

## 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<br>AC 24V |
| IGS-6325-8T8S   |                     |                    | --          | 56Gbps          |                     |
| IGS-6325-8T4X   |                     |                    | 4           | 96Gbps          |                     |
| IGS-6325-16T4S  | 16                  | 4                  | --          | 52Gbps          | DC 9~48V<br>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

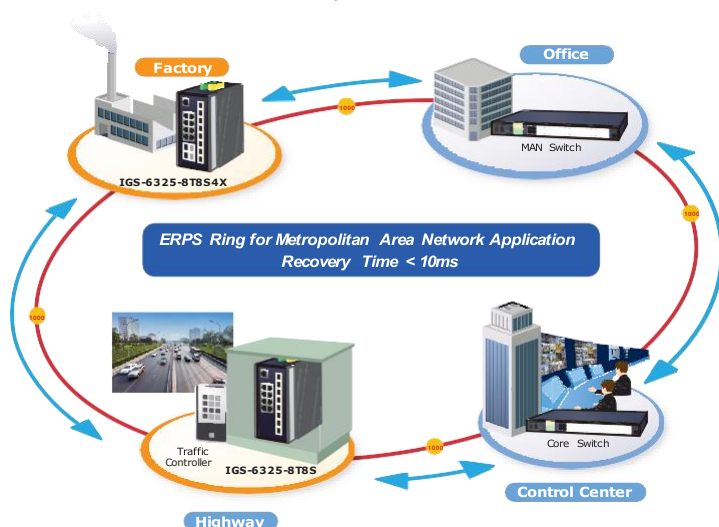
- IP dynamic routing protocol supports OSPFv2
- IP dynamic routing protocol supports RIP, OSPFv2 and OSPFv3 (IGS-6325-16T4X only)
- IPv4/IPv6 hardware static routing
- Routing interface provides per VLAN routing mode

### 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

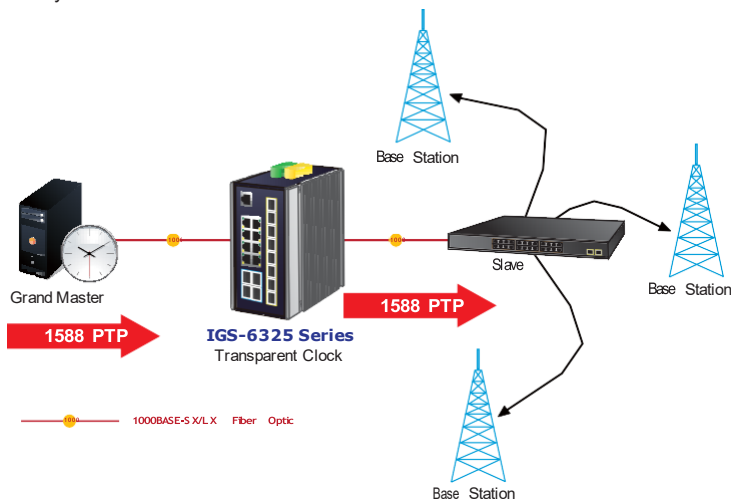
- Supports IPv4 IGMP snooping v1, v2 and v3
- Supports IPv6 MLD snooping v1 and v2
- Querier mode support
- IPv4 IGMP snooping port filtering
- IPv6 MLD snooping port filtering
- MVR (Multicast VLAN Registration)

### 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.

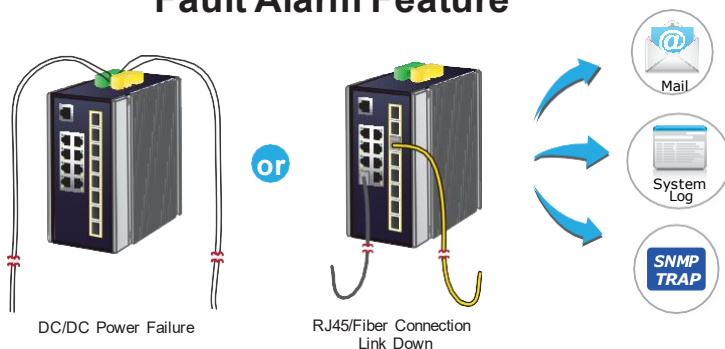
### SMTP/SNMP Trap Event Alert

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

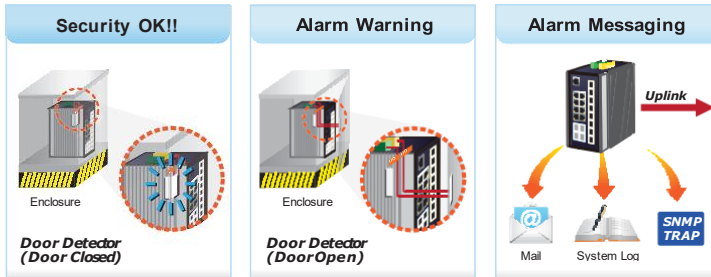
### Management

- 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

### Digital Input and Digital Output for External Alarm

The IGS-6325 Series supports Digital Input and Digital Output on its front panel. This external alarm enables users to use Digital Input to detect and log external device status (such as door intrusion detector), and send event alarm to the administrators. The Digital Output could be used to alarm the administrators if the IGS-6325 Series' port shows link down, link up or power failure.

#### Digital Input



#### Digital Output



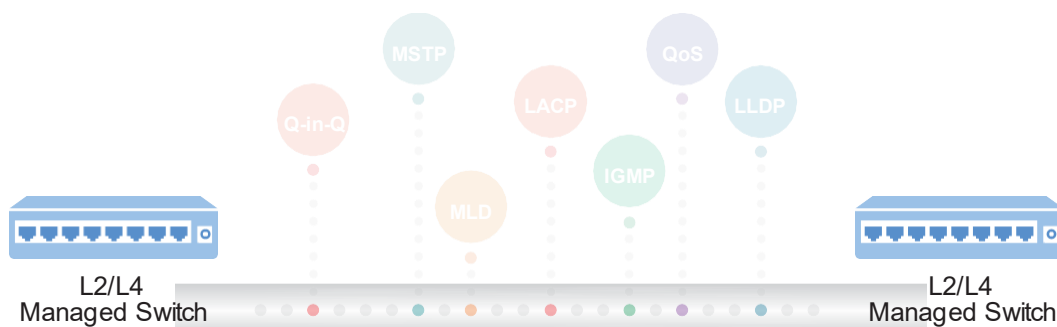
- Reset button for system reboot or reset to factory default
- Dual images
- DHCP Relay
- DHCP Option 82
- DHCP Server
- User Privilege levels control
- Network Time Protocol (NTP)
- Network Diagnostic
  - SFP-DDM (Digital Diagnostic Monitor)
  - Cable diagnostic technology provides the mechanism to detect and report potential cabling issues
  - ICMPv6/ICMPv4 remote ping
- SMTP/Syslog remote alarm
- System Log
- PLANET Smart Discovery Utility for deployment management

### IPv6/IPv4 Dual Stack

Supporting both IPv6 and IPv4 protocols, the IGS-6325 Series helps data centers, campuses, telecoms, and more to experience the IPv6 era with the lowest investment as its network facilities need not be replaced or overhauled if the IPv6 FTTx edge network is set up.

### Robust Layer 2 Features

The IGS-6325 Series can be programmed for advanced Layer 2 switch management functions such as dynamic port link aggregation, 802.1Q tagged VLAN, Q-in-Q VLAN, private VLAN, Multiple Spanning Tree Protocol (MSTP), Layer 2 to Layer 4 QoS, bandwidth control, IGMP snooping and MLD snooping. Via the aggregation of supporting ports, the IGS-6325 Series allows the operation of a high-speed trunk group that comes with multiple ports and supports fail-over as well.



### Efficient Management

For efficient management, the IGS-6325 Series is equipped with console, Web and SNMP management interfaces.

- With the built-in **Web-based** management interface, the IGS-6325 series 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.
- For standard-based monitor and management software, it offers SNMPv3 connection which encrypts the packet content at each session for secure remote management.

### Powerful Network Security

The IGS-6325 Series 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 IGS-6325 Series 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.

### Excellent Traffic Control

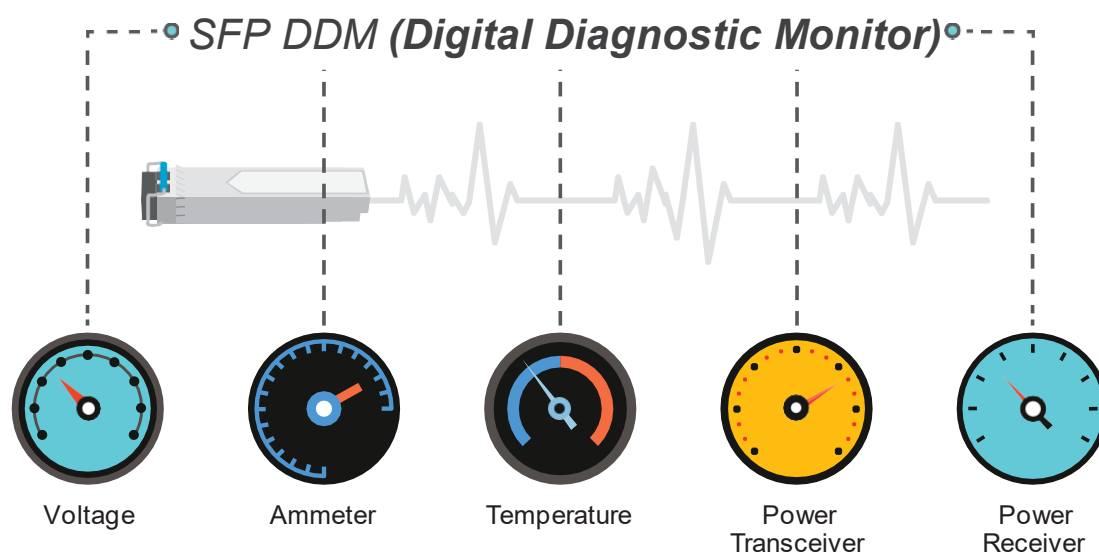
The IGS-6325 Series is loaded with powerful traffic management and QoS features to enhance connection services by telecoms and ISPs. The QoS features include wire-speed Layer 4 traffic classifiers and bandwidth limit that are particularly useful for multi-tenant units, multi-business units, Telco and network service providers' applications. It also empowers the industrial environment to take full advantage of the limited network resources and guarantees the best performance in VoIP and video conferencing transmission.

### Flexible and Extendable 10Gb Ethernet Solution

10G Ethernet is a big leap in the evolution of Ethernet. Each of the 10G SFP+ slots in the IGS-6325 Series supports **triple speed** and **10GBASE-SR/LR**, **2500BASE-X** or **1000BASE-SX/LX**. With its 4-port, 10G Ethernet link capability and additional 8-port 1G Ethernet link capability, the administrator now can flexibly choose the suitable SFP/SFP+ transceiver according to the transmission distance or the transmission speed required to extend the network efficiently. The IGS-6325 Series provides broad bandwidth and powerful processing capacity.

### Intelligent SFP Diagnosis Mechanism

The IGS-6325 Series supports SFP-DDM (digital diagnostic monitor) function that greatly helps network administrator to easily monitor real-time parameters of the SFP and SFP+ transceivers, such as optical output power, optical input power, temperature, laser bias current, and transceiver supply voltage.

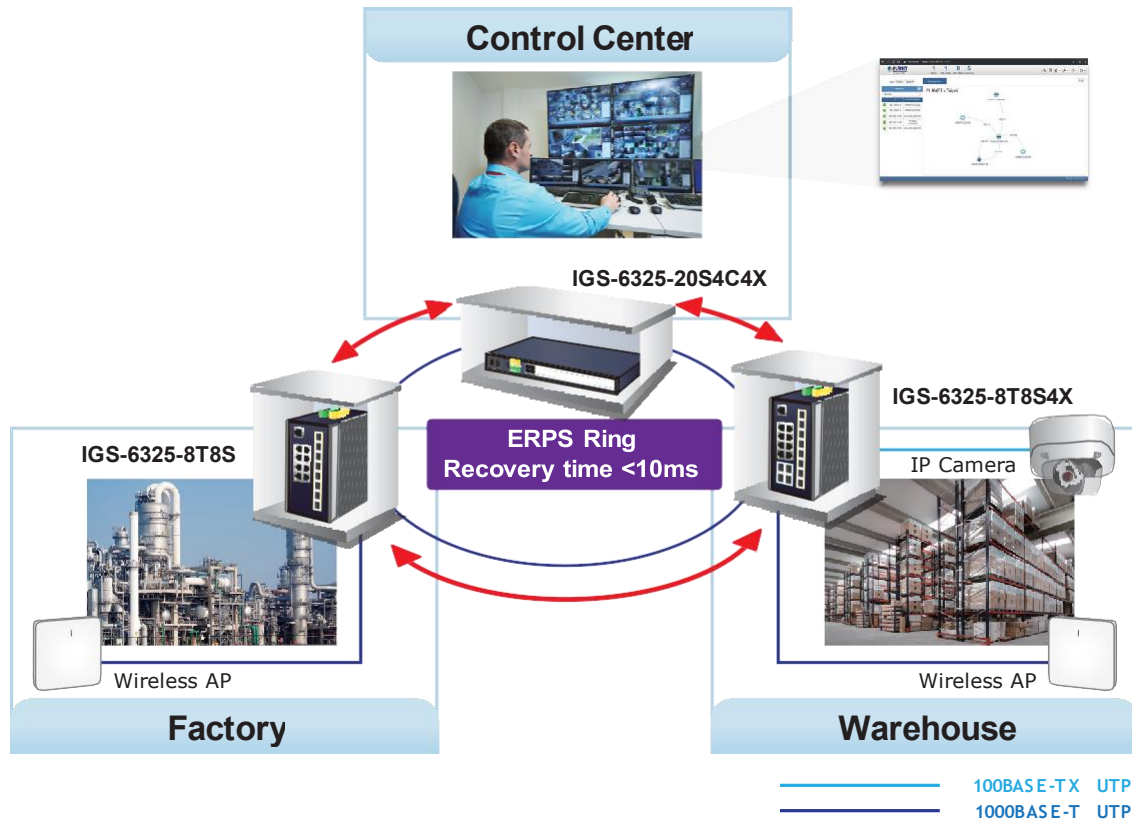


## Applications

### High Availability Mesh Networking Solution for Big Data System

To improve the technology of Optical Fiber Ethernet with highly-flexible, highly-extendable and easy-to-install features, the IGS-6325 Series offers up to **136Gbps** data exchange speed via Optical Fiber interface and the transmission distance can be extended to 120km.

The IGS-6325 Series features strong, rapid, self-recovery capability to prevent interruptions and external intrusions. It incorporates **ITU-T G.8032 ERPS (Ethernet Ring Protection Switching)** into customer's automation network to enhance system reliability and uptime. The IGS-6325 DIN-rail series is the ideal solution for data centers, service providers and telecoms to build redundant connection and establish high bandwidth for Big Data server farm.



### Layer 3 VLAN Routing

With the built-in, robust Layer 3 routing protocols, the IGS-6325 Series ensures reliable routing between VLANs and network segments. The routing protocols can be applied by VLAN interface with up to 4K dynamic routing entries. The IGS-6325 Series, certainly an ideal solution for industries, offers greater security, control and bandwidth conservation, and high-speed uplink.

## Specifications

| Product                 |          | IGS-6325-16T4X                                                                                                                                                                                                                           | IGS-6325-16T4S                                                          | IGS-6325-8T8S                                                               | IGS-6325-8T8S4X                                                                  | IGS-6325-8T4X                                                           |
|-------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Hardware Specifications |          |                                                                                                                                                                                                                                          |                                                                         |                                                                             |                                                                                  |                                                                         |
| Copper Ports            |          | 16 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports                                                                                                                                                                                           |                                                                         | 8 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports                               |                                                                                  |                                                                         |
| SFP Ports               |          | --                                                                                                                                                                                                                                       | 4 100/1000/2500 BASE-X SFP slots                                        | 8 100/1000/2500BASE-X SFP slots                                             |                                                                                  | --                                                                      |
| SFP+ Ports              |          | 4 10GBASE-SR/LR SFP+ slots, compatible with 1000BASE-SX/LX/BX and 2500BASE-X SFP                                                                                                                                                         | --                                                                      | --                                                                          | 4 10GBASE-SR/LR SFP+ slots, compatible with 1000BASE-SX/LX/BX and 2500BASE-X SFP |                                                                         |
| Console                 |          | 1 x RJ45-to-RS232 serial port (115200, 8, N, 1)                                                                                                                                                                                          |                                                                         |                                                                             |                                                                                  |                                                                         |
| Reset Button            |          | < 5 sec: System reboot<br>> 5 sec: Factory default                                                                                                                                                                                       |                                                                         |                                                                             |                                                                                  |                                                                         |
| Connector               |          | Removable 6-pin terminal block for power input<br>Pin 1/2 for Power 1, Pin 3/4 for fault alarm, Pin 5/6 for Power 2<br>Removable 6-pin terminal block for DI/DO interface<br>Pin 1/2 for DI 1 & 2, Pin 3/4 for DO 1 & 2, Pin 5/6 for GND |                                                                         |                                                                             |                                                                                  |                                                                         |
| Alarm                   |          | One relay output for power failure. Alarm relay current carry ability: 1A @ 24V DC                                                                                                                                                       |                                                                         |                                                                             |                                                                                  |                                                                         |
| Digital Input (DI)      |          | 2 digital input:<br>Level 0: -24~2.1V (±0.1V)<br>Level 1: 2.1~24V (±0.1V)<br>Input load to 24V DC, 10mA max.                                                                                                                             |                                                                         |                                                                             |                                                                                  |                                                                         |
| Digital Output (DO)     |          | 2 digital output:<br>Open collector to 24VDC, 100mA                                                                                                                                                                                      |                                                                         |                                                                             |                                                                                  |                                                                         |
| Enclosure               |          | IP30 aluminum case                                                                                                                                                                                                                       |                                                                         |                                                                             |                                                                                  |                                                                         |
| Installation            |          | DIN-rail or wall mounting                                                                                                                                                                                                                |                                                                         |                                                                             |                                                                                  |                                                                         |
| Dimensions (W x D x H)  |          | 96 x 107 x 152 mm                                                                                                                                                                                                                        | 86 x 107 x 152 mm                                                       |                                                                             |                                                                                  |                                                                         |
| Weight                  |          | 1,503g                                                                                                                                                                                                                                   | 1,168g                                                                  | 1,065g                                                                      | 1,250g                                                                           | 1,020g                                                                  |
| Power Requirements      |          | DC 9~48V, 3.3A max.                                                                                                                                                                                                                      | DC 9~48V, 4A max.                                                       | DC 12~48V, 4A max.                                                          |                                                                                  |                                                                         |
|                         |          | AC 24V, 2 max.                                                                                                                                                                                                                           | AC 24V, 1.5A max.                                                       |                                                                             |                                                                                  |                                                                         |
| Power Consumption       | DC input | Max. 14.4 watts/49.13 BTU (system on)<br>Max. 24 watts/81.89 BTU (Full loading)                                                                                                                                                          | Max. 10 watts/35BTU (system on)<br>Max. 29 watts/99 BTU (Full loading)  | Max. 9.12 watts/32BTU (system on)<br>Max. 26.04 watts/89 BTU (Full loading) | Max. 12 watts/41BTU (system on)<br>Max. 38.4 watts/132 BTU (Full loading)        | Max. 10 watts/35BTU (system on)<br>Max. 29 watts/99 BTU (Full loading)  |
|                         | AC input | Max. 13.5 watts/46.06 BTU (system on)<br>Max. 23 watts/78.48 BTU (Full loading)                                                                                                                                                          | Max. 12 watts/41BTU (system on)<br>Max. 30 watts/103 BTU (Full loading) | Max. 12 watts/41BTU (system on)Max. 29 watts/99 BTU (Full loading)          | Max. 13 watts/45BTU (system on)<br>Max. 38 watts/130 BTU (Full loading)          | Max. 12 watts/41BTU (system on)<br>Max. 30 watts/103 BTU (Full loading) |
| ESD Protection          |          | 6KV DC                                                                                                                                                                                                                                   |                                                                         |                                                                             |                                                                                  |                                                                         |
| Surge Protection        |          | 4KV DC                                                                                                                                                                                                                                   |                                                                         |                                                                             |                                                                                  |                                                                         |
| SDRAM                   |          | 512Mbytes                                                                                                                                                                                                                                |                                                                         |                                                                             |                                                                                  |                                                                         |
| Flash Memory            |          | 64Mbytes                                                                                                                                                                                                                                 |                                                                         |                                                                             |                                                                                  |                                                                         |
| Switch Performance      |          |                                                                                                                                                                                                                                          |                                                                         |                                                                             |                                                                                  |                                                                         |
| Switch Fabric           |          | 112Gbps/non-blocking                                                                                                                                                                                                                     | 52Gbps/non-blocking                                                     | 56Gbps/non-blocking                                                         | 136Gbps/non-blocking                                                             | 96Gbps/non-blocking                                                     |
| Throughput              |          | 83.3Mbps@64Bytes                                                                                                                                                                                                                         | 38.69Mpps@ 64Bytes                                                      | 41.66Mpps@ 64Bytes                                                          | 101.19Mpps@64Bytes                                                               | 71.43Mpps@64Bytes                                                       |
| Switch Architecture     |          | Store-and-Forward                                                                                                                                                                                                                        |                                                                         |                                                                             |                                                                                  |                                                                         |
| Address Table           |          | 32K entries, automatic source address learning and aging                                                                                                                                                                                 |                                                                         |                                                                             |                                                                                  |                                                                         |
| Shared Data Buffer      |          | 16Mb                                                                                                                                                                                                                                     |                                                                         |                                                                             |                                                                                  |                                                                         |
| Jumbo Frame             |          | 10K bytes                                                                                                                                                                                                                                |                                                                         |                                                                             |                                                                                  |                                                                         |
| Flow Control            |          | IEEE 802.3x pause frame for full duplex<br>Back pressure for half duplex                                                                                                                                                                 |                                                                         |                                                                             |                                                                                  |                                                                         |
| Layer 3 Functions       |          |                                                                                                                                                                                                                                          |                                                                         |                                                                             |                                                                                  |                                                                         |
| IP Interfaces           |          | Max. 128 VLAN interfaces                                                                                                                                                                                                                 |                                                                         |                                                                             |                                                                                  |                                                                         |
| Routing Table           |          | <b>Max. 128 static routing entries</b><br>Max. 4K H/W routing table entries                                                                                                                                                              |                                                                         |                                                                             |                                                                                  |                                                                         |

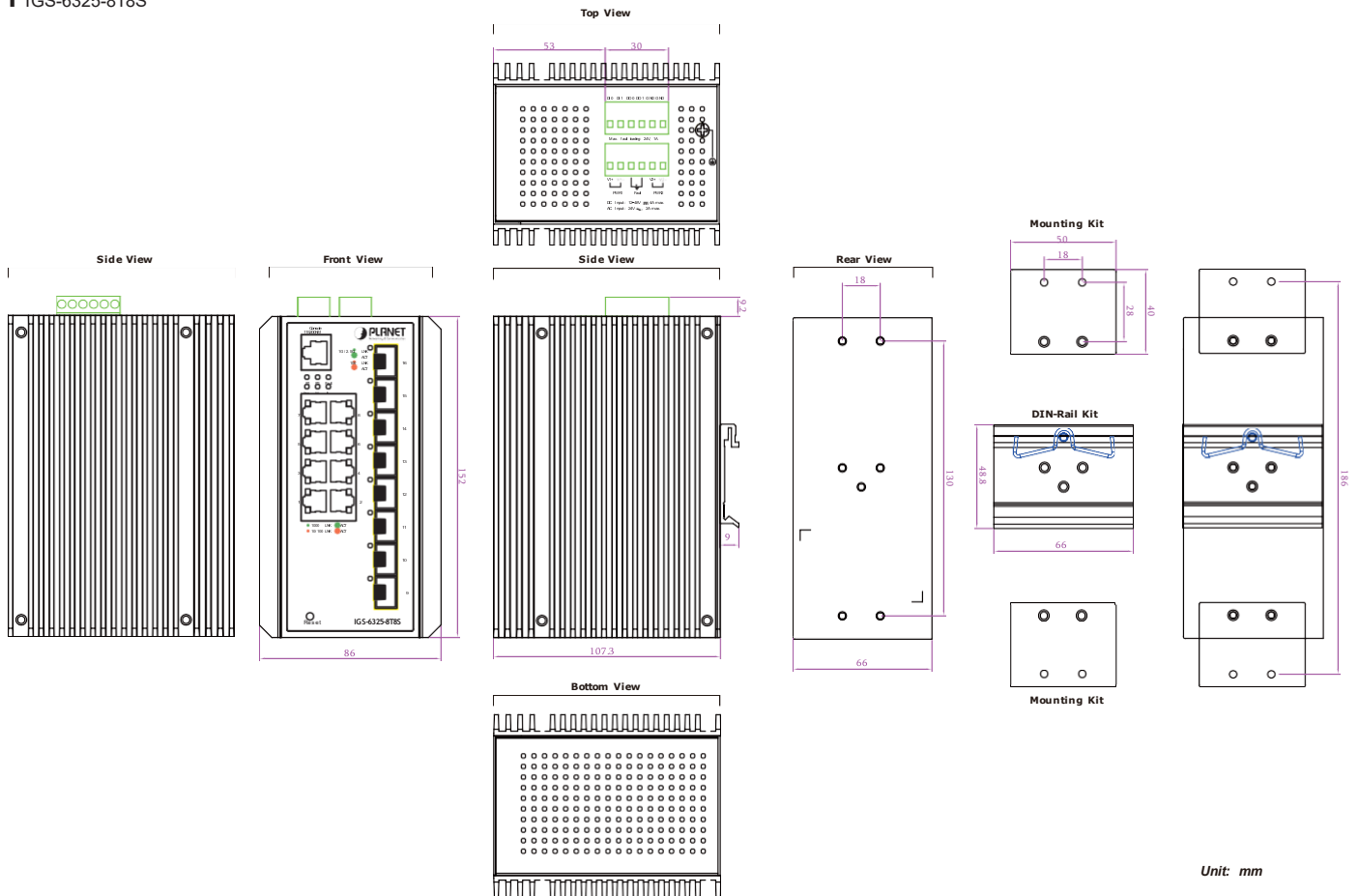
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| Routing Protocols            | IPv4 hardware static routing<br>IPv6 hardware static routing<br>IPv4 RIPv1/v2 for dynamic routing<br>IPv4 OSPFv2 for dynamic routing<br>IPv6 OSPFv3 for dynamic routing                                                                                       | IPv4 hardware static routing<br>IPv6 hardware static routing<br>IPv4 OSPFv2 dynamic routing |
| Layer 2 Management Functions |                                                                                                                                                                                                                                                               |                                                                                             |
| Port Configuration           | Port disable/enable<br>Auto-negotiation 10/100/1000Mbps full and half duplex mode selection<br>Flow control disable/enable<br>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<br>Many-to-1 monitor<br>RMirror – Remote Switched Port Analyzer (Cisco RSPAN)<br>Supports up to 5 sessions                                                                                                                                         |                                                                                             |
| VLAN                         | IEEE 802.1Q tagged VLAN<br>IEEE 802.1ad Q-in-Q tunneling<br>Private VLAN Edge (PVE)<br>MAC-based VLAN<br>Protocol-based VLAN<br>Voice VLAN<br>IP Subnet-based VLAN<br>MVR (Multicast VLAN registration)<br>GVRP<br>Up to 4K VLAN groups, out of 4095 VLAN IDs |                                                                                             |
| Link Aggregation             | IEEE 802.3ad LACP/<br>static trunk<br>10 trunk groups with 16<br>ports per trunk group                                                                                                                                                                        | IEEE 802.3ad LACP/static trunk<br>14 trunk groups with 16 ports per trunk group             |
| Spanning Tree Protoco        | IEEE 802.1D Spanning Tree Protocol<br>IEEE 802.1w Rapid Spanning Tree Protocol<br>IEEE 802.1s Multiple Spanning Tree Protocol<br>BPDU Guard                                                                                                                   |                                                                                             |
| IGMP Snooping                | IPv4 IGMP (v1/v2/v3) snooping<br>IPv4 IGMP querier mode support<br>Supports 255 IGMP groups                                                                                                                                                                   |                                                                                             |
| MLD Snooping                 | IPv6 MLD (v1/v2) snooping,<br>IPv6 MLD querier mode support<br>Supports 255 MLD groups                                                                                                                                                                        |                                                                                             |
| Access Control List          | IP-based ACL/MAC-based ACL<br>ACL based on:<br>- MAC Address<br>- IP Address<br>- Ethertype<br>- Protocol Type<br>- VLAN ID<br>- DSCP<br>- 802.1p Priority<br>Up to 256 entries                                                                               |                                                                                             |
| Bandwidth Control            | Per port bandwidth control<br>Ingress: 100Kbps~1000Mbps<br>Egress: 100Kbps~1000Mbps                                                                                                                                                                           |                                                                                             |
| QoS                          | Traffic classification based, strict priority and WRR<br>8-level priority for switching:<br>- Port number<br>- 802.1p priority<br>- 802.1Q VLAN tag<br>- DSCP/ToS field in IP packet                                                                          |                                                                                             |

|                              |                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ring                         | Supports ERPS, and complies with ITU-T G.8032<br>Supports major ring and sub-ring<br>Recovery time < 10ms @ 3 units<br>Recovery time < 50ms @ 16 units                                                                                                                                                                                                                                        |
| Synchronization              | IEEE 1588v2 PTP(Precision Time Protocol)<br>- Peer-to-peer transparent clock<br>- End-to-end transparent clock                                                                                                                                                                                                                                                                                |
| Security Functions           |                                                                                                                                                                                                                                                                                                                                                                                               |
| Access Control List          | IP-based ACL/MAC-based ACL<br>ACL based on:<br>- MAC Address<br>- IP Address<br>- Ethertype<br>- Protocol Type<br>- VLAN ID<br>- DSCP<br>- 802.1p Priority<br>Up to 512 entries                                                                                                                                                                                                               |
| Security                     | Port security<br>IP source guard, up to 512 entries<br>Dynamic ARP inspection, up to 1K entries<br>Command line authority control based on user level<br>Static MAC address, up to 64 entries                                                                                                                                                                                                 |
| AAA                          | RADIUS client<br>TACACS+ client                                                                                                                                                                                                                                                                                                                                                               |
| Network Access Control       | IEEE 802.1x port-based network access control<br>MAC-based authentication<br>Local/RADIUS authentication                                                                                                                                                                                                                                                                                      |
| Management                   |                                                                                                                                                                                                                                                                                                                                                                                               |
| Basic Management Interfaces  | Console; Telnet; Web browser; SNMP v1, v2c                                                                                                                                                                                                                                                                                                                                                    |
| Secure Management Interfaces | SSHv2, TLS v1.2, SNMPv3                                                                                                                                                                                                                                                                                                                                                                       |
| System Management            | Firmware upgrade by HTTP protocol through Ethernet network<br>Configuration upload/download through HTTP<br>LLDP protocol<br>NTP<br>PLANET NMS system and Smart Discovery Utility<br>PLANET CloudViewerPro app                                                                                                                                                                                |
| Event Management             | Remote syslog<br>System log<br>SMTP                                                                                                                                                                                                                                                                                                                                                           |
| SNMP MIBs                    | RFC 1213 MIB-II<br>RFC 1493 Bridge MIB<br>RFC 1643 Ethernet MIB<br>RFC 2863 Interface MIB<br>RFC 2665 Ether-Like MIB<br>RFC 2819 RMON MIB (Group 1, 2, 3 and 9)<br>RFC 2737 Entity MIB<br>RFC 2618 RADIUS Client MIB<br>RFC 2863 IF-MIB<br>RFC 2933 IGMP-STD-MIB<br>RFC 3411 SNMP-Frameworks-MIB<br>RFC 4292 IP Forward MIB<br>RFC 4293 IP MIB<br>RFC 4836 MAU-MIB<br>IEEE 802.1X PAE<br>LLDP |
| Standards Conformance        |                                                                                                                                                                                                                                                                                                                                                                                               |
| Regulatory Compliance        | FCC Part 15 Class A<br>CE:<br>EN55032<br>EN55035                                                                                                                                                                                                                                                                                                                                              |

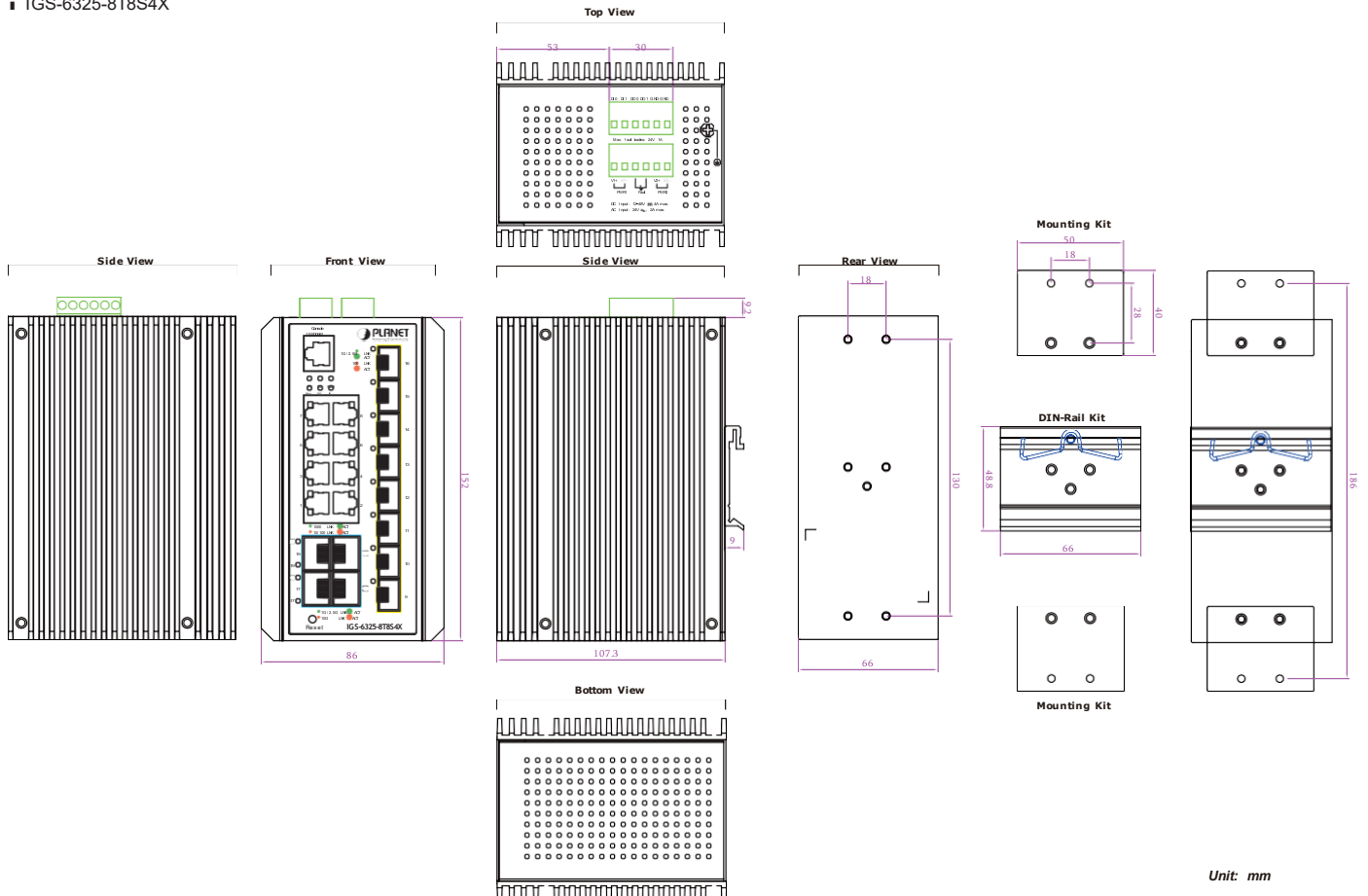
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stability Testing    | IEC60068-2-32 (free fall)<br>IEC60068-2-27 (shock)<br>IEC60068-2-6 (vibration)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Standards Compliance | IEEE 802.3 10BASE-T<br>IEEE 802.3u 100BASE-TX/100BASE-FX<br>IEEE 802.3z Gigabit SX/LX<br>IEEE 802.3ab Gigabit 1000T<br>IEEE 802.3ae 10Gb/s Ethernet<br>IEEE 802.3x flow control and back pressure<br>IEEE 802.3ad port trunk with LACP<br>IEEE 802.1D Spanning Tree Protocol<br>IEEE 802.1w Rapid Spanning Tree Protocol<br>IEEE 802.1s Multiple Spanning Tree Protocol<br>IEEE 802.1p Class of Service<br>IEEE 802.1Q VLAN tagging<br>IEEE 802.1X Port Authentication Network Control<br>IEEE 802.1ab LLDP<br>IEEE 802.3ah OAM<br>IEEE 802.1ag Connectivity Fault Management (CFM)<br>RFC 768 UDP<br>RFC 783 TCP<br>RFC 791 IP<br>RFC 792 ICMP<br>RFC 2068 HTTP<br>RFC 1112 IGMP v1<br>RFC 2236 IGMP v2<br>RFC 3376 IGMP v3<br>RFC 1923 RIPv1 (IGS-6325-16T4X only)<br>RFC 2453 RIPv2 (IGS-6325-16T4X only)<br>RFC 2710 MLD v1<br>RFC 3810 MLD v2<br>RFC 2328 OSPF v2<br>RFC 5340 - OSPF for IPv6 (IGS-6325-16T4X only)<br>ITU-T G.8032 ERPS Ring<br>ITU-T Y.1731 Performance Monitoring |
| Environment          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Operating            | -40 ~ 75 degrees C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Storage              | -40 ~ 85 degrees C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Humidity             | 5 ~ 95% (non-condensing)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Dimensions

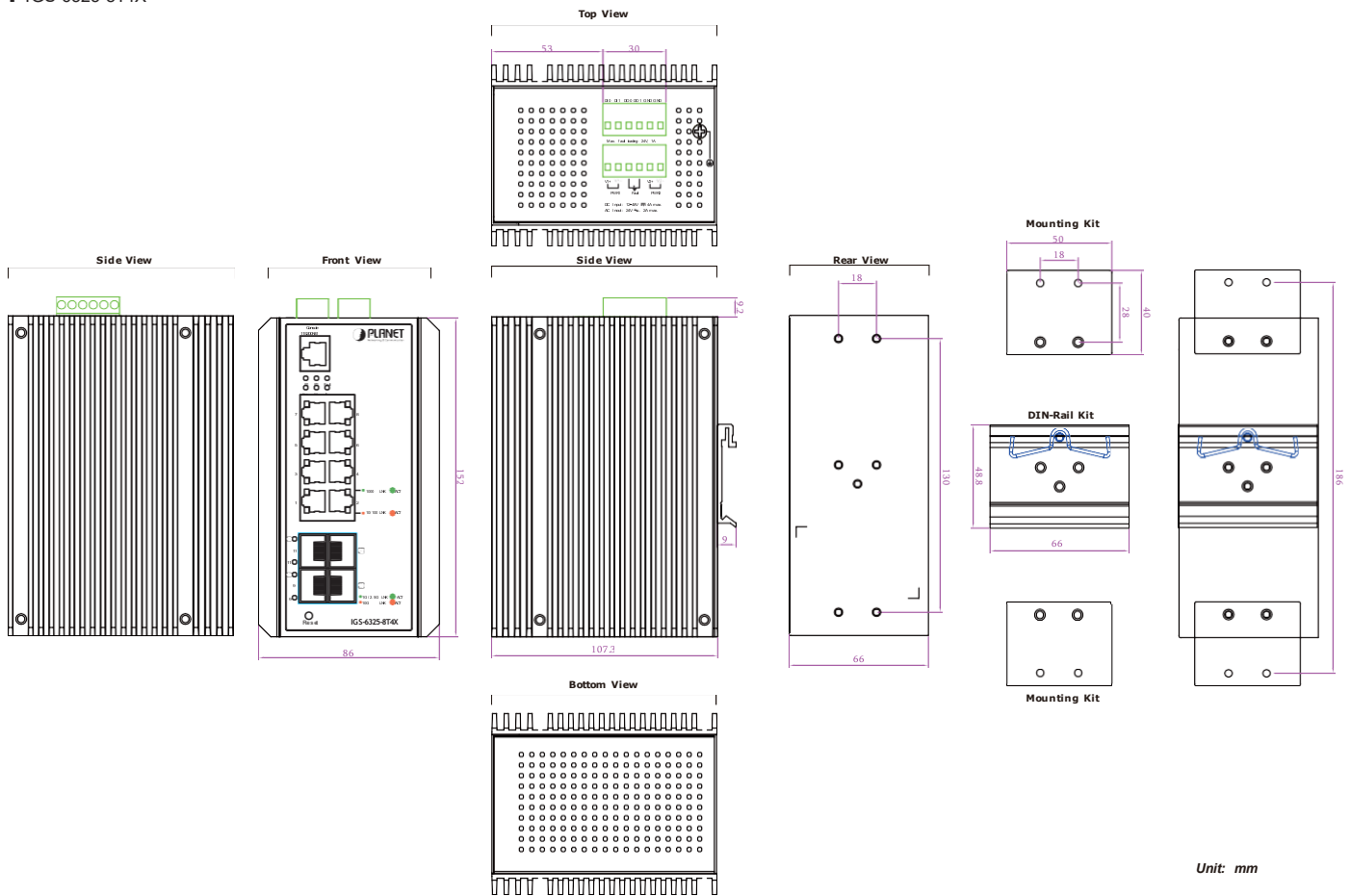
### IGS-6325-8T8S



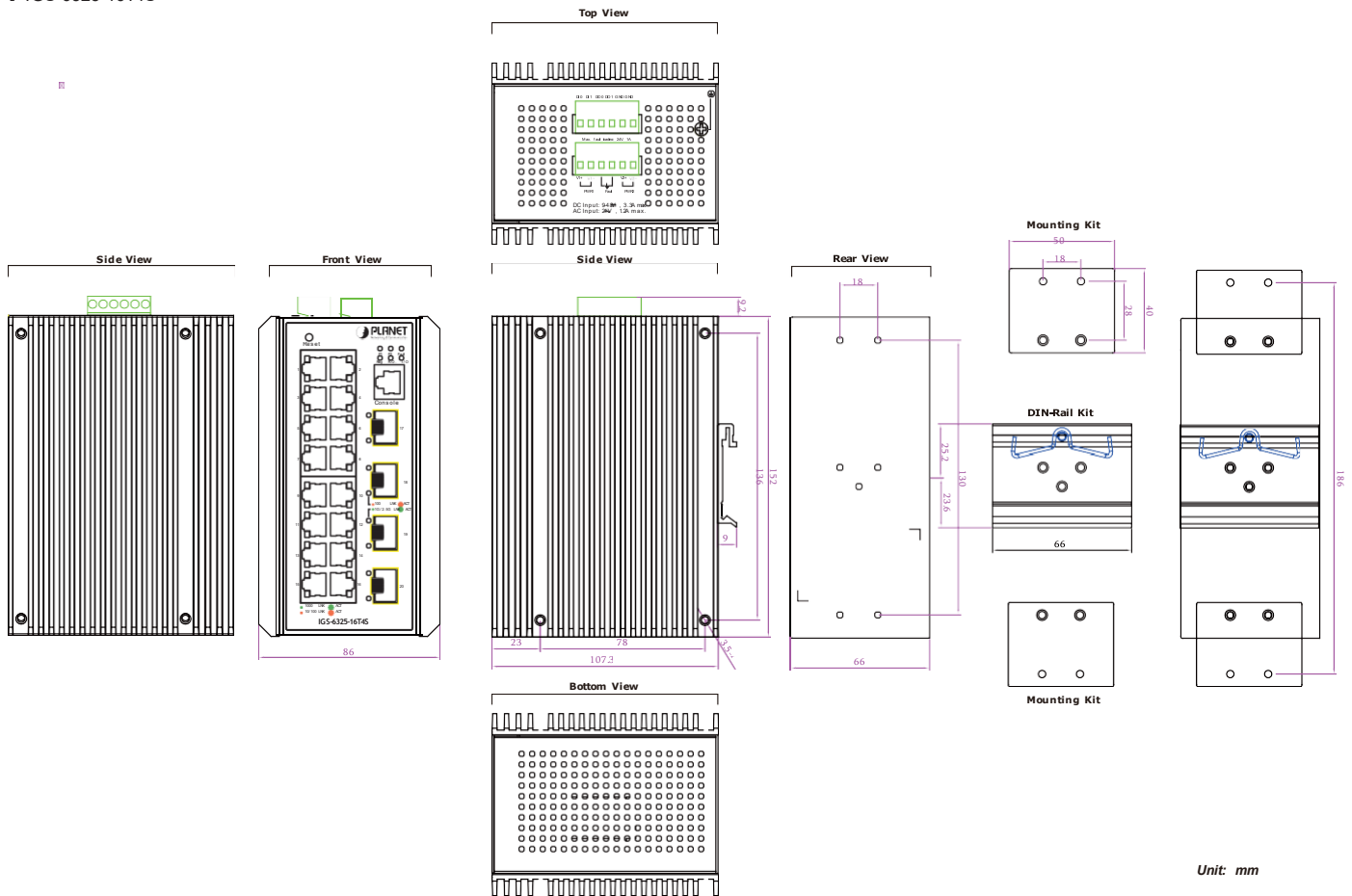
### IGS-6325-8T8S4X



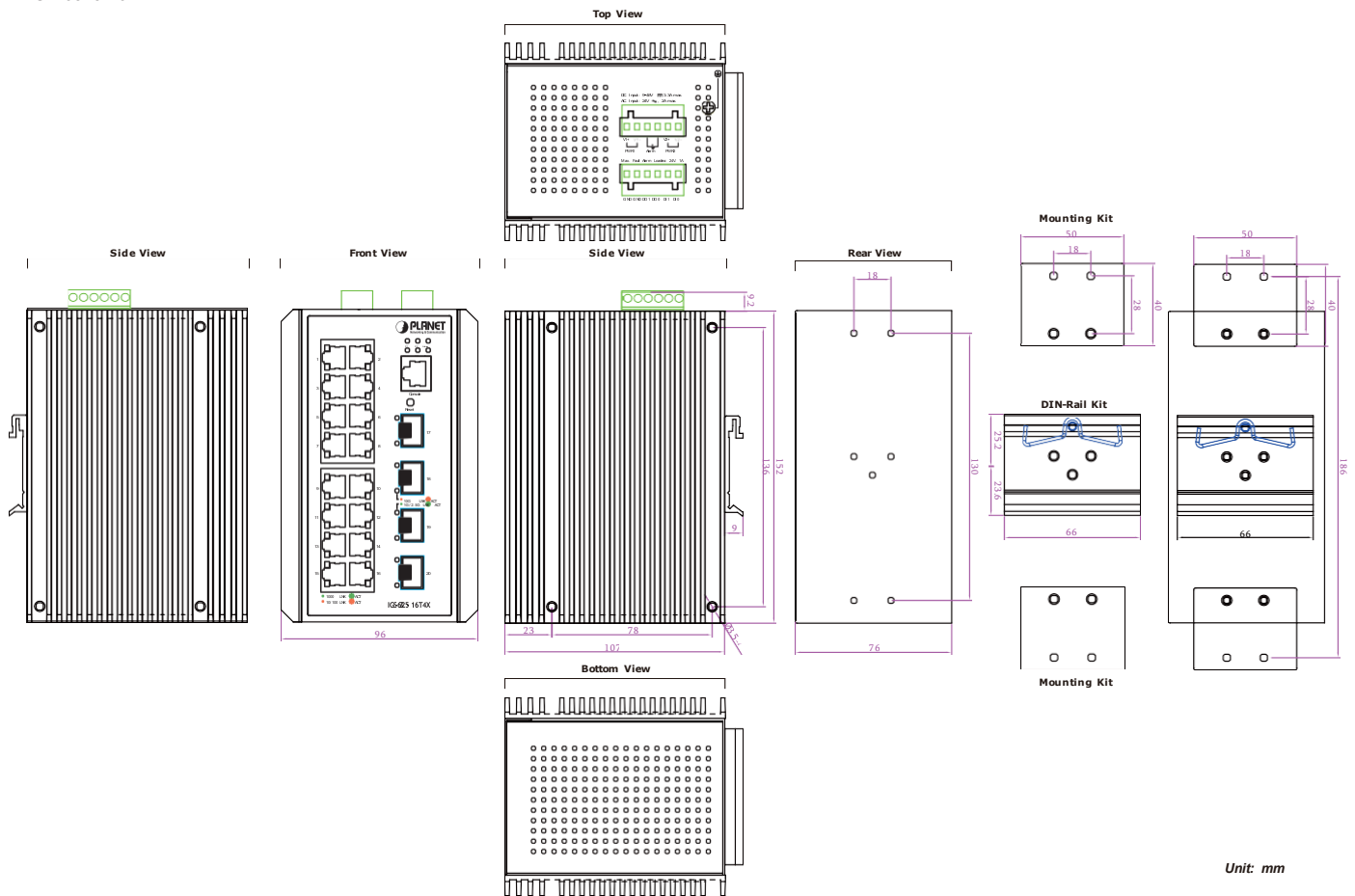
IGS-6325-8T4X



IGS-6325-16T4S



## IGS-6325-16T4X



## Ordering Information

|                 |                                                                                                  |
|-----------------|--------------------------------------------------------------------------------------------------|
| IGS-6325-8T8S   | Industrial L3 8-Port 10/100/1000T + 8-Port 1G/2.5G SFP Managed Ethernet Switch                   |
| IGS-6325-8T8S4X | Industrial L3 8-Port 10/100/1000T + 8-Port 1G/2.5G SFP + 4-Port 10G SFP+ Managed Ethernet Switch |
| IGS-6325-8T4X   | Industrial L3 8-Port 10/100/1000T + 4-Port 10G SFP+ Managed Ethernet Switch                      |
| IGS-6325-16T4S  | Industrial L3 16-Port 10/100/1000T + 4-Port 1G/2.5G SFP Managed Ethernet Switch                  |
| IGS-6325-16T4X  | Industrial L3 16-Port 10/100/1000T + 4-Port 10G SFP+ Managed Switch                              |

## Related Products

|                  |                                                                                                                   |
|------------------|-------------------------------------------------------------------------------------------------------------------|
| IGS-6325-16P4S   | Industrial L3 16-Port 10/100/1000T 802.3at PoE + 4-Port 1G/2.5G SFP Managed Ethernet Switch                       |
| IGS-6325-20T4C4X | Industrial L3 20-Port 10/100/1000T + 4-Port Gigabit TP/SFP + 4-Port 10G SFP+ Managed Ethernet Switch              |
| IGS-6325-20S4C4X | Industrial L3 14-Port 100/1G SFP with 4 Shared TP + 10-Port 1G/2.5G SFP + 4-Port 10G SFP+ Managed Ethernet Switch |
| IGS-6325-8UP2S2X | Industrial L3 8-Port 10/100/1000T 802.3bt PoE + 2-Port 100/1000X SFP + 2-Port 10G SFP+ Managed Ethernet Switch    |
| IGS-5225-8T2S2X  | Industrial L3 8-Port 10/100/1000T + 2-Port 100/1000X SFP + 2-Port 10G SFP+ Managed Ethernet Switch                |

## Available Modules for IGS-6325 DIN-rail series

|                          |                                                            |
|--------------------------|------------------------------------------------------------|
| CB-DASFP-0.5/2M          | 10G SFP+ Directly-attached Copper Cable (0.5/2M in length) |
| MTB-Series Module        | 10GBASE-LR/SR/BX/T Modules                                 |
| MGB2G-Series Transceiver | 2500BASE-SX/LX Transceiver                                 |
| MGB-Series Transceiver   | 1000BASE-SX/LX SFP Transceiver                             |
| MFB-Series Transceiver   | 100BASE-FX SFP Transceiver                                 |

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### IGS-6325 non-PoE Series

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