

52-Port Gigabit Web Smart PoE+ Switch

TPE-5048WS (v1.7R)

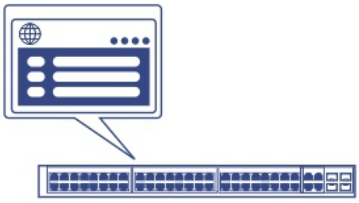
- 48 x Gigabit PoE+ ports
- 4 x Shared Gigabit ports (RJ-45 or SFP)
- 740W PoE power budget
- Easy-to-use web-based management interface
- PoE alive check automatically attempts to recover an unresponsive PoE device connected
- Remote cloud management with TRENDnet Hive (Additional fee applies)
- Supports IPv6, LACP, VLAN, QoS, and IGMP Snooping
- Bandwidth control per port
- Private, Multicast, and Voice VLAN support
- Smart Fan
- 104Gbps switching capacity
- IEEE 802.1p QoS with queue scheduling support
- Lifetime Warranty

TRENDnet's Gigabit Web Smart PoE+ Switch series offers advanced L2+ features with enhanced traffic management controls to meet the evolving demands of SMB networks. This rack mountable IPv6-ready managed switch comes with an intuitive web-based interface. Advanced managed switch features include LACP to increase bandwidth between switches by grouping ports together, VLANs for segmenting and isolating virtual LAN groups, QoS for traffic prioritization, port bandwidth controls, and SNMP monitoring, making this a powerful solution for any SMB network. Improve voice performance by isolating and prioritizing VoIP traffic from normal data traffic with an easy-to-use voice VLAN feature.

Free up router resources by offloading routing processes to this managed switch by using the L2+ IPv4/IPv6 static routing feature to efficiently route traffic at the switch level. The dynamic ARP inspection feature helps protect connected devices from man-in-the-middle attacks by discarding malicious and invalid ARP packets. Take advantage of the available multicast and IGMP/MLD snooping features to optimize IP surveillance system performance, and minimize network traffic. TRENDnet's web smart managed switches also feature SFP slots to support long-distance fiber networking applications.

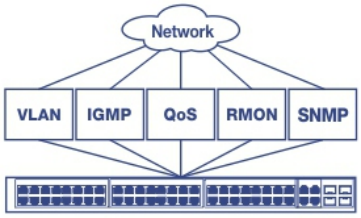
Installers and integrators can save on equipment costs and reduce installation time with TRENDnet's Web Smart PoE+ Managed Switches by delivering up to 30W per port of PoE power and data over existing Ethernet cables. With PoE technology, users only need one set of cables to deliver both data and power. With this PoE+ managed switch, network PoE devices, such as high-power wireless access points, PTZ and other advanced IP cameras, VoIP phone systems, IPTV decoders, access controls, and more.

Easily manage and configure TRENDnet's Web Smart PoE+ Managed Switch Series remotely by updating switches to the latest firmware for access to TRENDnet Hive. TRENDnet Hive is a network cloud manager that reduces management time and cost. No additional hardware, server, or personal cloud is required on these cloud managed switches with TRENDnet's reliable cloud service.



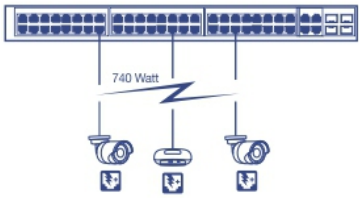
Web Smart Management

Provides an easy-to-use web-based management interface to reduce switch configuration complexity and offers a combination of SMB management features for easy deployment.



Integration Flexibility

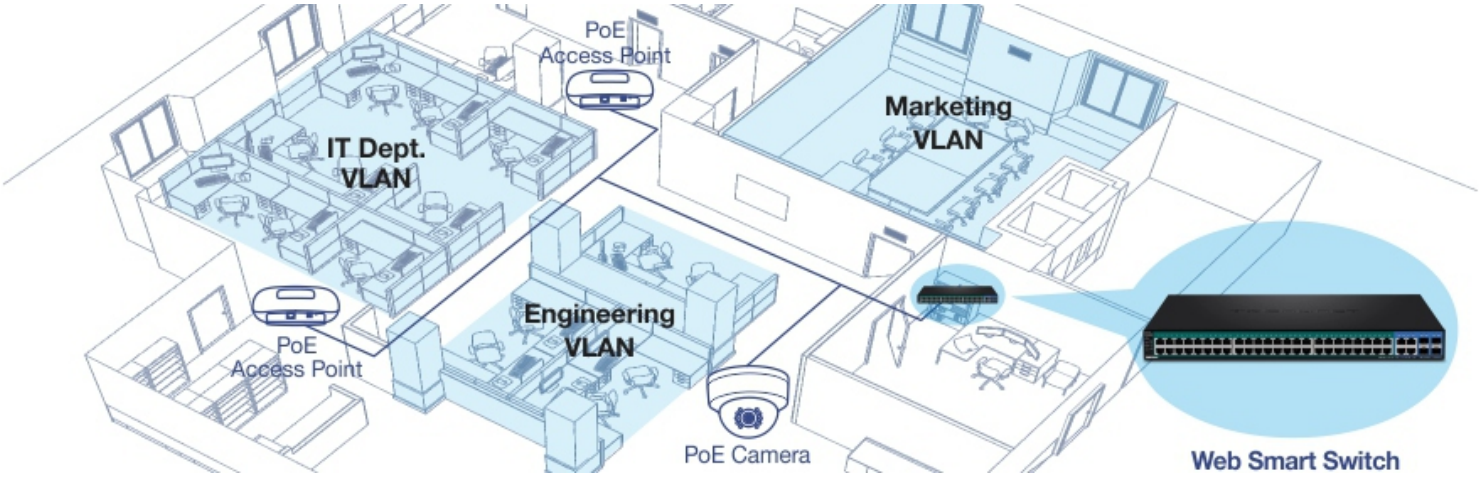
Managed features include access control lists, VLAN, IGMP snooping, QoS, RMON, SNMP trap, and syslog for monitoring and flexible network integration.

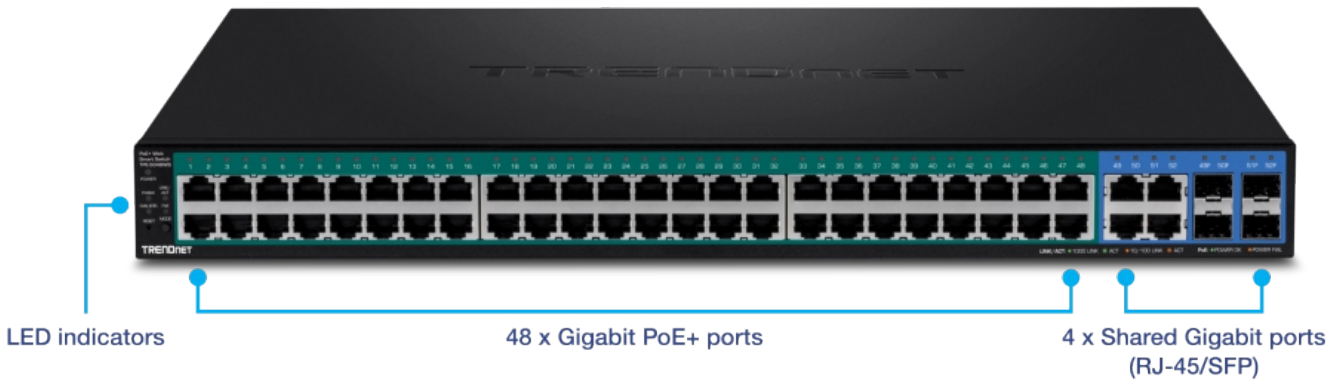


PoE Power

A 740W PoE power budget supplies power to PoE/PoE+ devices.

NETWORKING SOLUTION





FEATURES

Hardware Design
Provides 48 gigabit PoE+ ports, 4 shared gigabit ports (RJ-45 or SFP), a 104Gbps switching capacity, a built-in power supply, and rackmount brackets.

PoE Power
Supports up to 30W of PoE+ power per port with a total power budget of 740W.

IPv6 Ready
This switch supports IPv6 configuration and IPv6 neighbor discovery.

Hive Enabled
Remotely manage, configure, and diagnose this web smart switch via TRENDnet's cloud service (Additional fee applies)

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

Traffic Management
A broad range of network configurations are supported: 802.3ad link aggregation, Asymmetric VLAN, 802.1Q VLAN, Voice VLAN, RSTP, MSTP, Loopback Detection, GVRP, 802.1p Class of Service (CoS), port bandwidth management, and QoS queue scheduling.

Access Control
Features such as ACL, SSL, MAC/port filtering, 802.1X, TACACS+, and RADIUS are compatible with layered access controls

Monitoring
RMON, SNMP, SNMP Trap, 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

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

Device Interface
- 48 x Gigabit PoE+ ports
- 4 x Shared Gigabit ports (RJ-45/SFP)
- LED indicators

Performance
- Switch fabric: 104Gbps
- RAM buffer: 12Mbits
- MAC Address Table: 16K entries
- Jumbo Frames: 10Kbytes
- HOL Blocking Prevention
- Forwarding rate: 77.4Mpps (64-byte packet size)

Management
- HTTP/HTTPS (SSL v2/3 TLS) Web based GUI
- SNMP v1, v2c, v3
- RMON v1
- Static Unicast MAC Address
- Enable/disable 802.3az Power Saving
- LLDP and LLDP-MED
- Virtual Cable Diagnostics Test
- IPv6: IPv6 Neighbor Discovery, IPv6 Static IP, DHCPv6, Auto configuration
- DHCP relay/option 82

Hive Cloud Management
- Configure, monitor, and manage through the TRENDnet Hive Cloud Management Portal remotely via PC or Mac web browser
- Multi-device management
- Provisioning through scheduled batch firmware or configuration updates for multiple switches
- Event/hardware network monitoring (CPU/memory utilization)
- Enable & disable PoE, set PD (powered device) alive check, configure PoE scheduling, and monitor PoE budget utilization (for PoE switches only)
- Configure features such as IP address settings, VLANs, spanning tree, loopback detection, IGMP snooping, link aggregation, and bandwidth control through cloud management

Layer 3 Features
- IPv4 / IPv6 static routing
- IP interfaces: Up to 6
- Routing table entries: Up to 32 (IPv4 / IPv6)
- ARP table (up to 128 entries)
- Inter-VLAN routing

MIB

- IP FORWARD TABLE MIB RFC 1354
- RMON MIB RFC 1271
- IPV4 MIB RFC 1213
- IPV6 MIB RFC 2465
- GVRP MIB IEEE 802.1Q-VLAN
- LA MIB IEEE 802.3ad
- LLDP MIB IEEE 802.1AB
- IGMP SNOOPING MIB RFC 2933
- MLD SNOOPING MIB RFC 3019
- PRIVATE VLAN MIB IEEE 802.1Q
- DHCPSNOOP MIB RFC 2026
- QOS MIB RFC 4323
- SNMP MIB RFC 3415
- STP MIB RFC 4318
- PNAC MIB IEEE 802.1x
- VLAN MIB IEEE 802.1q
- DNS MIB RFC 1611
- ACL MIB
- BANDWIDTH CTRL MIB
- LBD MIB
- MIRROR MIB
- IPV6 NEIGHBOR MIB
- SNTP MIB
- STORM CTRL MIB
- STATISTICS MIB
- Tool MIB
- VOICE VLAN MIB
- DOS MIB

Spanning Tree

- IEEE 802.1D STP (Spanning Tree protocol)
- IEEE 802.1w RSTP (Rapid Spanning Tree protocol)
- IEEE 802.1s MSTP (Multiple Spanning Tree protocol)

Link Aggregation

- Static Link Aggregation
- 802.3ad Dynamic LACP

Quality of Service (QoS)

- 802.1p Class of Service (CoS)
- DSCP (Differentiated Services Code Point)
- Bandwidth Control per port
- Queue Scheduling: Strict Priority, Weighted Round Robin (WRR)

VLAN

- Multiple management VLAN assignment
- Asymmetric VLAN
- 802.1Q Tagged VLAN
- Dynamic GVRP
- Up to 256 VLAN groups, ID Range 1-4094
- Private VLAN (Protected Ports)
- Voice VLAN (10 user defined OUIs)

Multicast

- IGMP Snooping v1, v2, v3 (per VLAN)
- Static Multicast Address
- Up to 256 multicast entries

Port Mirror

- RX, TX, or Both
- One to one

Encryption

- 802.1X Port-Based Network Access Control , RADIUS, TACACS+
- Local Dial In User Authentication
- DHCP Snooping (per VLAN)
- Loopback Detection
- Duplicated Address Detection
- Trusted Host
- Denial of Service (DoS)

ACL IPv4 L2-L4 & IPv6

- MAC Address
- VLAN ID
- Ether Type (IPv4 only)
- IP Protocol 0-255
- TCP/UDP Port 1-65535
- 802.1p
- DSCP (IPv4 only)
- IPv6 Address (IPv6 only)

Compatibility

- Optional Software Utility: Windows® 10, 8.1, 8, 7, Vista, XP, Windows® 2003/2008 Server

Special Features

- PoE+
- IPv6
- 802.3az power saving
- Rack mountable

Power

- Input: 100 – 240V AC, 50/60Hz, internal power supply
- Max. consumption: 963W

PoE

- Power Budget: 740W
- 802.3at: Up to 30W per port
- PoE Mode A: Pins 1, 2, 3, and 6 for power
- PoE auto/manual classification
- PoE port priority/power scheduling
- PD alive check

Fan/Acoustics

- Quantity: 5
- Noise Level: 55 dBA (max.)

MTBF

- 338,601 hours

Operating Temperature

- -5 – 50°C (23 - 122°F)

Operating Humidity

- Max. 95% non-condensing

Dimensions

- 440 x 430 x 44mm (17.3 x 17 x 1.74 in.)
- Rack mountable 1U height

Weight

- 6.58kg (14.5 lbs.)

Certifications

- CE
- FCC
- UL

Warranty

- Lifetime

Package Contents

- TPE-5048WS
- Quick Installation Guide
- CD-ROM (Utility & User's Guide)
- Power cord (1.8m/6 ft.)
- Rack mount 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.

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