

Product Highlights

Rich L2 and L3 Features

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

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

Reliability

- Redundant power supply (RPS) support
- Ethernet Ring Protection Switching (ERPS) for single ring topologies
- Embedded 6 kV surge protection on all Gigabit Ethernet ports
- IEEE 802.3D/802.1s Spanning Tree
- Loopback Detection (LBD)

L3 Features

- Static Route
- RIP
- RIPng

The all-new DGS-3130 Series Gigabit Layer 3 Stackable Managed Switches are designed to address the needs of small to medium-sized business networks. A unified software image incorporates L2 and L3 features enabling the family 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.

With a variety of port configurations, each DGS-3130 series switch has six embedded 10G uplink/stacking ports. Two 10GBASE-T ports and four 10G SFP+ ports make selecting a stacking interface convenient.

Enhanced Network Reliability

The DGS-3130 Series is designed to be used in Enterprise and metro Ethernet applications. Incorporating high levels of network security, multiple management options and flexible stacking configurations, the DGS-3130 series ensures maximum uptime. All the models in the family support an additional external redundant power supply to ensure continued operation. These switches integrate essential reliability features to enhance network resilience, including 802.1D Spanning Tree (STP), 802.1w Rapid Spanning Tree (RSTP), and 802.1s Multiple Spanning Tree (MSTP), Loopback Detection (LBD), and Broadcast Storm Control. G.8032 Ethernet Ring Protection Switching (ERPS) minimises the recovery time to 50ms. For load sharing and redundancy in a switch cascading/server attachment configuration, the DGS-3130 Series provides dynamic 802.3ad Link Aggregation Port Trunking.

Comprehensive Security

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 IP-MAC-Port Binding feature allows administrators to bind a source IP address with an associated MAC and define the port number to enhance user access control. With the DHCP Snooping feature, the switch automatically learns IP/MAC pairs by snooping DHCP packets and saving them to the IMPB white list.

Easy Access Control Policies

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. After authentication, individual policies such as VLAN membership, QoS policies, and ACL rules can be assigned to each host. In addition, the switch also supports Microsoft® NAP (Network Access Protection). NAP is a policy enforcement technology that allows customers to protect network assets from compromised computers by enforcing compliance with network health policies.

Versatile Traffic Management

A rich set of multi-layer QoS/CoS features ensure that critical network services such as VoIP, video conferences, IPTV, and IP surveillance are always given high priority. Traffic Shaping features guarantee bandwidth for these services when the network is busy. L2 Multicast support enables the DGS-3130 Series to handle growing IPTV applications. Host-based IGMP/MLD Snooping allows multiple multicast subscribers per physical interface while ISM VLAN allows the switches to send multicast streams in a multicast VLAN to save bandwidth, and to provide better security to the backbone network. The ISM VLAN profiles allow administrators to bind or replace the pre-defined multicast registration information to subscriber ports quickly and easily.

Technical Specifications			
Interfaces	DGS-3130-30TS	DGS-3130-30S	DGS-3130-30PS
Ports	<ul style="list-style-type: none"> • 24 x 10/100/1000BASE-T ports • 2 x 10GBASE-T ports • 4 x 10G SFP+ ports 	<ul style="list-style-type: none"> • 24 x SFP ports • 2 x 10GBASE-T ports • 4 x 10G SFP+ ports 	<ul style="list-style-type: none"> • 24 x 10/100/1000BASE-T PoE ports • 2 x 10GBASE-T ports • 4 x 10G SFP+ ports
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)	• 900,546 hours	• 487,153 hours	• 409,054 hours
Acoustics	<ul style="list-style-type: none"> • Max: 52.5 dB • Min: 33.5 dB 	<ul style="list-style-type: none"> • Max: 54 dB • Min: 41.1 dB 	<ul style="list-style-type: none"> • Max: 53.4 dB • Min: 40.4 dB
Heat Dissipation	• 104.65 BTU/h	• 281.16 BTU/h	<ul style="list-style-type: none"> • 1609.41 BTU/h (with 370 W PoE load) • 3043.97 BTU/h (with 740 W PoE load)
Power Input	• 100 to 240 VAC, 50 to 60 Hz		
Max Power Consumption	• 30.76 W	• 82.4 W	<ul style="list-style-type: none"> • 471.67 W (with 370 W PoE load) • 892.1 W (with 740 W PoE load)
Dimensions (W x D x H)	• 440 x 250 x 44 mm	• 440 x 250 x 44 mm	• 440 x 350 x 44 mm
Weight	• 2.98 kg	• 3.21 kg	• 4.66 kg
Ventilation	• 1 x Smart fan	• 3 x Smart fans	• 3 x Smart fans
Operation Temperature	• 0 to 50 °C (32 to 122 °F)		
Storage Temperature	• -40 to 70 °C (-40 to 158 °F)		
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, CCC		
Safety	• CB, cUL, BSMI, CCC		

Technical Specifications			
Interfaces	DGS-3130-54TS	DGS-3130-54S	DGS-3130-54PS
Ports	<ul style="list-style-type: none"> • 48 x 10/100/1000BASE-T ports • 2 x 10GBASE-T ports • 4 x 10G SFP+ ports 	<ul style="list-style-type: none"> • 48 x SFP ports • 2 x 10GBASE-T ports • 4 x 10G SFP+ ports 	<ul style="list-style-type: none"> • 48 x 10/100/1000BASE-T PoE ports • 2 x 10GBASE-T ports • 4 x 10G SFP+ ports
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)	• 478,258 hours	• 520,861 hours	• 356,876 hours
Acoustics	<ul style="list-style-type: none"> • Max: 51.9 dB • Min: 32.7 dB 	<ul style="list-style-type: none"> • Max: 54 dB • Min: 37.5 dB 	<ul style="list-style-type: none"> • Max: 54.2 dB • Min: 36.8 dB
Heat Dissipation	• 172.72 BTU/h	• 446.99 BTU/h	<ul style="list-style-type: none"> • 1662.6 BTU/h (with 370 W PoE load) • 3097.24 BTU/h (with 740 W PoE load)
Power Input	• 100 to 240 V AC, 50 to 60 Hz		
Max Power Consumption	• 50.62 W	• 131 W	<ul style="list-style-type: none"> • 487.26 W (with 370 W PoE load) • 907.71 W (with 740 W PoE load)
Dimensions (W x D x H)	• 440 x 290 x 44 mm	• 440 x 350 x 44 mm	• 440 x 350 x 44 mm
Weight	• 3.72 kg	• 4.52 kg	• 5.14 g
Ventilation	• 2 x Smart fans	• 5 x Smart fans	• 4 x Smart fans
Operation Temperature	• 0 to 50 °C (32 to 122 °F)		
Storage Temperature	• -40 to 70 °C (-40 to 158 °F)		
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, CCC		
Safety	• CB, cUL, BSMI, CCC		

Software Features			
Stackability	<ul style="list-style-type: none"> Physical stacking <ul style="list-style-type: none"> Up to 9 units per stack or up to 12 stacking cost per stack¹ 	<ul style="list-style-type: none"> Virtual stacking <ul style="list-style-type: none"> D-Link Single IP Management (SIM) Up to 32 units per virtual stack 	
L2 Features	<ul style="list-style-type: none"> MAC Address Table: 16K (16,384) entries Flow Control <ul style="list-style-type: none"> 802.3x Flow Control HOL Blocking Prevention Jumbo Frames up to 9 Kbytes 802.3ad Link Aggregation <ul style="list-style-type: none"> Max. 32 groups per device, 8 Gigabit ports per group 	<ul style="list-style-type: none"> Spanning Tree Protocols <ul style="list-style-type: none"> 802.1D STP 802.1w RSTP 802.1s MSTP BPDU Filtering Root Restriction Loopback Detection 	<ul style="list-style-type: none"> Port Mirroring <ul style="list-style-type: none"> One-to-One Many-to-One Flow-based RSPAN Mirroring Ethernet Ring Protection Switching (ERPS) <ul style="list-style-type: none"> Single ring topology
L2 Multicasting	<ul style="list-style-type: none"> IGMP Snooping <ul style="list-style-type: none"> IGMP v1/v2/v3 Snooping Supports 1024 IGMP groups Port/Host-based IGMP Snooping Fast Leave 	<ul style="list-style-type: none"> Limited IP Multicast <ul style="list-style-type: none"> Up to 24 IGMP filtering profiles, 128 ranges per profile Double VLAN Q-in-Q <ul style="list-style-type: none"> Port-based Q-in-Q Selective Q-in-Q 	<ul style="list-style-type: none"> MLD Snooping <ul style="list-style-type: none"> MLD v1/v2 Snooping Support 1024 MLD Groups Host-based MLD Snooping Fast Leave
VLAN	<ul style="list-style-type: none"> VLAN Group <ul style="list-style-type: none"> Max. 4K VLAN groups GVRP <ul style="list-style-type: none"> Max. 4K dynamic VLAN groups 802.1Q Tagged VLAN 	<ul style="list-style-type: none"> Port-based VLAN <ul style="list-style-type: none"> 802.1v Protocol VLAN Voice VLAN MAC-based VLAN VLAN translation 	<ul style="list-style-type: none"> ISM VLAN Asymmetric VLAN Private VLAN VLAN Trunking Super VLAN
QoS (Quality of Service)	<ul style="list-style-type: none"> 802.1p <ul style="list-style-type: none"> 8 queues per port Queue Handling <ul style="list-style-type: none"> Strict Priority Weighted Round Robin (WRR) Strict + WRR Supports following actions for flows <ul style="list-style-type: none"> Remark 802.1p Priority Tag Remark TOS/DSCP Tag Bandwidth Control 	<ul style="list-style-type: none"> CoS based on <ul style="list-style-type: none"> Switch port VLAN ID 802.1p priority queues MAC address IPv4 address DSCP Protocol type TCP/UDP port User-defined packet content IPv6 address IPv6 traffic class IPv6 flow label 	<ul style="list-style-type: none"> Bandwidth Control <ul style="list-style-type: none"> Port-based (ingress/egress, min. granularity 8 Kbps) Flow-based (ingress/egress, min. granularity 8 Kbps) Three Color Marker <ul style="list-style-type: none"> CIR/PIR minimum granularity: 8 kbps Two Rate Three Color Marker (trTCM), CBS/PBS Single Rate Three Color Marker (srTCM), CBS/EBS
Access Control List (ACL)	<ul style="list-style-type: none"> ACL based on <ul style="list-style-type: none"> 802.1p priority VLAN ID MAC address Ether Type IPv4 address DSCP Protocol type TCP/UDP port number User-defined packet content IPv6 address IPv6 flow label IPv6 traffic class 	<ul style="list-style-type: none"> Supports up to 2048 ingress access entries Supports up to 512 egress access entries Time-based ACL CPU Interface Filtering 	
Security	<ul style="list-style-type: none"> SSH v2 SSL v1/v2/v3 Port Security <ul style="list-style-type: none"> Up to 64 MAC addresses per port IP-MAC Port Binding DHCP Snooping Supports up to 500 address binding entries 	<ul style="list-style-type: none"> Broadcast/Multicast/Unicast Storm Control Traffic segmentation D-Link Safeguard Engine NetBIOS/NetBEUI Filtering IPv6 ND Snooping 	<ul style="list-style-type: none"> DHCP Server Screening ARP Spoofing Prevention DoS Attack Prevention BPDU Attack Protection ARP Packet Inspection IP Packet Inspection

Gigabit Layer 3 Stackable Managed Switches

AAA	<ul style="list-style-type: none"> • 802.1X: <ul style="list-style-type: none"> • Port-based Access Control • Host-based Access Control • Identity-driven Policy (VLAN, ACL or QoS) Assignment • Authentication Database Failover • Web-based Access Control (WAC): <ul style="list-style-type: none"> • Port-based Access Control • Host-based Access Control • Identity-driven Policy (VLAN, ACL or QoS) Assignment • Authentication Database Failover 	<ul style="list-style-type: none"> • MAC-based Access Control (MAC): <ul style="list-style-type: none"> • Port-based Access Control • Host-based Access Control • Identity-driven Policy (VLAN, ACL or QoS) Assignment • Authentication Database Failover • Guest VLAN 	<ul style="list-style-type: none"> • Microsoft® NAP <ul style="list-style-type: none"> • Support 802.1X NAP • Support DHCP NAP • RADIUS Accounting • RADIUS and TACACS+ authentication for switch access • Four levels of User Account Control
Green Features	<ul style="list-style-type: none"> • Compliant with RoHS • Power saving by Link Status 	<ul style="list-style-type: none"> • Power saving by cable length • Time-based PoE 	<ul style="list-style-type: none"> • IEEE 802.3az Energy-Efficient Ethernet (EEE)
OAM	<ul style="list-style-type: none"> • Cable diagnostics 	<ul style="list-style-type: none"> • Hardware-based Dying Gasp 	<ul style="list-style-type: none"> • 802.3ah Ethernet Link OAM
Management	<ul style="list-style-type: none"> • Web-based GUI • Command Line Interface (CLI) • Telnet Server • Telnet Client • TFTP Client • DNS Client • Secure FTP Server • ZModem • SNMP v1/v2c/v3 • SNMP Traps • System Log • sFlow • Multiple images 	<ul style="list-style-type: none"> • Multiple Configurations • RMON v1: <ul style="list-style-type: none"> • Supports 1,2,3,9 groups • RMON v2: <ul style="list-style-type: none"> • Supports ProbeConfig group • LLDP • BootP/DHCP Client • DHCP Auto-Configuration • DHCP Relay • DHCP Client Option 12 • DHCP Relay Option 18, 37, 82 • Flash File System • PPPoE Circuit-ID Tag Insertion 	<ul style="list-style-type: none"> • CPU monitoring • Debug command • SNMP • NTP • Password recovery • Password encryption • Trusted Host • ICMPv6 • DHCP server
L3 Features	<ul style="list-style-type: none"> • Max. 16 IP interfaces • ARP Proxy 	<ul style="list-style-type: none"> • IPv6 Neighbour Discovery (ND) 	<ul style="list-style-type: none"> • VRRP
L3 Routing	<ul style="list-style-type: none"> • Static Route <ul style="list-style-type: none"> • 1,024 entries shared between IPv4/IPv6 • 1 entry consumed by each IPv4 route • 2 entries consumed by each IPv6 route 		<ul style="list-style-type: none"> • RIPv1/v2/ng
L3 Multicasting	<ul style="list-style-type: none"> • IGMP Filtering <ul style="list-style-type: none"> • Port-based filtering • VLAN-based filtering 		
MIB	<ul style="list-style-type: none"> • RFC 1213 MIB II • RFC 4188 Bridge MIB • RFC 1157, 2571-2576 SNMP MIB • RFC 1907 SNMPv2 MIB • RFC 1757, 2819 RMON MIB • RFC 2021 RMONv2 MIB • RFC 1398, 1643, 1650, 2358, 2665 Ether-like MIB • RFC 2674 802.1p MIB 	<ul style="list-style-type: none"> • RFC 2233, 2863 IF MIB • RFC 2618 RADIUS Authentication Client MIB • RFC 2620 RADIUS Accounting Client MIB • RFC 2925 PING & TRACEROUTE MIB • RFC 2674, 4363 802.1p MIB • RFC 1065, 1066, 1155, 1156, 2578 MIB Structure 	<ul style="list-style-type: none"> • RFC 1215 MIB Traps Convention • RFC 1212 Concise MIB Definitions • RFC 1215 MIB Traps Convention • RFC 1157, 2571-2576 SNMP MIB • RFC 4022 MIB for TCP • RFC 4113 MIB for UDP • RFC 4293 IPv6 SNMP Mgmt Interface MIB • RFC 2737 Entity MIB (version 2)
RFC Standard Compliance	<ul style="list-style-type: none"> • RFC 768 UDP • RFC 791 IP • RFC 792, 2463, 4443 ICMP • RFC 793 TCP • RFC 826 ARP • RFC 3513, 4291, IPv6 Addressing Architecture • RFC 2893, 4213 IPv4/IPv6 dual stack function • RFC 2463, 4443 ICMPv6 	<ul style="list-style-type: none"> • RFC 2462, 4862 IPv6 Stateless Address Auto Configuration • RFC 2464 IPv6 Ethernet and definition • RFC 1981 Path MTU Discovery for IPv6 • RFC 2460 IPv6 • RFC 2461, 4861 Neighbor Discovery for IPv6 • RFC 783 TFTP 	<ul style="list-style-type: none"> • RFC 2068 HTTP • RFC 1492 TACACS • RFC 2866 RADIUS Accounting • RFC 2474, 3260 DiffServ • RFC 1321, 2284, 2865, 3580, 3748 Extensible • Authentication Protocol (EAP) • RFC 2571, 2572, 2573, 2574, SNMP • RFC 854 Telnet • RFC 951, 1542 BootP

DGS-3130 Series

Gigabit Layer 3 Stackable Managed Switches

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 for DGS-3130-30TS, DGS-3130-30S, DGS-3130-54TS and DGS-3130-54S
DPS-700	AC Redundant Power Supply for PoE Models DGS-3130-30PS and DGS-3130-54PS
Optional SFP Transceivers	
DGS-712	1000BASE-T Copper SFP Transceiver
DEM-310GT	1000BASE-LX, Single-mode, 10 km
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)

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).



For more information: www.dlink.com

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