



## SPECIFICATION FOR APPROVAL

CUSTOMER : \_\_\_\_\_

PRODUCT NAME : 60W Passive PoE Module

PRODUCT MODEL : TSD-V111C-B

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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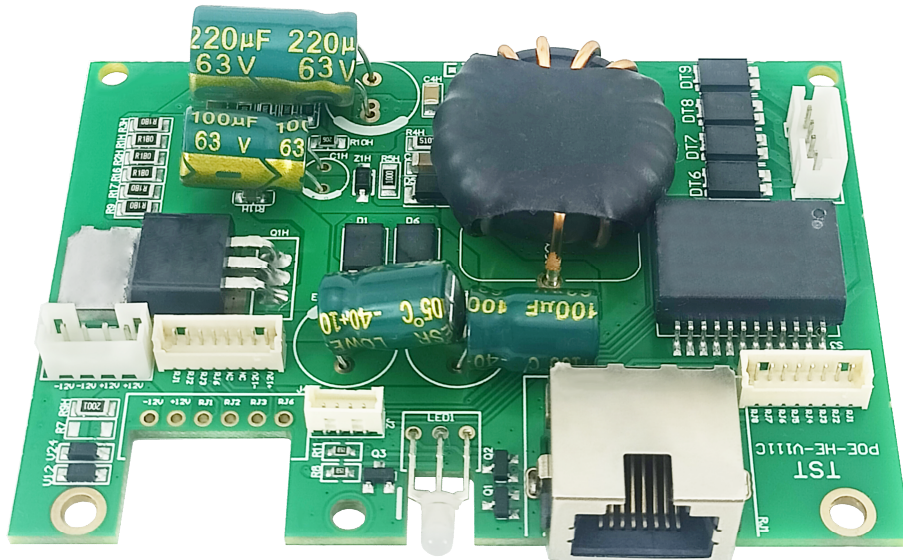
http: [www.tstpoe.com](http://www.tstpoe.com)

Add: Room 903, Building B-14C, First Industrial Zone, Baihua Community, Guangming Street, Guangming District, Shenzhen, China



## PRODUCT: 60W Passive PoE Module

### MODEL: TSD-V111C-B



## 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 10M BASE-T and 100M BASE-T. IEEE802.3af/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-V111C-B module is a high-power passive PoE module with a maximum output power of 60W. It can stably output three modes of direct current: 12V/5A, 24V/2.5A, and 36V/1.5A.

The TSD-V111C-B module is mainly used in high-power devices such as large advertising screens, high-fidelity speakers, and intelligent high-speed dome cameras. The module supports a wider range of voltage inputs to meet the diverse voltage input requirements of end users.



## Product Description

The TSD-V111C-B module has a total of seven input/output ports and supports two operating modes:

Model1: PoE Filtering Mode (PoE power signals pass through the module's network filter), PoE Input Port:

8-pin PH1.25mm terminal block, supporting power supply via RJ12+ RJ36-, RJ45+ RJ78-. The RJ45 Jack is fully compatible with RJ12+ RJ36-, RJ45+ RJ78- power supply. Output Ports: 4-pin PH1.25mm terminal block: Gigabit expansion port (RJ45, RJ78). 8-pin PH1.25mm terminal block: Outputs data signals and DC 12V power. 6-pin PH2.54mm solder holes: Outputs data signals and DC 12V power. 4-pin PH2.0mm terminal block: Outputs two sets of DC 12V power signals. Mode2: Pass-Through Mode (PoE power signals do not pass through the module's network filter), Input Port: 4-pin PH2.0mm terminal block for DC power input. Output Port: 4-pin PH2.0mm terminal block for DC 12V power output.

Dimensions and Structure: Overall size: 82 \* 58 \* 14mm. Screw hole diameters:  $\Phi=3.0\text{mm}$  \*3,  $\Phi=3.2\text{mm}$  \*2. PCB thickness: 1.6mm. Layout: Square structure. Maximum thickness: 14mm. Solder mask color: Glossy green oil. Module design: Double-sided two-layer PCB, with large components concentrated on one side to save space and facilitate installation.

The TSD-V111C-B module has a maximum output power of 60W and features overheat protection, overvoltage protection, overcurrent protection, and short-circuit protection. Transmission Rate: Adaptive transmission at 10/100/1000M/2.5G. Input Voltage: Supports wide-voltage DC 6-60V input. Default output voltage is DC 12V, with optional outputs of 24V/36V. Other voltages can be customized.

The TSD-V111C-B module has obtained authoritative certifications such as CE, FCC, and RoHS. Its EMC parameters comply with the IEC 61000-4-2/3/4/5/6 standards, and the product is widely sold in multiple countries and regions worldwide.

## Product Features

- RJ12+ RJ36-, RJ45+ RJ78- Fully compatible
- EMC complies with IEC 61000-4-2/3/4/5/6 standards
- Input: PoE wide voltage DC 6-60V





- Output: Voltage DC 12V MAX5A/24V MAX2.5A/36V MAX1.5A
- 10/100/1000M/2.5G adaptive transmission speed
- 4KV surge protection
- High temperature resistant flame retardant socket, reduce security risks
- Gigabit high-power network filters
- High frequency low resistance electrolytic capacitor, reduce circuit high frequency loss
- Environmental protection high temperature resistant PCB material
- Immersion Gold process, improve circuit reliability and conduction performance
- Short circuit protection, overload protection, overheating protection, overvoltage protection
- The sinking design of the RJ45 Jack reduces the height of the module, and the three-dimensional integrated design of the interface saves the installation space
- The conversion efficiency is more than 90%
- Big original high precision electronic components
- High conduction low impedance power devices
- Pure copper pin connector to ensure good contact
- Two operational modes can be selected

## Specifications

Product parameter table	
Product Name	60W Passive PoE module
Product Model	TSD-V111C-B
PoE Standard	/
Input Voltage	PoE: 6~60V
Output	Voltage DC 12V MAX5A/ DC 24V MAX2.5A/ DC 36V MAX1.5A (Other Voltage can be customized)
Conversion Efficiency	≥90%
PoE Pin	RJ12+ RJ36- , RJ45+ RJ78- Fully compatible
Conversion Mode	Non-isolated type
Data Rate	10/100/1000M / 2.5G Adaptive Transmission
Transmission Distance	100 meters(Category 5e Cable (Cat5e) )
Surge Protection	4KV



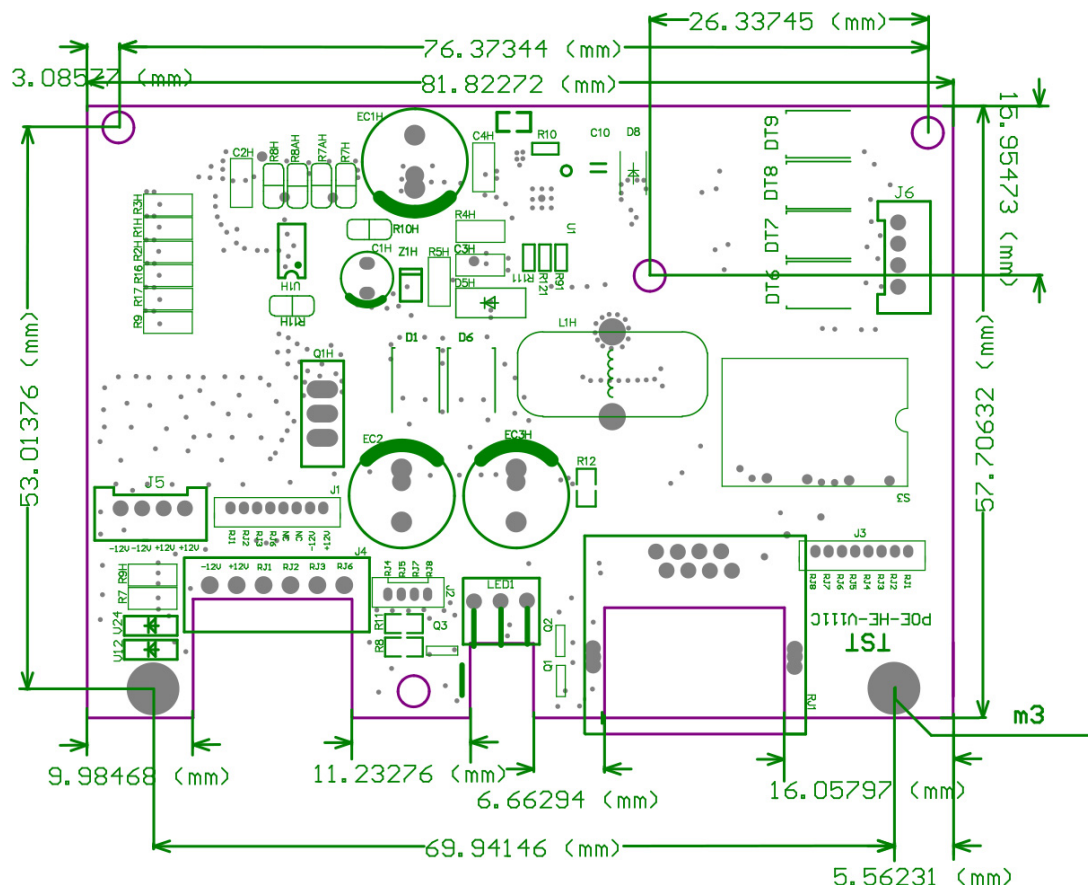
Circuit Protection	Short-circuit Protection Overcurrent Protection Overvoltage Protection Overheating Protection
LED Indicator	Green: 12V, red: 24V/36V
Interface	PoE Input Port1 (8Pin PH1.25mm terminal block) : PoE (RJ1~RJ8) PoE Input Port2 (RJ45 Jack) : PoE (RJ1~RJ8) PoE Input Port3 (4Pin PH2.0mm terminal block) : PoE IN Output Port (4Pin PH1.25mm terminal block) : Data OUT(RJ4,RJ5,RJ7,RJ8) Output Port (8Pin PH1.25mm terminal block) : Data + DC OUT Output Port (6Pin PH2.54mm soldering pads) : Data + DC OUT Output Port (4Pin PH2.0mm terminal block) : DC 12V OUT
Function	/
Material	FR-4
Color	Bright green oil
Accessories	/
EMC	IEC 61000-4-2/3/4/5/6
Temperature	-30~65°C For Operating -40~85°C For Storage
Humidity	RH95% MAX (Non-condensation)
Weight	N.W: 43g
Dimension	82*58*14mm
Package	Anti-static pearl cotton

## Product Applications

The TSD-V111C-B is a passive PoE module with a maximum output power of 60W. The module is mainly used in high-power devices such as large advertising screens, high-fidelity speakers, and intelligent high-speed dome cameras. The TSD-V111C-B has an input voltage range of 6~60V, making it highly versatile. Since its launch, the product has been widely praised in the market.

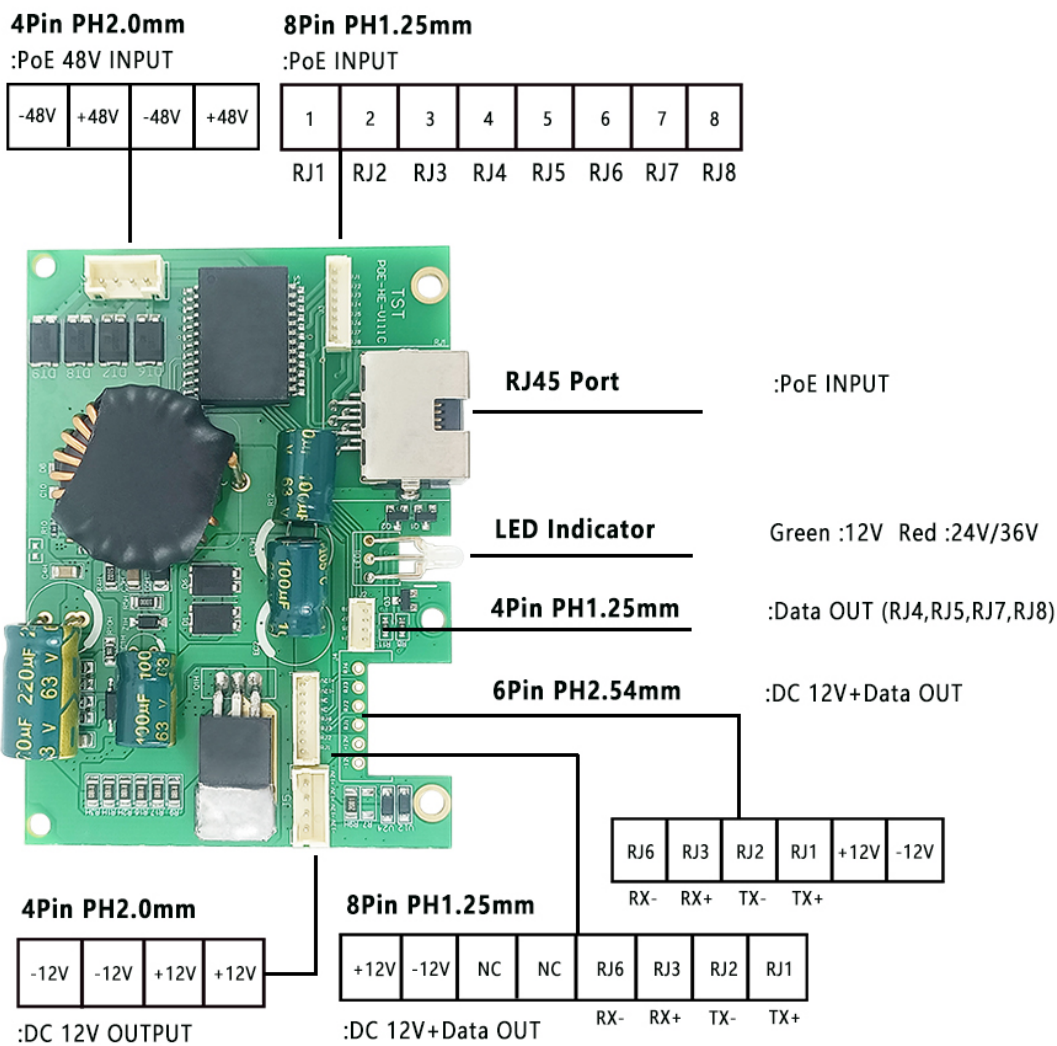
Precautions: The TSD-V111C-B module does not have isolation functionality. Users should avoid grounding two or more loads together during installation and use to ensure the normal operation of the equipment.

## Dimensions





## Interface Definition





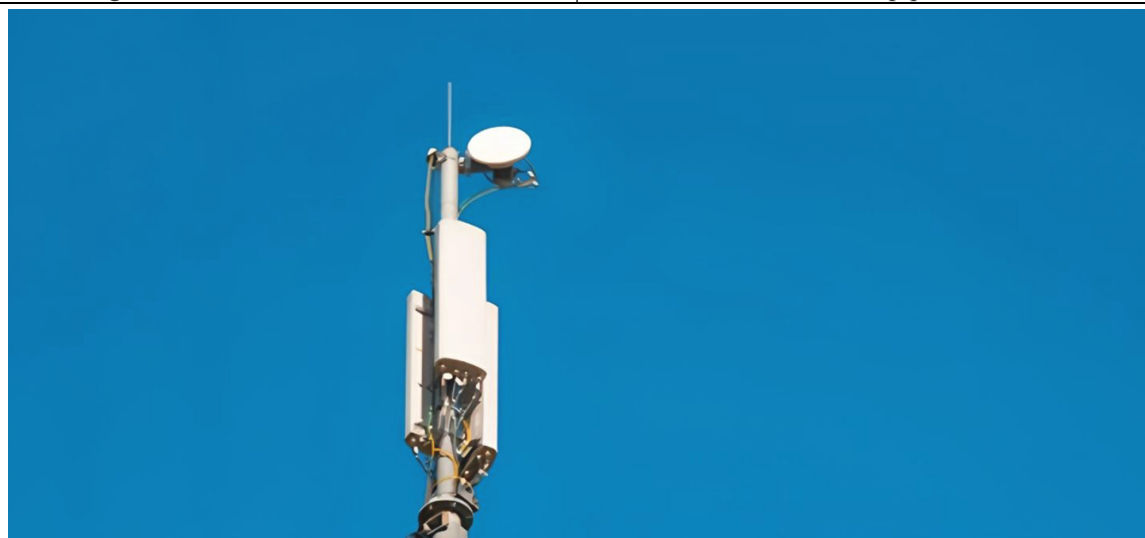
## Application Scenarios



High-definition surveillance camera



LED smart lamp pole screen

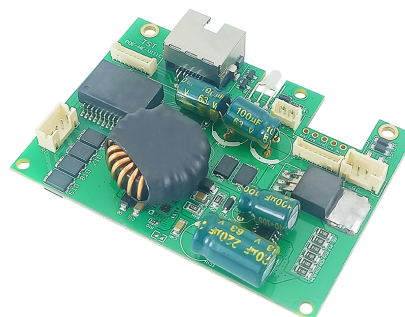
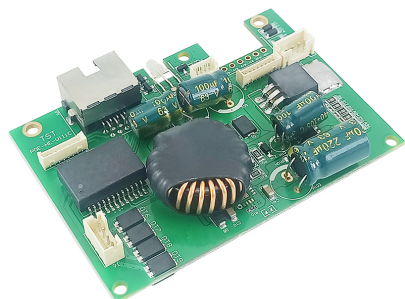
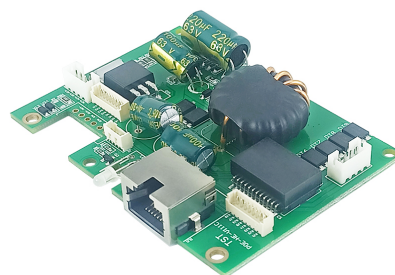
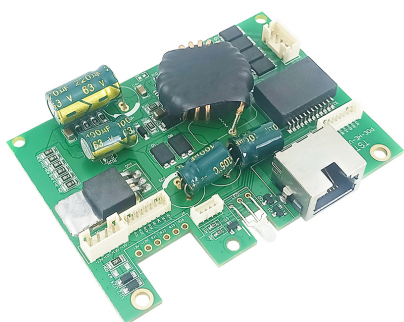
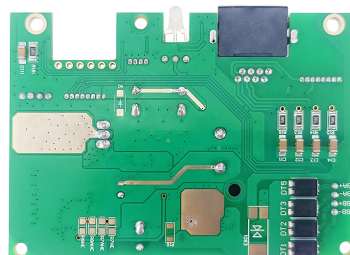
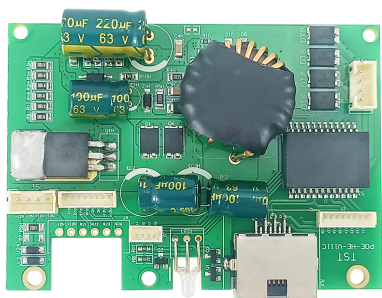


Outdoor bridge



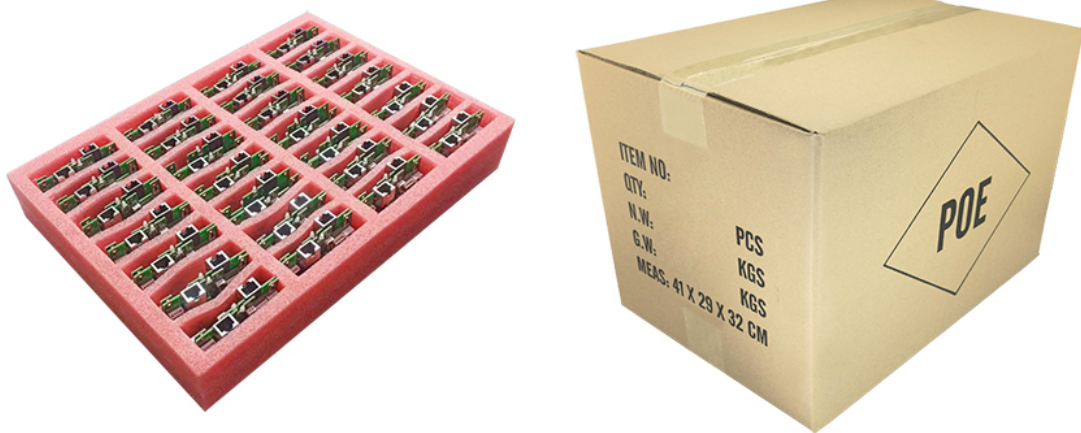


## Product Detail





## Product Package



Package Size: 41\*29\*32 cm ( L\*W\*H )

MPQ: 280 PCS

N.W: 12.0 kg

G.W: 12.8 kg