



## Web Smart 10/16/24/48-Port Gigabit Switches

### Overview

The D-Link DGS-1210 Series is the latest generation of Web Smart switches to feature D-Link Green technology. Equipped with 10, 16, 24, or 48 10/100/1000Mbps ports and two or four combo 10/100/1000BASE-T/SFP ports, the series integrates advanced management and security functions that provide performance and scalability. Additionally, the 10/100/1000Mbps ports on the DGS-1210-10P are PoE enabled, offering ease-of-use and green features such as PoE scheduling, which allows for the power to be shut off at a pre-determined time. Management options for the DGS-1210 Series switches include SNMP, Web Management, SmartConsole Utility, and Compact Command Lines. The series also supports ACL filtering and the D-Link Safeguard Engine™. The DGS-1210 Series uses Auto Voice VLAN, ensuring higher priority for voice traffic. The DGS-1210-10P comes with a fanless design in a compact 13-inch desktop enclosure; the DGS-1210-16 and DGS-1210-24 come in a fanless design with a 19-inch metal case. The DGS-1210-48 is equipped with two smart fans; these fans are set to low speed by default and will automatically switch to high speed once the temperature threshold has been reached. A fanless design allows for quieter operation and guarantees an extended lifetime, while smart fans help to considerably save power.

### D-Link Green

D-Link is continuously striving to take the lead in developing innovative technology that allows for power saving without sacrificing operational performance or functionality. The DGS-1210 Series automatically detects the length of connected cables and can adjust power usage by saving energy on shorter cable connections of up to 20 meters. Power saving by link status helps to further save energy by automatically switching ports without a link to sleep mode and thus drastically reducing power consumption. The DGS-1210 Series takes the approach to green IT and power saving one step further by incorporating a special chipset with advanced silicon technology.

### Seamless Integration

The DGS-1210 Series comes with Ethernet and Gigabit copper ports capable of connecting to existing CAT5 twisted-pair cables. Additionally, the last two or four ports of the DGS-1210 Series combine SFP and copper connectivity into one port and provides a more flexible solution for upstream or downstream server connections via fiber interface. Using the default presets, the administrator can quickly set up without worrying about reconfiguring any settings and providing easy access for the user.

### Extensive Layer 2 Features

Equipped with a complete lineup of L2 features, these switches include IGMP Snooping, Port Mirroring, Spanning Tree and Link Aggregation Control Protocol (LACP). The IEEE 802.3x Flow Control function allows servers to directly connect to the switch for fast, reliable data transfer. At 2000Mbps Full Duplex, the Gigabit ports provide high-speed data pipes to servers with minimum data transfer loss. Network maintenance features include Loopback Detection and Cable Diagnostics. Loopback Detection is used to detect loops created by a specific port and automatically shuts down the affected port. Cable Diagnostics is designed for network administrators to quickly examine the quality of the copper cables and determine the type of cable error.

### QoS, Bandwidth Control

The DGS-1210 Series supports Auto Surveillance VLAN (ASV), and Auto Voice VLAN which are best suited for VoIP and video surveillance deployments. Auto Surveillance VLAN is a new, industry-leading technology that the D-Link Web Smart Switch series provides. This technology consolidates data and surveillance video transmission through a single Switch, thus sparing businesses the expense of dedicated hardware and facilities. ASV also ensures the quality of real-time video for monitoring and control without compromising the transmission of conventional network data. The Auto Voice

### Green Technology

- Power saving by cable length detection
- Power saving by link status
- Continuous, reliable and eco-friendly operation
- PoE Scheduling (DGS-1210-10P only)

### Security Features

- Access Control List secures network
- D-Link Safeguard Engine protects CPU from Broadcast/Multicast/Unicast flooding
- Port Security supports 64 MACs per port
- ARP Spoofing Prevention

### Intuitive Management

- Manage using SmartConsole or Web-based GUI
- Built-in MIB browser for SNMP Management
- D-View 6.0 module support
- Compact CLI through Telnet

### VoIP Deployment

- Highest priority for VoIP services
- Auto Voice VLAN

### QoS

- Ensure time-sensitive data gets delivered efficiently
- Supports IEEE 802.1p QoS
- DSCP QoS



## Web Smart 10/16/24/48-Port Gigabit Switches

### Advanced Features

- Auto Surveillance VLAN
- Loopback Detection auto disables port when loop is detected
- Cable Diagnostics allows administrator to determine cable status
- Combined copper/SFP ports for increased flexibility
- Configurable MDI/MDI-X
- LLDP/LLDP-MED (DGS-1210-10P only)

### Trap & Logs

- SNMP Trap supports link and STP state change
- Trap for SmartConsole

### Online Help

- Link to local support web site
- Downloadable user guide

VLAN technology enhances the VoIP service by automatically placing voice traffic from an IP phone to an assigned VLAN. With higher priority and individual VLAN, these features guarantee the quality and security of VoIP traffic. Furthermore, the DSCP markings on Ethernet packets enable different levels of service to be assigned to network traffic. As a result, these voice and video packets take precedence over other packets. In addition, with Bandwidth Control, network administrators can reserve bandwidth for important functions that require a larger bandwidth or might have higher priority.

### Secure Your Network

The innovative D-Link Safeguard Engine function protects the switches against traffic flooding caused by virus attacks. The switches can also support 802.1X port-based authentication, allowing the network to be authenticated through external RADIUS servers. In addition, the Access Control List (ACL) feature enhances network security and helps to protect the internal IT network. The DGS-1210 Series includes ARP Spoofing Prevention, which protects from attacks on the Ethernet network that may allow an intruder to sniff data frames on a LAN, modify traffic, or bring traffic to a halt altogether by sending fake ARP messages to the network. To prevent ARP Spoofing attacks, the switch uses Packet Control ACLs to block invalid packets that contain fake ARP messages. For

added security, the DHCP Server Screening feature screens rogue DHCP server packets from user ports to prevent unauthorized IP assignment.

### Versatile Management

The DGS-1210 series provides a SmartConsole Utility and a web-based management interface that enable administrators to remotely control their network down to the port level. SmartConsole easily allows customers to discover multiple D-Link Web Smart Switches within the same L2 network segment. With this utility, users do not need to change the IP address of their PC. This also provides easy initial setting of the Smart Switches within the same L2 network segment that are connected to the user's PC that are displayed on screen for instant access. This allows extensive switch configuration settings and basic configuration of discovered devices such as password changes and firmware upgrades. The DGS-1210 Series also supports D-View 6.0 and Compact Command Line Interface (CLI) through Telnet. D-View 6.0 is a Network Management System that allows for the central management of critical network characteristics such as availability, reliability, resilience, and security in a consistent way. CLI management through Telnet makes the adjustment of basic settings such as password changes or firmware and configuration file uploads possible.



### Technical Specifications

	DGS-1210-10P	DGS-1210-16	DGS-1210-24	DGS-1210-48
Number of Ports	<ul style="list-style-type: none"> <li>• 8 PoE 10/100/1000Mbps</li> <li>• 2 combo 10/100/1000BASE-T/SFP</li> </ul>	<ul style="list-style-type: none"> <li>• 12 10/100/1000Mbps</li> <li>• 4 combo 10/100/1000BASE-T/SFP</li> </ul>	<ul style="list-style-type: none"> <li>• 20 10/100/1000Mbps</li> <li>• 4 combo 10/100/1000BASE-T/SFP</li> </ul>	<ul style="list-style-type: none"> <li>• 44 10/100/1000 Mbps</li> <li>• 4 combo 10/100/1000BASE-T/SFP</li> </ul>
Network Cables	<ul style="list-style-type: none"> <li>• UTP Cat.5, Cat.5e (100m max)</li> <li>• EIA/TIA-568 100-ohm STP (100m max)</li> </ul>			
Full/Half Duplex	<ul style="list-style-type: none"> <li>• Full/half duplex for 10/100Mbps speeds</li> <li>• Full duplex for Gigabit speed</li> </ul>			
Media Interface Exchange	<ul style="list-style-type: none"> <li>• Auto MDI/MDI-X adjustment for all twisted-pair ports</li> </ul>			
Port Standards & Functions	<ul style="list-style-type: none"> <li>• IEEE 802.3 10BASE-T Ethernet (twisted-pair copper)</li> <li>• IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper)</li> <li>• IEEE 802.3ab 1000BASE-T Gigabit Ethernet (twisted-pair copper)</li> <li>• Auto-negotiation</li> <li>• IEEE 802.3x Flow Control</li> </ul>			

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Performance				
Switching Capacity	• 20Gbps	• 32Gbps	• 48Gbps	• 96Gbps
Maximum 64 bytes packet forwarding rate	• 14.88Mpps	• 23.8Mpps	• 35.7Mpps	• 71.4 Mpps
RAM Buffer	• 512KB per device	• 512KB per device	• 512KB per device	• 1 MB per device
Transmission Method	• Store-and-forward			
MAC Address Table	• 8K entries per device			
MAC Address Update	• Up to 256 static MAC entries	• Enable/disable auto-learning of MAC addresses		

Physical and Environmental				
Maximum Power Consumption	• 109.6 W (PoE on) 14.45 W (PoE off)	• 17.4W	• 24.1W	• 59.1W
Standby Power Consumption	• 7W/110 V, 7.8W/240V	• 4.9W/110V, 5W/240V	• 6W/110V, 6.2W/240V	• 19.2W/110V, 1W/240V
Fan Quantity	• 0	• 0	• 0	• 2 smart fans (default fan speed is low, fans switch to high speed automatically at 33°C ambient temperatures)
Acoustics	• 0dBA	• 0dBA	• 0dBA	• 46.2dBA (max.)
Heat Dissipation	• 373.96 BTU/hr	• 59.23 BTU/hr	• 82.23 BTU/hr	• 201.65 BTU/hr
Dimensions	• 13in x 7.1in x 1.7in (330mm x 180mm x 44mm) • 13-inch desktop enclosure, 1U height	• 17.3in x 8.3in x 1.7in (440mm x 210mm x 44mm) • 19-inch standard rack mounting width, 1U height	• 17.3in x 8.3in x 1.7in (440mm x 210mm x 44mm) • 19-inch standard rack mounting width, 1U height	• 17.3in x 9.8in x 1.7in (440mm x 250mm x 44mm) • 19-inch standard rack mounting width, 1U height
Weight	• 4.1lbs (1.84kg)	• 6.3 lbs (2.9kg)	• 6.5 lbs (2.9kg)	• 8.9 lbs (4.04kg)
MTBF	• 205,249 hours	• 799,491 hours	• 410,948 hours	• 322,402 hours
AC Input	• 100 to 240 VAC 50/60Hz internal universal power supply			
Operating Temperature	• 32° to 104°F (0° to 40°C)			
Storage Temperature	• 14° to 158°F (-10° to 70°C)			
Operating Humidity	• 10% to 95% non-condensing			
Storage Humidity	• 5% to 95% non-condensing			
Emission (EMI)	• FCC Class A, CE Class A, IC Class A, VCCI Class A, C-Tick			
Diagnostic LEDs	• Power (per device)	• Fan Error (per device, optional)		
	• Link/Activity/Speed (per 10/100/1000Mbps port, per SFP port)			
Safety	• cUL, LVD			

PoE (DGS-1210-10P only)	
PoE Standard	• 802.3af • Pre-standard 802.3at
PoE Capable Ports	• Port 1 to 8: 15.4w or 30w • Max. 30w on 2 10/100/1000Mbps ports • Max. 15.4w on 4 10/100/1000Mbps ports • Max. 7.5w on 8 10/100/1000Mbps ports
PoE Power Budget	• Maximum: 78W

Software Features	
L2 Features	
MAC Address Table	• 8K
Flow Control	• 802.3x Flow Control • HOL Blocking Prevention

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Spanning Tree Protocol	<ul style="list-style-type: none"> <li>• 802.1D STP</li> <li>• 802.1w RSTP</li> </ul>
IGMP Snooping	<ul style="list-style-type: none"> <li>• IGMP v1/v2 Snooping</li> <li>• Supports IGMP Snooping Querier</li> <li>• IGMP per VLAN</li> <li>• Supports at least 64 static multicast addresses</li> <li>• Support 256 IGMP groups</li> </ul>
Loopback Detection	<ul style="list-style-type: none"> <li>• Auto disable port when loop is detected</li> </ul>
802.3ad Link Aggregation	DGS-1210-10P: <ul style="list-style-type: none"> <li>• 5 groups per device/8 ports per group</li> </ul> DGS-1210-16/24/48: <ul style="list-style-type: none"> <li>• 8 groups per device/8 ports per group</li> </ul>
Port Mirroring	<ul style="list-style-type: none"> <li>• One-to-One, Many-to-One, Supports Mirroring for Tx/Rx/Both</li> </ul>
Cable Diagnostics	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Configurable Auto MDI/MDI-X	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Multicast Filtering	<ul style="list-style-type: none"> <li>• Forwards all unregistered groups</li> <li>• Filters all unregistered groups</li> </ul>
<b>VLAN</b>	
802.1Q	<ul style="list-style-type: none"> <li>• 2003 Edition</li> </ul>
VLAN Group	<ul style="list-style-type: none"> <li>• Max 256 static VLAN groups, max 4094 VIDs</li> </ul>
Management VLAN	<ul style="list-style-type: none"> <li>• Supports 1 Management VLAN</li> </ul>
Asymmetric VLAN	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
Auto Voice VLAN	<ul style="list-style-type: none"> <li>• Max. 10 user defined OUI, Max. 8 default OUI</li> </ul>
Auto Surveillance VLAN	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
<b>QoS (Quality of Service)</b>	
802.1p Quality of Service	<ul style="list-style-type: none"> <li>• 4 Queues per port</li> </ul>
Queue Handling	<ul style="list-style-type: none"> <li>• Strict, Weighted Round Robin (WRR)</li> </ul>
CoS based on	<ul style="list-style-type: none"> <li>• 802.1p Priority Queues, DSCP</li> </ul>
Bandwidth Control	<ul style="list-style-type: none"> <li>• Port-based (Ingress/Egress, min. granularity 64 Kb/s)</li> </ul>
<b>Access Control List</b>	
Maximum profiles	<ul style="list-style-type: none"> <li>• 50</li> </ul>
Maximum rules shared by profiles	<ul style="list-style-type: none"> <li>• 240</li> </ul>
ACL based on	<ul style="list-style-type: none"> <li>• MAC Address, IPv4 Address (ICMP/IGMP/TCP/UDP), VLAN ID, 802.1p Priority, DSCP</li> </ul>
ACL Actions	<ul style="list-style-type: none"> <li>• Permit, Deny</li> </ul>
<b>Security</b>	
802.1X Port-based Access Control	<ul style="list-style-type: none"> <li>• Default 802.1X forwarding</li> </ul>
Port Security	<ul style="list-style-type: none"> <li>• Supports up to 64 MAC addresses per port</li> </ul>
Traffic Control	<ul style="list-style-type: none"> <li>• Broadcast/Multicast/Unicast Storm Control</li> </ul>
Static MAC	<ul style="list-style-type: none"> <li>• Supports 256 Static MAC entries</li> </ul>
D-Link Safeguard Engine	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
DHCP Server Screening	<ul style="list-style-type: none"> <li>• Yes</li> </ul>
ARP Spoofing Prevention	<ul style="list-style-type: none"> <li>• Max 64 entries</li> </ul>
SSL	<ul style="list-style-type: none"> <li>• Supports v1/v2/v3</li> <li>• Support IPv4</li> </ul>
<b>MIB</b>	
MIB	<ul style="list-style-type: none"> <li>• 1213 MIB II, 1493 Bridge MIB, 1907 SNMP v2 MIB, 1215 Trap Convention MIB, 2233 Interface Group MIB, D-Link Private MIB</li> </ul>

RFC	
RFC	<ul style="list-style-type: none"> <li>RFC 768 UDP, RFC 791 IP, RFC 792 ICMP, RFC 793 TCP, RFC 826 ARP, RFC 854 Telnet Server, RFC 855 Telnet Server, RFC 856 Telnet Binary Transmission, RFC 858 Telnet Server, RFC 896 Congestion Control in TCP/IP Network, RFC 903 Reverse Address Resolution Protocol, RFC 951 BootP Client, RFC 1155 MIB, RFC 1157 SNMP v1, RFC 1191 Path MTU Discovery, RFC 1212 Concise MIB Definition, RFC 1213 MIB II, IF MIB, RFC 1215 Traps for use with the SNMP, RFC 1239 Standard MIB, RFC 1350 TFTP, RFC 1493 Bridge MIB, RFC 1519 CIDR, RFC 1945 HTTP/1.0, RFC 2131 DHCP, RFC 2132 DHCP Options and BOOTP Vendor Extensions, RFC 2138 Radius Authentication, RFC 2233 Interface MIB, RFC 2578 Structure of Management Information Version 2 (SMIv2), RFC 2647 802.1p, RFC 3416 SNMP, RFC 3417 SNMP, RFC 3621 Power Ethernet</li> </ul>

Management	
Web-based GUI	<ul style="list-style-type: none"> <li>Supports IPv4</li> </ul>
Compact CLI through Telnet	<ul style="list-style-type: none"> <li>Yes</li> </ul>
Telnet Server	<ul style="list-style-type: none"> <li>Maximum connection is 4, Supports IPv4</li> </ul>
TFTP Client	<ul style="list-style-type: none"> <li>Supports IPv4</li> </ul>
SNMP	<ul style="list-style-type: none"> <li>v1/v2/v3</li> </ul>
SNMP Trap	<ul style="list-style-type: none"> <li>Yes</li> </ul>
Trap for SmartConsole Utility	<ul style="list-style-type: none"> <li>Yes</li> </ul>
System Log	<ul style="list-style-type: none"> <li>Max. 500 log entries, supports 5 IPv4 log server</li> </ul>
BootP/DHCP Client	<ul style="list-style-type: none"> <li>Yes</li> </ul>
Time Setting	<ul style="list-style-type: none"> <li>SNTP</li> </ul>
LLDP	<ul style="list-style-type: none"> <li>DGS-1210-10P only</li> </ul>
LLDP-MED	<ul style="list-style-type: none"> <li>DGS-1210-10P only</li> </ul>
Time-based PoE	<ul style="list-style-type: none"> <li>DGS-1210-10P only</li> </ul>

Warranty Information	
Warranty	Limited Lifetime <sup>1</sup>

Ordering Information	
Part Number	Description
DGS-1210-10P	Web Smart 8-Port Gigabit PoE Switch with 2 1000BASE-T/SFP Combo Ports
DGS-1210-16	Web Smart 16-Port Gigabit Switch with 4 Combo SFP Slots
DGS-1210-24	Web Smart 24-Port Gigabit Switch with 4 Combo SFP Slots
DGS-1210-48	Web Smart 48-Port Gigabit Switch with 4 Combo SFP Slots
DEM-211	100BASE-FX Multimode LC Transceiver, up to 2Km
DEM-310GT	1000BASE-LX SFP Module, up to 10Km
DEM-311GT	1000BASE-SX SFP Module, up to 550m

<sup>1</sup> 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.

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