



### High Performance Switching:

- + IPv4/IPv6 Routing
- + Up to 12K Routes
- + 40 Gigabit Stacking Backplane
- + Physical Data Stack Up to 12 Units per Stack
- + IP Stacking Up to 32 Units per IP
- + Up to 576Gbps Bandwidth per Stack
- + Optional 10 Gigabit Uplinks
- + Jumbo Frame Support (Up to 9216 Bytes)

### Security

- + D-Link Safeguard Engine
- + Enhanced Access Control List
- + Guest VLAN
- + Up to 4K 802.1Q VLANs
- + 802.1x (Port and MAC Authentication)
- + TACACS+ & RADIUS
- + SSH/SSL
- + Asymmetric VLANs and Traffic Segmentation
- + IP-MAC Port Binding
- + MAC-based Access Control (MAC)
- + Web-based Access Control (WAC)

### Layer 3 Support

- + RIPv1, RIPv2
- + RIPng
- + OSPF v2
- + OSPF Passive Interface
- + Up to 64 IP Interfaces
- + Multiple IP interfaces per VLAN
- + VRRP
- + Up to 1K Multicast Groups
- + IGMP v1, v2, v3
- + DVMRP v3
- + PIM-DM for IPv4
- + PIM-SM for IPv4
- + Multicast Duplication

### Advanced Enterprise Features

- + IGMP/MLD Snooping
- + Spanning Tree 802.1d, 802.1w, 802.1s
- + LAG (32 Groups/8 Ports)
- + Cross Stack Port Mirroring and Trunking
- + 802.1p QoS (8 Queues)
- + Broadcast Storm Control
- + SNMP v1/2/3
- + CLI or Web GUI Interface



## xStack Managed Gigabit Stackable L3 Switch, with 4 Combo SFP and 40Gig Stacking

### Overview

The latest generation of D-Link xStack switches support IPv6 routing and have more advanced features than ever to address today's concerns regarding security, QoS, and management. The xStack DGS-3600 series includes two models: DGS-3627, a 24-Port gigabit managed switch with 4 combo SFP slots or 100BASE-FX fiber ports with 3 optional 10Gigabit uplinks, and DGS-3650, a 48-Port gigabit managed switch with 4 combo SFP slots and 2 optional 10Gigabit uplinks for stacking. The D-Link DGS-3600 series is equipped with robust features that fulfill the most demanding network for voice and video streaming. Stackable up to 12 units under a single IP, the switches are able to provide a total of up to 576Gbps aggregated bandwidth, each with 40Gbps full-duplex of stacking bandwidth fixed-in. To help secure your network, the D-Link Safeguard Engine helps prevent Denial-of-Service (DoS) attacks while the Access Control List (ACL) enhances security of your network. The DGS-3600 series is equipped with industry standard management features including an easy-to-use web-based administrator interface and a standard CLI interface. D-Link provides these features on a scalable platform that increases your company's productivity while protecting your investment.

### IPv6 and IPv4 Routing

The xStack DGS-3600 series provides current IPv4 networks with a simple migration path to IPv6 and protects your investment for future network upgrades when greater security and larger addressing are required. Basic static routing such as RIP and RIP2 are supported for small network routing applications. Advanced routing protocols such as OSPF and equal cost routing are supported for load balancing and building a scalable network.

### Stackable Up to 12 Units

Each switch in the xStack DGS-3600 series has two optional ports to install stacking modules that provide up to 40Gbps in data stacking backplane, full-duplex. This enhances your overall network performance for those switches transmitting large files such as graphics or pictures. Under stacking mode, the switches are hot-swappable. This means that in a stack configuration, any of the switches can be replaced or removed without affecting the network. There is no need to reconfigure a replacement switch; just give the new switch the same stack number ID as the old switch and the network will carry the same configuration as before. This minimizes the downtime of a network and maximizes the productivity of your business. Also, to facilitate network administration, cross stack port mirroring and port trunking are supported.

### The D-Link Safeguard Engine and Security

The DGS-3600 series incorporates advanced mechanisms to detect an attack against the central processing unit of the switch and to take corrective action on the attacking interface. When a DoS attack is waged against any of the DGS-3600 switches, the D-Link Safeguard Engine detects the threat and prevents overload of the central processor thus ensuring network integrity and helping to maintain open network bandwidth channels.

In addition, the D-Link xStack DGS-3600 series offers a variety of authentication methods, including those without the requirement of a RADIUS server. It supports MAC based Access Control (MAC), which authenticates the user based on the MAC address of the client so that authentication is transparent to the client. It also supports Web-based Access Control (WAC), which prompts for username and password before allowing access to TCP traffic. Lastly, the xStack DGS-3600 series supports Network Access Protection (NAP). This feature works in conjunction with Microsoft® software platforms such as Vista® to reinforce health and security policies of the network, including policy validation, network restriction, remediation, and ongoing compliance.

### Voice and Video Applications

For today's business, having voice, data, and video on the same network is common practice. This challenge is met by the D-Link xStack DGS-3600 series, which supports 802.1p with 8 queues. The administrator can designate the priority of the traffic based on a variety of means including IP and MAC address, so that voice data is clear and jitter-free. Video traffic can also be assigned with the same priority. In addition, the D-Link xStack DGS-3600 series provides IGMP Snooping, which allows the forwarding of multicast packets such as streaming audio and video without increasing network broadcast congestion. By snooping IGMP registration information within a frame, a list of workstations that have joined the multicast group is created. This list then allows the switch to intelligently forward packets to only the appropriate member workstations. For IPv6 traffic, the DGS-3600 series supports MLD snooping. Multicast

routing is supported under independent multicast protocol, including PIM-SM and PIM-DM. DVMRP is also supported to interconnect two multicast-enabled networks across non-multicast networks. In conjunction with support for 802.1Q VLANs, Quality of Service (QoS) and security can be achieved on a network infused with data traffic.

### Ease of Management

The DGS-3600 Series supports SNMP v1/2/3 so traps can be set on abnormal events and information can be polled to maximize the productivity of the network. Other standard management features also supported include RMON and IEEE 802.1d Spanning Tree. User interfaces include an intuitive web-based GUI or standard CLI, with administration traffic protected through SSL or SSH encryptions.



	DGS-3627	DGS-3650
<b>Interface</b>		
10/100/1000BASE-T Ports	24	48
Combo SFP Slots	4	4
Open Slot for 10-Gigabit Uplink Modules	3	2
RS-232 Console Port	1	1
<b>Physical Stacking</b>		
Optional Module for Stacking	Single-Port DEM-410CX or DEM-410X	Single-Port DEM-410CX or DEM-410X
Maximum Number of Stacking Ports Optional	2 CX4 or XFP Ports	2 CX4 or XFP Ports
Stacking Speed (Per Port)	20Gbps (Full-Duplex)	20Gbps (Full-Duplex)
No. of Units Per Stack	12	12
<b>Optional 10-Gigabit Uplink (Transceivers sold separately)</b>		
Single XFP Slot Module (DEM-410X)	Yes	Yes
Single CX4 Port Module (DEM-410CX)	Yes	Yes
10GBASE-SR (300 m Multi-Mode Fiber) Support	Yes	Yes
10GBASE-LR (10 km Single-Mode Fiber) Support	Yes	Yes
Maximum Number of 10-Gigabit Uplinks Installable	3	2

	DGS-3627	DGS-3650
<b>Performance</b>		
Switch Fabric	108Gbps	136Gbps
Packet Forwarding Rate	80.36Mpps	101.19Mpps
Packet Buffer	2MB	2MB
MAC Address Table	16K Entries	16K Entries
IP v4 Routing Table	12K Entries	12K Entries
IP v6 Routing Table	6K Entries	6K Entries
IP v4 Host Table	8K Entries	8K Entries
IP v6 Host Table	4K Entries	4K Entries
Jumbo Frame Size	9,216 Bytes	9,216 Bytes
<b>Power</b>		
Power Supply	100 to 120VAC, 200 to 240VAC, 50/60Hz, Internal Power Supply	100 to 120VAC, 200 to 240VAC, 50/60Hz, Internal Power Supply
Power Consumption (Maximum)	72.3 Watts	131.3 Watts
Optional Redundant Power Supply	DPS-500	DPS-500
<b>Physical/Environmental</b>		
Heat Dissipation	246.70 BTU/Hr	448.02 BTU/Hr
Ventilation DC Fans	Four 1.6in x 1.6in x 0.8in (40mm x 40mm x 20 mm) fans	Three 1.6in x 1.6in x 0.8in (40mm x 40mm x 20 mm) fans
	One 2.0in x 2.0in x 0.4in (50mm x 50mm x 10 mm) fans	Two 1.6in x 1.6in x 0.4in (40mm x 40mm x 10mm) fans
		One 2.0in x 2.0in x 0.4in (50mm x 50mm x 10 mm) fans
Dimensions (W x D x H)	17.4in x 15.3in x 1.7in (441mm x 389mm x 44mm)	17.4in x 15.3in x 1.7in (441mm x 389mm x 44mm)
Size	19-Inch Rack-Mount Width, 1U Height	19-Inch Rack-Mount Width, 1U Height
Weight (Without Optional Module)	12.1 lbs (5.51 kg)	12.6 lbs (5.71 kg)
Operating Temperature	32° to 104°F (0° to 40°C)	32° to 104°F (0° to 40°C)
Storage Temperature	14° to 158°F (-10° to 70°C)	14° to 158°F (-10° to 70°C)
Operating Humidity	10% ~ 90% RH	10% ~ 90% RH
Storage Humidity	5% ~ 90% RH	5% ~ 90% RH
EMI	FCC Class A, CE, C-Tick,VCCI	FCC Class A, CE, C-Tick,VCCI
Safety	cUL, CB	cUL, CB
<b>Technical Specifications</b>		
L2 Features	<ul style="list-style-type: none"> <li>+ IGMP Snooping v1, v2, v3</li> <li>- 1K IGMP Snooping Groups</li> <li>- 64 Static Multicast Address</li> <li>+ Spanning Tree</li> <li>- 802.1D STP</li> <li>- 802.1w RSTP</li> <li>- 802.1s MSTP</li> <li>- STP Loopback Detection</li> <li>- BPDU Filtering per Port and per Device</li> <li>+ Trunking Across Stack</li> </ul>	<ul style="list-style-type: none"> <li>+ MLD Snooping</li> <li>- 1K MLD Snooping Groups</li> <li>- 64 Static Multicast Addresses</li> <li>+ 802.3ad Link Aggregation</li> <li>- Up to 32 Groups per Device</li> <li>- Up to 8 Gigabit Ports or 2 10-Gigabit Ports per Group</li> <li>+ Port Mirroring</li> <li>- One-to-One Mode</li> <li>- Many-to-One Mode</li> <li>- ACL Mode</li> </ul>

VLAN	<ul style="list-style-type: none"> <li>+ 802.1Q</li> <li>+ Total 4K VLAN Groups</li> <li>+ Maximum 255 Dynamic VLAN Groups</li> <li>+ GVRP</li> </ul>	<ul style="list-style-type: none"> <li>+ 802.1v</li> <li>+ Maximum 4K Static VLAN Groups</li> <li>+ Configurable VLAN ID from 1 to 4094</li> <li>+ Double VLAN</li> </ul>
L3 Features	<ul style="list-style-type: none"> <li>+ L3 Routing               <ul style="list-style-type: none"> <li>- Up to 12K entries (all route entries combined)</li> <li>- Up to 256 IPv4 static route entries</li> <li>- Up to 128 IPv6 static route entries</li> <li>- Up to 12K IPv4 dynamic route entries</li> <li>- Up to 6K IPv6 dynamic route entries</li> </ul> </li> <li>+ Floating Static Route               <ul style="list-style-type: none"> <li>- IPv4 Floating Static Route</li> <li>- IPv6 Floating Static Route</li> </ul> </li> <li>+ Policy Based Route</li> <li>+ RIPv6 (IPv6)<sup>1</sup></li> <li>+ Multiple IP Interfaces per VLAN (Up to 5)</li> <li>+ Multi Path Routing Supporting Equal Cost (EC) and Weighted Cost (WC)</li> <li>+ VRRP</li> <li>+ IPv6 Ready Phase 1</li> <li>+ IGMP v1, v2, v3</li> <li>+ DVMRP v3</li> <li>+ Per Port Limit IP Multicast Address Range for Control Packet</li> </ul>	<ul style="list-style-type: none"> <li>+ L3 Forwarding               <ul style="list-style-type: none"> <li>- Up to 8K IPv4 Forwarding Entries</li> <li>- Up to 4K IPv6 Forwarding Entries</li> <li>- Up to 8K Entries (all L3 Hardware Forwarding Entries Combined)</li> </ul> </li> <li>+ OSPF v2               <ul style="list-style-type: none"> <li>- OSPF Passive Interface</li> <li>- OSPF NSSA (Not So Stubby Area)</li> <li>- OSPF Equal Cost Route</li> </ul> </li> <li>+ RIP v1, v2</li> <li>+ Up to 64 IP Interfaces</li> <li>+ Multicast               <ul style="list-style-type: none"> <li>- Up to 64 Static Multicast Groups</li> <li>- Up to 1K Dynamic Multicast Groups</li> <li>- Up to 1K Multicast Groups (Static and Dynamic D-Link Safeguard Engine Multicast Groups Combined)</li> </ul> </li> <li>+ Multicast Duplication (Up to 32 VLAN per Port)</li> <li>+ PIM DM for IPv4</li> <li>+ PIM SM for IPv4</li> <li>+ IPv6 Tunneling</li> </ul>
QoS (Quality of Service)	<ul style="list-style-type: none"> <li>+ Per Port Bandwidth Control (Granularity of 64Kbits per Second)</li> <li>+ Per Flow Bandwidth Control (Granularity of 64Kbits per Second)</li> <li>+ 802.1p Priority Queues (8 Queues)               <ul style="list-style-type: none"> <li>- Queue Handling Mode Support: WRR and Strict Modes</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>+ CoS Based On:               <ul style="list-style-type: none"> <li>- Switch Port</li> <li>- 802.1p Priority Queues</li> <li>- IPv4/v6 Address</li> <li>- Protocol Type</li> <li>- IPv6 Flow Label</li> <li>- User-Defined Packet Content</li> </ul> </li> <li>- VLAN ID</li> <li>- MAC Address</li> <li>- DSCP</li> <li>- IPv6 Traffic Class</li> <li>- TCP/UDP Port</li> </ul>
ACL (Access Control List)	<ul style="list-style-type: none"> <li>+ Up to 8 Profiles</li> <li>+ Up to 1792 Global Rules, Each Rule Can Set Its Own Port Range</li> </ul>	<ul style="list-style-type: none"> <li>+ ACL Based On:               <ul style="list-style-type: none"> <li>- Switch Port</li> <li>- 802.1p Priority Queues</li> <li>- IPv4/v6 Address</li> <li>- Protocol Type</li> <li>- IPv6 Flow Label</li> <li>- User-Defined Packet Content</li> <li>- Time (Time-Based ACL)</li> </ul> </li> <li>- VLAN ID</li> <li>- MAC Address</li> <li>- DSCP</li> <li>- IPv6 Traffic Class</li> <li>- TCP/UDP Port</li> </ul>
Security	<ul style="list-style-type: none"> <li>+ RADIUS Authentication for Management Access (RFC 2138, 2139)</li> <li>+ SSH v2</li> <li>+ SSL v3</li> <li>+ Web-based Access Control</li> <li>+ MAC-based Access Control</li> <li>+ Traffic Segmentation</li> <li>+ D-Link Safeguard Engine</li> <li>+ Support Microsoft® NAP</li> </ul>	<ul style="list-style-type: none"> <li>+ TACACS+ Authentication for Management Access (RFC 1492)</li> <li>+ Port Security (Up to 16 MAC Addresses per Port)</li> <li>+ 802.1x Port-based/MAC-based Access Control</li> <li>+ Guest VLAN</li> <li>+ Broadcast/Multicast Storm Control (Minimum Granularity of 1 Packet per Second)</li> <li>+ IP-MAC-Port Binding (Up to 500 Entries per Device) Supporting ARP and ACL Modes</li> </ul>
Management	<ul style="list-style-type: none"> <li>+ Single IP Management v1.6</li> <li>+ CLI</li> <li>+ Telnet Server</li> <li>+ Telnet Client<sup>1</sup></li> <li>+ SNMP v1, v2c, v3</li> <li>+ SNMP Trap on MAC Notification</li> <li>+ BootP/DHCP Client</li> <li>+ System Log</li> <li>+ Trap/Alarm/Log Severity Control</li> <li>+ Flash File System</li> <li>+ CPU Monitoring via Web, CLI, SNMP</li> <li>+ Virtual Interface<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>+ Web-based GUI</li> <li>+ Web GUI Traffic Monitoring</li> <li>+ Web MAC Address Browsing</li> <li>+ TFTP Client</li> <li>+ RMON v1, v2</li> <li>+ sFlow</li> <li>+ DHCP Auto-Configuration</li> <li>+ DHCP Relay Option 82</li> <li>+ DHCP Server</li> <li>+ Dual Image</li> <li>+ Dual Configuration</li> </ul>

MIBs	<ul style="list-style-type: none"> <li>+ MIB-II (RFC 1213)</li> <li>+ SNMP v2 MIB (RFC 1907)</li> <li>+ RMON v2 MIB (RFC 2021)</li> <li>+ 802.3 MAU MIB (RFC 2668)</li> <li>+ IF MIB (RFC2233, 2863)</li> <li>+ IGMP v3 MIB</li> <li>+ OSPF v2 MIB (RFC 1850)</li> <li>+ VRRP MIB (RFC 2787)</li> <li>+ PIM MIB for IPv4 (RFC 2934)</li> <li>+ Ping MIB<sup>1</sup></li> <li>+ L2 Specific MIB</li> <li>+ Private MIB</li> </ul>	<ul style="list-style-type: none"> <li>+ Bridge MIB (RFC 1493)</li> <li>+ RMON MIB (RFC 1757, 2819)</li> <li>+ Ether-like MIB (RFC 1643, 2358, 2665)</li> <li>+ 802.1p MIB (RFC 2674)</li> <li>+ RADIUS Authentication Client MIB (RFC 2618)</li> <li>+ RIP v2 MIB (RFC 1724)</li> <li>+ IP Forwarding Table MIB (CIDR) (RFC 2096)</li> <li>+ IPv4 Multicast Routing MIB (RFC 2932)</li> <li>+ RADIUS Accounting Client MIB (RFC 2620)</li> <li>+ Trace Out MIB<sup>1</sup></li> <li>+ L3 Specific MIB</li> </ul>
Warranty	+ Limited Lifetime <sup>2</sup>	

### Ordering Information

Part Number	Description
DGS-3627	xStack Managed 24-Port Gigabit Stackable L3 Switch, 4 Combo SFP Slots, 2 Slots for Optional 10Gig Uplinks
DGS-3650	xStack Managed 48-Port Gigabit Stackable L3 Switch, 4 Combo SFP Slots, 2 Slots for Optional 10Gig Uplinks
DEM-211	100BASE-FX 155Mbps MMF Fiber LC SFP Transceiver
DEM-310GT	1000BASE-LX SFP LC Transceiver, Up to 10Km
DEM-311GT	1000BASE-SX SFP LC Transceiver, Up to 500m
DEM-410CX	1-Port 10Gigabit CX-4 Module (Includes 1 Meter CX-4 Cable)
DEM-410X	1-Port 10Gigabit XFP Module (XFP Transceiver Sold Separately)
DEM-421XT	10Gigabit XFP MMF Transceiver
DEM-422XT	10Gigabit XFP SMF Transceiver
DPS-500	Redundant Power Supply
DPS-800	Redundant Power Supply Rack (Holds Two Units of DPS-500)

<sup>1</sup> Features available in future firmware upgrade.

<sup>2</sup> Limited Lifetime Warranty available only in the U.S.A. and Canada.