深圳市拓视盾科技有限公司
Shenzhen Tstone Technology Co. ,Ltd

SPECIFICATION FOR APPROVAL

CUSTOMER :

PRODUCT NAME: Passive High-power 4-Port PoE Midspan

PRODUCT MODEL: TSD-MP404

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!

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PRODUCT: Passive High-power 4-Port PoE Midspan

MODEL: TSD-MP404

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

The TSD-MP404 midspan is a passive PoE power supply device that does not support the IEEE802.3af/at standard PoE protocols. This product is mainly used to connect ordinary switches and network terminal devices. It has the function of providing power to the network cable and can output four-channel PoE signals to power the PD (Powered Device) end, with a maximum single-channel output power of 50W.

The TSD-MP404 midspan receives network data from the superior ordinary switch and inputs a 12-56V DC signal at the same time. After being integrated and processed by the internal circuit, it outputs PoE signals to power terminal devices such as wireless APs (Access Points), IP phones, PoE cameras, and PoE speakers, which can effectively expand the network coverage area.

Product Description

Input and output configuration of TSD-MP404

RJ45 Jack (×4): Data IN

RJ45 Jack (×4): passive PoE OUT

2P Terminal Block: DC 12-56V IN

5.5×2.1mm DC Female socket: DC 12-56V IN

The overall dimensions are 110×42.5×24.5mm (L*W*H). The dimensions of the mounting lug are 11.5×42.5×1.3mm. Emerald Green Indicator Light: Indicates the working status of the power supply.1U Gold-Plated RJ45 Jack: Reduce transmission delay and ensure stable connection of network devices. DC Socket Specification: 5.5×2.1mm. Overall Material: Hard metal shell. Color: Glossy black paint. Total weight: 130 g.

The TSD-MP404 inputs four data signals and outputs four 12-56V PoE signals. There are two DC input methods for users to choose from: input through the 5.5×2.1mm DC female jack or the 2P terminal block, meeting the needs of users with different types of connecting devices. The maximum single-port output power is 50W. The power supply mode is power supply via the RJ45+ RJ78- pins. The transmission rate is 10/100Mbps adaptive.

The TSD-MP404 midspan does not support the IEEE802.3af/at standard PoE protocols. It is a passive PoE power supply device. The internal circuit is equipped with functions such as over-heat protection, over-current protection, over-voltage protection, and short-circuit protection. The product has obtained certifications such as CE, FC, and RoHS. Its EMC parameters meet the requirements of IEC 61000-4-2/3/4/5/6 standards. The TSD-MP404 midspan can meet users' diverse PoE circuit expansion needs, providing more power supply options for users. It has been widely used in fields such as education and healthcare. Its excellent performance has received a great deal of praise from users.

Product Features

- Input Voltage: DC 12V - 56V.
- Output: 12 - 56V passive PoE signals.
- EMC complies with the requirements of IEC 61000 - 4 - 2/3/4/5/6 standards.
- Certified by CE, FCC, and RoHS.
- Adaptive transmission rate of 10/100Mbps.
- Power supply pins: RJ45 + RJ78 -.
- Surge protection of 4KV.
- Conversion efficiency greater than 85%.
- Over-heat protection, over-voltage protection, over-load protection, and short-circuit protection
- Maximum Single Output Power: 50W
- Low-power transistors.
- High-precision electronic components from well-known brands, original and genuine.
- An environmentally friendly and high-temperature-resistant PCB board.
- 1U gold - plated Ethernet port
- Input type: RJ45 port, 2P terminal block and DC female socket
- Glossy black, hard metal shell with electroplating

Specifications

Product parameter table	
Product Name	Passive high-power 4-Port PoE midspan
Product Model	TSD-MP404
PoE Standard	/
Input Voltage	DC12-56V
Output	PoE: 12-56V
Conversion Efficiency	≧85%
PoE Pin	PoE: RJ45+ RJ78-
Conversion Mode	/

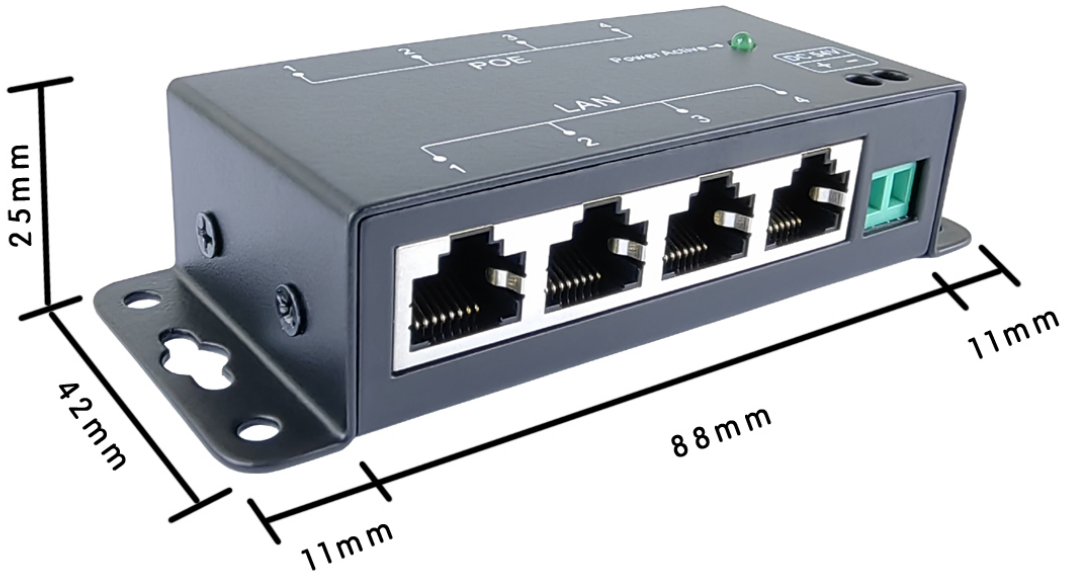
Data Rate	10/100Mbps
Transmission Distance	100 meters(Category 5e Cable (Cat5e))
Surge Protection	4KV
Circuit Protection	high-temperature protection, lightning protection overload protection, short-circuit protection
LED Indicator	Emerald Green LED: Indicates the working status of the power supply
Interface	Input Port (RJ45 Jack) : Data IN Input Port (2P terminal block) : DC 12-56V IN Input Port (DC female socket) : DC 12-56V IN Output Port (RJ45 Jack) : PoE OUT
Function	/
Material	Hard metal shell
Color	Glossy black paint
Accessories	/
EMC	IEC 61000-4-2/3/4/5/6
Temperature	-30～60℃ For Operating -30～80℃ For Storage
Humidity	RH95% MAX (Non-condensation)
Weight	N.W: 130g
Dimension	110*42.5*24.5mm(L*W*H)
Package	Anti-static pearl cotton + paper box

Product Applications

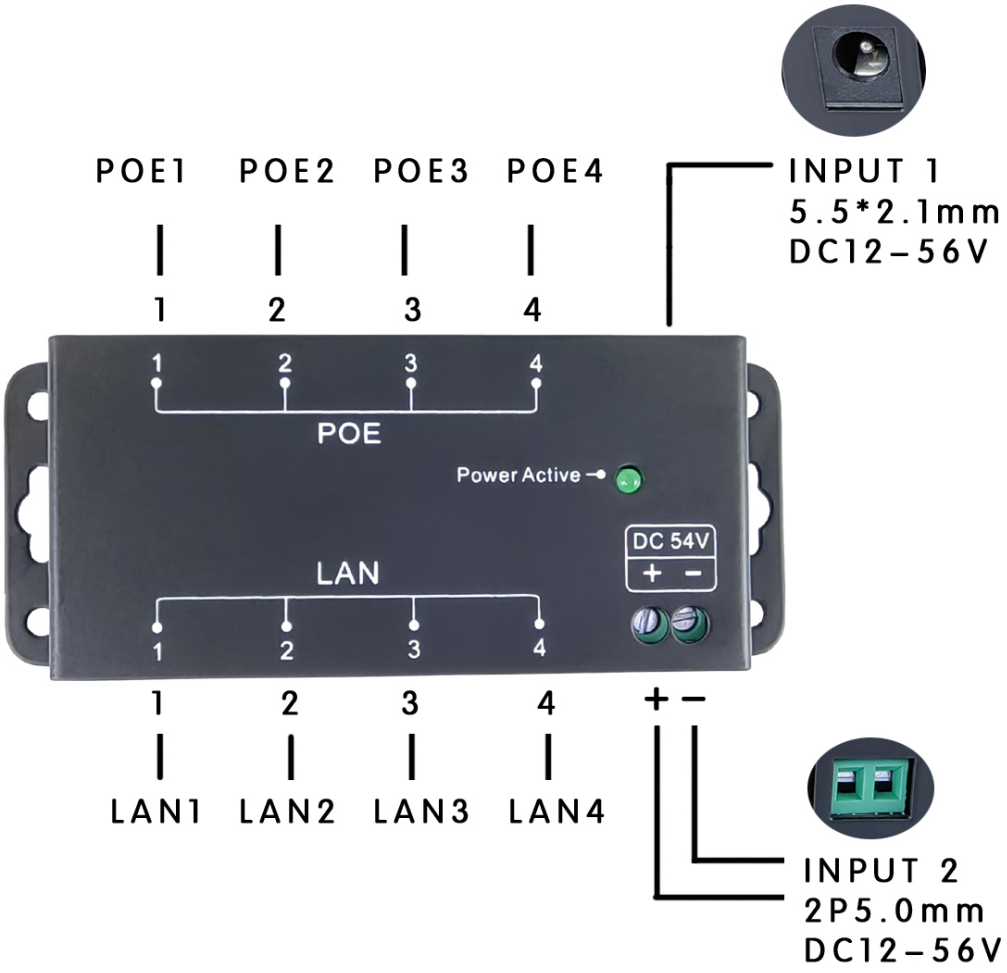
The TSD-MP404 midspan has a maximum single-port output power of 50W. It can expand the PoE power supply range without altering the existing network structure, providing network transmission and po wer supply for multiple terminal devices while achieving physical isolation between data and power.

The TSD-MP404 midspan offers a simple solution for the rapid deployment of high-power PoE, optimizes the user's network architecture, and reduces deployment costs. It is an indispensable power supply device in the PoE power supply system.

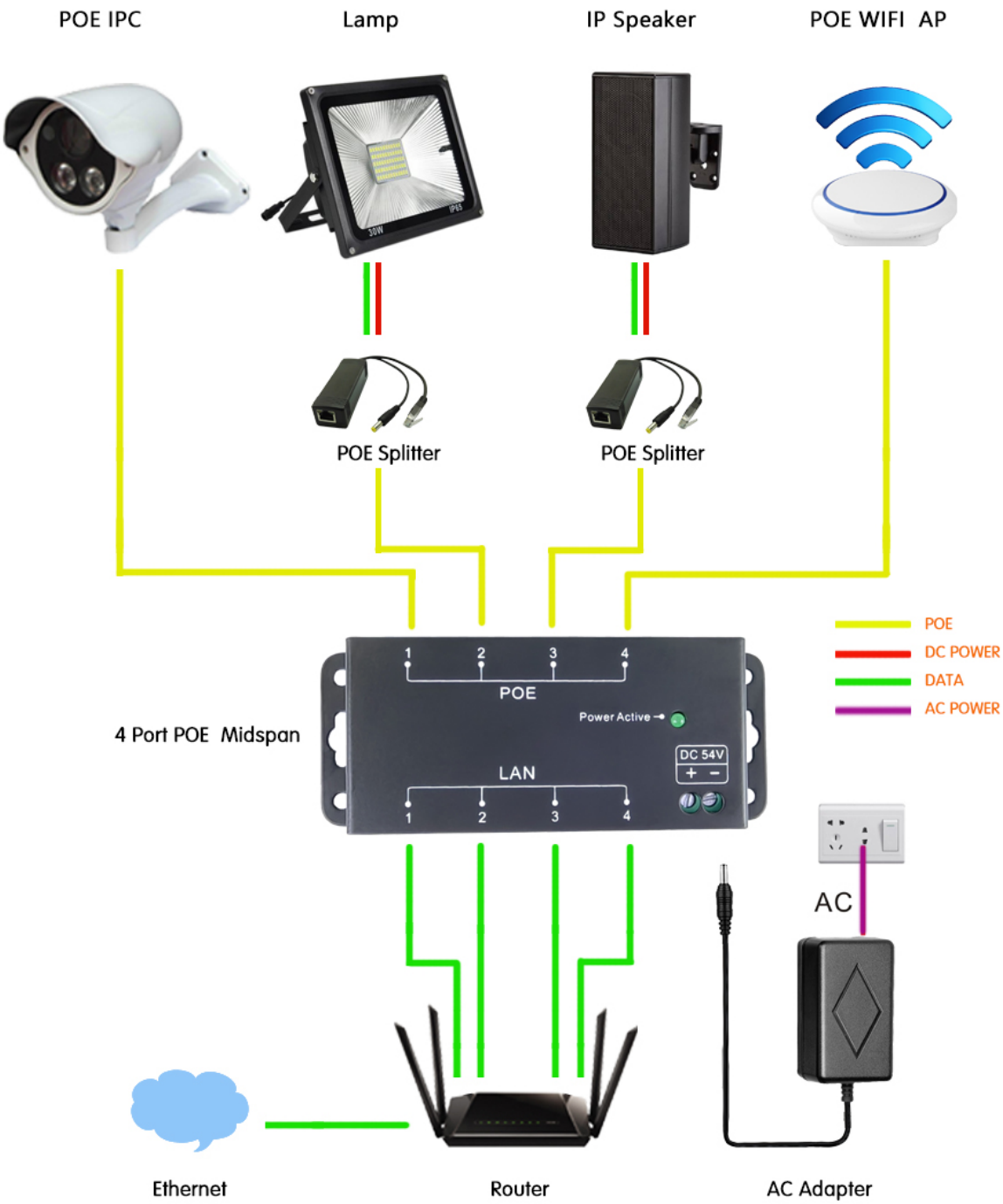
Dimensions



Interface Definition



Product Topology Diagram



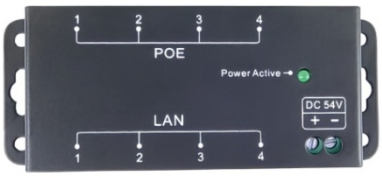
Application Scenarios

IP camera

Advertising display screen

Access Control System

Product Detail

Product Package

Package Size:130*50*40mm(L*W*H)
N.W:130g
G.W:150g
MPQ:1 PCS

Packaging list	
TSD-MP404	1 PCS
Instruction Manual	1 PCS
Accessories	/