# L2+ 8-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T + 2-Port 100/1000X SFP Managed Switch

Perfect Managed PoE+ Switch with L2+/L4 Switching and Security

PLANET GS-5220-8P2T2S Layer 2 Managed Gigabit Switch supports both **IPv4 and IPv6 protocols** and **Layer 3 static routing**, and provides **8 10/100/1000BASE-T** ports featuring **36-watt 802.3at PoE+, 2 additional Gigabit copper ports** and another **2 extra 100/1000BASE-X SFP fiber slots**. Each of the eight Gigabit ports provides 36 watts of power, with a total power budget of up to **240 watts** for the different types of PoE applications being employed. It provides a quick, safe and cost-effective Power over Ethernet network solution to IP security surveillance for small businesses and enterprises.

RJ45 Type Console   2 x 10/100/1000BASE-T RJ45 Port

8 x Gigabit 802.3at PoE+ Port   2 x 100/1000BASE-X SFP Slot
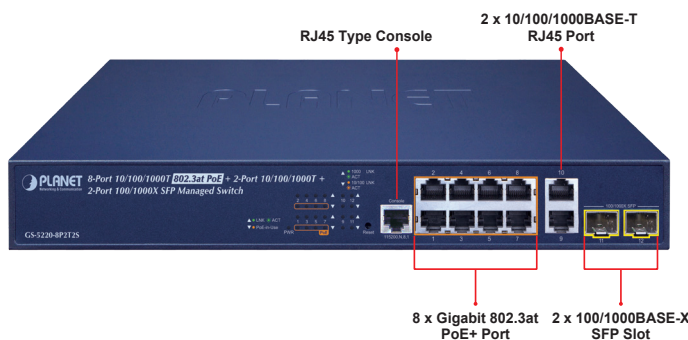
Network with Cybersecurity Helps Minimize Security Risks

The GS-5220-8P2T2S comes with enhanced cybersecurity to fend off cyberthreats and cyberattacks, it supports SSHv2, TLSv1.2, SNMPv3 protocols to provide strong protection against advanced threats. Served as a key point to transmit data to customer's critical equipment in a business network, the cybersecurity feature of the GS-5220-8P2T2S protects the switch management and enhances the security of the mission-critical network without any extra deployment cost and effort.

Physical Port

- 10-Port 10/100/1000BASE-T RJ45 copper with 8-Port IEEE 802.3at/af Power over Ethernet Injector function
- 2 100/1000BASE-X mini-GBIC/SFP slots
- RJ45 console interface for basic management and setup

Power over Ethernet

- Complies with IEEE 802.3at Power over Ethernet Plus/end-span PSE
- Up to 8 IEEE 802.3af/802.3at devices powered
- Supports PoE power up to 36 watts for each PoE port
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100 meters in standard mode and 250m in extended mode
- PoE management features
  – PoE admin-mode control
  – PoE management mode selection
  – Per port PoE function enable/disable
  – PoE port power feeding priority
  – Per PoE port power limit
  – PoE Port Status monitoring
  – PD classification detection
  – Sequence port PoE
  – PoE extension
- Intelligent PoE features
  – Temperature threshold control
  – PoE usage threshold control
  – PoE schedule
  – PD alive check
  – LLDP PoE neighbors

Layer 2 Features

- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- High performance of Store-and-Forward architecture and runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Storm Control support
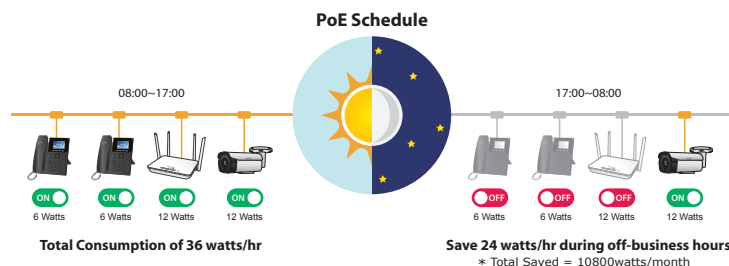 – Broadcast/Multicast/Unicast

Built-in Unique PoE Functions for Surveillance Management

As a managed PoE Switch for surveillance network, the GS-5220-8P2T2S features the following intelligent PoE management functions:

- ■ PoE Schedule
- ■ PD Alive Check
- ■ Scheduled Power Recycling
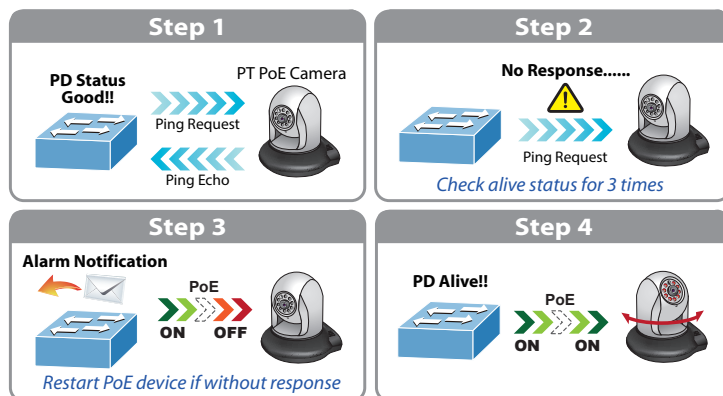- ■ SMTP/SNMP Trap Event Alert

PoE Schedule for Energy Saving

Besides being used for IP surveillance, the GS-5220-8P2T2S is certainly applicable to build any PoE network including VoIP and wireless LAN. Under the trend of energy saving worldwide and contributing to the environmental protection on the Earth, the GS-5220-8P2T2S can effectively control the power supply besides its capability of giving high watts power. The "PoE schedule" function helps you to enable or disable PoE power feeding for each PoE port during specified time intervals and it is a powerful function to help SMBs and enterprises save energy and budget.

PoE Schedule

08:00~17:00

17:00~08:00

ON 6 Watts ON 6 Watts ON 12 Watts ON 12 Watts   OFF 6 Watts OFF 6 Watts OFF 12 Watts ON 12 Watts

Total Consumption of 36 watts/hr

Save 24 watts/hr during off-business hours
∗ Total Saved = 10800watts/month

Intelligent Powered Device Alive Check

The GS-5220-8P2T2S can be configured to monitor a connected PD status in real time via ping action. Once the PD stops working and it is without response, the GS-5220-8P2T2S will resume the PoE port power and bring the PD back to work. It will greatly enhance the network reliability through the PoE port resetting the PD's power source, thus reducing administrator management burden.

Step 1

PD Status Good!! PT PoE Camera
Ping Request
Ping Echo

Step 2

No Response……
Ping Request
Check alive status for 3 times

Step 3

Alarm Notification
PoE ON OFF
Restart PoE device if without response

Step 4

PD Alive!!
PoE ON ON

- • Supports **VLAN**
  - – IEEE 802.1Q tagged VLAN
  - – Up to 4K VLANs groups, out of 4095 VLAN IDs
  - – Supports provider bridging (VLAN Q-in-Q, IEEE 802.1ad)
  - – Private VLAN Edge (PVE)
  - – Port Isolation
  - – MAC-based VLAN
  - – IP Subnet-based VLAN
  - – Protocol-based VLAN
  - – VLAN Translation
  - – Voice VLAN
  - – GVRP
- • Supports **Spanning Tree Protocol**
  - – IEEE 802.1D Spanning Tree Protocol
  - – IEEE 802.1w Rapid Spanning Tree Protocol
  - – IEEE 802.1s Multiple Spanning Tree Protocol, spanning tree by VLAN
  - – BPDU Filtering/BPDU Guard
- • Supports **Link Aggregation**
  - – 802.3ad Link Aggregation Control Protocol (LACP)
  - – Cisco ether-channel (static trunk)
  - – Maximum 6 trunk groups, up to 12 ports per trunk group
  - – Up to 24Gbps bandwidth (full duplex mode)
- • Provides port mirror (many-to-1)
- • Port back up function
- • Port mirroring to monitor the incoming or outgoing traffic on a particular port
- • Loop protection to avoid broadcast loops
- • Compatible with Cisco uni-directional link detection(UDLD) that monitors a link between two switches and blocks the ports on both ends of the link if the link fails at any point between the two devices

Layer 3 IP Routing Features

- • Supports maximum 32 static routes and route summarization

Quality of Service

- • Ingress Shaper and Egress Rate Limit per port bandwidth control
- • 8 priority queues on all switch ports
- • Traffic classification
  - – IEEE 802.1p CoS
  - – TOS/DSCP / IP Precedence of IPv4/IPv6 packets

Scheduled Power Recycling

The GS-5220-8P2T2S allows each of the connected PDs to reboot at a specified time each week. Therefore, it will reduce the chance of PD crash resulting from buffer overflow.

IP Camera

AP Router

IP Phone

PoE lighting

Door Phone
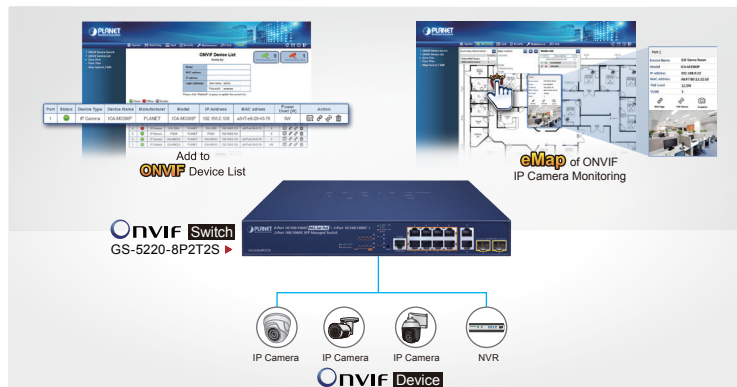
Automatically Reboot
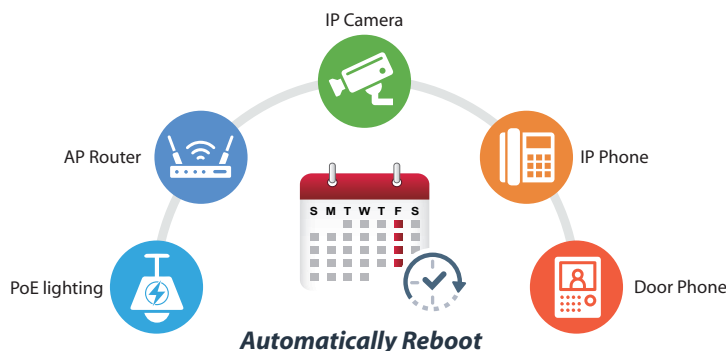
SMTP/SNMP Trap Event Alert

Though most NVR or camera management software offers SMTP email alert function, the GS-5220-8P2T2S further provides event alert function to help to diagnose the abnormal device owing to whether or not there is a break of the network connection, loss of PoE power or the rebooting response by the PD Alive Check process.

GS-5220-8P2T2S

Malfunction

e-mail

tests@planet.com.tw

IP Camera   IP Camera
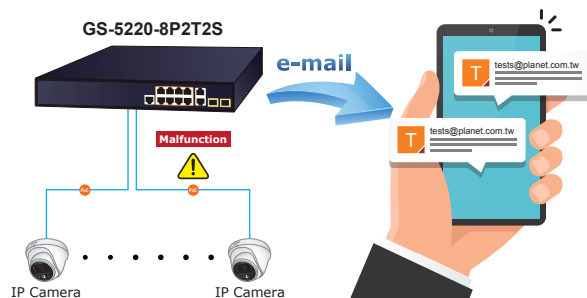
Convenient and Smart ONVIF Devices with Detection Feature

PLANET has newly developed an awesome feature -- ONVIF Support -- which is specifically designed for cooperating with video IP surveillances. From the GS-5220-8P2T2S GUI, you just need one click to search and show all of the ONVIF devices via network application. In addition, you can upload floor images to the switch and remotely monitor what is going on in the production line. Moreover, you can get real-time surveillance's information and online/offline status, and can have PoE reboot control from GUI.

Add to ONVIF Device List

eMap of ONVIF IP Camera Monitoring

ONVIF Switch
GS-5220-8P2T2S

IP Camera   IP Camera   IP Camera   NVR

ONVIF Device

– IP TCP/UDP port number

– Typical network application

• Strict priority and Weighted Round Robin (WRR) CoS policies

• Supports QoS and In/Out bandwidth control on each port

• Traffic-policing policies on the switch port

• DSCP remarking

Multicast

• Supports IPv4 IGMP Snooping v1, v2 and v3

• Supports IPv6 MLD Snooping v1 and v2

• Querier mode support

• IPv4 IGMP Snooping port filtering

• IPv6 MLD Snooping port filtering

• Multicast VLAN Registration (MVR) support

Security

• Authentication

– IEEE 802.1x Port-based / MAC-based network access authentication

– Built-in RADIUS client to co-operate with the RADIUS servers

– TACACS+ login users access authentication

– RADIUS/TACACS+ users access authentication

• Access Control List

– IP-based Access Control List (ACL)

– MAC-based Access Control List

• Source MAC/IP address binding

• **DHCP Snooping** to filter un-trusted DHCP messages

• **Dynamic ARP Inspection** discards ARP packets with invalid MAC address to IP address binding

• **IP Source Guard** prevents IP spoofing attacks

• IP address access management to prevent unauthorized intruder

Management

• IPv4 and IPv6 dual stack management

• Switch Management Interfaces

– Web switch management

– Console/Telnet Command Line Interface

– SNMP v1 and v2c switch management

– SSHv2, TLSv1.2 and SNMP v3 secure access

• **IPv6** IP Address/NTP/DNS management

• Built-in Trivial File Transfer Protocol (TFTP) client

• BOOTP and DHCP for IP address assignment