

Flexible Choices

- 8-Port 10/100/1000Mbps 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
- Support Microsoft® NAP

Traffic Monitoring/Bandwidth Control

- Traffic Segmentation
- Granular Bandwidth Control Down to 64Kbps
- Granular Broadcast Storm Control Down to 1pps
- 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

* Function available in future firmware update.

L2 Gigabit Metro Ethernet Switch

D-Link DGS-3700 series Metro Switches are designed & purpose-built for Metro Ethernet services for Telecom/Service Providers. Its design is based on field proven experience learnt from multiple Ethernet deployment in Telecoms/Carriers. It supports 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 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 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 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 connection 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 & 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), Intranet 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 suppression capabilities to enhance network performance and security. To prevent malicious flooding traffic caused by worm/virus infections, the DGS-3700 series in-built Safeguard Engine enforces its reliability, serviceability and availability.

OAM Management

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 provide tools to monitor and troubleshoot end-to-end Ethernet networks allow 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 OAM discovery, local and remote loopback diagnostic 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	24Gbps	
	Packet Forwarding Rate	17.86Mpps	
	Packet Buffer	1MB	
	MAC Address Table	16K Entries	
	Jumbo Frame Size	13,312 Bytes	
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	
	Size	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	
	MTBF	295,863 hours	298,611 hours
	3rd Party Certification	MEF9, 14	

TECHNICAL SPECIFICATIONS

L2 Features

- Virtual Stacking
- 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
- 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*
- E-RPS* (Ethernet Ring Protection Switching)
- L2 Protocol Tunneling

L2 Multicasting

- IGMP Snooping:
 - IGMP v1/v2/v3 Snooping
 - Support 1K IGMP Groups
 - IGMP Snooping Fast Leave
 - Host-based IGMP Fast Leave
- 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 Static VLAN Groups
 - Max. 2K Dynamic VLAN Groups
- 802.1Q Tagged VLAN
- 802.1v Protocol VLAN
- GVRP
- Double VLAN (Q-in-Q):
 - Port-Based Q-in-Q
 - Selective Q-in-Q
- Voice VLAN*
- MAC-Based VLAN
- Guest VLAN

QoS

- 802.1p Quality of Service
- 8 Queues
- 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
- Three Color Marker
 - trTCM
 - srTCM
- Congestion Control: SRED
- 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
- Bandwidth Control:
 - Port Based (Ingress/Egress, Min. Granularity 64Kbps)
 - Flow Based(Ingress/Egress, Min. Granularity 64Kbps)

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
- Time Based ACL
- CPU Interface Filtering
- ACL Statistic

Security

- SSH v1/v2
- SSL v1/v2/v3
- Port Security up to 128 MAC address per port/VLAN
- Broadcast/Multicast/Unicast Storm Control
- Traffic Segmentation
- IP-MAC-Port Binding:
 - Supports 500 Address Binding Entries per Device
 - Supports ARP / ACL / Auto (DHCP Snooping) Mode
- D-Link Safeguard Engine
- ARP Spoofing Prevention*
- DHCP Server Screening
- DHCP Client Filtering
- BPDU Attack Protection*
- NetBIOS/NetBEUI Filtering

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
- Microsoft® NAP (Support IPv4/v6)
- RADIUS and TACACS+ authentication for switch access
- 3 Level User Account
- RADIUS Accounting

Operation, Administration & Management (OAM)

- Loopback Diagnostic
- Cable Diagnostic
- 802.1ag Connectivity Fault Management (CFM)
 - Support 64 MIPs & 32 MEPs
- 802.3ah
- ITU-T Y.1731*
- Optical Transceiver Digital Diagnostic Monitoring (DDM)

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 Traps
- System Log
- RMON v1
 - Support 1,2,3,9 Groups
- RMON v2
 - Support ProbeConfig Group
- sFlow
- LLDP
- LLDP-MED*
- IPv6 Neighbor Discover (ND)
- BootP/DHCP Client
- DHCP Auto-Configuration
- DHCP Relay Option 60
- DHCP Relay Option 61
- DHCP Relay Option 82
- DHCP Server*
- DNS Relay*
- DNS Client*
- Flash File System*
- Dual Image
- Dual Configuration
- CPU Monitoring
- Cable Diagnostic
- SNTp

D-Link Green

- Comply with RoHS 6
- Power Saving Mode*
 - Link Down Status

MIB

- RFC1155, 2578 MIB Structure
- RFC1212 MIB Definition
- RFC1213 MIBII
- RFC1493 Bridge MIB
- RFC1901 ~ 1908 SNMPv2 MIB
- RFC1757, 2819 RMON MIB
- RFC2021 RMONv2 MIB
- RFC1643, 2358, 2665 Ether-like MIB
- RFC 2668 802.3 MAU MIB*
- RFC2674 Q-Bridge/P-Bridge MIB
- RFC2674 802.1p MIB
- RFC2233, 2863 IF MIB
- RFC2618 RADIUS Authentication Client MIB
- IGMPv3 MIB
- RFC4022 MIB for TCP

- RFC4113 MIB for UDP
- RFC3298 MIB for Diffserv
- RFC2620 RADIUS Accounting Client MIB
- Ping MIB
- Traceroute MIB*
- Running Configuration MIB
- TFTP Upload/Download MIB
- DDM MIB
- RFC2465 IPv6 MIB
- RFC2466 ICMPv6 MIB
- RFC4292 IP FDB MIB
- RFC4293 IPv6 SNMP Mgmt Interface MIB
- D-Link Private MIB

Standard Compliance

- RFC768 UDP
- RFC791 IP
- RFC792 ICMPv4
- RFC2463 ICMPv6
- RFC4884 Extended ICMP
- RFC793 TCP
- RFC826 ARP

- RFC1981 Path MTU Discovery for IPv6
- RFC2460 IPv6
- RFC2461, 4861 IPv6 ND
- RFC2462 IPv6 Stateless Address
 - Auto-configuration
- RFC2464 IPv6 over Ethernet and Definition
- RFC4291 IPv6 Addressing Architecture
- RFC4213 IPv4/IPv6 Dual Stack
- RFC2474, 3168, 3260 IPv6 Differentiated Services Field

*Function available in future firmware upgrade

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

Optional SFP Transceivers

- DEM-310GT SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 10 km, 3.3V operating voltage
- DEM-311GT SFP transceiver, 1000BASE-SX standard, multi-mode fiber, max. distance 550m, 3.3V operating voltage
- DEM-312GT2 SFP transceiver 1000BASE-SX standard, multi-mode fiber, max. distance 2km, 3.3V operating voltage
- DEM-314GT SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 50km, 3.3V operating voltage
- DEM-315GT SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 80km, 3.3V operating voltage
- DEM-330T WDM SFP transceiver, 1000BASE-BX standard, single-mode fiber, max. distance 10 km, 3.3V 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, 3.3V 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, 3.3V 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, 3.3V 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, 3.3V operating voltage
- DEM-210 SFP transceiver, 100BASE-FX standard, up to 15 km single-mode fiber Cable distance, 3.3V operating voltage
- DEM-220T WDM SFP transceiver, 100BASE-BX standard, single-mode fiber, max. distance 20 km, 3.3V operating voltage Tx wavelength 1550 nm, Rx wavelength 1310 nm
- DEM-220R WDM SFP transceiver, 100BASE-BX standard, single-mode fiber, max. distance 20 km, 3.3V operating voltage Rx wavelength 1550 nm, Tx wavelength 1310 nm



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 Release 02 (April 2009)