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

Environmentally Hardened Design

PLANET Industrial 8-port Gigabit 802.3at PoE+ Switch, IGS-10020HPT, is equipped with a rugged IP30 metal case for stable operation in heavy industrial demanding environments. Thus, the IGS-10020HPT 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-10020HPT can be placed in almost any difficult environment. The IGS-10020HPT also allows either DIN rail or wall mounting for efficient use of cabinet space.

Redundant Ring, Fast Recovery for Critical Network Applications

The IGS-10020HPT 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.

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 USB 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
  - 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

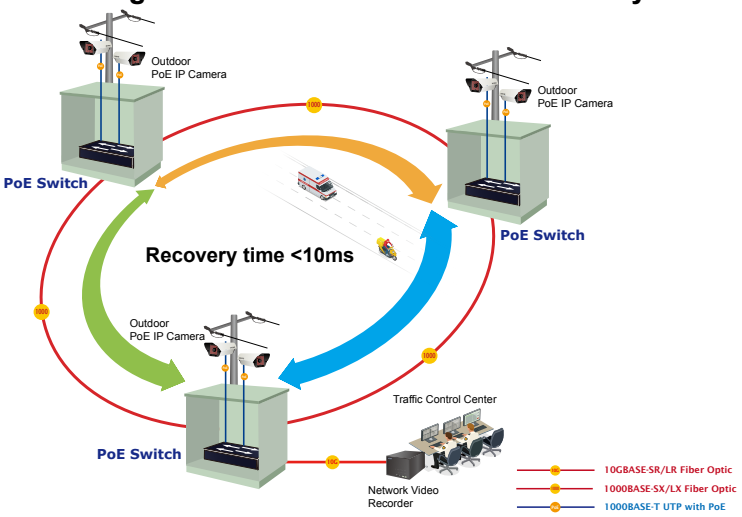
- Modbus TCP for real-time monitoring in a SCADA system
- IEEE 1588v2 PTP (Precision Time Protocol)

Industrial Case and Installation

- IP30 aluminum case
- DIN rail and wall-mount designs
- DC 9.6-48V (still output PoE), redundant power with polarity reverse protect function
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature
- E-Mark certification
- Fanless design

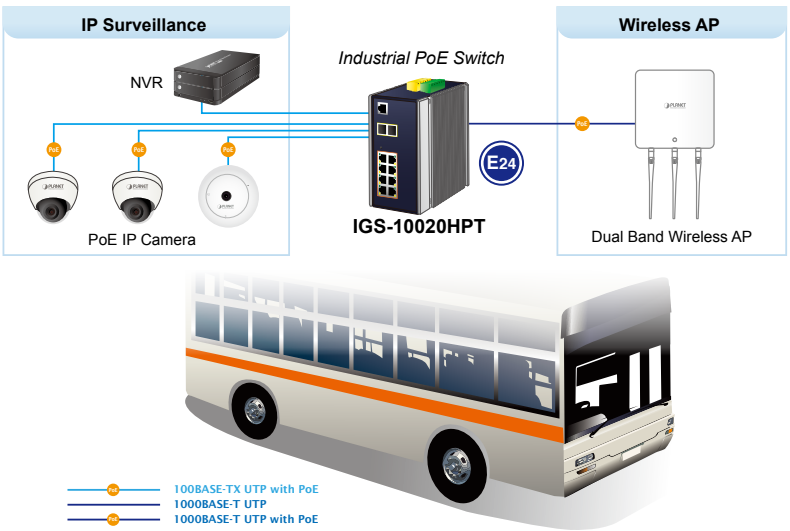
The IGS-10020HPT also protects customer's industrial network connectivity with switching recovery capability that is used for implementing fault tolerant ring and mesh network architectures. If the Industrial network was interrupted accidentally, the fault recovery times could be **less than 50ms** to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

ERPS Ring for Video Transmission Redundancy



In-vehicle and ITS Industrial Ethernet PoE Solution

The IGS-10020HPT is compliant with e-Mark requirements, making it suitable for a variety of in-vehicle applications and surveillance systems. To facilitate the 802.3at PoE+ usage with commonly used 12~48V DC power input for transportation and industrial-level applications, the IGS-10020HPT adopts 12~48V DC to 52V power boost technology to solve power source issue but does not require special power supplies. It fulfills the needs of surveillance systems, video transmissions and wireless services on the bus, shuttles and other vehicles for power and data transmissions.



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)
- 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

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-10020HPT 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-10020HPT 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.

Convenient and Smart ONVIF Devices with Detection Feature

PLANET has newly developed an awesome feature -- ONVIF Support -- which is specifically designed for co-operating with video IP surveillances. From the IGS-10020HPT'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

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)
  - 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
  - Console/Telnet Command Line Interface
  - Web switch management
  - SNMP v1, v2c, and v3 switch management
  - SSHv2 and TLSv1.2 secure access
- **IPv6** IP Address/NTP/DNS management
- Built-in Trivial File Transfer Protocol (TFTP) client
- BOOTP and DHCP for IP address assignment

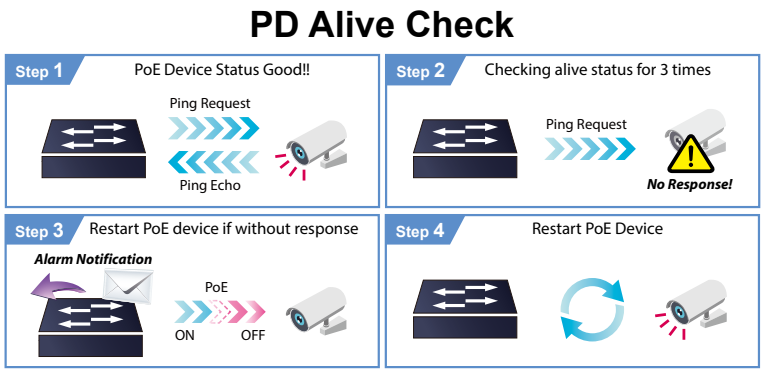
Built-in Unique PoE Functions for Surveillance Management

As an Industrial managed PoE Switch for surveillance network, the IGS-10020HPT 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

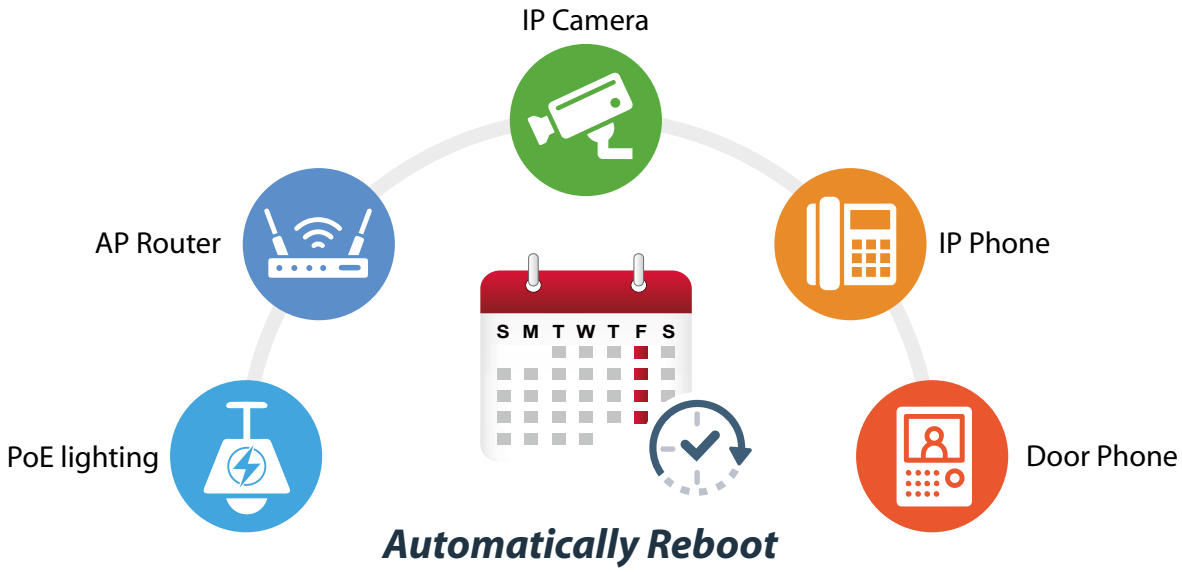
The IGS-10020HPT PoE Switch can be configured to monitor connected PD's status in real time via ping action. Once the PD stops working and responding, the IGS-10020HPT will recycle the PoE port power and bring the PD back to work. It also greatly enhances the reliability in that the PoE port will reset the PD power, thus reducing administrator's management burden.



- System Maintenance
  - Firmware upload/download via HTTP
  - Reset button for system reboot or reset to factory default
  - Dual Images
- DHCP Relay
- DHCP Option82
- DHCP Server Mode support
- User Privilege levels control
- NTP (Network Time Protocol)
- Link OAM
- Network Diagnostic
  - ICMPv6/ICMPv4 Remote Ping
  - Cable Diagnostic technology provides the mechanism to detect and report potential cabling issues
- SMTP/Syslog remote alarm
- Four RMON groups (history, statistics, alarms and events)
- SNMP trap for interface Link up and Link down notification
- System Log
- SFP-**DDM** (Digital Diagnostic Monitor)
- PLANET Smart Discovery Utility for deployment management
- PLANET NMS system and CloudViewer for deployment management

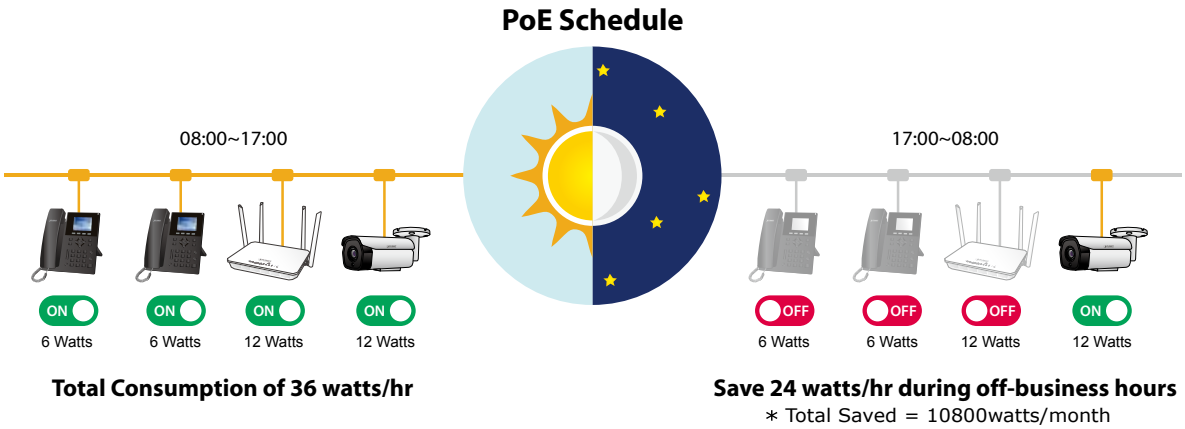
Scheduled Power Recycling

The IGS-10020HPT allows each of the connected PoE IP cameras or PoE wireless access points to reboot at a specific time each week. Therefore, it will reduce the chance of IP camera or AP crash resulting from buffer overflow.



PoE Schedule for Energy Saving

Under the trend of energy saving worldwide and contributing to environmental protection on the Earth, the IGS-10020HPT 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.

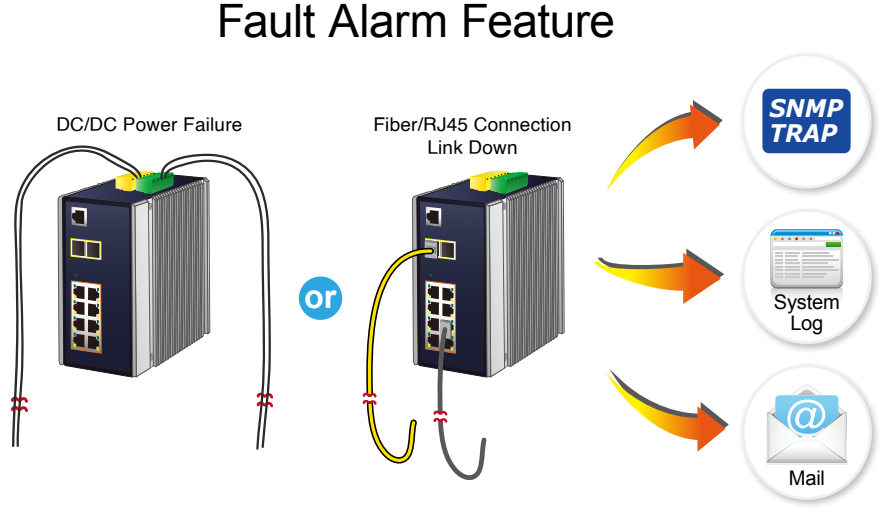


SMTP/SNMP Trap Event Alert

The IGS-10020HPT 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

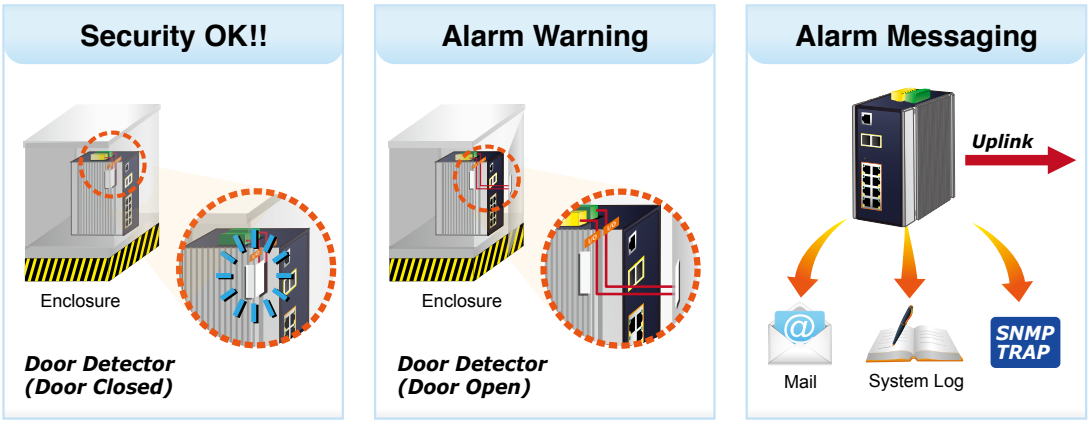
The IGS-10020HPT supports a Fault Alarm feature which can alert the users when there is something wrong with the switches. With this ideal feature, the users would not have to waste time finding where the problem is. It will help to save time and human resource.



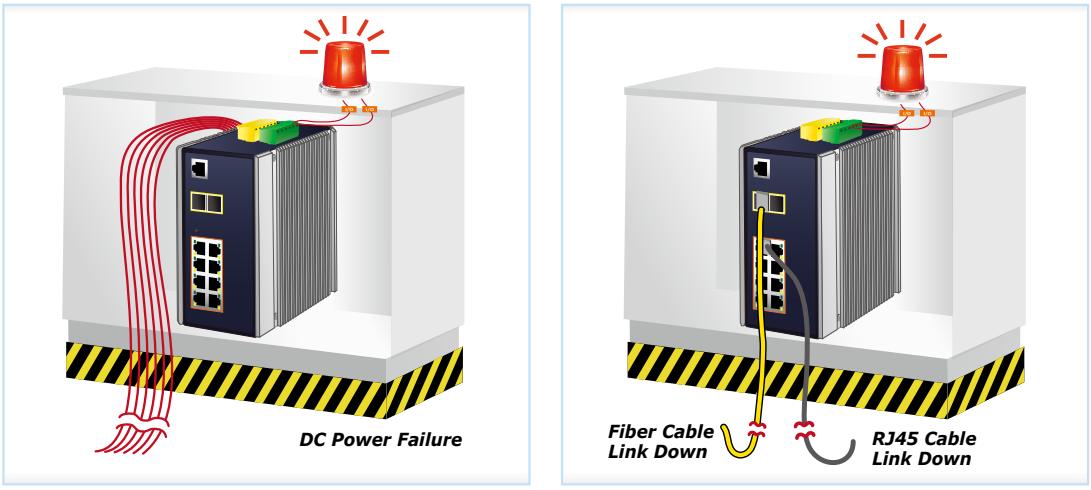
Digital Input and Digital Output for External Alarm

The IGS-10020HPT supports Digital Input and Digital Output on its upper 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-10020HPT port shows link down, link up or power failure.

Digital Input



Digital Output

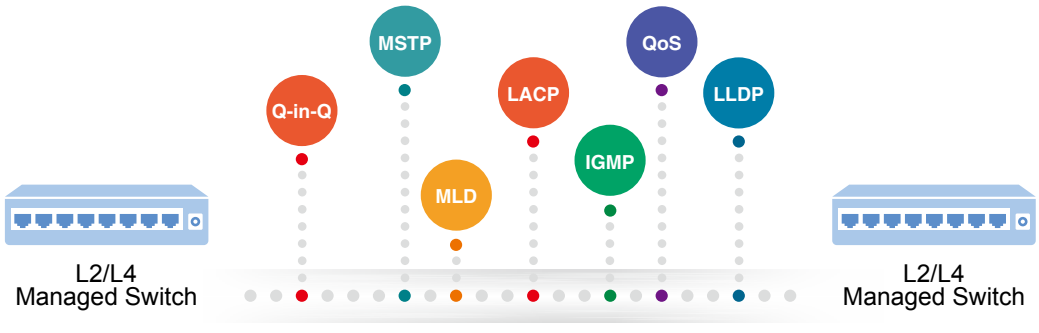


Layer 3 IPv4 and IPv6 Software VLAN Routing for Secure and Flexible Management

To help customers stay on top of their businesses, the IGS-10020HPT not only provides ultra high transmission performance and excellent Layer 2 technologies, but also IPv4/IPv6 software VLAN routing feature which allows to crossover different VLANs and different IP addresses for the purpose of having a highly-secure, flexible management and simpler networking application.

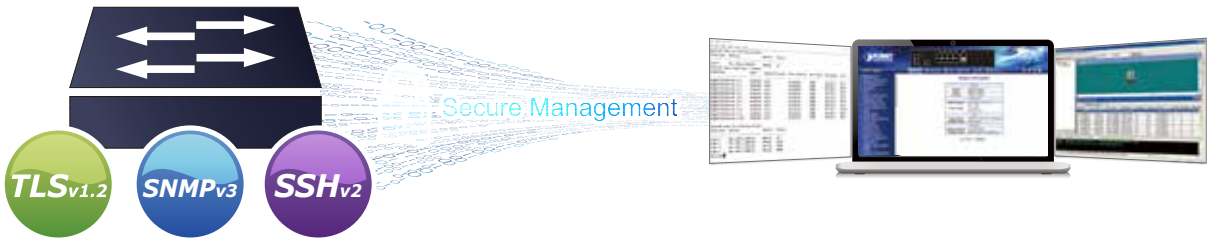
Robust Layer 2 Features

The IGS-10020HPT 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-10020HPT provides 802.1Q tagged VLAN, and the VLAN groups allowed will be maximally up to 4K. Via aggregation of supporting ports, the IGS-10020HPT allows the operation of a high-speed trunk combining multiple ports. It enables a maximum of up to 5 trunk groups with 10 ports per trunk group, and supports fail-over as well.



Efficient Secure Management

For efficient management, the IGS-10020HPT is equipped with console, Web and SNMP management interfaces. With the built-in Web-based management interface, the IGS-10020HPT offers an easy-to-use, platform-independent management and configuration facility. For text-based management, the IGS-10020HPT can be accessed via Telnet and the console port. Moreover, it also offers secure remote management via any standard-based management software by supporting SNMPv3 connection which encrypts the packet content at each session.



Powerful Security

The IGS-10020HPT 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. The network administrators can now construct highly-secure corporate networks with considerably less time and effort than before.

Cybersecurity Network Solution to Minimize Security Risks

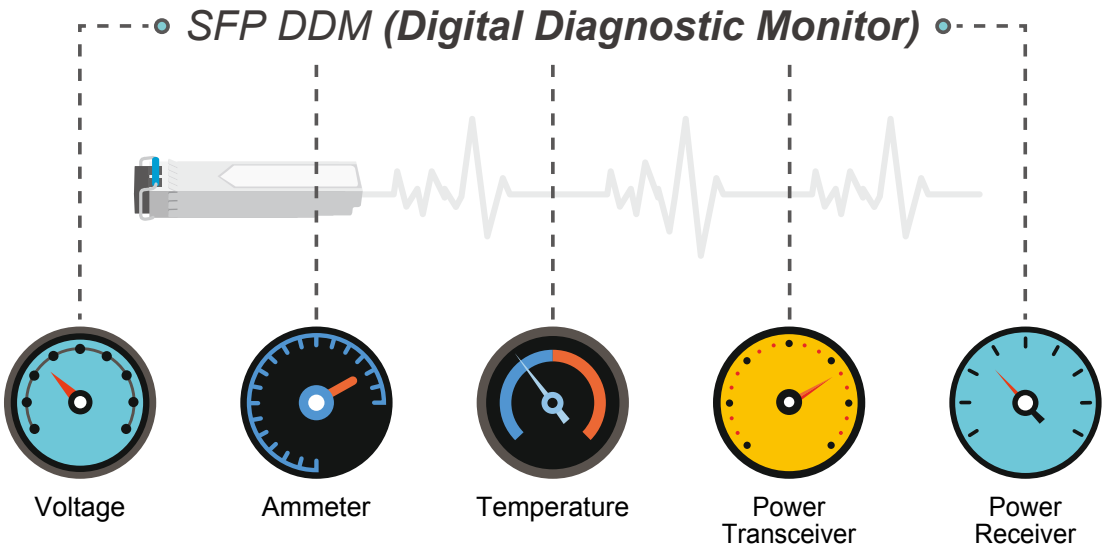
The cybersecurity features that virtually need no effort and cost to have included the protection of the switch management and the enhanced security of the mission-critical network. Both SSHv2 and TLSv1.2 protocols are utilized to provide strong protection against advanced threats. The network administrator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

Flexibility and Extension Solution

The additional two mini-GBIC slots built in the IGS-10020HPT support triple-speed 100/1000/2500BASE-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 550 meters to 2km (multi-mode fiber) and 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-10020HPT 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.

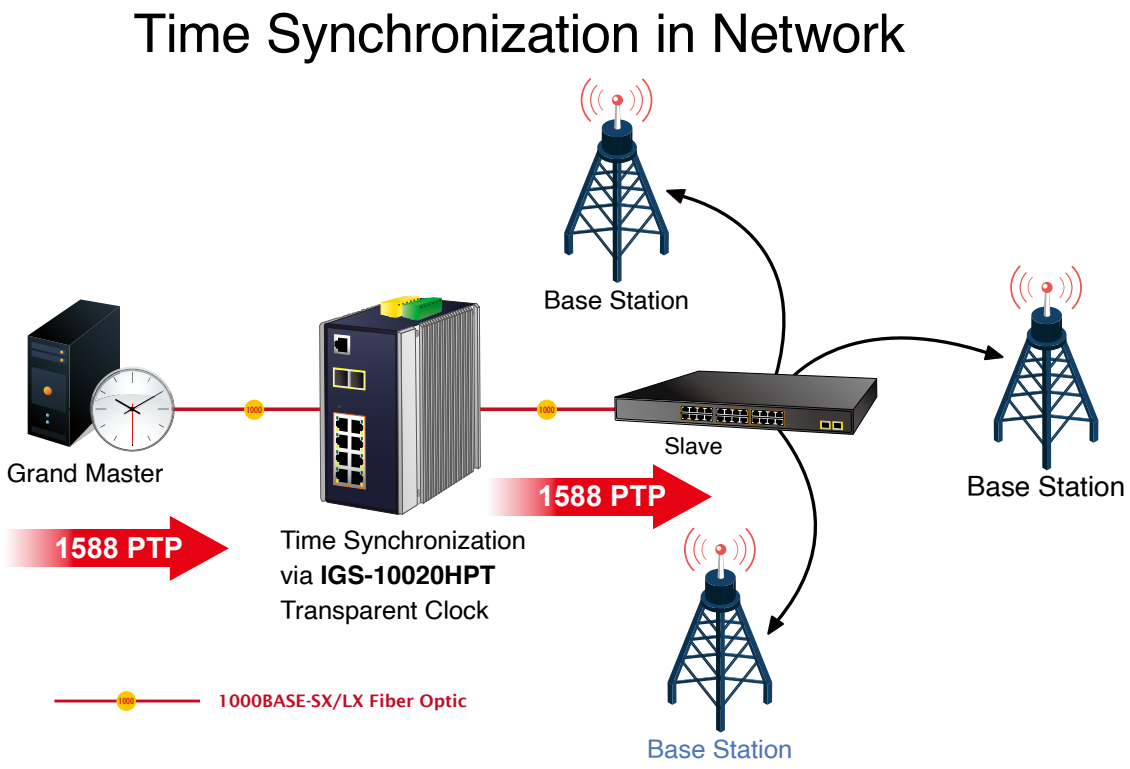


Modbus TCP provides Flexible Network Connectivity for Factory Automation

With the supported Modbus TCP/IP protocol, the IGS-10020HPT 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

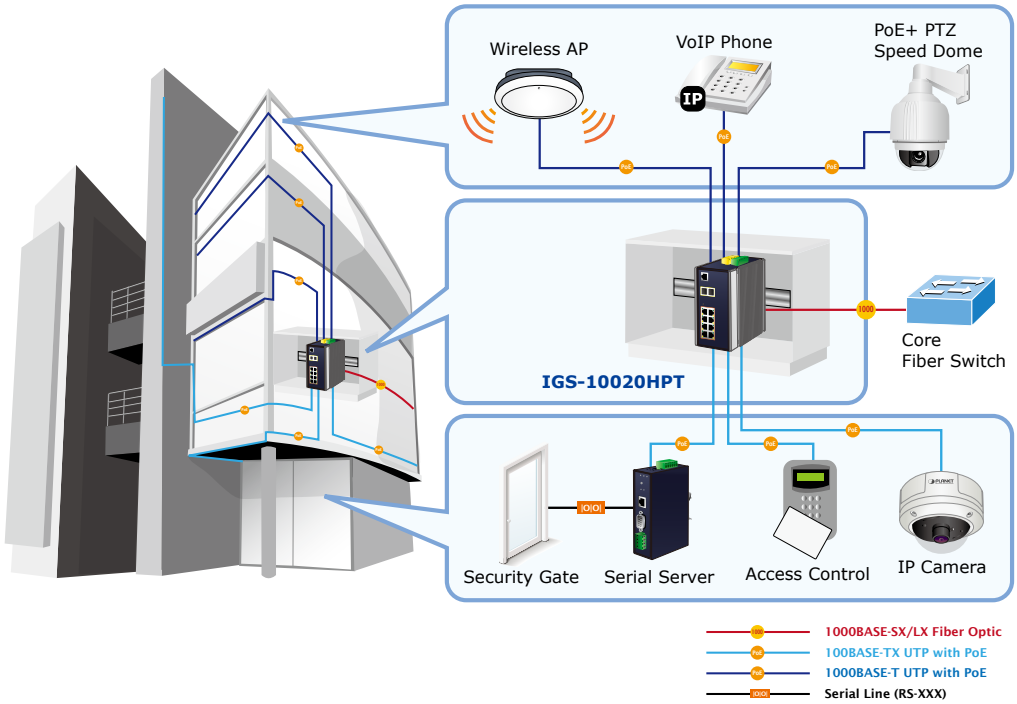
The IGS-10020HPT is ideal for telecom and Carrier Ethernet applications, supporting MEF service delivery and timing over packet solutions for IEEE 1588 and synchronous Ethernet.



Applications

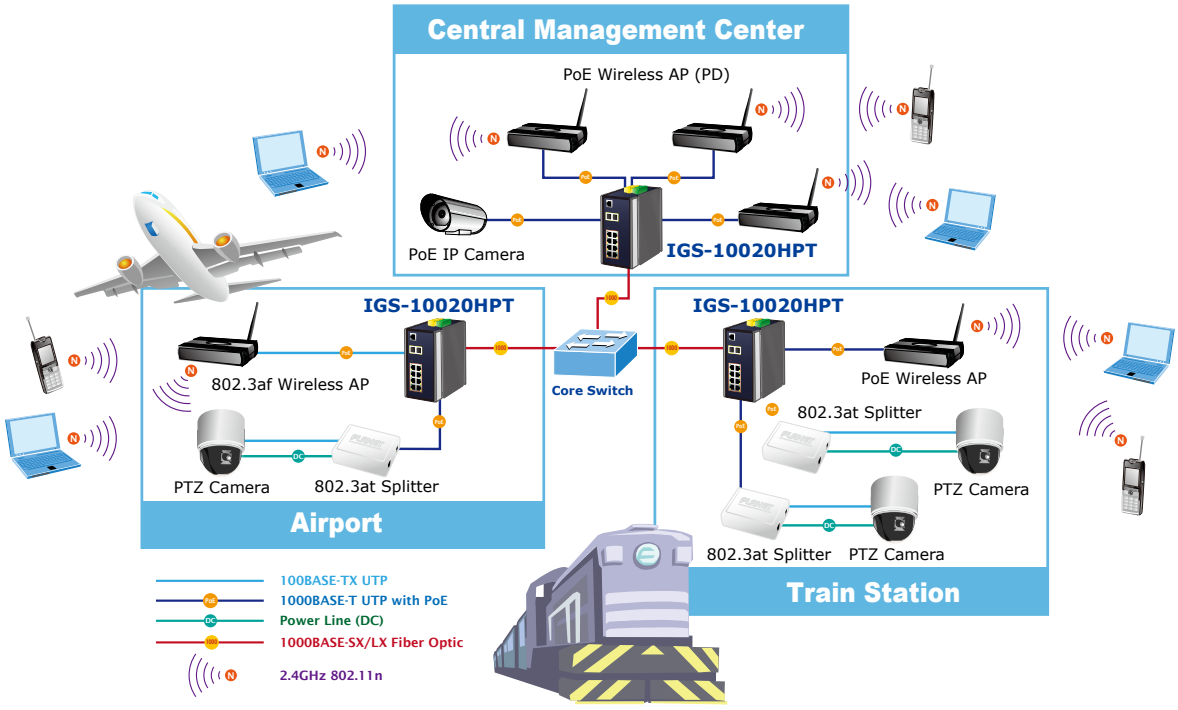
Industrial Area Department/Workgroup PoE Switch

Providing up to 8 PoE+, in-line power interfaces, the IGS-10020HPT can easily build a power centrally controlled by 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-10020HPT makes the installation of IP cameras or wireless AP easier and more efficient.



High Power IP Surveillance and Wireless LAN Service in Public Transportation

With IEEE 802.3at Power over Ethernet Plus standard, the IGS-10020HPT can directly connect with any IEEE 802.3at end-nodes like PTZ (Pan, Tilt & Zoom) IP cameras, PTZ speed dome cameras, color touch-screen Voice over IP (VoIP) telephones, and multi-channel wireless LAN access points. Wireless LAN would be more efficient for the transportation station to provide high speed and wide area Internet services for travelers. With the PoE wireless LAN structure, the transportation authority gains benefits from less cost while providing better Internet services in wider areas for the travelers.



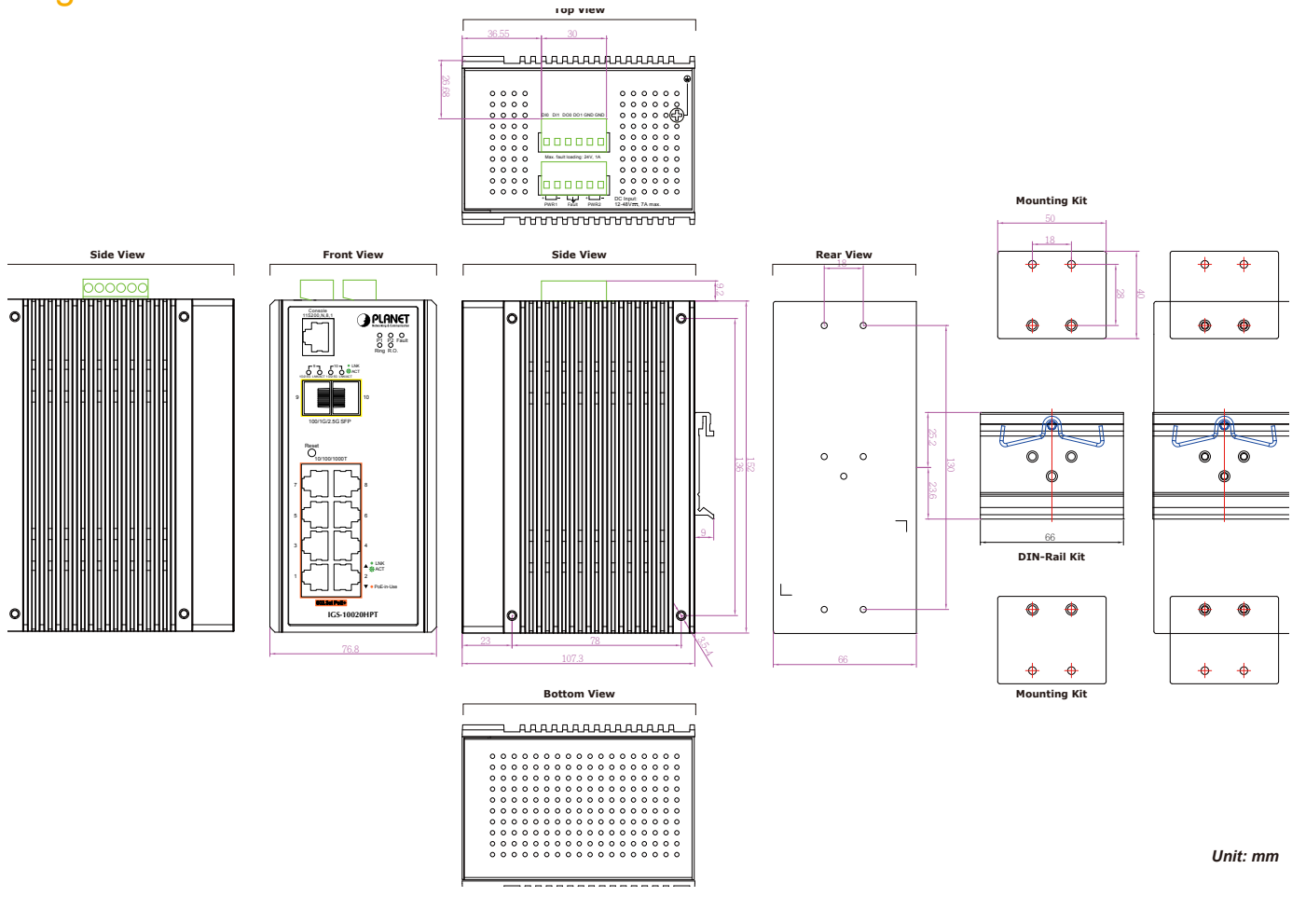
Specifications

Product	IGS-10020HPT
Hardware Specifications	
Version	3
Copper Ports	8 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports
Console	1 USB serial port (115200, 8, N, 1)
Reset Button	< 5 sec: System reboot > 5 sec: Factory default
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 @ DC 24V
DI/DO	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. 2 Digital Output (DO): Open collector to 24V DC, 100mA max.
Dimensions (W x D x H)	72 x 107x 152 mm
Weight	1096g
Power Requirements	DC 9.6-48V (still output PoE)
Power Consumption	257 watts/876BTU (Full loading with PoE function)
ESD Protection	6KV DC
EFT Protection	6KV DC
LED Indicator	**System:** Power 1 (Green) Power 2 (Green) Fault Alarm (Green) Ring (Green) R.O. (Ring Owner) (Green) **Per 10/100/1000T RJ45 Ports:** PoE-in-Use (Orange) LNK/ACT (Green) **Per 100/1000/2500BASE-X SFP Interface:** LNK/ACT (Green) 1G/2.5G (Orange)
Switching Specification	
Switch Architecture	Store-and-Forward
Switch Fabric	20Gbps/non-blocking
Throughput (packet per second)	14.8Mpps@ 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	9Kbytes
Power Over Ethernet	
PoE Standard	IEEE 802.3at Power over Ethernet Plus/PSE
PoE Power Supply Type	End-span
PoE Power Output	Per port 52V DC, 350mA; max. 15.4 watts (IEEE 802.3af) Per port 52V DC, 590mA; max. 36 watts (IEEE 802.3at)
Power Pin Assignment	1/2(+), 3/6(-)
PoE Power Budget	60W maximum (DC 12V power input) 120W maximum (DC 24V power input) 240W maximum (DC 48V power input)
Max. Number of Class 2 PDs @ 7 watts	8
Max. Number of Class 3 PDs @ 15.4 watts	8
Max. Number of Class 4 PDs @ 30.8 watts	8
PoE Extend Mode	Remote power feeding up to 100m in standard mode and 200m in extend mode
Layer 2 Function	
Port Configuration	Port disable/enable Auto-negotiation 10/100/1000Mbps full and half duplex mode selection Flow control disable/enable
Port Status	Display each port's speed duplex mode, link status, flow control status, auto negotiation status, trunk status

Port Mirroring	TX/RX/both 1 to 1 monitor
VLAN	802.1Q tagged based VLAN, up to 255 VLAN groups Q-in-Q tunneling Private VLAN Edge (PVE) MAC-based VLAN Protocol-based VLAN Voice VLAN GVRP MVR (Multicast VLAN Registration) Up to 4K VLAN groups, out of 4094 VLAN IDs
Link Aggregation	IEEE 802.3ad LACP/static trunk Supports 5 trunk groups with 10 ports per trunk group
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
IGMP Snooping	IGMP (v1/v2/V3) snooping, up to 255 multicast groups IGMP querier mode support
MLD Snooping	MLD (v1/v2) snooping, up to 255 multicast groups MLD querier mode support
Access Control List	IP-based ACL/MAC-based ACL Up to 123 entries
Bandwidth Control	Per port bandwidth control Ingress: 500Kb~1000Mbps Egress: 500Kb~1000Mbps
Storm Control	Unicast/Multicast/Broadcast
Layer 3 Function	
IP Interfaces	Max. 8 VLAN interfaces
Routing Table	Max. 32 routing entries
Routing Protocols	IPv4 software static routing IPv6 software static routing
Management	
Basic Management Interfaces	Console; Telnet; Web browser; SNMP v1, v2c
Secure Management Interfaces	SSHv2,TLSv1.2, SNMP v3
ONVIF	ONVIF device discovery ONVIF device monitoring Floor Map
SNMP MIBs	RFC-1213 MIB-II IF-MIB RFC-1493 Bridge MIB RFC-1643 Ethernet MIB RFC-2863 Interface MIB RFC-2665 Ether-Like MIB RFC-2819 RMON MIB (Group 1, 2, 3 and 9) RFC-2737 Entity MIB RFC-2618 RADIUS Client MIB RFC-2933 IGMP-STD-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)
Certification	e-Mark E24 ECE-R 010

Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3ab Gigabit 1000T IEEE 802.3z Gigabit SX/LX IEEE 802.3bz 2.5GBASE-X 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 802.1x 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 802.1ag Connectivity Fault Management(CFM) RFC 768 UDP RFC 793 TFTP RFC 791 IP RFC 792 ICMP RFC 2068 HTTP RFC 1112 IGMP v1 RFC 2236 IGMP v2 ITU-T G.8032 ERPS Ring ITU-T Y.1731 Performance Monitoring
Environment	
Operating Temperature	-40 ~ 75 degrees C
Storage Temperature	-40 ~ 85 degrees C
Humidity	5 ~ 95% (non-condensing)

Diagram



Unit: mm

Ordering Information

IGS-10020HPT	Industrial 8-port 10/100/1000T 802.3at PoE + 2-port 1G/2.5G SFP Managed Switch

Related Industrial PoE Switches

IGS-10020PT	Industrial 8-port 10/100/1000T 802.3at PoE + 2-port 1G/2.5G SFP Managed Switch
IGS-5225-8P4S	L2+ Industrial 8-Port 10/100/1000T 802.3at PoE + 4-Port 100/1000X SFP Managed Ethernet Switch
IGS-5225-8P2T2S	L2+ Industrial 8-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T + 2-Port 100/1000X SFP Managed Ethernet Switch

Available 100Mbps Modules for IGS-10020HPT

MFB-FX	SFP-Port 100BASE-FX Transceiver (1310nm) - 2km
MFB-F20	SFP-Port 100BASE-FX Transceiver (1310nm) - 20km
MFB-F40	SFP-Port 100BASE-FX Transceiver (1310nm) - 40km
MFB-F60	SFP-Port 100BASE-FX Transceiver (1310nm) - 60km
MFB-FA20	SFP-Port 100BASE-BX Transceiver (WDM,TX:1310nm) - 20km
MFB-FB20	SFP-Port 100BASE-BX Transceiver (WDM,TX:1550nm) - 20km
MFB-TFX	SFP-Port 100BASE-FX Transceiver (1310nm) - 2km (-40 ~ 75 degrees C)
MFB-TF20	SFP-Port 100BASE-FX Transceiver (1310nm) - 20km (-40 ~ 75 degrees C)

Available 1000Mbps Modules for IGS-10020HPT

MGB-GT	SFP-Port 1000 BASE-T Module
MGB-LX	SFP-Port 1000 BASE-LX mini-GBIC module - 20km
MGB-SX	SFP-Port 1000 BASE-SX mini-GBIC module - 550m
MGB-SX2	SFP-Port 1000 BASE-SX mini-GBIC module - 2km
MGB-L40	SFP-Port 1000 BASE-LX mini-GBIC module - 40km
MGB-L80	SFP-Port 1000 BASE-LX mini-GBIC module - 80km
MGB-L120	SFP-Port 1000 BASE-LX mini-GBIC module - 120km
MGB-LA10	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 10km
MGB-LB10	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 10km
MGB-LA20	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 20km
MGB-LB20	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 20km
MGB-LA40	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 40km
MGB-LB40	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 40km
MGB-LA80	SFP-Port 1000 BASE-BX (WDM, TX:1490nm) mini-GBIC module - 80km
MGB-LB80	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 80km
MGB-TSX	SFP-Port 1000 BASE-SX mini-GBIC module - 550m (-40 ~ 75 degrees C)
MGB-TSX2	SFP-Port 1000 BASE-SX mini-GBIC module – 2km (-40 ~ 75 degrees C)
MGB-TL40	SFP-Port 1000 BASE-LX mini-GBIC module - 40km (-40 ~ 75 degrees C)
MGB-TL80	SFP-Port 1000 BASE-LX mini-GBIC module - 80km (-40 ~ 75 degrees C)
MGB-TLA10	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 10km (-40 ~ 75 degrees C)
MGB-TLB10	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 10km (-40 ~ 75 degrees C)
MGB-TLA20	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 20km (-40 ~ 75 degrees C)
MGB-TLB20	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 20km (-40 ~ 75 degrees C)
MGB-TLA40	SFP-Port 1000 BASE-BX (WDM, TX:1310nm) mini-GBIC module - 40km (-40 ~ 75 degrees C)
MGB-TLB40	SFP-Port 1000 BASE-BX (WDM, TX:1550nm) mini-GBIC module - 40km (-40 ~ 75 degrees C)
MGB-TLA80	SFP-Port 1000 BASE-BX (WDM, TX:1490nm) mini-GBIC module - 80km (-40 ~ 75 degrees C)

Related DIN-rail Power Supplies

PWR-120-48/PWR-240-48/PWR-480-48/PWR-75-48	DC Single Output Industrial DIN-rail Power Supply Units

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