

## Industrial Layer 3 DIN-rail Managed Ethernet Switch



### Multi 1/2.5/10G for Factory and Metropolitan Long-reach Networking

PLANET IGS-6325 Series are the smallest yet high-capacity, industrial-grade Layer 3 managed switches with high-density hybrid copper and fiber optic interfaces in a DIN-rail type rugged case and can operate stably under the temperature range from **-40 to 75 degrees C**.

Models	10/100/1000T Copper	100/1000/2500X SFP	1G/10G SFP+	Switch Capacity	Power Input
IGS-6325-8T8S4X	8	8	4	136Gbps	DC 12~48V AC 24V
IGS-6325-8T8S			--	56Gbps	
IGS-6325-8T4X			4	96Gbps	
IGS-6325-16T4S	16	4	--	52Gbps	DC 9~48V AC 24V
IGS-6325-16T4X	16	--	4	112Gbps	

They're designed to be installed in any space-limited cabinets as they are small in size. Their connection distances can be flexibly extended via their powerful ports.



### Layer 3 Routing Support

The IGS-6325 Series enables the administrator to conveniently boost network efficiency by configuring Layer 3 IPv4/IPv6 VLAN static routing manually, and the IPv4 **OSPFv2** (Open Shortest Path First) settings automatically. The OSPF is an interior dynamic routing protocol for autonomous system based on link state. The protocol creates a database for link state by exchanging link states among Layer 3 switches, and then uses the Shortest Path First algorithm to generate a route table based on that database.

### Physical Port

- 8/16 10/100/1000BASE-T RJ45 copper ports
- 4/8 100/1000/2500BASE-X SFP slots for SFP type auto detection
- 4 10GBASE-SR/LR SFP+ slots, compatible with 1000BASE-SX/LX/BX and 2500BASE-X SFP (IGS-6325-8T4X, IGS-6325-8T8S4X and IGS-6325-16T4X)
- One RJ45-to-RS232 console interface for basic management and setup

### Industrial Hardened Design

- Dual power input, redundant power with reverse polarity protection
  - DC 9/12 to 48V input or AC 24V input
  - Active-active redundant power failure protection
  - Backup of catastrophic power failure on one supply
  - Fault tolerance and resilience
- DIN-rail and wall-mountable designs
- IP30 aluminum case
- Supports 6KV DC Ethernet ESD protection
- -40 to 75 degrees C operating temperature

### Digital Input and Digital Output

- 2 Digital Input (DI)
- 2 Digital Output (DO)
- Integrates sensors into auto alarm system
- Transfers alarm to IP network via email and SNMP trap

### Layer 3 IP Routing Features

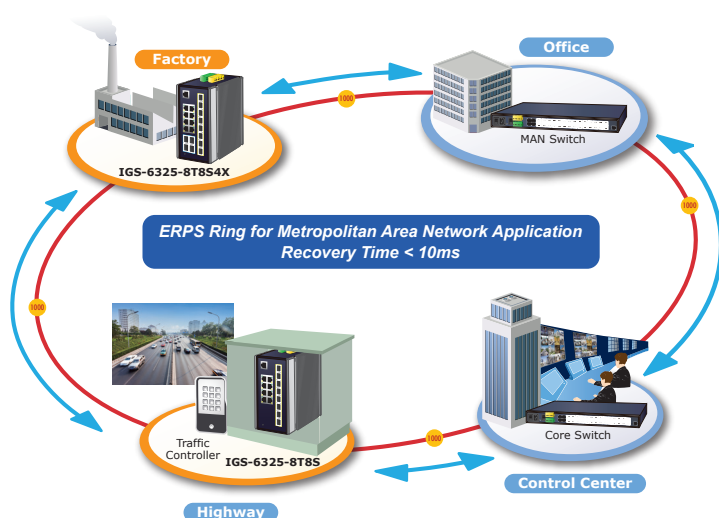
- IP dynamic routing protocol supports OSPFv2
- IP dynamic routing protocol supports RIP, OSPFv2 and OSPFv3 (IGS-6325-16T4X only)
- IPv4/IPv6 hardware static routing
- Routing interface provides per VLAN routing mode

### Layer 2 Features

- High performance of Store-and-Forward architecture, and runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Storm control support
  - Broadcast/Multicast/Unknown unicast
- Supports **VLAN**
  - IEEE 802.1Q tagged VLAN

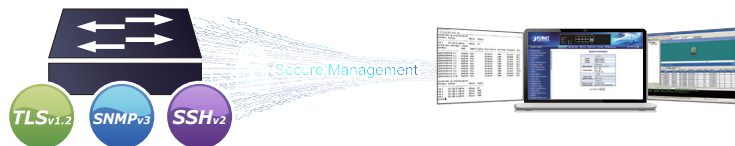
### Redundant Ring, Fast Recovery for Critical Network Applications

The IGS-6325 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), and **redundant power** input system into customer's industrial automation network to enhance system reliability and uptime in harsh factory environments. In a simple Ring network, the recovery time of data link can be as fast as 10ms.



### Network with Cybersecurity Helps Minimize Security Risks

The IGS-6325 Series comes with enhanced cybersecurity to fend off cyberthreats and cyberattacks. It supports SSHv2 and TLS v1.2 protocols to provide strong protection against advanced threats. Served as a key point to transmit data over multiple long distance fiber optical connections to customer's critical equipment in a business network, the cybersecurity feature of the IGS-6325 Series protects the switch management and enhances the security of the mission-critical network without any extra deployment cost and effort.



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

With the supported **Modbus TCP/IP** protocol, the IGS-6325 Series 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**, communication status, and DI and DO status, thus easily achieving enhanced monitoring and maintenance of the entire factory.

- Up to 4K VLANs groups, out of 4095 VLAN IDs
- Supports provider bridging (VLAN Q-in-Q 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
- Supports **Link Aggregation**
  - 802.3ad Link Aggregation Control Protocol (LACP)
  - Cisco ether-channel (static trunk)
  - Maximum 14 trunk groups, with 16 ports for each trunk
  - Up to 80Gbps bandwidth (full 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
- Link Layer Discovery Protocol (LLDP)
- 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
- Supports G.8032 ERPS (Ethernet Ring Protection Switching)
- IEEE 1588v2 TC and Synchronous Ethernet network timing

### Multicast

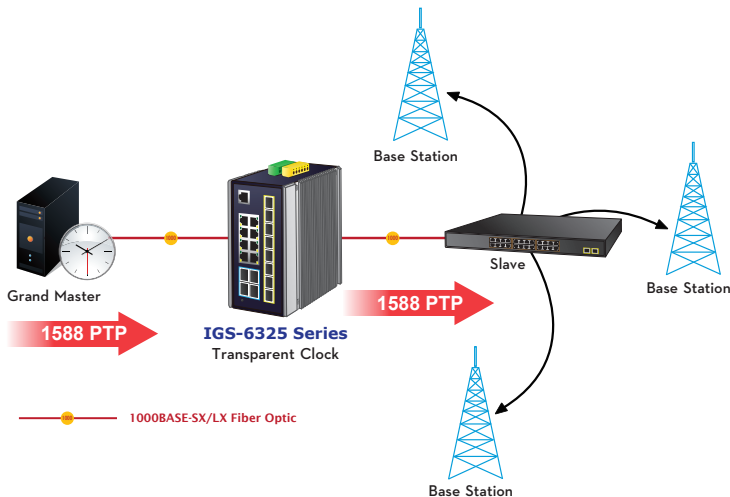
- Supports IPv4 IGMP snooping v1, v2 and v3
- Supports IPv6 MLD snooping v1 and v2
- Querier mode support
- IPv4 IGMP snooping port filtering
- IPv6 MLD snooping port filtering
- MVR (Multicast VLAN Registration)

### Quality of Service

- Ingress shaper and egress rate limit per port bandwidth control
- 8 priority queues on all switch ports
- Traffic classification

## 1588 Time Protocol for Industrial Computing Networks

The IGS-6325 Series is ideal for telecom and carrier Ethernet applications, supporting MEF service delivery and timing over packet solutions for IEEE 1588 and synchronous Ethernet.



## Redundant Power to Ensure Continuous Operation

The IGS-6325 DIN-rail series possesses dual DC 9/12~48V and AC 24V power supply utilized as redundant power supply to ensure its continuous operation. Its redundant power system is specifically designed to handle the demands of high-tech facilities requiring the highest power integrity.

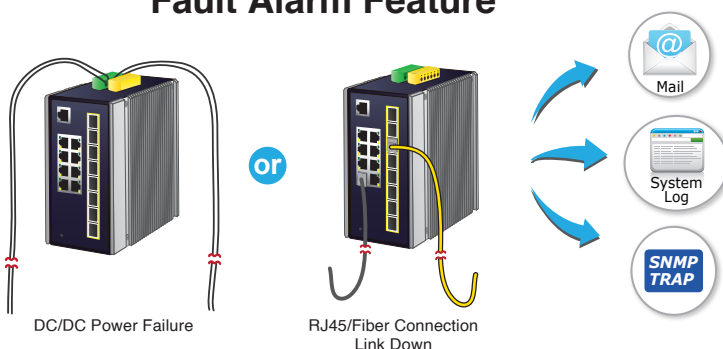
## SMTP/SNMP Trap Event Alert

The IGS-6325 Series 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.

## Effective Alarm Alert for Better Protection

The IGS-6325 Series supports a Fault Alarm feature which can alert the users when there is something wrong with the switches. With this ideal feature, the users would not have to waste time to find where the problem is. It will help to save time and human resource.

## Fault Alarm Feature



- IEEE 802.1p CoS
- ToS/DSCP/IP Precedence of IPv4/IPv6 packets
- IP TCP/UDP port number
- Typical network application
- Strict priority and Weighted Round Robin (WRR) CoS policies
- Traffic-policing on the switch port
- DSCP remarking
- Voice VLAN
- Security
- Authentication
  - IEEE 802.1x port-based/MAC-based network access authentication
  - IEEE 802.1x authentication with guest VLAN
  - Built-in RADIUS client to cooperate with the RADIUS servers
  - 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 (ACL)
- Source MAC/IP address binding
- 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
- IP address access management to prevent unauthorized intruder

## Management

- IPv4 and IPv6 dual stack management
- Switch Management Interfaces
  - Console and Telnet Command Line Interface
  - HTTP web switch management
  - SNMP v1 and v2c switch management
  - SSHv2, TLSv1.2 and SNMP v3 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