



## Green Technology

- IEEE 802.3az Energy Efficient Ethernet
- D-Link Green 3.0 power-slaving features
  - LED and Port Shutoff
  - Port Standby
  - System Hibernation
  - Cable Length Detection
  - Link Status Detection
  - Time-based PoE (PoE model only)

## Security Features

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

## Intuitive Management

- IPv4/ IPv6 Dual Stack<sup>1</sup>
- Web GUI (supports 10 languages)
- SmartConsole utility
- SNMP and RMON
- Simplified CLI through Telnet

## QoS

- Supports IEEE 802.1p QoS
- Supports DSCP
- ToS
- TCP/UDP Port Number
- IPv6 Traffic Class

## Advanced Features

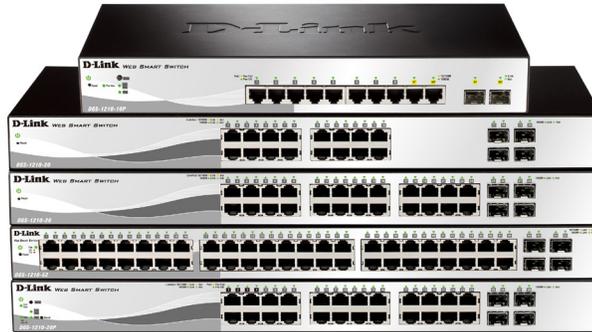
- Auto Surveillance VLAN
- Auto Voice VLAN
- Port or VLAN-based Loopback Detection
- Cable Diagnostics
- LLDP/LLDP-MED

## Trap & Logs

- SNMP Trap
- Trap for SmartConsole Utility
- System Log

<sup>1</sup> IPv6 management and configuration supported since firmware v3.10.

## Web Smart Switches



The DGS-1210 Series is the latest generation of D-Link Web Smart Switches featuring D-Link Green 3.0 technology. The series complies with the IEEE 802.3az Energy Efficient Ethernet standard. Support for IPv6 management and configurations ensures your network remains protected after the upgrade from IPv4 to IPv6<sup>1</sup>. By offering multiple management options, the Web Smart Switches allows quick deployment, infrastructure expansion, and seamless function upgrades. Built for small and medium-sized businesses, the DGS-1210 Web Smart Switches provide functionality, security, and manageability for a fraction of the standard cost of ownership.

The new DGS-1210-28P is a PoE Web Smart Switch that provides 24 10/100/1000 Base-T PoE ports with 4 Gigabit SFP ports. In addition to IEEE 802.3af compliance, ports 1-4 provide up to 30 watts of power output following IEEE 802.3at. The design allows more flexibility in power allocation for a variety of powered devices with affordable installation costs.

### Energy Saving

DGS-1210 switches are capable of conserving power without sacrificing operational performance or functionality by using D-Link Green 3.0 technology. Using the Energy Efficient Ethernet standard, the network will automatically decrease the power usage when traffic is low with no setup required. For environments not fully supporting the standard, DGS-1210 switches offer advanced power-saving settings including port shutoff and standby, LED shutoff, and system hibernation based on custom time profiles. The time profiles can also be applied to the PoE switch so that unnecessary power consumption can be saved during off hours. The DGS-1210 Series switches can also detect the length of connected cables to automatically reduce power usage on shorter cable connections.

### Easy Management

The D-Link Web Smart Switch series is designed for easy management. All configurations can be made through a Web interface regardless of the host PC's operating system. Furthermore, the web UI contains ten language options to make operations more straightforward. In the first installation, the SmartConsole Utility will automatically discover all D-Link Smart switches in the network, allowing administrators to assign IP addresses and the subnet mask quickly. It also allows simultaneous firmware upgrades to multiple switches, saving a great deal of time. Important management commands, such as downloading firmware or a configuration file, offer a sophisticated method of batch operations for multiple switches.

### Auto Surveillance VLAN and Voice VLAN

The D-Link Web Smart Switches automate the process of setting up IP surveillance and VoIP devices on a network. Auto Surveillance VLAN consolidates data and surveillance video transmission through the network, sparing businesses the expense of maintaining dedicated facilities. ASV also protects the quality of real-time video by grouping IP surveillance devices on a single high priority VLAN. This ensures that surveillance video streams will not be affected when ordinary data traffic are at their highest levels. Similarly, the Auto Voice VLAN guarantees clear quality and efficient transmission for all voice communication.

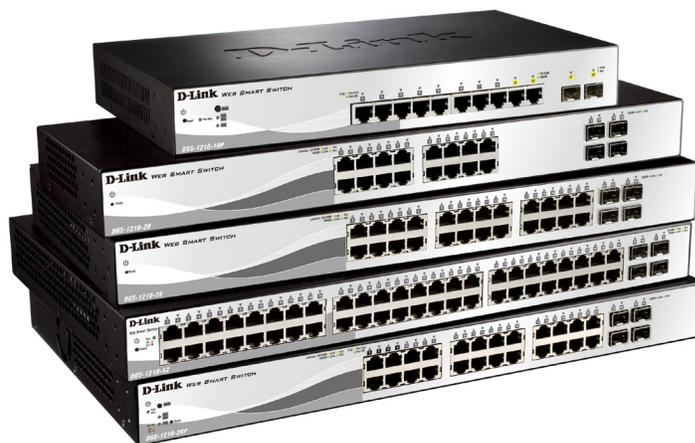
### Web Smart Switches

#### Extensive Layer 2 Features

Equipped with a complete lineup of L2 features, the DGS-1210 Series 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 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 and automatically shut down the affected port. The Cable Diagnostic feature designed primarily for administrators and customer service representatives, can rapidly discover the type of error and determine the cable quality.

#### 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 clients to be authenticated through external RADIUS servers. In addition, the Access Control List (ACL) feature enhances network security and protects the network by screening traffic from illegal MAC or IP addresses. ARP Spoofing Prevention prevents malicious intruders from sending massive fake ARP messages through a manipulated source. This protects important data from being stolen by Man-in-the-Middle attacks, and prevents wasting CPU cycles on these packets. For added security, the DHCP Server Screening feature blocks rogue DHCP server packets from user ports to prevent unauthorized IP assignment.





### Web Smart Switches

#### Technical Specifications

#### DGS-1210-20

#### DGS-1210-28

#### DGS-1210-52



General	Port Standards & Functions	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3ab 1000BASE-T Gigabit Ethernet IEEE 802.3x Flow Control for Full-Duplex Mode Auto-negotiation		
	Number of Ports	16 10/100/1000 Mbps, 4 SFP	24 10/100/1000 Mbps, 4 SFP	48 10/100/1000 Mbps, 4 dual-speed 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 10/100 Mbps speeds Full duplex for Gigabit speed		
	Media Interface Exchange	Auto or configurable MDI/MDIX		
Performance	Switching Capacity	40 Gbps	56 Gbps	104 Gbps
	Transmission Method	Store-and-forward		
	MAC Address Table	16,000 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	29.8 Mpps	41.7 Mpps	77.4 Mpps
	Packet Buffer Memory	1 MB per device		



## Web Smart Switches

### Technical Specifications

#### DGS-1210-20

#### DGS-1210-28

#### DGS-1210-52



Physical & Environmental	AC Input	100 to 240 VAC 50/60 Hz internal universal power supply		
	Maximum Power Consumption	14.06 W	16.81 W	43.5 W
	Standby Power Consumption	6.7 W/110 V, 7.2 W/240 V	5.9 W/110 V, 6.42 W/240 V	20.68 W/110 V, 22.05 W/240 V
	Fan Quantity	0	0	Two smart fans
	Acoustics	0 dB(A)	0 dB(A)	47.1 dB(A)
	Heat Dissipation	47.97 BTU/hr	57.36 BTU/hr	148.42 BTU/hr
	Operating Temperature	-5 to 50 °C (41 to 122 °F)		
	Storage Temperature	-20 to 70 °C (-4 to 158 °F)		
	Operating Humidity	0% to 95% non-condensing		
	Storage Humidity	0% to 95% non-condensing		
	Dimensions	440 x 140 x 44 mm (17.32 x 5.51 x 1.73 inches) 19" standard rack mounting width, 1U height	440 x 210 x 44 mm (17.32 x 8.27 x 1.73 inches) 19" standard rack mounting width, 1U height	440 x 250 x 44 mm (17.32 x 9.84 x 1.73 inches) 19" standard rack mounting width, 1U height
	Weight	2.2 kg (4.85 lbs)	2.9 kg (6.39 lbs)	4.1 kg (9.04 lbs)
	Diagnostic LEDs	Power (per device) Link/Activity/Speed (per 10/100/1000 Mbps port) Link/Activity/Speed (per SFP port)	Power (per device) Link/Activity/Speed (per 10/100/1000 Mbps port) Link/Activity/Speed (per SFP port)	Power (per device) Link/Activity/Speed (per 10/100/1000 Mbps port) Link/Activity/Speed (per SFP port) Fan (per device)
	MTBF	253,460 hours	236,739 hours	201,517 hours
Certifications	FCC Class A CE Class A ICES-003 VCCI Class A C-Tick BSMI			
Safety	cUL CE LVD			



### Web Smart Switches

#### Technical Specifications

#### DGS-1210-10P

#### DGS-1210-28P



General	Port Standards & Functions	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3ab 1000BASE-T Gigabit Ethernet IEEE 802.3x Flow Control for Full-Duplex Mode IEEE 802.3af compliance IEEE 802.3at compliance Auto-negotiation	
	Number of Ports	8 10/100/1000 Mbps PoE capable, 2 Combo Ports	24 10/100/1000 Mbps PoE capable, 4 SFP Ports
	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 10/100 Mbps speeds Full duplex for Gigabit speed	
	Media Interface Exchange	Auto or configurable MDI/MDIX	
Performance	Switching Capacity	20 Gbps	56 Gbps
	Transmission Method	Store-and-forward	
	MAC Address Table	16,000 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	14.88 Mpps	41.7 Mpps
	Packet Buffer Memory	1 MB per device	
PoE	PoE Standard	IEEE 802.3af and IEEE 802.3at	IEEE 802.3af and IEEE 802.3at
	PoE Capable Ports	Ports 1 to 8: Up to 30 W	Ports 1 to 4: Up to 30 W Ports 5 to 24: Up to 15.4 W
	PoE Power Budget	Max. 78 W	Max. 185 W

## Technical Specifications

### DGS-1210-10P

### DGS-1210-28P



Physical & Environmental	<b>AC Input</b>	100 to 240 VAC 50/60 Hz internal universal power supply	
	<b>Maximum Power Consumption</b>	97.0 W (PoE on) 12.5 W (PoE off)	238.4 W (PoE on) 27.4 W (PoE off)
	<b>Standby Power Consumption</b>	8.3 W/100 V, 8.0 W/240 V	16 W/110 V, 14 W/240 V
	<b>Fan Quantity</b>	0	Three smart fans
	<b>Acoustics</b>	0 dB(A)	52.2 dB(A)
	<b>Heat Dissipation</b>	330.96 BTU/hr	813.42 BTU/hr
	<b>Operating Temperature</b>	0 to 40 °C (32 to 104 °F)	-5 to 50 °C (41 to 122 °F)
	<b>Storage Temperature</b>	-20 to 70 °C (-4 to 158 °F)	
	<b>Operating Humidity</b>	0% to 95% non-condensing	
	<b>Storage Humidity</b>	0% to 95% non-condensing	
	<b>Dimensions</b>	330 x 180 x 44 mm (13 x 7.08 x 1.73 inches) Rack-mountable, 1U height	440 x 250 x 44 mm (17.32 x 9.84 x 1.73 inches); 19" standard rack mounting width, 1U height
	<b>Weight</b>	1.86 kg (4.10 lbs)	3.7 kg (8.15 lbs)
	<b>Diagnostic LEDs</b>	Power (per device) PoE Max (per Device) Link/Activity/Speed (per 10/100/1000 Mbps port) Link/Activity/Speed (per SFP port) Button to switch LED display mode between PoE and Link/Activity	Power (per device) PoE Max (per Device) Link/Activity/Speed (per 10/100/1000Base-T port) Link/Activity/Speed (per SFP port) Fan (per device) Button to switch LED display mode between PoE and Link/Activity
	<b>MTBF</b>	386,565 hours	224,530 hours
<b>Certifications</b>	FCC Class A CE Class A ICES-003 VCCI Class A C-Tick BSMI		
<b>Safety</b>	cUL CE LVD		



## Web Smart Switches

### Software Features

#### L2 Features

- MAC Address Table
  - 16,000 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-1210-10P:
    - Max. 5 groups per device/8 ports per group
  - DGS-1210-20:
    - Max. 10 groups per device/8 ports per group
  - DGS-1210-28/28P:
    - Max. 14 groups per device/8 ports per group
  - DGS-1210-52:
    - Max. 26 groups per device/8 ports per group
- Port Mirroring
  - One-to-One, Many-to-One
  - Supports Mirroring for Tx/Rx/Both
- Multicast Filtering
  - Forwards all unregistered groups
  - Filters all unregistered groups
- LLDP, LLDP-MED

#### 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
- 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
  - ToS<sup>1</sup>
  - TCP/UDP port number<sup>1</sup>
  - IPv6 traffic class<sup>1</sup>
- Bandwidth Control

<sup>1</sup> IPv6 management and configuration supported since firmware v3.10.

- Port-based (Ingress/Egress, min. granularity for 10/100/1000Base-T ports is 64 Kb/s)

#### Access Control List (ACL)

- DGS-1210-10P/20/28/28P
  - Max. 50 profiles
  - Max. 200 rules shared by profiles
  - Single or multiple ports (each rule)
- DGS-1210-52
  - Max. 50 profiles
  - Max. 450 rules shared by profiles
- ACL based on
  - MAC Address
  - IPv4 Address (ICMP/IGMP/TCP/UDP)
  - IPv6 Address (ICMP/TCP/UDP)<sup>1</sup>
  - 802.1p
  - DSCP
  - Ether type
  - IPv6 traffic class<sup>1</sup>
- ACL Actions
  - Permit
  - Deny

#### Security

- Port Security
  - Supports up to 64 MAC addresses per port
- Broadcast/Multicast/Unicast Storm Control
- Static MAC
- D-Link Safeguard Engine
- DHCP Server Screening
- Trusted Host
- ARP Spoofing Prevention
  - Max. 64 entries
- SSL
  - Supports v1/v2/v3
  - Supports IPv4/IPv6<sup>1</sup>
- Traffic Segmentation
- Smart Binding
  - Discover connected devices and click to bind
  - ARP Packet Inspection: 512 entries
  - IP Packet Inspection: 128 entries
  - Supports DHCP Snooping

#### AAA

- 802.1X Port-based Authentication
  - Supports RADIUS Server
  - Supports EAP, OTP, TLS, TTLS, PEAP

#### OAM

- Cable Diagnostics
- Factory Reset

#### 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
- D-Link ZoneDefense MIB

#### 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, IF MIB
- RFC 1215 MIB Traps Convention
- RFC 1350 TFTP
- RFC 1493 Bridge MIB
- RFC 1542 BootP/DHCP Client
- RFC 1769 SNTTP
- 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

#### Management

- Multi-Language Web-based GUI
  - English (default)
  - Simplified Chinese
  - Traditional Chinese
  - French
  - German
  - Italian
  - Japanese
  - Portuguese
  - Russian
  - Spanish
- SmartConsole Utility
- Simplified CLI
- Telnet Server
- TFTP Client
- IPv6 Neighbor Discovery<sup>1</sup>



## Web Smart Switches

### Software Features

- Configurable MDI/MDIX
- SNMP
  - Supports v1, v2, v3
- SNMP Trap
- System Log
  - Max. 500 log entries
- BootP/DHCP Client
- SNTP
- ICMPv6<sup>1</sup>
- IPv4/v6 Dual Stack<sup>1</sup>
- DHCP Auto Configuration
- RMON v1
- Time-based PoE (PoE model only)

#### D-Link Green 3.0 Technology

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

<sup>1</sup> IPv6 management and configuration supported since firmware v3.10.

### Optional Products

#### Optional WDM SFP Transceivers

DGS-1210-20/28/28P	
DEM-330T	1000BASE-BX, Wavelength Tx:1550 nm Rx:1310 nm, Single-mode, 10 km
DEM-330R	1000BASE-BX, Wavelength Tx:1310 nm Rx:1550 nm, Single-mode, 10 km
DEM-331T	1000BASE-BX, Wavelength Tx:1550 nm Rx:1310 nm, Single-mode, 40 km
DEM-331R	1000BASE-BX, Wavelength Tx:1310 nm Rx:1550 nm, Single-mode, 40 km

#### Optional SFP Transceivers

DGS-1210-20/28/28P	
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, 80 km

#### Optional WDM SFP Transceivers

DGS-1210-10P/52	
DEM-220T	100BASE-BX, Wavelength Tx:1550 nm Rx:1310 nm, Single-mode, 20 km
DEM-220R	100BASE-BX, Wavelength Tx:1310 nm Rx:1550 nm, Single-mode, 20 km
DEM-330T	1000BASE-BX, Wavelength Tx:1550 nm Rx:1310 nm, Single-mode, 10 km
DEM-330R	1000BASE-BX, Wavelength Tx:1310 nm Rx:1550 nm, Single-mode, 10 km
DEM-331T	1000BASE-BX, Wavelength Tx:1550 nm Rx:1310 nm, Single-mode, 40 km
DEM-331R	1000BASE-BX, Wavelength Tx:1310 nm Rx:1550 nm, Single-mode, 40 km

#### Optional SFP Transceivers

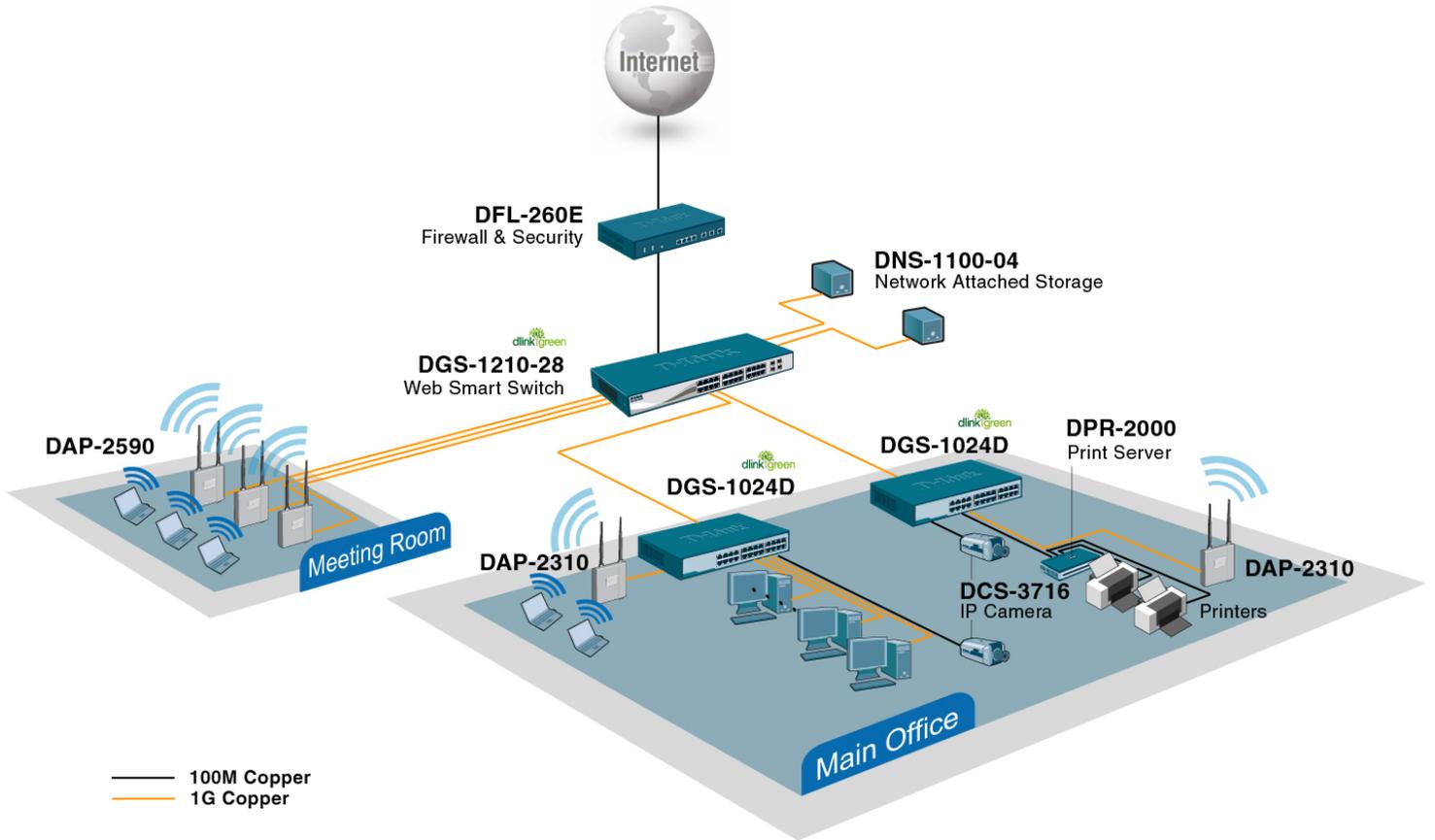
DGS-1210-10P/52	
DGS-712	1000BASE-T Copper
DEM-310GT	1000BASE-LX, Single-mode, 10 km
DEM-311GT	1000BASE-SX, Multi-mode, 550 m
DEM-312GT2	1000BASE-SX, Multi-mode, 2 km
DEM-314GT	1000BASE-LHX, Single-mode, 50 km
DEM-315GT	1000BASE-ZX, Single-mode, 80 km
DEM-210	100BASE-FX, Single-mode, 15 km
DEM-211	100BASE-FX, Multi-mode, 2 km

### Optional Software

#### 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)

### Deploying the DGS-1210 Series in an Office Environment



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