



Network Transmission

8-port Fast Ethernet Layer 2+ Managed Switch

Overview

GE's 8-port Fast Ethernet Managed Switch Series is now IFS. For fast and efficient connectivity from the network edge to a backbone switch or server, the IFS 8-port Fast Ethernet Managed Switch Series features eight 10/100Mbps Fast Ethernet ports with 2 Gigabit TP/SFP combo ports. The 2 Gigabit TP/SFP combo ports can be either 10/100/1000Mbps (RJ45) or 1000Base-SX/LX through an SFP (Small Form-factor Pluggable) GBIC interface and is also available in a PoE version.

Robust Layer 2+ Features

For efficient switch management, the IFS 8-port Fast Ethernet Managed Switch Series is easily programmed for switch management functions. Via a simple, yet powerful set of built-in Web Services, the switch can facilitate Port Speed Configuration, Port Link Aggregation, IEEE 802.1Q VLAN and Q-in-Q VLAN, Port Mirroring, Spanning Tree and ACL security. The switch 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 series is designed with a high performance wire-speed and switch architecture capable of providing a non-blocking switch fabric with throughput as high as 5.6 Gbps. To ensure optimum quality of service, the IFS 8-port Fast Ethernet Managed Switch Series 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 (GE-DS-82-PoE Only)

Featuring IEEE 802.3af Power over Ethernet (PoE) operation, 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 8-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, the result of 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-82 Series 8-port Fast Ethernet Layer 2+ Managed Switch



GE-DS-82
8-Port 10/100Mbps Managed Switch
with 2 Gigabit SFP Combo Uplink Ports



GE-DS-82-PoE
8-Port 10/100Mbps Managed PoE Switch
with 2 Gigabit SFP Combo Uplink Ports

Standard Features

Physical Ports

- 8-Port 10/100Base-TX RJ-45 (GE-DS-82)
- 8-Port 10/100Base-TX RJ-45 with PoE Injector (GE-DS-82-PoE)
- 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 and runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Broadcast/multicast/unicast storm control
- 5.6 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 4041 VLAN IDs
- Port-Based VLAN
- Q-in-Q tunneling (Double Tag VLAN)

Spanning Tree Protocol

- STP, IEEE 802.1D (Spanning Tree Protocol)
- MSTP, IEEE 802.1s (Multiple 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) [GE-DS-82-PoE Only]

- Complies with IEEE 802.3af Standard
- 180 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

	Part No.		GE-DS-82	GE-DS-82-PoE
	Description			
Physical Ports	10/100Base-T(x) Ports		RJ-45 (8)	RJ-45 (8)
	GigE Combo Uplink Ports		RJ-45 (Ports 9 and 10) 10/100/1000Mbps; SFP/Mini-GBIC Slots (Shared with Ports 9 and 10) 1000Base-SX/LX/BX	RJ-45 (Ports 9 and 10) 10/100/1000Mbps; SFP/Mini-GBIC Slots (Shared with Ports 9 and 10) 1000Base-SX/LX/BX
	Port Configuration		Auto MDI/MDI-X	Auto MDI/MDI-X
	Port Speed		Auto-negotiate	Auto-negotiate
Switch Performance	Switch Architecture		Store-and-forward	Store-and-forward
	Switch Fabric		5.6Gbps (non-blocking)	5.6Gbps (non-blocking)
	Switch Throughput		4.16Mpps @ 64Bytes	4.16Mpps @ 64Bytes
	MAC Address Table		8K entries	8K entries
	Share Data Buffer		2 Mbytes	2 Mbytes
	Maximum Frame Size		9K Bytes	9K Bytes
	Flow Control		Back pressure for Half-Duplex; IEEE 802.3x Pause Frame for Full-Duplex	Back pressure for Half-Duplex; IEEE 802.3x Pause Frame for Full-Duplex
	Management Interface		Console, telnet, Web browser, SSL, SNMPv1 and v2c and v3c	
Layer 2+ Functions	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.	
	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, up to 255 VLANs groups, out of 4041 VLAN IDs Port-based VLAN. Q-in-Q tunneling GVRP for VLAN management, up to 128 dynamic VLAN entries Private VLAN Edge (PVE) protected port) with two protected port groups	
	Link Aggregation		Static Port Trunk IEEE 802.3ad LACP (Link Aggregation Protocol) Supports 13 groups of 8-port trunk, IEEE 802.3ad LACP	
	Quality of Service (QoS)		4 priority queue Traffic classification based on: • Port priority • 802.1p priority • DSCP/TOS field in IP Packet	
	Multicasting/IGMP		IGMP Snooping (v1/v2) 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	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		180 Watts	
	Max. number of Class 2 PD		8	
	Max. number of Class 3 PD		8	
	PoE Power Output Per Port		48V DC, 350mA; 15.4 watts max.	
LED Indicators & Switch	Power Pin Assignment		1/2(+), 3/6(-)	
	Power		On/Green	
	10/100Base-TX/PoE Ports (8)		10/100 LNK/ACT - Green; 100Mbps - Amber	
	10/100/1000Base-T/SFP Ports		100 LNK/ACT - Amber; 1000 LNK/ACT - 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	
	Full Load Power Consumption		16 Watts	
	Dimensions (W x D x H)		13 x 6.10 x 1.71 in. - (330 x 155 x 43.5mm)	
	Weight		2.6 lbs., 1.2kg	
Environmental	Operating Temperature		0 to +50 degree C	
	Storage Temperature		-20 to +70 degree C	
	Relative Humidity		20% to 95% (non-condensing)	
Standards Compliance	Regulatory Standards		FCC Part 15 Class A; CE; UL	
	IEEE/RFC Standards		IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3z 1000Base-SX/LX IEEE 802.3ab 1000Base-T IEEE 802.3x Flow Control and Back pressure IEEE 802.3ad Port trunk with LACP IEEE 802.1d Spanning Tree Protocol IEEE 802.1s Multiple Spanning Tree Protocol IEEE 802.1p Class of service IEEE 802.1Q VLAN Tagging IEEE 802.1x Port Authentication Network Control RFC 768 UDP RFC 793 TFTP RFC 791 IP RFC 792 ICMP RFC 2068 HTTP RFC 1112 IGMP version 1 RFC 2236 IGMP version 2	IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3z 1000Base-SX/LX IEEE 802.3ab 1000Base-T IEEE 802.3x Flow Control and Back pressure IEEE 802.3ad Port trunk with LACP IEEE 802.1d Spanning Tree Protocol IEEE 802.1s Multiple 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 RFC 768 UDP RFC 793 TFTP RFC 791 IP RFC 792 ICMP RFC 2068 HTTP RFC 1112 IGMP version 1 RFC 2236 IGMP version 2

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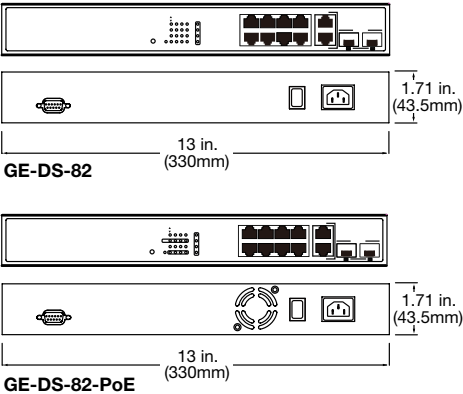
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Dimensional Diagrams



Ordering Information

GE-DS-82	8-Port Fast Ethernet Managed Switch
GE-DS-82-PoE	8-Port Fast Ethernet PoE Managed Switch

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