D-Link
Building Networks for People

Product Highlights

Feature-Rich Software

An integrated software image provides powerful L2 and L3 features to fulfill different applications' requirements, capable of building solid, reliable networks

Embedded 10G Ports

Six embedded high-speed 10G ports simplify the network deployment by providing versatile options for uplink connections

Scalability and High Availability

Physical stacking provides agile expansion and redundancy while reliability through fault tolerant topologies ensures rock-solid connectivity

DGS-3130 Series

Gigabit Layer 3 Stackable Managed Switches

Features

High Availability and Flexibility

- 24 or 48 10/100/1000BASE-T non-PoE ports
- 24 or 48 10/100/1000BASE-T PoE ports
- 24 or 48 SFP ports
- 2 10GBASE-T and 4 10G SFP+ embedded uplink ports

Reliability

- Redundant power supply (RPS) support
- Ethernet Ring Protection Switching (ERPS)
- Embedded 6 kV surge protection on all Gigabit Ethernet ports and on all GE RJ-45 access ports
- IEEE 802.1D/802.1w/802.1s Spanning Tree
- Loopback Detection (LBD)

L3 Features

- Static Route
- RIP/RIPng
- OSPFv2/v3

Operations, Administration and Maintenance

- IEEE 802.3ah Ethernet Link OAM
- IEEE 802.1ag/ITU-T Y.1731 Service OAM

High Bandwidth Stacking

- Physical stack of up to 9 units
- Supports long-distance stacking over fiber
- 80 Gbps per device physical stacking bandwidth

The DGS-3130 Series Gigabit Layer 3 Stackable Managed Switches are designed to address the needs of small to medium-sized business networks by incorporating L2 and L3 features that enable the switches to be deployed in a variety of environments and topologies. Together the hardware and software enhancements combine to create a family of powerful, flexible and cost-effective switches. The DGS-3130 Series allows multiple switches to be connected to form a single physical or virtual stack. This increases redundancy over multiple physical units, simplifies management, and provides a single IP address to manage all members in the stack. The DGS-3130 Series includes the latest security features such as Multi-layer and Packet Content Access Control Lists (ACL), Storm Control, and IP-MAC-Port Binding (IMPB) with DHCP Snooping. The DGS-3130 Series supports multiple authentication mechanisms such as 802.1X, Web-based Access Control (WAC), and MAC-based Access Control (MAC) for strict access control and easy deployment. A rich set of multilayer QoS/CoS features to ensure that critical network services such as VoIP, video conferences, IPTV, and IP surveillance are always given high priority.

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DGS-3130 Series
Gigabit Layer 3 Stackable Managed Switches

Technical Specifications

Interfaces	DGS-3130-30TS	DGS-3130-30S	DGS-3130-30PS
Ports	• 24 x 10/100/1000BASE-T ports • 2 x 10GBASE-T ports • 4 x 10G SFP+ ports	• 24 x SFP ports • 2 x 10GBASE-T ports • 4 x 10G SFP+ ports	• 24 x 10/100/1000BASE-T PoE ports • 2 x 10GBASE-T ports • 4 x 10G SFP+ ports
Optional Redundant Power Supply	• DPS-500A	• DPS-500A	• DPS-700
Console Port	10/100/1000BASE-T RJ-45 port for out-of-band CLI management		
Management Port	10/100/1000BASE-T RJ-45 port for out-of-band IP management		
Stacking Ports	4		
Stacking Cost[1]	1		
USB Ports	1 x USB 2.0 Type A port		
Performance			
Switching Capacity	168 Gbps		
64-Byte Packet Forwarding Rate	125 Mpps		
Packet Buffer Memory	2 MB		
PoE			
PoE Standards	-	-	• IEEE 802.3af • IEEE 802.3at
PoE Power Budget	-	-	• 370 W • 740 W (with DPS-700 RPS)
Physical			
MTBF (Hours)	388,361 hours	400,490 hours	279,418 hours
Acoustics	• Max: 47 dB • Min: 39.7 dB	• Max: 52.3 dB • Min: 42.7 dB	• Max: 56 dB • Min: 43.5 dB
Heat Dissipation	103.59 BTU/h	221.8 BTU/h	1550.92 BTU/h
Power Input	100 to 240 VAC, 50 to 60 Hz		
Max Power Consumption	• Max.: 30.36 W • Standby: 13.23 W	• Max.: 65.01 W • Standby: 22.77 W	• Max: 454.55 W (PoE On) 38.74 W (PoE Off) • Standby: 19.63 W
Dimensions (W xD x H)	• 440 x 250 x 44 mm	• 440 x 250 x 44 mm	• 440 x 430 x 44 mm
Weight	3.2 kg	3.5 kg	5.6 kg
Ventilation	1 x Smart fan	3 x Smart fans	3 x Smart fans
Operation Temperature	0 to 50 ˚C		
Storage Temperature	-40 to 70 ˚C		
Operating Humidity	10% to 90% RH		
Storage Humidity	5% to 90% RH		
Emission (EMI)	FCC Class A, CE Class A, VCCI Class A, IC, RCM, BSMI		
Safety	CB, cUL, BSMI		

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Technical Specifications

Interfaces	DGS-3130-54TS	DGS-3130-54S	DGS-3130-54PS
Ports	• 48 x 10/100/1000BASE-T ports • 2 x 10GBASE-T ports • 4 x 10G SFP+ ports	• 48 x SFP ports • 2 x 10GBASE-T ports • 4 x 10G SFP+ ports	• 48 x 10/100/1000BASE-T PoE ports • 2 x 10GBASE-T ports • 4 x 10G SFP+ ports
Optional Redundant Power Supply	• DPS-500A	• DPS-500A	• DPS-700
Console Port	10/100/1000BASE-T RJ-45 port for out-of-band CLI management		
Management Port	10/100/1000BASE-T RJ-45 port for out-of-band IP management		
Stacking Ports	4		
Stacking Cost[1]	2		
USB Ports	1 x USB 2.0 Type A port		
Performance			
Switching Capacity	216 Gbps		
64-Byte Packet Forwarding Rate	161 Mpps		
Packet Buffer Memory	4 MB		
PoE			
PoE Standards	-	-	• IEEE 802.3af • IEEE 802.3at
PoE Power Budget	-	-	• 370 W • 740 W (with DPS-700 RPS)
Physical			
MTBF (Hours)	• 273,037 hours	• 238,779 hours	• 356,876 hours
Acoustics	• Max: 48.6 dB • Min: 36.7 dB	• Max: 52.1 dB • Min: 47.1 dB	• Max: 56 dB • Min: 43.5 dB
Heat Dissipation	157.60 BTU/h	324.34 BTU/h	1619.03 BTU/h
Power Input	100 to 240 V AC, 50 to 60 Hz		
Max Power Consumption	• Max: 46.19 W • Standby: 25.67 W	• Max: 95.06 W • Standby: 36.41 W	• Max: 474.51 W (PoE On) 62.25 W (PoE Off) • Standby: 36.48 W
Dimensions (W xD x H)	• 440 x 310 x 44 mm	• 440 x 430 x 44 mm	• 440 x 430 x 44 mm
Weight	4.2 kg	5.6 kg	6.2 kg
Ventilation	2 x Smart fans	4 x Smart fans	4 x Smart fans
Operation Temperature	0 to 50 ˚C		
Storage Temperature	-40 to 70 ˚C		
Operating Humidity	10% to 90% RH		
Storage Humidity	5% to 90% RH		
Emission (EMI)	FCC Class A, CE Class A, VCCI Class A, IC, RCM, BSMI		
Safety	CB, cUL, BSMI		

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Software Features

Stackability

- Physical stacking
  - Stacking Lite
  - Up to 9 units per stack or up to 12 stacking cost per stack[1]
  - Up to 80 Gbps stacking bandwidth
  - Ring/chain topology support
- Virtual stacking
  - D-Link Single IP Management (SIM)
  - Up to 32 units per virtual stack

L2 Features

- MAC Address Table: 16K (16,384) entries
- Flow Control
  - 802.3x Flow Control
  - HOL Blocking Prevention
- Jumbo Frames up to 9 Kbytes
- 802.1AX/802.3ad Link Aggregation
  - Max. 32 groups per device, 8 ports per group
- Spanning Tree Protocols
  - 802.1D STP
  - 802.1w RSTP
  - 802.1s MSTP
  - BPDU Filtering
  - Root Guard
  - Loop Guard
- Loopback Detection
- Port Mirroring
  - Supports One-to-One, Many-to-One
  - Supports Mirroring for both Tx/Rx
  - Supports 4 mirroring groups
- Flow mirroring
  - Supports Mirroring for Tx/Rx
- VLAN Mirroring
- RSPAN
- L2 Protocol Tunneling
- Ethernet Ring Protection Switching (ERPS) v1/v2

L2 Multicasting

- IGMP Snooping
  - IGMP v1/v2/v3 Snooping
  - Supports 1024 IGMP groups
  - IGMP Snooping Fast Leave
  - Supports 128 static IGMP groups
  - Per VLAN IGMP Snooping
  - Data Driven Learning
  - IGMP Snooping Querier
  - IGMP Authentication
  - IGMP Accounting
- Report Suppression
- MLD Snooping
  - MLD v1/v2 Snooping
  - Support 1024 MLD Groups
  - MLD Snooping Fast Leave
  - Supports 64 static MLD groups
  - MLD Snooping Querier
  - Per VLAN MLD Snooping
  - MLD Proxy Reporting

L3 Multicasting

- IGMP v1/v2/v3
- PIM-SM for IPv4[2]

VLAN

- VLAN Group
  - Max. 4K VLAN groups
  - Max. 1~4094 VIDs
- GVRP
  - Max. 4K dynamic VLAN groups
- Double VLAN (Q-in-Q)
  - Port-based Q-in-Q
  - Selective Q-in-Q
- 802.1Q
- Auto Surveillance VLAN
- Port-based VLAN
- 802.1v Protocol-based VLAN
- Voice VLAN
- MAC-based VLAN
- VLAN translation
- Multicast VLAN (ISM VLAN for IPv4/IPv6)
- Asymmetric VLAN
- Private VLAN
- VLAN Trunking
- Super VLAN

Quality of Service

- 802.1p
- 8 queues per port
- Queue Handling
  - Strict Priority
  - Weighted Round Robin (WRR)
  - Strict + WRR
  - Weighted Deficit Round Robin (WDRR)
- Policy Map
  - Remark 802.1p priority
  - Remark IP precedence/DSCP
  - Time based QoS
- Congestion Control
  - Weighted Random Early Detection (WRED)
- CoS based on
  - Switch port
  - Inner/Outer VID
  - Inner/Outer 802.1p Priority
  - MAC address
  - IP address
  - DSCP
  - Protocol type
  - TCP/UDP port
  - IPv6 traffic class
  - IPv6 flow label
- Bandwidth Control
  - Port-based (ingress/egress, min. granularity 8 Kbps)
  - Flow-based (ingress/egress, min. granularity 8 Kbps)
  - Per queue bandwidth control (min. granularity 8 Kbps)
- Three Color Marker
  - CIR/PIR minimum granularity: 8 kbps
  - trTCM
  - srTCM

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Access Control List (ACL)	• ACL based on
	  • 802.1p priority
	  • VID
	  • MAC address
	  • Ether Type
	  • LLC
	  • VLAN
	  • IP address
	  • IP preference/ToS
	  • DSCP mask
	  • Protocol type
	  • TCP/UDP port number
	  • IPv6 Traffic Class
	  • IPv6 Flow Label
		• Time-based ACL
		• CPU Interface Filtering
		• Max. ACL entries:
		  • Ingress (hardware entries): 2048
		  • Egress (hardware entries): 512
		  • VLAN Access Map Numbers: 100	

Security	• Port Security
	  • Supports up to 64 MAC addresses per port
	• Broadcast/Multicast/Unicast Storm Control
	• D-Link Safeguard Engine
	• DHCP Server Screening
	• IP Source Guard
	• DHCP Snooping
		• IPv6 Snooping
		• Dynamic ARP Inspection (DAI)
		• DHCPv6 Guard
		• IPv6 Route Advertisement (RA) Guard
		• IPv6 ND Inspection
		• Duplicate Address Detection (DAD)
		• ARP Spoofing Prevention
		  • Max. 64 entries
		• L3 Control Packet Filtering
			• Traffic Segmentation
			• SSL
			  • Supports TLS 1.0/1.1/1.2
			  • Supports IPv4/IPv6 access
			• SSH
			  • Supports SSH v2
			  • Supports IPv4/IPv6 access
			• BPDU Attack Protection
			• DOS Attack Prevention

AAA	• Guest VLAN
	• 802.1X Authentication
	  • Supports port/host-based access control
	  • Identity-driven Policy Assignment
	  • Dynamic VLAN Assignment
	  • Ingress/Egress Bandwidth Control
	  • ACl Assignment
	• Privilege Level for Management Access
	• Trusted Host
		• RADIUS/TACACS+ Accounting
		• Web-based Access Control (WAC)
		  • Supports port/host-based access control
		  • Identity-driven Policy Assignment
		  • Dynamic VLAN Assignment
		  • Support IPv4 access
		  • Ingress/Egress Bandwidth Control
		  • ACL Assignment
			• RAIDUS and TACACS+ Authentication
			• Authentication Database Failover
			• Compound Authentication
			• MAC-based Access Control (MAC)
			  • Supports port/host-based access control
			  • Identity-driven Policy Assignment
			  • Dynamic VLAN Assignment
			  • Ingress/Egress Bandwidth Control
			  • ACL Assignment

Green Features	• Energy-Efficient Ethernet (EEE) • Power saving by link status	• Power saving by LED shut-off • Power saving by port shut-of	• Power saving by system hibernation • Time-based PoE
OAM (Operations, Administration and Maintenance)	• 802.3ah Ethernet Link OAM • D-Link Unidirectional Link Detection (DULD)	• Dying Gasp • 802.1ag Connectivity Fault Management (CFM	• Y.1731 OAM • Optical Transceiver Digital Diagnostic Monitoring (DDM)

Management	• Web-based GUI
	  • Support IPv4/IPv6 access
	  • Support SSL (HTTPS)
	• Command Line Interface (CLI)
	• Telnet Server for IPv4/IPv6
	• Telnet Client for IPv4/IPv6
	• TFTP Client for IPv4/IPv6
	• DNS Client for IPv4/IPv6
	• Secure FTP Server for IPv4/IPv6
	• SNMP
	  • Support v1/v2c/v3
	  • Support for IPv4/IPv6 access
	• SNMP Traps
	• System Log for IPv4/IPv6 Syslog Server
		• sFlow
		• Multiple images/ Multiple Configurations
		• RMON v1:
		  • Supports 1, 2, 3, 9 groups
		• RMON v2:
		  • Supports ProbeConfig group
		• LLDP/LLDP-MED
		• BootP/DHCP Client
		• DHCP Auto-Configuration
		• DHCP/DHCPv6 Local Relay
		• DHCP Relay Option 60/61/62/125
		• Flash File System
		• PPPoE Circuit-ID Tag Insertion
		• D-Link Discover Protocol (DDP)
			• Debug command
			• Support IPv4/v6 SNTP Server
			• NTPv3/v4
			• Password recovery/ encryption
			• DHCP server
			  • Support for IPv4/IPv6 address assignment
			• Command Logging
			• SMTP
			• DHCPv6 Prefix Delegation (PD)
			• Ping/ Traceroute for IPv4/IPv6
			• Microsoft® Network Load Balancing (NLB)
			• PD Alive (PoE Models Only)

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L3 Features	• IPv4 ARP Entries 4096
	  • 256 Static ARP
	• IPv6 ND Entries:1024
	  • 128 Static ND Entries
		• IP Interface
		  • Supports 128 interfaces
		• Gratuitous ARP
		• Loopback Interface
			• Proxy ARP
			  • Support local ARP proxy
			• VRRP v2/v3
			• IP Helper

L3 Routing	• Supports 1024 hardware routing entries shared by IPv4/IPv6
	  • 1 entry consumed by each IPv4 route
	  • 2 entries consumed by each IPv6 route
	• Supports up to 4096 hardware L3 forwarding entries shared by IPv4/ IPv6 4
	  • 1 entry consumed by each IPv4 route
	  • 2 entries consumed by each IPv6 route
		• IPv4/IPv6 Static Route
		  • Max. 512 IPv4 entries
		  • Max. 256 IPv6 entries
		  • Support Equal-Cost Multi-Path Route (ECMP)
		• IPv4/IPv6 Default Route
		• PBR (Policy-based Route)
		• Null Route
		• Route Preference
		• Route Redistribution
		• RIPv1/v2/ng
			• OSPF
			  • OSPF v2/v3
			  • OSPF passive interface
			  • Stub/NSSA area
			  • Support Equal-Cost Multi-Path Route (ECMP)
			  • Text/MD5

MIB	• RFC1065, RFC1066, RFC1155, RFC1156, RFC2578 MIB Structure • RFC1212 Concise MIB Definitions • RFC1213 MIBII • RFC1215 MIB Traps Convention • RFC1493, RFC4188 Bridge MIB • RFC1157, RFC2571, RFC2572, RFC2573, RFC2574, RFC2575, RFC2576 SNMP MIB • RFC1442, RFC1901, RFC1902, RFC1903, RFC1904, RFC1905, RFC1906, RFC1907, RFC1908, RFC2578, RFC3418, RFC3636 SNMPv2 MIB • RFC271, RFC1757, RFC2819 RMON MIB • RFC2021 RMONv2 MIB	• RFC1398, RFC1643, RFC1650, RFC2358, RFC2665, RFC3635 Ether-like MIB • RFC2668 802.3 MAU MIB • RFC2674, RFC4363 802.1p MIB • Interface Group MIB • RFC2618 RADIUS Authentication Client MIB • RFC4022 MIB for TCP • RFC4113 MIB for UDP • RFC2389 MIB for Diffserv. • RFC2620 RADIUS Accounting Client MIB • RFC2925 Ping & TRACEROUTE MIB • TFTP uploads and downloads (D-Link MIB)	• Trap MIB (D-Link MIB) • RFC4265 IPv6 MIB • RFC4266 ICMPv6 MIB • Entity MIB • VRRP MIB • RIPv2 MIB • RFC1850, RFC5643 OSPF MIB • RFC4293 IPv6 SNMP Mgmt Interface MIB • DDM MIB (D-Link MIB) • Private MIB • MIB for D-Link Zone Defense • RFC3621 Power Ethernet MIB • DDP MIB • LLDP-MED MIB
RFC Standard Compliance	• RFC 768 UDP • RFC 791 IP • RFC 793 TCP • RFC 826 ARP • RFC 3513, 4291, IPv6 Addressing Architecture • RFC2474, RFC3168, RFC3260 Definition of the DS Field in the IPv4 and IPv6 Headers • RFC1321, RFC2284, RFC2865, RFC2716, RFC1759, RFC3580, RFC3748 Extensible Authentication Protocol (EAP)	• RFC2571 SNMP Framework • RFC 2068 HTTP • RFC 2866 RADIUS Accounting • RFC792 ICMPv4 • RFC2463, RFC4443 ICMPv6 • RFC4884 Extended ICMP to support Multi-Part Messages • RFC1338, RFC1519 CIDR • RFC2574 User-based Security Model for SNMPv3 • RFC1981 Path MTU Discovery for IPv6 • RFC2460 IPv6	• RFC 2571, 2572, 2573, 2574, SNMP • RFC 854 Telnet • RFC 951, 1542 BootP • RFC2461, RFC4861 Neighbor Discovery for IPv6 • RFC2462, RFC4862 IPv6 Stateless Address Auto-configuration (SLAAC) • RFC2464 IPv6 over Ethernet and definition • RFC1886 DNS extension support for IPv6

Optional Accessories	
DEM-CB100S	1 m 10G SFP+ Direct Attach Cable (DAC)
DEM-CB300S	3 m 10G SFP+ Direct Attach Cable (DAC)
Optional Redundant Power Supplies	
DPS-500A	AC Redundant Power Supply
DPS-700	AC Redundant Power Supply for PoE Models
Optional SFP Transceivers	
DEM-211	100BASE-FX Multi-Mode, 2 km
DGS-712	1000BASE-T Copper SFP Transceiver
DEM-310GT	1000BASE-LX, Single-mode, 10 km
DEM-311GT	1000BASE-SX, Multi-mode, 500 m
DEM-312GT2	1000BASE-SX, Multi-mode, 2 km
Optional SFP+ Transceivers	
DEM-431XT	10GBASE-SR Multi-mode, OM1:33M/OM2:82M/OM3:300M (w/o DDM)
DEM-432XT	10GBASE-LR Single-mode, 10 km (w/o DDM)
DEM-410T	10G copper CAT6A 30m

[1] When stacking the DGS-3130-30TS/30S/30PS models, the stacking cost is 1 per unit so the maximum units per stack is 9.
When stacking the DGS-3130-54TS/54S/54PS models, the stacking cost is 2 per unit so the maximum units per stack is 6.
When stacking different models in the same stack, switches can be stacked up to a maximum of 12 stacking cost per stack. For example: 2 x DGS-3130-30TS (2 stacking cost) + 2 x DGS-3130-30S (2 stacking cost) + 4 x DGS-3130-54TS (8 stacking cost) consumes a total stacking cost of 12 (2+2+8).
[2] This feature does not support physical stacking mode. Only standalone mode is supported.

For more information: eu.dlink.com

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