USER GUIDE

PoE & Optical Transmission by SAE ART and TECHNOLOGY

16&24 port **Gigabit Managed Industrial PoE Switch** Series

Guide Description

In this guide you can find instructions on how to initially install and configure industrial PoE switch. It includes information about the warranty, switch management options, rack mount installation and power connections. The illustrations might be not completely the same as your purchased switch. Please refer to the switch's documentation for detailed information on our website www.sae-net.com .

1 - Packing List

Carefully unpack the industrial switch and accessory kit from the shipping box and check if the following items are included in the box:

- ✓ 1 x industrial SAE PoE switch
- ✓ Standard blue RS232 connection cable (CLI cable connector)
- ✓ Power Cable, Network Management Power Line
- ✓ Rack mounting brackets
- ✓ 1x User Guide

2 - Switch Installation notes & Product Overview

Please carefully inspect the power cord to see that it is secured fully to the AC power connector. It is very important to have a proper heat dissipation and ventilation around the switch. And in any case of use do not place heavy objects on the switch. This SAE product is L2+ full gigabit managed industrial PoE fiber switch which supply up to 24 gigabit RJ45 ports and 4 x 100/1000 Base-X uplink fiber slot ports (SFP) . Port 1-24 can support IEEE 802.3af/at PoE standard. single port PoE

power up to 30W and the maximum PoE output power of the host is 250W/400W. As a PoE power supply smart device, it can automatically detect and recognize the power receiving equipment that meets the standards of the PoE. It is suitable industrial zone such as factories, petroleum industry, refining, electrical industry, and so on. These series are made with high quality of rigorous screened components, which have superior performance in stability, environmental adaptability. It can work normally in very cold environment to very hot from -35°cto +75°c. The product is planned in a way to have better resistance against corrosion and electromagnetic power, to get more powerful suitability to environment.

2-1 . FEATURE

- ✓ 16/24*10/100/1000Base-T RJ45 ports can support POE power supply
- ✓ Redundant 220 Vac as input power
- ✓ Support non-blocking wire speed forwarding
- ✓ Support full duplex based on IEEE802.3x and half duplex based on Backpressure
- ✓ PoE network management, realize PoE port power allocation, priority setting, port power status viewing, time scheduling, etc.
- ✓ IEEE 802.3af/at PoE standard, without damaging non-PoE devices
- ✓ IEEE802.1Q VLAN, flexible VLAN division, Voice VLAN, and QinQ configuration.
- ✓ QoS, Priority mode based on 802.1P, Port & DSCP, queue scheduling algorithm including EQU, SP, WRR & SP+WRR.

2-2. Types of Switch Installation

There are two types of switch mode installation: Desktop or Shelf Installation and Rack Mount. When installing the switch on a desktop or shelf, please attach the device fully stable on the bottom at each corner of the device's base. For installing in the Rack, switch can be mounted in an EIA standard size 19-inch rack, by attaching the L-shaped mounting brackets to the sides of the switch and secure them with screws provided. Besides, mount the switch in the rack using a screwdriver and the supplied rack-mounting screws. Please follow below instruction for more information.

2-3. Installation Guide

Please confirm the following things before installation:

1. If the POE port meets the power requirement of the connecting devices.

2. If the POE standard requirement and power supply matches with the power receiving device

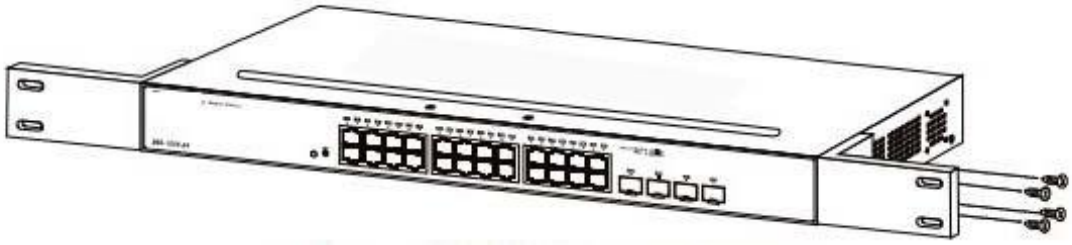
3.If the output power of the matched power adapter is compatible with the specification in the label of the POE switch.

Please install the POE switch according to the following steps:

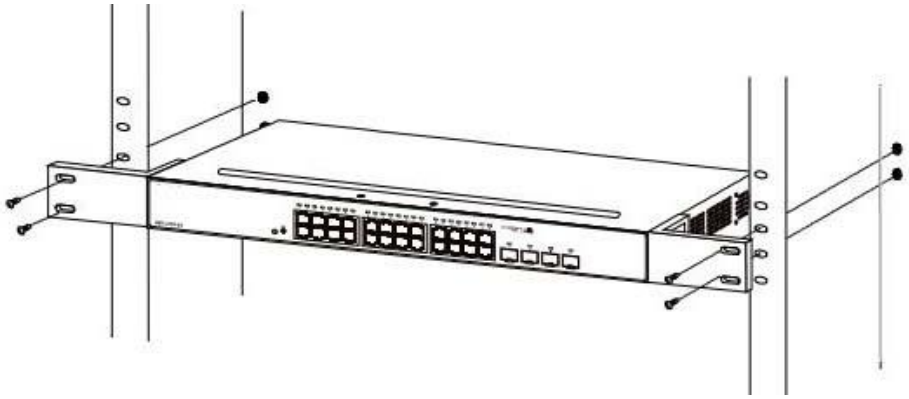
1. Put the PoE switch on the surface of a large and stable table, or professional industrial installation rack mount.

2. Connect Positive, Minus and Earth terminals as indicators on the power adapter.

3. Connect the network devices to the POE switch port through network cable.



use the screws provided with the equipment rack to mount the switch in the rack.



❖ **Note**

1.Please do not put heavy products on the POE switch, and please ensure good ventilation environment for the POE switch.

2.Please cut off the power first before plugging the power adapter.

2-4. Power

Connect the power cable, plug it into power sockets, turn on the power, then the switch will automatically initialize, and LED lights status will display as following:

1. Except the POE port lights, all the other lights will go through the process of “on-off-on-off”, which means the system restoration is successful.

2. Power LED remains lit.

3.Systerm indicator blink.

2-5. Panel Description LEDs

Indicator	Status	Description
Power Indicator: PWR	Yellow LED ON	Normal
	Yellow LED OFF	Power OFF
System Indicator: SYS	Yellow LED Blink	System working properly
	Yellow LED ON/OFF	System working NOT properly
PoE Indicator: PoE	Green LED ON	Connected PD device, working properly
	Green LED Blink	Short circuit or current overload
	Green LED OFF	No connected PD or power OFF
Link/ACT Indicator	Yellow LED ON	10/100/1000M corresponding port has data transmission
	Yellow LED Blink	10/100/1000M port connected & data send/receive properly
	Yellow LED OFF	No connection
SFP Indicator	Green LED ON	Corresponding port has data transmission
	Green LED Blink	Connect correctly & data send/receive properly
	Green LED OFF	No connection
Speed Indicator: SPD	LED ON	Working at 10/100/1000M
	LED OFF	Working at 100/1000M

Note Please confirm that the all PoE ports of PD devices are complying with IEEE802.3af/at standard.

Power Industrial Terminals: 220 VAC (110 ~240VAC), dual redundancy power input, 3-pin 5.08mm-gap plug-in terminal

PoE Port: The PoE ports support PoE function, which can transmit data and power simultaneously if connected matching device. The LED lights on the front panel can show working status of each port.

Ethernet Port: Besides PoE ports, other ports are normal self-sensing Ethernet RJ45 ports which support Auto MDI/MDIX, plug and play. The LED lights on the front panel can show working status of each port.

- **Note**

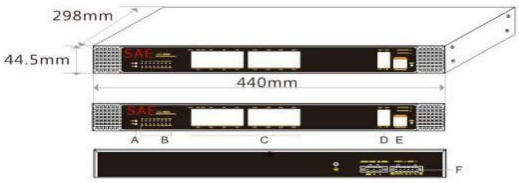
If initialization is inconsistent with the above, please check the power.

3.Technical Structure and Port Description

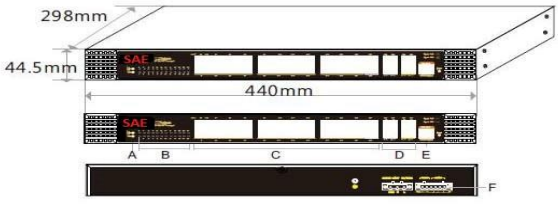
In this section it will be illustrated how to connect the switch to the ground and ports to the PDs. You must complete this procedure before powering on the switch.

3-1. Grounding the Switch

Carefully connect One M4 x 6 mm (metric) pan-head screw on back side of the PoE switch to the ground. Connect carefully all PDs to the switch by standard cat-6 cable patch cord.



A. Working indicator B. PoE Working indicator
C. 16* PoE ports D. 2*Gigabit SFP ports
E. Console port F. AC/DC dual input port



A.Working indicator B.PoE Working indicator
C. 24* PoE Ports D.4*Gigabit SFP Ports
E.Control Port F.AC/DC dual input port

4.Management Options

The SAE switch can be managed by using the Web User Interface by its NMS on web(Web UI), and console port(CLI). We strongly recommend to manage SAE switches one by one by using the Web UI option. Each switch must be assigned
its own IP address, which is used for communication with the management PC. However, for those professional system developers console port interface is at the corner and useful.

4-1. Web User Interface

Once the switch has been successfully installed, you can begin configuration, monitor the LED panel, and display
graphical statistics using a web browser. All types of Chrome and Internet Explorer are acceptable. For using web UI please make sure to have below list:

A PC with a RJ-45 Ethernet port connection (10/100 Mbps or 10/100/1000 Mbps)
A standard Ethernet cable patch cord

Then follow the instruction:

Connect the Ethernet cable to any of the ports in switch's front panel and to the Ethernet port on the PC.
Configure the PC's IP address to be in the network segment as the switch. The switch's default IP address is 192.168.2.1 with subnet mask 255.255.255.0.

2. Open the web browser and enter http:// 192.168.2.1 in the address box.
3. Log in to the switch. The device's Web UI user authentication window will be different depending on the switch model. For Smart Managed switches, enter the user 'admin' and password 'system'. Press OK to enter the main configuration window.

4-2. Console Port (CLI Mode)

To connect to the switch's console, use the supplied blue RS232 cable to connect to the switch's console port. This cable is a RS-232 serial to RJ-45 connector cable designed for use with the switch. A terminal emulation program is required to connect to the console port on the switch. These are widely available and can be easily downloaded from the Internet such as putty or similar software.
Using following steps to connect to switch's console port:
1.Connect the RS-232 serial interface to the serial port of the management PC.
2.Connect the RJ-45 interface to the console port of the switch.
3.Open a terminal emulation program on the management PC and configure the properties of the connection as follows:

- The speed (baud) can be 9600 or 115200 bps (depending on the purchased model).
-

The data bits should be 8.
•
The parity should be None.
•
The stop bits should be 1.
•
The flow control should be None.
4.Connect to the switch and the Command Line Interface (CLI) should be available.

- **Note**
  For those network admin who needs the CLI configuration instruction, we provided the cli file in our website. Please surf and download the file from www.sae-net.com

5.Application Connection Diagram