

Industrial L3 24-Port 10/100/1000T 802.3bt PoE + 4-Port 10G SFP+ Managed Ethernet Switch



Advanced Layer 3 Manageable PoE++ Solution for Harsh Environments

PLANET IGS-6325-24UP4X L3 Industrial Managed PoE++ Switch is a high-performance networking solution that provides 24 10/100/1000BASE-T 802.3bt PoE++ ports. Each port can deliver up to 95 watts of power. In addition, the switch has 4 10G SFP+ ports, all housed in a 19-inch 1U rack-mount case. With its 10Gbps uplink, this switch can handle extremely large amounts of data in a secure topology, linking to an industrial backbone or high-capacity servers.

The IGS-6325-24UP4X also has user-friendly yet advanced IPv6/IPv4 management interfaces, abundant L2/L4 switching functions, Layer 3 OSPFv2, v3 & RIPv2 dynamic routing capability, and advanced ITU-G.8032 ERPS Ring technology to improve the rapid self-recovery capability. Furthermore, PLANET intelligent PoE functions enable controlling the PoE IP surveillance and wireless network applications. The switch is designed to operate reliably, stably, and quietly within a temperature range of -40 to 75 degrees Celsius.



High Power and Full-speed Data Delivered over 4-pair UTP Cabling

The IGS-6325-24UP4X meets the standards of IEEE 802.3bt PoE++ technology and has a total power capacity of 1440 watts. This allows it to supply up to 95 watts of power to each remote PoE-compliant powered device (PD) using all four pairs of standard Cat5e/6 Ethernet cabling, ensuring high power and full-speed data delivery. Compared to the conventional 802.3at PoE+, it offers triple power capacity, making it the perfect solution for higher power consuming PDs, including:

- PoE PTZ speed dome cameras
- Network devices
- Thin clients
- AIO (all-in-one) touch PCs, point of sale (POS) and information kiosks
- Remote digital signage displays
- PoE lightings

Physical Port

- 24 10/100/1000BASE-T Gigabit Ethernet RJ45 ports with IEEE 802.3bt PoE++ injector function
- 4 10GBASE-SR/LR SFP+ slots, backward compatible with 1G/2.5GBASE-X SFP
- One RJ45-to-RS232 console interface for basic management and setup

IEEE 802.3bt Power over Ethernet

- Compliance with IEEE 802.3bt Type-4 PoE++ standard
- Backward compatibility with IEEE 802.3af/at PD device
- Power up to 24 IEEE 802.3bt PoE++ devices (60W) using dual power input
- Each port has a maximum power output of 95 watts (Using the maximum amount may reduce the number of available ports.)
- Total of 1440-watt PoE budget
 - A single power input can provide a power budget of up to 720W.
 - Two power inputs can provide a power budget of up to 1,440W.
- Detects powered devices (PD) automatically.
- Circuit protection prevents power interference between ports.
- Power feeding up to 100m
- PoE management features
 - Total PoE power budget control
 - Per port PoE function enable/disable
 - PoE admin-mode control
 - PoE port power feeding priority
 - Per PoE port power limit
 - PD classification detection
 - PoE extension mode to support power feeding up to a maximum distance of 160 meters.
- Intelligent PoE features
 - Temperature threshold setting
 - PoE usage threshold setting
 - PD alive check



802.3bt PoE++ and Advanced PoE Power Output Mode Management

To meet the demand for supplying stable PoE power to various powered devices, the IGS-6325-24UP4X switch offers five different PoE power output modes for selection.

- 90W 802.3bt PoE++ Power Output Mode
- 95W UPOE Power Output Mode
- 95W Force Power Output Mode
- 36W End-span PoE Power Output Mode
- 36W Mid-span PoE Power Output Mode

ONVIF Support Allows Effective and Centralized Control Over IP-based Security Products

The IGS-6325-24UP4X switch offers ONVIF support as part of its versatile feature set for seamless integration with IP surveillance cameras. Through the switch's web GUI, users can easily search for and display all ONVIF-compliant devices on their LAN.

Users can also upload floor plans to the switch and place IP surveillance cameras on the plan for more intuitive planning and faster inspection in the future. Additionally, the web GUI provides real-time surveillance information, online/offline status, and the ability to remotely reboot cameras.



Intelligent Alive Check for Powered Devices

The IGS-6325-24UP4X can be configured to monitor the status of connected powered devices (PDs) in real time through ping action. If a PD stops working and responding, the IGS-6325-24UP4X will recycle the PoE port power and bring the PD back to working condition. This greatly enhances reliability, as the assigned PoE port automatically reboots the PD, reducing the administrator's management burden.

- PoE schedule

Industrial Protocol

- Modbus TCP for real-time monitoring in the SCADA system
- Supports IEEE 1588v2 PTP (Precision Time Protocol) transparent clock mode.

Industrial Design and Installation

- The IP30 metal housing is designed to be rack-mountable in a 19-inch rack.
- The front-accessible and fan-less design enables convenient access and quiet operation.
- Dual 48-54V DC power input with reverse polarity protection
- -40 to 75 degrees C operating temperature

Digital Input and Digital Output

- 2 digital inputs (DI)
- 2 digital outputs (DO)
- Integrate sensors into auto alarm system
- Transfer alarms to IP networks via email and SNMP trap

Layer 3 IP Routing Features

- IPv4 dynamic routing protocol supports RIPv1/v2 and OSPFv2
- IPv6 dynamic routing protocol supports OSPFv3.
- 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/Unicast
- Supports VLAN
 - IEEE 802.1Q tagged VLAN
 - Provider Bridging (VLAN Q-in-Q/IEEE 802.1ad)
 - Private VLAN Edge (PVE)
 - Protocol-based VLAN
 - MAC-based VLAN

PD Alive Check



PoE Scheduling to Save Energy

By implementing the "PoE schedule" function, businesses can reduce their energy consumption during non-business hours or periods of low network usage. This not only helps to reduce energy costs but also minimizes the overall carbon footprint of the organization.

Furthermore, the IGS-6325-24UP4X's PoE scheduling feature provides a convenient and easy-to-use interface for managing power usage. The user can easily set the time intervals for each PoE port, allowing for more efficient power management.



Scheduled Power Recycling

The IGS-6325-24UP4X enables connected PoE IP cameras or PoE wireless access points to reboot at a specific time each week. This will reduce the chance of IP camera or AP crashes resulting from buffer overflow.



Layer 3 Routing Support

The IGS-6325-24UP4X allows administrators to boost network efficiency by configuring Layer 3 IPv4/IPv6 VLAN static routing manually or automatically through the Routing Information Protocol (RIP) or Open Shortest Path First (OSPF) settings.

- 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
 - IEEE 802.3ad Link Aggregation Control Protocol (LACP)
 - Cisco ether-channel (static trunk)
 - Maximum 14 trunk groups with 16 ports per trunk group
 - Up to 104Gbps bandwidth (duplex mode)
- Supports port mirroring for many-to-one connections.
- Port mirroring to monitor the incoming or outgoing traffic on a particular port.
- Loop protection to avoid broadcast loops
- Link Layer Discovery Protocol (LLDP)
- Supports ITU G.8032 ERPS Ring (Ethernet Ring Protection Switching).
- Compatible with Cisco's uni-directional link detection (UDLD), which 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.

Quality of Service

- Ingress shaper and egress rate limit per port bandwidth control
- 8 priority queues on all switch ports
- Traffic classification
 - 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
- Supports QoS and In/Out bandwidth control on each port
- Traffic-policing on the switch port
- DSCP remarking
- Voice VLAN

The RIP uses hop count as a routing metric and prevents routing loops by setting a limit on the number of hops allowed in a path from source to destination.

The OSPF is an interior dynamic routing protocol for autonomous systems based on link state. The protocol creates a database of link states 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.

Reliable 10Gb Ethernet Solution

The emergence of 10G Ethernet marks a significant advancement in Ethernet technology. The IGS-6325-24UP4X is a powerful networking device that offers four 10G SFP+ slots capable of supporting three different speeds. These slots can operate at 10GBASE-SR/LR or 1G/2.5GBASE-SX/LX backwards, providing administrators with flexibility in choosing the most suitable SFP/SFP+ transceiver based on the required transmission distance and speed. With ample bandwidth and robust processing capacity, the IGS-6325-24UP4X provides an efficient solution for administrators seeking to enhance their network infrastructure.

Cybersecurity Network Solution to Minimize Security Risks

The IGS-6325-24UP4X supports SSHv2 and TLSv1.2 protocols to provide strong protection against advanced threats. It includes a range of cybersecurity features such as DHCP Snooping, IP Source Guard, ARP Inspection Protection, 802.1x port-based, and MAC-based network access control, RADIUS and TACACS+ user accounts management, SNMPv3 authentication, and more to provide a comprehensive security solution.



Redundant Ring, Fast Recovery for Critical Network Applications

The IGS-6325-24UP4X 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 dual 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.



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)

Security

- Authentication
 - IEEE 802.1x port-based / MAC-based network access authentication
 - IEEE 802.1x authentication with guest VLAN
 - Guest VLAN assigns clients to a restricted VLAN with limited services
 - Built-in RADIUS client to co-operate with the RADIUS servers
 - TACACS+ login users access authentication
 - RADIUS/TACACS+ users access authentication
- Access Control List
 - IP-based Access Control List (ACL)
 - MAC-based Access Control List
- Source MAC/IP address binding
- DHCP Snooping to filter un-trusted 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 inet Command Line Interface
 - HTTP/HTTPS 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)

Effective Alarm Alert for Better Protection

The IGS-6325-24UP4X supports a Fault Alarm feature that can alert users when there is an issue with the switches. This feature saves time and resources by quickly identifying the problem, eliminating the need for laborious troubleshooting efforts.

Fault Alarm Feature



Digital Input and Digital Output for External Alarm

The IGS-6325-24UP4X supports digital input and output on its front panel. These features allow users to detect and log the status of external devices, such as door intrusion detectors, using digital input. It also enables the sending of an event alarm to administrators. Digital output can be used to alert administrators when the IGS-6325-24UP4X experiences a link down, link up, or power failure.

Digital Input



Digital Output



Robust Layer 2 Features

The IGS-6325-24UP4X is capable of advanced Layer 2 switch management functions, including 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. By aggregating supporting ports, the IGS-6325-24UP4X can operate up to 14 high-speed trunk groups with up to 16 ports, with fail-over support.



- 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/TFTP
 - Reset button for system reboot or reset to factory default
 - Dual Images
- DHCP Functions:
 - DHCP Relay
 - DHCP Option82
 - DHCP Server
- User Privilege levels control
- Network Time Protocol (NTP)
- Network Diagnostic
 - SFP-DDM (Digital Diagnostic Monitor)
 - ICMPv6/ICMPv4 Remote Ping
 - Cable diagnostic technology provides the mechanism to detect and report potential cabling issues
- SMTP/Syslog remote alarm
- System Log
- PLANET Smart Discovery Utility for deployment management
- PLANET UNI-NMS (Universal Network Management) and CloudViewer app for deployment management

Modbus TCP Provides Flexible Network Connectivity for Factory Automation

With the supported Modbus TCP/IP protocol, the IGS-6325-24UP4X 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 and communication status, thus easily achieving enhanced monitoring and maintenance of the entire factory.

1588 Time Protocol for Industrial Computing Networks

The IGS-6325-24UP4X is ideal for implementing Precision Time Protocol (PTP) applications as a transparent clock. It can play an important role in an IEEE 1588 and Synchronous Ethernet network by supporting MEF service delivery and timing over packet solutions.

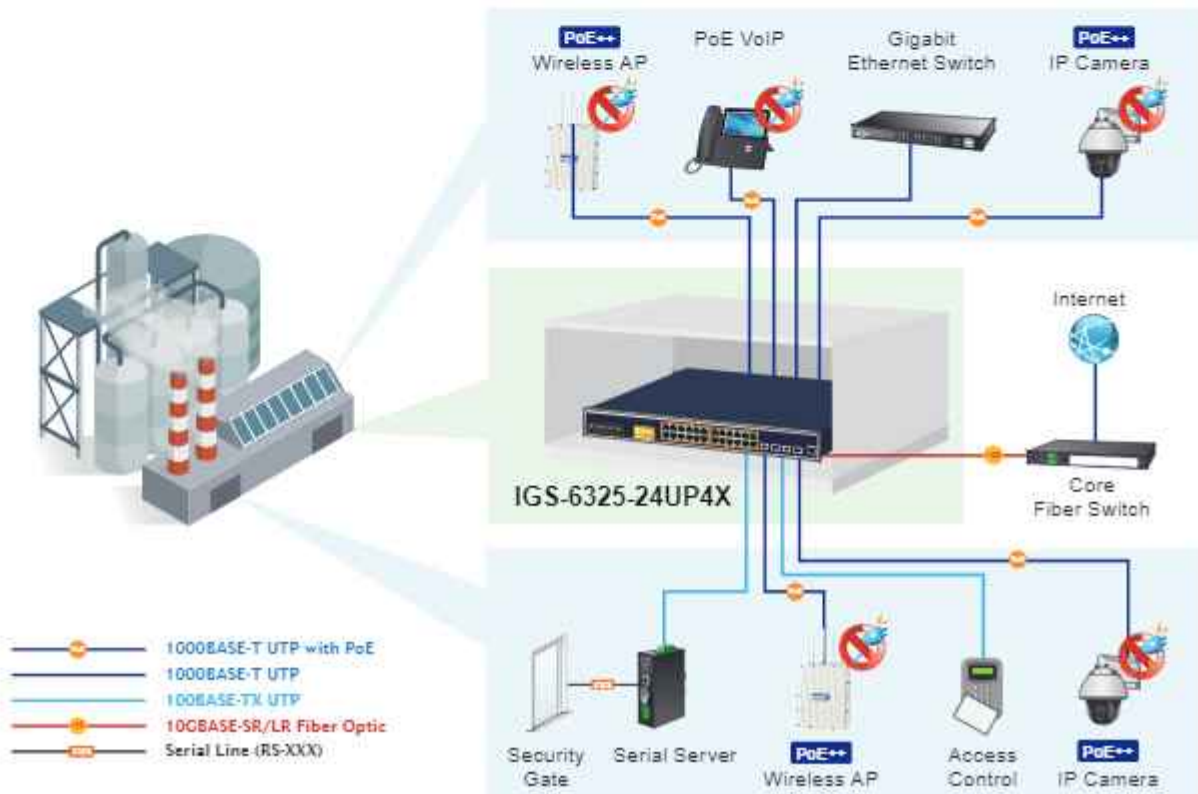
Time Synchronization in Network



Applications

Industrial Area Department/Workgroup PoE Switch

The IGS-6325-24UP4X offers up to 24 in-line power interfaces for PoE++, enabling the creation of a centrally controlled power system for IP phones, IP surveillance cameras, wireless AP groups, or a large number of access control access control systems for security purposes in industrial networks. With no limitations on power sockets, the IGS-6325-24UP4X simplifies the installation process for IP cameras or wireless APs, making it more efficient.



Specifications

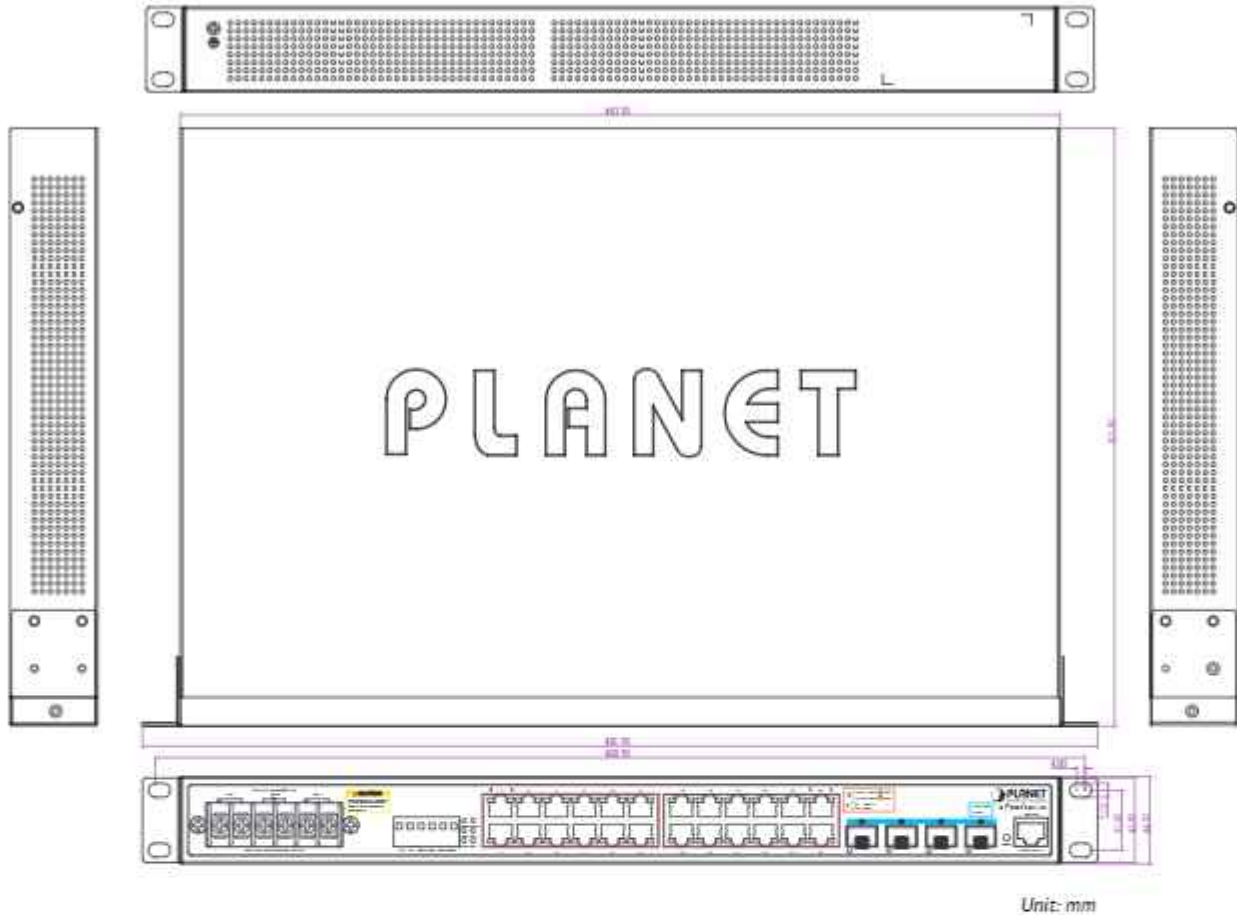
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|---------------------------------|--|
| PoE Power Output | IGS-6325-24UP4X |
| Hardware Specifications | |
| Copper Ports | 24 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports |
| SFP+ Slots | 4 10GBASE-SR/LR SFP+ interfaces (Port-25 to Port-28) Backward compatible with 1G/2.5GBASE-SX/LX/BX SFP transceivers |
| PoE Injector Port | 24 ports with 802.3bt PoE++ injector function from Port-1 to Port-24 |
| Console | 1 x RJ45-to-RS232 serial port (115200, 8, N, 1) |
| Reset Button | < 5 sec: System reboot > 5 sec: Factory default |
| ESD Protection | Contact 4KVDC; Air 8KVDC |
| Connector | 6-contact barrier terminal block for power input Contact 1/2 for Power 1, Contact 3/4 for fault alarm, Contact 5/6 for Power 2. Removable 6-pin terminal block for DI/DO interface Pin 1/2 for DI 0 & 1, Pin 3/4 for DO 0 & 1, Pin 5/6 for GND |
| Alarm | One relay output for power failure. Alarm relay current carry ability: 3A @ 24V DC |
| Digital Input (DI) | 2 digital input (DI): Level 0: -24V~2.1V ($\pm 0.1V$) Level 1: 2.1V~24V ($\pm 0.1V$) Input load to 24VDC, 10mA max. |
| Digital Output (DO) | 2 digital output (DO): Open collector to 24V DC, 100mA max. |
| Enclosure | IP30 metal case |
| Installation | Rack-mount kit |
| SDRAM | 512Mbytes |
| Flash Memory | 64Mbytes |
| Dimensions (W x D x H) | 440 x 300 x 44 mm, 1U height |
| Weight | 4,051g |
| Power Requirements | Dual 48~54V DC, 32A max. |
| Power Consumption | 52VDC Input: No Loading: 20.74W/70.8BTU/hr; Full Loading: 1,522W/5,262.9BTU/hr 54VDC Input: No Loading: 20.78W/70.9BTU/hr; Full Loading: 1,522W/5,193.3BTU/hr |
| LED Indicators | System: DC 1 (Green) DC 2 (Green) Alarm (Red) Ring (Green) Ring Owner (Green) DIDG (Red) 10/100/1000T RJ45 PoE++ Interfaces (Port 1 to Port 24): bt PoE++ (Green) af/at PoE (Amber) 1000 LNK/ACT (Green) 100 LNK/ACT (Amber) 1G/2.5G/10Gbps Fiber Interfaces (Port 25 to Port 28): 1G/2.5Gbps LNK/ACT (Green) 10Gbps LNK/ACT (Amber) |
| Switching Specifications | |
| Switch Architecture | Store-and-Forward |
| Switch Fabric | 128Gbps/non-blocking |
| Throughput (packet per second) | 95.2Mpps@ 64 bytes packet |
| Address Table | 16K entries, automatic source address learning and aging |
| Shared Data Buffer | 32M bits |
| Flow Control | IEEE 802.3x pause frame for full duplex Back pressure for half duplex |
| Jumbo Frame | 10K bytes |
| Power Over Ethernet | |
| PoE Standard | IEEE 802.3bt PoE++ Type-4 |
| PoE Power Supply Type | End-span Mid-span BT |

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| PoE Power Output | Per port 48V ~ 54VDC - 802.3bt Type-4 mode: maximum 95 watts - 802.3bt Type-3 mode: maximum 60 watts - End-span mode: maximum 38 watts - Mid-span mode: maximum 38 watts - Force mode: maximum 95 watts |
| Power Pin Assignment | 802.3bt/UPoE: 1/2(-), 3/6(+), 4/5(+), 7/8(-) 802.3at PoE: End-span: 1/2(-), 3/6(+) 802.3at PoE: Mid-span: 4/5(+), 7/8(-) |
| PoE Power Budget | Single power input: 720W maximum (depending on power input) Dual power input: 1,440W maximum (depending on power input) Note: The DC voltage of the dual power input must match, such as dual 54V. |
| Number of 90W 802.3bt Type-4 PDs | 16 |
| Number of 60W 802.3bt Type-3 PDs | 24 |
| Number of 30W 802.3at Type-2 PDs | 24 |
| PoE Management Functions | |
| Enhanced PoE Mode | Standard/Legacy/Force |
| PoE Management | PD Alive Check Scheduled Power Recycling PoE Schedule PoE Usage Monitoring PoE Extension |
| Active PoE Device Live Detection | Yes |
| PoE Power Recycling | Yes, daily or predefined schedule |
| PoE Schedule | 4 schedule profiles |
| PoE Extend Mode | Yes, max. up to 160 meters |
| Layer 3 Function | |
| IP Interfaces | Max. 128 VLAN interfaces |
| Routing Table | Max. 128 static routing entries Max. 4K routing table entries |
| Routing Protocols | IPv4 RIPv1/v2 dynamic routing IPv4 OSPFv2 dynamic routing IPv6 OSPFv3 dynamic routing IPv4 hardware static routing IPv6 hardware static routing |
| Layer 2 Function | |
| Port Configuration | Port disable/enable Auto-negotiation 10/100/1000Mbps full and half duplex mode selection Flow control disable/enable 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 Many-to-1 monitor RMirror – Remote Switched Port Analyzer (Cisco RSPAN) Supports up to 5 sessions |
| VLAN | IEEE 802.1Q tag-based VLAN IEEE 802.1ad Q-in-Q tunneling Private VLAN Edge (PVE) MAC-based VLAN Protocol-based VLAN Voice VLAN MVR (Multicast VLAN Registration) GVRP (GARP VLAN Registration Protocol) Up to 4K VLAN groups, out of 4096 VLAN IDs |
| Link Aggregation | IEEE 802.3ad LACP/static trunk Supports 14 trunk groups with 16 ports per trunk group |
| Spanning Tree Protocol | IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.1s Multiple Spanning Tree Protocol Supports 7 MSTP instances BPDU Guard, BPDU filtering and BPDU transparent Root Guard |

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|------------------------------|---|
| IGMP Snooping | IPv4 IGMP (v1/v2/v3) snooping IPv4 IGMP querier mode support Up to 2K multicast groups |
| MLD Snooping | IPv6 MLD (v1/v2) snooping IPv6 MLD querier mode support Up to 512 multicast groups |
| Bandwidth Control | Per port bandwidth control Ingress: 10Kbps~13000Mbps Egress: 100Kbps~13000Mbps |
| Ring | Supports ERPS, and complies with ITU-T G.8032 Recovery time < 10ms @ 3 nodes Recovery time < 50ms @ 18 nodes Supports Major ring and sub-ring |
| Synchronization | IEEE 1588v2 PTP (Precision Time Protocol) Peer-to-peer transparent clock End-to-end transparent clock |
| QoS | Traffic classification based, strict priority and WRR 8-level priority for switching - Port number - 802.1p priority - 802.1Q VLAN tag - DSCP/TOS field in IP packet |
| Security Functions | |
| Access Control List | IP-based ACL/MAC-based ACL ACL based on: MAC Address IP Address Ethertype Protocol Type VLAN ID DSCP 802.1p Priority Up to 512 entries |
| Security | Port security IP source guard, up to 512 entries Dynamic ARP inspection, up to 1K entries Command line authority control based on user level Static MAC address, up to 64 entries |
| AAA | RADIUS client TACACS+ client |
| Network Access Control | IEEE 802.1x port-based network access control MAC-based authentication Local/RADIUS authentication |
| Management | |
| Basic Management Interfaces | Console, Telnet, Web browser, SNMP v1, v2c |
| Secure Management Interfaces | SSHv2, TLSv1.2, SNMP v3 |
| System Management | Firmware upgrade by HTTP protocol through Ethernet network Configuration upload/download through HTTP Remote Syslog System log LLDP protocol NTP PLANET Smart Discovery Utility PLANET CloudViewer app |

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|------------------------------|--|
| SNMP MIBs | <p>RFC 1213 MIB-II</p> <p>RFC 1493 Bridge MIB</p> <p>RFC 1643 Ethernet MIB</p> <p>RFC 2863 Interface MIB</p> <p>RFC 2685 Ether-Like MIB</p> <p>RFC 2816 RMON MIB (Groups 1, 2, 3 and 9)</p> <p>RFC 2737 Entity MIB</p> <p>RFC 2618 RADIUS Client MIB</p> <p>RFC 2963 IF-MIB</p> <p>RFC 2933 IGMP-STD-MIB</p> <p>RFC 3411 SNMP-Frameworks-MIB</p> <p>RFC 4292 IP Forward MIB</p> <p>IEEE 802.1X FAE</p> <p>RFC 4293 IP MIB</p> <p>RFC 4836 MAU-MIB</p> <p>IEEE 802.1X FAE</p> <p>LLDP</p> <p>PowerEthernet MIB</p> |
| Standards Conformance | |
| Regulatory Compliance | <p>FCC Part 15 Class A</p> <p>CE:</p> <p>EN55032</p> <p>EN55035</p> |
| Standards Compliance | <p>IEEE 802.3 10BASE-T</p> <p>IEEE 802.3u 100BASE-TX/100BASE-FX</p> <p>IEEE 802.3z Gigabit SX/LX</p> <p>IEEE 802.3ab Gigabit 1000T</p> <p>IEEE 802.3ae 10Gigabit Ethernet</p> <p>IEEE 802.3x flow control and back pressure</p> <p>IEEE 802.3ad port trunk with LACP</p> <p>IEEE 802.1D Spanning Tree Protocol</p> <p>IEEE 802.1w Rapid Spanning Tree Protocol</p> <p>IEEE 802.1s Multiple Spanning Tree Protocol</p> <p>IEEE 802.1p Class of Service</p> <p>IEEE 802.1Q VLAN tagging</p> <p>IEEE 802.1ad Q-in-Q VLAN stacking</p> <p>IEEE 802.1X Port Authentication Network Control</p> <p>IEEE 802.1ab LLDP</p> <p>IEEE 802.3ah OAM</p> <p>IEEE 802.3af Power over Ethernet</p> <p>IEEE 802.3at Power over Ethernet Plus</p> <p>IEEE 802.3bt Power over Ethernet Plus Plus</p> <p>IEEE 1588 PTPv2</p> <p>RFC 788 UDP</p> <p>RFC 783 TFTP</p> <p>RFC 791 IP</p> <p>RFC 792 ICMP</p> <p>RFC 2068 HTTP</p> <p>RFC 1112 IGMP v1</p> <p>RFC 2236 IGMP v2</p> <p>RFC 3376 IGMP version 3</p> <p>RFC 2710 MLD version 1</p> <p>RFC 3310 MLD version 2</p> <p>RFC 2328 OSPF v2</p> <p>RFC 5340 OSPF v3</p> <p>RFC 2463 RIP v2</p> <p>ITU G.8032 ERPS Ring</p> |
| Environment | |
| Operating Temperature | -40 ~ 75 degrees C |
| Storage Temperature | -40 ~ 85 degrees C |
| Humidity | 5 ~ 95% (non-condensing) |

Dimensions



Ordering Information

| | |
|-----------------|---|
| IGS-6325-24UP4X | Industrial L3 24-Port 10/100/1000T 802.3at PoE + 4-Port 10G SFP+ Managed Ethernet Switch (-40~75 degrees C) |
|-----------------|---|

Related Products

| | |
|---|---|
| IGS-6325-24P4X | Industrial L3 24-Port 10/100/1000T 802.3at PoE + 4-Port 10G SFP+ Managed Ethernet Switch (-40~75 degrees C) |
| IGS-6325-24P4S | Industrial L3 24-Port 10/100/1000T 802.3at PoE + 4-Port Shared 100/1000X SFP Managed Ethernet Switch (-40~75 degrees C) |
| IGS-6325-16P4S | L3 Industrial 16-Port 10/100/1000T 802.3at PoE + 4-Port 100/1000X SFP Managed Ethernet Switch (-40~75 degrees C) |
| IGS-6325-20T4C4X | Industrial L2+ 20-Port 10/100/1000T + 4-Port TP/SFP Combo + 2-Port 10G SFP+ Managed Ethernet Switch (-40~75 degrees C) |
| IGS-6325-20S4C4X | Industrial L3 20-Port 100/1000X SFP + 4-Port Gigabit TP/SFP + 4-Port 10G SFP+ Managed Ethernet Switch |
| CB-DASFP-0.5/2M | 10G SFP+ Directly-attached Copper Cable (0.5/2M in length) |
| MTB Series Transceivers | 10GBASE-LR/SR/BX/T Modules |
| MGB-2G Series Transceivers | 2500BASE-X SFP Transceiver |
| MGB Series Transceivers | 1000BASE-SX/LX SFP Transceiver |
| MFB-Series Transceivers | 100BASE-FX SFP Transceiver |
| PWR-120-48/PWR-240-48/ PWR-480-48/PWR-960-48 | DC Single Output Industrial DIN-rail Power Supply Units |