Product Highlights

Flexibility and Reliability

Combination of RJ-45, SFP, and SFP+ ports provides the necessary flexibility to adapt to a wide range of applications and environments

Security and Authentication Features

Robust security features, including the D-Link Safeguard Engine™, protect against malicious attacks, while authentication tools allow access control

High Bandwidth

Up to four 10G SFP+ ports[1] for maximum throughput, reduce latency, and provide bandwidth for future network expansion

DGS-1210ME Series

Gigabit Metro Ethernet Switches

Key Features

Flexible Hardware Design

- Available in multiple configurations
  - Various 10/100/1000BASE-T RJ-45, 1G SFP, and 10G SFP+ port combinations
  - PoE and non-PoE variations
- Designed for standard 1U rack-mounting
- Rear panel RPS connector for an additional external power supply (for non-PoE models)

Layer 2 Features

- 16K MAC address table
- IEEE 802.1D STP, 802.1w RSTP, and 802.1s MSTP
- Loopback detection
- IEEE 802.3ad Link Aggregation
- Port-based Q-in-Q
- VLAN Trunking

Security and Authentication

- Port security
- SSH/SSL
- IP-MAC-Port Binding (IMPB)
- Access Control List (ACL) and IEEE 802.1X
- Guest VLAN

Reliability and Maintenance

- Surge protection on all Gigabit Ethernet ports[2]
- ITU-T G.8032 ERPS sub-50 ms protection and recovery
- Dying Gasp for quick trouble shooting during power failures or system shut downs

The DGS-1210ME Series Metro Ethernet Switches are a range of switches designed for Metro Ethernet applications. They feature a variety of port configurations, including 10/100/1000BASE-T RJ-45 ports, 1G SFP ports, and 10G SFP+ ports for increased network bandwidth. Surge protection, advanced Layer 2 functions, and a suite of security and management tools make the DGS-1210ME Series Metro Ethernet Switches ideal for Metro Ethernet applications.

Versatile Connectivity

The DGS-1210ME Series comes in a variety of port setups, including Gigabit Ethernet RJ-45, 1G SFP ports, or 10G SFP+ ports. All models offer a minimum of at least two 1G Ethernet SFP ports, excluding the DGS-1210-10XS/ME, which offers two 10G copper/SFP+ combo ports. The DGS-1210-28X/ME ,DGS-1210-28XS/ME and DGS-1210-52X/ME offer four 10G SFP+ ports for improved uplink bandwidth. The DGS-1210-10XP/ME features Power over Ethernet (PoE), allowing compatible devices to be installed and powered in remote locations without immediate access to power outlets.

Efficient and Resilient

For mission critical environments, the DGS-1210ME Series supports IEEE 802.1D 2004 edition, 802.1w, and 802.1s Spanning Tree Protocols (STP). The Spanning Tree Protocol allows the switches to participate in Spanning Tree topology, providing an alternative Layer 2 path in the event of a network failover. The switches also support IEEE 802.3ad link aggregation, which enables multiple ports to be grouped to form a single virtual port, increasing bandwidth and redundancy for higher availability. Furthermore, this series features IEEE 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. Advanced traffic classification parameters allow the network to be tuned for flexible configurations for specific multimedia applications such as VoIP or IPTV.

Security and Authentication

The DGS-1210ME Series supports IEEE 802.1X port-based/host-based access control, guest VLAN, and RADIUS/TACACS+ authentication for strict access control to the network. The IP-MAC-Port Binding (IMPB) feature allows administrators to associate a source IP address with a designated MAC address and also offers the flexibility to define the port number to enhance user access control. The built-in D-Link Safeguard Engine™ protects the CPU from broadcast, multicast, and 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 user-friendly web interface gives administrators access to advanced management features such as DHCP auto-configuration. This enables switches to load their configuration from a TFTP server once they have been assigned an IP address, allowing central management of device configurations. The switches support Link Layer Discovery Protocol (LLDP), which advertises the device's capabilities and identity to the local network, allowing administrators to better manage their network topology. Each port also supports cable diagnostics, which can be used to troubleshoot cable length and functionality problems remotely, resulting in lower management overheads.

Traffic and Bandwidth Control

Integrated bandwidth control allows network administrators to define the throughput levels for ingress and egress bandwidth. It provides a minimum granularity of 64 Kbps for ingress port and flow-based bandwidth control, and a minimum granularity of 64 Kbps for egress queue bandwidth. The DGS-1210ME Series also supports traffic control, which optimizes performance by dropping packets when exceeding a set threshold, while port mirroring helps administrators facilitate traffic diagnostics and track network performance. The DGS-1210ME Series also provides IGMP snooping with IGMP authentication to prune multicast traffic and to optimize available bandwidth.

Multicast Applications

The DGS-1210ME Series 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-1210ME Series 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. Additionally, ISM VLAN profiles allow users to bind or replace the predefined multicast registration information to subscriber ports quickly and easily.

DGS-1210-10X/ME

DGS-1210-10XS/ME

DGS-1210-10XP/ME

DGS-1210-28X/ME

DGS-1210-28X/SME

DGS-1210-52X/ME

Technical Specifications

Model Number	DGS-1210-10X/ME	DGS-1210-10XS/ME	DGS-1210-10XP/ME
Hardware Version	C1	C1	C1
Interface			
Size	• 11-inch standard rack-mount width • 1U height	• 11-inch standard rack-mount width • 1U height	• 11-inch standard rack-mount width • 1U height
Interface	• 8 x GE ports • 2 x 10G SFP+ ports	• 8 x 1G SFP ports • 2 x 10G combo copper/SFP+ ports	• 8 x GE PoE ports • 2 x 10G SFP+ ports
Console Port	RJ-45 console port		
Port Standards/Functions	• IEEE 802.3 10BASE-T Ethernet • IEEE 802.3u 100BASE-TX Fast Ethernet • IEEE 802.3ab 1000BASE-T Gigabit Ethernet • IEEE 802.3ae 10G Ethernet • IEEE 802.3x Flow Control for full-duplex mode, auto-negotiation • IEEE 802.3z 1000BASE-X Gigabit Fiber	• IEEE 802.3 10BASE-T Ethernet • IEEE 802.3u 100BASE-TX Fast Ethernet • IEEE 802.3ab 1000BASE-T Gigabit Ethernet • IEEE 802.3ae 10G Ethernet • IEEE 802.3x Flow Control for full-duplex mode, auto-negotiation • IEEE 802.3z 1000BASE-X Gigabit Fiber • IEEE 802.3u 100BASE-FX (for 10XS/ME,28XS/ME)	• IEEE 802.3 10BASE-T Ethernet • IEEE 802.3u 100BASE-TX Fast Ethernet • IEEE 802.3ab 1000BASE-T Gigabit Ethernet • IEEE 802.3ae 10G Ethernet • IEEE 802.3x Flow Control for full-duplex mode, auto-negotiation • IEEE 802.3af/802.3af/at (ports 1 to 8)
Half/Full Duplex	Half/full-duplex for 10/100 Mbps and full-duplex for 1000 Mbps speeds (Applicable only to copper ports)		
Media Interface Exchange	Auto or configurable MDI/MDIX (Applicable only to copper ports)		
Performance			
Switching Capacity	56 Gbps		
Forwarding Method	Store-and-forward		
MAC Address Table Size	16 K entries		
MAC Address Update	Up to 256 static MAC entries		
64-Byte Max Forwarding Rate	41.66 Mpps		
DRAM Size	1 GB DDR4		
Packet Buffer	1.5 MB		
Flash Memory	128 MB		
Optional RPS	DPS-200A, DPS-500A/DC	DPS-200A, DPS-500A/DC	--
LEDs			
Power (per device)	✓		
Console (per device)	✓		
Link/Active/Speed (per port)	✓		
Fan Error	--	--	✓
Physical/Environmental			
MTBF	900,258.13 hours	659,233 hours	660,740.13 hours
Acoustic	0 dB(A)	0 dB(A)	• High Speed 45.7 dB(A) • Low Speed 43.1 dB(A)
Heat Dissipation	27.96 BTU/hr	61.3 BTU/hr	923,765 BTU/hr
Power Input	AC Input: 100 to 240 V AC, 50/60 Hz		
Max Power Consumption	• 8.160 W/100 V • 8.195 W/240 V	• 61.26 W/100 V • 61.18 W/240 V	• 270.14 W (PoE on) • 14.32 W (PoE off)
Max PoE Budget	--	--	240 W
Standby Power Consumption	• 3.67 W/100 V • 3.74 W/240 V	• 6.48 W/100 V • 6.50 W/240 V	• 9.26 W/100 V • 9.25 W/240 V
Dimensions	280 x 180 x 44 mm	280 x 180 x 44 mm	330 x 200 x 44 mm
Ventilation	Fanless	Fanless	1 x Smart fan
Weight	1.852 kg	0.978 kg	2.26 kg
Power Surge Protection	IEC 61000-4-5 surge protection on all Gigabit Ethernet ports		
Operating Temperature	0 to 50 °C (23 to 122 °F)		
Storage Temperature	-25 to 70 °C (-40 to 158 °F)		
Operating Humidity	10% to 90% non-condensing		
Storage Humidity	5% to 90% non-condensing		
EMI	CE, FCC, IC, RCM, VCCI		
Safety Certifications	CB, UL, LVD		

Model Number	DGS-1210-28X/ME	DGS-1210-28XS/ME	DGS-1210-52X/ME
Hardware Version	C1	C1	C1
Interface			
Size	• 19-inch standard rack-mount width • 1U height	• 19-inch standard rack-mount width • 1U height	• 19-inch standard rack-mount width • 1U height
Interface	• 24 x GE ports • 4 x 10G SFP+ ports	• 24 x 1G SFP ports • 4 x 10G SFP+ ports	• 48 x GE PoE ports • 4 x 10G SFP+ ports
Console Port	RJ-45 console port		
Port Standards/Functions	• IEEE 802.3 10BASE-T Ethernet • IEEE 802.3u 100BASE-TX Fast Ethernet • IEEE 802.3ab 1000BASE-T Gigabit Ethernet • IEEE 802.3ae 10G Ethernet • IEEE 802.3x Flow Control for full-duplex mode, auto-negotiation • IEEE 802.3z 1000BASE-X Gigabit Fiber	• IEEE 802.3 10BASE-T Ethernet • IEEE 802.3u 100BASE-TX Fast Ethernet • IEEE 802.3ab 1000BASE-T Gigabit Ethernet • IEEE 802.3ae 10G Ethernet • IEEE 802.3x Flow Control for full-duplex mode, auto-negotiation • IEEE 802.3z 1000BASE-X Gigabit Fiber • IEEE 802.3u 100BASE-FX (for 10XS/ME,28XS/ME)	• IEEE 802.3 10BASE-T Ethernet • IEEE 802.3u 100BASE-TX Fast Ethernet • IEEE 802.3ab 1000BASE-T Gigabit Ethernet • IEEE 802.3ae 10G Ethernet • IEEE 802.3x Flow Control for full-duplex mode, auto-negotiation
Half/Full Duplex	Half/full-duplex for 10/100 Mbps and full-duplex for 1000 Mbps speeds (Applicable only to copper ports)		
Media Interface Exchange	Auto or configurable MDI/MDIX (Applicable only to copper ports)		
Performance			
Switching Capacity	128 Gbps	128 Gbps	176 Gbps
Forwarding Method	Store-and-forward		
MAC Address Table Size	16 K entries		
MAC Address Update	Up to 256 static MAC entries		
64-Byte Max Forwarding Rate	95.23 Mpps	95.23 Mpps	130.94 Mpps
DRAM Size	1 GB DDR4		
Packet Buffer	1.5 MB		
Flash Memory	128 MB		
Optional RPS	DPS-200A, DPS-500A/DC		
LEDs			
Power (per device)	✓		
Console (per device)	✓		
Link/Active/Speed (per port)	✓		
Fan Error	--	✓	✓
Physical/Environmental			
MTBF	832,908.04 hours	633,658 hours	450,166.57 hours
Acoustic	0 dB(A)	• High Speed 45.7 dB(A) • Low Speed 33.4 dB(A)	• High Speed 43.6 dB(A) • Low Speed 40.8 dB(A)
Heat Dissipation	62.86 BTU/hr	144.29 BTU/hr	119.92 BTU/hr
Power Input	AC Input: 100 to 240 V AC, 50/60 Hz		
Max Power Consumption	• 18.41 W/100 V • 18.31 W/240 V	• 42.24 W/100 V • 41.55 W/240 V	• 35.04 W/100 V • 34.38 W/240 V
Standby Power Consumption	• 6.815 W/100 V • 6.949 W/240 V	• 10.570 W/100 V • 10.775 W/240 V	• 14.39 W/100 V • 14.15 W/240 V
Dimensions	440 x 140 x 44 mm	440 x 210 x 44 mm	440 x 250 x 44 mm
Ventilation	Fanless	2 x Smart fans	1 x Smart fan
Weight	2.06 kg	2.96 kg	3.50 kg
Power Surge Protection	IEC 61000-4-5 surge protection on all Gigabit Ethernet ports		
Operating Temperature	0 to 50 °C (23 to 122 °F)		
Storage Temperature	-25 to 70 °C (-40 to 158 °F)		
Operating Humidity	10% to 90% non-condensing		
Storage Humidity	5% to 90% non-condensing		
EMI	CE, FCC, IC, RCM, VCCI		
Safety Certifications	CB, UL, LVD		

Software		
L2 Features	• MAC address table: 16K entries • Jumbo Frame: Up to 10,240 bytes • Spanning Tree Protocols - 802.1D STP - 802.1w RSTP - 802.1s MSTP - BPDU filtering - Root restriction • Loopback detection	• Mirroring - Support 1 mirroring group - One-to-One, Many-to-One, Flow-based (ACL) mirroring for ingress traffic • L2 Protocol Tunneling (L2PT) • Link aggregation - Compliant with 802.3ad, 802.3AX - Max. 8 groups, 8 ports per group • Flex Link • MAC flapping detection
L2 Multicasting	• IGMP Snooping - IGMP v1/v2/v3 snooping, v3 awareness - IGMP authentication/filtering - Up to 1024 groups - Group/host-based IGMP snooping fast leave - Report suppression	• MLD Snooping - MLD v1, MLD v2 awareness - Supports 1024 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 • ISM VLAN (multicast VLAN) • Private VLAN • VLAN translation
L3 Features	• Max. 768 ARP entries • Supports 768 static ARP entries • Static route - 64 IPv4 static routes - 32 IPv6 static routes	• Gratuitous ARP • Default route • 4 IP interfaces
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) • Queue handling - Strict Priority Queue (SPQ) - Weighted Round Robin (WRR)
Access Control List (ACL)	• ACL based on - Switch port - 802.1p priority - VLAN ID - MAC address - EtherType - IPv4/v6 address - DSCP - Protocol type - IPv4/IPv6 TCP/UDP port number - ICMP - IPv6 traffic class	• Up to 768 ingress access rules • ACL action (permit/deny/mirror) • ACL statistics • CPU interface filtering
Authentication, Authorization, and Accounting (AAA)	• 802.1X - Host-based access control - Port-based access control • Guest VLAN • Host-based MAC authentication • RADIUS accounting	• TACACS+ accounting • User account privilege (4 level user access) • MAC-based access control - Max. 512 entries when using local database • Authentication for management access - Local, RADIUS, TACACS+ database - Trusted host
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 - IPv6 DHCP snooping • Broadcast/Multicast/Unicast storm control	• D-Link Safeguard Engine • DHCP server screening • DHCP client filtering • BPDU attack protection • DoS attack prevention • Traffic segmentation
Operations, Administration, and Maintenance (OAM)	• 802.3ah Ethernet Link OAM - 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 • Optical transceiver digital diagnostics monitoring (DDM)

Management	• Web-based GUI (IPv4/IPv6) • Command Line Interface (CLI) • Telnet Server/Client (Support IPv4/IPv6) • TFTP client (IPv4) • 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	• DHCP relay (IPv4/IPv6) - DHCP relay agent/local relay - DHCP relay option 12, 18, 37, 38, 82 • PPPoE Circuit-ID tag insertion • Trap/alarm/log severity control • CPU monitoring • SNTP • LLDP-MED (for PoE models only) • Password recovery • Password encryption
MIB	• RFC1212 Concise MIB Definitions • RFC1213 MIB II • RFC1215 MIB Traps Convention • RFC1065, 1155, 2578 MIB Structure • RFC1493 Bridge MIB • RFC1157, 2573, 2575, 2576 SNMP MIB • RFC3418 SNMPv2 MIB • RFC2819 RMON MIB • RFC2021 RMONv2 MIB • RFC1643, 1650, 2665 Ether-like MIB	• RFC2674 802.1p MIB • RFC 2233 Interface Group MIB • RFC 2618 RADIUS authentication client MIB • RFC 2620 RADIUS accounting client MIB • RFC4022 MIB for TCP • RFC4113 MIB for UDP • PoE MIB • DDP MIB • LLDP-MED MIB
IETF Standard	• RFC768 UDP • RFC791 IP • RFC792 ICMPv4 • RFC2463, 4443 ICMPv6	• RFC793 TCP • RFC826 ARP • RFC1321, 2284, 2865, 2716, 3580 Extensible Authentication Protocol (EAP)
IPv6	• RFC1981 Path MTU Discovery • RFC2460 IPv6 • RFC2461, 4861 Neighbor Discovery	• RFC2462, 4862 IPv6 Stateless Address Auto-configuration • RFC2893, 4213 IPv4/IPv6 dual stack function

Order Information	
DGS-1210-10X/ME	8 Ports GE + 2 Ports 10G SFP+ Managed Switch
DGS-1210-10XP/ME	8 Ports GE PoE+ + 2 Ports 10G SFP+ Managed Switch
DGS-1210-10XS/ME	8 Ports 1G SFP + 2 Ports 10G Combo Managed Switch
DGS-1210-28X/ME	24 Ports GE + 4 Ports 10G SFP+ Managed Switch
DGS-1210-28XS/ME	24 Ports 1G SFP + 4 Ports 10G SFP+ Managed Switch
DGS-1210-52X/ME	48 Ports GE + 4 Ports 10G SFP+ Managed Switch
Redundant Power Supply (Non-PoE Models Only)	
DPS-200A	60W Redundant Power Supply
DPS-500A	140W Redundant Power Supply
DPS-500DC	140W Redundant Power Supply
DPS-CB150-2PS	150 cm RPS cable for connecting DGS-1210-10X/ME,10XS/ME,28X/ME,28XS/ME,52X/ME and DPS-200A/500A/500DC
Optional SFP Transceivers	
DEM-310GT	1000BASE-LX, Single-mode, 10 km
DEM-311GT	1000BASE-SX, Multi-mode, 500 m
DEM-314GT	1000BASE-LHX, Single-mode, 50 km
DGS-712	1000BASE-T 100 m (only supports 1000 Mbps mode - no flow control)
Optional WDM SFP Transceiver	
DEM-330T	1000BASE-LX, Single-mode, 10 km, Tx: 1550, Rx: 1310 nm
DEM-330R	1000BASE-LX, Single-mode, 10 km, Tx: 1310, Rx: 1550 nm
Optional SFP+ Transceivers	
DEM-431XT	10GBASE-SR SFP+ Transceiver, 33 m: OM1 MMF, 82 m: OM2 MMF, 300 m: OM3 MMF
DEM-432XT	10GBASE-LR SFP+ Transceiver, 10 km
DEM-433XT	10GBASE-ER SFP+ Transceiver, 40 km
DEM-434XT	10GBASE-ZR SFP+ Transceiver, 80 km
DEM-436XT-BXD	10GBASE-LR BiDi SFP+ Transceiver, Tx: 1330 nm, Rx: 1270 nm, 20 km
DEM-436XT-BXU	10GBASE-LR BiDi SFP+ Transceiver, Tx 1270 nm, Rx: 1330 nm, 20 km
Optional SFP+ Direct Attach Stacking Cables	
DEM-CB100S	10-GE SFP+ 1 m Direct Attach Cable
DEM-CB300S	10-GE SFP+ 3 m Direct Attach Cable
DEM-CB700S	10-GE SFP+ 7 m Direct Attach Cable

1. Up to 4 10G SFP+ uplink ports are available on the DGS-1210-28X/28XS/52X switches.
2. All Gigabit Ethernet ports of the DGS-1210ME Series (C1) switches support up to 6 kV surge protection.
3. Please note that the firmware for the DGS-1210ME Series (Cx) is not backwards compatible with Ax/Bx hardware.

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C1 v1.00 WW