8-Port 10/100/1000Mbps Managed Industrial Ethernet Switch

PLANET IGS-801M is an 8-Port 10/100/1000Mbps Industrial Gigabit Ethernet Switch with non-blocking wire-speed performance and new slim type with IP-30 metal shape for easy deployment in heavy industrial demanding environments.

High Gigabit Performance / Wire-Speed Switching

With a 16Gbps internal switching fabric and featuring 9K jumbo packet support in each Gigabit port, the IGS-801M Industrial Gigabit Ethernet Switch can handle extremely large amounts of data in a secure topology linking to a backbone or high capacity servers. The IGS-801M has 8K MAC address table and offers wire-speed packets transfer performance without risk of packet loss. The high data throughput of the device makes it ideal for most Gigabit environments.

Environmentally Hardened Design

With IP-30 industrial case protection, the IGS-801M provides a high level of immunity against electromagnetic interference and heavy electrical surges which are usually found on plant floors or in curb side traffic control cabinets. The IGS-801M also provides a wide range of power supply options suitable for multiple industries and for worldwide operation. The feature of operating temperature ranges from -10 to 60 degrees C allowing the Managed Industrial Switch to be placed in almost any difficult environment.

Robust Layer 2 Features

The IGS-801M supports robust advanced features including IEEE 802.1Q VLAN, port link aggregation, QoS, broadcast storm control, IGMP snooping enhanced security and bandwidth utilization to fit a variety of applications. Via aggregation of supporting port, the IGS-801M allows the operation of high-speed trunk combining multiple ports. A maximum of up to 4 ports of the IGS-801M can be assigned for 8 trunk groups and support fail-over as well. In addition, its standard-compliant implementation ensures well interoperability with equipments from other vendors.

Physical Port

- 8-port 10/100/1000Base-T RJ-45 copper interface

Layer 2 Features

- Supports auto negotiation and half-duplex / full-duplex modes for all 10Base-T/100Base-TX and 1000Base-T ports
- Auto-MDI/MDI-X detection on each RJ-45 port
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- High performance Store and Forward architecture, broadcast storm control, runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Backplane (Switching Fabric): 16Gbps
- 9K Jumbo packet size support
- 8K MAC Address Table
- VLANs
  - IEEE 802.1Q Tag-based VLAN
  - Up to 64 VLANs groups, out of 4096 VLAN IDs
  - Port-based VLAN
- Link Aggregation
  - Up to 4 trunk groups
  - Up to 8 ports per trunk group with 16Gbps bandwidth
  - IEEE 802.3ad LACP (Link Aggregation Control Protocol)
  - Cisco ether-channel (Static Trunk)
- Spanning Tree Protocol:
  - IEEE 802.1d classic Spanning Tree Algorithm
  - IEEE 802.1w Rapid Spanning Tree Protocol

Remote and Centralized Management

For efficient management, the IGS-801M is built with Web-based management design to offer a user-friendly configuration interface. To further expand the current network, the IGS-801M supports standard Simple Network Management Protocol (SNMP) and can be monitored via any standard-based management software. These features provide a cost-effective way to manage the devices from the Internet whenever you are at work or at home.

Fast Recovery to a Redundant Ethernet Network

The IGS-801M features strong and self-recovery capability to prevent interruptions and outside intrusions. It incorporates Rapid Spanning Protocol (IEEE 802.1w RSTP) and redundant power supply system into customers' industrial automation network to enhance system reliability and uptime in the harsh factory environments. It also protects customer's industrial network connectivity with switching recovery capability that is used for implementing fault tolerant ring and mesh network architectures.

Application

Industrial Area Manageable Switch for Data Collection and Forwarding

The IGS-801M offers high performance and high reliability to make sure the continuous industrial operation in harsh environments such as control cabinet of transportation, factory floors, outdoor space, and the places where the temperature is extremely low or high. With a non-blocking design and desktop size, the installation of PLANET IGS-801M 8-port Gigabit Managed Industrial Ethernet Switch is as easy as that of a Fast Ethernet network and it is helpful to build a Gigabit high-bandwidth switched network quickly.

To further expand the current network, the IGS-801M provides advanced WEB and SNMP management interface to fill this kind of demand. With its built-in web-based management, the IGS-801M offers an easy-to-use, platform-independent management and configuration facility. The IGS-801M supports standard Simple Network Management Protocol (SNMP) that makes the managed switch able to be monitored via any standard-based management software. With the IGS-801M, which complies with all the requirements of industrial applications, customers may enjoy high reliability, recovery capability, and safe Ethernet network operation.

Quality of Service
- 4 priority queues on all switch ports
- Traffic classification:
  - IEEE 802.1p CoS
  - IP TOS / DSCP
- Strict priority and Weighted Round Robin (WRR) CoS policies

Multicast
- IGMP Snooping v1 and v2
- IGMP Query mode for Multicast Media application
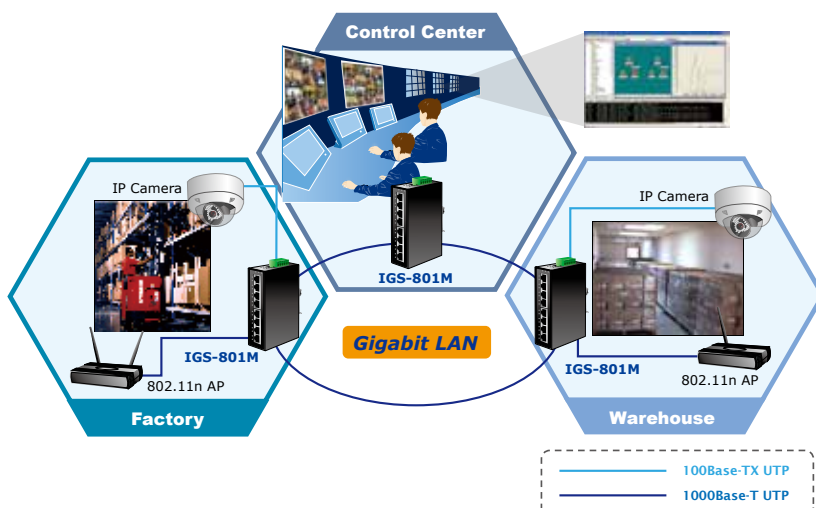
Security
- IEEE 802.1x Port-based Authentication
- Port Mirroring of the incoming or outgoing traffic on a particular port

Management
- Remote WEB-based management
- Access through SNMP v1, v2c
- SNMP Trap for alarm notification of events
- Firmware upgrade through web interface
- Cable Diagnostics technology
- Supports PLANET Smart-DISCOVERY Utility for deploy management

Industrial Case / Installation
- IP-30 aluminum case protection
- DIN rail and wall mount Design
- Redundant power design
- 12 to 48V DC, redundant power with polarity reverse protect function
- Supports EFT protection 6000 VDC for power line
- Supports 6000 VDC Ethernet ESD protection
- -10 to 60 degrees C operating temperature

Specifications

Model	IGS-801M
Hardware Specifications	
Copper Ports	8 10/100/1000Base-T RJ-45 auto-MDI/MDI-X ports
Switch Processing Scheme	Store and Forward
Switch Fabric	16Gbps
Throughput (packet per second)	11.9Mpps
Address Table	8K entries
Share Data Buffer	176 kilobytes on-chip frame buffer
Flow Control	IEEE 802.3x pause frame for full-duplex Back pressure for half-duplex
Jumbo Frame	9Kbytes

LED	System:
	    Power 1, Power 2, Fault Alarm
	Ports:
	    10/100 Link/Act
	    1000 Link/Act

Installation	DIN rail kit and wall mount ear
Power Supply	External power supply: DC 12~48V Redundant power DC 12~48V and connective removable terminal block for master and slave power
Power Consumption	8.2 watts (Full load)
Case Dimensions (W x D x H)	IP-30, 135 x 87 x 32 mm
Weight	473g
Layer 2 Function	
System Configuration	Web Browser, SNMPv1, v2c monitor, SNMP Trap
Port Configuration	Port disable / enable Auto negotiation 10/100/1000Mbps full and half duplex mode selection Flow control disable / enable
VLAN	802.1Q Tagged based VLAN, up to 64 VLAN groups Port-based VLAN, up to 8 VLAN groups
Port Trunking	IEEE 802.3ad LACP / Static Trunk Support 4 groups of 8-port trunk support
QoS	Traffic classification based, strict priority and WRR 4-level priority for switching - 802.1p priority - DSCP/TOS field in IP Packet
IGMP Snooping	IGMP (v1/v2) snooping, up to 256 multicast Groups IGMP querier mode support
Storm Control	▪ Broadcast storm control ▪ Multicast storm control ▪ Flooded unicast storm control
SNMP MIBs	RFC-1213 MIB-II IF-MIB RFC-1493 Bridge MIB RFC-2863 Interface MIB Q-Bridge MIB RMON Group 1 statistics
Standards Conformance	
Regulation Compliance	FCC Part 15 Class A, CE
Standards Compliance	IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX/100Base-FX IEEE 802.3z Gigabit SX/LX IEEE 802.3ab Gigabit 1000T IEEE 802.3x flow control and back pressure IEEE 802.3ad port trunk with LACP IEEE 802.1d spanning tree protocol IEEE 802.1w rapid spanning tree protocol IEEE 802.1p class of service IEEE 802.1Q VLAN tagging IEEE 802.1x port authentication network control

Stability testing	IEC60068-2-32(Free fall) IEC60068-2-27(Shock) IEC60068-2-6(Vibration)	
Standards Conformance		
Operating	Temperature:	-10~60 degrees C
	Relative Humidity:	5~90% (non-condensing)
Storage	Temperature:	-40~85 degrees C
	Relative Humidity:	5~90% (non-condensing)

Ordering Information

| IGS-801M | 8-Port Gigabit Managed Industrial Ethernet Switch |

C-IGS-801M