

## Model: LTPOE-SW1604EG

### Features

#### 16-Port 10/100/1000Mbps IEEE 802.3af/at PoE Switch (End-Span PSE)

- Comply with IEEE802.3, IEEE802.3u, IEEE802.3ab, IEEE802.3az,IEEE802.3af/at standards
- Support IEEE802.3x full-duplex flow control; support Auto MDI/MDIX
- 16 Port support 48V-56VDC power to PoE powered devices
- Provide 15.4W or 30W power to powered devices
- 300-watts PoE budge
- Built-in 300W power supply
- 4 Combo uplink port:10/100/1000Mbps RJ-45 or 1000Base-X optical fiber port SFP
- PoE data & power transmission distance up to 100meters
- Backplane Bandwidth: 40Gbps
- Support 10K length Jumbo frame transmission
- Restart function helps master IC reset wholly
- Excellent anti-thunder, anti-static and anti-interference ability
- Surge Protection: 6KV
- Easy and convenient to use, plug & play, no need to configure
- Galvanized housing for stable and durable working life



## Overview

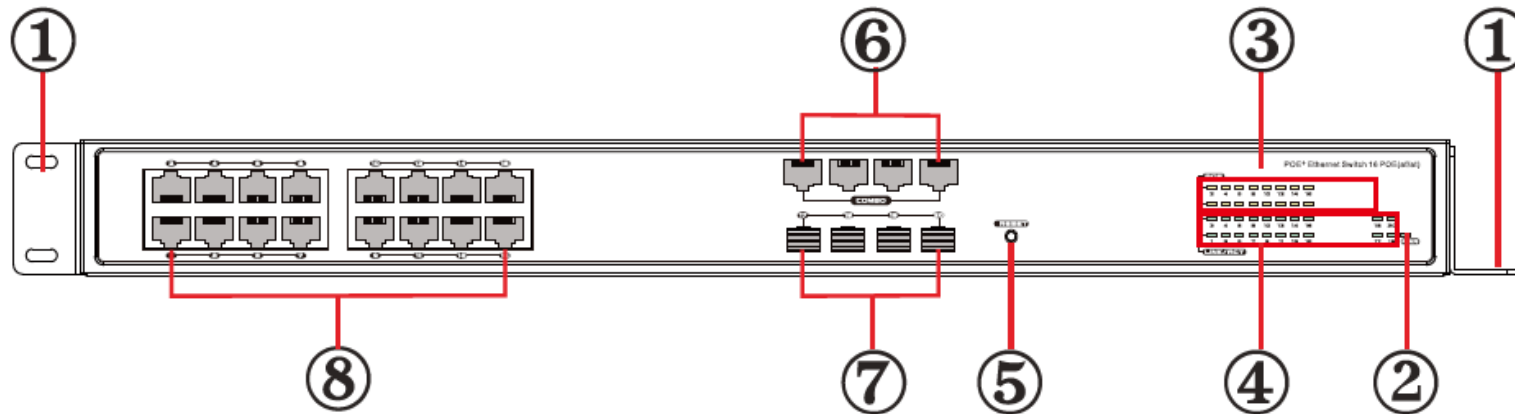
The LTPOE-SW1604EG provides 16 port 10/100/1000Mbps IEEE 802.3af/at Power over Ethernet with a total of 300 watts of PoE budget, which is an ideal solution to fulfill the demand of sufficient PoE power for network applications.

The LTPOE-SW1604EG is an ideal solution for securing IP surveillance infrastructure. It provides both 802.3af/at PoE functions along with 16 x 10/100/1000Base-TX ports featuring 15.4-watt-802.3af/30-watt 802.3at PoE in RJ-45 interfaces and extra 4-COMBO uplink Port 10/100/1000Mbps RJ-45 or 1000Base-X optical fiber port SFP port to keep a cascade connection with another switch or NVR. For instance, one LTPOE-SW1604EG can be combined with one 16 Channel NVR and 16 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.

With data and power over Ethernet from one unit, the LTPOE-SW1604EG 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 16 PoE interfaces, the LTPOE-SW1604EG is ideal for small businesses and work-groups 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

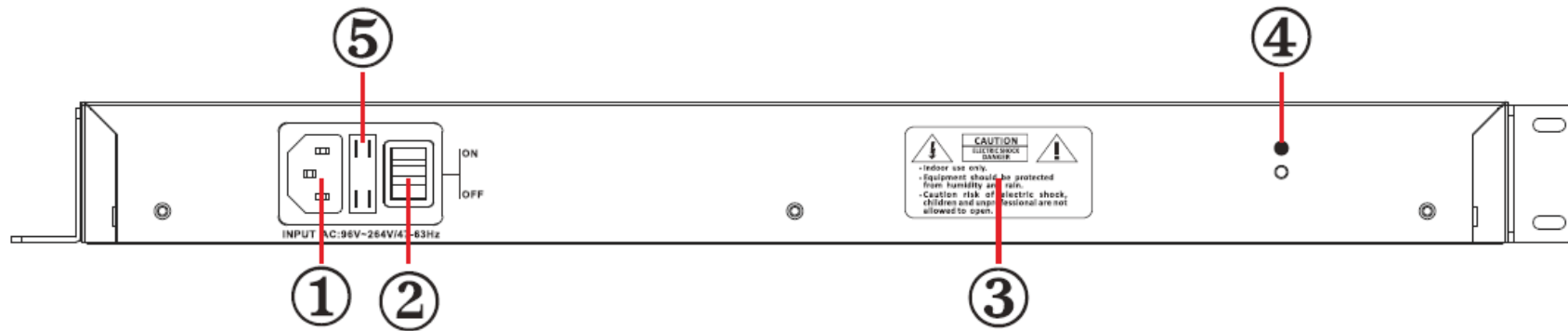
### Front Panel



- 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:1000Mbps link up off: link down blinks: data transfer  
**Yellow** LED on: 10/100Mbps link up off: link down blinks: data transfer
- ⑤ Rest Button: Whole machine will restart while press the button
- ⑥ Uplink SFP port: Speed 1000Base-X,transfers data from PoE ports to other devices(NVR/Switch/ADSL)
- ⑦ Uplink Gigabit RJ-45 port: Transfer data from PoE ports to other devices(NVR/Switch/ADSL)
- ⑧ Downlink Port: Transfer data from other IP devices to the switch

## Rear Panel

### Rear Panel



- ① Input AC 96~264V
- ② Power Switch: Turn on with power, Turn off no power
- ③ Warning contents
- ④ Ground Connection
- ⑤ Fuse: Max 10A

## What is a Combo Port on an Ethernet Switch

A Gigabit Ethernet Combo port is an Ethernet port and a Mini-GBIC port (also called SFP's) that share the same switch fabric and port number. A Combo port is a way to provide different types of connectivity without taking up unused switch fabric. These Combo ports can also be labeled as tied, meaning two different physical ports that can only be used one at a time. A Gigabit Ethernet Combo port consists of one 1000Base-T Gigabit over Copper port (provided), and one Mini-GBIC port (empty port that requires Mini-GBIC module).

**Note:**

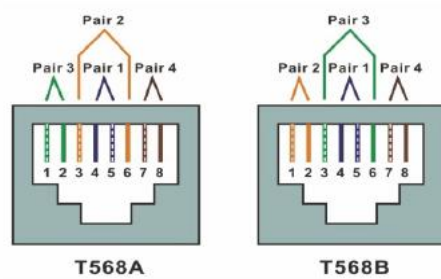
If a Mini-GBIC port is being used, then the corresponding 1000BASE-T copper port is automatically disabled and vice versa.

## What is SFP

(Small Form-factor Pluggable) A small transceiver that plugs into the SFP port of a network switch and connects to Fiber Channel and Gigabit Ethernet (GbE) optical fiber cables at the other end. Superseding the GBIC transceiver, SFP modules are also called "mini-GBIC" due to their smaller size. By choosing the appropriate SFP module, the same Electrical port on the switch can connect to fibers of different types (multi mode or single mode) and different wavelengths. If the fiber is upgraded, the SFP module is replaced.

The SFP converts the serial electrical signals to optical signals and vice versa. SFP modules are hot swappable and contain ID and system information for the switch.

## 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 consists 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:

1. All RJ-45 Ports of this device support Auto MDI/MDIX, so the different wire sequence of both ends of the cable is allowed.
2. Up to three units can be cascaded.

## Quick Setup Guide

### Package Contents

- |                         |                       |
|-------------------------|-----------------------|
| 1) LTPOE-SW1604EG: 1pc  | 2) AC power cord: 1pc |
| 3) Screw: 10pcs         | 4) Manual: 1pc        |
| 5) Mounting-ears : 2pcs | 6) Rubber feet: 4pcs  |

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

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

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

Step 4: Input AC power cord into power socket of PoE switch

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

## Technical Specifications

Model		LTPOE-SW1604EG(300W)
Product Name		16-Port 10/100/1000Mbps IEEE 802.3af/at PoE Switch (End-Span PSE)
Power Supply	Power Supply Mode	Built-in Power Supply
	Voltage Range	AC96~264V
	Power Consumption	The device <10W PoE power supply ≤ 300W
Network Port Parameter	Network Port	Downlink RJ-45 Port: 16*10/100/1000Mbps 4 Combo uplink port:10/100/1000Mbps RJ-45 or 1000Base-X optical fiber port SFP
	Transmission Distance	Downlink Port: 100m Uplink RJ-45 port: 100m The transmission distance of optical fiber port depends on different SFP modules
	Transmission Medium	Downlink Port: Cat5e/6 standard cable Uplink Port: Cat5e/6 standard cable or fiber
	PoE Standards	IEEE802.3af/at
	PoE Power Supply Mode	End-span method
	PoE Power Supply Wattage	Each port ≤30W Whole device≤300W
Network Switch Specification	Network Standards	IEEE802.3, IEEE802.3ab, IEEE802.3ad, IEEE802.3u, IEEE802.3az, IEEE802.3z
	Swap Mode	Store-and- forward
	Data-Caching Mechanism	4.1M
	MAC Address List	8K
	Backplane Bandwidth	40Gbps
	Forwarding Capacity	29.76Mpps
Indicator/Button	Power Indicator	Red LED on: power on
	Uplink Combo Port	Green LED on:1000Mbps link up off: link down blinks: data transfer Yellow LED on: 10/100Mbps link up off: link down blinks: data transfer
	PoE Indicator	16 PoE indicators (Yellow)
	PoE Network Port Indicator	16 port indicators blink while data transfer
	Reset Button	Press the reset button to turn on indicator (green) and the device restarts
Protection Level	Surge Protection	6KV(common mode),10/700us IEC61000-4-5 2KV(differential mode),10/700us IEC610000-4-5
	Electrostatic Protection	Contact Discharge: ±6KV Air Discharge: ±8KV Standard: IEC61000-4-2
Reliability	Mean time between failures (MTBF)	>50000h
Mechanical	Dimensions (L*W*H)	440mmx297mmx44.5mm
	Housing	Galvanized
	Body Color	Black
	Net Weight	4.25kg
Environmental	Operating Temperature	0°C~55°C
	Storage Temperature	-40°C~85°C
	Relative Humidity	0~95% (non-condensing)



## 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

