D-Link
Building Networks for People

Product Highlights

10 Gigabit Connectivity

High bandwidth uplinks eliminate network bottlenecks and provide low-latency connections for network servers and storage

Comprehensive Management

An intuitive web interface, SNMP support, and a powerful Command Line Interface provide a complete set of management features

Layer 3 Functions

Wired speed inter-VLAN routing helps by reducing the pressure of routers and backbone networks, improving the overall network efficiency

DGS-1510 Series

Gigabit Stackable Smart Managed Switches

Features

Advanced Features

- Physical stacking of up to 6 devices via two 10G ports
- Ethernet Ring Protection Switching (ERPS)
- Static Routing
- Auto Surveillance VLAN
- Auto Voice VLAN
- Loopback Detection
- LLDP/LLDP-MED

Security Features

- Access Control List (ACL)
- D-Link Safeguard Engine
- BPDU Attack Protection
- ARP Spoofing Prevention
- IP-MAC-Port Binding
- DoS Attack Prevention
- Clientless MAC/Web Access Control

Intuitive Management

- Multi-language web-based user interface
- Built-in SNMP MIB for remote network management systems
- Comprehensive CLI support
- Manageability for both IPv4/IPv6 environments
- Dual image support
- D-Link Network Assistant (DNA) utility for easy installation
- Console interface for out-of-band management

Green Technology

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

The D-Link DGS-1510 Series is the latest generation of Smart Managed switches with 10G capability, available with 16, 24, or 48 10/100/1000 Mbps ports plus additional fibre ports for physical stacking or uplinks. The PoE-capable DGS-1510-28P and DGS-1510-28XMP switches provide additional flexibility for businesses looking to power IP phones, wireless access points, or IP cameras using existing network infrastructure. The combination of high bandwidth connections and PoE support make the DGS-1510 Series ideal for Small-Medium Enterprise (SME) and Small-Medium Business (SMB) environments.

10G SFP+ Stacking/Uplink Ports

The last two SFP+ ports of the DGS-1510 Series switches allow users to create a physical stack of up to 6 units in a fault-tolerant ring or linear topology using Direct Attach Cables (DACs) or any compatible SFP+ transceiver[1]. This creates a total of 288 Gigabit ports, ensuring high bandwidth while staying cost-efficient. Meanwhile, the remaining uplink ports can be used for other functions, such as connecting to a larger network. Users can also easily configure and manage any of the DGS-1510 Series Smart Managed switches in a single stack. With 20 Gbps full-duplex capabilities, the DGS-1510 Series offers 10G connectivity to core networks and servers while still maintaining fast data transfer rates.

Layer 3 Traffic Management

The DGS-1510 Series provides static routing, allowing you to segment your network into workgroups that communicate between VLANs and increase application performance. With these capabilities, you can reduce the load on your core devices, allowing you to create a scalable and efficient network.

DGS-1510 Series Gigabit Stackable Smart Managed Switches

Extensive Layer 2 Features

The DGS-1510 Series switches are equipped with a complete line-up 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. Network maintenance features include Loopback Detection and Cable Diagnostics. Loopback Detection automatically detects and shuts down loops created by a specific port or VLAN. The Cable Diagnostics feature, designed primarily for administrators and customer service representatives, can determine cable quality and can quickly discover sections of cabling that need to be replaced.

Traffic Classification & QoS

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 transmissions through a single DGS-1510 Series Smart Managed switch, saving businesses the costs of maintaining expensive dedicated hardware and infrastructure. ASV also ensures the quality of real-time video for monitoring and control without compromising the transmission of conventional network data by giving ASV traffic priority over other packets.

Keep Your Network Secure

D-Link's innovative Safeguard Engine protects the DGS-1510 Series against traffic flooding caused by malicious attacks. The DGS-1510 Series supports both MAC and web-based access control. This gives network administrators multiple authentication options, reducing deployment times and removing the need for client software. The DGS-1510 Series supports IEEE 802.1X port-based authentication, allowing network users to be authenticated through external RADIUS servers. The Address Resolution Protocol (ARP) Spoofing Prevention feature helps to prevent attacks that may allow an intruder to intercept users' traffic while 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 security features, and IPv6 Quality of Service (QoS), ensuring seamless integration with next generation networks. The DGS-1510 Series also supports IPv4/v6 dual stack functionality, which allows the switches to act as a bridge between IPv4 and IPv6 networks.

D-Link Assist
Rapid Response Support

If the worst should happen to your network you need the very best support and fast. Downtime costs your business money. D-Link Assist maximises your uptime by solving technical problems quickly and effectively. Our highly trained technicians are on standby around the clock, ensuring that award-winning support is only a phone call away.

With a choice of three affordable service offerings covering all D-Link business products, you can select the package that suits you best:

D-Link Assist Gold - for comprehensive 24-hour support

D-Link Assist Gold is perfect for mission-critical environments where maximum uptime is a high priority. It guarantees four hour around-the-clock response. Cover applies 24/7 for every day of the year including holidays.

D-Link Assist Silver - for prompt same-day assistance

D-Link Assist Silver is designed for 'high availability' businesses that require rapid response within regular working hours. It provides a four hour response service Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist Bronze - for guaranteed response on the next business day

D-Link Assist Bronze is a highly cost-effective support solution for less critical environments. Response is guaranteed within eight business hours Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist can be purchased together with any D-Link business product. So whether you're buying switching, wireless, storage, security or IP Surveillance equipment from D-Link, your peace of mind is guaranteed. D-Link Assist also offers installation and configuration services to get your new hardware working quickly and correctly.

DGS-1510 Series Gigabit Stackable Smart Managed Switches

Versatile Management

The DGS-1510 Series supports virtual stacking via D-Link's Single IP Management (SIM), allowing up to 32 devices to be managed through a single IP address. This simplifies management of small workgroups or wiring closets while significantly reducing the number of IP addresses needed to manage your network. The DGS-1510 Series provides the D-Link Network Assistant (DNA) utility and a web-based management interface that enables administrators to easily set up and remotely manage their networks, greatly reducing switch deployment time. The DGS-1510 Series also features an extensive Command Line Interface (CLI) and SNMP support, allowing centralised management of a large number of devices. Out-of-band management of the switches is also available via a designated console port. This provides access to devices in the event that there is a loss of connectivity or that the switch is overloaded with bulk or malicious traffic.

Energy Efficient

All of the DGS-1510 Series switches are capable of conserving power without sacrificing operational performance or functionality thanks to D-Link Green 3.0 technology. Using the IEEE 802.3az Energy Efficient Ethernet (EEE) standard, the network will automatically decrease power usage when traffic is low. For environments that do not fully support this standard, these switches offer advanced power-saving settings including port shut-off, LED shut-off, and system hibernation based on custom profiles. These profiles can also be applied to the PoE switches so that there is no unnecessary power consumption during off-hours.

DGS-1510-20

DGS-1510-28

DGS-1510-28P

DGS-1510-28X

DGS-1510-28XMP

DGS-1510-52

DGS-1510-52X

DGS-1510 Series Gigabit Stackable Smart Managed Switches

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 x 10/100/1000 Mbps, 2 x Gigabit SFP, 2 x 10G SFP+	24 x 10/100/1000 Mbps, 2 x Gigabit SFP, 2 x 10G SFP+	48 x 10/100/1000 Mbps, 2 x Gigabit SFP, 2 x 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 full-duplex for 1000 Mbps 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	Up to 16,384 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	1.5 MB per device		3 MB per device
MTBF	882,152 hours	516,593 hours	433,434 hours
Physical & Environment			
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 x smart fan	1 x smart fan	2 x smart fans
Acoustics	43.8 dB(A)	43.8 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		

DGS-1510 Series Gigabit Stackable Smart Managed Switches

Technical Specifications		
General	DGS-1510-28X	DGS-1510-52X
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 x 10/100/1000Mbps, 4 x 10G SFP+	48 x 10/100/1000Mbps, 4 x 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 full-duplex for 1000 Mbps speed	
Media Interface Exchange	Auto or configurable MDI/MDIX	
Performance		
Switching Capacity	128Gbps	176Gbps
Transmission Method	Store-and-forward	
MAC Address Table	Up to 16,384 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	95.24Mpps	130.95Mpps
Packet Buffer Memory	1.5 MB per device	3MB per device
MTBF	516,593 hours	416,789 hours
Physical & Environment		
AC Input	100 to 240 VAC 50/60 Hz internal universal power supply	
Maximum Power Consumption	22.3 Watts	44.2 Watts
Standby Power Consumption	15.2 W	28.9 W
Smart Fan Quantity	1 x smart fan	2 x smart fans
Acoustics	42.7 dB(A)	45.8 dB(A)
Heat Dissipation	76.043 BTU/hr	138.787 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	440mm x 210mm x 44mm	440mm x 250mm x 44mm
Weight	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 Gigabit Stackable Smart Managed Switches

Technical Specifications		
General	DGS-1510-28P	DGS-1510-28XMP
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 x 10/100/1000 Mbps PoE capable, 2 x Gigabit SFP, 2 x 10G SFP+	24 x 10/100/1000 Mbps PoE capable, 4 x 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 full-duplex for 1000 Mbps speed	
Media Interface Exchange	Auto or configurable MDI/MDIX	
Performance		
Switching Capacity	92 Gbps	128 Gbps
Transmission Method	Store-and-forward	
MAC Address Table	Up to 16,384 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	95.24 Mpps
Packet Buffer Memory	1.5 MB per device	
MTBF	275,428 hours	274,796 hours
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	Max. 370 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)	436.3 W (PoE on), 38.4 W (PoE off)
Standby Power Consumption	21 W	28.3 W
Smart Fan Quantity	2 x smart fans	
Acoustics	46.4 dB(A)	56.9 dB(A)
Heat Dissipation	813.967 BTU/hr	1487.78 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	440 x 308 x 44 mm (17.36 x 12.12 x 1.73 inches) 19" standard rack mounting width, 1U height
Weight	2.54 kg	4.25 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	CE, FCC, C-Tick, VCCI, BSMI, CCC, IPv6 Ready Logo Phase 2
Safety	cUL, CB	cUL, CB

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DGS-1510 Series Gigabit Stackable Smart Managed Switches

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[1]
		  • Supports Duplex Chain/Ring topology
		  • Up to 40G stacking bandwidth full duplex
		  • Up to 6 units per stack

L2 Features	• MAC Address Table: Up to 16,384
	• Flow Control
	  • 802.3x Flow Control
	  • HOL Blocking Prevention
	• Jumbo Frame up to 9,216 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
	  • 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 v4.07[2]
		• 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
		• Ethernet Ring Protection Switching (ERPS)

VLAN	• 802.1Q Tagged VLAN • 4K VLAN Groups • Configurable VID: 0~4094 • GVRP • Asymmetric VLAN	• Auto Voice VLAN • Auto Surveillance VLAN 2.0[2] • MAC-based VLAN • Protocol-based VLAN

Quality of Service (QoS)	• 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
		• 802.1p Quality of Service
		• Queue Handling
		  • Strict Priority Queue (SPQ)
		  • Weighted Round Robin (WRR)
		  • Deficit Round Robin (DRR)
		  • SPQ + WRR
		• 8 queues per port
		• Bandwidth Control
		  • Port-based (Ingress/Egress, min. granularity for 10/100/1000 BASE-T ports is 64 Kb/s)

L3 Features	• ARP
	  • 256 Static ARP
	  • Supports Gratuitous ARP
	• IPv6 Neighbour Discovery (ND)
	• 16 IP interfaces
		• Default Routing
		• Static Routing
		  • 64 IPv4 Static Route Entries
		  • 32 IPv6 Static Route Entries
		• UDP helper[2]

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
	• D-Link Safeguard Engine
	• DHCP Server Screening
	• ARP Spoofing Prevention
	  • Max. 64 entries
	• SSH
	  • Supports v2
	  • Supports IPv4/IPv6
	• BPDU Attack Protection
	• DoS Attack Prevention
		• SSL
		  • Supports v1/v2/v3
		  • Supports IPv4/IPv6
		• Traffic Segmentation
		• IP-MAC-Port Binding
		  • DHCP snooping
		  • IP Source Guard
		  • Dynamic ARP Inspection
		  • IPv6 DHCP Guard
		  • IPv6 RA Guard
		  • IPv6 Snooping
		  • IPv6 Source Guard
		  • IPv6 ND Inspection

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
	• Guest VLAN
	• RADIUS and TACACS+ authentication for switch access
	• RADIUS and TACACS+ accounting
		• 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

DGS-1510 Series Gigabit Stackable Smart Managed Switches

Software Features		
OAM	• Cable Diagnostics • sFlow	• Factory Reset

Management	• Command Line Interface (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
	• Debug command
	• Dual images
	• Surveillance mode[2]
		• DHCP Client
		• D-Link Network Assistant support
		• SNTP
		• ICMPv6
		• IPv4/v6 Dual Stack
		• DHCP Auto Configuration
		• RMON v1
		• LLDP, LLDP-MED
		• DHCP relay
		• Web-based GUI
		• TFTP Client
		• NTP
		• Telnet client (supports CLI only)

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

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	
Optional SFP+ Transceivers		
DEM-431XT	10GBASE-SR SFP+ Transceiver (without 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	
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	

[1] When stacking in a linear typology, the remaining unused SFP+ ports in the stacking port pair of the top and bottom switches will also be considered occupied by the switch and cannot be used for any other purpose.
[2] This feature will be supported by firmware release version 1.40 and later, expected release in Q4 2016.

For more information: www.dlink.com

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