

## Product Highlights

### Flexibility

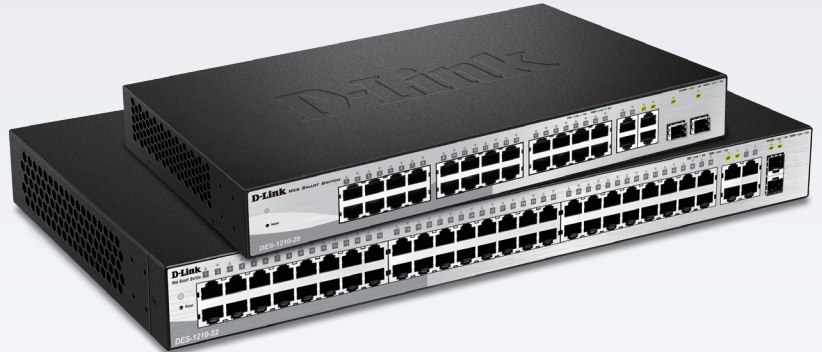
Ethernet, SPF, and Mini-GBIC ports allow utilization across a wide range of applications and environments via simplified switch configuration

### Easy to Install & Use

The D-Link Network Assistant Utility or a multi-language Web-Based management interface allows administrators to remotely control their network

### Security and Authentication Features

D-Link Safeguard Engine™ protects against malicious attacks while authentication tools provide granular access control to administrators



## DES-1210-28/52

# Web Smart Switch

## Features

### Flexible Hardware Design

- Selectable 24/48 10/100 BASE-TX ports
- 2 Combo 1000 BASE-T/SFP ports
- 2 10/100/1000 BASE-T ports

### Security Features

- Access Control List
- D-Link Safeguard Engine
- Port Security
- ARP Spoofing Prevention
- DHCP Server Screening
- Smart IP-MAC-Port Binding

### Advanced Features

- Auto Surveillance VLAN
- Auto Voice VLAN
- Loopback Detection
- Cable Diagnostics
- LLDP/LLDP-MED

### Intuitive Management

- D-Link Network Assistant Utility or Web-based GUI
- Built-in SNMP MIB for remote NMS (D-View 6.0)
- Compact CLI through Telnet

The DES-1210-28/52 Web Smart Switch is equipped with 24 or 48 10/100 Mbps ports, 2 10/100/1000BASE-T ports, and 2 combo 10/100/1000BASE-T/SFP ports. The DES-1210-28/52 integrates advanced management and security functions for enhanced performance and scalability. Support for IPv6 management and configurations ensure your network remains protected after the upgrade from IPv4 to IPv6. Management options including SNMP, Web Management, SmartConsole Utility, and Compact Command Line also make deployment easier. The DES-1210-28/52 provides a complete and affordable solution that is ideal for small and medium businesses and the enterprise edge.

## Seamless Integration

The Web Smart Switch is designed to provide SMB users with complete control over their network. With Ethernet and Gigabit copper ports capable of connecting to existing CAT5 twisted-pair cables, these switches eliminate the need for complex reconfiguration. The DES-1210-28/52 allows for flexible connections to a backbone or server. Additionally, all ports support auto-negotiation of MDI/MDIX crossover, eliminating the need for crossover cables or uplink ports.

## Extensive Layer 2 Features

Equipped with a complete lineup of L2 features, these switches include IGMP Snooping, Port Mirroring, Spanning Tree, and Link Aggregation Control Protocol (LACP). IEEE 802.3x Flow Control allows servers to directly connect to the switch for reliable data transfer. Network maintenance features include Loopback Detection and Cable Diagnostics. Loopback Detection is used to detect loops created by a specific port and automatically shuts down the affected port. Cable Diagnostics allow network administrators to quickly examine the quality of the copper cables and also determine the type of cable error.

## QoS, Bandwidth Control

The DES-1210-28/52 supports Auto Surveillance VLAN (ASV), and Auto Voice VLAN, which are best suited for video surveillance and VoIP deployments. Auto Surveillance VLAN is a new, industry-leading technology that consolidates surveillance video transmission and data through a single Web Smart Switch, thus sparing businesses the expense of dedicated hardware and facilities. ASV also ensures the quality of real-time video for monitoring and control without compromising the flow of conventional network data. The Auto Voice VLAN technology enhances the VoIP service by automatically routing voice traffic from an IP phone to an assigned VLAN. With higher priority and a dedicated 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. In addition, with bandwidth control network administrators can reserve bandwidth for important functions that require a larger bandwidth or might have high priority.



## Secure Your Network

D-Link's innovative Safeguard Engine protects against traffic flooding caused by virus attacks. The DES-1210-28/52 also supports 802.1X port-based authentication, allowing the network to be authenticated through external vRADIUS servers. In addition, the Access Control List (ACL) feature enhances network security and protects the internal IT network. The DES-1210-28/52 supports ARP Spoofing Prevention, which prevents the network from being cut off or eavesdropped by hackers using faked ARPs that pretend to be PCs, servers, routers, or gateways. For added security, DHCP Server Screening filters rogue DHCP server packets from user ports to prevent unauthorized IP assignment.

## Versatile Management

The DES-1210-28/52 provides a D-Link Network Assistant Utility that enables administrators to remotely control their network down to the port level. The D-Link Network Assistant Utility allows customers to easily 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, and the initial setup of the switches will be greatly simplified. 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 DES-1210-28/52 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.

Technical Specifications		
General	DES-1210-28	DES-1210-52
Size	• 13" metal case	• 19" metal case
Interface	<ul style="list-style-type: none"> <li>• 24 10/100BASE-TX</li> <li>• 2 1000BASE-T</li> <li>• 2 Combo 10/100/1000BASE-T / 100/1000SFP</li> </ul>	<ul style="list-style-type: none"> <li>• 48 10/100BASE-TX</li> <li>• 2 1000BASE-T</li> <li>• 2 Combo 10/100/1000BASE-T / 100/1000SFP</li> </ul>
Port Standards	<ul style="list-style-type: none"> <li>• IEEE 802.3 10BASE-T Ethernet (twisted-pair copper)</li> <li>• IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper)</li> <li>• IEEE 802.3ab 1000BASE-T Gigabit Ethernet (twisted-pair copper)</li> <li>• IEEE 802.3z Gigabit Ethernet (fiber) ANSI/IEEE 802.3</li> <li>• Auto-negotiation</li> <li>• IEEE 802.3x Flow Control</li> </ul>	
Performance		
Switching Capacity	• 12.8 Gbps	• 17.6 Gbps
64-byte Maximum Forwarding Rate	• 9.5 Mpps	• 13.1 Mpps
Packet Buffer Memory	• 4.1 Mbits	• 13.1 Mbits
MAC Address Table Size	• 8K Entries	• 16K Entries
Flash Memory	• 16 MB	
Forwarding Method	• Store and forward	
LEDs		
Power (Per Device)	✓	
Link/Active/Speed (Per Port)	✓	
Physical/Environmental		
MTBF	• 330,182 hours	• 429,482 hours
Acoustic	• 0 dB	
Heat Dissipation	• 29.69 BTU/h	• 47.81 BTU/h
Power Input	• 100 to 240 VAC, 50 to 60 Hz Internal Universal Power Supply	
Maximum Power Consumption	• 9.46 watts	• 14.77 watts
Dimension (W x D x H)	• 330 x 180 x 44 mm (12.99 x 7.09 x 1.73 inches)	• 440 x 210 x 44 mm (17.32 x 8.27 x 1.73 inches)
Operation Temperature	• -5-50 °C (23-122 °F)	
Storage Temperature	• -20-70 °C (-4-158 °F)	
Operating Humidity	• 5% to 95% non-condensing	
EMI	<ul style="list-style-type: none"> <li>• FCC Class A</li> <li>• CE Class A</li> <li>• VCCI Class A</li> <li>• IC, C-Tick</li> </ul>	
Safety	<ul style="list-style-type: none"> <li>• cUL</li> <li>• CE LVD</li> </ul>	
3rd Party Certifications	• IPv6 Ready Logo Phase 2	

**Technical Specifications**

Software	All Models	
L2 Features	<ul style="list-style-type: none"> <li>• MAC Address Table               <ul style="list-style-type: none"> <li>• DES-1210-28: 8K entries</li> <li>• DES-1210-52: 16K entries</li> </ul> </li> <li>• Flow Control               <ul style="list-style-type: none"> <li>• 802.3x Flow Control</li> <li>• HOL Blocking Prevention</li> </ul> </li> <li>• Port Mirroring               <ul style="list-style-type: none"> <li>• One-to-One</li> <li>• Many-to-One</li> <li>• Supports Mirroring for Tx/Rx/Both</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Spanning Tree               <ul style="list-style-type: none"> <li>• Supports 802.1D STP 2004 edition</li> <li>• Supports 802.1w RSTP</li> <li>• Supports Root Restriction(defined in 802.1Q-2005)</li> </ul> </li> <li>• 802.3ad Link Aggregation               <ul style="list-style-type: none"> <li>• DES-1210-28:                   <ul style="list-style-type: none"> <li>Max. 8 groups per device/8 ports per group</li> </ul> </li> <li>• DES-1210-52:                   <ul style="list-style-type: none"> <li>Max. 16 groups per device/8 ports per group</li> </ul> </li> </ul> </li> </ul>
L2 Multicasting	<ul style="list-style-type: none"> <li>• Forward all unregistered groups</li> <li>• Filter all unregistered groups</li> <li>• MLD snooping               <ul style="list-style-type: none"> <li>• Support MLD v1,v2</li> <li>• 256 MLD snooping groups</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• IGMP Snooping               <ul style="list-style-type: none"> <li>• Supports IGMP v1,v2, v3 awareness</li> <li>• Supports 256 IGMP snooping groups</li> <li>• Supports 64 static multicast address</li> </ul> </li> </ul>
VLAN	<ul style="list-style-type: none"> <li>• 802.1Q tagged VLAN</li> <li>• VLAN Group               <ul style="list-style-type: none"> <li>• Max. 256 static VLAN groups</li> <li>• Max. 4094 VIDs</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Management VLAN</li> <li>• Asymmetric VLAN</li> <li>• Auto Voice VLAN</li> <li>• Auto Surveillance VLAN</li> </ul>
Quality of Service (QoS)	<ul style="list-style-type: none"> <li>• 802.1p</li> <li>• Max. 4 queues per port</li> <li>• Queue Handling               <ul style="list-style-type: none"> <li>• Strict</li> <li>• Weighted Round Robin (WRR)</li> </ul> </li> <li>• Bandwidth control</li> </ul>	<ul style="list-style-type: none"> <li>• CoS Based on:               <ul style="list-style-type: none"> <li>• 802.1p</li> <li>• DSCP</li> <li>• ToS</li> <li>• TCP/UDP port number</li> <li>• IPv6 traffic class</li> </ul> </li> </ul>
Access Control List (ACL)	<ul style="list-style-type: none"> <li>• ACL based on:               <ul style="list-style-type: none"> <li>• 802.1p priority</li> <li>• VLAN</li> <li>• MAC address</li> <li>• Ethernet type</li> <li>• IPv4 and IPv6 address</li> <li>• LLC mask</li> <li>• DSCP</li> <li>• Protocol type</li> <li>• TCP/UDP port number</li> <li>• IPv6 Traffic Class</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Max. 50 ingress ACL profiles</li> <li>• Max. 1280 ingress ACL rules</li> </ul>
Security	<ul style="list-style-type: none"> <li>• 802.1x               <ul style="list-style-type: none"> <li>• Supports IPv4/IPv6 RADIUS Server</li> <li>• Supports Port-based access Control</li> <li>• Supports EAP, OTP, TLS, TTLS and PEAP</li> <li>• Supports MD5 authentication</li> <li>• Supports 802.1X session timeout attribute</li> </ul> </li> <li>• D-Link Safeguard Engine</li> <li>• DHCP Server Screening</li> <li>• ARP Spoofing Prevention</li> </ul>	<ul style="list-style-type: none"> <li>• Storm Control</li> <li>• Traffic Segmentation</li> <li>• Port Security</li> <li>• DoS Attack Prevention</li> <li>• SSH</li> <li>• SSL</li> <li>• Smart Binding(IP-MAC-Port Binding, IMPB)</li> <li>• Duplicate Address Detection (DAD)</li> </ul>
Management	<ul style="list-style-type: none"> <li>• Web-based GUI</li> <li>• Compact CLI through Telnet</li> <li>• Telnet Server (IPv4 / IPv6)</li> <li>• SmartConsole Utility</li> <li>• SNMP (IPv4 / IPv6)               <ul style="list-style-type: none"> <li>• Supports v1/v2c/v3</li> </ul> </li> <li>• SNMP Trap</li> <li>• System Log               <ul style="list-style-type: none"> <li>• Max. 500 log entries</li> <li>• Supports IPv4 / IPv6 log server</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• TFTP Client (IPv4 / IPv6)</li> <li>• BootP/DHCP Client (IPv4 / IPv6)</li> <li>• LLDP</li> <li>• LLDP-MED</li> <li>• SNMP (IPv4/v6)</li> <li>• DHCP Auto Configuration</li> <li>• RMON v1</li> <li>• IPv4/v6 Dual Stack</li> <li>• DDP (D-Link Discover Protocol)</li> </ul>

# DES-1210-28/52 Web Smart Switch

MIB	<ul style="list-style-type: none"> <li>• RFC1213 MIB II</li> <li>• RFC1493 Bridge MIB</li> <li>• RFC1907 SNMPv2 MIB</li> <li>• RFC1757,RFC2819 RMON MIB</li> <li>• RFC1215 MIB Traps Convention</li> <li>• RFC2233 Interface Group MIB</li> </ul>	<ul style="list-style-type: none"> <li>• RFC1398,1643,1650,2358,2665 Ether-like MIB</li> <li>• RFC2674,4363 802.1p MIB</li> <li>• IEEE 802.1AB-2005 LLDP-MIB</li> <li>• ZoneDefense MIB</li> <li>• DDP MIB</li> </ul>
Order Information		
Part Number	Description	
DES-1210-28	24 10/100 Base-TX + 2 10/100/1000 Base-T + 2 Combo 10/100/1000 BASE-T/ 100/1000 SFP	
DES-1210-52	48 10/100 Base-TX + 2 10/100/1000 Base-T + 2 Combo 10/100/1000 BASE-T/ 100/1000 SFP	
Optional Management Software		
DV-600S	D-View 6.0 Network Management Software (Standard Edition)	
DV-600P	D-View 6.0 Network Management Software (Professional Edition)	
Optional SFP Transceivers		
DEM-310GT	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	100BASE-ZX, single-mode, 80 km	
DEM-210	100BASE-FX, single-mode, 15 km	
DEM-211	100BASE-FX, multi-mode, 2 km	
DGS-712	1000BASE-LX, single-mode, 2 km	
Optional WDM SFP Transceivers		
DEM-330T	1000BASE-LX, Wavelength Tx: 1550 nm, Rx: 1310 nm, single-mode, 10 km	
DEM-330R	1000BASE-LX, Wavelength Tx: 1310 nm, Rx: 1550 nm, single-mode, 10 km	
DEM-331T	1000BASE-LX, Wavelength Tx: 1550 nm, Rx: 1310 nm, single-mode, 40 km	
DEM-331R	1000BASE-LX, Wavelength Tx: 1310 nm, Rx: 1550 nm, single-mode, 40 km	
DEM-220T	1000BASE-LX, Wavelength Tx: 1550 nm, Rx: 1310 nm, single-mode, 20 km	
DEM-220R	1000BASE-LX, Wavelength Tx: 1310 nm, Rx: 1550 nm, single-mode, 20 km	

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