

Industrial IP67-rated 4-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T Managed Ethernet Switch (-40~75 degrees C)



Suitable for Industrial Environment

PLANET IGS-604HPT-RJ, an Industrial 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-604HPT-RJ can be easily mounted on a DIN rail or wall taking up less space. Each of the four Gigabit PoE+ ports provides 36-watt 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.



Physical Port

- **6-port 10/100/1000BASE-T waterproof and dustproof** RJ45 copper with 4-port **IEEE 802.3at/af Power over Ethernet** Injector function

Hardware Conformance

- Complies with IEEE 802.3at High Power over Ethernet end-span PSE
- Complies with IEEE 802.3af Power over Ethernet end-span PSE
- Up to 4 ports of 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
- PoE Management
 - Total PoE power budget control
 - Per port PoE function enable/disable
 - PoE Port Power feeding priority
 - Per PoE port power limitation
 - PD classification detection
 - PD alive check
 - PoE schedule
 - PD scheduled power recycling

Hardware Conformance

- IP67-rated aluminum case
- Redundant power design
 - 48 to 56V DC, redundant power with polarity reverse protect function
 - Active-active redundant power failure protection
 - Backup of catastrophic power failure on one supply
 - Fault tolerance and resilience
- DIN-rail and wall-mount design
- Supports EFT protection for 6000V DC power and 6000V DC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

Layer 3 IP Routing Features

- Supports maximum 32 static routes and route summarization

Layer 2 Features

- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)

Waterproof and Dustproof RJ45 Ethernet Connector and Shielded Plug

The IGS-604HPT-RJ is equipped with a 6-port 10/100/1000BASE-T auto-negotiation waterproof and dustproof RJ45 connector with 4-port IEEE 802.3at PoE+ (Port 3 to port 6); each PoE port provides 36-watt PoE output. These shielded RJ45 plugs can make the general UTP cable waterproof and dustproof. When connected to the waterproof and dustproof RJ45 connector, it provides tight and strong connection, and ensures it comes with the industrial protection rating of IP67 capable of withstanding humidity, dirt, dust, shock, vibrations, heat and cold.



Environmentally Hardened Design

The IGS-604HPT-RJ is able to protect itself from dust and water ingress, and 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.



Dual Power Input for High Availability Network System

The IGS-604HPT-RJ features a strong dual power input system (**Dual 48V~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-604HPT-RJ via DC Power 2 alternatively without any loss of operation.

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-604HPT-RJ features high-performance Gigabit IEEE 802.3af PoE (up to 15.4 watts) and IEEE 802.3at PoE+ (up to 36 watts) on all ports. 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-604HPT-RJ'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.

- High performance of Store-and-Forward architecture, and runt/CRC filtering that eliminates erroneous packets to optimize the network bandwidth
- Storm control support
 - Broadcast/Multicast/Unicast
- Supports **VLAN**
 - IEEE 802.1Q tagged VLAN
 - Up to 255 VLANs groups, out of 4095 VLAN IDs
 - Provides Bridging (VLAN Q-in-Q) support (IEEE 802.1ad)
 - Private VLAN Edge (PVE)
 - Protocol-based VLAN
 - MAC-based VLAN
 - IP subnet-based VLAN
 - Voice VLAN
- Supports **Spanning Tree Protocol**
 - STP, IEEE 802.1D Spanning Tree Protocol
 - RSTP, IEEE 802.1w Rapid Spanning Tree Protocol
 - MSTP, IEEE 802.1s Multiple Spanning Tree Protocol, spanning tree by VLAN
 - BPDU Guard
- Supports **Link Aggregation**
 - 802.3ad Link Aggregation Control Protocol (LACP)
 - Cisco ether-channel (static trunk)
 - Maximum 3 trunk groups, with 2 ports for each trunk
 - Up to 4Gbps bandwidth (full duplex mode)
- Provides port mirror (many-to-1)
- Port mirroring monitors the incoming or outgoing traffic on a particular port
- Loop protection to avoid broadcast loops
- Supports E.R.P.S. (Ethernet Ring Protection Switching)
- IEEE 1588 and Synchronous Ethernet network timing

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
 - IP TCP/UDP port number
 - Typical network application
- Strict priority and Weighted Round Robin (WRR) CoS policies
- Traffic-policing policies on the switch port
- DSCP remarking

Multicast

- Supports IGMP snooping v1, v2 and v3
- Supports MLD snooping v1 and v2
- Querier mode support
- IGMP snooping port filtering

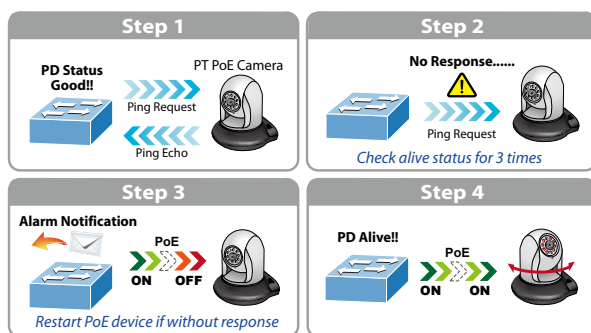
Built-in Unique PoE Functions for Surveillance Management

As a managed PoE Switch for surveillance network, the IGS-604HPT-RJ features intelligent PoE management functions:

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

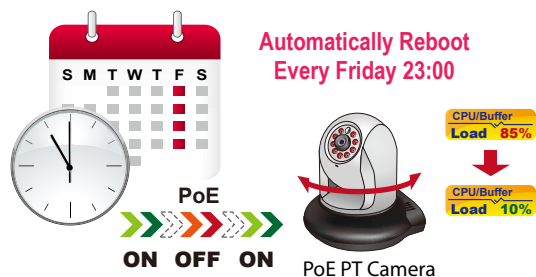
Intelligent Powered Device Alive Check

The IGS-604HPT-RJ can be configured to monitor a connected PD (Powered Device) status in real time via ping action. Once the PD stops working and it is without response, the IGS-604HPT-RJ 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.



Scheduled Power Recycling

The IGS-604HPT-RJ 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.



SMTP/SNMP Trap Event Alert

Though most NVR or camera management software offers SMTP email alert function, the IGS-604HPT-RJ 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.

SMTP/SNMP Trap Event Alert



- MLD snooping port filtering
- MVR (Multicast VLAN Registration)

Security

- Authentication
 - IEEE 802.1x port-based/MAC-based network access authentication
 - IEEE 802.1x authentication with guest VLAN
 - Built-in RADIUS client to cooperate with the RADIUS servers
 - RADIUS/TACACS+ users access authentication
- Access Control List
 - IP-based Access Control List (ACL)
 - MAC-based Access Control List (ACL)
- Source MAC/IP address binding
- 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
- IP address access management to prevent unauthorized intruder

Management

- IPv4 and IPv6 dual stack management
- Switch Management Interfaces
 - Telnet command line interface
 - Web switch management
 - SNMP v1, v2c, and v3 switch management
 - SSH/SSL secure access
- IPv6 address/NTP management
- Built-in Trivial File Transfer Protocol (TFTP) client
- BOOTP and DHCP for IP address assignment
- System Maintenance
 - Firmware upload/download via HTTP/TFTP
 - Reset button for system reboot or reset to factory default
 - Dual images
- DHCP relay and option 82
- User privilege levels control
- NTP (Network Time Protocol)
- Link Layer Discovery Protocol (LLDP) and LLDP-MED
- Network diagnostic
 - Cable diagnostic technology provides the mechanism to detect and report potential cabling issues
 - ICMPv6/ICMPv4 remote ping
- SMTP/Syslog remote alarm
- Four RMON groups (history, statistics, alarms and events)
- SNMP trap for interface link up and link down notification
- System Log
- PLANET Smart Discovery Utility for deployment management