



DGS-1500 SmartPro Family



Green Technology

- IEEE 802.3az EEE
- Power saving via LED and Port shutoff
- Power saving via Port Standby
- Power saving via System Hibernation
- Power saving via Cable Length detection
- Power saving via Link Status detection
- Time-based PoE (DGS-1500-28P¹ only)

Security Features

- Access Control List secures network
- D-Link Safeguard Engine protects CPU from Broadcast/Multicast/Unicast Flooding
- Port Security supports 64 MACs per port
- ARP Spoofing Prevention
- SSL

Intuitive Management

- SmartConsole utility or Web-based GUI
- Single IP Management (Virtual Stacking)
- Built-in SNMP MIB for remote NMS (D-View 6.0)

VoIP Deployment

- Highest priority for VoIP services
- Auto Voice VLAN

QoS (Quality of Service)

- Supports IEEE 802.1p QoS, up to four Priority Queues per port
- Bandwidth Control
- DSCP

Advanced Features

- Layer 3 Static Routing
- IPv6 support²
- Auto Surveillance VLAN
- Loopback Detection automatically disables a port or VLAN when a loop is detected
- Cable Diagnostics allows administrators to determine cable status
- Configurable MDI/MDIX
- LLDP/LLDP-MED

Trap & Logs

- SNMP Trap
- Trap for SmartConsole Utility

Online Help

- Link to local support website
- Online User Guide

D-Link's DGS-1500 Series SmartPro switches are designed for businesses which require functions such as L3 Static Routing and Single IP Management (Virtual Stacking) without upgrading to a managed switch. This series integrates advanced management and security functions that are similar to those of a managed switch, but less complex. The switches feature D-Link Green™ 3.0 technology which enables significant power savings. Additionally, the DGS-1500-28P¹'s 10/100/1000 Mbps ports are PoE-enabled, offering ease-of-use and green features like Time-based PoE, which enables the power to the port to be shut off at a predetermined time. Compliant with 802.3af and 802.3at, these switches are capable of feeding power to devices of up to 30 Watts. Management options include SNMP, Web Management, SmartConsole Utility, and Compact CLI. The series also supports ACL filtering and D-Link's Safeguard Engine to protect the network. The DGS-1500-20 and DGS-1500-28 both feature a fanless design. The fanless design allows them to emit less heat and noise than a standard switch, making them suitable for office environments. The DGS-1500-28P¹ and DGS-1500-52 both feature smart fans. Using a thermal sensor that can detect temperature change, the smart fans can react accordingly by utilising different fan speeds for different temperatures.

Advanced Features

The DGS-1500 Series integrates advanced features such as Virtual Stacking and Layer 3 features like Static Routing. Virtual Stacking reduces the number of IP addresses needed on a network by configuring up to 32 devices to appear as a single unit with one IP address. This simplifies network management for small workgroups and allows for switches to be added without special cabling.

Extensive Layer 2 Features

These switches are equipped with a complete lineup of Layer 2 features including IGMP Snooping, Port Mirroring, Spanning Tree, and Link Layer Discovery Protocol (LLDP). The IEEE 802.3x Flow Control function allows servers to directly connect to the switch for fast, reliable data transfer. At 2000 Mbps Full Duplex, the Gigabit ports provide high-speed data pipes to servers with minimum data transfer loss. Network maintenance features include Loopback Detection and Cable Diagnostics. Loopback Detection is used to detect loops created by a specific port or VLAN and automatically shut down the affected port or VLAN. The Cable Diagnostics feature, designed primarily for administrators and customer service representatives, can quickly discover the type of error on cables and determine the cable quality.

QoS, Bandwidth Control

The DGS-1500 Series supports Auto Surveillance VLAN (ASV) and Auto Voice VLAN, which are best suited for VoIP and video surveillance deployments. Auto Surveillance VLAN is a new, industry-leading technology built into D-Link Smart Switches. This technology consolidates data and surveillance video transmission through a single SmartPro switch, thus sparing businesses the expense of maintaining dedicated hardware and facilities. ASV also ensures the quality of real-time video for monitoring and control without compromising the transmission of conventional network data. The Auto Voice VLAN technology enhances VoIP service by automatically placing voice traffic from an IP phone to an assigned VLAN. With higher priority and an individual VLAN, these features guarantee the quality and security of VoIP traffic. Furthermore, the DSCP markings on Ethernet packets enable different levels of service to be assigned to network traffic.

¹ DGS-1500-28P will be released in late 2011.

² IPv6 Ready Logo Phase II will be obtained in the future. IPv6 support will be available in a future release.

DGS-1500 SmartPro Family

D-Link Assist Rapid Response Support

If the worst should happen to your network you need the very best support and fast. Downtime costs your business money. D-Link Assist maximises your uptime by solving technical problems quickly and effectively. Our highly-trained technicians are on standby around the clock, ensuring that award-winning support is only a phone call away.

With a choice of three affordable service offerings covering all D-Link business products, you can select the package that suits you best:

D-Link Assist Gold - for comprehensive 24-hour support

D-Link Assist Gold is perfect for mission-critical environments where maximum uptime is a high priority. It guarantees four hour around-the-clock response. Cover applies 24/7 for every day of the year including holidays.

D-Link Assist Silver - for prompt same-day assistance

D-Link Assist Silver is designed for 'high availability' businesses that require rapid response within regular working hours. It provides a four hour response service Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist Bronze - for guaranteed response on the next business day

D-Link Assist Bronze is a highly cost-effective support solution for less critical environments. Response is guaranteed within eight business hours Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist can be purchased together with any D-Link business product. So whether you're buying switching, wireless, storage, security or IP Surveillance equipment from D-Link, your peace of mind is guaranteed. D-Link Assist also offers installation and configuration services to get your new hardware working quickly and correctly.

As a result, these voice and video packets take precedence over other packets. In addition, with Bandwidth Control, network administrators can reserve bandwidth for important functions that require more bandwidth or might require high priority.

Secure your Network

D-Link's innovative Safeguard Engine protects the switches against traffic flooding caused by virus attacks. The switches also support 802.1X port-based authentication, allowing the network to be authenticated through external RADIUS servers. In addition, the Access Control List (ACL) feature enhances network security and helps to protect the internal IT network by screening traffic based on MAC or IP addresses. The DGS-1500 Series includes ARP Spoofing Prevention, which protects from attacks on the Ethernet network that may allow an intruder to sniff data frames, modify traffic, or bring traffic to a halt altogether by sending fake ARP messages to the network. To prevent ARP Spoofing attacks, the switch uses Packet Control ACLs to block invalid packets that contain fake ARP messages. For added security, the DHCP Server Screening feature screens rogue DHCP server packets from user ports to prevent unauthorised IP assignment.

Versatile Management

The DGS-1500 Series provides a SmartConsole utility and a web-based management interface that enables administrators to remotely control their network down to the port level. The SmartConsole easily allows customers to discover multiple D-Link Web Smart Switches within the same L2 network segment. With this utility, users do not need to change the IP address of their PC. It also simplifies the initial setup of the Smart Switches. Switches within the same L2 network segment that are connected to the user's PC are displayed

on screen for instant access. This allows extensive switch configuration and basic setup of discovered devices including password changes and firmware upgrades. The DGS-1500 Series also supports D-View 6.0 and Compact Command Line Interface (CLI) through Telnet. D-View 6.0 is a Network Management System that allows for the central management of critical network characteristics such as availability, reliability, resilience, and security. CLI management of the switches is possible via Telnet. This makes it possible to adjust basic settings, passwords, configuration files, and firmware with ease.

D-Link Green Technology

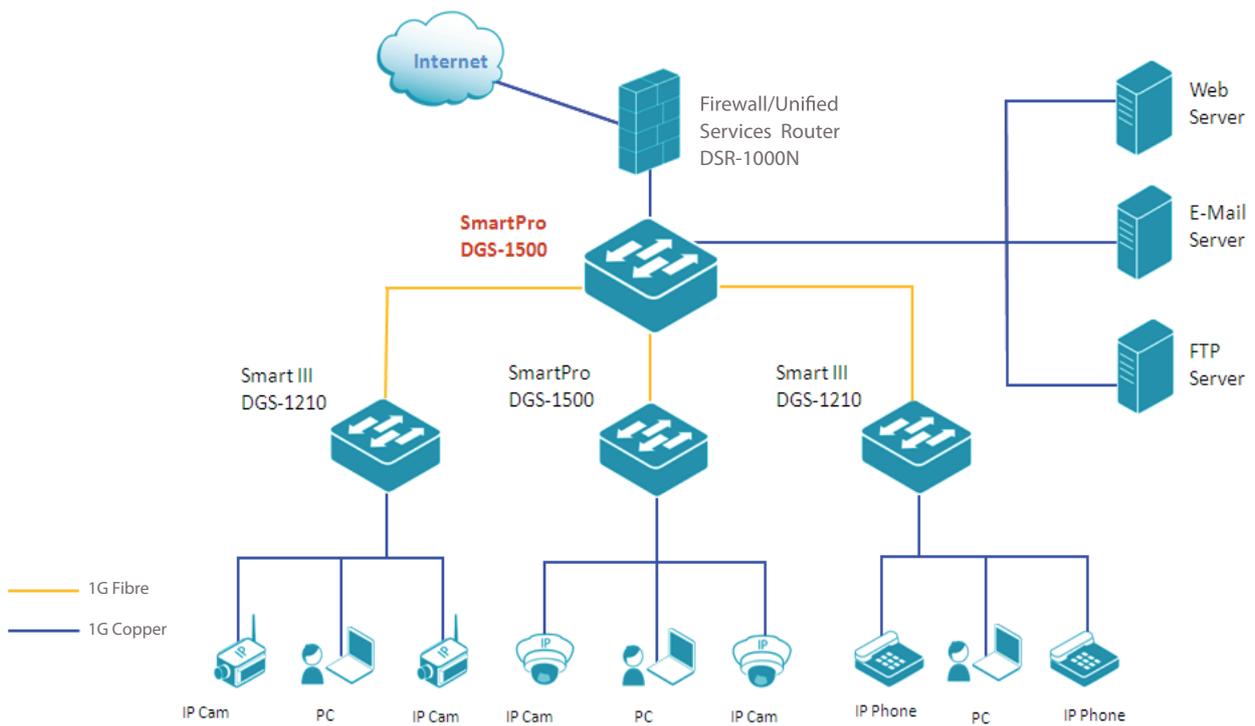
D-Link is striving to take the lead in developing innovative and power-saving technology that does not sacrifice operational performance or functionality. The DGS-1500 Series implements D-Link Green Technology, which includes a power saving mode, smart fan, reduced heat dissipation, and cable length detection. The power-saving features include being able to schedule when to turn off LEDs and ports when not in use, and when to make the switch enter hibernation mode. The switches can also detect the length of connected cables to automatically adjust power usage by saving energy on shorter cable connections of up to 20 metres. The switches can also support power-saving by link status, which drastically reduces power consumption by automatically toggling ports without a link to sleep mode. The DGS-1500-28P¹ and DGS-1500-52 both feature built-in smart fans. Using a thermal sensor that can detect temperature change, the fans can react accordingly by utilising different fan speeds for different temperatures. The Smart Fan feature enables the built-in fans to automatically turn on at a certain temperature, providing continuous, reliable and eco-friendly operation of the switch.

¹ DGS-1500-28P will be released in late 2011.



DGS-1500 SmartPro Family

Deploying the DGS-1500 Series in an Office Environment



DGS-1500 SmartPro Family

Technical Specifications

		DGS-1500-20	DGS-1500-28	DGS-1500-28P ³	DGS-1500-52
General	Interfaces	16x Gigabit Ethernet 4x SFP	24x Gigabit Ethernet 4x SFP	24x Gigabit Ethernet 4x SFP	48x Gigabit Ethernet 4x SFP
	Optional Redundant Power Supply			RPS-700	
	Full/Half Duplex	Full/half duplex for 10/100 Mbps speeds, Full duplex for 1000 Mbps speed			
	Media Interface Exchange	Auto MDI/MDIX adjustment			
Performance	Switching capacity	40 Gbps	56 Gbps	56 Gbps	104 Gbps
	Packet forwarding rate	29.8 Mpps	41.7 Mpps	41.7 Mpps	77.4 Mpps
	Transmission method	Store-and-forward			
	Packet buffer	1 MB per device			
	MAC Address table	16 K entries per device			
	MAC Address update	Up to 256 static MAC entries Enable/disable auto-learning of MAC addresses			
PoE	PoE standard			802.3af 802.3at	
	PoE capable ports			1-24	
	PoE power budget			Max. 370 W (740 W with external RPS)	
Power	AC Input	100 to 240 VAC, 50/60 Hz internal universal power supply			
	Max. Power consumption	14.06 W	16.81 W		43.5 W
	Standby power consumption	7.2 W	6.42 W		22.05W
Physical & Environmental	Dimensions (W x D x H)	440 x 140 x 44 mm	440 x 210 x 44 mm	440 x 310 x 44 mm	440 x 250 x 44 mm
	Weight	2.2 Kg	2.9 Kg		4.1 Kg
	LEDs	Power Link/Act/Speed	Power Link/Act/Speed	Power Fan Link/Act/Speed PoE PoE max RPS	Power Fan Link/Act/Speed
	Fans	0	0		2 smart fans
	Acoustics	0 dBA	0 dBA		47.1 dBA (max)
	Heat dissipation	47.97 BTU/hr	57.36 BTU/hr		148.42 BTU/hr
	Operating temperature	-5 to 50° C			
	Storage temperature	-20 to 70° C			
	Operating humidity	0% to 95% non-condensing			
	Storage humidity	0% to 95% non-condensing			
	Emission (EMI)	FCC Class A, CE Class A, ICES-003, VCCI Class A, C-Tick, BSMI			
	MTBF	253,460 hours	236,739 hours		201,517 hours
	Safety	cUL, LVD			

³DGS-1500-28P will be released in late 2011.



DGS-1500 SmartPro Family

Software Features

Stackability

- Virtual Stacking/Clustering of up to 32 units
 - Supports D-Link Single IP Management

L2 Features

- MAC Address Table
 - 16 K entries
- Flow Control
 - 802.3x Flow Control
 - HOL Blocking Prevention
- IGMP Snooping
 - IGMP v1/v2 Snooping
 - Supports 256 IGMP groups
 - Supports at least 64 static multicast addresses
 - IGMP per VLAN
 - Supports IGMP Snooping Querier
- Spanning Tree Protocol
 - 802.1D STP
 - 802.1w RSTP
- Loopback Detection
- 802.3ad Link Aggregation
 - DGS-1500-20: Max. 10 groups per device, 8 ports per group
- DGS-1500-28/DGS-1500-28P⁴: Max. 14 groups per device, 8 ports per group
- DGS-1500-52: Max. 26 groups per device, 8 ports per group
- Port Mirroring
 - One-to-One
 - Many-to-One
 - Supports Mirroring for Tx/Rx/Both
- Cable Diagnostics
- Configurable MDI/MDIX
- Multicast Filtering
 - Forwards all unregistered groups
 - Filters all unregistered groups
- Jumbo Frame
 - Up to 10,000 bytes
- LLDP
- LLDP-MED
- L2 Multicast Filtering

VLAN

- 802.1Q
- VLAN Group
 - Max. 4K static VLAN groups
 - Max. 4094 VIDs
- GVRP
 - Up to 256 dynamic VLANs
- Asymmetric VLAN
- Auto Voice VLAN
 - Max. 10 user defined OUI
 - Max. 8 default OUI
- Auto Surveillance VLAN

QoS (Quality of Service)

- 802.1p Quality of Service
- 4 queues per port
- Queue Handling
 - Strict
 - Weighted Round Robin (WRR)
- CoS based on
 - 802.1p Priority Queues
 - DSCP
 - ToS⁵
 - IPv6 Traffic Class⁵
 - IPv6 flow label⁵
 - TCP/UDP port⁵
- Bandwidth Control
 - Port-based (Ingress/Egress, min. granularity 10/100/1000 is 64 Kb/s)

L3 Features

- ARP
 - 64 Static ARP
 - Supports Gratuitous ARP
- IPv6 Neighbour Discovery (ND)⁵
- IP Interface
 - Supports 4 interfaces

L3 Routing

- Default Routing
- Static Routing
 - 32 IPv4 Static Route Entries
 - Max. 128 IPv4 Host Routes

Access Control List (ACL)

- DGS-1500-20/28/28P⁴
 - Max. 50 profiles
 - Max. 200 rules shared by profiles
 - Each rule can be associated with a single port or multiple ports
- DGS-1500-52:
 - Max. 50 profiles
 - Max. 450 rules shared by profiles
 - Each rule can only be associated with a single port
- ACL based on
 - MAC Address
 - IPv4 Address (ICMP/IGMP/TCP/UDP)
 - 802.1p
 - DSCP Ethernet type

Security

- 802.1X Port-based Access Control
- Port Security
 - Supports up to 64 MAC addresses per port
- Broadcast/Multicast/Unicast Storm Control
- D-Link Safeguard Engine™
- DHCP Server Screening
- IP-MAC-Port Binding⁵
 - Supports 512 address binding entries

- ARP mode
- Supports DHCP Snooping
- ARP Spoofing Prevention
 - Max. 64 entries
- Traffic Segmentation
- SSL
 - Supports v1/v2/v3
 - Supports IPv6⁵

AAA

- 802.1X Authentication
 - Supports local/RADIUS database
 - Supports Port-based access control
 - Supports EAP, OTP, TLS, TTLS, PEAP
- IPv6 RADIUS Server⁵

MIB

- 1213 MIB II
- 1493 Bridge MIB
- 1907 SNMP v2 MIB
- 1215 Trap Convention MIB
- 2233 Interface Group MIB
- D-Link Private MIB
- LLDP MIB
- Power-Ethernet MIB⁶

RFC Standard Compliance

- RFC 783 TFTP
- RFC 854 Telnet Server
- RFC 951 BootP/DHCP Client
- RFC 1157 SNMP v1, v2, v3
- RFC 1213 MIB II
- RFC 1215 MIB Traps Convention
- RFC 1350 TFTP
- RFC 1493 Bridge MIB
- RFC 1769 SNTP
- RFC 1542 BootP/DHCP Client
- RFC 1901 SNMP v1, v2, v3
- RFC 1907 SNMP v2 MIB
- RFC 1908 SNMP v1, v2, v3
- RFC 2068 FCS
- RFC 2131 BootP/DHCP Client
- RFC 2138 RADIUS Authentication
- RFC 2139 RADIUS Authentication
- RFC 2233 Interface Group MIB
- RFC-2246 SSL
- RFC 2475
- RFC 2570 SNMP v1, v2, v3
- RFC 2575 SNMP v1, v2, v3
- RFC 2598 CoS
- RFC 2616 FCS
- RFC 2618 RADIUS Authentication
- RFC 2819 RMON v1
- RFC 2865 RADIUS Authentication
- RFC 3164 System Log
- RFC 3195 System Log
- RFC 3411-17 SNMP
- RFC 3621 Power Ethernet MIB

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⁵ Will be available in a future release in 2012. IPv6 Ready Logo Phase II will be obtained in the future.

⁶ Available for DGS-1500-28P only.

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Software Features

OAM

- Cable Diagnostics
- Factory Reset

Management

- Web-based GUI
- Single IP Management
- Compact CLI
- Telnet Server
- TFTP Client
- Configurable MDI/MDIX
- SNMP
 - Supports v1/v2/v3
- SNMP Trap
- Trap for SmartConsole Utility

- System Log
 - Max. 500 log entries
- BootP/DHCP Client
- SNTP
- ICMP v6⁵
- IPv4/v6 Dual Stack⁵
- DHCP Auto Configuration
- Debug Command
- Time Setting
 - SNTP
- RMON1
- Trusted Host
- Time-based PoE⁶
- User Account
- Upload/Download Configuration file

- Backup/Upgrade firmware
- Smart Wizard

Green

- Power Saving by:
 - Link Status
 - Cable Length
 - LED Shutoff
 - Port Standby
 - System Hibernation

Certification

- IPv6 Core Ready Logo Phase II⁵

Optional Products

Optional SFP Transceivers

Supported by DGS-1500-20/28/28P ⁴	
DGS-712	1000BASE-T Copper
DEM-310GT	1000BASE-LX, Single-mode, 10 km
DEM-311GT	1000BASE-SX, Multi-mode, 550 m
DEM-312GT2	1000BASE-SX, Multi-mode, 2 km
DEM-314GT	1000BASE-LHX, Single-mode, 50 km
DEM-315GT	1000BASE-ZX, Single-mode, 80km

Supported by DGS-1500-52	
DGS-712	1000BASE-T Copper
DEM-310GT	1000BASE-LX, Single-mode, 10 km
DEM-311GT	1000BASE-SX, Multi-mode, 550 m
DEM-312GT2	1000BASE-SX, Multi-mode, 2 km
DEM-314GT	1000BASE-LHX, Single-mode, 50km
DEM-315GT	1000BASE-ZX, Single-mode, 80km
DEM-210	100BASE-BX, Single-mode, 15 km
DEM-211	100BASE-BX, Multi-mode, 2 km

Optional WDM SFP Transceivers

Supported by DGS-1500-20/28/28P ⁴	
DEM-330T/R	Gigabit Wavelength Tx:1550 nm, Rx:1310 nm Single-mode, 10 km
DEM-331T/R	Gigabit Wavelength Tx:1550 nm, Rx:1310 nm Single-mode, 40 km

Supported by DGS-1500-52	
DEM-330T/R	Gigabit Wavelength Tx:1550 nm, Rx:1310 nm Single-mode, 10 km
DEM-331T/R	Gigabit Wavelength Tx:1550 nm, Rx:1310 nm Single-mode, 40 km

Optional Management Software

Supported by DGS-1500-20/28/28P ⁴ /52	
DV-600S	D-View 6.0 Network Management System (Standard Edition)
DV-600P	D-View 6.0 Network Management System (Professional Edition)

Optional Redundant Power Supply

Supported by DGS-1500-28P ⁴	
DPS-700	589 Watts Redundant Power Supply 370 Watts PoE Power Budget



For further information: www.dlink.eu

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⁵ Will be available in a future release in 2012. IPv6 Ready Logo Phase II will be obtained in the future.

⁶ Available for DGS-1500-28P only.

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