

## Industrial 8-Port 10/100/1000T Wall-mounted Gigabit PoE+ Switch



### Easily-deployed and Expanded PoE Network

Designed to be installed in a wall enclosure or simply mounted at any convenient location on a wall, PLANET WGS-814HP and WGS-818HP are innovative, **wall-mounted industrial 8-port Gigabit Ethernet Switches with 4-/8-port 802.3at Power over Ethernet Plus injector**. They come in a compact but rugged IP30 metal housing. Featuring a total PoE budget of **60/120 watts**, ultra networking speed and operating temperature ranging from **-20 to 60 degrees C**, the WGS-814HP and WGS-818HP are ideal solutions to meet the demand for sufficient PoE power for the following network applications.

- Building / Home automation network
- Internet of things (IoT)
- IP surveillance and wireless

The WGS-814HP and WGS-818HP are able to operate reliably, stably and quietly in any environment without affecting its performance, and provides a quick, safe and easy deployment of PoE PDs with power feeding.



### Innovative Wall-mount Installation

The WGS-814HP and WGS-818HP are 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 **“Front Access”** design, making the installing, cable wiring, LED monitoring and maintenance of the WGS-818HP placed in an enclosure very easy for technicians to manage. **Fixed wall mounting, magnetic wall mounting or DIN rail** installation can be had to suit your working environment, thereby making its usability more flexible.

### Physical Port

- **WGS-814HP**
  - **8-Port 10/100/1000BASE-T** Gigabit RJ45 copper with 4-Port **IEEE 802.3at PoE+** Injector (Port-1 to Port-4)
- **WGS-818HP**
  - **8-Port 10/100/1000BASE-T** Gigabit RJ45 copper with 8-Port **IEEE 802.3at PoE+** Injector (Port-1 to Port-8)

### Power over Ethernet

- Complies with IEEE 802.3at Power over Ethernet Plus, end-span PSE
- Backward compliant with IEEE 802.3af Power over Ethernet end-span PSE
- Up to 4 ports of IEEE 802.3at devices powered (WGS-814HP)
- Up to 8 ports of IEEE 802.3at devices powered (WGS-818HP)
- Supports PoE Power up to 30.8 watts for each PoE port
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 250 meters ( in extend mode)

### Layer 2 Features

- High performance Store and Forward architecture
- IEEE 802.3x flow control for full duplex operation and back pressure for half duplex operation
- 9K jumbo frame supports in 1000Mbps duplex mode
- Automatic address learning and address aging

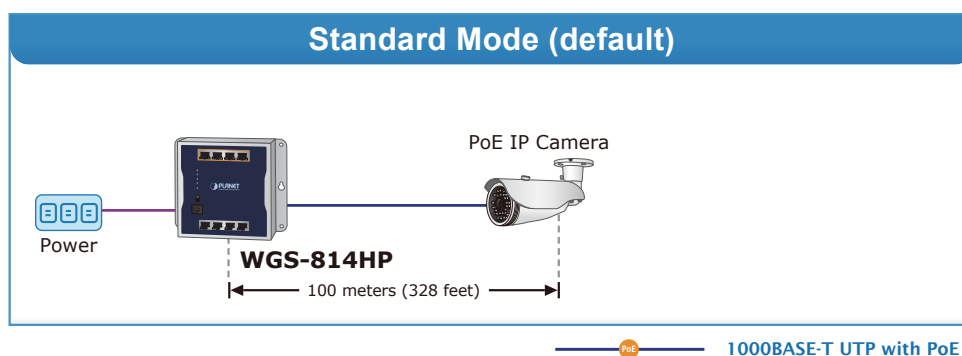
### Industrial Case and Installation

- Compact size; fixed wall mounting, magnetic wall mounting or DIN-rail mounting
- IP30 metal chassis
- Supports -20 to 60 degrees C operating temperature
- LED indicators for real-time PoE usage
- 48V~56V DC input range

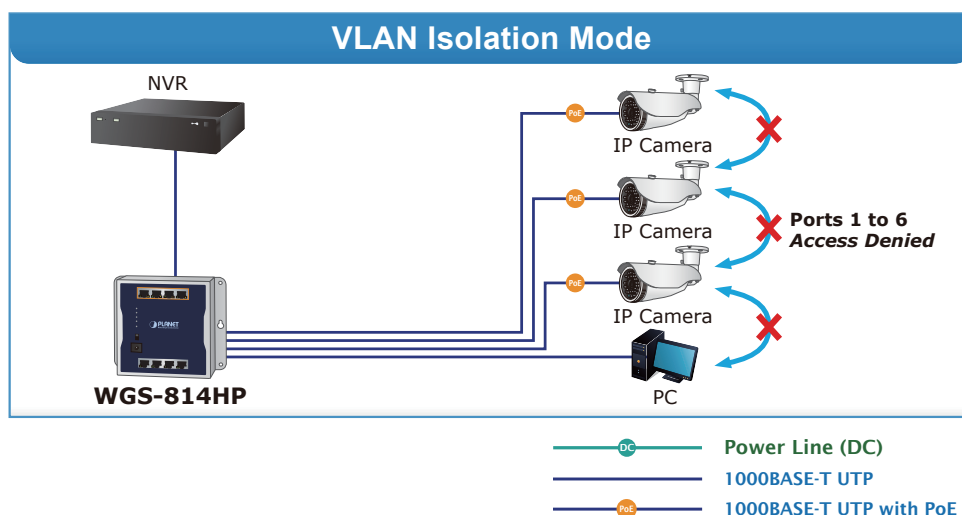


### Standard, VLAN and Extend Operation Modes

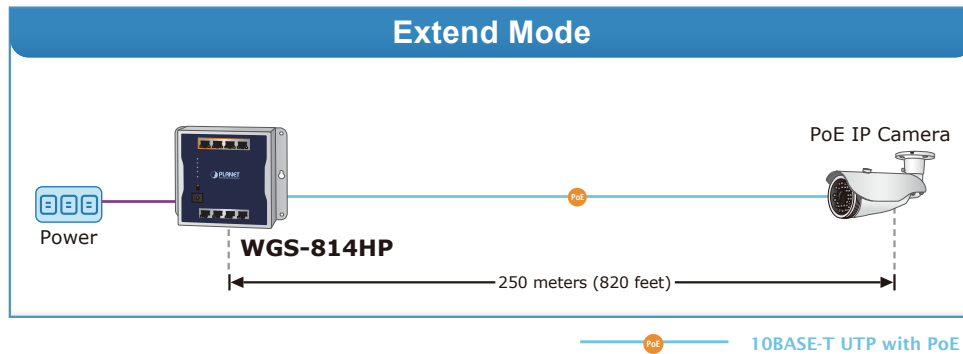
The WGS-814HP and WGS-818HP provide **Standard**, **VLAN** and **Extend** operation modes. The WGS-814HP and WGS-818HP can operate as a normal IEEE 802.3at/ PoE+ switch in the standard operation mode.



The **VLAN operation mode** features the port-based VLAN function that can help to prevent the IP camera's multicast or broadcast storm from influencing each other. With two uplink ports with 1000Mbps transfer rate, it ensures high-speed data and video transmission, and reliable assurance for connection between the surveillance system and outside network where the four PoE+ ports can be used to their full potential.



In the **Extend operation mode**, the WGS-814HP and WGS-818HP operate 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, both WGS-814HP and WGS-818HP provide an additional solution for 802.3at PoE distance extension, thus saving the cost of Ethernet cable installation. Its VLAN isolation function isolates ports so as to prevent broadcast storm and defend DHCP spoofing in the extend operation mode.



#### Centralized Power Distribution for Small Ethernet Networking

The WGS-814HP and WGS-818HP provide four/Eight PoE ports that combine up to **60/120 watts** of power output budget for catering to small-scale PoE network applications. Compliant with both IEEE 802.3at and IEEE 802.3af Power over Ethernet standards, each PoE port supplies up to 30 watts of power output and data transmission in Gigabit speed both delivered over one Cat.5e/6 Ethernet cable, powering remote PoE PD at distance up to 100 meters.

#### Intelligent LED Indicator for Real-time PoE Usage

To facilitate auto power management, the WGS-818HP implements **Power Budget Control** function that helps to prevent power budget overloading. Moreover, the WGS-818HP 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-814HP has four LEDs indicating **15W, 30W, 45W** and **60W** of power usage while the front panel of the WGS-818HP has four LEDs indicating **30W, 60W, 90W** and **120W** of power usage

#### PoE Power Usage 60W



#### PoE Power Usage 120W



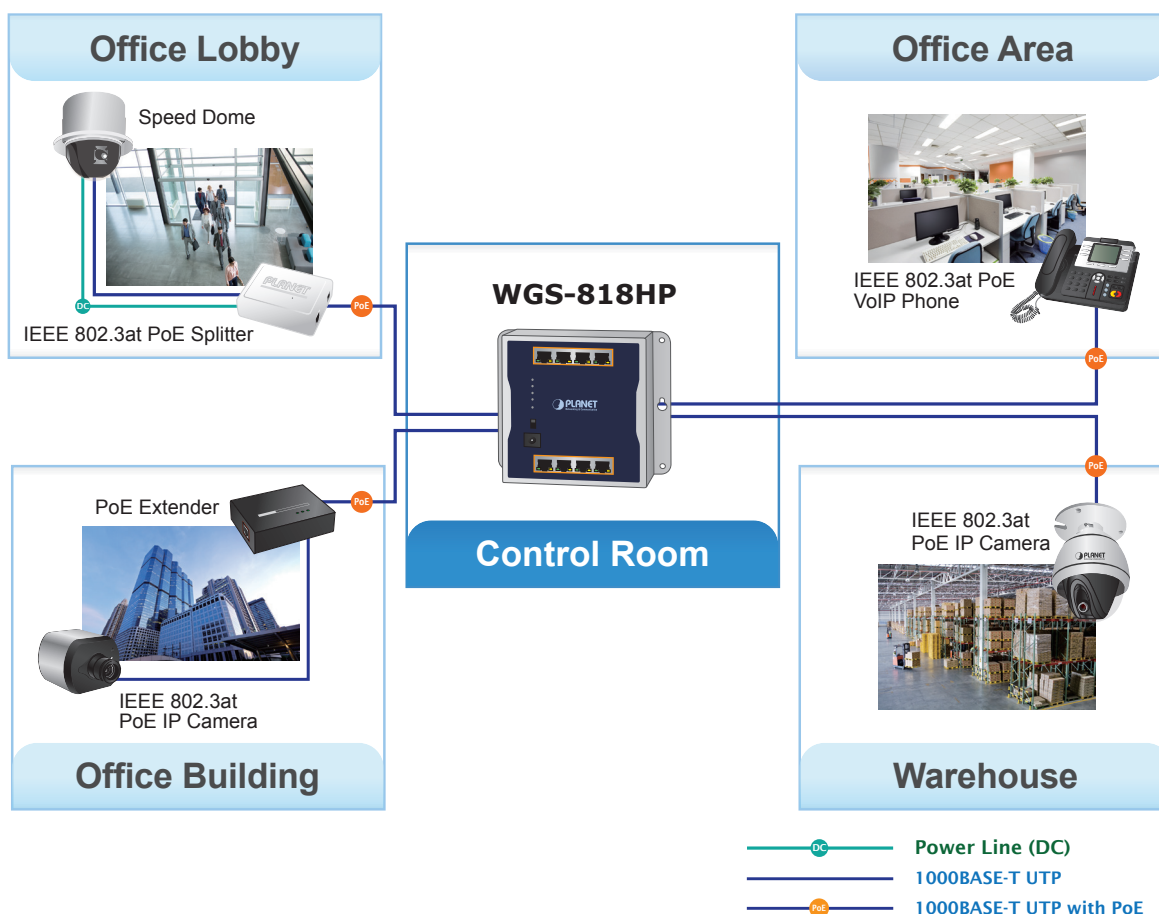
### Quick, Safe and Easy PoE Network Deployment

Carrying both Ethernet data and power simultaneously, the WGS-814HP and WGS-818HP reduce cabling requirements and eliminates the need for dedicated electrical outlets on the wall, ceiling or any unreachable place. It helps users to utilize just one Ethernet cable to install and deploy IP camera, wireless AP or VoIP phone more efficiently and cost-effectively.

## Applications

### IP Office Department/Workgroup PoE Switch

To further expand the office premises, the additional telephones required could be installed at less cost via the PoE IP telephony system, better than the traditional circuit wiring telephony system. The WGS-814HP and WGS-818HP PoE+ Switch help enterprises to create an integrated data, voice, and powered network. The IEEE 802.3af/at compliant IP phones can be installed without the need of an additional power cable because the power can be provided via the standard Ethernet cable from the connected PoE+ Switch. With the WGS-814HP and WGS-818HP, IP telephony deployment becomes more reliable and cost effective, thus helping enterprises save tremendous cost when upgrading from the traditional telephony system to IP telephony communications infrastructure.



## Specifications

| Model                      |                        | WGS-814HP                                                                                                                                                                                                                           | WGS-818HP                                                     |
|----------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Hardware Specifications    |                        |                                                                                                                                                                                                                                     |                                                               |
| Network Connector          |                        | 8-Port RJ45 for 10/100/1000BASE-T                                                                                                                                                                                                   | 8-Port RJ45 for 10/100/1000BASE-T                             |
| PoE Inject Port            |                        | 4-Port with 802.3at PoE+ injector function (Port-1 to Port-4)                                                                                                                                                                       | 8-Port with 802.3at PoE+ injector function (Port-1 to Port-8) |
| Switch Architecture        |                        | Store and forward                                                                                                                                                                                                                   |                                                               |
| MAC Address Table          |                        | 4K MAC address table with auto learning function                                                                                                                                                                                    |                                                               |
| Switch Fabric              |                        | 16Gbps / non-blocking                                                                                                                                                                                                               |                                                               |
| Switch Throughput          |                        | 11.9Mpps@64Bytes                                                                                                                                                                                                                    |                                                               |
| Jumbo Frame                |                        | 9Kbytes                                                                                                                                                                                                                             |                                                               |
| Flow Control               |                        | IEEE 802.3x pause frame for full duplex<br>Back pressure for half duplex                                                                                                                                                            |                                                               |
| LED Indicators             | Power LED              | Power (Green)                                                                                                                                                                                                                       |                                                               |
|                            | PoE Power Usage LED    | 15W, 30W, 45W, 60W (Amber)                                                                                                                                                                                                          | 30W, 60W, 90W, 120W (Amber)                                   |
|                            | PoE Port               | PoE-in-Use (Amber)<br>LNK/ACT (Green)                                                                                                                                                                                               | PoE-in-Use (Amber)<br>LNK/ACT (Green)                         |
|                            | 10/100/1000BASE-T Port | LNK/ACT (Green)                                                                                                                                                                                                                     | -                                                             |
| ESD Protection             |                        | 4KV DC                                                                                                                                                                                                                              |                                                               |
| DIP Switch                 |                        | Selectable operation modes:<br>■ Standard: IEEE 802.3at PoE+ transmission distance of 100m<br>■ VLAN: Port-based VLAN<br>■ Extend: 25-watt PoE transmission distance of 250m at speed of 10Mbps                                     |                                                               |
| Connector                  |                        | DC power jack with 2.0mm central pole                                                                                                                                                                                               |                                                               |
| Power Requirements         |                        | 48~56V DC, 1.5A (max.)                                                                                                                                                                                                              | 48~56V DC, 3A (max.)                                          |
| Power Consumption          |                        | 70 watts / 239BTU                                                                                                                                                                                                                   | 137 watts / 467BTU                                            |
| Enclosure                  |                        | IP30 metal                                                                                                                                                                                                                          |                                                               |
| Dimensions (W x D x H)     |                        | 148 x 25 x 134 mm                                                                                                                                                                                                                   |                                                               |
| Weight                     |                        | 472 g                                                                                                                                                                                                                               | 474 g                                                         |
| Installation               |                        | Fixed wall mounting, magnetic wall mounting and DIN-rail mounting                                                                                                                                                                   |                                                               |
| Power over Ethernet        |                        |                                                                                                                                                                                                                                     |                                                               |
| PoE Standard               |                        | IEEE 802.3at Power over Ethernet Plus PSE                                                                                                                                                                                           |                                                               |
| PoE Power Supply Type      |                        | End-span                                                                                                                                                                                                                            |                                                               |
| PoE Power Output           |                        | IEEE 802.3af Standard<br>- Per port 48V~56V DC (depending on the power supply), max. 15.4 watts<br>IEEE 802.3at Standard<br>- Per port 50V~56V DC (depending on the power supply), max. 30 watts                                    |                                                               |
| Power Pin Assignment       |                        | 1/2(+), 3/6(-)                                                                                                                                                                                                                      |                                                               |
| PoE Power Budget           |                        | 60 watts (depending on power input)                                                                                                                                                                                                 | 120 watts (depending on power input)                          |
| Max. Number of Class 2 PDs |                        | 4                                                                                                                                                                                                                                   | 8                                                             |
| Max. Number of Class 3 PDs |                        | 4                                                                                                                                                                                                                                   | 8                                                             |
| Max. Number of Class 4 PDs |                        | 2                                                                                                                                                                                                                                   | 4                                                             |
| Standard Conformance       |                        |                                                                                                                                                                                                                                     |                                                               |
| Standard Compliance        |                        | IEEE 802.3 Ethernet<br>IEEE 802.3u Fast Ethernet<br>IEEE 802.3ab Gigabit Ethernet<br>IEEE 802.3x Flow Control<br>IEEE 802.3af Power over Ethernet<br>IEEE 802.3at Power over Ethernet plus<br>IEEE 802.3z Energy Efficient Ethernet |                                                               |
| Regulatory Compliance      |                        | FCC Part 15 Class A, CE                                                                                                                                                                                                             |                                                               |
| Stability Testing          |                        | IEC 60068-2-32 (Free fall)<br>IEC 60068-2-27 (Shock)<br>IEC 60068-2-6 (Vibration)                                                                                                                                                   |                                                               |
| Environment                |                        |                                                                                                                                                                                                                                     |                                                               |
| Operating                  |                        | Temperature: -20 ~ 60 degrees C<br>Relative Humidity: 5 ~ 95% (non-condensing)                                                                                                                                                      |                                                               |
| Storage                    |                        | Temperature: -20 ~ 70 degrees C<br>Relative Humidity: 5 ~ 95% (non-condensing)                                                                                                                                                      |                                                               |



## Ordering Information

|           |                                                                                      |
|-----------|--------------------------------------------------------------------------------------|
| WGS-814HP | Industrial 8-Port 10/100/1000T Wall-mounted Gigabit Ethernet Switch with 4-Port PoE+ |
| WGS-818HP | Industrial 8-Port 10/100/1000T 802.3at PoE+ Wall-mounted Gigabit Ethernet Switch     |

## Related Products

|               |                                                                                                         |
|---------------|---------------------------------------------------------------------------------------------------------|
| WGS-810       | Industrial 8-Port 10/100/1000T Wall-mounted Gigabit Ethernet Switch with 4-Port PoE+ (-20~60 degrees C) |
| WGS-804HP     | 8-Port 10/100/1000T Wall-mounted Gigabit Ethernet Switch with 4-Port PoE+                               |
| WGS-4215-8P2S | Industrial 8-Port 10/100/1000T 802.3at PoE + 2-Port 100/1000X SFP Wall-mount Managed Switch             |
| WGR-500       | Industrial Wall-mount Gigabit Router                                                                    |
| HAC-1000      | Z-wave Home Automation Control Gateway                                                                  |
| WDAP-C7200E   | 1200Mbps 802.11ac Dual Band Ceiling-mount Wireless Access Point                                         |
| ICA-3460V     | H.265 4MP PoE Bullet IR IP Camera with Vari-focal Lens                                                  |
| ICA-4460V     | H.265 4MP PoE Dome IR IP Camera with Vari-focal Lens                                                    |

# DIREKTRONIK

Direktronik AB tel. 08-52 400 700 [www.direktronik.se](http://www.direktronik.se)