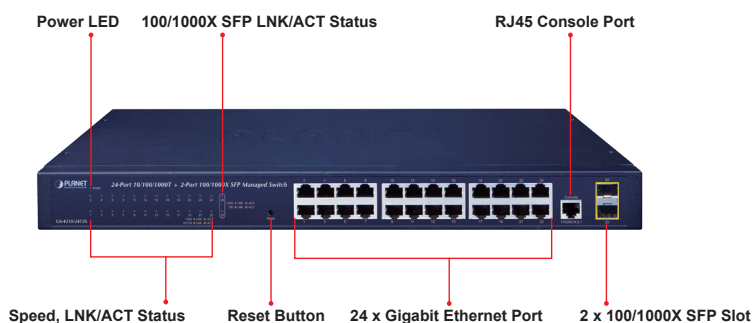# 24-Port 10/100/1000T + 2-Port 100/1000X SFP Managed Switch

## Cost-optimized Managed Switch with Advanced L2/L4 Switching and Security

PLANET GS-4210-24T2S is an ideal Gigabit 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**. Besides the popular IPv6/IPv4 management and abundant L2/L4 switching functions, the GS-4210-24T2S comes with fanless feature and green technology to provide a quiet, energy-saving, high-speed and reliable office network environment.

The GS-4210-24T2S is equipped with **24 10/100/1000BASE-T** Gigabit Ethernet ports and 2 additional **100/1000BASE-X** SFP interfaces with inner power system. It offers a rack-mountable, affordable, safe and reliable Gigabit network switch solution for SMBs deploying networks, or requiring enhanced data security and network traffic management.

Power LED    100/1000X SFP LNK/ACT Status        RJ45 Console Port

Speed, LNK/ACT Status    Reset Button    24 x Gigabit Ethernet Port    2 x 100/1000X SFP Slot

## Cybersecurity Network Solution to Minimize Security Risks

The GS-4210-24T2S supports SSHv2 and TLS protocols to provide strong protection against advanced threats. It includes a range of cybersecurity features such as **DHCP Snooping**, **IP Source Guard**, **dynamic ARP Inspection** Protection, **802.1x port-based** network access control, **RADIUS** and **TACACS+** user accounts management, **SNMPv3** authentication, and so on to complement it as an all-security solution.

## Physical Port

- **24-port 10/100/1000BASE-T** Gigabit RJ45 copper
- **2 100/1000BASE-X** mini-GBIC/SFP slots
- RJ45 console interface for switch basic management and setup
- Reset button for system factory default

## Switching

- Hardware-based 10/100Mbps, half/full duplex and 1000Mbps full duplex mode, flow control and auto-negotiation, and auto MDI/MDI-X
- Features Store-and-Forward mode with wire-speed filtering and forwarding rates
- IEEE 802.3x flow control for full duplex operation and back pressure for half duplex operation
- 9K jumbo frame
- Automatic address learning and address aging
- Supports CSMA/CD protocol

## Layer 2 Features

- Supports **VLAN**
  - IEEE 802.1Q tagged VLAN
  - Provider Bridging (VLAN Q-in-Q) support (IEEE 802.1ad)
  - Protocol VLAN
  - Voice VLAN
  - Private VLAN (Protected port)
  - Management VLAN
  - GVRP
- 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)
  - Cisco ether-channel (static trunk)
  - Maximum 8 trunk groups, up to 8 ports per trunk group
- Provides port mirror (many-to-1)
- Loop protection to avoid broadcast loops
- Supports ERPS (Ethernet Ring Protection Switching)

## Redundant Ring, Fast Recovery for Critical Network Applications

The GS-4210-24T2S supports redundant ring technology and features strong, rapid self-recovery capability to prevent interruptions and external intrusions. It incorporates advanced **ITU-T G.8032 ERPS (Ethernet Ring Protection Switching)** technology, Spanning Tree Protocol (802.1s MSTP) into customer's network to enhance system reliability and uptime in various environments.



*ERPS for Ring IP Surveillance Application*
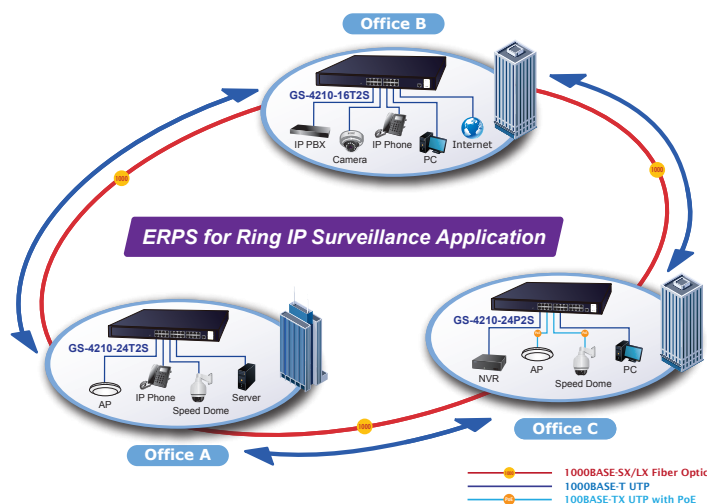
## IPv6/IPv4 Dual Stack Management

Supporting both IPv6 and IPv4 protocols, the GS-4210-24T2S helps the SMBs to step in the IPv6 era with the lowest investment as its network facilities need not be replaced or overhauled if the IPv6 FTTx edge network is set up.
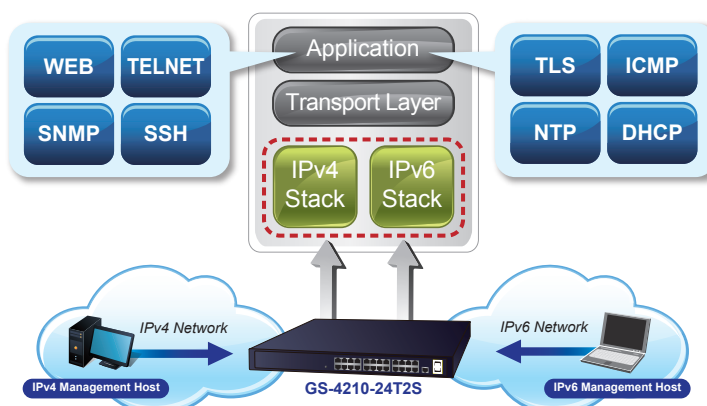


## Quality of Service

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

## Multicast

- Supports IPv4 IGMP snooping v2 and v3
- Supports IPv6 MLD snooping v1, v2
- IGMP querier mode support
- IGMP snooping port filtering
- MLD snooping port filtering

## Security

- Authentication
  - IEEE 802.1X port-based network access authentication
  - Built-in RADIUS client to cooperate with the RADIUS servers
  - DHCP Option 82
  - RADIUS/TACACS+ login user access authentication
- Access Control List
  - IPv4/IPv6 IP-based ACL
  - IPv4/IPv6 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
- Dynamic ARP Inspection discards ARP packets with invalid MAC address to IP address binding
- IP source guard prevents IP spoofing attacks
- DoS attack prevention

## Management

- IPv4 and IPv6 dual stack management
- Switch management interface
  - Web switch management
  - Console/Telnet Command Line Interface
  - SNMP v1 and v2c switch management
  - SSHv2, TLSv1.2 and SNMP v3 secure access
- User privilege levels control

## Robust Layer 2 Features

The GS-4210-24T2S can be programmed for advanced switch management functions such as dynamic port link aggregation, 802.1Q VLAN and **Q-in-Q VLAN**, **Multiple Spanning Tree Protocol (MSTP)**, loop and **BPDU guard**, **IGMP snooping**, and MLD snooping. Via the link aggregation, the GS-4210-24T2S allows the operation of a high-speed trunk to combine with multiple ports such as a 16Gbps fat pipe, and supports fail-over as well. Also, the **Link Layer Discovery Protocol (LLDP)** is the Layer 2 protocol included to help discover basic information about neighboring devices on the local broadcast domain.

## Efficient Traffic Control

The GS-4210-24T2S 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 advantage of the limited network resources.

- Built-in Trivial File Transfer Protocol (TFTP) client
- BOOTP and DHCP for IP address assignment
- System maintenance
  - Firmware upload/download via HTTP/TFTP
  - Configuration upload/download through web interface
  - Dual images
  - Hardware reset button for system reboot or reset to factory default
- SNTP Network Time Protocol
- Cable diagnostics
- Link Layer Discovery Protocol (LLDP) 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 for deployment management
- PLANET NMS system and NMSViewerPro/CloudViewerPro for deployment management

## Powerful Security

PLANET GS-4210-24T2S offers comprehensive **IPv4/IPv6** 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. With the **protected port** function, communication between edge ports can be prevented to guarantee user privacy. Furthermore, **port security** function allows limiting the number of network devices on a given port. The network administrators can now construct highly-secure corporate networks with considerably less time and effort than before.

## Friendly and Secure Management

For efficient management, the GS-4210-24T2S is equipped with Command line, Web and SNMP management interfaces.

- With the built-in **Web-based** management interface, the GS-4210-24T2S offers an easy-to-use, platform-independent management and configuration facility.
- For **text-based** management, it can be accessed via Telnet and the console port.
- By supporting the standard SNMP protocol, the switch can be managed via any SNMP-based management software.

Moreover, the GS-4210-24T2S offers secure remote management by supporting **SSHv2**, **TLSv1.2** and **SNMP v3** connections which encrypt the packet content at each session.