

## DGS-6600

### Chassis Based Switches



#### Product Highlights:

##### Designed for Enterprise LAN

- Deployable as an Enterprise Aggregation Switch
- Supports IPv6

##### Superior Performance

- Dual switch fabrics with up to 576 Gbps, 428.57 Mpps non-blocking packet forwarding
- Bottleneck-free distributed packet switching/routing
- Intelligent line cards with on-board L2/L3/L4 switching controllers

##### Flexible Modular Design

- 4-Slot chassis
- Scalable expansion to 192 10/100/1000BASE-T, 192 PoE, 192 SFP, or 24 10-Gigabit ports

##### High Resiliency

- 3+1 redundant backup power modules
- Hot-swappable line cards
- Replaceable fan module
- 802.1D/w/s spanning tree, 802.3ad link
- VRRP support

##### Quality of Service

- 802.1p priority queues/multi-layer CoS
- Committed information rate

##### Security

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

The D-Link's DGS-6600 Series chassis-based switches are intelligent and high-performance multi-layer LAN devices designed for Enterprise local area networks (LAN). 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 scalable expansion 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 home offices.

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 futureproof architecture suitable for applications of not just today, but those of the future.

##### Flexible Modular Design

The DGS-6600 Series is now available in a 4-slot chassis model, the DGS-6604. One open slot is reserved for a control module, and the other three slots can be fitted with user-selectable port modules. In addition to these open slots, there are four slots for redundant backup power supplies, and one slot for a replaceable fan module. This modular architecture allows modules to be gradually added to meet network growth, and modules can be easily swapped anytime to fit network requirement changes.

##### Deployable as an 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 as an aggregation (i.e. distribution) switch which can provide high port density connections to an Access Layer Switch in an office environment.

##### High Performance

The DGS-6604 4-slot switch provides a switch capacity of up to 576 Gbps and system performance of up to 428.57 Mpps. To make use of this high-performance hardware, these switches utilise a distribution switching method where each line card (the port module that directly connects to the network nodes) intelligently determines 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 relying on the control cards, the DGS-6600 Series switches can deliver very fast packet forwarding at almost zero-wait speed.

##### High Port Densities

Port densities can reach 144 Gigabit or 24 10-Gigabit ports per 4-slot chassis. All port modules are hot-swappable without the need to change any hardware or software settings. By providing up to 24 10GE ports with each port running at non-blocking rates, it can help enterprises migrate to a 10G backbone.

##### High Availability

The DGS-6604 provides 3+1 redundant backup power supplies (up to 3 active and 1 backup) and a hot swappable fan module to create a very highly available chassis-based device suitable for mission-critical network applications.

## Chassis Based Switches

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.

600.701 c104.432 600.701 l105.205 600.867 l105.151 601.089 105.061 601.301 104.943 601.496 c104.943 601.496 l10

# Technical Specifications

| Technical specifications |                                   |             |
|--------------------------|-----------------------------------|-------------|
| Hardware                 | Chassis Slots                     | 4           |
|                          | Fixed Slots (for Control Modules) | 1           |
|                          | Open Slots (for Port Modules)     | 3           |
|                          | Max. Switching Capacity           | 576 Gbps    |
|                          | Max. Packet Forwarding Rate       | 428.57M pps |
| Maximum Port Density     | 10/100/1000BASE-T Ports           | 144         |
|                          | 10/100/1000BASE-T Ports with PoE  | 144         |
|                          | SFP Slots                         | 144         |
|                          | 10-Gigabit Ethernet XFP Slots     | 24          |

| Module Support Matrix |                               | 10/100/1000 BASE-T | SFP | 10/100/1000 BASE-T/SFP COMBO | 10G XFP |
|-----------------------|-------------------------------|--------------------|-----|------------------------------|---------|
| CPU Engine            | DGS-6600-CM                   | –                  | –   | –                            | –       |
| Lan Interface Modules | DGS-6600-48T                  | 48                 | –   | –                            | –       |
|                       | DGS-6600-48S                  | –                  | 48  | –                            | –       |
|                       | DGS-6600-48TS                 | 24                 | 24  | –                            | –       |
|                       | DGS-6600-8XG                  | –                  | –   | –                            | 8       |
|                       | DGS-6600-48P                  | 48                 | 12  | –                            | –       |
|                       | DGS-6600-24SC2XG <sup>1</sup> | –                  | –   | 12                           | 2       |
| Power Suppliers       | DGS-6600-PWR                  | –                  | –   | –                            | –       |
| Fan Module            | DGS-6600-FAN                  | –                  | –   | –                            | –       |

<sup>1</sup> Available in future.

## Software Features

### L2 Features

- MAC Address Table
  - 32K per I/O module
- Flow Control
  - 802.3x Flow Control
  - HOL Blocking Prevention
- Jumbo Frame up to 9,732 Bytes
- IGMP Snooping
  - IGMP v1/v2/v3 Snooping
  - Support 1K Groups
  - IGMP Proxy
- Spanning Tree
  - 802.1D STP
  - 802.1w RSTP
  - 802.1s MSTP
- 802.3ad Link Aggregation
  - Max. 128 Trunk Groups per device, 8 ports per group
  - Support cross- module trunk
- Port Mirroring
  - One-to-One
  - Many-to-One
  - Port mirroring for Tx/Rx/Both
  - RSPAN<sup>2</sup>
- ERPS (Ethernet Ring Protection Switching)
- MLD Snooping<sup>2</sup>
  - MLD v1 Snooping
  - Supports 1K groups
  - Host-based MLD Snooping Fast Leave
- Loopback Detection<sup>2</sup>
- L2 Protocol Tunneling<sup>2</sup>

### VLAN

- VLAN Group
  - Max. 4K VLAN
- 802.1Q Tagged VLAN
- 802.1v Protocol VLAN
- Port-based VLAN
- Double VLAN (Q-in-Q)
  - Port-based Q-in-Q
  - Selective Q-in-Q<sup>2</sup>

### L3 Features

- Max 4K IP interface
- VRRP
- IPv6 Tunneling
  - Manual
  - ISATAP
  - 6to4
- IPv6 Ready Phase 2
- Proxy ARP<sup>2</sup>
- Gratuitous ARP<sup>2</sup>

### L3 Routing

- 12K hardware routing entries shared by IPv4/IPv6
- 8K hardware L3 forwarding entries shared by IPv4/IPv6
- 256 static routing entries
  - Support ECMP /WCMP<sup>2</sup>
- Policy-based Route<sup>2</sup>
- RIP
  - RIP v1/v2
  - RIPng (IPv6)
- OSPF
  - OSPF v2
  - OSPF v3 (IPv6)
  - OSPF Passive Interface
  - Stub/NSSA Area



## Optional Products

### Starter Combination Kits

#### DGS-6604-SK

- 4-slot chassis
- 1x 850W Power Supply
- 1x Fan module
- 1x Control module

#### DGS-6604-SK-48T

- 4-slot chassis
- 1x 850W Power Supply
- 1x Fan module
- 1x Control module
- 1x 48-port Gigabit module

#### DGS-6604-SK-48P

- 4-slot chassis
- 1x 850W Power Supply
- 1x Fan module
- 1x Control module
- 1x 48-port Gigabit PoE module

### Optional 10-Gigabit XFP Transceivers

#### DEM-421XT

XFP transceiver, 10GBASE-SR standard, multi-mode fibre, max. distance 300 m, 3.3/5 V

#### DEM-422XT

XFP transceiver, 10GBASE-LR standard, single-mode fibre, max. distance 10 km, 3.3/5 V

#### DEM-423XT

XFP transceiver, 10GBASE-ER standard, single-mode fibre, max. distance 40 km, 3.3/5 V

### Line Cards and Modules

#### 10 GbE Modules

DGS-6600-8XG 8 ports 10GE XFP module

#### Gigabit Modules

DGS-6600-48T 48 ports 10/100/ 1000Base-T module

DGS-6600-48S 48 ports SFP module

DGS-6600-48TS 24 ports 10/100/ 1000Base-T and 24 ports SFP module

#### PoE Modules

DGS-6600-48P 48 ports 10/100/1000 Base-T PoE module

#### CPU Modules

DGS-6600-CM Control module

#### Power Supply Modules

DGS-6600-PWR 850W Redundant AC power supply

#### Ventilation

DGS-6600-FAN Smart fan module (8 pcs)

### Optional SFP Transceivers

#### DEM-310GT

SFP transceiver, 1000BASE-LX standard, single-mode fibre, max. distance 10 km, 3.3 V

#### DEM-311GT

SFP transceiver, 1000BASE-SX standard, multi-mode fibre, max. distance 550 m, 3.3 V

#### DEM-312GT2

2SFP transceiver 1000BASE-SX standard, multi-mode fibre, max. distance 2 km, 3.3 V

#### DEM-314GT

SFP transceiver, 1000BASE-LX standard, single-mode fibre, max. distance 50 km, 3.3 V

#### DEM-314GT

SFP transceiver, 1000BASE-LX standard, single-mode fibre, max. distance 50 km, 3.3 V

#### DEM-315GT

SFP transceiver, 1000BASE-LX standard, single-mode fibre, max. distance 80 km, 3.3 V

#### DEM-330T

WDM SFP transceiver, 1000BASE-LX standard, singlemode fibre, max. distance 10 km, 3.3 V, Tx wavelength 1550 nm, Rx wavelength 1310 nm

#### DEM-330R

SWDM SFP transceiver, 1000BASE-LX standard, singlemode fibre, max. distance 10 km, 3.3 V, Tx wavelength 1310 nm, Rx wavelength 1550 nm

#### DEM-331T

WDM SFP transceiver, 1000BASE-LX standard, singlemode fibre, max. distance 40 km, 3.3 V, Tx wavelength 1550 nm, Rx wavelength 1310 nm

#### DEM-331T

WDM SFP transceiver, 1000BASE-LX standard, singlemode fibre, max. distance 40 km, 3.3 V, Tx wavelength 1550 nm, Rx wavelength 1310 nm

#### DEM-211

SFP transceiver, 100BASE-FX multi-mode fibre, max. distance 2 km, 3.3 V

#### DEM-210

SFP transceiver, 100BASE-FX single-mode fibre, max. distance 15 km, 3.3 V



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