Fanless Design
- Allows for noiseless operation
- Saves energy while lowering costs
- Provides continuous, reliable and eco-friendly operation

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
- IP-MAC-Port Binding (DHCP Snooping)*

Intuitive Management
- Manage using SmartConsole or web-based GUI
- Built-in MIB browser for SNMP Management
- D-View 6.0 module support
- Compact CLI through Telnet

VoIP Deployment
- Highest priority for VoIP services
- Auto Voice VLAN
- DSCP QoS

QoS
- Ensure time-sensitive data gets delivered efficiently
- Supports IEEE 802.1p QoS up to 4 802.1p Priority Queues

Advanced Features
- Loopback Detection auto disables port when loop is detected
- Cable Diagnostics allows administrator to determine cable status
- Force MDI/MDIX

Trap & Logs
- SNMP Trap supports link and STP state change
- Trap for SmartConsole Utility

Online Help
- Link to local support web site
- Downloadable user guide
- Real-time manual checks

* Available in future release

24/48-Port Web Smart Switch III

D-Link's DES-1210 Series is the latest generation of Web Smart Switches. Equipped with 24 or 48 10/100Mbps ports, 2 10/100/1000BASE-T ports, and 2 combo 10/100/1000BASE-T/SFP ports, the series integrates advanced management and security functions that provide performance and scalability. While easy to use, the DES-1210 Series provides a complete and affordable solution for small and medium businesses. Management options for the switches include SNMP, Web Management, SmartConsole Utility, and Compact Command Lines. The series also supports ACL filtering and D-Link's Safeguard Engine. Furthermore, the DES-1210-28/52 uses Auto Voice VLAN, ensuring higher priority for voice traffic. Both models come with an innovative fanless design in 19" metal cases.

Seamless Integration
The Web Smart Switches are designed to provide SMB users a complete control over the network. With Ethernet and Gigabit copper ports capable of connecting to existing Cat.5 twisted-pair cables, these switches eliminate the need for a complex reconfiguration process. The DES-1210 Series allows for flexible connection to a backbone or servers. Additionally, all ports support auto-negotiation of MDI/MDIX crossover, or configurable auto MDI and therefore do away with crossover cables or uplink ports. This brings inexpensive and easy connectivity to your desktop.

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). The IEEE 802.3x Flow Control function allows servers to directly connect to the switch for fast, reliable data transfer. At 2000Mbps 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 and automatically shut down the affected port. Cable Diagnostics is designed for network administrators to quickly examine the quality of the copper cables and also determine the type of cable error.

QoS, Bandwidth Control
The switches are perfect for deployment in a VoIP environment, as they support Auto Voice VLAN and Differentiated Services Code Point (DSCP) QoS for VoIP application. Auto Voice VLAN will automatically place voice traffic from an IP phone to an assigned VLAN and by doing so enhance the VoIP service. With a higher priority and individual VLAN, this feature guarantees the quality and security of VoIP traffic. DSCP marks parts of an IP packet, enabling different levels of service to be assigned for network traffic.

With Bandwidth Control, the network administrator 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 function protects the switches against traffic flooding caused by virus attacks. The switches 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. With the IP-MAC-Port Binding (DHCP Snooping) feature, the switch snoops DHCP information in order to automatically learn IP-MAC-Port Binding pairs and create a white list. Whenever cyber crime or hacking attempts are found, the IP change is kept under control and the location of the IP address becomes traceable. For added security, the DHCP Server Screening feature screens rogue DHCP server packets from user ports to prevent unauthorized IP assignment.

Versatile Management
The new generation of Web Smart Switches provides growing businesses simple and easy management of their network using an intuitive SmartConsole utility or 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 and it also provides an easy initial setting of the Smart Switches. Switches within the same L2 network segment that are connected to the user's local PC are displayed on screen for instant access. This allows extensive switch configuration settings and basic configuration of discovered devices such as password changes and firmware upgrades.

The DES-1210 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 in a consistent way. D-View 6.0 provides a useful set of tools for network administrators who want to effectively manage device configurations, fault tolerance, performance, and security. CLI management of the switches is possible via Telnet. This makes the adjustment of basic settings like password changes or firmware and configuration file uploads possible.

24/48-Port Web Smart Switch III

Technical Specifications

General

Port Standards & Functions	▪ IEEE 802.3 10BASE-T Ethernet (twisted-pair copper) ▪ IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper) ▪ IEEE 802.3ab 1000BASE-T Gigabit Ethernet (twisted- pair copper) ▪ IEEE 802.3z Gigabit Ethernet (fiber) ANSI/IEEE 802.3 ▪ Auto-negotiation ▪ IEEE 802.3x Flow Control
Number of Ports	▪ DES-1210-28: 24 10/100Mbps, 2 10/100/1000BASE-T, 2 combo 10/100/1000BASE-T/SFP ▪ DES-1210-52: 48 10/100Mbps, 2 10/100/1000BASE-T, 2 combo 10/100/1000BASE-T/SFP
Network Cables	▪ UTP Cat. 5, Cat. 5e (100 m max.) ▪ EIA/TIA-568 100-ohm STP (100 m max.)
Full/Half Duplex	▪ Full/half duplex for 10/100Mbps speeds ▪ Full duplex for Gigabit speed
Media Interface Exchange	Auto MDI/MDIX adjustment for all twisted-pair ports

Performance

Switching Capacity	▪ DES-1210-28: 12.8Gbps ▪ DES-1210-52: 17.6Gbps
Transmission Method	Store-and-forward
MAC Address Table	8K entries per device
MAC Address Update	▪ Up to 256 static MAC entries ▪ Enable/disable auto-learning of MAC addresses
Maximum 64 bytes packet forwarding rate	▪ DES-1210-28: 9.5 Mpps ▪ DES-1210-52: 3.1 Mpps
RAM Buffer	▪ DES-1210-28: 512KB per device ▪ DES-1210-52: 1MB per device

Physical & Environmental

AC Input	100 to 240 VAC 50/60Hz internal universal power supply
Maximum Power Consumption	▪ DES-1210-28: 17.6W ▪ DES-1210-52: 28.9W
Standby Power Consumption	▪ DES-1210-28: 7.6W/110V, 7.9W/240V ▪ DES-1210-52: 13.2W/110V, 13.3W/240V
Fan Quantity	▪ DES-1210-28: 0 ▪ DES-1210-52: 0
Acoustics	▪ DES-1210-28: 0dBA ▪ DES-1210-52: 0dBA
Heat Dissipation	▪ DES-1210-28: 60.05 BTU/hr ▪ DES-1210-52: 98.61 BTU/hr
Operating Temperature	0° to 40° C
Storage Temperature	-10° to 70° C
Operating Humidity	10% to 95% non-condensing

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24/48-Port Web Smart Switch III

Storage Humidity	5% to 95% non-condensing
Dimensions	▪ DES-1210-28: 440 mm x 210 mm x 44mm ▪ DES-1210-52: 441 mm x 250 mm x 44 mm ▪ 19-inch standard rack mounting width, 1U height
Weight	▪ DES-1210-28: 2.6 kg ▪ DES-1210-52: 3.3 kg
Diagnostic LEDs	▪ Power (Per device) ▪ Link/Activity/Speed (Per 10/100/1000Mbps port) ▪ Link/Activity/Speed (Per 10/100Mbps port) ▪ Link/Activity/Speed (Per SFP port)
Emission (EMI)	▪ FCC Class A ▪ CE Class A ▪ VCCI Class A ▪ C-Tick
MTBF	▪ DES-1210-28: 419,467hrs ▪ DES-1210-52: 289,012hrs
Safety	cUL, LVD

Software Features

L2 Features
- MAC Address Table
  - DES-1210-28: 8K
  - DES-1210-52: 8K
- Flow Control
  - 802.3x Flow Control
  - HOL Blocking Prevention
- IGMP Snooping
  - IGMP v1/v2 Snooping
  - Support 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
  - DES-1210-28:
    Max. 8 groups per device/8 ports per group
  - DES-1210-52:
    Max. 8 groups per device/8 ports per group
- Port Mirroring

- One-to-One
- Many-to-One
- Supports Mirroring for Tx/Rx/Both
- Cable Diagnostics
- Configurable Auto MDI/MDIX
- Multicast Filtering*
  - Forwards all groups
  - Forwards all unregistered groups
  - Filters all unregistered groups

VLAN
- 802.1Q
- VLAN Group
  - Max. 256 static VLAN groups
  - Max. 4094 VIDs
- Management VLAN
- Asymmetric VLAN
- Auto Voice VLAN
  - Max. 10 user defined OUI
  - Max. 8 default OUI

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
- Bandwidth Control
  - Port-based (Ingress/Egress, min. granularity 64Kb/s)

Access Control List (ACL)
- Max. 50 profiles
- Max. 240 rules shared by profiles
- ACL based on
  - MAC Address
  - IPv4 Address (ICMP/IGMP/TCP/UDP)
- ACL Actions
  - Permit
  - Deny

* Available in future release

SWITCH

D-Link®

24/48-Port Web Smart Switch III

Security

- 802.1X
- Port Security
    - Supports up to 64 MAC addresses per port
- Broadcast/Multicast/Unicast Storm Control
- IP-MAC-Port Binding
    - DHCP Snooping*
- Static MAC
- D-Link Safeguard Engine
- DHCP Server Screening*
- ARP Spoofing Prevention*
    - Max. 64 entries
- SSL*
    - Supports v1/v2/v3
    - Supports IPv4

* Available in future release

MIB

- MIB II
- Bridge MIB
- SNMPv2 MIB
- MIB Traps Convention
- Interface Group MIB
- Private MIB

Management

- Web-based GUI
- Compact CLI through Telnet
- Telnet Server
- TFTP Client
- SNMP
    - Supports v1/v2/v3*
- SNMP Trap

- Trap for SmartConsole Utility
- System Log
    - Max. 500 log entries
    - Supports IPv4 log server
- BootP/DHCP Client
- Time Setting
    - SNTP

Optional Products

Optional SFP Transceivers

DEM-310GT	1000BASE-LX, Single-mode, 10km
DEM-311GT	1000BASE-SX, Multi-mode, 550m
DEM-312GT2	1000BASE-SX, Multi-mode, 2km
DEM-314GT	1000BASE-LX, Single-mode, 50km
DEM-315GT	1000BASE-LX, Single-mode, 80km
DEM-210	100BASE-FX, Single-mode, 15km
DEM-211	100BASE-FX, Multi-mode, 2km

Optional WDM SFP Transceivers

DEM-220T	100BASE-BX, Wavelength Tx:1550nm Rx:1310nm, Single-mode, 20km
DEM-220R	100BASE-BX, Wavelength Tx:1310nm Rx:1550nm, Single-mode, 20km
DEM-330T	1000BASE-LX, Wavelength Tx:1550nm Rx:1310nm, Single-mode, 10km
DEM-330R	1000BASE-LX, Wavelength Tx:1310nm Rx:1550nm, Single-mode, 10km

DEM-331T	1000BASE-LX, Wavelength Tx:1550nm Rx:1310nm, Single-mode, 40km
DEM-331R	1000BASE-LX, Wavelength Tx:1310nm Rx:1550nm, Single-mode, 40km

SWITCH