D-Link
Building Networks for People

Highlights

Save Energy, Save Money

Be friendly to the planet and your budget; achieve significant power savings to keep your costs low

Manageability

Advanced functions including SNMP v1/2c/3, and D-View Module Multi-language Web GUI

IPv6 Ready

The DGS-1210-28 Web Smart Switch is fully IPv6 compatible and ready for enterprises using IPv6

DGS-1210-28
Web Smart Switch

Features

Green Technology

- Power saving via the following features:
  - Link Status detection
  - Time-based PoE
  - LED Shut-Off
  - Port Shut-Off
  - System Hibernation

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

- D-Link Network Assistant Utility or Web-based GUI
- Built-in SNMP MIB for remote NMS (D-View 6.0)
- Compact CLI through Telnet

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

D-Link's DGS-1210-28 Web Smart Switch is the latest generation of Web Smart Switches featuring D-Link Green Technology. The DGS-1210-28 integrates advanced management and security functions that provide performance and scalability. Management options for the switch include SNMP, Web Management, D-Link Network Assistant Utility, and Compact Command Lines. The DGS-1210-28 also supports ACL filtering and D-Link's Safeguard Engine. The DGS-1210-28 uses Auto Voice VLAN, ensuring higher priority for voice traffic. 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. Link status drastically reduces power consumption by automatically toggling ports without a link to sleep mode. The DGS-1210-28 takes the approach to green IT one step further by incorporating a special chipset with advanced silicon technology.

Extensive Layer 2 Features

Equipped with a complete lineup of L2 features, the DGS-1210-28 Web Smart Switch includes 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.

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DGS-1210-28 Web Smart Switch

QoS, Bandwidth Control

The DGS-1210-28 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 DGS-1210-28 Web Smart Switch provides. This technology consolidates data and surveillance video transmission through a single DGS-1210-28, 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 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 DGS-1210-28 supports 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-1210-28 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-1210-28 provides a D-Link Network Assistant Utility and a web-based management interface that enables administrators to remotely control their network down to the port level. The D-Link Network Assistant Utility 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 Web 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-1210-28 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.

Seamless Integration

The DGS-1210-28 comes with Ethernet and Gigabit copper ports capable of connecting to existing Cat5 twisted-pair cables. Additionally, with its 24 10/100/1000Mbps and 4 1G SFP ports, the DGS-1210-28 Web Smart Switch can provide a more flexible solution for upstream or downstream server connections. 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. The Cable Diagnostic feature is designed primarily for administrators and customer service representatives, and can help them rapidly discover the type of error and determine the cable quality. Using the default presets, an administrator can quickly set up the switch without reconfiguring any settings, helping to ensure seamless integration into any network configuration.

Technical Specifications

General

Number of Ports	• DGS-1210-28: 24 10/100/1000 Mbps, 4 SFP	
Port Standard & 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) • IEEE 802.3az compliance • Auto-negotiation • IEEE 802.3x Flow Control	
SFP Transceivers Supported	• DGS-712 1000BASE-T Copper SFP Transceiver • DEM-310GT (1000Base-LX, Single-mode, 10km) • DEM-311GT (1000Base-SX, Mutli-mode, 550m) • DEM-312GT2 (1000Base-SX, Multi-mode, 2km) • DEM-314GT (1000BASE-LHX, Single-mode, 50km) • DEM-315GT (1000BASE-ZX, Single-mode, 80km)	• DEM-330T/R (Gigabit WDM transceiver, Single-Mode, 10 km) • DEM-331T/R (Gigabit WDM transceiver, Single-Mode, 40 km) • DEM-302S-LX (1000Base-LX, Single-mode, 2km) • DEM-302S-BXD/BXU (Gigabit WDM transceiver, Single-mode, 2km)
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	

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DGS-1210-28 Web Smart Switch

Performance	
Switching Capacity	• DGS-1210-28: 56 Gbps
Transmission Method	• Store-and-forward
MAC Address Table	• 16 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-1210-28: 41.7 Mpps
Packet Buffer Memory	• DGS-1210-28: 1.5 MB per device
DDRIII for CPU	• 128 Mbytes
Flash Memory	• 16 Mbytes
Physical/Environmental	
AC Input	• 100 to 240 VAC 50/60 Hz internal universal power supply
Maximum Power Consumption	• DGS-1210-28: 22.45 W
Standby Power Consumption	• DGS-1210-28: 17.65 W/100 V, 17.84 W/240 V
Fan Quantity	• DGS-1210-28: 0
Acoustics	• DGS-1210-28: 0 dBA
Heat Dissipation	• DGS-1210-28: 76.55 Btu/hr
Operating Temperature	• -5 to 50 ˚C (23 to 122 °F)
Storage Temperature	• -20 to 70 ˚C (-4 to 158 °F)
Operating Humidity	• 0% to 95% non-condensing
Storage Humidity	• 0% to 95% non-condensing
Dimensions (L x W x H)	• DGS-1210-28: 440 mm x 140 mm x 44 mm (17.32 x 5.51 x 1.73 inces, 19" standard rack mounting width, 1U height)
Weight	• DGS-1210-28: 1.67 kg (3.68 lbs)
Diagnostic LEDs	• Power (Per device) • Link/Activity/Speed (Per 10/100/1000 Mbps port) • Link/Activity/Speed (Per SFP port)
Certifications	• FCC Class A • CE Class A • IC Class A • VCCI Class A • C-Tick • BSMI • CCC
MTBF	• DGS-1210-28: 540,000 hours
Safety	• cUL • CE • CCC

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Software

L2 Features	• MAC Address Table
	  • 16K entries
	• IGMP Snooping
	  • IGMP v1/v2 Snooping
	  • Supports 256 IGMP groups
	  • Supports at least 64 static multicast addresses
	  • IGMP per VLAN
	  • Supports IGMP Snooping Querier
	• Loopback Detection
	• 802.3ad Link Aggregation
	  • Max. 14 groups per device, 8 ports per group
	• LLDP
	• LLDP-MED
	• Jumbo Frame
	  • Up to 9,216 bytes
	• Cable Diagnostics
		• Spanning Tree Protocol
		  • 802.1D STP
		  • 802.1w RSTP
		  • 802.1s MSTP
		• Flow Control
		  • 802.3x Flow Control
		  • HOL Blocking Prevention
		• Port Mirroring
		  • One-to-One
		  • Many-to-One
		  • Supports Mirroring for Tx/Rx/Both
		• Multicast Filtering
		  • Forwards all unregistered groups
		  • Filters all unregistered groups
		• Configurable MDI/MDIX

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

Quality of Service (QoS)	• 802.1p Quality of Service
	• 8 queues per port
	• Queue Handling
	  • Strict
	  • Weighted Round Robin (WRR)
	• Bandwidth Control
	  • Port-based (Ingress/Egress, min granularity 10/100/1000 is 64 Kbs)
		• QoS based on:
		  • 802.1p Priority Queues
		  • DSCP
		  • ToS
		  • IPv6 Traffic Class
		  • TCP/UDP port

L3 Features	• IP Interface • Supports 1 interface	• IPv6 Neighbor Discovery (ND)

Access Control List (ACL)	• Max. 50 profiles
	• Max. 768 rules shared by IPv4, MAC and IPv6
	• Each rule can only be associated with a single port
	• ACL based on
	  • 802.1p priority
	  • VLAN
	  • MAC address
		• Ether type
		  • IP address
		  • DSCP
		  • Protocol type
		  • TCP/UDP port number
		  • IPv6 Traffic Class

Security	• Broadcast/Multicast/Unicast Storm Control
	• D-Link Safeguard Engine
	• DHCP Server Screening
	• IP-MAC-Port Binding (Smart Binding)
	  • Supports 512 address binding entries
	  • ARP Inspection
	  • ARP + IP Inspection
	  • Supports DHCP Snooping
	• 802.1X Port-based Access Control
		• ARP Spoofing Prevention
		  • Max. 64 entries
		• Traffic Segmentation
		• SSH v2
		• SSL
		  • Supports v1/v2/v3
		• Port Security
		  • Supports up to 64 MAC addresses per port

AAA	• 802.1X Authentication
	  • Supports local/RADIUS database
	  • Supports Port-based access control
	  • Supports EAP, OTP, TLS, TTLS, PEAP
		• IPv6 RADIUS Server
		• Support MD5 authentication

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

RFC Standard Compliance	• RFC 783 TFTP • RFC 951 BootP/DHCP Client • RFC 1157 SNMP v1, v2, v3 • RFC 1213 MIB II • RFC 1215 MIB Traps Convention • RFC 1350 TFTP • RFC 1493 Bridge MIB • RFC 1769 SNTP • RFC 1542 BootP/DHCP Client • RFC 1901 SNMP v1, v2, v3 • RFC 1907 SNMP v2 MIB • RFC 1908 SNMP v1, v2, v3 • RFC 2131 BootP/DHCP Client • RFC 2138 RADIUS Authentication	• RFC 2139 RADIUS Authentication • RFC 2233 Interface Group MIB • RFC-2246 SSL • RFC 2475 • RFC 2570 SNMP v1, v2, v3 • RFC 2575 SNMP v1, v2, v3 • RFC 2598 CoS • RFC 2618 RADIUS Authentication • RFC 2819 RMON v1 • RFC 2865 RADIUS Authentication • RFC 3164 System Log • RFC 3195 System Log • RFC 3411-17 SNMP
OAM	• Cable Diagnostics	• Factory Reset

Management	• Web-based GUI
	• D-Link Network Assistant Utility
	• Compact CLI
	• Telnet Server
	• TFTP Client
	• Configurable MDI/MDIX
	• SNMP
	  • Supports v1/v2c/v3
	• SNMP Trap
	• Backup/Upgrade firmware
	• Smart Wizard
	• Upload/Download Configuration file
		• System Log
		  • Max. 500 log entries
		• BootP/DHCP Client
		• SNTP
		• ICMP v6
		• IPv4/v6 Dual Stack
		• DHCP Auto Configuration
		• Debug Command
		• Time Setting
		  • SNTP
		• RMONv1
		• Trusted Host

Green™ V3.0 Technology	• Power Saving by:
	  • Link Status
	  • Time-based PoE: PoE ports can be turned on/off by port or system through schedule
		• LED Shutoff
		• System Hibernation
		• Port Shutoff

Optional SFP Transceivers (all models except where noted)	
DGS-712	1000 Base-T Copper
DEM-302S-LX	1000Base-LX, Single-mode, 2km
DEM-302S-BXD/BXU	Gigabit WDM transceiver, Single-mode, 2km
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-LHX, Single-mode, 50 km
DEM-315GT	100BASE-ZX, Single-mode, 80 km
DEM-330T/R	Gigabit WDM transceiver, Single-Mode 10km
DEM-331T/R	Gigabit WDM transceiver, Single-Mode 40km

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