

## Product Specifications

**2-Port 10/100/1000T 802.3bt PoE + 2-Port 10/100/1000T 802.3at PoE + 1-Port Gigabit Desktop Switch (External 120 Watts)**

**GSD-504UP**

Version 1.0

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### Change History:

Revision:	Date:	Author:	Change List
Version 1.0	2020/1/3	Simon Yeh	Initial Release

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<b>Reviewed By:</b>	Jonas Yang	<b>Approved By:</b>	Kent Kang

## 1. PRODUCT DESCRIPTION



### The Smallest 802.3bt PoE++ Switch

PLANET GSD-504UP is the smallest unmanaged Gigabit PoE switch equipped with two 802.3bt PoE++ ports, two 802.3at PoE+ ports and one uplink port. With a total PoE power budget of 120 watts and non-blocking data switching performance, the GSD-504UP can fulfill the demand of sufficient PoE power for different applications.

### Plug and Play High Power Sourcing Solution

Complying with the IEEE 802.3bt Power over Ethernet Plus Plus technology, the GSD-504UP provides up to 90 watts of PoE output power, tripling that of the earlier 802.3at plus. With the Legacy function enabled via the DIP switch, it can be backward compatible with 802.3af/at PoE standards to allow users to flexibly deploy standard and high powered devices simultaneously with no need of software configuration. With data and Power over Ethernet from one unit, the GSD-504UP can reduce cable deployment and eliminate the need for dedicated electrical outlets on the wall, ceiling or any unreachable place.

### Environment-friendly, Fanless Design for Silent Operation

The GSD-504UP 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-504UP 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-504UP 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.

### Ideal Solution for SOHO to Have IP Surveillance Secure

As IP surveillance is in great demand, the GSD-504UP PoE++ Switch is also best used as a Surveillance Switch to supply PoE power to PoE IP cameras without requiring an extra cabling or electrical outlet, making the deployment of cameras quick and convenient. The GSD-504UP supports two 802.3bt PoE ++ ports and two 802.3at PoE+ ports along with four 10/100/1000BASE-T ports featuring up to 90 or 30 watts, and one extra Gigabit Ethernet TP interface supporting high-speed transmission of surveillance images and videos.

## 2. PRODUCT FEATURES

### ➤ **Physical Port**

- 5 10/100/1000BASE-T Gigabit RJ45 ports

### ➤ **Power over Ethernet**

- Complies with IEEE 802.3af/at/bt Power over Ethernet end-span PSE
- 2 ports for IEEE 802.3bt PDs and 2 ports for IEEE 802.3af/at PDs
- Supports PoE power up to 90 watts for PoE port 1 to port 2, 30 watts for PoE port 3 to port4
- Each port supports 55V DC power to PoE PD
- 120-watt PoE budget
- Auto detects PD
- Circuit protection prevents power interference between ports
- Supports PoE in Standard and Legacy 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 2K absolute MAC addresses
- Automatic address learning and address aging

### ➤ **Hardware**

- LED indicators for PoE ready/activity and LINK/ACT
- One 55V DC power jack
- Fanless design

### 3. PRODUCT SPECIFICATIONS

#### 3.1 MAIN COMPONENTS

Switch ASIC	MT7530	x 1
PoE PSE Controller	PD69204T4+PD69200+TPS23861	x 1
PoE PD Controller	N/A	x 1

#### 3.2 FUNCTION SPECIFICATIONS

<b>Model</b>	<b>GSD-504UP</b>
<b>Hardware Specifications</b>	
<b>Network Connector</b>	5 10/100/1000BASE-T RJ45 auto MDI/MDIX ports
<b>PoE Inject Port</b>	2 ports with 802.3bt PoE++ injector function (Ports 1 to 2) 2 ports with 802.3af/at PoE+ injector function (Ports 3 to 4)
<b>LED Indicators</b>	System: PWR (Orange) Per PoE port: PoE (Orange, Ports 1 to 4) Ethernet port: LNK (Green)
<b>Thermal Fan</b>	Fanless design
<b>Switch Architecture</b>	Store-and-Forward
<b>MAC Address Table</b>	2K MAC address table with auto learning function
<b>Switch Fabric</b>	10Gbps
<b>Switch Throughput</b>	7.44Mpps @64 bytes
<b>Jumbo Packet</b>	9K bytes
<b>Flow Control</b>	Back pressure for half duplex. IEEE 802.3x pause frame for full duplex
<b>Power Requirements</b>	55V DC, 2.8A
<b>Surge Protection</b>	Difference Mode: $\pm 4KV$ ; Common mode: $\pm 6KV$
<b>ESD Protection</b>	Contact: 4KV; Air: 6KV
<b>Power Consumption</b>	Max. 136 watts, 464.05 BTU
<b>Dimensions (W x D x H)</b>	168 x 93 x 32 mm
<b>Weight</b>	414g
<b>Power over Ethernet</b>	
<b>PoE Standard</b>	IEEE 802.3at Power over Ethernet Plus/PSE IEEE 802.3bt Power over Ethernet Plus Plus/PSE
<b>PoE Power Supply Type</b>	Ports 1 to 2: End-span + Mid-span; Ports 3 to 4: End-span
<b>Power Pin Assignment</b>	Ports 1 to 2: 4 pairs 1/2 (-), 3/6 (+) and 4/5 (+), 7/8 (-); Ports 3 to 4: 2 pairs 1/2 (-), 3/6 (+)
<b>PoE Power Output</b>	Ports 1 to 2: 90W max.; Ports 3 to 4: 30W max.
<b>Total PoE Power Budget</b>	120 watts
<b>Standard Conformance</b>	
<b>EMI Safety</b>	FCC Part 15 Class A, CE
<b>Standard Compliance</b>	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX

	IEEE 802.3ab 1000BASE-T 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 802.3bt Power over Ethernet Plus Plus
<b>Environment</b>	
<b>Operating</b>	Temperature: 0 ~ 50 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
<b>Storage</b>	Temperature: -10 ~ 70 degrees C Relative Humidity: 5 ~ 95% (non-condensing)

### 3.3 PHYSICAL SPECIFICATIONS:

■ **Dimensions:**

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

■ **Weight:**

414g

■ **Front Panel**



■ **Rear Panel**



■ **LED Indicators**

■ **System**

LED	Color	Function
PWR	Orange	<b>Lights:</b> Indicates the Switch has power. The LED is shown on Port 5.

■ **Per 10/100/1000Mbps Port**

LED	Color	Function
LNK/ACT	Green	<b>Lights:</b> Indicates the link through that port is successfully established at 10/100/1000Mbps. <b>Blinks:</b> Indicates that the Switch is actively sending or receiving data over that port.

■ **PoE-in-Use Port**

LED	Color	Function
PWR	Orange	<b>Lights:</b> Indicates the port is providing 55V DC In-line power.

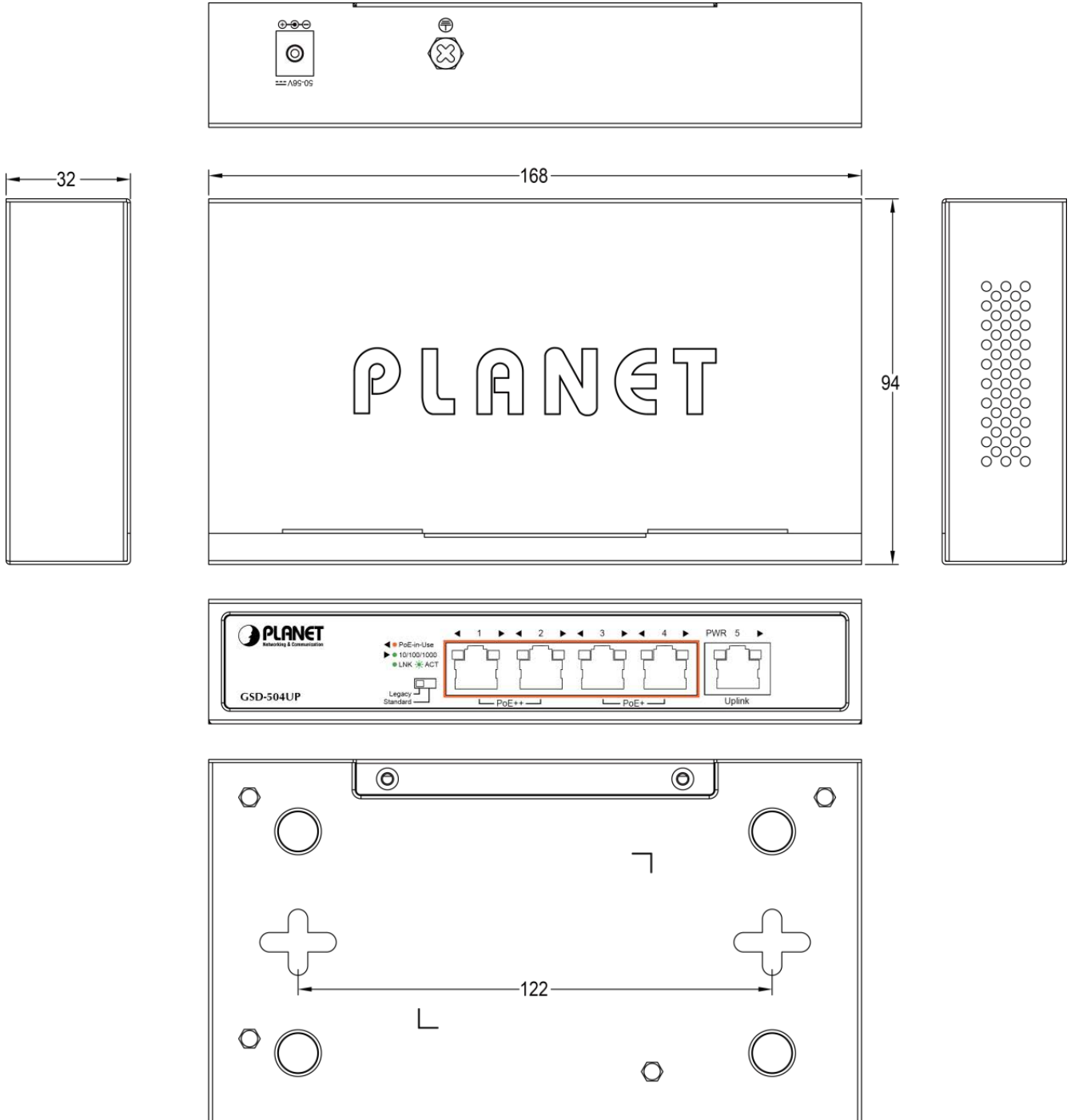
■ **DIP Switch**

■ **Standard/Legacy Mode**

Standard	To provide power to the PD devices that follow the IEEE 802.3af/at/bt standard.
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<b>Legacy</b>	To provide power to the PD devices that do not fully follow the IEEE802.3af/at/bt standard. Besides, the Legacy mode supports Ultra PoE.
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■ **Three-view Diagram**



**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 REGULATORY COMPLIANCE

FCC Part 15 Class A, CE

### 3.6 RELIABILITY

MTBF > 50,000 hrs @ 25 degrees C

### 3.7 BASIC PACKAGING

■ GSD-504UP	x 1
■ User's Manual	x 1
■ Rubber Feet	x 4
■ 55V Power Adapter	x 1
■ Power Cord	x 1

### 3.8 PACKING INFORMATION

<b>Box Dimensions:</b>	240 x 228 x 84 mm
<b>Weight:</b>	1490g
<b>Carton Dimensions:</b>	446 x 254 x 486 mm
<b>Carton Weight:</b>	15.5kg
<b>Quantity:</b>	10pcs in one carton