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

Wire-speed inter-VLAN routing reduces the load on routers and backbone networks, improving overall network efficiency



DGS-1510 Series

Gigabit Stackable Smart Managed Switches with 10G Uplinks

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 fiber ports for physical stacking or uplinks. The series includes three PoE-capable switches that 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.

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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. 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 and Quality of Servicew

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 Managed 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 helps to protect 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 user traffic while the DHCP Server Screening feature screens rogue DHCP server packets from user ports to prevent unauthorized 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.

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 supports 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 centralized 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.

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DGS-1510 Series
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DGS-1510-20



DGS-1510-28P



DGS-1510-28XMP



DGS-1510-28X



DGS-1510-52X



DGS-1510-52XMP



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DGS-1510 Series
Gigabit Stackable Smart Managed Switches with 10G Uplinks

Technical Specifications			
Model Number	DGS-1510-20	DGS-1510-28X	DGS-1510-52X
Hardware Version	A1		A2
General			
Size	• 19" standard rack width, 1U height		
Interfaces	• 16 x 10/100/1000 Mbps • 2 x Gigabit SFP • 2 x 10G SFP+	• 24 x 10/100/1000 Mbps • 4 x 10G SFP+	• 48 x 10/100/1000 Mbps • 4 x 10G SFP+
Port Standards & Functions	• IEEE 802.3 10BASE-T Ethernet • IEEE 802.3u 100BASE-TX Fast Ethernet • IEEE 802.3ab 1000BASE-T Gigabit Ethernet • IEEE 802.3ae 10 Gigabit Ethernet • IEEE 802.3x Flow Control for full-duplex mode, auto-negotiation		
Network Cables	• UTP Cat. 5, Cat. 5e, Cat. 6 (100 m max.) • EIA/TIA-568 100-ohm STP (100 m max.)		
Duplex Mode	• 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	• 128 Gbps	• 176 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 Packet Forwarding Rate	• 56.54 Mpps	• 95.24 Mpps	• 130.95 Mpps
Packet Buffer Memory	• 1.5 MB per device	• 1.5 MB per device	• 3 MB per device
MTBF	• 882,152 hours	• 516,593 hours	• 423,302 hours
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)	✔	✔	✔
Physical & Environment			
AC Input	• 100 to 240 VAC 50/60 Hz internal universal power supply		
Maximum Power Consumption	• 20.3 W	• 22.3 W	• 48 W
Standby Power Consumption	• 12.2 W	• 15.2 W	• 30.3 W
Fans	• 1 x smart fan	• 1 x smart fan	• 1 x smart fan
Acoustics	• 43.8 dB(A)	• 42.7 dB(A)	• 49.7 dB(A)

DGS-1510 Series
Gigabit Stackable Smart Managed Switches with 10G Uplinks

Heat Dissipation	• 41.60 BTU/hr	• 76.04 BTU/hr	• 163.68 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 (W x D x H)	• 280 x 180 x 44 mm (11.00 x 7.09 x 1.73 in)	• 440 x 210 x 44 mm (17.36 x 8.26 x 1.73 in)	• 440 x 210 x 44 mm (17.36 x 8.26 x 1.73 in)
Weight	• 1.24 kg (2.73 lbs)	• 2.00 kg (4.41 lbs)	• 3.10 kg (6.83 lbs)
Certifications	• CE, FCC, C-Tick, VCCI, BSMI, CCC, IPv6 Ready Logo Phase 2	• CE, FCC, C-Tick, VCCI, BSMI, CCC, IPv6 Ready Logo Phase 2	• CE, FCC, C-Tick, VCCI, BSMI, CCC
Safety	• cUL, CB		

Technical Specifications

Model Number	DGS-1510-28P	DGS-1510-28XMP	DGS-1510-52XMP
Hardware Version	• A1		
General			
Size	• 19" standard rack width, 1U height		
Interfaces	• 24 x 10/100/1000 Mbps PoE • 2 x Gigabit SFP • 2 x 10G SFP+	• 24 x 10/100/1000 Mbps PoE • 4 x 10G SFP+	• 48 x 10/100/1000 Mbps PoE • 4 x 10G SFP+
Port Standards & Functions	• IEEE 802.3 10BASE-T Ethernet • IEEE 802.3u 100BASE-TX Fast Ethernet • IEEE 802.3ab 1000BASE-T Gigabit Ethernet • IEEE 802.3ae 10 Gigabit Ethernet • IEEE 802.3x Flow Control for full-duplex mode, auto-negotiation		
Network Cables	• UTP Cat. 5, Cat. 5e, Cat. 6 (100 m max.) • EIA/TIA-568 100-ohm STP (100 m max.)		
Duplex Mode	• 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	• 176 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 Packet Forwarding Rate	• 68.45 Mpps	• 95.24 Mpps	• 130.95 Mpps
Packet Buffer Memory	• 1.5 MB per device		• 3 MB per device
MTBF	• 275,428 hours	• 274,796 hours	• 303,027 hours

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

PoE			
PoE Standard	• IEEE 802.3af/at		
PoE Capable Ports	• Ports 1 to 24: Up to 30 W		• Ports 1 to 48: Up to 30 W
PoE Power Budget	• Max. 193 W	• Max. 370 W	• Max. 370 W (without RPS); Max. 740 W (with RPS, only supports DPS-700)
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)	✔	✔	✔
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)	• 486.9 W (PoE on) • 58.8 W (PoE off)
Standby Power Consumption	• 21 W	• 28.2 W	• 40.1 W
Fans	• 2 x smart fans		• 4 x smart fans
Acoustics	• 46.4 dB(A)	• 56.9 dB(A)	• 55.4 dB(A)
Heat Dissipation	• 813.97 BTU/hr	• 1487.78 BTU/hr	• 1660.33 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 (W x D x H)	• 440 x 210 x 44 mm (17.36 x 8.26 x 1.73 in)	• 440 x 308 x 44 mm (17.36 x 12.12 x 1.73 in)	• 440 x 308 x 44 mm (17.36 x 12.12 x 1.73 in)
Weight	• 2.54 kg (5.60 lbs)	• 4.25 kg (9.37 lbs)	• 5.41 kg (11.93 lbs)
Certifications	• CE, FCC, C-Tick, VCCI, BSMI, CCC, IPv6 Ready Logo Phase 2	• CE, FCC, C-Tick, VCCI, BSMI, CCC, IPv6 Ready Logo Phase 2	• 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 (SIM)
	  • Up to 20 G stacking bandwidth
	  • Up to 32 devices per virtual stack
		• Physical Stacking
		  • Supports duplex chain/Ring topology
		  • Up to 40 G 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/v3 Snooping
	  • 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
	  • Supports 512 groups
	  • Supports 128 static multicast addresses
	  • Per VLAN MLD Snooping
	  • Host-based MLD Fast Leave
	  • MLD Snooping Querier
		• Spanning Tree Protocol (STP)
		  • 802.1D STP
		  • 802.1w RSTP
		  • 802.1s MSTP
		• Loopback Detection v4.07
		• 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, flow-based (ACL) mirroring
		• 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 • VLAN Wizard	• Asymmetric VLAN • Auto Voice VLAN • Auto Surveillance VLAN 2.1 • MAC-based VLAN • Protocol-based VLAN

Quality of Service (QoS)	• CoS based on
	  • 802.1p priority
	  • VLAN
	  • MAC address
	  • EtherType
	  • 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 10/100/1000BASE-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

Access Control List (ACL)	• ACL based on
	  • 802.1p priority
	  • VLAN
	  • MAC address
	  • EtherType
	  • 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

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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

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
	• Multiple images
	• DHCP Server
	• DHCP Client
		• Surveillance mode
		• D-Link Network Assistant support
		• SNTP
		• ICMPv6
		• IPv4/v6 Dual Stack
		• DHCP Auto Configuration
		• RMON v1
		• LLDP, LLDP-MED
		• DHCP relay
		• Web-based GUI
		• NTP
		• Telnet client (supports CLI only)
		• PD-Alive (PoE models only)

D-Link Green 3.0 Technology	• Power saving by:
	  • Link status
	  • LED or port shut-off
	  • System hibernation mode
	  • Time-based PoE (PoE models only)	

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DGS-1510 Series
Gigabit Stackable Smart Managed Switches with 10G Uplinks

Order Information	
Product Number	*Description*
DGS-1510-20	16 x 10/100/1000 Mbps, 2 x Gigabit SFP, and 2 x 10G SFP+
DGS-1510-28X	24 x 10/100/1000 Mbps and 4 x 10G SFP+
DGS-1510-28XMP	24 x 10/100/1000 Mbps PoE-capable and 4 x 10G SFP+
DGS-1510-28P	24 x 10/100/1000 Mbps PoE-capable, 2 x Gigabit SFP, and 2 x 10G SFP+
DGS-1510-52X	48 x 10/100/1000 Mbps and 4 x 10G SFP+
DGS-1510-52XMP	48 x 10/100/1000 Mbps PoE-capable and 4 x 10G SFP+
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: 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-302S-BXD	1000BASE-LX, wavelength Tx: 1550 nm, Rx: 1310 nm, single-mode, 2 km
DEM-302S-BXU	1000BASE-LX, wavelength Tx: 1310 nm, Rx: 1550 nm, single-mode, 2 km
Optional SFP+ Transceivers	
DEM-431XT	10GBASE-SR SFP+ transceiver (without DDM), 33 m: OM1 MMF, 82 m: OM2 MMF, 300 m: OM3 MMF
DEM-432XT	10GBASE-LR SFP+ transceiver (without DDM), 10 km
DEM-433XT	10GBASE-ER SFP+ transceiver (without DDM), 40 km
DEM-434XT	10GBASE-ZR SFP+ transceiver (without DDM), 80 km
DEM-436XT-BXD	10GBASE-LR BiDi SFP+ transceiver (without DDM), wavelength Tx: 1330 nm, Rx: 1270 nm, 20 km
DEM-436XT-BXU	10GBASE-LR BiDi SFP+ transceiver (without DDM), wavelength Tx: 1270 nm, Rx: 1330 nm, 20 km

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Optional SFP+ Direct Attach Stacking Cables	
DEM-CB100S	10 G SFP+ 1 m Direct Attach Cable
DEM-CB300S	10 G SFP+ 3 m Direct Attach Cable
Optional Redundant Power Supplies	
DPS-700	AC Redundant Power Supply (DGS-1510-52XMP only)

[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.

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