

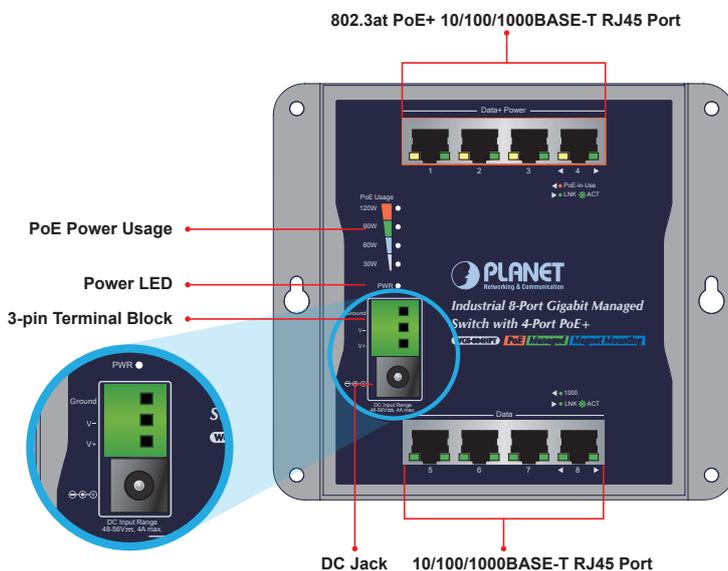
Industrial 8-Port 10/100/1000T Wall-mounted Managed Switch with 4-Port PoE+



Easily-deployed and Expanded Network

Designed to be installed in a wall enclosure or simply mounted on a wall at any convenient location, PLANET WGS-804HPT, an innovative, **Industrial 8-port 10/100/1000T Wall-mounted Managed Switch with 4-Port PoE+**, offers IPv6/IPv4 dual stack management, **intelligent Layer 2 management functions**, and **user-friendly interface**. The WGS-804HPT is able to operate reliably, stably and quietly in any environment without affecting its performance. With a total power budget of up to **144 watts** for different kinds of PoE applications and featuring ultra networking speed and operating temperature ranging from **-40 to 75 degrees C** in a compact but rugged IP30 metal housing, the WGS-804HPT is an ideal solution to meeting the demand for the following network applications:

- Building/Home automation network
- Internet of things (IoT)
- IP surveillance
- Wireless LAN



Physical Port

- **8-Port 10/100/1000BASE-T** Gigabit RJ45 copper with 4-Port **IEEE 802.3at/af** PoE Injector function (Port-1 to Port-4)

Power over Ethernet

- Complies with IEEE 802.3at Power over Ethernet Plus, end-span PSE
- Backward compatible with IEEE 802.3af Power over Ethernet
- Up to 4 ports of IEEE 802.3af/802.3at devices powered
- Supports PoE power up to 36 watts for each PoE port
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100 meters in standard mode and 250m in extend mode
- PoE management
 - Total PoE power budget control
 - Per port PoE function enable/disable
 - PoE port power feeding priority
 - Per PoE port power limitation
 - PD classification detection
 - PD alive check
 - PoE schedule

Industrial Case and Installation

- Compact size, wall-mounted, magnetic wall mount and DIN-rail designs
- IP30 metal case
- Supports -40 to 75 degrees C operating temperature
- Supports ESD 8KV DC Ethernet protection
- Redundant power design
 - 48V~56V DC wide power input
 - -3-pin terminal block or DC jack connector

Switching

- Hardware-based 10/100Mbps, half/full duplex and 1000Mbps full duplex mode, flow control and auto-negotiation and auto MDI/MDI-X
- Features Store-and-Forward mode with wire-speed filtering and forwarding rates
- IEEE 802.3x flow control for full duplex operation and back pressure for half duplex operation
- 8K MAC address table size
- 10K jumbo frame
- Automatic address learning and address aging
- Supports CSMA/CD protocol

Cybersecurity Network Solution to Minimize Security Risks

The WGS-804HPT supports SSHv2 and TLSv1.2 protocols to provide strong protection against advanced threats. It includes a range of cybersecurity features such as **DHCP Snooping**, **IP Source Guard**, **Dynamic ARP Inspection**, **802.1x port-based network access control**, **RADIUS and TACACS+ user accounts management**, **SNMPv3 authentication**, and so on to complement it as an all-security solution.



Redundant Ring, Fast Recovery for Critical Network Applications

The WGS-804HPT supports redundant ring technology and features strong, rapid self-recovery capability to prevent interruptions and external intrusions. It incorporates advanced **ITU-T G.8032 ERPS (Ethernet Ring Protection Switching)** technology, **Spanning Tree Protocol (802.1s MSTP)** into customer's network to enhance system reliability and uptime in various environments.

Built-in Unique PoE Functions for Powered Devices Management

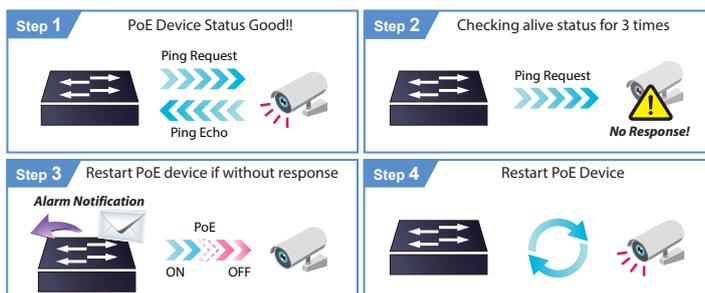
As it is the managed PoE switch for surveillance, wireless and VoIP networks, the WGS-804HPT features the following special PoE management functions:

- PD alive check
- Scheduled power recycling
- PoE schedule
- PoE usage monitoring
- PoE extension

Intelligent Powered Device Alive Check

The WGS-804HPT can be configured to monitor connected PD (Powered Device) status in real time via ping action. Once the PD stops working and responding, the WGS-804HPT will resume the PoE port power and bring the PD back to work. It will greatly enhance the network reliability through the PoE port resetting the PD's power source and reducing administrator management burden.

PD Alive Check



Layer 2 Features

- Supports **VLAN**
 - IEEE 802.1Q tagged VLAN
 - Provider bridging (VLAN Q-in-Q, IEEE 802.1ad) support
 - Protocol VLAN
 - Voice VLAN
 - Private VLAN (Protected port)
 - Management VLAN
 - GVRP
- Supports **Spanning Tree Protocol**
 - STP (Spanning Tree Protocol)
 - RSTP (Rapid Spanning Tree Protocol)
 - MSTP (Multiple Spanning Tree Protocol)
 - STP BPDU Guard, BPDU Filtering and BPDU Forwarding
- Supports **Link Aggregation**
 - IEEE 802.3ad Link Aggregation Control Protocol (LACP)
 - Cisco ether-channel (static trunk)
 - Maximum 4 trunk groups, up to 4 ports per trunk group
- Provides port mirror (many-to-1)
- Loop protection to avoid broadcast loops
- Supports ERPS (Ethernet Ring Protection Switching)

Quality of Service

- Ingress/Egress Rate Limit per port bandwidth control
- Traffic classification
 - IEEE 802.1p CoS
 - TOS/DSCP/IP precedence of IPv4/IPv6 packets
- Strict priority and Weighted Round Robin (WRR) CoS policies

Multicast

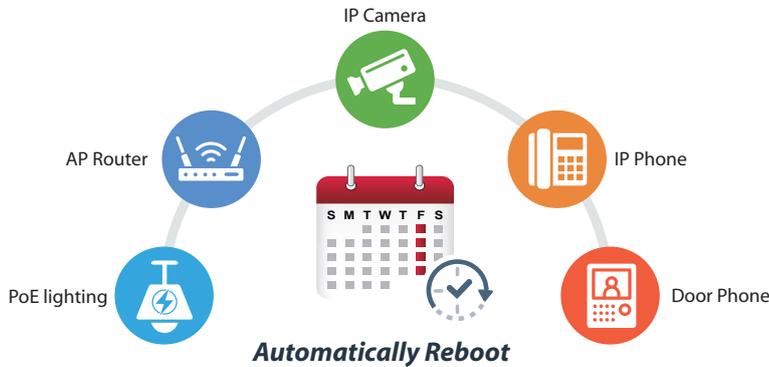
- Supports IPv4 IGMP snooping v2, v3
- Supports IPv6 MLD snooping v1, v2
- IGMP querier mode support
- IGMP snooping port filtering
- MLD snooping port filtering

Security

- Storm Control support
 - Broadcast/Unknown unicast/Unknown multicast
- Authentication
 - IEEE 802.1X port-based network access authentication
 - Built-in RADIUS client to co-operate with the RADIUS servers
 - DHCP Option 82
 - RADIUS and TACACS+ authentication
- Access Control List
 - IPv4/IPv6 IP-based ACL
 - IPv4/IPv6 IP-based ACE
 - MAC-based ACL
 - MAC-based ACE

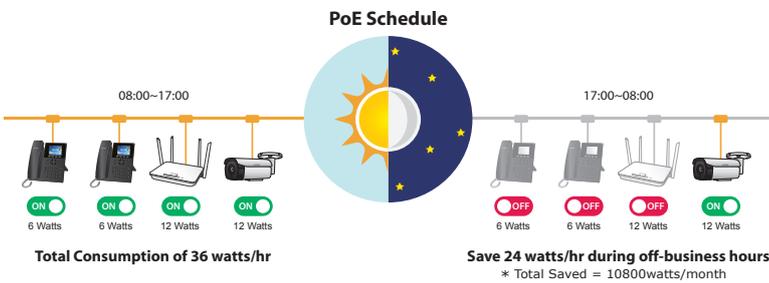
Scheduled Power Recycling

The WGS-804HPT allows each of the connected PoE IP cameras or PoE wireless access points to reboot at a specific time each week. Therefore, it will reduce the chance of IP camera or AP crash resulting from buffer overflow.



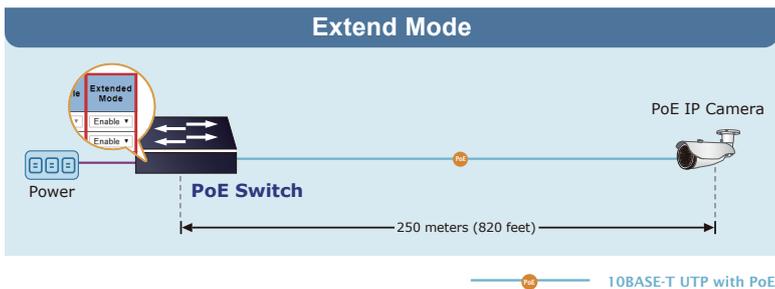
PoE Schedule for Energy Savings

Under the trend of energy saving worldwide and contributing to environmental protection, the WGS-804HPT can effectively control the power supply besides its capability of giving high watts power. The “PoE schedule” function helps you to enable or disable PoE power feeding for each PoE port during specified time intervals and it is a powerful function to help SMBs or enterprises save power and budget. It also increases security by powering off PDs that should not be in use during non-business hours.



802.3at PoE+ Power and Ethernet Data Transmission Distance Extension

In the “Extend” operation mode, the WGS-804HPT operates on a per-port basis at 10Mbps duplex operation but can support 20-watt PoE power output over a distance of up to 250 meters overcoming the 100m limit on Ethernet UTP cable. With this brand-new feature, the WGS-804HPT provides an additional solution for 802.3at/af PoE distance extension, thus saving the cost of Ethernet cable installation.



- MAC Security
 - Static MAC
 - MAC filtering
- Port security for source MAC address entries filtering
- DHCP snooping to filter distrusted DHCP messages
- Dynamic ARP inspection discards ARP packets with invalid MAC address to IP address binding
- IP source guard prevents IP spoofing attacks
- DoS attack prevention

Management

- IPv4 and IPv6 dual stack management
- Switch Management Interface
 - Web switch management
 - Telnet Command Line Interface
 - SNMP v1 and v2c switch management
 - SSHv2, TLSv1.2 and SNMP v3 secure access
- SNMP Management
 - SNMP trap for interface Link Up and Link Down notification
 - Four RMON groups (history, statistics, alarms and events)
- User privilege levels control
- Built-in Trivial File Transfer Protocol (TFTP) client
- Static and DHCP for IP address assignment
- System Maintenance
 - Firmware upload/download via HTTP/TFTP
 - Configuration upload/download through HTTP/TFTP
 - Dual images
 - Hardware reset button for system reboot or reset to factory default
- SNTP Network Time Protocol
- Network Diagnostic
 - Cable diagnostics
 - ICMPv6/ICMPv4 Remote Ping
- Link Layer Discovery Protocol (LLDP) Protocol and LLDP-MED
- Event message logging to remote Syslog server
- Four RMON groups (history, statistics, alarms and events)
- PLANET Smart Discovery Utility for deployment management
- PLANET NMS system and CloudViewer for deployment management

PoE Usage Monitoring and Intelligent LED Indicator for Real-time PoE Usage

Via the power usage chart in the web management interface, the WGS-804HPT enables the administrator to monitor the status of the power usage of the connected PDs in real time. Thus, it greatly enhances the management efficiency of the facilities. Moreover, the WGS-804HPT helps users to monitor the current status of PoE power usage easily and efficiently via its advanced LED indication. Called “**PoE Power Usage**”, the front panel of the WGS-804HPT has four LED indicators of different power usages.



Real-time PoE Power Usage

Innovative Wall-mount Installation

The WGS-804HPT is specially designed to be installed in a narrow environment, such as wall enclosure. The compact, flat and wall-mounted design fits easily in any space-limited location. It adopts the user-friendly “**Front Access**” design, making the installing, cable wiring, LED monitoring and maintenance of the WGS-804HPT placed in an enclosure very convenient for technicians. The WGS-804HPT can be installed by **fixed wall mounting, magnetic wall mounting or DIN rail**, thereby making its usability more flexible.



All-New Industrial Flat-type Ethernet

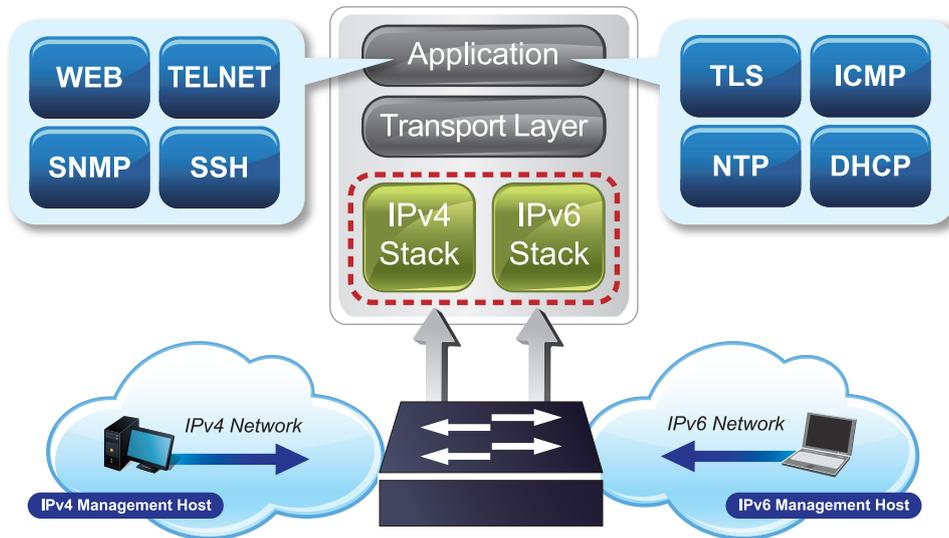
Environmentally Hardened Design

With IP30, flat but rugged metal housing protection, the WGS-804HPT provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curb-side traffic control cabinets without air conditioner. Being able to operate under the temperature range from -40 to 75 degrees C, the WGS-804HPT can be placed in almost any difficult environment.



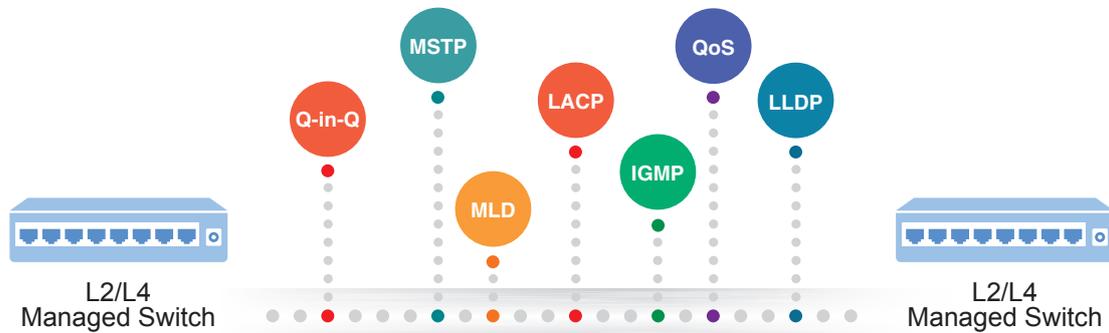
IPv6/IPv4 Dual Stack Management

Supporting both IPv6 and IPv4 protocols, the WGS-804HPT helps the SMBs to step in the IPv6 era with the lowest investment as its network facilities need not be replaced or overhauled if the IPv6 FTTx edge network is set up.



Robust Layer 2 Features

The WGS-804HPT can be programmed for advanced switch management functions such as dynamic port link aggregation, 802.1Q VLAN, Q-in-Q VLAN, **Multiple Spanning Tree Protocol (MSTP)**, Loop and **BPDU Guard**, **IGMP Snooping**, and **MLD Snooping**. Via the link aggregation, the WGS-804HPT allows the operation of a high-speed trunk to combine with multiple ports such as a 16Gbps fat pipe, and supports fail-over as well. Also, the **Link Layer Discovery Protocol (LLDP)** is the Layer 2 protocol included to help discover basic information about neighboring devices on the local broadcast domain.



Efficient Traffic Control

The WGS-804HPT is loaded with robust QoS features and powerful traffic management to enhance services to business-class data, voice, and video solutions. The functionality includes broadcast/multicast/unicast **storm control**, per port **bandwidth control**, 802.1p/CoS/IP DSCP QoS priority and remarking. It guarantees the best performance in VoIP and video stream transmission, and empowers the enterprises to take full advantage of the limited network resources.

Powerful Security

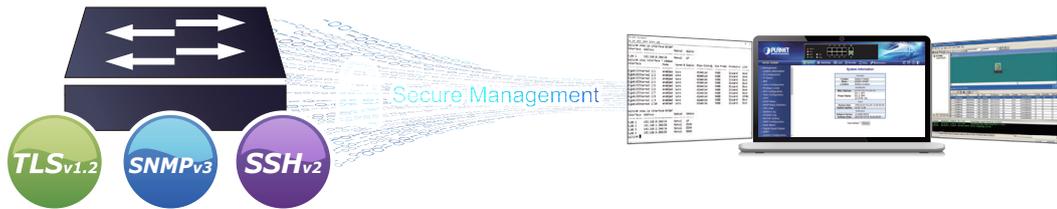
PLANET WGS-804HPT offers comprehensive **IPv4/IPv6** Layer 2 to Layer 4 **Access Control List (ACL)** for enforcing security to the edge. It can be used to restrict network access by denying packets based on source and destination IP address, TCP/UDP ports or defined typical network applications. Its protection mechanism also comprises **802.1X port-based** user and device authentication, which can be deployed with RADIUS to ensure the port level security and block illegal users. With the **protected port** function, communication between edge ports can be prevented to guarantee user privacy. Furthermore, **Port security** function allows to limit the number of network devices on a given port. The network administrators can now construct highly-secure corporate networks with considerably less time and effort than before.

Friendly and Secure Management

For efficient management, the WGS-804HPT is equipped with Command line, Web and SNMP management interfaces.

- With the built-in **Web-based** management interface, the WGS-804HPT offers an easy-to-use, platform-independent management and configuration facility.
- For **text-based** management, it can be accessed via Telnet and the console port.
- By supporting the standard SNMP protocol, the switch can be managed via any SNMP-based management software.

Moreover, the WGS-804HPT offers secure remote management by supporting **SSHv2**, **TLSv1.2** and **SNMP v3** connections which encrypt the packet content at each session.



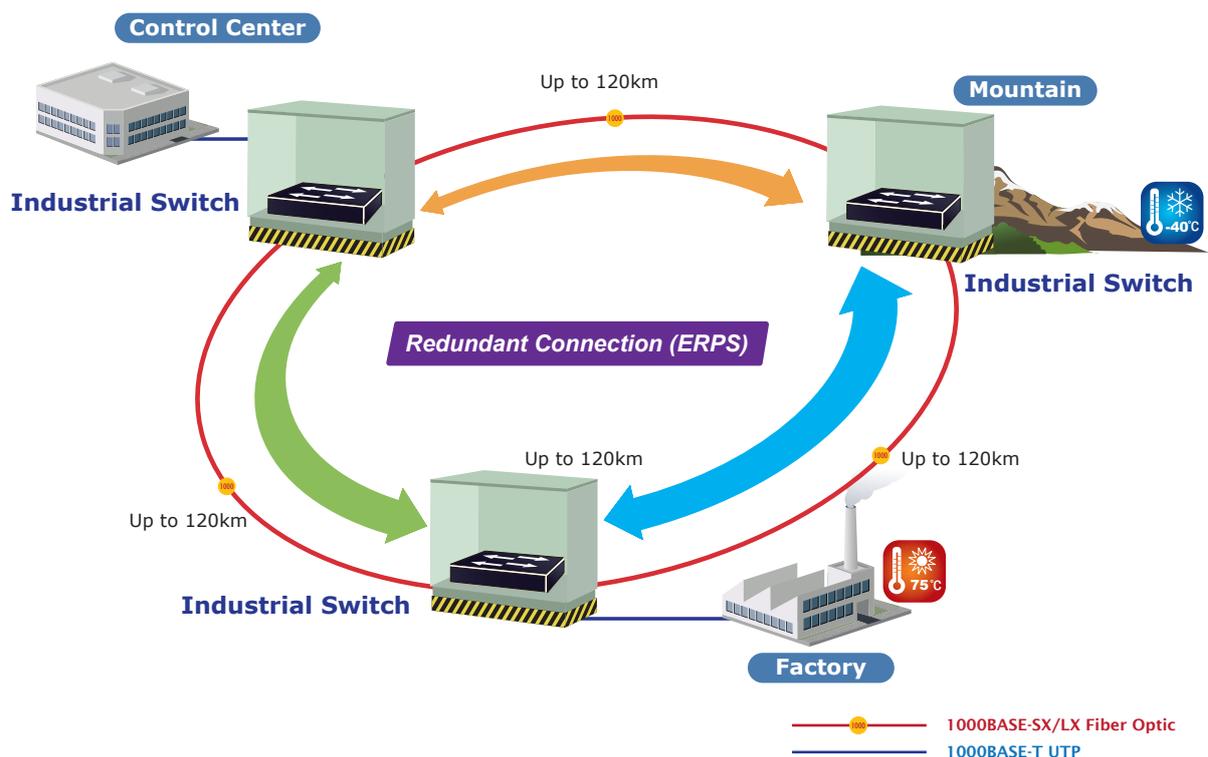
Ready to Go with IoT Generation

Internet is very popular the world over as users surf online daily with their mobile devices, such as smart phones, tablets, or laptop computers. However, users expect more from the convenience of Internet, like how to use their mobile devices to control something via the Internet, thus making life more convenient. The WGS-804HPT is based on such concept to help users implement the Internet of things (IoT) on the SOHO/Home network. Home automation is no longer a dream as Gigabit network can easily cloud IoT equipment, making it a smart home.

Applications

ITU-T G.8032 ERPS Makes Data Transmission Uninterrupted

The WGS-804HPT features strong rapid self-recovery capability to prevent interruptions and external intrusions. It incorporates **ITU-T G.8032 ERPS (Ethernet Ring Protection Switching)** technology into customer’s automation network to enhance system reliability and uptime. Applying the IEEE 802.3at Power over Ethernet standard, the WGS-804HPT can directly connect with any IEEE 802.3at end nodes like PTZ (pan, tilt, zoom) network cameras and speed dome cameras. The WGS-804HPT can easily help system integrators with the available network infrastructure to build wireless AP, IP camera and VoIP systems where power can be centrally controlled.



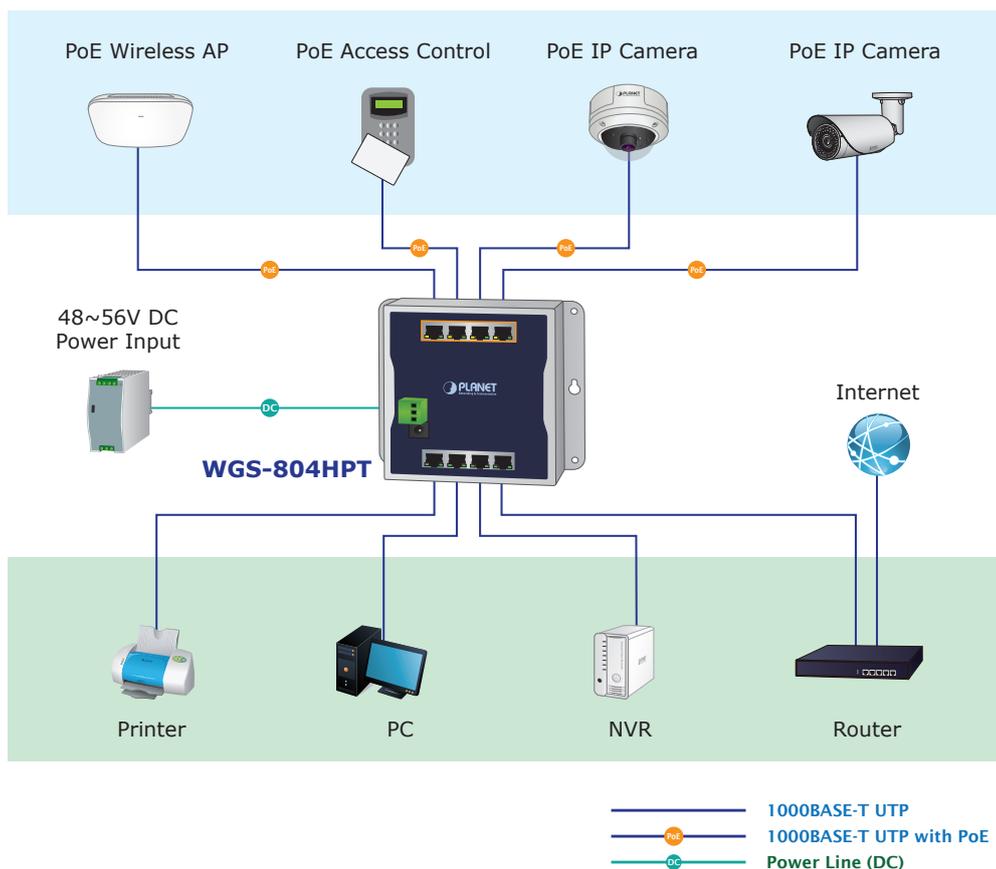
Security Building Automation Switch

Suitable for buildings where security is strictly to be enforced, the WGS-804HPT Industrial Wall-mount Managed Switch offers a comprehensive Layer 2 to Layer 4 Access Control List (ACL). The switch can restrict network access by denying packets based on source and destination IP address, TCP/UDP ports or defined typical network applications. With the WGS-804HPT, a tightly-controlled network can be easily had in no time.



Industrial Area Switch for Data Collection and Forwarding

The WGS-804HPT is equipped with 8 10/100/1000Mbps ports offering auto MDI/MDIX feature providing 16Gbps non-blocking switch fabric and the 8K MAC address table so that the WGS-804HPT can perform wire-speed packets transfer without the risk of packet loss. The WGS-804HPT with the slim-type IP30 metal case is ideal for most heavy industrial demanding environments.



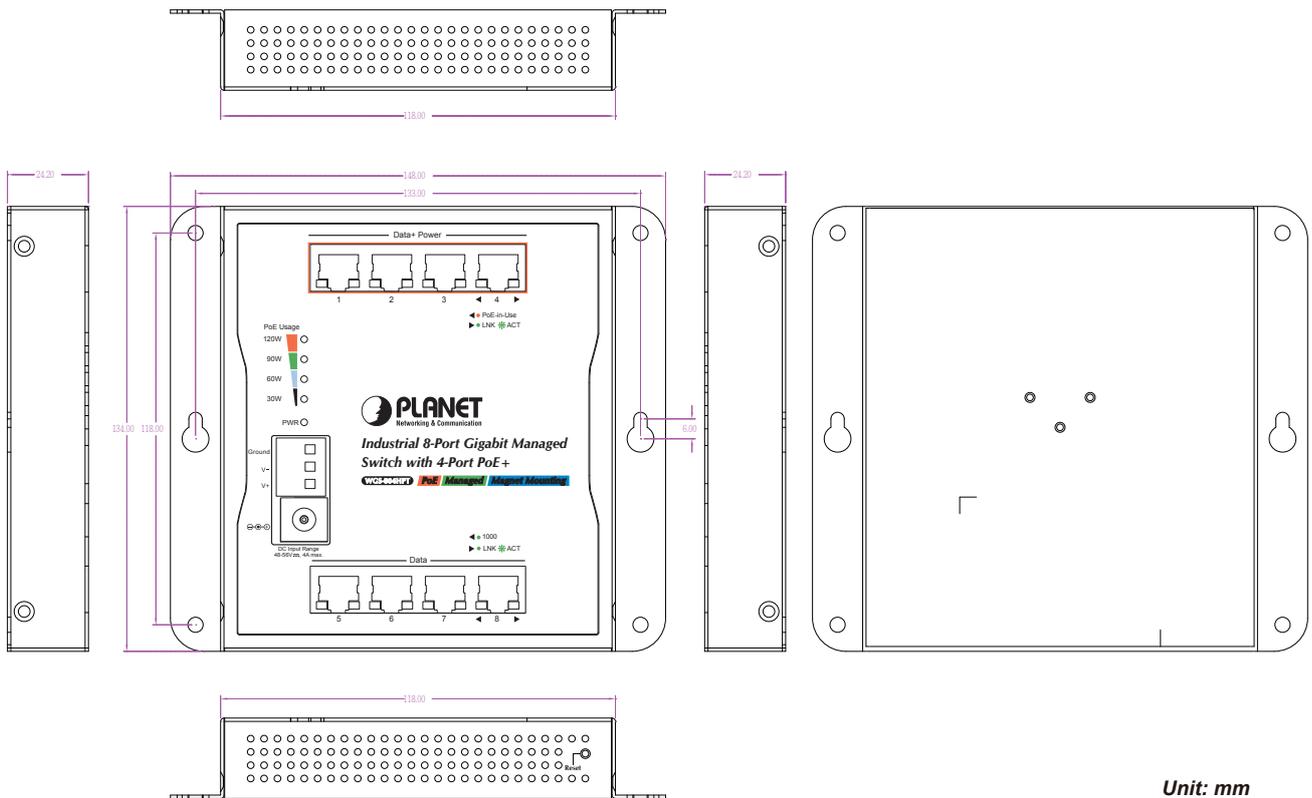
Specifications

Product	WGS-804HPT
Hardware Specifications	
Copper Ports	8-Port 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports
PoE Inject Port	4-Port with 802.3af/802.3at PoE injector function (Port-1 to Port-4)
Reset Button	< 5 sec: System reboot > 5 sec: Factory default
Connector	<ul style="list-style-type: none"> ■ Removable 3-pin terminal block for power input <ul style="list-style-type: none"> - Pin 1/2 for Power (Pin 1: V+ / Pin 2: V-) - Pin 3 for earth ground ■ DC power jack with 2.0mm central pole
Power Requirements	48~56V DC, 3A (max.)
Power Consumption/ Dissipation	Max. 152 watts/519 BTU
Dimensions (W x D x H)	148 x 25 x 134 mm
Weight	532g
ESD Protection	Contact Discharge 4KV DC Air Discharge 8KV DC
Enclosure	IP30 metal
Installation	Wall mount, magnetic wall mount and DIN-rail kit
LED	<p>Power LED: Power (Green)</p> <p>PoE Power Usage LED: 30W, 60W, 90W, 120W (Green)</p> <p>PoE Port(Port-1 to Port-4) : PoE-in-Use (Amber) LNK/ACT (Green)</p> <p>10/100/1000BASE-TX Port (Port-5 to Port-8) : 1000 (Green) LNK/ACT (Green)</p>
Switch Specifications	
Switch Architecture	Store-and-Forward
Switch Fabric	16Gbps/non-blocking
Switch Throughput@64 bytes	11.9Mpps @64 bytes
MAC Address Table	8K entries
Shared Data Buffer	4.1 megabits
Flow Control	IEEE 802.3x pause frame for full-duplex Back pressure for half-duplex
Jumbo Frame	10KB
Power over Ethernet	
PoE Standard	IEEE 802.3af/802.3at Power over Ethernet PSE
PoE Power Supply Type	End-span
PoE Power Output	<p>IEEE 802.3af Standard</p> <ul style="list-style-type: none"> - Per port 48V~56V DC (depending on the power supply), max. 15.4 watts <p>IEEE 802.3at Standard</p> <ul style="list-style-type: none"> - Per port 50V~56V DC (depending on the power supply), max. 36 watts
Power Pin Assignment	1/2(+), 3/6(-)
PoE Power Budget	144 watts (depending on power input)
Max. Number of Class 2 PDs	4
Max. Number of Class 3 PDs	4
Max. Number of Class 4 PDs	4
PoE Management Functions	
PoE Management	<p>PD Alive Check</p> <p>Scheduled Power Recycling</p> <p>PoE Schedule</p> <p>PoE Usage Monitoring</p> <p>PoE Extension</p>
Active PoE Device Live Detection	Yes
PoE Power Recycling	Yes, daily or predefined schedule
PoE Schedule	4 schedule profiles
PoE Extend Mode	Yes, max. up to 250 meters

Layer 2 Functions	
Port Mirroring	TX/RX/Both Many-to-1 monitor
VLAN	802.1Q tagged VLAN Up to 256 VLAN groups, out of 4094 VLAN IDs 802.1ad Q-in-Q tunneling (VLAN stacking) Voice VLAN Protocol VLAN Private VLAN (Protected port) GVRP Management VLAN
Link Aggregation	IEEE 802.3ad LACP and static trunk Supports 4 groups with 4 ports per trunk
Spanning Tree Protocol	STP, IEEE 802.1D Spanning Tree Protocol RSTP, IEEE 802.1w Rapid Spanning Tree Protocol MSTP, IEEE 802.1s Multiple Spanning Tree Protocol STP BPDU Guard, BPDU Filtering and BPDU Forwarding
IGMP Snooping	IPv4 IGMP (v2/v3) snooping IGMP querier Up to 256 multicast groups
MLD Snooping	IPv6 MLD (v1/v2) snooping, up to 256 multicast groups
QoS	8 mapping ID to 8 level priority queues - Port Number - 802.1p priority - DSCP/IP precedence of IPv4/IPv6 packets Traffic classification based, strict priority and WRR Ingress/Egress Rate Limit per port bandwidth control
Ring	Supports ERPS, and complies with ITU-T G.8032
Security Functions	
Access Control List	IPv4/IPv6 IP-based ACL/MAC-based ACL IPv4/IPv6 IP-based ACE/MAC-based ACE
Port Security	IEEE 802.1X – Port-based authentication Built-in RADIUS client to co-operate with RADIUS server RADIUS/TACACS+ user access authentication
MAC Security	IP-MAC port binding MAC filter Static MAC address
Enhanced Security	DHCP Snooping and DHCP Option82 STP BPDU guard, BPDU filtering and BPDU forwarding DoS attack prevention ARP inspection IP source guard
Management Functions	
Basic Management Interfaces	Web browser; Telnet; SNMP v1, v2c
Secure Management Interfaces	SSHv2, TLS v1.2, SNMPv3
Switch Management	Firmware upgrade by HTTP/TFTP protocol through Ethernet network Configuration upload/download through HTTP/TFTP Remote/Local Syslog System log LLDP protocol SNTP PLANET Smart Discovery Utility PLANET NMS System/CloudViewer
SNMP MIBs	RFC 1213 MIB-II RFC 1215 Generic Traps RFC 1493 Bridge MIB RFC 2674 Bridge MIB Extensions RFC 2737 Entity MIB (Version 2) RFC 2819 RMON (1, 2, 3, 9) RFC 2863 Interface Group MIB RFC 3635 Ethernet-like MIB RFC 3621 Power Ethernet MIB

Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC 60068-2-32 (free fall) IEC 60068-2-27 (shock) IEC 60068-2-6 (vibration)
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3z Gigabit SX/LX IEEE 802.3ab Gigabit 1000BASE-T IEEE 802.3x Flow Control and Back Pressure IEEE 802.3ad Port Trunk with LACP IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.1s Multiple Spanning Tree Protocol IEEE 802.1p Class of Service IEEE 802.1Q VLAN Tagging IEEE 802.1x Port Authentication Network Control IEEE 802.1ab LLDP RFC 768 UDP RFC 783 TFTP RFC 793 TCP RFC 791 IP RFC 792 ICMP RFC 2068 HTTP RFC 1112 IGMP v1 RFC 2236 IGMP v2 RFC 3376 IGMP v3 RFC 2710 MLD v1 RFC 3810 MLD v2 ITU G.8032 ERPS Ring
Environment	
Operating	Temperature: -40 ~ 75 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -40 ~ 85 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Accessories	
Standard Accessories	<ul style="list-style-type: none"> ■ Quick Installation Guide x 1 ■ 3-pin Terminal Block Connector x 1 ■ Wall-mounted Kit x 1 ■ DIN-rail Kit x 1 ■ Magnet Kit x 1 ■ RJ45 Dust Cap x 8

Dimensions



Unit: mm

Ordering Information

WGS-804HPT	Industrial 8-Port 10/100/1000T Wall-mounted Managed Switch with 4-Port PoE+ (-40~75 degrees C)
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Accessories

PWR-120-48	120W 48V DC Single Output Industrial DIN-rail Power Supply (-10 ~ 60 degrees C)
PWR-240-48	240W 48V DC Single Output Industrial DIN-rail Power Supply (-10 ~ 60 degrees C)
PWR-480-48	480W 48V DC Single Output Industrial DIN-rail Power Supply (-25 ~ 70 degrees C)

Related Products

WGS-4215-8P2S	Industrial 8-Port 10/100/1000T 802.3at PoE + 2-Port 100/1000X SFP Wall-mounted Managed Switch (-40~75 degrees C)
WGS-4215-16P2S	Industrial 16-Port 10/100/1000T 802.3at PoE + 2-Port 100/1000X SFP Wall-mounted Managed Switch
WGS-4215-8HP2S	Industrial 4-Port 10/100/1000T 802.3bt PoE + 4-Port 10/100/1000T 802.3at PoE + 2-Port 100/1000X SFP Wall-mount Managed Switch (-40~75 degrees C)
WGS-5225-8UP2SV	Industrial L2+ 8-Port 10/100/1000T 802.3bt PoE + 2-Port 1G/2.5G SFP Wall-mount Managed Switch with LCD Touch Screen
WGS-5225-8P2SV	Industrial 8-port 10/100/1000T 802.3at PoE + 2-port 1G/2.5G SFP Wall-mount Managed Switch with LCD Touch Screen
WGS-5225-8P2S	Industrial 8-port 10/100/1000T 802.3at PoE + 2-port 1G/2.5G SFP Wall-mount Managed Switch
WGS-804HP	8-Port 10/100/1000T Wall Mounted Gigabit Ethernet Switch with 4-Port PoE+
WGS-814HP	Industrial 8-Port 10/100/1000T Wall-mounted Gigabit Switch with 4-port PoE+
WGS-818HP	Industrial 8-Port 10/100/1000T Wall-mounted Gigabit PoE+ Switch

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