# Industrial 8-Port 10/100/1000T + 2-Port 100/1000X SFP Wall-mount Managed Switch

Easily-deployed and Expanded Network

Designed to be installed in a wall enclosure or simply mounted on a wall at any convenient location, PLANET WGS-4215-8T2S, an innovative, **Industrial 8-port 10/100/1000T + 2-port 100/1000X SFP Wall-mount Managed Switch**, offers IPv6/ IPv4 dual stack management, **intelligent Layer 2 management functions**, and **user-friendly interface**. The WGS-4215-8T2S is able to operate reliably, stably and quietly in any environment without affecting its performance. Featuring ultra networking speed and operating temperature ranging from **-40** to **75 degrees C** in a compact but rugged IP30 metal housing, the WGS-4215-8T2S is an ideal solution to meeting the demand for the following network applications:

- ■ Building/Home automation network
- ■ Internet of things (IoT)
- ■ IP surveillance
- ■ Wireless LAN
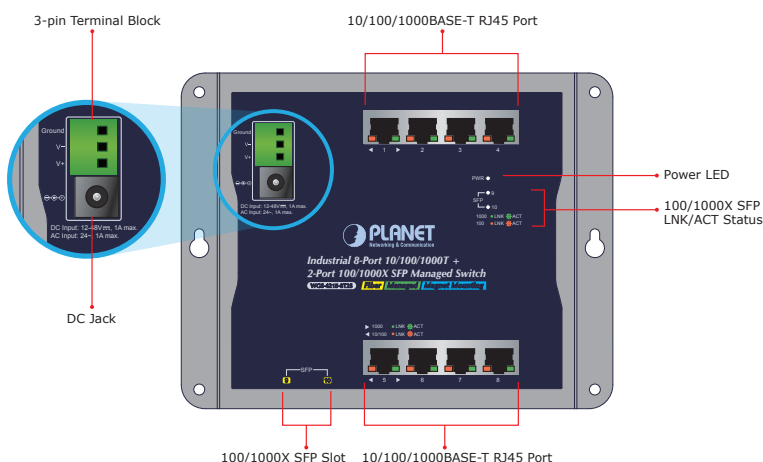
Cybersecurity Network Solution to Minimize Security Risks

The WGS-4215-8T2S supports SSHv2 and TLS protocols to provide strong protection against advanced threats. It includes a range of cybersecurity features such as **DHCP**

Physical Port

- • **8-port 10/100/1000BASE-T** Gigabit RJ45 copper
- • **2 100/1000BASE-X mini-GBIC/SFP** slots

Industrial Case and Installation

- • Compact size, wall-mounted, magnetic wall mount or DIN-rail design
- • IP30 metal case
- • Supports -40 to 75 degrees C operating temperature
- • Supports EFT protection of 6KV DC for power line
- • Supports ESD 6KV DC Ethernet protection
- • Redundant power design
  - – 12V~48V DC/24V AC terminal block/12V~48V DC jack power input
  - – 12V~48V DC input range for booting with reverse polarity protection

Switching

- • Hardware based 10/100Mbps, half/full duplex and 1000Mbps full duplex mode, flow control and auto-negotiation and auto MDI/MDI-X
- • 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
- • 9K jumbo frame
- • Automatic address learning and address aging
- • Supports CSMA/CD protocol

Layer 2 Features

- • Supports **VLAN**
  - – IEEE 802.1Q tagged VLAN
  - – Provides 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

Snooping, IP Source Guard, Dynamic ARP Inspection, 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.

Redundant Ring, Fast Recovery for Critical Network Applications

The WGS-4215-8T2S 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, and 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
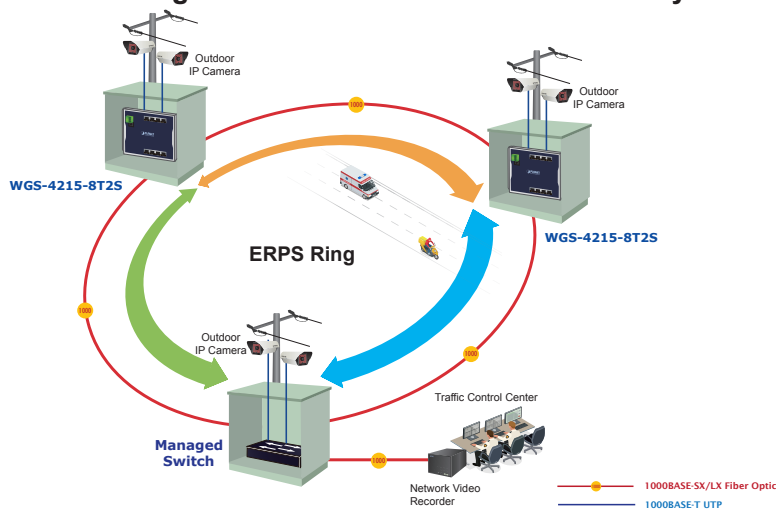
Innovative Wall-mount Installation

The WGS-4215-8T2S is specially designed to be installed in a narrow environment, such as wall enclosure. The compact, flat and wall-mounted design fits easily in any space-limited location. It adopts the user-friendly "Front Access" design, making the installing, cable wiring, LED monitoring and maintenance of the WGS-4215-8T2S placed in an enclosure very convenient for technicians. The WGS-4215-8T2S can be installed by fixed wall mounting, magnetic wall mounting or DIN rail, thereby making its usability more flexible.

- Supports **Link Aggregation**
  - IEEE 802.3ad Link Aggregation Control Protocol (LACP)
  - Cisco ether-channel (static trunk)
  - Maximum 4 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)

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 and 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 unicast/Unknown multicast
- Authentication
  - IEEE 802.1X port-based network access authentication
  - Built-in RADIUS client to co-operate 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

Flat Design | DIN-rail Installation | PoE Usage

Fiber Connection | Magnetic Installation | Front Access | Dual Power Input

All-New Industrial Flat-type Ethernet

Dual Power Input for High Availability Network System

The WGS-4215-8T2S features a strong dual power input system (12V~48V DC or 24V AC) incorporated into customer's automation network to enhance system reliability and uptime. In the example below, when the 3-pin terminal block fails to work, the hardware failover function will be activated automatically to keep powering the WGS-4215-8T2S via the DC plug power alternatively without any loss of operation.

Dual Power Input with Auto Failover
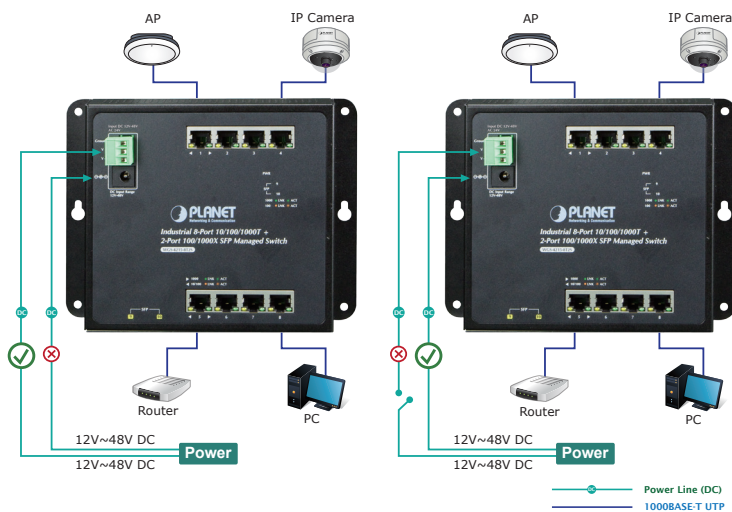
Environmentally Hardened Design

With IP30, flat but rugged metal housing protection, the WGS-4215-8T2S 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 WGS-4215-8T2S can be placed in almost any difficult environment.

- – Telnet Command Line Interface
- – SNMP v1 and v2c switch management
- – SSHv2, TLSv1.2 and SNMP v3 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
- SNTP Network Time Protocol
- Network Diagnostic
  - – Cable diagnostics
  - – ICMPv6/ICMPv4 Remote Ping
- Link Layer Discovery Protocol (LLDP) Protocol and LLDP-MED
- Event message logging to remote Syslog server
- Four RMON groups (history, statistics, alarms and events)
- PLANET Smart Discovery Utility for deployment management
- PLANET NMS system and CloudViewer for deployment management