D-Link®

DGS-1216T

16-Port Copper Gigabit Smart Switch

With 2 Combo SFP (Mini GBIC)

The DGS-1216T copper Gigabit Smart Switch presents a cost-effective solution for the small and medium business to implement Gigabit Ethernet packet switching with easy fine-tuning of network performance and security. This switch comes with 16 10/100/1000BASE-T copper Gigabit ports and 2 combo SFP (Mini GBIC) ports for flexible fiber Gigabit connection. Port trunks are provided for server deployment and network backbone attachment, while functions important for bandwidth-intensive applications such as Priority Queues and VLANs are supported to enable you to implement Quality of Service (QoS) and security without having to go through complex network management usually found in other managed switches.

16 Copper Gigabit Ports

16 Gigabit ports provide an inexpensive alternative solution to fiber-optic. Using your existing low-cost Cat. 5 copper twisted-pair wires as the transmission media, these ports allow you to instantly upgrade your servers to Gigabit capability without requiring you to install new, expensive fiber cables. All ports support 10/100/1000Mbps network speed auto-sensing, full/half duplex auto-negotiation and auto MDI/MDIX plug-and-play.

2 Combo SFP Slots for Flexible Fiber Connection

2 combo SFP (Mini GBIC) slots are provided for flexible fiber connection. You can select to install optional transceiver modules in these slots for short, medium or long-distance fiber backbone attachment. Use of the SFP will disable their corresponding built-in 10/100/1000BASE-T connections.

Port Trunks for Aggregated Bandwidths

Ports can be combined together to create multi-link load-sharing aggregated bandwidths to a server or a network backbone. To expand the network, you can also make use of

the port trunks to eliminate bottlenecks between the cascaded switches. The switch allows you to combine between 2 and 4 ports per trunk to create multiple port trunks.

VLANs for Enhanced Security & Performance

The switch support VLANs to let you improve security and bandwidth utilization by limiting the broadcast domains and confining intra-group traffic within their segments. To segment up the network, VLAN-supported workstations and servers that are connected to the switch can be grouped into different Virtual LANs (VLANs).

Quality of Service Support

The switch supports Layer 2 802.1p Priority Queue control to prioritize network packets. Classification of users' data priorities can be based on a data packet Priority Queue. This QoS function support allows you to run bandwidth-intensive and delay-sensitive applications and to attach video servers to the switch for video conference.

Key Features

- *16 10/100/1000BASE-T ports for copper Gigabit connection*
- *2 combo SFP (Mini GBIC) for flexible fiber Gigabit connection*
- *Auto MDI/MDIX cross over for all twisted-pair ports*
- *802.3x Flow Control for protection against data loss*
- *Port trunks for server/network backbone attachments*
- *Port-based VLAN support to enhance security/network performance*
- *802.1p Priority Queues, port-based QoS*
- *Easy configuration through web-based management*
- *Standard rack-mount size*

DGS-1216T
Technical Specifications

General

Standards
- 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

Number of Ports
- 16 10/100/1000BASE-T ports
- 2 combo SFP (Mini GBIC) *

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

Mini GBIC (SFP) Support
- IEEE 802.3z 1000BASE-LX (DEM-310GT transceiver)
- IEEE 802.3z 1000BASE-SX (DEM-311GT transceiver)
- IEEE 802.3z 1000BASE-LH (DEM-314GT transceiver)
- IEEE 802.3z 1000BASE-ZX (DEM-315GT transceiver)

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
- Per port: Link/Act, Speed
- Per device: Power/CPU

Software

VLAN
- Port-based VLAN
- Maximum number of VLAN: 16 per device

Quality of Service (QoS)
- 802.1p Priority Queues
- Maximum number of queues: 2
- Port-based VLAN

Port Trunks
- 2 or 4 ports per trunk
- 2 port trunks per device

Management & Configuration
- Web-based configuration
- Windows-based utility
- Configuration reset through software or hardware (reset button)

Performance

Transmission Method
Store-and-forward

MAC Address Table
4K entries per device

MAC Address Learning
Automatic update

Packet Filtering/Forwarding Rates (half duplex)
Maximum 1,488,095 pps per port

RAM Buffer
272KB per device

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
440 (W) x 210 (D) x 44 (H) mm (device only)
19-inch standard rack mounting size

Weight
2.832 kg (device only)

Emission (EMI)
- FCC Class A
- CE Class A

Safety
CUL

Ordering Information

Gigabit Smart Switch

DGS-1216T	16 10/100/1000BASE-T ports, 2 combo SFP (Mini GBIC)

Optional SFP Transceiver

DEM-310GT	SFP transceiver for 1000BASE-LX, single-mode fiber, max. distance 10km, 3.3V
DEM-311GT	SFP transceiver for 1000BASE-SX, multi-mode fiber, max. distance 550m, 3.3V
DEM-314GT	SFP transceiver for 1000BASE-LHX, single-mode fiber, max. distance 35km, 3.3V
DEM-315GT	SFP transceiver for 1000BASE-ZX, single-mode fiber, max. Distance 80km, 3.3V

D-Link®

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