

D-Link Smart Managed Switches User Manual

Home » D-Link » D-Link Smart Managed Switches User Manual



Contents

- 1 D-Link Smart Managed Switches User Manual
- 2 Smart Managed Switches
- 3 Features
 - 3.1 Green Technology
- **4 Seamless Integration**
- **5 Advanced Features**
- **6 Surveillance Mode**
- 7 Advanced Access Control
- 8 Versatile Management
- 9 6kV Surge Protection
- **10 Lifetime Warranty**
- 11 Surveillance Topology Web Interface
- 12 D-Link Network Assistant (DNA)
 - **12.1 Technical Specifications**
- 13 Read More About This Manual & Download
- 14 Documents / Resources
 - 14.1 References
- **15 Related Posts**

D-Link Smart Managed Switches User Manual



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
- 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
- Embedded 6kV surge protection on all Gigabit Ethernet access ports

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 onscreen 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.

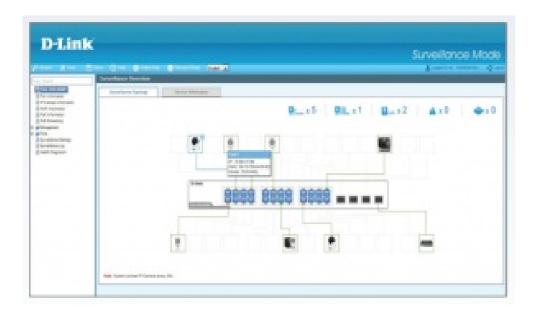
6kV Surge Protection

The DGS-1250 Series switches feature built-in 6kV surge protection on all PoE and non-PoE Ethernet access ports. This helps protect the switches against sudden electrical surges such as lightning strikes or unstable electrical current. Built-in 6kV surge protection helps reduce the chances of equipment being damaged from electrical surges, and effectively lowers maintenance costs by minimizing the need for expensive equipment repairs or replacement.

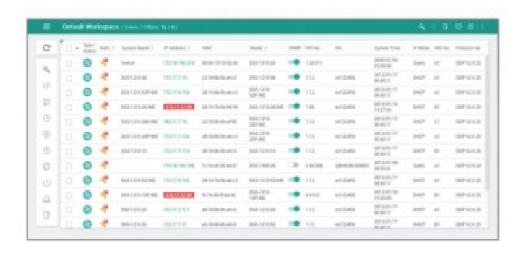
Lifetime Warranty

D-Link offers a Lifetime Warranty and Next Business Day (NBD) hardware replacement for the DGS-1250 Series Smart Managed Switches to further its commitment to product quality and long-term customer confidence.

Surveillance Topology Web Interface



D-Link Network Assistant (DNA)



Technical Specifications				
Model Number	• DGS-1250-28X-6 KV	• DGS-1250-28XM P-6KV	• DGS-1250-52X-6 KV	• DGS-1250-52XM P-6KV
Hardware Versi on	• A1			
General	I			
Interfaces	• 24 x 10/100/1000BASE -T • 4 x 10G SFP+ por ts	 24 x 10/100/1000B ASE-T PoE 4 x 10G SFP+ port s 	• 48 x 10/100/1000 BASE-T • 4 x 10G SFP+ po rts	• 48 x 10/100/1000 BASE-T PoE • 4 x 10G SFP+ por ts
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 Capa city	• 128 Gbps	• 128 Gbps	• 176 Gbps	• 176 Gbps
Transmission Method	Store-and-forward			
MAC Address T able	• 16K	• 16K	• 32K	• 32K
Static MAC Ad dresses	• 256 entries			
Maximum 64 By te Packet Forw arding 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 P orts		• 24		• 48
PoE Power Bud get		• 370 W • 30 W per port		• 370 W • 30 W per port

LEDs	
Power (per devi	✓
Link/Active/Spe ed (per RJ-45 p ort)	✓
Link/Active/Sp eed (per 10G SFP+ port)	✓

Physical				
Power Input	• 100 to 240 V AC 50/60 Hz internal universal power supply			
Maximum Powe r 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
Surge Protectio n	6kV surge protection	on on all Ethernet acces	s ports	

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 Dissipatio n	• 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 (1 00 V) 133.331 BTU/hr (2 40 V) 	• 173.91 BTU/hr (1 00 V) • 74.592 BTU/hr (2 40 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 Tem perature	• -5 to 50°C (23 to 122°F)			
Storage Temp erature	• -20 to 70°C (-4 to 158°C)			
Operating Humidity	0% to 95% relative humidity			
Storage Humidi ty	0% to 95% relative humidity			

Dimensions (L x W x H)	• 440 x 140 x 44 m m (17.32 xb 5.51 x 1.73 in)	• 440 x 250 x 44 m m (17.32 x 9.84 x 1.73 in)	• 440 x 210 x 44 m m (17.32 x 8.27 x 1.73 in)	• 440 x 250 x 44 m m (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			
ЕМІ	CE Class A, VCCI Class A, FCC Class A, IC, BSMI			
Software				

	Protocol 16K entries 22K entries (DCS 1250 52X/52XMB entri	• 802.1D STP
		• 802.1D STP
	201/ antring (DCC 1050 50V/50VMD antri	1
	 32K entries (DGS-1250-52X/52XMP only) 	• 802.1W RSTP
	IGMP Snooping	• 802.1s MSTP
	IGMP v1/v2/v3 Snooping	Flow Control
	Supports 256 IGMP groups	802.3x Flow Control
	Supports at least 64 static multicast addresses	HOL Blocking Prevention
	IGMP per VLAN	Port Mirroring
	Supports IGMP Snooping Querier	One-to-One
	Loopback Detection	Many-to-One
	802.3ad Link Aggregation:	Supports Mirroring for Tx/Rx/
	Both	
	Supports maximum 8 groups per per device and 8 per	orts per • Multicast Filtering
.2 Features	group roups	Forwards all registered g
	• LLDP	Filters all unregistered groups
	• LLDP-MED	Configurable MDI/MDIX
	Jumbo Frame	• MLD snooping v1/v2 awaren
	ess (256 groups)	
	• Up to 12,000 bytes	• PD-Alive

802.1Q VLAN Group Max. 4094 static VLAN groups Configurable VID from 1 – 4094 Asymmetric VLAN	 Auto Voice VLAN Max. 10 user-defined OU Max. 8 default OU Auto Surveillance VLAN
---	---

Quality of Servic e (QoS)	 802.1p Quality of Service 8 queues per por Queue Handling Strict Weighted Round Robin (WRR) Bandwidth Control Port-based (ingress/egress, min granulari ty 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 Li st (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 mas 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 Preventio 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 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

Green V3.0 Tec hnology	 Power Saving by: Link Status Time-based PoE: PoE ports can be turned on/off by port or ystem through schedule 	System hibernationPort shut offCable length detection s
---------------------------	---	---

Г

	RFC1212 Concise MIB Definitions	• RFC2674 802.1p
MIBs	MIB • RFC1213 MIBII	• Interface Group N
	RFC1215 MIB Traps Convention S Authentication Client MIB	• RFC2618 RADIU
	RFC1493 Bridge MIB TCP	• RFC4022 MIB for
	• RFC1157, RFC2573, RFC2575, RFC2576 SNMP MIB for UDP	• RFC4113 MIB
	 RFC1442, RFC1901, RFC1902, RFC1903, RFC1904, RFC1905, B for Diffserv. 	• RFC2389 MI
	RFC1906, RFC1907, RFC1908, RFC2578, RFC3418 SNMPv2 MIB DIUS Accounting Client MIB	• RFC2620 RA
	 RFC271, RFC1757, RFC2819 RMON MIB RFC2021 RMONv2 MIB RFC1398, RFC1643, RFC1650, RFC2358, RFC2665 Ether-like MIE LLDP-MED MIB 	Private MIB PoE MIB DDP MIB
	DE0704 ID	20570 ONIMP A
	RFC791 IP ations	C2573 SNMP Applic
		C2461, RFC4861 Ne
	• RFC793 TCP • RF	C2462, RFC4862 IP
	v6 Stateless Address Auto-configuration	
	· ·	LAAC) FC2464 IPv6 over Eth
RFC Standards	ernet and definition	02404 II VO OVCI EIII
	RFC826 ARP Architecture	C4291 IPv6 Addressing
	RFC1321, RFC2284, RFC2865, RFC2716, RFC3580 Extensibl • RFC2893, RFC4213 I Pv4/IPv6 dual stack function Authentication Protocol (EAP)	

Order Information		
DGS-1250-28X- 6KV	24 Ports 10/100/1000 Mbps + 4 Ports 10G SFP+ Smart Managed Switch	
DGS-1250-28X MP- 6KV	24 Ports 10/100/1000 Mbps PoE + 4 Ports 10G SFP+ Smart Managed Switch	
DGS-1250-52X- 6KV	48 Ports 10/100/1000 Mbps + 4 Ports 10G SFP+ Smart Managed Switch	
DGS-1250-52X MP- 6KV	48 Ports 10/100/1000 Mbps PoE + 4 Ports 10G SFP+ Smart Managed Switch	
Optional SFP Transceivers		
DGS-712	1000BASE-T copper	
DEM-310GT	1000BASE-LX, single-mode, 10 km	
DEM-311GT	1000BASE-SX, multi-mode, 550 m	

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	

For more information

Read More About This Manual & Download PDF:

Documents / Resources



D-Link Smart Managed Switches [pdf] User Manual Smart Managed Switches, DGS-1250

References

- **D** For Home D-Link
- **Consumer** | D-Link

Manuals+, home privacy