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

SPECIFICATION FOR APPROVAL

CUSTOMER : _____

PRODUCT NAME : 18W PoE PD Module for IPC Devices

PRODUCT MODEL : TSD-PD3862

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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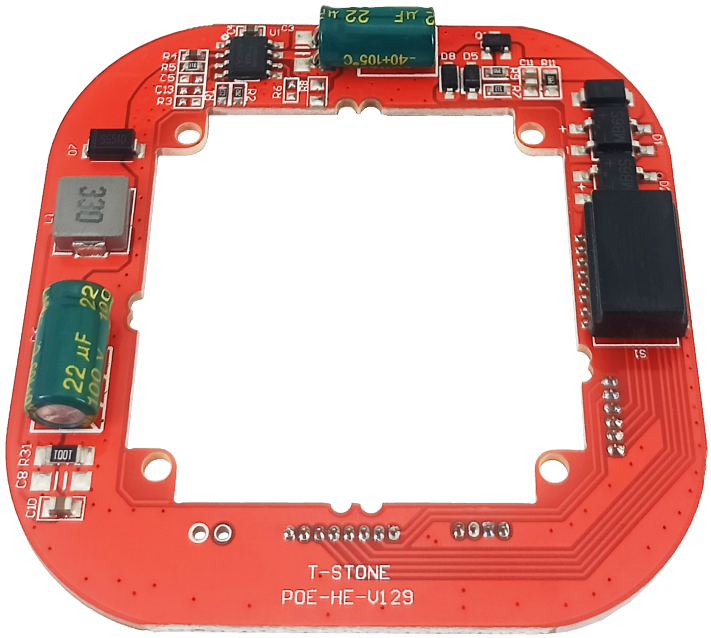
MODEL: TSD-PD3862



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

TSD-PD3862 module is an active PoE module designed for IPC equipment such as hemispherical cameras in the field of security monitoring. The maximum output power of the module is 18W, and it can stably output 12V 1.5A DC.

The TSD-PD3862 module has the handshake recognition function, which can receive the identification signal of the power supply equipment, complete the transmission of PoE signal, and provide continuous DC power for the terminal device and transmit data signals.

Product Description

The input and output ports of the TSD-PD3862 module are set on the back of the circuit board. The re are two input terminal blocks: a 4Pin PH1.25mm female socket, supporting RJ45+ and RJ78- PoE pow er supply, and outputting 12V direct current; a 6Pin PH1.25mm female socket, supporting RJ12+ and RJ3 6- power supply. There are two output terminal blocks: a 2Pin PH2.0mm female socket, outputting 12V DC, 1.5A; an 8Pin PH1.25mm female socket, outputting data signals and 12V DC,1.5A.

Size structure: 61.3*61.3*12.3mm, screw hole diameter: Φ=2.0mm*4, hole center distance: 34*34mm. PCB thickness: 1.6mm. Overall layout: irregular structure, hollow design, plate inner diameter and outer di ameter difference: 10.5mm, maximum thickness: 12.3mm. The surface is sprayed with bright red oil. Mod ule design: two-layer board double-sided design, the whole board less components, saving space, easy inst allation.

The maximum output power of the TSD-PD3862 module is 18W, and it has functions such as overh eat protection, overvoltage protection, over-current protection, and short circuit protection. Transmission rat e: 10/100M adaptive. It supports wide voltage input DC 38-56V, and the default output voltage is DC 12 V. Other voltages can be customized.

The TSD-PD3862 module supports the IEEE802.3af PoE international standard protocol and has obtai ned authoritative certifications such as CE, FCC, and RoHS. The EMC parameters meet the requirements of the IEC 61000-4-2/3/4/5/6 standard, and the product is sold well in more than 100 countries worldwide.

Product Features

- IEEE802.3af PoE international standard protocol
- RJ12+ / RJ36- / RJ45+ / RJ78- Fully compatible
- EMC complies with IEC 61000-4-2/3/4/5/6 standards

●Handshake recognition function

●Input: PoE wide voltage DC 38-56V

●Output: Voltage 12V DC MAX1.5A

●10/100Mbps adaptive transmission speed

●4KV surge protection to ensure equipment safety

●High temperature resistant flame retardant socket, reduce security risks

●100 megabit high power network filter

●High frequency low resistance electrolytic capacitor, reduce circuit high frequency loss

●Environmental protection lead-free process, environmental protection high temperature resistant PCB material

●Short circuit protection, overload protection, overheating protection, overvoltage protection

●Vertical interface, hollow design, flexible installation

●The conversion efficiency is more than 90%

●Big original high precision electronic components

●High power transistor, high conduction and low impedance

●Pure copper pin connector to ensure good contact

●Equipped with 80mm connecting line for easy connection

Specifications

Product parameter table	
Product Name	18W PoE PD module for IPC devices
Product Model	TSD-PD3862
PoE Standard	IEEE802.3af
Input Voltage	PoE: DC 38-56V
Output	voltage DC 12V MAX 1.5A (Other Voltage can be customized)
Conversion Efficiency	≧90%
PoE Pin	RJ12+ / RJ36- / RJ45+ / RJ78- Fully compatible
Conversion Mode	Non-isolated
Data Rate	10/100Mbps Adaptive Transmission
Transmission Distance	100 meters(Category 5e Cable (Cat5e))

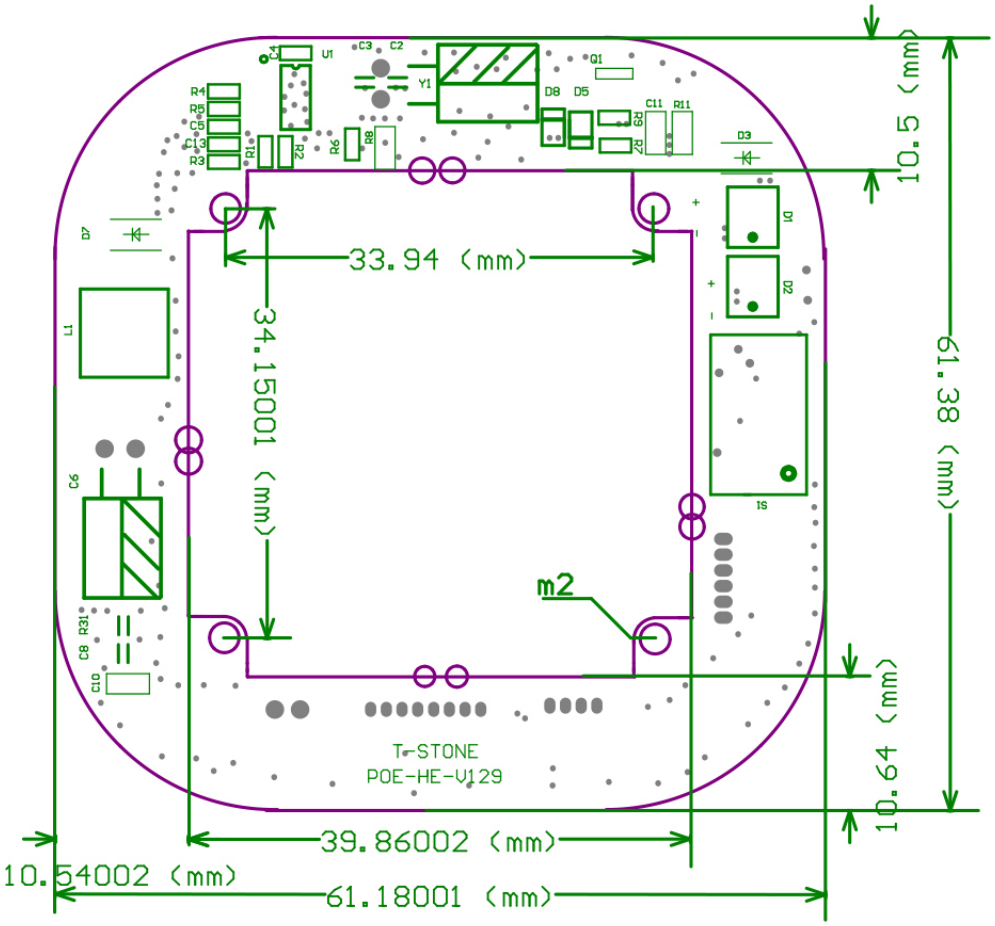
Surge Protection	4KV
Circuit Protection	Short-circuit Protection Over-current Protection Overvoltage Protection Overheating Protection
LED Indicator	/
Interface	PoE Input Port (4Pin PH1.25mm terminal block) : RJ45+ RJ78- PoE Input Port (6Pin PH1.25mm terminal block) : RJ12+ RJ36- Output Port (8Pin PH1.25mm terminal block) : Data +DC Output Port (2Pin PH2.0mm terminal block) : DC 12V OUT
Function	/
Material	FR-4
Color	Glossy red oil
Accessories	80mm Connecting Line
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: 10g
Dimension	61.3mm*61.3mm*12.3mm
Package	Anti-static pearl cotton

Product Applications

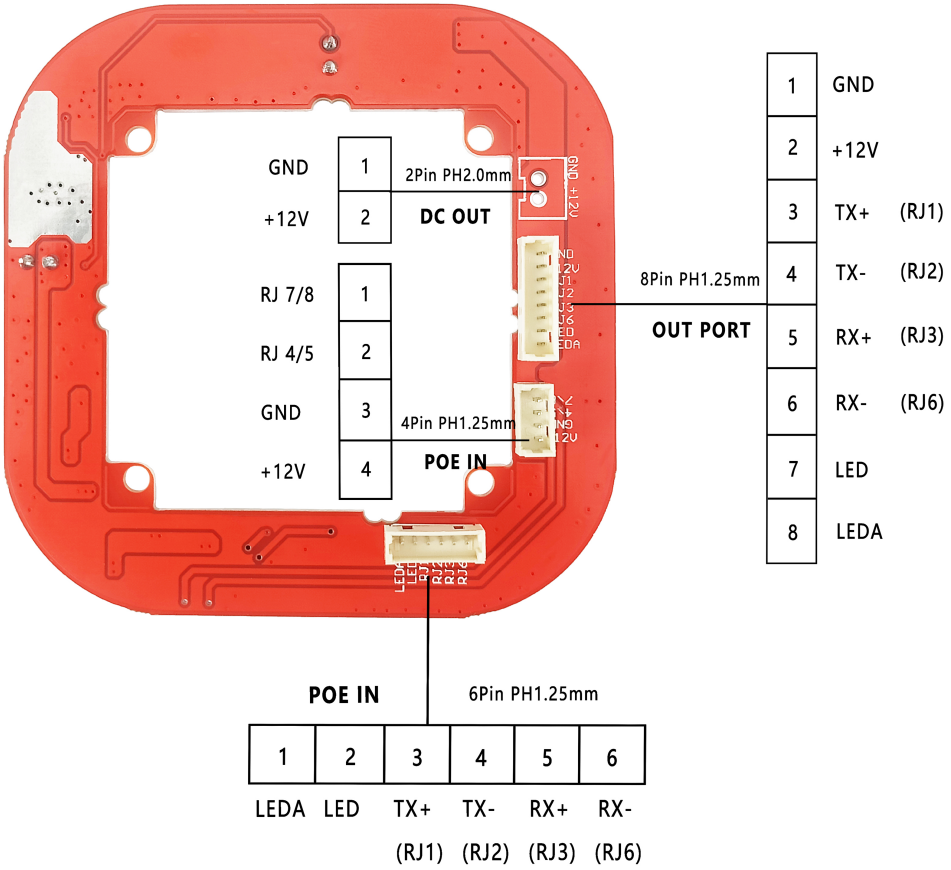
TSD-PD3862 is an active PoE module with a maximum output power of 18W. The module is mainly used in IPC equipment such as large hemisphere in the field of security monitoring. The module is designed with hollow-out, compatible with the user motherboard, easy to install, and can be applied in terminal equipment in many fields. TSD-PD3862 has been well received since its launch.

Users should pay attention when using: the TSD-PD3862 module does not have the isolation function, and the device should avoid common ground when installing and working, otherwise it will affect the no rmal operation of the device.

Dimensions


10.5 (mm)
33.94 (mm)
34.15001 (mm)
61.38 (mm)
m2
T-STONE
POE-HE-V129
10.64 (mm)
39.86002 (mm)
10.54002 (mm)
61.18001 (mm)

Interface Definition



Application Scenarios

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td>IP audio system</td><td>Campus IP phone</td></tr>
<tr><td colspan="2">  </td></tr>
<tr><td colspan="2">Hemispherical surveillance camera</td></tr>
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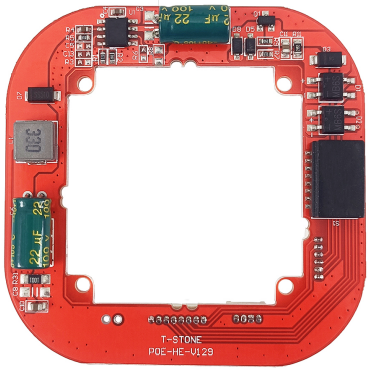
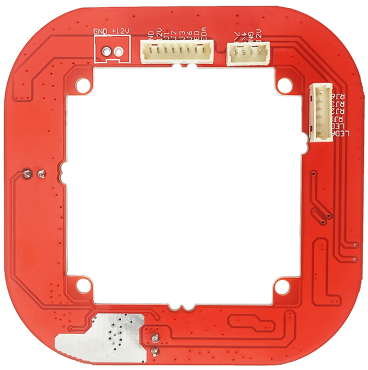
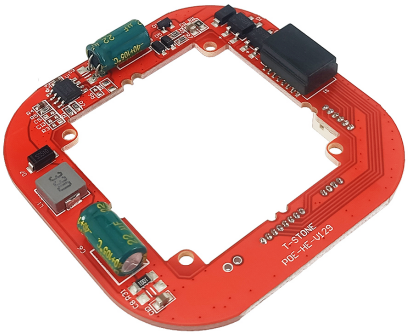
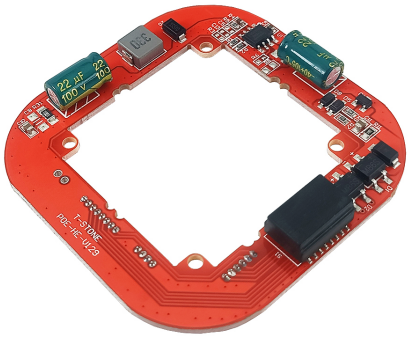
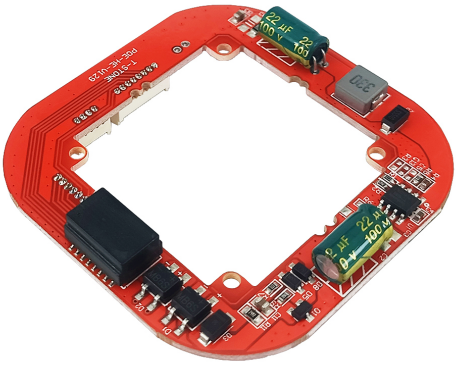
Product Detail

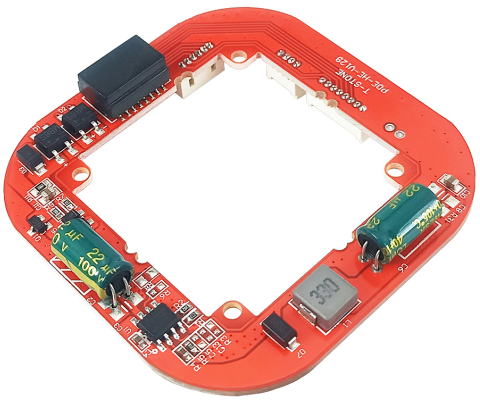












Product Package

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

MPQ: 280 PCS

N.W: 2.8 kg

G.W: 3.75 kg