

Industrial 8-port 10/100/1000T 802.3at PoE + 2-port 1G/2.5G SFP Managed Switch



Environmentally Hardened Design

PLANET IGS-10020PT Industrial 8-port Gigabit 802.3at PoE+ Switch is equipped with a rugged IP30 metal case for stable operation in heavy industrial environments. Thus, the IGS-10020PT provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curbside traffic control cabinets.

Being able to operate under wide temperature range from -40 to 75 degrees C, the IGS-10020PT can be placed in almost any difficult environment. The IGS-10020PT also allows either DIN rail or wall mounting for efficient use of cabinet space.



Redundant Ring, Fast Recovery for Critical Network Applications

The IGS-10020PT 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.

The IGS-10020PT also protects customer's industrial network connectivity with switching recovery capability that is used for implementing fault tolerant ring and mesh network architectures. If the Industrial network was interrupted accidentally, the fault recovery times could be less than 50ms to quickly bring the network back to normal operation.

Physical Port

- 8 10/100/1000BASE-T Gigabit Ethernet RJ45 ports with IEEE 802.3at PoE+ Injector
- 2 100/1000/2500BASE-X mini-GBIC/SFP slots for SFP type auto detection
- 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 in standard mode and 200m in extend mode
- PoE management features
 - PoE admin-mode control
 - PoE management mode selection
 - Per port PoE function enable/disable
 - Per PoE port power feeding priority
 - Per PoE port power limit
 - PoE Port Status monitoring
 - PD classification detection
 - Sequence port PoE
- Intelligent PoE features
 - PoE Legacy mode enable/disable
 - Temperature threshold control
 - PoE usage threshold control
 - PoE schedule
 - PD alive check
 - LLDP PoE Neighbors

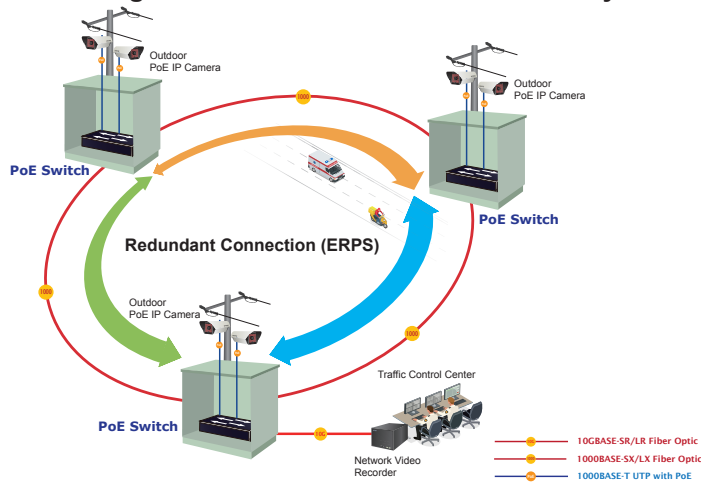
Industrial Protocol

- Modbus TCP for real-time monitoring in a SCADA system
- IEEE 1588v2 PTP (Precision Time Protocol)

Industrial Case and Installation

- IP30 aluminum case
- DIN rail and wall-mount designs
- DC 48-54V, redundant power with reverse polarity protection

ERPS Ring for Video Transmission Redundancy



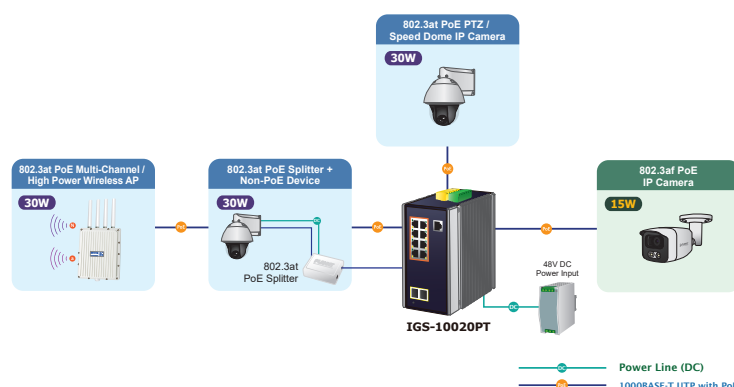
Cybersecurity Network Solution to Minimize Security Risks

The cybersecurity features that virtually need no effort and cost to have included the protection of the switch management and the enhanced security of the mission-critical network. Both SSHv2 and TLSv1.2 protocols are utilized to provide strong protection against advanced threats. The network administrator can now construct highly-secure corporate networks with considerably less time and effort than before.



High Power PoE for Security and Public Service Applications

To fulfill the demand of High Power PoE for network applications with Gigabit speed transmission under wide temperature, the IGS-10020PT provides 8 10/100/1000Mbps ports featuring **IEEE 802.3at** Power over Ethernet Plus (PoE+) that combines up to **36-watt** power output and data per port over one Cat5E/6 Ethernet cable. As the whole system comes with a total **240-watt** PoE budget, the IGS-10020PT is designed specifically to satisfy the growing demand of higher power consuming network PDs (powered devices) such as multi-channel (802.11a/b/g/n) wireless LAN access points, PTZ (Pan, Tilt & Zoom)/Speed Dome network cameras and other PoE network devices, doubling that of the current conventional 802.3af PoE.



- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

Digital Input and Digital Output

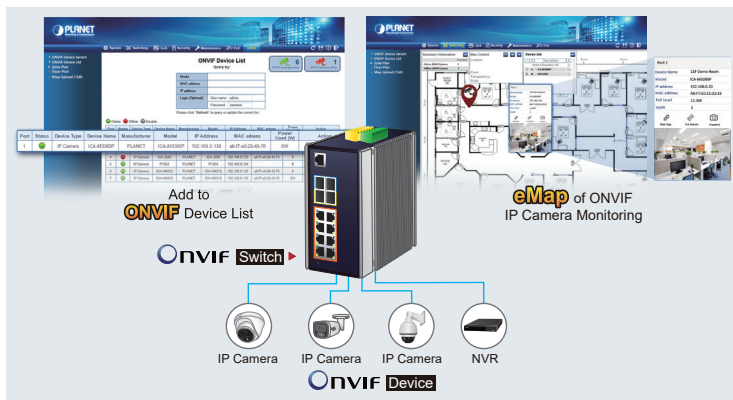
- 2 Digital Input (DI)
- 2 Digital Output (DO)
- Integrate sensors into auto alarm system
- Transfer alarm to IP network via email and SNMP trap

Layer 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
 - Supports provider Bridging (VLAN Q-in-Q, IEEE 802.1ad)
 - Private VLAN Edge (PVE)
 - Port Isolation
 - MAC-based VLAN
 - Protocol-based VLAN
 - 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 Guard
- Supports **Link Aggregation**
 - 802.3ad Link Aggregation Control Protocol (LACP)
 - Cisco ether-channel (static trunk)
 - Maximum 5 trunk groups with 10 ports per trunk group
 - Up to 20Gbps 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)

Convenient and Smart ONVIF Devices with Detection Feature

PLANET has developed an awesome feature -- ONVIF Support -- which is specifically designed for co-operating with video IP surveillances. From the IGS-10020PT's 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 can remotely monitor or inspect an assembly line. Moreover, you can get real-time surveillance information and online/offline status; the PoE reboot can be controlled from the GUI



Built-in Unique PoE Functions for Surveillance Management

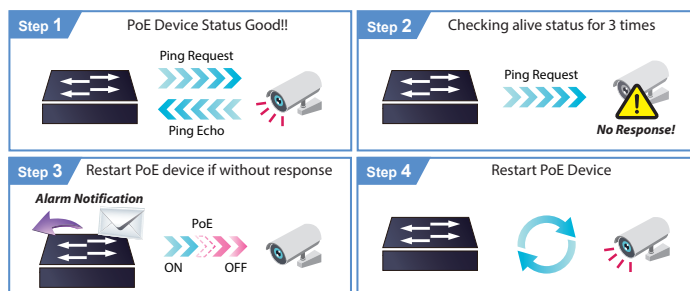
As an Industrial managed PoE Switch for surveillance network, the IGS-10020PT features the following intelligent PoE management functions:

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

Intelligent Powered Device Alive Check

The IGS-10020PT PoE+ Switch can be configured to monitor connected PD's status in real time via ping action. Once the PD stops working and responding, the IGS-10020PT 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.

PD Alive Check



- 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) and LLDP-MED
- Provides ONVIF for co-operating with PLANET video IP surveillances

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
 - 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 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)