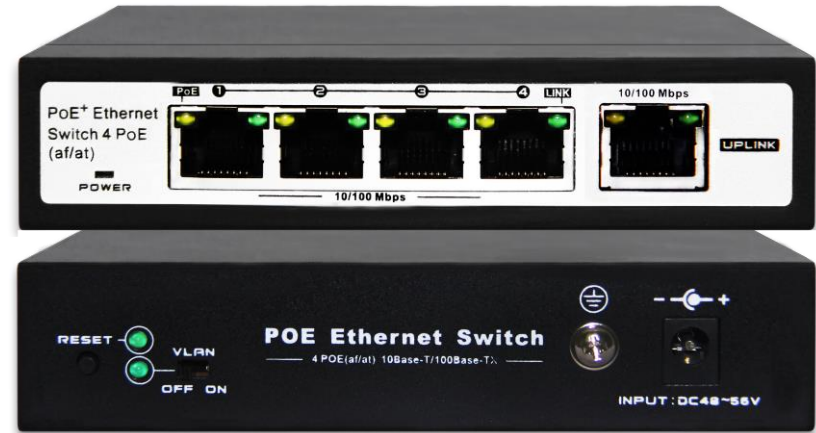


## Model: ET-1004EP-E

### Features

#### 4-Port 10/100Mbps IEEE 802.3af/at PoE Switch (End-Span PSE)

- Comply with IEEE802.3, IEEE802.3u, IEEE802.3af/at standards
- Support IEEE802.3x full-duplex flow control; support Auto MDI/MDIX
- 4-Port support 48V-56VDC power to PoE powered devices
- Provide 15.4W or 30W power to powered devices
- Extra 1-Port 10/100Mbps UPLINK RJ-45
- 60-watts or 120-watts PoE budget
- PoE data & power transmission distance up to 100meters
- Port based VLAN for Enhanced Security
- Transmission distance up to 250meters while VLAN indicator turns on
- Backplane Bandwidth: 1.0Gbps
- Excellent anti-thunder, anti-static and anti-interference ability
- Surge Protection: 2KV
- Restart function helps master IC reset wholly.
- External 53VDC/1.25 power adapter included
- Easy and convenient to use, plug & play, no need to configure
- Galvanized housing for stable and durable working life



### Overview

The ET-1004EP-E provides 4-port 10/100Mbps IEEE 802.3af/at Power over Ethernet with a total of 60 or 120 watts of PoE budget, which is an ideal solution to fulfill the demand of sufficient PoE power for network applications. It is able to drive 4 IEEE 802.3af/at compliant powered devices.

The ET-1004EP-E is an ideal solution for securing IP surveillance infrastructure. It provides both 802.3af/at PoE functions along with 4 x 10/100Base-TX ports featuring 15.4-watt 802.3af/30.8-watt 802.3at PoE in RJ-45 interfaces and extra 1 x 10/100Mbps UPLINK RJ-45 port to keep a cascade connection with another switch or NVR. For instance, one FS-FS1004EP-E can be combined with one 4-Channel NVR and four PoE IP cameras as a kit for the administrators to centrally and efficiently manage the surveillance system in the local LAN and the remote site via Internet.

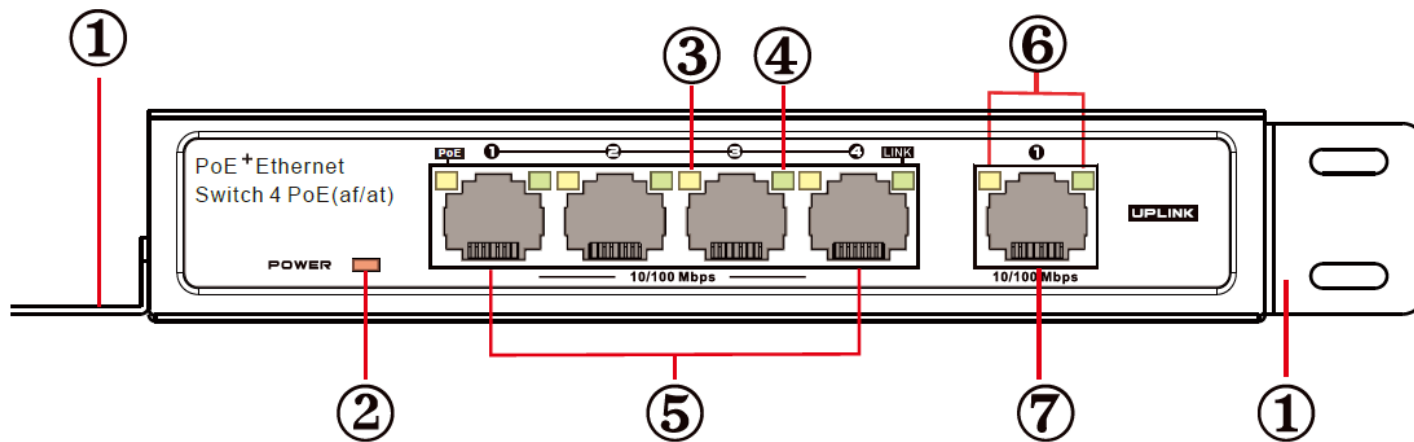
The ET-1004EP-E RJ-45 interfaces support 10/100Mbps Auto-Negotiation at downlink port from 1 to 4 and uplink port from 1 to 2 for optimal speed detection through RJ-45 Category 6, 5e or 5 cables. It also supports standard Auto-MDI/MDI-X that can detect the type of connection to any Ethernet device without requiring special straight or crossover cables.

The ET-1004EP-E support port-based VLAN function, which effectively prevent the whole system from internet broadcast storm to make the data transfer much safer. When the VLAN mode is enabled, the data cannot be forwarded among DOWNLINK RJ-45 ports, but DOWNLINK ports and UPLINK RJ-45 port can communicate with each other. The bandwidth of DOWNLINK RJ-45 port is forced to 10Mbps mode to adapt to the long distance transmission of max 250meters. The bandwidth of UPLINK RJ-45 port is still 100Mbps.

With data and power over Ethernet from one unit, the ET-1004EP-E reduces cabling requirements and eliminates the need for dedicated electrical outlets on the wall, ceiling or any unreachable place. A wire that carries both data and power can lower the installation costs, simplify the installation effort and eliminate the need for electricians or extension cords. Providing 4 PoE interfaces, the ET-1004EP-E is ideal for small businesses and workgroups requiring deploying the PoE for the wireless access points, IP-based surveillance IP phones in any places easily, efficiently and cost-effectively.

## Front & Rear Panel

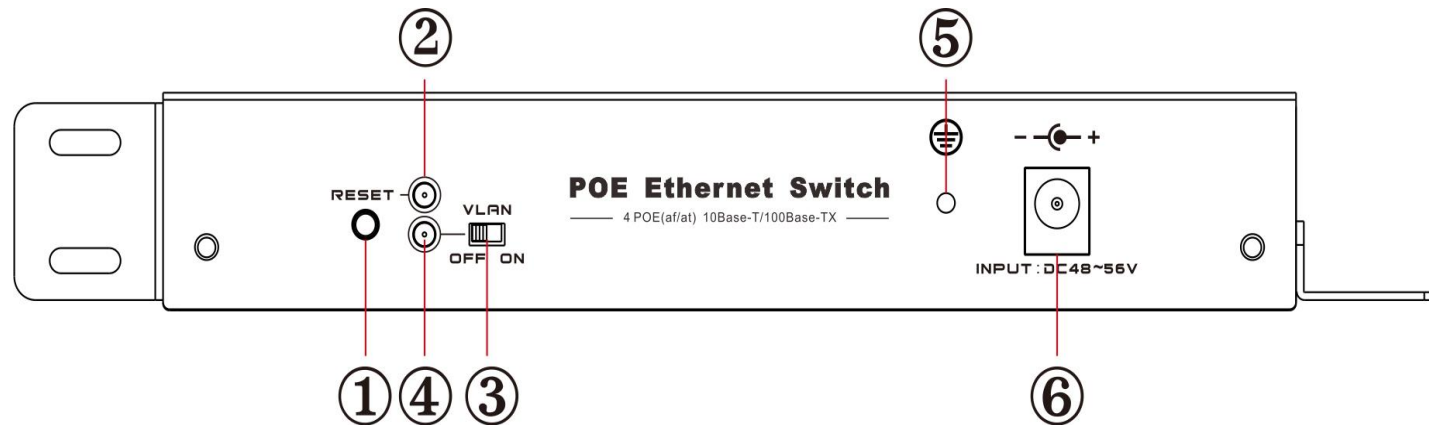
Front Panel



① Rack-mounting ears: Cabinets for product installation or Wall installation

- ② Power Indicator: **Red** Light on: with power Light off : no power
- ③ PoE Indicator: **Yellow** Light on when device is powered Light off: when device is not detected or not powered
- ④ Link/ Act Indicator: **Green** LED on: link up off: link down blinks: data transfer
- ⑤ Fast Ethernet Downlink Port: **Green** LED on: link up, off: link down, blinks: data transfer **Yellow** Light on when device is powered Light off: when device is not detected or not powered
- ⑥ Uplink Indicator: **Green** LED on: link up, off: link down, blinks: data transfer **Yellow** LED on: link speed is 100M, off: link speed is 10M
- ⑦ Fast Ethernet Uplink Port: **Green** LED on: link up, off: link down, blinks: data transfer **Yellow** LED on: link speed is 100M, off: link speed is 10M

## Rear Panel



- ① **Reset Button:** Press the reset button to turn on indicator and the device restarts.
- ② Reset Button Indicator: Green
- ③ **VLAN Button:** Turn on VLAUN button: indicator on and VLAN function starts Turn off VLAN button: indicator off and VLAN function stops
- ④ VLAN Indicator: Green
- ⑤ Ground Connection
- ⑥ Input: DC 48~56V

## VLAN Introduction

At present, applications of Ethernet switch is very wide. To satisfy the needs of various customers, it is urgent for network services to solve the problems of broadcast domains, bandwidth and security, so a new kind of technology of VLAN emerged.

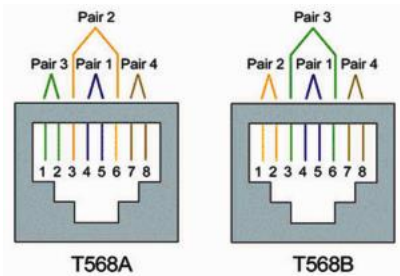
Each DOWNLINK RJ-45 port and UPLINK RJ-45 port form a separate workstations respectively. In the same VLAN workstation, regardless of which switch they are actually connected to, the communication between them is as if they were on a separate switch. Broadcasts in the same VLAN can only be heard by members of the VLAN, but not in other VLANs, which can control the generation of unwanted broadcast storms. At the same time, if there is no routing, different VLANs cannot communicate with each other, which increases the security of different departments in the enterprise network.

When the VLAN mode is enabled, the data cannot be forwarded among DOWNLINK RJ-45 ports, but DOWNLINK ports and UPLINK RJ-45 port can communicate with each other. The bandwidth of DOWNLINK RJ-45 port is forced to 10Mbps mode to adapt to the long distance transmission of max 250meters. The bandwidth of UPLINK RJ-45 port is 100Mbps, which keeps a cascade connection with another switch or NVR.

**Note:**

After you turn on VLAN button, please press reset button or reboot power the device, then VLAN mode is enabled.

## RJ 45 Define



	1	2	3	4	5	6	7	8
T568A	White Green	Green	White Orange	Blue	White Blue	Orange	White Brown	Brown
T568B	White Orange	Orange	White Green	Blue	White Blue	Green	White Brown	Brown

## How to make a network cable

To create a network cable, you will first need the equipment listed below.

1. Cat5e, Cat6, or Cat7 cable
2. RJ-45 connectors
3. Crimping tool
4. Wire stripper or Knife

The wire sequence of RJ45 connector must comply with international standard of EIA/TIA 568A or EIA/TIA 568B.

- 1) We recommend stripping at least a half of an inch off of the cable to expose the inner wires.
- 2) Separate the wires within the cable after the network cable jacket has been removed so that they can be put into the RJ-45 connector.
- 3) The **CAT5 twisted-pair cable** consist of four twisted wires, each color coded; 8 wires must be correctly lined as the standards of EIA/TIA 568A or EIA/TIA 568B.
- 4) Cut thread residue and leave 1.5cm wire exposed outside the insulating layer and ensure 8 wires are straighten and neat.
- 5) Place the cable into the RJ-45 connector and then use the **crimping tool** to attach the connector.
- 6) Repeat above steps for the other end of the cable; the wire sequence of both ends of the cable is suggested to be identical.
- 7) Make sure to test the cables before installing them once both ends of the cable have been completed.

### Note:

All RJ-45 Ports of this device support Auto MDI/MDIX, so the different wire sequence of both ends of the cable is allowed.


## Quick Setup Guide


### Package Contents

- |                      |                                   |
|----------------------|-----------------------------------|
| 1) FS-S1004EP-E: 1pc | 2) 53VDC/12.5A Power adapter: 1pc |
| 3) Mounting-ears     | 4) Manual: 1pc                    |

Step1: Begin with all input/output devices turned off with power cables removed.

Step2: Connect RJ-45 port of PoE cameras with  of Downlink port of PoE switches in standard Cat 5e/6 cables.

Step3: Connect  Uplink port of PoE switches with RJ-45 port of NVR or compute or other devices in standard Cat 5e/6 cables.

Step 4: Connect 53VDC/1.25A power adaptor into  PoE switches.

Step 5: Make sure above connection is properly finished, then turn on power.

## Technical Specifications

Model		ET-1004EP-E
Product Name		4-Port 10/100Mbps IEEE 802.3af/at PoE Switch (End-Span PSE)
Power Supply	Power Supply Mode	Power Adaptor
	Voltage Range	DC48~56V
	Power Consumption	The device <5W POE power supply <60W or 120W
Network Port Parameter	Network Port	1~4 Ethernet Port: 10/100Mbps 1 Uplink Port: 10/100Mbps
	Transmission Distance	1~4 Ethernet Port: 100m Mandatory 10 Mbps reach up to 250m Uplink port: 100m
	Transmission Medium	1~4 Ethernet Port: Cat5e/6 standard cable Uplink Port: Cat5e/6 standard cable
	POE Standards	IEEE802.3af/at
	PoE Power Supply Mode	End-span method
	PoE Power Supply Wattage	Each port ≤30W Whole device <60W or 120W
Network Switch Specification	Network Standards	IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX/FX, IEEE802.3az
	Swap Mode	Store-and- forward
	Data-Caching Mechanism	448K
	MAC Address List	1K
	Backplane Bandwidth	0.74Mbps
Indicator/Button	Power Indicator	Red LED on: power on
	Fast Ethernet Uplink Port	Green LED on: link up, off: link down, blinks: data transfer Yellow LED on: link speed is 100M, off: link speed is 10M
	PoE Indicator	4 PoE indicators (Yellow)
	PoE Network Port Indicator	1~4 port indicators blink while data transfer
	Reset Button	Press the reset button to turn on indicator (green) and the device restarts.
	VLAN Button	Turn on VLAUN button: indicator on and VLAN function restarts Turn off VLAN button: indicator off and VLAN function stops
Protection Level	Surge Protection	2KV(common mode),10/700us IEC61000-4-5 500V(differential mode),10/700us IEC610000-4-5
	Electrostatic Protection	Contact Discharge: ±2KV Air Discharge: ±2KV Standard: IEC61000-4-2
Reliability	Mean time between failures (MTBF)	>50000h
Mechanical	Dimensions (L*W*H)	115mmx78mmx27mm
	Housing	Galvanized
	Body Color	Black
	Net Weight	425g
Environmental	Operating Temperature	0°C~55°C
	Storage Temperature	-40°C~70°C

	Relative Humidity	0~95% (non-condensing)
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## Applications

- Security Monitoring System
- Multimedia Network Teaching System
- Medical Monitoring Display System
- Industrial Automation Control System
- Banking, securities, financial information display system
- Remote Network Server Monitoring
- Department Store Security
- Casino Security
- Hospitals, Airports and banks
- School Campuses

## Application Diagram



