Network Transmission

24-port Fast Ethernet Layer 2+ Managed PoE Switch

Overview

GE's 24-port Fast Ethernet Managed PoE Switch is now IFS. Designed to provide fast and efficient connectivity from the network edge to a backbone switch or server, the IFS 24-port Fast Ethernet Managed PoE Switch features 24 10/100Mbs Ethernet ports with full power isolated PoE ports along with 2 uplink Gigabit TP/SFP combo ports.

Robust Layer 2+ Features

For efficient switch management, the IFS 24-port Fast Ethernet Managed PoE Switch is easily programmed for all switch management functions, via a simple, yet powerful set of built-in Web services. This switch can be easily programmed for all switch management functions such as Port Speed Configuration, Port Link Aggregation, IEEE 802.1Q VLAN and Q-in-Q VLAN, Port Mirroring, Rapid Spanning Tree and ACL security. The switch also includes advanced features such as Multicasting with IGMP snooping and query, QoS (Quality of Service), broadcast storm and bandwidth control to enhance bandwidth utilization.

These switches support standard Simple Network Management Protocol (SNMP) and include an advance SNMP feature set to monitor the status of the switch and traffic per port. The switch can also be monitored via any standards-based SNMP management software.

Engineered for Real-time Performance

This switch is designed with a high-performance switch architecture capable of providing a non-blocking switch fabric with throughput as high as 8.8 Gbps. To ensure optimum quality of service, the IFS 24-port Fast Ethernet Managed PoE Switch classifies and prioritizes Layer 2 802.1p or Layer 3 IP TOS/DSCP traffic into four hardware queues that support strict or Weighted Round Robin (WRR) queuing algorithms. This functionality provides maximum allocation of limited network resources and guarantees best performance for real-time applications.

Full Power Isolated per Port PoE

Featuring IEEE 802.3af Power over Ethernet (PoE), this switch provides optimized deployment and safe power management of edge devices such as IP Surveillance cameras, access control panels, wireless access points (WAP) and Voice over IP (VoIP). Full power PoE is provided to all 24 ports with no power sharing, and added port circuit protection isolates and prevents power interference between ports.

Advanced Security

This switch also offers comprehensive Layer 3 and Layer 4 Access Control List (ACL) to filter out unwanted traffic. Its protection mechanisms are comprised of RADIUS and Port-Based 802.1x user and device authentication. In addition, the switch provides MAC filter, Static MAC, IP/MAC binding and Port Security for enforcing security policies to the edge. With IFS enterprise-class switches, a network administrator can now construct a highly secure network with considerably less time and effort.

GE-DS-242-PoE 24-port Fast Ethernet Layer 2+ Managed PoE Switch

GE-DS-242-PoE

Standard Features

Physical Ports

- 24-Port 10/100Base-TX RJ-45 with PoE Injector
- 2-Uplink Gigabit TP/SFP combo ports
- 1 RS-232 male DB9 console port
- Auto-MDI/MDI-X detection
- Auto-negotiation
- Supports full-duplex/half-duplex modes

High-performance Switch Architecture

- Complies with the IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z standards
- High performance Store and Forward architecture, broadcast storm control, runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- 8.8 Gbps non-blocking switch fabric
- 9K bytes Jumbo frame support
- 8K MAC address table, automatic source address learning and aging

Full Multicast Support for IP Video

- IGMP Snooping v1 and v2 fast leave
- IGMP Query mode support
- Up to 256 multicast groups

VLAN Support

- IEEE 802.1Q Tag-Based VLAN
- Up to 255 VLANs groups, out of 4096 VLAN IDs
- Port-Based VLAN
- Q-in-Q tunneling (Double Tag VLAN)

Spanning Tree Protocol

- STP, IEEE 802.1D (Spanning Tree Protocol)
- RSTP, IEEE 802.1w (Rapid Spanning Tree Protocol)

Quality of Service (QoS)

- 4 priority queues on all switch ports
- Traffic classification:
  - IEEE 802.1p Class of Service
  - IP TOS/DSCP code priority
  - Port Base priority
- Strict priority and weighted round robin (WRR) CoS policies
- Ingress/Egress Bandwidth Control on each port

Power over Ethernet (PoE)

- Complies with IEEE 802.3af Standard
- 380 Watt power budget
- Auto-detects PoE powered devices (PD)
- Provides full-power (15.4W) PoE on each port - no port sharing
- Circuit protection isolates and prevents power interference between ports
- End-Span (PSE) configuration supplies power up to 100m
- PoE Management features:
  - Total power budget control
  - Per port control (enable/disable, priority, power limit)
  - PD classification detection
  - Power Supply Over temperature Protection

Link Aggregation

- IEEE 802.3ad LACP (Link Aggregation Control Protocol)
- Up to 13 Trunk groups
- Up to 8 ports per Trunk group with 1.6Gbps bandwidth (Full Duplex mode)
- Supports Cisco ether-Channel (Static Trunk)

Advanced Security

- IEEE 802.1x Port-based authentication
- RADIUS users access authentication
- Layer 3 and Layer 4 Access Control List (ACL)
- MAC Filtering and Source IP/MAC address port-binding
- Port Mirroring to monitor incoming or outgoing traffic on a particular port

Switch Management

- Local console or remote switch management via Web browser, Telnet CLI, SNMP v1, v2c
- SNMP Trap for alarm notification of events
- Four RMON groups 1, 2, 3, 9 (history, statistics, alarms and events)
- Built-in Trivial File Transfer Protocol (TFTP) client
- Configuration upload/download via TFTP or HTTP
- Firmware upgrade via TFTP or HTTP
- Supports Ping function
- Reset button for system management

Warranty

- 3-year Limited Warranty

Specifications

Physical Ports	
10/100Base-T(x) Ports	RJ-45 (24)
GigE Combo Uplink Ports	RJ-45 (Ports 25 and 26) 10/100/1000Mbps; SFP/Mini-GBIC Slots (Shared with Ports 25 and 26) 1000Base-SX/LX/BX
Port Configuration	Auto MDI/MDI-X
Port Speed	Auto-negotiate
Switch Performance	
Switch Architecture	Store-and-Forward
Switch Fabric	8.8Gbps (non-blocking)
Switch Throughput	6.547Mpps @ 64Bytes
MAC Address Table	8K entries
Share Data Buffer	512Kbytes
Maximum Frame Size	9K Bytes
Flow Control	Back pressure for Half-Duplex IEEE 802.3x Pause Frame for Full-Duplex
Layer 2+ Functions	
Management Interface	Console, telnet, Web browser, SSL, SNMPv1 and v2c
Port Configuration	Port enable/disable Auto-negotiation 10/100Mbps full-and-half duplex mode selection Flow control enable/disable
Port Status	Display each port's speed duplex mode, link status and flow control status. Auto negotiation status, trunk status
Port Mirroring	TX/RX/Both; 1 to 1 monitoring
Bandwidth Control	Ingress/Egress rate control: configure per 128Kbps
VLAN	IEEE 802.1q tagged-based VLAN Port-based VLAN Q-in-Q tunneling Up to 255 VLANs groups, out of 4041 VLAN IDs
Link Aggregation	Supports 13 groups of 8-port trunk, IEEE 802.3ad LACP
Quality of Service (QoS)	Traffic classification based on: - Port priority - 802.1p priority - TOS/DSCP field in IP Packet
Multicasting/IGMP	IGMP (v1/v2) Snooping IGMP Query Up to 256 multicast groups
Access Control List	IP-based Layer 3/Layer 4 ACL Up to 220 ACL rule entries
SNMP MIBs	RFC-1213 MIB-II RFC-2863 Interface MIB RFC-2665 EtherLike MIB RFC-1493 Bridge MIB RFC-2819 RMON MIB (Group 1, 2, 3,9) RFC-2737 Entity MIB POWER-ETHERNET-MIB
Power over Ethernet	
PoE Standard	IEEE 802.3af
PoE Power Supply Type	End-Span (PSE)
PoE Power Budget	380 Watts
Max. number of Class 2 PD	24
Max. number of Class 3 PD	24
PoE Power Output Per Port	48V DC, 350 mA; 15.4 watts max.
Power Pin Assignment	1/2(+), 3/6(-)

LED Indicators & Switch	
Power	On/Green
10/100Base-TX/PoE Ports (24)	10/100 LNK/ACT - Green; PoE in Use - Amber
10/100/1000Base-T/SFP Ports	100 LNK/ACT - Green; 1000 LNK/ACT - Green
FAN(s)	Alarm/Green
Reset Button	System reboot: push and hold < 5 sec. Factory Default: push and hold > 5 sec.
Electrical and Mechanical	
AC Power Input Voltage	100~240VAC, 50/60Hz, Auto-sensing
Power Consumption (System on)	110V (17.5 Watts); 220V (17 Watts)
Power Consumption (Full load)	110V (419 Watts max); 220V (420 Watts max.)
Dimensions (W x D x H)	17.32 x 11.81 x 1.75 in., 440 x 300 x 44.5mm
Weight	9.48 lbs., 4.3kg
Environmental	
Operating Temperature	0 to +50° C
Storage Temperature	-20 to +70° C
Relative Humidity	20% to 95% (non-condensing)
Standards Compliance	
Regulatory Standards	FCC Part 15 Class A; CE
IEEE Standards	IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3ab 1000Base-T IEEE 802.3z 1000Base- SX/LX IEEE 802.3x Flow Control and Back pressure IEEE 802.3ad Port trunk with LACP IEEE 802.1d Spanning Tree Protocol IEEE 802.1s Rapid Spanning Tree Protocol IEEE 802.1p Class of service IEEE 802.1Q VLAN Tagging IEEE 802.1x Port Authentication Network Control IEEE 802.3af Power over Ethernet

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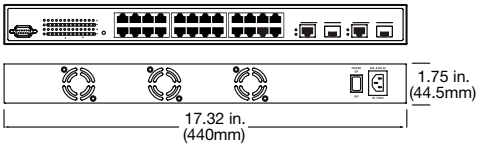
Specifications subject to
change without notice.

Ordering Information

GE-DS-242-PoE	24-port Fast Ethernet Layer 2+ Managed PoE Switch

Dimensional Diagram



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