



TRILINK

TRILINK TL-SW24P-2U1S **24-Port AI-Enhanced PoE Switch**

Product Overview

The TRILINK TL-SW24P-2U1S is a high-capacity AI-Enhanced PoE switch designed for large-scale surveillance and enterprise network deployments.

It provides reliable power and data through 24 PoE Fast Ethernet ports, supported by 2 Gigabit uplink ports and 1 Gigabit SFP uplink for high-speed backbone connectivity.

This model is ideal for large CCTV systems, factories, buildings, campuses, and commercial security projects requiring stable, intelligent, and scalable PoE networking.

Key Features

- 24 × 10/100 Mbps PoE RJ45 ports
- 2 × 10/100/1000 Mbps Gigabit RJ45 uplink ports
- 1 × Gigabit SFP uplink port
- IEEE 802.3af / 802.3at compliant
- Total PoE power budget: 320W
- Up to 30W PoE output per port
- AI Watchdog for automatic camera recovery
- 250 m long-distance PoE transmission (Extend Mode)
- One-key VLAN isolation
- 6KV lightning protection on all ports
- Heavy-duty metal rack-mount enclosure



AI & Intelligent Management Functions

AI Watchdog Protection

Continuously monitors connected PoE devices and automatically restarts PoE power if a device becomes unresponsive, ensuring maximum system uptime.

- Ideal for large-scale surveillance networks
- Reduces downtime and maintenance costs

VLAN Isolation Mode

One-key VLAN isolation separates PoE ports while maintaining uplink connectivity, enhancing security and network stability in multi-device deployments.

- Prevents broadcast storms
- Improves overall network reliability

Long-Distance PoE Transmission (Extend Mode)

Supports PoE transmission up to 250 meters, making it suitable for wide-area deployments such as campuses, industrial sites, and parking facilities.

Enterprise-Grade Protection & Stability

- 6KV lightning protection on all Ethernet ports
- Intelligent power and overload protection
- Designed for continuous 24/7 operation

Technical Specifications

Hardware Specifications

Item	Description
Model	TL-SW24P-2U1S
PoE Ports	24 × 10/100 Mbps RJ45
Uplink Ports	2 × Gigabit RJ45
SFP Port	1 × Gigabit SFP
PoE Standard	IEEE 802.3af / IEEE 802.3at
Max PoE Output (Per Port)	30W

Item	Description
Total PoE Power Budget	320W
MAC Address Table	8K
Backplane Bandwidth	10.8 Gbps
Switching Method	Store-and-Forward
Lightning Protection	6KV (per port)

Power Specifications

Item	Description
Power Input	AC 110–240V, 50/60Hz
PoE Output Voltage	52V



Physical & Environment

Item	Description
Housing	Metal
Installation	Rack-mount
Dimensions	440 × 190 × 45 mm
Operating Temperature	-10°C to +55°C
Storage Temperature	-40°C to +70°C
Operating Humidity	10% – 90% (non-condensing)
Warranty	1 year

Package Contents

Item	Description
24 port poe switch	1
Power Adapter	1
Mounting Accessories	1 Set
User Manual	1

Applications

- Large-scale CCTV surveillance systems
- Industrial and factory networks
- Campus and building deployments
- Enterprise security infrastructure



The diagram illustrates a PoE network configuration. A central PoE Switch is powered by an AC Adapter. It provides power and data to four cameras: one standard IP Camera (via a PoE Splitter) and three PoE IP Cameras. The switch is also connected to an NVR (Network Video Recorder) using Cat.5 cabling. The NVR is then connected to a Monitor through a Video line.