## DGS-1510-28X Datasheet





### Overview

The DGS-1510 Series is D-Links latest generation of SmartPro switches with 10G port connectivity, making them ideal for deployment in SME/SMB core environments.

### **Quick Specs**

Figure 1 shows the appearance of DGS-1510-28X.



#### Table 1 shows the Quick Specs.

Product Code	DGS-1510-28X
Ethernet Technology	Gigabit Ethernet 10 Gigabit Ethernet
Total Number of Network Ports	28
Form Factor	Rack-mountable
Power Source	Power Supply
Layer Supported	3
Compatible Rack Unit	1U

#### **Product Details**

Figure 2 shows the front panel of DGS-1510-28X.





#### DGS-1510-28X provides these features:

#### Power over Ethernet

The DGS-1510-28P's 10/100/1000 Mbps ports are PoE-enabled for powering devices such as IP cameras, VoIP phones and wireless access points. Compliant with 802.3af and 802.3af, the DGS-1510-28P supports up to 30W of power output on any particular PoE port up to 193W, providing flexibility in power allocation for a variety of powered devices, including new 802.11ac wireless access points that require 802.3at power for full functionality. Time-based PoE enables power to a port to be shut off at a scheduled time, reducing power usage and increasing security by powering off devices that should not be in use during non-business hours.

#### 10G SFP+ Stacking/Uplink Ports

Depending on whether linear or fault-tolerant ring stacking is implemented, users can use one or two 10-Gigabit SFP+ ports to create a physical stack. 6 units or 288 gigabit ports can be configured as a stack using optional direct attach cables to provide high bandwidth with cost efficiency. Users can also easily configure and manage any of the DGS-1510 SmartPro series in a single stack. With 20 Gbps full duplex capabilities, the DGS-1510 offers 10G connectivity to core networks and servers while still maintaining fast data transfer rates.

#### **Layer 3 Traffic Management**

The DGS-1510 Series provides static routing, allowing you to segment your network into workgroups and communicate across VLANs without degrading application performance. With these capabilities, you can boost the efficiency of your network by offloading internal traffic-handling tasks from your router, allowing it to manage external traffic and security.

#### **Extensive Layer 2 Features**

The DGS-1510 Series 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. Network maintenance features include Loopback Detection and Cable Diagnostics; Loopback Detection is used to detect loops created by a specific port or VLAN and will automatically shut down the affected port or VLAN. The Cable Diagnostics feature, designed primarily for administrators and customer service representatives, can determine cable quality and can quickly discover sections of cabling that need to be replaced.

#### Traffic Classification & QoS

The DGS-1510 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, sparing businesses the expense of maintaining expensive 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. As a result, these voice and video packets take precedence over other packets ensuring uninterrupted VoIP for network users.

#### Secure your Network

D-Link's innovative Safeguard Engine protects DGS-1510 Series against traffic flooding caused by malicious attacks. The series also supports 802.1X portbased authentication, allowing the network to be authenticated through external RADIUS servers.

The DGS-1510 Series supports both MAC and Web-based access control. These provide a user-friendly way to alleviate deployment time, giving customers an effective and efficient authentication choice.

With an Access Control List (ACL), the DGS-1510 Series both enhances network security and helps to protect the internal IT network by screening ingress traffic based on any user defined content. The DGS-1510 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. For added security, the DHCP Server Screening feature screens rogue DHCP server packets from user ports to prevent unauthorized IP assignment.

#### IPv6 Ready

The DGS-1510 Series is IPv6 ready and supports various IPv6 functions such as MLD Snooping, IPv6 ACL/QoS, and IP-MAC-Port Binding (IMPB) to ensure seamless integration of next generation networks. The DGS-1510 Series also supports an IPv4/v6 dual stack function that allows the switch to act as a bridge between IPv4 and IPv6 networks.

#### Versatile Management

The DGS-1510 Series supports virtual stacking via D-Link's Single IP Management (SIM), allowing up to 32 devices to be managed via a single IP address. This

simplifies management of small workgroups or wiring closets while reducing the number of IP addresses needed in your network.

The DGS-1510 Series provides a D-Link Network Assistant Utility and a webbased management interface that enables administrators to easily set up and remotely manage their networks. The D-Link Network Assistant Utility allows customers to easily discover and perform initial setup on multiple D-Link products simultaneously. This greatly reduces the deployment time for services required by network administrators such as device firmware upgrades, configuration backup and restoration, setting IP addresses, or even solution deployment like ASV.

The DGS-1510 Series also supports fully featured Command Line Interface (CLI) and SNMP MIBs. It provides the capability of central management in a large scale network. CLI management of the switches is also available via a console port. With out-of-band manageability, accessing the switch is still possible even if its network data plane is overwhelmed by bulk or malicious traffic.

#### **Energy Saving**

DGS-1510 switches are capable of conserving power without sacrificing operational performance or functionality by using D-Link Green 3.0 technology. Using the 802.3az Energy Efficient Ethernet standard, the network will automatically decrease power usage when traffic is low. For environments not fully supporting the standard, DGS-1510 switches offer advanced powersaving settings including port shutoff, LED shutoff, and system hibernation based on custom scheduling profiles. The profiles can also be applied to the PoE switch so that there is no unnecessary power consumption during off hours.

#### **Compare to Similar Items**

Table 2 shows the comparison of DGS-1510-28X.

Module	DGS-1510-28X	DGS-1210-28P
Ethernet Technology	Gigabit Ethernet 10 Gigabit Ethernet	Gigabit Ethernet
Total Number of Network Ports	28	24
Form Factor	Rack-mountable	Desktop Rack-mountable
Power Source	Power Supply	Power Supply
Layer Supported	3	2

#### **Get More Information**

Do you have any question about the DGS-1510-28X?

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## Specification

DCC 1510 20V Chapitication	
DGS-1510-28X Specification	
1000Base-T Interface	24
10G SFP+ Interface	4
Auto MDI/MDIX	Yes
Console Port	Yes
10/100/1000BASE-T ports	24
10G SFP+ ports	4
Max. Packet Forwarding Rate	95.24 Mpps
Switch Capacity	128 Gbps
Dimension	440mm x 210mm x 44mm
Operation Temperature	-5 -50°C
Storage Temperature	-20-70°C
Operation Humidity	0% ~ 95% RH

Storage Humidity	0% ~ 95% RH
Maximum Power Consumption	22.3 W
Standby Power Consumption	14.6 W/100V, 15.2 W/240V
Maximum Heat Dissipation	76.04 BTU/hr
Acoustic	42.7 dB(A)
MTBF	516,593 hours
Power Input	100 - 240 VAC
CPU Speed	400MHz
DRAM Size	256MB
Flash Memory Size	32MB
Packet Buffer Size	1.5MB
FAN	1 DC Fan
Comply witd RoHS 6	Yes
Energy Efficiency Etdernet (EEE)	Yes
Power Saving By Link Status	Yes
Power Saving By LED Shut-Off	Yes
Power Saving By Port Shut-Off	Yes
Power Saving By System Hibernation	Yes
Physical Stacking	Yes
Physical Stacking Bandwidtd	40 G
Units Per Physical Stack	6
D-Link Single IP Management (SIM)	Yes
Units Per SIM Stack	32
MAC Address Table Size	16384
Black Hole MAC Address	Yes
802.3x Flow Control	Yes
Head-of-line (HOL) Blocking Prevention	Yes
802.1D Spanning Tree (STP)	Yes
802.1w Rapid Spanning Tree (RSTP)	Yes
802.1s Multiple Spanning Tree (MSTP)	Yes
Root Restriction	Yes
G.8032 ERPS	Yes
802.1AX Link Aggregation	Yes
Link Aggregation Group Per Device	32

802.3ad Link Aggregation	Yes
Max Port Per Link Aggregation Group	8
Port Mirroring	Yes
Flow-based (ACL) mirroring	Yes
Jumbo Frame	9216
Loopback Detection (LBD)	Yes
IGMP Snooping	Yes
Max IGMP Snooping Groups	512
IGMP Snooping Fast Leave	Yes
IGMP Proxy Reporting	Yes
MLD Snooping	Yes
MLD Snooping Groups	Yes
MLD Snooping Fast Leave	Yes
MLD Proxy Reporting	Yes
802.1Q VLAN	Yes
VLAN Groups	4094
Port-based VLAN	Yes
802.1v Protocol-based VLAN	Yes
Voice VLAN	Yes
MAC-based VLAN	Yes
Auto Surveillance VLAN	Yes, 2.1
GVRP	Yes
Asymmetric VLAN	Yes
IP Interface	Yes
Max Number of IP Interface	16
ARP	Yes
ARP Entries	512
Gratuitous ARP	Yes
ND Entries	Yes
UDP Helper	Yes
Default Route	Yes
Static Route	Yes
Number of Queue	8
Class of Service (CoS)	Yes
Remark 802.1p priority	Yes

Remark ToS/DSCP	Yes
Rate Limiting	Yes
Queue Handling	Yes
Strict Priority Queue (SPQ)	Yes
Weighted Round Robin (WRR)	Yes
Deficit Round Robin (DRR)	Yes
SPQ + WRR	Yes
Port-based Bandwidtd Control	Yes
Max Access Control List (ACL) Entries	Yes
MAC Access List	Yes
IP Access List	Yes
IPv6 Access List	Yes
Time based ACL	Yes
SSH	Yes
SSL	Yes
Port Security	Yes
Broadcast/Multicast/Unicast Storm Control	Yes
Traffic Segmentation	Yes
IP Source Guard	Yes
DHCP Snooping	Yes
IPv6 Snooping	Yes
Dynamic ARP Inspection (DAI)	Yes
DHCPv6 Guard	Yes
IPv6 Route Advertisement (RA) Guard	Yes
IPv6 ND Inspection	Yes
Duplicate Address Detection (DAD)	Yes
D-Link Safeguard Engine	Yes
DHCP Server Screening	Yes
ARP Spoofing Prevention	Yes
BPDU Attack Protection	Yes
DoS Attack Prevention	Yes
802.1X	Yes
Port based 802.1X Autdentication	Yes
Host based 802.1X Autdentication	Yes
Identity Driven 802.1X Policy Assignment	Yes

Web-based Access Control (WAC)	Yes
Port based WAC Autdentication	Yes
Host based WAC Autdentication	Yes
Identity Driven WAC Policy Assignment	Yes
Japanese Web-based Access Control (JWAC)	Yes
Host based JWAC Autdentication	Yes
Port based JWAC Autdentication	Yes
Identity Driven JWAC Policy Assignment	Yes
Port based MAC Autdentication	Yes
MAC-based Access Control (MAC)	Yes
Host based MAC Autdentication	Yes
Identity Driven MAC Policy Assignment	Yes
Compound Autdentication	Yes
Guest VLAN	Yes
Autdentication for Management Access	Yes
Privilege Level for Management Access	5
RADIUS	Yes
RADIUS Accounting	Yes
TACACS+	Yes
TACACS+ Accounting	Yes
Cable Diagnostics	Yes
Optical Transceiver Digital Diagnostic Monitoring (DDM)	Yes
Network Time Protocol (NTP)	Yes
Simple Network Time Protocol (SNTP)	Yes
Command Line Interface (CLI)	Yes
Web-based GUI	Yes
Telnet Server	Yes
Telnet Client	Yes
SNMP	Yes
TFTP Client	Yes
SNMP Trap	Yes
ZModem	Yes
RMONv1	Yes
System Log	Yes
LLDP	Yes

D-Link Discover Protocol (DDP)	Yes (v0.25)
LLDP-MED	Yes
DHCP/BootP Client	Yes
DHCP Auto-configuration	Yes
Flash file system	Yes
DHCP relay	Yes
Multiple Images	Yes
Multiple Configurations	Yes
Editable System Prompt	Yes
Editable Login Banner	Yes
DNS Client	Yes
Password Encryption	Yes
Debug Command	Yes
Ping	Yes
sFlow	Yes
Traceroute	Yes
D-Link Network Assistant	Yes
Smart Wizard	Yes
SSH	Yes
SSL	Yes
Store-and-Forwarding	Yes

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