SPECIFICATION FOR APPROVAL

CUSTOMER : _____

PRODUCT NAME : 16 Port Super-power Gigabit PoE Switch

PRODUCT MODEL : PSE1600G2S

BRAND : TST（OEM/ODM）

DATE : 2024 / 06 / 26

DRAWING			CUSTOMER APPROVE
DESIGNED	CHECKED	APPROVED	
VANNE	YOUTRONG	Mark	
DATE	2024 / 06 / 26		Please return the visa after confirmation, thank you!

Shenzhen Tstone Technology Co. ,Ltd
Mobile: 13640991523
http: www.tstpoe.com
Add：Room 903, Building B-14C, First Industrial Zone, Baihua Community, Guangming Street, Guangming District, Shenzhen, China

PRODUCT: 16 Port Super-power Gigabit PoE Switch

MODEL: PSE1600G2S

What Is PoE

POE (Power Over Ethernet) refers to the technology that can transmit data signals for some IP-based terminals (such as IP phones, wireless LAN access point APs, IP cameras, etc.) without any changes to the existing Ethernet Cat.5 cabling infrastructure, and can also provide DC power supply for such devices.

A complete POE system consists of two parts: Power Sourcing Equipment (PSE) and Powered Device (PD). The PSE device is the device that powers the Ethernet client device and is also the manager of the entire POE (Power-over-Ethernet) process. The PD device is the PSE load that receives the power supply, that is, the client device of the POE system. Based on the IEEE 802.3af/at standard, the two establish information about the connection status, device type, power consumption level and other aspects of the PD of the power receiving device, and use this as the basis for PSE to supply power to the PD through Ethernet.

The Principle of POE

The standard Category 5 cable has four twisted pairs, but only two pairs are used in l0M BASE-T and 100M BASE-T. IEEE80 2.3af/at allows two uses: (1) When the idle pin is used for power supply, pins 4 and 5 are connected as the positive pole, and pins 7 and 8 are connected as the negative pole. (2) Pin 1 and pin 2 are connected as the positive pole, and pin 3 and 6 are connected as the negative pole.

The Advantages of POE

1. Save labor and material costs. Compared with the traditional wiring method of weak current engineering, POE only needs to install a network cable to make the IP equipment work normally. In many cases, POE is more advantageous in the places where it is difficult to deploy AC power. As the number of network devices in the system increases, the use of POE eliminates the need for local power supply for the equipment, which will greatly reduce deployment costs and simplify their manageability.

2. Easy to install and manage. Customers can autonomously and securely mix PoE devices and legacy devices within the system, and can coexist with existing Ethernet cables. PoE devices are compatible with the management system of existing network devices and can share the management platform with existing network devices.

3. Good security. The Power Sourcing Equipment （PSE） in a PoE system will only supply power to the Powered Device （PD） that needs to be powered. Only when the Device that needs to be powered is connected and the protocol is successfully identified, the power supply equipment will have a voltage output and supply power to the powered device, thus eliminating the risk of leakage and short circuit on the line.

Product Introduction

PSE1600G2S is a 16 Port Super-power Gigabit POE Switch, which conforms to the IEEE802.3BT POE standard protocol. Each port can output a POE signal (maximum 90W) to power a super-power PD devices and transmit signals for it.

With the wide application of POE technology in weak current engineering, not only the low-power IP devices generally use POE power supply technology, but also more and more high-power IP devices have a wide range of demand for POE power supply technology. However, the maximum output power of the POE switch based on IEEE802.3AF/AT standard is only 15.4W/30W per port, which is difficult to meet the demand of high-power IP devices for POE signal power. PSE1600G2S is a super power POE switch. It can output a maximum of 90W POE signal per port, so it can meet the needs of most high-power IP devices.

Product Description

PSE1600G2S has 16 gigabit high-power POE ports and 2 SFP gigabit optical ports. The 16 gigabit high-power POE ports can connect 16 high-power PD devices, and each port can output a maximum of 90W POE signal to power the connected PD devices and transmit signals for them. The two SFP gigabit optical ports can be inserted into two SFP optical modules, and connected to the fiber, through the fiber connection to the upper switch or network management platform, responsible for long-distance signal lossless transmission. The back of PSE1600G2S is designed with an AC port , which can support AC power access of AC100-240V 50/60HZ. Its front has a mode selection dial switch, you can go through the switch to select the switch's working mode: NOM / VLAN / CENK three working modes. The default mode is NOM (Normal mode). The front panel of PSE1600G2S is also designed with 1 PWR indicator, 16 LINK/ACT indicators, 16 1000M indicators and 2 SFP optical port indicators to indicate the working status of power supply, POE port and SFP optical port respectively.

The PSE1600G2S shell is designed with a standard 1U case and mounting lugs to support both standard rack mounting and desktop mounting. The whole switch shell is made of hard metal material, and the heat dissipation mesh is designed on both sides to facilitate the heat dissipation of the switch. A ground interface is designed behind the machine to facilitate the installation of the whole machine ground protection cable. The AC interface is designed with a power switch, which can facilitate the power off or open of the whole machine.

PSE1600G2S conforms to IEEE802.3bt international POE standard protocol, and is compatible with IEEE802.3af/at protocol. It has a maximum output power of 90W (IEEE802.3bt) and supports 30W (IEEE802.3at) and 15.4W (IEEE802.3af) outputs, which can be compatible with all levels of PD devices and po

wer them according to their level. Its data transfer rate is gigabit, while supporting 10M/100M/1000M ada ptive transmission. The SFP optical port can support dual or single-fiber SFP optical modules to provide l ong distance lossless fiber transmission. It supports wide voltage input AC100-240V 50/60HZ, compatible with all countries of the world mains voltage and frequency. Its conversion efficiency is more than 90%, POE signal transmission distance is more than 100 meters, POE power supply pin uses RJ1245+RJ3678- eight-core full power supply mode.

The main board of PSE1600G2S adopts high-speed and low noise design scheme, and takes into acc ount the design concept of heat dissipation and long life. The main board circuit design has the protectio n function of lightning, short circuit, overload and high temperature. At the same time, the design idea of anti-electric shock and anti-leakage is integrated to ensure the safety of the product. The EMC parameter s can meet the requirements of IEC 61000-4-2/3/4/5/6 standard. The products have obtained CE, FC, Rohs and other certifications, and sell well in more than 100 countries and regions around the world.

Product Features

- IEEE802.3af/at/bt POE international standard protocol and handshake recognition function
- Wide input voltage AC100-240V 50/60HZ
- Output：48V1.85A 90W, other voltages can be customized
- 10M/100M/1000M adaptive transmission speed
- RJ1245+ RJ3678- Power supply pin
- Dual gigabit SFP uplink optical port, support single-fiber/dual-fiber optical module
- Support multiple working modes (NOM / VLAN / CENK)
- Rack installation, desktop installation and other installation methods
- There are cooling meshs on both sides for easy heat dissipation
- 6KV surge protection
- With overheat protection, overvoltage protection, overload protection, short circuit protection
- Anti-electric shock and anti-electric leakage design, safer to use
- The conversion efficiency is over 90%
- EMC complies with IEC 61000-4-2/3/4/5/6 standards
- Hard metal material shell, easy to enhance its installation robustness and heat dissipation

Specifications

Items	Specifications
Product Name	16 Port Super-power Gigabit POE Switch
Product Model	PSE1600G2S
PoE Standard	IEEE802.3af/at/bt
Input Voltage	AC100-240V 50/60HZ
Output	POE 48V1.85A 90W (Other Voltage can be customized)
Conversion Efficiency	≧90%
PoE Pin	RJ1245+ RJ3678-
Conversion Mode	Isolated
Data Rate	10M/100M/1000M Adaptive
Transmission Distance	100 meters
Surge Protection	6KV
Circuit Protection	Short-circuit Protection Overcurrent Protection Overvoltage Protection Overheating Protection Anti-electric shock Protection Anti-electric leakage Protection
LED Indicator	1* Power Indicator 16* Link/Act Indicators 16* 1000M Indicators 2* SFP Optical Port Indicators
Interface	16* PoE Ports 2* SFP Optical Ports 1* AC Port
Material	Hard metal
Color	Matte black
Accessories	1* AC cable 2* Mouting lugs

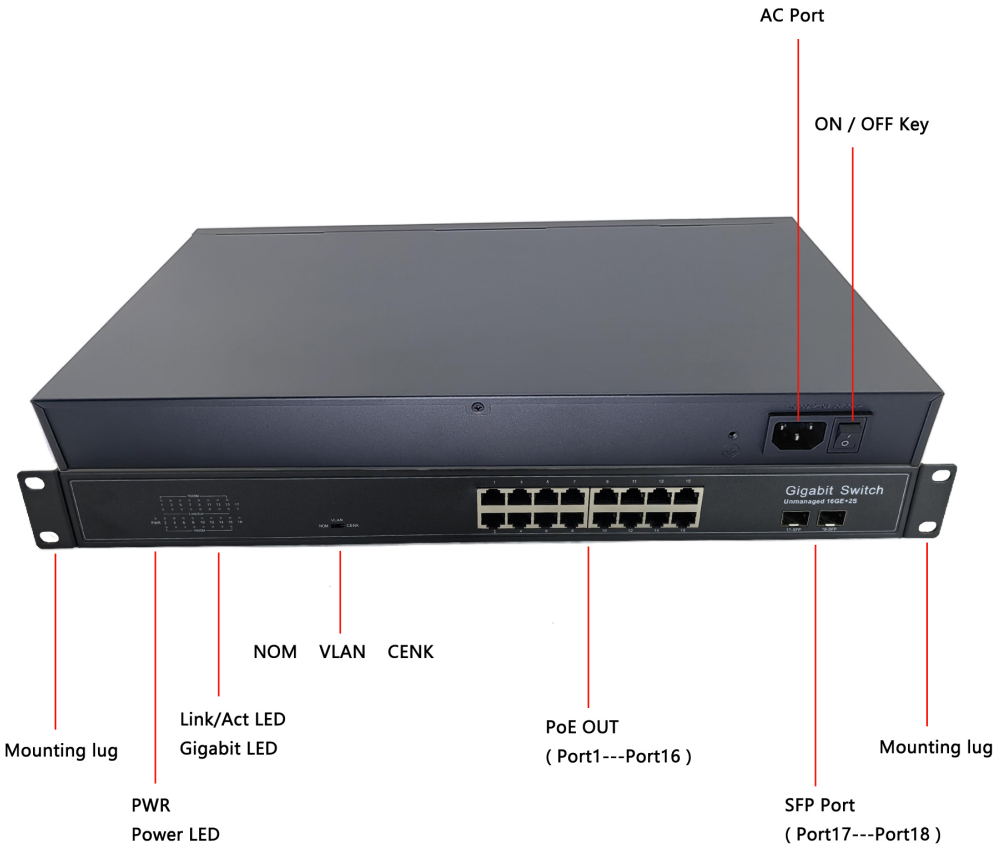
	6* Screws
EMC	IEC 61000-4-2/3/4/5/6
Temperature	-20～80℃ For Operating -30～100℃ For Storage
Humidity	RH95% MAX (Non-condensation)
Weight	N.W: 3.1kg G.W: 3.65kg
Dimension	Product Dimension: 440mm*230mm*45mm Packing Dimension: 465mm*320mm*80mm
Package	Kraft Carton

Product Applications

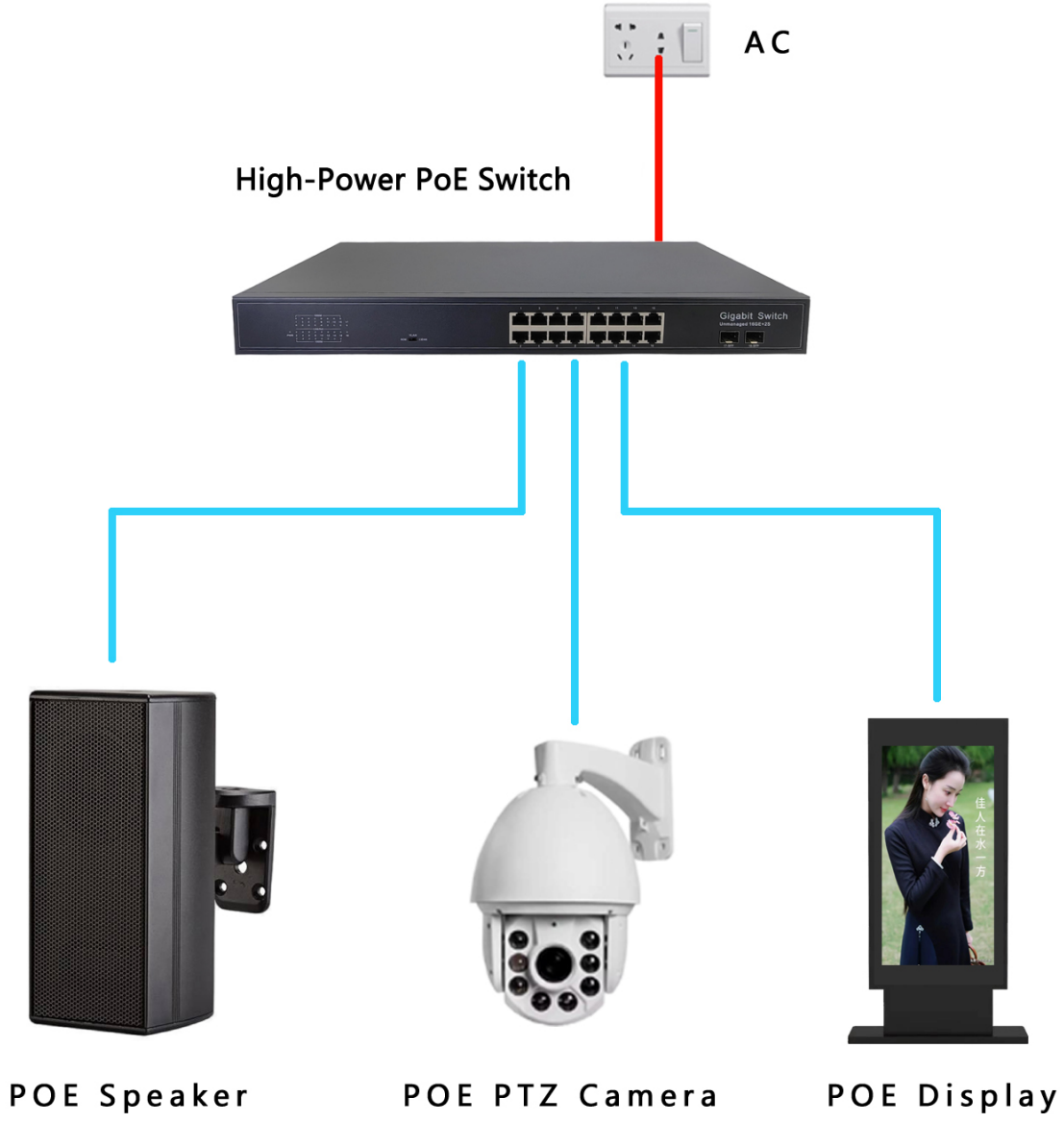
PSE1600G2S is a 16 Port Super-power Gigabit POE Switch designed specifically for high power PD devices and compatible with low power PD devices. Widely used in high-power CCTV, high-power wireless coverage equipment, high-power audio broadcasting system, large-size display, indoor lighting and other industries. The products have been put into the market for many years, and have performed well in the field of high-power POE applications, and have been widely favored and praised by customers around the world.

Dimensions

Interface Definition



Application topology



Application Scenarios

	
Broadcasting Speaker	WIFI CPE
	
CCTV	AD Display

Product Detail

Product Package

Package Size: 465*320*80mm (L*W*H)

Package List	
Items	**Quantity**
PoE Switch	1
AC Cable	1
Mouting lugs	2
Screws	6
Operation Manual	1