16-Port 10/100/1000T 802.3at PoE + 2-Port Gigabit SFP Ethernet Switch with LCD PoE Monitor
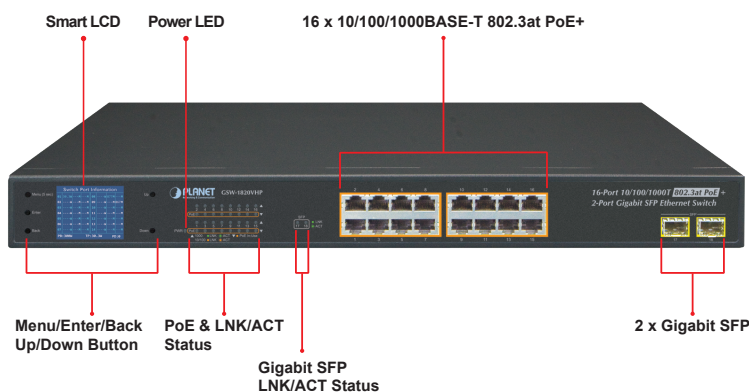

Just "Plug and Watch" for a Quick Solution

PLANET GSW-1820VHP 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 GSW-1820VHP is equipped with **16 10/100/1000BASE-T** ports with each port taking up 30 watts of PoE+ power, and **2 extra 1000BASE-X SFP** slots with inner power system. With a total PoE+ power budget of **300 watts** and non-blocking data switching performance, the GSW-1820VHP can fulfill 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.

Physical Port

- **16 10/100/1000BASE-T** Gigabit RJ45 copper ports
- **2 1000BASE-X mini-GBIC SFP** interfaces

Power over Ethernet

- Complies with IEEE 802.3af/at Power over Ethernet end-span PSE
- Up to 16 ports of IEEE 802.3af/802.3at devices powered
- Supports PoE power up to 32 watts for each PoE port
- Each port supports 54V DC power to PoE powered device
- 300-watt PoE budget
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100m in standard mode and 250m in extend mode

Smart LCD

- The LCD switch features **Standard**, **VLAN** and **Extend** modes; the Extend mode features 20-watt PoE transmission distance of 250m at speed of 10Mbps and VLAN isolation
- The LCD switch is able to isolate ports to prevent broadcast storm and defend DHCP spoofing
- Power low-voltage, power over-voltage and PSE over-temperature protection
- Screen saver, fan control, factory default and save configuration
- PoE management
  - Total PoE power budget control
  - Per port PoE function enable/disable
  - PoE port power feeding priority
  - Per PoE port power limitation
  - PD alive check

Switching

- Hardware-based 10/100/1000Mbps auto-negotiation and auto MDI/MDI-X
- Flow control for full duplex operation and back pressure for half duplex operation
- 9216bytes packet size
- Integrates address look-up engine, supporting 8K absolute MAC addresses
- IEEE 802.1Q VLAN transparency
- Automatic address learning and address aging

Smart and Intuitive LCD Control

The GSW-1820VHP provides an intuitive color panel on its front panel that facilitates the Ethernet management and PoE PD management. They greatly promote management efficiency in large-scale networks for enterprises, hotels, shopping malls, government buildings and other public areas, and feature the following special management and status functions:

■ PoE management and status

■ Port management and status

■ Switch mode: Standard, VLAN and Extend

■ Budget and bandwidth control

■ PD alive check

■ Maintenance: Screen saver, fan control, factory default and save configuration
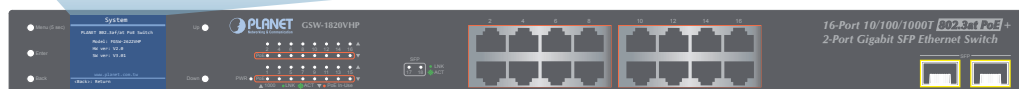
Hardware

- 19-inch desktop size, 1U height, rack mountable
- 2-inch color LCD with smart management functions
- LED indicators for system power, per port PoE ready and PoE activity, speed, Link/Act
- 3 silent fans to provide stable and efficient power performance
- Supports Energy-Efficient Ethernet (EEE) function (IEEE 802.3az)
- Supports contact discharge of ±6KV DC and air discharge of ±8KV DC for Ethernet ESD protection
- Supports ±6KV surge immunity

Switch Port Information

01	30.3W	---M	867M	08	----W	---M	---M
02	----W	---M	---M	09	-8.3W	---M	-<1M
03	----W	---M	---M	10	----W	---M	---M
04	15.4W	-10M	---M	11	-OFF-	---M	---M
05	----W	---M	---M	12	----W	---M	---M
06	----W	---M	---M	13	17.6W	223M	246M
07	----W	---M	---M	14	----W	---M	---M

PB:300W   TP:72W   PD:4

Main Menu

01 — Switch Mode
02 — Budget Control
03 — PSE Port Priority
04 — PSE Port Enable
05 — PD Type
06 — Alive Check
07 — Bandwidth
08 — Fan Control

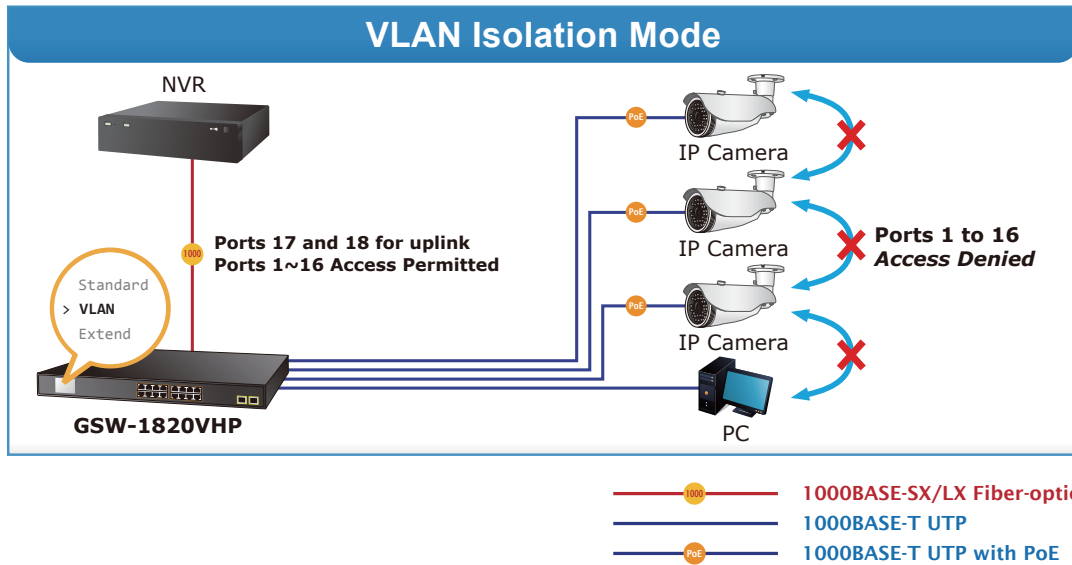### Switch Mode

Options:
> Standard
VLAN
Extend

PSE Port Enable

Port   Status
01   > Enable
        Disable

Current Setting: Enable
<UP>/<Down>:Select
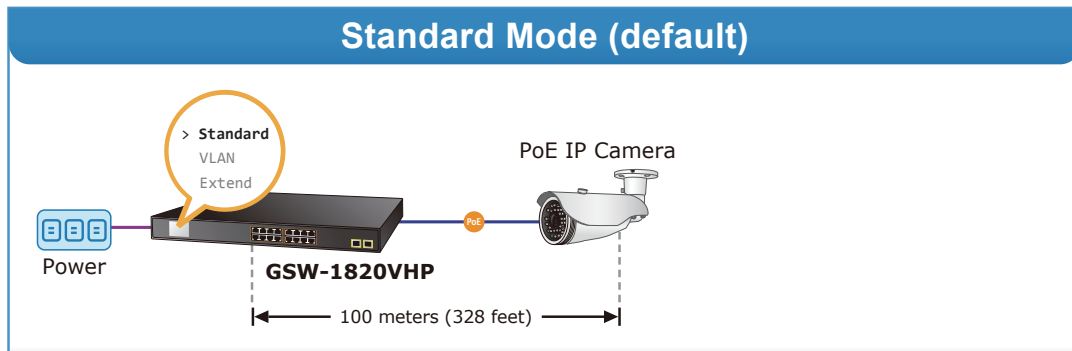<Enter>:Confirm <Back>:Return

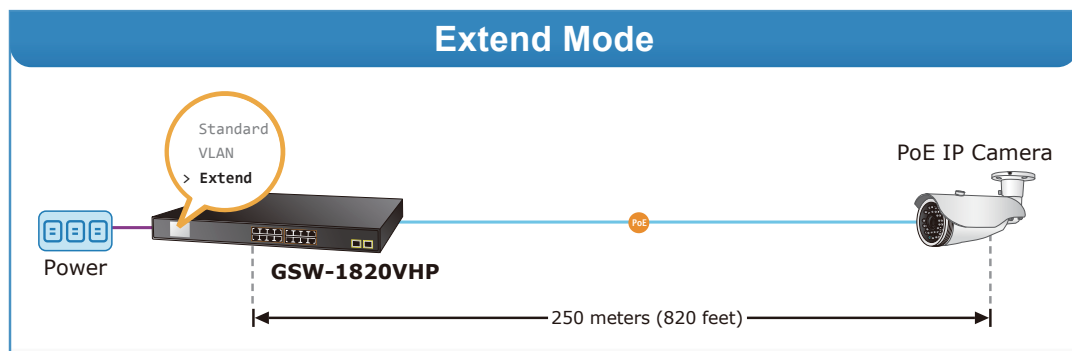### Standard, VLAN and Extend Operation Modes

The GSW-1820VHP provides Standard, VLAN and Extend operation modes. The GSW-1820VHP operates as a normal IEEE 802.3af/at PoE Switch in the Standard operation mode. The VLAN operation mode features the port-based VLAN function that can help to prevent the IP camera's multicast or broadcast storm from influencing each other.

VLAN Isolation Mode

NVR

IP Camera

IP Camera

IP Camera

PC

Ports 17 and 18 for uplink
Ports 1~16 Access Permitted

Ports 1 to 16
Access Denied

Standard
> **VLAN**
Extend

GSW-1820VHP

1000BASE-SX/LX Fiber-optic
1000BASE-T UTP
1000BASE-T UTP with PoE

In the Extend operation mode, the GSW-1820VHP operates on a per-port basis at 10Mbps duplex operation but can support 20-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 GSW-1820VHP provides an additional solution for 802.3af/at PoE distance extension, thus saving the cost of Ethernet cable installation. Its VLAN isolation function isolates ports so as to prevent broadcast storm and defend DHCP spoofing in the Extend operation mode.

Standard Mode (default)

> **Standard**
VLAN
Extend

PoE IP Camera

Power

GSW-1820VHP

100 meters (328 feet)

1000BASE-T UTP with PoE

Extend Mode

Standard
VLAN
> **Extend**

PoE IP Camera

Power

GSW-1820VHP

250 meters (820 feet)

10BASE-T UTP with PoE

Flexible Extension Solution

The two mini-GBIC slots built in the GSW-1820VHP is compatible with the 1000BASE-SX/LX SFP (small form-factor pluggable) fiber transceiver, uplinked to the backbone switch and monitoring center in long distance. The distance can be extended from 550 meters (multi-mode fiber) to 10/20/30/40/50/60/70/120 kilometers (single-mode fiber or WDM fiber). They are well suited for applications within the enterprise data centers and distributions.

Robust Protection

The GSW-1820VHP 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.
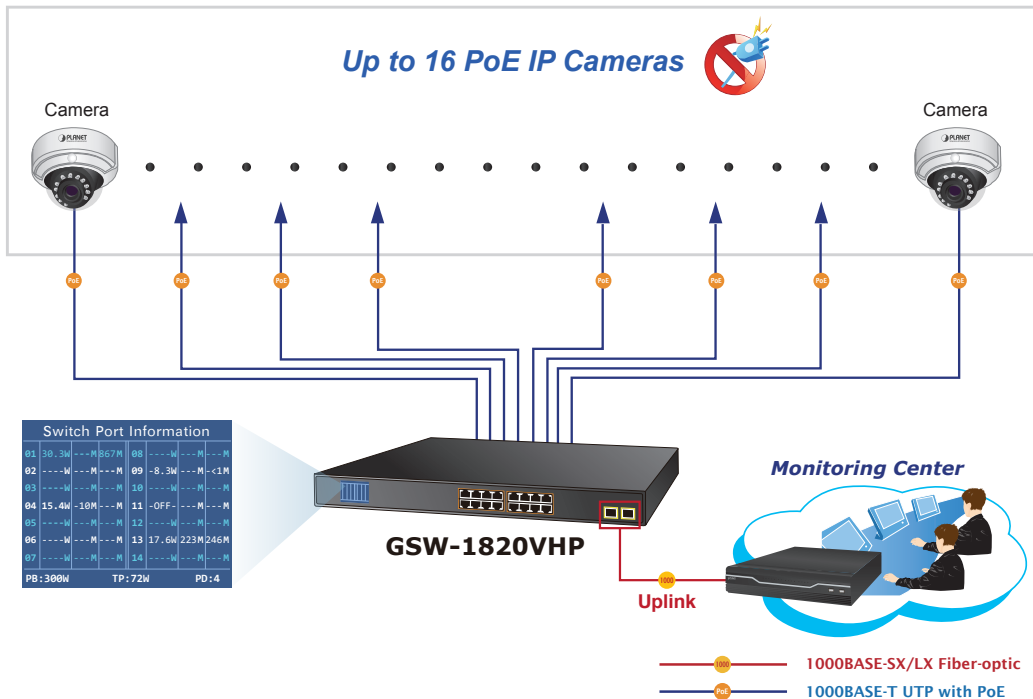
Easy Installation and Cable Connection

As data and power are transmitted over one cable, the GSW-1820VHP does not need a second cable and electrical outlets on the wall, ceiling or any unreachable place. Thus, it helps to lower the installation costs and simplify the installation effort. All the RJ45 copper interfaces of the GSW-1820VHP support 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.
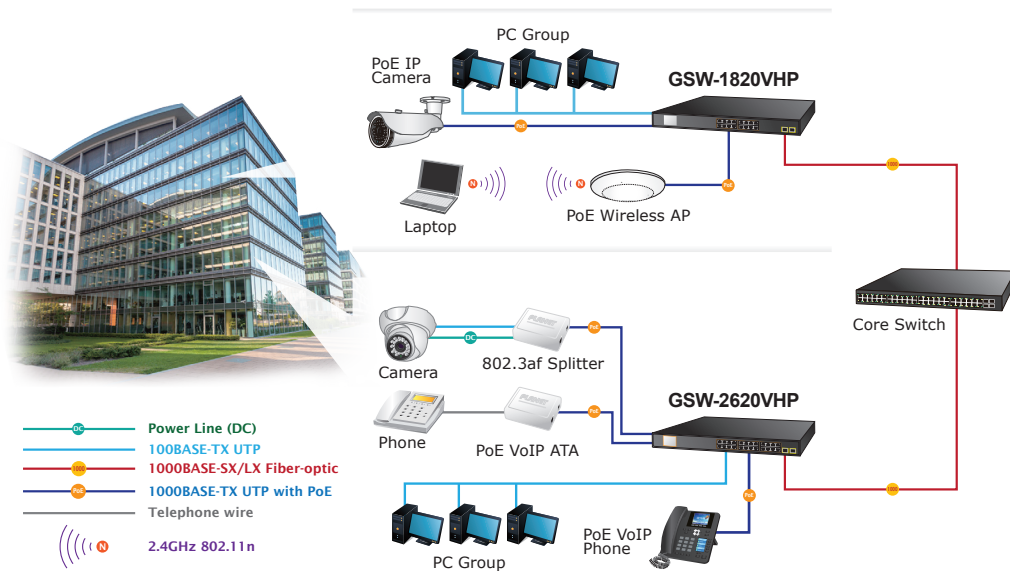
Applications

Perfectly-integrated Solution for PoE IP Camera and NVR System

With its 36Gbps high-performance switch architecture and 300-watt PoE power budget, the recorded video files from the 16 PoE IP cameras powered by the GSW-1820VHP are saved in the 16-channel NVR systems or surveillance software in the monitoring center for possible backup references.

Ideal PoE Switch for All Enterprises

Providing sixteen 802.3at PoE+ in-line power interfaces, the GSW-1820VHP 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 need for power sockets, the GSW-1820VHP makes the installation of cameras easier and more efficient.

Specifications

Model	GSW-1820VHP
Hardware Specifications	
802.3af/802.3at PoE Injector Port	16
10/100/1000BASE-T MDI/MDIX Ports	16
1000BASE-X SFP/mini-GBIC Slots	2
Switch Architecture	Store-and-Forward
Switch Fabric	36Gbps/non-blocking
Switch Throughput@64 bytes	26.8Mpps@64 bytes
MAC Address Table	8K entries
Maximum Frame Size	9216 bytes
Flow Control	IEEE 802.3x pause frame for full-duplex; back pressure for half-duplex
LED Indicators	**System:** Power (Green) **10/100/1000BASE-T RJ45 Interfaces:** 10/100Mbps LNK/ACT (Red) 1000Mbps LNK/ACT (Green) PoE-in-Use (Amber) **1000BASE-X SFP Interfaces:** LNK/ACT (Green)
LCD Monitor (W x D)	40.6mm x 30.5mm, 2-inch
Buttom	Menu, Enter, Back, Up and Down
Dimensions (W x D x H)	440 x 233 x 44mm (1U height)
Enclosure	Metal
Weight	3.4kg
Power Requirements	100~240V AC, 50/60Hz, 5A max.
Power Consumption/Dissipation	Max. 330watts/1132 BTU
Thermal Fan	3
ESD Protection	Contact discharge of ±6KV DC Air discharge of ±8KV DC
Surge Protection	±6KV
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-54V DC, 300mA. max. 15.4 watts (IEEE 802.3af) Per port 53V-54V DC, 600mA. max. 30 watts (IEEE 802.3at)
Power Pin Assignment	1/2 (+), 3/6 (-)
PoE Power Budget	300 watts
Max. Number of Class 2 PDs	16
Max. Number of Class 3 PDs	16
Max. Number of Class 4 PDs	11
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 Power over Ethernet Plus IEEE 802.3az Energy Efficient Ethernet (EEE)
Environment	
Operating	Temperature: -10 ~ 60 degrees C Relative Humidity: 10 ~ 90% (non-condensing) * Temperature: < 40 degrees C; Humidity: < 90% Temperature: > 40 degrees C; Humidity: < 50%
Storage	Temperature: -10 ~ 70 degrees C Relative Humidity: 5 ~ 90% (non-condensing)

Ordering Information

GSW-1820VHP	16-Port 10/100/1000T 802.3at PoE + 2-Port Gigabit SFP Ethernet Switch with LCD PoE Monitor

Related PoE Products

GSD-1222VHP	8-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T + 2-Port 1000X SFP Ethernet Switch with PoE LCD Monitor
GSW-2620VHP	24-Port 10/100/1000T 802.3at PoE + 2-Port 1000X SFP Gigabit Ethernet Switch with LCD PoE Monitor (300W)
FGSD-1022VHP	8-Port 10/100TX 802.3at PoE + 2-Port Gigabit TP/SFP combo Desktop Switch with LCD PoE Monitor (120W)
FGSW-1822VHP	16-Port 10/100TX 802.3at PoE + 2-Port Gigabit TP/SFP Combo Ethernet Switch with LCD PoE Monitor (300W)
FGSW-2622VHP	24-Port 10/100TX 802.3at PoE + 2-Port Gigabit TP/SFP Combo Ethernet Switch with LCD PoE Monitor (300W)
HDP-5240PT	720p SIP Multi-unit Video Door Phone with RFID and PoE
HDP-5260PT	720p SIP Multi-unit Apartment Vandalproof Door Phone with RFID and PoE
ICA-3250	1080p IR Bullet PoE IP Camera
ICA-4250	1080p IR Dome PoE IP Camera
ICA-E8550	5 Mega-pixel Outdoor IR PoE Fisheye IP Camera with Extended Support
ICA-M4320P	H.265 3 Mega-pixel IR IP Camera with Remote Focus and Zoom
WNAP-W2200UE	300Mbps 802.11n In-Wall Wireless Access Point w/ USB Charger
WDAP-C7200E	1200Mbps 802.11ac Dual Band Ceiling-mount Wireless Access Point
WNAP-C3220E	300Mbps 802.11n Ceiling-mount Wireless Access Point
ICF-1800	HD Touch Screen Android Multimedia Conferencing Phone
POE-162S	IEEE 802.3at Gigabit High Power over Ethernet Splitter
POE-E201	IEEE 802.3at Power over Ethernet Extender
VIP-1120PT	High Definition Color PoE IP Phone
VIP-2140PT	High Definition Color PoE IP Phone with Dual Display

SFP Gigabit Modules are available for the GSW-1820VHP

Gigabit Ethernet Transceiver (1000BASE-X SFP)

Model	DDM	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MGB-GT	-	1000	Copper	--	100m	--	0 ~ 60 degrees C
MGB-SX	YES	1000	LC	Multi Mode	550m	850nm	0 ~ 60 degrees C
MGB-SX2	YES	1000	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C
MGB-LX	YES	1000	LC	Single Mode	20km	1310nm	0 ~ 60 degrees C
MGB-L40	YES	1000	LC	Single Mode	40km	1310nm	0 ~ 60 degrees C
MGB-L80	YES	1000	LC	Single Mode	80km	1550nm	0 ~ 60 degrees C
MGB-L120	YES	1000	LC	Single Mode	120km	1550nm	0 ~ 60 degrees C
MGB-TSX	YES	1000	LC	Multi Mode	550m	850nm	-40 ~ 75 degrees C
MGB-TSX2	YES	1000	LC	Multi Mode	2km	1310nm	-40 ~ 75 degrees C
MGB-TLX	YES	1000	LC	Single Mode	20km	1310nm	-40 ~ 75 degrees C
MGB-TL40	YES	1000	LC	Single Mode	40km	1310nm	-40 ~ 75 degrees C
MGB-TL80	YES	1000	LC	Single Mode	80km	1550nm	-40 ~ 75 degrees 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 MGB-LB10	1000	WDM(LC)	Single Mode	10km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 degrees C
MGB-LA20 MGB-LB20	1000	WDM(LC)	Single Mode	20km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 degrees C
MGB-LA40 MGB-LB40	1000	WDM(LC)	Single Mode	40km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 degrees C
MGB-LA60 MGB-LB60	1000	WDM(LC)	Single Mode	60km	1310nm 1550nm	1550nm 1310nm	0 ~ 60 degrees C
MGB-TLA10 MGB-TLB10	1000	WDM(LC)	Single Mode	10km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 degrees C
MGB-TLA20 MGB-TLB20	1000	WDM(LC)	Single Mode	20km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 degrees C
MGB-TLA40 MGB-TLB40	1000	WDM(LC)	Single Mode	40km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 degrees C
MGB-TLA60 MGB-TLB60	1000	WDM(LC)	Single Mode	60km	1310nm 1550nm	1550nm 1310nm	-40 ~ 75 degrees C

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GSW-1820VHP