

### Flexible Choices

- 8-Port 10/100/1000 Mbps with 4 Combo Copper/SFP or 8-Port SFP with 4 Combo Copper/SFP
- Front panel accessibility:
  - RS-232 console port
  - Grounding
  - RJ-45 OOB management port
  - RJ-45 Alarm port
  - Modular AC/DC power supply unit
  - Modular Fan
  - Modular Dust Filter

### Quality of Service

- 802.1p Priority Queues/Multi-Layer CoS
- IP Multicast Support for Bandwidth-Intensive Applications
- 8 Hardware Queues

### Security

- L2/L3/L4 Multi-Layer Access Control
- External RADIUS/TACACS+ Authentication Support
- SSH/SSL Support
- 802.1X Guest VLAN
- Web-Based Access Control (WAC)
- MAC-Based Access Control (MAC)
- D-Link Safeguard Engine
- Microsoft® NAP Support

### Traffic Monitoring/Bandwidth

- Traffic Segmentation
- Granular Bandwidth Control Down to 64 Kbps
- Granular Broadcast Storm Control Down to 1 pps
- 802.3ad Link Aggregation
- RMON Support
- Port Mirroring

### Configuration/Management

- Web-Based
- Command Line Interface (CLI)
- SNMP v1, v2c, v3
- D-Link Single IP Management (SIM) v.1.6
- Telnet Server/Client
- Dual Images/Configurations

## L2 Gigabit Metro Ethernet Switch



D-Link's DGS-3700 series Metro Switches are designed and purpose-built for Metro Ethernet services for Telecom/Service Providers. Its design is based on field proven experience learned from multiple Ethernet deployment in Telecoms/Carriers. It supports a wide variety of technologies including Ethernet, OAM (Operations, Administration and Maintenance), Double VLAN (Q-in-Q), QoS and Triple play services demanded by Carrier Ethernet networks.

### Product Overview

D-Link's DGS-3700 series is D-Link Metro switch family optimized for the Ethernet-to-the-Home (ETTH) and Ethernet-to-the-Business (ETTb) services. It comes ready with Service Provider-Friendly hardware, robust software & security features, OAM manageability functions and Triple-Play Services.

D-Link's DGS-3700 series comes with:

- D-Link DGS-3700-12 with 8-Port 10/100/1000Mbps + 4 Combo Copper/SFP L2 Management Switch
- D-Link DGS-3700-12G 8-Port SFP + 4 Combo Copper/SFP L2 Management Switch

The SFP Gigabit ports support a wide variety of SFP transceivers. They include 100BASE-FX, 1000BASE-LX, 1000BASE-SX, 1000BASE-SXM, 1000BASE-LHX, 1000BASE-ZX and Wavelength-Division Multiplexing (WDM) SFP transceivers.

### Service Provider Friendly Hardware

D-Link's DGS-3700 series is designed to be deployed in compact and outdoor Telecom/Carriers cabinet. It has a compact form factor of 210 mm in depth in a 1U rack enclosure with operating temperature of up to 65°C. Furthermore, to simplify field installation, troubleshooting and maintenance, it has all the access connections located on the front panel.

These include:

- 10/100/1000BASE-T Ports or SFP Slots
- Modular AC/DC Power Supply
- Modular Fan
- Modular Dust Filter
- RS-232 console port
- RJ-45 OOB management port
- RJ-45 Alarm port
- Grounding

### Robust Software and Security

D-Link DGS-3700 series provides extensive VLAN support including Double VLAN (Q-in-Q), Layer 2 Protocol Tunneling (L2PT), GARP/GVRP and 802.1Q to enhance network security and performance. Bandwidth Control can be flexibly set for each port using pre-defined thresholds to assure a committed level of service for end users. For advanced applications, per-flow bandwidth control allows easy fine-tuning of service types based on specific IP addresses or protocols. Moreover, it has a robust set of multi-layer (L2, L3, L4) QoS/CoS features optimized for Triple-Play Services like Voice over IP (VoIP), Media-on-Demand (MOD), Internet data access and video conferencing. Priority queues for 802.1p/TOS/DiffServ are supported, with classification and marking based on MAC SA/DA, IP SA/DA, and/or TCP/UDP port numbers.

D-Link DGS-3700 series provides a complete set of security features, which include IP-MAC-Port Binding (IMPb) with DHCP Snooping, L2/L3/L4 multi-layer Access Control Lists and 802.1X user authentication via TACACS+ and RADIUS servers. In addition, it also offers abnormal traffic suppression capabilities to enhance network performance and security. To prevent malicious flooding traffic caused by worm/virus infections, the DGS-3700 series' built-in Safeguard Engine enforces its reliability, serviceability and availability.

### Product Overview

To uphold enterprise customers' SLA, service providers must reduce the Mean Time to Repair (MTTR) and increase service availability. Ethernet OAM features address these challenges and enable service providers to offer carrier-grade services. D-Link DGS-3700 series supports industry-standard OAM tools including IEEE 802.1ag Connectivity Fault Management and IEEE802.3ah Ethernet in the First Mile. IEEE 802.1ag protocol provides tools to monitor and troubleshoot end-to-end Ethernet networks, allowing service providers to check connectivity, isolate network issues, and identify customers affected by network issues. IEEE 802.3ah Ethernet in the First Mile protocol provides link-layer OAM discovery, local and remote loopback diagnostics on the link between the customers' equipment and the service provider network.

### Technical Specifications

#### DGS-3700-12

#### DGS-3700-12G



Interface	10/100/1000Base-T Ports	8	-
	SFP Slots	-	8
	Combo 10/100/1000BASE-T /SFP Ports		4
	RS-232 Console Port		1
	RJ-45 OOB Management Port		1
	RJ-45 Alarm Port		1
Modular Components	Dust Filter		1
	Fan		1
	Power supply unit (AC & DC)		1
Performance	Switch Fabric		24 Gbps
	Packet Performance Rate		17.86 Mbps
	Packet Buffer		1 MB
Power	Power Supply Modular	AC: 100~240 VAC, 50/60Hz DC: 36~75VDC @ 3A Max	
	Power Consumption (Max)	AC: 46.2W DC: 38.9W	AC: 42.1W DC: 30.3W
Physical/ Environmental	Dimensions	441x210x44 mm (19-Inch Rack-Mount Width, 1U Height)	
	Weight	3.4 kg	
	Operating Temperature	0° to 65°C	
	Storage Temperature	-40° to 70°C	
	Operating Humidity	10% to 90% RH	
	Storage Humidity	5% to 90% RH	
	EMI	FCC Class A, CE, C-Tick, VCCI	
	Safety	cUL, CB	
	Acoustic	~33°C: < 40.9dB 33~50°C: < 45.0dB 50°C~: < 61.8dB	~33°C: < 41.5dB 33~50°C: < 45.6dB 50°C~: < 60.1dB
	MTBF	295,863 hours	298,611 hours
	Certifications	MEF9, 14, EPL, EVPL, ELAN	



## L2 Gigabit Metro Ethernet Switch

### Software Features

- L2 Features**
  - MAC Address Table: 16k
  - Flow Control:
    - 802.3x Flow Control
    - HOL Blocking Prevention
  - Jumbo Frame up to 13,312 Bytes
  - Spanning Tree:
    - 802.1D STP
    - 802.1w RSTP
    - 802.1s MSTP
    - BPDU Filtering
    - Root Restriction
  - Loopback Detection
  - ERPS (Ethernet Ring Protection Switching)
  - 802.3ad Link Aggregation
    - Max. 6 groups per device / 8 Gigabit ports per group
  - Port Mirroring:
    - One-to-One
    - Many-to-One
    - Flow-based Mirroring
    - RSPAN mirroring
  - L2 Protocol Tunneling
- L2 Multicasting**
  - IGMP Snooping:
    - IGMP v1/v2/v3 Snooping
    - Support 1K IGMP Groups
    - Port/host-based IGMP Snooping Fast Leave
    - Report Suppression
  - IGMP/MLD Proxy Reporting
  - IGMP/MLD Filtering
    - Up to 60 IGMP filtering profiles, 128 ranges per profile
  - MLD Snooping:
    - MLD v1 Snooping
    - MLD v2 Snooping
    - Support 1K MLD snooping Groups
    - MLD Snooping Fast Leave
- VLAN**
  - VLAN Group:
    - Max. 4k VLAN Groups
  - GVRP
    - Max. 2k Dynamic VLAN Groups
  - 802.1Q Tagged VLAN
  - Port-based VLAN
  - 802.1v Protocol VLAN
  - Double VLAN (Q-in-Q):
    - Port-Based Q-in-Q
    - Selective Q-in-Q
  - VLAN translation for single/double tagged packets
  - Voice VLAN
- L3 Features**
  - MAC-Based VLAN
  - Subnet-based VLAN
  - ISM VLAN
- L3 Routing**
  - Max. 32 IP Interfaces
  - IPv6 Neighbor Discover (ND)
  - Support up to 32 static inter-VLAN routing entries
- QoS**
  - 802.1p
  - DSCP
  - 8 queues
  - Queue Handling
    - Strict Priority
    - Weighted Round Robin (WRR)
    - Strict + WRR
  - CoS Based on:
    - 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 Content
  - Support following Actions for Flows
    - Remark 802.1p Priority Tag
    - Remark TOS/DSCP Tag
    - Bandwidth Control
    - Flow Statistics
    - Committed Information Rate(CIR), min. granularity 64Kbps
  - Three Color Marker
    - trTCM
    - srTCM
  - Congestion Control:
    - SRED
  - Bandwidth Control:
    - Port Based (Ingress/Egress, Min. Granularity 64 Kbps)
    - Flow Based(Ingress/Egress, Min. Granularity 64 Kbps)
- ACL (Access Control List)**
  - Up to 1,500 access rules
  - ACL Based on:
    - 802.1p Priority
    - VLAN ID
    - MAC Address
    - Ether Type
  - IPv4/v6 Address
  - DSCP
  - Protocol Type
  - TCP/UDP Port Number
  - IPv6 Traffic Class
  - IPv6 Flow Label
  - User Defined Packet Content
  - ACL Statistic
  - Time Based ACL
  - CPU Interface Filtering
- Security**
  - SSH v2
  - SSL v3
  - Port Security up to 128 MAC address per port/VLAN
  - Broadcast/Multicast/Unicast Storm Control
  - Traffic Segmentation
  - IP-MAC-Port Binding:
    - ARP Packet Inspection Device
    - IP Packet Inspection
    - DHCP Snooping
    - IPv6 ND Snooping
    - Support up to 500 Address Binding Entries per Device
  - D-Link Safeguard Engine
  - NetBIOS/NetBEUI Filtering
  - DHCP Server Screening
  - DHCP Client Filtering
  - ARP Spoofing Prevention
  - BPDU Attack Protection
- AAA**
  - 802.1X:
    - Port-Based Access Control
    - Host-Based Access Control
    - Dynamic VLAN Assignment
  - Web-Based Access Control (WAC):
    - Port-Based Access Control
    - Host-Based Access Control
    - Dynamic VLAN Assignment
  - MAC-Based Access Control (MAC):
    - Port-Based Access Control
    - Host-Based Access Control
    - Dynamic VLAN Assignment
  - Guest VLAN
  - Microsoft® NAP
    - Supports 802.1X NAP
  - RADIUS Accounting
  - RADIUS and TACACS+ authentication for switch access
  - 3 Level User Account
  - Identity-driven ACL
  - Identity-drive QoS
- Operation, Administration & Management (OAM)**
  - Loopback Diagnostics
  - Cable Diagnostics
  - 802.3ah Ethernet Link OAM
  - 802.3ah D-Link Extension: D-Link Unidirectional Link Detection (DULD)
  - 802.1ag Connectivity Fault Management (CFM)
  - ITU-T Y.1731
- Management**
  - Web-Based GUI (Support IPv4/v6)
  - Command Line Interface (CLI)
  - Telnet Server (Support IPv4/v6)
  - Telnet Client (Support IPv4/v6)
  - TFTP Client (Support IPv4/v6)
  - XModem
  - ZModem
  - SNMP v1/v2c/v3
    - SNMP over IPv6
  - SNMP Traps
  - System Log
  - RMON v1
    - Support 1,2,3,9 Groups
  - RMON v2
    - Support ProbeConfig Group
  - sFlow
  - LLDP
  - LLDP-MED
  - BootP/DHCP Client
  - DHCP Auto-Configuration
  - DHCP Relay
    - DHCP Relay Option 60
    - DHCP Relay Option 61
    - DHCP Relay Option 82
  - DHCP Server
  - Dual Image
  - Dual Configuration
  - CPU Monitoring
  - DNS Relay
  - Debug Command
  - SNMP
  - Password Recovery
  - ICMPv6
  - Trusted Host
- D-Link Green**
  - Comply with RoHS 6
  - Power Saving Mode
    - Link Down Status

### MIB

- RFC1065, 1066, 1155, 1156, 2578 MIB Structure
- RFC 1212 MIB Definition
- RFC 1213 MIBII
- RFC 1493 Bridge MIB
- RFC1157, 2571 ~ 2576 SNMP MIB
- RFC1442, 1901~08 , 2578 SNMPv2 MIB
- RFC 1757, 2819 RMON MIB
- RFC 2021 RMONv2 MIB
- RFC1398, 1643, 1650, 2358, 2665 Ether-like MIB
- RFC2668, 4836 802.3 MAU MIB
- RFC 2674, 4363 Q-Bridge/P-Bridge MIB
- RFC 2233, 2863 IF MIB
- RFC 2618 RADIUS Authentication Client MIB
- IGMPv3 MIB
- RFC 4022 MIB for TCP
- RFC 4113 MIB for UDP
- RFC 3298 MIB for Diffserv
- RFC 2620 RADIUS Accounting Client MIB
- RFC2925 Ping MIB
- RFC2925 Traceroute MIB
- Running Configuration MIB
- TFTP Upload/Download MIB
- RFC 2465 IPv6 MIB
- RFC 2466 ICMPv6 MIB
- RFC 4292 IP FDB MIB
- RFC 4293 IPv6 SNMP Mgmt Interface MIB
- D-Link Private MIB

### Standard Compliance

- RFC 768 UDP
- RFC 791 IP
- RFC 792 ICMPv4
- RFC 2463 4443 ICMPv6
- RFC 4884 Extended ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 1321, 2284, 2865, 2716, 3580, 3748 Extensible Authentication Protocol (EAP)
- RFC2571 SNMP Framework
- RFC2572 SNMP Message Processing and Dispatching
- RFC2573 SNMP Applications
- RFC2574 User-based Security Model for SNMPv3
- RFC1981 Path MTU Discovery for IPv6
- RFC2460 IPv6
- RFC2461, 4861 IPv6 ND
- RFC2462, 4862 IPv6 Stateless Address Auto-configuration
- RFC2464 IPv6 over Ethernet and Definition
- RFC3513, 4291 IPv6 Addressing Architecture
- RFC2893, 4213 IPv4/IPv6 Dual Stack

## Optional Products

### Optional Management Software

- |         |   |
|---------|---|
| DV-600S | D-View 6.0 Network Management Software Standard Edition     |
| DV-600P | D-View 6.0 Network Management Software Professional Edition |
| DV-601* | E2ES Console Plug-in for D-View 6                           |

### Optional SFP Transceivers

- |            |   |
|------------|---|
| 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 550 m, 3.3 V operating voltage   |
| DEM-312GT2 | SFP transceiver 1000BASE-SX standard, multi-mode fiber, max. distance 2 km, 3.3 V operating voltage   |
| DEM-314GT  | SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 50 km, 3.3 V operating voltage  |
| DEM-315GT  | SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 80 km, 3.3 V operating voltage  |
| DEM-330T   | WDM SFP transceiver, 1000BASE-BX standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage, Tx wavelength 1550 nm, Rx wavelength 1310 nm  |
| DEM-330R   | WDM SFP transceiver, 1000BASE-BX standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage, Tx wavelength 1310 nm, Rx wavelength 1550 nm  |
| DEM-331T   | WDM SFP transceiver, 1000BASE-BX standard, single-mode fiber, max. distance 40 km, 3.3 V operating voltage, Tx wavelength 1550 nm, Rx wavelength 1310 nm  |
| DEM-331R   | WDM SFP transceiver 1000BASE-BX standard, single-mode fiber, max. distance 40 km, 3.3 V operating voltage, Tx wavelength 1310 nm, Rx wavelength 1550 nm   |
| 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, 3.3 V operating voltage   |
| DEM-220T   | WDM SFP transceiver, 100BASE-BX standard, single-mode fiber, max. distance 20 km, 3.3 V operating voltage<br>Tx wavelength 1550 nm, Rx wavelength 1310 nm |
| DEM-220R   | WDM SFP transceiver, 100BASE-BX standard, single-mode fiber, max. distance 20 km, 3.3 V operating voltage<br>Rx wavelength 1550 nm, Tx wavelength 1310 nm |

\* Product available in the future



**D-Link Corporation**  
 No. 289 Xinhua 3rd Road, Neihu, Taipei 114, Taiwan  
 Specifications are subject to change without notice.  
 D-Link is a registered trademark of D-Link Corporation and its overseas subsidiaries.  
 All other trademarks belong to their respective owners.  
 ©2010 D-Link Corporation. All rights reserved.  
 Release 03 (March 2010)