D-Link
Building Networks for People

Highlights

Easy Management

A multilingual Web UI, a Full CLI, and a variety of management features allow the switches to integrate with your existing network

Expand your Network

All models include high-speed 4 x 10G SFP+ uplink ports enabling easy expansion of your network

Power over Ethernet

Support for IEEE 802.3af/at and a higher PoE budget allow the PoE models in the series to power more devices with greater port density

DGS-1250 Series

Smart Managed Switches

Features

Green Technology

- Link status detection
- Port and LED shut-off
- System hibernation
- Time-based PoE (PoE models only)

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 or multi-lingual Web UI
- Built-in SNMP MIB for remote NMS (D-View 7.0)
- Full command line support via console port

Advanced Features

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

The D-Link DGS-1250 Series Smart Managed Switches 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.

Seamless Integration

The DGS-1250 Series includes a wide range of port and media types. All models in the DGS-1250 Series feature four 10G SFP+ ports, allowing you to choose the most suitable media type for your requirements. All DGS-1250 Series PoE switches include support for IEEE 802.3af/at and higher power budgets, allowing more PoE devices to be powered by the switch and for devices to be installed in remote locations without immediate access to power outlets. Furthermore, the DGS-1250-28XMP and DGS-1250-52XMP can supply PoE power up to 370 W providing even more power for connected devices.

Advanced Features

The DGS-1250 Series comes equipped with a complete lineup of L2 features, including IGMP snooping, port mirroring, Spanning Tree Protocol (STP), 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 transfers. The DGS-1250 Series also supports advanced features such as static routing, which allow network administrators to divide the network into VLANs, increasing network efficiency. Network maintenance features include loopback detection and cable diagnostics. Loopback detection significantly speeds up troubleshooting by automatically detecting and shutting down switching loops. The cable diagnostics feature, designed primarily for administrators and customer service representatives, determines the cable quality and quickly discovers errors, allowing for swift diagnostics and maintenance.

Surveillance Mode

The DGS-1250 Series supports Auto Voice VLAN and Surveillance Mode, which allows voice and video traffic to be automatically identified and handled differently than regular network traffic. Auto Voice VLAN detects Voice over IP (VoIP) traffic and automatically segments it from the rest of the network, adding a layer of isolation and allowing Quality of Service (QoS) to be applied. Surveillance Mode detects compatible ONVIF cameras and places them in a surveillance VLAN, allowing a single switch to be used for voice, video, and data, removing the need for dedicated hardware and reducing maintenance costs. Surveillance Mode also includes its own Web UI, making surveillance features easily accessible and simplifying management of your surveillance network.

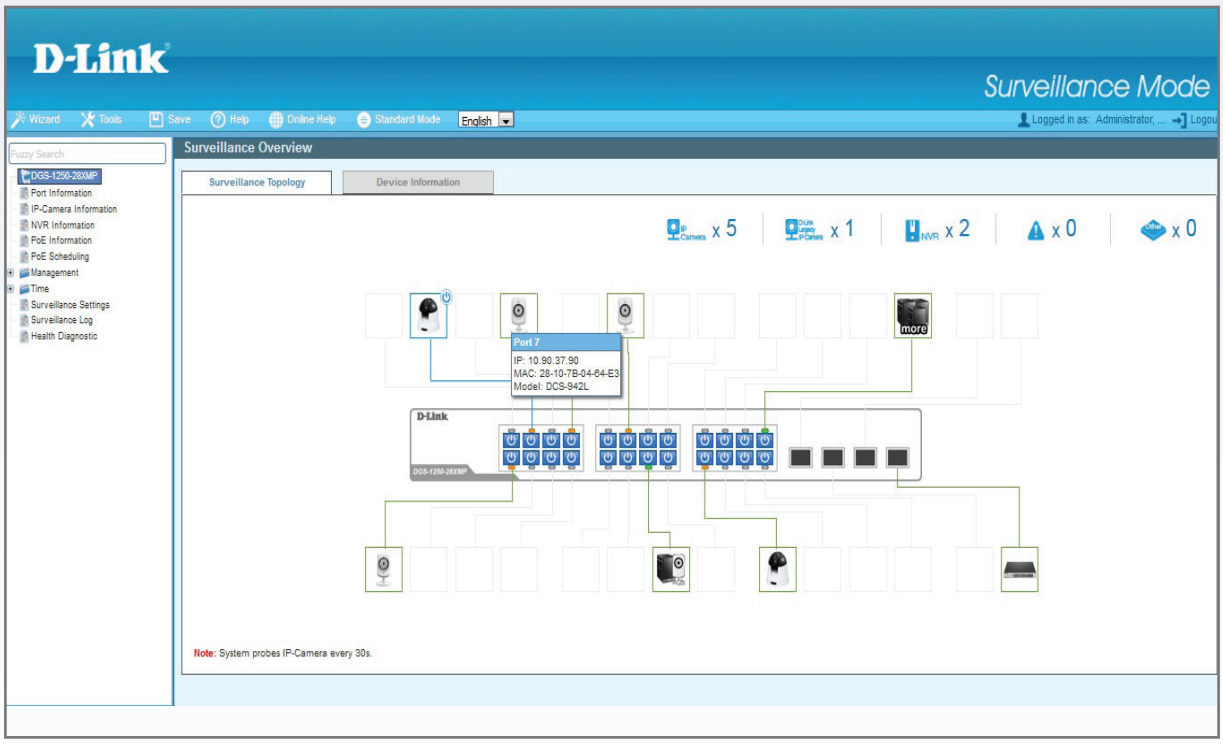
Advanced Access Control

D-Link's innovative Safeguard Engine helps to protect the switches against traffic flooding caused by malicious attacks. The DGS-1250 Series supports 802.1X port-based authentication, allowing clients to be authenticated through external RADIUS servers. The Access Control List (ACL) feature helps to enhance network security and helps to protect the internal IT network. The DGS-1250 Series also features Address Resolution Protocol (ARP) spoofing prevention, which helps to provide protection from attacks on the network that could allow an intruder to sniff data frames, modify traffic, or bring traffic to a halt altogether by sending fake ARP messages. To help prevent ARP spoofing attacks, the switch uses packet control ACLs to block invalid packets that contain fake ARP messages. The DHCP server screening filters DHCP replies on unauthorized ports to prevent them from being assigned an IP address.

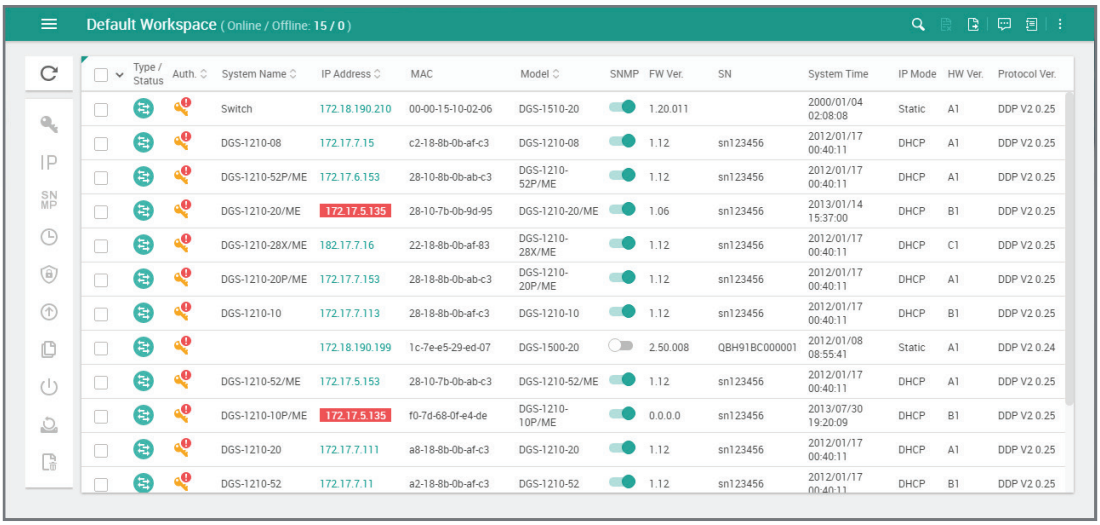
Versatile Management

The DGS-1250 Series comes with the D-Link Network Assistant (DNA) utility that enables administrators to remotely control their network down to the port level. 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 display them on-screen for instant access. With this utility, users do not need to change the IP address of their PC. This allows for simultaneous configuration and setup of all discovered devices, including password changes and firmware upgrades. The DGS-1250 Series supports Command Line Interface (CLI) through console port. SNMP is also supported which allows for the central management of network assets, remote configuration, and logging functions.

Surveillance Topology Web Interface



D-Link Network Assistant (DNA)



D-Link
Building Networks for People

DGS-1250 Series Smart Managed Switches

Technical Specifications				
Model Number	• DGS-1250-28X	• DGS-1250-28XMP	• DGS-1250-52X	• DGS-1250-52XMP
Hardware Version	• A1			
General				
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
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			
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
Flash Memory	• 64 MB			
DRAM Size	• 256 MB DDR3			
PoE				
PoE Standard		• IEEE 802.3af/at		• IEEE 802.3af/at
PoE Capable Ports		• 24		• 48
PoE Power Budget		• 370 W • 30 W per port		• 370 W • 30 W per port
LEDs				
Power (per device)	✓			
Link/Active/Speed (per RJ-45 port)	✓			
Link/Active/Speed (per 10G SFP+ port)	✓			

D-Link
Building Networks for People

DGS-1250 Series Smart Managed Switches

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

Maximum Power Consumption	• 30.6 W/100 V
	• 29.6 W/240 V
		• PoE On:
		  • 455.1 W/100 V
		  • 431.5 W/240 V
		• PoE Off:
		  • 38.6 W/100 V
		  • 39.1 W/240 V
			• 51 W/100 V
			• 51.2 W/240 V
				• PoE On:
				  • 467.3 W/100 V
				  • 443.6 W/240 V
				• PoE Off:
				  • 56.4 W/100 V
				  • 57.2 W/240 V

Standby Power Consumption	• 8.7 W/100 V • 9.3 W/240 V	• 18.5 W/100 V • 19 W/240 V	• 23 W/100 V • 23.5 W/240 V	• 27.8 W/100 V • 28.4 W/240 V
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	• 104.346 BTU/hr (100 V)
	• 100.936 BTU/hr (240 V)
		• PoE On:
		  • 1551.891 BTU/hr (100 V)
		  • 1471.415 BTU/hr (240 V
		• PoE Off:
		  • 131.626 BTU/hr (100 V)
		  • 133.331 BTU/hr (240 V)
			• 173.91 BTU/hr (100 V)
			• 174.592 BTU/hr (240 V)
				• PoE On:
				  • 1593.493 BTU/hr (100 V)
				  • 1512.676 BTU/hr (240 V)
				• PoE Off:
				  • 192.324 BTU/hr (100 V)
				  • 195.052 BTU/hr (240 V)

MTBF	• 743,482.45 hours	• 463,430.16 hours	• 589,984.72 hours	• 309,053.10 hours
Operating Temperature	• -5 to 50°C (23 to 122°F)			
Storage Temperature	• -20 to 70°C (-4 to 158°C)			
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 (17.32 x 5.51 x 1.73 in)	• 440 x 250 x 44 mm (17.32 x 9.84 x 1.73 in)	• 440 x 210 x 44 mm (17.32 x 8.27 x 1.73 in)	• 440 x 250 x 44 mm (17.32 x 9.84 x 1.73 in)
Weight	• 1.75 kg (3.86 lbs)	• 3.46 kg (7.63 lbs)	• 3.01 kg (6.63 lbs)	• 3.85 kg (8.49 lbs)

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)
		• PD-Alive
		• DDM support for optics

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)
	  • WDRR
	• 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 support for RADIUS/TACACS+
		  • Password encryption
		  • MAC authentication

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

OAM	• Cable diagnostics	• Factory reset

Management	• Web-based GUI
	• D-Link Network Assistant
	• Full CLI
	• 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
		• Command logging

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

Order Information	
DGS-1250-28X	24 Ports 10/100/1000 Mbps + 4 Ports 10G SFP+ Smart Managed Switch
DGS-1250-28XMP	24 Ports 10/100/1000 Mbps PoE + 4 Ports 10G SFP+ Smart Managed Switch
DGS-1250-52X	48 Ports 10/100/1000 Mbps + 4 Ports 10G SFP+ Smart Managed Switch
DGS-1250-52XMP	48 Ports 10/100/1000 Mbps PoE + 4 Ports 10G SFP+ Smart Managed Switch
Optional SFP Transceivers	
DGS-712	1000BASE-T copper
DEM-302S-LX	1000BASE-LX, single-mode, 2 km
DEM-302S-BXD/BXU	Gigabit WDM transceiver, single-mode, 2 km
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 10 km
DEM-331T/R	Gigabit WDM transceiver, single-mode 40 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

Updated 2022/5/5

D-Link®
Building Networks for People