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

SPECIFICATION FOR APPROVAL

CUSTOMER : _____

PRODUCT NAME : 12W Isolated 100Mbps PoE PD Module

PRODUCT MODEL : TSD-PD3804

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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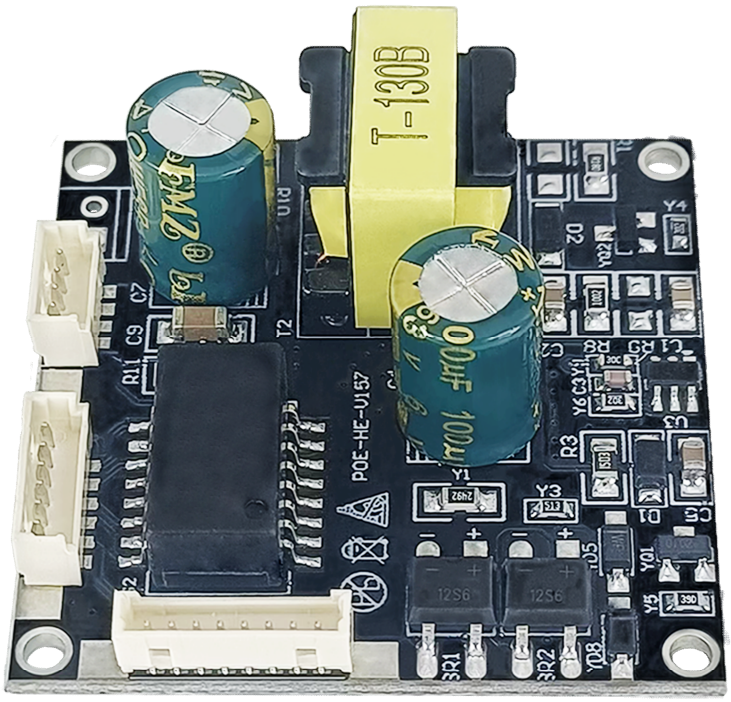

What Is PoE

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-PD3804 is a 12W active PoE module suitable for applications in security monitoring, audio broadcasting, and wireless coverage. It complies with the IEEE 802.3af PoE standard protocol. The maximum output power of this module is 12W, and it can continuously and stably output 12V 1A direct current.

The TSD-PD3804 module features a handshake protocol and can be integrated into ordinary IP devices. This enables the devices to safely receive PoE signals and operate stably, effectively reducing wiring costs and simplifying the wiring process.

Product Description

The PD3804 features two input terminal blocks and two output terminal blocks.4-Pin PH1.25mm fem-ale connector (Input): Supports RJ45+/RJ78- POE power supply while simultaneously outputting DC 12V.4-Pin PH1.25mm female connector (Input): Supports RJ12+/RJ36- power supply.8-Pin PH1.25mm female connector (Output): Provides DC 12V 1A and network signals.2-Pin PH2.0mm female connector (Standby Socket): Outputs DC 12V current.

Size structure: 38*38mm, Screw hole diameter: Φ=2.0mm*4, Hole center distance: 34*34mm, PCB thickness: 1.6mm. Double-layer board design, with the surface sprayed with glossy black oil. Overall layout: Square structure. Maximum thickness: 15mm. The module adopts a single-sided design. All components are concentrated on the front side, and the back side is a bare board without components, which is conducive to assembly and use.

The PD3804 complies with IEEE802.3AF POE standard protocol and has a maximum output power of 12 W. Transmission rate: 10/100Mbps adaptive transmission. Support wide voltage input DC 38-56V, default output voltage DC 12V, other voltages can be customized.

PD3804 adopts isolation design scheme, equipped with isolation transformer, is an isolated PD module. The circuit has anti-lightning, anti-short circuit, anti-overload, anti-high temperature and other protection functions, EMC parameters can meet IEC 61000-4-2/3/4/5/6 standard requirements. Products have obtained CE, FCC, RoHS and other certifications, selling well in more than 100 countries and regions around the world.

Product Features

- IEEE802.3af/at POE international standard protocol
- Input: wide POE voltage DC38-56V

- Output: voltage DC12V MAX1A
- 10/100Mbps adaptive transmission speed
- RJ12+ RJ36- / RJ45+ RJ78- Fully compatible
- Vertical interface, easy installation
- 4KV surge protection
- Overheat protection, overvoltage protection, overload protection, short circuit protection
- Conversion efficiency is over 85%
- EMC complies with IEC 61000-4-2/3/4/5/6 standards
- 100Mbps high frequency POE filter to ensure stable data transmission
- High frequency low resistance electrolytic capacitor, effectively reduce the circuit high frequency loss and heating
- International brand original high-precision electronic components, stable performance
- High power, high conduction and low impedance transistor, stable performance and low heat
- Environmentally friendly and high-temperature resistant PCB material, lead-free process that is environmentally friendly
- Adopts pure copper pin connector to avoid bad contact
- Beige high temperature flame retardant interface socket, safe and reliable quality
- EE13 frame isolation transformer, high electrical safety
- Equipped with 80mm cable for easy customer connection

Specifications

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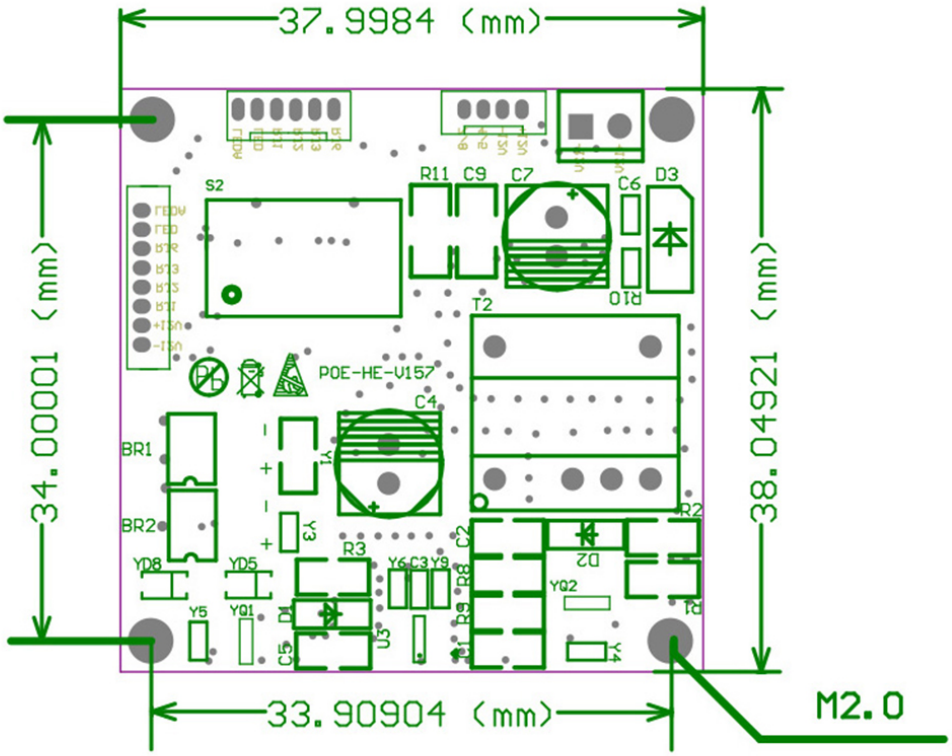
Product Applications

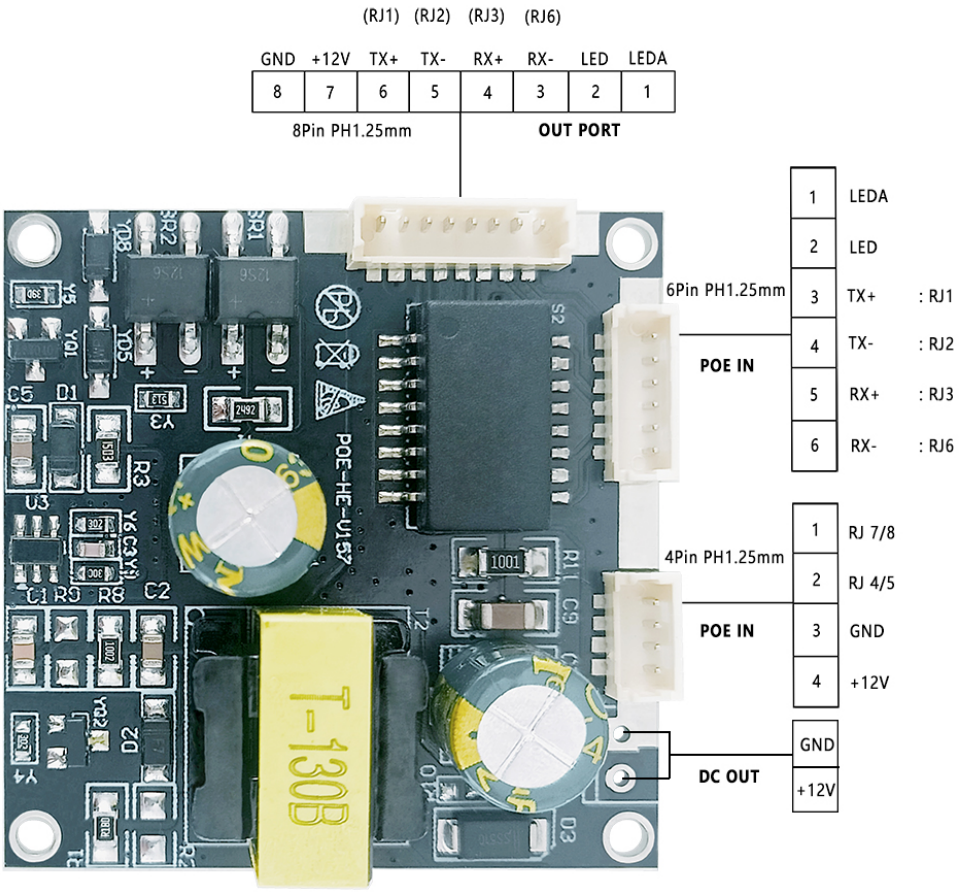
TSD-PD3804 is an Active PoE module, the maximum output power of 12W, the module is mainly used in security monitoring, network audio broadcast, wireless coverage and other equipment.

TSD-PD3804 performs well in the PoE equipment application field, and its stable work and excellent performance characteristics continue to obtain praise and praise from equipment manufacturers and end users.

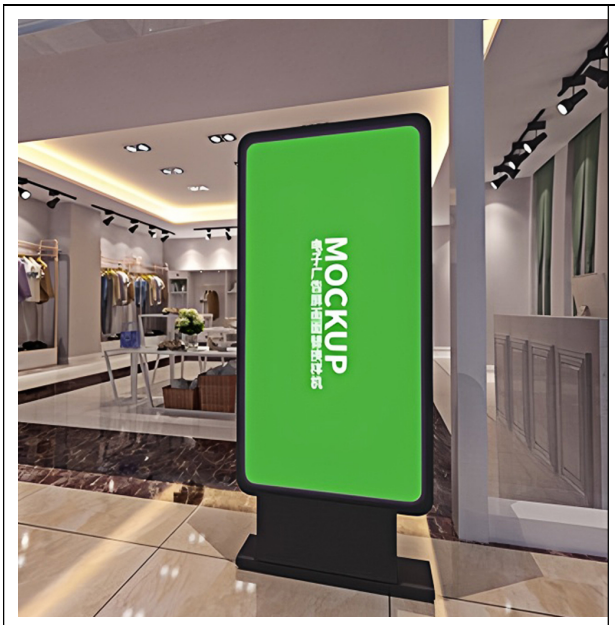
Dimensions



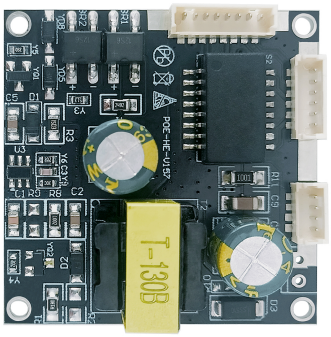
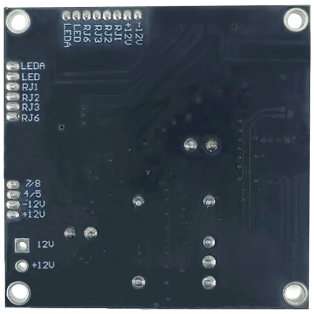
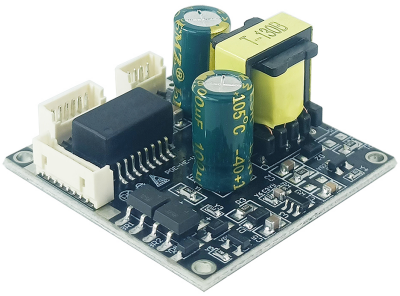
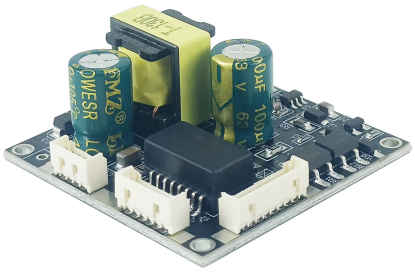
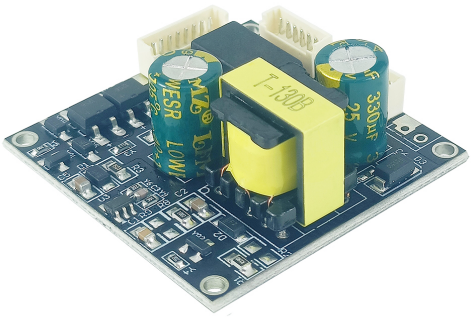
Interface Definition



Application Scenarios

	
Intelligent	Intelligent Access Control System
	
Security and protection monitoring	

Product Detail

Product Package