

Product Highlights

Enterprise Ready Superior Performance Solution

Next-generation Gigabit networking technology capable of providing high performance bandwidth and scalability that exceed all expectations

High Reliability

Fault-tolerant topologies ensure rock-solid connectivity, and D-Link Green technology provides eco-friendly power-saving

Comprehensive Security Solution

Support for multiple user authentication methods as well as IP-MAC-Port Binding to help secure the network environment



DGS-6600 Series

Chassis-Based Switches

Designed for Enterprise LAN and MAN

- Deployable as an enterprise aggregation switch or metro aggregation switch
- Support IPv6, MPLS services¹

Superior Performance

- Switch fabric with up to 1.152 Tbps, 857 Mpps packet forwarding
- Distributed packet switching/routing
- Intelligent line cards with on-board L2/L3/L4 switching controller

Flexible Modular Design

- 4-Slot and 8-Slot Chassis
- Scalable expansion to 288 10/100/1000BASE-T, 288 PoE, 288 SFP, or 96 10-Gigabit ports¹
- Dual Control Modules / Multi Power Supplies

High Reliability

- Up to 8 redundant load-sharing power modules
- Hot-swappable line cards
- Replaceable fan modules
- 802.1D/1w/1s Spanning Tree, 802.1AX, 802.3ad link aggregation
- VRRP & ERPS support

Security

- L2/L3/L4 multi-layer access control
- External RADIUS authentication support
- SSH

The D-Link's DGS-6600 Chassis-Based Switch Series are intelligent and high-performance multi-layer LAN devices designed for Enterprise local area networks (LAN), campus, and metropolitan area networks (MAN). They are ideal for deployment in environments that require uninterrupted running of network applications and a high level of performance, security, and control.

Featuring a flexible modular architecture and industry standard compliance, these switches provide scalability and a high level of investment protection for businesses to deploy Gigabit and 10-Gigabit packet switching and routing for office networking and Ethernet-based Internet services to homes. The DGS-6600 Series is equipped with high-speed switch fabric, and advanced software functions, including complete IPv6 support. These switches provide the performance, high availability and future-proof architecture suitable for applications of today and of the future.

High Availability

The DGS-6608 provides 2 slots for control modules. Each control module is equipped with its own switch fabric and management agent, and can be used for redundant backup and sharing of network load and management tasks. The DGS-6604/8 provides up to 4/8 redundant load-sharing power supplies and a hot swappable fan module to create a very highly available chassis-based device suitable for mission-critical network applications.

The DGS-6600 Series offers end-to-end connectivity and granular application control with two chassis supporting a wide range of port modules. The DGS-6604 has 576 Gbps backplane capacity and comes in a 4-slot chassis form factor that allows for 1 control module and 3 user-selectable port modules. The DGS-6604 form factor allows up to 4 slots for 3+1 redundant power supplies as well as having a replaceable fan tray and modular dust filter. The DGS-6604 has 1.152 Tbps backplane capacity and comes in a 8-slot chassis form factor has 2 slots for dual control modules and 6 slots for user-selectable port modules. The DGS-6608 form factor has up to 8 slots for 4+4 redundant power supplies as well as having a replaceable fan tray and modular dust filter.

Deployable as Aggregation Switch

Using a common set of modules for 10/100/1000BASE-T ports, PoE support, SFP, and 10-Gigabit uplinks, IT personnel can fit a DGS-6600 Series switch with different port types and deploy it either as a core switch or an aggregation (i.e. distribution) switch which can provide high port density connections to workstations in an office environment, or to a subscriber's CPE in a densely populated Ethernet metro area network.

High Performance

To make use of this high-performance hardware, the DGS-6600 Series utilise a distribution switching method which has each line card (the port module that directly connects to the network nodes) intelligently determine the switch path for each data packet. The switches synchronise the switching and routing information between the control cards and the line cards to map out the fastest data transfer path. With each line card capable of performing L2/3/4 on-board packet switching without reliance on the control cards, the DGS-6600 Series switches can deliver very fast packet forwarding at almost zero-wait speed.

Enterprise-Wide Security

The DGS-6600 Series provides not only network access security but also protection against virus and worm attacks. Access security is provided through comprehensive policy-based ACL, port security, and IP-MAC-Port binding features. Attacks hidden behind control protocols are thwarted to prevent the switch's CPU from being overwhelmed with unnecessary tasks which can cause degradation to a network's performance. The DGS-6600 Series extends security to network management via such functions as SSH v2 and SNMP v3 with authentication and encryption of management traffic.

High Port Densities

Port densities can reach 144 Gigabit or 48 10-Gigabit ports per 4-slot chassis, or 288 Gigabit or 96 10-Gigabit ports¹ per 8-slot chassis. All port modules are hot-swappable, and can be used in either chassis type without the need to change hardware or software settings. By providing up to 96 10GE ports¹ with each port running at non-blocking rates, it can help enterprises migrate to a 10G backbone.

Traffic Management for Triple Play

The DGS-6600 Series implements a rich set of multilayer QoS/CoS features including flow-based bandwidth control and broadcast/multicast storm control to ensure that critical network services such as VoIP, video conferencing, IPTV, and IP surveillance are served with high priority. Bandwidth control guarantees bandwidth of these services when the network is busy. With L2 Multicast support, the DGS-6600 Series is capable of handling growing IPTV applications.



If the worst should happen to your network you need the very best support and fast. Downtime costs your business money. D-Link Assist maximises your uptime by solving technical problems quickly and effectively. Our highly trained technicians are on standby around the clock, ensuring that award-winning support is only a phone call away.

With a choice of three affordable service offerings covering all D-Link business products, you can select the package that suits you best:

D-Link Assist Gold - for comprehensive 24-hour support

D-Link Assist Gold is perfect for mission-critical environments where maximum uptime is a high priority. It guarantees four hour around-the-clock response. Cover applies 24/7 for every day of the year including holidays.

D-Link Assist Silver - for prompt same-day assistance

D-Link Assist Silver is designed for 'high availability' businesses that require rapid response within regular working hours. It provides a four hour response service Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist Bronze - for guaranteed response on the next business day

D-Link Assist Bronze is a highly cost-effective support solution for less critical environments. Response is guaranteed within eight business hours Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist can be purchased together with any D-Link business product. So whether you're buying switching, wireless, storage, security or IP Surveillance equipment from D-Link, your peace of mind is guaranteed. D-Link Assist also offers installation and configuration services to get your new hardware working quickly and correctly.

Complete IPv6 Support

The DGS-6600 Series provides complete support for IPv6 to accommodate the potential huge increase in number of users and geographical needs of the expanding Internet. It addresses the requirements of emerging applications such as Internet-enabled wireless devices, home and industrial appliances, Internet-connected transportation, integrated telephony services, sensor networks, distributed computing, and gaming. The use of globally unique IPv6 addresses simplifies the mechanisms used for reachability and end-to-end security for network devices that are crucial to the applications and services that are driving the demand for IP addresses.

Application Convergence

The DGS-6600 Series combines high-speed hardware with software functions like prioritised traffic QoS and multicast routing to deliver performance suitable for real-time applications such as Internet telephony, streaming multimedia, and TV. In addition, these switches offer Power over Ethernet (PoE) solutions to provide both electrical power and network connectivity to PoE-capable devices such as IP phones and wireless AP, and are ideal for large-scale enterprise edge deployment. An example of this application convergence would be VoIP for mobile users via wireless access points connected through DGS-6600 Series switches.

MPLS Functions¹

The DGS-6600 Series supports advanced Multiprotocol Label Switching (MPLS) functions that enable service providers to build next-generation intelligent networks and deliver a wide variety of advanced, value-added services over a single infrastructure. The DGS-6600 Series MPLS function allow service providers to provide point-to-point VPN service, VPWS (VLL) and point-to-multi-point VPN service, VPLS services to enterprise customers. This solution can be integrated seamlessly over any existing infrastructure, such as IP, Frame Relay, ATM, or Ethernet. Subscribers with differing access links can be aggregated on an MPLS edge without changing their current environments, as MPLS is independent of access technologies.

Green Technology

D-Link is striving to take the lead in developing innovative and power-saving technology that does not sacrifice operational performance or functionality. The DGS-6600 Series incorporates D-Link Green Technology, which includes a power saving mode, Smart Fan, and Time-based PoE. The power saving feature automatically powers down ports that have no link or link partner. The Smart Fan feature allows for the built-in fans to automatically turn on only if a specified temperature is exceeded, providing continuous, reliable and eco-friendly operation of the switch. Time-based PoE is able to turn PoE on/off per port by a pre-defined time profile to reduce PoE power consumption.

Technical Specifications		
Chassis	DGS-6604	DGS-6608
Chassis Slots	• 4	• 8
Fixed Slots (for Control Modules)	• 1	• 2
Open Slots (for Port Modules)	• 3	• 6
Max. Switching Capacity	• 576 Gbps	• 1.152 Tbps
Max. Packet Forwarding Rate	• 428.57 Mpps	• 857.14 Mpps
Maximum Port Density		
10/100/1000Base-T Ports	• 144	• 288
10/100/1000Base-T Ports with PoE	• 144	• 288
Gigabit SFP Slots	• 144	• 288
10-Gigabit SFP+ Slots	• 48	• 96

Physical		
Dimensions (W x D x H)	<ul style="list-style-type: none"> • 445 mm × 470 mm × 280 mm (6.3U) (17.51 in x 18.5 in x 11 in) 	<ul style="list-style-type: none"> • 445mm×470mm×500mm (11.25U) (17.51 in x 18.5 in x 19.68 in)
Operating Temperature	<ul style="list-style-type: none"> • 0° to 50°C (32 to 122°F) 	
Storage Temperature	<ul style="list-style-type: none"> • -40° to 70°C (-40 to 158°F) 	
Operating Humidity	<ul style="list-style-type: none"> • 10% to 90% RH 	
Storage Humidity	<ul style="list-style-type: none"> • 5% to 90% RH 	
Emission (EMI)	<ul style="list-style-type: none"> • FCC Class A <ul style="list-style-type: none"> • CE • C-Tick • VCCI • ICES-003 	
Safety	<ul style="list-style-type: none"> • cUL • CB 	
Software Features		
L2 Features	<ul style="list-style-type: none"> • MAC Address Table <ul style="list-style-type: none"> -32K per I/O module • Flow Control <ul style="list-style-type: none"> -802.3x Flow Control -HOL Blocking Prevention • Jumbo Frame up to 9,732 bytes • IGMP Snooping <ul style="list-style-type: none"> -IGMP v1/v2/v3 Snooping -Support 2K groups -IGMP Proxy² -Host-based IGMP Snooping Fast Leave² • 802.3ad Link Aggregation <ul style="list-style-type: none"> -Compliant with 802.1AX and 802.3ad -Max. 128 groups per device, 8 ports per group -Support cross-module trunk 	<ul style="list-style-type: none"> • Port Mirroring: <ul style="list-style-type: none"> -Support 3 mirroring groups -One-to-One, Many-to-One, -Port mirroring for Tx/Rx/Both -Flow-based and RSPAN • MLD Snooping <ul style="list-style-type: none"> -MLD v1/v2 Snooping -Support 2K groups -Host-based MLD snooping Fast Leave² • Loopback detection • L2 Protocol Tunneling²
L3 Features	<ul style="list-style-type: none"> • Max. 4K IP Interfaces • ARP Proxy • VRRP • IPv6 Tunneling <ul style="list-style-type: none"> -Manual -ISATAP -6to4 	<ul style="list-style-type: none"> • IPv6 Neighbor Discovery (ND) • IPv6 Phase 2 Ready • Gratuitous ARP² • Loopback interface
VLAN	<ul style="list-style-type: none"> • VLAN Group • Max. 4K VLAN • GVRP <ul style="list-style-type: none"> -Max. 256 dynamic VLANs • 802.1Q Tagged VLAN • Port-based VLAN • 802.1v Protocol VLAN • Super VLAN 	<ul style="list-style-type: none"> • Double VLAN (Q-in-Q) <ul style="list-style-type: none"> -Port-based Q-in-Q -Selective Q-in-Q • VLAN Translation • MAC-based VLAN • Subnet-based VLAN • VLAN Trunking
L3 Routing	<ul style="list-style-type: none"> • 12K hardware routing engines shared by IPv4/IPv6 • 8K hardware L3 forwarding entries shared by IPv4/IPv6 • 256 static routing entries for IPv4/IPv6 <ul style="list-style-type: none"> -Support for ECMP -Support for WCMP² • Policy-Based Routing • RIP v1/v2/ng 	<ul style="list-style-type: none"> • OSPF <ul style="list-style-type: none"> -Support OSPF v2/v3 -OSPF Passive Interface -Stub/NSSA Area -OSPF Equal Cost Route • BGP4 • BGP+²
L3 Multicasting	<ul style="list-style-type: none"> • Up to 4K hardware multicast groups • PIM-DM • PIM-DM v6² • PIM-SM 	<ul style="list-style-type: none"> • PIM-SM v6² • PIM Sparse-Dense Mode² • DVMRP v3

QoS	<ul style="list-style-type: none"> • IEEE 802.1p CoS • 8 hardware Queues per Port • Queue Handling <ul style="list-style-type: none"> -Strict Priority -Weighted Round Robin (WRR) -Deficit Round Robin (DRR) -Strict + WRR -WDRR • Support Following Actions for Flows <ul style="list-style-type: none"> -Remark 802.1p Priority Tag -Remark TOS/DSCP Tag -Bandwidth Control -Committed Information Rate (CIR), min. granularity 64 Kbps • Three Color Marker <ul style="list-style-type: none"> -trTCM -srTCM 	<ul style="list-style-type: none"> • Congestion Control <ul style="list-style-type: none"> -RED² • CoS Based on: <ul style="list-style-type: none"> -Switch Port -VLAN ID -802.1p Priority Queues -MAC Address -IPv4/v6 Address -DSCP -Protocol Type -IPv6 Traffic Class -IPv6 Flow Label -TCP/UDP Port -User-defined Packet Content² • Bandwidth Control • Port-based (Ingress/Egress, Min. Granularity 64Kbps) • Time-based QoS
ACL	<ul style="list-style-type: none"> • ACL Based on <ul style="list-style-type: none"> -802.1p Priority -VLAN ID -MAC Address -Ether Type -LLC -IPv4/v6 Address -DSCP -Protocol Type -TCP/UDP Port Number -IPv6 Traffic Class -IPv6 Flow Label 	<ul style="list-style-type: none"> • Ingress ACL • Egress ACL²
Security	<ul style="list-style-type: none"> • SSH v2 • Port Security up to 16 MAC addresses per port • Broadcast/Multicast/Unicast Storm Control • IP-MAC-Port binding 	<ul style="list-style-type: none"> • DoS Attack Prevention • ARP Spoofing Prevention² • D-Link Safeguard Engine
MPLS	<ul style="list-style-type: none"> • LDP • VPWS (VLL) 	<ul style="list-style-type: none"> • VPLS • MPLS/BGP L3 VPN²
AAA	<ul style="list-style-type: none"> • 802.1X <ul style="list-style-type: none"> -Port-based Access Control -MAC-based Access Control -Dynamic VLAN Assignment • Web-based Access Control (WAC)² <ul style="list-style-type: none"> -Port-based Access Control -Host-based Access Control -Dynamic VLAN Assignment 	<ul style="list-style-type: none"> • MAC-based Access Control (MAC)² <ul style="list-style-type: none"> -Port-based Access Control -Host-based Access Control -Dynamic VLAN Assignment • TACACS+ • RADIUS Authentication for Switch Access • Guest VLAN
Management	<ul style="list-style-type: none"> • Web-based GUI • Command Line Interface (CLI) • Telnet Server (Support IPv4/v6) • Telnet Client • TFTP Client • SNMP v1/v2c/v3 • SNMP over IPv6 • SNMP Traps • System Log • RMON v1 <ul style="list-style-type: none"> -Support 1,2,3,9 Groups • Flash File System • Multiple Images 	<ul style="list-style-type: none"> • Multiple Configurations • Debug Command • Up to 15 levels user account privilege • Trusted Host • Password Recovery • Microsoft[®] NLB Support² • DHCP Client • DHCP Relay <ul style="list-style-type: none"> -Option 82 • DHCP Server • SNTP • Ping (Support IPv4/v6) • Traceroute (Support IPv4/v6)
Green	<ul style="list-style-type: none"> • Power saving by Link Status 	<ul style="list-style-type: none"> • Power saving by Time-based PoE

MIB/IETF Standard	<ul style="list-style-type: none"> • DLINK-MSTP MIB • DLINK-TC MIB • Draft-IETF-IDMR-DVMRP MIB-11,DVMR PSTD MIB • IEEE Std 802.1X,IEEE8021-PAE MIB • IEEE Std 802.3ad,IEEE8023-LAG MIB • RFC791 IP MIB • RFC792 ICMPv4 MIB • RFC793 TCP MIB • RFC826 ARP MIB • RFC1212 Concise MIB Definitions • RFC1213 MIBII • RFC1215 MIB Traps Conversion • RFC1338, RFC1519 CIDR MIB • RFC1724 RIPv2 MIB • RFC1886 DNS IPv6 MIB • RFC1981 MTU Discovery IPv6 MIB • RFC2460 IPv6 MIB • RFC2461, RFC4861 ND IPv6 MIB • RFC2462, RFC4862 IPv6 Auto-configuration • RFC2463, RFC4443 ICMPv6 MIB • RFC2464 IPv6 over Ethernet MIB • RFC2474, RFC3168, • RFC2571 SNMP Framework MIB • RFC2572 SNMP Message Processing Dispatching MIB • RFC2573 SNMP Applications MIB • RFC2574 User-based Security Model for SNMP v3 MIB • RFC3260 DS Field Definition MIB • RFC2716, RFC3748 EAP MIB • RFC2737 Entity MIB 	<ul style="list-style-type: none"> • RFC2787 VRRP MIB • RFC2819 RMON MIB • RFC2863 IF MIB • RFC2893, RFC4213 IPv4/v6 Dual Stack Function MIB • RFC2934 PIM MIB for IPv4 • RFC3411 SNMP-FRAMEWORK MIB • RFC3412 SNMP-MPD MIB • RFC3413 SNMP-TARGET MIB • RFC3413 SNMP-NOTIFICATION MIB • RFC3414 SNMP-USER-BASED-SM MIB • RFC3415 SNMP-VIEW-BASED-ACM MIB • RFC3418 SNMP v2 MIB • RFC3513, RFC4291 IPv6 Addressing Architecture MIB • RFC3584 SNMP-COMMUNITY MIB • RFC3635 EtherLike MIB • RFC4133 ENTITY MIB • RFC4188 BRIDGE MIB • RFC4273 BGP4 MIB • RFC4292 IP-FORWARD MIB • RFC4293 IP MIB • RFC4363 P-BRIDGE MIB • RFC4363 Q-BRIDGE MIB • RFC4560 DISMAN-PING MIB • RFC4560 DISMAN-TRACEROUTE MIB • RFC4750 OSPF MIB • RFC5060 PIM-STD MIB • RFC5132 IPMCAST MIB • RFC5240 PIM-BSR MIB • RFC5519 MGMD-STD MIB
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Order Information

Part Number	Description
DGS-6604-SK	Starter Kit: DGS-6604 + DGS-6600-CM + DGS-6600-PWR
DGS-6608-SK	Starter Kit: DGS-6608 + DGS-6600-CM-II + DGS-6600-PWR

Order Information (CPU Engines)

DGS-6600-CM-II	Control Module for DGS-6600 Series
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Order Information (LAN Interface Modules)

DGS-6600-48T	48-port 10/100/1000M module for DGS-6600 Series
DGS-6600-48S-C	48-port SFP module for DGS-6600 Series
DGS-6600-48TS	24-port 10/100/1000M and 24-port SFP module for DGS-6600 Series
DGS-6600-48P	48-port 10/100/1000M module with PoE function for DGS-6600 Series
DGS-6600-16XS-D	16-port 10GE SFP+ Module with MPLS function DGS-6600 Series

Order Information (Power Supplies)

DGS-6600-PWR	850 W AC Power Module for DGS-6600 Series
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Order Information (Fan Tray)

DGS-6600-FAN	Replacement Fan Module for DGS-6604
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DGS-6600 Series Chassis-Based Switches

Order Information (Optional SFP Transceivers)	
DEM-211	SFP transceiver, 100BASE-FX standard, up to 2 km multi-mode fiber cable distance, 3.3 V operating voltage
DEM-210	SFP transceiver, 100BASE-FX standard, up to 15 km single-mode fiber Cable distance, 3.3V operating voltage
DEM-310GT	SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage
DEM-311GT	SFP transceiver, 1000BASE-SX standard, multi-mode fiber, max. distance 550m, 3.3 V operating voltage
DEM-314GT	SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 50km, 3.3 V operating voltage
Order Information (Optional SFP+ Transceivers)	
DEM-431XT	SFP+ transceiver, 10GBASE-SR standard, multi-mode fiber, max. distance 300 m, 3.3 V operating voltage
DEM-432XT	SFP+ transceiver, 10GBASE-LR standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage
DEM-432XT-DD	SFP+ transceiver, 10GBASE-LR standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage, DDM support
Order Information (Optional XFP Transceivers)	
DEM-421XT	XFP transceiver, 10GBASE-SR standard, multi-mode fiber, max. distance 300 m, 3.3 V operating voltage

¹ Requires DGS-6600-16XS-D

² Function available in a future firmware upgrade.



For more information: www.dlink.com

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