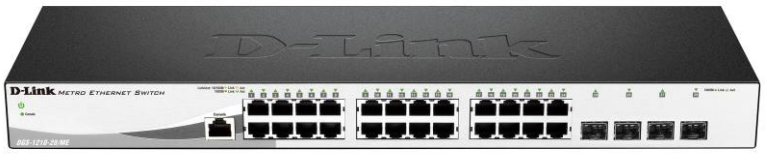

DGS-1210-28/ME

L2 Managed Switch with 24 10/100/1000Base-T Ports and 4 1000Base-X SFP Ports

The D-Link DGS-1210-28/ME switch is an ideal solution for Metro Ethernet applications. This switch provides 24 10/100/1000Base-T ports for copper connections, along with 4 1000Base-X SFP ports for improved uplink bandwidth. 6 kV surge protection ensures resilience against unexpected electrical spikes, while a full suite of security and management features keeps your network protected from internal and external threats.

Efficient and Resilient

For mission critical environments, the DGS-1210-28/ME switch supports 802.1D 2004 edition, 802.1w, and 802.1s Spanning Tree Protocols (STP). STP allows the switch to be configured with a redundant backup bridge path, so transmission and reception of packets can be guaranteed in emergency situations. The switch also supports 802.3ad link aggregation, which enables multiple ports to be grouped in parallel to form a single port, increasing bandwidth and redundancy for higher availability. The switch features 802.1p Quality of Service (QoS), allowing for real-time traffic classification into Weighted Round Robin (WRR) and strict priority levels mapped to 8 queues. Packet classification is based on TOS, DSCP, MAC, IPv4, VLAN ID, TCP/UDP port number, protocol type, or user-defined packet content for flexible configuration for specific multimedia applications such as VoIP or IPTV.

Security & Authentication

The DGS-1210-28/ME switch supports 802.1X port-based/host-based access control, guest VLAN, and RADIUS/TACACS+ authentication for strict access control over the network. The IP-MAC-Port Binding feature allows administrators to bind a source IP address with an associated MAC and also to define the port number to enhance user access control. The built in D-Link Safeguard Engine™ protects the CPU from broadcast/multicast/unicast flooding by automatically trapping packets and logging events in these situations. In addition, the Access Control List (ACL) feature enhances network security and switch performance.

Management Capabilities

A web-based GUI provides a user-friendly interface and easy management, and DHCP auto-configuration gives administrators enhanced management features, allowing them to save configuration presets to a TFTP server. Individual switches can then retrieve their IP addresses from the server and load the preset configuration. Support for Link Layer Discovery Protocol (LLDP) allows a network device to advertise its identity and capabilities on the local network, which helps businesses better manage their network topology. Also, each port on these switches supports a cable diagnostic feature that helps detect cable related problems such as length or cable functionality issues, so the administrator can quickly identify and fix this problem.

Traffic & Bandwidth Control

Integrated bandwidth control allows network administrators to define the throughput levels for each port to manage bandwidth. It provides minimum granularity of 64 Kbps, ingress control for port and flow-based bandwidth control. The DGS-1210-28/ME switch also supports traffic control, which optimizes performance by dropping packets beyond the threshold, and port mirroring helps administrators facilitate traffic diagnostics and track switch performance. The DGS-1210-28/ME switch also provides IGMP snooping with IGMP authentication to prune multicast traffic and to optimize network performance.

Multicast Applications

The DGS-1210-28/ME switch features a full set of L2 multicast functions, including IGMP snooping, IGMP filtering, fast leave, and multicast traffic configuration for specific ports. With L2 multicast support, the DGS-1210-28/ME is ready and capable of handling growing IPTV applications. Host-based IGMP/MLD snooping allows for multiple multicast subscribers per physical interface, and ISM VLAN sends multicast streams in a multicast VLAN, saving bandwidth on the backbone network. ISM VLAN profiles allow users to bind/replace the predefined multicast registration information to subscriber ports quickly and easily.

DGS-1210-28/ME

L2 Managed Switch with 24 10/100/1000Base-T Ports and 4 1000Base-X SFP Ports

General Features			
Model	DGS-1210-28/ME	DGS-1210-28/ME	DGS-1210-28/ME/P
Hardware Version	A1, A2	B1	B1
Hardware			
Size	• 19-inch standard rackmount width • 1U height		
Interface	• 24 10/100/1000Base-T ports • 4 1000Base-X SFP ports • RJ-45 console port		
LEDs	• Power • Console • Link/Activity/Speed (per port)	• Power • Console • Link/Activity/Speed (per port) • RPS	• Power • Console • Link/Activity/Speed (per port) • RPS
Network Cables	• UTP Cat. 5, Cat. 5e (100 m max.)		
Power Connector	• AC power connector	• AC power connector • Connector for RPS[1]	• AC power connector • Connector for external lead-acid 12 V DC battery[1] (rechargeable, with voltage monitoring)
Functionality			
Standards and 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 802.3az Energy Efficient Ethernet • Auto-negotiation • IEEE 802.3x Flow Control • IEEE 802.3z 1000Base-X • Auto MDI/MDIX adjustment for all twisted-pair ports		
Duplex Mode	• Full/half duplex for 10/100 Mbps speeds • Full duplex for 1000 Mbps speed		
Performance			
Switching Capacity	• 56 Gbps		
Switching Method	• Store-and-forward		
MAC Address Table Size	• 16K Entries		
64-byte Max. Packet Forwarding Rate	• 41.7 Mpps		
RAM for CPU	• 128 MB DDR3	• 256 MB DDR3	• 256 MB DDR3
Packet Buffer	• 1.5 MB		
Flash Memory	• 32 MB		
Jumbo Frame	• 9,216 bytes		

D-Link
Building Networks for People

DGS-1210-28/ME
L2 Managed Switch with 24 10/100/1000Base-T Ports and 4 1000Base-X SFP Ports

Software		
L2 Features	• MAC Address Table: 16K • Spanning Tree Protocol - 802.1D STP - 802.1w RSTP - 802.1s MSTP - BPDU filtering - Root restriction • Ethernet Ring Protection Switching (ERPS, ITU-T G.8032) support (only for DGS-1210-28/ME/B and DGS-1210-28/ME/P/B)	• Loopback Detection • Port Mirroring - Supports 1 mirroring group - Supports One-to-One, Many-to-One, Flow-based (ACL) mirroring for ingress traffic • L2 Protocol Tunneling (L2PT) • RSPAN • Link aggregation - 802.3ad - Supports max 8 groups, 8 ports per group
L2 Multicasting	• IGMP Snooping - IGMP v1/v2 Snooping, v3 awareness - IGMP authentication/filtering - Supports 1024 groups - VLAN/host-based IGMP snooping fast leave - Report Suppression - IGMP Querier	• MLD Snooping - MLD v1, MLD v2 awareness - Supports 512 groups
VLAN	• 802.1Q Tagged VLAN • VLAN group - Max. 4094 VLAN groups • Port-based VLAN • GVRP • Asymmetric VLAN • Max. 256 dynamic VLAN	• 802.1v Protocol VLAN • VLAN Trunking • MAC-based VLAN • Port-based Q-in-Q • Q-in-Q Selective • ISM VLAN
L3 Features	• Max. 256 ARP entries • Supports 255 static ARP entries • Supports Gratuitous ARP • IP Interfaces: 4	• Default Route • Static Routing: - Supports 60 IPv4 static routes - Supports 30 IPv6 static routes
Quality of Service (QoS)	• CoS based on: - Switch port - 802.1p priority queues - VLAN ID - MAC address - IPv4/IPv6 address - DSCP - TOS - Protocol type - TCP/UDP port - IPv6 traffic class	• Bandwidth Control - Port-based (Ingress, Min. Granularity 64 Kbps) - Flow-based (Ingress, Min. Granularity 64 Kbps) - Egress queue bandwidth control (Min. Granularity 64 Kbps)[2] • Обработка очередей - Strict Priority - Weighted Round Robin (WRR) • 8 outbound queues
Access Control List (ACL)	• ACL based on - Switch port - 802.1p priority - VLAN ID - MAC address - Ether Type - TOS - IPv4/v6 address - DSCP - Protocol type - IPv4/IPv6 TCP/UDP port number - ICMP - IPv6 traffic class - User-defined packet content	• Up to 768 ingress access rules • ACL Action (permit/deny/mirror) • Time-based ACL • ACL statistics • CPU interface filtering
AAA	• 802.1X - Host-based access control - Port-based access control • Guest VLAN • Host-based MAC authentication • Supports Microsoft® NAP	• RADIUS/TACACS+ accounting • User Account Privilege (4 level user account) • MAC-based access control - Max. 512 entries when using local database • Authentication for access control: RADIUS, TACACS+, local database

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DGS-1210-28/ME
L2 Managed Switch with 24 10/100/1000Base-T Ports and 4 1000Base-X SFP Ports

Security	• SSH v2 • SSL v1/2/3 • Port Security (Up to 64 MAC addresses per port) • IP-MAC-Port Binding (IMPB) - ARP inspection - IP inspection - DHCP Snooping IPv6 • Broadcast/Multicast/Unicast storm control	• D-Link Safeguard Engine • DHCP Server Screening • DHCP client filtering • BPDU attack protection • DoS attack prevention • Traffic segmentation
OAM	• 802.3ah Ethernet Link OAM - Supports 802.3ah link layer remote loopback and discovery (System log and SNMP) - 802.3ah D-Link extension: D-link Unidirectional • Link Detection (DULD), (System log and SNMP)	• Cable diagnostics • Dying Gasp (only for DGS-1210-28/ME/B and DGS-1210-28/ME/P/B) • Digital Diagnosics Monitoring (DDM) • 802.1ag CFM[2]
Management	• Web-based GUI (IPv4/IPv6) • Command Line Interface (CLI) • Telnet Server/Client (IPv4/IPv6) • TFTP client (IPv4/IPv6) • Command logging • SNMP v1/v2c/v3 • SNMP Traps • System log • RMON v1 • RMON v2 • LLDP • BootP/DHCP client • DHCP Auto-configuration • Text-editable config file • Trusted Host	• DHCP relay (IPv4/IPv6) - DHCP relay agent/local relay - DHCP relay option 12, 37, 38 - DHCP relay option 82 • PPPoE Circuit-ID tag insertion • Trap/alarm/log severity control • CPU monitoring • SNTP • Debug command • Password recovery • Password encryption • sFlow • Dual Image • Supports Real Time Clock (RTC) (only for DGS-1210-28/ME/B and DGS/1210-28/ME/P/B) • Supports up to 14 concurrent telnet/ssh/console sessions • FTP client (IPv4/IPv6)
MIB	• RFC1213 MIB II • RFC1493 Bridge MIB • RFC1907 SNMPv2 MIB • RFC1757, 2819 RMON MIB • RFC2021 RMONv2 MIB • RFC1398, 1643, 1650, 2358, 2665 Ether-like MIB	• RFC2674, 4363 802.1p MIB • RFC2233, 2863 IF MIB • RFC2618 RADIUS Authentication Client MIB • RFC2620 RADIUS Accounting Client MIB • RFC2925 Ping & Traceroute MIB • D-Link ZoneDefense MIB
IETF	• RFC768 UDP • RFC791 IP • RFC792 ICMPv4 • RFC2463, 4443 ICMPv6 • RFC793 TCP • RFC826 ARP	• RFC 2474, 3260 definition of the DS Field in the IPv4 and IPv6 header • RFC1321, 2284, 2865, 3580, 3748 Extensible Authentication Protocol (EAP) • RFC2571, RFC2572, RFC2573, RFC2574 SNMP
IPv6	• RFC1981 Path MTU Discovery • RFC2460 IPv6 • RFC2461, 4861 Neighbor Discovery • RFC2462, 4862 IPv6 Stateless Address Auto-configuration	• RFC2464 IPv6 Neighbor over Ethernet and definition • RFC3513, 4291 IPv6 addressing architecture • RFC2893, 4213 Dual Stack IPv4/IPv6 • RFC3484 Default Address Selection

DGS-1210-28/ME
L2 Managed Switch with 24 10/100/1000Base-T Ports and 4 1000Base-X SFP Ports

Physical Parameters			
Dimensions (L x W x H)	• 440 x 140 x 44 mm		
Weight	• 1.66 kg	• 2.21 kg	• 2.21 kg
Environmental Conditions			
Power Input	• AC Input: 100 to 240 V AC, 50/60 Hz		
Maximum Power Consumption	• 18.8 W	• 19.14 W	• 19.14 W
Standby Power Consumption	• 100 V: 17.65 W • 240 V: 17.84 W	• 100 V: 7.87 W • 240 V: 8.21 W	• 100 V: 7.87 W • 240 V: 8.21 W
Heat Dissipation	• 76.59 BTU/hr	• 60.12 BTU/hr	• 60.12 BTU/hr
MTBF (hours)	• 388,138	• 497,918	• 497,918
Acoustic	• 0 dB		
Power Surge Protection	• All Ethernet ports support IEC61000-4-5 surge protection		
Internal Power Supply	• 24 W (output: 12 V/2 A)	• 24 W (output: 12 V/2 A)	• 54 W (output: 12 V/3.8 A, 13.6 V/0.6 A)
Ventilation	• Fanless		
Temperature	• Operating: -30 to 50 °C • Storage: -40 to 70 °C		
Humidity	• Operating: 10% to 90% non-condensing • Storage: 5% to 90% non-condensing		

Package Contents

- DGS-1210-28/ME switch
- Power cord
- Power cord retainer[3]
- RJ-45 console cable[3]
- 2 brackets for 19-inch rack mounting
- 4 rubber feet
- Mounting kit
- Quick Installation Guide[3]

Others	
EMI	• FCC Class A • CE Class A • VCCI • BSMI • CCC
Safety	• CE • LVD • UL • CB

[1] Not included in the package contents.
[2] Only for B1 hardware version.
[3] Is not supplied with DGS-1210-28/ME/A2B.

Note: The latest software version (v7.00) for B1 hardware version does not support backward compatibility with A1 hardware version.

DGS-1210-28/ME

L2 Managed Switch with 24 10/100/1000Base-T Ports and 4 1000Base-X SFP Ports

Order Information	
Part Number	*Description*
DGS-1210-28/ME/A	L2 Managed Switch with 24 10/100/1000Base-T Ports and 4 1000Base-X SFP Ports
DGS-1210-28/ME/UPS/A	L2 Managed Switch with 24 10/100/1000Base-T Ports, 4 1000Base-X SFP Ports, UPS Function When Connecting External 12 V DC Battery and Battery Rechargeability
DGS-1210-28/ME/DC/A	L2 Managed Switch with 24 10/100/1000Base-T Ports, 4 1000Base-X SFP Ports and DC Power Supply
DGS-1210-28/ME/RPS/A	L2 Managed Switch with 24 10/100/1000Base-T Ports and 4 1000Base-X SFP Ports, Powered from 220 V Power Supply or External 12 V DC Power Supply
DGS-1210-28/ME/B	L2 Managed Switch with 24 10/100/1000Base-T Ports, 4 1000Base-X SFP Ports, Powered from 220 V Power Supply or External 12 V DC Power Supply, and Switch Power Status Monitoring
DGS-1210-28/ME/P/B*	L2 Managed Switch with 24 10/100/1000Base-T Ports, 4 1000Base-X SFP Ports, UPS Function When Connecting External 12 V DC Battery, Battery Rechargeability and Switch Power Status Monitoring
DGS-1210-28/ME/DC/B	L2 Managed Switch with 24 10/100/1000Base-T Ports, 4 1000Base-X SFP Ports, Powered from 36-72 V DC Main Power Supply, 12 V DC Redundant Power Supply, and Switch Power Status Monitoring
Optional Management Software	
DV-700-N25-LIC	D-View 7 - 25 Node License
DV-700-N50-LIC	D-View 7 - 50 Node License
DV-700-N100-LIC	D-View 7 - 100 Node License
DV-700-N250-LIC	D-View 7 - 250 Node License
DV-700-N500-LIC	D-View 7 - 500 Node License
DV-700-N1000-LIC	D-View 7 - 1000 Node License
DV-700-P5-LIC	D-View 7 - 5 Probe License
DV-700-P10-LIC	D-View 7 - 10 Probe License
DV-700-P25-LIC	D-View 7 - 25 Probe License
DV-700-P50-LIC	D-View 7 - 50 Probe License
DV-700-P100-LIC	D-View 7 - 100 Probe License
Optional SFP Transceivers	
DEM-310GT	1000Base-LX Single-Mode SFP transceiver (up to 10 km)
DEM-311GT	1000Base-SX Multi-Mode SFP transceiver (up to 550 m)
DEM-312GT2	1000Base-SX+ Multi-Mode SFP transceiver (up to 2 km)
DEM-314GT	1000Base-LHX Single-Mode SFP transceiver (up to 50 km)
DEM-315GT	1000Base-ZX Single-Mode SFP transceiver (up to 80 km)
DGS-712	1000Base-T Copper SFP transceiver (up to 100 m)
DEM-302S-LX	1000Base-LX Single-Mode SFP transceiver (up to 2 km)

Optional WDM SFP Transceivers	
DEM-330T	1000Base-BX-D (Tx:1550 nm, Rx:1310 nm) Single-Mode WDM SFP transceiver (up to 10 km)
DEM-330R	1000Base-BX-U (Tx:1310 nm, Rx:1550 nm) Single-Mode WDM SFP transceiver (up to 10 km)
DEM-331T	1000Base-BX-D (Tx:1550 nm, Rx:1310 nm) Single-Mode WDM SFP transceiver (up to 40 km)
DEM-331R	1000Base-BX-U (Tx:1310 nm, Rx:1550 nm) Single-Mode WDM SFP transceiver (up to 40 km)
DEM-302S-BXD	1000Base-BX-D (Tx:1550 nm, Rx:1310 nm) Single-Mode WDM SFP transceiver (up to 2 km)
DEM-302S-BXU	1000Base-BX-U (Tx:1310 nm, Rx:1550 nm) Single-Mode WDM SFP transceiver (up to 2 km)
Optional Equipment	
DPS-500A	Redundant power supply for switches (140 W)
DPS-CB150-2PS/B	1.5 meter power cable for connecting redundant power supply to switches

* Standard RPS connector can be used only for connecting external 12 V DC battery as UPS.