Industrial 4-Port 10/100/1000T 802.3at PoE + 4-Port 10/100/1000T + 2-Port 100/1000X SFP Managed Switch (-40~75 degrees C)

Ideal, Cost-effective, Manageable PoE Solution for Hardened Environment

Designed to be installed in heavy industrial demanding environments, the IGS-4215-4P4T2S is the new generation of PLANET Industrial-grade, DIN-rail type L2/L4 Managed Gigabit PoE+ Switch featuring **PLANET intelligent PoE** functions to improve the availability of critical business applications. It provides **IPv6/IPv4 dual stack management** and built-in **L2/L4 Gigabit switching engine** along with **4 10/100/1000BASE-T** ports featuring **30-watt 802.3at PoE+**, **4 additional Gigabit copper ports** and another **2 extra 100/1000BASE-X SFP fiber slots** for data and video uplink. The IGS-4215-4P4T2S is able to operate reliably, stably and quietly in any environment without affecting its performance. It comes with a total power budget of up to **144 watts** for different kinds of PoE applications and operating temperature ranging from **-40 to 75 degrees C** in a rugged IP30 metal housing.

Cybersecurity Network Solution to Minimize Security Risks

The IGS-4215-4P4T2S supports SSHv2 and TLS protocols to provide strong protection against advanced threats. It includes a range of cybersecurity features such as DHCP Snooping, IP Source Guard, dynamic ARP Inspection Protection, 802.1x port-based network access control, RADIUS and TACACS+ user accounts management, SNMPv3 authentication, and so on to complement it as an all-security solution.

Physical Port

- **8-port 10/100/1000BASE-T** Gigabit RJ45 copper with 4-port **IEEE 802.3at/af** PoE Injector (Port-1 to Port-4)
- **2 100/1000BASE-X mini-GBIC/SFP** slots, SFP type auto detection
- RJ45 console interface for switch basic management and setup

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/802.3at devices powered
- Supports PoE power up to 36 watts for each PoE port
- Auto detects powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 100 meters in standard mode and 250m in extend mode
- PoE management
  - Total PoE power budget control
  - Per port PoE function enable/disable
  - PoE port power feeding priority
  - Per PoE port power limitation
  - PD classification detection
  - PD alive-check
  - PoE schedule

Industrial Case & Installation

- IP30 aluminum case
- DIN-rail and wall-mount design
- Supports -40 to 75 degrees C operating temperature
- Supports ESD 6KV DC Ethernet protection
- Redundant power design
  - 48V~56V DC wide power input with reverse polarity protection
- Provides one relay output for power failure

Switching

- Hardware based 10/100Mbps (half/full duplex), 1000Mbps (full duplex), auto-negotiation and auto MDI/MDI-X

Highest Density DIN-rail PoE+ Switch with Upgraded Cybersecurity
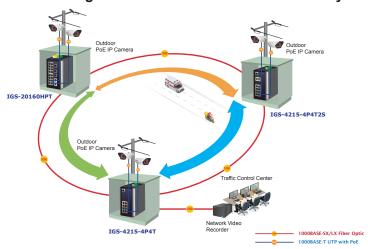*Strengthen SSH/TLS Encryption*

Redundant Ring, Fast Recovery for Critical Network Applications

The IGS-4215-4P4T2S 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) into customer's network to enhance system reliability and uptime in various environments.

ERPS Ring for Video Transmission Redundancy

Built-in Unique PoE Functions for Powered Devices Management

As it is the managed PoE switch for surveillance, wireless and VoIP networks, the IGS-4215-4P4T2S features the following special PoE management functions:

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

Intelligent Powered Device Alive Check

The IGS-4215-4P4T2S can be configured to monitor connected PD (Powered Device) status in real time via ping action. Once the PD stops working and responding, the IGS-4215-4P4T2S 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.

- 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
- 8K MAC address table size
- 10K jumbo frame
- Automatic address learning and address aging
- Supports CSMA/CD protocol

Layer 2 Features

- Supports VLAN
  - IEEE 802.1Q tagged **VLAN**
  - Provider bridging (VLAN Q-in-Q, IEEE 802.1ad) support
  - Protocol VLAN
  - Voice VLAN
  - Private VLAN (Protected port)
  - Management VLAN
  - GVRP
- Supports **Spanning Tree Protocol**
  - STP (Spanning Tree Protocol)
  - RSTP (Rapid Spanning Tree Protocol)
  - MSTP (Multiple Spanning Tree Protocol)
  - STP BPDU Guard, BPDU Filtering and BPDU Forwarding
- Supports **Link Aggregation**
  - IEEE 802.3ad Link Aggregation Control Protocol (LACP)
  - Cisco ether-channel (static trunk)
  - Maximum 4 trunk groups, up to 4 ports per trunk group
- Provides port mirror (many-to-1)
- Loop protection to avoid broadcast loops
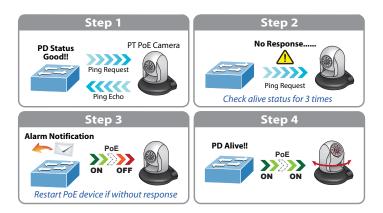- Supports ERPS (Ethernet Ring Protection Switching)

Quality of Service

- Ingress/Egress Rate Limit per port bandwidth control
- Traffic classification
  - IEEE 802.1p CoS
  - TOS/DSCP/IP precedence of IPv4/IPv6 packets
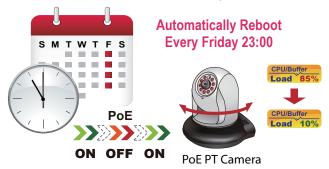 - Strict priority and Weighted Round Robin (WRR) CoS policies

Multicast

- Supports IPv4 IGMP snooping v2, v3
- Supports IPv6 MLD snooping v1, v2
- IGMP querier mode support
- IGMP snooping port filtering
- MLD snooping port filtering

Step 1	Step 2
PD Status Good!! PT PoE Camera Ping Request Ping Echo	**No Response......** Ping Request *Check alive status for 3 times*

Step 3	Step 4
Alarm Notification PoE ON OFF *Restart PoE device if without response*	**PD Alive!!** PoE ON ON

Scheduled Power Recycling

The IGS-4215-4P4T2S 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.

Automatically Reboot Every Friday 23:00

S M T W T F S

CPU/Buffer Load 85%

PoE

ON OFF ON

CPU/Buffer Load 10%

PoE PT Camera

PoE Schedule for Energy Saving

Under the trend of energy saving worldwide and contributing to environmental protection, the IGS-4215-4P4T2S 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.

PoE Schedule

08:00~17:00

ON 6 Watts ON 6 Watts ON 12 Watts ON 12 Watts

Total Consumption of 36 watts/hr

17:00~08:00

OFF 6 Watts OFF 6 Watts OFF 12 Watts ON 12 Watts

Save 24 watts/hr during off-business hours
∗ Total Saved = 10800watts/month

PoE Usage Monitoring and Intelligent LED Indicator for Real-time PoE Usage

Via the power usage chart in the web management interface, the IGS-4215-4P4T2S enables the administrator to monitor the status of the power usage of the connected PDs in real time. Thus, it greatly enhances the management efficiency of the facilities. Moreover, the IGS-4215-4P4T2S helps users to monitor the current
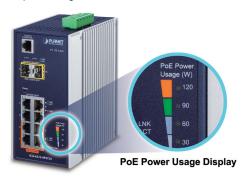
Security

- Storm Control support
  - Broadcast/unknown unicast/unknown multicast
- Authentication
  - IEEE 802.1X port-based network access authentication
  - Built-in RADIUS client to cooperate with the RADIUS servers
  - DHCP Option 82
  - RADIUS/TACACS+ authentication
- Access Control List
  - IPv4/IPv6 IP-based ACL
  - IPv4/IPv6 IP-based ACE
  - MAC-based ACL
  - MAC-based ACE
- MAC Security
  - Static MAC
  - MAC filtering
- Port security for source MAC address entries filtering
- DHCP snooping to filter distrusted DHCP messages
- Dynamic ARP inspection discards ARP packets with invalid MAC address to IP address binding
- IP source guard prevents IP spoofing attacks
- DoS attack prevention

Management

- IPv4 and IPv6 dual stack management
- Switch Management Interface
  - Web switch management
  - Console/Telnet Command Line Interface
  - SNMP v1 and v2c switch management
  - SSHv2, TLSv1.2 and SNMPv3 secure access
- SNMP Management
  - SNMP trap for interface Link Up and Link Down notification
  - Four RMON groups (history, statistics, alarms and events)
- User privilege levels control
- Built-in Trivial File Transfer Protocol (TFTP) client
- Static and DHCP for IP address assignment
- System Maintenance
  - Firmware upload/download via HTTP/TFTP
  - Configuration upload/download through HTTP/TFTP
  - Dual images
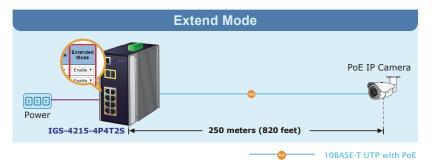 - Hardware reset button for system reboot or reset to factory default

status of PoE power usage easily and efficiently via its advanced LED indication. Called "PoE Power Usage", the front panel of the IGS-4215-4P4T2S has four LED indicators of different power usages.

- SNTP Network Time Protocol
- Network Diagnostic
  - Cable diagnostics
  - ICMPv6/ICMPv4 Remote Ping
  - SFP-DDM (Digital Diagnostic Monitor)
- Link Layer Discovery Protocol (LLDP) Protocol and LLDP-MED
- Event message logging to remote syslog server
- PLANET Smart Discovery Utility for deployment management
- PLANET NMS system and CloudViewer for deployment management

PoE Power Usage Display

802.3at PoE+ Power and Ethernet Data Transmission Distance Extension

In the "Extend" operation mode, the IGS-4215-4P4T2S 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 IGS-4215-4P4T2S provides an additional solution for 802.3at/af PoE distance extension, thus saving the cost of Ethernet cable installation.
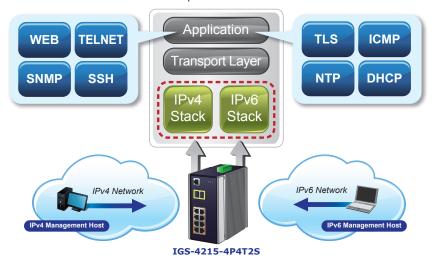

Environmentally Hardened Design

With the IP30 aluminum industrial case, the IGS-4215-4P4T2S 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 conditioner. Being able to operate under the temperature range from -40 to 75 degrees C, the IGS-4215-4P4T2S can be placed in almost any difficult environment.

Robust Protection

The IGS-4215-4P4T2S provides contact discharge of ±6KV DC and air discharge of ±8KV DC for Ethernet ESD protection. It 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.

IPv6/IPv4 Dual Stack Management

Supporting both IPv6 and IPv4 protocols, the IGS-4215-4P4T2S helps the system integrators to step in the IPv6 era with the lowest investment as its network facilities need not be replaced or overhauled if the IPv6 network is set up.

Robust Layer 2 Features

The IGS-4215-4P4T2S can be programmed for advanced switch management functions such as dynamic port link aggregation, 802.1Q VLAN, **Q-in-Q VLAN, Multiple Spanning Tree Protocol (MSTP)**, Loop and **BPDU Guard**, **IGMP Snooping**, and **MLD Snooping**. Via the link aggregation, the IGS-4215-4P4T2S allows the operation of a high-speed trunk to combine with multiple ports such as a 16Gbps fat pipe, and supports fail-over as well. Also, the **Link Layer Discovery Protocol (LLDP)** is the Layer 2 protocol included to help discover basic information about neighboring devices on the local broadcast domain.

L2/L4
Managed Switch

L2/L4
Managed Switch

Efficient Traffic Control

The IGS-4215-4P4T2S is loaded with robust QoS features and powerful traffic management to enhance services to business-class data, voice, and video solutions. The functionality includes broadcast/multicast/unicast **storm control**, per port bandwidth control, 802.1p/CoS/IP DSCP QoS priority and remarking. It guarantees the best performance in VoIP and video stream transmission, and empowers the enterprises to take full advantage of the limited network resources.

Powerful Security

PLANET IGS-4215-4P4T2S offers comprehensive **IPv4/IPv6** 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** user and device authentication, which can be deployed with RADIUS to ensure the port level security and block illegal users. With the **protected port** function, communication between edge ports can be prevented to guarantee user privacy. Furthermore, **Port security** function allows to limit the number of network devices on a given port. The network administrators can now construct highly-secure corporate networks with considerably less time and effort than before.

Friendly and Secure Management

For efficient management, the IGS-4215-4P4T2S is equipped with Command line, Web and SNMP management interfaces.

- With the built-in **Web-based** management interface, the IGS-4215-4P4T2S offers an easy-to-use, platform-independent management and configuration facility.
- For **text-based** management, it can be accessed via Telnet and the console port.
- By supporting the standard SNMP protocol, the switch can be managed via any SNMP-based management software.

Moreover, the IGS-4215-4P4T2S offers secure remote management by supporting **SSHv2**, **TLSv1.2** and **SNMPv3** connections which encrypt the packet content at each session.
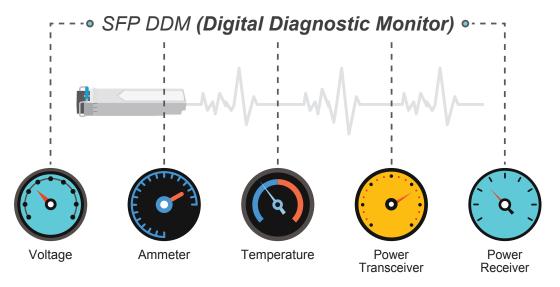

Flexibility and Long-distance Extension Solution

The two mini-GBIC slots built in the IGS-4215-4P4T2S support SFP auto-detection and dual speed as it features **100BASE-FX** and **1000BASE-SX/LX SFP** (Small Form-factor Pluggable) fiber transceivers to uplink to backbone switch and monitoring center in long distance. The distance can be extended from 550 meters to 2 kilometers (multi-mode fiber) and to 10/20/40/60/80/120 kilometers (single-mode fiber or WDM fiber). They are well suited for applications within the enterprise data centers and distributions.
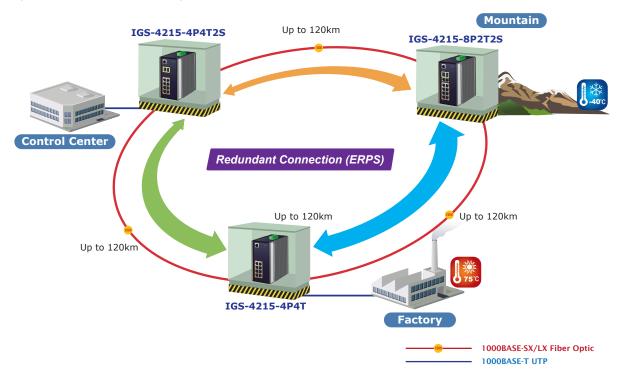
Intelligent SFP Diagnosis Mechanism

The IGS-4215-4P4T2S 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.

SFP DDM *(Digital Diagnostic Monitor)*

Voltage	Ammeter	Temperature	Power Transceiver	Power Receiver

Applications

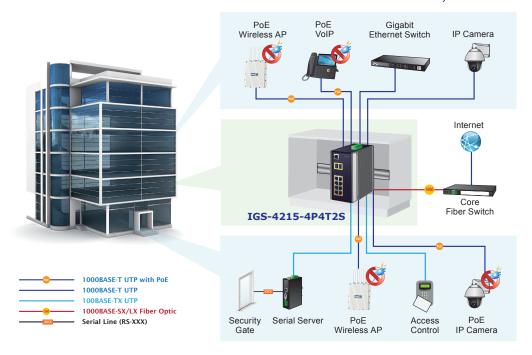*ITU-T G.8032 ERPS Makes Data Transmission Uninterrupted*

The IGS-4215-4P4T2S features strong rapid self-recovery capability to prevent interruptions and external intrusions. It incorporates **ITU-T G.8032 ERPS (Ethernet Ring Protection Switching)** technology into customer's automation network to enhance system reliability and uptime. Applying the IEEE 802.3at Power over Ethernet standard, the IGS-4215-4P4T2S can directly connect with any IEEE 802.3at end-nodes like PTZ (Pan, Tilt & Zoom) network cameras and speed dome cameras. The IGS-4215-4P4T2S can easily help system integrators with the available network infrastructure to build wireless AP, IP camera and VoIP systems where power can be centrally-controlled.

IGS-4215-4P4T2S
Up to 120km
Mountain
IGS-4215-8P2T2S
-40℃

Control Center

Redundant Connection (ERPS)

Up to 120km
Up to 120km
Up to 120km

IGS-4215-4P4T

Factory
75℃

1000BASE-SX/LX Fiber Optic
1000BASE-T UTP

Industrial-grade PoE Switch for Building Automation & Security

Suitable for buildings where security is strictly to be enforced, the IGS-4215-4P4T2S, with 4 PoE, in-line power interfaces, can easily build a power centrally controlled for 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 can be built. Without the power-socket limitation, the IGS-4215-4P4T2S makes the installation of IP cameras or wireless APs easier and more efficiently.

Perfect Integration Solution for IP PoE Camera and NVR System

The IGS-4215-4P4T2S provides 4 10/100/1000Mbps 802.3at PoE ports which can offer sufficient PoE power to 4 PoE IP cameras at the same time. In addition, with the 2 100/1000BASE-X SFP interfaces, the IGS-4215-4P4T2S can connect to a core fiber switch and send video streams to an NVR and monitoring center. Through the high-performance switch architecture, the IGS-4215-4P4T2S 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 both in the local LAN and the remote site via Internet. The IGS-4215-4P4T2S undoubtedly brings an ideal secure surveillance system at a lower total cost.

Extending Ethernet Distance

Specifications

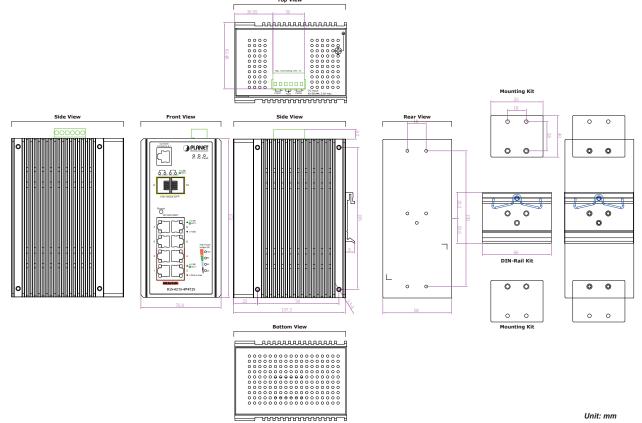| Product	IGS-4215-4P4T2S
Hardware Specifications	
Copper Ports	8 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports
SFP/mini-GBIC Slots	2 1000BASE-SX/LX/BX SFP interfaces (Port-9 and Port-10) Compatible with 100BASE-FX SFP
PoE Injector Port	4 ports with 802.3af/802.3at PoE injector function (Port-1 to Port-4)
Console	1 x RS232-to-RJ45 serial port (115200,8, N, 1)
Reset Button	< 5 sec: System reboot > 5 sec: Factory default
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	One relay output for power failure. Alarm relay current carry ability: 1A @ 24V AC
Power Requirements	48~56V DC, 3.5A (max.)
Power Consumption/ Dissipation	5.04 watts, 17.1BTU (Standby without PoE function) 8.96 watts, 30.5 BTU (Full loading without PoE function) 152.96 watts, 521.8 BTU (Full loading with PoE function)
Dimensions (W x D x H)	76 x 107 x 152 mm
Weight	1004g
Enclosure	IP30 aluminum case
Installation	DIN-rail kit and wall-mount ear
ESD Protection	6KV DC
LED	3 x LED for System and Power: ■ Green: DC Power 1 ■ Green: DC Power 2 ■ Green: Power Fault 2 x LED for PoE Copper Port (Port-1~Port-4): ■ Green: LNK/ACT ■ Orange: PoE-in-use 2 x LED for 10/100/1000T Copper Port (Port-5~Port-8): ■ Green: LNK/ACT ■ Orange: 1000Mbps 2 x LED for per mini-GBIC interface (Port-9 and Port-10) ■ Green: LNK/ACT ■ Orange: 1000Mbps 4 x LED for PoE Power Usage (W) ■ Orange: 30, 60, 90 and 120W
Switching	
Switch Architecture	Store-and-Forward
Switch Fabric	20Gbps/non-blocking
Switch Throughput@64 bytes	14.8Mpps @64 bytes
MAC Address Table	8K entries
Shared Data Buffer	4.1 megabits
Flow Control	IEEE 802.3x pause frame for full-duplex Back pressure for half-duplex
Jumbo Frame	10 Kbytes
Power over Ethernet	
PoE Standard	IEEE 802.3af/802.3at Power over Ethernet PSE
PoE Power Supply Type	End-span
PoE Power Output	IEEE 802.3af Standard - Per port 48V~56V DC (depending on the power supply), max. 15.4 watts IEEE 802.3at Standard - Per port 50V~56V DC (depending on the power supply), max. 36 watts
Power Pin Assignment	1/2(+), 3/6(-)
PoE Power Budget	144 watts (depending on power input)
Max. Number of Class 2 PDs	4
Max. Number of Class 3 PDs	4
Max. Number of Class 4 PDs	4
PoE Management Functions	
PoE Management	PD Alive Check Scheduled Power Recycling PoE Schedule PoE Usage Monitoring PoE Extension

Active PoE Device Live Detection	Yes
PoE Power Recyclinge	Yes, daily or predefined schedule
PoE Schedule	4 schedule profiles
PoE Extend Mode	Yes, max. up to 250 meters
Layer 2 Functions	
Port Mirroring	TX/RX/Both Many-to-1 monitor
VLAN	802.1Q tagged-based VLAN Up to 256 VLAN groups, out of 4094 VLAN IDs 802.1ad Q-in-Q tunneling (VLAN stacking) Voice VLAN Protocol VLAN Private VLAN (Protected port) GVRP Management VLAN
Link Aggregation	IEEE 802.3ad LACP and static trunk Supports 4 groups with 4 ports per trunk
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) STP BPDU Guard, BPDU Filtering and BPDU Forwarding
IGMP Snooping	IPv4 IGMP snooping v2, v3 IGMP querier Up to 256 multicast groups
MLD Snooping	IPv6 MLD snooping v2, v3, up to 256 multicast groups
Access Control List	IPv4/IPv6 IP-based ACL/MAC-based ACL IPv4/IPv6 IP-based ACE/MAC-based ACE

QoS	8 mapping IDs to 8 level priority queues
	  - Port number
	  - 802.1p priority
	  - DSCP/IP precedence of IPv4/IPv6 packets
	Traffic classification based, strict priority and WRR
	Ingress/Egress Rate Limit per port bandwidth control

Ring	Supports ERPS, and complies with ITU-T G.8032
Security Functions	
Access Control List	IPv4/IPv6 IP-based ACL/MAC-based ACL
Port Security	IEEE 802.1X – Port-based authentication Built-in RADIUS client to co-operate with RADIUS server RADIUS/TACACS+ user access authentication
MAC Security	IP-MAC port binding MAC filter Static MAC address
Enhanced Security	DHCP Snooping and DHCP Option82 STP BPDU guard, BPDU filtering and BPDU forwarding DoS attack prevention ARP inspection IP source guard
Management Functions	
Basic Management Interfaces	RS232 to RJ45 Console Web browser Telnet SNMP v1, v2c
Secure Management Interfaces	SSHv2, TLS v1.2, SNMPv3
System Management	Firmware upgrade by HTTP/TFTP protocol through Ethernet network Remote/Local Syslog System log LLDP protocol SNTP PLANET Smart Discovery Utility PLANET NMS System and CloudViewer

SNMP MIBs	RFC 1213 MIB-II
	RFC 1215 Generic Traps
	RFC 1493 Bridge MIB
	RFC 2674 Bridge MIB Extensions
	RFC 2737 Entity MIB v2
	RFC 2819 RMON (1, 2, 3, 9)
	RFC 2863 Interface Group MIB
	RFC 3635 Ethernet-like MIB
	Power over Ethernet MIB

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 10BASE-T
	IEEE 802.3u 100BASE-TX/100BASE-FX
	IEEE 802.3z Gigabit SX/LX
	IEEE 802.3ab Gigabit 1000BASE-T
	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 802.3af Power over Ethernet

Standards Compliance (right column):

IEEE 802.3at Power over Ethernet Plus
IEEE 802.3az for Energy-Efficient Ethernet
RFC 768 UDP
RFC 793 TFTP
RFC 791 IP
RFC 792 ICMP
RFC 2068 HTTP
RFC 1112 IGMP v1
RFC 2236 IGMP v2
RFC 3376 IGMP v3
RFC 2710 MLD v1
RFC 3810 MLD v2
ITU G.8032 ERPS Ring

Environment	
Operating Temperature	-40 ~ 75 degrees C
Storage Temperature	-40 ~ 85 degrees C
Humidity	5 ~ 95% (non-condensing)

Dimensions

Top View

Side View

Front View

Side View

Rear View

Bottom View

Mounting Kit

DIN-Rail Kit

Mounting Kit

IGS-4215-4P4T2S

Unit: mm

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Ordering Information

IGS-4215-4P4T2S	Industrial 4-Port 10/100/1000T 802.3at PoE + 4-Port 10/100/1000T + 2-Port 100/1000X SFP Managed Switch (-40~75 degrees C)

Related Products

IGS-4215-8P2T2S	Industrial 8-Port 10/100/1000T 802.3at PoE + 2-Port 10/100/1000T + 2-Port 100/1000X SFP Managed Switch (-40~75 degrees C)
IGS-4215-4P4T	Industrial 4-Port 10/100/1000T 802.3at PoE + 4-Port 10/100/1000T Managed Switch

Accessories

PWR-240-48	240W 48V DC Single Output Industrial DIN-rail Power Supply (-10 ~ 60 degrees C)
PWR-480-48	480W 48V DC Single Output Industrial DIN-rail Power Supply (-25 ~ 70 degrees C)

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-SX(V2)	YES	1000	LC	Multi Mode	550m	850nm	0 ~ 60 degrees C
MGB-SX2(V2)	YES	1000	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C
MGB-LX(V2)	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(V2)	YES	1000	LC	Single Mode	120km	1550nm	0 ~ 60 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.
MMGB-LA10(V2) MGB-LB10(V2)	YES	1000	WDM(LC)	Single Mode	10km	1310nm	1550nm	0 ~ 60 degrees C
		1000	WDM(LC)	Single Mode	10km	1550nm	1310nm	0 ~ 60 degrees C
MGB-LA20(V2) MGB-LB20(V2)	YES	1000	WDM(LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60 degrees C
		1000	WDM(LC)	Single Mode	20km	1550nm	1310nm	0 ~ 60 degrees C
MGB-LA40(V2) MGB-LB40(V2)	YES	1000	WDM(LC)	Single Mode	40km	1310nm	1550nm	0 ~ 60 degrees C
		1000	WDM(LC)	Single Mode	40km	1550nm	1310nm	0 ~ 60 degrees C
MGB-LA80 MGB-LB80	YES	1000	WDM(LC)	Single Mode	80km	1490nm	1550nm	0 ~ 60 degrees C
		1000	WDM(LC)	Single Mode	80km	1550nm	1490nm	0 ~ 60 degrees C

Available 100Mbps Modules

Fast Ethernet Transceiver (100BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.	Operating Temp.
MFB-FX	100	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C	0 ~ 60 degrees C
MFB-F20	100	LC	Single Mode	20km	1310nm	0 ~ 60 degrees C	0 ~ 60 degrees C
MFB-F40	100	LC	Single Mode	40km	1310nm	0 ~ 60 degrees C	0 ~ 60 degrees C
MFB-F60	100	LC	Single Mode	60km	1310nm	0 ~ 60 degrees C	0 ~ 60 degrees C
MFB-F120	100	LC	Single Mode	120km	1310nm	0 ~ 60 degrees C	0 ~ 60 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-FA20	100	WDM(LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60 degrees C
MFB-FB20	100	WDM(LC)	Single Mode	20km	1550nm	1310nm	0 ~ 60 degrees C

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