dlink green

Green Technology

- Power saving via Cable Length detection
- Power saving via Link Status detection
- Provides continuous, reliable and eco-friendly operation
- Time-based PoE (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

- SmartConsole utility or Web-based GUI
- Built-in SNMP MIB for remote NMS (D-View 6.0)
- Compact CLI through Telnet

VoIP Deployment

- Highest priority for VoIP services
- Auto Voice VLAN

QoS

- Ensures efficient delivery of time-sensitive data
- Supports IEEE 802.1p QoS, up to 4 802.1p Priority Queues per port
- DSCP

Advanced Features

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

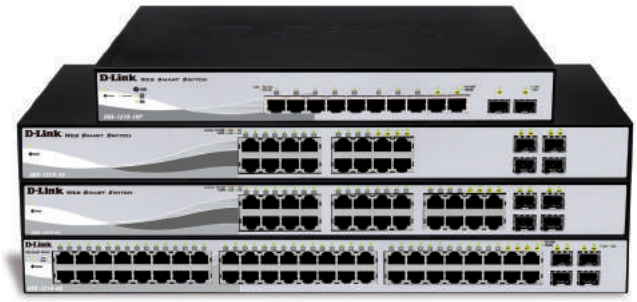
Trap & Logs

- SNMP Trap supports link and STP state changes
- Trap for SmartConsole Utility

Online Help

- Link to local support website
- Online User Guide

10/16/24/48-Port Web Smart Switch



D-Link's DGS-1210 Series is the latest generation of Web Smart Switches featuring D-Link Green Technology. The series integrates advanced management and security functions that provide performance and scalability. Additionally, the DGS-1210-10P's 10/100/1000 Mbps ports are PoE-enabled, offering ease-of-use and green features like Time-based PoE, which allows for the power to be shut off at a predetermined time. Compliant with 802.3af and 802.3at Pre-Standard, this switch is capable of feeding power to devices up to 30 Watts. Management options for the switches include SNMP, Web Management, SmartConsole Utility, and Compact Command Lines. The series also supports ACL filtering and D-Link's 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" desktop enclosure, the DGS-1210-16 and DGS-1210-24 feature a fanless design in 19" metal cases. The DGS-1210-48 is equipped with two smart fans which are set to low speed by default and will automatically switch to high speed once the temperature threshold is reached. A fanless design allows for quieter operation and guarantees an extended lifetime.

Energy Saving

Incorporating D-Link Green™ technology, the switch is capable of power-saving without sacrificing operational performance or functionality. It is able to detect the length of connected cables to automatically adjust power usage by saving energy on shorter cable connections of up to 20 meters. Link status drastically reduces power consumption by automatically toggling ports without a link to sleep mode. The DGS-1210 Series takes the approach to green IT 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 Cat.5 twisted-pair cables. Additionally, the last two or four ports of the DGS-1210 Series combine SFP and copper connectivity into one port and therefore provide a more flexible solution for upstream or downstream server connections via fiber interface. Using the default presets, an administrator can quickly set up the switch without reconfiguring any settings.

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 2000 Mbps 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 shut down the affected port. The Cable Diagnostic feature designed primarily for adminstrators and customer service representatives, can rapidly discover the type of error and determine the cable quality.

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 D-Link Smart III Switch series provide. This technology consolidates data and surveillance video transmission through a single Smart III 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 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

10/16/24/48-Port Web Smart Switch

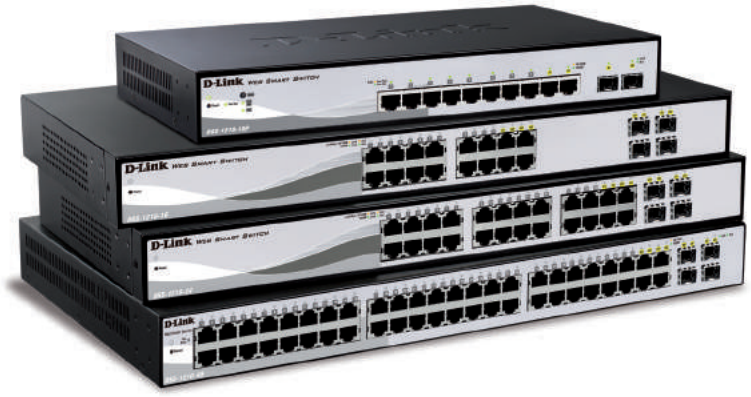
features guarantee the quality and security of VoIP traffic. Furthermore, the DSCP markings on Ethernet packets enable different levels of service to be assigned to network traffic. As a result, these voice and video packets take precedence over other packets. In addition, with Bandwidth Control, network administrators can reserve bandwidth for important functions that require a larger bandwidth or might have high priority.

Secure your Network

D-Link's innovative Safeguard Engine protects the switches against traffic flooding caused by virus attacks. The switches 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, 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 enables administrators to remotely control their network down to the port level. The 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. It also simplifies the initial setup of the Smart Switches. Switches within the same L2 network segment that are connected to the user's PC are displayed on screen for instant access. This allows extensive switch configuration and basic setup of discovered devices including 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. CLI management of the switches is possible via Telnet. This makes it possible to adjust basic settings, passwords, configuration files, and firmware with ease.



10/16/24/48-Port Web Smart Switch

Technical Specifications

General	Port Standards & Functions	IEEE 802.3i 10BASE-T Ethernet (twisted-pair copper) IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper) IEEE 802.3ab 1000BASE-T Gigabit Ethernet (twisted- pair copper) Auto-negotiation IEEE 802.3x Flow Control
	Number of Ports	DGS-1210-10P: 8 PoE 10/100/1000 Mbps, 2 combo 10/100/1000BASE-T/SFP DGS-1210-16: 12 10/100/1000 Mbps, 4 combo 10/100/1000BASE-T/SFP DGS-1210-24: 20 10/100/1000 Mbps, 4 combo 10/100/1000BASE-T/SFP DGS-1210-48: 44 10/100/1000 Mbps, 4 combo 10/100/1000BASE-T/SFP
	Network Cables	UTP Cat. 5, Cat. 5e (100 m max.) EIA/TIA-568 100-ohm STP (100 m max.)
	Full/Half Duplex	Full/half duplex for 10/100 Mbps speeds Full duplex for Gigabit speed
	Media Interface Exchange	Auto MDI/MDIX adjustment for all twisted-pair ports
Performance	Switching Capacity	DGS-1210-10P: 20 Gbps DGS-1210-16: 32 Gbps DGS-1210-24: 48 Gbps DGS-1210-48: 96 Gbps
	Transmission Method	Store-and-forward
	MAC Address Table	8 K entries per device
	MAC Address Update	Up to 256 static MAC entries Enable/disable auto-learning of MAC addresses
	Maximum 64 bytes packet forwarding rate	DGS-1210-10P: 14.88 Mpps DGS-1210-16: 23.8 Mpps DGS-1210-24: 35.7 Mpps DGS-1210-48: 71.4 Mpps
	RAM Buffer	DGS-1210-10P: 512 KB per device DGS-1210-16: 512 KB per device DGS-1210-24: 512 KB per device DGS-1210-48: 1 MB per device
PoE*	PoE Standard	802.3af & Pre-standard 802.3at
	PoE Capable Ports	Ports 1 to 8 : 15.4 W or 30 W Max. 30 W on 2 10/100/1000 Mbps ports Max. 15.4 W on 4 10/100/1000 Mbps ports Max. 7.5 W on 8 10/100/1000 Mbps ports
	PoE Power Budget	Max. 78 W

* PoE features available on DGS-1210-10P only

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Physical & Environmental	**AC Input**	100 to 240 VAC 50/60 Hz internal universal power supply
	Maximum Power Consumption	DGS-1210-10P: 109.6 W (PoE on), 14.45 W (PoE off) DGS-1210-16: 17.4 W DGS-1210-24: 24.1 W DGS-1210-48: 59.1 W
	Standby Power Consumption	DGS-1210-10P: 7 W/110 V, 7.8 W/240 V DGS-1210-16: 4.9 W/110 V, 5 W/240 V DGS-1210-24: 6 W/110 V, 6.2 W/240 V DGS-1210-48: 19.2 W/110 V, 20.1 W/240 V
	Fan Quantity	DGS-1210-10P: 0 DGS-1210-16: 0 DGS-1210-24: 0 DGS-1210-48: 2 smart fans (default fan speed is low, fans switch to high speed automatically at 33 degrees Celsius ambient temperature)
	Acoustics	DGS-1210-10P: 0 dBA DGS-1210-16: 0 dBA DGS-1210-24: 0 dBA DGS-1210-48: 46.2 dBA (max.)
	Heat Dissipation	DGS-1210-10P: 373.96 BTU/hr DGS-1210-16: 59.23 BTU/hr DGS-1210-24: 82.23 BTU/hr DGS-1210-48: 201.65 BTU/hr
	Operating Temperature	0 to 40˚C
	Storage Temperature	-10 to 70˚C
	Operating Humidity	10% to 95% non-condensing
	Storage Humidity	5% to 95% non-condensing
	Dimensions	DGS-1210-10P: 330 mm x 180 mm x 44 mm (13" desktop enclosure, 1U height) DGS-1210-16: 440 mm x 210 mm x 44 mm (19" standard rack mounting width, 1U height) DGS-1210-24: 440 mm x 210 mm x 44 mm (19" standard rack mounting width, 1U height) DGS-1210-48: 440 mm x 250 mm x 44 mm (19" standard rack mounting width, 1U height)
	Weight	DGS-1210-10P: 1.84 kg DGS-1210-16: 2.87 kg DGS-1210-24: 2.97 kg DGS-1210-48: 4.04 kg
	Diagnostic LEDs	Power (Per device) Fan error (Per device, optional) Link/Activity/Speed (Per 10/100/1000 Mbps port) Link/Activity/Speed (Per SFP port)
	Emission (EMI)	FCC Class A CE Class A IC Class A VCCI Class A C-Tick
	MTBF	DGS-1210-10P: 205,249 hours DGS-1210-16: 799,491 hours DGS-1210-24: 410,948 hours DGS-1210-48: 322,402 hours
	Safety	cUL, LVD

10/16/24/48-Port Web Smart Switch

Software Features

L2 Features
- MAC Address Table
  - 8 K
- Flow Control
  - 802.3x Flow Control
  - HOL Blocking Prevention
- IGMP Snooping
  - IGMP v1/v2 Snooping
  - Supports 256 IGMP groups
  - Supports at least 64 static multicast addresses
  - IGMP per VLAN
  - Supports IGMP Snooping Querier
- Spanning Tree Protocol
  - 802.1D STP
  - 802.1w RSTP
- Loopback Detection
- 802.3ad Link Aggregation
  - DGS-1210-10P: Max. 5 groups per device/8 ports per group
  - DGS-1210-16/DGS-1210-24/DGS-1210-48: Max. 8 groups per device/8 ports per group
- Port Mirroring
  - One-to-One
  - Many-to-One
  - Supports Mirroring for Tx/Rx/Both
- Cable Diagnostics
- Configurable MDI/MDIX
- Multicast Filtering
  - Forwards all unregistered groups
  - Filters all unregistered groups

VLAN
- 802.1Q
- VLAN Group
  - Max. 256 static VLAN groups
  - Max. 4094 VIDs
- Management VLAN
- Asymmetric VLAN
- Auto Voice VLAN
  - Max. 10 user defined OUI
  - Max. 8 default OUI
- Auto Surveillance VLAN

QoS (Quality of Service)
- 802.1p Quality of Service
- 4 queues per port
- Queue Handling
  - Strict
  - Weighted Round Robin (WRR)
- CoS based on
  - 802.1p Priority Queues
  - DSCP
- Bandwidth Control
  - Port-based (Ingress/Egress, min. granularity for 10/100 is 64 Kb/s and 10/100/1000 is 1850 Kb/s))

Access Control List (ACL)
- Max. 50 profiles
- Max. 240 rules shared by profiles
- ACL based on
  - MAC Address
  - IPv4 Address (ICMP/IGMP/TCP/UDP)
- ACL Actions
  - Permit
  - Deny

Security
- 802.1X Port-based Access Control
- Port Security
  - Supports up to 64 MAC addresses per port
- Broadcast/Multicast/Unicast Storm Control
- Static MAC
- D-Link Safeguard Engine
- DHCP Server Screening
- ARP Spoofing Prevention
  - Max. 64 entries
- SSL
  - Supports v1/v2/v3
  - Supports IPv4

MIB
- 1213 MIB II
- 1493 Bridge MIB
- 1907 SNMP v2 MIB
- 1215 Trap Convention MIB
- 2233 Interface Group MIB
- D-Link Private MIB

RFC Standard Compliance
- 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

Management
- Web-based GUI
- Compact CLI through Telnet
- Telnet Server
- TFTP Client
- SNMP
  - Supports v1/v2/v3
- SNMP Trap
- Trap for SmartConsole Utility
- System Log
  - Max. 500 log entries
  - Supports IPv4 log server
- BootP/DHCP Client
- DHCP Auto Configuration
- Time Setting
  - SNTP
- LLDP, LLDP-MED*
- Time-based PoE*

* Available for PoE models only

Optional Products

Optional SFP Transceivers

DEM-310GT	1000BASE-LX, Single-mode, 10 km
DEM-311GT	1000BASE-SX, Multi-mode, 550 m
DEM-312GT2	1000BASE-SX, Multi-mode, 2 km
DEM-314GT	1000BASE-LX, Single-mode, 50 km
DEM-315GT	1000BASE-LX, Single-mode, 80 km
DEM-210	100BASE-FX, Single-mode, 15 km
DEM-211	100BASE-FX, Multi-mode, 2 km

Optional WDM SFP Transceivers

DEM-220R	100BASE-BX, Wavelength Tx:1550 nm Rx:1310 nm, Single-mode, 20 km
DEM-220T	100BASE-BX, Wavelength Tx:1550 nm Rx:1310 nm, Single-mode, 20 km
DEM-330T	1000BASE-LX, Wavelength Tx:1550 nm Rx:1310 nm, Single-mode, 10 km
DEM-330R	1000BASE-LX, Wavelength Tx:1310 nm Rx:1550 nm, Single-mode, 10 km
DEM-331T	1000BASE-LX, Wavelength Tx:1550 nm Rx:1310 nm, Single-mode, 40 km
DEM-331R	1000BASE-LX, Wavelength Tx:1310 nm Rx:1550 nm, Single-mode, 40 km

Deploying the DGS-1210 Series in an Office Environment