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

SPECIFICATION FOR APPROVAL

CUSTOMER　　　:

PRODUCT NAME:　　　　1 Port Passive PoE Midspan

PRODUCT MODEL:　　　　　TSD-MP101

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:1 Port Passive PoE Midspan

MODEL：TSD-MP101

What Is PoE

PoE (Power over Ethernet) refers to the technology that can transmit data signals for some IP-based termi nals (such as IP phones, wireless LAN access point APs, IP cameras, etc.) without any changes to the ex isting 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 (P D). The PSE device is the device that powers the Ethernet client device and is also the manager of the e ntire PoE (Power-over-Ethernet) process. The PD device is the PSE load that receives the power supply, t hat is, the client device of the PoE system. Based on the IEEE 802.3af/at standard, the two establish info rmation 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 Ether net.

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-MP101 Midspan is a non-standard PoE power supply device that takes network data signals and 12V-56V DC power as input, and outputs a single-channel PoE signal with a maximum output power of 30W.

The TSD-MP101 Midspan can provide PoE power to devices such as wireless APs, IP phones, PoE cameras, and PoE speakers. By replacing traditional wiring methods with the TSD-MP101, it effectively reduces cabling costs and extends network coverage.

The MP101 product includes two models:

TSD-MP101: Fast Ethernet PoE Midspan, transmission rate: 10/100M;

TSD-MP101G: Gigabit PoE Midspan, transmission rate: 10/100/1000M.

Product Description

The interface configuration of TSD-MP101:

Input: RJ45 Port 1 (LAN): Input for data signals

5.5×2.1mm DC Jack: Input for 12V–56V DC power

Output: RJ45 Port 2 (PoE): Outputs 12V–56V PoE signal.

The overall dimensions are 76 × 28 × 21.4 mm. The dimensions of the mounting lug are 8.5 × 8.5 × 2.6 mm. Indicator light: Displays power status. DC socket specification: 5.5×2.1mm.Overall material: ABS eco-friendly plastic shell. Color: Matte black.

The TSD-MP101 takes one data signal and one DC power input, delivering a single-channel 12–56V PoE output. Max Output Power per Port: 30W.The power supply mode is power supply via the RJ45+ RJ78-pins. The transmission rate is 10/100M auto-negotiation.

The TSD-MP101 has obtained CE, FCC, RoHS and other certifications. Its EMC parameters meet the requirements of IEC 61000-4-2/3/4/5/6 standards. The TSD -MP101 does not support IEEE 802.3af/at PoE standards (voltage input/output is flexible). The internal circuit of the product has functions such as overheat protection, overcurrent protection, overvoltage protection, and short-circuit protection. It has hanging ears on both sides to support multiple installation methods.

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.

- Transmission Rate: 10/100M auto-negotiation

- Power supply pins: RJ45 + RJ78 -.

- Surge protection of 4KV.

- Conversion efficiency greater than 85%.

- Protection Features: over-heat protection, over-voltage protection, over-load protection, and short-circuit protection.

- Low-power transistors.

- High-precision electronic components from well-known brands, original and genuine.

- An environmentally friendly and high-temperature-resistant PCB board.

- DC Input: 5.5×2.1mm DC female jack\

- Enclosure: Matte black ABS eco-friendly plastic shell

Specifications

Product parameter table		
Product Name	1 Port Passive PoE Midspan	
Product Model	TSD-MP101	TSD-MP101G
PoE Standard	/	
Input Voltage	DC12-56V	
Output	PoE: 12-56V	
Conversion Efficiency	≧85%	
PoE Pin	PoE: RJ45+ RJ78-	
Conversion Mode	/	
Data Rate	10/100M	10/100/1000M
Transmission Distance	100 meters(Category 5e Cable (Cat5e))	
Surge Protection	4KV	
Circuit Protection	Over-heat protection over-voltage protection Over-load protection short-circuit protection.	

LED Indicator	Indicator Light: Displays power status (Operational: Green)
Interface	Input Port (RJ45 Jack) : Data IN Input Port (DC female socket) : DC 12-56V IN Output Port (RJ45 Jack) : PoE OUT
Function	/
Material	ABS Eco-Friendly Plastic Housing
Color	Matte Black
Accessories	/
EMC	IEC 61000-4-2/3/4/5/6
Temperature	-30～65℃ For Operating -40～85℃ For Storage
Humidity	RH95% MAX (Non-condensation)
Weight	N.W:22g
Dimension	76*28*21.4 mm
Package	Folding Carton

Product Applications

The TSD-MP101 Midspan delivers a maximum output power of 30W per port, featuring a compact and lightweight design for easy installation. Its flexibility makes it ideal for various PoE power supply scenarios, effectively simplifying cabling and reducing costs for users.
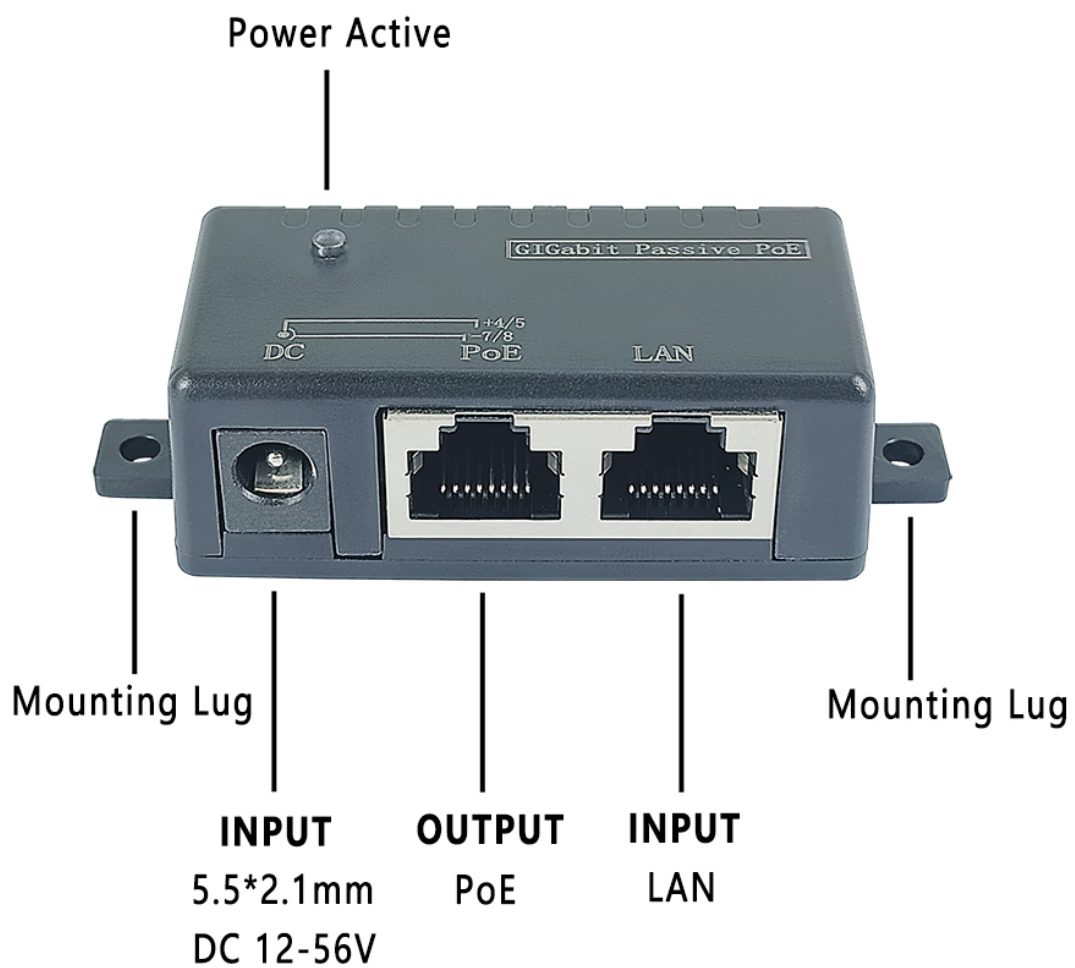
Widely adopted in industries such as education, manufacturing, and security surveillance, this product has earned consistent praise for its outstanding performance.
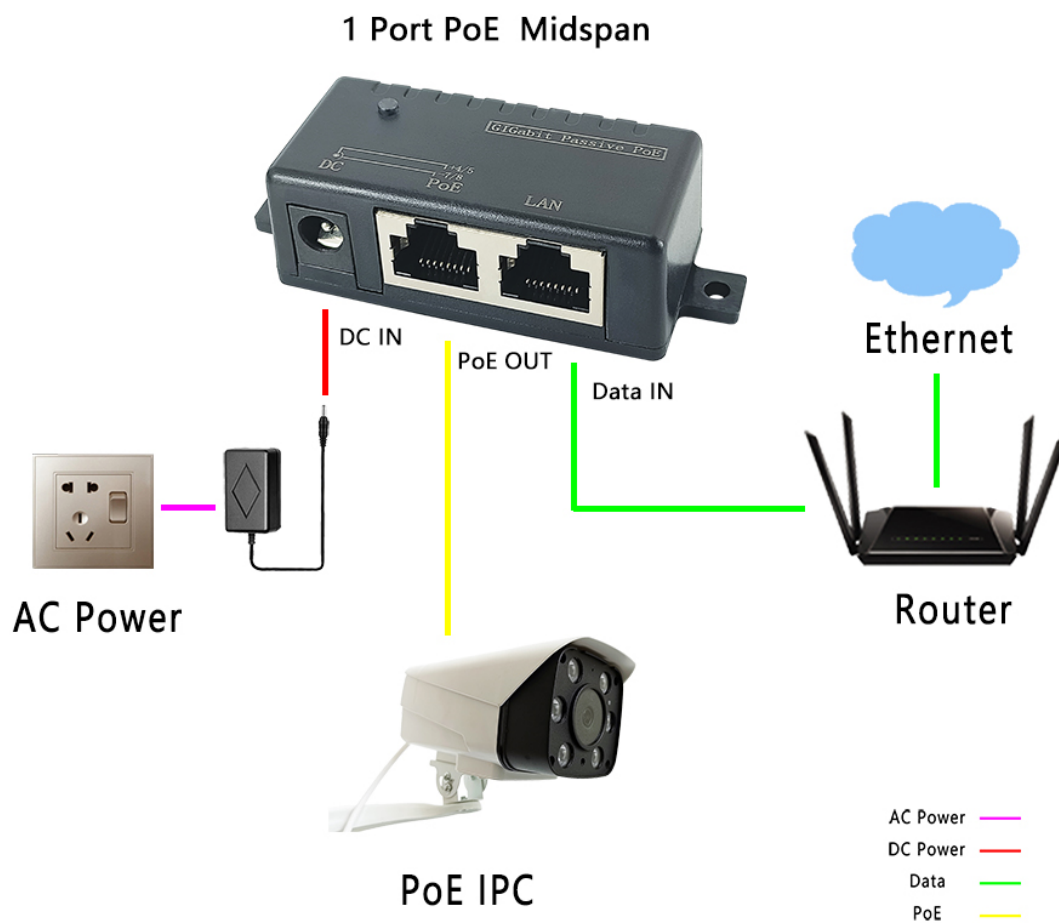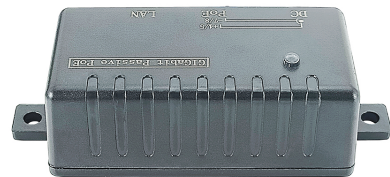
Dimensions

Interface Definition

Power Active

GIGabit Passive PoE

+4/5
-7/8
DC   PoE   LAN

Mounting Lug   Mounting Lug

INPUT   **OUTPUT**   **INPUT**

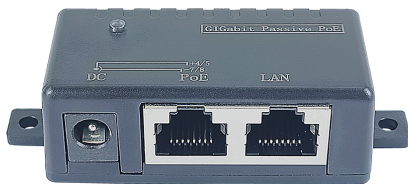5.5*2.1mm   PoE   LAN

DC 12-56V
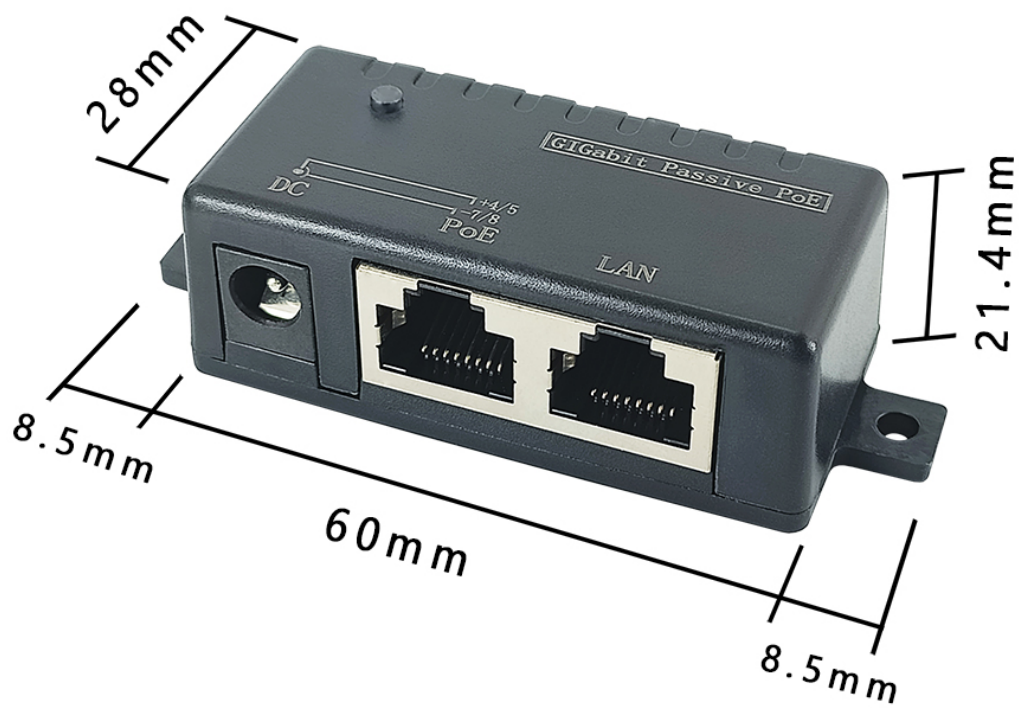
Product Topology Diagram

Application Scenarios

Digital Display

Network IP Camera

Smart Access Control System

Product Detail

Product Package

Package Size : 94*71*31 mm (L*W*H)
N.W: 22 g
G.W: 41 g
MPQ : 1 PCS

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