## Product Highlights

- **Class leading performance**
  Higher switching capacity and faster packet forwarding rate

- **Advanced L2 features**
  Managed switch features without the complexity and high cost

- **Enhanced security**
  Smart binding technology prevents illicit access to your network

- **Optimised for VoIP and IP surveillance**
  Automatic prioritisation of VoIP and IP surveillance traffic without complicated set up

- **IPv6 ready**
  IPv6 Core Ready Logo Phase 2

- **D-LinkGreen**
  Advanced power saving technologies
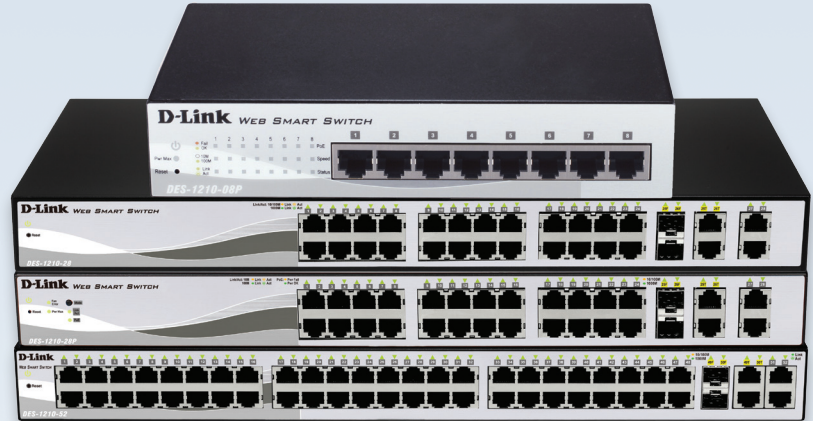
DES-1210-08P/28/28P/52

Fast Ethernet Smart Switches

Key Features

Green Technology
- Fanless Design- silent operation[1]
- Time-based PoE

Security Features
- Access Control List
- D-Link Safeguard Engine CPU from malicious traffic
- Port Security
- ARP Spoofing
- DHCP server screening
- Smart binding

Intuitive Management
- IPv4/ IPv6 Dual Stack
- IPv6 management
- Web GUI (supports 10 languages)
- SmartConsole utility
- SNMP and RMON
- Simplified CLI through Telnet

VoIP & IP Surveillance
- Highest priority for VoIP services
- Auto Voice VLAN

QoS
- Ensures efficient delivery of mission critical data
- Layer 2 QoS (4 queues)
- Layer 3 CoS (DSCP)

Advanced Features
- Loopback Detection automatically disables a port when a loop is detected
- Cable Diagnostics allows administrators to determine the cable status
- Rapid Spanning Tree – prevents loops and ensures availability
- IGMP snooping - save bandwidth on multicast traffic
- Asymmetric VLAN

[1] Except DES-1210-28P
[2] Not available for the DES-1210-08P

The DES-1210 Series is the latest generation of Smart Switches. Equipped with 8, 24 or 48 Fast Ethernet ports, 2 Gigabit ports[2] and 2 combo Gigabit/SFP ports[2], this series offers all the features needed in a small and medium business, without the complexity or cost involved. The built-in web interface and PC based SmartConsole Utility make these switches easy to deploy, configure and troubleshoot. Its complete set of features allows for seamless integration in every environment.

The PoE option is available on the 8 and 24 port members of the family. Integrating technologies such as time-based PoE which allows the power to be shut off at a predetermined time, saving power on VoIP phones, Wireless Access Points or any other PoE equipment. The DES-1210-28P utilises Smart Fan feature, automatically turning on the system fans only when necessary. This not only saves energy and cost but it also extends the lifespan of the switch. The DES-1210-28P is also compliant with the new PoE+ standard, enabling it to feed up to 30 Watts to connected devices.

Extensive set of Features

Equipped with a complete line-up of features, these switches include Quality of Service, Port Trunking, Spanning Tree and IGMP snooping. Network monitoring and maintenance features include Port Mirroring, Loopback Detection and the innovative Cable Diagnostics. With Cable diagnostics, the switch will flag a faulty Ethernet cable connected to any of its ports, detailing the type of error detected.

Ready for network convergence

These switches are ideal for converged networks, where IP telephony/VoIP, IP surveillance systems and traditional data traffic are integrated in the data flow. The Auto Voice and Auto Surveillance VLAN features will automatically place these types of traffic on separate VLANs, thus guaranteeing the confidentiality, prioritisation and quality of these services on the network.

Secure your Network

The DES-1210 series support RADIUS authentication, to ensure that only authorised users are able to log into the network. In addition, the Access Control List (ACL) feature further enhances security by ensuring that network resources are accessible only by their legitimate users. In addition, the DES-1210 Series protects against the most widespread network attacks, such as ARP spoofing or rogue DHCP servers. Smart Binding manages unwanted access to your network. This is done by checking IP and MAC address on a particular port against a pre-configured database before allowing or denying access.

Avoid Network Disruption

D-Link's innovative Safeguard Engine protects against traffic flooding caused by broadcast storms or virus attacks, blocking traffic that reaches the definable threshold and avoiding network lock-ups before they occur. Spanning Tree (STP) and Rapid Spanning Tree (RSTP) allow for redundant paths in a network to ensure servers and other resources are always available.

Versatile Management

The new generation of Smart switches is provided with an intuitive PC-based SmartConsole utility and a friendly web interface that enables administrators to configure and control their network down to the port level. The SmartConsole automatically discovers multiple D-Link Web Smart Switches within the same network segment, so administrators can access all of them even before they have been configured. This allows for very quick deployments and initial setups, including firmware upgrades. For more advanced administrators, the DES-1210 series supports a Command Line Interface (CLI) accessible with Telnet.

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.

D-Link
Building Networks for People

Technical Specifications	DES-1210-08P	DES-1210-28	DES-1210-28P	DES-1210-52
General				
Size	• Desktop	• 19" rack mountable, 1U		
Interface	• 8 10/100BASE-TX	• 24 10/100BASE-TX • 2 1000BASE-T • 2 Combo 1000BASET/SFP	• 24 10/100BASE-TXPoE • 2 1000BASE-T • 2 Combo 1000BASET/SFP	• 48 10/100BASE-TX • 2 1000BASE-T • 2 Combo 1000BASET/SFP
Port Standards	• IEEE 802.3 Ethernet • IEEE 802.3u Fast • Ethernet	• IEEE 802.3 Ethernet • IEEE 802.3u Fast Ethernet • IEEE 802.3ab Gigabit Ethernet • IEEE 802.3z Gigabit Ethernet (fiber)		
Auto negotiation	• Yes			
IEEE 802.3x Flow Control	• Yes			
Auto MDI/MDIX	• Yes			
Performance				
Switching Capacity	• 1.6 Gbps	• 12.8 Gbps	• 12.8 Gbps	• 17.6 Gbps
64-Byte Packet Forwarding Rate	• 1.19 Gbps	• 9.5 Mpps	• 9.5 Mpps	• 13.1 Mpps
MAC Address Table Size	• 8k Entries			
Flash Memory	• 16 MB			
Transmission Method	• Store-and-forward			
Packet Buffer Memory	• 384KB	• 512 kb	• 512 kb	• 1 MB
PoE				
PoE Standard	• 802.3af		• 802.3af and 802.3at	
PoE Capable Ports	• Port 1-8 up to 15.4 watts per port		• Port 1-4 upto 15.4 or 30 watts per port Port 5-24 upto 15.4 watts per port	
PoE Power Budget	• 72 watts		• 193 watts	
LEDs				
Power (Per Device)	• Yes			
Console (Per Device)	• Yes			
Link/Activity/Speed (Per Port)	• Yes			
Physical & Environmental				
MTBF (Hours)	• 274,382	• 356,242	• 205,416	• 592,770
Acoustics	• 0 dB	• 0 dB	• 53.9 dB	• 0 dB
Heat Dissipation	• 305.03 BTU/hr	• 60.05 BTU per hour	• 866.65 BTU per hour	• 98.61 BTU per hour
Power Input	• 100 to 240 VAC, 50 to 60 Hz Internal Universal Power Supply			
Max Power Consumption	• 89.4 Watts (PoE on) 9.6 Watts (PoE off)	• 13.4 watts	• 254 watts (PoE on), • 26.4 watts (PoE off)	• 28.9 watts
Dimensions (W x D x H)	• 190 x 120 x 38 mm	• 440 x 140 x 44 mm	• 440 x 250 x 44 mm	• 440 x 250 x 44 mm
Fan Quantity	• Fanless	• Fanless	3 Smart Fans[1]	• Fanless
Operating Temperature	• 0 to 40˚ C			
Storage Temperature	•–10 to 70˚ C			
Operating Humidity	• 5% to 95% non-condensing			
Emission (EMI)	• FCC Class A, CE Class A, VCCI Class A, IC, C-Tick			
Safety	• cUL, LVD			

[1]Default fan speed is low. Fan switches to high speed automatically at 33˚ C ambient temperature

Software Features

L2 Features
- MAC Address Table
  - 8K 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 Querier
- Spanning Tree Protocol
  - 802.1D STP
  - 802.1w RSTP
- Loopback Detection
- 802.3ad Link Aggregation
  - 4 groups per device (DES-1210-08P)
  - 14 groups per device (DES-1210-28/28P)
  - 26 groups per device (DES-1210-52)
  - 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 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
  - ToS1
- Bandwidth Control
  - Port-based (Ingress/Egress, min. granularity 64 Kb/s for 10/100 Mbps and 1850 Kb/s for 1000 Mbps)

[1]Except DES-1210-28P

Access Control List (ACL)
- Max. 50 profiles
- Max. 200 rules shared by profiles
- ACL based on:
  - MAC Address
  - IPv4 Address
  - ICMP/IGMP/TCP/UDP
  - VLAN ID
  - 802.1p Priority Queues
  - DSCP
- ACL Actions
  - Permit
  - Deny

Security
- 802.1X
- Port Security
  - Supports up to 64 MAC addresses per port
- Broadcast/Multicast/Unicast Storm Control
- Static MAC
- D-Link Safeguard Engine
- DHCP Server Screening
- ARP Spoofing Prevention
  - Max. 64 entries
- SSL2
  - Supports v1/v2/v3
  - Supports IPv4
- Smart Binding

MIB
- 1213 MIB II
- 1493 Bridge MIB
- 1907 SNMP v2 MIB
- 1215 Trap Convention MIB
- 2233 Interface Group MIB
- D-Link Private MIB
- Power-Ethernet MIB
- LLDP MIB[1]

RFC Standard Compliance
- RFC 768 UDP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 854 Telnet Server
- RFC 855 Telnet Server
- RFC 856 Telnet Binary

Transmission
- RFC 858 Telnet Server
- RFC 896 Congestion Control in

TCP/IP Network
- RFC 903 Reverse Address

Resolution Protocol
- RFC 951 BootP Client
- RFC 1155 MIB
- RFC 1157 SNMP v1
- RFC 1191 Path MTU Discovery
- RFC 1212 Concise MIB

Definition
- RFC 1213 MIB II, IF MIB
- RFC 1215 Traps for use with the SNMP
- RFC 1239 Standard MIB
- RFC 1350 TFTP
- RFC 1493 Bridge MIB
- RFC 1519 CIDR
- RFC 1945 HTTP/1.0
- RFC 2131 DHCP
- RFC 2132 DHCP Options and BOOTP Vendor Extensions
- RFC 2138 Radius

Authentication
- RFC 2233 Interface MIB
- RFC 2578 Structure of Management Information Version 2 (SMIv2)
- RFC 2647 802.1p
- RFC 3416 SNMP
- RFC 3417 SNMP
- RFC 3621 Power Ethernet

Management
- Web-based GUI
- Compact CLI through Telnet
- Telnet Server
- SmartConsole Utility
- 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
- LLDP, LLDP-MED
- Time-based PoE
- IPV6 Management
- RMON v1 group 1, 2, 3, 9

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-LX, Single-mode, 50 km
DEM-315GT	• 1000BASE-LX, Single-mode, 80 km
DEM-210	• 1000BASE-LX, Single-mode, 15 km
DEM-211	• 1000BASE-LX, Single-mode, 2 km

Optional WDM SFP Transceivers

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

Optional Management Software

DV-600S	• D-View 6.0 Network Management System (Standard Edition)
DV-600P	• D-View 6.0 Network Management System (Professional Edition)
DV-601P	• E2ES Console Plugin for D-View 6.0

For more information: www.dlink.com