

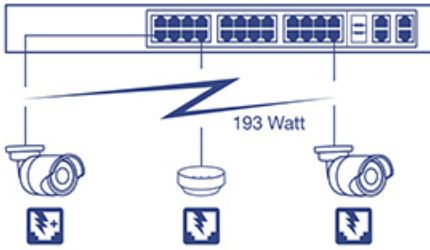


28-Port 10/100 Mbps Web Smart PoE+ Switch

TPE-224WS (C1.1R)

- 20 x PoE ports (15.4 W / port)
- 4 x PoE+ ports (30 W / port)
- 2 x Gigabit ports
- 2 x Shared Gigabit ports (RJ-45 or SFP)
- 193 Watt PoE budget
- 12.8 Gbps switching capacity
- Rack mountable
- Smart fans reduce energy consumption

TRENDnet's 28-Port 10/100 Mbps Web Smart PoE+ Switch, model TPE-224WS, offers 24 x 10/100 Mbps PoE ports (Ports 1-4 support PoE+), 2 x Gigabit ports, 2 x shared Gigabit ports (RJ-45 or SFP), and a PoE Power budget of 193W. This IPv6 ready switch offers advanced traffic management, troubleshooting, access control, energy saving GREENnet, and monitoring features at a reduced cost.



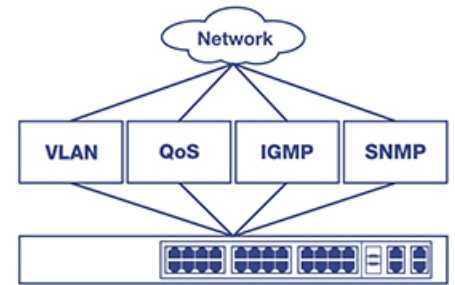
Power over Ethernet

The 193 W PoE power budget supplies PoE+ (up to 30 W) to ports 1-4 and PoE (up to 15.4 W) to ports 5-24 along with PD (powered device) auto classification and over current / short circuit protection.



Web Smart Management

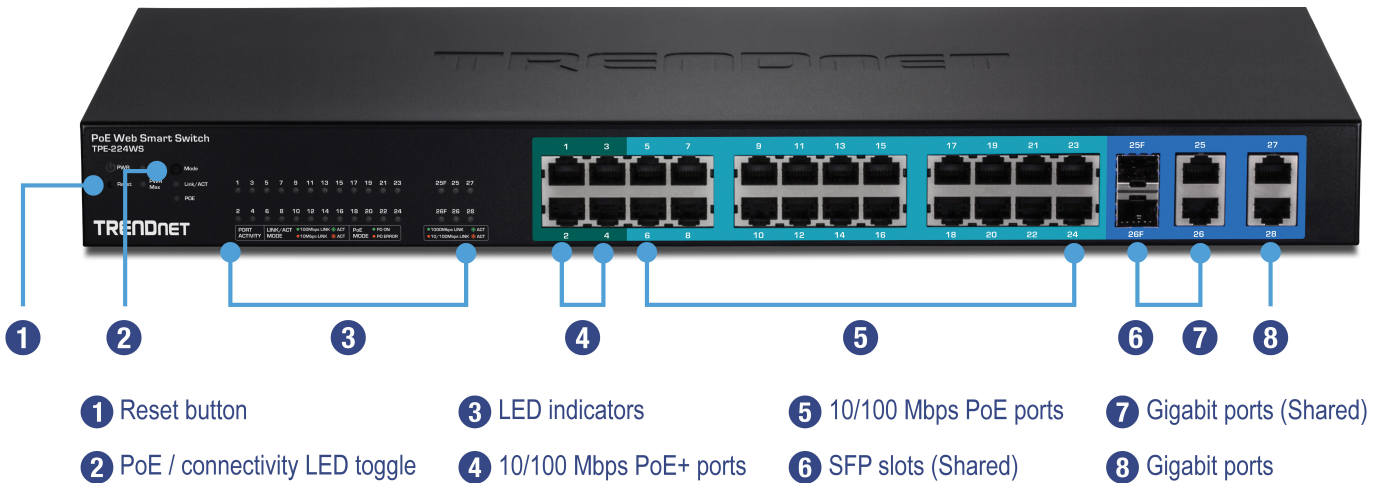
Provides an easy to use web-based GUI management for reduced switch configuration complexity and offers a combination of more commonly used SMB management features for easy deployment.



Integration Flexibility

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

Networking Solution





Hardware Design

Provides 24 x 10/100 Mbps PoE ports (Ports 1-4 support PoE+), 2 x Gigabit ports, 2 x shared Gigabit ports (RJ-45 or SFP), a PoE Power budget of 193W, and includes rackmount brackets.



Smart Fan

Smart fan saves energy by varying fan speed and use based on cooling needs.



IPv6 Ready

This switch supports IPv6 configuration and IPv6 neighbor discovery.



Traffic Management

A broad range of network configurations are supported by: 802.3ad link aggregation, Asymmetric VLAN, 802.1Q VLAN, Voice VLAN, Private VLAN, Bandwidth Controls, GVRP, IGMP v1-v3, 802.1p Class of Service (CoS), Spanning Tree (STP, RSTP, and MSTP), and QoS queue scheduling.



Troubleshooting

Real time traffic comparison charts, error group charts, and a convenient cable diagnostic test aid in rapid troubleshooting.



Access Controls

Features such as ACL, SSL, MAC / port filtering, Denial of Service controls, 802.1X, TACACS+, and RADIUS are compatible with layered network 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 (15.4 W / port)
- IEEE 802.3at (30 W / port)
- IEEE 802.3az

Device Interface

- 4 x 10/100 Mbps PoE+ ports,
- 20 x 10/100 Mbps PoE ports
- 2 x Gigabit ports
- 2 x Shared Gigabit ports (RJ-45 or SFP)
- LED indicators (Mode Button displays Link / Activity or PoE port status)
- Reset Button

Data Transfer Rate

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

Performance

- Switch fabric: 12.8 Gbps
- RAM buffer: 512 KB
- MAC Address Table: 8 K entries
- HOL Blocking Prevention
- Forwarding rates: 9.5 Mpps (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
- Virtual Cable Test
- IPv6: IPv6 Neighbor Discovery, IPv6 Static IP, DHCPv6, Auto configuration

MIB

- MIB II RFC 1213
- Bridge MIB RFC 1493
- Bridge MIB Extension RFC 2674
- SNMPv2 MIB RFC 1907
- Ethernet Interface MIB RFC 1643

- Ethernet –like MIB RFC 2863
- Interface Group MIB RFC 2233
- MIB Traps Convention RFC 1215
- RMON MIB RFC 1757, RFC 2819
- 802.1p MIB RFC 2674
- RADIUS Client Authentication MIB RFC 2618
- LLDP-MIB IEEE 802.1ab
- Ping MIB RFC 2925, RFC 4560

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
- Many to one

Access Control

- 802.1X Port-Based Network Access Control, RADIUS, TACACS+
- Local Dial In User Authentication
- DHCP Snooping (per VLAN)
- Loopback Detection
- Duplicated Address Detection
- 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 - 240 V AC, 50/60 Hz, internal power supply
- Consumption: 239.7 W (max.)

PoE

- PoE budget: 193 W
- 802.3at: Up to 30 W per port (ports 1-4)
- 802.3af: Up to 15.4 W per port (ports 5-24)
- Mode A: Pins 1,2 for power(+) and pins 3,6 for power(-)
- PD auto classification
- Over current / short circuit protection

Fan / Acoustics

- Quantity: 2
- Noise Level: 54 dB(A) (max.)

MTBF

- 283,830 hours

Operating Temperature

- -5 – 50 °C (23 – 122 °F)

Operating Humidity

- Max. 90% non-condensing

Dimensions

- 440 x 210 x 44.45 mm (17.3 x 8.27 x 1.75 in.)
- Rack mountable 1U height

Weight

- 3.26 kg (7.18 lbs.)

Certifications

- CE
- FCC
- UL

Warranty

- 3 year limited

Package Contents

- TPE-224WS
- Quick Installation Guide
- CD-ROM (Utility & User's Guide)
- Power cord (1.8 m / 6 ft.)
- Rack mount kit

