

Next Generation Layer 3 Stackable Smart Managed Switch

A new generation of Layer 3 stackable Smart Managed switches to aggregate your Gigabit network with 10G ports for uplink or stacking.

DGS-1520 Series

High Availability and Flexibility

- 24 or 48 x 10/100/1000Base-T ports
- 20 or 44 x 10/100/1000Base-T PoE and 4 x 2.5GBase-T PoE ports
- 2 x 10GBase-T and 2 x SFP+ uplink ports

High Bandwidth Stacking

- Physical Stacking of up to 8 units
- 2 x 10GBase-T and/or 2 x SFP+
- 80 Gbps physical stacking bandwidth

Advanced L2 features

- RSPAN
- Selective Q-in-Q

Advanced L3 features

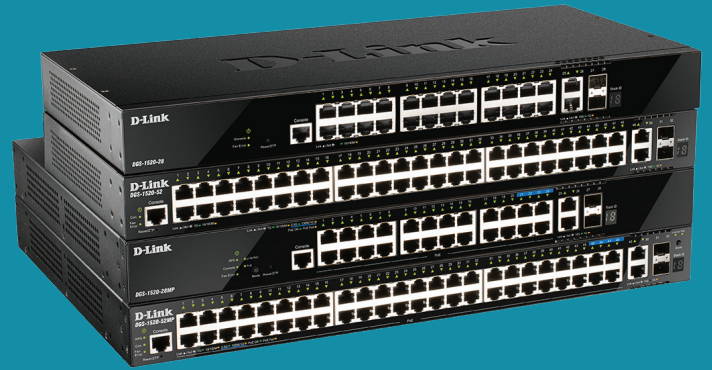
- IGMP v1/v2/v3
- MLD v1/v2
- PIM-SM/DM/SSM
- Static Route
- RIP/RIPng
- OSPF

Reliability and Resiliency

- Ethernet Ring Protection Switching (ERPS)
- Virtual Router Redundancy Protocol (VRRP)
- Redundant Power Supply (RPS) support

Management, Provisioning and Automation

- D-View 7
- D-Link Network Assistant (DNA)
- Zero Touch Provisioning (ZTP)



Stackable Smart Gigabit

Stack up to 8 switches for high-density Gigabit aggregation



Zero Touch Provisioning

Effortless multi-site deployment



High Capacity

Up to 188 Gbps switching capacity



PoE Capable

Up to 370W PoE output per switch



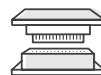
Multi-Gigabit Ports

4 x 2.5GBase-T ports for Wi-Fi 6 APs (PoE models)



Power Redundancy

Connect with DPS-520 for power redundancy (non-PoE models)







Flexible Stacking or Uplink

10GBase-T and/or SFP+ (fiber) ports for stacking or uplink



Advanced Manageability

Supports dynamic routing and selective Q-in-Q tagging

| Model | DGS-1520-28 | DGS-1520-28MP | DGS-1520-52 | DGS-1520-52MP |
|---------------------------|---|---|--|---|
| Product Image |  |  |  |  |
| General | | | | |
| Hardware Version | A1 | | | |
| Size | 19" standard rack width, 1U height | | | |
| Interfaces | 24 x 10/100/1000Base-T Ports 2 x 10GBase-T Ports 2 x 10G SFP+ Ports | 20 x 10/100/1000Base-T PoE Ports 4 x 2.5GBase-T PoE Ports 2 x 10GBase-T Ports 2 x 10G SFP+ Ports | 48 x 10/100/1000Base-T Ports 2 x 10GBase-T Ports 2 x 10G SFP+ Ports | 44 x 10/100/1000Base-T PoE 4 x 2.5GBase-T PoE Ports 2 x 10GBase-T Ports 2 x 10G SFP+ Ports |
| Standards | IEEE 802.3 10BASE-T Ethernet (twisted-pair copper) IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper) IEEE 802.3u 100BASE-FX 100 Mbps over fiber optic IEEE 802.3ab 1000BASE-T Gigabit Ethernet (twisted-pair copper) IEEE 802.3z 1000BASE-X 1 Gbps over fiber optic IEEE 802.3az Energy-Efficient Ethernet (EEE) IEEE 802.3x Flow Control IEEE 802.3ae 10 Gigabit Ethernet IEEE 802.3af/at IEEE 802.3bz | | | |
| Media Interface Exchange | Auto or configurable MDI/MDIX | | | |
| LED | Power/Stacking ID/Fan (per device) Link/Activity/Speed (per 10/100/1000 Mbps port, per 2.5G PoE port, per Gigabit SFP port, per 10G SFP+ port) | | | |
| Functionality | | | | |
| Switching Capacity | 128 Gbps | 140 Gbps | 176 Gbps | 188 Gbps |
| Transmission Method | Store-and-Forward | | | |
| MAC Address Table | Up to 16,384 entries per device | | | |
| Static MAC Addresses | Up to 512 static MAC entries | | | |
| Maximum Forwarding Rate | 95.24 Mpps | 104.16 Mpps | 130.95 Mpps | 139.88 Mpps |
| PoE Standard | N/A | IEEE802.3at, IEEE802.3af | N/A | IEEE802.3at, IEEE802.3af |
| PoE Power Budget | N/A | 370 W, 740 W (with RPS) | N/A | 370 W, 740 W (with RPS) |
| Physical | | | | |
| Power Input | 100 - 240 VAC | | | |
| Maximum Power Consumption | 30.4 W | 453.3 W (PoE On); 45.2 W (PoE Off) | 51.2 W | 459.5 W (PoE On); 66.3 W (PoE Off) |
| Standby Power Consumption | 20.9 W/100 V; 21.5 W/240 V | 37.2 W/100 V; 37.3 W/240 V | 25.5 W/100 V; 26.8 W/240 V | 39.8 W/100 V; 40.7 W/240 V |
| Acoustics | 51.8 dB(A) | 57.1 dB(A) | 56.8 dB(A) | 56.7 dB(A) |
| Heat Dissipation | 103.7 BTU/hr | 1545.8 BTU/hr | 174.6 BTU/hr | 1635.1 BTU/hr |
| MTBF | 468252 Hours | 333946 Hours | 364888 Hours | 328174 Hours |
| Operating Temperature | -5 - 50°C (23 - 122 °F) | | | |
| Storage Temperature | -40 - 70°C (-40 - 158 °F) | | | |
| Operating Humidity | 10% - 95% RH | | | |
| Storage Humidity | 5% - 95% RH | | | |
| Dimensions (L x W x H) | 441 x 207.4 x 44 mm (17.36 x 8.17 x 1.73 in) | 441 x 308.5 x 44 mm (17.36 x 12.15 x 1.73 in) | 441 x 207.4 x 44 mm (17.36 x 8.17 x 1.73 in) | 441 x 308.5 x 44 mm (17.36 x 12.15 x 1.73 in) |
| Weight | 2.33 kg (5.14 lbs) | 4.29 kg (9.46 lbs) | 2.78 kg (6.13 lbs) | 4.80 kg (10.58 lbs) |
| EMI | CE Class A, FCC Class A, IC Class A, RCM Class A, VCCI Class A, BSMI Class A | | | |

| Software | | |
|-----------------|---|--|
| Stackability | Physical stacking <ul style="list-style-type: none"> • 10GBase-T and SFP+ • Up to 8 units per stack • Up to 80 Gbps stacking bandwidth • Ring/chain topology support | Virtual stacking <ul style="list-style-type: none"> • D-Link Single IP Management (SIM) • Up to 32 units per virtual stack |
| L2 Features | MAC Address Table: 16,384 entries Flow Control <ul style="list-style-type: none"> • 802.3x Flow Control • HOL Blocking Prevention Jumbo Frames up to 12,288 Bytes 802.1AX/802.3ad Link Aggregation <ul style="list-style-type: none"> • Max. 32 groups per device, 8 ports per group Spanning Tree Protocols <ul style="list-style-type: none"> • 802.1D STP • 802.1w RSTP • 802.1s MSTP • BPDU Filtering • Root Guard • Loop Guard | Loopback Detection Port Mirroring <ul style="list-style-type: none"> • Supports One-to-One, Many-to-One • Supports Mirroring for both Tx/Rx • Supports 4 mirroring groups Flow mirroring <ul style="list-style-type: none"> • Supports Ingress Mirroring only VLAN Mirroring RSPAN L2 Protocol Tunneling Ethernet Ring Protection Switching (ERPS) v1/v2 |
| L2 Multicasting | IGMP Snooping <ul style="list-style-type: none"> • IGMP v1/v2/v3 Snooping • Supports 512 IGMP groups • Host-based IGMP Snooping Fast Leave • Supports 128 static IGMP groups • Per VLAN IGMP Snooping • Data Driven Learning • IGMP Snooping Querier • Report Suppression | MLD Snooping <ul style="list-style-type: none"> • MLD v1/v2 Snooping • Support 256 MLD Groups • Host-based MLD Snooping Fast Leave • Supports 64 static MLD groups • MLD Snooping Querier • Per VLAN MLD Snooping • MLD Proxy Reporting |
| VLAN | VLAN Group <ul style="list-style-type: none"> • Max. 4K VLAN groups • Max. 1~4094 VIDs GVRP <ul style="list-style-type: none"> • Max. 4K dynamic VLAN groups Double VLAN (Q-in-Q) <ul style="list-style-type: none"> • 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 Subnet-based VLAN VLAN translation Multicast VLAN (ISM VLAN for IPv4/IPv6) Asymmetric VLAN Private VLAN VLAN Trunking Super VLAN |
| L3 Features | IPv4 ARP Entries: 8192 <ul style="list-style-type: none"> • 256 Static ARP IPv6 ND Entries:4096 <ul style="list-style-type: none"> • 128 Static ND Entries IP Interface <ul style="list-style-type: none"> • Supports 16 interfaces | Gratuitous ARP Loopback Interface Proxy ARP <ul style="list-style-type: none"> • Support local ARP proxy VRRP v2/v3 IP Helper |
| L3 Routing | Supports 1024 hardware routing entries shared by IPv4/IPv6 <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 1 entry consumed by each IPv4 route • 2 entries consumed by each IPv6 route IPv4/IPv6 Static Route <ul style="list-style-type: none"> • Max. 512 IPv4 entries • Max. 256 IPv6 entries Equal-Cost Multi-Path Route (ECMP) Weighted-Cost Multi-Path Route (WCMP) | IPv4/IPv6 Default Route Policy-based Route (PBR) Null Route Route Preference Route Redistribution RIPv1/v2/ng OSPF <ul style="list-style-type: none"> • OSPF v2/v3 • OSPF passive interface • Stub/NSSA area • Supports Equal-Cost Multi-Path Route (ECMP) • Text/MD5 authentication |

| Software | | |
|---------------------------|---|--|
| L3 Multicasting | IGMP v1/v2/v3 IGMP Proxy MLD v1/v2 MLD proxy | DVMRP v3 PIM Sparse-Dense Mode (PIM-SDM) PIM-SM/DM/SSM for IPv4/IPv6 |
| QoS (Quality of Service) | 802.1p 8 queues per port Queue Handling <ul style="list-style-type: none"> • Strict Priority • Weighted Round Robin (WRR) • Strict + WRR • Weighted Deficit Round Robin (WDRR) Congestion Control <ul style="list-style-type: none"> • Weighted Random Early Detection (WRED) • 802.1Qbb Priority-based Flow Control (PFC) [10G ports only] Policy Map <ul style="list-style-type: none"> • Remark 802.1p priority • Remark IP precedence/DSCP • Rate limiting • Time based QoS CoS based on <ul style="list-style-type: none"> • Switch port • Inner/Outer VID | <ul style="list-style-type: none"> • Inner/Outer 802.1p Priority • MAC address • Ether type • IP address • DSCP • ToS/IP preference • Protocol type • TCP/UDP port • IPv6 traffic class • IPv6 flow label Bandwidth Control <ul style="list-style-type: none"> • Port-based (ingress/egress, min. granularity 8 Kbps) • Flow-based (ingress/egress, min. granularity 8 Kbps) • Per queue bandwidth control (min. granularity 8 Kb/s) Three Color Marker <ul style="list-style-type: none"> • CIR/PIR minimum granularity: 8 kbps • trTCM • srTCM |
| Access Control List (ACL) | ACL based on <ul style="list-style-type: none"> • 802.1p priority • VID • MAC address • Ether Type • LLC • VLAN • IP address • IP preference/ToS • DSCP mask | <ul style="list-style-type: none"> • Protocol type • TCP/UDP port number • IPv6 Traffic Class • IPv6 Flow Label Time-based ACL CPU Interface Filtering Max. ACL entries: <ul style="list-style-type: none"> • Ingress (hardware entries): 1536 • Egress (hardware entries): 512 • VLAN Access Map Numbers: 2048 |
| Security | Port Security <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • Max. 64 entries L3 Control Packet Filtering Unicast Reverse Path Forwarding (URPF) Traffic Segmentation SSL <ul style="list-style-type: none"> • Supports TLS 1.0/1.1/1.2 • Supports IPv4/IPv6 access SSH <ul style="list-style-type: none"> • Supports SSH v2 • Supports IPv4/IPv6 access BPDU Attack Protection DOS Attack Prevention |
| AAA | Guest VLAN 802.1X Authentication <ul style="list-style-type: none"> • Supports port/host-based access control • Identity-driven Policy Assignment • Dynamic VLAN Assignment Web-based Access Control (WAC) <ul style="list-style-type: none"> • Supports port/host-based access control • Identity-driven Policy Assignment • Dynamic VLAN Assignment | MAC-based Access Control (MAC) <ul style="list-style-type: none"> • Supports port/host-based access control • Identity-driven Policy Assignment • Dynamic VLAN Assignment RADIUS and TACACS+ Authentication Authentication Database Failover Compound Authentication Privilege Level for Management Access Trusted Host RADIUS/TACACS+ Accounting |

| Software | | |
|---|---|--|
| Green Features | Energy-Efficient Ethernet (EEE) Power saving by link status Power saving by LED shut-off | Power saving by port shut-off Power saving by system hibernation Time-based PoE (PoE models only) |
| Operation, Administration and Maintenance (OAM) | Cable Diagnostics Optical Transceiver Digital Diagnostic Monitoring (DDM) | |
| Management | Web-based GUI <ul style="list-style-type: none"> • Support IPv4/IPv6 access • Support SSL (HTTPS) Command Line Interface (CLI) Telnet Server/Client for IPv4/IPv6 TFTP Client for IPv4/IPv6 DNS Client for IPv4/IPv6 Secure FTP Server/Client for IPv4/IPv6 SNMP <ul style="list-style-type: none"> • Support v1/v2c/v3 • Support for IPv4/IPv6 access SNMP Traps System Log for IPv4/IPv6 Syslog Server sFlow Multiple Images & 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/LLDP-MED | BootP/DHCP Client DHCP Auto-Configuration/Auto Image DHCP/DHCPv6 Local Relay DHCP Relay Option 60/61/62/125 Flash File System D-Link Discover Protocol (DDP) Debug command Support IPv4/v6 SNMP Server NTPv3/v4 Password recovery/encryption DHCP server <ul style="list-style-type: none"> • 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) Zero Touch Provisioning (ZTP) |

| | |
|---------------|--|
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| DGS-1520-28MP | 20 x 10/100/1000BASE-T PoE Ports, 4 x 2.5GBASE-T PoE Ports, 2 x 10GBASE-T Ports and 2 x 10G SFP+ Ports |
| DGS-1520-52 | 48 x 10/100/1000BASE-T Ports, 2 x 10GBASE-T Ports and 2 x 10G SFP+ Ports |
| DGS-1520-52MP | 44 x 10/100/1000BASE-T PoE Ports, 4 x 2.5GBASE-T PoE Ports, 2 x 10GBASE-T Ports and 2 x 10G SFP+ Ports |

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-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-331T | 1000BASE-LX, Wavelength Tx:1550 nm Rx:1310 nm, Single-mode, 40 km |
| DEM-331R | 1000BASE-LX, Wavelength Tx:1310nm Rx:1550 nm, Single-mode, 40 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-433XT | 10GBASE-ER Single-mode, 40 km (w/o DDM) |
| DEM-434XT | 10GBASE-ZR Single-mode, 80 km (w/o DDM) |
| DEM-436XT-BXD | 10GBASE-LR Single-mode, 20 km (TX-1330/RX-1270 nm) (w/o DDM) |
| DEM-436XT-BXU | 10GBASE-LR Single-mode, 20 km (TX-1270/RX-1310 nm) (w/o DDM) |

Optional SFP+ Direct Attach Stacking Cables

| | |
|------------|--|
| DEM-CB100S | 1 m 10G SFP+ Direct Attach Cable (DAC) |
| DEM-CB300S | 3 m 10G SFP+ Direct Attach Cable (DAC) |
| DEM-CB700S | 7 m 10G SFP+ Direct Attach Cable (DAC) |

Optional Redundant Power Supplies

| | |
|---------|--|
| DPS-520 | PoE Redundant Power Supply for Non-PoE Models only |
| DPS-700 | AC Redundant Power Supply for PoE Models only |