

X S T A C K<sup>®</sup>

## High Performance Switching

- IPv4/IPv6 Routing
- Up to 12K Routes
- 40 Gigabit Stacking Backplane
- Physical Data Stack Up to 12 Units per Stack
- Up to 4-SFP+ 10-Gigabit Uplinks
- IP Stacking Up to 32 Units per IP
- Up to 576Gbps Bandwidth per Stack
- Jumbo Frame Support (up to 13K)
- PoE and PoE+ Options

## Security

- Microsoft<sup>®</sup> NAP
- Enhanced Access Control List
- Guest VLAN
- Up to 4K 802.1Q VLANs
- 802.1X (Port and MAC Authentication)
- TACACS+ & RADIUS
- SSH/SSL
- Traffic Segmentation
- IP-MAC Port Binding
- MAC-based Access Control
- Web-based Access Control
- DHCP Server Screening

## xStack 24/48-Port Gigabit Stackable L3 Switch Family with PoE/PoE+, Gigabit SFP and 10-Gigabit SFP+ Slots

### Overview

The latest generation of D-Link<sup>®</sup> xStack<sup>®</sup> Switches supports IPv6 routing and has more advanced features than ever to address today's security, QoS, and management concerns. The xStack DGS-3620 Series includes five gigabit managed switches with a choice of 24 or 48 port 10/100/1000Base-T models, 24 SFP port model, and PoE + model options. The DGS-3620-28TC comes with four combo SFP slots and four 10-Gigabit SFP+ slots. The DGS-3620-28SC is the fiber version equipped with four combo 10/100/1000 Base-T ports and four 10-Gigabit SFP+ slots. The DGS-3620-52T has four 10-Gigabit SFP+ slots and two optional 10-Gigabit uplinks. The DGS-3620-28PC and DGS-3620-52P also include PoE (802.3af) and PoE+ (802.3at) that provides up to 30W to power devices such as IP phones, Access Points, or security cameras.

The xStack DGS-3620 Series is equipped with robust features that fulfill the most demanding network's needs 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 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 network security. The DGS-3620 Series is equipped with industry standard management features including easy-to-use CLI and web-based administrator interfaces. D-Link provides these features on a scalable platform, increasing your company's productivity while protecting your investment.

### IPv6 and IPv4 Routing

The xStack DGS-3620 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 RIPV2 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-3620 Series has four optional SFP+ Ports to install compatible modules for stacking provide up to 40Gbps data stacking backplane while in full-duplex mode. This enhances your overall network performance for 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 network downtime 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-3620 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-3620 switches, the D-Link Safeguard Engine detects the threat and prevents overload of the CPU, thus ensuring network integrity and helping to maintain open network bandwidth channels.

business



## xStack 24/48-Port Gigabit Stackable L3 Switch Family with PoE/PoE+, Gigabit SFP and 10-Gigabit SFP+ Slots

### Layer 3 Support

- RIPv1, RIPv2, OSPFv2
- RIPvng, OSPFv3
- Up to 256 IP Interfaces
- Multiple IP Interfaces per VLAN
- VRRP
- Up to 2K Multicast Groups
- IGMP v1, v2, v3
- DVMRP v3
- PIM-DM/SM/SDM/SSM for IPv4

### 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 v1/2c/3
- CLI or Web GUI Interface
- sFLOW
- RSPAN

In addition, the xStack DGS-3620 Series offers a variety of authentication methods, including those without the requirement of a RADIUS server. It supports MAC-based Access Control, 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, which prompts for username and password before allowing access to TCP traffic. Lastly, the xStack Series supports Network Access Protection (NAP). This feature works in conjunction with Microsoft® software platforms such as Windows Vista® to reinforce network health and security policies including policy validation, network restriction, remediation, and ongoing compliance.

### Voice and Video Applications

For today's businesses, having voice, data, and video on the same network is common practice. This challenge is met by the xStack DGS-3620 Series, which supports 802.1p with eight queues. The administrator can designate traffic priority 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 xStack DGS-3620 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 xStack DGS-3600 Series supports MLD snooping. Multicast routing is supported under independent multicast protocol, including PIM-SM, PIM-DM, and PIM-SDM (Sparse Dense Mode). 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 xStack DGS-3620 Series supports SNMP v1/2c/3 so traps can be set on abnormal events and information can be polled to maximize network productivity. 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, either of which can be protected through SSL or SSH encryption.

Technical Specifications		DGS-3620-28TC	DGS-3620-28SC	DGS-3620-28PC	DGS-3620-52T	DGS-3620-52P
						
Interface	10/100/1000BASE-T Ports	24	-	24	48	48
	SFP Slots	4 Combo SFP	24	4 Combo SFP	4 Combo SFP/SFP+	4 Combo SFP/SFP+
	Combo 10/100/1000BASE-T Ports	-	4	-	-	-
	10 Gigabit SFP+ Slots	4				
	Console Ports	1				
Physical Stacking	Installable SFP+ Module for Stacking	DEM-431XT-DD DEM-432XT-DD DEM-433XT-DD DEM-435XT-DD DEM-CB100S DEM-CB300S				
	Max Number of Stacking Ports Installable	2 SFP+				
	Stacking Speed (Per Port)	20 Gbps (Full-Duplex)				
	No. of Units Per Stack	12				
Optional 10-Gigabit Uplink	Installable SFP+ Modules for Uplink	4 SFP+ Uplink, 2 Available uplinks when stacking DEM-431XT-DD DEM-432XT-DD DEM-433XT-DD DEM-435XT-DD DEM-CB100S DEM-CB300S				
PoE	PoE Ports	-	-	24	-	48
	PoE Budget	-	-	370W (740W with DPS-700 in Expansion mode)	-	370W (740W with DPS-700 in Expansion mode)
	802.3af (PoE)	-	-	Yes	-	Yes
	802.3at (PoE+)	-	-	Yes	-	Yes
Performance	Switching Capacity	128Gbps	128Gbps	128Gbps	176Gbps	176Gbps
	Packet Forwarding Rate	95.24Mpps	95.24Mpps	95.24Mpps	130.95Mpps	130.95Mpps
	Packet Buffer	2 MB				
	MAC Address Table	32K Entries				
	IP v4/v6 Routing Table	12K Entries				
	IP v6 Routing Table	6K Entries				
	IP v4 Host Table	8K Entries				
	IP v6 Host Table	4K Entries				
Jumbo Frame Size	13K Bytes					
Power	Power Supply	100 to 120 V AC, 200 to 240 V AC, 50/60 Hz, Internal Power Supply				
	Optional Redundant Power Supply	DPS-500	DPS-500	DPS-700	DPS-500	DPS-700

## Technical Specifications

L2 Features	<ul style="list-style-type: none"> <li>+ IGMP Snooping v1, v2, v3 <ul style="list-style-type: none"> <li>- 1K IGMP Snooping Groups</li> </ul> </li> <li>+ 64 Static Multicast Address</li> <li>+ Spanning Tree <ul style="list-style-type: none"> <li>- 802.1D STP</li> <li>- 802.1w RSTP</li> <li>- 802.1s MSTP</li> <li>- Loopback Detection v 4.0</li> </ul> </li> <li>- BPDU Filtering per Port and per Device</li> </ul>	<ul style="list-style-type: none"> <li>+ Trunking Across Stack</li> <li>+ RSPAN</li> <li>+ MLD Snooping v1/v2+ ERPS (Ethernet Ring Protectoin Switching) (Enhanced Image)</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> <li>+ MAC - Based VLAN</li> <li>+ VLAN Trunking</li> </ul>	<ul style="list-style-type: none"> <li>+ Double VLAN (Q in Q) <ul style="list-style-type: none"> <li>- Port-based Q in Q</li> <li>- Selective Q in Q</li> </ul> </li> <li>+ Super VLAN</li> <li>+ Asymmetric VLAN</li> <li>+ 802.1v</li> <li>+ Voice VLAN</li> <li>+ D-Link Intelligent Port Management (IPM)</li> <li>+ ISM VLAN</li> <li>+ Private VLAN</li> <li>+ Subnet-based 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>+ RIPng (IPv6) (Enhanced Image)</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 1/2</li> <li>+ IGMP v1, v2, v3</li> <li>+ DVMRP v3 (Enhanced Image)</li> <li>+ Per Port Limit IP Multicast Address Range for Control Packet</li> <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> </ul>	<ul style="list-style-type: none"> <li>- OSPF <ul style="list-style-type: none"> <li>- OSPF v2</li> <li>- OSPF v3 (IPv6) (Enhanced Image)</li> <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 256 IP Interfaces</li> <li>+ Multicast <ul style="list-style-type: none"> <li>- Up to 64 Static Multicast Groups</li> <li>- Up to 2K Dynamic Multicast Groups Safeguard Engine™ Multicast Groups Combined)</li> </ul> </li> <li>+ Multicast Duplication (Up to 32 VLAN per Port)</li> <li>+ PIM-DM/SM/SDM for IPv4</li> <li>+ IPv6 Tunneling <ul style="list-style-type: none"> <li>- Static</li> <li>- ISATAP</li> <li>- GRE</li> <li>- G to 4</li> </ul> </li> <li>+ BGP (Enhanced Image)</li> <li>+ Proxy ARP</li> <li>+ Gratuitous ARP</li> <li>+ PIM-SMv6</li> <li>+ PIM SSM</li> <li>+ Time Based PoE (PoE Models Only)</li> <li>+ Policy Based Route</li> <li>+ BFD (Bidirectional Forwarding Detection)</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> <li>+ CoS Based On: <ul style="list-style-type: none"> <li>- Switch Port - VLAN ID</li> <li>- 802.1p Priority Queues - MAC Address</li> <li>- IPv4/v6 Address - DSCP</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Protocol Type - IPv6 Traffic Class</li> <li>- IPv6 Flow Label - TCP/UDP Port</li> <li>- User-Defined Packet Content</li> <li>+ Remark 802.1 Priority Tag</li> <li>+ Remark TOS/DSCP Tag</li> <li>+ Flow Statistics</li> <li>+ Committed Information Rate (CIR) min. granularity 1Kbps</li> <li>+ Time-based QoS</li> </ul>

<p>Security</p>	<ul style="list-style-type: none"> <li>+ RADIUS Authentication for Management Access (RFC 2138, 2139)</li> <li>+ SSH v1/v2</li> <li>+ SSL v1/v2</li> <li>+ Web-based Access Control</li> <li>+ MAC-based Access Control</li> <li>+ Japan Web-based Access Control (JWAC)<sup>1</sup></li> <li>+ 802.1x Port-based/MAC-based Access Control</li> <li>+ Traffic Segmentation</li> <li>+ D-Link Safeguard Engine</li> <li>+ Support Microsoft® Network Access Protection</li> <li>+ TACACS+ Authentication for Management Access (RFC 492)</li> </ul>	<ul style="list-style-type: none"> <li>+ Port Security (Up to 16 MAC Addresses per Port)</li> <li>+ Guest VLAN</li> <li>+ Broadcast Storm Control (Minimum Granularity of 1 PPS)</li> <li>+ IP-MAC-Port Binding (Up to 500 Entries per Device) Supporting ARP/ACL/DHCP Snooping<sup>1</sup> Modes</li> <li>+ DHCP Server Screening</li> <li>+ CPU Interface Filtering</li> <li>+ ARP Spoofing Prevention</li> <li>+ BPDU Attack Protection</li> </ul>
<p>Management</p>	<ul style="list-style-type: none"> <li>+ Single IP Management v1.6</li> <li>+ CLI</li> <li>+ Telnet Server</li> <li>+ Telnet Client</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>2</sup></li> <li>+ Web-based GUI</li> <li>+ Web GUI Traffic Monitoring</li> <li>+ TFTP Client</li> <li>+ RMON v1, v2</li> </ul>	<ul style="list-style-type: none"> <li>+ sFlow</li> <li>+ DHCP Auto-Configuration</li> <li>+ DHCP Relay Option 82</li> <li>+ DHCP Relay Option 60 &amp; 61</li> <li>+ DHCP Server</li> <li>+ Dual Image</li> <li>+ Dual Configuration</li> <li>+ LLDP</li> <li>+ DHCPv6 Client</li> <li>+ DHCPv6 Relay</li> <li>+ DHCPv6 Server</li> <li>+ Cable Diagnostics</li> <li>+ SNTF</li> <li>+ ICMPv6</li> <li>+ Trusted Host</li> <li>+ MTV Setting</li> <li>+ NLB (Network Load Balancing)</li> <li>+ LLDP-Med</li> <li>+ Optical Transceiver Digital Diagnostic Monitoring (DDM)</li> <li>+ 802.3ah D-Link extension: D-link Unidirectional Link Detection (DULD)</li> </ul>
<p>MIB/ IETF Standards</p>	<ul style="list-style-type: none"> <li>+ RFC1213 MIB-II</li> <li>+ RFC1493 Bridge MIB</li> <li>+ RFC1907 SNMPv2 MIB</li> <li>+ RFC2571~2576 SNMP MIB</li> <li>+ RFC1271, 2819 RMON MIB</li> <li>+ RFC2021 RMON v2 MIB</li> <li>+ RFC2665 Ether-like MIB</li> <li>+ RFC2668 MAU MIB</li> <li>+ RFC2674 802.1p MIB</li> <li>+ RFC2233, 2863 IF MIB</li> <li>+ RFC2618 RADIUS Authentication Client MIB</li> <li>+ RFC1724 RIP v2 MIB</li> <li>+ RFC1850 OSPF v2 MIB</li> <li>+ RFC2096 IP Forwarding Table MIB (CIDR)</li> <li>+ RFC2787 VRRP MIB</li> <li>+ RFC2932 IPv4 Multicast Routing MIB</li> <li>+ RFC2934 PIM MIB for IPv4</li> <li>+ RFC2620 RADIUS Accounting Client MIB</li> <li>+ RFC2933 IGMP MIB</li> <li>+ Ping MIB</li> <li>+ Traceroute MIB</li> </ul>	<ul style="list-style-type: none"> <li>+ D-Link Private MIB</li> <li>+ RFC768 UDP+ RFC783 TFTP</li> <li>+ RFC 791 IP</li> <li>+ RFC 792 ICMP</li> <li>+ RFC 793 TCP</li> <li>+ RFC 826 ARP</li> <li>+ RFC854 Telnet</li> <li>+ RFC951, 1542 BootP</li> <li>+ RFC2068 HTTP</li> <li>+ RFC2338 VRRP</li> <li>+ RFC2529, 3053, 3056 IPv6 Tunnel</li> <li>+ RFC2138 RADIUS</li> <li>+ RFC2139 RADIUS Accounting</li> <li>+ RFC1492 TACACS</li> <li>+ RFC3176 sFlow</li> <li>+ RFC2598 DiffServ Expedited Forwarding</li> <li>+ RFC2460 IPv6</li> <li>+ RFC4861 IPv6 Neighbor Discovery (ND)</li> <li>+ RFC4862 IPv6 Stateless Address Autoconfiguration</li> <li>+ RFC1981 IPv6 Path MTU Discovery</li> </ul>

Standard Image	+ 802.1D/1w/1s Spanning Tree Protocol + 802.3ad Link Aggregation + IGMP/MLD Snooping + 802.1Q + Voice VLAN + 802.1p + ACL + SSH/SSL + Traffic Segmentation + PIM-SM/PIM-DM/PIM-SSM + Port/Host Based 802.1X + Identity-driven security policy assignment + SNMP, RMONv1/v2 + DHCP Auto-configuration + 802.1D/1w/1s Spanning Tree Protocol + 802.3ah	+ LBD (LoopBack Detection) + Port Mirroring + GVRP + Port/MAC-based VLAN + DHCP Server + RIPv1/v2/OSPFv2 + Time-based ACL/PoE + Asymmetric VLAN + DHCP Server Screening + BPDU Attack Protection + Port/Host Based WAC/MAC <sup>2</sup> + Microsoft NAP Support + LLDP / LLDP-MED + DHCP Relay + LBD (LoopBack Detection)
Enhanced Image	+ IPv6 Tunneling + BGP + RIPng(IPv6) + OSPFv3 + BGP+ + DVMRPv3	+ Cable Diagnostic + Connectivity Fault Management (CFM) + MPLS/VPLS + VRF + MPLS Lavel Management + LDP

### Warranty Information

Warranty	Lifetime <sup>1</sup>
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### Ordering Information

<i>Part Number</i>	<i>Description</i>
DGS-3620-28TC/SI	xStack 24-Port Layer 3 Switch with 4-Combo SFP, 4 10Gigabit SFP+, Standard Image
DGS-3620-28TC/EI	xStack 24-Port Layer 3 Switch with 4-Combo SFP, 4 10Gigabit SFP+, Enhanced Image
DGS-3620-28SC/SI	xStack 24-Port Layer 3 SFP Switch with 4-Combo 1Gigabit Ports, 4 10Gigabit SFP+, Standard Image
DGS-3620-28SC/EI	xStack 24-Port Layer 3 SFP Switch with 4-Combo 1Gigabit Ports, 4 10Gigabit SFP+, Enhanced Image
DGS-3620-28PC/SI	xStack 24-Port Layer 3 PoE+ Switch with 4 Combo SFP Ports, 4 10Gigabit SFP+, Standard Image
DGS-3620-28PC/EI	xStack 24-Port Layer 3 PoE+ Switch with 4 Combo SFP Ports, 4 10Gigabit SFP+, Enhanced Image
DGS-3620-52T/SI	xStack 48-Port Layer 3 Switch with 4 10Gigabit SFP+ Ports, Standard Image
DGS-3620-52T/EI	xStack 48-Port Layer 3 Switch with 4 10Gigabit SFP+ Ports, Enhanced Image
DGS-3620-52P/SI	xStack 24-Port Layer 3 PoE+ Switch with 4 10Gigabit SFP+, Standard Image
DGS-3620-52P/EI	xStack 24-Port Layer 3 PoE+ Switch with 4 10Gigabit SFP+, Enhanced Image
DPS-500	Redundant Power Supply Unit (140 Watt RPSU)
DPS-700	Redundant Power Supply Unit (589 Watt RPSU)
DEM-CB100S	SFP+ Direct Attach Stacking Cable,1M
DEM-CB300S	SFP+ Direct Attach Stacking Cable, 3M
DEM-431XT-DD	10GBase-SR Transceiver, DDM, 80/300M
DEM-432XT-DD	10GBase-LR Transceiver, DDM, 10K
DEM-435XT-DD	10GBase-LRM Transceiver, DDM, 220M

<sup>1</sup> Lifetime Warranty available only in the USA and Canada.

<sup>2</sup> Supported in Future Release

All references to speed are for comparison purposes only. Product specifications, size and shape are subject to change without notice, and actual product appearance may differ from that depicted herein.

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