



D-Link Green™

- + Ports that have no link are automatically powered down
- + RoHS and WEEE-compliant Design

High Performance Wire-speed Architecture

- + Non-blocking Architecture
- + 4 Hardware Priority Queues
- + 802.1X Authentication
- + 802.1p QoS
- + DSCP-based QoS
- + 802.1Q VLAN
- + Static Link Aggregation
- + SNMP v1
- + 802.1D Spanning Tree
- + Jumbo Frame Support
- + Port Mirroring
- + Port Setting (Speed, Availability, Flow Control)
- + Management VLANs
- + Trusted Host up to 3 hosts
- + Asymmetric VLANs
- + Auto-discovery Utility
- + IGMP Snooping
- + D-Link® Safeguard Engine™

Operational Simplicity

- + True Plug-and-Play
- + No Fans for Quiet Operation²
- + Auto-negotiation
- + Clear, At-a-glance per Port LED Indicators
- + Auto MDI/MDI-X Detection
- + Cable Diagnostics

Investment Protection

- + Support for Industry Standards
- + Fiber Media Support via SFPs



Web Smart 16/24/48-Port Gigabit Switches

Overview

D-Link's latest generation of Web Smart Gigabit Switches blends plug-and-play simplicity with exceptional performance and reliability to create a cost-effective solution for bandwidth-starved work groups and departments. Enhanced features include Gigabit uplink combo ports, Power over Ethernet¹, QoS, and versatile management functions. There are four models to choose from: DGS-1216T, which supports 16 Gigabit ports with two combo SFP slots; DGS-1224T, which supports 24 Gigabit ports with two combo SFP slots; DGS-1224TP, which supports 24 IEEE 802.3af Power over Ethernet ports with four combo SFP slots; and DGS-1248T, which supports 48 Gigabit ports with four combo SFP slots. Power over Ethernet easily allows you to install and power wireless access points, network cameras, VoIP phones and other network equipment for simplified and reduced deployment costs. Total PoE power budget on 24 10/100/1000 ports for the DGS-1224TP is 180 watts. Therefore, the maximum power output per PoE port is up to 15.4W on 11 ports or 7.5W on 24 ports simultaneously.

The DGS-1200 Series is housed in a new style 19" rackmount case with an easy-to-view front panel and diagnostic LEDs and feature an innovative fanless design to ensure quiet operation compared to standard switches². User-friendly, web-based management is supported for easy configuration and flexibility for different network requirements.

D-Link Green™ Technology

D-Link is striving to take the lead in developing innovative and power-saving technology without sacrificing operational performance or functionality. The DGS-1200 Series implements D-Link Green technology, resulting in reduced power consumption and heat dissipation. The switches have adopted the latest silicon technology, which helps lower your power consumption usage. If a port does not have a cable link or the connected device is

powered down, the port goes to "sleep mode", reducing power consumption and saving energy. In a standard work day scenario in which PCs are used 10 hours a day and powered down for 14 hours, the DGS-1216T can provide power savings of up to 32%, the DGS-1224T can provide power savings up to 23%, and the DGS-1248T can provide power savings up to 21% when compared to a D-Link conventional switch.

Protecting the Environment for a Better Tomorrow

The incorporation of D-Link Green technology into these switches re-emphasizes D-Link's strong commitment to protecting the environment and leading the development of eco-friendly products. These switches comply with RoHS (Restriction of Hazardous Substances) and WEEE (Waste Electrical and Electronic Equipment) directives. RoHS directives restrict the use of specific hazardous materials during the manufacture of electrical and electronic goods, while WEEE directives apply standards for proper disposal and recyclable packaging to help reduce wastage.

Secure Your Network

The DGS-1200 Series provides a robust set of security features normally found only in fully managed switching solutions. They are equipped with the D-Link Safeguard Engine™ to protect the CPU from malicious attacks. When frames enter the switch, the D-Link Safeguard Engine detects and blocks broadcast, multicast, and unicast flooding, which can overload a CPU and bring network traffic to a halt. In addition, the switches provide support for secure encrypted 802.1X Port-based Authentication, Broadcast Storm Control, and up to 256 static MAC address entries.

You can also manage the switches from a remote station using the Trusted Host function. Management can be from up to three designated management stations through a web browser or telnet session.

IEEE 802.1Q VLAN Tagging

VLANs allow your network to be segmented into Departmental, Hierarchical, and Security groups and place a “tag” in a frame to identify which VLAN it belongs to. This allows 802.1Q-compliant devices to work seamlessly together to manage VLAN traffic.

Asymmetric VLANs

Asymmetric VLANs are also supported by the DGS-1200 Series. With this feature enabled, VLAN groups can send information to each other without the traffic going through a router or a Layer 3 switch. This eliminates expense and maximizes efficiency while maintaining security.

802.1p Priority Tagging or DSCP-based QoS

The DGS-1200 Series allows users to prioritize traffic based on 802.1p or DSCP-based (Differentiated Services Case Point) QoS. Port-based QoS prioritizes all port traffic with one value, while 802.1p classifies frames according to their VLAN tag. DSCP-based QoS prioritizes traffic according to its IP header. DSCP-based QoS and 802.1p priority tagging prioritizes traffic such as VoIP as it enters the switch, ensuring that your data is always clear and jitter-free.

Link Aggregation

The DGS-1200 Series supports Static Link Aggregation, which “trunks” multiple ports together to function as a single, high-bandwidth channel. When a high-bandwidth channel is needed to uplink to another switch, Link Aggregation makes this process simple and hassle-free.

Jumbo Frame Support

Jumbo Frame support is designed to improve network throughput and significantly reduce the CPU utilization of large file transfers (such as multimedia files or large data files). This is accomplished by enabling larger, more efficient payloads per packet. The DGS-1216T, DGS-1224T, and DGS-1224TP support Jumbo Frames up to 10KB in size while the DGS-1248T supports Jumbo Frames up to 9220 bytes in size.

IGMP Snooping

IGMP Snooping allows for the forwarding of multicast packets, such as streaming audio and video, without increasing network congestion. By snooping IGMP registration information within a frame, a list of workstations in the multicast group is created. The switch uses this list to intelligently forward packets to the appropriate workstations.

Cable Diagnostics

Because your connection is just as important as the switch itself, the DGS-1200 Series is designed with a cable diagnostic feature that detects transmission errors and the condition of cables attached to the switch's Gigabit copper ports. Cable Diagnostics make it easier to troubleshoot cabling issues through a web-based interface and keep all connections up.

Advanced Management Features

The DGS-1200 Series supports SNMP v1, a useful tool in managing and controlling SNMP-supported network devices. SNMP enables the switches to provide valuable information about the switch's status and send traps on abnormal events. This sharing of vital management information saves time and money.

The DGS-1200 Series also supports 802.1D Spanning Tree, which provides protection from universal cabling loops forming within a network infrastructure. Spanning tree detects and breaks these loops, ensuring network uptime.

Management Utility

In addition to the Web-based Management Interface, the DGS-1200 Series also ships with the D-Link SmartConsole Utility. This utility provides a valuable tool in managing, planning, and troubleshooting network configurations. Managing a Web Smart switch takes only minutes. With full color graphics, diagrams, and easy-to-understand navigation menus, using the SmartConsole Utility is as easy as surfing the web. The SmartConsole Utility also includes:

Discovery List – Automatically detects and displays up to 254 D-Link Web Smart Switches on your network along with their MAC addresses

Monitor List – Monitors switch status and any trap messages sent to a designated station

Trap View – Notifies the administrator whenever an abnormal event occurs on the switch

Device Setting – Allows the administrator to set up the switch's IP Address, Subnet Mask, Gateway, Send Trap to Address, System Name, Password, and Location

With its green sensibility and easy-to-use, robust feature set, the DGS-1216T, DGS-1224T, DGS-1224TP, and DGS-1248T make a great solution for any growing business.



Technical Specifications

Model	DGS-1216T	DGS-1224T	DGS-1224TP	DGS-1248T
Interface				
Ports	16 10/100/1000BASE-T Auto-negotiating, Auto-MDI/MDI-X ports with 802.3x Flow Control	24 10/100/1000BASE-T Auto-negotiating, Auto-MDI/MDI-X ports with 802.3x Flow Control	24 10/100/1000BASE-T PoE Auto-negotiating, Auto MDI-MDI/X ports with 802.3 Flow Control	48 10/100/1000BASE-T Auto-negotiating, Auto MDI/MDI-X ports with 802.3 Flow Control
Combo Ports	2 (SFP)	2 (SFP)	4 (SFP)	4 (SFP)
Optional SFP Modules	DEM-310GT: 1000BASE-LX SFP Module, up to 10Km DEM-311GT: 1000BASE-SX SFP Module, up to 550m	DEM-310GT: 1000BASE-LX SFP Module, up to 10Km DEM-311GT: 1000BASE-SX SFP Module, up to 550m	DEM-310GT: 1000BASE-LX SFP Module, up to 10Km DEM-311GT: 1000BASE-SX SFP Module, up to 550m	DEM-310GT: 1000BASE-LX SFP Module, up to 10Km DEM-311GT: 1000BASE-SX SFP Module, up to 550m
LED Indicators	Per device: Power/CPU Per 10/100/1000BASE-T port: Link/Act, 100/1000Mbps Per SFP slot: Link/Act, 1000Mbps	Per device: Power/CPU Per 10/100/1000BASE-T port: Link/Act, 100/1000Mbps Per SFP slot: Link/Act, 1000Mbps	Per device: Power/PWR Max/CPU/Fan Error Port LED Mode Indicator: Link/Act Mode/PoE Mode Per 10/100/1000BASE-T port: Link/Act, 100/1000Mbps Per SFP slot: Link/Act, 1000Mbps	Per device: Power/PWR Max/CPU/Fan Error Port LED Mode Indicator: Link/Act Mode/PoE Mode Per 10/100/1000BASE-T port: Link/Act, 100/1000Mbps Per SFP slot: Link/Act, 1000Mbps

Performance

Switch Capacity	32Gbps	48Gbps	48Gbps	96Gbps
Packet Forwarding Rate	23.8Mpps	35.7Mpps	35.7Mpps	71.4Mpps
MAC Address Table Size	8K	8K	8K	8K
MAC Address Update	Up to 256 static MAC entries Enable/disable auto-learning of MAC addresses	Up to 256 static MAC entries Enable/disable auto-learning of MAC addresses	Up to 256 static MAC entries Enable/disable auto-learning of MAC addresses	Up to 256 static MAC entries Enable/disable auto-learning of MAC addresses
Packet Buffer	512KB	512KB	512KB	1MB
Jumbo Frame	10,240 bytes	10,240 bytes	10,240 bytes	9,220 bytes

Physical & Environmental

Power Consumption	23W	31.2W	250.3W	76.2W
Power Input	100 to 240 VAC 50/60Hz internal universal power supply	101 to 240 VAC 50/60Hz internal universal power supply	102 to 240 VAC 50/60Hz internal universal power supply	103 to 240 VAC 50/60Hz internal universal power supply
PoE Budget	n/a	n/a	180 watts	n/a
DC Fans	0	0	2	3
Heat Dissipation	78.48BTU/hr	106.45BTU/hr	854.02BTU/hr	259.99BTU/hr
Acoustic Value	0 dB	0 dB	47 dB	51.6 dB
Operating Temperature	32° to 104°F (0° to 40°C)	32° to 104°F (0° to 40°C)	32° to 104°F (0° to 40°C)	32° to 104°F (0° to 40°C)
Storage Temperature	14° to 158°F (-10° to 70°C)	14° to 158°F (-10° to 70°C)	14° to 158°F (-10° to 70°C)	14° to 158°F (-10° to 70°C)
Operating Humidity	10% ~ 90% Non-condensing	10% ~ 90% Non-condensing	10% ~ 90% Non-condensing	10% ~ 90% Non-condensing
Storage Humidity	5% ~ 90% Non-condensing	5% ~ 90% Non-condensing	5% ~ 90% Non-condensing	5% ~ 90% Non-condensing
Dimensions (W x D x H)	17.3in x 8.2in x 1.7in (440mm x 210mm x 44mm)	17.3in x 8.2in x 1.7in (440mm x 210mm x 44mm)	17.3in x 8.2in x 1.7in (440mm x 210mm x 44mm)	17.3in x 12.2in x 1.7in (440mm x 309mm x 44mm)

Model	DGS-1216T	DGS-1224T	DGS-1224TP	DGS-1248T
Size	19-inch standard rackmounting width, 1U height	19-inch standard rackmounting width, 1U height	19-inch standard rackmounting width, 1U height	19-inch standard rackmounting width, 1U height
Weight	6 lbs (2.72 kg)	6.2 lbs (2.80 kg)	7.9 lbs (3.6 kg)	9.8 lbs (4.46 g)
EMI	FCC Class A, CE Class A, VCCI Class A	FCC Class A, CE Class A, VCCI Class A	FCC Class A, CE Class A, VCCI Class A	FCC Class A, CE Class A, VCCI Class A
RoHS-compliant	Yes	Yes	Yes	Yes
MTFB	228,450hrs	215,976hrs	173,467hrs	186,656hrs
Safety	cUL, LVD	cUL, LVD	cUL, LVD	cUL, LVD

Software Specifications

Port Standards and Functions	+ IEEE 802.3 10BASE-T Ethernet	+ IEEE 802.3u 100BASE-TX Fast Ethernet
	+ IEEE 802.3ab 1000BASE-T Gigabit Ethernet	+ IEEE 802.3z Gigabit Ethernet (fiber) ANSI/IEEE 802.3
	+ IEEE 802.3x Flow Control	+ Nway Auto-Negotiation
	+ 802.3af Power over Ethernet (for DGS-1224TP only)	
L2 Features	+ IGMP v1/2 Snooping: supports 64 multicast groups	+ 802.1D Spanning Tree
	+ Static Port Trunk (Link Aggregation): up to 6 groups per device, up to 8 ports per group	
Green Ethernet	+ Power Saving Mode (as compared with previous models) - Full Load/Max. Power Consumption DGS-1216T: 24% DGS-1224T: 11% DGS-1248T: 24%	- Link Down Power Consumption DGS-1216T: 32% DGS-1224T: 23% DGS-1248T: 21%
Note: The Power Saving percentage cannot be applied for DGS-1224TP since there is no previous model		
VLAN	+ 802.1Q VLAN (VLAN Tagging)	+ Up to 256 static VLAN groups
	+ Management VLAN	+ Asymmetric VLAN
QoS (Quality of Service)	+ 802.1p Priority Queues	+ Up to 4 queues per port
	+ DSCP-based QoS	+ Supports WRR or Strict Mode in Queue Handling
Security	+ 802.1X Port-based Access Control	+ Broadcast Storm Control
	+ D-Link® Safeguard Engine™	+ Trusted Host
	+ Cable Diagnostics function	
Management	+ Web-based GUI	+ SNMP v1 support
	+ DHCP Client	+ Trap setting for destination IP, system events, fiber port events, twisted-pair port events
	+ Port Access Control	+ Web-based: Configuration backup/restoration
	+ Web-based: Firmware backup/upload	+ Firmware upgrade using SmartConsole Utility
	+ System Reboot using web-based interface	+ SmartConsole Utility
MIB Support	+ RFC 1213 MIB-II	+ D-Link Enterprise Private MIB

Warranty Information

Warranty	Limited Lifetime ³
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Ordering Information

<i>Part Number</i>	<i>Description</i>
DGS-1216T	Web Smart 16-Port Gigabit Switch with 2 Combo SFP Slots
DGS-1224T	Web Smart 24-Port Gigabit Switch with 2 Combo SFP Slots
DGS-1224TP	Web Smart 24-Port Gigabit PoE Switch with 4 Combo SFP Slots
DGS-1248T	Web Smart 48-Port Gigabit Switch with 4 Combo SFP Slots
DEM-310GT	1000BASE-LX SFP Module, up to 10Km
DEM-311GT	1000BASE-SX SFP Module, up to 550m

¹ Available on DGS-1224TP only.

² Available on DGS-1216T/DGS-1224T only.

³ Limited Lifetime Warranty available only in the USA and Canada.

All references to speed are for comparison purposes only. Product specifications, size and shape are subject to change without notice, and actual product appearance may differ from that depicted herein.