Compact Industrial 4-Port 10/100/1000T 802.3at PoE + 1-Port 10/100/1000T Ethernet Switch (-40~75 degrees C)

High Power PoE Solution for Harsh Industrial Network

The IGS-504PT is the smallest industrial-grade 4-Port PoE+ Switch in PLANET industrial PoE product line and is specially designed to be installed in a narrow environment. It provides up to 120-watt 802.3at PoE+ output capability and wire-speed Gigabit performance even in the harsh industrial environment. With **four 10/100/1000BASE-T** ports featuring **IEEE 802.3at PoE+** and **one extra 10/100/1000BASE-T** RJ45 copper interface for uplink connection.

The power system of the IGS-504PT supports **48~54V DC** power input for power redundancy and operational flexibility. It comes with a total power budget of up to **120 watts** for different kinds of PoE applications and operating temperature ranging from -40 to 75 degrees C in a rugged IP30 metal housing.

Plug and Play High Power Sourcing Solution

Complying with the **IEEE 802.3at Power over Ethernet Plus** technology, the IGS-504PT provides up to **30 watts** of PoE output power to allow users to flexibly deploy standard and high powered devices simultaneously with no need of software configuration. Furthermore, the IGS-504PT can extend much longer distance by using PLANET PoE Extender for powering up the PoE PD devices which can be installed over more than 100 meters away. By daisy-chaining multiple PoE extenders, it offers the great flexibility of doubling, tripling or quadrupling the distance of PoE network.

Interface

- 5 10/100/1000BASE-T Gigabit Ethernet RJ45 copper ports

Power over Ethernet

- Complies with IEEE 802.3at Power over Ethernet Plus, end-span PSE
- Backward compatible with IEEE 802.3af Power over Ethernet
- Up to 4 ports of IEEE 802.3af/at devices powered
- Up to 120-watt PoE budget
- Supports PoE power up to 30 watts for each PoE port
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
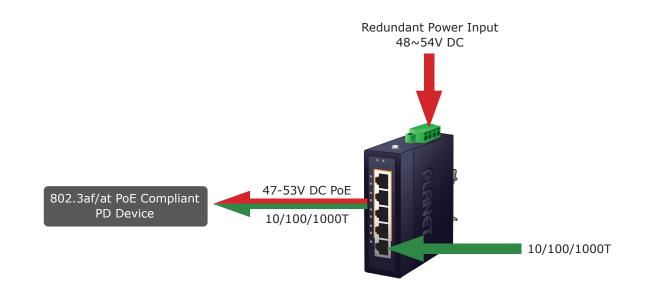- Remote power feeding up to 100m

Layer 2 Switching

- Features Store-and-Forward mode with wire-speed filtering and forwarding rates
- IEEE 802.3x flow control for full duplex operation and back pressure for half duplex operation
- 2K MAC address table size
- 9K jumbo frame
- IEEE 802.1Q VLAN transparency
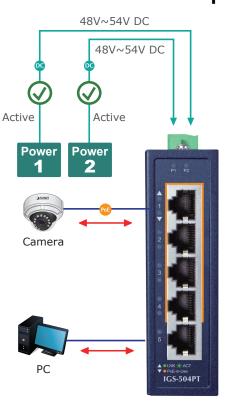- Automatic address learning and address aging

Industrial Case and Installation

- IP30 metal case
- DIN-rail, wall-mount or side wall-mount design
- 48~54V DC redundant power with reverse polarity protection
- Supports 6KV DC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

Redundant Power Input
48~54V DC

802.3af/at PoE Compliant
PD Device

47-53V DC PoE
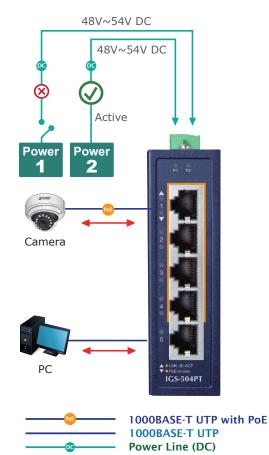
10/100/1000T

10/100/1000T

Dual Power Input for High Availability Network System

The IGS-504PT features a strong dual power input system with wide-ranging voltages (48V~54V DC) incorporated into customer's automation network to enhance system reliability and uptime. In the example below, when Power Supply 1 fails to work, the hardware failover function will be activated automatically to keep powering the IGS-504PT via Power Supply 2 without any break of operation.
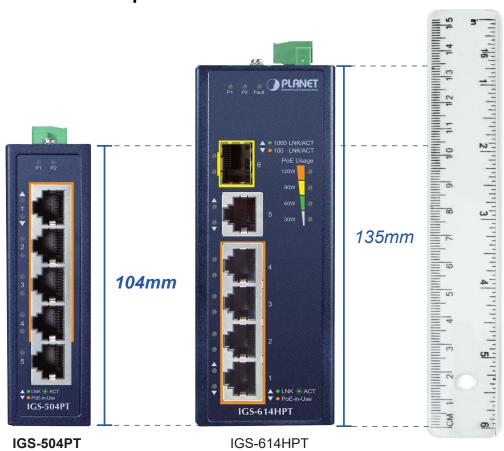
Non-stop Ethernet Server
Dual Power Input with Auto Failover

48V~54V DC

48V~54V DC

48V~54V DC

48V~54V DC

Active   Active

Active

| Power 1 | Power 2 |

| Power 1 | Power 2 |

Camera

Camera

PC

PC

P1   P2

P1   P2

IGS-504PT

IGS-504PT

1000BASE-T UTP with PoE
1000BASE-T UTP
Power Line (DC)

Small but Strong Enough for Any Hardened Environment

With the IP30 industrial metal case, the IGS-504PT 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 without air conditioning. It features a ventilated construction in which a cooling fan is not necessary, thereby making its operation noiseless. Being able to operate under the temperature range from **-40 to 75 degrees C**, the IGS-504PT can be placed in almost any difficult environment.

Compact Industrial 5-Port Switch

IGS-504PT   IGS-614HPT

Robust Protection

The IGS-504PT provides contact discharge of ±6KV DC and air discharge of ±8KV DC for Ethernet ESD protection. It also supports ±6KV surge immunity to improve product stability and protects users' networks from devastating ESD attacks, making sure the flow of operation does not fluctuate.

Flexible and Easy Installation with Limited Space

The compact-sized IGS-504PT is specially designed to be installed in a narrow environment, such as wall enclosure. It can be installed by fixed wall mounting or DIN rail, thereby making its usability more flexibly and easily in any space-limited location.

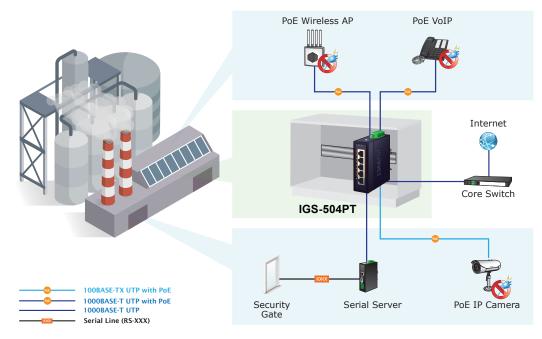**DIN-rail Mounting**   **Wall Mounting**   **Side Wall Mounting**
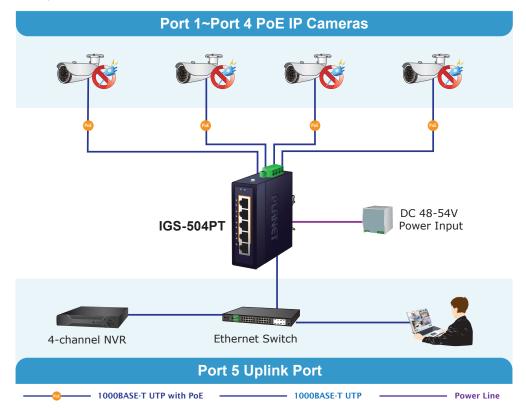(Space saving)

Applications

Industrial-grade PoE+ Switch for Building Automation and Security

Suitable for buildings where security is strictly enforced, the IGS-504PT, with four Gigabit Ethernet 802.3at PoE+, in-line power interfaces, can easily build a power that can centrally control an IP phone system, IP surveillance system, and wireless AP group in the harsh Industrial environment. For instance, 4 PoE IP cameras or PoE wireless APs can be easily installed for surveillance demands or a wireless roaming environment in the industrial area. The IGS-504PT makes the installation of IP cameras or wireless APs easier and more efficient as it does not require electrical outlets.

PoE —	100BASE-TX UTP with PoE
PoE —	1000BASE-T UTP with PoE
—	1000BASE-T UTP
IOIOI —	Serial Line (RS-XXX)

Perfect Integration Solution for IP PoE Camera and NVR System

The IGS-504PT provides four 10/100/1000BASE-T 802.3at PoE+ ports which can offer sufficient PoE power to 4 PoE IP cameras at the same time. In addition, with the Gigabit interface, the IGS-504PT can connect to a core switch and send video streams to an NVR and monitoring center. Through the high-performance switch architecture, the IGS-504PT facilitates the recorded video files from the 4 PoE+ IP cameras to be saved in the NVR systems. Furthermore, the NVR systems can be controlled and monitored in both the local LAN and the remote site via Internet. The IGS-504PT undoubtedly brings an ideal secure surveillance system at a lower total cost.
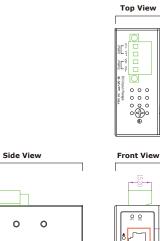

Port 1~Port 4 PoE IP Cameras

IGS-504PT

DC 48-54V Power Input

4-channel NVR   Ethernet Switch

Port 5 Uplink Port

PoE — 1000BASE-T UTP with PoE	— 1000BASE-T UTP	— Power Line

Product Specifications

Model	IGS-504PT
Hardware Specifications	
Copper Ports	**5** 10/100/1000BASET RJ45 auto-MDI/MDI-X ports
PoE Injector Ports	**4 ports** with 802.3at PoE+ injector function (Ports 1 to 4)
PoE Budget	120W maximum@75 degrees C
Connector	Removable 4-pin terminal block Pin 1/2 for Power 1; Pin 3/4 for Power 2
Power Requirements	**48~54V DC**, 3A (max.) Redundant power with reverse polarity protection
Power Consumption	■ **DC 48V**: Max. 0.48 watts/1.63BTU (System) Max. 62.88 watts/214.5BTU (Full Loading) ■ **DC 54V**: Max. 0.54 watts/1.84BTU (System) Max. 123.12 watts/420BTU (Full Loading)
Dimensions (W x D x H)	30 x 70 x 104 mm
Weight	260g
Enclosure	IP30 metal case
Installation	DIN-rail kit and wall-mount kit
ESD Protection	6KV
Switch Specifications	
Switch Architecture	Store-and-Forward
Switch Fabric	10Gbps
Throughput (packet per second)	7.4Mpps@64bytes
Address Table	2K entries
Jumbo Frame	9Kbytes
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex
Power over Ethernet	
PoE Standard	IEEE 802.3at Power over Ethernet Plus/PSE Backward compatible with IEEE 802.3af Power over Ethernet/PSE
PoE Power Supply Type	End-span
Power Pin Assignment	1/2 (+), 3/6 (-)
PoE Power Output	Per port 48-54V DC Max. 30 watts@54V DC Max. 15 watts@48V DC
PoE Power Budget	120 watts
Max. Number of Class 4 PDs	4
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC 60068-2-32 (free fall) IEC 60068-2-27 (shock) IEC 60068-2-6 (vibration)
Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.3x Full-Duplex Flow Control IEEE 802.3az Energy Efficient Ethernet (EEE) IEEE 802.3at Power over Ethernet Plus PSE IEEE 802.3af Power over Ethernet Plus IEEE 802.1p Class of Service
Environment	
Temperature	Operating: -40~75 degrees C Storage: -40~75 degrees C
Humidity	Operating: 5~90% (non-condensing) Storage: 5~90% (non-condensing)

Dimensions

Top View

Side View   **Front View**   **Side View**   **Rear View**

Mounting Kit

DIN-Rail Kit

Bottom View

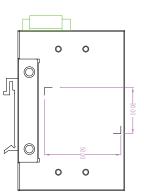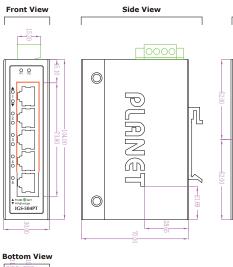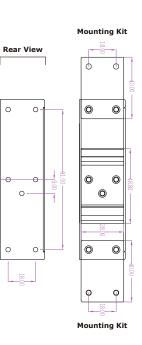**Mounting Kit**

Unit: mm

Ordering Information

IGS-504PT	Compact Industrial 4-Port 10/100/1000T 802.3at PoE + 1-Port 10/100/1000T Ethernet Switch

Related Products

IGS-504HPT	Industrial 4-Port 10/100/1000T 802.3at PoE + 1-Port 10/100/1000T Gigabit Ethernet Switch
IGS-614HPT	Industrial 4-Port 10/100/1000T 802.3at PoE + 1-Port 10/100/1000T + 1-Port 100/1000XSFP Gigabit Ethernet Switch
IGS-624HPT	Industrial 4-Port 10/100/1000T 802.3at PoE + 2-Port 100/1000XSFP Gigabit Ethernet Switch
ISW-504PT	Industrial 4-Port 10/100TX 802.3at PoE+ plus 1-Port 10/100TX Ethernet Switch
ISW-514PTF	Industrial 4-Port 10/100TX 802.3at PoE+ plus 1-Port 100FX Ethernet Switch
IFGS-1022HPT	Industrial 8-Port 10/100TX 802.3at PoE + 2-Port Gigabit TP/SFP Combo Ethernet Switch
IGS-5225-4P2S	L2+ Industrial 4-Port 10/100/1000T 802.3at PoE + 2-Port 100/1000X SFP Managed Ethernet Switch

IGS-504PT