SERVICE PROVIDERS SOLUTION

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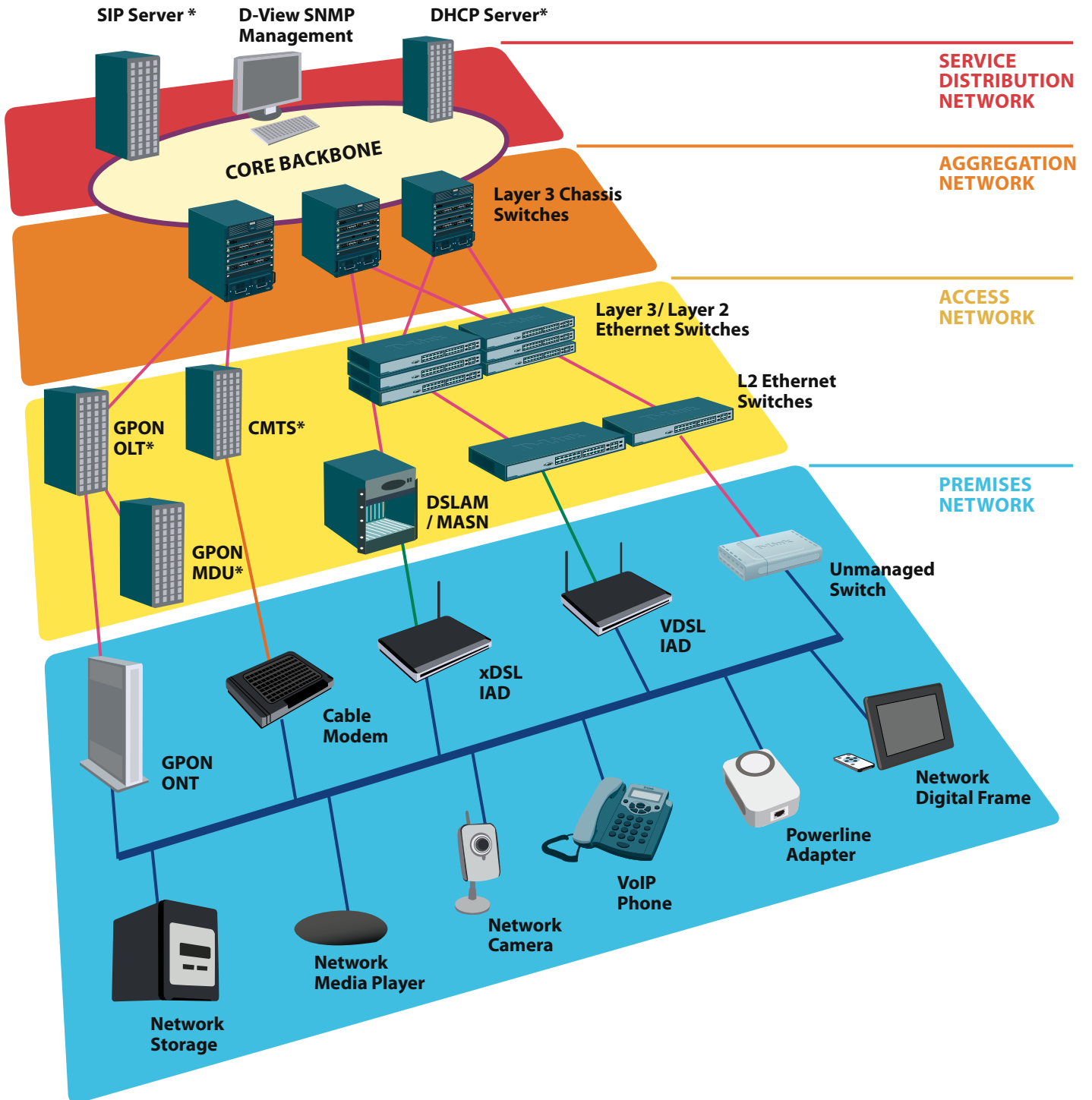
SERVICE PROVIDERS

The solution suitable for service providers to extend their provision of backend infrastructure services to customers at various levels, such as service distribution, aggregation, access and premise networks. Products under this category include carrier switches, broadband digital subscriber line (DSL) and DSL access multiplexers (DSLAMs), integrated access devices (IADs), wireless routers, cable modems, Voice over IP (VoIP), passive optical network (PON), rural connective platform outdoor wireless bridges, digital home appliances, network storage, IP surveillance and multimedia devices.

D-Link Service Providers Network Solution

SIP Server *

D-View SNMP Management

DHCP Server*

SERVICE DISTRIBUTION NETWORK

CORE BACKBONE

AGGREGATION NETWORK

Layer 3 Chassis Switches

ACCESS NETWORK

Layer 3/ Layer 2 Ethernet Switches

L2 Ethernet Switches

GPON OLT*

CMTS*

PREMISES NETWORK

GPON MDU*

DSLAM / MASN

Unmanaged Switch

VDSL IAD

xDSL IAD

Cable Modem

GPON ONT

Network Digital Frame

Powerline Adapter

VoIP Phone

Network Camera

Network Media Player

Network Storage

──── 10G Fiber Ethernet		──── Twisted Pair Cable
──── Fiber Ethernet		──── Copper Ethernet Cable
──── Coaxial Cable	*	Non-D-Link products

D-Link Service Providers Network Solution

D-Link Service Providers Network Solution offers ideal network infrastructure to achieve reliable, flexible, and high performance network from premises to core network.

Premises Network (Home Network)

As new technologies emerge, more and more users of premises network will demand for reliable and high-speed Wide Area Network connection to carry data, voice, video and multimedia content. D-Link supports service providers to help them meet these demands by their customers by providing a complete selection range of premises network connectivity devices, which include cable modem, xDSL Integrated Access Device (IAD), VDSL IAD, Fiber To The Business (FTTB) / Ethernet To The Home (ETTH), and gigabit-passive-optical networks optical-network-terminal (GPON ONT). These devices are designed by D-Link to ensure excellent performance for each network technology used by service providers to help them deliver their network services, and at the same time provide flexibility for application and implementation by end users.

Access Network

Moving up to the upper layer after the premises network is the access network. D-Link offers IP DSLAM, VDSL switches and layer-2/3 Ethernet switches as a reliable termination point for each of the services delivered by the service provider for access network. D-Link solution for access network includes features, such as:

- **Network segmentation – VLAN**
  Network segmentation allows the service provider to group customers into different network segments based on their service level for easier network management and service delivery.

- **User Authentication and Network Security**
  At the access network, D-Link provides user authentication and network security features to eliminate unauthorized users and malicious traffic before it gets in to the core network. These include 802.1X authentication, Web-based Access Control, RADIUS and TACACS support, Safeguard Engine, ACL and many other features.

Aggregation Network

Each network traffic that successfully passed the network security filter and authentication process in the access network will be gathered to a part of the service provider's core network called the aggregate network. In this network layer, the service provider will need powerful devices to handle and perform the necessary functions on the heavy network traffic load before forwarding them to the next destination. To help service providers meet the requirements of aggregate network, D-Link offers an ideal aggregation network solution with its layer-3 managed switch and layer-3 chassis switch. D-Link aggregation network solution provides high-speed connection between access network elements with 10 Gigabit links and up to 384 Gbps switching capacity. D-Link also provides the following essential functions in its solution:

- **High Availability**
  D-Link solution assures continuity of aggregation network with redundant power supply, stacking configuration and Virtual Router Redundancy Protocol (VRRP)

- **Bandwidth Management**
  With D-Link aggregation network solution, service providers are able to manage their bandwidth allocation for each customer to meet their service level agreement

- **Routing**
  D-Link aggregation network solution supports static route, RIP I/II, OSPF, RIPng for IPv6 implementation, DVMRP and PIM Sparse/Dense mode for multicast implementation.

Service Distribution Network

For each of the network devices that build their access and aggregation network, the service providers will need a reliable network management system for their service distribution network. D-Link, in understanding the concerns of service providers, provides an ideal solution for centralized network management – D-View 6.0. D-View 6.0 enables service providers to manage and monitor critical network characteristics such as device configuration, network performance, security and fault tolerance. It supports a wide range of manageable network devices, including access points, SNMP capable smart/managed switches, SNMP capable routers, OLT/ONU devices, broadband CO devices, and Windows servers.

CARRIER SWITCHES

Circuit switching devices for use by telephone carriers and service providers to connect and provide services to customers. Products under this category include chassis, metro Ethernet aggregation, Layer 3, edge and managed switches, transceivers, and redundant power supplies.

Gigabit Ethernet Layer 3 Chassis Switches

DES-7200 Series

DES-7200 Series chassis-based switch is an intelligent and high performance multi-layer LAN device designed for enterprise, campus, and metropolitan area networks (MAN). The switch is ideal for deployment in environments where uninterrupted running of network applications and high level of performance, security and control are required. It provides the flexibility of deploying Gigabit and/or 10-Gigabit packet switching and routing.

- Internet Group Management Protocol (IGMP) Snooping
- Rapid Ether Ring Protection (RERP)
- Double VLAN (Q-in-Q)
- Selective Q-in-Q
- Private VLAN
- Virtual Router Redundancy Protocol (VRRP)
- IPv6 Ready Phase 2
- Open Shortest Path First (OSPF)
- Border Gateway Protocol (BGP)
- Protocol Independent Protocol-Dense Mode (PIM-DM)

- Protocol Independent Protocol-Sparse Mode (PIM-SM)
- Quality of Service (QoS)
- Multi Protocol Label Switching (MPLS)
- Virtual Routing & Forwarding (VRF)
- IP Flow Information Export (IPFIX)
- Global MAC-IP Binding
- CPU Protection Policy (CPP)
- 802.1X Port-based Access Control
- 802.1X MAC-based Access Control
- Simple Network Management Protocol (SNMP)

DES-7206-BASE

- I/O Module Slot x 4
- CPU Module Slot x 2
- Built in Fan Tray
- Built in Dust Filter
- AC/DC Power Supply Option
- Redundant Power Supply

DES-7210-BASE

- I/O Module Slot x 8
- CPU Module Slot x 2
- Built in Fan Tray
- Built in Dust Filter
- AC/DC Power Supply Option
- Redundant Power Supply

Optional Accessories

I/O Modules

7200-24	12-Port 10/100/1000BASE-T + 12-Port Combo 1000BASE-T or SFP
7200-24G	12-Port SFP + 12-Port Combo 10/100/1000BASE-T or SFP
7200-24P	12-Port 10/100/1000BASE-T PoE + 12-Port Combo 1000BASE-T PoE or SFP
7200-48	44-Port 10/100/1000BASE-T + 4-Port Combo 1000BASE-T or SFP
7200-48P	44-Port 10/100/1000BASE-T PoE + 4-Port Combo 1000BASE-T PoE or SFP
7200-2XG	2-Port 10-Gigabit XFP
7200-4XG	4-Port 10-Gigabit XFP

Enhanced I/O Modules

7200-24G2XGE	12-Port SFP + 12-Port Combo 1000BASE-T or SFP + 2-Port 10-Gigabit XFP
7200-24GE	24-Port SFP
7200-48E	44-Port 10/100/1000BASE-T + 4-Port Combo 1000BASE-T or SFP

Extension Memory

7200-512RAM	512MB Additional RAM Module (for 7200-CM3/7200-CM4)

CPU Modules

7200-CM1	CPU Module with 96G Switching Capacity (for DES-7206-BASE)
7200-CM3	CPU Module with 96G Switch Capacity & Supports Advanced Service Engine (for DES-7206-BASE)
7200-CM2	CPU Module with 192G Switching Capacity (for DES-7210-BASE)
7200-CM4	CPU Module with 192G Switching Capacity & Supports Advanced Service Engine (for DES-7210-BASE)

Advanced Service Engines

7200-ASE2	ASE II for IPFIX Support
7200-ASE3	ASE III for MPLS Support

Redundant Power Supplies

7200-1200AC	1200W AC Redundant Power Supply
7200-1200DC	1200W DC Redundant Power Supply
7200-2000AC	2000W AC Redundant Power Supply

Fans

7206-FAN	Fan Tray (for DES-7206-BASE)
7210-FAN	Fan Tray (for DES-7210-BASE)

10-Gigabit Ethernet XFP Transceivers

DEM-421XT	10GBASE-SR, MMF, 300m
DEM-422XT	10GBASE-LR, SMF, 10km
DEM-423XT	10GBASE-ER, SMF, 40km

Gigabit Ethernet SFP Transceivers

DEM-310GT	1000BASE-LX, SMF/MMF, 10km/2km
DEM-311GT	1000BASE-SX, MMF, 550m
DEM-312GT2	1000BASE-SX, MMF, 2km
DEM-314GT	1000BASE-LH, SMF, 50km
DEM-315GT	1000BASE-ZX, SMF, 80km
DGS-712	1000BASE-T, Copper, 100m

Gigabit Ethernet WDM SFP Transceivers

DEM-330T/R	1000BASE-BX, SMF, 10km
DEM-331T/R	1000BASE-BX, SMF, 40km

Fast Ethernet SFP Transceivers

DEM-210	100BASE-FX, SMF, 15km
DEM-211	100BASE-FX, MMF, 2km

Fast Ethernet WDM SFP Transceivers

DEM-220T/R	100BASE-BX, SMF, 20km

Management Software

DV-600S	D-View 6.0 Network Management System (Standard Edition)
DV-600P	D-View 6.0 Network Management System (Professional Edition)

DES-7200 Series

Model		DES-7206-BASE	DES-7210-BASE
LAN Standard		IEEE 802.3; IEEE 802.3u; IEEE 802.3ab; IEEE 802.3z; IEEE 802.3ae; IEEE 802.3af	
General Features	Max. Switching Capacity	192Gbps (with 2 Control Modules)	384Gbps (With 2 Control Modules)
	Passive Backplane Capacity	0.8TBytes	1.6TBytes
	Maximum Forwarding Rate	142Mpps (with 2 Control Modules)	286Mpps (with 2 Control Modules)
	Packet Buffer Memory	2MBytes	
	SDRAM for CPU	256MBytes (With 7200-CM1/7200-CM2) / 512MBytes (With 7200-CM3/7200-CM4) - Expandable to 1GByte	
	Flash Memory	32MBytes (With 7200-CM1/7200-CM2) / 512MBytes (With 7200-CM3/7200-CM4)	
	Console Port	RJ-45 Ethernet-based; Out-of-Band Configuration	
	Extension Flash Storage Media	Type-A Female USB Port	
Base Unit	Expansion Module Slot	Total 6 Slots: 2 for Control Modules + 4 for Port Modules	Total 10 Slots: 2 for Control Modules + 8 for Port Modules
	Max. 10BASE-T/100BASE-TX/ 1000BASE-T Port (RJ-45)	192	384
	Max. 10BASE-T/100BASE-TX/ 1000BASE-T PoE Port (RJ-45)	192	384
	Max. SFP Port	96	192
	Max. 10GE XFP Slot	16	32
	Fan Tray	Yes (Built-in); 7206-FAN for DES-7206-BASE	Yes (Built-in); 7210-FAN for DES-7210-BASE
	Dust Filter	Yes (Built-in)	
	Power Supply	No (Need to Select the Suitable Power Supply Module)	
Control Module	Console Module Slot	2	
	CPU & Management Module	7200-CM1 / 7200-CM3: CPU Module with 96G Switching Capacity CPU Module with 96G Switching Capacity & Support Advanced Service Engine (ASE)	7200-CM2 / 7200-CM4: CPU Module with 192G Switching Capacity CPU Module with 192G Switching Capacity & Support Advanced Service Engine (ASE)
Port Module	Standard Module	7200-24: 12-Port 10/100/1000BASE-T; 12-Port Combo 110/100/1000BASE-T or SFP 7200-24G: 12-Port SFP; 12-Port Combo 10/100/1000BASE-T or SFP 7200-24P: 12-Port 10/100/1000BASE-T PoE; 12-Port Combo 10/100/1000BASE-T PoE or SFP 7200-48: 44-Port 10/100/1000BASE-T; 4-Port Combo 10/100/1000BASE-T or SFP 7200-48P: 44-Port 10/100/1000BASE-T PoE; 4-Port Combo 10/100/1000BASE-T PoE or SFP 7200-2XG: 2-Port 10-Gigabit XFP 7200-4XG: 4-Port 10-Gigabit XFP	
	Enhanced I/O Module	7200-24G2XGE: 12-Port SFP; 12-Port Combo 10/100/1000BASE-T or SFP; 2-Port XFP 7200-24GE: 24-Port SFP 7200-48E: 44-Port 10/100/1000BASE-T; 4-Port Combo 10/100/1000BASE-T or SFP	
Advanced Service Engine (ASE) Module (Require 7200-CM3 or 7200-CM4)		7200-ASE2: ASE for IPFIX; Support 128K IPFIX Entries; 6Gbps Throughput 7200-ASE3: ASE for MPLS; Support 192K Shared Table for Routing and L3 Forwarding Entries; 10Gbps Throughput	
Power Supply Module		7200-1200AC: Power Output: 1,200W; AC Input: 90~264VAC, 40~60Hz 7200-1200DC: Power Output: 1,200W; DC Input: -36~-72VDC 7200-2000AC: Power Output: 1,200W@90~176VAC, 2,000W@176~264VAC; AC Input: 90Vac~264VAC, 40~60Hz	
RAM Module		7200-512RAM: 512MB Extension RAM Module for 7200-CM3/7200-CM4; Support Better Performance when the Network Requires More Than 128K Routes or MPLS Applications	
Fan Module		7206-FAN: Fan Tray for DES-7206-BASE, 6 DC Fans	7210-FAN: Fan Tray for DES-7210-BASE, 6 DC Fans
L2 Features		MAC Address: 16K Per Standard I/O Card; 32K Per Enhanced I/O Card; Jumbo Frame: Max. 9,216Bytes; Address Resolution Protocol (ARP): Static ARP, Configurable ARP Aging Time; IGMP Snooping: 1K Groups, IGMP Proxy; Port Mirroring: One-to-One, Multi-to-One, Tx/Rx/Both Port Mirroring; Spanning Tree (STP): 802.1D STP, 802.1w Rapid STP, 802.1s Multiple STP; Rapid Ether Ring Protection (RERP): Max. 16 Domains, Recovering L2 Traffic in 500ms; 802.3ad Link Aggregation: 128 Trunk Groups, 8 Ports Per Group; Head of Line Blocking Prevention	
Virtual LAN (VLAN)		802.1Q Tagged VLAN, 802.1v Protocol VLAN, VLAN Group: 4K; Port-based VLAN; Super VLAN; Private VLAN; Double VLAN: Port-based Q-in-Q, Selective Q-in-Q	
L3 Features		Max. 2K IP Interface; Secondary IP; Virtual Router Redundancy Protocol (VRRP); IPv6 Tunneling: Manual Tunnel, ISATAP, 6to4; IPv6 Ready Phase 2	
L3 Routing		Routing Entries: 12K, 192K (With 7200-ASE3); Static Routes: Max. 1K; Policy Based Route; Routing Information Protocol (RIP) v1/v2; RIPng (IPv6)*; Multi Path Route: ECMP/WCMP; BGP+ v4 (IPv6); Open Shortest Path First (OSPF) v2/v3 (IPv6): Stub/NSSA Area; Border Gateway Protocol (BGP) v4	
L3 Multicasting		Protocol Independent Protocol-Dense Mode (PIM-DM); PIM-DMv6*; Protocol Independent Protocol-Sparse Mode (PIM-SM); PIM-SMv6*; Protocol Independent Protocol-Source Specific Mode (PIM-SSM); PIM-SSMv6*; PIM Snooping Internet Group Management Protocol (IGMP) v1/v2/v3	
Quality of Service		802.1p Class of Service (CoS); 8 Queues; Queue Handling: Strict, Weighted Round Robin (WRR), Strict + WRR; CoS based on: VLAN ID, 802.1p Priority, MAC Address	
Multi Protocol Label Switching (MPLS) & Virtual Private LAN Service (VPLS)		Virtual Routing & Forwarding (VRF) (Require Enhanced I/O module or 7200-ASE3); VPLS* (Require 7200-ASE4); MPLS Label Management (Require 7200-ASE3); Label Distribution Protocol (LDP) (Require 7200-ASE3); MPLS L3 VPN (Require 7200-ASE3); Virtual Private Wire Service (VPWS)* (Require 7200-ASE3)	
IP Flow Information Export (IPFIX)		Require 7200-ASE2	
Security		CPU Protection Policy (CPP); Secure Shell (SSH) v1.5/v2; Port Security: Max. 16 Max Addresses Per Port; Global MAC-IP Binding; Defeat IP Scan; IP-MAC-Port Binding	
Authentication, Authorization & Accounting (AAA)		802.1X: Port-based Access Control, MAC-based Access Control, Dynamic VLAN Assignment; Accounting: Period Accounting, Multiple Accounting; Remote Authentication Dial In User Service (RADIUS)	
Management		Command Line Interface (CLI); Telnet Server; TFTP; DHCP Server; DHCP Relay; DHCP Relay Option 82; XModem; Simple Network Management Protocol (SNMP) v1/v2c/v3; SNMP Trap; System Log; Remote Monitoring (RMON) v1: 1, 2, 3, 9 Groups; System Status LED; System Alert; DNS Client; Debug; Network Time Protocol (NTP) / Simple Network Time Protocol (SNTP); File System: Flash Storage Media, Multiple Firmware, Multiple Configuration	
Management Information Base (MIB)		MIB-II (RFC1213); Bridge (RFC1493); SNMPv2 (RFC1901, 1907); SNMP (RFC1157, 2571-2576); RIPv2 (RFC1724) RMON (RFC1271, 2819); PIM-SSM (RFC3569); IP FDB (RFC2096); IGMPv3 (RFC2933); D-Link Private MIB	
Standard Compliance		PIM-SM (RFC2362); VRRP (RFC2338, 2787); DVMRP (RFC1075); DiffServ (RFC2474-2475); 802.1p (RFC2674); IGMPv3 (RFC2933); RADIUS (RFC2138-2139, 2865-2866); Super VLAN (RFC3069); OSPF (RFC1370, 1587, 1765, 1850, 2328, 2370); DHCP (RFC1542, 2131, 3046); (RFC791); BGP (RFC1771, 1997, 2439, 2796, 2842, 2918); SNMP (RFC3411-3417); UDP (RFC768); IP (RFC791); TCP (RFC793); Telnet (RFC854); NTP (RFC1305); TFTP (RFC1350); SNTP (RFC1769)	
Physical & Environment	Dimension (W x D x H)	436.8 x 508 x 647.4 mm	436.8 x 448 x 956 mm
	Operation Temperature	0 to 40 °C	
	Storage Temperature	-40 to 70 °C	
	Humidity	90% Non-Condensing	
Certification	EMI-EMC Compliance	FCC Class A; CE Class A; VCCI Class A	
	Safety Compliance	cUL; CB	

* Available in Future Firmware Upgrade

Gigabit Ethernet Metro Ethernet Aggregation Switches
DGS-3700 Series

DGS-3700-12

- 10/100/1000BASE-T x 8
- Combo 1000BASE-T/SFP x 4

DGS-3700-12G

- SFP Slot x 8
- Combo 1000BASE-T/SFP x 4

D-Link DGS-3700 Series Metro Switches are designed and purpose-built for Metro Ethernet services for Telecoms/Service Providers. Its design is based on field proven experiences learned from multiple Ethernet deployment in Telecoms/ Carriers. This series 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.

- Internet Group Management Protocol (IGMP) Snooping
- Multicast Listener Discovery (MLD) Snooping
- Loopback Detection (LBD)
- 802.1v Protocol VLAN
- Double VLAN (Q-in-Q)
- Selective Q-in-Q
- Voice VLAN
- Guest VLAN
- Quality of Service (QoS)
- Access Control List (ACL)
- Broadcast/Multicast/ Unicast Storm Control

- Traffic Segmentation
- D-Link Safeguard Engine™
- IP-MAC-Port Binding (IMPB)
- DHCP Server Screening
- ARP Spoofing Prevention
- BPDU Attack Protection
- 802.1X Port/Host-based Access Control
- Web-based Access Control (WAC)
- MAC-based Access Control (MAC)
- Microsoft® Network Access Protection (NAP)
- Three-Level User Account

Optional Accessories

Gigabit Ethernet SFP Transceivers
DEM-310GT	1000BASE-LX, SMF/MMF, 10km/2km
DEM-311GT	1000BASE-SX, MMF, 550m
DEM-312GT2	1000BASE-SX, MMF, 2km
DEM-314GT	1000BASE-LH, SMF, 50km
DEM-315GT	1000BASE-ZX, SMF, 80km
DGS-712	1000BASE-T, Copper, 100m

Gigabit Ethernet WDM SFP Transceivers
DEM-330T/R	1000BASE-BX, SMF, 10km
DEM-331T/R	1000BASE-BX, SMF, 40km

Fast Ethernet SFP Transceivers
DEM-210	100BASE-FX, SMF, 15km
DEM-211	100BASE-FX, MMF, 2km

Fast Ethernet WDM SFP Transceivers
DEM-220T/R	100BASE-BX, SMF, 20km

Management Software
DV-600S	D-View 6.0 Network Management System (Standard Edition)
DV-600P	D-View 6.0 Network Management System (Professional Edition)

DGS-3700 Series

Model		DGS-3700-12	DGS-3700-12G
LAN Standard		IEEE 802.3; IEEE 802.3u; IEEE 802.3z; IEEE 802.3ab	
Port Interface	10BASE-T/100BASE-TX/ 1000BASE-T Port (RJ-45)	8	-
	SFP Port	-	8
	Combo 1000BASE-T/SFP	4	
Modules	Dust Filter	1	
	Fan	1	
	Power Supply	1	
Stackability	Virtual Stack	D-Link Single IP Management (SIM); Virtual Stack up to 32 Devices	
General Features	Switching Capacity	24Gbps	
	Max. Forwarding Rate	17.86Mpps	
	Forwarding Mode	Store and Forward	
	Packet Buffer Memory	1MBtye	
	SDRAM for CPU	128MBtye	
	Flash Memory	32MByte	
	Mean Time Before Failure	295,863 hours	298,611 hours
	Console Port	Female RS-232 DB-9 Console Port; For Configuring the Software Features; Locate on Front Panel RJ-45 Ethernet-based; Support Auto-MDI/MDIX Mode; Out-of-Band Configuration; Locate on Front Panel	
	Alarm Detection Port	RJ-45 Port for Alarm Detection	
L2 Features		MAC Address Table: 16K; Flow Control: IEEE 802.3x Flow Control, Head-of-Line (HoL) Blocking Prevention; Spanning Tree (STP): 802.1D STP, 802.1w Rapid STP, 802.1s Multiple STP, BPDU Filtering, Root Restriction; Loopback Detection; 802.3ad Link Aggregation: Max. 6 Groups Per Device, Max. 8 Ports Per Group; Jumbo Frame: Max. 13,312Bytes; Port Mirroring: One-to-One, Many-to-One, Flow-based Mirroring, RSPAN Mirroring; Ethernet Ring Protection Switching (E-RPS), L2 Protocol Tunneling	
L2 Multicasting		IGMP Snooping v1/v2/v3: 1K Groups, IGMP Fast Leave, Host-based IGMP Fast Leave; IGMP/MLD Proxy Reporting; IGMP/MLD Filtering: Max. 60 IGMP Filtering Profiles, 128 Ranges Per Profile; MLD Snooping v1/v2: 1K Groups, MLD Snooping Fast Leave	
Virtual LAN (VLAN)		VLAN Groups: Max. 4K Static VLAN Groups, Max. 2K Dynamic VLAN Groups; 802.1Q Tagged VLAN; 802.1v Protocol VLAN; GARP VLAN Registration Protocol (GVRP); Double VLAN (Q-in-Q): Port-based Q-in-Q, Selective Q-in-Q; Voice VLAN; MAC-based VLAN; Guest VLAN	
Quality of Service (QoS)		802.1p Quality of Service; 8 Queues; Three Color Marker: trTCM, srTCM; Congestion Control: SRED; CoS based on: Switch Port, VLAN ID, 802.1p Priority Queues, MAC Address, IPv4/IPv6 Address, DSCP, Protocol Type, IPv6 Traffic Class, IPv6 Flow Label, TCP/UDP Port, User-Defined Packet Content 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)	
Access Control List (ACL)		Access Rules: Max. 1,500; Time-based ACL; CPU Interface Filtering; ACL Statistic ACL based on: 802.1p Priority, VLAN ID, MAC Address, Ether Type, IPv4/IPv6 Address, DSCP, Protocol Type, TCP/UDP Port Number, IPv6 Traffic Class, IPv6 Flow Label, TCP/UDP Port, User-Defined Packet Content	
Security		Secure Shell (SSH) v1/v2; Secure Sockets Layer (SSL) v1/v2/v3; Port Security: Max. 128 MAC Addresses Per Port/VLAN; Broadcast/Multicast/Unicast Storm Control; Traffic Segmentation; D-Link Safeguard Engine; IP-MAC-Port Binding: 500 Address Binding Entries Per Devices, ARP / ACL / Auto (DHCP Snooping) Modes; DCHP Server Screening; DHCP Client Filtering; BPDU Attack Protection; NetBIOS / NetBEUI Filtering	
Authentication, Authorization & Accounting (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 Network Access Protection (NAP): IPv4/IPv6; RADIUS/TACACS+ Authentication for Switch Access; Three-Level User Account; RADIUS Accounting	
Management		Web-based GUI (IPv4/IPv6); Command Line Interface (CLI); Telnet Server (IPv4/IPv6); Telnet Client (IPv4/IPv6); TFTP Client (IPv4/IPv6); XModem; ZModem; Simple Network Management Protocol (SNMP) v1/v2c/v3; SNMP Trap; System Log; Remote Monitoring (RMON) v1: 1, 2, 3, 9 Groups; RMON v2: ProbeConfig Group; sFlow; Link Layer Discover Protocol (LLDP); LLDP-Media Endpoint Discovery (LLDP-MED); IPv6 Neighbor Discover (ND); BootP/DHCP Client; DHCP Auto Configuration; DHCP Relay Option 60/61/82; DHCP Server; DNS Relay; Dual Image; Dual Configuration; CPU Monitoring; SNTP	
Operations, Administration & Management (OAM)		Loopback Diagnostic; Cable Diagnostic; 802.1ag Connectivity Fault Management (CFM): 64 MIPs & 32 MEPs; 802.3ah Ethernet in the First Mile; ITU-T Y.1731; Optical Transceiver Digital Diagnostic Monitoring (DDM)	
D-Link Green		Comply with RoHS 6; Power Saving Mode: Link Down Status	
Management Information Base (MIB)		MIB Structure (RFC1155, 2578); MIB Definition (RFC1212); MIB-II (RFC1213); Bridge (RFC1493); SNMPv2 (RFC1901-1908); RMON (RFC1757, 2819); RMONv2 (RFC2021); Ether-Like (RFC1643, 2358, 2665); MAU (RFC2668); Q-Bridge/P-Bridge (RFC2674); 802.1p (RFC2674); IF (RFC2233, 2863); RADIUS Authentication Client (RFC2618); IGMPv3 (RFC3376); TCP (RFC4022); UDP (RFC4113); Diffserv (RFC3298); RADIUS Accounting Client (RFC2620); Ping; Traceroute; Running Configuration; TFTP Upload/Download; DDM; IPv6 (RFC2465); ICMPv6 (RFC2466); IP FDB (RFC4292); IPv6 SNMP Mgmt Interface (RFC4293); D-Link Private MIB	
Standard Compliance		UDP (RFC768); IP (RFC791); ICMPv4 (RFC792); ICMPv6 (RFC2463); Extended ICMP (RFC4884); TCP (RFC793); ARP (RFC826); Path MTU Discovery for IPv6 (RFC1981); IPv6 (RFC2460); IPv6 ND (RFC2461, 4861); IPv6 Stateless Address (RFC2462); IPv6 over Ethernet and Definition (RFC2464); IPv6 Addressing Architecture (RFC4291); IPv4/IPv6 Dual Stack (RFC4213); IPv6 Differentiated Services Fields (RFC2474, 3168, 3260)	
Physical & Environment	Dimension (W x D x H)	19-inch; 1U Rack-Mount; 441 x 210 x 44mm	
	Weight	3.4kg	
	Power Input	One AC & One DC Dual Power Input; Each Power Input has Individual Power Switch; DC Input Takes Higher Priority When Both Connected; AC Power Input: 100~240VAC, 50/60MHz; DC Power Input: 36-75VDC @ 3A Max.; Power Efficiency: 77%@AC In, 79%@DC In	
	Power Supply (Modular)	DGS-3700-PWR; AC: 100~240VAC, 50/60Hz; DC: 36~75VDC@3A Max, Output: 12V	
	Max. Power Consumption	AC: 46.2W; DC: 38.9W	AC: 42.1W; DC: 30.3W
	Grounding	1	
	Replaceable Fan Tray	DGS-3700-FAN: Automatically Turn On/Off & Adjust Speed Based on System Temp.; Alert Alarm if Fan Running at Abnormal Speed	
	Replaceable Air Filtration	DGS-3700-AF: Modular Air Filtration that can be Cleaned up while the Service is Running	
	Power Saving	Power Saving Function on All Gigabit RJ-45 Ports; Link Down Power Saving Mode	
	Operation Temperature	0 to 65 °C	
	Storage Temperature	-40 to 70 °C	
	Operation Humidity	10% to 90% RH	
	Storage Humidity	5% to 90% RH	
	Acoustic	Operation Temperature At Less than 30°C: < 40.9dB; At 33°C to 50°C: < 45.0dB; At More than 50°C: < 61.8dB	Operation Temperature At Less than 30°C: < 41.5dB; At 33°C to 50°C: < 45.6dB; At More than 50°C: < 60.1dB
Certification	EMI-EMC Compliance	FCC Class A; CE Class A; C-Tick Class A; VCCI Class A	
	Safety Compliance	cUL; CB	
	Metro Ethernet Forum	MEF 9 & 14	
	IPv6 Ready Logo	IPv6 Ready Logo Phase 2	

Gigabit Ethernet xStack Layer 3 Core Switches

DGS-3600 Series

DGS-3600 Series consists of Layer 3 Gigabit switches that deliver performance, flexibility, security, multi-layer QoS and access, with redundant power option for SMB and enterprises. It is easy to deploy, simple to manage, and it can be virtually stacked with any switches supporting D-Link Single IP Management (SIM). It also supports 10-Gigabit physical stacking.

- D-Link Single IP Management (Virtual Stack)
- Internet Group Multicast Protocol (IGMP) Snooping
- Multicast Listener Discovery (MLD) Snooping
- L2 Protocol Tunneling
- 802.1v Protocol VLAN
- Double VLAN (Q-in-Q)
- Selective Q-in-Q
- Virtual Router Redundancy Protocol (VRRP)
- Ethernet-Ring Protection Switching (E-RPS)*
- IPv6 Tunnel*
- Gratuitous ARP
- Routing Information Protocol (RIP)
- Routing Information Protocol Next Generation (RIPng)*
- Open Shortest Path First (OSPF)
- Border Gateway Protocol (BGP)*
- Protocol Independent Protocol-Dense Mode (PIM-DM)

- Protocol Independent Protocol-Sparse Mode (PIM-SM)
- Distance Vector Multicast Routing Protocol (DVMRP)
- Quality of Service (QoS)
- D-Link Unidirectional Link Detection (DULD)*
- Access Control List (ACL)
- Broadcast/Multicast/Unicast Storm Control
- Traffic Segmentation
- D-Link Safeguard Engine
- IP-MAC-Port Binding
- 802.1X Access Control
- Web-based Access Control (WAC)
- MAC-based Access Control (MAC)
- Microsoft® Network Access Protection (NAP)
- Three-Level User Account
- sFlow
- Link Layer Discover Protocol (LLDP)
- LLDP-Media Endpoint Discovery (LLDP-MED)

DGS-3612
- 10/100/1000BASE-T x 8
- Combo 1000BASE-T/SFP x 4
- Redundant Power Supply

DGS-3612G
- SFP Slot x 8
- Combo 1000BASE-T/SFP x 4
- Redundant Power Supply

DGS-3627
- 10/100/1000BASE-T x 20
- Combo 1000BASE-T/SFP x 4
- 10G Expansion Slot x 3
- Redundant Power Supply
- Physical Stack

DGS-3627G
- SFP Slot x 20
- Combo 1000BASE-T/SFP x 4
- 10G Expansion Slot x 3
- Redundant Power Supply
- Physical Stack

DGS-3650
- 10/100/1000BASE-T x 44
- Combo 1000BASE-T/SFP x 4
- 10G Expansion Slot x 2
- Redundant Power Supply
- Physical Stack

Optional Accessories

Modules
DEM-410X	1-Port 10G XFP Module (for DGS-3627, DGS-3627G & DGS-3650)
DEM-410CX	1-Port 10G CX4 Module (for DGS-3627, DGS-3627G & DGS-3650)

10-Gigabit Ethernet XFP Transceivers
DEM-421XT	10GBASE-SR, MMF, 300m (for DGS-3627, DGS-3627G & DGS-3650)
DEM-422XT	10GBASE-LR, SMF, 10km (for DGS-3627, DGS-3627G & DGS-3650)
DEM-423XT	10GBASE-ER, SMF, 40km (for DGS-3627, DGS-3627G & DGS-3650)

Gigabit Ethernet SFP Transceivers
DEM-310GT	1000BASE-LX, SMF/MMF, 10km/2km
DEM-311GT	1000BASE-SX, MMF, 550m
DEM-312GT2	1000BASE-SX, MMF, 2km
DEM-314GT	1000BASE-LH, SMF, 50km
DEM-315GT	1000BASE-ZX, SMF, 80km
DGS-712	1000BASE-T, Copper, 100m

Gigabit Ethernet WDM SFP Transceivers
DEM-330T/R	1000BASE-BX, SMF, 10km
DEM-331T/R	1000BASE-BX, SMF, 40km

Fast Ethernet SFP Transceivers
DEM-210	100BASE-FX, SMF, 15km (for DGS-3612 & DGS-3612G)
DEM-211	100BASE-FX, MMF, 2km (for DGS-3612 & DGS-3612G)

Fast Ethernet WDM SFP Transceivers
DEM-220T/R	100BASE-BX, SMF, 20km (for DGS-3612 & DGS-3612G)

Redundant Power Supplies
DPS-200	60-Watt AC Redundant Power Supply (for DGS-3612)
DPS-500	140-Watt AC Redundant Power Supply (for DGS-3612G, DGS-3627, DGS-3627G & DGS-3650)
DPS-500DC	140-Watt AC Redundant Power Supply (for DGS-3627, DGS-3627G & DGS-3650)

Management Software
DV-600S	D-View 6.0 Network Management System (Standard Edition)
DV-600P	D-View 6.0 Network Management System (Professional Edition)

* Available in Future Firmware Upgrade

DGS-3600 Series

Model		DGS-3612	DGS-3612G	DGS-3627	DGS-3627G	DGS-3650
LAN Standard		IEEE 802.3; IEEE 802.3u; IEEE 802.3z; IEEE 802.3ab; IEEE 802.3ae				
Port Interface	10BASE-T/100BASE-TX/ 1000BASE-T Port (RJ-45)	8	-	20	-	44
	SFP Port	-	8	-	20	-
	Combo 1000BASE-T/SFP	4				
	10 GE Expansion Slot	-		3	3	2
	XFP Expansion Module	-		DEM-410X		
	CX4 Expansion Module	-		DEM-410CX		
Stackability	Virtual Stack	D-Link Single IP Management (SIM); Virtual Stack up to 32 Devices				
	Physical Stack	-		Via Optional CX4/XFP Module; Bi-Directional Redundant Stacking Topology; Duplex Chain / Ring Topology; Bandwidth up to 40Gbps (Full Duplex); Up to 12 Units Per Stack; Backup Master; Trunking or Mirroring across Stack		
General Features	Switching Capacity	24Gbps		108Gbps		136Gbps
	Max. Forwarding Rate	17.86Mpps		80.36Mpps		101.19Mpps
	Forwarding Mode	Store and Forward				
	Packet Buffer Memory	2MBytes				
	SDRAM for CPU	256MBytes				
	Flash Memory	PROM 512KBytes x 1; Runtime 16MBytes x 1				
	Mean Time Before Failure	402,111 hours	342,645 hours	287,631 hours	289,946 hours	246,838 hours
	Console Port	Female RS-232 DB-9 Console Port for Out-of-Band Configuration				
L2 Features		MAC Address Table: 16K; Flow Control: IEEE 802.3x Flow Control, Head-of-Line (HoL) Blocking Prevention; IGMP Snooping v1/v2/v3: 1K Groups, IGMP Snooping Fast Leave, Host-based IGMP Fast Leave*; MLD Snooping v1: 1K Groups, MLD Snooping Fast Leave; Jumbo Frame: Max. 9,216Bytes; Spanning Tree (STP): 802.1D STP, 802.1w Rapid STP, 802.1s Multiple STP, Per Port/Device BPDU Filtering, Root Restriction*; Loopback Detection; 802.3ad Link Aggregation: Max. 32 Groups Per Device, 8 Gigabit Ports or 2 10GE Ports Per Group; Port Mirroring: One-to-One, Many-to-One, Flow-based Mirroring, RSPAN; L2 Protocol Tunneling				
Virtual LAN (VLAN)		VLAN Group: Max. 4K Static VLAN Groups, Max. 255 Dynamic VLAN Groups; 802.1Q Tagged VLAN; 802.1v Protocol VLAN; GARP VLAN Registration Protocol (GVRP); Double VLAN (Q-in-Q): Port-based Q-in-Q, Selective Q-in-Q; MAC-based VLAN*; Super VLAN*				
L3 Features		256 Interfaces; Virtual Router Redundancy Protocol (VRRP); Ethernet-Ring Protection Switching (E-RPS)*; IPv6 Tunneling*: Static, ISATAP, GRE, 6to4; IPv6 Ready Phase 1/2; Proxy ARP; Gratuitous ARP				
L3 Routing		12K Hardware Routing Entries Shared by IPv4/IPv6: Max. 12K IPv4 Routes, Max. 6K IPv6 Routes; 8K Hardware L3 Forwarding Entries Shared by IPv4/IPv6: Max. 8K IPv4 Entries, Max. 4K IPv6 Entries; Static Route Entries: 256 for IPv4, 128 for IPv6, ECMP/WCMP; Policy-based Route; Routing Information Protocol (RIP) v1/v2; RIPng (IPv6)*; Border Gateway Protocol (BGP) v4* Open Shortest Path First (OSPF) v2/v3 (IPv6): OSPF Passive Interface, Stub/NSSA Area, OSPF Equal Cost Route				
Multicasting		1K Hardware Multicast Groups; Internet Group Management Protocol (IGMP) v1/v2/v3 Protocol Independent Protocol-Dense Mode (PIM-DM); Protocol Independent Protocol-Sparse Mode (PIM-SM); PIM Sparse-Dense Mode; Distance Vector Multicast Routing Protocol (DVMRP) v3				
Quality of Service (QoS)		802.1p Class of Service (CoS); 8 Queues; Queue Handling: Strict, Weighted Round Robin (WRR), Strict + WRR; CoS based on: Switch Port, VLAN ID, 802.1p Priority Queues, MAC Address, IPv4/IPv6 Address, DSCP, Protocol Type, IPv6 Traffic Class, IPv6 Flow Label, TCP/UDP Port, User-Defined Packet Content Actions for Flows: Remark 802.1p Priority Tag, Remark TOS/DSCP Tag, Bandwidth Control, Flow Statistics, Committed Information Rate (CIR): Min. Granularity 1kbps; Time-based QoS Bandwidth Control: Port-based (Ingress/Egress, Min. Granularity 64kbps), Flow-based (Ingress, Min. Granularity)				
Access Control List (ACL)		Max. 1,792 Access Rules; ACL Statistics; Time-based ACL; ACL based on: 802.1p Priority, VLAN ID, MAC Address, Ether Type, IPv4/IPv6 Address, DSCP, Protocol Type, TCP/UDP Port Number, IPv6 Traffic Class, IPv6 Flow Label, User-Defined Packet Content				
Security		Secure Shell (SSH) v1/v2; Secure Sockets Layer (SSL) v1/v2/v3; Port Security: Max. 16 MAC Addresses Per Port; Broadcast/Multicast/Unicast Storm Control; Traffic Segmentation; D-Link Safeguard Engine; CPU Interface Filtering; IP-MAC-Port Binding: ARP Packet Inspection, IP Packet Inspection, DHCP Snooping, DHCPv6 & NDP Snooping*, Max. 500 Address Binding Entries Per Device; DHCP Server Screening; ARP Spoofing Prevention*; BPDU Attack Protection*				
Authentication, Authorization & Accounting (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 Network Access Protection (NAP): 802.1X NAP, DHCP NAP; Guest VLAN; RADIUS & TACACS+ Authentication for Switch Access; Three-Level User Account				
Management		Web-based GUI; Command Line Interface (CLI); Telnet Server; Telnet Client*; TFTP Client; ZModem; System Log; Simple Network Management Protocol (SNMP) v1/v2c/v3; SNMP Trap; Link Layer Discovery Protocol (LLDP); Remote Monitoring (RMON) v1: 1, 2, 3, 9 Groups; RMON v2: ProbeConfig Group; DHCP Auto-Configuration; DHCP Relay; DHCP Relay Option 60/61*/82; DHCP Server; Flash File System; Multiple Images; Multiple Configurations; CPU Monitoring; Simple Network Time Protocol (SNTP); Internet Control Message Protocol (ICMP) v6; IPv6 Neighbor Discovery (ND); DHCPv6 Client*; DHCPv6 Relay*; DHCPv6 Server*; Cable Diagnostics*; sFlow; BootP/DHCP Client; Debug Command; D-Link Unidirectional Link Detection (DULD)*				
Management Information Base (MIB)		MIB-II (RFC1213); Bridge (RFC1493); SNMPv2 (RFC1907); SNMP (RFC2571-2576); RMON (RFC1271, 2819); RMONv2 (RFC2021); Ether-Like (RFC2665); MAU (RFC2668); 802.1p (RFC2674); IF (RFC2233, 2863); RADIUS Authentication Client (RFC2618); RIPv2 (RFC1724); OSPFv2 (RFC1850); VRRP (RFC2787); IP Forwarding Table CIDR (RFC2096); IPv4 Multicast Routing (RFC2932); PIM for IPv4 (RFC2934); RADIUS Accounting Client (RFC2620); IGMP (RFC2933); Ping*; Traceroute*; D-Link Private MIB				
Standard Compliance		UDP (RFC768); TFTP (RFC783); IP (RFC791); ICMP (RFC792); TCP (RFC793); ARP (RFC826); Telnet (RFC854); BootP (RFC951, 1542);; HTTP (RFC2068); VRRP (RFC2338); IPv6 Tunnel (RFC2529, 3053, 3056); RADIUS (RFC2138); RADIUS Accounting (RFC2139); TACACS (RFC1492); sFlow (RFC3176); DiffServ Expedited Forwarding (RFC2598)				
Physical & Environment	Dimension (W x D x H)	19", 1U Rack-Mount; 441 x 309 x 44mm		19", 1U Rack-Mount; 441 x 389 x 44mm		
	Weight (W/O Modules)	3.7kg	5.0kg	5.5kg	5.5kg	5.7kg
	Power Input	AC Input: 100-240 VAC, 50/60Hz; Internal Universal Power Supply				
	Max. Power Consumption	42.2W	43.7W	94.3W	75.6W	137.5W
	Redundant Power Supply	DPS-200	DPS-500	DPS-500 / DPS-500DC		
	Operation Temperature	0 to 40 °C				
	Storage Temperature	-40 to 70 °C				
	Operation Humidity	10% to 90% RH				
	Storage Humidity	5% to 90% RH				
	Acoustic	< 52.1 dB	< 51.1 dB	< 51.6 dB	< 51.3 dB	< 48.1 dB
Certification	EMI-EMC Compliance	FCC Class A; CE Class A; C-Tick Class A; VCCI Class A				
	Safety Compliance	cUL; CB				
	Metro Ethernet Forum	MEF 9, 14				

* Available in Future Firmware Upgrade

Fast Ethernet xStack Layer 3 Core Switches

DES-3800 Series

The xStack DES-3800 Series consists of Layer 3 10/100Mbps switches that deliver performance, flexible expansion, robust security, multi-layer QoS, Power over Ethernet and redundant power option.

- D-Link Single IP Management (Virtual Stack)
- Internet Group Multicast Protocol (IGMP) Snooping
- Multicast Listener Discovery (MLD) Snooping
- Loopback Detection (LBD)
- 802.1v Protocol VLAN
- Double VLAN (Q-in-Q)
- Open Shortest Path First (OSPF)
- Virtual Router Redundancy Protocol (VRRP)
- Protocol Independent Multicast-Dense Mode (PIM-DM)
- Protocol Independent Multicast-Sparse Mode (PIM-SM)

- Distance Vector Multicast Routing Protocol (DVMRP)
- Quality of Service (QoS)
- Access Control List (ACL)
- Broadcast/Multicast/Unicast Storm Control
- Traffic Segmentation
- D-Link Safeguard Engine™
- D-Link ZoneDefense™
- IP-MAC-Port Binding
- 802.1X Port/Host-based Access Control
- Web-based Access Control
- MAC-based Access Control
- Microsoft® Network Access Protection (NAP)
- Guest VLAN

DES-3828

- 10/100BASE-TX x 24
- 10/100/1000BASE-T x 2
- Combo 1000BASE-T/SFP x 2
- AC Power Supply
- Redundant Power Supply

DES-3828DC

- 10/100BASE-TX x 24
- 10/100/1000BASE-T x 2
- Combo 1000BASE-T/SFP x 2
- DC Power Supply

DES-3828P

- 10/100BASE-TX x 24 (PoE)
- 10/100/1000BASE-T x 2
- 1000BASE-T/SFP Combo Slot x 2
- AC Power Supply
- Redundant Power Supply

DES-3852

- 10/100BASE-TX x 48
- 10/100/1000BASE-T x 2
- 1000BASE-T/SFP Combo Slot x 2
- AC Power Supply
- Redundant Power Supply

Optional Accessories

Gigabit Ethernet SFP Transceivers
DEM-310GT	1000BASE-LX, SMF/MMF, 10km/2km
DEM-311GT	1000BASE-SX, MMF, 550m
DEM-312GT2	1000BASE-SX, MMF, 2km
DEM-314GT	1000BASE-LH, SMF, 50km
DEM-315GT	1000BASE-ZX, SMF, 80km

Gigabit Ethernet WDM SFP Transceivers
DEM-330T/R	1000BASE-BX, SMF, 10km
DEM-331T/R	1000BASE-BX, SMF, 40km

Redundant Power Supplies
DPS-200	60-Watt AC Redundant Power Supply (for DES-3828 & DES-3852)
DPS-600	500-Watt AC Redundant Power Supply (for DES-3828P)

Management Software
DV-600S	D-View 6.0 Network Management System (Standard Edition)
DV-600P	D-View 6.0 Network Management System (Professional Edition)

DES-3800 Series

Model		DES-3828	DES-3828DC	DES-3828P	DES-3852
LAN Standard		IEEE 802.3; IEEE 802.3u; IEEE 802.3z; IEEE 802.3ab; IEEE 802.3af (DES-3828P)			
Port Interface	10BASE-T/100BASE-TX Port (RJ-45)	24		24 (PoE)	48
	10BASE-T/100BASE-TX/ 1000BASE-T Port (RJ-45)	2			
	Combo 1000BASE-T/SFP Port	2			
Stack-ability	Virtual Stack	D-Link Single IP Management (SIM); Virtual Stack up to 32 Devices			
General Features	Switching Capacity	12.8Gbps			15.7Gbps
	Max. Forwarding Rate	9.5Mpps			11.7Mpps
	Forwarding Mode	Store and Forward			
	Packet Buffer Memory	32MBytes			
	SDRAM for CPU	128MBytes			
	Flash Memory	PROM 512KBytes x 1; Runtime 16MBytes x 1			
	Mean Time Before Failure (MTBF)	123,027 hours	133,105 hours	168,110 hours	102,737 hours
	Console Port	Female RS-232 DB-9 Console Port for Out-of-Band Configuration			
L2 Features		MAC Address Table: 16K; Flow Control: IEEE 802.3x Flow Control, Head-of-Line (HoL) Blocking Prevention; IGMP Snooping v1/v2/v3: 256 Groups, Static Multicast Addresses: 64, Host-based IGMP Snooping Fast Leave; Spanning Tree (STP): 802.1D STP, 802.1w Rapid STP, 802.1s Multiple STP; Per Port / Device BPDU Filtering; 802.3ad Link Aggregation: Max. 32 Groups Per Device, Max. 8 Ports Per Group; MLD Snooping v1/v2; Port Mirroring: One-to-One, Many-to-One, Flow-based; Jumbo Frame: Up to 9KBytes; Loopback Detection			
Virtual LAN		VLAN Group: Max. 4K Static VLAN Group, Max. 4K Dynamic VLAN Group; 802.1Q Tagged VLAN; GARP VLAN Registration Protocol (GVRP); Double VLAN (Q-in-Q); 802.1v Protocol VLAN			
L3 Features		128 Static Routing Entries; 2K Hardware Routing Entries; 4K Hardware L3 Forwarding Entries; 64 IP Interfaces; Open Shortest Path First (OSPF) v2: OSPF Passive Interface, OSPF Equal Cost Route; Routing Information Protocol (RIP) v1/v2; Virtual Router Redundancy Protocol (VRRP); ARP Proxy			
Multicast		Internet Group Management Protocol (IGMP) v1/v2/v3; Distance Vector Multicast Routing Protocol (DVMRP) v3; Protocol Independent Multicast-Dense Mode (PIM-DM); Protocol Independent Multicast-Sparse Mode (PIM-SM)			
Quality of Service (QoS)		Bandwidth Control: Port-based (Ingress/Egress, Min. Granularity 64kbps), Flow-based (Ingress, Min. Granularity 64kbps); 802.1p Class of Service: 8 Queues; Queue Handling: Strict, Weighted Round Robin (WRR), Strict + WRR; CoS based on: Switch Port, MAC Address, TOS, DSCP, IP Address, TCP/UDP Port			
Access Control List (ACL)		Max. 800 Access Rules; CPU Interface Filtering; ACL based on: Port, MAC Address, 802.1p Priority, VLAN ID, DSCP, IPv4/IPv6 Address, Protocol Type, TCP/UDP Port Number, User Defined Packet Content, IPv6 Traffic Class, IPv6 Flow Label			
Security		Secure Shell (SSH) v1.5/v2; Secure Sockets Layer (SSL) v2/v3; Port Security: Max. 16 MAC Addresses Per Port; Broadcast/Multicast/Unicast Storm Control; Traffic Segmentation; D-Link Safeguard Engine; D-Link ZoneDefense; DHCP Snooping; IP-MAC-Port Binding: 500 Address Binding Entries Per Device, ARP Packet Inspection; IP Packet Inspection			
Authentication, Authorization & Accounting (AAA)		802.1X: Port-based Access Control, Host-based Access Control, Dynamic VLAN Assignment; Web-based Access Control (WAC): Port-based Access Control, Dynamic VLAN Assignment; MAC-based Access Control (MAC): Port-based Access Control, Dynamic VLAN Assignment; Microsoft Network Access Protection (NAP); Guest VLAN; RADIUS Accounting; RADIUS and TACACS+ Authentication for Switch Access; Three-Level User Account			
Management		Web-based GUI; Command Line Interface (CLI); Telnet Server/Client; TFTP Client; BootP/DHCP Client; DHCP Auto-Configuration; DHCP Server; System Log; Simple Network Time Protocol (SNTP); CPU Monitoring; Simple Network Management Protocol (SNMP) v1/v2c/v3; SNMP Trap; DHCP Relay Option 82; Dual Image; Remote Monitoring (RMON) v1: 1, 2, 3, 9 Groups; RMON v2: ProbeConfig Group; Dual Configuration			
Management Information Base (MIB)		MIB-II (RFC1213); Bridge (RFC1493); SNMPv2 (RFC1907); RMON (RFC1757, 2819); Ether-Like (RFC1643, 2358, 2665); 802.1p (RFC2674); Bridge (RFC4363); IF (RFC2233, 2863); RADIUS Authentication Client (RFC2618); RADIUS Accounting Client (RFC2620); RIPv2 (RFC1724); OSPFv2 (RFC1850); IP Forwarding Table (RFC2096); VRRP (RFC2787); IPv4 Multicast Routing (RFC2932); PIM for IPv4 (RFC2934); D-Link Private MIB			
Physical & Environment	Dimension (W x D x H)	19-inch, 1U Rack-Mount 441 x 310 x 44mm		19-inch, 1U Rack-Mount 441 x 369 x 44mm	19-inch, 1U Rack-Mount 441 x 310 x 44mm
	Weight	4.24kg		6.02kg	4.23kg
	Power Input	AC Input: 100-240VAC, 50/60Hz; Internal Universal Power Supply	DC 60W, 48VDC Internal Universal Power Supply	AC Input: 90-264VAC, 50/60Hz; Internal Universal Power Supply	AC Input: 100-240VAC, 50/60Hz; Internal Universal Power Supply
	Max. Power Consumption	36.2W	32.7W	507.2W	47W
	Power over Ethernet	-		Power Budget: 370W; Per Port: 1-16.8W (Default:15.4W) Time-based PoE	-
	Redundant Power Supply	DPS-200	-	DPS-600	DPS-200
	Operation Temperature	0 to 40 ℃			
	Storage Temperature	-40 to 70 ℃			
	Humidity	5% to 95% Non-Condensing			
	Acoustic	< 51 dB	< 52 dB	< 51 dB	< 53 dB
Certification	EMI-EMC Compliance	FCC Class A; CE; C-Tick			
	Safety Compliance	CSA International; CB			

Fast Ethernet xStack Layer 2 Edge Switches

DES-3528/52 Series

The xStack DES-3528/52 Series consists of L2 10/100Mbps switches that deliver performance, flexible expansion, robust security, multi-layer QoS and redundant power supply option.

- D-Link Single IP Management (Virtual Stack)
- Loopback Detection (LBD)
- Internet Group Management Protocol (IGMP) Snooping
- Multicast Listener Discovery (MLD) Snooping
- Policy-based Routing
- 802.1v Protocol VLAN
- Double VLAN (Q-in-Q)
- Selective Q-in-Q
- IGMP Snooping Multicast (ISM) VLAN
- Asymmetric VLAN
- Voice VLAN
- Quality of Service (QoS)

- Access Control List (ACL)
- Traffic Segmentation
- Broadcast/Multicast/Unicast Storm Control
- ARP Spoofing Prevention
- BPDU Attack Protection
- 802.1X Port/Host-based Access Control
- Web-based Access Control (WAC)
- MAC-based Access Control (MAC)
- Multiple Authentication
- Guest VLAN
- Microsoft® Network Access Protection (NAP)
- Three-Level User Accounts

Optional Accessories

Gigabit Ethernet SFP Transceivers
DEM-310GT   1000BASE-LX, SMF/MMF, 10km/2km
DEM-311GT   1000BASE-SX, MMF, 550m
DEM-312GT2   1000BASE-SX, MMF, 2km
DEM-314GT   1000BASE-LH, SMF, 50km
DEM-315GT   1000BASE-ZX, SMF, 80km
DGS-712   1000BASE-T, Copper, 100m

Gigabit Ethernet WDM SFP Transceivers
DEM-330T/R   1000BASE-BX, SMF, 10km
DEM-331T/R   1000BASE-BX, SMF, 40km

Fast Ethernet SFP Transceivers
DEM-210   100BASE-FX, SMF, 15km
DEM-211   100BASE-FX, MMF, 2km

Fast Ethernet WDM SFP Transceivers
DEM-220T/R   100BASE-BX, SMF, 20km

Redundant Power Supplies
DPS-200   60-Watt AC Redundant Power Supply (for DES-3528 & DES-3552)
DPS-600   500-Watt AC Redundant Power Supply (for DES-3528P & DES-3552P)

Management Software
DV-600S   D-View 6.0 Network Management System (Standard Edition)
DV-600P   D-View 6.0 Network Management System (Professional Edition)

DES-3528

- 10/100BASE-TX x 24
- Combo 1000BASE-T/SFP x 2
- 1000BASE-T/Stacking Port x 2
- AC Power Supply
- Redundant Power Supply
- Physical Stack

DES-3528DC

- 10/100BASE-TX x 24
- Combo 1000BASE-T/SFP x 2
- 1000BASE-T/Stacking Port x 2
- DC Power Supply
- Physical Stack

DES-3528P

- 10/100BASE-TX x 24 (PoE)
- Combo 1000BASE-T/SFP x 2
- 1000BASE-T/Stacking Port x 2
- AC Power Supply
- Redundant Power Supply
- Physical Stack

DES-3552

- 10/100BASE-TX x 48
- Combo 1000BASE-T/SFP x 2
- 1000BASE-T/Stacking Port x 2
- AC Power Supply
- Redundant Power Supply
- Physical Stack

DES-3552P

- 10/100BASE-TX x 48 (PoE)
- Combo 1000BASE-T/SFP x 2
- 1000BASE-T/Stacking Port x 2
- AC Power Supply
- Redundant Power Supply
- Physical Stack

DES-3528/3552 Series

Model		DES-3528	DES-3528DC	DES-3528P	DES-3552	DES-3552P
LAN Standard		IEEE 802.3; IEEE 802.3u; IEEE 802.3z; IEEE 802.3ab; IEEE 802.3af (DES-3528P & DES-3552P)				
Port Interface	10BASE-T/100BASE-TX Port (RJ-45)	24		24 (PoE)	48	48 (PoE)
	10BASE-T/100BASE-TX/ 1000BASE-T Port (RJ-45)	2				
	Combo 1000BASE-T/SFP	2				
Stackability	Virtual Stack	D-Link Single IP Management (SIM); Virtual Stack up to 32 Devices				
	Physical Stack	Via GE Port 27 & 28 (for DES-3528/28DC/28P); Via GE Port 51 & 52 (for DES-3552/52P); Bi-Directional Redundant Stacking Topology; Linear/Ring Topology; Bandwidth up to 2Gbps Bi-Directional Per Port, Up to 4Gbps Per Device; Up to 8 Units Per Stack; Backup Master; Inter Trunking or Mirroring				
General Features	Switching Capacity	12.8Gbps			17.6Gbps	
	Max. Forwarding Rate	9.5Mpps			13.1Mpps	
	Forwarding Mode	Store and Forward				
	Packet Buffer Memory	1MBytes				
	SDRAM for CPU	128MBytes				
	Flash Memory	16MBytes				
	Mean Time Before Failure	203,785 hours	419,736 hours	345,226 hours	380,412 hours	200,486 hours
	Console Port	Female RS-232 DB-9 Console Port for Out-of-Band Configuration				
L2 Features		MAC Address Table: 16K; Flow Control: IEEE 802.3x Flow Control, HOL Blocking Prevention; Jumbo Frame: Max. 9,216Bytes; Spanning Tree Protocol (STP): 802.1D STP, 802.1w Rapid STP, 802.1s Multiple STP, BPDU Filtering; Loopback Detection; 802.3ad Link Aggregation: Max. 8 Groups Per Device, Max. 8 Ports Per Group; Port Mirroring: One-to-One, Many-to-One, Flow-based Mirroring, RSPAN				
L2 Multicasting		IGMP Snooping v1/v2/v3: 256 Groups, Host-based IGMP Snooping Fast Leave, Report Suppression; Limited IP Multicasting (IGMP Filtering): Max. 24 IGMP Filtering Profiles, 128 Ranges Per Profile; MLD Snooping v1/v2: 256 Groups; MLD Snooping Fast Leave				
L3 Features		ARP Proxy; Policy-based Routing				
Virtual LAN		VLAN Groups: Max. 4K VLAN; GARP VLAN Registration Protocol (GVRP): Max. 256 Dynamic VLAN; 802.1Q Tagged VLAN; 802.1v Protocol VLAN; Double VLAN (Q-in-Q): Port-based Q-in-Q, Selective Q-in-Q; VLAN Translation; Port-based VLAN; MAC-based VLAN; ISM VLAN; Asymmetric VLAN; VLAN Trunking; Voice VLAN; Subnet-based VLAN				
Quality of Service (QoS)		802.1p Quality of Service; 8 Queues Per Port; Queue Handling: Strict Priority, Weighted Round Robin (WRR), Strict + WRR; CoS based on: Switch Port, VLAN ID, 802.1p Priority Queues, MAC Address, DSCP, Protocol Type, IPv6 Traffic Class, IPv6 Flow Label; TCP/UDP Port, User-Defined Packet Content; Time-based QoS; Actions for Flow: Remark 802.1p Priority Tag, Remark TOS/DSCP Tag, Bandwidth Control, Flow Statistics, Committed Information Rate (CIR): Min. Granularity 64kbps; Stabilized Random Early Detection (SRED) Congestion Control; Bandwidth Control: Port-based (Ingress, Min. Granularity 64kbps), Flow-based (Ingress, Min. Granularity 64kbps), Per Egress Queue Bandwidth Control, Per Egress Queue Bandwidth Guarantee				
Access Control List (ACL)		Max. 1,792 Access Rules; ACL Statistics; Time-based ACL; VLAN-based ACL; CPU Interface Filtering; ACL based on: 802.1p Priority, VLAN ID, MAC Address, Ether Type, IPv4/IPv6 Address, DSCP, Protocol Type, TCP/UDP Port Number, IPv6 Traffic Class, IPv6 Flow Label, User-Defined Packet Content				
Security		Secure Shell (SSH) v2; Secure Sockets Layer (SSL) v1/v2/v3; Port Security: Max. 64 MAC Addresses Per Port; Broadcast/Multicast/Unicast Storm Control; D-Link Safeguard Engine; NetBIOS/NetBEUI Filtering; IP-MAC-Port Binding (IMPB): ARP Packet Inspection, IP Packet Inspection, DHCP Snooping, 500 Address Binding Entries Per Device; Traffic Segmentation; DHCP Server Screening; DHCP Client Filtering; ARP Spoofing Prevention; BPDU Attack Protection				
Authentication, Authorization & Accounting (AAA)		802.1X: Port-based Access Control, Host-based Access Control, Dynamic VLAN Assignment, Authentication Database Failover; Web-based Access Control (WAC): Port-based Access Control, Host-based Access Control, Dynamic VLAN Assignment, Authentication Database Failover; MAC-based Access Control (MAC): Port-based Access Control, Host-based Access Control, Dynamic VLAN Assignment, Authentication Database Failover; Multiple Authentication; Japanese Web-based Access Control (JWAC); Microsoft Network Access Protection (NAP): 802.1X NAP, DHCP NAP; Guest VLAN; RADIUS & TACACS+ Authentication for Switch Access; RADIUS Accounting; Three-Level User Accounts				
Management		Web-based GUI; Command Line Interface (CLI); Telnet Server; Telnet Client; TFTP Client; ZModem; Simple Network Management Protocol (SNMP) v1/v2c/v3; SNMP Traps; Link Layer Discovery Protocol (LLDP); Remote Monitoring (RMON) v1: 1, 2, 3, 9 Groups; RMON v2: ProbeConfig Group; CPU Monitoring; PPPoE Circuit-ID Tag Insertion; Dual Image; Dual Configuration; DHCP Auto-Configuration; sFlow; BootP/DHCP Client; DHCP Server; DHCP Relay; DHCP Relay Option 60/61/82; System Log; Network Time Protocol (NTP) / Simple NTP (SNTP); Password Recovery; Password Encryption; DHS Relay				
Operations, Admin & Management (OAM)		Cable Diagnostics; 802.3ah Ethernet Link OAM; 802.1ag Connectivity Fault Management (CFM); Loopback Diagnostics				
D-Link Green		Compliant with RoHS 6; Time-based PoE				
Management Information Base (MIB)		MIB-II (RFC1213); Bridge (RFC1409); SNMPv2 (RFC1907); RMON (RFC1757, 2819); RMONv2 (RFC2021); Ether-Like (RFC1643, 2358, 2665); 802.1p (RFC2674); IF (RFC2233, 2863); Ping & Traceroute (RFC2925); RADIUS Authentication Client (RFC2618); RADIUS Accounting Client (RFC2620); D-Link Private MIB				
Standard Compliance		UDP (RFC768); TFTP (RFC783); IP (RFC791); ICMP (RFC792); TCP (RFC793); ARP (RFC826); Telnet (RFC854); BootP (RFC951, 1542); HTTP (RFC2068); RADIUS (RFC2138); RADIUS Accounting (RFC2139, 2866); DiffServ (RFC2474); DSCP AF (RFC2597); DSCP EF (RFC2598); TACACS (RFC1492); SNMPv1 (RFC1157); SNMPv2c (RFC1901, 1908); SNMPv3 (RFC2570, 2575); Syslog (RFC3164, 3295); DHCP Relay Option (RFC3046)				
Physical & Environment	Dimension (W x D x H)	19-inch, 1U Rack-Mount 441 x 210 x 44mm		19-inch, 1U Rack-Mount 441 x 310 x 44mm		19", 1U Rack-Mount 441 x 370 x 44mm
	Weight	2.51kg	2.52kg	5.42kg	4.09kg	6.52kg
	Power Input	AC Input: 100-240VAC, 50/60Hz; Universal Power Supply	DC Power Input: 48VDC, 0.6A Universal Power Supply		AC Input: 100-240VAC, 50/60Hz; Internal Universal Power Supply	
	Max. Power Consumption	20.5W	18.38W	505.1W	33.1W	506.4W
	Power over Ethernet	-		Power Budget: 370W; Port 1-8: 30W Port 9-24: 15.4W Time-based PoE	-	Power Budget: 370W; Port 1-8: 30W Port 9-48: 15.4W Time-based PoE
	Redundant Power Supply	DPS-200	-	DPS-600	DPS-200	DPS-600
	Operation Temperature	0 to 50 ℃	0 to 45 ℃	0 to 50 ℃		
	Storage Temperature	-40 to 70 ℃				
	Operation Humidity	5% to 95% Non-Condensing				
	Acoustic	0 dB	0 dB	48.2 dB at Max Speed	35.1 dB at Max Speed	TBD
	Fan	Fanless		4 DC Fans	2 DC Fans	4 DC Fans
	Real Time Clock (RTC)	Maintain the Timing Setting when the Device Power is Off				
Certification	EMI-EMC Compliance	FCC Class A; CE Class A; C-Tick; VCCI				
	Safety Compliance	CB; UL/cUL				
	Metro Ethernet Forum	MEF 9, 14	-			

Fast Ethernet Metro Ethernet Edge Switches

DES-3200 Series

The DES-3200 Series Layer 2 xStack Managed Switch is designed for the Metro ETTX and FTTX market. This series provides 8/16/24 100Mbps Fast Ethernet connections plus 2/4 combo Gigabit/SFP ports. DES-3200-28F provides Fast Ethernet fiber connections which is an advantage in Metro Ethernet applications.

- D-Link Single IP Management (Virtual Stack)
- Internet Group Multicast Protocol (IGMP) Snooping
- Multicast Listener Discovery (MLD) Snooping
- Ethernet Ring Protection Switching (ERPS)*
- Gratuitous Address Resolution Protocol (ARP)
- 802.3ah Ethernet Link OAM*
- 802.1v Protocol VLAN
- VLAN Trunking
- Asymmetric VLAN
- Double VLAN (Q-in-Q)
- Selective Q-in-Q
- IGMP Snooping Multicast (ISM) VLAN

- Quality of Service (QoS)
- Access Control List (ACL)
- CPU Interface Filtering
- 802.1ag Connectivity Fault Management (CFM)*
- Broadcast/Multicast/Unicast Storm Control
- Traffic Segmentation
- D-Link Safeguard Engine™
- IP-MAC-Port Binding (IMPB)
- ARP Spoofing Prevention*
- BPDU Attack Protection*
- DHCP Server Screening*
- 802.1X Port-based Access Control
- 802.1X Host-based Access Control
- Per Queue Bandwidth Control*

DES-3200-10

- 10/100BASE-TX x 8
- Combo 1000BASE-T/SFP x 2
- Fanless
- 9-inch, 1U Desktop

DES-3200-18

- 10/100BASE-TX x 16
- Combo 1000BASE-T/SFP x 2
- Fanless
- 9-inch, 1U Desktop

DES-3200-28

- 10/100BASE-TX x 24
- Combo 1000BASE-T/SFP x 4
- Fanless
- 19-inch, 1U Rack-Mount

DES-3200-28F

- 100BASE-X SFP x 24
- Combo 1000BASE-T/SFP x 4
- DC Fan x 1
- 19-Inch, 1U Rack-Mount

Optional Accessories

Gigabit Ethernet SFP Transceivers
DEM-310GT	1000BASE-LX, SMF/MMF, 10km/2km
DEM-311GT	1000BASE-SX, MMF, 550m
DEM-312GT2	1000BASE-SX, MMF, 2km
DEM-314GT	1000BASE-LH, SMF, 50km
DEM-315GT	1000BASE-ZX, SMF, 80km

Gigabit Ethernet WDM SFP Transceivers
DEM-330T/R	1000BASE-BX, SMF, 10km
DEM-331T/R	1000BASE-BX, SMF, 40km

Fast Ethernet SFP Transceivers
DEM-210	100BASE-FX, SMF, 15km
DEM-211	100BASE-FX, MMF, 2km

Fast Ethernet WDM SFP Transceivers
DEM-220T/R	100BASE-BX, SMF, 20km

Management Software
DV-600S	D-View 6.0 Network Management System (Standard Edition)
DV-600P	D-View 6.0 Network Management System (Professional Edition)

* Available in Future Firmware Upgrade

DES-3200 Series

Model		DES-3200-10	DES-3200-18	DES-3200-28	DES-3200-28F
LAN Interface		IEEE 802.3; IEEE 802.3u; IEEE 802.3z; IEEE 802.3ab			
Port Interface	10BASE-T/100BASE-TX Port (RJ-45)	8	16	24	-
	100BASE-X SFP Port	-	-	-	24
	Combo 1000BASE-T/SFP Port	2		4	
Stackability	Virtual Stack	D-Link Single IP Management (SIM); Virtual Stack up to 32 Devices			
General Features	Switching Capacity	5.6Gbps	7.2Gbps	12.8Gbps	
	Maximum Forwarding Rate	4.2Mpps	5.4Mpps	9.5Mpps	
	Forwarding Mode	Store and Forward			
	Packet Buffer Memory	384KBytes			
	DDRI SDRAM for CPU	128MBytes			
	Flash Memory	16MBytes			
	Mean Time Before Failure (MTBF)	873,750 hours	743,115 hours	639,525 hours	447,268 hours
	Console Port	Female RS-232 DB-9 Console Port for Out-of-Band Configuration			

L2 Features		MAC Address Table: 8K; Jumbo Frame: Max. 2048Bytes;
		Spanning Tree Protocol: 802.1D-2004 Edition STP, 802.1w Rapid STP, 802.1s Multiple STP,
		   BPDU Filtering, Root Restriction; L2 Protocol Tunneling; Loopback Detection (LBD);
		802.3ad Link Aggregation: Max. 5 Groups (DES-3200-10), Max. 9 Groups (DES-3200-18),
		   Max. 14 Groups (DES-3200-28/28F), Max. 8 Ports Per Group;
		Port Mirroring: 1 Mirroring Group, One-to-One, Many-to-One, Flow-based (ACL) Mirroring;
		Flow Control: IEEE 802.3x Flow Control, Head-of-Line (HoL) Blocking Prevention;
		Ethernet-Ring Protection Switching (E-RPS)*			

L2 Multicast		IGMP Snooping v1/v2, v3 Awareness: 1K Groups, Port-based IGMP Snooping Fast Leave; Limited IP Multicasting: Max. 24 IGMP Filtering Profiles, 128 Groups Per Profile MLD Snooping v1/v2, v2 Awareness: 1K Groups; IGMP Authentication			
L3 Features		Gratuitous ARP			
Virtual VLAN (VLAN)		802.1Q Tagged VLAN; 802.1v Protocol VLAN; VLAN Group: Max. 4K VLAN; Port-based VLAN; MAC-based VLAN; GARP VLAN Registration Protocol (GVRP): Max. 255 Dynamic VLAN; VLAN Trunking; Asymmetric VLAN; ISM VLAN; VLAN Translation Double VLAN (Q-in-Q): Port-based Q-in-Q, Selective Q-in-Q			

Quality of Service (QoS)		802.1p, 4 Queues Per Port; Queue Handling: Strict Priority, Weighted Round Robin (WRR);
		CoS based on: Switch Port, VLAN ID, 802.1p Priority Queues, MAC Address, Ether Type,
		   IP Address, TOS, DSCP, Protocol Type, TCP/UDP Port, User-Defined Packet Content
		Actions for Flows: Remark 802.1p Priority Tag; Time-based QoS;
		Bandwidth Control: Port-based (Ingress/Egress, Min. Granularity 62.5kbps),
		   Flow-based (Ingress, Min. Granularity 62.5kbps)			

Access Control List (ACL)		Max. 512 Access Rules; Time-based ACL; ACL Statistics; CPU Interface Filtering; ACL based on: 802.1p Priority, VLAN ID, MAC Address, Ether Type, IP Address, DSCP, Protocol Type, TCP/UDP Port Number, User-Defined Packet Content, Switch Port			
Security		Secure Shell (SSH) v2; Secure Sockets Layer (SSL) v1/v2/v3; Broadcast/Multicast/Unicast Storm Control; Traffic Segmentation; D-Link Safeguard Engine; IP-MAC-Port Binding (IMPB): IP Packet Inspection, ARP Packet Inspection, DHCP Snooping, 500 Address Binding Entries Per Device; Port Security: Max. 64 MAC Addresses Per Port; DoS Attack Prevention; ARP Spoofing Prevention*; BPDU Attack Protection*			
Authentication, Authorization & Accounting (AAA)		802.1X: Port-based Access Control, Host-based Access Control; Two-Level User Account; Guest VLAN; RADIUS & TACACS+ Authentication for Switch Access; RADIUS Accounting			
Management		Web-based GUI (IPv4/IPv6); Command Line Interface (CLI); Telnet Server/Client (IPv4/IPv6); TFTP Client (IPv4/IPv6); XModem; ZModem; System Log; Dual Image; CPU Monitoring; Simple Network Management Protocol (SNMP) v1/v2c/v3: SNMP over IPv6; SNMP Traps; Remote Monitoring (RMON) v1: 1, 2, 3, 9 Groups; RMON v2: ProbeConfig Group; BootP/DHCP Client; DHCP Auto-Configuration; DHCP Relay; DHCP Relay Option 82; Simple Network Time Protocol (SNTP); Link Layer Discovery Protocol (LLDP); Password Encryption; Simple Mail Transfer Protocol (SMTP); Debug Command; Network Load Balancing (NLB)*; IPv6 Management			
Operations, Administration & Management (OAM)		Loopback Diagnostics*; Cable Diagnostics*; 802.3ah Link OAM; 802.1ag Connectivity Fault Management (CFM)*			
Management Information Base (MIB)		MIB-II (RFC1213); Bridge (RFC1409); SNMPv2 (RFC1907); RMON (RFC1757, 2819); RMONv2 (RFC2021); Ether-Like (RFC1643, 2358, 2665); 802.1p (RFC2674); IF (RFC2233, 2866); RADIUS Authentication Client (RFC2618); RADIUS Accounting Client (RFC2620); Ping & Traceroute (RFC2925); D-Link Private MIB			
Physical & Environment	Dimension (W x D x H)	9-inch, 1U Desktop; 228.5 x 180 x 44mm		19-inch, 1U Rack-Mount; 441 x 207 x 44mm	
	Power Input	AC Input: 100-240 VAC, 50/60Hz; Internal Universal Power Supply			
	Power Consumption	12.7W	13.2W	18.4W	46.7W
	Operation Temperature	0 to 40 °C			
	Storage Temperature	-40 to 70 °C			
	Operation Humidity	5% to 95% Non-Condensing			
	Fan	Fanless			1 DC Fan
Certification	EMI-EMC Compliance	FCC Class A; CE Class A; VCCI Class A; IC			
	Safety Compliance	UL/cUL; CB			

* Available in Future Firmware Upgrade

Fast Ethernet Entry-Level Managed Switches

DES-3028/52 Series

DES-3028 / DES-3052 Series provides flexible choices of 24 or 48 Fast Ethernet ports, with or without Power over Ethernet. Each switch is equipped with four Gigabit Ethernet ports including two combo SFP which are capable of both Gigabit and Fast Ethernet (100BASE-FX) fiber connections for user-specific applications.

- D-Link Single IP Management (Virtual Stack)
- Internet Group Multicast Protocol (IGMP) Snooping
- Multicast Listener Discovery (MLD) Snooping
- Asymmetric VLAN
- IGMP Snooping Multicast (ISM) VLAN
- Double VLAN (Q-in-Q)
- Quality of Service (QoS)
- Access Control List (ACL)
- CPU Interface Filtering

- Broadcast/Multicast/Unicast Storm Control
- Traffic Segmentation
- D-Link Safeguard Engine™
- IP-MAC-Port Binding (IMPB)
- Microsoft® Network Access Protection
- 802.1X Port-based Access Control
- 802.1X Host-based Access Control
- Guest VLAN
- Simple Network Management Protocol (SNMP)
- Cable Diagnostics

DES-3028

- 10/100BASE-TX x 24
- 10/100/1000BASE-T x 2
- Combo 1000BASE-T/SFP x 2
- Fanless

DES-3028P

- 10/100BASE-TX x 24 (PoE)
- 10/100/1000BASE-T x 2
- Combo 1000BASE-T/SFP x 2
- DC Fan x 2

DES-3052

- 10/100BASE-TX x 48
- 10/100/1000BASE-T x 2
- Combo 1000BASE-T/SFP x 2
- Fanless

DES-3052P

- 10/100BASE-TX x 48 (PoE)
- 10/100/1000BASE-T x 2
- Combo 1000BASE-T/SFP x 2
- DC Fan x 3

Optional Accessories

Gigabit Ethernet SFP Transceivers
DEM-310GT   1000BASE-LX, SMF/MMF, 10km/2km
DEM-311GT   1000BASE-SX, MMF, 550m
DEM-312GT2   1000BASE-SX, MMF, 2km
DEM-314GT   1000BASE-LH, SMF, 50km
DEM-315GT   1000BASE-ZX, SMF, 80km

Gigabit Ethernet WDM SFP Transceivers
DEM-330T/R   1000BASE-BX, SMF, 10km
DEM-331T/R   1000BASE-BX, SMF, 40km

Fast Ethernet SFP Transceivers
DEM-210   100BASE-FX, SMF, 15km
DEM-211   100BASE-FX, MMF, 2km

Fast Ethernet WDM SFP Transceivers
DEM-220T/R   100BASE-BX, SMF, 20km

Management Software
DV-600S   D-View 6.0 Network Management System (Standard Edition)
DV-600P   D-View 6.0 Network Management System (Professional Edition)

DES-3028/52 Series

Model		DES-3028	DES-3028P	DES-3052	DES-3052P
LAN Standard		IEEE 802.3; IEEE 802.3u; IEEE 802.3z; IEEE 802.3ab; IEEE 802.3af (DES-3028P & DES-3052P)			
Port Interface	10BASE-T/100BASE-TX Port (RJ-45)	24	24 (PoE)	48	48 (PoE)
	10BASE-T/100BASE-TX/ 1000BASE-T Port (RJ-45)	2			
	Combo 1000BASE-T/SFP	2			
Stackability	Virtual Stack	D-Link Single IP Management (SIM); Virtual Stack up to 32 Devices			
General Features	Switching Capacity	12.8Gbps		17.6Gbps	
	Maximum Forwarding Rate	9.5Mpps		13.1Mpps	
	Forwarding Mode	Store and Forward			
	Packet Buffer Memory	512KBytes			
	SDRAM for CPU	64MBytes			
	Flash Memory	8MBytes			
	Mean Time Before Failure (MTBF)	248,271 hours	196,033 hours	292,133 hours	169,182 hours
	Console Port	Female RS-232 DB-9 Console Port for Out-of-Band Configuration			
L2 Features		MAC Address Table: 8K; Jumbo Frames: Max. 2,048Bytes; IGMP Snooping v1/v2: 256 Groups, Port-based IGMP Snooping Fast Leave; IGMP Authentication; Limited IP Multicast: Max. 24 IGMP Filtering Profiles, 128 Ranges Per Profile; MLD Snooping v1/v2: 256 Group, MLD Snooping Fast Leave Spanning Tree Protocol (STP): 802.1D-2004 Edition STP, 802.1w Rapid STP, 802.1s Multiple STP, BPDU Filtering, Root Restriction; Loopback Detection (LBD); 802.3ad Link Aggregation: Max. 6 Groups Per Device, Max. 8 Ports Per Group; Port Mirroring: One-to-One, Many-to-One, Flow-based Mirroring; Flow Control: IEEE 802.3x Flow Control, Head-of-Line (HoL) Blocking Prevention			
Virtual LAN (VLAN)		802.1Q Tagged VLAN, VLAN Group: Max. 4K VLAN; Port-based VLAN; Asymmetric VLAN; ISM VLAN; GARP VLAN Registration Protocol (GVRP): Max. 255 Dynamic VLAN; Double VLAN (Q-in-Q): Port-based Q-in-Q			
Quality of Service (QoS)		802.1p Quality of Service; 4 Queues Per Port; Queue Handling: Strict, Weighted Round Robin; CoS based on: Switch Port, VLAN ID, 802.1p Priority Queues, MAC Address, IP Address, DSCP, Protocol Type, TCP/UDP Port, User-Defined Packet Content Bandwidth Control: Port-based (Ingress/Egress, Min. Granularity 64kbps), Flow-based (Ingress, Min. Granularity 64kbps); Time-based QoS			
Access Control List (ACL)		Max. 256 Access Rules; Time-based ACL; CPU Interface Filtering; Traffic Segmentation; ACL based on: 802.1p Priority, VLAN ID, MAC Address, Ether Type, IP Address, DSCP, Protocol Type, TCP/UDP Port Number, User-Defined Packet Content			
Security		Secure Shell (SSH) v2; Secure Sockets Layer (SSL) v1/v2/v3; Port Security: Max. 16 MAC Addresses Per Port; Broadcast/Multicast/Unicast Storm Control; IP-MAC-Port Binding (IMPB): ARP Packet Inspection, IP Packet Inspection, DHCP Snooping, 500 Address Binding Entries Per Device; Microsoft Network Access Protection (NAP): 802.1X NAP, DHCP NAP; D-Link Safeguard Engine			
Authentication, Authorization & Accounting (AAA)		802.1X: Port-based Access Control, Host-based Access Control, Dynamic VLAN Assignment; Guest VLAN, RADIUS Accounting; RADIUS & TACACS+ Authentication for Switch Access			
Management		Web-based GUI; Command Line Interface (CLI); Telnet Server/Client; TFTP Client; Simple Network Management Protocol (SNMP) v1/v2c/v3; SNMP Traps; XModem; ZModem; Remote Monitoring (RMON) v1: 1, 2, 3, 9 Groups; RMON v2: ProbeConfig Group; BootP/DHCP Client; DHCP Auto-Configuration; DHCP Relay; DHCP Relay Option 82; Dual Image; CPU Monitoring; Simple Network Time Protocol (SNTP); System Log; Link Layer Discovery Protocol (LLDP); Debug Command; Cable Diagnostics			
Management Information Base (MIB)		MIB-II (RFC1213); Bridge (RFC1493); SNMPv2 (RFC1907); RMON (RFC1757, 2819); RMONv2 (RFC2021); Ether-Like (RFC1643, 2358, 2665); 802.1p (RFC2674); IF (RFC2233, 2863); Ping & Traceroute (RFC2925); RADIUS Authentication Client (RFC2618); RADIUS Accounting Client (RFC2620); D-Link Private MIB			
Standard Compliance		RADIUS Accounting (RFC2866); RADIUS Authentication For Management Access (RFC2138, 2139); TACACS+ Authentication for Management Access (RFC1492); HTTP (RFC2068); UDP (RFC768); TFTP (RFC783); IP (RFC791); ICMP (RFC792); TCP (RFC793); ARP (RFC826); Telnet (RFC854); SNMP (RFC1157, 1901, 1908, 2570, 2575); RMONv1 (RFC2819); BootP/DHCP (RFC951, 1542); DHCP Relay (RFC3046); System Log (RFC3164, 3195)			
Physical & Environment	Dimension (W x D x H)	19-inch, 1U Rack-Mount; 441 x 207 x 44mm		19-inch, 1U Rack-Mount; 441 x 309 x 44mm	
	Power Input	AC Input: 100-240 VAC, 50/60Hz; Internal Universal Power Supply			
	Power Consumption	18.8W	217W	25.5W	395W
	Power over Ethernet	-	Power Budget: 185W; Per Port up to 15.4W	-	Power Budget: 370W; Per Port up to 15.4W
	Operation Temperature	0 to 40 °C			
	Storage Temperature	-10 to 70 °C			
	Humidity	5% to 95% Non-Condensing			
	Fan	Fanless	2 DC Fans	Fanless	3 DC Fans
Certification	EMI-EMC Compliance	FCC Class A; CE; C-Tick; VCCI Class A			
	Safety Compliance	cUL; LVD			

SFP/XFP Transceivers

D-Link Small Form-Factor Pluggable (SFP) and 10-Gigabit Small Form-Factor Pluggable (XFP) Transceivers can achieve long distance data transmission and high speed communication with single-mode fiber, multi-mode fiber and copper cables. These modules can be installed into switches and media converters.

10-Gigabit Ethernet XFP Transceivers

Model	Type	Standard	Connector	Wavelength	Cable Type	Transmission Distance
DEM-421XT	XFP (10GE)	IEEE 802.3ae 10GBASE-SR	Duplex LC	850nm	Multi-Mode Fiber 50/125μm, 62.5/125μm	300m
DEM-422XT	XFP (10GE)	IEEE 802.3ae 10GBASE-LR	Duplex LC	1310nm	Single-Mode Fiber 9/125μm	10km
DEM-423XT	XFP (10GE)	IEEE 802.3ae 10GBASE-ER	Duplex LC	1550nm	Single-Mode Fiber 9/125μm	40km

Gigabit Ethernet WDM Bi-Directional SFP Transceivers

Model	Type	Standard	Connector	Wavelength	Cable Type	Transmission Distance
DEM-330T[1]	WDM Bi-Directional SFP (1Gbps)	IEEE 802.3z 1000BASE-BX	Simplex LC	TX: 1550nm RX: 1310nm	Single-Mode 9/125μm	10km
DEM-330R[1]	WDM Bi-Directional SFP (1Gbps)	IEEE 802.3z 1000BASE-BX	Simplex LC	TX: 1310nm RX: 1550nm	Single-Mode 9/125μm	10km
DEM-331T[2]	WDM Bi-Directional SFP (1Gbps)	IEEE 802.3z 1000BASE-BX	Simplex LC	TX: 1550nm RX: 1310nm	Single-Mode 9/125μm	40km
DEM-331R[2]	WDM Bi-Directional SFP (1Gbps)	IEEE 802.3z 1000BASE-BX	Simplex LC	TX: 1310nm RX: 1550nm	Single-Mode 9/125μm	40km

[1] DEM-330T & DEM-330R are used as a pair
[2] DEM-331T & DEM-331R are used as a pair

Gigabit Ethernet SFP Transceivers

Model	Type	Standard	Connector	Wavelength	Cable Type	Transmission Distance
DEM-310GT	SFP (1Gbps)	IEEE 802.3z 1000BASE-LX	Duplex LC	1310nm	Single-Mode 9/125 μm Multi-Mode Fiber 50/125μm, 62.5/125μm	SMF: 10km (9/125μm) MMF: 2km (50/125μm)/ 500m (62.5/125μm)
DEM-311GT	SFP (1Gbps)	IEEE 802.3z 1000BASE-SX	Duplex LC	850nm	Multi-Mode Fiber 50/125μm, 62.5/125μm	550m
DEM-312GT2	SFP (1Gbps)	IEEE 802.3z 1000BASE-SX	Duplex LC	1310nm	Multi-Mode Fiber 50/125μm, 62.5/125μm	1km (50/125μm)/ 2km (62.5/125μm)
DEM-314GT	SFP (1Gbps)	IEEE 802.3z 1000BASE-LH	Duplex LC	1550nm	Single-Mode 9/125μm	50km
DEM-315GT	SFP (1Gbps)	IEEE 802.3z 1000BASE-ZX	Duplex LC	1550nm	Single-Mode 9/125μm	80km
DGS-712	Twisted Pair (1Gbps)	IEEE 802.3ab 1000BASE-T	RJ-45	-	-	100m

Fast Ethernet WDM Bi-Directional SFP Transceivers

Model	Type	Standard	Connector	Wavelength	Cable Type	Transmission Distance
DEM-220T[3]	WDM Bi-Directional SFP (100Mbps)	1EEE 802.3ah 100BASE-BX	Simplex LC	TX: 1550nm RX: 1310nm	Single-Mode 9/125μm	20km
DEM-220R[3]	WDM Bi-Directional SFP (100Mbps)	IEEE 802.3ah 100BASE-BX	Simplex LC	TX: 1310nm RX: 1550nm	Single-Mode 9/125μm	20km

[3] DEM-220T & DEM-220R are used as a pair

Fast Ethernet SFP Transceivers

Model	Type	Standard	Connector	Wavelength	Cable Type	Transmission Distance
DEM-210	SFP (100Mbps)	IEEE 802.3u 100BASE-FX	Duplex LC	1310nm	Single-Mode 9/125 μm	15km
DEM-211	SFP (100Mbps)	IEEE 802.3u 100BASE-FX	Duplex LC	1310nm	Multi-Mode Fiber 50/125μm, 62.5/125μm	2km

Carrier Switch vs SFP/XFP Transceiver Compatible Matrix

	10GE XFP			GE WDM Bi-Di SFP				GE SFP						FE WDM Bi-Di SFP		FE SFP	
	DEM-421XT	DEM-422XT	DEM-423XT	DEM-330R	DEM-330T	DEM-331R	DEM-331T	DEM-310GT	DEM-311GT	DEM-312GT2	DEM-314GT	DEM-315GT	DGS-712	DEM-220R	DEM-220T	DEM-210	DEM-211
DES-3028/52 Series	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes
DES-3200 Series	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes
DES-3528/52 Series	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DES-3800 Series	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
DES-7200 Series via Modules	Yes[1]	Yes[1]	Yes[1]	Yes[2]	Yes[2]	Yes[2]	Yes[2]	Yes[2]	Yes[2]	Yes[2]	Yes[2]	Yes[2]	Yes[2]	Yes[2]	Yes[2]	Yes[2]	Yes[2]
DGS-3600 Series (DGS-3612/12G)	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DGS-3600 Series (DGS-3627/27G/50)	Yes[3]	Yes[3]	Yes[3]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
DGS-3700 Series	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

[1] Must use with 7200-2XG, 7200-4XG or 7200-24G2XGE Modules
[2] Must use with 7200-24, 7200-24G, 7200-24P, 7200-48, 7200-48P, 7200-24G2XGE, 7200-24GE, 7200-48E Modules
[3] Must use with DEM-410X Module

Redundant Power Supplies

D-Link redundant power supplies (RPS) are designed to conform to wattage requirements of D-Link switches. These external RPS are enclosed in solid metal cases with sockets to AC or DC power sources on one end and the connectors to the switch's internal power supply on the other end.

Redundant Power Supplies

Model	Output Power	Input Power	Input Frequency	Form Factor	Over Current Protection
DPS-200	60-Watt	90 to 264VAC AC Power Source	47 to 63Hz	Solid Metal Case	Yes
DPS-500	140-Watt	90 to 264VAC AC Power Source	47 to 63Hz	Solid Metal Case	Yes
DPS-500DC	140-Watt	-36 to -72VDC DC Power Source	47 to 63Hz	Solid Metal Case	Yes
DPS-600	500-Watt	90 to 264VAC AC Power Source	47 to 63Hz	Solid Metal Case 19-inch Rack-Mount, 1U Height	Yes

Redundant Power Supply Chassis

Model	No. of RPS Slots	Form Factor	Supported RPS
DPS-800	2	19-inch Rack-Mount, 1U Height	DPS-200; DPS-500; DPS-500DC
DPS-900	8	19-inch Rack-Mount, 5U Height	DPS-200; DPS-500

Redundant Power Supply Accessories

Model	Description	Supported RPS
DPS-CB400	4-Meter Extension Power Cable	DPS-200; DPS-500; DPS-500DC

Carrier Switch vs Redundant Power Supply Compatible Matrix

Switch Model	DPS-200 (60W)	DPS-500 (140W)	DPS-500DC (140W)	DPS-600 (500W)
DES-3528/52 Series				
DES-3528	Yes	-	-	-
DES-3528P	-	-	-	Yes
DES-3552	Yes	-	-	-
DES-3552P	-	-	-	Yes
DES-3800 Series				
DES-3828	Yes	-	-	-
DES-3828P	-	-	-	Yes
DES-3852	Yes	-	-	-
DGS-3600 Series				
DGS-3612	Yes	-	-	-
DGS-3612G	-	Yes	-	-
DGS-3627	-	Yes	Yes	-
DGS-3627G	-	Yes	Yes	-
DGS-3650	-	Yes	Yes	-

Carrier Switches Selection Matrix

	Layer 3 Chassis Switches	Layer 3 xStack Switches		Layer 2 xStack Switches		Layer 2 Managed Switches	
Models	**DES-7200 Series**	**DGS-3600 Series**	**DES-3800 Series**	**DES-3528/52 Series**	**DGS-3700 Series**	**DES-3200 Seriews**	**DES-3028/52 Series**
General							
Maximum Switching Capacity	6-Slot: 192Gbps; 10-Slot: 384Gbps	12-Port: 24Gbps; 27-Port: 108Gbps 50-Port: 136Gbps	28-Port: 12.8Gbps 52-Port: 15.7Gbps	28-Port: 12.8Gbps; 52-Port: 17.6Gbps	24Gbps	10-Port: 5.6Gbps;18-Port: 7.2Gbps 28-Port: 12.8Gbps	28-Port: 12.8Gbps 52-Port: 17.6Gbps
Form Factor	6-Slot: 19-inch 15U Rack-Mount 10-Slot: 19-inch 22U Rack-Mount	19-inch 1U Rack-Mount	19-inch 1U Rack-Mount	19-inch 1U Rack-Mount	19-inch 1U Rack-Mount	10/18-Port: 9-inch 1U Desktop 28-Port: 19-inch 1U Rack-Mount	19-inch 1U Rack-Mount
Fixed 10/100BASE-TX Port	No	No	28-Port: 24; 52-Port: 48	28-Port: 24; 52-Port: 48	No	10-Port: 8; 18-Port: 16; 28-Port: 24	28-Port: 24; 52-Port: 48
10/100/1000BASE-T Port	6-Slot: 192; 10-Slot: 384 (With 7200-48 or 7200-48P)	12-Port: 8; 27-Port:20; 50-Port: 44	All Models: 2	All Models: 2	12-Port: 8	No	All Models: 2
Small Form-Factor Pluggable (SFP) Port	6-Slot: 96; 10-Slot: 192 (With 7200-24G or 7200-24G2XGE)	12-Port G: 8; 27-Port G: 20	No	No	12-Port G: 8	28-Port F: 24	No
Combo 1000BASE-T or SFP Port	6-Slot: 48; 10-Slot: 96 (With 7200-24 or 7200-24G)	All Models: 4	All Models: 2	All Models: 2	All Models: 4	10/18-Port: 2 28-Port: 4	All Models: 2
10G XFP Port	6-Slot: 16; 10-Slot 32 (With 7200-4XG)	12-Port: No; 27/50-Port: Yes (2)	No	No	No	No	No
Module Slot	6-Slot: 4, 10-Slot: 8 (Vertical)	Yes (2)	No	No	No	No	No
Redundant Power Supply	Yes (7200-1200AC, 7200-1200DC, 7200-2000AC)	12-Port: Yes (DPS-200) 27/50-Port: Yes (DPS-500)	28/52-Port: Yes (DPS-200) 28-Port DC: No 28-Port P: Yes (DPS-600)	28/52-Port: Yes (DPS-200) 28-Port DC: No 28-Port P: Yes (DPS-600)	No	No	No
Power over Ethernet (PoE)	24-Port: 7200-24P; 48-Port: 7200-48P	No	Yes (DES-3828P)	Yes (DES-3528P; DES-3552P)	No	No	Yes (DES-3028P; DES-3052P)
Stackability							
Physical Stacking (device) / Max. Bandwidth	No	12-Port: No 27/50-Port: Yes (12) / 40Gbps	No	Yes (8) / 4Gbps	No	No	No
Virtual Stacking Single IP Management (device)	No	Yes (32)	Yes (32)	Yes (32)	Yes (32)	Yes (32)	Yes (32)
Layer 2 Features							
Jumbo Frame (Size)	Yes (9,216bytes)	Yes (9,216bytes)	Yes (9kbytes)	Yes (9,216bytes)	Yes (13,312bytes)	Yes (2,048bytes)	Yes (2,048bytes)
802.1D/802.1w/802.1s Spanning Tree Protocol (STP)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ethernet Ring Protection Switching (E-RPS)	Yes (RERP)	Yes	No	Yes*	Yes	Yes	Yes*
Loopback Detection (LBD)	No	Yes	Yes	Yes	Yes	Yes	Yes
802.3ad Link Aggregation	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Layer 2 Multicast							
Internet Group Management Protocol (IGMP) Snooping	Yes (v1/v2/v3)	Yes (v1/v2/v3)	Yes (v1/v2/v3 awareness)	Yes (v1/v2/v3)	Yes (v1/v2/v3)	Yes(v1/v2/v3 awareness)	Yes (v1/v2)
Multicast Listener Discover (MLD) Snooping	No	Yes (v1/v2)	Yes (v1/v2 awareness)	Yes (v1/v2)	Yes (v1/v2)	Yes (v1/v2 awareness)	Yes (v1/v2 awareness)
Virtual LAN (VLAN)							
802.1v Protocol VLAN Classification	Yes	Yes	Yes	Yes	Yes	Yes	No
Double VLAN (Q-in-Q)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Selective Q-in-Q	Yes	Yes	No	Yes	Yes	Yes	No
Voice VLAN	No	No	No	Yes*	Yes	No	No
IGMP Snooping Multicast (ISM) VLAN	Yes (IVGL/SVGL)	Yes	Yes	Yes	Yes	Yes	Yes
Asymmetric VLAN	No	No	No	Yes	No	Yes	Yes
Layer 3 Features							
Virtual Router Redundancy Protocol (VRRP)	Yes	Yes	Yes	No	No	No	No
IPv6 Tunneling	Yes	Yes	No	No	No	No	No
Layer 3 Routing							
Static Route	Yes	Yes	Yes	Yes*	Yes	No	No
Routing Information Protocol (RIP)	Yes (v1/v2)	Yes (v1/v2)	Yes (v1/v2)	No	No	No	No
Routing Information Protocol Next Generation (RIPng)	Yes	Yes*	No	No	No	No	No
Open Shortest Path First (OSPF)	Yes (v1/v2/v3)	Yes (v2/v3*)	Yes (v2)	No	No	No	No
Border Gateway Protocol (BGP)	Yes	Yes	No	No	No	No	No
Layer 3 Multicasting							
Protocol Information Multicast - Dense Mode (PIM-DM)	Yes	Yes	Yes	No	No	No	No
Protocol Information Multicast - Sparse Mode (PIM-SM)	Yes	Yes	Yes	No	No	No	No
Distance-Vector Multicast Routing Protocol (DVMRP) v3	No	Yes	Yes	No	No	No	No
Internet Group Management Protocol (IGMP)	Yes (v1/v2/v3)	Yes (v1/v2/v3)	Yes	No	No	No	No
Multi-Protocol Label Switching (MPLS)							
VPN Routing and Forwarding (VRF)	Yes* (Enhanced I/O Module/7200-ASE3)	No	No	No	No	No	No
MPLS L3 VPN (MPLS / BGP VPN) & L2 VPN (VPWS / VPLS)	Yes* (With 7200-ASE3)	No	No	No	No	No	No
Quality of Service (QoS)							
Strict Priority	Yes	Yes	Yes	Yes	Yes	Yes	Yes (Highest queue)
Weighted Round Robin (WRR)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strict + WRR	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Random Early Detection (RED)	No	Yes (Weighted RED)	Yes (Weighted RED)	Yes (Stabilized RED)	Yes (Stabilized RED)	No	No
Bandwidth Control (min. granularity)	Yes (64kbps)	Yes (64kbps)	Yes (64kbps)	Yes (64kbps)	Yes (64kbps)	Yes(62.5kbps)	Yes (64kbps)
Three Color Marker	No	Yes	Yes	Yes	Yes	No	No
Access Control List (ACL)							
Access Control List	Yes (Ingress / VLAN-Based) (Egress ACL with Enhanced I/O Module)	Yes	Yes	Yes	Yes	Yes	Yes
Time-based ACL	Yes	Yes	No	Yes	Yes	Yes	Yes
Security							
Port Security (Entries Per Port)	Yes (16)	Yes (64)	Yes (16)	Yes (64)	Yes (128)	Yes (64)	Yes (16)
Broadcast/Multicast/Unicast Storm Control (min. granularity)	Yes (1pps)	Yes (1pps)	Yes (128kbps)	Yes (1pps)	Yes (1pps)	Yes (62.5kbps)	Yes (64kbps)
Traffic Segmentation	Yes (Private VLAN)	Yes	Yes	Yes	Yes	Yes	Yes
IP-MAC-Port Binding (IMPB)	Yes (ARP Inspection, IP Source Guard, DHCP Snooping)	Yes	Yes (v3.3)	Yes	Yes	Yes	Yes
D-Link Safeguard Engine	Yes (CPP)	Yes	Yes	Yes	Yes	Yes	Yes
DHCP Server Screening	No	Yes	No	Yes	Yes	Yes	Yes*
ARP Spoofing Prevention	No	No	No	Yes	Yes	Yes	Yes*
BPDU Attack Protection	Yes (BPDU Guard)	No	No	Yes	Yes	Yes	No
Authentication, Authorization & Accounting (AAA)							
802.1X Access Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Web-based Access Control (WAC)	No	Yes	Yes	Yes	Yes	No	No*
MAC-based Access Control (MAC)	No	Yes	Yes	Yes	Yes	Yes	No*
Microsoft® Network Access Protection (NAP)	Yes*	Yes	Yes	Yes	Yes	Yes	Yes
Guest VLAN	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dynamic VLAN Assignment	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RADIUS & TACACS+ Authentication for Management Access	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Management							
Web GUI, CLI & SNMP	Yes*	Yes	Yes	Yes	Yes	Yes	Yes
Remote Monitoring (RMON)	Yes (v1)	Yes (v1/v2)	Yes (v1/v2)	Yes (v1/v2)	Yes (v1/v2)	Yes (v1/v2)	Yes (v1/v2)
sFlow	Yes*	Yes	No	Yes	Yes	No	No
Link Layer Discovery Protocol (LLDP)	Yes	Yes	No	Yes	Yes	Yes	Yes
D-Link Unidirectional Link Detection (DULD)	No	Yes*	No	Yes*	Yes	No	No
Operations, Administration & Management (OAM)							
802.3ah Ethernet Link OAM	No	No	No	Yes	Yes	Yes	Yes*
802.1ag Connectivity Fault Management (CFM)	No	No	No	Yes	Yes	Yes	No
Certification							
IPv6 Ready Logo	Yes (Phase II)	Yes (Phase II)	No	No	Yes (Phase II)	Yes (Phase II)	No
Metro Ethernet Forum (MEF) Certification	No	Yes (MEF 9, 14)	No	Yes (MEF 9, 14)	Yes (MEF 9, 14)	Yes (MEF 21)	No

* Available in Future Firmware Upgrade

BROADBAND

Devices for use in broadband networking. Products under this category include digital subscriber line (DSL) and IP digital subscriber line access multiplexer (DSLAM) devices, integrated access devices, modems and routers.

ADSL2+ Low Capacity IP DSLAMs

DAS-3224

24-Port IP DSLAM

The IP DSL Access Multiplexers (IP DSLAM) are carrier-class, high performance devices deployed at the service provider CO (central office) side. They provide IP-based broadband access services to ADSL subscribers CPE (consumer premise equipment) in the multi-unit, multi-tenant buildings over the existing telephone line.

- ADSL2/2+ Standard, Annex A (DAS-3224 & DAS-3248)
- ADSL2/2+ & Long Reach DSL, Annex A (DAS-3324)
- IGMP Snooping
- IEEE 802.1Q VLAN
- MAC/IP Filtering
- IEEE 802.1d Spanning Tree
- IEEE 802.3ad Link Aggregation

Physical Features
- ADSL2+ Port with POTS Splitter x 24
- 10/100/1000BASE-T Uplink x 2
- 10/100/1000BASE-T In-band Management x 1

DAS-3248

48-Port IP DSLAM

DAS-3324

24-Port IP DSLAM

Physical Features
- ADSL2+ Port with POTS Splitter x 48
- 10/100/1000BASE-T Uplink x 2
- 10/100/1000BASE-T In-band Management x 1

Physical Features
- ADSL2+ Port with POTS Splitter x 24
- 10/100BASE-FX x 2

ADSL2+ Medium Capacity IP DSLAMs

DAS-4192

The IP DSL Access Multiplexers (DSLAMS) are carrier-class, high performance devices deployed at the service provider CO (central office) side. They provide IP-based broadband access services to ADSL subscribers CPE (consumer premise equipment) in the multi-unit, multi-tenant buildings over the existing telephone line.

- ADSL2/2+ Annex A, B, M, L
- Dual Star Architecture
- IGMP Snooping
- IEEE 802.1Q VLAN

- MAC/IP Filtering
- IEEE 802.1d Spanning Tree
- IEEE 802.3ad Link Aggregation

Physical Features

Network Control Card Slot x 1
I/O Module Slot x 4
Alarm and Fan Module Slot x 2
Redundant Power Support

Optional Accessories

Modules

DAS-4192-10	Network Control Card with 2 Gigabit Uplinks
DAS-4192-20	ADSL2+ Line Card with 48 ADSL Ports
DAS-4192-30	Line Card Dummy Panel
DAS-4192-40	POTS Splitter Card with 48 Splitter Ports
DAS-4192-50	POTS Splitter Card Dummy Panel
DAS-4192-60	POTS Splitter Chassis

ADSL2+ High Capacity IP DSLAMs

DAS-4672

The IP DSL Access Multiplexers (DSLAMS) are carrier-class, high performance devices deployed at the service provider CO (central office) side. They provide IP-based broadband access services to ADSL subscribers CPE (consumer premise equipment) in the multi-unit, multi-tenant buildings over the existing telephone line.

- ADSL2/2+ Annex A, B, M, L
- Dual Star Architecture
- IGMP Snooping
- IEEE 802.1Q VLAN

- MAC/IP Filtering
- IEEE 802.1d Spanning Tree
- IEEE 802.3ad Link Aggregation

Physical Features

I/O Module Slot x 12
Alarm and Fan Module Slot x 2
Redundant Network Control Card Slot x 2
Dual Power Supplies

Optional Accessories

Modules

DAS-4672-10	ADSL2+ Line Card with 2 Gigabit Uplinks
DAS-4672-20	ADSL2+ Line Card with 48 ADSL Ports
DAS-4672-30	Line Card Dummy Panel
DAS-4672-40	POTS Splitter Card with 48 Splitter Ports
DAS-4672-50	POTS Splitter Card Dummy Panel

ADSL2+ Modems & Routers

The ADSL2+ modems and routers are high-speed Internet connection devices that provide speeds of up to 24Mbps downstream and 1Mbps upstream. These speeds are suitable for high-speed multimedia Internet applications such as streaming video and voice over the Internet.

DSL-320B

ADSL2+ Ethernet Modem

Main Features
- ADSL2/2+ Standards (Annex A)

DSL-500B

1-Port ADSL2+ Router

Main Features
- ADSL2/2+ Standards (Annex A)
- Stateful Packet Inspection (SPI)

DSL-524B

4-Port ADSL2+ Router

Main Features
- ADSL2/2+ Standards (Annex A)
- Stateful Packet Inspection (SPI)

DSL-2640B

4-Port ADSL2+ Wireless G Router

Main Features
- ADSL2/2+ Standards (Annex A)
- MAC-based Access Control
- Stateful Packet Inspection (SPI)

Physical Features
- 2dBi Dipole Antenna x 1
- Detachable Antenna with RP-SMA Interface

ADSL2+ Modems & Routers

DSL-2740B

4-Port ADSL2+ Wireless N Router
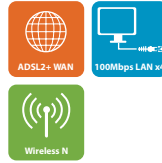
ADSL2+ WAN   **100Mbps LAN x4**

Wireless N

Main Features
- ADSL2/2+ Standards (Annex A)
- Operate at 2.4GHz frequency band
- 2T2R High Speed 300Mbps
- MAC/IP-based Accesss Control
- Domain/URL Filtering
- Scheduling Parental Control
- Stateful Packet Inspection (SPI)

Physical Features
- 2dBi Non-Detachable Dipole Antenna x 2

DSL-2750B

4-Port ADSL2+ Wireless N Router

ADSL2+ WAN   **100Mbps LAN x4**

Wireless N   **USB 2.0 x 1**

Main Features
- ADSL2/2+ Standards (Annex A)
- Operate at 2.4GHz frequency band
- 2T2R High Speed 300Mbps
- D-Link's Innovative Green Ethernet technology
- Storage, Printer and 3G USB Sharing
- SharePort
- MAC/IP-based Accesss Control
- Domain/URL Filtering
- Scheduling Parental Control
- Stateful Packet Inspection (SPI)

Physical Features
- 2dBi Dipole Antenna x 2
- Detachable Antenna with RP-SMA Interface

VDSL2 Switches & Routers

VDSL2 (Very-High-Bit-Rate Digital Subscriber Line 2) is an ITU-T G.993.2 standard and access technology that exploits the existing infrastructure of telephone copper wires that are present in every home, office building, factory, and public premise. VDSL2 can be deployed from the telephone company and service provider central offices, from fiber-fed cabinets located near the customer premises, or within buildings.

DAS-3626

VDSL2 Switch

Main Features
- 6-Band (30MHz, 100/100Mbps)
- 5-Band (17MHz, 100/50Mbps)
- Discrete Multi-Tone (DMT) modulation
- G.993.2 limit PSD mask
- Embedded Operation Channel (EOC) & Indicator Bits Channel (IB)
- Support DELT & SELT

Physical Features
- 24-Port VDSL2 Line
- 10/100/1000BASE-T/SFP x 2
- Built-in POTS Splitter
- Alarm I/O x 4
- Dual AC and DC Power

DSL-6541i

VDSL2 Router

100Mbps LAN x4 **USB 2.0 x 1**

Main Features
- 6-Band (30MHz, 100/100Mbps)
- NAT, DHCP Server, IP Multicast
- Quality of Service (QoS)
- Stateful Packet Inspection (SPI)
- Denial of Service (DoS)

Physical Features
- VDSL2 Port x 1

DSL-6541K

VDSL2 Router
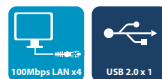
100Mbps LAN x4 **USB 2.0 x 1**

Main Features
- 6-Band (30MHz, 100/100Mbps)
- NAT, DHCP Server, IP Multicast
- Quality of Service (QoS)
- Stateful Packet Inspection (SPI)
- Denial of Service (DoS)

Physical Features
- VDSL2 Port x 1

DSL-6640B

VDSL2 Wireless G Router

100Mbps LAN x4 **USB 2.0 x 1** **Wireless G**
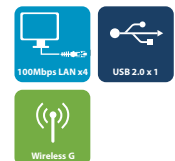
Main Features
- 5-Band (17MHz, 100/50Mbps)
- NAT, DHCP Server, IP Multicast
- Quality of Service (QoS)
- Stateful Packet Inspection (SPI)
- Denial of Service (DoS)

Physical Features
- VDSL2 Port x 1

VDSL2 Switches & Routers

DSL-6641i

VDSL2 Wireless G Router

100Mbps LAN x4 **USB 2.0 x 1** **Wireless G**

Main Features

- 6-Band (30MHz, 100/100Mbps)
- NAT, DHCP Server, IP Multicast
- Quality of Service (QoS)
- Stateful Packet Inspection (SPI)
- Denial of Service (DoS)

Physical Features

- VDSL2 Port x 1

DSL-6740B

VDSL2 Wireless N Router

100Mbps LAN x4 **USB 2.0 x 1** **Wireless N**

Main Features

- Operate at 2.4GHz frequency band
- 2T2R High Speed 270Mbps
- 5-Band (17MHz, 100/50Mbps)
- NAT, DHCP Server, IP Multicast
- Quality of Service (QoS)
- Stateful Packet Inspection (SPI)
- Denial of Service (DoS)

Physical Features

- VDSL2 Port x 1

DSL-6741i

VDSL2 Wireless N Router

100Mbps LAN x4 **USB 2.0 x 1** **Wireless N**

Main Features

- Operate at 2.4GHz frequency band
- 2T2R High Speed 270Mbps
- 6-Band (30MHz, 100/100Mbps)
- NAT, DHCP Server, IP Multicast
- Quality of Service (QoS)
- Stateful Packet Inspection (SPI)
- Denial of Service (DoS)

Physical Features

- VDSL2 Port x 1

Integrated Access Devices (IADs)

An IAD provides all the functions that your home needs to establish a fast, secure Internet connection and to make and receive Internet calls. It also supports multiple priority queues to enable a group of home or office users to experience the benefit of smooth network connection of inbound and outbound data without concern of traffic congestion. This QoS support allows users to enjoy high ADSL2+ or VDSL transmission for applications such as VoIP, streaming multimedia and on-line games over the Internet.

DVA-G3170i
Wireless G ADSL2+ IAD
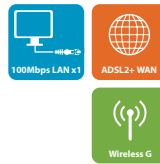
100Mbps LAN x1 | **ADSL2+ WAN** | **Wireless G**

Main Features
- Session Initiation Protocol (SIP)
- Network Address Translation (NAT)
- PPTP/L2TP/IPSec Pass-Through
- Quality of Service (QoS)
- DoS Attack Prevention
- Stateful Packet Inspection (SPI)

Physical Features
- FXS RJ-11 Port x 1
- FXO RJ-11 Port x 1

DVA-G3670B
Wireless G ADSL2+ IAD
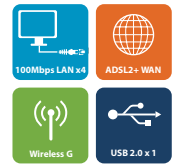
100Mbps LAN x4 | **ADSL2+ WAN** | **Wireless G** | **USB 2.0 x 1**

Main Features
- Session Initiation Protocol (SIP)
- Network Address Translation (NAT)
- PPTP/L2TP/IPSec Pass-Through
- Quality of Service (QoS)
- DoS Attack Prevention
- Stateful Packet Inspection (SPI)

Physical Features
- FXS RJ-11 Port x 2
- FXO RJ-11 Port x 1

DVA-N3260B
Wireless N ADSL2+ IAD
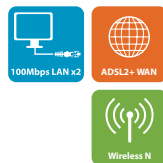
100Mbps LAN x2 | **ADSL2+ WAN** | **Wireless N**

Main Features
- 2T2R High Speed 300Mbps
- Session Initiation Protocol (SIP)
- Network Address Translation (NAT)
- PPTP/L2TP/IPSec Pass-Through
- Quality of Service (QoS)
- DoS Attack Prevention
- Stateful Packet Inspection (SPI)
- Wireless up to 300Mbps data rate

Physical Features
- FXS RJ-11 Port x 1
- FXO RJ-11 Port x 1

DVA-N3670B
Wireless N ADSL2+ IAD

100Mbps LAN x4 | **ADSL2+ WAN** | **Wireless N** | **USB 2.0 x 1**

Main Features
- 2T2R High Speed 300Mbps
- Session Initiation Protocol (SIP)
- Network Address Translation (NAT)
- PPTP/L2TP/IPSec Pass-Through
- Quality of Service (QoS)
- DoS Attack Prevention
- Stateful Packet Inspection (SPI)
- Wireless up to 300Mbps data rate

Physical Features
- FXS RJ-11 Port x 2
- FXO RJ-11 Port x 1

DVA-G3810BN
Wireless HomePNA IAD

100Mbps WAN | **100Mbps LAN x4** | **ADSL2+ WAN** | **Wireless G**
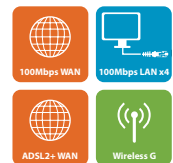
Main Features
- Session Initiation Protocol (SIP)
- QoS for Voice, Video, and Data
- Remote Management
- IPSec, PPTP, L2TP VPN
- Stateful Packet Inspection (SPI)
- Network Address Translation (NAT)
- IEEE 802.1x Authentication
- VoIP (RTP/RTCP)
- Dual WAN

Physical Features
- FXS RJ-11 Port x 1
- HPNA v3.1 Coaxial Port x 1
- USB2.0 Port for NAS x 1

Wireless Routers

These wireless routers allow users to create a secure wireless network to share Internet access. In compliance with wireless LAN standards IEEE 802.11g, n 150 and n, they are suitable for use in homes, offices, factories and public premises.

DIR-300
Wireless G Router

100Mbps WAN | **100Mbps LAN x4**
Wireless G
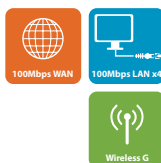
Main Features
- Quality of Service (QoS)
- Parental Control
- Stateful Packet Inspection (SPI)
- IPv6 Ready

Physical Features
- 2dBi Dipole Antenna x 1
- Detachable Antenna with RP-SMA Interface

DIR-320
Wireless G Router

100Mbps LAN x4 | **Wireless G**
USB 2.0 x 1
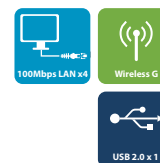
Main Features
- USB Printer Sharing supporting Windows, Mac OS, Unix LPR
- Quality of Service (QoS)
- Parental Control
- Stateful Packet Inspection (SPI)

Physical Features
- 2dBi Dipole Antenna x 1
- Detachable Antenna with RP-SMA Interface
- USB2.0 for WCN and Printer Connection

DIR-600
Wireless N 150 Router

100Mbps WAN | **100Mbps LAN x4**
Wireless N
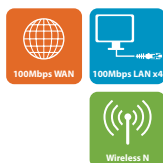
Main Features
- Operate at 2.4GHz frequency band
- 1T1R High Speed 150Mbps
- Network Address Translation (NAT)
- Stateful Packet Inspection (SPI)
- Multiple PPTP/L2TP/IPSec VPN Pass-Through
- IPv6 Ready

Physical Features
- 2dBi Dipole Antenna x 1
- Detachable Antenna with RP-SMA Interface

DIR-615
Wireless N Router
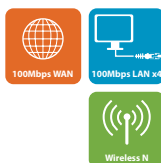
100Mbps WAN | **100Mbps LAN x4**
Wireless N

Main Features
- Operate at 2.4GHz frequency band
- 2T2R High Speed 300Mbps
- MAC/IP-based Accesss Control
- Parental Control
- Stateful Packet Inspection (SPI)
- Security function can be configured by users
- Wi-Fi Protected Setup (WPS)
- IPv6 Ready

Physical Features
- 2dBi Non-Detachable Dipole Antenna x 2

DIR-635
Wireless N Router

100Mbps WAN | **100Mbps LAN x4**
USB 2.0 x 1 | **Wireless N**

Main Features
- Operate at 2.4GHz frequency band
- 2T3R High Speed 300Mbps
- MAC/IP-based Access Control
- Domain/URL Filtering
- Scheduling Parental Control
- Stateful Packet Inspection (SPI)
- Wi-Fi Protected Setup (WPS)

Physical Features
- 2dBi Dipole Antenna x 3
- Detachable Antenna with RP-SMA Interface

Wireless Routers

DIR-655

Wireless N Gigabit Router

Main Features

- Operate at 2.4GHz frequency band
- 2T3R High Speed 300Mbps
- WMM and StreamEngine Intelligent QoS technology
- MAC/IP-based Access Control
- Domain/URL Filtering
- Scheduling Parental Control
- Stateful Packet Inspection (SPI)
- Wi-Fi Protected Setup (WPS)

Physical Features

- 2dBi Dipole Antenna x 3
- Detachable Antenna with RP-SMA Interface

DIR-825

Wireless N Gigabit Router

Main Features

- Operate at 2.4GHz and 5GHz frequency band
- 2T2R High Speed 300Mbps
- WMM and StreamEngine Intelligent QoS technology
- MAC/IP-based Access Control
- Domain/URL Filtering
- Scheduling Parental Control
- Stateful Packet Inspection (SPI)
- Wi-Fi Protected Setup (WPS)
- IPv6 Ready

Physical Features

- 2dBi Dipole Antenna x 3
- Detachable Antenna with RP-SMA Interface

Cable Modems

The cable modems connect computers and remote routers to a broadband network, providing a standard-based solution for high-speed Internet access. These devices bridge radio-wave-like signals over the cable TV wiring to a standard Ethernet interface. Powered by TurboDOX bandwidth acceleration software, the cable modems increase download speeds at up to 20 times for home users' enjoyment of popular Internet applications, such as file sharing, audio and video streaming, Internet TV and website uploading.

DCM-202

DOCSIS 2.0 Cable Modem

100Mbps LAN x1   USB 1.1 x 1

Main Features
- DOCSIS 2.0/EuroDOCSIS 2.0 CableLabs compliant
- Support Windows (Ethernet & USB)
- Support Mac OS & Unix/Linux (Ethernet only)
- TFTP software download

Physical Features
- Coaxial (Female) Port x 1

DCM-312

DOCSIS 2.0 Cable Modem

100Mbps LAN x1   USB 1.1 x 1

LAN   FXS RJ-11 x 2

Main Features
- DOCSIS 2.0/EuroDOCSIS 2.0 CableLabs compliant
- Packet Cable 1.5 CableLabs certified
- Session Initiation Protocol (SIP)
- Voice compression
- Support TFTP software download

Physical Features
- Coaxial (Female) Port x 1

DCM-604

DOCSIS 2.0 Cable Modem

100Mbps LAN x4   USB 1.1 x 1

LAN   FXS RJ-11 x 2   Wireless G

Main Features
- DOCSIS 2.0/EuroDOCSIS 2.0 CableLabs compliant
- Packet Cable 1.5 CableLabs certified
- Session Initiation Protocol (SIP)
- QoS Management

Physical Features
- Coaxial (Female) Port x 1

DCM-301

DOCSIS 3.0 Cable Modem

1Gbps LAN x1

Main Features
- DOCSIS 3.0 /EuroDOCSIS 3.0 CableLabs compliant
- Downstream speed up to 320Mbps; upstream speed up to 120Mbps
- SNMP Management
- IP Address Filtering
- IPv6 Ready

Physical Features
- Coaxial (Female) Port x 1

Cable Modems

DCM-702

DOCSIS 3.0 Cable Modem

Main Features
- DOCSIS 3.0 /EuroDOCSIS 3.0 CableLabs compliant
- QoS enhancement
- Wi-Fi Protected Setup (WPS)
- IPv6 Ready
- IPSec VPN Pass-Through
- Stateful Packet Inspection (SPI)

Physical Features
- Coaxial (Female) Port x 1

DCM-704B

DOCSIS 3.0 Cable Modem

Main Features
- DOCSIS 3.0 /EuroDOCSIS 3.0 CableLabs compliant
- Packet Cable 1.5 CableLabs certified
- Session Initiation Protocol (SIP)
- QoS Enhancement
- Wi-Fi Protected Setup (WPS)
- Support Multi-SSID

Physical Features
- Coaxial (Female) Port x 1

DCM-712

DOCSIS 3.0 Cable Modem

Main Features
- DOCSIS 3.0 /EuroDOCSIS 3.0 CableLabs compliant
- Packet Cable 1.5 CableLabs certified
- Session Initiation Protocol (SIP)

Physical Features
- Coaxial (Female) Port x 1

Voice over IP (VoIP)

The VoIP devices allow homes and businesses to take advantage of their DSL/cable modem connection to make inexpensive Internet phone calls. Through broadband connection, these devices allow users to access voice and fax services over the Internet to significantly reduce the cost of international and long distance calls.

DVG-2102S

VoIP Terminal Adapter

100Mbps LAN x1   FXS RJ-11 x 2   LAN

Main Features
- Session Initiation Protocol (SIP) v2
- Echo Cancellation
- VPN Pass-Through
- L2TP / PPTP Client
- NAT Traversal
- Quality of Service (QoS)
- Interactive Voice Response (IVR)

DVG-7111S

VoIP Terminal Adapter
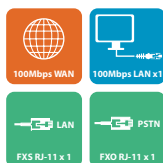
100Mbps WAN   100Mbps LAN x1
FXS RJ-11 x 1 LAN   FXO RJ-11 x 1 PSTN

Main Features
- Session Initiation Protocol (SIP) v2
- Echo Cancellation
- VPN Pass-Through
- L2TP / PPTP Client
- NAT Traversal
- Quality of Service (QoS)
- Interactive Voice Response (IVR)
- Recordable Greeting Message (FXO)
- Emergency Number Table (FXO)

DVG-2016S

16-Port VoIP Station Gateway

100Mbps WAN   100Mbps LAN x1

Main Features
- Session Initiation Protocol (SIP) v2
- Echo Cancellation
- NAT Traversal
- Quality of Service (QoS)
- PPPoE, DHCP, Static IP
- VPN Pass-Through
- HTTPS & SSL/TLS

Physical Features
- 16 FXS ports in 1 RJ-21 connector

DVG-2032S

32-Port VoIP Station Gateway

100Mbps WAN   100Mbps LAN x1

Main Features
- Session Initiation Protocol (SIP) v2
- Echo Cancellation
- NAT Traversal
- Quality of Service (QoS)
- PPPoE, DHCP, Static IP
- VPN Pass-Through
- HTTPS & SSL/TLS

Physical Features
- 32 FXS ports in 2 RJ-21 connector

Voice over IP (VoIP)

DVG-5004S

4-Port VoIP Station Gateway
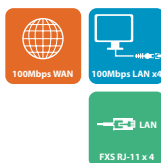
100Mbps WAN | **100Mbps LAN x4** | **FXS RJ-11 x 4 LAN**

Main Features
- Session Initiation Protocol (SIP) v2
- Echo Cancellation
- NAT Traversal
- Quality of Service (QoS)
- PPPoE, DHCP, Static IP
- Static Routing
- VPN Pass-Through
- HTTPS & SSL/TLS

DVG-5008S

8-Port VoIP Station Gateway
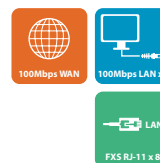
100Mbps WAN | **100Mbps LAN x4** | **FXS RJ-11 x 8 LAN**

Main Features
- Session Initiation Protocol (SIP) v2
- Echo Cancellation
- NAT Traversal
- Quality of Service (QoS)
- PPPoE, DHCP, Static IP
- Static Routing
- VPN Pass-Through
- HTTPS & SSL/TLS

DVG-6004S

4-Port VoIP Trunk Gateway
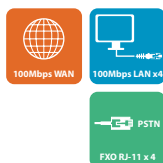
100Mbps WAN | **100Mbps LAN x4** | **FXO RJ-11 x 4 PSTN**

Main Features
- Session Initiation Protocol (SIP) v2
- Echo Cancellation
- NAT Traversal
- Quality of Service (QoS)
- PPPoE, DHCP, Static IP
- Static Routing
- VPN Pass-Through
- HTTPS & SSL/TLS

DVG-6008S

8-Port VoIP Trunk Gateway
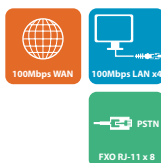
100Mbps WAN | **100Mbps LAN x4** | **FXO RJ-11 x 8 PSTN**

Main Features
- Session Initiation Protocol (SIP) v2
- Echo Cancellation
- NAT Traversal
- Quality of Service (QoS)
- PPPoE, DHCP, Static IP
- Static Routing
- VPN Pass-Through
- HTTPS & SSL/TLS

DVG-7022S

4-Port VoIP Gateway
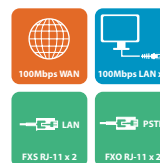
100Mbps WAN | **100Mbps LAN x4** | **FXS RJ-11 x 2 LAN** | **FXO RJ-11 x 2 PSTN**

Main Features
- Session Initiation Protocol (SIP) v2
- Echo Cancellation
- NAT Traversal
- Quality of Service (QoS)
- PPPoE, DHCP, Static IP
- Static Routing
- VPN Pass-Through
- HTTPS & SSL/TLS

Voice over IP (VoIP)

DVG-5402SP
VoIP Router

Main Features
- Session Initiation Protocol (SIP) v2
- Echo Cancellation
- NAT Traversal
- Quality of Service (QoS)
- Interactive Voice Response (IVR)
- Automatic Provisioning

DVG-G5402SP
VoIP Wireless Router

Main Features
- Session Initiation Protocol (SIP) v2
- Echo Cancellation
- NAT Traversal
- Quality of Service (QoS)
- Interactive Voice Response (IVR)
- Automatic Provisioning

Physical Features
- IEEE 802.11g Wireless LAN

DVG-N5402SP
VoIP Wireless Router

Main Features
- Session Initiation Protocol (SIP) v2
- Echo Cancellation
- NAT Traversal
- Quality of Service (QoS)
- IEEE 802.1Q VLAN
- IGMP Snooping
- Wi-Fi Protected Setup (WPS) Button

Physical Features
- IEEE 802.11n 2.0 (2T2R)
- USB2.0 Port for 3G backup x 1

Passive Optical Network (PON)

Gigabit Passive Optical Network (GPON) devices deliver high-speed voice, data and video services to residential and business subscribers. They present a high-speed, Fiber-To-The-Home/Building (FTTH/FTTB) and extremely cost-effective alternative to conventional access equipment, reducing points of failure and simplifying network architecture.

DPN-5402

GPON Optical Network Terminal

1Gbps LAN x4 | FXS RJ-11 x 2

Main Features

- Full ITU-T G.984.x set ONT functionality
- Configurable AES Encryption
- Layer2 802.1D Transparent Bridge
- Port-based VLANs

Physical Features

- GPON (U:1310nm, D:1490nm) x 1

RURAL CONNECTIVE PLATFORM

A platform for wireless connectivity suitable for implementation in remote places. Products under this category include outdoor wireless bridges.

Outdoor Wireless Bridges

D-Link Long Distance Wireless Outdoor Bridge is designed to provide long distance wireless connectivity in areas where a wired network infrastructure is prohibitive. The integrated Intel® IXP Networking Processor operates on non-licensed spectrums, offering low cost, durable, and reliable outdoor wireless broadband connectivity. When operating with an unobstructed line-of-sight, the D-Link wireless backhaul solution is able to achieve connections at distances of up to 40km. These impressive ranges are possible through the application of a TDMA modification to the MAC layer of standard IEEE 802.11.

DAP-3760

Long Distance Outdoor Wireless Bridge

Main Features
- Long-range throughput up to 8Mbps
- Point-to-Point Bridge up to 40km
- Alternative to backhaul solutions such as WiMAX and GSM
- Wireless installation for remote areas that cannot be reached by cable
- Connect rural area to Internet

Physical Features
- 10/100BASE-TX x 1 (PoE)
- 23dBi Internal Directional Antenna
- Robust, waterproof outdoor unit built to withstand the elements

Optional Accessories:
- ANT70-SP (Antenna Surge Protector)

DAP-3860

Long Distance Outdoor Wireless Bridge

Main Features
- Long-range throughput up to 8Mbps
- Relay function to extend distance up to 120km
- Alternative to backhaul solutions such as WiMAX and GSM
- Wireless installation for remote areas that cannot be reached by cable
- Connect rural area to Internet

Physical Features
- 10/100BASE-TX x 1 (PoE)
- 23dBi Internal Directional Antenna
- 23dBi Detachable Directional Antenna x 1
- Robust, waterproof outdoor unit built to withstand the elements

Optional Accessories:
- ANT70-SP (Antenna Surge Protector)

DIGITAL HOME

Appliances for a digital lifestyle to store, secure, and entertain. Products under this category include network storage, IP surveillance and multimedia.

Network Storage

D-Link Network Attached Storage (NAS) enclosures enable the addition of disk storage devices to the network for sharing documents, files and digital media such as music, video and photographs. NAS enclosures are ideal for server deployment in office and business settings, and can add up to four internal SATA drives on a per need basis to fulfill storage requirements as the business grows. Remote access to files via the Internet is also possible through the built-in FTP server. Administrators can set access privileges for users, groups or folders according to their respective rights.

DNS-313

1-Bay Network Storage Enclosure

1Gbps LAN x1   **USB 2.0 x 1**

Main Features
- Operate in Windows environment
- Used as a NAS or a portable hard disk drive directly attached to PC USB port
- Support P2P download

Physical Features
- Open Bay for 3.5" SATA Hard Drive x 1
- USB2.0 Port x 1
- Built-in iTunes & FTP Servers

DNS-323

2-Bay Network Storage Enclosure

1Gbps LAN x1   **USB 2.0 x 1**

Main Features
- Support Standard, JBOD, RAID 0, RAID 1 drive modes
- Operate in Windows, Mac OS and Linux environments
- Support P2P download

Physical Features
- Open Bay for 3.5" SATA Hard Drive x 2
- USB2.0 Print Server Port x 1
- Built-in FTP Server

DNS-343

4-Bay Network Storage Enclosure

1Gbps LAN x1   **USB 2.0 x 1**

Main Features
- Support Standard, JBOD, RAID 0, RAID 1, RAID 5 drive modes
- Operate in Windows, Mac OS and Linux environments
- Support P2P download

Physical Features
- Open Bay for 3.5" SATA Hard Drive x 4
- USB2.0 Port x 1
- Built-in FTP Server
- OLED Display Screen

IP Surveillance

The network cameras let users watch and listen remotely from anywhere. They connect to an Ethernet wired and wireless network at home, in a building, factory or campus, and via broadband to the Internet. Equipped with versatile features such as video zoom, audio/video recording and multi-camera monitoring, these cameras provide a comprehensive security system for surveillance of home and business premises.

DCS-1130

Wireless N
Network Camera

100Mbps LAN x1 · **Wireless N** · **16x Digital Zoom** · **Built-in Microphone**

Main Features
- MJPEG, MPEG4 video format
- Motion detection
- Video output to 3GPP
- Recording to NAS
- Support Java
- Wi-Fi Protected Setup (WPS)

Physical Features
- 1/4" CMOS Sensor
- Fixed Lens

DCS-2121

Wireless G
Network Camera

100Mbps LAN x1 · **Wireless G** · **16x Digital Zoom** · **Built-in Microphone**

Main Features
- MJPEG, MPEG4 video format
- Motion detection
- 2-way audio
- Video output to 3GPP
- Recording to NAS
- Support Java
- Wi-Fi Protected Setup (WPS)

Physical Features
- 1/4" Megapixel CMOS Sensor
- Fixed Lens
- DI/DO Interface
- SD Card Slot

Multimedia

These multimedia devices unite a home network with the home entertainment center, allowing users to share, access, and enjoy digital multimedia in the comfort of the living room. They connect to the television and let users access digital media content stored in the PC or a network attached storage, browse music files, watch videos and view digital photos. They also allow users to access online media contents on the TV through a home broadband Internet connection. Users can listen to high quality digital music on a stereo system, share digital photos with friends and family, and watch their favorite high-definition digital videos on a TV screen.

DSM-210

Wireless Internet Photo Frame

| 100Mbps LAN x1 | USB 2.0 x 1 |
| Wireless G | |

Main Features
- UPnP AV photo sharing
- Motion detection for LCD power on/off
- Online media contents portal (dlink.framechannel.com)
- Wireless WPS PIN/PBC
- PC Yahoo widget
- 1GB internal memory

Physical Features
- SD/MS Card Reader
- 10" Wireless Internet Photo Frame

DSM-302

D-Link Pebble Full HD Media Player

| 100Mbps LAN x1 | USB 2.0 x 1 |

Main Features
- Display available album art
- Stream media content from UPnPAV (DLNA) NAS/server
- Play media file from storage of USB2.0 and card reader

Physical Features
- SD/xD/MS Card Reader
- Remote Control
- Full HD 1080P Output
- HDMI Interface
- SPDIF Optical Audio Output
- Intuitive Animated TV Interface

D-Link Green™
For A Healthier Planet

We at D-Link are committed to our social responsibility to help protect our environment. We are taking the initiative to improve on going green from three angles; to comply with green standards through meeting various certifications, reduce wastage and harmful chemicals through green packaging, and energy saving from green technology.

Certification

D-Link actively works to reduce energy consumption, consciously striving to create products that fit within standards for a better environment. D-Link's current list of certifications includes the following:

• ENERGY STAR
• ISO 14001
• ISO 9001
• RoHS
• TÜV STAR

Green Packaging

D-Link has adopted a green approach for packaging objectives. New compact packaging designs and eco-friendly materials result in notable reductions in materials used which improve shipping efficiency.
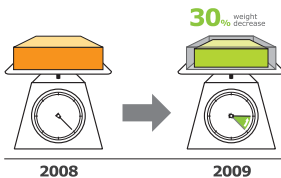
Packaging Size

The new revisions for consumer products have generally resulted in more than 30% decrease in the total weight of packaging materials.

Soy Ink

Use of the American Soy Bean Association-IM Soy Ink Seal certifies that D-Link recognizes its value as a renewable resource and alternative to petroleum-based inks.

Package Materials

Product boxes are now printed using eco-friendly soy ink derived from natural ingredients as opposed to traditional petroleum-based ink. In addition to being more biodegradable and easier to recycle, images and print appear brighter than traditional ink.

D-Link uses an inner paper tray made of 100% reprocessed paper pulp. The outer box is recyclable.

The majority of printed materials included with the package use wood-free paper, and are printed in monochrome (black/white) rather than full spectrum.

Green Technology

D-Link is the first company to create green switching technology. From that point, we have focused our efforts to expand the use of green technology throughout all of our product lines. D-Link Green Technology includes a number of innovations to reduce energy consumption.

Power Savings

Wi-Fi Scheduler

SharePort

Smart Fan

Power Savings by Link Status
When a computer or network equipment is shut down, switches often remain on and continue to consume considerable amounts of power. D-Link Green Technology allows switches to automatically detect link status and reduce power usage of ports that are idle.

Power Savings by Cable Length Detection
D-Link Green verified switches have the ability to analyze the length of any Ethernet cable connected to them for adjustment of power usage accordingly. Shorter lengths require less power.

Time-Based Power over Ethernet (PoE)
Time-based PoE optimization turns PoE on or off based on a schedule to save power. When PoE devices are not in use (that is during the night, or on the weekend), PoE can be disabled until needed.

Wi-Fi Scheduler
Scheduled Wireless allows administrators to configure specific hours when the wireless network will be powered off to save energy and enhance security.

SharePort
SharePort technology saves power by eliminating the need to connect a printer or storage device to a dedicated PC or print server.

LCD Standby
Devices with LCDs such as photo frames and storage routers include a feature to automatically disable the screen/backlight when no motion or activity is detected.

Power Saving by Hard Drives Hibernation
In conventional network attached storage (NAS) systems, hard drives are constantly spinning even when they are not actively being accessed. With green hard drive power management, the hard drive is automatically powered down during periods of inactivity, saving power, reducing heat and prolonging the life of the equipment.

Smart FAN
Conventionally, fans in network equipment run constantly regardless of whether they are needed or not. D-Link Green makes use of Smart Fan technology to automatically turn off or lower the speed of the fan to reduce noise and power consumption whenever system temperatures are low.

Fanless
Switch designs usually require a fan to cool the device down. By adopting advanced design, the device is kept cool without the need of a fan.

PLC (Power Line Communication) Power Saving
Energy powers down when no Ethernet activity is detected by the device.

Digital Photo Frame Power Saving (Motion Detection Sensor)
Rather than constantly powering a device, the motion detection sensor detects if people are within the vicinity. When users are not present, the device automatically turns off to minimize energy consumption.

Wireless On/Off Button
Even when wireless connection is not needed it is still active. This feature allows users to simply turn off the function, which saves energy.

Power On/Off Button
The Power On/Off button allows users to turn off their router/gateway when not in use. This feature allows users to simply switch off their device rather than physically unplugging the power cord.

Wireless Output Power Management
Tri-level Wi-Fi transmit power setting provides the flexibility to control the Wi-Fi Transmit power to optimize the wireless range. Wi-Fi power consumption for a router or gateway could be reduced by up to 75% of its peak power consumption for serving a small to medium size home, while boosted to maximum power for large homes and businesses.

Wake on LAN
Allows the device to be turned on or woken up by a network message.

D-Link Green devices are about providing eco-friendly alternatives without compromising performance.

Worldwide Offices

Headquarters
No. 289 Xinhu 3rd Road
Neihu, Taipei 114
Taiwan
TEL: +886-2-6600-0123
FAX: +886-2-6600-9898
URL: www.dlink.com.tw

Singapore
(International Headquarters)
1 International Business Park
#03-12 The Synergy
Singapore 609917
TEL: +65-6774-6233
FAX: +65-6774-6322
URL: www.dlink-intl.com

Australia
Building A, Level 3, 11 Talavera Road
North Ryde, NSW 2113
Australia
TEL: +61-2-8899-1800
FAX: +61-2-8899-1868
URL: www.dlink.com.au

Austria
Millennium Tower
Handelskai 94-96, A-1200 Wien
Austria
TEL: +43-1-240-27270
FAX: +43-1-204-27271
URL: www.dlink.at

Belgium & Luxemburg
D-Link BNL
Humaniteitslaan 233
1620 Drogenbos
Belgium
TEL: +32(0)2-517-7111
FAX: +32(0)2-517-6500
URL: www.dlink.be

Brazil
Praca General Gentil Falcao,
108- 1º Andar
Sao Paulo – SP - Brasil
CEP: 04571-150
TEL: +55-11-2185-9300
FAX: +55-11-2185-9322
URL: www.dlink.com.br

Bulgaria
60A Bulgaria Blvd., Office 1
Sofia 1680
Bulgaria
TEL: +3592-958-2242
FAX: +3592-958-6557
URL: www.dlink.eu

Canada
2525 Meadowvale Boulevard
Mississauga, ON L5N 5S2
Canada
TEL: +1-905-829-5033
URL: www.dlink.ca

China
Room02-05, Floor 26, Building B
Global Trade Center
36 North Third Ring Road East
Dongcheng District, Beijing 100013
China
TEL: +86-10-58257789
FAX: +86-10-58257792
URL: www.dlink.com.cn

Czech Republic
Vaclavske Namesti 36, Praha 1, 110 00
Czech Republic
TEL: +420 224 247 500
FAX: +420 224 234 697
URL: www.dlink.cz

Denmark
Naverland 2, DK-2600
Glostrup, Copenhagen
Denmark
TEL: +45-43-969040
FAX: +45-43-424347
URL: www.dlink.dk

Egypt
1, Makram Ebeid Street - City Lights
Building
Floor 6, Office C2
Nasr City, Cairo
Egypt
TEL: +2-02-267-18375
FAX: +2-02-227-56854
URL: www.dlink-me.com

Europe, UK & Ireland
D-Link House, 1 Abbey Road
Park Royal, London, NW10 7BX
United Kingdom
TEL: +44-20-8955-9000
FAX: +44-20-8955-9002
URL: www.dlink.co.uk

Finland
Latokartanontie 7A
FIN-00700 Helsinki
Finland
TEL: +358-10-309-8840
FAX: +358-10-309-8841
URL: www.dlink.fi

France
41 Boulevard Vauban
78280 Guyancourt
France
TEL: +33-1-30-23-86-88
FAX: +33-1-30-23-86-89
URL: www.dlink.fr

Germany
Schwalbacher Strasse 74
D-65760 Eschborn
Germany
TEL: +49-6196-77990
FAX: +49-6196-7799300
URL: www.dlink.de

Greece
101, Panagoulis Str., 163-43
Helioupolis, Athens
Greece
TEL: +30-210-9914512
FAX: +30-210-9916902
URL: www.dlink.gr

Hungary
Rakoczi ut 70-72, HU-1074
Budapest, Hungary
TEL: +36 (0) 1-461-30-00
FAX: +36 (0) 1-461-30-04
URL: www.dlink.hu

India
D-Link India Limited,
Jasmine, Survey # 341/C.T.S.
629 Madhusudhan Kalekar Marg.
Bandra (E), Mumbai- 400051
TEL: 91-22-26595700
FAX: 91-22-26591088
URL: www.dlink.co.in

Iran
Unit 9, 5th Floor, No. 11, 35th Alley,
Alvand St., Argantine SQ.
Tehran
Iran
TEL: +98-21-888-80918
FAX: +98-21-888-80919
URL: www.dlink-me.com

Israel
20 Ha-Magshimim Str.
Kiryat Matalon, Petach Tikva,
49348
Israel
TEL: +972-3-9215173
FAX: +972-3-9219005
URL: www.dlink.co.il

Italy
Via Nino Bonnet N. 6/b
20154 Milano
Italy
TEL: +39-02-2900-0676
FAX: +39-02-2900-1723
URL: www.dlink.it

Japan
SOWA Gotanda Building 2F
Higashigotanda 2-7-18
Shinagawa-ku, Tokyo 141-0022
Japan
TEL: +81-3-5792-5100
FAX: +81-3-5792-5105
URL: www.dlink-jp.com

Worldwide Offices

Kenya
The Mall, Westlands
1st Floor, Shop No. 1F05
Nairobi
Kenya
TEL : +254-20-4452816
URL: www.dlink-africa.com

Latin America
Avenue Vitacura 2939, Piso 6
Edificio Millenium,
Las Condes, Santiago
Chile
TEL: +56-2-5838-950
FAX: +56-2-5838-953
URL: www.dlinkla.com

Mexico
D-Link Mexicana S.A. de C.V.
Blvd. Avila Camacho #40, piso 18
Col. Lomas de Chapultepec
Mexico, D.F. 11000
TEL: +52-55-420-93-100
URL: www.dlinkla.com.mx

Middle East
P.O. Box 500367, Building 3, Office 103
Dubai Internet City, Dubai
United Arab Emirates
TEL: +971-4-391-6480
FAX: +971-4-390-8881
URL: www.dlink-me.com

Morocco
M.I.T.C
Route de Nouaceur angle RS et CT
1029 Bureau N° 312 ET 337
Casablanca
Morocco
TEL.: +212-663-727-324
URL: www.dlink-me.com

Netherlands
Weena 290, 3012 NJ
Rotterdam
Netherlands
TEL: +31-10-282-1445
FAX: +31-10-282-1331
URL: www.dlink.nl

Nigeria
52A Campbell Street
Lagos Island, Lagos State
Nigeria
TEL: +234-1-8536769
URL: www.dlink-africa.com

Norway
Karihaugveien 89
N-1086 Oslo
Norway
TEL: +47-99-30-01-00
FAX: +47-22-30-95-80
URL: www.dlink.no

Pakistan
D-147/1, KDA Scheme # 1
Opposite Mudassir Park, Karsaz Road
Karachi - Pakistan
TEL: +92-21-454-8158, 454-8310,
432-6649
FAX: +92-21-437-5727
URL: www.dlink-me.com

Poland
Budynek Aurum ul. Walicow 11
PL-00-851 Warszawa
Poland
TEL: +48 (0) 22-583-92-75
FAX: +48 (0) 22-583-92-76
URL: www.dlink.pl

Portugal
Av. Duque de Loule, 123, 5.3,
Lisboa 1069-152, Lisboa
Portugal
TEL: +351-21-8688493
FAX: +351-21-8622492
URL: www.dlink.pt

Romania
Blv Unirii No. 55, bl. E4A, Sc.2, Et.4,
Ap.39, Sector 3,Bucharest
Romania
TEL: +40(0)21-3202305
FAX: +40(0)21-3202307
URL: www.dlink.ro

Russia
Grafsky per., 14, Floor 3
Moscow, 129626
Russia
TEL: +7-495-744-0099
FAX: +7-495-744-0099
URL: www.dlink.ru

Saudi Arabia
Office # 84, Al Khaleej Building
Opp. King Fahd Road, Olaya
Riyadh
Kingdom of Saudi Arabia
TEL: +966-1-217-0008
FAX: +966-1-217-0009
URL: www.dlink-me.com

South Africa
Eco Boulevard Convenience
Center
First Floor Block B
270 Witch-Hazel Avenue
Highveld Techno Park
Centurion, Gauteng
Republic of South Africa
TEL: +27-12-661-2025
FAX: +27-12-661-7122
URL: www.d-link.co.za

South Korea
Rm 306 Samsung IT Valley,
197-5, Guro-Dong, Guro-Gu
Seoul 150-050
South Korea
TEL: +82-2-2028-1810
FAX: +82-2-2028-1829
URL: www.d-link.co.kr

Spain
Avenida Diagonal, 593-595
9 Floor, 08014 Barcelona
Spain
TEL: +34-93-409-0770
FAX: +34-93-491-0795
URL: www.dlink.es

Sweden
Gustavslundsvagen 151B
S-167 15 Bromma
Sweden
TEL: +46-(0)8564-61900
FAX: +46-(0)8564-61901
URL: www.dlink.se

Switzerland
Glatt Tower, 2.OG CH-8301
Glattzentrum Postfach 2.OG
Switzerland
TEL: +41 (0) 1-832-11-00
FAX: +41 (0) 1-832-11-01
URL: www.dlink.ch

Taiwan
No. 289 Xinhu 3rd Road
Neihu, Taipei 114
Taiwan
TEL: +886-2-6600-0123
FAX: +886-2-6600-3939
URL: www.dlinktw.com.tw

Turkey
Ayazaga Maslak Yolu
Erdebil Cevahir Is Merkezi
No: 5/A Ayazaga
Istanbul
Turkey
TEL: +90-212-289-5659
FAX: +90-212-289-7606
URL: www.dlink.com.tr

U.S.A
17595 Mt. Herrmann Street
Fountain Valley, CA 92708
USA
TEL: +1-714-885-6000
URL: www.dlink.com

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