PLANET
Networking & Communication

Product Specifications

4-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T

Desktop Ethernet Switch

GSD-604HP

Version 3.0

Change History:

Revision	Date	Author	Change List
Version 3.0	2019/10/14	Calvin Chao	PoE Chipset changes
Version 2.0	2017/3/14	Bryant Wu	Main Chipset changes Remove Loop protection
Version 1.0	2015/11/19	Bryant Wu	Initial release

Author	Calvin Chao	Editor:	Calvin Chao
Reviewed by:		Approved by:	Kent Kang

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1. PRODUCT DESCRIPTION

Cost-effective IP Surveillance System Solution

PLANET's new GSD-604HP provides four 802.3at PoE+ ports for catering to small-scale IP surveillance or home networks at a lower total cost. With **Dual** 10/100/1000BASE-T uplink ports, the recorded HD video streams from the 4 PoE IP cameras can be powered by the GSD-604HP and saved in the 4-channel NVR systems or surveillance software to perform comprehensive security monitoring and manage the surveillance system in the LAN or the remote site via Internet.
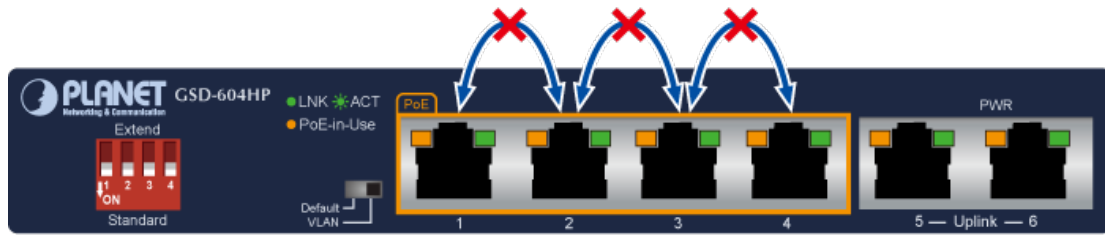
The GSD-604HP's advanced features are as follows:

- **Four   PoE+ port with a total budget of 65 watts**
- **Two 10/100/1000Mbps uplink ports**
- **Port-based VLAN**
- **Compact size, fanless design**
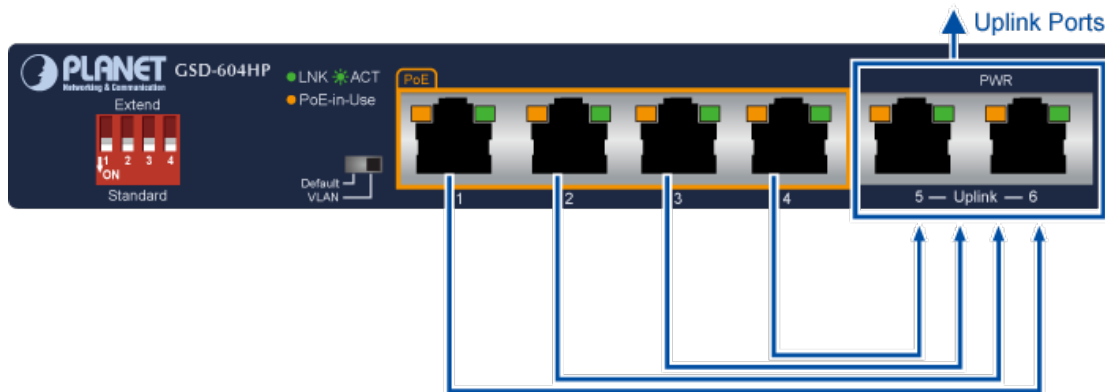- **Extended mode**

Two Gigabit Uplink Ports

The GSD-604HP comes with two uplink ports with 1000Mbps transfer rate to ensure 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.

Innovative Port-based VLAN

The GSD-604HP features "**Port-based VLAN**" whose ports can be isolated from each other via one DIP switch.   This can help to prevent the IP camera's multicast or broadcast storm from influencing each other, thus fully meeting the requirements of the IP surveillance systems and Ethernet projects.
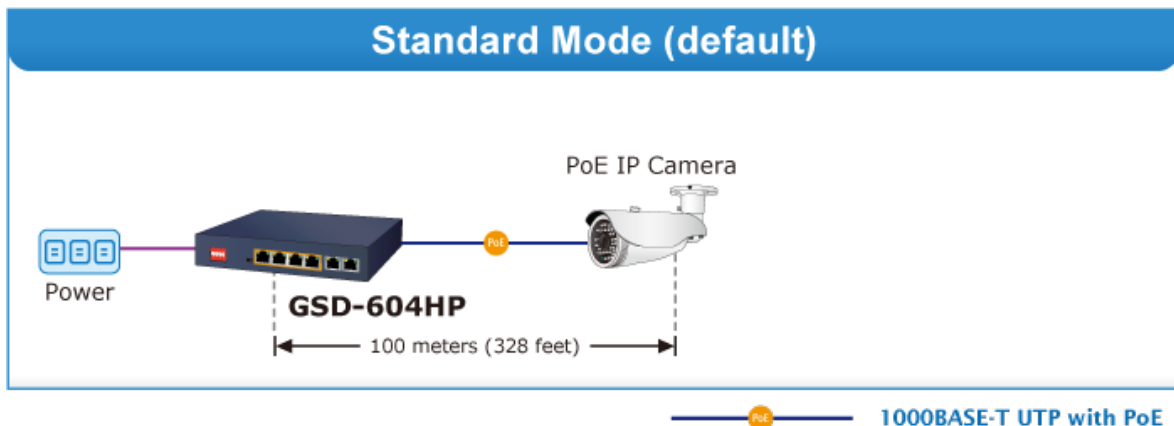
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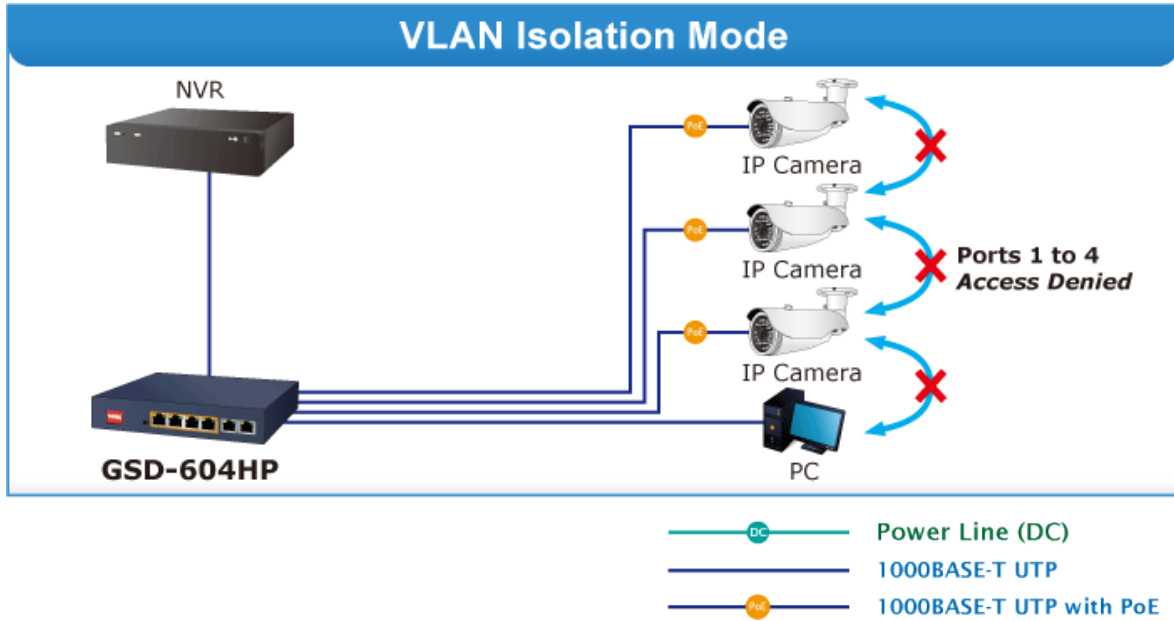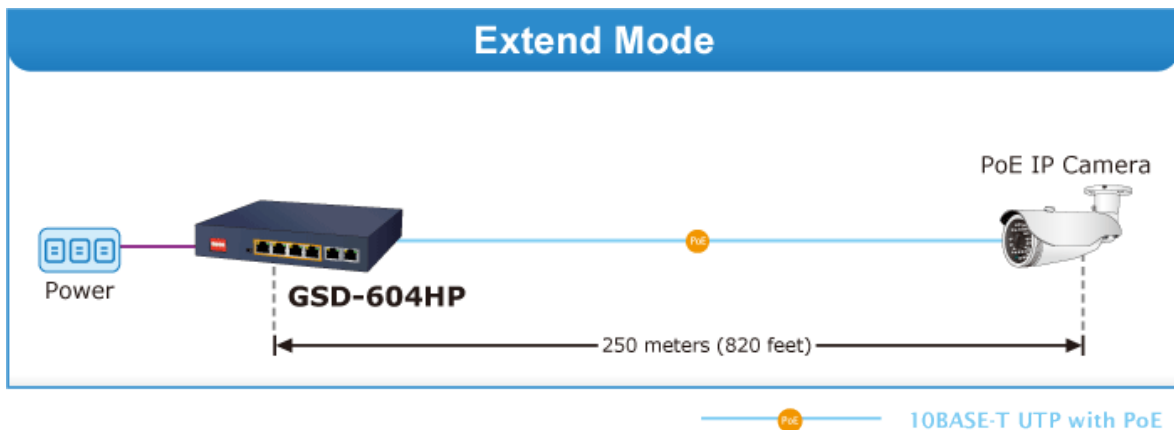

Standard, VLAN and Extend Operation Modes

The GSD-604HP provides **Standard**, **VLAN** and **Extend** operation modes. The GSD-604HP operates as a normal IEEE 802.3at/af 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.

■ In the **Extend operation mode**, the GSD-604HP 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 GSD-604HP provides an additional solution for 802.3at/af 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.

Environment-friendly, Fanless Design for Silent Operation
The GSD-604HP comes with a desktop-sized, compact metal housing, making the placement of the unit convenient. It features a ventilated construction in which a cooling fan is not necessary, thereby making its operation noiseless. Moreover, the GSD-604HP is able to operate reliably and stably in any environment without affecting its performance. The deployment of PoE PDs with constant power feeding can be easily and quickly done.

Robust Protection
The GSD-604HP protects against the ESD 6kV surge to improve product stability and also protects users' networks from devastating ESD attacks, making sure the flow of operation does not fluctuate.

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2. PRODUCT FEATURES

➢ **RJ45 Interface**

■ 6 10/100/1000BASE-T RJ45 ports with 4-port IEEE 802.3af/at injector function

➢ **Power over Ethernet**

■ Complies with IEEE 802.3af/at Power over Ethernet end-span PSE

■ Up to 4 ports of IEEE 802.3af/802.3at devices powered

■ Supports PoE power up to 30 watts for each PoE port

■ Each port supports 54V DC power to PoE powered device

■ 65-watt PoE budget

■ Auto detects powered device (PD)

■ Circuit protection prevents power interference between ports

■ Remote power feeding up to 100m in standard mode and 250m in extend mode

➢ **Switching**

■ Hardware-based 10/100/1000Mbps, auto-negotiation and auto MDI/MDI-X

■ Flow control for full duplex operation and back pressure for half duplex operation

■ Integrates address look-up engine, supporting 4K absolute MAC addresses

■ Automatic address learning and address aging

■ Supports port-based VLAN

➢ **Hardware**

■ LED indicators for PoE ready/activity and LINK/ACT

■ One 54V DC power jack

■ Fanless design

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3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENTS

Switch ASIC:	RTL8370N-VB-CG	x 1
PSE Chipset:	PD69104B1	x 1
Switch EEPRM:	AT24C02 + AT24C16	x 1
PoE EEPRM:	AT24C16	x 1

3.2 FUNCTION SPECIFICATIONS

Model	GSD-604HP 4-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T Desktop Ethernet Switch
Hardware Specifications	
Network Connector	6 10/100/1000BASE-T RJ45 auto MDI/MDIX ports
PoE Inject Port	4 ports with 802.3at/af PoE injector function (Ports1 to 4)
LED Display	**System:** Power (Orange) **Per PoE port:** PoE (Orange, port 1 to port 4) **Ethernet port:** LNK(Green)
Thermal Fan	Fanless design
Switch Architecture	Store and Forward
MAC Address Table	4K MAC address table with auto learning function
Switch Fabric	12Gbps
Switch Throughput	8.92Mpps @64 bytes
Jumbo Packet	9K bytes
Flow Control	Back pressure for half duplex. IEEE 802.3x pause frame for full duplex
Power Requirements	54X DC, 1.3A
ESD Protection	6KV DC
Power Consumption	Max. 66.69 watts, 227.5 BTU
Dimensions (W x D x H)	168 x 93 x 32mm
Weight	374g
Power over Ethernet	
PoE Standard	IEEE 802.3af Power over Ethernet/PSE IEEE 802.3at Power over Ethernet Plus/PSE
PoE Power Supply Type	End-span
Power Pin Assignment	1/2(+), 3/6(-)
PoE Power Output	Per Port 54V DC, 300mA. max. 15.4 watts (IEEE 802.3af) Per Port 54V DC, 600mA. max. 30 watts (IEEE 802.3at)

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PoE Power Budget	65 watts
Standard Conformance	
EMI Safety	FCC Part 15 Class A, CE
Standard Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab Gigabit 1000BASE-T IEEE 802.3x Flow Control and Back Pressure IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3az Energy Efficient Ethernet (EEE)
Environment	
Operating Environment	0 ~ 50 degrees C
Storage Environment	-10 ~ 70 degrees C
Operating Humidity	5 ~ 95%, relative humidity, non-condensing
Storage Humidity	5 ~ 95%, relative humidity, non-condensing

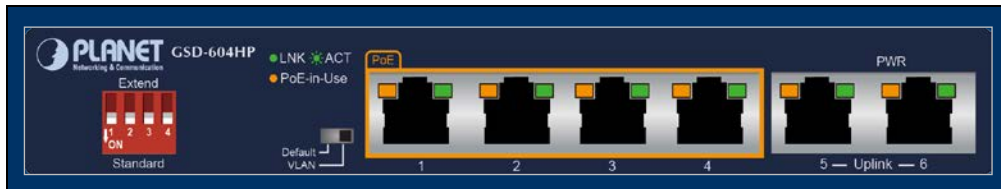### 3.3 PHYSICAL SPECIFICATIONS:

Dimensions:

168 x 93 x 32mm (W x D x H)

Weight:

374g

Front Panel View

Rear Panel View

LED Definition:

■ **System**

LED	Color	Function
PWR	**Orange**	**Lights:** Indicates the Switch has power. **The LED is shown on Port 6**

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- **Per 10/100/1000Mbps Port**

LED	Color	Function
LNK	Green	**Lights**: Indicates the link through that port is successfully established at 10/10/1000Mbps. **Blinks**: Indicates that the Switch is actively sending or receiving data over that port.

- **PoE-in-Use Port**

LED	Color	Function
PoE	Orange	**Lights:** Indicates the port is providing 54V DC in-line power.

3.4 ENVIRONMENTAL SPECIFICATIONS

Operating:

    Temperature: 0°C ~ 50 degrees C

    Relative Humidity: 5% ~ 95% (non-condensing)

Storage:

    Temperature: -10°C ~ 70 degrees C

    Relative Humidity: 5% ~ 95% (non-condensing)

3.5 ELECTRICAL SPECIFICATIONS

DC Power Input Voltage:	DC Adapter(54.5V 1.32A)*1
Power Consumption (System on):	1.08 w / 3.68 BTU
Power Consumption (Ethernet Full Loading Operation):	2.16w / 7.37 BTU
Power Consumption (PoE Full Loading + Ethernet Full Loading):	66.69w / 227.5 BTU

3.6 REGULATORY COMPLIANCE

FCC Class B, CE

3.7 RELIABILITY

MTBF > 100,000Hrs @ 25 degrees C

3.8 BASIC PACKAGING

☑ GSD-604HP Desktop Switch	x 1
☑ User's Manual	x 1

☑ Power Adapter – DC Adapter (54.5V 1.32A)	x 1
☑ Power Cord	x 1
☑ Rubber Feet	x 4
☑ Wall-mount Kit	x 1

3.9 PACKING INFORMATION

Box Dimensions (W x D x H):	240 x 186 x 84 mm
Gross Weight:	1.1 kg
Carton Dimensions (W x D x H):	450 x 264 x 390 mm
Total Weight:	11kg
Quantity:	10pcs per carton