

Industrial IP67-rated 4-Port 10/100/1000T 802.3at PoE+ 2-Port 10/100/1000T Managed Ethernet Switch



Suitable for Industrial Environment

PLANET IGS-5227X-4P2T, an Industrial Layer 2+ Managed Ethernet Switch, comes with an IP67-rated industrial case, 4-port 10/100/1000T 802.3at PoE+, 2-port 10/100/1000T, and **static Layer 3 routing**, providing a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curb-side traffic control cabinets. The IGS-5227X-4P2T can be easily mounted on a DIN rail or wall taking up less space. Each of the four Gigabit PoE+ ports provides 36 watts of power, which means a total power budget of up to **144 watts** can be utilized simultaneously without considering the different types of PoE applications being employed. It also provides a quick, safe and cost-effective Power over Ethernet network solution to IP security surveillance for small businesses and enterprises.



IP67 Rugged Case

2 x Waterproof and Dustproof Gigabit M12

4 x Waterproof and Dustproof Gigabit PoE+ M12

12~56V DC Waterproof and Dustproof M23 Redundant Power Input



Physical Port

- **6-port 10/100/1000BASE-T waterproof and dustproof M12** X-coded female connectors with 4-port IEEE 802.3at/af Power over Ethernet Injector function

Power over Ethernet

- Complies with IEEE 802.3at Power over Ethernet Plus/end-span PSE
- Up to 4 IEEE 802.3af/802.3at devices powered
- Supports PoE power up to 36 watts for each PoE port (Port 3 to port 6)
- 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
- Intelligent PoE features
 - Temperature threshold control
 - PoE usage threshold control
 - PoE extension
 - 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)

Industrial Case and Installation

- IP67-rated aluminum case
- DIN-rail or wall-mount design
- 12~56V DC, redundant power with reverse polarity protection

Waterproof and Dustproof M12 Ethernet Connector

The IGS-5227X-4P2T is equipped with a 6-port 10/100/1000BASE-T auto-negotiation dustproof M12 connector with 4-port IEEE 802.3at PoE+ (Port 3 to Port 6); each PoE port provides 36 watts PoE output. The M12 connector provides tight and strong connection, and guarantees stable Ethernet operation performance under high vibration and shock environment. It comes with the industrial protection rating of IP67 capable of withstanding humidity, dirt, dust, shock, vibrations, heat and cold. The IGS-5227X-4P2T is able to operate under the temperature range from **-40 to 75 degrees C**. All these features ensure the highest level of reliability for mission-critical applications in any difficult environment.



Cybersecurity Network Solution to Minimize Security Risks

The IGS-5227X-4P2T supports SSHv2, TLS and SSL protocols to provide strong protection against advanced threats. It includes a range of cybersecurity features such as **DHCP Snooping**, **IP Source Guard**, **ARP Inspection** Protection, **802.1x port-based** and **MAC-based** network access control, **RADIUS** and **TACACS+** user accounts management, **SNMPv3** authentication, and so on to complement it as an all-security solution.

Dual Power Input for High Availability Network System

The IGS-5227X-4P2T features a strong dual power input system (**Dual 12V~56V DC**) incorporated into customer's automation network to enhance system reliability and uptime. For example, when DC Power 1 fails to work, the hardware failover function will be activated automatically to keep powering the IGS-5227X-4P2T via DC Power 2 alternatively without any loss of operation.

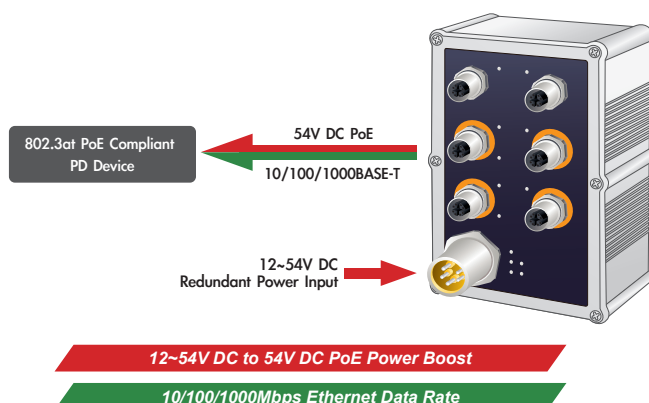
Convenient and Reliable Power System

To facilitate the 802.3at PoE+ usage with commonly used 12~56V DC power input for transportation and industrial-level applications, the IGS-5227X-4P2T adopts **12~54V DC to 54V power boost technology** to solve power source issue but does not require special power supplies. The IGS-5227X-4P2T provides an integrated power solution with a wide range of voltages (12~56V DC) for worldwide operability. It also provides dual-redundant, reversible polarity 12~56V DC power supply inputs for high availability applications.

- Supports 6KV DC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

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
- Supports **VLAN**
 - IEEE 802.1Q tagged VLAN
 - Up to 4K VLANs groups, out of 4094 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 (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 3 trunk groups with 2 ports per trunk group
 - Up to 4Gbps bandwidth (duplex mode)
- Provides port mirror (1-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



Centralized Power Management for Gigabit Ethernet PoE+ Networking

To fulfill the needs of higher power required PoE+ network applications with Gigabit speed transmission, the IGS-5227X-4P2T features high-performance Gigabit IEEE 802.3at PoE+ (up to 36 watts) on PoE+ ports (Port 3 to port 6). It perfectly meets the power requirements of PoE VoIP phone, PoE Wireless AP and all kinds of PoE IP cameras such as IR, PTZ, speed dome cameras and even box type IP cameras with a built-in fan and heater for high power consumption. The IGS-5227X-4P2T's PoE capabilities also help to reduce deployment costs for network devices as a result of freeing from restrictions of power outlet locations. Power and data switching are integrated into one unit, delivered over a single cable and managed centrally. It thus eliminates cost for additional AC wiring and reduces installation time.

Built-in Unique PoE Functions for Surveillance Management

As an Industrial managed PoE Switch for surveillance network, the IGS-5227X-4P2T 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 IGS-5227X-4P2T 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 IGS-5227X-4P2T 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.

- Link Layer Discovery Protocol (LLDP)
- Provides ONVIF for co-operating with PLANET video IP surveillances

Layer 3 IP Routing Features

- Supports maximum 8 static routes and route summarization
- IPv4/IPv6 software static routing

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
- 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