

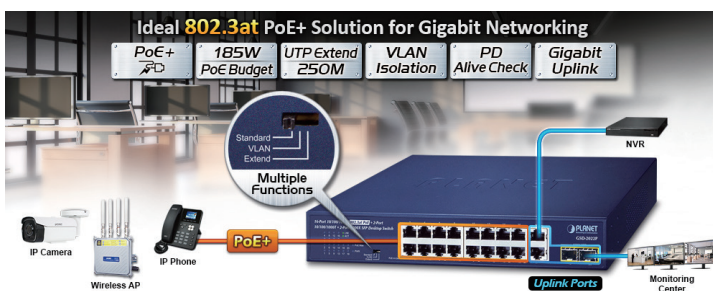
16-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T + 2-Port 1000X SFP Desktop Switch



Centralized Power Management for Gigabit Ethernet PoE Networking

To facilitate 32W PoE power network applications with Gigabit speed transmission, the GSD-2022P is equipped with **16 10/100/1000BASE-T Gigabit Ethernet ports**, 2 extra Gigabit TP ports and **2 1000BASE-X SFP** interfaces with the inner power system. With a total of 185 watts of PoE budget, it features high-performance Gigabit IEEE 802.3af PoE (up to 15.4W) and IEEE 802.3at PoE+ (up to 32W) capabilities on all ports.

By offering reliable switching technology and advanced networking features, the GSD-2022P optimizes the installation and power management of network devices such as wireless access points, VoIP phones, and security cameras. It also eliminates time and cost of deployment by integrating power and data switching into one unit and freeing network devices from restrictions of power outlet locations and the additional AC wiring.



Perfect Integrated Solution for PoE IP Surveillance

The GSD-2022P brings you an ideally secure surveillance system at a lower total cost. The GSD-2022P provides 16 10/100/1000Mbps 802.3at PoE+ ports able to feed sufficient PoE power to 16 IEEE 802.3af/IEEE 802.3at PoE+ IP cameras at the same time. It is also able to connect with one 16-channel NVR or two 8-channel NVRs, uplinked to backbone switch and the monitoring center. With such a high-performance switch architecture, the recorded video files from the PoE IP cameras can be saved to the NVR system where the administrator can control and monitor the surveillance images in both the local LAN and remote sites.

Physical Port

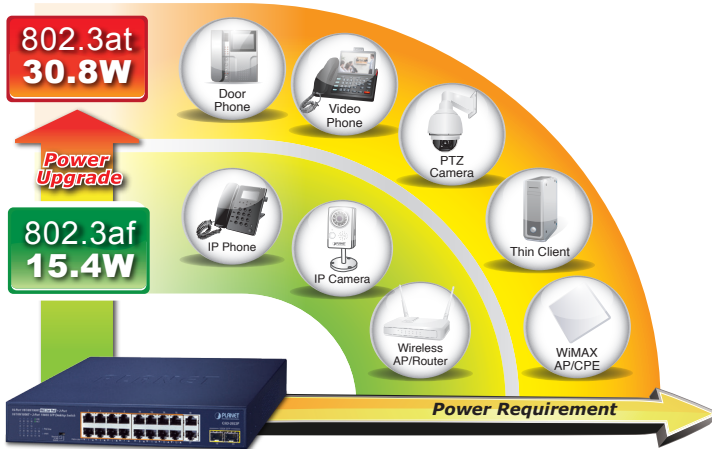
- 16-port 10/100/1000BASE-T Gigabit RJ45 copper with IEEE 802.3at PoE+ injector function
- 2 10/100/1000BASE-T Gigabit RJ45 copper interfaces
- 2 1000BASE-X SFP interfaces

Power over Ethernet

- Complies with IEEE 802.3at Power over Ethernet end-span PSE
- Up to 16 ports of IEEE 802.3af/802.3at devices powered (ports 1~16)
- Supports PoE power up to 32 watts for each PoE port, with a total PoE budget of 185W.
- Each port supports 54V DC power to PoE powered device
- Auto detects powered device (PD)
- Supports PD alive function
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100m in standard mode with 250m in extend mode

Switching

- Hardware-based 10/100/1000Mbps auto-negotiation and auto MDI/MDI-X
- Supports IEEE 802.3x flow control in full-duplex mode and backpressure in half-duplex mode
- Integrates address look-up engine, supporting 8K absolute MAC addresses
- 9K jumbo frame supports all speeds (10/100/1000Mbps)
- Hardware DIP switch for **Standard, VLAN** and **Extend** mode selection;
 - VLAN mode: Ports 1 to 16 cannot communicate with each other, but can communicate with the uplink ports 17 to 18 and SFP ports 19 to 20
 - Extend mode: Ports 1 to 8 have data rate of 10Mbps. The farthest transmission distance of up to 250 meters and all ports can communicate with each other.
- VLAN mode is to isolate ports to prevent broadcast storm and defend DHCP spoofing
- Automatic address learning and address aging
- Supports Energy-Efficient Ethernet (EEE) function (IEEE 802.3az)



Hardware

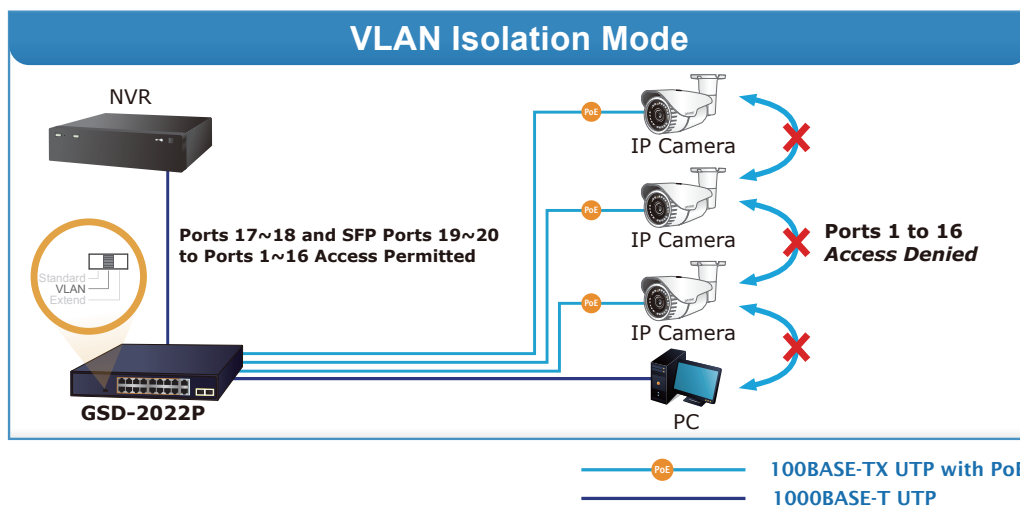
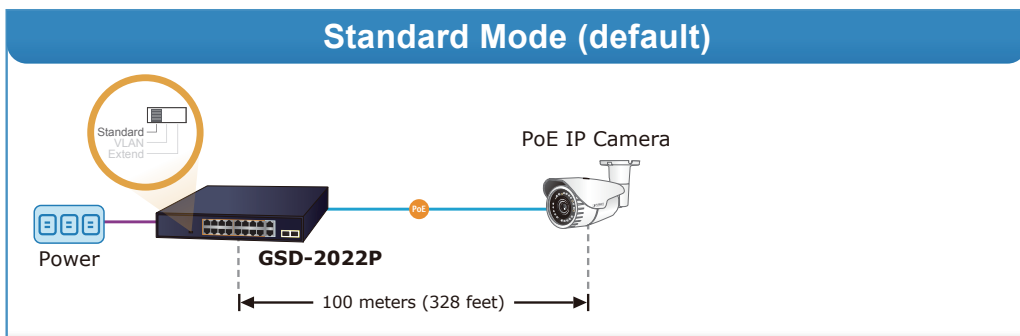
- 12-inch desktop size, 1U height
- LED indicators for system power, per port PoE ready and PoE activity, speed, Link/Act
- 1 silent fan to provide stable and efficient power performance
- Supports contact discharge of $\pm 6KV$ DC and air distance discharge of $\pm 8KV$ DC for Ethernet ESD protection
- Supports $\pm 6KV$ surge immunity

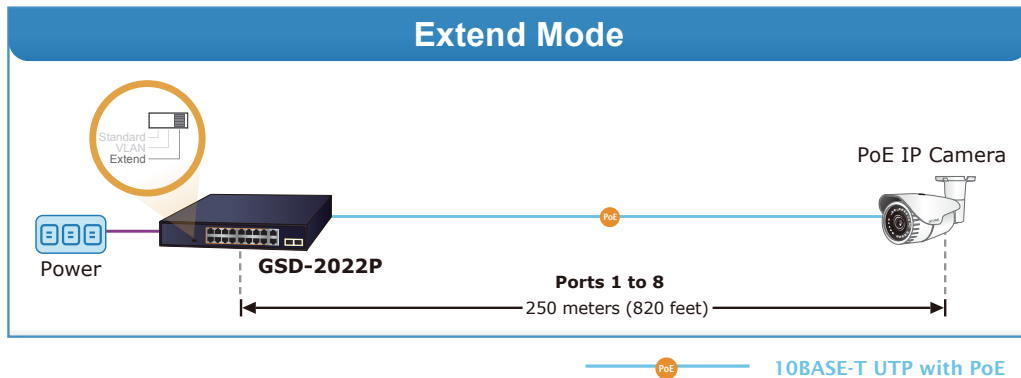
Ethernet Data Transmission Distance Extension

The DIP switch provides “Standard”, “VLAN” and “Extend” operation modes.

- The GSD-2022P operates as a normal IEEE 802.3at PoE+ switch in the “Standard” operation mode.
- The “VLAN” operation mode features port-based VLAN function that helps to prevent the IP camera’s multicast or broadcast storm from influencing each other.
- In the “Extend” operation mode, the GSD-2022P operates on a per-port basis at 10Mbps duplex operation but supports 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-2022P provides an additional solution for 802.3at PoE+ distance extension, thus saving the cost of Ethernet cable installation.





Powered Device Alive Check

The GSD-2022P adopts not only Power over Ethernet technology, but also automated PD monitoring and real-time PoE status. The PD alive check feature is applied in Standard, VLAN and Extend modes. After the PoE of the port is powered on, the device starts to detect whether the port is transmitting data. If the port does not transmit data and the duration exceeds a specific time, PoE will automatically power off and then re-power. It also will greatly enhance the network reliability in that the PoE port will reset the PD power, thus reducing administrator’s management burden.

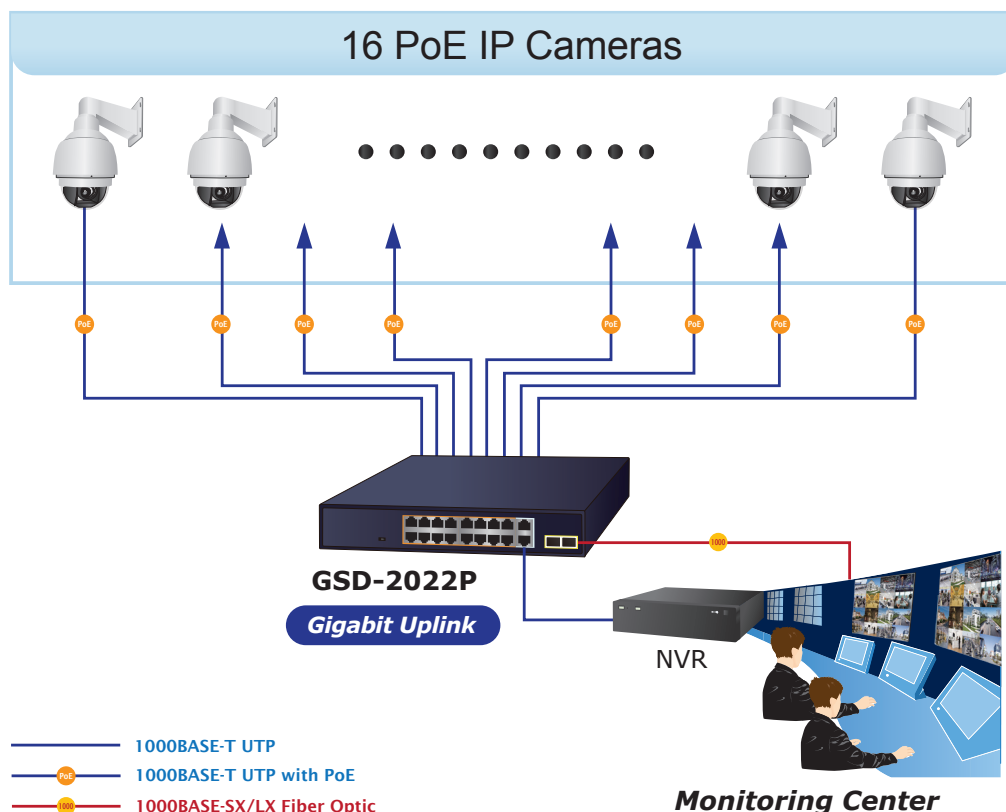
Flexible Extension Solution

The two mini-GBIC slots built in the GSD-2022P are compatible with the 1000BASE-SX/LX SFP (Small Form-factor Pluggable) fiber transceiver, uplinked to backbone switch and monitoring center in long distance. The distance can be extended from 550 meters (multi-mode fiber) to 10/20/30/40/50/60/70/120 kilometers (single-mode fiber or WDM fiber). They are well suited for applications within the enterprise data centers and distributions.

Applications

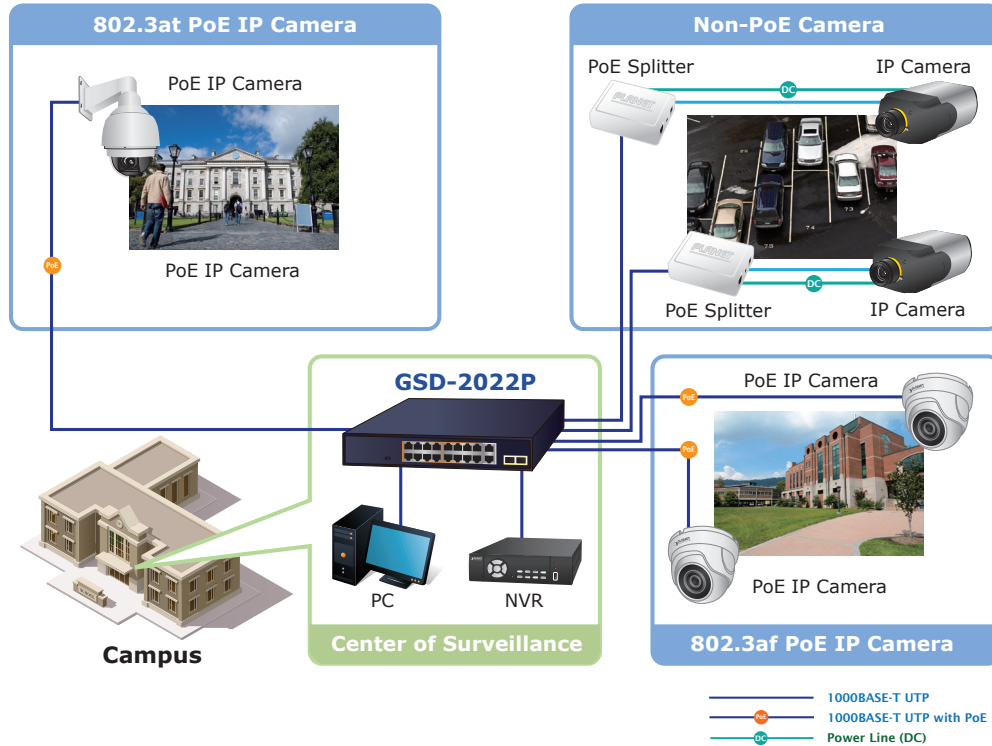
Perfectly Integrated Solution for IP PoE Camera and NVR System

Particularly designed for the growing popular IP Surveillance applications, the GSD-2022P 802.3at PoE Switch is positioned as a Surveillance Switch for quick and easy PoE IP camera deployment with power feeding. The GSD-2022P provides both 802.3at and 802.3af PoE functions along with 16 10/100/1000BASE-TX ports featuring 30-watt 802.3at or 15.4-watt 802.3af PoE in RJ45 interface, 2 extra Gigabit copper ports and 2 Gigabit SFP uplink interfaces supporting high-speed transmission of surveillance images and videos.



Department / Workgroup PoE Network

Providing 16 PoE in-line power interfaces, the GSD-2022P can easily build a power that can centrally control IP phone system, IP camera system and wireless AP group for the enterprise. Cameras can be installed around the corner in the company or campus for surveillance demands. Without the power-socket limitation, the GSD-2022P makes the installation of cameras easier and more efficient.



Specifications

Model	GSD-2022P
Hardware Specifications	
10/100/1000BASE-T Copper Ports	18 auto MDI/MDIX
1000BASE-X SFP/mini-GBIC Slots	2
DIP Switch	Selectable operation mode <ul style="list-style-type: none"> ■ Standard ■ VLAN ■ Extend
LED Indicators	System Power (Green) 10/100/1000T RJ45 Interfaces 10/100/1000 LNK / ACT (Green) PoE-in-Use (Amber) 1000X SFP Interfaces 1000 LNK / ACT (Green)
Dimensions (W x D x H)	280 x 180 x 44 mm (1U height)
Enclosure	Metal
Weight	1810g
Power Requirements	100~240V AC, 50/60Hz, 5A max.
Power Consumption/Dissipation	Max. 201 watts/686 BTU
Thermal Fan	1
ESD Protection	Contact discharge of ±6KV DC, Air discharge of ±8KV DC
Surge Protection	±6KV
Installation	Desktop or rack-mount installation
Switching	
Switch Architecture	Store-and-Forward
Switch Fabric	40Gbps/non-blocking
Switch Throughput@64bytes	29.76Mpps
MAC Address Table	8K entries

Jumbo Frame	9216 bytes
Flow Control	IEEE 802.3x pause frame for full duplex; back pressure for half duplex
Power over Ethernet	
PoE Standard	IEEE 802.3at Power over Ethernet Plus/PSE
PoE Injector Ports	16
PoE Power Supply Type	End-span/Mid-span: 1/2/4/5 (+), 3/6/7/8 (-)
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)
PoE Power Budget	185 watts
Number of PDs, 7 watts	16
Number of PDs, 15.4 watts	12
Number of PDs, 30 watts	6
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab Gigabit 1000BASE-T IEEE 802.3z Gigabit SX/LX 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
Environment	
Operating	Temperature: 0 ~ 50 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -10 ~ 70 degrees C Relative Humidity: 5 ~ 95% (non-condensing)