# Industrial L2/L4 Multi-port 802.3at PoE + 2-Port 100/1000X SFP Managed Ethernet Switch Series

## Architecture-optimized Full PoE+ Power Solution Ideal for Hardened Environment

Designed to be installed in heavy industrial demanding environments, PLANET's newly-launched IGS-4215 PoE series, an Industrial-grade, DIN-rail type L2/L4 Managed Gigabit PoE+ Switch, features **PLANET intelligent PoE** functions to improve the availability of critical business applications. It provides I**Pv6/IPv4 dual stack management** and built-in **L2/L4 Gigabit switching engine** along with **4** or **8** or **16 10/100/1000BASE-T** ports featuring **36-watt 802.3at PoE+**, **2 or 4 additional Gigabit copper ports** and another **2 extra 100/1000BASE-X SFP fiber slots** for data and video uplink. The IGS-4215 PoE series is able to operate reliably, stably and quietly in any hardened environment without affecting its performance. It comes with a total power budget of up to **320 watts** for different kinds of PoE applications and operating temperature ranging from **-40** to **75 degrees C** in a rugged IP30 metal housing.

| Models / Item | IGS-4215-4P4T | IGS-4215-4P4T2S | IGS-4215-8P2T2S | IGS-4215-16P2T2S |
|---|---|---|---|---|
| 10/100/1000BASE-T Copper | 8 | 8 | 10 | 18 |
| 100/1000BASE-X SFP | - | 2 | 2 | 2 |
| PoE Standard | IEEE 802.3at PoE+ | | | |
| PoE Ports | 4 | 4 | 8 | 16 |
| PoE Budget | 144 watts | 144 watts | 240 watts | 320 watts |
| Power Input | 48~54V DC x 2 | | | |

## Cybersecurity Network Solution to Minimize Security Risks

The IGS-4215 PoE series 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 over a long-distance fiber optic cable to customer's critical equipment in a business network, the cybersecurity feature of the IGS-4215 PoE series protects the switch management and enhances the security of the mission-critical network without any extra deployment cost and effort.

## Physical Port

- **4/8/16 10/100/1000BASE-T** Gigabit Ethernet RJ45 ports with **IEEE 802.3at/af PoE+** Injector function
- **4/2 10/100/1000BASE-T** Gigabit Ethernet RJ45 ports
- **Two 100/1000BASE-X SFP** slots for SFP type auto detection
- One RJ45 console interface for basic management and setup

## Power over Ethernet

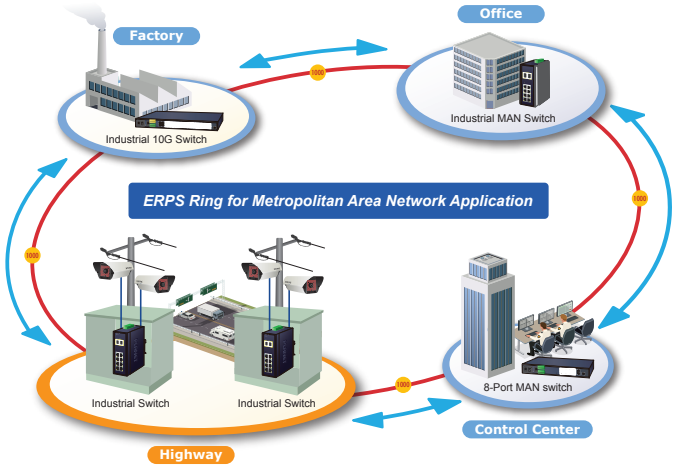
- Complies with IEEE 802.3at Power over Ethernet Plus, end-span PSE
- Backward compatible with IEEE 802.3af Power over Ethernet
- Up to 4/8/16 ports of IEEE 802.3af/802.3at devices powered
- 144-/240-/320-watt PoE budget
- Supports PoE power up to 36 watts for each PoE port
- Auto detects powered device (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
- Intelligent PoE features
  - Temperature threshold control
  - PoE extension
  - PD alive check
  - PoE schedule

## Industrial Hardened Design

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

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

The IGS-4215 PoE series 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.




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

As the industrial PoE+ managed switch for surveillance, wireless and VoIP networks, the IGS-4215 PoE series features 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 PoE series 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 PoE series 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 the administrator's management burden.

## Digital Input and Digital Output (IGS-4215-16P2T2S only)

- 2 digital input (DI)
- 2 digital output (DO)
- Integrate sensors into auto alarm system
- Transfer alarm to IP network via SNMP trap

## Switching

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

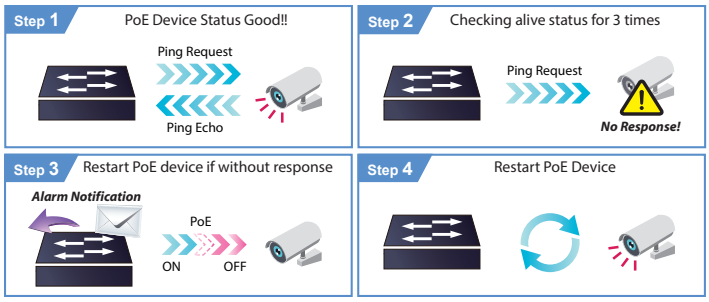
## Layer 2 Features

- 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**
  - 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
  - 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 6 trunk groups, up to 8 ports per trunk group
- Provides port mirror (many-to-1)
- Loop protection to avoid broadcast loops
- Supports ERPS (Ethernet Ring Protection Switching)
- Link Layer Discovery Protocol (LLDP)

## Quality of Service

- Ingress/Egress Rate Limit per port bandwidth control
- Traffic classification

## PD Alive Check

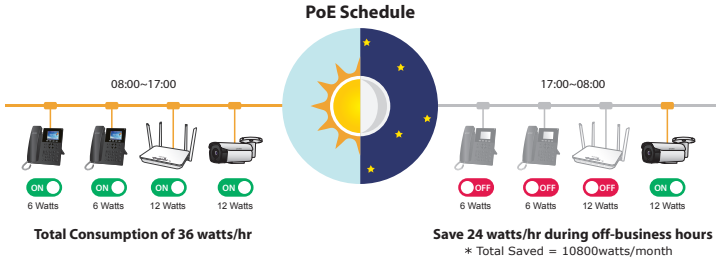



### Scheduled Power Recycling

The IGS-4215 PoE series allows each of the connected PoE IP cameras or PoE wireless access points to reboot at a specified time each week. Therefore, it will reduce the chance of IP camera or AP crash resulting from buffer overflow.

### PoE Schedule for Energy Savings

Under the global trend of energy saving and contributing to environmental protection, the IGS-4215 PoE series 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, which 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.




### 802.3at PoE+ Power and Ethernet Data Transmission Distance Extension

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

- IEEE 802.1p CoS
- 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 v2, v3
- Supports IPv6 MLD snooping v1, v2
- IGMP querier mode support
- IGMP snooping port filtering
- MLD snooping port filtering

## Security

- Storm Control support
  - Broadcast/ unknown multicast/unknown unicast
- Authentication
  - IEEE 802.1X port-based network access authentication
  - Built-in RADIUS client to cooperate with the RADIUS servers
  - DHCP Relay and DHCP Option 82
  - RADIUS/TACACS+ users access 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 SNMP v3 secure access
- SNMP Management