLANET SFP on the GSW-2620HP. If you insert an SFP transceiver that is not supported, the GSW-2620HP will not recognize it.

1. Before we connect the GSW-2620HP to the other network device, we have to make sure both sides of the SFP transceivers are with the same media type, for example, 1000BASE-SX to 1000BASE-SX; 1000BASE-LX to 1000BASE-LX.

2. Check whether the fiber-optic cable type matches with the SFP transceiver requirement.

   ➤ To connect to 1000BASE-SX SFP transceiver, please use the multi-mode fiber cable with one side being the male duplex LC connector type.

   ➤ To connect to 1000BASE-LX SFP transceiver, please use the single-mode fiber cable with one side being the male duplex LC connector type.

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User's Manual

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16/24-Port 10/100/1000T 802.3at PoE+ Ethernet Switch

GSW-1600HP/GSW-2620HP

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:
https://www.planet.com.tw/en/support/faq

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