

SWITCH, 16 POE GIGABIT PORTS ART. IPSWP160A



Please read this manual thoroughly before use and keep it for future reference

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1 Product Introduction

1.1 Product Overview

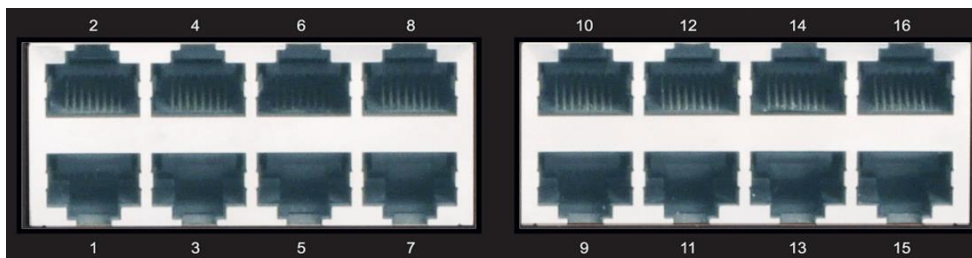
Thank you for choosing our company's switch, this product is a 16-port 10/100/1000M Unmanaged PoE Gigabit Ethernet switch.

The product is desktop design, all-metal chassis and elegant appearance. This product is easy to install, can rack, plug and play, no management; dynamic LED indicator to monitor switch status and troubleshooting work. Supporting 16 10/100/1000Mbps auto-negotiation ports, use store and forward technology, combined with dynamic memory assignment, to ensure it can be distributed to each port. Flow control ensures to prevent data packet from losing while sending and receiving. Compatible with 10Base-T, 100Base-TX and 1GBase three network environment. Support IEEE802.3az energy efficient Ethernet (EEE), reduce power consumption by detection cable length and operating loading, auto adjust signal intensity, reduce energy consumption and protect the environment.

LED panel light displays power and network state dynamically. All 16 ports have PoE function, the power is up to 30 watts each port, compliant with IEEE802.3af, IEEE802.3at standards. PoE total power reaches 260W for all ports. It can connect IP phone, IP cameras, wireless LAN access point AP and other PD devices, no need power cords and outlet socket.

1.2 Front and rear panel description

RJ45 port area on the front panel of switch:



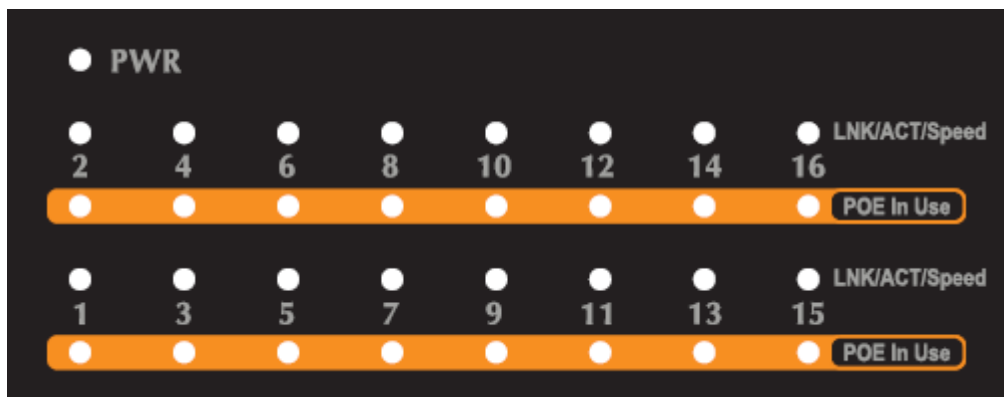
It has 16 10/100/1000M Auto-Negotiation RJ45 ports (Auto MDI / MDIX) on the front panel, it can connect to the LAN. Including a LINK / ACT/Speed LED each port for port status indication, please read the table description for LED function description.

Rear panel:



1.3 LED Indicator description

Switch indicators includes Link / Act/Speed, PoE, power status indicator. Link / Act, PoE light is green, the power status indicator is red.



You can learn the switch work status by LED indicators. The following table shows these indicators' function:

LED	COLOR	STATUS	STATUS DESCRIPTION
Power	Red	On	Power ON
		Off	Power OFF
Link/Act/Speed	Green/ orange	On	Connect to the port 10/100M: Orange 1000M: Green
		Off	Disconnect to the port
		Flashing	Sending or receiving data
PoE	Yellow	On	Detect the PD
		Off	The PD is not connected to or detected

1.4 Switch Features and Specifications

Features:

- Comply with IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3af, IEEE802.3at standards
- Supports IEEE802.3x flow control for full-duplex mode and backpressure for half-duplex transfer mode
- Support Storage - forward technology
- 16 port 10/100/1000Mbps Auto -negotiation MDI/MDIX RJ45 ports
- Supports auto-negotiation function for UTP port, adjust the transmission ways and the transmission speed automatically
- Supports MAC address auto-learning
- Dynamic LED indicator and provide a simple working status and troubleshooting tips
- Supports a maximum power 30W each PoE port

Specifications:

Supporting standards and protocols		IEEE802.3 10Base-T, IEEE802.3u 100Base-TX, IEEE802.3af, IEEE802.3at
Network Media (Cable)		10Base-T: UTP category 3, 4, 5 cable (maximum 100m) 100Base-TX: UTP category 5, 5e cable (maximum 100m) 1000Base-TX: UTP category 5, 5e cable (maximum 100m)
Number of Ports		16 x 10/100/1000Mbps Auto-Negotiation RJ-45 ports
LED indicator	10/100/1000M	Link/Act/speed (10/100M indicator Orange; 1G indicator Green)
	PoE	PoE
	Power light	Power
Transfer Method		Store-and-Forward
Exchange capacity		32Gb/s
MAC Address Learning		Automatic learning, automatic aging, 8K MAC address table
Packet filtering and forwarding rate		10Mbps: 14880pps, 100Mbps: 148800pps; 1000Mbps: 1488000pps
Dimensions (W x D x H)		442 x 208 x 44 mm
Environment		Operating Temperature: 0°C - 40°C Storage Temperature: -10°C - 70°C Operating Humidity: 10%~90%RH Non-condensing Storage Humidity: 5%~90% RH Non-condensing
Power		AC 100V ~ 240V; Frequency 50/60Hz

2 Hardware installation

Before installing the switch, make sure that the following "packing list" listed OK. If any part is lost and damaged, please contact your local agent immediately. In addition, make sure that you have the tools install switches and cables by your hands.

- One PoE Switch
- One power cord
- This User Guide
- Rubber footpads
- Mounting screws with two "L" planks

Note: This switch can be placed on a flat surface.

2.1 Power cord

Supports desktop and rack-mount installation, please follow below installation tips:

- Do not place heavy objects on the switch.
- The equipment should be far from the power outlet about 1.5 meters.
- Please check the power supply to ensure the connection safety carefully.
- Make sure that leave sufficient ventilation around the devices, make the switch work in a cool place.
- Open the box, put the switch on the desk, please insert one side of power regulator into AC outlet of switch, the other side will be insert into power socket, if everything goes well, red "Power" indicators on the front panel will be lighted, the other green light only flashes once.

2.2 Connect Computer (NIC) to the switch

Please insert the NIC into the computer, after installing network card driver, please connect one end of the twisted pair to RJ-45 jack of your computer, the other end will be connected to any RJ-45 port of switch, the distance between switch and computer is around 100 meters. Once the connection is OK and the devices are power ON normally, the green Link / ACT status indicator lights corresponding ports of the switch.

2.3 Switch Cascade Connection

The any port of switch can automatically identify straight cable and cross cable, so no matter which port can be cascaded.

Among switch, another switch, hub can be connected by many ways, either connect any port of this switch to any port of another switch by straight cable or you can also connect any port of one switch to any port of another switch by unshield twisted pair RJ45, realize all switch cascade connection.

2.4 Switch connection to the PD

All 16 ports of switch have PoE power supply function, the maximum output power up to 15.4W each port, it can make PD devices, such as internet phone, network camera, wireless access point work, provide five levels of 3.84 ~ 12.95W electric power request. You only need to connect the switch PoE port directly to the PD port by network cable.

2.5 RJ-45 Pin specification

Please note the cable-making methods, because cable which does not meet the standards of the sequence data will make the data transmission speed slow, unstable and even be blocked, the following chart represents that the standard RJ-45 jack and the connector and pin definition:



Standard RJ-45 jack / connector

RJ-45 connector pin definitions	
Pin Number	Signal
1	A_TX + (Transmit)
2	A_TX - (Transmit)
3	B_RX + (Receive)
4	PoE Power-
5	PoE Power-

6	B_RX - (Receive)
7	PoE Power+
8	PoE Power+

2.6 Notes

Switch support auto-negotiation function, while connecting other network devices, the port LED indicators status depends on the negotiation results of the operation mode, please refer to previous page status indicator table. If the connection is OK, but the indicator does not light, please try to check if other network devices, network cable is OK.

- Please put the switch on a stable, dry and cool place and prevent falling.
- Make sure the switch work properly, please make sure if the power voltage matches with the power requirements of switch before using.
- While switch works, network cable port can be freely inserted or removed without disrupting the work of the switch.
- Before cleaning the switch, first unplug the power, and wipe with a damp fabric, without liquid.
- Please prevent the switch from dusty areas and strong electromagnetic interference area.

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