User Guide

16-Port 10/100Mbps + 2G Combo

Unmanaged PoE Switch

This document applies to the 16-Port 10/100Mbps+2G Combo Unmanaged PoE Switch. The 16-Port 10/100Mbps+2G Combo 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 into 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, and we will give you a proper solution as soon as possible.

Chapter 1 Product Introduction

1.1 Product Overview

16-Port 10/100Mbps+2G Combo is our independent research and development of Unmanaged PoE Switch! Provides 16*10/100Mbps adaptive RJ45 ports and 2*1000Mbps Combo ports, each supporting MDI/MDIX automatic flip and wire-speed forwarding. Ports 1 - 16 support PoE, which automatically detects PD devices that comply with IEEE 802.3at/af standards. It is easy to use and flexibly expands home and office networks without limitation of power line layout. It is easy to manage and maintain and meets the requirements of different scenarios.

Chapter 2 Product Appearance Description

2.1 Front Panel

The front panel consists of 16*10/100Mbps adaptive RJ45 ports and 2*1000Mbps Combo ports and related indicators, as shown in the following figure:
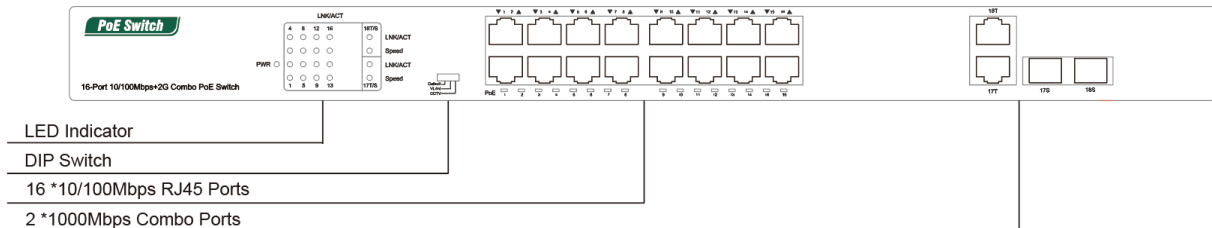

Figure 2-1 Front panel of the 16-Port 10/100Mbps+2G Combo Switch

16-Port 10/100Mbps+2G Combo Port description:

➢**10/100Mbps RJ45 Ports**

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

➢**1000Mbps Combo Ports**

The 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 17T/S-18T/S 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 ports 1~18.

VLAN: 1-16 ports can be isolated each other but 1-16 ports can connect to 17~18 ports after opening VLAN to stop broadcast storm to increase forwarding rate of frame.

CCTV: Up to 250m PoE distance allows you to expand your network via Ethernet cable but where you want to fix devices such as IP Cameras.

Note: After changing 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: The network is not connected Steady on: A 10/100/1000Mbps network device is connected Blinking: Data is being transferred
Speed	Green	Off: Indicates the link through established at 10/100Mbps. Light: Indicates the link through established at 1000Mbps.
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 power supply

2.3 Rear Panel

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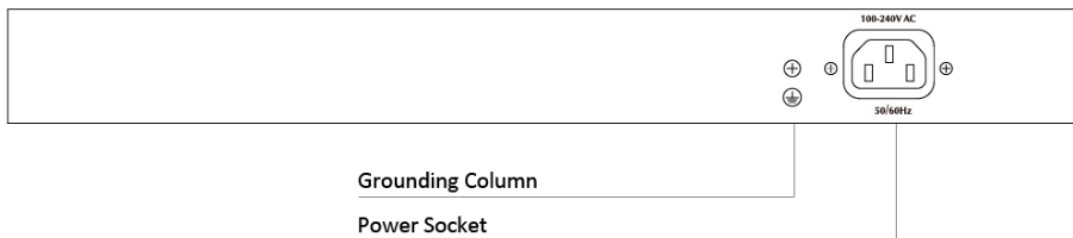

Figure 2-2 Rear panel of the 16-Port 10/100Mbps+2G Combo Switch

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 corresponding facilities.

➢ The grounding of the Switch shall comply with the grounding requirements described in this manual, and shall be separately and well grounded.

➢ The Switch voltage should be stable to prevent abnormal operation of the Switch caused by power supply voltage mutation, fluctuation, and other phenomena;

➢ 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 3-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).

➢ 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;

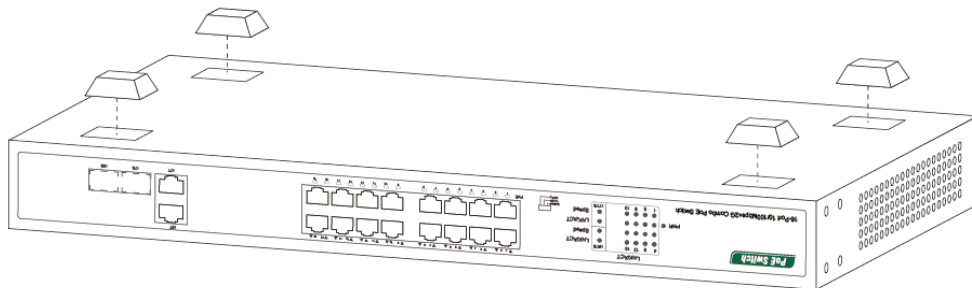➢ Carefully position the Switch upright on the workbench;

Figure 3-1 Desktop Installation Diagram

Rack mounting

➢ 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.
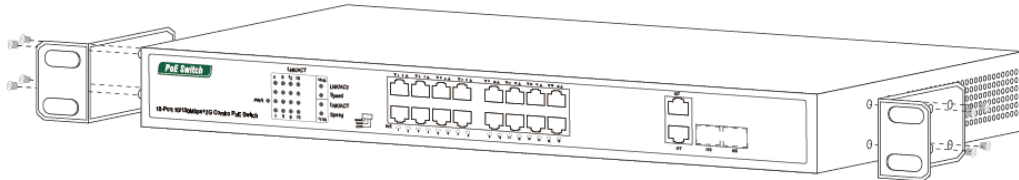
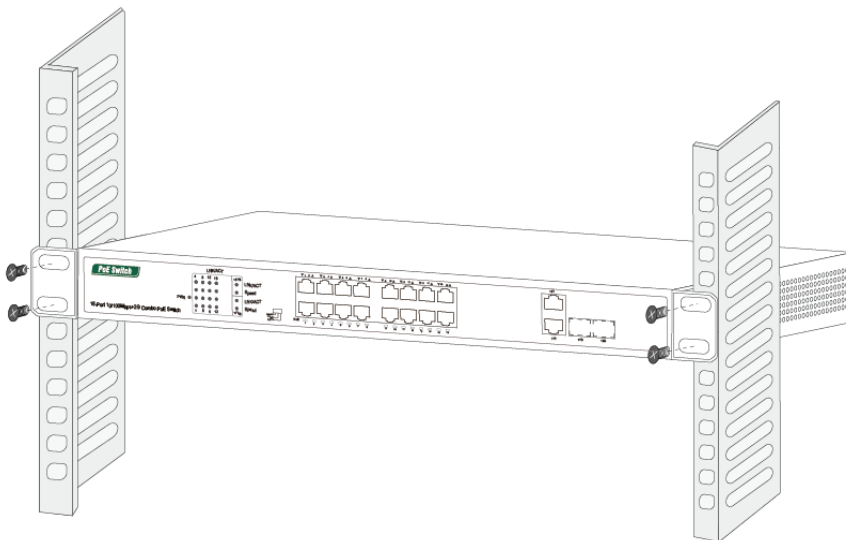

Figure 3-2 Diagram 1 of rack installation

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 50/60Hz).

Appendix: Technical Specifications

Model	16-Port 10/100Mbps+2G Combo Unmanaged PoE Switch	
Standard	IEEE802.3, IEEE802.3u, IEEE802.3ab, IEEE802.3z, IEEE802.3x, IEEE802.3af, IEEE802.3at	
Network Media(Cable)	10BASE-T: UTP category 3,4,5 cable (≤100m) 100BASE-TX: UTP category 5, 5e cable (≤100m) 1000BASE-T: UTP category 5e, 5 cable (≤100m)	
MAC Address Table	8K, Auto-learning, Auto-aging	
Jumbo Frame	9216Bytes	
Packet Buffer	4.1Mbit	
Transfer Mode	Store-and-Forward	
Switching Capacity	7.2Gbps	
Packet Forwarding Rate	5.4Mpps	
PoE Port	Port1~16	
PoE Power on RJ45	Mode A 1/2(+), 3/6(-)	
PoE Power Output	Voltage: 55V DC Power: 30W (Max)	
PoE Power Budget	250W	160W
Power Supply	270W	180W
Power Output	DC 55V/4.5A	
Power Input	AC: 100~240V, 50/60Hz 5A (Max)	
Dimensions (L*W*H)	440*207*44mm	
Fan	2	
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	