

Product Highlights

Flexibility

Support for Duplex Chain/Ring topology for up to 12 physically stacked units as well as virtual stacking managed via a single IP provides flexibility and convenience

Strong Security

Innovative Safeguard Engine, ACL, and ARP Spoofing Prevention protect your network from malicious attacks and unauthorized access

Green Solution

A suite of D-Link Green Technology features help save energy automatically and reduce costs, without sacrificing performance



DGS-3420 Series xStack L2+ Managed Stackable Gigabit Switches

Features

Flexible Choices

- 20/48 10/100/1000BASE-T Auto MDI/MDIX ports or 20 SFP slots
- 4 Combo 10/100/1000BASE-T/SFP ports¹
- 4 10-Gigabit SFP+ uplink ports
- 802.3af and 802.3at Power Over Ethernet support²

High Bandwidth Stacking

- Physical stack of up to 12 units, 576 Gigabit ports
- Stackable through 2 10-Gigabit SFP+ ports
- Up to 40 Gbps Full-Duplex Stacking Bandwidth
- Virtual Stack of up to 32 units using single IP
 Management

Reliability

- Redundant Power Supply (RPS) support
- 802.1D/802.1w/802.1s Spanning Tree
- Loopback Detection (LBD)
- Ethernet Ring Protection Switching (ERPS)

Security Features

- L2/L3/L4 Multi-Layer Access Control
- External RADIUS/TACACS+ Authentication
- SSH/SSL support
- Web-based Access Control (WAC)
- MAC-based Access Control (MAC)
- D-Link Safeguard Engine
- Supports Microsoft[®] NAP

The DGS-3420 Series xStack L2+ Managed Stackable Gigabit Switches are next generation switches that deliver performance, flexibility, security, multi-layer QoS, and accessibility, along with redundant power solutions for SMBs and enterprises. With high Gigabit port densities, Gigabit SFP, 10-Gigabit SFP+ support, and advanced software solutions, these switches can act as either departmental access layer devices or aggregation switches to form a multilevel network structured with backbone and centralized high-speed servers. Service providers can take advantage of the high SFP density switches (such as DGS-3420-28SC/26SC) to structure the aggregation of Fiber to the Building (FTTB) networks that extend to subscribers' sites.

Unparalleled Flexibility

Easily deployed and simple to manage, the DGS-3420 Series switches can be stacked with any switch that supports D-Link's Single IP Management to form a multi-level network structured with backbone and centralized high-speed servers. The virtual stack can include units located anywhere on the same network domain, and uses optional 10-Gigabit uplinks to move intrastack traffic at 20 Gbps full duplex speeds.

D-Link Green Technology

D-Link is striving to take the lead in developing innovative and power-saving technology that does not sacrifice operational performance or functionality. The DGS-3420 Series implements D-Link Green technology, which includes power saving through link status, smart fan design, increased heat dissipation, and cable length detection. The power-saving feature automatically powers down ports that have no link or link partner. The Smart Fan design allows the built-in fans to automatically turn on only at a certain temperature, providing continuous, reliable, and eco-friendly operation.



Redundant Ring Stacking

Alternatively, depending on whether linear or fault-tolerant ring stacking is implemented, users can use one or two 10-Gigabit SFP+ ports to create a physical stack.³ 12 units or 576 Gigabit ports can be configured for a stack using directly attached cables to provide high bandwidth on the DGS-3420 Series with cost efficiency. Support for virtual stacking provides further convenience by allowing centralized management of ports across different locations for simplifying large-scale deployments.

IPv6 Technology

The DGS-3420 Series also features comprehensive IPv6 support, including IPv6 Tunnel, ICMPv6, DHCPv6, RIPng, IPv4/IPv6 dual stack, and more. With 10-Gigabit connectivity and IPv6 support, the series enables you to future-proof your network for cost efficiency and longevity while meeting the requirements of IPv6-capable network devices.

Security, Performance & Availability

The DGS-3420 Series provides a complete set of security features including L2/L3/L4 multi-layer Access Control Lists and 802.1X user authentication via TACACS+ and RADIUS servers. The DGS-3420 Series offers extensive VLAN support including GVRP and 802.1Q VLAN to enhance security and

performance. A robust set of L2/L3/L4 QoS/CoS solutions help ensure that critical network services such as VoIP, ERP, Intranet, and video conferencing are served with proper priority. The series also provides D-Link's Safeguard Engine to increase reliability, serviceability, and availability by preventing malicious flooding of traffic caused by worms or virus infections. Bandwidth Control can be flexibly set for each port using pre-defined thresholds to assure a committed level of service for end-users. For advanced applications, flow-based bandwidth control allows easy fine-tuning of service types based on specific IP addresses or protocols.

Comprehensive Management

The DGS-3420 Series provides a breadth of features to let network administrators manage and troubleshoot the network with ease. Provision for a centralized web-based GUI, Command Line Interface (CLI), Telnet, Flash File System, multiple images/configurations, and CPU monitoring help reduce the time spent on network configuration considerably. Support for device-based and flow-based monitoring such as SNMP, Syslog, RMON, and sFlow ensure smooth performance throughout the network. Lastly, features such as Cable Diagnostics and Connectivity Fault Management (CFM) round out the switch's OAM capabilities to help administrators save time during troubleshooting scenarios.



DGS-3420-28TC



DGS-3420-26SC



DGS-3420-28SC



DGS-3420-28PC



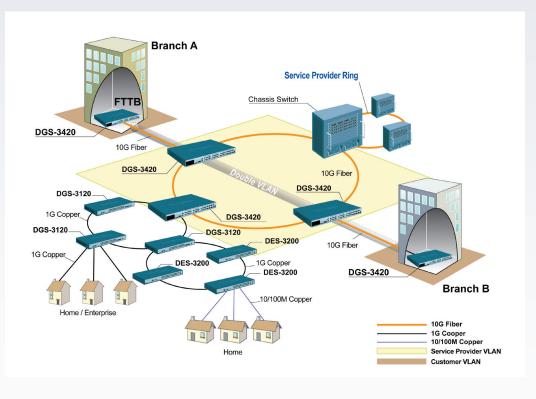
DGS-3420-52T



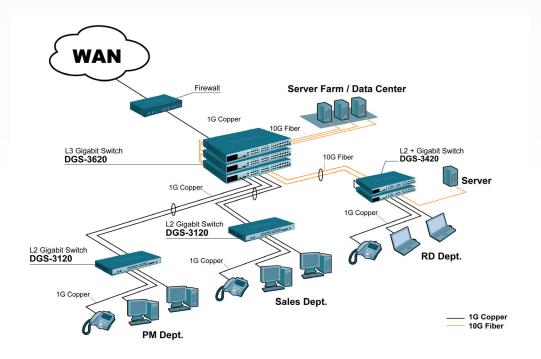
DGS-3420-52P



DGS-3420 Series in Service Provider Networks

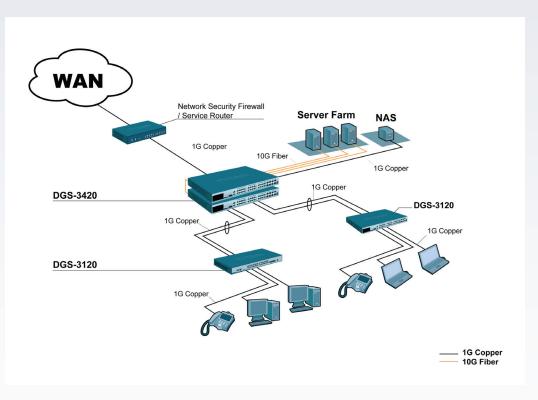


DGS-3420 Series in Large Enterprise Networks





SMB Network Deployment





Technical Specifications			
General	DGS-3420-28TC	DGS-3420-26SC	DGS-3420-28SC
Interfaces	20 10/100/1000BASE-T ports 4 Combo 10/100/1000BASE-T/SFP ports 4 SFP+ ports	20 SFP ports 4 Combo 10/100/1000BASE-T/SFP ports 2 SFP+ ports	20 SFP ports 4 Combo 10/100/1000BASE-T/SFP ports 4 SFP+ ports
Optional Redundant Power Supply	DPS-500	DPS-500	DPS-500
Console Port		RJ-45	
Management Port		10/100BASE-T	
Alarm Port		1	
SD Card Slot		1	
Performance			
Switch Fabric	128 Gbps	88 Gbps	128 Gbps
Packet Forwarding Rate	95.24 Mpps	65.47 Mpps	95.24 Mpps
Packet Buffer	2 MB		
MAC Address Table		16K Entries	
IPv4 Routing Table	1K Entries		
IPv6 Routing Table	1K Entries		
IPv4 Forwarding Table	2K Entries		
IPv6 Forwarding Table	1K Entries		
Jumbo Frame Size	13000 bytes		
Physical & Environment			
MTBF (Hours)	293,446 hours	300,018 hours	298,747 hours
Acoustics	Max: 48.9 dB	Max: 47.3 dB	Max: 47.4 dB
Heat Dissipation	155.8 BTU/hr	137 BTU/hr	145.2 BTU/hr
Power Input	100 to 240 V AC, 50/60 Hz	100 to 240 V AC, 50/60 Hz	100 to 240 V AC, 50/60 Hz
Max Power Consumption	44.9 watts	40.2 watts	42.6 watts
Dimensions (W x D x H)	441 x 310 x 44 mm (17.36 x 122 x 1.73 inches)	441 x 310 x 44 mm (17.36 x 12.2 x 1.73 inches)	441 x 310 x 44 mm (17.36 x 12.2 x 1.73 inches)
Weight	4.12 kg (9.08 lbs)	4.04 kg (8.90 lbs)	4.06 kg (8.95 lbs)
Ventilation	via Temperature Controlled Smart Fan (>39 °C: High Speed; < 36 °C: Low Speed) ^₄		
Operating 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, C-Tick		
Safety	CB, cUL, LVD		
Certification	IPv6 Ready Logo Phase 2		



General	DGS-3420-28PC	DGS-3420-52T	DGS-3420-52P
Interfaces	20 10/100/1000BASE-T PoE ports 4 Combo 10/100/1000BASE-T PoE/SFP ports 4 SFP+ ports	48 10/100/1000BASE-T ports 4 SFP+ ports	48 10/100/1000BASE-T PoE ports 4 SFP+ ports
Optional Redundant Power Supply	DPS-700	DPS-500	DPS-700
Console Port		RJ-45	
Management Port		10/100BASE-T	
Alarm Port		1	
SD Card Slot		1	
Performance			
Switch Fabric	128 Gbps	176 Gbps	176 Gbps
Packet Forwarding Rate	95.24 Mpps	130.95 Mpps	130.95 Mpps
Packet Buffer		2 MB	
MAC Address Table		16K Entries	
IPv4 Routing Table	1K Entries		
IPv6 Routing Table		1K Entries	
IPv4 Forwarding Table	2K Entries		
IPv6 Forwarding Table		1K Entries	
Jumbo Frame Size	13,000 bytes		
PoE			
PoE Standard	802.3af and 802.3at	-	802.3af and 802.3at
PoE Power Budget	370 watts (740 watts with DPS-700 RPS)	-	370 watts (740 watts with DPS-700 RPS)
Physical & Environment			
MTBF (Hours)	237,115 hours	248,607 hours	226,203 hours
Acoustics	Max: 52.7 dB	Max: 53.3 dB	Max: 55 dB
Heat Dissipation	1712.5 BTU/hr	259.1 BTU/hr	1763.3 BTU/hr
Power Input	100 to 240 V AC, 50/60 Hz	100 to 240 V AC, 50/60 Hz	100 to 240 V AC, 50/60 Hz
Max Power Consumption	502.2 watts	76.0 watts	517.1 watts
Dimensions (W x D x H)	441 x 380 x 44 mm (17.36 x 14.96 x 1.73 inches)	441 x 380 x 44 mm (17.36 x 14.96 x 1.73 inches)	441 x 380 x 44 mm (17.36 x 14.96 x 1.73 inches)
Weight	5.75 kg (12.67 lbs)	5.07 kg (11.17 lbs)	6.24 kg (13.75 lbs)
Ventilation	via Temperature Controlled Smart Fan (>39 °C: High Speed; < 36 °C: Low Speed) ⁴		
Operating 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, C-Tick	
Safety	CB, cUL, LVD	
Certification	IPv6 Ready Logo Phase 2	

Software Features		
Stackability	 Virtual Stacking Support D-Link Single IP Management Up to 32 devices per virtual stack Up to 20G stacking bandwidth 	 Physical Stacking Supports Duplex Chain/Ring topology Up to 40G stacking bandwidth Up to 12 units per stack
L2 Features	 MAC Address Table: 16K Flow Control 802.3x Flow Control HOL Blocking Prevention Jumbo Frame up to 13,000 Bytes IGMP Snooping IGMP v1/v2/v3 Snooping Supports 960 groups Port/Host-based IGMP Snooping Fast Leave MLD Snooping Supports MLD v1/v2 Snooping Supports 480 groups Host-based MLD Snooping Fast Leave Loopback Detection 	 L2 Multicast Filtering/Limited IP Multicast Spanning Tree Protocol 802.1D-2004 STP 802.1w RSTP 802.1Q-2005 MSTP BPDU filtering Root Restriction 802.3ad Link Aggregation/Max. 32 groups per device 8 Gigabit ports or 2 10-Gigabit ports per group Port Mirroring Supports 4 Mirroring Groups Supports 4 Mirroring Groups Supports One-to-One, Many-to-One, Flow-based, and RSPAN mirroring L2 Protocol Tunneling ERPS (Ethernet Ring Protection Switching)
VLAN	 VLAN Group Max. 4K Static VLAN Groups Max. 255 Dynamic VLAN Groups 802.1Q Tagged VLAN 802.1v Protocol VLAN GVRP 	 Double VLAN (Q-in-Q) Port-based Q-in-Q MAC-based VLAN VLAN Trunking
L3 Features	 256 IP interfaces Loopback interface IPv6 Tunneling 	 Proxy ARP Gratuitous ARP VRRP⁵
L3 Routing	 1K routing entries shared by IPv4/v6 Max. 1K IPv4 routes Max. 512 IPv6 routes 2K L3 forwarding entries shared by IPv4/v6 Max. 2K IPv4 entries Max. 1K IPv6 entries 	 256 static routing entries for IPv4, 128 entries for IPv6 RIP v1/v2 RIPng Equal-Cost Multi-Path Route (ECMP) Policy-based Routing Route Redistribution



Quality of Service (QoS)	 802.1p Quality of Service (CoS) 8 queues per port Queue Handling Strict Weighted Round Robin (WRR) Strict + WRR CoS based on Switch Port VLAN 802.1p Priority Queues MAC Address IPv4/v6 Address DSCP Protocol Type IPv6 Flow Label TCP/UDP Port User-defined Packet Content 	 Supports following actions for flows: Remark 802.1p Priority Tag Remark TOS/DSCP Tag Bandwidth Control Flow Statistics Committed Information Rate (CIR), min. granularity 1 Kbps Bandwidth Control Port-based (Ingress/Egress, min. granularity 8 Kbps) Flow-based (Ingress, min. granularity 8 Kbps) Time-based QoS Congestion Control - WRED⁵
Access Control List (ACL)	 Ingress ACL: support up to 6 profiles and 256 rules per profile Egress ACL: support up to 4 profiles and 128 rules per profile ACL based on 802.1p Priority VLAN ID MAC Address Ether Type IPv4/v6 Address DSCP Protocol Type TCP/UDP Port Number IPv6 Flow Label User-defined Packet Content 	 ACL Statistics Time-based ACL
Security	 SSH v2 SSL v1/v2/v3 Port Security for up to 3328 MAC addresses for port/system/ VLAN Broadcast/Multicast/Unicast Storm Control Traffic Segmentation IP-MAC-Port Binding ARP Packet Inspection IP Packet Inspection DHCP Snooping DHCPv6 and NDP Snooping Supports up to 500 Address Binding Entries per device 	 D-Link Safeguard Engine DHCP Server Screening CPU Interface Filtering ARP Spoofing Prevention BPDU Attack Protection Secure FTP⁵ NetBIOS/NetBEUI Filtering
ΑΑΑ	 802.1X Port-based Access Control Host-based Access Control Dynamic VLAN Assignment Web-based Access Control (WAC) Port-based Access Control Host-based Access Control Dynamic VLAN Assignment MAC-based Access Control (MAC) Port-based Access Control MAC-based Access Control Host-based Access Control Port-based Access Control Port-based Access Control Dynamic VLAN Assignment 	 Japan Web-based Access Control (JWAC) Host-based Access Control Microsoft NAP Supports 802.1X NAP Supports DHCP NAP Guest VLAN RADIUS and TACACS+ authentication for switch access 4-Level user account



Management	 Web-based GUI Command Line Interface (CLI) Telnet Server Telnet Client TFTP Client ZModem SNMP v1/v2c/v3 SNMP Trap System Log RMON v1 Supports 1,2,3,9 Groups RMON v2 Supports ProbeConfig Group sFlow LLDP/LLDP-MED BootP/DHCP Client DHCP Auto-Configuration DHCP Relay 	 DHCP Relay Option 60; 61 DHCP Relay Option 82 DHCP Server Flash File System Multiple Images Multiple Configurations CPU Monitoring Debug Command SNTP ICMPv6 DHCPv6 Client DHCPv6 Relay DHCPv6 Server Trusted Host MTU Setting Microsoft* NLB Support UDP helper
OAM	 802.3ah Ethernet Link OAM 802.3ah D-Link Extension: D-Link Unidirectional Link Detection (DULD) IEEE1588 Precision Time Protocol (PTP) 	 Cable Diagnostics Connectivity Fault Management (CFM) ITU-T Y.1731
D-Link Green 3.0 Technology	 Power Saving by: Link Status Cable Length detection LED Shutoff⁵ Port Shutoff⁵ System Hibernation mode⁵ Time-based PoE (PoE models only) 	• 802.3az Energy Efficient Ethernet (EEE) ⁸
MIB/IETF Standards	 RFC1213 MIB-II RFC1493, 4188 Bridge MIB RFC1907 SNMPv2 MIB RFC2571-2576 SNMP MIB RFC1271, 2819 RMON MIB RFC2021 RMON v2 MIB RFC1398, 1643, 1650, 2358, 2665 Ether-like MIB RFC2668 MAU MIB RFC2668 MAU MIB RFC2233, 2863 IF MIB RFC2618 RADIUS Authentication Client MIB RFC1724 RIP v2 MIB RFC2096 IP Forwarding Table MIB (CIDR) RFC2620 RADIUS Accounting Client MIB RFC2925 Ping MIB RFC2925 Traceroute MIB D-Link Private MIB 	 RFC 2787 VRRP MIB⁵ RFC768 UDP RFC783 TFTP RFC791 IP RFC793 TCP RFC854 Telnet RFC951, 1542, 2131 BootP RFC2068, 2618 HTTP RFC2068, 2618 HTTP RFC2138 RADIUS RFC2138 RADIUS RFC2139 RADIUS Accounting RFC1492 TACACS RFC3176 sFlow RFC2598 DiffServ Expedited Forwarding RFC4213 IPv4/IPv6 Dual Stack



Optional Products		
Optional Management Software		
DV-600S	D-View 6.0 Network Management Software Standard Edition	
DV-600P	D-View 6.0 Network Management Software Professional Edition	
Optional 10 Gbps SFP+ Transceivers		
DEM-431XT	10GBASE-SR SFP+ Transceiver (w/o DDM), 80 m: OM1 & OM2 MMF, 300 m: OM3 MMF	
DEM-431XT-DD	10GBASE-SR SFP+ Transceiver (with DDM), 80 m: OM1 & OM2 MMF, 300 m: OM3 MMF	
DEM-432XT	10GBASE-LR SFP+ Transceiver (w/o DDM), 10 km	
DEM-432XT-DD	10GBASE-LR SFP+ Transceiver (with DDM), 10 km	
DEM-433XT	10GBASE-ER SFP+ Transceiver (w/o DDM), 40 km	
DEM-433XT-DD	10GBASE-ER SFP+ Transceiver (with DDM), 40 km	
DEM-434XT	10GBASE-ZR SFP+ Transceiver (w/o DDM), 80 km	
DEM-435XT	10GBASE-LRM SFP+ Transceiver (w/o DDM), 220 m: OM1 & OM2 MMF, 300 m: OM3 MMF	
DEM-435XT-DD	10GBASE-LRM SFP+ Transceiver (with DDM), 220m: OM1 & OM2 MMF, 300 m: OM3 MMF	
DEM-436XT-BXU	10GBASE-LR BiDi SFP+ Transceiver (w/o DDM) 20 km, TX: 1270 nm, RX: 1330 nm	
DEM-436XT-BXD	10GBASE-LR BiDi SFP+Transceiver (w/o DDM) 20 km, TX: 1330 nm, RX: 1270 nm	
Optional 1 Gbps SFF	PTransceivers	
DEM-310GT	SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage	
DEM-311GT	SFP transceiver, 1000BASE-SX standard, multi-mode fiber, max. distance 550 m, 3.3 V operating voltage	
DEM-312GT2	SFP transceiver 1000BASE-SX standard, multi-mode fiber, max. distance 2 km, 3.3 V operating voltage	
DEM-314GT	SFP transceiver, 1000BASE-LHX standard, single-mode fiber, max. distance 50 km, 3.3 V operating voltage	
DEM-315GT	SFP transceiver, 1000BASE-ZX standard, single-mode fiber, max. distance 80 km, 3.3 V operating voltage	
DEM-330T	WDM SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage, Tx wavelength 1550 nm, Rx wavelength 1310 nm	
DEM-330R	WDM SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage, Tx wavelength 1310 nm, Rx wavelength 1550 nm	
DEM-331T	WDM SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 40 km, 3.3 V operating voltage, Tx wavelength 1550 nm, Rx wavelength 1310 nm	
DEM-331R	WDM SFP transceiver 1000BASE-LX standard, single-mode fiber, max. distance 40 km, 3.3 V operating voltage, Tx wavelength 1310 nm, Rx wavelength 1550 nm	
DEM-211	SFP transceiver, 100BASE-FX multi-mode fiber, max. distance 2 km, 3.3 V operating voltage	
DEM-210	SFP transceiver, 100BASE-FX single-mode fiber, max. distance 15 km, 3.3 V operating voltage	
DEM-220T	100Base-BX, Wavelength Tx:1550 nm, Rx:1310 nm,Single-mode, 20 km	
DEM-220R	100Base-BX, Wavelength Tx:1310 nm, Rx:1550 nm,Single-mode, 20 km	
DGS-712	1000BASE-TX	

Optional 10 Gbps SFP+ Direct Attach Cables			
DEM-CB100S	10-GbE SFP+ 1 m Direct Attach Cable		
DEM-CB300S	10-GbE SFP+ 3 m Direct Attach Cable		
DEM-CB700S	10-GbE SFP+ 7 m Direct Attach Cable		
Optional Redundant Powe	Optional Redundant Power Supplies		
DPS-500	140-watt redundant power supply		
DPS-500DC	140-watt DC redundant power supply		
DPS-7007	589-watt redundant power supply		
Order Information			
DGS-3420-28TC	20 10/100/1000BASE-T and 4 Combo 10/100/1000BASE-T/SFP and 4 SFP+ ⁶		
DGS-3420-26SC	20 SFP and 4 Combo 10/100/1000BASE-T/SFP and 2 SFP+ ⁶		
DGS-3420-28SC	20 SFP and 4 Combo 10/100/1000BASE-T/SFP and 4 SFP+ ⁶		
DGS-3420-28PC	20 10/100/1000BASE-T PoE and 4 Combo 10/100/1000BASE-T PoE/SFP and 4 SFP+ ⁶		
DGS-3420-52T	48 10/100/1000BASE-T and 4 SFP+6		
DGS-3420-52P	48 10/100/1000BASE-T PoE and 4 SFP+6		

¹ For DGS-3420-28TC/28SC/28SC/28PC models
 ² For DGS-3420-28PC/52P models
 ³ When switch is used in a stack, the last 2 ports are dedicated stacking ports and cannot be used as uplink ports.
 ⁴ By default, the fan speed is set to low. When the temperature inside the chassis exceeds 39 °C, the fan switches to high speed until the temperature drops below 36 °C.
 ⁵ Supported by R1.5 firmware.
 ⁶ Stacking cable and SD card are not included.
 ⁷ Supported in DGS-3420-28PC and DGS-3420-52P only
 ⁸ Supported by hardware version B1
 ⁹ Please consult your local dealer for the details for features described in this page may vary depending on the regions.

