



User Guide

AES4102P

24 x 2.5 GE | 2 x 10 GE | 4 x 10 GE SFP+ | L3 PoE+



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This manual is applicable to AES4102P. Unless otherwise specified in the manual, the product diagram shows AES4102P as an example.

Chapter 2 Product Appearance Description

2.1 Front Panel

The front panel consists of 24*10M/100M/1000M/2.5Gbps adaptive RJ45 ports, 2*10Gbps RJ45 ports, 4*10Gbps SFP+ fiber optic module expansion slots and 1* Console port with associated indicators, as shown in the figure below:



Figure 2-1 Switch front panel diagram

Port description:

➤ 10M/100M/1000M/2.5Gbps RJ45 Ports

Support 10M/100M/1000M/2.5Gbps rate adaptive function, support (Auto-MDI/MDIX) function. Among them, ports 1-24 support PoE power supply, in line with IEEE802.3af/at standard, with a maximum output of 30W per port. Each port has a corresponding indicator light, i.e., port 1-24 indicator light shown on the panel above.

➤ 10Gbps RJ45 Ports

10 Gigabit uplink electrical port is backward compatible with 100M/1000M/2.5G/5Gbps transmission rates, corresponding to 25 and 26 port indicators.

➤ 10Gbps SFP+ Slots

10G optical port support standard module 10G/2.5G/1G adaptive, use of adaptive 10G/2.5G/1G standard optical modules, support SR/LR/LRM/ER/ZR and other mode ls, corresponding to 27-30 port indicator.

➤ Console Port

The Console port is used to connect to the serial port of a computer or other terminal device and to manage or configure the Switch.

➤ Reset Switch

A Switch that can be automatically reset, long press for 5 seconds, release to restore the factory settings.

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:

Packing List

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

- PoE Switch*1
- User Manual*1
- Power Cord*1
- Console Cable*1
- Accessories (Rack Mount Kit*2, Rubber Feet*4, Screw*8)

⚠ 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

AES4102P is our self-developed Layer 3 10GE Uplink port Managed PoE Switch with 24*10M/100M/1000M/2.5Gbps adaptive RJ45 ports, 2*10Gbps RJ45 ports and 4*10Gbps SFP+ fiber module expansion slots and 1* Console port. 10 Gigabit uplink electrical port is backward compatible with 100M/1000M/2.5G/5Gbps transmission rate, 10G optical port support standard module 10G/2.5G/1G adaptive. All ports 1-24 support PoE power supply, individual ports up to 30W. Layer 3 routing protocol control, adapt to multiple services, efficient and secure information transmission, complete security policy, perfect QoS policy and rich VLAN function, easy to manage and maintain, to meet the requirements of Enterprises, Communities, Hotels, Office Networks and Campus Network Networking and Access.

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LED	Color	Function
PWR	Green	Off: No Power supply. Light: Indicates the Switch has power.
PoE	Orange	Off: The port does not supply power to the peer device. Light: A receiving device is connected with it, and the power supply is normal.
LNK/ACT (Bicolor lamp)	Orange	Ports 1-24 always on: Connection rate is 10M/ 100M/1000Mbps. Ports 25-26 always on: Connection rate is 100M/1000M/2.5G/5Gbps. Ports 27-30 always on: Connection rate is 1000M/2.5Gbps. Off: The data port is disconnected. Blinking: The data port has data forwarding.
	Green	Ports 1-24 always on: connection rate is 2.5Gbps. Ports 25-26 always on: connection rate is 10Gbps. Ports 27-30 always on: Connection rate is 10Gbps. Off: The data port is disconnected. Blinking: The data port has data forwarding.
SYS	Green	Blinking: The system is working properly. Off or always on: The system is being started or is abnormal.

2.3 Rear Panel

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

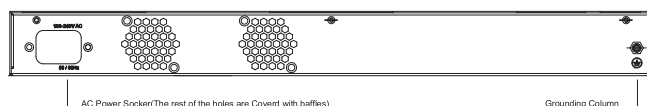


Figure 2-2 Diagram of the rear panel of the Switch

AC Power Socket

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.

Grounding Column

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

⚠ Precautions: The product has provision for a permanently connected protective grounding conductor, this conductor need to install to building earth by a skilled person.

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;
- 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 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);
- Environment requirements: The operating temperature ranges from 0°C to 40°C (32°F to 104°F) and the relative humidity ranges from 5% to 90%.

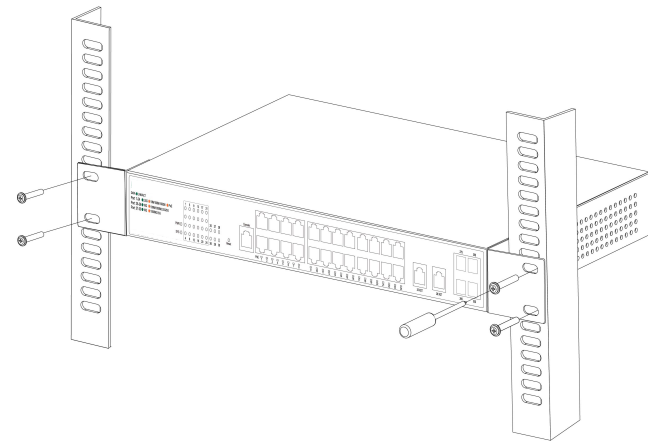


Figure 3-3 Diagram 2 of rack installation

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 AC: 100-240V, 50/60Hz)

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.

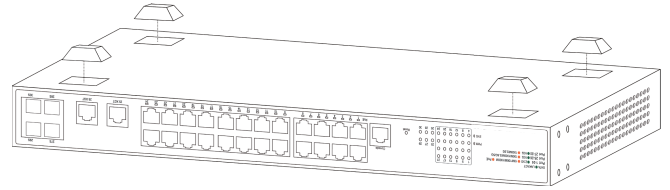


Figure 3-1 Desktop installation diagram

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.

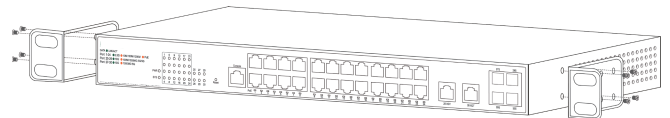


Figure 3-2 Diagram 1 of rack installation

Appendix: Technical Specifications

Model	AES4102P
Standard	IEEE802.3, IEEE802.3u, IEEE802.3ab, IEEE802.3z, IEEE802.3x, IEEE802.3bz, IEEE802.3ae, IEEE802.3ad, IEEE802.3an, IEEE802.1X, IEEE802.1Q, IEEE802.1p, IEEE802.1d, IEEE802.1w, 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-X: UTP category 5e, 6 cable (≤100m) 2.5GBASE-X: UTP category 6, 6A cable (≤100m) 10GBASE-X: UTP category 6A, 7 cable (≤100m) 1000BASE-X: MMF, SMF 10GBASE-X: MMF, SMF 10GBASE-SR: OM3/OM4 or above MMF (2m~300m) 10GBASE-LR: IEC's B1.1 and B1.3 SMF (2m~10000m)
MAC Address Table	32K, Auto-learning, Auto-updating
Jumbo Frames	12KByte
Packet Buffer	16Mbit
Transfer Mode	Store-and-Forward
Switching Capacity	240Gbps
Packet Forward Speed	178.56Mpps
PoE Port	Port1~24
PoE Power Output	30W (Max)
PoE Power On RJ45	1/2 (-), 3/6 (+)
PoE Power Budget	370W
Power Supply	438W Built-in power supply
Input Voltage	AC:100-240V 50/60Hz, 8A Max
Dimensions (L*W*H)	440*260*44mm
Operating Temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage Temperature	-40°C ~ 70°C (-40°F ~ 158°F)
Operating Humidity	10% ~ 90% non-condensing
Storage Humidity	5% ~ 90% non-condensing