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Safety Guidelines

Observe the following to avoid any potential harm caused from improper use.

- For your safety, DO NOT open the device's shell/outer case whether it is working or not;
- The device operates correctly only with a specified voltage range rating;
- Keep the device away from strong current or lightning, especially when connecting it to a power outlet using a power cord;
- To avoid potential short circuit and malfunction, DO NOT expose the device to humidity, heat, vibration or dust;
- Operate it in a well-ventilated working environment.

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Chapter 1 Introduction

1.1 Product Overview

Thanks for purchasing this F1226P 24-Port 10/100Mbps+2-Port Gigabit /SFP Combo Managed PoE Switch! The switch is a state-of-the-art, high-performance, IEEE-compliant network solution designed for communities, businesses, system integrators and ISPs who require a large number of ports and want the power of Gigabit connectivity to eliminate bottlenecks, boost performance and increase productivity. The switch comes with 24 10/100Mbps ports and 2 Gigabit combo (SFP fiber/copper) ports, where fiber ports always take priority over copper ports. PoE optimizes the installation and management of network devices such as VoIP phones, wireless APs and IP-based surveillance cameras by requiring only a standard Cat 5 UTP cable to carry both power and data – reducing installation time and cost. The switch connects up to 24 IEEE 802.3af-compliant devices, each of which is assured of up to 15.4W, or up to 12 high-power IEEE 802.3at-compliant devices, each of which is assured of up to 30W. Plus, it also provides a complete package of enterprise-class features including VLAN, 802.1Q VLAN, QoS, SNMP, port mirroring and port aggregation, STP, PoE, etc. By default, the F1226P distributes power dynamically and each PoE capable port supplies power at IEEE802.3at standard.

1.2 Features

- Compliant with IEEE802.3, IEEE802.3u, IEEE802.3ab, IEEE802.3z, IEEE802.3af, IEEE802.3at, IEEE802.1Q, IEEE802.1d, IEEE802.1w, IEEE802.3x
- 24 10/100Mbps and 2 10/100/1000Mbps ports with autosensing and auto-negotiation capabilities (auto-negotiation on duplex mode and speed)
- 2 Gigabit combo (SFP fiber/copper) ports, where fiber ports always take priority over copper ports
- Auto MDI/MDIX on all ports

- IEEE 802.3x flow control in full duplex and backpress flow control in half duplex
- 4K MAC address table with auto-learning and auto-aging capabilities
- Web based management
- Support DHCP client, VLAN, QoS, SNMP, port mirroring, port aggregation, IGMP Snooping, STP and PoE functions, etc
- Internal high performance switching power supply; Power input: AC100~240V 50/60Hz~6A

1.3 Physical Description

Front Panel:

The front panel contains the following:

- Power switch
- Network ports (24 RJ45 ports)
- Status indicator
- RESET button

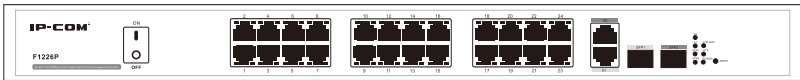


Figure 1 Switch Front Panel

1. Network ports:

24 10/100Mbps and 2 10/100/1000Mbps ports with autosensing and auto-negotiation capabilities

2 1000Mbps SFP fiber ports

2. Status LEDs:

- Link/Act1~24 24 10/100M port status LEDs
- PoE1~24 24 PoE status LEDs
- G1~G2 2 1000M Link/Act port status LEDs (Off when operating at 10/100M speed)
- SFP1~SFP2 2 SFP fiber port LEDs
- Power 1 Power LED
- SYS 1 SYS LED
- PoE-MAX PoE power usage threshold LED

The following table describes the LED designations.

LED	Color	Status	Designation	Remarks
POWER	Green	Solid	Power is supplied to the switch and is operating normally	
		Off	Power is disconnected	
SYS	Green	Solid/Off	System is operating abnormally	
		Blinking	System is operating normally	
PoE-MAX	Green	Solid	Reaching max power budget and no more power available for another new PD	
		Off	Power available for additional PDs	
Link/Act1~24	Orange	Solid	Link is established on the port	
		Blinking	Packet transmission or reception is occurring on the port	
		Off	No link is established on the port	
PoE1~24	Green	Solid	The PoE powered device (PD) is connected and the port is supplying power successfully	
		Off	No PoE-powered device (PD) connected	
G1~G2	Green	Solid	Link is established on the port	G1/G2 only lights up when operating at 1000M
		Blinking	Packet transmission or reception is occurring on the port	
		Off	No link is established on the port	
SFP1~SFP2	Green	Solid	Link is established or packet transmission is occurring on the port	
		Off	No link is established on the port	

3. RESET Button:

The Reset button located on the front panel of the switch can be used to restore switch back to factory default settings.

Press and hold it for over 5 seconds and then release, the SYS LED will first flash quickly for about 3 seconds and then regularly, which indicates switch has restarted automatically with factory default settings.

Note:

DO NOT press the RESET button unless you do want to delete current settings made on the switch and restore factory defaults.

Back Panel:

The back panel contains the following:

- An AC power receptacle for accommodating the supplied power cord.



Figure 2 Back Panel

1.4 Package Contents

Verify that the package contains the following:

- 1 Switch
- 4 Rubber footpads for tabletop installation
- 1 Power cord
- Rack-mount Kit for installing the switch in a 19-inch rack
- Install Guide

If any item is missing or damaged, contact the place of purchase immediately.

Chapter 2 Installation

This chapter describes the installation procedures for your Switch.

2.1 Installation Considerations

To keep the switch in optimum working condition and prolong its life time, follow the instructions below for installation:

- Please keep the switch in a dry and well ventilated environment.
- For desktop installations, place the device on a flat table or shelf surface; for rack-mount installations, use a 19-inch (48.3-centimeter) EIA standard equipment rack that is grounded and physically secure. The rack-mount kit supplied with the switch is also required.
- Do not restrict airflow by covering or obstructing air inlets of the switch. Keep more than 10 centimeters free on all sides for cooling. Be sure there is adequate airflow in the room or wiring closet where the switch is installed.
- Don't put heavy articles on the Switch.
- Make sure there is more than 1.5 centimeters vertical distance free between devices that overlap each other.
- Ensure operating power supply accords with rated input standard.

2.2 Installing the Switch

The Switch can be installed on a flat surface or in a standard 19-inch rack.

1. Installing the Switch on a Flat Surface

The switch ships with four self-adhesive rubber footpads. Stick one rubber footpad on each of the four concave spaces on the bottom of the switch. The rubber footpads cushion the switch against shock/vibrations.

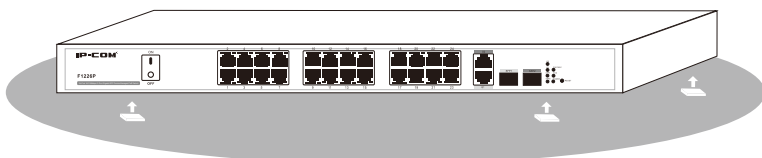


Figure 3: Attach Footpads to Switch

2. Installing the Switch in a Rack

To install the switch in a rack, use the following procedure (and refer to Figures 4-5). To perform this procedure, you need the 19-inch rack-mount kit supplied with switch.

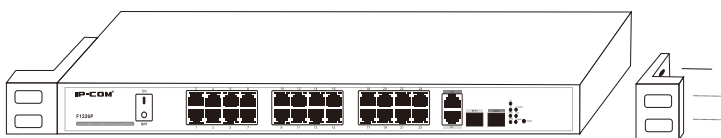


Figure 4: Attach Brackets to Switch

- 1). Make sure the 19-inch (48.3-centimeter) EIA standard equipment rack is grounded and physically secure.
- 2). Attach the supplied mounting brackets to the side of the switch.
- 3). Insert the screws provided in the rack-mount kit through each bracket and into the bracket mounting holes in the switch.
- 4). Align the mounting holes in the brackets with the holes in the rack.
- 5). Tighten the screws with a screwdriver to secure each bracket.

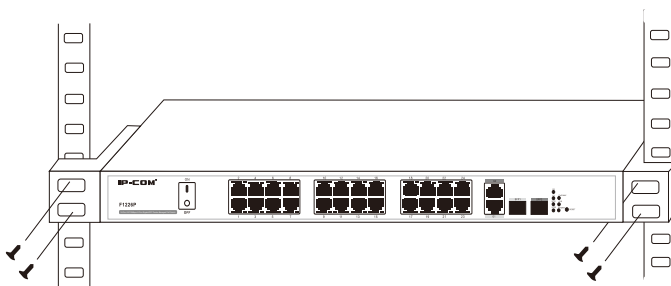


Figure 5: Install Switch in a 19-inch Rack

Note:

Always install devices from the bottom of the rack to the top. This will prevent the rack from over balancing and toppling over.

Chapter 3 Hardware Connection

1. Applying AC Power: Make sure power source meets switch power specification: AC 100-240V 50/60Hz.
 - a). Connect the female end of the supplied AC power adapter cable to the power receptacle on the back of the switch.
 - b). Connect the 3-pronged end of the AC power adapter cable to the 3-pronged AC source.

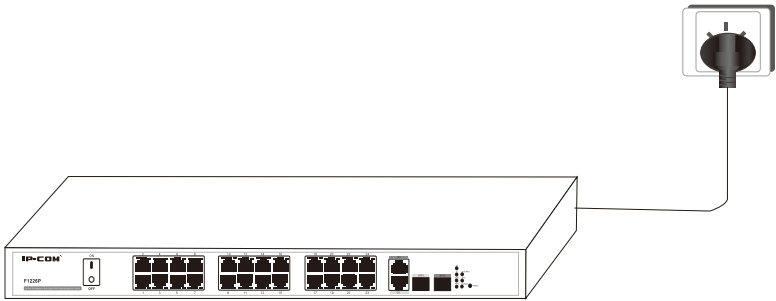


Figure 6: Connect Switch to Power Source

Connecting PCs to the switch:

Connect each PC to an RJ-45 network port on the Switch (Figure 7) using an Ethernet cable terminated with an RJ-45 connector.

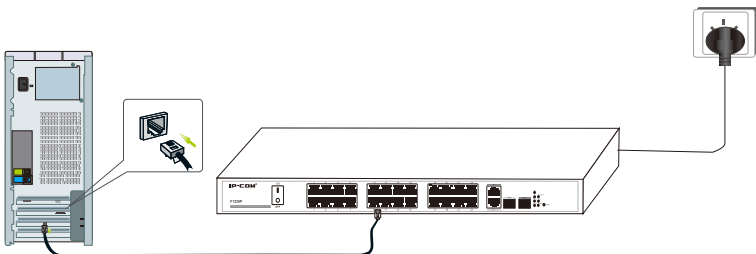


Figure 7: Connect PC to Switch's RJ-45 Port

3. Connect PDs (PoE powered devices, for example, 802.3at-/802.3af-compliant AP, IP

telephone or IP camera) to switch. Power is transmitted on conductors: 1, 2, 3 and 6.

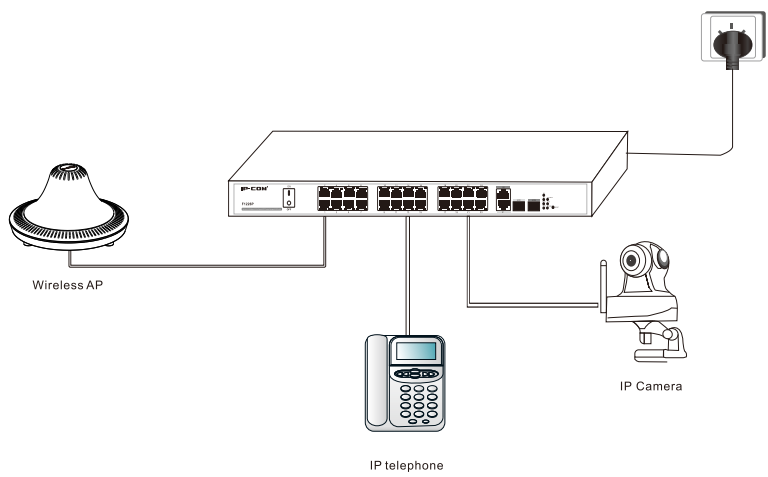


Figure 8: Connect PDs to Switch

Chapter 4 Troubleshooting

4.1 Power LED is off

- Check the power cord connections at the switch and the connected devices.
- Ensure all cables are used correctly and comply with the Ethernet specifications.

4.2 Link/Act LED is off

- Check the crimp on the connectors and make sure that the plug is properly inserted and locked into the port at both the switch and the connecting device.
- Ensure all cables are used correctly and comply with the Ethernet specifications.
- Ethernet specifications limit the cable length between the switch and the attached device to 100 m (328 ft.). Make sure the cable between switch and the attached device is within this length.
- Check for a defective adapter card, cable, or port by testing them in an alternate environment where all products are functioning.

Additional Troubleshooting Suggestions

If the suggestions in Troubleshooting do not help, visit our website at www.ip-com.com.cn or contact our technical support: info@ip-com.com.cn for assistance.

Appendix A Technical Specifications

General Specifications		
Network Standards Compatibility	IEEE802.3, IEEE802.3u, IEEE802.3ab, IEEE802.3z, IEEE802.3af, IEEE802.3at, IEEE802.1Q, IEEE802.1d, IEEE802.1w, IEEE802.3x	
Protocol Compatibility	CSMA/CD Ethernet, SNMP	
Transmission Rate	Gigabit Ethernet 2000Mbps (full duplex)	Fast Ethernet 100Mbps (half duplex) 200Mbps(full duplex)
Topological Structure	Star	
Network Cable	10Base-T: Cat.3 UTP or better (100 meters) 100Base-TX: Cat.5 UTP/STP (100 meters) 1000Base-Tx: Cat.5e UTP/STP or better (100 meters) Note: To connect IEEE802.3at compliant PDs, use Cat.5, Cat.5e or better cables.	
Fiber	1000Base-LX: SM Fiber (up to 10km) 1000Base-SX: MM Fiber (up to 550m) 1000Base-LHX: SM Fiber (up to 50km) 1000Base-ZX: SM Fiber (up to 80km)	
Interface	24 10/100Mbps and 2 10/100/1000Mbps ports 2 Gigabit combo (SFP fiber/copper) ports, where fiber ports always take priority over copper ports.	
Performance Specifications		
Forwarding Scheme	Store-and-forward	
Address Database Size	4k	
MAC Address Learning	Auto-learning/-aging	
Packet Filter / Forwarding Rate	14880pps (10Mbps wire speed)	
	148810pps (100Mbps wire speed)	
	1488095pps (1000Mbps wire speed)	
Backplane Bandwidth	8.8Gbps	
Physical & Environmental Specifications		

AC Input Range	100-240V 50/60Hz 6A(Max)
Power Consumption	<400W
Operating Temperature	-10°C~45°C
Storage Temperature	-40°C ~70°C
Operating Humidity	10%~90% RH non-condensing
Storage humidity	5%~90% RH non-condensing
Heat Dissipation	Forced air cooling
Dimensions	440x284x44mm

Appendix B Regulatory Compliance Information



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. This device complies with EU 1999/5/EC.

NOTE: (1) The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. (2) To avoid unnecessary radiation interference, it is recommended to use a shielded RJ45 cable.



FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. 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 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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

NOTE: (1) The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. (2) To avoid unnecessary radiation interference, it is recommended to use a shielded RJ45 cable.

Disclaimer: This equipment is an industry class product instead of an end-user device. It may cause harmful interference to radio communications. If this equipment does cause harmful interference to radio communications, which can be determined by turning the equipment off and on, the user may need to take some measures to correct the interference.