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Product Highlights

10 Gigabit Connectivity

Ideal for deployment in SMB networks with large bandwidth demands such as data replication and backup, video-on-demand, and 10G server connections

Comprehensive Management and Security

Manage your entire network easily via Web GUI or D-Link Network Assistant. Protect your network with IP-MAC-Port binding, Safeguard Engine, ACL, and ARP Spoofing Prevention.

Unparallelled Flexibility

Physical and virtual stacking provides redundancy and expandability, while enabling simple deployment and management

DGS-1510 Series

Gigabit Stackable SmartPro Switches with 10G Uplinks

Features

Advanced Features

- Single IP Management (Virtual Stacking), stack up to 32 devices
- Physical Stacking via 2 10G ports, stack up to 6 devices
- Static Routing
- IPv6 Management Support
- Auto Surveillance VLAN
- Auto Voice VLAN
- Loopback Detection automatically disables a port or VLAN when a loop is detected
- Configurable MDI/MDIX
- LLDP/LLDP-MED

Security Features

- Access Control List
- D-Link Safeguard Engine
- Port Security
- ARP Spoofing Prevention
- IP-MAC-Port Binding
- DoS Attack Prevention

Intuitive Management

- D-Link Network Assistant Utility or Multi-language Web-based GUI
- Built-in SNMP MIB for remote NMS (D-View 6.0)
- Full CLI via console port
- IPv4/IPv6 Stack
- Dual Image

Green Technology

- IEEE 802.3az Energy Efficient Ethernet
- D-Link Green 3.0 power-saving features

The DGS-1510 Series is D-Link's latest generation of SmartPro switches with 10G port connectivity, making them ideal for deployment in SME/SMB core environments. The DGS-1510 Series provides a reliable, scalable, and modular interconnection between core switches and edge switches with rich capabilities and simplified flexibility. Available in 16, 24 or 48 10/100/1000 Mbps port models, these switches also include 2 Gigabit SFP ports and 2 10G SFP+ ports. The DGS-1510 Series now features an IEEE 802.3at certified 24 10/100/1000 Mbps PoE model which is ideal for simplyfing deployment of VoIP phones and network cameras.

The DGS-1510 Series PoE-enabled switches are ideal for businesses looking to power VoIP phones, wireless access points or network cameras. The DGS-1510-28P 24-port PoE Switch supports up to 30 W of power output giving you flexibility in power allocation for a variety of powered devices enabling you to scale your operations to meet business growth, incorporate new technologies all with affordable installation costs.

Two 10G SFP+ Stacking/Uplink Ports

Depending on whether linear or fault-tolerant ring stacking is implemented, users can use one or two 10-Gigabit SFP+ ports to create a physical stack. 6 units or 288 Gigabit ports can be configured as a stack using optional direct attach cables to provide high bandwidth on the DGS-1510 Series with cost efficiency. Users can mix from any of the DGS-1510 SmartPro series in a single stack to allow simultaneous and easy configuration, management and troubleshooting.

Flexibility and Scalability

The DGS-1510 Series supports virtual stacking via D-Link's Single IP Management (SIM), allowing up to 32 devices to be managed via a single IP. This simplifies management of small workgroups or wiring closets while allowing the network to be scaled to handle increased bandwidth demand. SIM reduces the number of IP address needed in your network and allows switches to be stacked together over Ethernet instead of using physical uplink or stacking ports. This eliminates the need for specialised stacking cables and removes distance barriers that can limit topology options when using other stacking technology.

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Extensive Layer 2 Features

The DGS-1510 Series switches are equipped with a complete lineup of Layer 2 features including IGMP Snooping, Port Mirroring, Spanning Tree, and Link Layer Discovery Protocol (LLDP). 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 or VLAN and automatically shut down the affected port or VLAN. The Cable Diagnostics feature, designed primarily for administrators and customer service representatives, can quickly discover the type of error on cables and determine the cable quality.

QoS, Bandwidth Control

The DGS-1510 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 built into D-Link Smart Switches. This technology consolidates data and surveillance video transmission through a single SmartPro switch, sparing businesses the expense of maintaining expensive 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 VoIP service by automatically placing voice traffic from an IP phone to an assigned VLAN. With higher priority and an 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 more bandwidth or might require 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 by screening ingress traffic based on MAC or IP addresses. The DGS-1510 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 unauthorised IP assignment.

IPv6 Ready

The DGS-1510 Series is IPv6 ready and supports various IPv6 functions such as MLD Snooping, IPv6 ACL/QoS, and IMPBv6 to ensure seamless integration of next generation networks. The DGS-1510 Series also supports a IPv4/v6 dual stack function that allows the switch to act as a bridge between IPv4 and IPv6 networks. Finally, all DGS-1510 Series are certified to be IPv6 Ready Logo Phase 2, which guarantees interoperability for IPv6 environments.

Versatile Management

The DGS-1510 Series 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 allows customers to easily discover multiple D-Link SmartPro 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 SmartPro 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-1510 Series also supports D-View 6.0 and a fully featured Command Line Interface (CLI) via console port. 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 console port and Telnet interfaces. This makes it possible to adjust basic settings, passwords, configuration files, and firmware with ease.

Layer 3 Traffic Management

The DGS-1510 Series provides static route, allowing you to segment your network into workgroups and communicate across VLANs without degrading application performance. With these capabilities, you can boost the efficiency of your network by offloading internal traffic-handling tasks from your router and allowing it to manage external traffic and security.

Energy Saving

DGS-1510 switches are capable of conserving power without sacrificing operational performance or functionality by using D-Link Green 3.0 technology. Using the 802.3az Energy Efficient Ethernet standard, the network will automatically decrease the power usage when traffic is low with no setup required. For environments not fully supporting the standard, DGS-1510 switches offer advanced power-saving settings including port shutoff, LED shutoff, and system hibernation based on custom scheduling profiles. The profiles can also be applied to the PoE switch so that there is no unnecessary power consumption during off hours.

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DGS-1510 Series
Gigabit Stackable SmartPro Switches with 10G Uplinks

DGS-1510-20

DGS-1510-28

DGS-1510-28P

DGS-1510-52

Technical Specifications			
General	DGS-1510-20	DGS-1510-28	DGS-1510-52
Port Standards & Functions	IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, 802.3ae 10 GbE, IEEE 802.3x Flow Control for Full-Duplex Mode, Auto-negotiation		
Number of Ports	16 10/100/1000 Mbps, 2 Gigabit SFP, 2 10G SFP+	24 10/100/1000 Mbps, 2 Gigabit SFP, 2 10G SFP+	48 10/100/1000 Mbps, 2 Gigabit SFP, 2 10G 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 and Gigabit speed		
Media Interface Exchange	Auto or configurable MDI/MDIX		
Performance			
Switching Capacity	76 Gbps	92 Gbps	140 Gbps
Transmission Method	Store-and-forward		
MAC Address Table	16,000 entries per device		
MAC Address Update	Up to 512 static MAC entries Enable/disable auto-learning of MAC addresses		
Maximum 64 bytes Packet Forwarding Rate	56.54 Mpps	68.45 Mpps	104.16 Mpps
Packet Buffer Memory	DGS-1510-20/28 - 1.5 MB per device DGS-1510-52 - 3 MB per device		

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DGS-1510 Series
Gigabit Stackable SmartPro Switches with 10G Uplinks

Physical & Environment	DGS-1510-20	DGS-1510-28	DGS-1510-52
AC Input	100 to 240 VAC 50/60 Hz internal universal power supply		
Maximum Power Consumption	20.3 W	24 W	38.4 W
Standby Power Consumption	12.2 W	15.2 W	27.6 W
Smart Fan Quantity	1	1	2
Acoustics	43.8 dB(A)	47.5 dB(A)	44.2 dB(A)
Heat Dissipation	41.602 BTU/hr	72.292 BTU/hr	130.944 BTU/hr
Operation Temperature	-5 to 50 ˚C (23 to 122 ˚F)		
Storage Temperature	-20 to 70˚C (-4 to 158 ˚F)		
Operation Humidity	0% to 95% non-condensing		
Storage Humidity	0% to 95% non-condensing		
Dimensions	280 x 180 x 44 mm (11 x 7.09 x 1.73 inches) 19" standard rack mounting width, 1U height	440 x 210 x 44 mm (17.36 x 8.26 x 1.73 inches) 19" standard rack mounting width, 1U height	440 x 250 x 44 mm (17.36 x 9.84 x 1.73 inches) 19" standard rack mounting width, 1U height
Weight	1.24 kg	2.00 kg	2.40 kg
Diagnostic LEDs	Power/Stacking ID/Fan (per device), Link/Activity/Speed (per 10/100/1000 Mbps port), Link/ Activity/Speed (per Gigabit SFP port), Link/Activity/Speed (per 10G SFP+ port)		
Certifications	CE, FCC, C-Tick, VCCI, BSMI, CCC		
Safety	cUL, CB		

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DGS-1510 Series PoE
Gigabit Stackable SmartPro Switches with 10G Uplinks

Technical Specifications	
General	DGS-1510-28P
Port Standards & Functions	IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3ab 1000BASE-T Gigabit Ethernet, 802.3ae 10 GbE, IEEE 802.3x Flow Control for Full-Duplex Mode, Auto-negotiation
Number of Ports	24 10/100/1000 Mbps PoE capable, 2 Gigabit SFP, 2 10G 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 and Gigabit speed
Media Interface Exchange	Auto or configurable MDI/MDIX
Performance	
Switching Capacity	92 Gbps
Transmission Method	Store-and-forward
MAC Address Table	16,000 entries per device
MAC Address Update	Up to 512 static MAC entries, Enable/disable auto-learning of MAC addresses
Maximum 64 bytes Packet Forwarding Rate	68.45 Mpps
Packet Buffer Memory	1.5 MB per device
PoE	
PoE Standard	IEEE 802.3af, 802.3at
PoE Capable Ports	Ports 1 to 24: Up to 30 W
PoE Power Budget	Max. 193 W
Physical & Environment	
AC Input	100 to 240 VAC 50/60 Hz internal universal power supply
Maximum Power Consumption	238.7 W (PoE on), 29 W (PoE off)
Standby Power Consumption	21 W
Smart Fan Quantity	2
Acoustics	46.4 dB(A)
Heat Dissipation	813.967 BTU/hr
Operation Temperature	-5 to 50 ˚C (23 to 122 ˚F)
Storage Temperature	-20 to 70˚C (-4 to 158 ˚F)
Operation Humidity	0% to 95% non-condensing
Storage Humidity	0% to 95% non-condensing
Dimensions	440 x 210 x 44 mm (17.36 x 8.26 x 1.73 inches) 19" standard rack mounting width, 1U height
Weight	2.54 kg
Diagnostic LEDs	Power/Stacking ID/Fan Error/PoE Push Button (per device), Link/Activity/Speed/PoE Mode (per 10/100/1000 Mbps port), Link/Activity/Speed (per SFP port), Link/Activity/Speed (per 10G SFP+ port)
Certifications	CE, FCC, C-Tick, VCCI, BSMI, CCC
Safety	cUL, CB

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Software Features		

Stackability	• Virtual Stacking Support
	  • D-Link Single IP Management
	  • Up to 32 devices per virtual stack
	  • Up to 20G stacking bandwidth
		• Physical Stacking
		  • Supports Duplex Chain/Ring topology
		  • Up to 40G stacking bandwidth full duplex
		  • Up to 6 units per stack

L2 Features	• MAC Address Table: 16K
	• Flow Control
	  • 802.3x Flow Control
	  • HOL Blocking Prevention
	• Jumbo Frame up to 9000 Bytes
	• IGMP Snooping
	  • IGMP v1/v2 Snooping
	  • IGMP v3 awareness
	  • Supports 512 IGMP groups
	  • Supports 128 static multicast addresses
	  • IGMP per VLAN
	  • Supports IGMP Snooping Querier
	  • Host-based IGMP Snooping Fast Leave
	• MLD Snooping[1]
	  • Supports MLD v1/v2 awareness
	  • Supports 512 groups
	  • Supports 128 Static Multicast Addresses
	  • Per VLAN MLD Snooping
	  • Host-based MLD Fast Leave
	  • MLD Snooping Querier
		• Spanning Tree Protocol
		  • 802.1D STP
		  • 802.1w RSTP
		  • 802.1s MSTP
		• Loopback Detection
		• 802.3ad Link Aggregation
		  • Max. 32 groups per device/8 ports per group
		• Port Mirroring
		  • Support 4 mirroring groups
		  • One-to-One, Many-to-One
		  • Supports Mirroring for Tx/Rx/Both
		• Multicast Filtering
		  • Forwards all unregistered groups
		  • Filters all unregistered groups
		• LLDP, LLDP-MED

VLAN	• 802.1Q Tagged VLAN • 4K VLAN Groups • Configurable VID: 0~4094	• Asymmetric VLAN • Auto Voice VLAN • Auto Surveillance VLAN

Quality of Service (QoS)	• 802.1p Quality of Service
	• Queue Handling
	  • Strict
	  • Weighted Round Robin (WRR)
	• 8 queues per port
	• Bandwidth Control
	  • Port-based (Ingress/Egress, min. granularity for 10/100/1000 BASE-T ports is 64 Kb/s)
		• CoS based on
		  • 802.1p priority
		  • VLAN
		  • MAC address
		  • Ether type
		  • IP address
		  • DSCP
		  • Protocol type
		  • TCP/UDP port number
		  • DSCP of IPv6 Traffic Class
		  • IPv6 flow label

L3 Features	• ARP
	  • 256 Static ARP
	  • Supports Gratuitous ARP
	• IPv6 Neighbour Discovery (ND)
		• Default Routing
		• Static Routing
		  • 64 IPv4 Static Route Entries
		  • 32 IPv6 Static Route Entries

Access Control List (ACL)	• ACL based on
	  • 802.1p priority
	  • VLAN
	  • MAC address
	  • Ether type
	  • IP address
	  • DSCP
	  • Protocol type
	  • TCP/UDP port number
	  • DSCP of IPv6 Traffic Class
	  • IPv6 flow label
		• ACL Actions
		  • Permit
		  • Deny
		• Max. 256 access list
		• Max. 768 rules
		• Single or multiple ports (each rule)
		• Time-based ACL
		• ACL Statistics

Security	• Port Security
	  • Supports up to 128 MAC addresses per port
	• Broadcast/Multicast/Unicast Storm Control
	• Dynamic ARP Inspection
	• Static MAC
	• D-Link Safeguard Engine
	• DHCP Server Screening
	• ARP Spoofing Prevention
	  • Max. 64 entries
	• SSH
	  • Supports v2
	  • Supports IPv4/IPv6
		• SSL
		  • Supports v1/v2/v3
		  • Supports IPv4/IPv6
		• Traffic Segmentation
		• IP-MAC-Port Binding
		  • DHCP snooping
		  • IP Source Guard
		  • Dynamic ARP inspection
		  • DHCPv6 Guard
		  • RA Guard
		  • IPv6 Snooping
		  • IPv6 Source Guard
		• DoS Attack Prevention

AAA	• Compound Authentication
	• 802.1X Port and MAC-based Authentication
	  • Supports RADIUS and Local Server
	  • Supports EAP, OTP, TLS, TTLS, PEAP
	• Web-based Access Control (WAC)
	  • Port-based Access Control
	  • Host-based Access Control
	  • Dynamic VLAN Assignment
		• MAC-based Access Control (MAC)
		  • Port-based Access Control
		  • Host-based Access Control
		  • Dynamic VLAN Assignment
		• Japan Web-based Access Control (JWAC)
		  • Port-based Access Control
		  • Host-based Access Control
		  • Dynamic VLAN Assignment

OAM	• Cable Diagnostics	• Factory Reset

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Software Features		

Management	• CLI
	• Telnet Server
	• TFTP Client
	• IPv6 Neighbor Discovery
	• Configurable MDI/MDIX
	• SNMP
	  • Supports v1, v2c, v3
	• SNMP Trap
	• System Log
	  • Max. 10,000 log entries
		• DHCP Client
		• D-Link Network Assistant support[1]
		• SNTP
		• ICMPv6
		• IPv4/v6 Dual Stack[1]
		• DHCP Auto Configuration
		• RMON v1

D-Link Green 3.0 Technology	• Power Saving by:
	  • Link Status
	  • LED or Port Shutoff
		• System Hibernation mode
		• Time-based PoE (PoE model only)

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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-LHX, single-mode, 50 km
DEM-315GT	1000BASE-ZX, single-mode, 80 km
DGS-712	1000BASE-T to SFP transceiver
Optional WDM SFP Transceivers	
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
DEM-330T	1000BASE-LX, Wavelength Tx 1550nm, Rx 1310nm, single-mode, 10km
DEM-330R	1000BASE-LX, Wavelength Tx 1310nm, Rx 1550nm, single-mode, 10km
Optional SFP+ Transceivers	
DEM-431XT	10GBASE-SR SFP+ Transceiver (without DDM), 80m: OM1 & OM2 MMF,300m: OM3 MMF
DEM-431XT-DD	10GBASE-SR SFP+ Transceiver (with DDM), 80m: OM1 & OM2 MMF, 300m: OM3 MMF
DEM-432XT	10GBASE-LR SFP+ Transceiver (without DDM), 10km
DEM-432XT-DD	10GBASE-LR SFP+ Transceiver (with DDM), 10km
DEM-433XT	10GBASE-ER SFP+ Transceiver (without DDM), 40km
DEM-433XT-DD	10GBASE-ER SFP+ Transceiver (with DDM), 40km
DEM-434XT	10GBASE-ER SFP+ Transceiver (without DDM), 80km
DEM-435XT	10GBASE-LRM SFP+ Transceiver (without DDM), 220m
DEM-435XT-DD	10GBASE-LRM SFP+ Transceiver (with DDM), 220m
DEM-436XT-BXD	10GBASE-LR SFP+ Transceiver. Wavelength: Tx 1330nm Rx: 1270nm (without DDM), 20km
DEM-436XT-BXU	10GBASE-LR SFP+ Transceiver. Wavelength: Rx 1330nm Tx: 1270nm (without DDM), 20km
Optional SFP+ Direct Attach Stacking Cables	
DEM-CB100S	10-GbE SFP+ 1 m Direct Attach Cable
DEM-CB300S	10-GbE SFP+ 3 m Direct Attach Cable
DEM-CB700S	10-GbE SFP+ 7m Direct Attach Cable

For more information: www.dlink.com

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