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Part of GE Security

Network Transmission Products

24 Gigabit Fiber Copper PoE and Stacking Switch Series

Overview

The GE Security GE-DSG / GE-DSSG series is a Layer 2+ managed gigabit switch designed to handle extremely large amounts of data. These units function in a secure topology, linking to an enterprise backbone or high-capacity network server. The powerful features of QoS and network security make this series an effective solution for data traffic control for ISPs and enterprises, including VoIP, video streaming and multicast applications. In addition, this switch is ideal for the core layer of campus, enterprise networks and the aggregation layer of IP metropolitan networks. Multicasting IGMP Snooping and Query assure effective bandwidth utilization of larger video files.

Designed for various networking applications, the GE-DSG / GE-DSSG are all multiple ports with SFP fiber optical connective ability and robust Layer 2 features. This series provides 24 gigabit Ethernet ports with multiple shared gigabit SFP slots. Boasting high-performance architecture these switches are capable of providing non-blocking switch fabric and wire-speed throughput as high as 68Gbps, these units simplify LAN upgrades that can increase bandwidth demands.

Switcher stacking feature with the ability to connect up to 16 switches with control of 38 ports over a 5 Gbps backbone with intelligent hot swap for both master and node switches.

Gigabit Power over Ethernet

The GE Security GE-DSSG-244-PoE series Power-over-Ethernet (PoE) optimizes the installation and power management of network devices such as 802.11n wireless access points (AP) with gigabit LAN port, VoIP phones and security video cameras. PoE capabilities also reduce installation costs for many new network productivity devices, and free the wireless AP deployment from restrictions due to power outlet locations. Power and data switching are integrated into one unit and delivered over a single cable, eliminating costs for additional AC wiring and reducing installation time.

Fiber-Optical Long-Reach Networking

For large-scale network deployment applications, the GE-DSSG-244 provides 24 100/1000 dual-speed SFP slots, eight shared gigabit TP ports, and two dedicated high-speed HDMI-like interfaces for stacking with the series of switches. By applying the GE-DSSG series switch, up to 16 units and 384 fiber-optical ports can be managed by a stacking group. Through additional ports, functionality can be added as needed. The two built-in stacking ports provide 5Gbps bandwidth and up to 20Gbps bi-directional speed. These units can handle extremely large amounts of data and video in a secure topology linking for backbone or high-capacity network server. The stacking technology also enables the chassis-based switches to be integrated into GE-DSSG series Managed Switch without the expensive up-front cost.

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GE-DSG-244

GE-DSSG-244-PoE

GE-DSSG-244

High-Reliability Stacking Management

The GE-DSG/GE-DSSG series applies the advantage of stackable technology to manage the stack group with one single IP address, which helps network managers to easily manage a stack of switches instead of connecting and setting each unit one by one. Through its high-bandwidth tunnel and stacking technology, the GE-DSSG-244 series gives the enterprises, service providers and telecoms flexible control over port density, uplinks and switch stack performance. Stack redundancy of the GE-DSSG-244 series ensures data integrity be retained even if one switch in the stack fails. You can even hot-swap switches without disrupting the network, which greatly simplifies the tasks of upgrading the LAN for catering to increasing bandwidth demands.

Robust Layer 2 Features

The GE-DSG/GE-DSSG series can be programmed for advanced switch management functions such as dynamic port link aggregation, Q-in-Q VLAN, private VLAN, Rapid Spanning Tree protocol, Layer 2 to Layer 4 QoS, bandwidth control and IGMP Snooping. The GE-DSG/GE-DSSG series provides 802.1Q Tagged VLAN, and the VLAN groups allowed will be maximally up to 255. Via aggregation of supporting ports, the GE-DSG/GE-DSSG series allows the operation of a high-speed trunk combining multiple ports. It enables a maximum of 12 groups of 16 ports for port link aggregation, and supports fail-over as well.

Cable Diagnostics

GE's DSG and DSSG 24 port Web browser interface provides more than just set up operations. PoE and cable diagnostics monitor each port providing immediate notification of problem areas. Ethernet connections, PoE utilization, power consumption, available power and even cable connections right down to the wire pair save you valuable time and expense in troubleshooting system problems.

Easy and Friendly Traffic Control

GE Security GE-DSG/GE-DSSG series is loaded with powerful but easy traffic management and QoS features to enhance services offered by telecoms. The functionality includes QoS features such as wire-speed Layer 4 traffic classifiers and bandwidth limiting that are particularly useful for multi-tenant unit, multi-business unit, telco, or network service provider applications, such as VoIP, video streaming and multicast applications. The embedded handy QoS configuration wizard helps you set up typical network application rules easily and quickly via Web interface. The GE-DSG/GE-DSSG series also empowers the enterprises or campus to take full advantages of the limited network resources and guarantees the best performance in voice and video conferencing transmission.

Efficient Management

For efficient management, the GE-DSSG-244 series managed stackable gigabit switch is equipped with console, WEB and SNMP management interfaces. With the built-in Web-based management interface, the GE-DSG/GE-DSSG series offers an easy-to-use, platform-independent management and configuration facility. The GE-DSG/GE-DSSG series supports standard Simple Network Management Protocol (SNMP) and can be managed via any standard-based management software. For text-based management, the GE-DSG/GE-DSSG series can be accessed via telnet and the console port. Moreover, the GE-DSG/GE-DSSG series offers secure remote management by supporting SNMPv3 connection which encrypts the packet content at each session.

PoE Power That is Never Shared

For GE's PoE versions, power is never shared. Full 802.3af power is applied to each assigned port. This assures continuous operation for video cameras and other products that require full power.

24 Gigabit Fiber Copper PoE and Stacking Switch Series

	GE SKU	GE-DSG-244	GE-DSSG-244-PoE	GE-DSSG-244
	GE Description			
Hardware Specification	**Copper Ports**	24 10/ 100/1000Base-T RJ-45 Auto-MDI/MDI-X ports	24 10/ 100/1000Base-T RJ-45 Auto-MDI/MDI-X ports with IEEE 802.3af PoE injector	8 10/ 100/1000Base-T RJ-45 Auto-MDI/MDI-X ports, shared with Port-1 to Port-8
	SFP/Mini-GBIC Slots	4 SFP interfaces, shared with Port-21 to Port-24; 100Base-FX SFP transceiver compatible	4 SFP interfaces, shared with Port-21 to Port-24; 100Base-FX SFP transceiver compatible	24 SFP interfaces, 1000Base-SX/ LX and 100Base-FX SFP transceiver compatible
	Switch Processing Scheme	Store-and-Forward	Store-and-Forward	Store-and-Forward
	Switch Fabric	48Gbps	68Gbps	68Gbps
	Address Table	8K entries	8K entries	8K entries
	Share Data Buffer	1392 kilobytes	1392 kilobytes	1392 kilobytes
	Flow Control	IEEE 802.3x Pause Frame for Full-Duplex 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 Back pressure for Half-Duplex
	Jumbo Frame	10Kbytes	10Kbytes	10Kbytes
	LED	**System:** Power **Ports:** 1000 Link/Act 10/100 Link/Act SFP Link	**System:** Power, Master **Ports:** 10/100/1000 Link/Act, PoE In-Use, SFP Link, Stack Port Link **Alert:** FAN alert	**System:** Power, Master **Ports:** 1000 Link/Act, 10/100 Link/Act, SFP Link, Stack Port Link
	Dimension	17.32" x 7.87" x 1.75"	17.32" x 11.81" x 1.75"	17.32" x 7.87" x 1.75"
	Weight	5.93 lbs	9.92 lbs	6.61 lbs
Power over Ethernet	**PoE Standard**		IEEE 802.3af Power over Ethernet/ PSE	
	PoE Power Supply		End-Span	
	PoE Power Output		Per Port 48V DC, 350mA. Max. 15.4 watts	
	Power Pin Assignment		1/2(+), 3/6(-)	
	PoE Power Budget		220 Watts	
	Number of PD@7Watts		24	
	Number of PD@15.4Watts		14	
Stacking	**Stacking Ports**		Two 5Gbps HDMI-Like interface	Two 5Gbps HDMI-Like interface
	Stacking Numbers		16	16
	Stacking Bandwidth		10Gbps (Full-Duplex)	10Gbps (Full-Duplex)
	Stack ID Display		7-Segment LED Display (1~9, A~F,0)	7-Segment LED Display (1~9, A~F,0)
	Stack Topology		Ring/Chain/Back-to-Back stack	Ring/Chain/Back-to-Back stack

24 Gigabit Fiber Copper PoE and Stacking Switch Series continued

	GE SKU	GE-DSG-244	GE-DSSG-244-PoE	GE-DSSG-244
	GE Description			
Layer 2 Function	System Configuration	Console, Telnet, Web Browser, SNMPv1, v2c and v3		
	Port Configuration	Port disable/enable. Auto-negotiation 10/100/1000Mbps full and half duplex mode selection. Flow Control disable/ enable. Bandwidth control on each port.		
	Port Status	Display each port's speed duplex mode, link status, Flow control status. Auto negotiation status, trunk status.		
	VLAN	802.1Q Tagged Based VLAN ,up to 255 VLAN groups Q-in-Q Private VLAN		
	Link Aggregation	IEEE 802.3ad LACP / Static Trunk Support 12 groups of 16-Port trunk support		
	QoS	Traffic classification based, Strict priority and WRR 4-level priority for switching - Port Number - 802.1p priority - DS/TOS field in IP Packet		
	IGMP Snooping	IGMP (v1/v2) Snooping, up to 8K multicast Groups IGMP Querier mode support		
	Access Control List	IP-Based ACL/MAC-Based ACL 256 entries		
	SNMP MIBs	RFC-1213 MIB-II IF-MIB RFC-1493 Bridge MIB RFC-1643 Ethernet MIB RFC-2863 Interface MIB RFC-2665 Ether-Like MIB RFC-2737 Entity MIB RFC-2618 RADIUS Client MIB RFC-2933 IGMP-STD-MIB RFC3411 SNMP-Frameworks-MIB IEEE802.1X PAE LLDP MAU-MIB Power over Ethernet		
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 IEEE 802.1ab LLDP IEEE 802.3af Power over Ethernet (GE-DSSG-244-POE)		
Environmental	Operating	Temperature: 0° ~ 50° C Relative Humidity: 20% ~ 95% (non-condensing)		
	Storage	Temperature: -20° ~ 70° C Relative Humidity: 20% ~ 95% (non-condensing)		
Electrical Specification	AC Power Input Voltage	100 ~ 240VAC, 50 / 60Hz, Auto-sensing.		
	Power Consumption (System on)	**110V:** 22.2 Watts / 75.7 BTU	**110V:** 29.3 Watts / 99.9 BTU	**110V:** 15.5 Watts
		220V: 23 Watts / 78.43 BTU	**220V:** 30.2 Watts / 102.98 BTU	**220V:** 16 Watts
	Power Consumption (Full Load)	**110V:** 29.3 Watts / 100 BTU	**110V:** 39 Watts / 132.99 BTU	**220V:** 46 Watts
		220V: 30.2 Watts / 102.98 BTU	**220V:** 40 Watts / 136.4 BTU	**220V:** 45.5 Watts
	Power Consumption (PoE Full Load)	-	-	-
		-	**220V:** 23Watts / 78.43 BTU	**220V:** 23Watts / 78.43 BTU

Standard Features

Physical Port

GE-DSG-244

- 24-Port 10/100/1000Base-T Gigabit Ethernet RJ-45
- 4 mini-GBIC/SFP slots, shared with Port-21 to Port-24 and compatible with 100Base-FX SFP transceiver.
- RS-232 DB9 console interface for switch basic management and setup

GE-DSSG-244

- 24 100/1000Base-X mini-GBIC/SFP slots
- 8-Port 10/100/1000Base-T RJ-45 copper, shared with Port-1 to Port-8.
- 2 HDMI-like 5GbE stacking interfaces
- RS-232 DB9 console interface for switch basic management and setup

GE-DSSG-244-PoE

- 24-Port 10/100/1000Base-T Gigabit Ethernet RJ-45 with IEEE 802.3af PoE Injector
- 4 mini-GBIC/SFP slots, shared with Port-21 to Port-24 and compatible with 100Base and 1000-FX, SX, and LX SFP transceiver.
- 2 HDMI-like 5GbE stacking interfaces
- RS-232 DB9 console interface for switch basic management and setup

Layer 2 Features

- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x PAUSE frame flow control (full-duplex)
- High performance of Store-and-Forward architecture, broadcast storm control and runt/CRC filtering eliminates erroneous packets to optimize the network bandwidth
- Supports VLAN
- Supports Spanning Tree Protocol
- Supports Link Aggregation
- Provides Port Mirror (many-to-1)
- Port Mirroring to monitor the incoming or outgoing traffic on a particular port

Quality of Service

- 4 priority queues on all switch ports.
- Supports for strict priority and weighted round robin (WRR) CoS policies
- Ingress Shaper and Egress Rate Limit per port bandwidth control
- Traffic-policing policies on the switch port

Multicast

- Supports IGMP Snooping v1, v2 and v3
- Querier mode support

Security

- IEEE 802.1x port-based network access authentication
- MAC-based network access authentication
- IP-based Access Control List (ACL)
- MAC-based Access Control List
- Static MAC

Management

- WEB-based, Telnet, Console Command Line management
- Accesses through SNMPv1, v2c and v3 security set and get requests.
- Built-in Trivial File Transfer Protocol (TFTP) client
- BOOTP and DHCP for IP address assignment
- Firmware upload/download via HTTP / TFTP
- SNTP (Simple Network Time Protocol)
- LLDP Protocol

Stacking

- Hardware stack up to 16 units and 384 gigabit ports
- Single IP address stack management
- Stacking architecture supports Chain and Ring mode
- Plug-and-Play connectivity
- Mirror across stack
- Link Aggregation groups spanning multiple switches in a stack
- Hardware learning with MAC table synchronization across stack

Power over Ethernet

- Complies with IEEE 802.3af Power over Ethernet End-Span PSE
- Up to 24 IEEE 802.3af devices powered
- Support PoE power up to 15.4 watts for each PoE port
- Auto detect powered device (PD)
- Circuit protection prevent power interference between ports
- Remote power feeding up to 100m
- PoE management

Part of GE Security

North America
T 888-GE-SECURITY
888-437-3287
F 503-691-7566
E sales@ifs.com

Asia
T 852-2907-8108
F 852-2142-5063

Australia and New Zealand
T 613-9239-1200
F 613-9239-1299

Europe
T 44-113-238-1668
F 44-113-253-8121

Latin America
T 305-593-4301
F 305-593-4300

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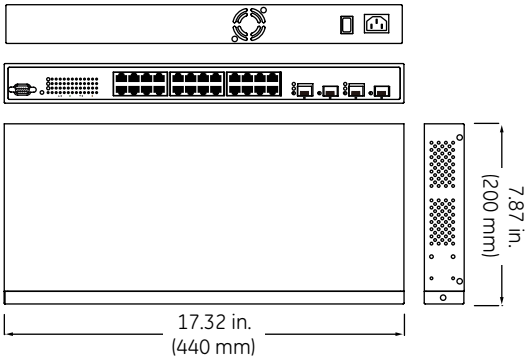
Specifications subject to
change without notice

Ordering Information

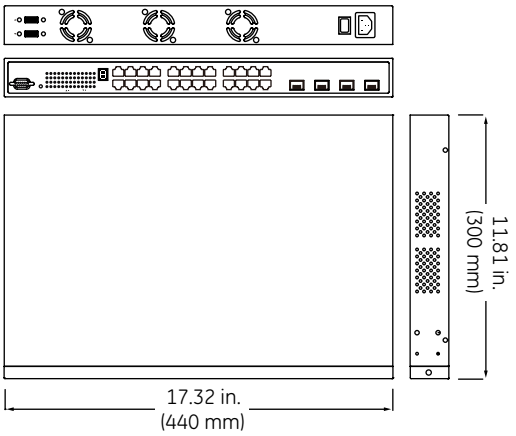
GE-DSG-244	24-Port 10/100/1000Base-T with 4 Shared SFP Managed Gigabit Switch
GE-DSSG-244-POE	24-Port 10/100/1000Base-T PoE Managed Stackable Switch
GE-DSSG-244	24-Port 100/1000Base-X with 8 Shared TP Managed Stackable Switch

Dimensional Diagram

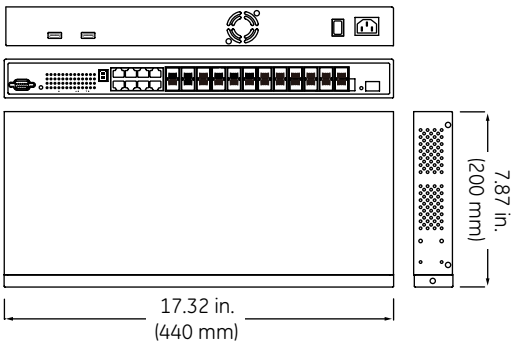
GE-DSG-244



GE-DSSG-244-PoE



GE-DSSG-244



Agency Compliances

- UL
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