D-Link
Building Networks for People

Product Highlights

Flexibility and Reliability

A combination of RJ-45, SFP, and Combo ports provides the necessary flexibility to adapt to a wide range of applications and environments

Management made Easy

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

Power over Ethernet

Increased PoE capability and support for IEEE 802.3af/at allow the PoE models in the series to power more devices with greater port density



DGS-2000 Series

Managed Access Switches

Features

Flexible Hardware Design

- Available in multiple configurations:
  - Different combinations of 1000BASE-T, 100/1000 Mbps GbE/SFP combo, and 10/1000 Mbps SFP
  - PoE and non-PoE variations
- Designed for standard 1U rack-mounting

Layer 2 Features

- 8K or 16K MAC address table
- IEEE 802.1D STP, 802.1w RSTP, and 802.1s MSTP
- Loopback detection
- Supports IEEE 802.3ad Link Aggregation
- Port-based Q-in-Q

Security and Authentication

- Access Control Lists (ACLs)
- Smart IP-MAC-Port Binding (Smart IMPB)
- D-Link Safeguard Engine helps the CPU resist broadcast/multicast/unicast flooding
- Port Security

Intuitive Management

- D-Link Network Assistant (DNA) utility or Web UI
- Command Line Interface (CLI) through Telnet or SSH
- RJ-45 Console Port

The DGS-2000 Series Managed Access Switches includes a range of models designed to provide increased Power over Ethernet (PoE) output, a variety of physical interface types, multiple management interfaces, and advanced Layer 2 features. With these features and more, the DGS-2000 Series provides a cost-efficient and flexible solution for expanding any business network.

Seamless Integration

The DGS-2000 Series includes a wide range of port and media types, including 10/100/1000BASE-T RJ-45 ports, 100/1000 Mbps GbE/SFP combo ports, and 100/1000 Mbps SFP ports. The DGS-2000-10, DGS-2000-26, DGS-2000-10P and DGS-2000-10MP models feature 2 100/1000 Mbps SFP ports, while all other DGS-2000 Series models feature 2 or 4 GbE/SFP combo ports, allowing you to choose the most suitable media type for your requirements. All DGS-2000 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. Additionally, an extended Link Layer Discovery Protocol - Media Endpoint Devices (LLDP-MED) automatically negotiates and manages power fed to IEEE 802.3at PoE+ powered devices for optimal power distribution.

Advanced Features

The DGS-2000 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. Network maintenance features include loopback detection and cable diagnostics. Loopback detection significantly speeds up troubleshooting by automatically detecting and terminating switching loops. The cable diagnostics feature, designed primarily for administrators and customer service representatives, determines the cable quality and quickly discovers errors, allowing for effortless diagnostics and maintenance.

Efficient and Resilient Networking

The DGS-2000 Series supports 802.3ad Link Aggregation, which allows grouping of multiple ports to provide redundancy and load balancing in mission-critical environments. Additionally, these switches also support 802.3ah OAM Ethernet link layer remote loopback and discovery as well as D-Link's Unidirection Link Detection (DULD). Combined, the two Layer 2 protocols ensure the reliability of data transmission in your network.

Security & Authentication

The DGS-2000 Series supports Auto Voice VLAN and Auto Surveillance VLAN 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. DGS-2000 Series supports surveillance VLAN for IP surveillance deployments. This gives video trafc a dedicated VLAN and higher priority through the switch, separating surveillance trafc from the rest of the network.

Comprehensive Security

The DGS-2000 Series provides users with the latest security features such as Packet Content Access Control Lists (ACL), Storm Control, and Smart IP-MAC-Port Binding (Smart IMPB) with DHCP Snooping. The Smart IMPB feature allows administrators to bind a source IP address with an associated MAC and define the port number to enhance user access control. With the DHCP Snooping feature, the switch automatically learns IP/MAC pairs by snooping DHCP packets and saving them to the IMPB white list.

Advanced Access Control

D-Link's innovative Safeguard Engine helps to protect the switches against traffic flooding caused by malicious attacks. DGS-2000 Series supports 802.1X port-based authentication, allowing the clients to be authenticated through external RADIUS servers.

Versatile Management

The DGS-2000 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 allows customers to easily discover multiple D-Link Managed Access Switches within the same L2 network segment and display them on-screen for instant access so 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-2000 Series also supports Command Line Interface (CLI) through Telnet, SSH and the console port.

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DGS-2000 Series Managed Access Switches

Technical Specifications			
Model Number	DGS-2000-10	DGS-2000-10P	DGS-2000-10MP
Hardware Version	• A1		
Interface			
Size	• 11-inch standard rack-mount width • 1U height	• 19-inch standard rack-mount width • 1U height	
Interfaces	• 8 x 10/100/1000BASE-T ports • 2 x 100/1000 Mbps SFP ports	• 8 x 10/100/1000BASE-T PoE ports • 2 x 100/1000 Mbps SFP ports	
Console Port	• RJ-45 Connector		
Port Standards & Functions	• IEEE 802.3 for Ethernet • IEEE 802.3u 100BASE-TX Fast Ethernet • IEEE 802.3ab 1000BASE-T Gigabit Ethernet • Auto-negotiation • IEEE 802.3x Flow Control • IEEE 802.3z 1000BASE-X Gigabit Fiber		
Network Cables	• UTP Cat. 5, Cat. 5e (100 m max.)		
Full/Half-Duplex	• Full/half-duplex for 10/100 Mbps speeds • Full-duplex for 1000 Mbps speed		
Media Interface Exchange	• Auto MDI/MDIX adjustment for all twisted-pair ports		
Performance			
Switching Capacity	• 20 Gbps		
Forwarding Method	• Store-and-forward		
MAC Address Table Size	• 8K entries		
64-byte Max. Forwarding Rate	• 14.88 Mpps		
CPU Memory	• 256 MB DDR3		
Packet Buffer	• 4.1 MBits		
Flash Memory	• 32 MB		
LEDs			
Power (per device)	✓	✓	✓
Link/Active/Speed (per port)	✓	✓	✓
PoE			
PoE Standard	• N/A	• IEEE 802.3af/at	• IEEE 802.3af/at
PoE Capable Port	• N/A	• Ports 1 -8	• Ports 1 -8
PoE Power Budget	• N/A	• 65W	• 130W

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DGS-2000 Series Managed Access Switches

Physical/Environmental			
MTBF	• 1,380,058 hours	• 729,258 hours	• 1,274,005 hours
Acoustic	• 0 dB(A)		
Heat Dissipation	• 21.59 BTU/hr	• 279.59 BTU/hr	• 519.51 BTU/hr
Power Input	• AC Input: 100 to 240 V AC, 50/60 Hz internal universal power supply	• AC Input: 54.0 V DC external power supply	• AC Input: 100 to 240 V AC, 50/60 Hz internal universal power supply
Maximum Power Consumption	• 6.33 W	• 81.9 W (PoE on) • 7.6 W (PoE off)	• 152.3 W (PoE on) • 9.4 W (PoE off)
Standby Power Consumption	• 2.07 W	• 2.5 W	• 5.2 W
Dimensions (W x D x H)	• 280 x 126 x 44 mm (11.02 x 4.96 x 1.73 in)	• 280 x 126 x 44 mm (11.02 x 4.96 x 1.73 in)	• 330 x 180 x 44 mm (12.99 x 7.09 x 1.73 in)
Ventilation	• Fanless		
Weight	• 0.98 kg (2.16 lbs)	• 0.95 kg (2.09 lbs)	• 1.77 kg (3.90 lbs)
Operating Temperature	• -5 to 50 °C (23 to 122 °F)		
Storage Temperature	• -40 to 70 °C (-40 to 158 °F)		
Operating Humidity	• 10% to 90% non-condensing		
Storage Humidity	• 5% to 90% non-condensing		
EMI	• FCC class A, CE class A, IC, VCCI, BSMI		
Safety Certifications	• cUL, UL, CB, BSMI		

Technical Specifications			
Model Number	DGS-2000-20	DGS-2000-26	DGS-2000-28
Hardware Version	• A1		
Interface			
Size	• 19-inch standard rack-mount width • 1U height		
Interfaces	• 16 x 10/100/1000BASE-T ports • 4 x 100/1000 Mbps GbE/SFP combo ports	• 24 x 10/100/1000BASE-T ports • 2 x 100/1000 Mbps GbE/SFP ports	• 24 x 10/100/1000BASE-T ports • 4 x 100/1000 Mbps GbE/SFP combo ports
Console Port	• RJ-45 Connector		
Port Standards & Functions	• IEEE 802.3 for Ethernet • IEEE 802.3u 100BASE-TX Fast Ethernet • IEEE 802.3ab 1000BASE-T Gigabit Ethernet • Auto-negotiation • IEEE 802.3x Flow Control • IEEE 802.3z 1000BASE-X Gigabit Fiber		
Network Cables	• UTP Cat. 5, Cat. 5e (100 m max.)		
Full/Half-Duplex	• Full/half-duplex for 10/100 Mbps speeds • Full-duplex for 1000 Mbps speed		
Media Interface Exchange	• Auto MDI/MDIX adjustment for all twisted-pair ports		

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DGS-2000 Series Managed Access Switches

Performance			
Switching Capacity	• 40 Gbps	• 52 Gbps	• 56 Gbps
Forwarding Method	• Store-and-forward		
MAC Address Table Size	• 8K entries		
64-byte Max. Forwarding Rate	• 29.8 Mpps	• 38.7Mpps	• 41.7 Mpps
CPU Memory	• 256 MB DDR3		
Packet Buffer	• 4.1 MBits		
Flash Memory	• 32 MB		
LEDs			
Power (per device)	✓	✓	✓
Link/Active/Speed (per port)	✓	✓	✓
Physical/Environmental			
MTBF	• 1,087,100 hours	• 1,082,534 hours	• 992,594 hours
Acoustic	• 0 dB(A)		
Heat Dissipation	• 44.62 TU/hr	• 51.93 TU/hr	• 59.09 TU/hr
Power Input	• AC Input: 100 to 240 V AC, 50/60 Hz internal universal power supply		
Maximum Power Consumption	• 13.08 W	• 15.22 W	• 17.32 W
Standby Power Consumption	• 5.56 W	• 5.06 W	• 6.55 W
Dimensions (W x D x H)	• 280 x 180 x 44 mm (11.02 x 4.96 x 1.73 in)	• 440 x 140 x 44 mm (17.32 x 5.51 x 1.73 in)	
Ventilation	• Fanless		
Weight	• 1.75 kg (3.86 lbs)	• 2.06 kg (4.54 lbs)	• 2.15 kg (4.74 lbs)
Operating Temperature	• -5 to 50 °C (23 to 122 °F)		
Storage Temperature	• -40 to 70 °C (-40 to 158 °F)		
Operating Humidity	• 10% to 90% non-condensing		
Storage Humidity	• 5% to 90% non-condensing		
EMI	• FCC class A, CE class A, IC, VCCI, BSMI		
Safety Certifications	• cUL, UL, CB, BSMI		

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DGS-2000 Series Managed Access Switches

Technical Specifications				
Model Number	DGS-2000-28P	DGS-2000-28MP	DGS-2000-52	DGS-2000-52MP
Hardware Version	• A1			
Interface				
Size	• 19-inch standard rack-mount width • 1U height			
Interfaces	• 24 x 10/100/1000BASE-T PoE ports • 4 x 100/1000 Mbps GbE/SFP combo ports		• 48 x 10/100/1000BASE-T ports • 4 x 100/1000 Mbps GbE/SFP combo ports	• 48 x 10/100/1000BASE-T PoE ports • 4 x 100/1000 Mbps GbE/SFP combo ports
Console Port	• RJ-45 Connector			
Port Standards & Functions	• IEEE 802.3 for Ethernet • IEEE 802.3u 100BASE-TX Fast Ethernet • IEEE 802.3ab 1000BASE-T Gigabit Ethernet • Auto-negotiation • IEEE 802.3x Flow Control • IEEE 802.3z 1000BASE-X Gigabit Fiber			
Network Cables	• UTP Cat. 5, Cat. 5e (100 m max.)			
Full/Half-Duplex	• Full/half-duplex for 10/100 Mbps speeds • Full-duplex for 1000 Mbps speed			
Media Interface Exchange	• Auto MDI/MDIX adjustment for all twisted-pair ports			
Performance				
Switching Capacity	• 56 Gbps		• 104 Gbps	
64-byte Max. Forwarding Rate	• 41.7 Mpps		• 77.4 Mpps	
MAC Address Table Size	• 8K entries		• 16K entries	
CPU Memory	• 256 MB DDR3			
Packet Buffer	• 4.1 MBits		• 12 MBits	
Flash Memory	• 32 MB			
LEDs				
Power (per device)	✓	✓	✓	✓
Link/Active/Speed (per port)	✓	✓	✓	✓
PoE				
PoE Standard	• IEEE 802.3af/at	• IEEE 802.3af/at	• N/A	• IEEE 802.3af/at
PoE Capable Port	• Ports 1 -24	• Ports 1 -8	• N/A	• Ports 1 -48
PoE Power Budget	• 193W	• 370W	• N/A	• 370W

Physical/Environmental				
MTBF	• 469,262 hours	• 277,967 hours	• 400,667 hours	• 236,667 hours
Acoustic	• High speed: 51.7 dB(A) • Low speed: 44.9 dB(A)		• 0 dB(A)	• High speed: 52.4 dB(A) • Low speed: 47.6 dB(A)
Heat Dissipation	• 900.36 TU/hr	• 1521.99 TU/hr	• 118.92 TU/hr	• 1634.01 TU/hr
Power Input	• AC Input: 100 to 240 V AC, 50/60 Hz internal universal power supply			
Maximum Power Consumption	• 236.9 W (PoE on) • 30.6 W (PoE off)	• 446.1 W (PoE on) • 29.8 W (PoE off)	• 34.85 W	• 478.9 W (PoE on) • 54.4 W (PoE off)
Standby Power Consumption	• 19.6 W	• 18.5 W	• 13.9 W	• 32 W
Dimensions (W x D x H)	• 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 430 x 44 mm (17.32 x 16.93 x 1.73 in)
Ventilation	• 2 x Smart fan		• Fanless	• 3 x Smart fan
Weight	• 3.75 kg (8.27 lbs)	• 3.94 kg (8.69 lbs)	• 3.46 kg (7.63 lbs)	6.26 kg (13.80 lbs)
Operating Temperature	• -5 to 50 °C (23 to 122 °F)			
Storage Temperature	• -40 to 70 °C (-40 to 158 °F)			
Operating Humidity	• 10% to 90% non-condensing			
Storage Humidity	• 5% to 90% non-condensing			
EMI	• FCC class A, CE class A, VCCI, BSMI			
Safety Certifications	• CE, LVD, UL, CB			

Software		
L2 Features	• MAC address table: 8K or 16K entries • Static mac address: 128 entries • Spanning Tree Protocols - 802.1D STP - 802.1w RSTP - 802.1s MSTP • Loopback detection • Jumbo Frame: 10000 Bytes	• Mirroring - Supports 1 mirroring group - Supports One-to-One, Many-to-One, - Supports mirroring based on Tx and Rx • Link aggregation - Compliant with 802.3ad - Supports max. 8 groups, 8 ports per group
L2 Multicasting	• IGMP Snooping - IGMP v1/v2/v3 snooping, v3 awareness - Supports 512 groups, 4k groups for models DGS-2000-52/52MP - IGMP authentication/filtering - VLAN/host-based IGMP snooping fast leave - Per VLAN IGMP Snooping	• MLD Snooping - MLD v1, MLD v2 - Supports 512 groups, 4k groups for models DGS-2000-52/52MP - Per VLAN MLD Snooping - Fast Leave - MLD Snooping Querier
VLAN	• 802.1Q tagged VLAN • VLAN groups - Max. 4094 VIDs - Supports 256 static VLAN groups • Port-based VLAN • Asymmetric VLAN	• Port-based Q-in-Q • ISM VLAN (multicast VLAN) • Voice VLAN • Auto surveillance VLAN • VLAN Translation

L3 Features	• Max. 128 ARP entries • Supports 128 static ARP entries • IPv4/v6 Interface - Max. 4 IPv4/IPv6 interfaces - Max. 1 IP interface per VLAN • Static Route - Max. 128 IPv4 entries - Max. 128 IPv6 entries	• Default route • IPv6 Neighbor Discovery (ND) - 256 Entries • ARP - 128 Entries
Quality of Service (QoS)	• CoS based on: - Switch port - DSCP • Bandwidth control - Port-based (ingress, egress, min. granularity 16 Kbps)	• Queue handling - Strict priority (SPQ) - Weighted Round Robin (WRR) • 8 outbound queues
Access Control List (ACL)	• ACL based on - MAC address - TOS - IPv4/v6 address - DSCP - TCP/UDP port - Protocol	• Up to 200 ingress access rules • Up to 150 ingress access profiles • ACL action (permit/deny)
Authentication, Authorization, and Accounting (AAA)	• 802.1X - Host-based access control - Port-based access control - Port default 802.1p priority setting - Ingress/egress bandwidth control - Dynamic VLAN assignment • Ping • Guest VLAN • RADIUS accounting	• Trusted Host - Supports IPv4/v6 host - Max trusted host (IP range) - Telnet - SNMP - HTTP - SSH • Authentication for management access - Local, RADIUS
Security	• Port security (Up to 64 MAC addresses per port) • Smart IP-MAC-Port Binding (Smart IMPB) • ARP Inspection • Max. 256 entries • IPv4 Inspection • Max. 127 entries • IPv6 Inspection • Max. 63 entries • DHCP Snooping • Max. 512 entries	• Broadcast/Multicast/Unicast storm control • IP Inspection (IP source Guard) • Duplicate Address Detection (DAD) • D-Link Safeguard Engine • DoS attack prevention • Traffic segmentation • SSH • SSHv2 • Support IPv4 • Support IPv6 • Configurable TCP port number
Operations, Administration, and Maintenance (OAM)	• 802.3ah Ethernet Link OAM - Supports 802.3ah link layer remote loopback and discovery (System log and SNMP) - 802.3ah D-Link extension: D-Link Unidirectional Link Detection (DULD), (System log and SNMP)	• Cable diagnostics - Diagnostic RJ-45 cables of copper ports
Management	• Web-based GUI (IPv4/IPv6) • Command Line Interface (CLI) through Telnet or SSH • Telnet Server/Client (Support IPv4/IPv6) • TFTP client (IPv4) • Command logging • SNMP v1/v2c/v3 • SNMP traps • System log • RMON v1 • LLDP • BootP/DHCP client • DHCP auto-configuration	• Text-editable config file • Trusted host • DHCP relay (IPv4/IPv6) - DHCP relay agent/local relay - DHCP relay option 82 • PPPoE Circuit-ID tag insertion • SNTP • LLDP-MED (for PoE models only) • Password encryption • Dual Image • Ping • Traceroute
MIB	• RFC1213 MIB II • RFC1065, 1151, 2578 MIB Structure • RFC1493 Bridge MIB • RFC1157, 2573, 2575, 2576 SNMP MIB • RFC1907 SNMPv2 MIB	• RFC1398, 1643, 2665 Ether-like MIB • RFC2674 802.1p MIB • RFC 2233 Interface Group MIB • RFC2925 Ping & Traceroute MIB

IETF Standard	• RFC768 UDP • RFC791 IP • RFC792 ICMPv4 • RFC2463, 4443 ICMPv6	• RFC793 TCP • RFC826 ARP • RFC1321, 2284, 2865, 2716, 3580 Extensible Authentication Protocol (EAP)
IPv6	• RFC1981 Path MTU Discovery • RFC2460 IPv6 • RFC2461, 4861 Neighbor Discovery	• RFC2462, 4862 IPv6 Stateless Address Auto-configuration • RFC2893, 4213 IPv4/IPv6 dual stack function

Order Information

Part Number	*Description*
DGS-2000-10	8-Port 10/100/1000BASE-T + 2-Port 100/1000 Mbps SFP Ports Managed Access Switch
DGS-2000-10P	8-Port 10/100/1000BASE-T PoE + 2-Port 100/1000 Mbps SFP Ports Managed Access Switch
DGS-2000-10MP	8-Port 10/100/1000BASE-T PoE + 2-Port 100/1000 Mbps SFP Ports Managed Access Switch
DGS-2000-20	16-Port 10/100/1000BASE-T+ 4-Port 100/1000 Mbps GbE/SFP Combo Ports Managed Access Switch
DGS-2000-26	24-Port 10/100/1000BASE-T + 2-Port 100/1000 Mbps GbE/SFP Ports Managed Access Switch
DGS-2000-28	24-Port 10/100/1000BASE-T + 4-Port 100/1000 Mbps GbE/SFP Combo Ports Managed Access Switch
DGS-2000-28P	24-Port 10/100/1000BASE-T PoE + 4-Port 100/1000 Mbps GbE/SFP Combo Ports Managed Access Switch
DGS-2000-28MP	24-Port 10/100/1000BASE-T PoE + 4-Port 100/1000 Mbps GbE/SFP Combo Ports Managed Access Switch
DGS-2000-52	48-Port 10/100/1000BASE-T + 4-Port 100/1000 Mbps GbE/SFP Combo Ports Managed Access Switch
DGS-2000-52MP	48-Port 10/100/1000BASE-T PoE + 4-Port 100/1000 Mbps GbE/SFP Combo Ports Managed Access Switch

Optional SFP Transceivers

DEM-210	100BASE-FX, single-mode, 15 km
DEM-211	100BASE-FX, multi-mode, 2 km
DEM-220T	100BASE-BX-D , single-mode, 20 km
DEM-220R	100BASE-BX-U , single-mode, 20 km
DGS-712	1000BASE-T copper, 100 m
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
DEM-330T	1000BASE-BX-D, single-mode, 10 km
DEM-330R	1000BASE-BX-U, single-mode, 10 km
DEM-331T	1000BASE-BX-D, single-mode, 40 km
DEM-331R	1000BASE-BX-U, single-mode, 40 km

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Optional Management Software	
DV-700-N25-LIC	D-View 7 - 25 Node License
DV-700-N50-LIC	D-View 7 - 50 Node License
DV-700-N100-LIC	D-View 7 - 100 Node License
DV-700-N250-LIC	D-View 7 - 250 Node License
DV-700-N500-LIC	D-View 7 - 500 Node License
DV-700-N1000-LIC	D-View 7 - 1000 Node License
DV-700-P5-LIC	D-View 7 - 5 Probe License
DV-700-P10-LIC	D-View 7 - 10 Probe License
DV-700-P25-LIC	D-View 7 - 25 Probe License
DV-700-P50-LIC	D-View 7 - 50 Probe License
DV-700-P100-LIC	D-View 7 - 100 Probe License

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