D-Link®

Highlights

10 Gigabit Connectivity

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

Comprehensive Management

An intuitive multilingual web interface, SNMP support, and a powerful Command Line Interface[1] 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-1250 Series
Gigabit Smart Managed Switches with 10G Uplinks

Features

10G Connectivity with Optional PoE Support

- 24/48 x 10/100/1000BASE-T PoE or non-PoE ports
- 4 x 10G SFP+ embedded uplink ports

Advanced Features

- Static routing
- Surveillance Mode
- Auto Voice VLAN
- Dual software images
- Dual configuration files

Security Features

- Access Control Lists (ACLs)
- D-Link Safeguard Engine helps the CPU resist broadcast/multicast/unicast flooding
- Port Security supports up to 64 MAC addresses per port
- ARP Spoofing Prevention
- IMPB Support

Intuitive Management

- D-Link Network Assistant (DNA) utility
- Multilingual Web UI
- Built-in SNMP MIB for remote NMS (D-View 7.0)
- Full command line support via console port[1]

The D-Link DGS-1250 Series Gigabit Smart Managed Switches with 10G Uplinks are the latest generation of switches to provide increased Power over Ethernet (PoE) output, high port density, multiple management interfaces, and advanced Layer 2 features. With all of these features combined, the DGS-1250 Series provides a cost-efficient and flexible solution for expanding any business network.

10G High-Bandwidth Connectivity

All models in the DGS-1250 Series feature four 10G SFP+ ports, allowing you to choose the most suitable media type for your requirement, to mitigate network bottlenecks.

Power and Connectivity

All DGS-1250 Series PoE switches include support for IEEE 802.3af/at with a high PoE power budget of up to 370W. This allows more PoE devices to be powered by a single switch and for devices to be installed in remote locations without immediate access to power outlets.

Advanced Features

The DGS-1250 Series also supports advanced features such as static routing, routing, allowing you to segment your network into workgroups that communicate between VLANs. With this, you can reduce the load on your core devices, allowing you to create a scalable and efficient network.

Advanced Access Control

D-Link's innovative Safeguard Engine helps to protect the switches against traffic flooding caused by malicious attacks. A host of security and authentication features such as 802.1X port-based authentication, Access Control List (ACL), Address Resolution Protocol (ARP) spoofing prevention and IP-MAC-Port Binding, helps to further protect your network.

Advanced QoS and Surveillance Mode

The DGS-1250 Series supports Auto Voice VLAN and Surveillance Mode, which allows voice and video traffic to be automatically identified and prioritised. Surveillance Mode provide a Web UI specifically designed for video surveillance, making related features easily accessible and simplifying management of your surveillance network.

Surveillance Topology Web Interface
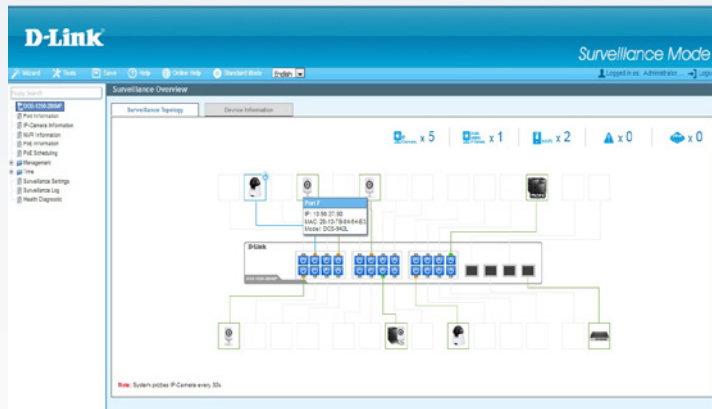
Versatile Management

The DGS-1250 Series can be managed through the Web UI, the D-Link Network Assistant (DNA) utility or via the dedicated console port. The D-Link Network Assistant utility furthermore allows customers to easily discover multiple D-Link Smart Managed Switches within the same L2 network segment and for simultaneous configuration and maintenance. The full Command Line Interface (CLI)[1] support provides network engineers more control, precision and repeatability on network configuration.

D-Link Network Assistant (DNA)

D-LinkAssist
Next Business Day Service

Complimentary Next Business Day Service, as Standard

Your network is the backbone of your business. Keeping it running is essential, even if the unexpected happens. D-Link Assist is a rapid-response technical support service that replaces faulty equipment quickly and efficiently. Maximising your uptime and giving you the confidence that instant support is only a phone call away.

All D-Link products with 5-year or Limited Lifetime warranty come with complimentary Next Business Day Service. D-Link will send out a replacement product to you on the next business day after acceptance of a product failure. On receipt of the replacement product, you simply arrange the return of the defective product to us. Any products with a 2-year/3-year warranty can also benefit from the Next Business Day advance replacement service when the optional 3-year warranty extension has been purchased.

Find out more at **eu.dlink.com/services**

Technical Specifications

General

Model Number	• DGS-1250-28X	• DGS-1250-28XMP	• DGS-1250-52X	• DGS-1250-52XMP
Hardware Version	• A1			
Interfaces	• 24 x 10/100/1000BASE-T • 4 x 10G SFP+ ports	• 24 x 10/100/1000BASE-T PoE • 4 x 10G SFP+ ports	• 48 x 10/100/1000BASE-T • 4 x 10G SFP+ ports	• 48 x 10/100/1000BASE-T PoE • 4 x 10G SFP+ ports
Console Port	• RJ-45 port for CLI management			
Port Standards	• IEEE 802.3 10BASE-T Ethernet (twisted-pair copper) • IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper) • IEEE 802.3u 100BASE-FX 100 Mbps over fiber optic • IEEE 802.3ab 1000BASE-T Gigabit Ethernet (twisted-pair copper) • IEEE 802.3z 1000BASE-X 1 Gbps over fiber optic • IEEE 802.3az Energy-Efficient Ethernet (EEE) • IEEE 802.3x Flow Control • IEEE 802.3ae 10 Gigabit Ethernet • IEEE 802.3af/at (PoE models only)			
Network Cables	• UTP Cat. 5, Cat. 5e (100 m max.)			
Duplex Mode	• Full/Half-duplex for 10/100 Mbps • Full-duplex for 1000 Mbps			
Media Interface Exchange	• Auto MDI/MDIX adjustment for all twisted-pair ports			

Performance

Switching Capacity	• 128 Gbps	• 128 Gbps	• 176 Gbps	• 176 Gbps
Transmission Method	• Store-and-forward			
MAC Address Table	• 16K	• 16K	• 32K	• 32K
Static MAC Addresses	• 256 entries			
Maximum 64 Byte Packet Forwarding Rate	• 95.24 Mpps	• 95.24 Mpps	• 130.95 Mpps	• 130.95 Mpps
Packet Buffer Memory	• 12 Mbits	• 12 Mbits	• 16 Mbits	• 16 Mbits
CPU Memory	• 2G DDR3			
Flash Memory	• 64 MB			

PoE

PoE Standard		• IEEE 802.3af/at		• IEEE 802.3af/at
PoE Capable Ports		• 24		• 48
PoE Power Budget		• 370 W		• 370 W

LEDs

Power (per device)	✓
Link/Active/Speed (per RJ-45 port)	✓
Link/Active/Speed (per 10G SFP+ port)	✓

Physical

Power Input	• 100 to 240 V AC 50/60 Hz internal universal power supply			

Maximum Power Consumption	• 29.6W	• PoE On:
		  • 431.5 W
		• PoE Off:
		  • 39.1 W
			• 51.2 W	• PoE On:
				  • 443.6 W
				• PoE Off:
				  • 57.2 W

Standby Power Consumption	• 9.3 W	• 19 W	• 23.5 W	• 28.4 W
Acoustics	• Max: 47.6 dB(A) • Min: 33.2 dB(A)	• Max: 50.8 dB(A) • Min: 42.0 dB(A)	• Max: 50.7 dB(A) • Max: 39.0 dB(A)	• Max: 51.2 dB(A) • Min: 43.0 dB(A)

Heat Dissipation	• 100.936 BTU/hr	• PoE On:
		  • 1471.415 BTU/hr
		• PoE Off:
		  • 133.331 BTU/hr
			• 174.592 BTU/hr	• PoE On:
				  • 1512.676 BTU/hr
				• PoE Off:
				  • 195.052 BTU/hr

MTBF	• 743,482.45 hours	• 463,430.16 hours	• 589,984.72 hours	• 309,053.10 hours
Operating Temperature	• -5 to 50℃ (23 to 122℉)			
Storage Temperature	• -20 to 70℃ (-4 to 158℃)			
Operating Humidity	• 0% to 95% relative humidity			
Storage Humidity	• 0% to 95% relative humidity			
Dimensions (L x W x H)	• 440 x 140 x 44 mm	• 440 x 250 x 44 mm	• 440 x 210x 44 mm	• 440 x 430 x 44 mm
Weight	• 1.75 kg	• 3.46 kg	• 3.01 kg	• 3.85 kg

Certifications

Safety	• CB, UL, BSMI, CCC
EMI	• CE Class A, VCCI Class A, FCC Class A, IC, BSMI

Software

L2 Features	• MAC Address Table
	  • 16K entries
	  • 32K entries (DGS-1250-52X/52XMP only)
	• IGMP Snooping
	  • IGMP v1/v2/v3 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:
	  • Supports maximum 8 groups per per device and 8 ports per group
	• LLDP
	• LLDP-MED
	• Jumbo Frame
	  • Up to 12,000 bytes
		• 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 registered groups
		  • Filters all unregistered groups
		• Configurable MDI/MDIX
		  • MLD snooping v1/v2 awareness (256 groups)

VLAN	• 802.1Q
	• VLAN Group
	  • Max. 4094 static VLAN groups
	• Configurable VID from 1 - 4094
	• 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 16 Kbps)
		• QoS based on:
		  • 802.1p priority queues
		  • DSCP
		  • MAC address
		  • EtherType
		  • IP address
		  • Protocol type
		  • ToS
		  • IP preference
		  • IPv6 Traffic Class
		  • TCP/UDP port

L3 Features	• IP interface
	  • Supports 4 interfaces
	• IPv6 Neighbor Discovery (ND)
		• Static routing
		  • 124 IPv4 static route entries
		  • 50 IPv6 static route entries

Access Control List (ACL)	• Max. 50 access lists
	• Max. 768 rules shared by IPv4, MAC, and IPv6
	• Each rule can only be associated with a single port
	• ACL based on
	  • MAC address
	    • 802.1p priority mask
	    • VID mask
	    • Source/destination MAC address mask
	    • EtherType mask
	  • IP address
	    • Source/destination IP address mask
	    • DSCP mask
	    • Protocol type mask
	    • TCP/UDP port number mask
		• IPv6 address
		  • Source/destination IP address mask
		  • DSCP mask
		  • Protocol type mask
		  • TCP/UDP port number mask
		  • IPv6 traffic class mask

Security Features	• Broadcast/Multicast/Unicast Storm Control
	• D-Link Safeguard Engine
	• Traffic segmentation
	• SSH v2
	• TLS v.1.2
	• DoS attack prevention
	• 802.1X Port-based Access Control
	• Port Security
	  • Supports up to 64 MAC addresses per port
	• ARP Spoofing Prevention
	  • Max. 127 entries
		• DHCP Server Screening
		• IP-MAC-Port Binding (Smart Binding)
		  • ARP Inspection
		    • Max. 64 entries
		  • IPv4 Inspection
		    • Max. 127 entries
		  • IPv6 Inspection
		    • Max. 63 entries
		  • DHCP Snooping
		    • Max. 512 entries

AAA	• 802.1X Authentication
	  • Supports local/RADIUS database
	  • Supports port-based access control
	  • Supports EAP, OTP, TLS, TTLS, PEAP
	  • Max. 128 entries when using local database
		• IPv6 RADIUS server
		• Support MD5 authentication

OAM	• Cable diagnostics	• Factory reset

Management	• Web-based GUI
	• D-Link Network Assistant
	• Compact CLI
	• Full CLI[1]
	• Telnet Server
	• TFTP Client
	• Configurable MDI/MDIX
	• SNMP
	  • Supports v1/v2c/v3
	• SNMP Trap
	• Backup/upgrade firmware
	• Smart Wizard
	• Upload/download configuration file
	• BootP/DHCP Client
		• System Log
		  • Max. 500 log entries
		• SNTP
		• ICMP v6
		• IPv4/v6 Dual Stack
		• DHCP Auto Configuration
		• Time setting
		  • SNTP
		• RMONv1
		• Trusted host
		• Dual image
		• Dual configuration

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
		• System hibernation
		• Port shut off
		• Cable length detection

MIBs	• RFC1212 Concise MIB Definitions • RFC1213 MIBII • RFC1215 MIB Traps Convention • RFC1493 Bridge MIB • RFC1157, RFC2573, RFC2575, RFC2576 SNMP MIB • RFC1442, RFC1901, RFC1902, RFC1903, RFC1904, RFC1905, RFC1906, RFC1907, RFC1908, RFC2578, RFC3418 SNMPv2 MIB • RFC271, RFC1757, RFC2819 RMON MIB • RFC2021 RMONv2 MIB • RFC1398, RFC1643, RFC1650, RFC2358, RFC2665 Ether-like MIB	• RFC2674 802.1p MIB • Interface Group MIB • RFC2618 RADIUS Authentication Client MIB • RFC4022 MIB for TCP • RFC4113 MIB for UDP • RFC2389 MIB for Diffserv. • RFC2620 RADIUS Accounting Client MIB • Private MIB • PoE MIB • DDP MIB • LLDP-MED MIB
RFC Standards	• RFC791 IP • RFC768 UDP • RFC793 TCP • RFC792 ICMPv4 • RFC2463, RFC4443 ICMPv6 • RFC826 ARP • RFC1321, RFC2284, RFC2865, RFC2716, RFC3580 Extensible Authentication Protocol (EAP)	• RFC2573 SNMP Applications • RFC2461, RFC4861 Neighbor Discovery for IPv6 • RFC2462, RFC4862 IPv6 Stateless Address Auto-configuration (SLAAC) • RFC2464 IPv6 over Ethernet and definition • RFC4291 IPv6 Addressing Architecture • RFC2893, RFC4213 IPv4/IPv6 dual stack function

Optional SFP Transceivers

DGS-712	1000BASE-T copper
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-211	100BASE-FX, multi-mode, 2 km

Optional SFP+ Transceivers

DEM-410T	10GBASE-T SFP+ transceiver, 100 m
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

1 Full CLI support available at end 2019 via firmware update

For more information: www.dlink.com