



## 12-Port Gigabit PoE+ Smart Surveillance Switch

TPE-3012LS (v1.0R)

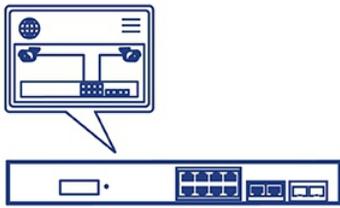
- 8 x Gigabit PoE+ ports
- 2 x Gigabit ports
- 2 x SFP slots
- 110W PoE power budget
- Easy-to-use web-based management interface
- Supports IPv6, LACP, VLAN, QoS, and IGMP Snooping
- Extend PoE+ signal up to 656 ft./200m at 10Mbps
- Front panel 4-digit LED display provides PoE power statistics
- Surveillance mode GUI for simplified configuration and network monitoring
- Device discovery for ONVIF compliant IP cameras and NVRs
- Upload building floorplans to create an E-map of surveillance devices
- Change IP camera IP address settings
- Upgrade IP camera firmware
- Change IP camera administrator user name and password
- Bandwidth control per port
- 802.1Q, MAC, Surveillance, and Voice VLAN support
- IEEE 802.1p QoS with queue scheduling support
- 24Gbps switching capacity
- IEEE 802.1p QoS with queue scheduling support
- Lifetime Warranty

TRENDnet's Gigabit PoE+ Smart Surveillance Switch series is designed to simplify the installation and management of surveillance networks, especially for integrators and installers. These ONVIF switches are optimized for the surveillance industry; surveillance mode provides a graphical dashboard interface with detailed information about the switch and each connected PoE device. Connect ONVIF compliant IP cameras and NVRs for more advanced capabilities such as changing device IP settings, and to view individual IP camera video within the switch GUI. The Smart Surveillance Switches are also PoE self-healing switches featuring PoE device auto-recovery and power scheduling.

Installers and integrators can save on equipment costs and reduce installation time with TRENDnet's Gigabit PoE+ Smart Surveillance Switches by delivering up to 30W per port of PoE power and data over existing Ethernet cables. Available PoE port controls include enabling and disabling PoE, PD alive check, and power scheduling. PD alive check is an automated PoE self-healing switch feature that attempts to recover an unresponsive PoE device connected to the switch. If a PoE device such as a PoE camera becomes unresponsive to pings, the ONVIF compliant switch will auto-reboot the PoE port in attempt to recover the device.

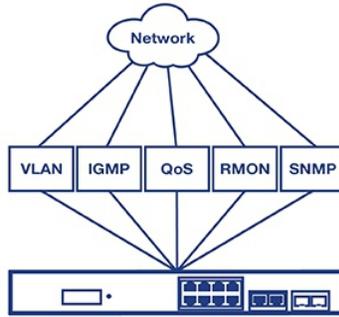
These PoE+ ONVIF switches feature a 4-digit LED display showing total PoE power, available power, and power-per-port. They also support long distance PoE+ networking up to 656 ft./200m away at speeds up to 10mbps. TRENDnet's Gigabit PoE+ Smart Surveillance Switches also feature SFP slots to support long-distance fiber networking applications.

Advanced managed switch features include LACP to group ports together to increase bandwidth between switches, VLANs for segmenting and isolating virtual LAN groups, QoS for traffic prioritization, port bandwidth controls, and SNMP monitoring, making this ONVIF switch a powerful SMB network solution. Improve voice performance by isolating and prioritizing VoIP traffic from normal data traffic with the easy-to-use voice VLAN feature.



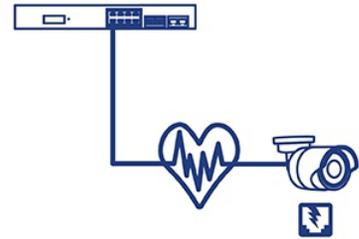
### Smart Surveillance Management

These managed ONVIF switches are optimized for the surveillance industry; surveillance mode provides a graphical dashboard interface with detailed information about the switch and each connected device.



### Integration Flexibility

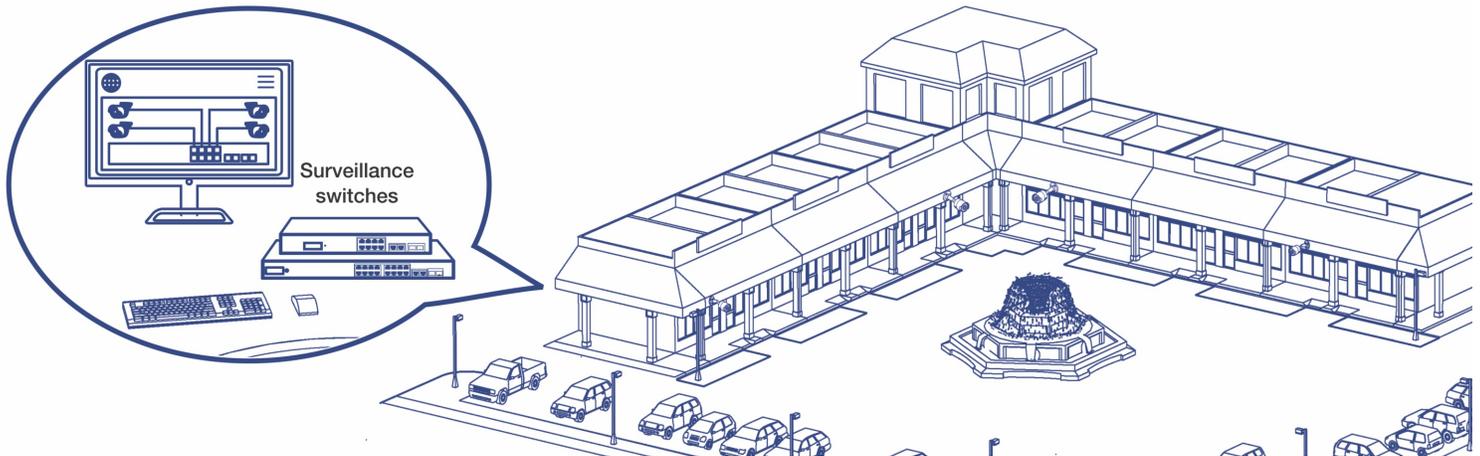
Managed switch features include access control lists, VLAN, IGMP snooping, QoS, RMON, SNMP, and syslog for monitoring and flexible network integration.



### PoE Device Alive Check

PD alive check is an automated PoE self-healing switch feature that attempts to recover an unresponsive PoE device connected to the switch. If a PoE device such as a PoE camera becomes unresponsive, the ONVIF compliant switch will auto-reboot the PoE port in attempt to recover the device.

## NETWORKING SOLUTION



## FEATURES



### Hardware Design

Provides gigabit PoE+ ports, SFP slots for fiber connectivity, and a 1U 19" rackmount design with brackets included



### PoE Power

Each PoE+ managed ONVIF switch supplies up to 30W of power per port and data over a single Ethernet cable to PoE devices



### Surveillance Mode

ONVIF switches are optimized for the surveillance industry, proving a graphical dashboard interface with useful information about the switch and each connected device



### Long Range PoE+

Long distance PoE+ networking up to 656 ft./200m away at speeds up to 10mbps



### 4-Digit PoE LED Display

4-digit 7-segment LED display to view total power, available power, and power-per-port



### IPv6 Ready

ONVIF switches support IPv6 configuration and IPv6 neighbor discovery



### Traffic Management

Managed switch features include: Link aggregation, 802.1Q VLAN, Voice VLAN, Surveillance VLAN, RSTP, MSTP, Loopback Detection, QoS, and port bandwidth management



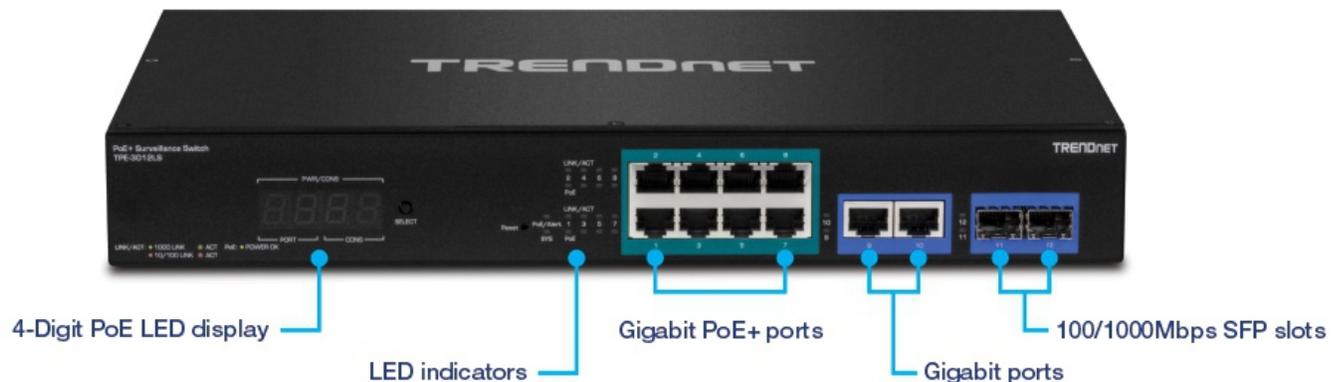
### Troubleshooting

A convenient cable diagnostic test and traffic statistics aid in network troubleshooting



### Monitoring

RMON, SNMP, and Port Mirroring support administrator monitoring solutions



## SPECIFICATIONS

### Standards

- IEEE 802.1d
- IEEE 802.1p
- IEEE 802.1Q
- IEEE 802.1s
- IEEE 802.1w
- IEEE 802.1X
- IEEE 802.1ab
- IEEE 802.3
- IEEE 802.3u
- IEEE 802.3x
- IEEE 802.3z
- IEEE 802.3ab
- IEEE 802.3ad
- IEEE 802.3af
- IEEE 802.3at
- IEEE 802.3az

### Device Interface

- 8 x Gigabit PoE+ ports
- 2 x Gigabit ports
- 2 x 100/1000Mbps SFP slots
- LED indicators
- 4-Digit PoE LED display (total power budget, available power, consumption per port)

### Data Transfer Rate

- Ethernet: 10Mbps (half duplex), 20Mbps (full duplex)
- Fast Ethernet: 100Mbps (half duplex), 200Mbps (full duplex)
- Gigabit Ethernet: 2000Mbps (full duplex)

### Performance

- Switch fabric: 24Gbps
- RAM buffer: 512KB
- MAC address table: 8K entries
- Jumbo frames: 10KB
- Forwarding mode: store and forward
- Forwarding rate: 17.8Mpps (64-byte packet size)

### MIB

- RMON MIB RFC 1271
- IPV4 MIB RFC 1213 (read only)
- SNMP MIB RFC 3415

### Spanning Tree

- STP (spanning tree)
- RSTP (rapid spanning tree)
- MSTP (multiple spanning tree)

### Management

- HTTP / HTTPS web-based GUI – Standard or Surveillance Mode
- CLI command line interface (Telnet / SSHv2)
- SNMP v1, v2c, v3
- IPv4/IPv6 support
- Multiple user accounts
- Dynamic/static unicast MAC address table
- Enable or disable 802.3az power saving per port
- Syslog
- System message logging severity levels
- Port mirroring (transmit, receive, one-to-one, many-to-one)
- ICMPv4/ICMPv6
- Traceroute
- LLDP
- Cable diagnostics test
- SFP DDM (Digital-diagnostic-monitoring)
- UDLD (UniDirectional Link Detection)
- Port error disabled/Errdisable state
- Ping watchdog

### Link Aggregation

- Static link aggregation and dynamic LACP (Up to 8 groups)

### Quality of Service (QoS)

- 802.1p Class of Service (CoS)
- DSCP (Differentiated Services Code Point)
- Bandwidth limit per port
- Queue Scheduling: strict priority (SP), weighted round robin (WRR)

### VLAN

- Multiple management VLAN assignment
- 802.1Q Tagged VLAN
- MAC-based VLAN
- Surveillance VLAN
- Voice VLAN
- Up to 256 VLAN groups, ID Range 1-4094

### Multicast

- IGMP Snooping v2/v3
- IGMP immediate/fast leave
- IGMP querier
- Dynamic/static multicast MAC address table
- MVR (Multicast VLAN registration)
- Up to 1K multicast entries

### Access Control

- 802.1X port-based authentication (Local user database, RADIUS, Guest VLAN)
- DHCP Snooping / Option 82
- Loopback detection
- Denial of Service (DoS) prevention
- Storm control (broadcast, unknown multicast, unknown unicast, min: 16Kbps)
- Head-of-line (HoL) blocking prevention
- IP Source Guard / IP-MAC-Port-VLAN binding
- Protected ports
- Port Security/MAC address learning restriction (Up to 255 entries)

### Access Control List (ACL)

- MAC Address (VLAN ID, EtherType, 802.1p)
- IPv4 (IP Protocol, TCP/UDP Port, 802.1p, DSCP, TCP flag, ICMP type, ICMP code)

### Surveillance Mode (ONVIF)

- Surveillance mode GUI for simplified configuration and network monitoring
- Device discovery for ONVIF compliant devices such as IP cameras and NVRs
- Upload floor plans to create a visual overview of the network
- Change camera IP address configuration
- Upgrade IP camera firmware
- Change IP camera administrator user name and password

### PoE

- PoE budget: 110W
- 802.3at: up to 30W per port (ports 1-8)
- PoE Mode A: Pins 1,2 and pins 3,6 for power
- PoE power scheduling
- PD alive check
- Over current/short circuit protection

### Power

- Input: 100 – 240V AC, 50/60Hz, internal power supply
- Max. consumption: 10W (No PoE load)

### Surge Protection

- 6kV (Ports 9 & 10)

### Fan/Acoustics

- Fanless

**MTBF**

- 434,157 hours

**Operating Temperature**

- 0° – 40° C (32° – 104° F)

**Operating Humidity**

- Max. 90% non-condensing

**Dimensions**

- 330 x 230 x 44.45mm (12.9 x 9.1 x 1.75 in.)
- 1U rack mountable

**Weight**

- 2.26kg (4.98 lbs.)

**Certifications**

- CE
- FCC
- ETL

**Warranty**

- Lifetime Warranty

**Package Contents**

- TPE-3012LS
- Quick Installation Guide
- Power cord (1.5m/5 ft.)
- Rackmount kit

TRENDnet offers a lifetime warranty for all of its metal-enclosed network switches that have been purchased in the United States/Canada on or after 1/1/2015. Cooling fan and internal power supply carry a one-year warranty.

All references to speed are for comparison purposes only. Product specifications, size, and shape are subject to change without notice, and actual product appearance may differ from that depicted herein.