Industrial L2+ 8-Port 10/100/1000T 802.3at PoE + 2-Port 1G/2.5G SFP Managed Ethernet Switch Series

Advanced Manageable PoE Solution for Hardened Environment

PLANET IGS-5225 L2+ Industrial Managed PoE+ Switch series, featuring **8 10/100/1000BASE-T 802.3at PoE+ ports** with each port powering up to 36 watts, and two **100/1000/ 2500 BASE-X SFP ports** in an **IP30** rugged metal case, can be installed in any difficult environment. It provides user-friendly yet advanced IPv6/IPv4 management interfaces, abundant **L2/L4 switching functions**, **Layer 3 static routing** capability, and advanced **ITU-G.8032 ERPS Ring** technology to improve the rapid self-recovery capability and PLANET **intelligent PoE** functions for controlling the PoE outdoor IP surveillance and wireless network applications. It is able to operate reliably, stably and quietly in the temperature range from **-40 to 75 degrees C**.

Redundant Ring, Fast Recovery for Critical Network Applications

The IGS-5225 PoE Series 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), and redundant power input system into customer's industrial automation network to enhance system reliability and uptime in harsh factory environments. In a simple Ring network, the recovery time of data link can be as fast as 10ms.

Physical Port

- **8 10/100/1000BASE-T** Gigabit Ethernet RJ45 ports with **IEEE 802.3at PoE+** Injector function
- **2 100/1000/2500BASE-X SFP** ports for SFP type auto detection
- **2 10/100/1000BASE-T** Gigabit Ethernet RJ45 ports (IGS-5225-8P2T2S)
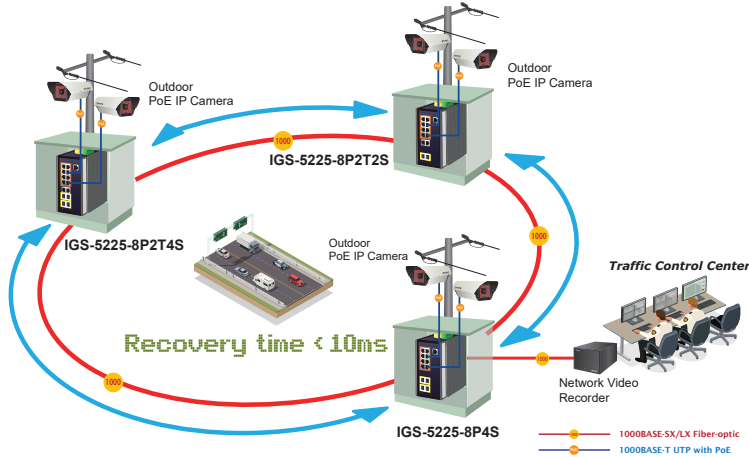- One RJ45 console interface for basic management and setup

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 100m
- PoE management features
  - PoE admin-mode control
  - PoE management mode selection
  - PoE Legacy mode selection
  - PoE Budget setup option
  - 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 extend mode control to support power feeding up to a distance of up to 160 meters
- Intelligent PoE features
  - Temperature threshold control
  - PoE usage threshold control
  - PoE schedule
  - PD alive check
  - LLDP PoE Neighbors
- Industrial Protocol
- Modbus TCP for real-time monitoring in the SCADA system
- IEEE 1588v2 PTP (Precision Time Protocol) transparent clock mode

Industrial Case and Installation

- IP30 aluminum case
- DIN-rail or wall-mount design
- 48~54V DC, redundant power with reverse polarity protection

ERPS Ring for Video Transmission Redundancy

Outdoor PoE IP Camera

Outdoor PoE IP Camera

IGS-5225-8P2T2S

IGS-5225-8P2T4S

Outdoor PoE IP Camera

Traffic Control Center

Recovery time < 10ms

Network Video Recorder

IGS-5225-8P4S

1000BASE-SX/LX Fiber-optic
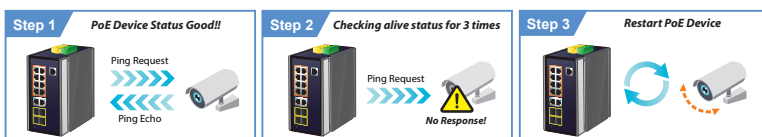1000BASE-T UTP with PoE

High Power PoE for Security and Public Service Applications

As the whole system comes with a total 240-watt PoE budget, the IGS-5225 PoE Series is designed specifically to satisfy the growing demand of higher power consuming network PDs (powered devices) such as multi-channel (802.11n/ac/ax) wireless LAN access points, PTZ (pan, tilt, zoom) speed dome network cameras and other PoE network devices.

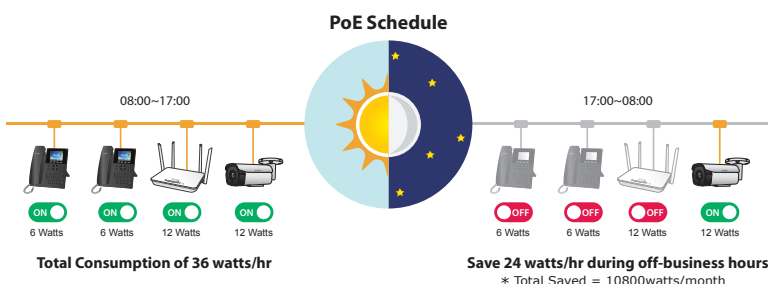### Intelligent Alive Check for Powered Device

The IGS-5225 PoE Series can be configured to monitor connected PD's status in real time via ping action. Once the PD stops working and responding, the IGS-5225 PoE Series will recycle the PoE port power and bring the PD back to work. It also greatly enhances the reliability in that the PoE port will reset the PD power, thus reducing administrator's management burden.

PoE PD Alive Check

Step 1   PoE Device Status Good!!
Ping Request
Ping Echo

Step 2   Checking alive status for 3 times
Ping Request
No Response!

Step 3   Restart PoE Device

PoE Schedule for Energy Savings

Under the trend of energy savings worldwide and contributing to environmental protection on the Earth, the IGS-5225 PoE Series can effectively control the power supply besides its capability of giving high watts power. The built-in **"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 or enterprises save power and money.

PoE Schedule

08:00~17:00

17:00~08:00

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

Total Consumption of 36 watts/hr

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

- 12~54V DC, redundant power with reverse polarity protection (IGS-5225-8P4S-12V only)
- Supports 6KV DC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

Digital Input and Digital Output

- 2 digital input (DI)
- 2 digital output (DO)
- Integrate sensors into auto alarm system
- Transfer alarm to IP network via email and SNMP trap

Layer 3 IP Routing Features

- Supports maximum 32 static routes and route summarization
- Routing interface provides per VLAN routing mode

Layer 2 Features

- Storm Control support
    - Broadcast/Multicast/Unicast
- Supports **VLAN**
    - IEEE 802.1Q tagged VLAN
    - 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 (STP)
    - IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
    - IEEE 802.1s Multiple Spanning Tree Protocol (MSTP), 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 with 4 ports per trunk group
    - Up to 8Gbps bandwidth (duplex mode)
- Provides port mirror (many-to-1)
- Port mirroring to monitor the incoming or outgoing traffic on a particular port
- Loop protection to avoid broadcast loops
- Supports ERPS (Ethernet Ring Protection Switching)
- 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
- Link Layer Discovery Protocol (LLDP)
- IEEE 802.3ah OAM

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Scheduled Power Recycling

The IGS-5225 PoE Series allows each of the connected PoE IP cameras or PoE wireless access points to reboot at a specified time each week. Therefore, it will reduce the chance of IP camera or AP crash resulting from buffer overflow.

Automatically Reboot
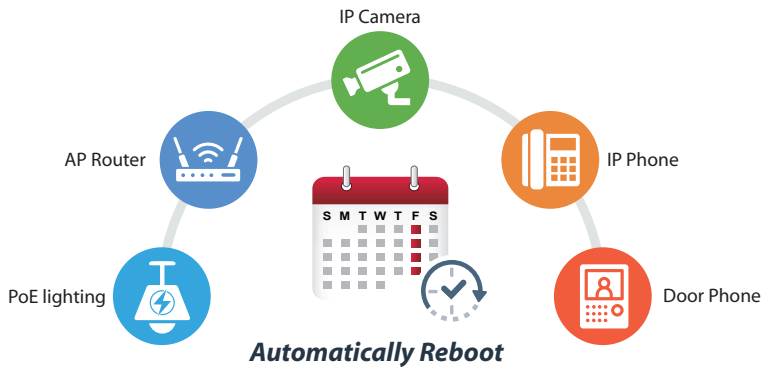
SMTP/SNMP Trap Event Alert

The IGS-5225 PoE Series provides event alert function to help to diagnose the abnormal device owing to whether or not there is a break of the network connection, or the rebooting response.
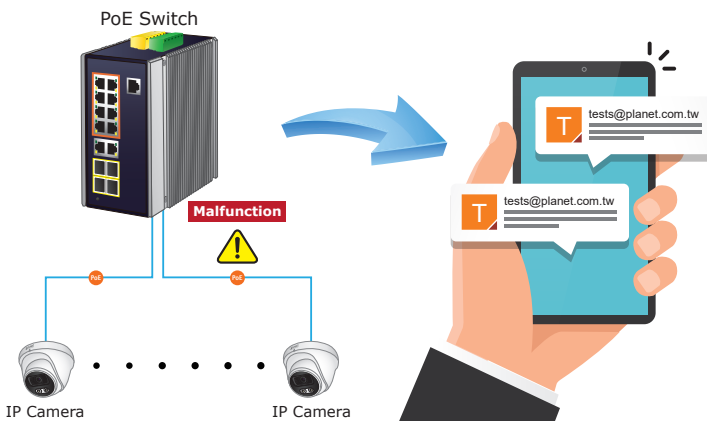
Effective Alarm Alert for Better Protection

The IGS-5225 PoE Series supports a Fault Alarm feature which can alert the users when there is something wrong with the switches. With this ideal feature, the users would not have to waste time finding where the problem is. It will help to save time and human resource.

Fault Alarm Feature

DC/DC Power Failure   RJ45/Fiber Connection Link Down
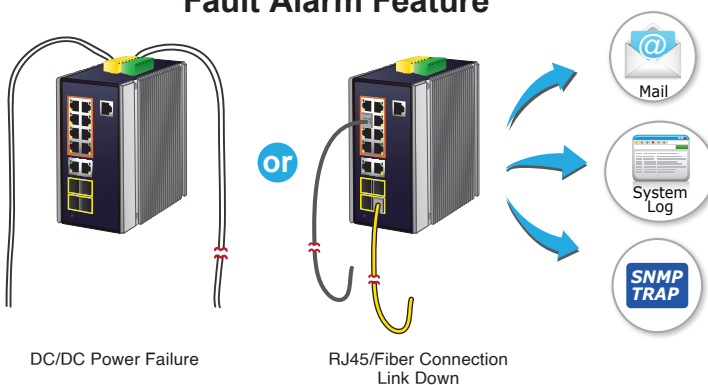
Quality of Service

- Ingress Shaper and Egress Rate Limit per port bandwidth control
- 8 priority queues on all switch ports
- Traffic classification
  - IEEE 802.1p CoS
  - IP TOS/DSCP/IP precedence
  - 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 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
- MVR (Multicast VLAN Registration)

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
  - Guest VLAN assigns clients to a restricted VLAN with limited services
- 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 and Telnet Command Line Interface
  - SNMP v1 and v2c switch management
  - SSHv2, TLSv1.2 and SNMP v3 secure access
- SNMP Management
  - Four RMON groups (history, statistics, alarms, and events)
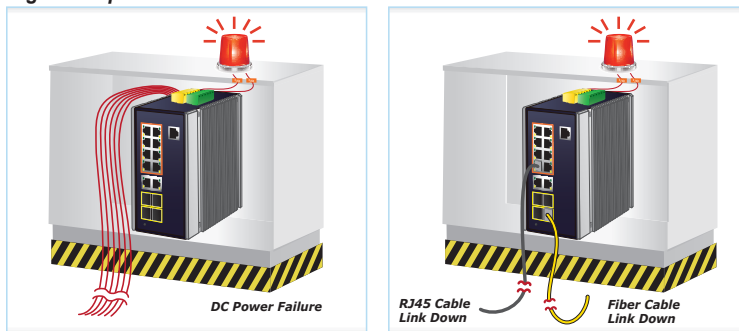 - SNMP trap for interface Link Up and Link Down notification

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Digital Input and Digital Output for External Alarm

The IGS-5225 PoE Series supports Digital Input and Digital Output on its front panel. This external alarm enables users to use Digital Input to detect and log external device status (such as door intrusion detector), and send event alarm to the administrators. The Digital Output could be used to alarm the administrators if the IGS-5225 PoE Series port shows link down, link up or power failure.

Digital Input

Security OK!!	Alarm Warning	Alarm Messaging
		Uplink
Enclosure	Enclosure	Mail System Log SNMP TRAP
Door Detector (Door Closed)	**Door Detector (Door Open)**	

Digital Output

DC Power Failure

RJ45 Cable Link Down   **Fiber Cable Link Down**

Convenient and Smart ONVIF Devices with Detection Feature

PLANET has developed an awesome feature -- ONVIF Support -- which is specifically designed for cooperating with video IP surveillances. From the IGS-5225 PoE Series GUI, clients just need one click to search and show all of the ONVIF devices via network application. In addition, clients can upload floor images to the switch series, making the deployments of surveillance and other devices easy for planning and inspection purposes. Moreover, clients can get real-time surveillance's information and online/offline status; the PoE reboot can be controlled from the GUI.

Add to **ONVIF** Device List

eMap of ONVIF IP Camera Monitoring

ONVIF Switch
IGS-5225-8P2T4S ▶

IP Camera   IP Camera   IP Camera   NVR

ONVIF Device

- **IPv6** IP Address/NTP/DNS management
- Built-in Trivial File Transfer Protocol (TFTP) client
- BOOTP and DHCP for IP address assignment
- System Maintenance
  - Firmware upload/download via HTTP
  - Reset button for system reboot or reset to factory default
  - Dual Images
- DHCP Relay and DHCP Option82
- DHCP Server
- User Privilege levels control
- NTP (Network Time Protocol)
- UPnP
- Network Diagnostic
  - ICMPv6/ICMPv4 Remote Ping
  - Cable Diagnostic technology provides the mechanism to detect and report potential cabling issues
  - SFP-DDM (Digital Diagnostic Monitor)
- SMTP, Syslog and SNMP trap remote alarm
- Local system Log
- Provides ONVIF for co-operating with PLANET video IP surveillance
- PLANET Smart Discovery Utility for deployment management
- PLANET NMS system and CloudViewer for deployment management

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Robust Layer 2 Features

The IGS-5225 PoE Series can be programmed for advanced switch management functions such as dynamic port link aggregation, Q-in-Q VLAN, private VLAN, Rapid Spanning Tree Protocol, Layer 2 to Layer 4 QoS, bandwidth control and IGMP snooping. The IGS-5225 PoE Series provides 802.1Q tagged VLAN, and the VLAN groups allowed will be maximally up to 4K. Via aggregation of supporting ports, the IGS-5225 PoE Series allows the operation of a high-speed trunk combining multiple ports. It enables a maximum of up to 10 trunk groups with 4 ports per trunk group, and supports fail-over as well.
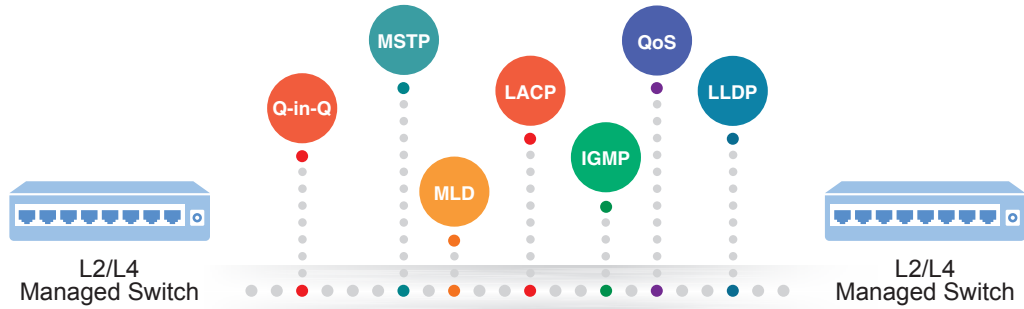
Network with Cybersecurity Helps Minimize Security Risks

The IGS-5225 PoE Series comes with enhanced cybersecurity to fend off cyberthreats and cyberattacks. It supports SSHv2 and TLSv1.2 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 IGS-5225 PoE Series protects the switch management and enhances the security of the mission-critical network without any extra deployment cost and effort.

Efficient Management

For efficient management, the IGS-5225 PoE Series is equipped with Command line, Web and SNMP management interfaces.

- With the built-in **Web-based** management interface, the IGS-5225 PoE Series 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.
- For standard-based monitor and management software, it offers SNMPv3 connection which encrypts the packet content at each session for secure remote management.

Powerful Security from Layer 2 to Layer 4

The IGS-5225 PoE Series 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** and **MAC-based** user and device authentication. With the **private VLAN** function, communication between edge ports can be prevented to ensure user privacy.

Advanced IP Network Protection

The IGS-5225 PoE Series also provides **DHCP Snooping**, **IP Source Guard** and **Dynamic ARP Inspection** functions to prevent IP snooping from attack and discard ARP packets with invalid MAC address. The network administrators can now construct highly-secure corporate networks with considerably less time and effort than before.

Modbus TCP Provides Flexible Network Connectivity for Factory Automation

With the supported Modbus TCP/IP protocol, the IGS-5225 PoE Series can easily integrate with **SCADA** systems, **HMI** systems and other data acquisition systems in factory floors. It enables administrators to remotely monitor the industrial Ethernet switch's **operating information**, **port information** and **communication status**, thus easily achieving enhanced monitoring and maintenance of the entire factory.

1588 Time Protocol for Industrial Computing Networks

The IGS-5225 PoE Series is ideal for telecom and Carrier Ethernet applications, supporting MEF service delivery and timing over packet solutions for IEEE 1588 and synchronous Ethernet.

Time Synchronization in Network
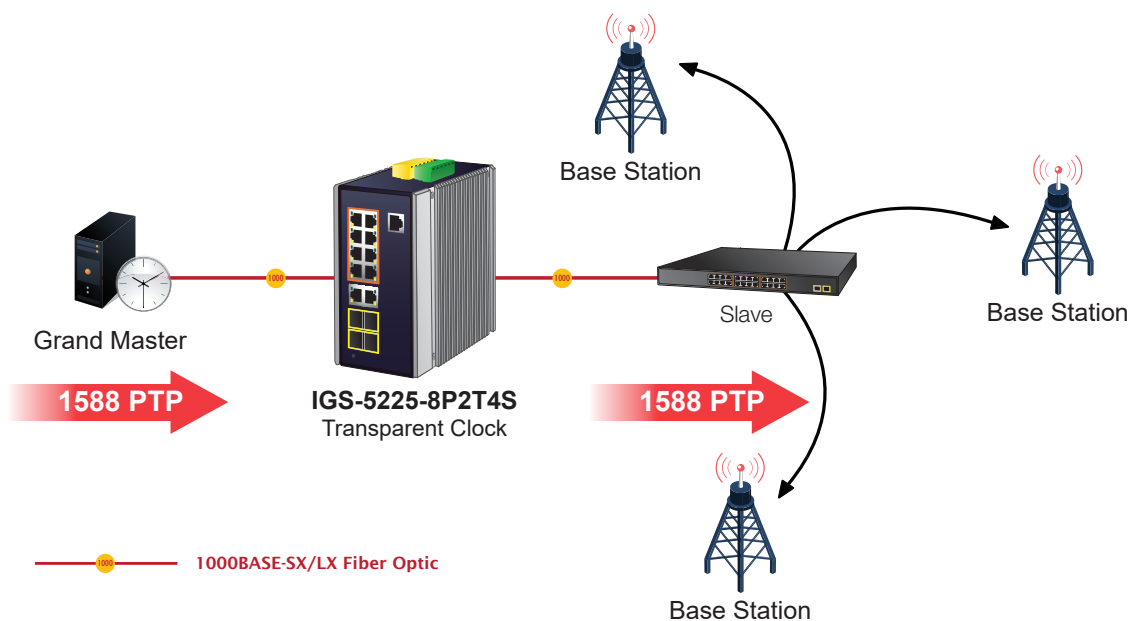
Flexibility and Extension Solution

The two SFP ports built in the IGS-5225 PoE Series support multi-speed, **100BASE-FX**, **1000BASE-SX/LX** and **2500BASE-X SFP** (Small Form-factor Pluggable) fiber-optic modules, meaning the administrator now can flexibly choose the suitable SFP transceiver according to not only the transmission distance but also the transmission speed required.

The distance can be extended from 300 meters to 2km (multi-mode fiber) and up to 10/20/40/60/80/120 kilometers (single-mode fiber or WDM fiber). They are well suited for applications within the enterprise data centers and distributions.

Intelligent SFP Diagnosis Mechanism

The IGS-5225 PoE Series supports SFP-**DDM** (Digital Diagnostic Monitor) function that greatly helps network administrator to easily monitor real-time parameters of the SFP, such as optical output power, optical input power, temperature, laser bias current, and transceiver supply voltage.

SFP DDM *(Digital Diagnostic Monitor)*

Voltage	Ammeter	Temperature	Power Transceiver	Power Receiver
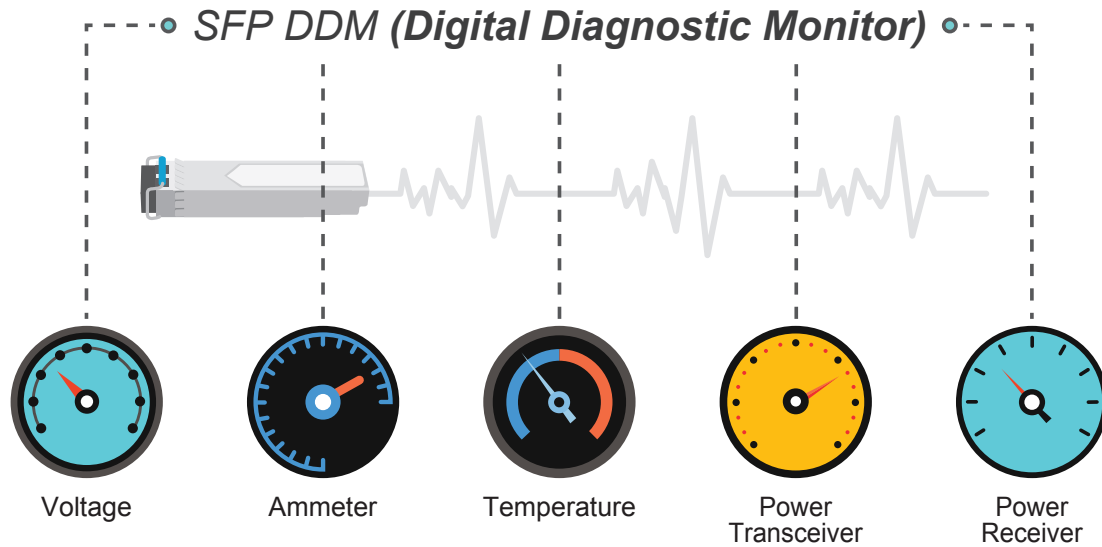
Convenient and Reliable Power System

To facilitate the 802.3at PoE usage with commonly-used 12~54V DC power input for transportation and industrial-level applications, the IGS-5225-8P4S-12V adopts the 12~54V DC to 54V power boost technology to solve power source issue but does not require special power supplies. Its wide-ranging voltages design is suitable for worldwide operability with high availability applications requiring dual or backup power inputs.

Applications

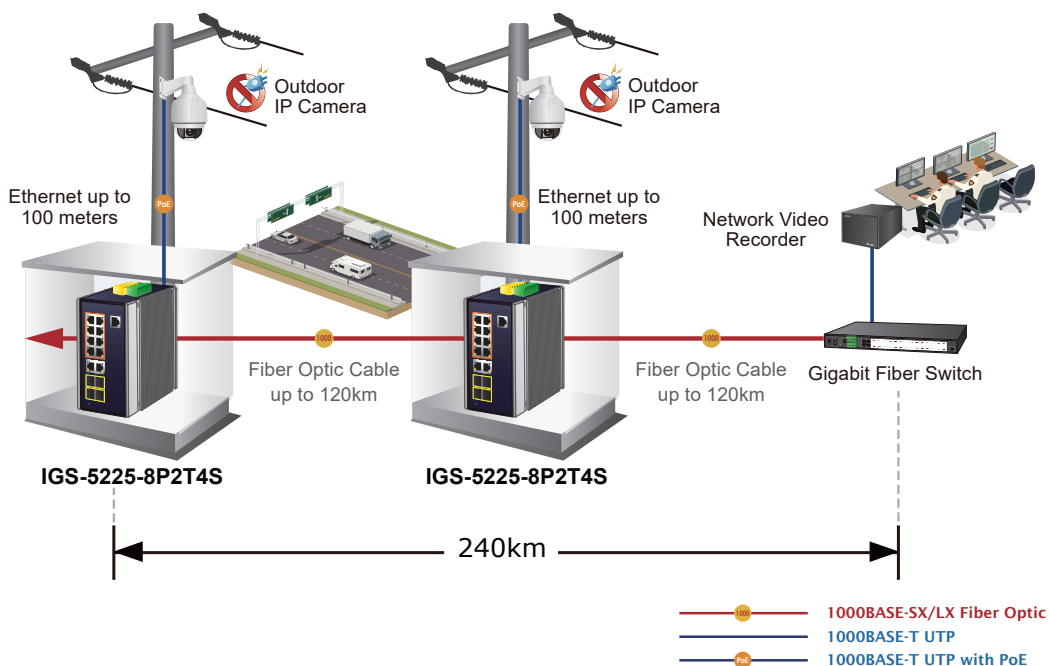## Industrial Area Department/Workgroup PoE Switch

Providing up to 8 PoE+, in-line power interfaces, the IGS-5225 PoE Series can easily build a power centrally controlled for IP phone system, IP camera system, or wireless AP group for Industrial network. For instance, 8 PoE IP cameras or wireless access points can be easily installed around the corner in the industrial environment for surveillance demands or for a wireless roaming network. Without the power-socket limitation, the IGS-5225 PoE Series makes the installation of IP cameras or wireless AP easier and more efficient.
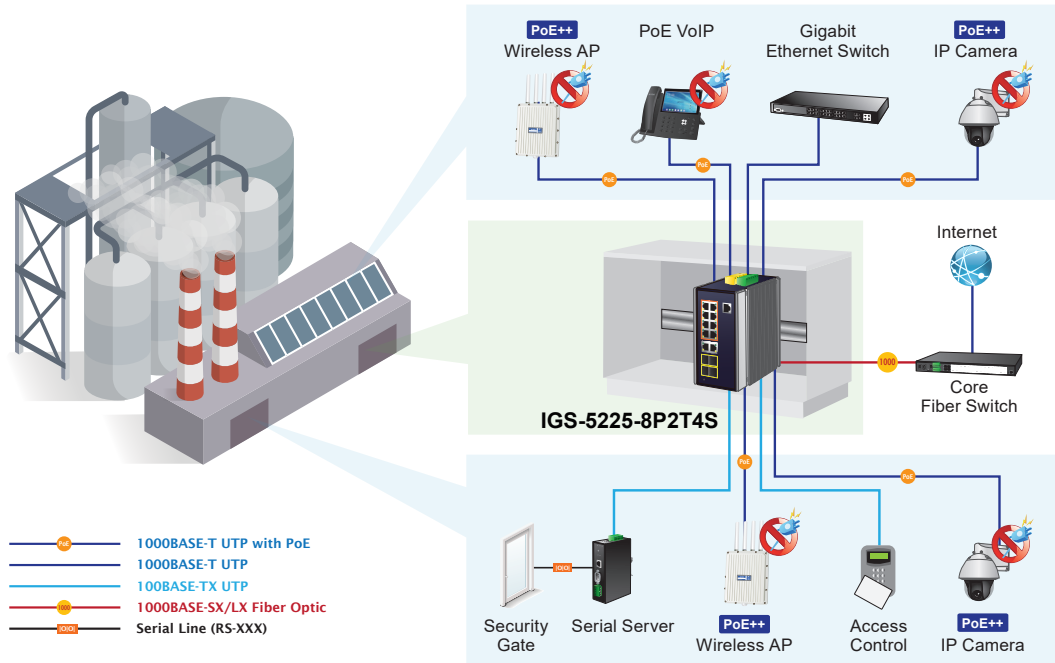
Perfect Integration Solution for IP PoE Camera and NVR System

The IGS-5225 PoE Series provides eight 10/100/1000BASE-T 802.3at PoE+ ports which can offer sufficient PoE power to 8 PoE IP cameras at the same time. In addition, with the two 100/1000/2500BASE-X SFP interfaces, the IGS-5225 PoE Series can connect to a core fiber switch and send video streams to an NVR and monitoring center. Through the high-performance switch architecture, the IGS-5225 PoE Series facilitates the recorded video files from the 8 PoE+ IP cameras to be saved in the NVR systems. Furthermore, the NVR systems can be controlled and monitored in both the local LAN and the remote site via Internet. The IGS-5225 PoE Series undoubtedly brings an ideal secure surveillance system at a lower total cost.

Extending Ethernet Distance

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Specifications

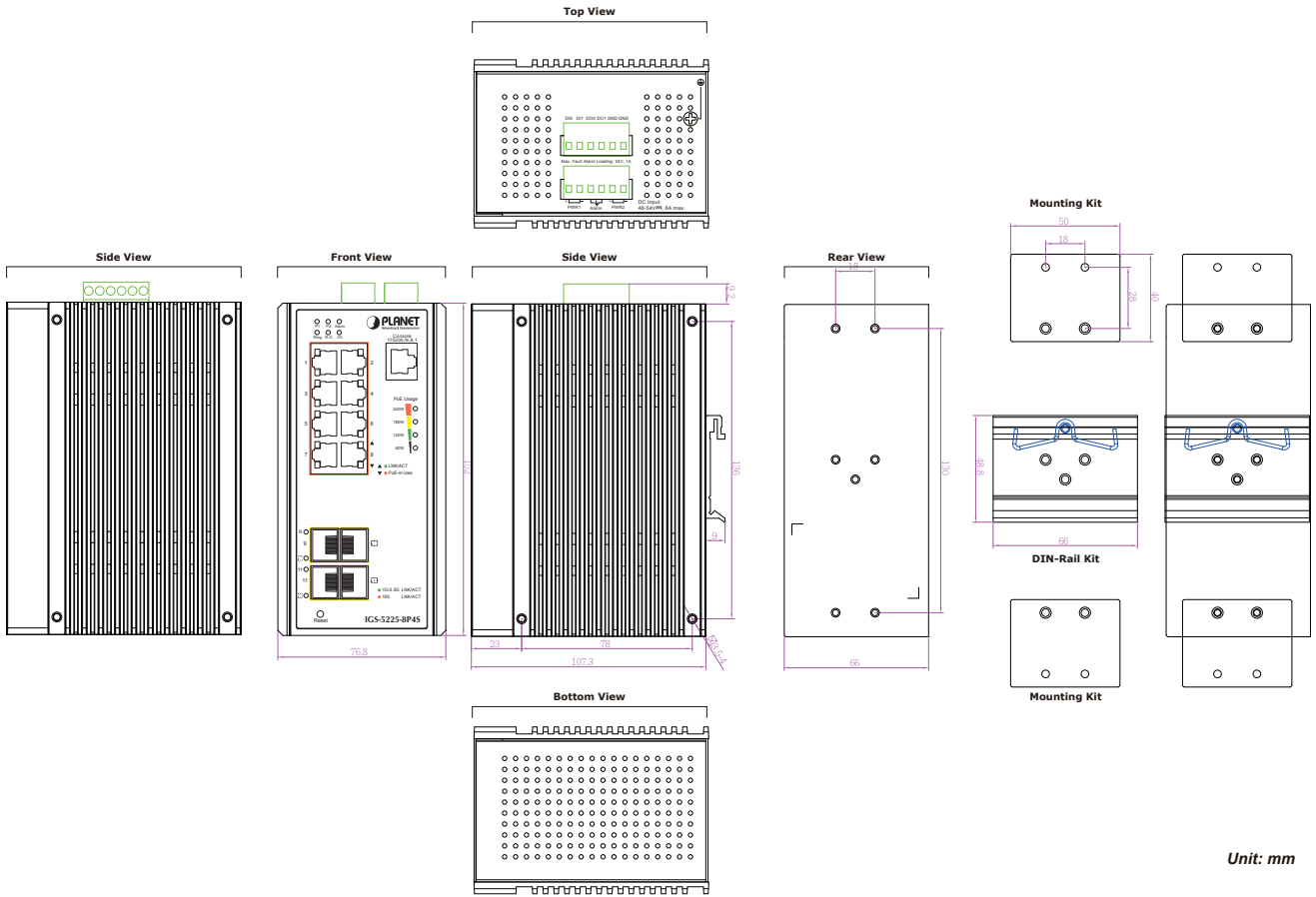| Product	IGS-5225-8P4S-12V	IGS-5225-8P4S	IGS-5225-8P2T2S	IGS-5225-8P2T4S
Hardware Specifications				
Hardware Version	V1	v5	v4	v2
Copper Ports	8 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports	8 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports	10 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports	10 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports
SFP Fiber Ports	2 100/1000BASE-X SFP interfaces (Port-9 and Port-10) 2 100/1000/2500BASE-X SFP interfaces (Port-11 and Port-12)	2 100/1000BASE-X SFP interfaces (Port-9 and Port-10) 2 100/1000/2500BASE-X SFP interfaces (Port-11 and Port-12)	2 100/1000/2500BASE-X SFP interfaces (Port-11 and Port-12)	2 100/1000BASE-X SFP interfaces (Port-11 and Port-12) 2 100/1000/2500BASE-X SFP interfaces (Port-13 and Port-14)
PoE Injector Ports	8 ports with 802.3at/af PoE injector function with Port-1 to Port-8			
Console	1 x RJ45-to-RS232 serial port (115200, 8, N, 1)			
RAM	128MBytes			
Flash Memory	64MBytes			
Reset Button	< 5 sec: System reboot > 5 sec: Factory default			
ESD Protection	6KV DC			
Enclosure	IP30 aluminum case			
Installation	DIN-rail kit and wall-mount kit			
Connector	Removable 6-pin terminal block for power input Pin 1/2 for Power 1, Pin 3/4 for fault alarm, Pin 5/6 for Power 2 Removable 6-pin terminal block for DI/DO interface Pin 1/2 for DI 1 & 2, Pin 3/4 for DO 1 & 2, Pin 5/6 for GND			
Alarm	One relay output for power failure. Alarm relay current carry ability: 1A @ 24V DC			
Digital Input	2 digital input (DI) Level 0: -24V~2.1V (±0.1V) Level 1: 2.1V~24V (±0.1V) Input load to 24V DC, 10mA max.			
Digital Output	2 digital output (DO) Open collector to 24V DC, 100mA max.			
Dimensions (W x D x H)	76.8 x 107.3 x 152 mm			
Weight	1128g	1130g	1128g	1144g
Power Requirements	Dual 12~54V DC	Dual 48~54V DC (>51V DC for PoE+ output recommended)		
Power Consumption	Max. 7.28 watts/22.11BTU (Power on without any connection)	Max. 5.3 watts/18BTU (Power on without any connection)	Max. 6.48 watts/22.1BTU (Power on without any connection)	Max. 6.48watts/22 BTU (Power on without any connection)
	Max.249 watts/849.09BTU (Full loading with PoE function)	Max. 263 watts/896.8BTU (Full loading with PoE function)	Max.263 watts/896.8BTU (Full loading with PoE function)	Max. 261W/890 BTU(Full Loading)
LED Indicator	System: Power 1 (Green) Power 2 (Green) Alarm (Red) Ring (Green) Ring Owner (Green) DIDO (Red) Per 10/100/1000T RJ45 PoE+ Ports: PoE-in-Use (Amber) LNK/ACT (Green) Per 10/100/1000T RJ45Ports: 1000 LNK/ACT (Green) 100 LNK/ACT (Amber) Per SFP Interface: 10/100 LNK/ACT (Amber) 1G/2.5G LNK/ACT (Green)			
Switching				
Switch Architecture	Store-and-Forward			
Switch Fabric	30Gbps/non-blocking	30Gbps/non-blocking	30Gbps/non-blocking	34Gbps/non-blocking
Throughput (packet per second)	22.32Mpps@ 64 bytes packet	22.32Mpps@ 64 bytes packet	22.32Mpps@ 64 bytes packet	25.30Mpps@ 64bytes packet

Address Table	8K entries, automatic source address learning and aging
Shared Data Buffer	4Mbits
Flow Control	IEEE 802.3x pause frame for full duplex Back pressure for half duplex
Jumbo Frame	9K bytes
Power Over Ethernet	
PoE Standard	IEEE 802.3at Power over Ethernet Plus/PSE Backward compatible with 802.3af Power over Ethernet
PoE Power Supply Type	End-span
Power Pin Assignment	1/2(+), 3/6(-)
PoE Power Output	Per port 54V DC, max. 36 watts

IEEE 802.3af Standard
- Per port 48V~51V DC (depending on the power supply), max. 15.4 watts
IEEE 802.3at Standard
- Per port 52V~54V DC (depending on the power supply), max. 36 watts

PoE Power Budget	12V power input - 60W maximum 24V power input -120W maximum 48V~54V power input - 240W maximum	48V power input - 120W maximum (depending on power input) 52~54V power input - 240W maximum (depending on power input)

Max. Number of Class 2 PDs	8
Max. Number of Class 3 PDs	8
Max. Number of Class 4 PDs	8
PoE Management Functions	
Active PoE Device Alive Detection	Yes
PoE Power Recycling	Yes, daily or predeinded schedule
PoE Schedule	4 schedule profiles
PoE Extend Mode	Yes, max. 160 to 200 meters
PoE System Management	System PoE Admin control Total PoE power budget control PoE Legacy mode Over-temperature threshold alarm PoE usage threshold alarm
PoE Port Management	Port Enable/Disable/Schedule Port Priority
Layer 3 Functions	
IP Interfaces	Max. 8 VLAN interfaces
Routing Table	Max. 32 routing entries
Routing Protocols	IPv4 software static routing IPv6 software static routing
Layer 2 Function	
Port Configuration	Port disable/enable Auto-negotiation 10/100/1000Mbps full and half duplex mode selection Flow control disable/enable Power saving mode control
Port Status	Display each port's speed duplex mode, link status, flow control status, auto negotiation status, trunk status
Port Mirroring	TX / RX / Both Many-to-1 monitor
VLAN	IEEE 802.1Q tag-based VLAN IEEE 802.1ad Q-in-Q tunneling Private VLAN Edge (PVE) MAC-based VLAN Protocol-based VLAN VLAN Translation Voice VLAN MVR (Multicast VLAN Registration) GVRP Up to 4K VLAN groups, out of 4094 VLAN IDs
Link Aggregation	IEEE 802.3ad LACP/static trunk Supports 6 trunk groups with 4 ports per trunk group
Spanning Tree Protocol	IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.1s Multiple Spanning Tree Protocol

IGMP Snooping	IPv4 IGMP (v1/v2/v3) snooping IPv4 IGMP querier mode support Up to 255 multicast groups
MLD Snooping	IPv6 MLD (v1/v2) snooping IPv6 MLD querier mode support Up to 255 multicast groups

Bandwidth Control	Per port bandwidth control
	  Ingress: 500Kb~1000Mbps
	  Egress: 500Kb~1000Mbps

RING	Supports ERPS, and complies with ITU-T G.8032 Recovery time < 10ms

Synchronization	IEEE 1588v2 PTP(Precision Time Protocol)
	  - Peer-to-peer transparent clock
	  - End-to-end transparent clock

QoS	Traffic classification based, strict priority and WRR
	8-level priority for switching
	  - Port number
	  - 802.1p priority
	  - 802.1Q VLAN tag
	  - DSCP/TOS field in IP packet

Security Functions	

Access Control List	IP-based ACL/MAC-based ACL
	ACL based on:
	  - MAC Address
	  - IP Address
	  - Ethertype
	  - Protocol Type
	  - VLAN ID
	  - DSCP
	  - 802.1p Priority
	Up to 256 entries

Security	Port Security IP source guard Dynamic ARP inspection Command line authority control based on user level
AAA	RADIUS client TACACS+ client
Network Access Control	IEEE 802.1x port-based network access control MAC-based authentication Local/RADIUS authentication
Switch Management	
Basic Management Interfaces	Console; Telnet; Web browser; SNMP v1, v2c
Secure Management Interfaces	SSHv2, TLS v1.2, SNMP v3
System Management	Firmware upgrade by HTTP protocol through Ethernet network Configuration upload/download through HTTP Remote syslog System log LLDP protocol NTP PLANET Smart Discovery Utility PLANET CloudViewer app
Event Management	Remote syslog Local system log SMTP
ONVIF	ONVIF device discovery ONVIF device monitoring Floor Map

SNMP MIBs	RFC 1213 MIB-II RFC 2863 IF-MIB RFC 1493 Bridge MIB RFC 1643 Ethernet MIB RFC 2863 Interface MIB RFC 2665 Ether-Like MIB RFC 2737 Entity MIB RFC 2819 RMON MIB (Groups 1, 2, 3 and 9) RFC 2618 RADIUS Client MIB RFC 3411 SNMP-Frameworks-MIB IEEE 802.1X PAE LLDP MAU-MIB Power over Ethernet MIB

Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32 (free fall) IEC60068-2-27 (shock) IEC60068-2-6 (vibration)
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3z Gigabit SX/LX IEEE 802.3ab Gigabit 1000T 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 802.1ad Q-in-Q VLAN stacking IEEE 802.1X Port Authentication Network Control IEEE 802.1ab LLDP IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3ah OAM IEEE 1588 PTPv2 RFC 768 UDP RFC 783 TFTP RFC 791 IP RFC 792 ICMP RFC 2068 HTTP RFC 1112 IGMP v1 RFC 2236 IGMP v2 RFC 3376 IGMP version 3 RFC 2710 MLD version 1 RFC 3810 MLD version 2 ITU-T G.8032 ERPS Ring

Environment	
Operating Temperature	-40 ~ 75 degrees C
Storage Temperature	-40 ~ 85 degrees C
Humidity	5 ~ 95% (non-condensing)

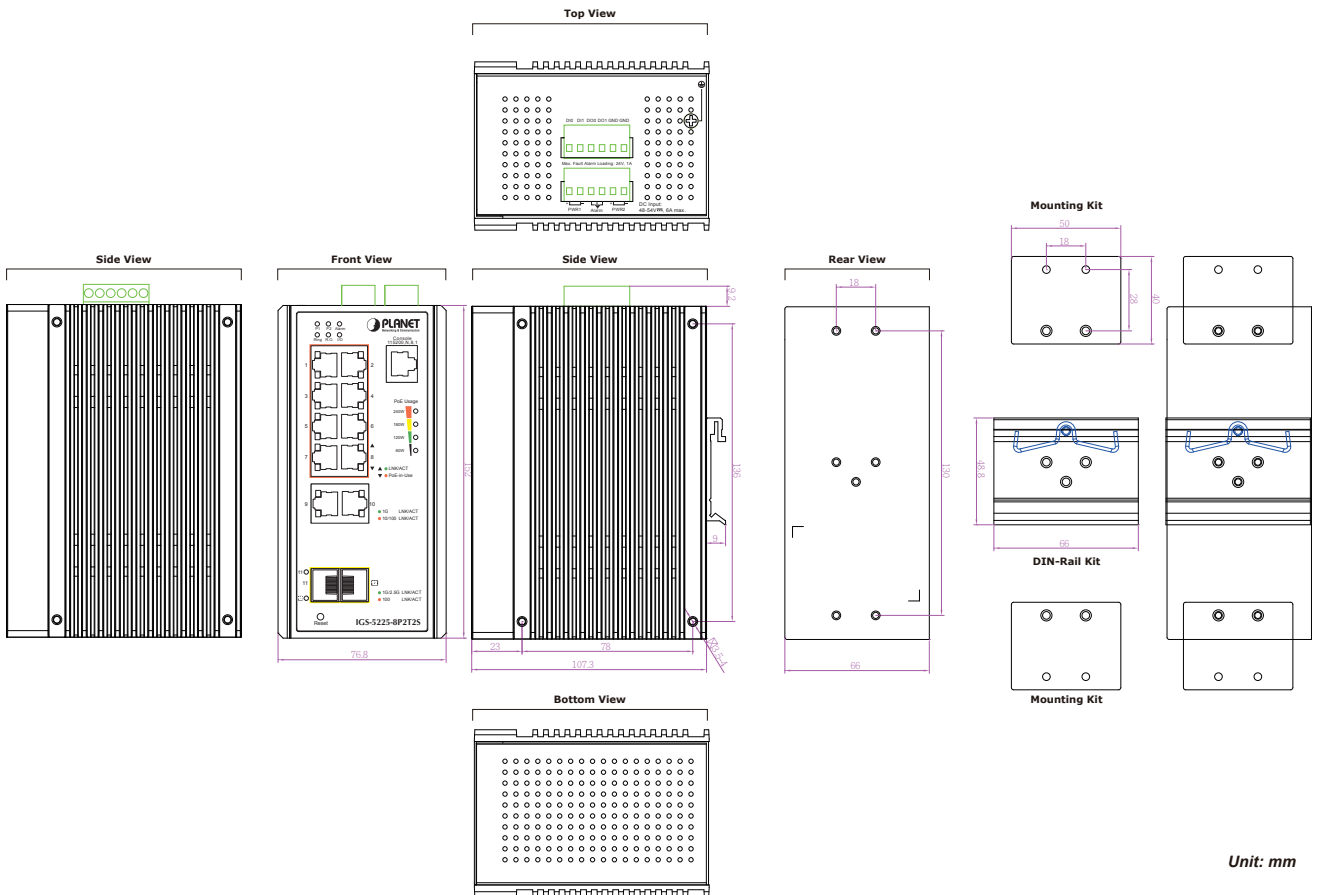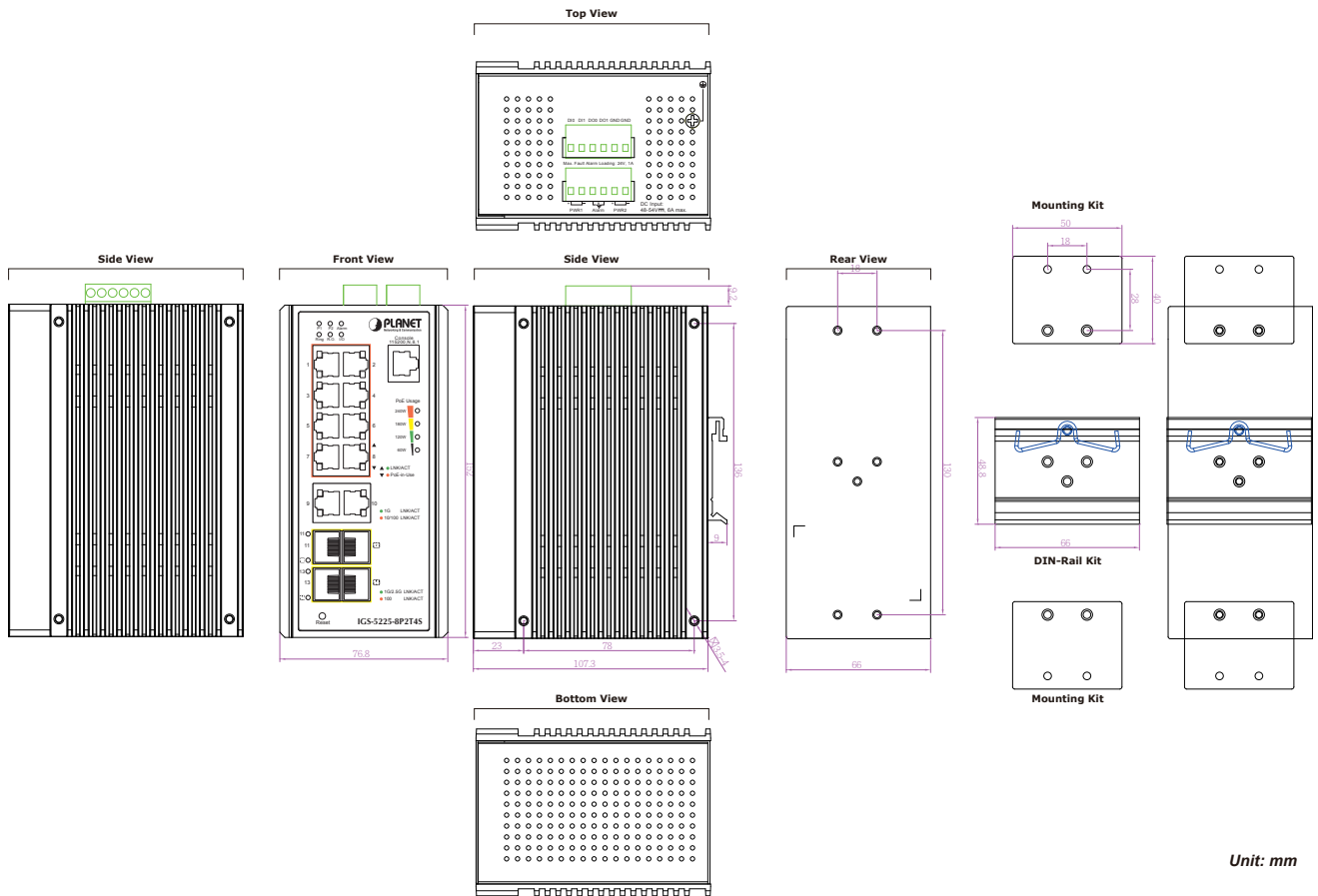## Dimensions

IGS-5225-8P4S and IGS-5225-8P4S-12V

Unit: mm

IGS-5225-8P2T2S

Unit: mm

IGS-5225-8P2T4S

Unit: mm

Ordering Information

IGS-5225-8P4S	Industrial L2+ 8-Port 10/100/1000T 802.3at PoE + 2-Port 100/1G SFP + 2-Port 1G/2.5G SFP Managed Ethernet Switch
IGS-5225-8P4S-12V	Industrial L2+ 8-Port 10/100/1000T 802.3at PoE + 2-Port 100/1G SFP + 2-Port 100/1G/2.5G SFP Managed Ethernet Switch w/ 12V Booster
IGS-5225-8P2T2S	Industrial L2+ 8-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T + 2-Port 1G/2.5G SFP Managed Ethernet Switch
IGS-5225-8P2T4S	Industrial L2+ 8-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T + 2-Port 100/1G SFP + 2-Port 1G/2.5G SFP Managed Ethernet Switch

Related Products

IGS-5225-8P2S2X	L3 Industrial 8-Port 10/100/1000T 802.3at PoE + 4-Port 100/1000X SFP + 2-Port 10G SFP+ Managed Ethernet Switch
IGS-6325-16P4S	L3 Industrial 16-Port 10/100/1000T 802.3at PoE + 4-Port 100/1000X SFP Managed Ethernet Switch (-40~75 degrees C)
IGS-20160HPT	L3 Industrial 16-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T + 2-Port 1G/2.5G SFP Managed Ethernet Switch
IGS-10020HPT	L2+ Industrial 8-Port 10/100/1000T 802.3at PoE + 2-Port 1G/2.5G SFP Managed Ethernet Switch

Available Modules

MGB2G-Series Transceiver	2500BASE-SX/LX Transceiver
MGB-Series Transceiver	1000BASE-SX/LX Transceiver
MFB-Series Transceiver	100BASE-FX SFP Transceiver

Related Power Supply

PWR-480-48	48V, 480W Din-rail Power Supply (NDR-480-48, adjustable 48-56V DC Output)

FC CE

**IGS-5225-8P4S/IGS-5225-8P4S-12V
IGS-5225-8P2T2S/IGS-5225-8P2T4S**