

L2+ Gigabit Switch

Enhanced Access Layer Switch

- 24 or 48 Gigabit Ports Per Switch
- 4 Combo SFP Fiber Gigabit
- 2 or 3 Open Slots for Optional 10-Gigabit Uplinks
- Virtual Stack or Physical High-Speed Stacking
- Enhanced L2+ With Static Routing, Multi-Layer ACL and QoS
- Malicious Traffic and Performance Degradation Prevention

FEATURES

Flexible Choices

- 24 or 48 10/100/1000BASE-T Ports
- 4 Combo SFP for Fiber Gigabit
- 2 or 3 Open Slots for Optional 10-Gigabit Uplinks
- Stackable Through Optional 10-Gigabit Coaxial Ports
- Optional External Redundant Power Supply

xStack Integration

- Virtual Stack of Up to 32 Units
- Single IP Management for Integration With L3 Core Switches
- Physical Stackable to 12 Units, 576 Gigabit Ports ²

Enhanced L2+ Features

- IP v.4/v.6 Static Routing
- IP v.6 Tunneling ¹

Security

- L2/L3/L4 Multi-Layer Access Control
- D-Link Safeguard Engine
- 802.1x Authentication, External RADIUS/TACACS+ Support
- SSH/SSL Support
- Health Check ³

Quality of Service

- 802.1p Priority Queues/Multi-Layer CoS
- 8 Hardware Queues

Traffic Monitoring/Bandwidth Control

- Traffic Segmentation
- Bandwidth Control Down to 64Kbps
- Per Flow Bandwidth Control
- Broadcast Storm Control Down to 1pps
- 802.3ad Link Aggregation (Port Trunks)
- Port Mirroring

Configuration/Management

- Web-Based
- Command Line Interface (CLI)
- SNMP v.1, v.2c, v3
- D-Link Single IP Management (SIM) v.1.5
- Telnet Server
- Dual Images/Configurations

¹ Star stacking available in future; other functions available in future firmware upgrade.

² Calculation based on 12 units of DGS-3450 stacked in the Ring Topology.

³ Health Check ZoneDefense operates in conjunction with D-Link NetDefend firewalls.

The xStack DGS-3400 series of next generation switches delivers performance, flexibility, security, multi-layer Quality of Service (QoS) and redundant power option for the SMB and enterprises. With high Gigabit port densities for desktop connections, SFP fiber connectivity, 10-Gigabit uplink options and enhanced Layer 2+ functions, these switches comprise the workgroup access-layer stack for seamless integration with L3 core switches to form part of a multi-level network structured with high-speed backbone and centralized servers.

Unparalleled Flexibility. Any switch in the DGS-3400 series can operate as a stand-alone device or part of a scalable stack. Embedded with Single IP Management capability, a stand-alone switch can form part of a virtual stack, where intra-stack traffic flows through the usual network wires, doing away with the costly stacking cables. Without stacking cables, cable distance barriers and physical stacking limitations, a virtual stack can comprise units that are located anywhere on the network that minimizes the impact of any single point of failure.

Ring or Star ¹ Stacking. Alternatively, optional 10-Gigabit modules can be installed in the open slots to create a physical stack. Up to 12 units or 576 Gigabit ports can be configured for a stack. ² Users can install one or two single-port modules, depending on whether the fault-tolerant Ring or Star ¹ stacking is implemented. With each of these ports providing 20Gbps full duplex transmission on the cost-effective coaxial cable, the DGS-3400 series provides not only high-bandwidth stacking but also cost control capability that allows users to add ports strictly on a per need basis. Modules with single 10-Gigabit XFP can also be installed in any of the open slots for uplink to a server or a fiber backbone.

More Intelligent Than Simple Layer 2 Switch. The DGS-3400 series provides a complete set of security features, which includes L2/L3/L4 multi-layer Access Control Lists and 802.1x user authentication via TACACS+ and RADIUS servers. In addition, it offers suppression capabilities, Layer 3 IP v.4/v.6 Static Routing and IP v.6 Tunneling ¹ to increase network performance and security. To ensure that not only proper user access is served, but also malicious traffic within the network is prevented, the DGS-3400 series includes a Health Check mechanism that provides proactive network security without the need for manual intervention from the administrator. ³

Security, Performance & Availability. The DGS-3400 series provides extensive VLAN support including GARP/GVRP, 802.1Q and asymmetric VLAN to enhance security and performance. To support converged applications including VoIP, ERP, Intranet and video conference, a robust set of L2/L3/L4 QoS/CoS features ensures that critical network services are served with proper priority. With Multi-layer L2/L3/L4 bandwidth control and D-Link Safeguard Engine, DGS-3400 series can set limits to traffic flows from the edge of the network while automatically prevents broadcast packets and bulk traffic generated by Internet DoS-related activities from utilizing the switch's CPU resources. This prevention of unnecessary and harmful traffic can increase the overall network serviceability, reliability and availability of the stack.



Product Specifications

DGS-3426

DGS-3427

DGS-3450



Interface	10/100/1000BASE-T Ports	24	24	48
	Auto-Negotiation of Network Speed	✓	✓	✓
	Auto-MDI/MDIX	✓	✓	✓
	802.3x Flow Control	✓	✓	✓
	SFP	4	4	4
	Open Slot for 10Gigabit Uplink Modules	2	3	2
	RS-232 Console Port	1	1	1
Physical Stacking	Installable Module for Stacking	Single-Port DEM-410CX	Single-Port DEM-410CX	Single-Port DEM-410CX
	Max Number of Stacking Ports Installable	2 CX4 Ports	2 CX4 Ports	2 CX4 Ports
	Stacking Speed (Per Port)	20Gbps (Full-Duplex)	20Gbps (Full-Duplex)	20Gbps (Full-Duplex)
	No. of Units Per Stack (Star Topology)	8 *	8 *	8 *
	No. of Units Per Stack (Ring Topology)	12	12	12
Optional 10-Gigabit Uplink	Single XFP Slot Module (DEM-410X)	✓	✓	✓
	Single CX4 Port Module (DEM-410CX)	✓	✓	✓
	10GBASE-SR (300 m Multi-Mode Fiber) Support	✓	✓	✓
	10GBASE-LR (10 km Single-Mode Fiber) Support	✓	✓	✓
	10GBASE-ER (40 km Single-Mode Fiber) Support	✓	✓	✓
	Max. Number of 10-Gigabit Uplinks Installable	2	3	2
Performance	Switch Fabric	88Gbps	108Gbps	136Gbps
	Packet Forwarding Rate	65.47Mpps	80.36Mpps	101.19Mpps
	Packet Buffer	750KB	750KB	750KB
	MAC Address Table	8K Entries	8K Entries	8K Entries
	IP v.4/v.6 Static Routing Table	128 Entries	128 Entries	128 Entries
	IP v.4 Host Table	2K Entries	2K Entries	2K Entries
	IP v.6 Host Table	1K Entries	1K Entries	1K Entries
Power	Power Supply	100 to 120VAC, 200 to 240VAC, 50/60Hz, Internal Power Supply		
	Power Consumption (Max.)	70.8 Watts	71.6 Watts	131.34 Watts
	Optional Redundant Power Supply	DPS-500	DPS-500	DPS-500
Physical/Environmental	BTU/Hr.	241.58	244	448
	Ventilation	2 40 x 40 mm DC Fans	2 40 x 40 mm DC Fans	2 40 x 40 mm DC Fans
	Dimensions	441 x 389 x 44 mm	441 x 389 x 44 mm	441 x 389 x 44 mm
	Size	19-Inch Rack-Mount Width, 1U Height		
	Weight (Without Optional Module)	5.42 kg	5.51 kg	5.74 kg
	Operating Temperature	0° to 40°C	0° to 40°C	0° to 40°C
	Storage Temperature	-10° to 70°C	-10° to 70°C	-10° to 70°C
	Operating Humidity	10% to 90% RH	10% to 90% RH	10% to 90% RH
	Storage Humidity	5% to 90% RH	5% to 90% RH	5% to 90% RH
	EMI	FCC Class A, CE, C-Tick	FCC Class A, CE, C-Tick	FCC Class A, CE, C-Tick
	Safety	CSA International	CSA International	CSA International

* Functions available in future.

Software Functions

L2 Features

- IGMP snooping
- Spanning Tree: 802.1D STP, 802.1W RSTP, 802.1S MSTP
- STP loop back detection
- 8 802.3ad Link Aggregation groups
- Back Pressure Flow Control
- Port mirroring: one-to-one, multiple-to-one, ACL modes *
- Trunking/mirroring across stack *
- Head-of-line blocking prevention

VLAN

- 802.1Q
- Double VLAN *
- 4K VLAN groups
- GVRP
- Guest VLAN *

L3 Features

- 128 IP v.4/v.6 Static Routing
- IPv.6 Tunneling *

QoS

- Per flow bandwidth control
- 802.1p support
- 8 queues per port
- Queue handling methods: WRR, Strict
- CoS based on:
 - Switch port
 - MAC address
 - 802.1p priority
 - VLAN
 - Protocol type
 - TOS
 - DSCP
 - IP v.4/v.6 address
 - IP v.6 traffic class
 - IP v.6 flow label
 - TCP/UDP port



ACL (Access Control List)

- Maximum 768 rules based on:
 - Switch port
 - MAC address
 - 802.1p priority
 - VLAN
 - Protocol type
 - TOS
 - DSCP
 - IP address
 - IP v.4/v.6 address
 - IP v.6 traffic class
 - IP v.6 flow label
 - TCP/UDP port
- Time-based ACL *
- CPU interface filtering

Security

- RADIUS/TACACS/TACACS+
- SSH v.2
- SSL v.3
- Port security
- 802.1x port-based/MAC-based access control
- Web-based access control *
- Broadcast storm control
- Traffic segmentation
- MAC-IP binding
- D-Link Safeguard Engine

Management

- D-Link Single IP Management v.1.5
- Web-based GUI
- CLI
- Web GUI traffic monitoring
- Web MAC address browsing
- Telnet server
- TFTP client
- SNMP v.1, v.2c, v.3
- SNMP trap on MAC notification
- RMON v.1
- BootP/DHCP client
- DHCP auto-configuration
- DHCP relay option 82 *
- System log
- Trap/alarm/log severity control
- Dual Images
- Dual Configurations
- CPU Monitoring
- Virtual Interface *

* Functions available in future firmware upgrade.

Optional Products

Optional Management Software

- DS-510S** D-View 5.1 SNMP Network Management Program (standard version)
DS-510P D-View 5.1 SNMP Network Management Program (professional version)

Optional 10Gigabit Uplink Modules

- DEM-410X** 1-slot 10Gigabit XFP uplink module
DEM-410CX 1-port 10Gigabit CX4 uplink module

Optional 10Gigabit XFP Transceivers

- DEM-421XT** XFP transceiver for 10GBASE-SR, multi-mode fiber, max. distance 300 m, 3.3/5V
DEM-422XT XFP transceiver for 10GBASE-LR, single-mode fiber, max. distance 10 km, 3.3/5V
DEM-423XT XFP transceiver for 10GBASE-ER, single-mode fiber, max. distance 40 km, 3.3/5V

Optional SFP Transceivers

- DEM-310GT** SFP transceiver for 1000BASE-LX, single-mode fiber, max. distance 10 km, 3.3V
DEM-311GT SFP transceiver for 1000BASE-SX, multi-mode fiber, max. distance 550 m, 3.3V
DEM-312GT2 SFP transceiver for 1000BASE-SX, multi-mode fiber, max. distance 2 km, 3.3V
DEM-314GT SFP transceiver for 1000BASE-LHX, single-mode fiber, max. distance 50 km, 3.3V
DEM-315GT SFP transceiver for 1000BASE-LX, single-mode fiber, max. distance 80 km, 3.3V
DEM-330T SFP transceiver for 1000BASE-LX, single-mode fiber, max. 10 km, 3.3V, WDM (Tx: 1550 nm, Rx: 1310 nm)
DEM-330R SFP transceiver for 1000BASE-LX, single-mode fiber, max. 10 km, 3.3V, WDM (Tx: 1310 nm, Rx:1550 nm)
DEM-331T SFP transceiver for 1000BASE-LX, single-mode fiber, max. 40 km, 3.3V, WDM (Tx: 1550 nm, Rx: 1310 nm)

- DEM-331R** SFP transceiver for 1000BASE-LX, single-mode fiber, max. 40 km, 3.3V, WDM (Tx: 1310 nm, Rx:1550 nm)

Optional Redundant Power Supply

- DPS-500** 140-watt redundant power supply
DPS-800 2-slot redundant power supply chassis
DPS-900 8-slot redundant power supply chassis

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