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

SPECIFICATION FOR APPROVAL

CUSTOMER :

PRODUCT NAME: 25W Gigabit Passive PoE Combiner

PRODUCT MODEL: TSD-C048G

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:25W Gigabit Passive POE Combiner

MODEL: TSD-CO48G

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 t he 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 th e entire PoE (Power-over-Ethernet) process. The PD device is the PSE load that receives the power suppl y, 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 P D 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 - CO48G is a gigabitpassive PoE combiner with an adaptive transmission rate of 10M/100M/1000M. It does not support the IEEE802.3af/at PoE standard protocols. It inputs direct current of 6-36V and data signals, and outputs a PoE signal of 48V 0.5A with a maximum output power of 25W.

The TSD - CO48G combiner integrates the functions of signal and power transmission. It can supply power to devices such as PoE IPCs, PoE wireless APs, and IP phones and transmit network data. It is mainly used in scenarios such as solar power supply systems and network infrastructure.

Product Description

The TSD-CO48G has two input ports and one output port. Input ports: RJ45 connector: for inputting data signals; DC female socket: for inputting 6 - 36V DC signals. Output port: RJ45 Jack: for outputtin g PoE power supply signals.

Size structure: 288 * 31 * 26 mm, with a cable length of 200 mm. Specificationsof DC female sock et: 5.5*2.1 mm. Overall material: high-temperature-resistant and environmentally friendly ABS plastic shell, color: matte black.

The TSD - CO48G has an input voltage of 6 - 36V and an output voltage of 48V 0.5A. There are two power supply modes to choose from: power supply through the RJ12+ RJ36- or RJ45+ RJ78- pin po sitions. The maximum output power is 25W, and it features adaptive transmission at a rate of 10M/100M/ 1000M.

The circuit of the TSD - CO48G is equipped with protection functions against lightning strikes, short - circuits, overloads, and high temperatures. The product has obtained certifications such as CE, FCC, an d RoHS. Its EMC parameters meet the requirements of the IEC 61000 - 4 - 2/3/4/5/6 standards and it is a best - seller in many countries and regions around the world.

Product Features

- Input voltage: DC 6V ~ 36V
- Output voltage: DC 48V 0.5A
- EMC complies with IEC 61000 - 4 - 2/3/4/5/6 standard requirements
- Certified by CE, FCC, RoHS

- Adaptive transmission rate of 10M/100M/1000M
- Power supply pins: RJ12+ RJ36 -/ RJ45+ RJ78 -
- 4KV surge protection
- 5.5*2.1 mm DC female socket
- High-temperature-resistant and environmentally friendly ABS plastic shell
- Made of original high-precision electronic components of international brands, with stable performance
- High-power, high-conductivity and low-impedance transistors with stable performance and low heat generation
- High-temperature-resistant PCB made of environmentally friendly materials, using lead-free and environmentally friendly processes
- Overheat protection, overvoltage protection, overload protection and short-circuit protection
- Conversion efficiency greater than 85%

Specifications

Product parameter table	
Product Name	25W gigabit passive PoE combiner
Product Model	TSD-CO48G
PoE Standard	/
Input Voltage	DC 6-36V
Output	PoE: DC 48V 0.5A
Conversion Efficiency	≧85%
PoE Pin	PoE: RJ12+ RJ36- / RJ45+ RJ78-
Conversion Mode	/
Data Rate	10M/100M/1000M Adaptive transmission speed
Transmission Distance	100 meters(Category 5e Cable (Cat5e))
Surge Protection	4KV
Circuit Protection	overheat protection, overcurrent protection overvoltage protection, short circuit protection
LED Indicator	/

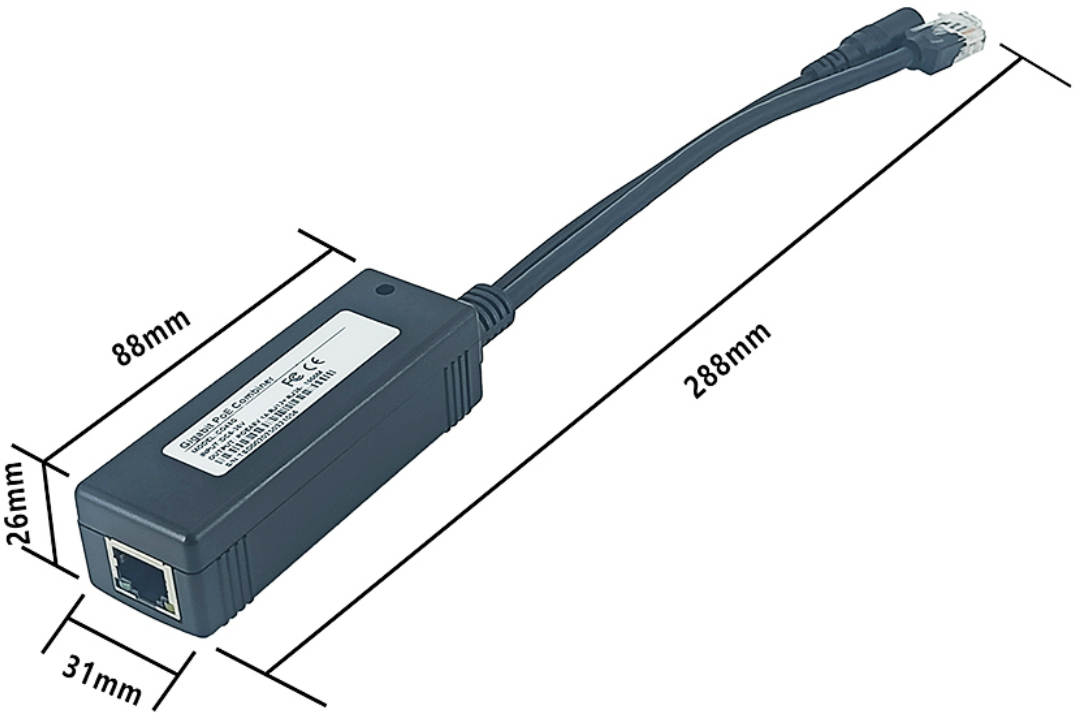
Interface	Input Port (DC female socket) : DC 6-36V IN Input Port (RJ45 connector) : Data IN Output Port (RJ45 Jack) : PoE OUT
Function	/
Material	High-temperature-resistant and environmentally friendly ABS plastic
Color	Matte black
Accessories	/
EMC	IEC 61000-4-2/3/4/5/6
Temperature	-20～60℃ For Operating -30～80℃ For Storage
Humidity	RH95% MAX (Non-condensation)
Weight	N.W: 45g
Dimension	285mm*28mm*23mm
Package	Transparent LDPE Packaging Bag

Product Applications

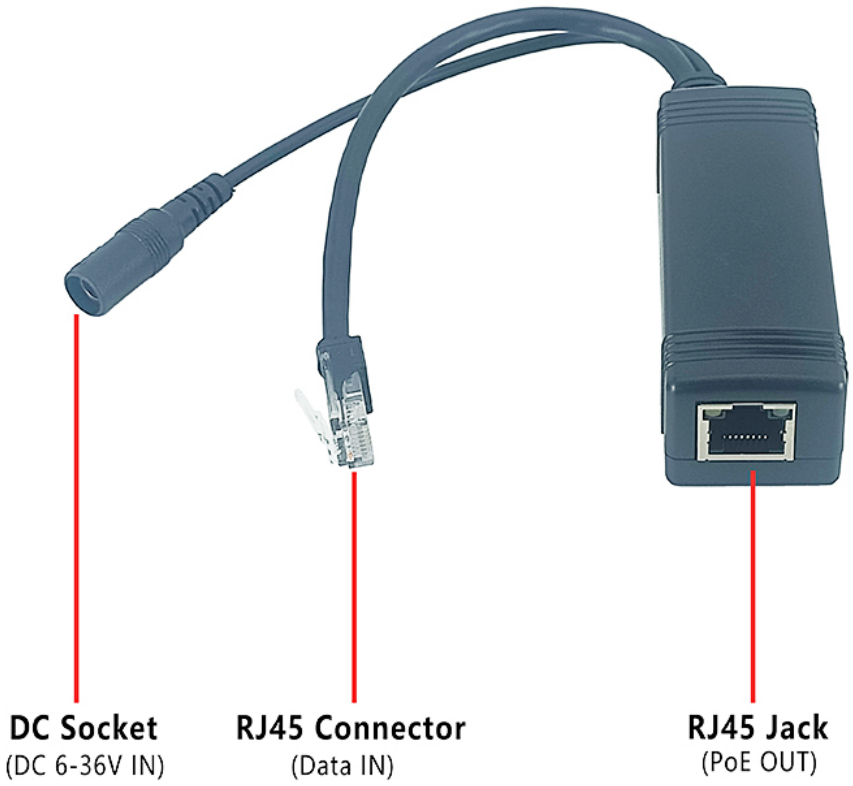
The TSD - CO48G has a maximum output power of 25W. It can support the operation of PoE terminal devices such as network cameras, wireless access points (APs), and IP phones. Its flexible deployment characteristics bring a great deal of convenience to both equipment manufacturers and end - users.

The TSD - CO48G does not support the IEEE802.3af/at standard protocols. It directly supplies power to terminal devices in a forced manner during operation. Users should note that the power requirements of terminal devices should match those of the TSD - CO48G. Otherwise, it may cause damage to the devices.

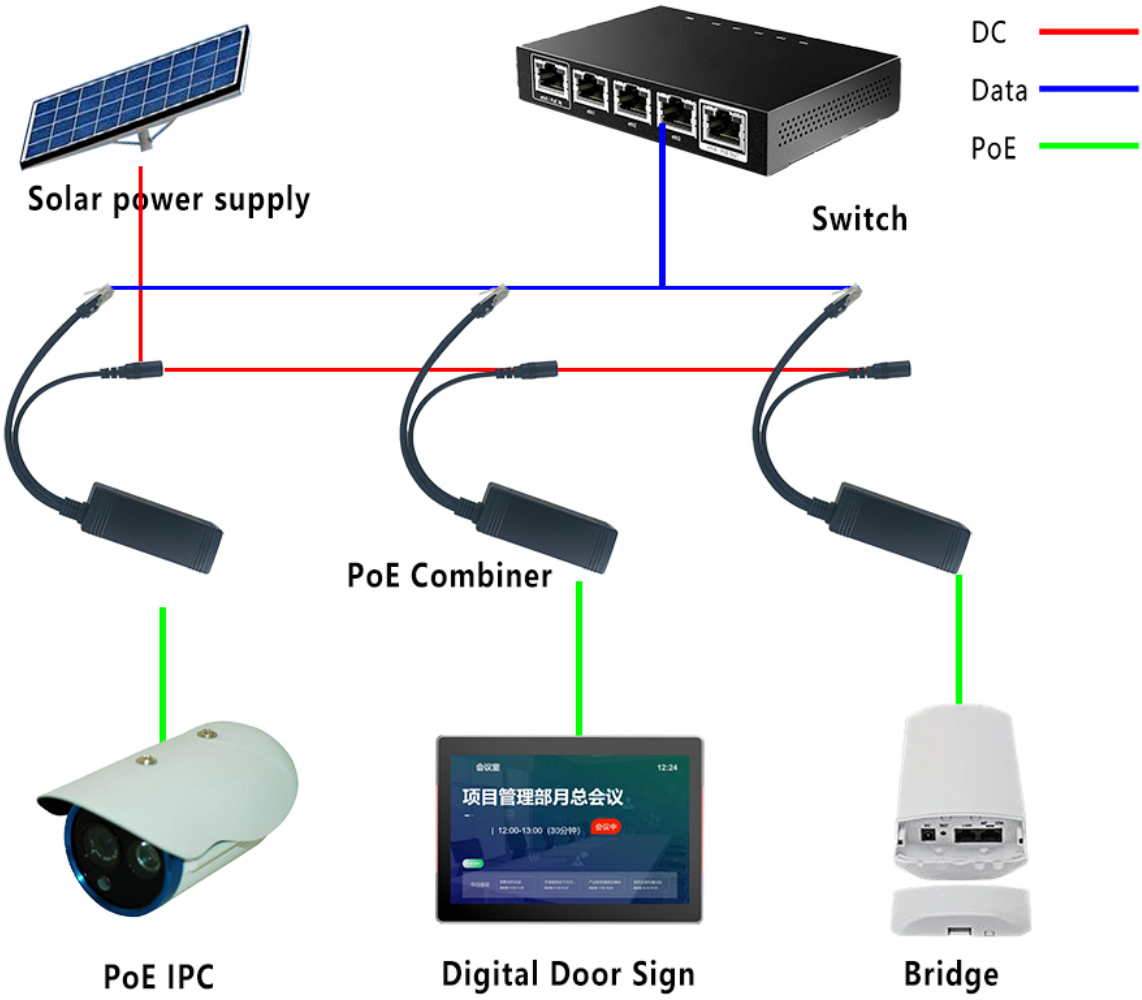
Dimensions



Interface Definition



Topology Diagram for Product Installation and Application



Application Scenarios

Wall-mounted AP

PoEIPC

Bridge

Product Detail

Product Package

Package Size: 250*73*2.5 mm (L*W*H)

MPQ: 1 PCS

N.W: 58 g

G.W: 61 g