

16/24/48-Port Gigabit Switch

Web Smart Switch

- Choices of 16, 24, 48 Copper Gigabit Ports
- 2 or 4 Combo SFP Slots
- Versatile Management Through "SmartConsole" or Web-Based GUI
- VLAN Traffic Segmentation & Priority Queue QoS
- Network Access Security
- Built-in MIB for SNMP Management

FEATURES

- Choices of 16, 24 & 48 10/100/1000BASE-T Gigabit Ports
- 2 or 4 Combo SFP Slots
- Up to 10,240 Jumbo Frame Size
- Up to 6 Port Trunks for Server Connection/Switch Cascading
- 802.1Q VLAN Tagging for Traffic Segmentation
- Up to 4 802.1p Priority Queues for QoS
- Access Security With 802.1x Port-Based Authentication
- Broadcast Storm Control for Bandwidth Management
- Safeguard Engine Feature for Guaranteed Switch Performance
- Versatile Management Through SmartConsole or Web-Based GUI
- SNMP Management Support
- 19-Inch Standard Rack-Mount Size

* The specifications described herein are for DGS-1216T and DGS-1224T version D1, and DGS-1248T version B1.

Smart[™]

D-Link's next generation Web Smart Gigabit switch series blends plug-and-play simplicity with exceptional performance and reliability for small and medium-sized business (SMB) networking. With 3 models to choose from, this series provides flexible choices for different network size requirements. All models are housed in a new style rack-mount metal case with easy-to-view front-panel diagnostic LEDs, and provide advance features including up to 4 combo SFP fiber connections, network security, traffic segmentation, QoS and versatile management.

A Switch for Each Business Size. Choices of 16, 24 and 48 copper Gigabit ports are available for selection. Supporting the Cat. 5 copper twisted-pair cables with auto-detection of MDI/MDIX, these switches bring inexpensive and easy Gigabit connection to the desktops. Each switch provides 2 or 4 combo SFP slots for flexible connection to a fiber backbone or servers.

Extensive Layer 2 Features. Implemented as complete L2 devices, these switches include functions such as Jumbo frame support, IGMP snooping, port mirroring, Spanning Tree, port trunks and 802.3x Flow Control to enhance performance and network resiliency.

Traffic Segmentation and QoS. The switches support 802.1Q VLAN Tagging for traffic segmentation by groups to enhance network security and performance. They also support 802.1p Priority Queues, enabling users to run bandwidth-sensitive applications such as streaming multimedia and VoIP on the network. These functions allow the switches to work seamlessly with managed VLAN and 802.1p traffic on the network.

Network Security. The switches provide MAC address filters screen access to the network. They support 802.1x port-based authentication, allowing the network to be configured with external RADIUS servers. Additional features like D-Link Safeguard Engine protect the switches against traffic flooding caused by virus/worm outbreaks.

Versatile Management. Switch configuration and management is through the SmartConsole Utility or a web-based GUI. SmartConsole is an easy way to access the switch from a local PC; users do not have to type in any IP address or subnet, and all switches connected on the network are displayed on the screen for instant access. The web-based GUI allows switch access from any location on the network or from a remote site, using a web-browser. It allows extensive switch configuration setting, which can be backed up for duplication in other switches.

In addition, users can also use the built-in MIB to poll the switches for information about their status and send traps of abnormal events. MIB support allows users to integrate the switches with other third-party devices for management in an SNMP environment.

DGS-1224T
24-Port Switch

DGS-1216T
16-Port Switch

DGS-1248T
48-Port Switch



Technical Specifications

General

Port Standards & Functions

- IEEE 802.3 10BASE-T Ethernet (twisted-pair copper)
- IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper)
- IEEE 802.3ab 1000BASE-T Gigabit Ethernet (twisted-pair copper)
- IEEE 802.3z Gigabit Ethernet (fiber) ANSI/IEEE 802.3
- NWay auto-negotiation
- IEEE 802.3x Flow Control
- Port mirroring

Number of Ports

- DGS-1216T: 16 10/100/1000BASE-T ports, 2 combo SFP slots
- DGS-1224: 24 10/100/1000BASE-T ports, 2 combo SFP slots
- DGS-1248T: 48 10/100/1000BASE-T ports, 4 combo SFP slots

* Use of the SFP will disable their corresponding 10/100/1000BASE-T connections

Protocol

CSMA/CD

Data Transfer Rates

- Ethernet:
 - 10Mbps (half duplex)
 - 20Mbps (full duplex)
- Fast Ethernet:
 - 100Mbps (half duplex)
 - 200Mbps (full duplex)
- Gigabit Ethernet:
 - 2000Mbps (full duplex)

Topology

Star

Network Cables

- UTP Cat. 5, Cat. 5e (100 m max.)
- EIA/TIA-568 100-ohm STP (100 m max.)

Full/half Duplex

- Full/half duplex for 10/100Mbps speeds
- Full duplex for Gigabit speed

Media Interface Exchange

Auto MDI/MDIX adjustment for all twisted-pair ports

LED Indicators

- DGS-1216T, DGS-1224T
 - Per device: Power/CPU
 - Per 10/100/1000BASE-T port: Link/Act, 100Mbps, 1000Mbps
 - Per SFP slot: Link/Act, 1000Mbps
- DGS-1248T:
 - Per device: Power/CPU
 - Per 10/100/1000BASE-T port: 10/100Mbps, 1000Mbps
 - Per SFP slot: Link/Act

Software

L2 Features

- IGMP snooping: supports 64 multicast groups
- Default flooding for non-joined multicast traffic
- 802.1D Spanning Tree
- Port trunk (Link Aggregation): up to 6 groups per device, up to 8 ports per group

VLAN

- 802.1Q VLAN standard (VLAN Tagging)
- Up to 256 static VLAN groups

QoS (Quality of Service)

- 802.1p Priority Queues standard
- Up to 4 queues per port
- Supports WRR mode in queue handling

Security

- 802.1x port-based access control
- Broadcast Storm Control: threshold of 8K, 16K, 32K, 64K, 128K, 512K, 1024K, 2048K, 4096K bytes per second
- D-Link Safeguard Engine to protect CPU from broadcast / multicast / unicast flooding

Management

- Web-based GUI or SmartConsole Utility
- SNMP support
- DHCP client
- Trap setting for destination IP, system events, fiber port events, twisted-pair port events
- Port access control
- Web-based configuration backup/restoration
- Web-based firmware backup/upload
- Firmware upgrade using SmartConsole Utility
- Reboot

MIB

- RFC 1213 MIB-II
- D-Link Enterprise Private MIB

Performance

Switch Capacity

- DGS-1216T: 32Gbps
- DGS-1224T: 48Gbps
- DGS-1248T: 96Gbps

Transmission Method

Store-and-forward

MAC Address Table

8K entries per device

MAC Address Update

- Up to 256 static MAC entries
- Enable/disable auto-learning of MAC addresses

Maximum 64 bytes packet forwarding rate

- DGS-1216T: 35.7 Mbps
- DGS-1224T: 35.7 Mbps
- DGS-1248T: 71.4 Mbps

RAM Buffer

- DGS-1216T: 512KBytes per device
- DGS-1224T: 512KBytes per device
- DGS-1248T: 1MByte per device

Jumbo Frame

- DGS-1216T, DGS-1224T: 10,240bytes
- DGS-1248T: 9,216 bytes

Physical & Environmental

AC Input

100 to 240 VAC 50/60Hz internal universal power supply

Operating Temperature

0° to 40° C

Storage Temperature

-10° to 70° C

Operating Humidity

10% to 90% non-condensing

Storage Humidity

5% to 90% non-condensing

Dimensions

- DGS-1216T: 440 mm x 210 mm x 44mm
- DGS-1224T: 440 mm x 210 mm x 44mm
- DGS-1248T: 441 (W) x 309 (D) x 44 (H) mm
- 19-inch standard rack mounting width, 1U height

Weigh

- DGS-1216T: 2.832 kg
- DGS-1224T: 2.993 kg
- DGS-1248T: 4.4 kg

Emission (EMI)

- FCC Class A
- CE Class A

MTBF

- DGS-1216T: 157,699 hrs
- DGS-1224T: 155,456 hrs
- DGS-1248T: 156,505 hrs

Safety

CUL



Optional SFP Transceivers

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

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