User Guide

16FE (PoE) +1G Combo+1GE PoE Switch

This document applies to the 16FE (PoE) +1G Combo+1GE PoE Switch. The 16FE (PoE) +1G Combo+1GE is used as an example in the product figure unless otherwise specified.

Packing List

When using the Switch for the first time, carefully open the packing box. The packing box should contain the following items:

- Switch *1
- User Manual *1
- Power Cord *1
- Rack Mount Kit *2
- Screw *8
- Feet *4

⚠ Note: Precision devices are built in the device, please handle them carefully to avoid violent vibration, which may affect the performance of the device. If you find that the equipment is damaged or any parts are lost in the process of transportation, please inform us, we will give you a proper solution as soon as possible.

Chapter 1 Product Introduction

1.1 Product Overview

16FE (PoE) +1G Combo+1GE provides 16*10/100Mbps adaptive RJ45 ports, 1*1000Mbps Combo port, and 1* 1000Mbps RJ45 port. All RJ45 ports support wire speed forwarding and automatic flip, no configuration required, plug and play. Ports 1-16 support the PoE function, which automatically detects PD devices that comply with IEEE 802.3at/af standards without worrying about damage to non-standard PoE devices or common devices. Each PoE port provides a maximum of 30W power.

Chapter 2 Product Appearance Description

2.1 Front Panel

The front panel consists of 16*10/100Mbps adaptive RJ45 ports , 1*1000Mbps Combo port,1*1000Mbps RJ45 port and related indicators, as shown in the following figure:

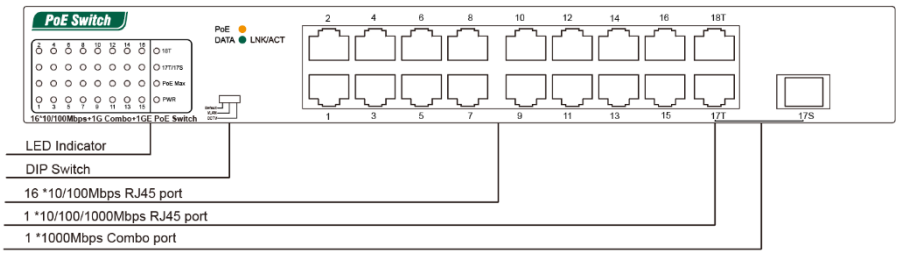

Figure 2-1 Front panel of the 16FE (PoE) +1G Combo+1GE Switch

16FE (PoE) +1G Combo+1GE Port description:

➢**10/100/1000Mbps RJ45 Port**

Supports 10Mbps, 100Mbps, or 1000Mbps rate adaptation, auto-MDI /MDIX, and each port has a corresponding indicator, that is, port indicators 1-16 as shown on the panel in the figure above.

➢**1000Mbps Combo Port**

Combo port is located on the right side of the panel. It is an optical multiplexing port. Each port has a corresponding indicator, that is, the 17-18 port indicator shown on the panel in the figure above.

➢**DIP Switch**

The DIP Switch located on the left panel.

Default: the factory default mode, can normal communication between port 1~18.

VLAN: In VLAN isolation mode, ports 1-16 and 17/18 on the Switch are divided into an independent VLAN. Ports 1-16 can only communicate with 17/18. Ports 1-16 cannot communicate with each other to ensure network security. In this mode, connect 17/18 to the central Switching device.

CCTV Mode: Ultra-long distance transmission of 250 meters can solve the problem of long-distance transmission in network monitoring projects, replace optical fiber and network extender, solve the problem of difficult access to power at the ultra-remote end, and reduce the cost of engineering wiring.

Note: After change the mode, there is no need to restart manually to make the

corresponding configuration take effect.

➢**LED Indicator**

The LED indicator is used to indicate the different working status of the Switch, so that we can check whether the Switch is working properly in time.

2.2 LED Indicator

The LED indicators of the Switch are shown in the following table. Users can monitor the work and running status of the Switch conveniently and quickly through the following indicators:

LED	Color	Function
PWR	Green	Off: No Power supply. Light: Indicates the switch has power.
LNK/ACT	Green	Off: No device is connected to the corresponding port. Light: Indicates the link through that port is successfully. Blink: Indicates that the Switch is actively sending or receiving data over that port.
PoE	Orange	Off: No PoE powered device (PD) connected. Light: There is a PoE PD connected to be port, which supply power successfully. Blink: Indicates port abnormal PoE supply.
Max	Green	Off: PoE power is less than 80% of total power. Light: PoE power above 80%.

2.3 Rear panel

The rear panel of a PoE Switch shows the AC power port. The power input ranges from 100-240V AC or 200-240V at 50/60 Hz.

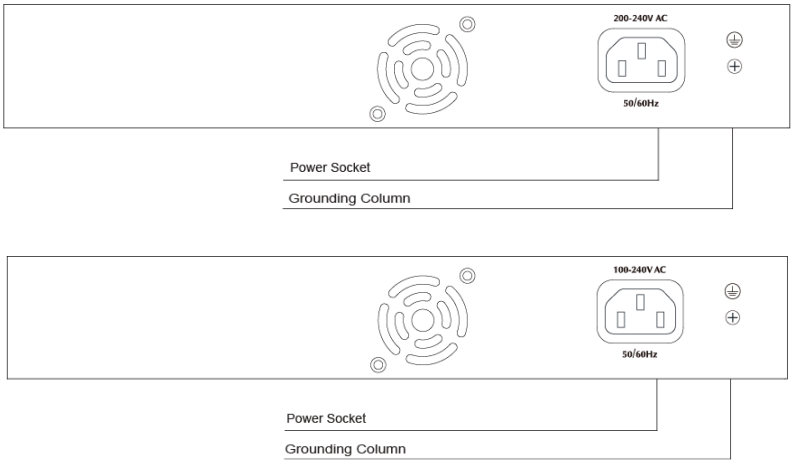

Figure 2-2 Rear panel of the 16FE (PoE) +1G Combo+1GE Switch

AC power port

This is an AC power socket, connect the negative plug of the power cord to this interface, and connect the positive plug to the AC power supply.

Lightning protection grounding pole

It is located to the left of the power interface. Please use wire grounding to prevent lightning strike.

Chapter 3 Installation Guide

This chapter helps users correctly install and safely use Switches.

3.1 Installation Precautions

⚠ **Precautions:** To avoid equipment damage and personal injury, observe the following precautions:

- The Switch room should be dry and ventilated, free from corrosive gases and strong electromagnetic interference.
- The humidity of the Switch equipment room should be lower than 90%. Install proper devices when possible.
- The grounding of the Switch shall comply with the grounding requirements described in this manual, and shall be separately and well grounded.
- Keep a proper distance between the Switch and other devices. Do not stack other devices with the Switch.
- The connection cable between the Switch and the distribution frame should be standardized and reasonable, and the distribution frame (box) jumper wire should be concise and clear to prevent the phenomenon of parallel lines and wires;
- To avoid the danger of electric shock, do not open the chassis without authorization; If any fault occurs, contact professional maintenance personnel.

⚠ **Safety Tips:**

- Use a three-hole socket with safe grounding, and ensure that the PGND cable of the power socket is properly grounded.
- Ensure sufficient space for heat dissipation and ventilation of the Switch. Do not place heavy objects on the Switch.

3.2 Installation Environment

Before installation, make sure that the proper working environment is available, including power requirements, adequate space, proximity to other equipment to be connected, and other equipment in place. Please confirm the following installation requirements:

- Ensure the stability of the workbench and good grounding;
- Check whether cables and connectors required for installation are in place (less than 100m).
- The product does not provide installation components. Prepare components of the selected installation type, such as screws, nuts, and tools, to ensure reliable installation.
- Environment requirements: The operating temperature ranges from 0°C to 40°C and the relative humidity ranges from 5% to 90%.

3 .3 Installation

Desktop installation

- Place the bottom of the Switch face up on a large enough stable desktop;
- Tear off the attached sticky paper on the surface of the footpad and paste the footpad into the groove at the bottom of the chassis of the Switch to prevent external vibration;
- Carefully position the Switch upright on the workbench;

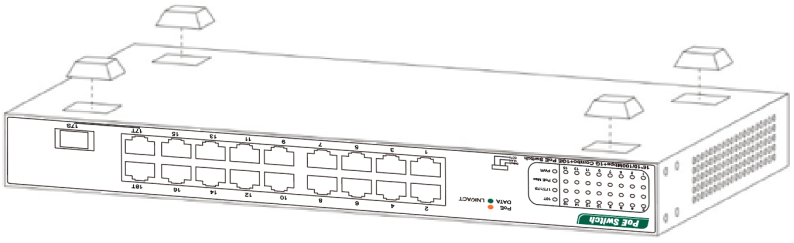

Figure 3 - 1 Desktop Installation Diagram

Rack mounted

- Check the grounding and stability of the EIA-19inch cabinet;
- Fix mounting ears to both sides of the front panel of the Switch using screws. Place the Switch on a bracket of the cabinet and move the Switch along the guide rails of the cabinet to a proper position;
- Use screws to fix mounting ears to the guide rails at both ends of the cabinet

to ensure that the Switch is securely installed on the brackets in the cabinet slots. The mounting ear of the device is not used for weight bearing, it is only used for fixation;

- When installing devices in a cabinet, brackets (fixed on the cabinet) are provided below the device chassis to support devices.

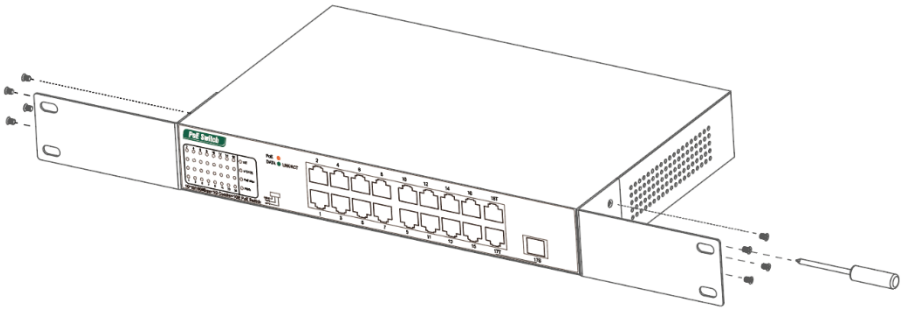

Figure 3-2 Diagram 1 of rack installation

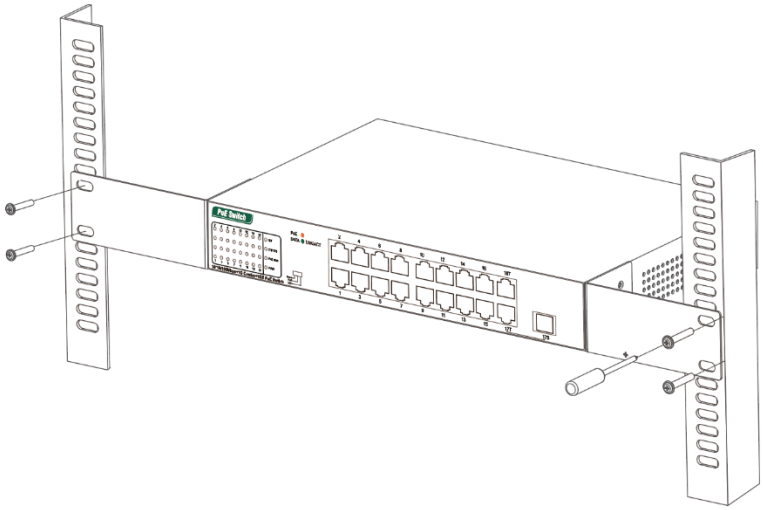

Figure 3-3 Diagram 2 of rack installation

3.4 Enabling the Switch

Connect the power cord, plug in, and turn on the power. After the Switch is started, the Switch automatically initializes. If all port indicators are on and off, the system is successfully reset. The power LED indicator is steady on.

Note: Before powering on the device, ensure that the voltage is correct; otherwise, the device may be damaged. (Power input range: 100-240V AC or 200-240V 50/60Hz).

Appendix: Technical Specifications

Model	16FE(PoE)+1G Combo+1GE PoE Switch	
Standard	IEEE802.3,IEEE802.3 u, IEEE 802.3z,IEEE 802.3 3x, IEEE802.3az, IEEE802.3ab,IEEE802.3af,IEEE802.3at	
Network Media(Cable)	10BASE-T: UTP category 3,4,5 cable (≤100m) 100BASE-TX: UTP category 5 cable (≤100m) 1000BASE-T: UTP category 5e cable (≤100m) 1000BASE-X: MMF or SMF SFP module	
MAC Address Table	8K, Auto-learning, Auto-aging	
Transfer Mode	Store-and-Forward	
Jumbo Frames	9216Byte	
Switching Capacity	7.2Gbps	
Packet Forward Speed	5.4Mpps	
Dimensions (L*W*H)	280*180*44mm	
PoE Power Output	Voltage: 54V DC Power: 30W(Max)	
PoE Port	Port 1-16	
Fan	1	Fanless
Input Voltage	AC 100-240V 50/60Hz	AC 200-240V 50/60Hz
Power Supply	200W	150W
PoW Power budget	185W	135W
Temperature	Operating Temperature: 0°C ~ 40 °C Storage Temperature: -40 °C ~70°C	
Humidity	Operating Humidity: 10% ~ 90% non-condensing Storage Humidity: 5% ~ 90% non-condensing	