Diagnostic LEDs		
Power/Stacking ID/Fan (per device)	✔	✔
Link/Activity/Speed (per 10/100/1000 Mbps port)	✔	✔
Link/Activity/Speed (per Gigabit SFP port)	✔	✔
Link/Activity/Speed (per 10G SFP+ port)	✔	✔
Physical & Environment		
AC Input	• 100 to 240 VAC 50/60 Hz internal universal power supply	
Maximum Power Consumption	• 22.3 W	• 44.2 W
Standby Power Consumption	• 15.2 W	• 28.9 W
Fans	• 1 x smart fan	• 2 x smart fans
Acoustics	• 42.7 dB(A)	• 45.8 dB(A)
Heat Dissipation	• 76.04 BTU/hr	• 138.79 BTU/hr
Operating Temperature	• -5 to 50 ˚C (23 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 (W x D x H)	• 440 x 210 x 44 mm (17.36 x 8.26 x 1.73 in)	• 440 x 210 x 44 mm (17.36 x 8.26 x 1.73 in)
Weight	• 2.00 kg (4.41 lbs)	• 2.40 kg (5.29 lbs)
Certifications	• CE, FCC, C-Tick, VCCI, BSMI, CCC, IPv6 Ready Logo Phase 2	
Safety	• cUL, CB	

Technical Specifications		
Model Number	DGS-1510-28P	DGS-1510-28XMP
Hardware Version	• A1	
General		
Size	• 19" standard rack width, 1U height	
Interfaces	• 24 x 10/100/1000 Mbps PoE-capable • 2 x Gigabit SFP • 2 x 10G SFP+	• 24 x 10/100/1000 Mbps PoE-capable • 4 x 10G SFP+
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 10 Gigabit Ethernet • IEEE 802.3x Flow Control for full-duplex mode, auto-negotiation	
Network Cables	• UTP Cat. 5, Cat. 5e (100 m max.) • EIA/TIA-568 100-ohm STP (100 m max.)	
Duplex Mode	• Full/half-duplex for 10/100 Mbps and full-duplex for 1000 Mbps speed	
Media Interface Exchange	• Auto or configurable MDI/MDIX	

Performance		
Switching Capacity	• 92 Gbps	• 128 Gbps
Transmission Method	• Store-and-forward	
MAC Address Table	• Up to 16,384 entries per device	
MAC Address Update	• Up to 512 static MAC entries • Enable/disable auto-learning of MAC addresses	
Maximum Packet Forwarding Rate	• 68.45 Mpps	• 95.24 Mpps
Packet Buffer Memory	• 1.5 MB per device	
MTBF	• 275,428 hours	• 274,796 hours

PoE		
PoE Standard	• IEEE 802.3af/at	
PoE Capable Ports	• Ports 1 to 24: Up to 30 W	
PoE Power Budget	• Max. 193 W	• Max. 370 W

Diagnostic LEDs		
Power/Stacking ID/Fan Error/ PoE Push Button (per device)	✔	✔
Link/Activity/Speed/PoE Mode (per 10/100/1000 Mbps port)	✔	✔
Link/Activity/Speed (per SFP port)	✔	✔
Link/Activity/Speed (per 10G SFP+ port)	✔	✔

Physical & Environment		
AC Input	• 100 to 240 VAC 50/60 Hz internal universal power supply	
Maximum Power Consumption	• 238.7 W (PoE on) • 29 W (PoE off)	• 436.3 W (PoE on) • 38.4 W (PoE off)
Standby Power Consumption	• 21 W	• 28.3 W
Fans	• 2 x smart fans	
Acoustics	• 46.4 dB(A)	• 56.9 dB(A)
Heat Dissipation	• 813.97 BTU/hr	• 1487.78 BTU/hr
Operation Temperature	• -5 to 50 ˚C (23 to 122 ˚F)	
Storage Temperature	• -20 to 70 ˚C (-4 to 158 ˚F)	
Operation Humidity	• 0% to 95% non-condensing	
Storage Humidity	• 0% to 95% non-condensing	
Dimensions (W x D x H)	• 440 x 210 x 44 mm (17.36 x 8.26 x 1.73 in)	• 440 x 308 x 44 mm (17.36 x 12.12 x 1.73 in)
Weight	• 2.54 kg (5.60 lbs)	• 4.25 kg (9.37 lbs)
Certifications	• CE, FCC, C-Tick, VCCI, BSMI, CCC	• CE, FCC, C-Tick, VCCI, BSMI, CCC, IPv6 Ready Logo Phase 2
Safety	• cUL, CB	

Software Features

Stackability	• Virtual Stacking Support
	  • D-Link Single IP Management (SIM)
	  • Up to 32 devices per virtual stack
	  • Up to 20G stacking bandwidth
	
	• Physical Stacking
	  • Supports duplex chain/rRing topology
	  • Up to 40G stacking bandwidth full-duplex
	  • Up to 6 units per stack

L2 Features	• MAC address table: Up to 16,384
	• Flow Control
	  • 802.3x Flow Control
	  • HOL Blocking Prevention
	• Jumbo Frame up to 9,216 Bytes
	• IGMP Snooping
	  • IGMP v1/v2 Snooping
	  • IGMP v3 awareness
	  • Supports 512 IGMP groups
	  • Supports 128 static multicast addresses
	  • IGMP per VLAN
	  • Supports IGMP Snooping Querier
	  • Host-based IGMP Snooping Fast Leave
	• MLD Snooping
	  • Supports MLD v1/v2 awareness
	  • Supports 512 groups
	  • Supports 128 static multicast addresses
	  • Per VLAN MLD Snooping
	  • Host-based MLD Fast Leave
	  • MLD Snooping Querier
	
	• Spanning Tree Protocol (STP)
	  • 802.1D STP
	  • 802.1w RSTP
	  • 802.1s MSTP
	• Loopback Detection v4.07[2]
	• 802.3ad Link Aggregation
	  • Max. 32 groups per device/8 ports per group
	• Port mirroring
	  • Support 4 mirroring groups
	  • One-to-one, many-to-one, flow-based (ACL) mirroring
	• Multicast Filtering
	  • Forwards all unregistered groups
	  • Filters all unregistered groups
	• Ethernet Ring Protection Switching (ERPS)

VLAN	• 802.1Q Tagged VLAN • 4K VLAN Groups • Configurable VID: 0-4094 • GVRP • Asymmetric VLAN • Auto Voice VLAN • Auto Surveillance VLAN 2.0[2] • MAC-based VLAN • Protocol-based VLAN

Quality of Service (QoS)	• CoS based on
	  • 802.1p priority
	  • VLAN
	  • MAC address
	  • EtherType
	  • IP address
	  • DSCP
	  • Protocol type
	  • TCP/UDP port number
	  • DSCP of IPv6 traffic class
	  • IPv6 flow label
	
	• 802.1p Quality of Service
	• Queue Handling
	  • Strict Priority Queue (SPQ)
	  • Weighted Round Robin (WRR)
	  • Deficit Round Robin (DRR)
	  • SPQ + WRR
	• 8 queues per port
	• Bandwidth Control
	  • Port-based (ingress/egress, min. granularity for 10/100/1000BASE-T ports is 64 Kb/s)

L3 Features	• ARP
	  • 256 Static ARP
	  • Supports Gratuitous ARP
	• IPv6 Neighbour Discovery (ND)
	• 16 IP interfaces
	
	• Default routing
	• Static routing
	  • 64 IPv4 static route entries
	  • 32 IPv6 static route entries
	• UDP helper[2]

Access Control List (ACL)	• ACL based on
	  • 802.1p priority
	  • VLAN
	  • MAC address
	  • EtherType
	  • IP address
	  • DSCP
	  • Protocol type
	  • TCP/UDP port number
	  • DSCP of IPv6 traffic class
	  • IPv6 flow label
	
	• ACL Actions
	  • Permit
	  • Deny
	• Max. 256 access list
	• Max. 768 rules
	• Single or multiple ports (each rule)
	• Time-based ACL
	• ACL Statistics

Security	• Port Security
	  • Supports up to 128 MAC addresses per port
	• Broadcast/Multicast/Unicast Storm Control
	• Dynamic ARP Inspection
	• D-Link Safeguard Engine
	• DHCP Server Screening
	• ARP Spoofing Prevention
	  • Max. 64 entries
	• SSH
	  • Supports v2
	  • Supports IPv4/IPv6
	• BPDU Attack Protection
	• DoS Attack Prevention
		• SSL
		  • Supports v1/v2/v3
		  • Supports IPv4/IPv6
		• Traffic Segmentation
		• IP-MAC-Port Binding
		  • DHCP snooping
		  • IP Source Guard
		  • Dynamic ARP Inspection
		  • IPv6 DHCP Guard
		  • IPv6 RA Guard
		  • IPv6 Snooping
		  • IPv6 Source Guard
		  • IPv6 ND Inspection

AAA	• Compound Authentication
	  • 802.1X port and MAC-based authentication
	  • Supports RADIUS and local server
	  • Supports EAP, OTP, TLS, TTLS, PEAP
	• Web-based Access Control (WAC)
	  • Port-based access control
	  • Host-based access control
	  • Dynamic VLAN assignment
	• Guest VLAN
	• RADIUS and TACACS+ authentication for switch access
	• RADIUS and TACACS+ accounting
		• MAC-based Access Control (MAC)
		  • Port-based access control
		  • Host-based access control
		  • Dynamic VLAN assignment
		• Japan Web-based Access Control (JWAC)
		  • Port-based access control
		  • Host-based access control
		  • Dynamic VLAN assignment

OAM	• Cable Diagnostics • sFlow	• Factory Reset

Management	• Command Line Interface (CLI)
	• Telnet Server
	• TFTP Client
	• IPv6 Neighbor Discovery
	• Configurable MDI/MDIX
	• SNMP
	  • Supports v1, v2c, v3
	• SNMP Trap
	• System Log
	  • Max. 10,000 log entries
	• Debug command
	• Dual images
	• Surveillance mode[2]
		• DHCP Client
		• D-Link Network Assistant support
		• SNTP
		• ICMPv6
		• IPv4/v6 Dual Stack
		• DHCP Auto Configuration
		• RMON v1/v2
		• LLDP, LLDP-MED
		• DHCP relay
		• Web-based GUI
		• TFTP Client
		• NTP
		• Telnet client (supports CLI only)

D-Link Green 3.0 Technology	• Power saving by:
	  • Link status
	  • LED or port shut-off
	  • System hibernation mode
	  • Time-based PoE (PoE models only)	

Order Information

Product Number	Description
DGS-1510-20	16 x 10/100/1000 Mbps, 2 x Gigabit SFP, and 2 x 10G SFP+
DGS-1510-28	24 x 10/100/1000 Mbps, 2 x Gigabit SFP, and 2 x 10G SFP+
DGS-1510-52	48 x 10/100/1000 Mbps, 2 x Gigabit SFP, and 2 x 10G SFP+
DGS-1510-28X	24 x 10/100/1000 Mbps and 4 x 10G SFP+
DGS-1510-52X	48 x 10/100/1000 Mbps and 4 x 10G SFP+
DGS-1510-28P	24 x 10/100/1000 Mbps PoE-capable, 2 x Gigabit SFP, and 2 x 10G SFP+
DGS-1510-28XMP	24 x 10/100/1000 Mbps PoE-capable and 4 x 10G SFP+

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-LHX, single-mode, 50 km
DEM-315GT	1000BASE-ZX, single-mode, 80 km
DGS-712	1000BASE-T to SFP transceiver

Optional WDM SFP Transceivers

DEM-331T	1000BASE-LX, wavelength Tx: 1550 nm, Rx: 1310 nm, single-mode, 40 km
DEM-331R	1000BASE-LX, wavelength Tx: 1310 nm, Rx: 1550 nm, single-mode, 40 km
DEM-330T	1000BASE-LX, wavelength Tx: 1550 nm, Rx: 1310 nm, single-mode, 10 km
DEM-330R	1000BASE-LX, wavelength Tx: 1310 nm, Rx: 1550 nm, single-mode, 10 km
DEM-302S-BXD	1000BASE-LX, wavelength Tx: 1550 nm, Rx: 1310 nm, single-mode, 2 km
DEM-302S-BXU	1000BASE-LX, wavelength Tx: 1310 nm, Rx: 1550 nm, single-mode, 2 km

Optional SFP+ Transceivers

DEM-431XT	10GBASE-SR SFP+ transceiver (without DDM), 33 m: OM1 MMF, 82 m: OM2 MMF, 300 m: OM3 MMF
DEM-431XT-DD	10GBASE-SR SFP+ transceiver (with DDM), 33 m: OM1 MMF, 82 m: OM2 MMF, 300 m: OM3 MMF
DEM-432XT	10GBASE-LR SFP+ transceiver (without DDM), 10 km
DEM-432XT-DD	10GBASE-LR SFP+ transceiver (with DDM), 10 km
DEM-433XT	10GBASE-ER SFP+ transceiver (without DDM), 40 km
DEM-433XT-DD	10GBASE-ER SFP+ transceiver (with DDM), 40 km
DEM-434XT	10GBASE-ZR SFP+ transceiver (without DDM), 80 km
DEM-436XT-BXD	10GBASE-LR BiDi SFP+ transceiver (without DDM), wavelength Tx: 1330 nm, Rx: 1270 nm, 20 km
DEM-436XT-BXU	10GBASE-LR BiDi SFP+ transceiver (without DDM), wavelength Tx: 1270 nm, Rx: 1330 nm, 20 km

Optional SFP+ Direct Attach Stacking Cables	
DEM-CB100S	10G SFP+ 1 m Direct Attach Cable
DEM-CB300S	10G SFP+ 3 m Direct Attach Cable
DEM-CB700S	10G SFP+ 7 m Direct Attach Cable

[1] When stacking in a linear typology, the remaining unused SFP+ ports in the stacking port pair of the top and bottom switches will also be considered occupied by the switch and cannot be used for any other purpose.
[2] This feature will be supported by firmware release version 1.40 and later, expected release in Q4 2016.

Updated on 2015/11/05