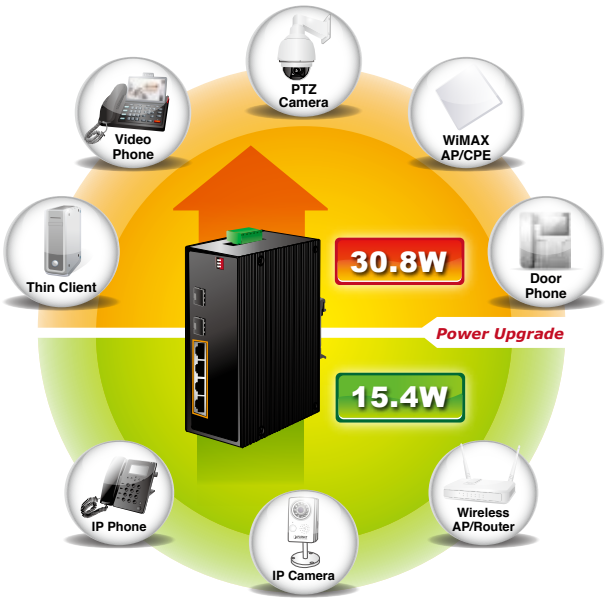
Industrial 4-Port 10/100/1000T 802.3at PoE+ w/ 2-Port 100/1000X SFP Ethernet Switch

Long Distance High Power PoE and Gigabit Data Extension Solution

The PLANET IGS-624HPT is an Industrial Gigabit 802.3at PoE+ Switch providing non-blocking wire-speed performance and great flexibility for Gigabit Ethernet extension in harsh industrial environment. It provides 4-port 10/100/1000Base-T copper with 802.3af/at PoE injector and 2 extra 100/1000Base-X SFP fiber optic interfaces delivered in an IP30 rugged strong case with redundant power system. The IGS-624HPT is well suited for applications in deploying surveillance system, and securing control and wireless service in climatically demanding environments with wide temperature range from -40 to 75 degrees C.

High Power PoE for Security and Public Service Applications

To fulfill the demand of High Power PoE for network applications, the IGS-624HPT provides 4 10/100/1000Mbps ports featuring both IEEE 802.3af and IEEE 802.3at Power over Ethernet Plus (PoE+) that combine up to 30-watt of power output and data per port over one Cat.5E / 6 Ethernet cable. With totally 120-watt PoE output capability on the whole system, the IGS-624HPT is designed specifically to satisfy the growing demand of higher power consuming network PD (powered devices) such as PTZ (Pan, Tilt & Zoom) / Speed Dome network cameras, multi-channel (802.11a / b / g / n) outdoor wireless LAN access points and other PoE network devices by providing double PoE power, rather than the current conventional 802.3af PoE.



Physical Port

- 4-port 10/100/1000Base-T RJ-45 with IEEE 802.3af / 802.3at PoE Injector
- 2-port SFP slot interface, SFP supports 1000Base-X and 100Base-FX transceiver via DIP switch configured

Power over Ethernet

- Complies with IEEE 802.3af / 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 30.8 watts for each PoE port
- Provides DC 52V power over RJ-45 Ethernet cable to PD with Ethernet port
- Auto-detects EEE 802.3af/at equipment and protects devices from being damaged by incorrect installation
- Remote power feeding up to 100m

Layer 2 Features

- Supports Auto-Negotiation and 10/100Mbps half / full duplex and 1000Mbps full duplex mode
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x PAUSE frame flow control (full-duplex)
- Automatic address learning and address aging

Industrial Case / Installation

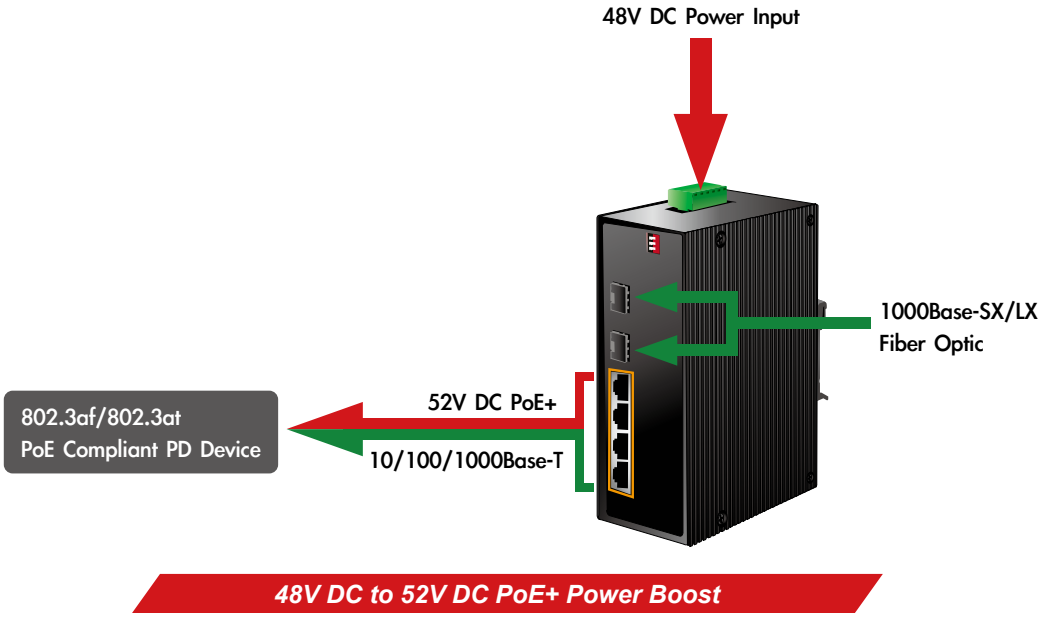
- IP30 aluminum metal case protection
- Dual SFP Ports Auto Link Redundant Mode Support
- DIN Rail and Wall Mount Design
- 24~48V DC redundant power with polarity reverse protect function and connective removable terminal block for master and slave power
- Supports 6000 VDC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

Intelligent LED Indicator for Real-time PoE Usage

The IGS-624HPT helps users to monitor current status of PoE power usage easily and efficiently by its advanced LED indication. Called “PoE Power Usage”, the front panel of the Industrial Gigabit PoE+ Switch has four orange LEDs indicating 30W, 60W, 90W and 120W of PoE power usage.

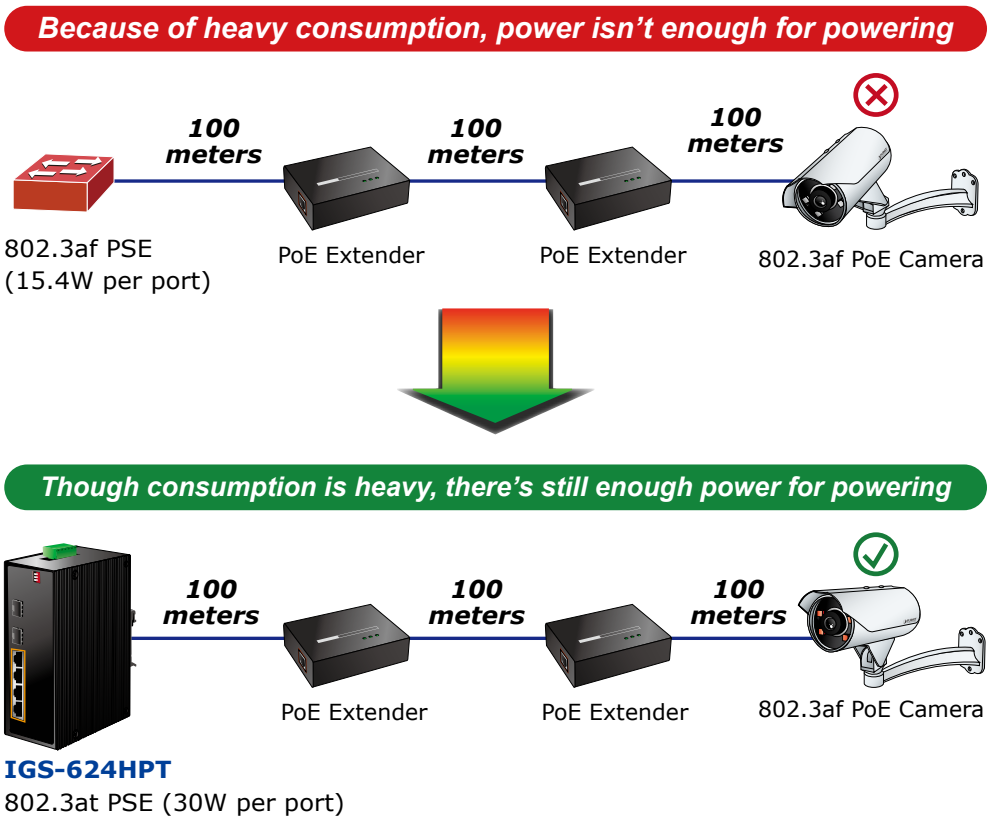
Convenient and Reliable Power System

To facilitate the 802.3at High Power PoE usage with the commonly used 48V DC power input in transportation and industrial-level applications, the IGS-624HPT adopts 24~48V DC to 52V DC power boost technology to solve power source issue which is not required for special power supplies to achieve the level of High Power PoE+ output. To enhance the operation reliability and flexibility, the IGS-624HPT is equipped with two DC power input connectors for redundant power supply installation.



High Power Budget for PoE Extension

With 30-watt PoE output capability, the IGS-624HPT can extend much longer distance by using PLANET PoE Extender for powering up the IEEE 802.3af PoE PD devices which can be installed over more than 100 meters away. By daisy-chaining multiple PLANET PoE Extenders, it offers the great flexibility of doubling, tripling or quadrupling the distance of PoE network.

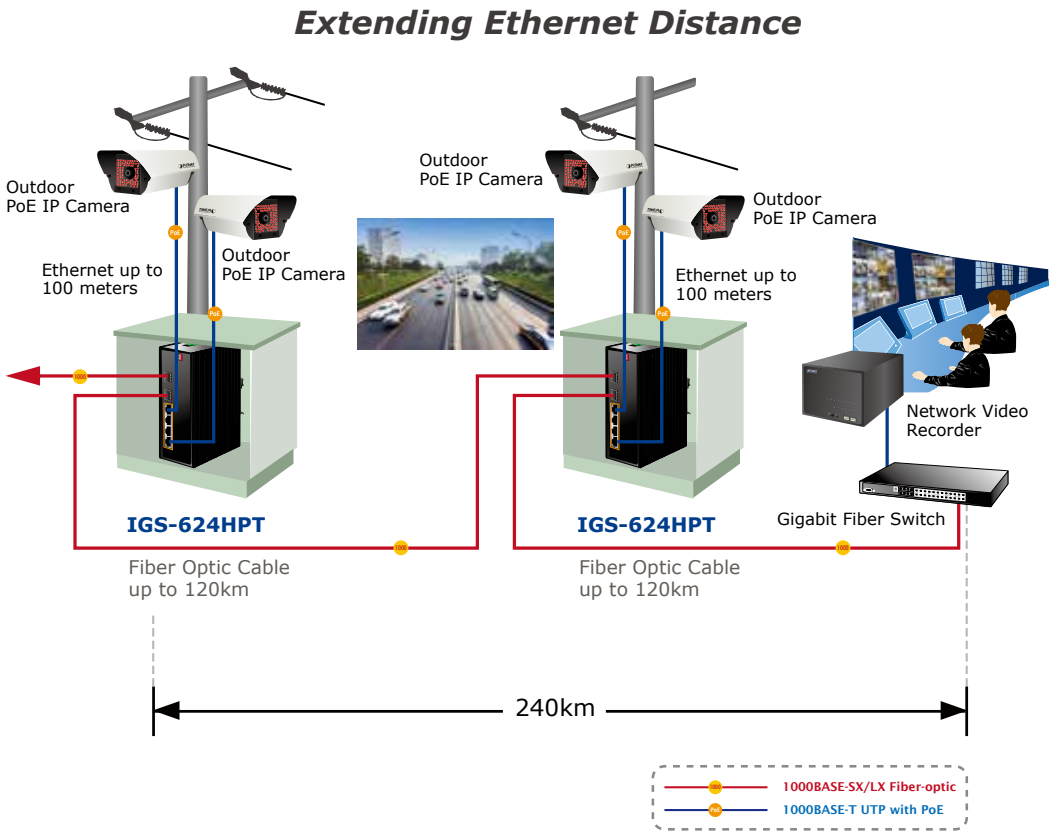


Environmentally Hardened Design

The IGS-624HPT is equipped with the rugged IP30 metal case for easy deployment in heavy Industrial demanding environments. With IP30 industrial case protection, the IGS-624HPT provides 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. Being able to operate under the temperature range from -40 to 75 degrees C, the IGS-624HPT can be placed in almost any difficult environment. The IGS-624HPT also allows either DIN rail or wall mounting for efficient use of cabinet space.

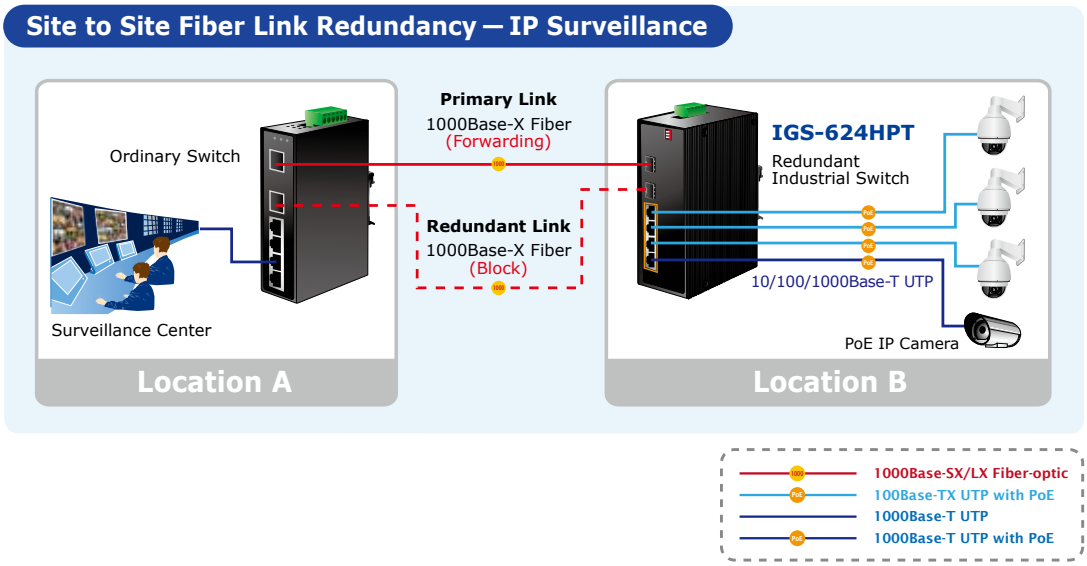
Fiber-Optical Link Capability Extend the Range of Network Deployment

The two SFP slots are compatible with 100Base-FX or 1000Base-SX / LX / WDM through SFP (Small Form Factor Pluggable) fiber-optic transceivers. The fiber optical uplink capability guarantees the throughput to all nodes hooked into the network and the Gigabit Ethernet distance can be extended from 550 meters (Multi-Mode fiber cable) up to 10/20/30/40/50/70/120 kilometers (Single-Mode fiber or WDM fiber).



Adjustable 6-Port Switch Mode or 4 + 2 Fiber Redundant Mode

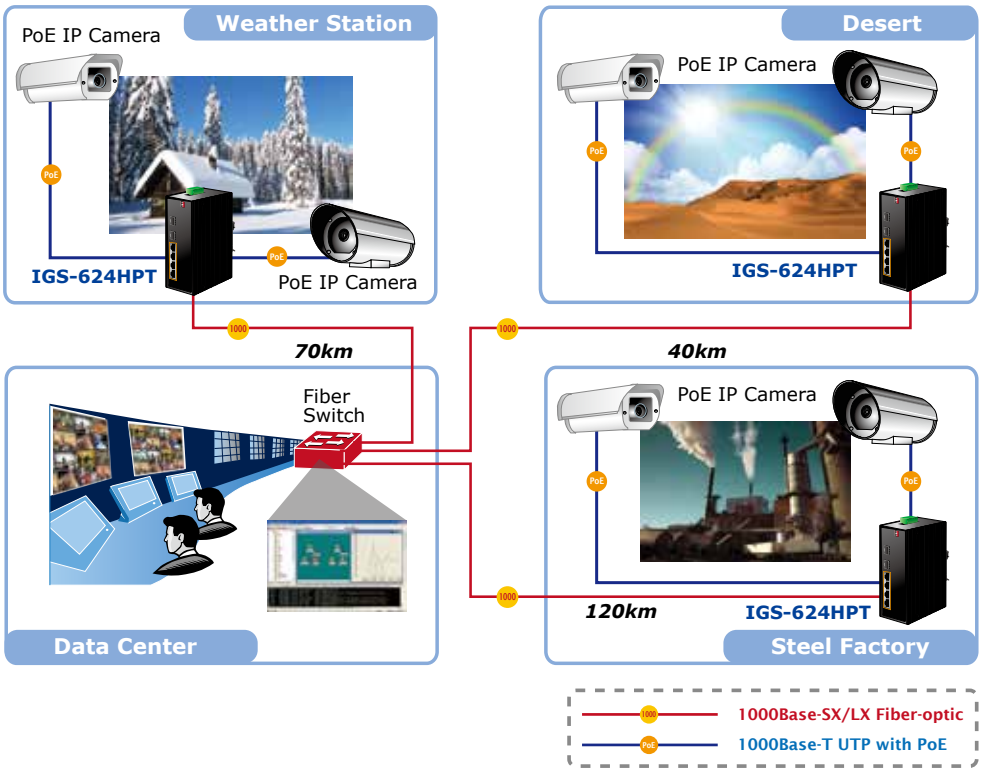
Via the built-in DIP switch, the IGS-624HPT can be configured as 6-port Ethernet switch or 4+2 fiber redundant mode. With the 6-port switch mode, the IGS-624HPT can operate in Store-and-Forward mechanism with high performance; on the other hand, when in the 4+2 fiber redundant mode, it provides rapid fiber redundancy of link for highly critical Ethernet applications. The redundant mode also supports auto-recovering function. If the destination port of a packet is link down, it will forward the packet to the other port of the backup pair.



Application

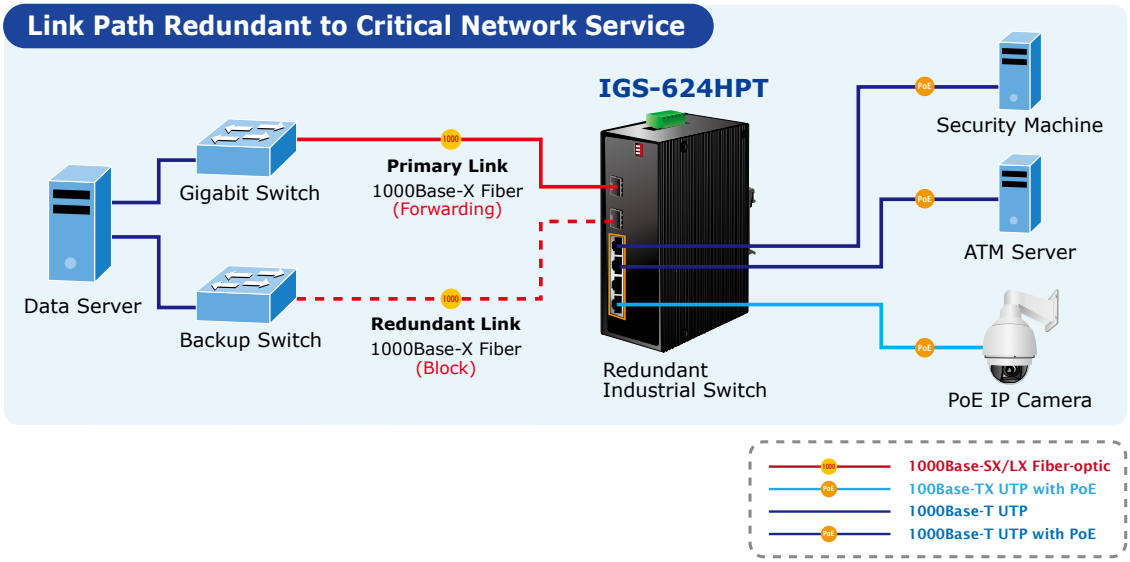
Hardened Environment Application

The IGS-624HPT Industrial PoE+ Switch offers full port Gigabit speed. It provides very high reliability and security features to make sure the continuous operation in harsh environments such as control cabinet of transportation, factory, outdoor and places where extreme low or high temperatures can be experienced. Moreover, the IGS-624HPT is also compatible with 100Mbps and 1000Mbps SFP transceivers to provide a strong, stable long-distance connection and flexible industrial networking deployment.



Redundancy Application

The IGS-624HPT Industrial Gigabit PoE+ Switch provides rapid fiber redundancy of link for highly critical Ethernet applications. The redundant-mode supports auto-recover function. If the destination port of a packet is link down, it forwards the packet to the other port of the backup pair.

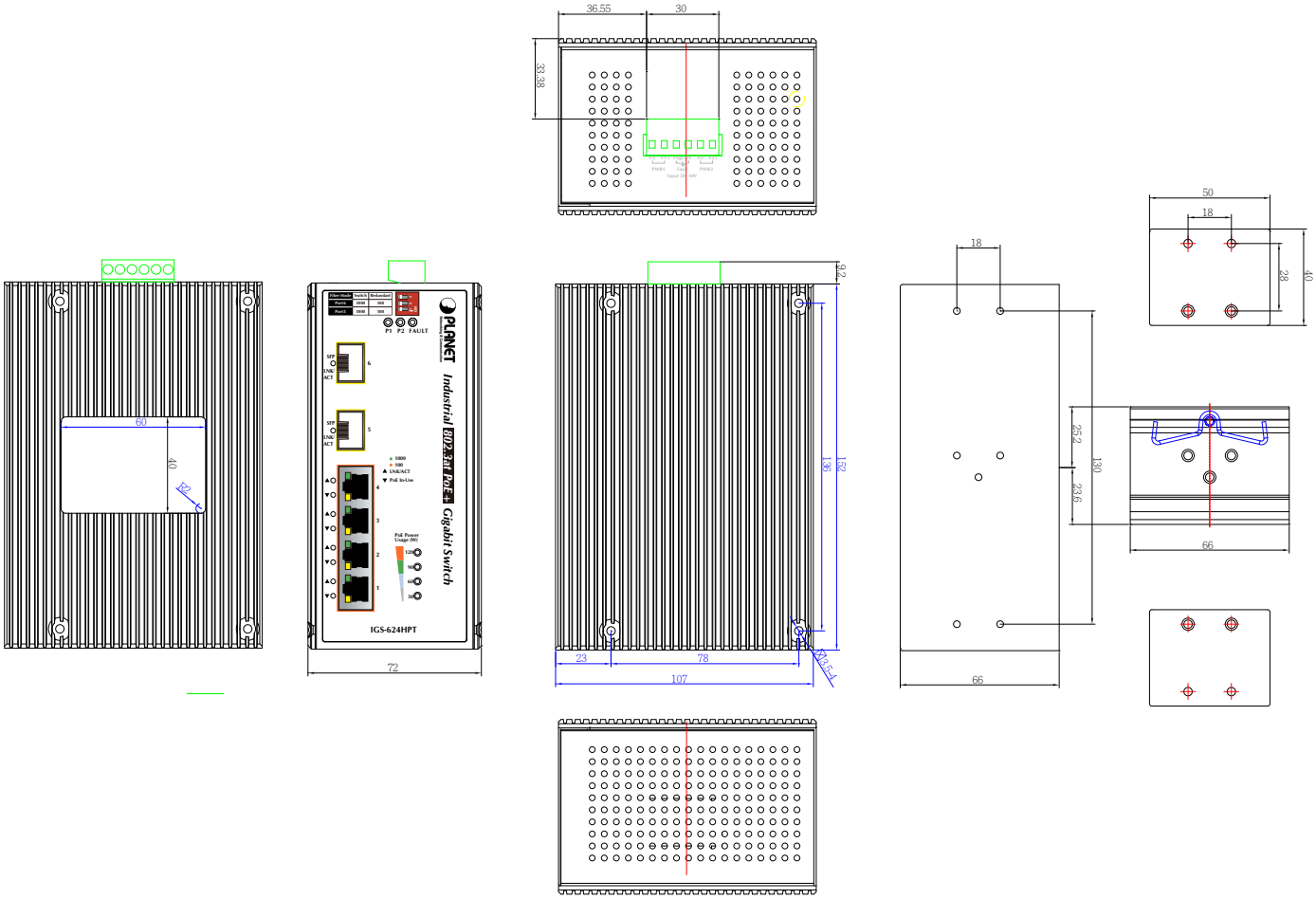


Specifications

Model	IGS-624HPT
Hardware Specifications	
Copper Ports	4 x 10/100/1000Base-T RJ-45 TP Auto-MDI/MDI-X, Auto-Negotiation
SFP / mini-GBIC Slots	2 x SFP interfaces Supports 1000Base-SX/LX and 100Base-FX SFP transceivers
DIP Switch	° DIP-1: SFP Port 5 1000Base-X (default) / 100Base-FX ° DIP-2: SFP Port 6 1000Base-X (default)/ 100Base-FX ° DIP-3: Switch mode / Fiber Redundant mode
Connector	Removable 6-pin terminal block Pin 1/2 for Power 1; Pin 3/4 for fault alarm; Pin 5/6 for Power 2
Alarm	Provides one relay output for power fail Alarm Relay current carry ability: 1A @ DC 24V
LED	3 x LED for System and Power: ° Green: DC Power 1 ° Green: DC Power 2 ° Green: Power Fault 2 x LED for Per Copper Port (Port-1~Port-4): ° Green: 1000 LNK/ACT, Orange:100 LNK/ACT ° Orange: PoE In-use 1 x LED for Per mini-GBIC interface (Port-5 and Port-6) ° Green: LNK/ACT 4 x LED for PoE Power Usage (W) ° Orange: 30, 60, 90 and 120W
ESD Protection	6KV DC
EFT Protection	6KV DC
Enclosure	IP30 aluminum metal case
Installation	DIN rail kit and wall mount ear
Dimensions (W x D x H)	152 x 107x 72 mm
Weight	1539g
Power Requirements	48V DC, 5A max. or 24V DC, 10A max. Redundant power with polarity reverse protection function
Power Consumption / Dissipation	15.1 watts / 52 BTU (Full loading without PoE function) 135.1 watts / 461 BTU (Full loading with PoE function)
Power over Ethernet	
PoE Standard	IEEE 802.3af / IEEE 802.3at Power over Ethernet / PSE
PoE Power Supply Type	End-Span
Power Pin Assignment	1/2(+), 3/6(-)
PoE Power Output	Per port 52V DC, 275mA. Max. 15.4 watts (IEEE 802.3af) Per port 52V DC, 535mA. Max. 30 watts (IEEE 802.3at)
Max. number of Class 4 PD	4
Switch Specification	
Switch Processing Scheme	Store-and-Forward
Address Table	1K entries
Flow Control	Back pressure for half duplex IEEE 802.3x Pause Frame for full duplex
Switch Fabric	12Gbps
Throughput (packet per second)	8.93Mpps@64bytes
Maximum Transmit Unit	9216 bytes
Speed	SX/LX: 2000Mbps (full-duplex) FX: 200Mbps (full-duplex) TP: 10/20Mbps, 100/200Mbps, 2000Mbps
Standards Conformance	
Standards Compliance	IEEE 802.3 Ethernet / 10Base-T IEEE 802.3u Fast Ethernet / 100Base-TX IEEE 802.3ab Gigabit Ethernet / 1000Base-T IEEE 802.3z Gigabit Ethernet / 1000Base-SX/LX IEEE 802.3x Full-Duplex Flow Control IEEE 802.3at High Power over Ethernet IEEE 802.3af Power over Ethernet

Regulation Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32(Free fall) IEC60068-2-27(Shock) IEC60068-2-6(Vibration)
Environment	
Temperature	Operating: -40~75 degrees C Storage: -40~75 degrees C
Humidity	Operating: 5~95% (Non-condensing) Storage: 5~95% (Non-condensing)

Dimensions



Ordering Information

IGS-624HPT	Industrial 4-Port 10/100/1000T 802.3at PoE+ w/ 2-Port 100/1000X SFP Ethernet Switch

Related PoE Products

ICA-2200	Full HD PoE Box IP Camera
ICA-2500	5 Mega-Pixel PoE Box IP Camera
ICA-3250V	Full HD Outdoor IR PoE IP Camera
ICA-3350V	3 Mega-Pixel Vari-Focal Bullet IR IP Camera
ICA-4200V	Full HD 20M IR Vari-Focal Dome IP Camera
ICA-5350V	3 Mega-Pixel Vandalproof IR IP Camera
ICA-8350	3 Mega-Pixel Vandalproof Fisheye IP Camera
ICA-HM101	2 Mega-Pixel PoE Cube IP Camera
ICA-HM126	H.264 Full HD Box IP Camera
ICA-HM127	3 Mega-Pixel H.264 Box IP Camera
ICA-HM132	H.264 2 Mega-Pixel 20M IR Vari-Focal Dome IP Camera
ICA-HM136	H.264 2 Mega-Pixel 20M IR Vandalproof Dome IP Camera
ICA-HM312	2 Mega-Pixel 25M IR Outdoor Bullet PoE IP Camera
ICA-HM316	2 Mega-Pixel Outdoor IR PoE IP Camera
ICA-HM351	2 Mega-Pixel 35M IR Outdoor Box PoE IP Camera
ICA-HM620	2 Mega-Pixel PoE Plus Speed Dome Internet Camera
POE-152S	IEEE 802.3af Power over Ethernet Splitter
POE-162S	IEEE 802.3at Gigabit High Power over Ethernet Splitter
POE-E101	IEEE 802.3af Power over Ethernet Extender
POE-E201	IEEE 802.3at Power over Ethernet Extender
WNAP-C3220	802.11n Wireless Ceiling Mount PoE Access Point
WNAP-1120PE	802.11n Wireless Access Point with PoE
WNAP-6350	2.4GHz 300Mbps 802.11n Wireless Outdoor PoE Access Point
WNAP-7350	5GHz 300Mbps 802.11a/n Wireless Outdoor PoE Access Point

Related DIN-Rail Power Supply

PWR-240-48	240W 48V DC Industrial DIN Rail Power Supply (-10~60 degrees C)

SFP Module List

Fast Ethernet Transceiver (100Base-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MFB-FX	100	LC	Multi Mode	2km	1310nm	0 ~ 60°C
MFB-F20	100	LC	Single Mode	20km	1310nm	0 ~ 60°C
MFB-F40	100	LC	Single Mode	40km	1310nm	0 ~ 60°C
MFB-F60	100	LC	Single Mode	60km	1310nm	0 ~ 60°C
MFB-F120	100	LC	Single Mode	120km	1550nm	0 ~ 60°C
MFB-TFX	100	LC	Multi Mode	2km	1310nm	-40 ~ 75°C
MFB-TF20	100	LC	Single Mode	20km	1550nm	-40 ~ 75°C

Fast Ethernet Transceiver (100Base-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MFB-FA20	100	WDM(LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60°C
MFB-FB20	100	WDM(LC)	Single Mode	20km	1550nm	1310nm	0 ~ 60°C
MFB-TFA20	100	WDM(LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75°C
MFB-TFB20	100	WDM(LC)	Single Mode	20km	1550nm	1310nm	-40 ~ 75°C
MFB-TFA40	100	WDM(LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 75°C
MFB-TFB40	100	WDM(LC)	Single Mode	40km	1550nm	1310nm	-40 ~ 75°C

Gigabit Ethernet Transceiver (1000Base-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Wavelength
MGB-GT	1000	Copper	--	100m	--	0 ~ 60°C
MGB-SX	1000	LC	Multi Mode	550m	850nm	0 ~ 60°C
MGB-SX2	1000	LC	Multi Mode	2km	1310nm	0 ~ 60°C
MGB-LX	1000	LC	Single Mode	10km	1310nm	0 ~ 60°C
MGB-L30	1000	LC	Single Mode	30km	1310nm	0 ~ 60°C
MGB-L40	1000	LC	Single Mode	40km	1550nm	0 ~ 60°C
MGB-L50	1000	LC	Single Mode	50km	1550nm	0 ~ 60°C
MGB-L70	1000	LC	Single Mode	70km	1550nm	0 ~ 60°C
MGB-L120	1000	LC	Single Mode	120km	1550nm	0 ~ 60°C
MGB-TSX	1000	LC	Multi Mode	550m	850nm	-40 ~ 75°C
MGB-TLX	1000	LC	Single Mode	10km	1310nm	-40 ~ 75°C
MGB-TL30	1000	LC	Single Mode	30km	1310nm	-40 ~ 75°C
MGB-TL50	1000	LC	Single Mode	50km	1550nm	-40 ~ 75°C

Gigabit Ethernet Transceiver (1000Base-BX, Single Fiber Bi-Directional SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MGB-LA10	1000	WDM(LC)	Single Mode	10km	1310nm	1550nm	0 ~ 60°C
MGB-LB10	1000	WDM(LC)	Single Mode	10km	1550nm	1310nm	0 ~ 60°C
MGB-LA20	1000	WDM(LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60°C
MGB-LB20	1000	WDM(LC)	Single Mode	20km	1550nm	1310nm	0 ~ 60°C
MGB-LA40	1000	WDM(LC)	Single Mode	40km	1310nm	1550nm	0 ~ 60°C
MGB-LB40	1000	WDM(LC)	Single Mode	40km	1550nm	1310nm	0 ~ 60°C
MGB-LA60	1000	WDM(LC)	Single Mode	60km	1310nm	1550nm	0 ~ 60°C
MGB-LB60	1000	WDM(LC)	Single Mode	60km	1550nm	1310nm	0 ~ 60°C
MGB-TLA10	1000	WDM(LC)	Single Mode	10km	1310nm	1550nm	-40 ~ 75°C
MGB-TLB10	1000	WDM(LC)	Single Mode	10km	1550nm	1310nm	-40 ~ 75°C
MGB-TLA20	1000	WDM(LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75°C
MGB-TLB20	1000	WDM(LC)	Single Mode	20km	1550nm	1310nm	-40 ~ 75°C
MGB-TLA40	1000	WDM(LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 75°C
MGB-TLB40	1000	WDM(LC)	Single Mode	40km	1550nm	1310nm	-40 ~ 75°C
MGB-TLA60	1000	WDM(LC)	Single Mode	60km	1310nm	1550nm	-40 ~ 75°C
MGB-TLB60	1000	WDM(LC)	Single Mode	60km	1550nm	1310nm	-40 ~ 75°C

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