

## Industrial L2+ 8-Port 10/100/1000T 802.3bt PoE + 2-Port 1G/2.5G SFP Wall-mount Managed Switch with LCD Touch Screen



### Wall-mounted PoE++ Managed Switch with Advanced L2+/L4 Switching and Security

PLANET WGS-5225-8UP2SV is an Industrial Wall-mount PoE++ Managed Switch with **LCD Touch Screen** featuring PLANET **intelligent PoE** functions to improve the availability of industrial applications. It provides IPv6/IPv4 dual stack management and built-in L2+/L4 Gigabit switching engine along with **eight 10/100/1000BASE-T** ports featuring **95-watt PoE** and **two additional 100/1000/2500BASE-X SFP ports**. With a total power budget of up to **720** watts for different kinds of PoE applications, and featuring networking speed and operating temperature ranging from **-20 to 70 degrees C** in a compact but rugged IP30 metal housing, the **WGS-5225-8UP2SV** is an ideal solution to meet the demand for the following network applications:



\* The above pictures are for illustration only.

### 802.3bt PoE++ – 90~95-watt Power over 4-pair UTP Solution

As the WGS-5225-8UP2SV adopts the IEEE 802.3bt PoE++ standard and PoH technology, it is capable to source up to **95 watts** of power by using all the four pairs of standard Cat5e/6 Ethernet cabling to deliver power and full-speed data to each remote PoE compliant powered device (PD). It possesses triple amount of power capability than the conventional 802.3at PoE+ and is an ideal solution to satisfy the growing demand for higher power consuming network PDs, such as:

### Physical Port

- **8 10/100/1000BASE-T** Gigabit Ethernet RJ45 ports with **IEEE 802.3bt PoE++** Injector function
- **2 100/1000/2500BASE-X SFP** slots for SFP type auto detection

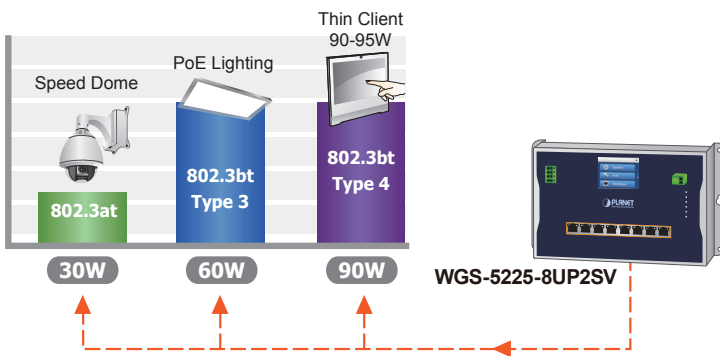
### Industrial Case and Installation

- IP30 aluminum case
- Supports -20 to 70 degrees C operating temperature
- Supports ESD 6KV DC Ethernet protection
- Dual power input design
  - 48V~54V DC wide power input with reverse polarity protection
- Compact size with fixed wall-mounted design

### Power over Ethernet

- Complies with IEEE 802.3bt Power over Ethernet Plus Plus PSE
- Backward compatible with 802.3at PoE+ end-span or mid-span PSE
- Up to 8 IEEE 802.3af/802.3at/802.3bt devices powered
- Supports PoE power up to 95 watts for each PoE port
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100m
- PoE management features
  - Total PoE power budget control
  - Per port PoE function enable/disable
  - PoE admin-mode control
  - PoE port power feeding priority
  - Per PoE port power limit
  - PD classification detection
  - Sequence port PoE
  - PoE extend mode control to support power feeding up to a distance of up to 160 meters
  - Auto maximum PoE budget control by power input detection
- Intelligent PoE features
  - PoE usage threshold control
  - PD alive check
  - PoE schedule

- PoE PTZ speed dome cameras
- Network devices
- Thin clients
- AIO (all-in-one) touch PCs, point of sale (POS) and information kiosks
- Remote digital signage displays
- PoE lightings



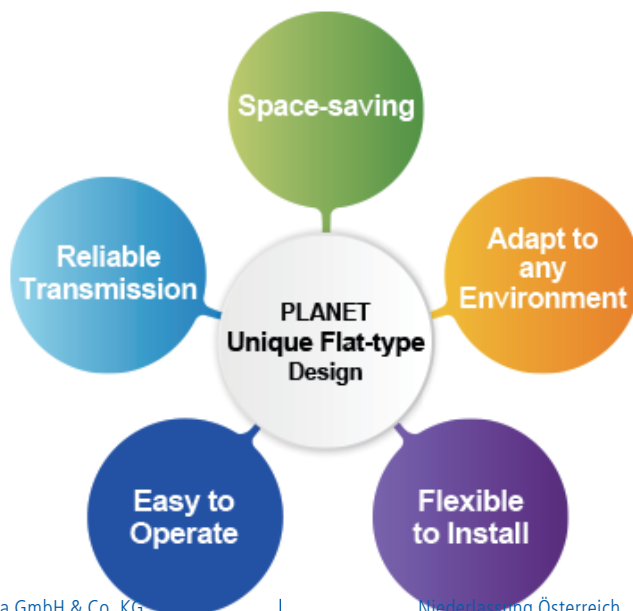
### 802.3bt PoE++ and Advanced PoE Power Output Mode Management

To meet the demand of various powered devices consuming stable PoE power, the WGS-5225-8UP2SV provides five different PoE power output modes for selection.

- 90W 802.3bt PoE++ Power Output Mode
- 95W UPOE/PoH Power Output Mode
- 30W End-span PoE Power Output Mode
- 30W Mid-span PoE Power Output Mode
- 60W Force Power Output Mode

### Innovative Wall-mount Installation

The WGS-5225-8UP2SV is specially designed to be installed in a narrow environment, such as wall enclosure or electric box. The compact, flat and wall-mounted design fits easily in any space-limited location. It adopts the user-friendly “Front Access” and touch color screen design, making the installing, cable wiring, LED monitoring and maintenance of the WGS-5225-8UP2SV placed in an enclosure very convenient for technicians. The WGS-5225-8UP2SV can be installed by fixed wall mounting, thereby making its usability more flexible.



### Industrial Protocol

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

### Layer 3 IP Routing Features

- Supports maximum 32 static routes and route summarization
- Routing interface provides per VLAN routing mode

### Layer 2 Features

- Storm Control support
  - Broadcast/Multicast/Unicast
- Supports **VLAN**
  - IEEE 802.1Q tagged VLAN
  - Provider Bridging (VLAN Q-in-Q) support (IEEE 802.1ad)
  - Private VLAN Edge (PVE)
  - Protocol-based VLAN
  - MAC-based VLAN
  - Voice VLAN
  - GVRP (GARP VLAN Registration Protocol)
- 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/BPDU Filtering
- Supports **Link Aggregation**
  - 802.3ad Link Aggregation Control Protocol (LACP)
  - Cisco ether-channel (static trunk)
  - Maximum 2 trunk groups with 2 ports per trunk group
  - Up to 10Gbps 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)

### Quality of Service

- Ingress Shaper and Egress Rate Limit per port bandwidth control

### Intuitive LCD Control

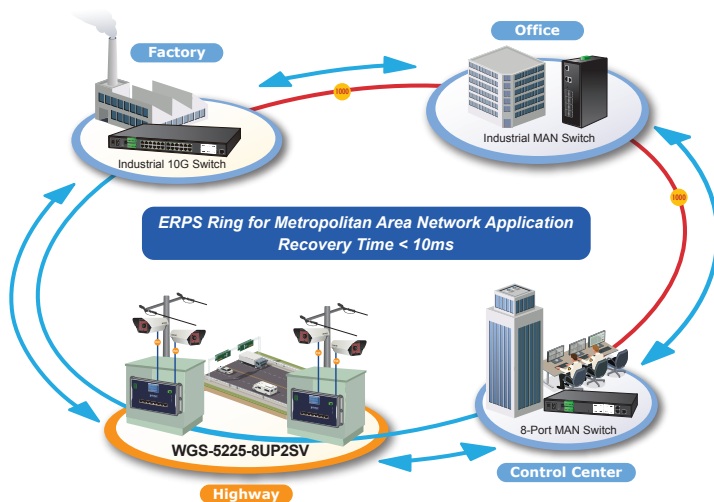
The WGS-5225-8UP2SV comes with an intuitive touch panel on its front panel that facilitates the Ethernet PoE PD management that greatly promotes management efficiency in large-scale networks, such as enterprises, hotels, shopping malls, government buildings, and other public areas. It also features the following special management and status functions:

- IP address, VLAN and QoS configuration
- PoE management and status
- Port management and status, and SFP information
- Troubleshooting: cable diagnostic and remote IP ping
- Maintenance: reboot, factory default and save configuration



### Redundant Ring, Fast Recovery for Critical Network Applications

The WGS-5225-8UP2SV 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 **dual power** input system into customer's industrial automation network to enhance system reliability and uptime in harsh factory environments. In a certain simple ring network, the recovery time of data link can be as fast as 10ms.



- 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 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
- MVR (Multicast VLAN Registration)

### Security

- Authentication
  - IEEE 802.1x Port-based / MAC-based network access authentication
  - Built-in RADIUS client to cooperate with the RADIUS servers
  - TACACS+ login users access authentication
  - RADIUS/TACACS+ users access authentication
  - Guest VLAN assigns clients to a restricted VLAN with limited services
- 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
- Auto DoS rule to defend DoS attack
- IP address access management to prevent unauthorized intruder

### Management

- IPv4 and IPv6 dual stack management
- Switch Management Interfaces
  - Telnet Command Line Interface

### Built-in Unique PoE Functions for Powered Devices Management

As it is the managed PoE switch for surveillance, wireless and VoIP networks, the WGS-5225-8UP2SV features the following special PoE management functions:

- PD alive check
- Scheduled power recycling
- PoE schedule
- PoE usage monitoring

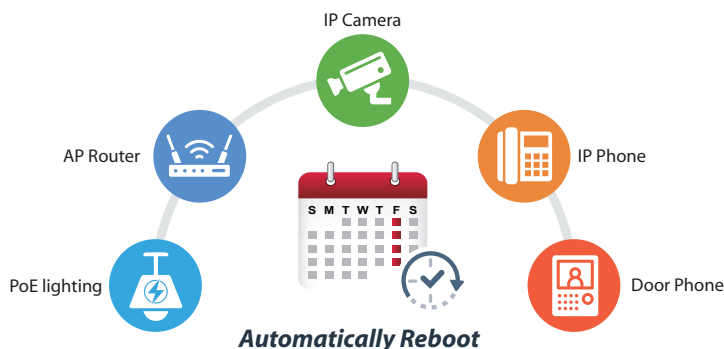
### Intelligent Powered Device Alive Check

The WGS-5225-8UP2SV can be configured to monitor connected PD status in real time via ping action. Once the PD stops working and responding, the WGS-5225-8UP2SV will resume the PoE port power and bring the PD back to work. It will greatly enhance the network reliability through the PoE port resetting the PD's power source and reducing administrator management burden.



### Scheduled Power Recycling

The WGS-5225-8UP2SV 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

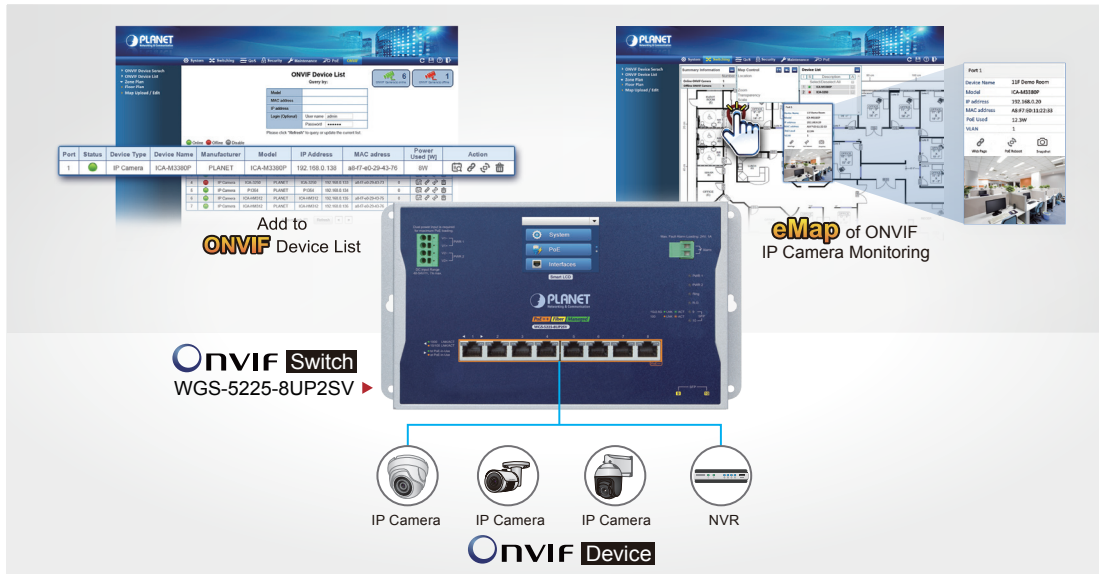
Under the trend of energy saving worldwide and contributing to environmental protection, the WGS-5225-8UP2SV can effectively control the power supply besides its capability of giving high watts power. The "PoE schedule" function helps you to enable or disable PoE power feeding for each PoE port during specified time intervals and it is a powerful function to help SMBs or enterprises save power and budget. It also increases security by powering off PDs that should not be in use during non-business hours.

- Web switch management
- SNMP v1, v2c, and v3 switch management
- SSHv2 and TLSv1.2 secure access
- SNMP Management
  - Four RMON groups (history, statistics, alarms, and events)
  - SNMP trap for interface Link Up and Link Down notification
- IPv6 IP address/NTP/DNS management
- Built-in Trivial File Transfer Protocol (TFTP) client
- BOOTP and DHCP for IP address assignment
- System Maintenance
  - Firmware upload/download via HTTP/TFTP
  - Reset button for system reboot or reset to factory default
  - Dual Images
- DHCP Relay and DHCP Option 82
- DHCP Server
- User Privilege levels control
- Network Time Protocol (NTP)
- Network Diagnostic
  - ICMPv6/ICMPv4 Remote Ping
  - Cable diagnostic technology provides the mechanism to detect and report potential cabling issues
  - SFP-DDM (Digital Diagnostic Monitor)
- SMTP, Syslog and SNMP trap remote alarm
- System Log
- PLANET UNI-NMS (Universal Network Management) and Smart Discovery Utility for deployment management
- Provides ONVIF for co-operating with PLANET video IP surveillances



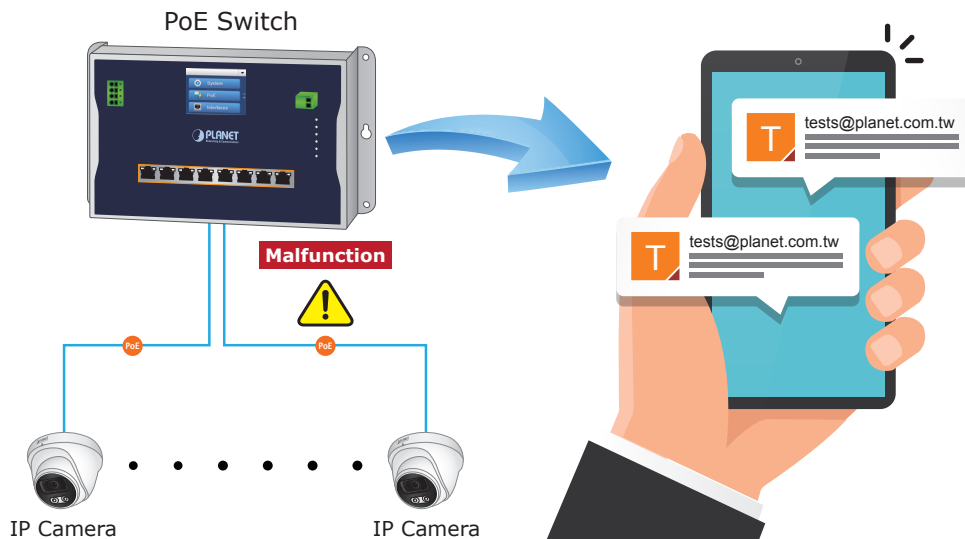
**Convenient and Smart ONVIF Devices with Detection Feature**

PLANET has newly developed an awesome feature -- ONVIF Support -- which is specifically designed for co-operating with video IP surveillances. From the WGS-5225-8UP2SV'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.



**SMTP/SNMP Trap Event Alert**

The WGS-5225-8UP2SV 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.



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

To help customers stay on top of their businesses, the WGS-5225-8UP2SV not only provides ultra high transmission performance and excellent Layer 2 technologies, but also IPv4/IPv6 software VLAN routing feature which allows to cross over 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 WGS-5225-8UP2SV 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 WGS-5225-8UP2SV provides 802.1Q tagged VLAN, and the VLAN groups allowed will be maximally up to 4K. Via aggregation of supporting ports, the WGS-5225-8UP2SV allows the operation of a high-speed trunk combining multiple ports. It enables a maximum of up to 2 trunk groups with 2 ports per trunk group, and supports fail-over as well.

### Network with Cybersecurity Helps Minimize Security Risks

The WGS-5225-8UP2SV comes with enhanced cybersecurity to fend off cyberthreats and cyberattacks. It supports SSHv2 and TLSv1.2 protocols to provide strong protection against advanced threats. Served as a key point to transmit data to customer's critical equipment in a business network, the cybersecurity feature of the WGS-5225-8UP2SV protects the switch management and enhances the security of the mission-critical network without any extra deployment cost and effort.

### Efficient Management

For efficient management, the WGS-5225-8UP2SV is equipped with Command line, Web and SNMP management interfaces.

- With the built-in **Web-based** management interface, the WGS-5225-8UP2SV offers an easy-to-use, platform-independent management and configuration facility.
- For **text-based** management, it can be accessed via Telnet and SSHv2 protocol.
- For standard-based monitor and management software, it offers SNMPv3 connection which encrypts the packet content at each session for secure remote management.



### Powerful Security from Layer 2 to Layer 4

The WGS-5225-8UP2SV 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.

### Advanced IP Network Protection

The WGS-5225-8UP2SV also provides **DHCP Snooping**, **IP Source Guard** and **Dynamic ARP Inspection** functions to prevent IP snooping from attack and discard ARP packets with invalid MAC address. The network administrators can now construct highly-secure corporate networks with considerably less time and effort than before.

### Modbus TCP provides Flexible Network Connectivity for Factory Automation

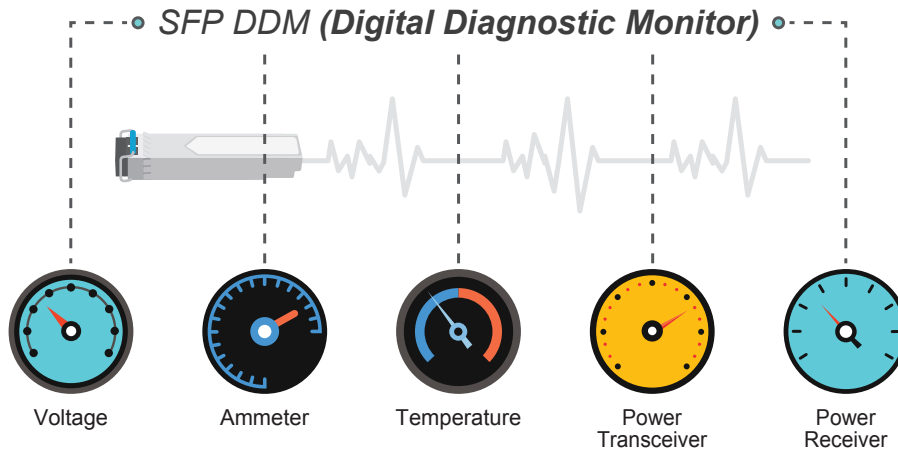
With the supported **Modbus TCP/IP** protocol, the WGS-5225-8UP2SV can easily integrate with **SCADA** systems, **HMI** systems and other data acquisition systems in factory floors. It enables administrators to remotely monitor the industrial Ethernet switch's operating information, port information and communication status, thus easily achieving enhanced monitoring and maintenance of the entire factory.

### Flexibility and Extension Solution

The additional two SFP slots built in the WGS-5225-8UP2SV support multi-speed, **100BASE-FX**, **1000BASE-SX/LX** and **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 (multi-mode fiber) to 20/40/80/120 kilometers (single-mode fiber or WDM fiber). They are well suited for applications within the enterprise data centers and distributions.

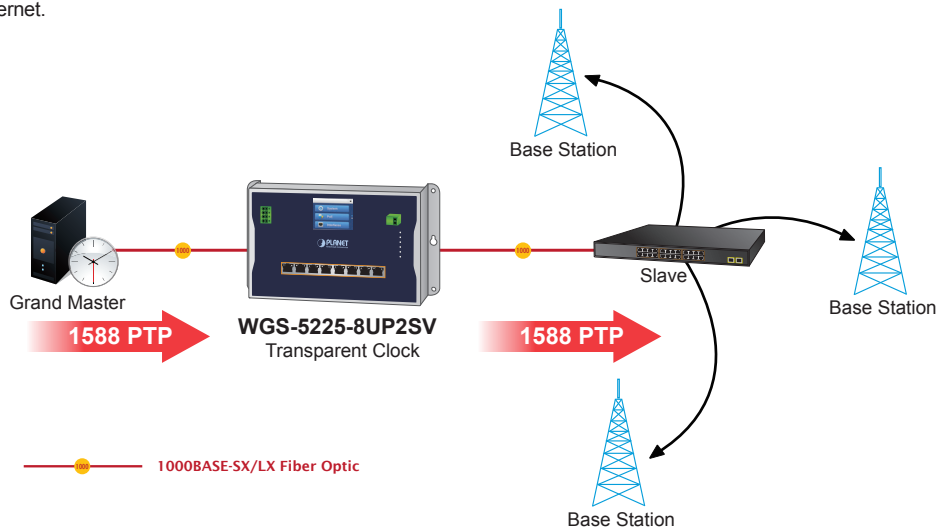
**Intelligent SFP Diagnosis Mechanism**

The WGS-5225-8UP2SV 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.



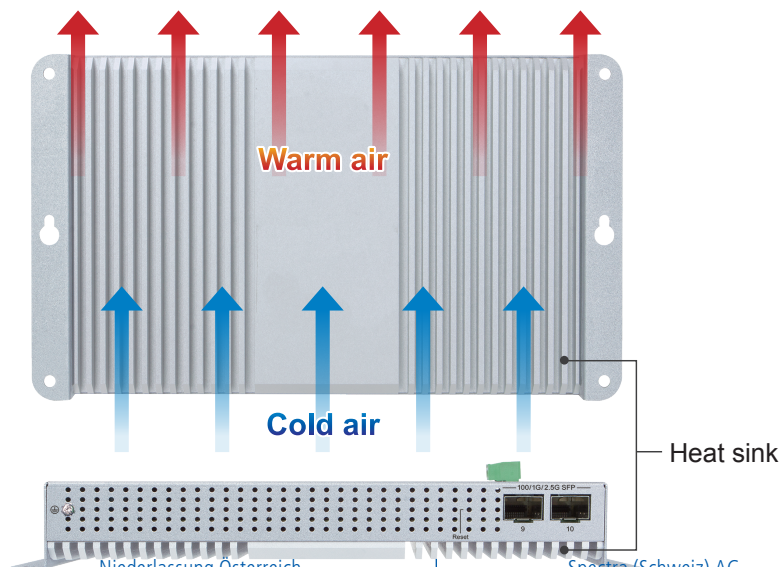
**1588 Time Protocol for Industrial Computing Networks**

The WGS-5225-8UP2SV is ideal for telecom and Carrier Ethernet applications, supporting MEF service delivery and timing over packet solutions for IEEE 1588 and synchronous Ethernet.



**A One-piece Aluminum Enclosure Gives Protection and Heat Dissipation**

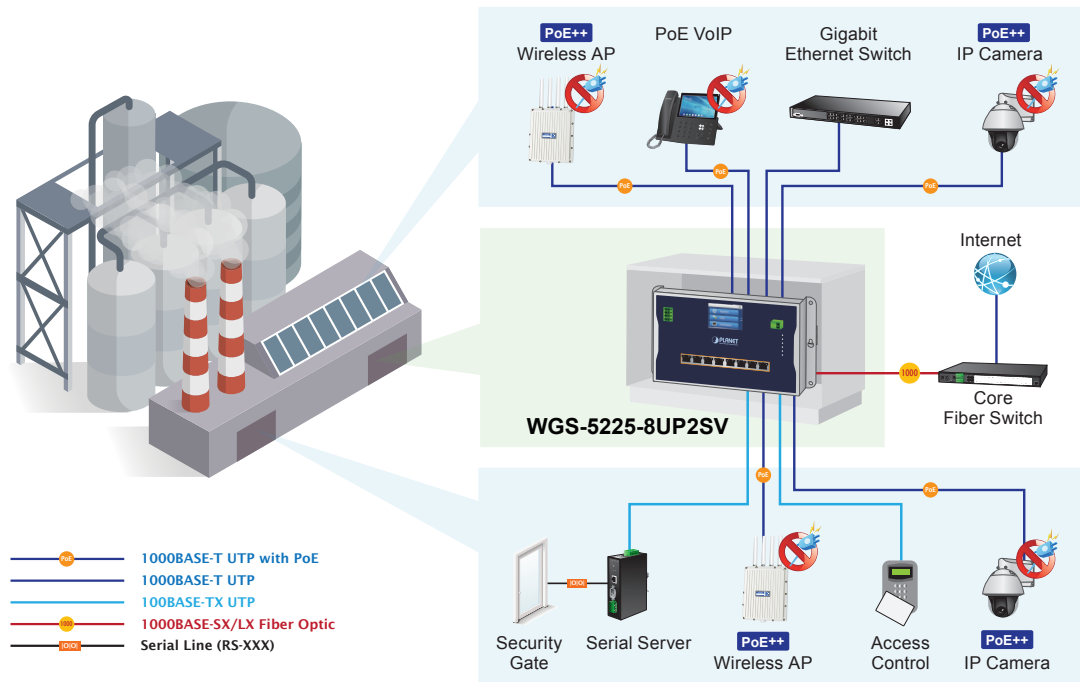
The WGS-5225-8UP2SV comes with an unbody aluminum enclosure that, like a heat sink, has the shape of a fin profile on the rear side of the switch, thus dissipating heat very quickly, especially in the operating temperature of 70 degrees C.



## Applications

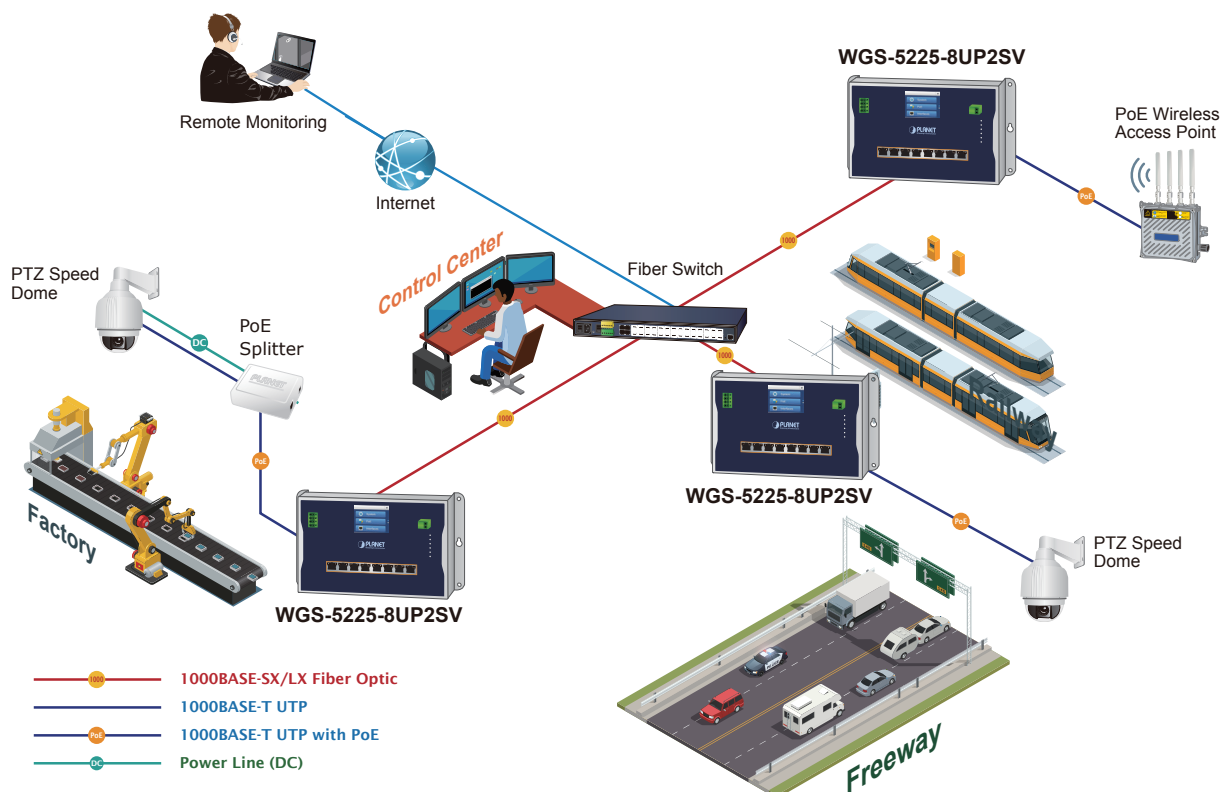
### Security Building Automation Switch

Suitable for buildings where security is strictly to be enforced, the WGS-5225-8UP2SV offers a comprehensive Layer 2 to Layer 4 Access Control List (ACL). The switch can restrict network access by denying packets based on source and destination IP address, TCP/UDP ports or defined typical network applications. With the WGS-5225-8UP2SV, a tightly-controlled network can be easily had in no time.



### Different Networks Managed by One Control Center

Providing up to 8 PoE++, in-line power interfaces, the WGS-5225-8UP2SV can centrally manage power supplying to an industrial network system where IP phones, IP cameras, wireless APs and more are built. 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 WGS-5225-8UP2SV makes the installation of IP cameras and wireless APs easier and more efficient.



## Specifications

Product	WGS-5225-8UP2SV
<b>Hardware Specifications</b>	
Copper Ports	8 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports
SFP Slots	2 100/1000/2500BASE-X SFP interfaces Compatible with 100BASE-FX, 1000BASE-SX/LX/BX and 2500BASE-X SFP transceivers
PoE Injector Port	8 ports with 802.3bt PoE++ injector function with Port-1 to Port-8
RAM	128MBytes
Flash Memory	64MBytes
Reset Button	< 5 sec: System reboot > 5 sec: Factory Default
Connector	4-pin terminal block for power input - Pin 1/2 for Power 1 (Pin 1: V+ / Pin 2: V-) - Pin 3/4 for Power 2 (Pin 3: V+ / Pin 4: V-) 2-pin terminal block for event alarm
Alarm	One relay output for power failure. Alarm Relay current carry ability: 1A @ 24V DC
Enclosure	IP30 aluminum case
Installation	Wall-mount
Dimensions (W x D x H)	245 x 140 x 36 mm
Weight	1299g
Power Requirements	Dual 48~54V DC (>52V DC for PoE++ and PoE+ output recommended)
Power Consumption	Max. 7.2 watts/24.7BTU (Power on without any connection) Max. 251 watts/861.2BTU (Full loading with PoE function)
ESD Protection	6KV DC
LED Indicator	System: PWR 1(Green) PWR 2 (Green) Ring (Green) Ring Owner (Green) Per 10/100/1000T RJ45 PoE++ Ports: 802.3bt PoE-in-Use (Green) 802.3af/at PoE-in-Use (Amber) 1000 LNK/ACT (Green) 10/100 LNK/ACT (Amber) Per SFP Interface: 1000/2500 LNK/ACT (Green) 100 LNK/ACT (Amber)
<b>Switching Specifications</b>	
Switch Architecture	Store-and-Forward
Switch Fabric	26Gbps/non-blocking
Throughput (packet per second)	19.345Mpps@ 64 bytes 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
<b>Power Over Ethernet</b>	
PoE Standard	IEEE 802.3bt PoE++ Type-4 PSE Backward compatible with 802.3at PoE+ PSE
PoE Power Supply Type	<ul style="list-style-type: none"> <li>■ 802.3bt</li> <li>■ UPOE/POH</li> <li>■ End-span</li> <li>■ Mid-span</li> <li>■ Force</li> </ul>
PoE Power Output	802.3bt PoE++ - Per port 52V~56V DC (depending on the power supply), max. 90 watts UPoE(PoH) - Per port 52V~56V DC (depending on the power supply), max. 95 watts IEEE 802.3at Standard - Per port 52V~56V DC (depending on the power supply), max. 36 watts Force - Per port 52V~56V DC (depending on the power supply), max. 60 watts

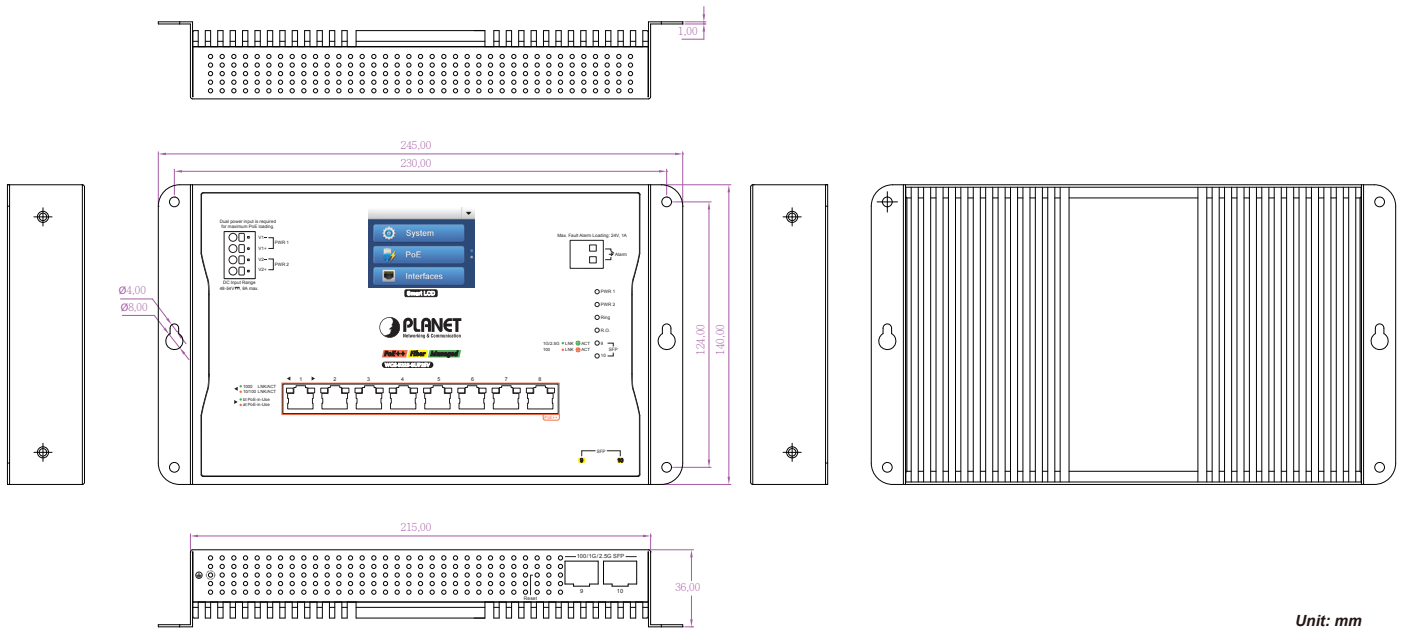


Power Pin Assignment	End-span: 1/2 (-), 3/6 (+) Mid-span: 4/5 (+), 7/8 (-) 802.3bt/UPoE: 1/2 (-), 3/6 (+), 4/5 (+), 7/8 (-)
PoE Power Budget	48V Power input - 125W maximum (depending on power input) 52~54V Power input - Single power input: 360W maximum (depending on power input) - Dual power input: 720W maximum (depending on power input) * Dual power input must be the same as DC voltage, like dual 54V
Max. number of Class 3 PDs	8
Max. number of Class 4 PDs	8
Max. number of Class 8 PDs	8
<b>PoE Management Functions</b>	
Active PoE device alive detects	Yes
PoE Power Recycle	Yes, daily or predefined schedule
PoE Schedule	4 schedule profiles
PoE Extend Mode	Yes, max. 160 to 200 meters
PoE System Management	System PoE Admin control Total PoE power budget control Auto power input and PoE budget control PoE Legacy mode Over-temperature threshold alarm PoE usage threshold alarm
PoE Port Management	Port Enable/Disable/Schedule PoE mode control - 802.3bt - UPoE - 802.3at End-span - 802.3at Mid-span - Force mode - Port Priority
<b>Layer 3 Functions</b>	
IP Interfaces	Max. 8 VLAN interfaces
Routing Table	Max. 32 routing entries
Routing Protocols	Ipv4 software static routing Ipv6 software static routing
<b>Layer 2 Function</b>	
Port Configuration	Port disable/enable Auto-negotiation 10/100/1000Mbps full and half duplex mode selection Flow control disable/enable Port link capability control
Port Status	Display each port's speed duplex mode, link status, flow control status, auto negotiation status, trunk status
Port Mirroring	TX/RX/both Many-to-1 monitor
VLAN	IEEE 802.1Q tag-based VLAN IEEE 802.1ad Q-in-Q tunneling Private VLAN Edge (PVE) MAC-based VLAN Protocol-based VLAN Voice VLAN MVR (Multicast VLAN Registration) GVRP Up to 4K VLAN groups, out of 4094 VLAN IDs
Link Aggregation	IEEE 802.3ad LACP/static trunk Supports 2 trunk groups with 2 ports per trunk group
Spanning Tree Protocol	IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.1s Multiple Spanning Tree Protocol
IGMP Snooping	Ipv4 IGMP (v1/v2 /v3) Snooping Ipv4 IGMP Querier mode support Up to 255 multicast Groups

MLD Snooping	Ipv6 MLD (v1/v2) Snooping Ipv6 MLD Querier mode support Up to 255 multicast Groups
Bandwidth Control	Per port bandwidth control Ingress: 500Kb~1000Mbps Egress: 500Kb~1000Mbps
RING	Supports ERPS, and complies with ITU-T G.8032 Recovery time < 10ms
Synchronization	IEEE 1588v2 PTP(Precision Time Protocol) - Peer-to-peer transparent clock - End-to-end transparent clock
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
<b>Security Functions</b>	
Access Control List	IP-based ACL/MAC-based ACL ACL based on: - MAC Address - IP Address - Ethertype - Protocol Type - VLAN ID - DSCP - 802.1p Priority Up to 256 entries
Security	Port security IP source guard Dynamic ARP inspection Command line authority control based on user level
AAA	RADIUS client TACACS+ client
Network Access Control	IEEE 802.1x port-based network access control MAC-based authentication Local/RADIUS authentication
<b>Management Functions</b>	
Basic Management Interfaces	Telnet; Web browser; SNMP v1, v2c
Secure Management Interfaces	SSHv2, TLS v1.2, SNMPv3
System Management	Firmware upgrade by HTTP protocol through Ethernet network Configuration upload/download through HTTP LLDP protocol NTP PLANET Smart Discovery Utility
Event Management	Remote Syslog System log SMTP
ONVIF	ONVIF device discovery ONVIF device monitoring Floor Map

SNMP MIBs	RFC 1213 MIB-II IF-MIB RFC 1643 Ethernet MIB RFC 2863 Interface MIB RFC 2665 Ether-Like MIB RFC 2819 RMON MIB (Groups 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
<b>Standards Conformance</b>	
Regulatory Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32 (free fall) IEC60068-2-27 (shock) IEC60068-2-6 (vibration)
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3z Gigabit SX/LX IEEE 802.3ab Gigabit 1000T 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 802.3ah OAM IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet Plus IEEE 802.3bt Power over Ethernet Plus Plus RFC 768 UDP RFC 793 TFTP RFC 791 IP RFC 792 ICMP RFC 2068 HTTP RFC 1112 IGMP v1 RFC 2236 IGMP v2 RFC 3367 IGMP version 3 RFC 2710 MLD version 1 RFC 3810 MLD version 2 ITU-T G.8032 Ethernet Ring Protection Switching
<b>Environment</b>	
Operating Temperature	-20 ~ 70 degrees C
Storage Temperature	-40 ~ 85 degrees C
Humidity	5 ~ 95% (non-condensing)

## Dimensions



Unit: mm

## Ordering Information

WGS-5225-8UP2SV	Art. No. 16111	Industrial L2+ 8-Port 10/100/1000T 802.3bt PoE + 2-Port 100/1000X SFP Wall-mount Managed Switch with LCD Touch Screen
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## Related Product

WGS-5225-8P2SV	Art. No. 16112	Industrial L2+ 8-Port 10/100/1000T 802.3at PoE + 2-Port 100/1000X SFP Wall-mount Managed Switch with LCD Touch Screen
WGS-5225-8P2S	Art. No. 16113	Industrial L2+ 8-Port 10/100/1000T 802.3at PoE + 2-Port 100/1000X SFP Wall-mount Managed Switch
WGS-5225-8T2SV	Art. No. 16114	Industrial L2+ 8-Port 10/100/1000T + 2-Port 100/1000X SFP Wall-mount Managed Switch with LCD Touch Screen

## Related Power Supply

PWR-480-48	48V, 480W Din-Rail Power Supply (NDR-480-48, adjustable 48-56V DC Output)
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## Available 1000Mbps Modules

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-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	DDM	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MGB-TSA	YES	1000	WDM(LC)	Single Mode	2km	1310nm	1550nm	-40 ~ 75 degrees C
MGB-TSB		1000	WDM(LC)	Single Mode	2km	1550nm	1310nm	-40 ~ 75 degrees C
MGB-TLA10	YES	1000	WDM(LC)	Single Mode	10km	1310nm	1550nm	-40 ~ 75 degrees C
MGB-TLB10		1000	WDM(LC)	Single Mode	10km	1550nm	1310nm	-40 ~ 75 degrees C
MGB-TLA20	YES	1000	WDM(LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75 degrees C
MGB-TLB20		1000	WDM(LC)	Single Mode	20km	1550nm	1310nm	-40 ~ 75 degrees C
MGB-TLA40	YES	1000	WDM(LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 75 degrees C
MGB-TLB40		1000	WDM(LC)	Single Mode	40km	1550nm	1310nm	-40 ~ 75 degrees C
MGB-TLA80	YES	1000	WDM(LC)	Single Mode	80km	1490nm	1550nm	-40 ~ 75 degrees C
MGB-TLB80		1000	WDM(LC)	Single Mode	80km	1550nm	1490nm	-40 ~ 75 degrees C
MGB-TLA120	YES	1000	WDM(LC)	Single Mode	120km	1490nm	1550nm	-40 ~ 75 degrees C
MGB-TLB120		1000	WDM(LC)	Single Mode	120km	1550nm	1490nm	-40 ~ 75 degrees C

## Available 2500Mbps Modules

## 2.5 Gigabit Ethernet Transceiver (2.5GBASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MGB-2GTSR	2.5G	LC	Multi Mode	300m	850nm	-40 ~ 75 degrees C
MGB-2GLR2	2.5G	LC	Single Mode	2km	1310nm	-40 ~ 75 degrees C
MGB-2GLR20	2.5G	LC	Single Mode	20km	1310nm,	-40 ~ 75 degrees C

## 2.5G Gigabit Ethernet Transceiver (2.5GBASE-BX, Single Fiber Bi-directional SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MGB-2GTLA20	2.5G	WDM(LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75 degrees C
MGB-2GTBL20	2.5G	WDM(LC)	Single Mode	20km	1550nm	1310nm	-40 ~ 75 degrees C

## Available 100Mbps Modules

## Fast Ethernet Transceiver (100BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MFB-TFX	100	LC	Multi Mode	2km	1310nm	-40 ~ 75 degrees C
MFB-TF20	100	LC	Single Mode	20km	1310nm	-40 ~ 75 degrees C

## Fast Ethernet Transceiver (100BASE-BX, Single Fiber Bi-directional SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MFB-TSA	100	WDM(LC)	Multi Mode	2km	1310nm	1550nm	-40 ~ 75 degrees C
MFB-TSB	100	WDM(LC)	Multi Mode	2km	1550nm	1310nm	-40 ~ 75 degrees C
MFB-TFA20	100	WDM(LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75 degrees C
MFB-TFB20	100	WDM(LC)	Single Mode	20km	1550nm	1310nm	-40 ~ 75 degrees C
MFB-TFA40	100	WDM(LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 75 degrees C
MFB-TFB40	100	WDM(LC)	Single Mode	40km	1550nm	1310nm	-40 ~ 75 degrees C
MGB-TL80	YES	1000	LC	Single Mode	80km	1550nm	-40 ~ 75 degrees C