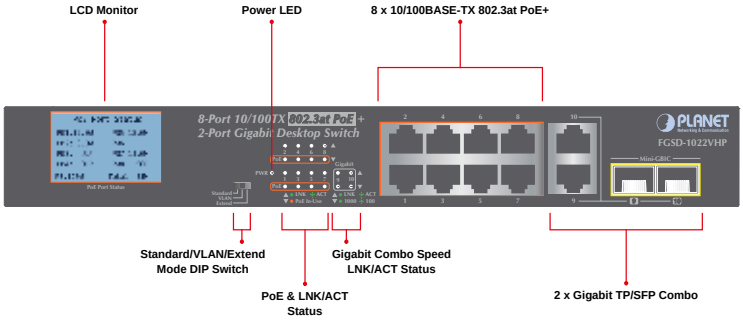
8-Port 10/100TX 802.3at PoE + 2-Port Gigabit TP/SFP Combo Desktop Switch

Cost-effective Integration Solution for Secure IP Surveillance Infrastructure

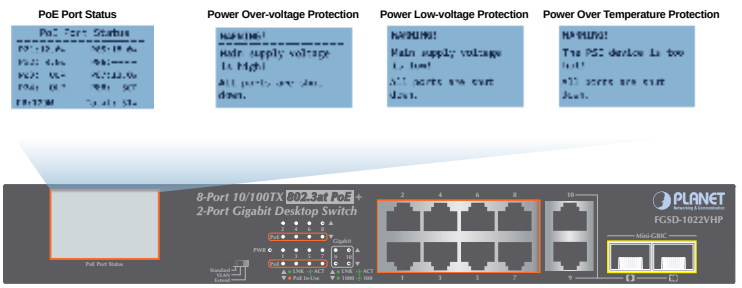
PLANET FGSD-1022VHP is an ideal **Plug and Watch Power over Ethernet** solution which provides quick installation, real-time PoE work status monitoring and immediate troubleshooting through its unique LCD display to improve work efficiency and quality without any PC or software required.

The FGSD-1022VHP is equipped with **8 10/100BASE-TX** ports featuring **30-watt 802.3at Power over Ethernet Plus (PoE+)** copper interfaces and **2 Gigabit TP/SFP combo** interfaces with inner power system. With a total PoE power budget of up to 120 watts and non-blocking data switching performance, the FGSD-1022VHP **fulfills the demand of sufficient PoE power for HD IP surveillance**. It offers a desktop-sized, reliable and visible power solution for small businesses and system integrators deploying Power over Ethernet networks.



LCD Monitor for Real-time PoE Usage and System Status Display

The LCD monitor of the FGSD-1022VHP clearly shows the PoE loading of each port, total PoE power usage and system status, such as overload, low voltage, over voltage and high temperature. With its brand-new LCD monitor, user is able to obtain detailed information about real-time PoE working condition of the FGSD-1022VHP directly. Also the Power Budget Control function helps to prevent power budget overloading.



Physical Port

- **8-port 10/100BASE-TX** Fast Ethernet RJ45 copper
- **2 10/100/1000BASE-T TP** and **2 1000BASE-X mini-GBIC SFP** shared combo interfaces

Power over Ethernet

- Complies with IEEE 802.3af/at Power over Ethernet end-span PSE
- Up to 8 ports of IEEE 802.3af/802.3at devices powered
- Supports PoE Power up to 30.8 watts for each PoE port
- Each port supports 53V DC power to PoE Powered Device
- 120-watt PoE budget
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100m with standard mode

Switching

- Hardware based 10/100Mbps or 10/100/1000Mbps auto-negotiation and auto MDI/MDI-X
- Flow control for full duplex operation and back pressure for half duplex operation
- Integrates address look-up engine, supporting 4K absolute MAC addresses
- IEEE 802.1Q VLAN transparency
- Hardware DIP switch for **"Standard"**, **"VLAN"** and **"Extend"** mode selection; the **"Extend"** mode features 30-watt PoE transmit distance of 250m at speed of 10Mbps and VLAN isolation
- Solid DIP switch to isolate ports to prevent broadcast storm and defend DHCP spoofing
- Automatic address learning and address aging

Hardware

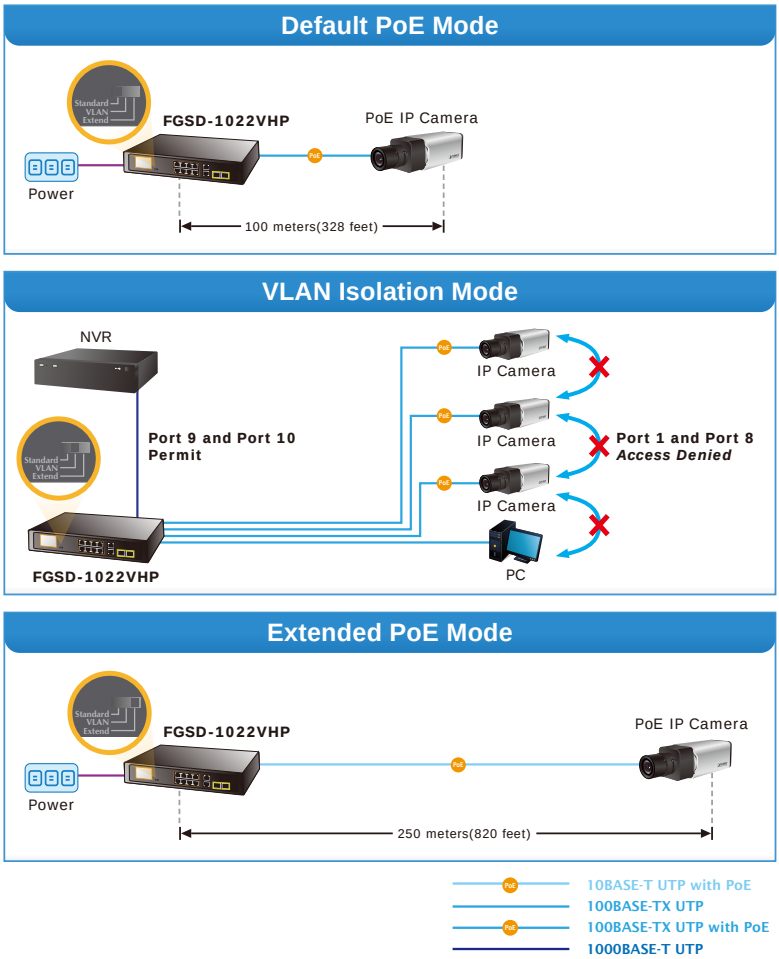
- 12-inch desktop size, 1U height, rack mountable
- LED indicators for system power, per port PoE ready and PoE activity, speed, Link/Act
- LCD monitor for system status and PoE usage status display
- 1 silent fan to provide stable and efficient power performance
- Supports Contact Discharge of ±4KV DC and Air Discharge of ±6KV DC for Ethernet ESD protection
- Supports ±4KV Surge Immunity

802.3at PoE+ Power and Ethernet Data Transmit Distance Extension

The built-in solid DIP switch provides **"Standard"**, **"VLAN"** and **"Extend"** operation modes. The FGSD-1022VHP operates as a normal IEEE 802.at/af PoE Switch in the **"Standard"** operation mode.

The **"VLAN"** operation mode features with port-based VLAN function that can help to prevent the IP camera's multicast or broadcast storm from influencing each other.

In the **"Extend"** operation mode, the FGSD-1022VHP operates on a per-port basis at 10Mbps duplex operation but can support 30-watt PoE power output over a distance of up to 250 meters overcoming the 100m limit on Ethernet UTP cable. With this brand-new feature, the FGSD-1022VHP provides an additional solution for 802.3at/af PoE distance extension, thus saving the cost of Ethernet cable installation. Furthermore, its VLAN isolation function isolates ports so as to prevent broadcast storm and defend DHCP spoofing in the **"Extend"** operation mode.



Flexible and Extendable Two Gigabit Uplink Solution

The FGSD-1022VHP provides 2 extra Gigabit TP/SFP combo interfaces supporting 10/100/1000BASE-T RJ45 copper for IP surveillance network devices such as NVR, video streaming server or NAS to facilitate surveillance management.

Or through these Gigabit speed fiber SFP slots, the 1000BASE-SX/LX SFP (Small Form-factor Pluggable) fiber transceiver is inserted to be uplinked to a backbone switch and monitoring center over a long distance. The distance can be extended from 550m to 2km (multi-mode fiber), even going up to above 10/20/30/40/50/60/70/120km (single-mode fiber or WDM fiber). They are well suited for applications within the enterprise data centers and distributions.

Robust Protection

The FGSD-1022VHP provide contact discharge of ±4KV DC and air discharge of ±6KV DC for Ethernet ESD protection, also supports ±4KV Surge Immunity to improve product stability and protects users' networks from devastating ESD attacks, making sure the flow of operation does not fluctuate.

Easy Installation and Cable Connection

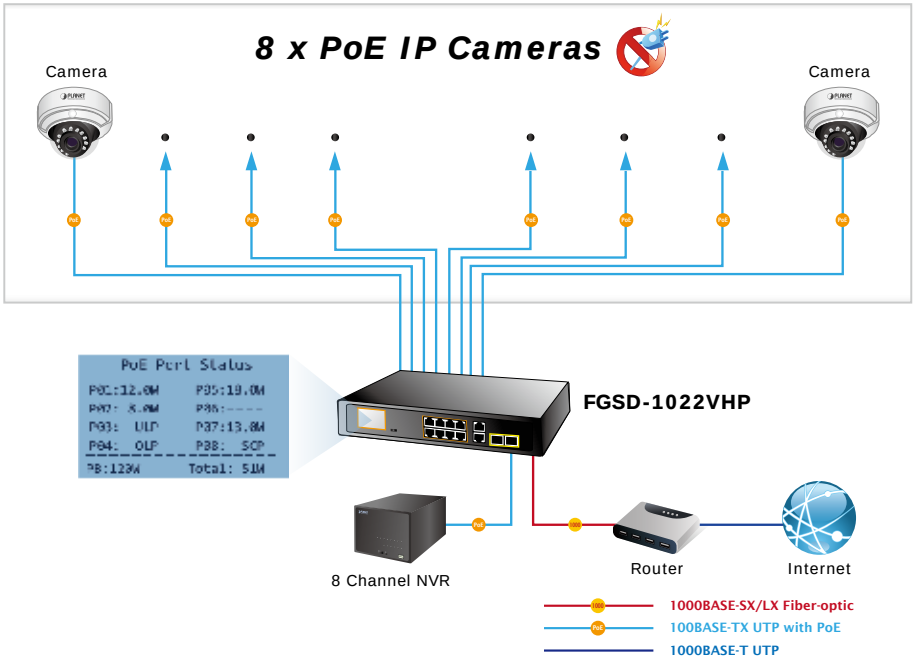
As data transfer and high power PoE are transmitted over a cable, the FGSD-1022VHP is able to reduce the need of extended cables and electrical outlets on the wall, ceiling or any unreachable place. It helps to lower the installation costs and simplify the installation effort. All RJ45 copper interfaces of the FGSD-1022VHP support 10/100Mbps and 10/100/1000Mbps auto-negotiation for optimal speed detection through RJ45 Category 6, 5 or 5e cable. It also supports standard auto-MDI/MDI-X that can detect the type of connection to any Ethernet device without requiring special straight-through or crossover cables.

Applications

Perfectly-integrated Solution for PoE IP Camera and NVR System

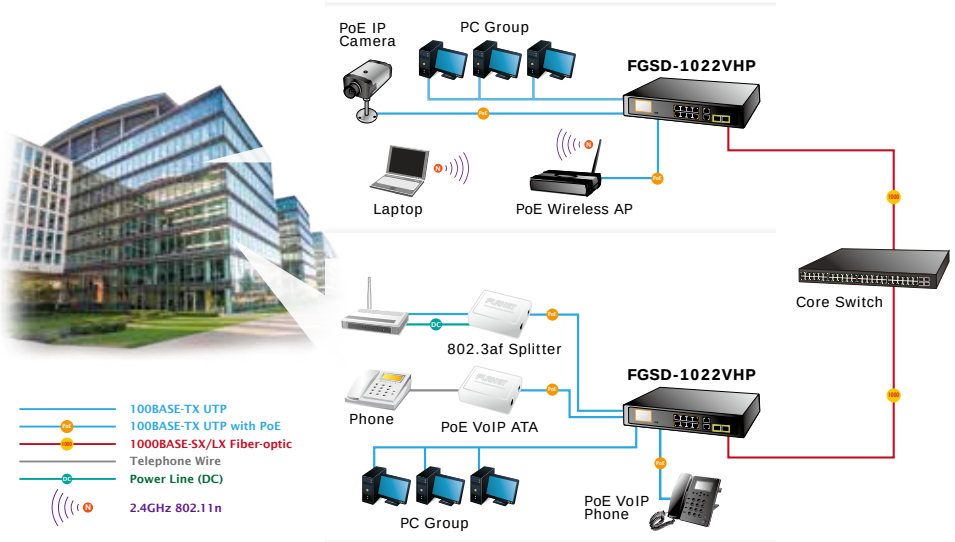
To fulfill the needs of the high power consumption of PoE network applications, the FGSD-1022VHP provides eight IEEE802.3at Power over Ethernet Plus (PoE+) ports that combine up to 30 watts of power output and data per port over one Cat5E/6 Ethernet cable. With its 5.6Gbps high-performance switch architecture and 120-watt PoE power budget, the FGSD-1022VHP is an ideal device for catering to medium scale of IP surveillance or public service PoE networks at a lower total cost.

For instance, one FGSD-1022VHP can be combined with one 8-channel NVR and 8 PoE IP cameras as a kit for the administrators to centrally and efficiently manage the surveillance system in the local LAN and the remote site via Internet. The recorded video files from the 8 PoE IP cameras powered by the FGSD-1022VHP can be saved in the 8-channel NVR systems or surveillance software to perform comprehensive security monitoring.



Department/Workgroup PoE Switch

Providing eight 802.3at PoE+ in-line power interfaces, the FGSD-1022VHP can easily build a power that centrally controls IP phone system, IP camera system and wireless AP group for enterprises. Cameras can be installed around the corner in the company or campus for surveillance demands. Without the power-socket limitation, the FGSD-1022VHP makes the installation of cameras more easily and efficiently.



Specifications

Product	FGSD-1022VHP
Hardware Specifications	
802.3af/802.3at PoE Injector Port	8
10/100BASE-TX MDI/MDIX Ports	8
10/100/1000BASE-T MDI/MDIX Ports	2 (Combo Port)
1000BASE-X SFP/mini-GBIC Slots	2 (Combo Port)
DIP Switch	1 for standard mode/VLAN mode/extend mode operation
Switch Architecture	Store-and-Forward
Switch Fabric	5.6Gbps/non-blocking
Switch Throughput@64 bytes	4.16Mpps@64Bytes
MAC Address Table	4K entries
Maximum Frame Size	1536 bytes
Flow Control	IEEE 802.3x pause frame for full-duplex; back pressure for half-duplex
LED	System: Power (Green) 10/100BASE-TX RJ45 Interfaces: 10/100Mbps LNK/ACT (Green) PoE-in-Use (Orange) 10/100/1000BASE-T RJ45/SFP Interfaces: LNK/ACT (Green) 100/1000 (Green)
LCD Monitor	■ Total PoE budget ■ Total PoE usage ■ Per port PoE usage ■ PD light load protection/PD over load protection ■ Short-circuit protection (SCP) ■ Power supply Low voltage alarm/High voltage alarm
Dimensions (W x D x H)	180 x 280 x 44 mm (1U height)
Enclosure	Metal
Weight	1.8kg
Power Requirements	AC 100~240V, 50/60Hz, 2.5A max.
Power Consumption/Dissipation	Max. 130 watts/443 BTU
Thermal Fan	1
ESD Protection	Contact Discharge of ±4KV DC Air Discharge of ±6KV DC
Surge Immunity	±4KV
Power over Ethernet	
PoE Standard	IEEE 802.3af Power over Ethernet/PSE IEEE 802.3at Power over Ethernet Plus/PSE
PoE Power Supply Type	End-span
PoE Power Output	Per port 53V DC, 300mA. max. 15.4 watts (IEEE 802.3af) Per port 53V DC, 600mA. max. 30 watts (IEEE 802.3at)
Power Pin Assignment	1/2(+), 3/6(-)
PoE Power Budget	120 watts
Max. Number of Class 2 PDs	8
Max. Number of Class 3 PDs	8
Max. Number of Class 4 PDs	4
Standards Conformance	
Regulatory Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab Gigabit 1000BASE-T IEEE 802.3z Gigabit SX/LX IEEE 802.3x flow control and back pressure IEEE 802.3af Power over Ethernet IEEE 802.3at High Power over Ethernet Plus
Environment	
Operating	Temperature: 0 ~ 50 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -10 ~ 70 degrees C Relative Humidity: 5 ~ 95% (non-condensing)

Ordering Information

FGSD-1022VHP	8-Port 10/100TX 802.3at PoE + 2-Port Gigabit TP/SFP Combo Desktop Switch

Related PoE Products

ICA-2250VT	Industrial PoE Plus Outdoor IR IP Camera
ICA-2500	5 Mega-pixel PoE Box IP Camera
ICA-3250V	Full HD Outdoor IR PoE IP Camera
ICA-4200V	Full HD 20M IR Vari-focal Dome IP Camera
ICA-4500V	5 Mega-pixel 20M IR Vari-focal Dome IP Camera
ICA-5250	Full HD Ultra-mini Vandal Dome
ICA-5350V	3 Mega-pixel Vandalproof IR IP Camera
ICA-E3550V	5 Mega-pixel Bullet IR PoE IP Camera
ICA-E5550V	5 Mega-pixel Vandalproof IR PoE IP Camera
ICA-E8550	5 Mega-pixel Outdoor IR PoE Fisheye IP Camera
ICA-HM351	2 Mega-pixel 35M IR Outdoor Box PoE IP Camera
POE-162S	IEEE 802.3at Gigabit High Power over Ethernet Splitter
POE-E201	IEEE 802.3at Power over Ethernet Extender
WNAP-C3220A	802.11n Wireless Ceiling-mount PoE Access Point
WNAP-W2201A	802.11n 300Mbps In-Wall Access Point w/USB Charger (EU Type)
WDAP-C7200AC	1200Mbps 802.11ac Dual Band Ceiling-mount Wireless Access Point
WDAP-W7200AC	1200Mbps 802.11ac Dual Band Wall-mount Wireless Access Point
VIP-2020PT	Enterprise HD PoE IP Phone (2-Line)
VIP-5060PT	Professional HD PoE IP Phone (6-Line)

SFP Gigabit Modules are available for the FGSD-1022VHP

Gigabit Ethernet Transceiver (1000BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MGB-GT	1000	Copper	--	100m	--	0 ~ 60 ºC
MGB-SX	1000	LC	Multi Mode	550m	850nm	0 ~ 60 ºC
MGB-SX2	1000	LC	Multi Mode	2km	1310nm	0 ~ 60 ºC
MGB-LX	1000	LC	Single Mode	10km	1310nm	0 ~ 60 ºC
MGB-L30	1000	LC	Single Mode	30km	1310nm	0 ~ 60 ºC
MGB-L50	1000	LC	Single Mode	50km	1550nm	0 ~ 60 ºC
MGB-L70	1000	LC	Single Mode	70km	1550nm	0 ~ 60 ºC
MGB-L120	1000	LC	Single Mode	120km	1550nm	0 ~ 60 ºC
MGB-TSX	1000	LC	Multi Mode	550m	850nm	-40 ~ 75 ºC
MGB-TLX	1000	LC	Single Mode	10km	1310nm	-40 ~ 75 ºC
MGB-TL30	1000	LC	Single Mode	30km	1310nm	-40 ~ 75 ºC
MGB-TL70	1000	LC	Single Mode	70km	1550nm	-40 ~ 75 ºC

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 MGB-LB10	1000	WDM (LC)	Single Mode	10km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 ºC
MGB-LA20 MGB-LB20	1000	WDM (LC)	Single Mode	20km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 ºC
MGB-LA40 MGB-LB40	1000	WDM (LC)	Single Mode	40km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 ºC
MGB-LA60 MGB-LB60	1000	WDM (LC)	Single Mode	60km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 ºC
MGB-TLA10 MGB-TLB10	1000	WDM (LC)	Single Mode	10km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 ºC
MGB-TLA20 MGB-TLB20	1000	WDM (LC)	Single Mode	20km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 ºC
MGB-TLA40 MGB-TLB40	1000	WDM (LC)	Single Mode	40km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 ºC
MGB-TLA60 MGB-TLB60	1000	WDM (LC)	Single Mode	60km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 ºC