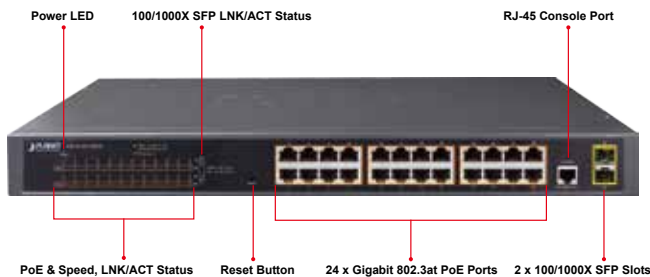


# 24-Port 10/100/1000T 802.3at PoE + 2-Port 100/1000X SFP Managed Switch



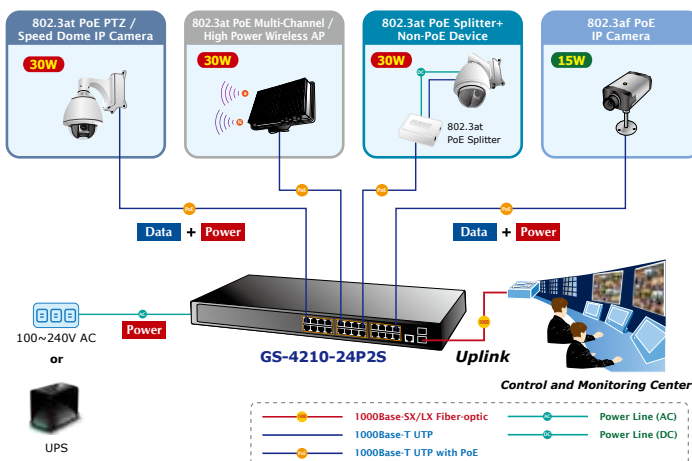
## Cost-Optimized Managed PoE+ Switch for Small and Medium Businesses

PLANET GS-4210-24P2S is an ideal Gigabit PoE Switch which provides cost-effective advantage to local area network and is widely accepted in the SMB office network. It offers intelligent Layer 2 data packet switching and management functions, friendly web user interface and stable operation. The model complies with IEEE 802.3at Power over Ethernet Plus (PoE+) at an affordable price. The GS-4210-24P2S is equipped with 24 10/100/1000Base-T Gigabit Ethernet ports and 2 100/1000Base-X SFP interfaces with inner power system. Its 24 Gigabit Ethernet ports integrated with 802.3at PoE+ injector function on all ports. It offers a rack-mountable, affordable, safe and reliable power solution for SMBs deploying Power over Ethernet networks, or requiring enhanced data security and network traffic management.



## IEEE 802.3at/af Compliant Power Source Switch

The PoE in-line power following the IEEE 802.3at/af standard makes the GS-4210-24P2S able to deliver Gigabit speed data and up to 30 watts of power per port to 24 PoE compliant powered devices (PDs) with a combined power output budget of up to 300 watts. The GS-4210-24P2S provides more flexibility in power requirement for all kinds of PDs with affordable installation costs.



## Physical Port

- 24-port 10/100/1000Base-T Gigabit RJ-45 copper
- 2 100/1000Base-X mini-GBIC/SFP slots
- RJ-45 console interface for switch basic management and setup
- Reset button for system factory default and reboot

## Power over Ethernet

- Complies with IEEE 802.3at High Power over Ethernet
- Complies with IEEE 802.3af Power over Ethernet
- Up to 24 ports of IEEE 802.3af / 802.3at devices powered
- Supports PoE Power up to 30.8 watts for each PoE port
- 300-watt PoE budget
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100m
- PoE Management
  - Total PoE power budget control
  - Per port PoE function enable/disable
  - PoE Port Power feeding priority
  - Per PoE port power limitation
  - PoE delay
  - PD classification detection

## Layer 2 Features

- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- High performance Store and Forward architecture, runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Supports VLAN
  - IEEE 802.1Q tagged VLAN, up to 256 VLAN groups, out of 4094 VLAN IDs
  - Protocol VLAN
- 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)
  - Maximum 8 LACP groups, up to 16 ports per LACP group
  - Cisco ether-channel (Static Trunk)
  - Maximum 8 trunk groups, up to 8 ports per trunk group
- Provides port mirror (many-to-1)

### Robust Layer 2 Features

The GS-4210-24P2S can be programmed for advanced switch management functions such as dynamic port link aggregation, 802.1Q VLAN, Spanning Tree protocol (STP), Rapid Spanning Tree protocol (RSTP) and Multiple Spanning Tree protocol (MSTP), IGMP Querier and IGMP Snooping. Via aggregation of supporting ports, the GS-4210-24P2S allows the operation of a high-speed trunk to combine with multiple ports such as a 32Gbps fat pipe and supports fail-over as well. The Link Layer Discovery Protocol (LLDP) feature is also included and used to discover basic information about neighboring devices on the local broadcast domain.

### Efficient Traffic Control

The GS-4210-24P2S 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 at VoIP and video stream transmission, and empowers the enterprises to take full advantages of the limited network resources.

### Enhanced and Secure Management

For efficient management, the GS-4210-24P2S is equipped with console, Web, Telnet and SNMP management interfaces. With the built-in Web-based management interface, the GS-4210-24P2S offers an easy-to-use, platform-independent management and configuration facility. By supporting standard Simple Network Management Protocol (SNMP), the switch can be managed via any standard management software. For text-based management, the switch can be accessed via Telnet and the console port. Moreover, the GS-4210-24P2S offers secure remote management by supporting HTTPS and SNMPv3 connections which encrypt the packet content at each session.

### Powerful Security

PLANET GS-4210-24P2S offers comprehensive 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 authentication, which can be deployed with RADIUS to ensure the port level security and block illegal users. The Port Security allows limiting the number of users on a given port. The network administrators can now construct highly-secured corporate networks with considerably less time and effort than before.

### Flexible Extension Solution

The two mini-GBIC slots built in the GS-4210-24P2S are compatible with the 100Base-FX / 1000Base-SX/LX SFP (Small Form-factor Pluggable) fiber transceiver to uplink to backbone switch and monitor center in long distance. The distance can be extended from 550 meters to 2km (multi-mode fiber) up to above 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.

### Quality of Service

- Ingress / Egress Rate Limit per port bandwidth control
- Storm Control support
  - Broadcast / Unknown-Unicast / Unknown-Multicast
- Traffic classification
  - IEEE 802.1p CoS
  - DSCP / IP Precedence of IPv4 / IPv6 packets
- Strict priority and Weighted Round Robin (WRR) CoS policies

### Multicast

- Supports IGMP Snooping v2 and v3
- IGMP Querier mode support
- IGMP Snooping port filtering
  - Up to 256 multicast groups

### Security

- Authentication
  - IEEE 802.1X port-based network access authentication
  - Built-in RADIUS client to co-operate with the RADIUS servers
  - DHCP Option 82
  - RADIUS / TACACS+ login user access authentication
- Access Control List
  - IPv4 IP-based ACL
  - IPv4 IP-based ACE
  - MAC-based ACL
  - MAC-based ACE
- MAC Security
  - Static MAC
  - MAC Filtering
- Port Security for Source MAC address entries filtering
- DHCP Snooping to filter distrusted DHCP messages

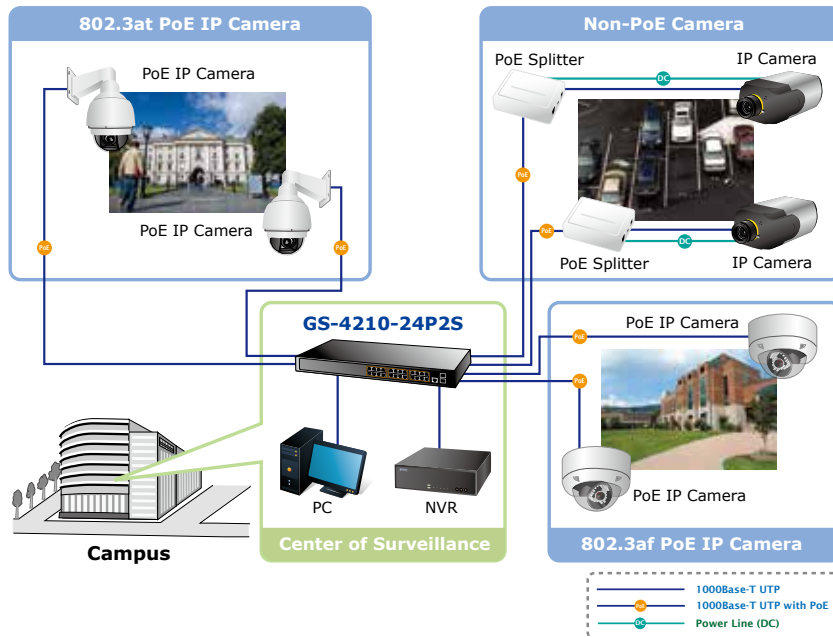
### Management

- Switch Management Interface
  - Local Command Line Interface
  - Web switch management
  - Telnet Command Line Interface
  - SNMP v1, v2c and v3
  - HTTPs secure access
- 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
- Link Layer Discovery Protocol (LLDP) Protocol and LLDP-MED
- SNMP trap for interface Link Up and Link Down notification
- Event message logging to remote Syslog server
- Four RMON groups (history, statistics, alarms and events)
- PLANET Smart Discovery Utility

## Applications

### Perfectly-Integrated Solution for PoE IP Surveillance

The GS-4210-24P2S brings an ideal, secure surveillance system at a lower total cost. The GS-4210-24P2S provides 24 10/100/1000Mbps 802.3at PoE+ ports able to feed sufficient PoE power for 24 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 NVR systems, uplink to the 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 in the NVR system to enable the administrators to control and monitor the surveillance images both in the local LAN and the remote sites.

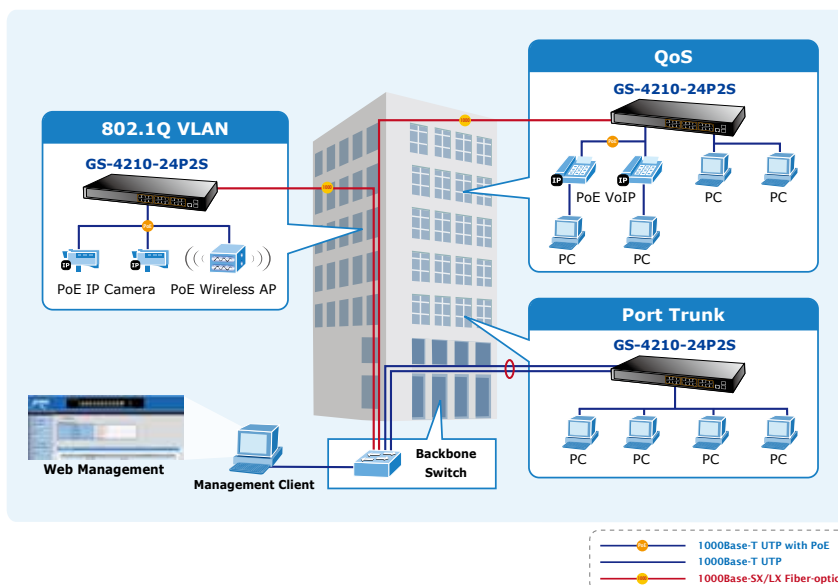


### Department / Workgroup PoE Network

Providing 24 PoE in-line power interfaces, the GS-4210-24P2S can easily build a power centrally-controlled IP phone system, IP camera system and wireless AP group for enterprises.

The GS-4210-24P2S delivers full ports of 802.3af/at compliant Gigabit Ethernet network connectivity with high-performance and cost-effective advantages for the increasing number of PoE IP telephones, PoE IP cameras, PoE wireless access points and other devices applied at the edge of the small or medium enterprise network. The GS-4210-24P2S improves the network efficiency and protects the network clients with the powerful features:

- Layer 2 to Layer 4 security
- QoS / 802.1Q VLAN / Static Trunk / LACP
- 802.1x Port-based and MAC-based network access authentication security
- Multicast IGMP Snooping



## Specifications

Model	GS-4210-24P2S
<b>Hardware Specifications</b>	
Copper Ports	24 x 10/100/1000Base-T RJ45 Auto-MDI/MDI-X Ports
PoE Injector Port	24 802.3af / 802.3at PoE Injector Ports
SFP/mini-GBIC Slots	2 100/1000Base-X SFP interfaces, supporting 100/1000Mbps dual mode
Console	1 x RS-232-to-RJ45 serial port (115200, 8, N, 1)
Switch Architecture	Store-and-Forward
Switch Fabric	52Gbps / non-blocking
Switch Throughput@64 bytes	38.6Mpps @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	9216 bytes
Reset Button	< 5 sec: System reboot > 5 sec: Factory default
LED	System: Power (Green) 10/100/1000T RJ45 Interfaces (Port 1 to Port 24): 1000 LNK / ACT (Green), 10/100 LNK/ACT (Orange), PoE (Orange) 100/1000Mbps SFP Interfaces (Port 25 to Port 26): 1000 LNK / ACT (Green), 100 LNK/ACT (Orange)
Thermal Fan	2
Power Requirements	100~240V AC, 50/60Hz, 4A (max.)
Power Consumption / Dissipation	Max. 330 watts / 1122 BTU
Dimensions (W x D x H)	445 x 207 x 45 mm (1U height)
Weight	2.8kg
Enclosure	Metal
<b>Power over Ethernet</b>	
PoE Standard	IEEE 802.3af Power over Ethernet / PSE IEEE 802.3at Power over Ethernet Plus / PSE
PoE Power Output	Per Port 52V DC, 300mA. Max. 15.4 watts (IEEE 802.3af) Per Port 52V DC, 600mA. Max. 30 watts (IEEE 802.3at)
PoE Power Budget	300 watts
Number of PDs, 7 watts	24
Number of PDs, 15.4 watts	19
Number of PDs, 30 watts	9
<b>Layer 2 Functions</b>	
Port Mirroring	TX / RX / Both Many-to-1 monitor
VLAN	802.1Q tagged-based VLAN Up to 256 VLAN groups, out of 4094 VLAN IDs Protocol VLAN
Link Aggregation	IEEE 802.3ad LACP supports 8 groups of 16-port trunk and static trunk supports 8 groups of 8-port trunk
Spanning Tree Protocol	STP / RSTP / MSTP
Multicast	IGMP (v2/v3) Snooping IGMP Querier Up to 256 multicast groups
Access Control List	IPv4 IP-based ACL / MAC-based ACL / IPv4 IP-based ACE / MAC-based ACE
QoS	8 mapping ID to 8 level priority queues - Port Number - 802.1p priority - DSCP field in IP Packet Traffic classification based, Strict priority and WRR
Security	IEEE 802.1X – port-based authentication Built-in RADIUS client to co-operate with RADIUS server RADIUS / TACACS+ user access authentication MAC filter Static MAC address DHCP Snooping and DHCP Option82 STP BPDU Guard, BPDU Filtering and BPDU Forwarding

Management Functions	
Basic Management Interfaces	RJ45 Console / Web browser / Telnet / SNMP v1, v2c, v3 Firmware upgrade by HTTP / TFTP protocol through Ethernet network Remote / Local Syslog System log LLDP protocol SNTP
Secure Management Interfaces	HTTPs, SNMP v3
SNMP MIBs	RFC 3635 Ethernet-like MIB RFC 2863 Interface Group MIB RFC 2819 RMON (1, 2, 3, 9) RFC 1493 Bridge MIB
Standards Conformance	
Regulation Compliance	FCC Part 15 Class A, CE
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 IEEE 802.3af Power over Ethernet IEEE 802.3at High Power over Ethernet RFC 768 UDP RFC 793 TFTP RFC 791 IP RFC 792 ICMP RFC 2068 HTTP RFC 1112 IGMP version 1 RFC 2236 IGMP version 2 RFC 3376 IGMP version 3
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)

## Ordering Information

GS-4210-24P2S	24-Port 10/100/1000T 802.3at PoE + 2-Port 100/1000X SFP Managed Switch
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## Related PoE Products

ICA-2200	Full HD PoE Box IP Camera
ICA-2250VT	Industrial PoE Plus Outdoor IR IP Camera
ICA-2500	5 Mega-pixel PoE Box IP Camera
ICA-3250V	Full HD Outdoor IR PoE IP Camera
ICA-4200V	Full HD 20M IR Vari-focal Dome IP Camera
ICA-4500V	5 Mega-pixel 20M IR Vari-focal Dome IP Camera
ICA-5250	Full HD Ultra-mini Vandal Dome
ICA-5350V	3 Mega-pixel Vandalproof IR IP Camera
ICA-HM127	3 Mega-pixel H.264 Box IP Camera
ICA-HM132	H.264 2 Mega-pixel 20M IR Vari-focal Dome IP Camera
ICA-HM136	H.264 2 Mega-pixel 20M IR Vandalproof Dome IP Camera
ICA-HM351	2 Mega-pixel 35M IR Outdoor Box PoE IP Camera
ICA-HM620	2 Mega-pixel PoE Plus Speed Dome Internet Camera
POE-162S	IEEE 802.3at Gigabit High Power over Ethernet Splitter

POE-E201	IEEE 802.3at Power over Ethernet Extender
WNAP-C3220	802.11n Wireless Ceiling-mount PoE Access Point
WNAP-W2200	802.11n 300Mbps In-Wall Access Point w/ USB Charger (EU Type)
WDAP-C7400	900Mbps Dual Band Ceiling-mount Wireless Access Point
WDAP-C7200AC	1200Mbps 802.11ac Dual Band Ceiling-mount Wireless Access Point
VIP-256PT	802.3af PoE SIP IP Phone
VIP-2020PT	Enterprise HD PoE IP Phone (2-Line)
VIP-5060PT	Professional HD PoE IP Phone (6-Line)

## Available Gigabit SFP Modules for GS-4210-24P2S

MGB-GT	SFP-Port 1000Base-T Module
MGB-SX	SFP-Port 1000Base-SX mini-GBIC module - 220/550m
MGB-LX	SFP-Port 1000Base-LX mini-GBIC module - 10km
MGB-L30	SFP-Port 1000Base-LX mini-GBIC module - 30km
MGB-L50	SFP-Port 1000Base-LX mini-GBIC module - 50km
MGB-L70	SFP-Port 1000Base-LX mini-GBIC module - 70km
MGB-L120	SFP-Port 1000Base-LX mini-GBIC module - 120km
MGB-LA10	SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module - 10km
MGB-LB10	SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module - 10km
MGB-LA20	SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module - 20km
MGB-LB20	SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module - 20km
MGB-LA40	SFP-Port 1000Base-LX (WDM,TX:1310nm) mini-GBIC module - 40km
MGB-LB40	SFP-Port 1000Base-LX (WDM,TX:1550nm) mini-GBIC module - 40km

## Available Fast Ethernet SFP Modules for GS-4210-24P2S

MFB-FX	SFP-Port 100Base-FX Transceiver (1310nm)-2km
MFB-F20	SFP-Port 100Base-FX Transceiver (1310nm)-20km
MFB-F40	SFP-Port 100Base-FX Transceiver (1310nm)-40km
MFB-F60	SFP-Port 100Base-FX Transceiver (1310nm)-60km
MFB-FA20	SFP-Port 100Base-BX Transceiver (WDM,TX:1310nm)-20km
MFB-FB20	SFP-Port 100Base-BX Transceiver (WDM,TX:1550nm)-20km