

Product Highlights

Management

Virtual Stacking of up to 32 units from a single console

Physical Stacking

Manage up to 576 Gigabit ports from a single

PoE and PoE + models

More power on the ethernet ports to support VoIP and wireless applications



DGS-3420 SERIES

xStack Layer 2+ Managed Stackable Gigabit Switches

Features

- 20/48 10/100/1000BASE-T 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
- Optional External Redundant Power Supply
- High Bandwidth Physical/Virtual 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

Security

- L2/L3/L4 Multi-Layer Access Control
 External RADIUS/TACACS+ Authentication
- SSH/SSL support
- 802.1X Guest VLAN
- Web-based Access Control (WAC)
 MAC-based Access Control (MAC)
- D-Link Safeguard Engine Supports Microsoft® NAP
- **Enhanced L2+ Features**
- IPv4/v6 Static Routing

• RIP/RIPng Quality of Service

- 802.1p Priority Queues/Multi-Layer CoS
 Time-based QoS

Reliability

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

Traffic Monitoring/Bandwidth Control

- Traffic Segmentation
- Granular Bandwidth Control Down to 64 Kbps per port
- Granular Broadcast Storm Control Down to 1 pps per port
- 802.3ad Link Aggregation
- RMON support Port mirroring

Green

- Time-based PoF
- Power Saving

The xStack DGS-3420 Series of next generation Layer 2+ Gigabit switches delivers performance, flexibility, security, multi-layer Quality of Service (QoS), and accessibility, along with redundant power solutions for businesses. 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 centralised high-speed servers.

Service providers can take advantage of the high SFP density switch (such as DGS-3420-28SC) to structure the aggregation of Fiber to the Building (FTTB) networks that are extended to the subscribers' sites.

Unparalleled Flexibility

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

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. 12 units or 576 Gigabit ports can be configured for a stack using direct attach cables to provide high-bandwidth with cost efficiency in mind.

¹ For DGS-3420-28TC/28SC/28PC models

² For DGS-3420-28PC/52P model



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 prioritised. The series also provides D-Link's Safeguard Engine to increase the switch's reliability, service ability, and availability to prevent 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 configuration of service types based on specific IP addresses or protocols.

IPv6 Technology

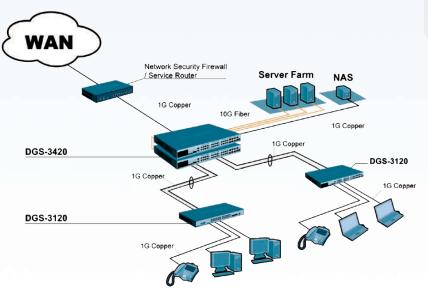
The DGS-3420 Series also features comprehensive IPv6 support, including IPv6 Tunnel, ICMPv6, DHCPv6, RIPng, and more. With10-Gigabit connectivity and IPv6 support, the series enables you to future-proof your network for cost efficiency and longevity while meeting the requirements of future IPv6 capable network devices.

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 of the switch.

The DGS-3420 Series also includes Time-based PoE which automatically switches off the power on PoE ports when not active to save energy.

Business Network Deployment





If the worst should happen to your network you need the very best support and fast. Downtime costs your business money. D-Link Assist maximises your uptime by solving technical problems quickly and effectively. Our highly trained technicians are on standby around the clock, ensuring that award-winning support is only a phone call away.

With a choice of three affordable service offerings covering all D-Link business products, you can select the package that suits you best:

D-Link Assist Gold - for comprehensive 24-hour support

D-Link Assist Gold is perfect for mission-critical environments where maximum uptime is a high priority. It guarantees four hour around-the-clock response. Cover applies 24/7 for every day of the year including holidays.

D-Link Assist Silver - for prompt same-day assistance

D-Link Assist Silver is designed for 'high availability' businesses that require rapid response within regular working hours. It provides a four hour response service Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist Bronze - for guaranteed response on the next business day

D-Link Assist Bronze is a highly cost-effective support solution for less critical environments. Response is guaranteed within eight business hours Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist can be purchased together with any D-Link business product. So whether you're buying switching, wireless, storage, security or IP Surveillance equipment from D-Link, your peace of mind is guaranteed. D-Link Assist also offers installation and configuration services to get your new hardware working quickly and correctly.



Technical Specifications	DGS-3420-28TC	DGS-3420-28SC		
General				
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 • 4 SFP+ ports		
Optional Redundant Supply	• DPS-500	• DPS-500		
Console Port	• RJ-45			
Management Port	• 10/100BASE-T	•10/100BASE-T		
Alarm Port	•1	•1		
SD Card Slot	• 1			
Performance				
Switch Fabric	• 128 Gpbs	• 128 Gpbs		
Packet Forwarding Rate	• 95.24 Mpps	• 95.24 Mpps		
Packet Buffer	• 2 MB	• 2 MB		
MAC Address Table	• 16K Entries	• 16K Entries		
IP v4/v6 Routing Table	• 1K/512 Entries	• 1K/512 Entries		
IP v4/v6 L3 Forwarding Table	• 2K/1K Entries	• 2K/1K Entries		
Jumbo Frame Size	• 13000 bytes	• 13000 bytes		
РоЕ				
PoE Standard				
PoE Power Budget				
Physical				
MTBF (Hours)	• 287763 hours	• 300371 hours		
Acoustic	 At Operation Temperature of: below 30 °C: < 38.7 dB above 30 °C: < 46.5 dB 	At Operatios 6.2 dB		
Heat Dissipation	• 200.5 BTU/hr	• 205.3 BTU/hr		
Power Input	• 100 to 240 V AC, 50/60Hz	• 100 to 240 V AC, 50/60Hz		
Max Power Consumption	• 58.8 watts	• 60.2 watts		
Dimensions (W x D x H)	• 441 x 310 x 44 mm	• 441 x 310 x 44 mm		
Weight	•4.12 kg	• 4.06 kg		
Ventilation	• via Temperature Controlled Smart Fan (> 39 °C	C: High Speed; < 36 °C: Low Speed) ³		
Operating Temperature	•0 to 50 °C			
Storage Temperature	•-40 to 70 °C	• -40 to 70 °C		
Operating Humidity	• 10% to 90% RH			
Storage Humidity	• 5% to 90% RH	• 5% to 90% RH		
Emission (EMI)	• FCC Class A, CE Class A, VCCI Class A, IC, C-Tick	• FCC Class A, CE Class A, VCCI Class A, IC, C-Tick		
Safety	• CB, cUL, LVD	• CB, cUL, LVD		
Certification	• IPv6 Ready Logo Phase 2	• IPv6 Ready Logo Phase 2		



Technical Specifications	DGS-3420-28PC	DGS-3420-52T	DGS-3420-52P	
General				
Interfaces	• 20 10/100/1000BASE-T 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 Supply	• DPS-700	• DPS-500	• DPS-700	
Console Port	• RJ-45	•RJ-45		
Management Port	• 10/100BASE-T	•10/100BASE-T		
Alarm Port	•1	•1		
SD Card Slot	•1	•1		
Performance				
Switch Fabric	• 128 Gpbs	• 176 Gpbs	• 176 Gpbs	
Packet Forwarding Rate	• 95.24 Mpps	• 130.95 Mpps	• 130.95 Mpps	
Packet Buffer	2 MB			
MAC Address Table	• 16K Entries	• 16K Entries		
IP v4/v6 Routing Table	• 1K/512 Entries	• 1K/512 Entries		
IP v4/v6 L3 Forwarding Table	• 2K/1K Entries	• 2K/1K Entries		
Jumbo Frame Size	• 13000 bytes	•13000 bytes		
РоЕ				
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				
MTBF (Hours)	• 206190 hours	• 255608 hours	• 202462 hours	
Acoustic	• At Operation Temperature of: • below 30 °C: < 40.3 dB • above 30 °C: < 52.5 dB	• At Operation Temperature of: • below 30 °C: < 40.6 dB • above 30 °C: < 51.1 dB	• At Operation Temperature of: • below 30 °C: < 43.2 dB • above 30 °C: < 54.8 dB	
Heat Dissipation	• 1630.0 BTU/hr	• 276.2 BTU/hr	• 1723.4 BTU/hr	
Power Input	• 100 to 240 V AC, 50/60Hz	• 100 to 240 V AC, 50/60Hz		
Max Power Consumption	478.0 watts	81.0 watts	505.4 watts	
Dimensions (W x D x H)	441 x 310 x 44 mm	441 x 310 x 44 mm		
Weight	• 5.75 kg	• 5.07 kg	• 6.24 kg	
Ventilation	• via Temperature Controlled Sma	• via Temperature Controlled Smart Fan (> 39 °C: High Speed; < 36 °C: Low Speed) ³		
Operating Temperature	• 0 to 50 °C	•0 to 50 °C		
Storage Temperature	•-40 to 70 °C	•-40 to 70 °C		
Operating Humidity	• 10% to 90% RH	• 10% to 90% RH		
Storage Humidity	• 5% to 90% RH	• 5% to 90% RH		
Emission (EMI)	• FCC Class A, CE Class A, VCCI Cla	• FCC Class A, CE Class A, VCCI Class A, IC, C-Tick		
Safety	• CB, cUL, LVD	• CB, cUL, LVD		
Certification	• IPv6 Ready Logo Phase 2	• IPv6 Ready Logo Phase 2		

 $^{^{\}rm 3}$ Fan speed is adjusted according to operating temperature.



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 Frames up to 13000 bytes
- Jumbo Traines up to Tsoot IGMP snooping IGMP v1/v2/v3 Snooping Supports 960 groups Port/Host-based IGMP Snooping

- Fast Leave

- Fast Leave

 MLD Snooping

 MLD v1/v2 Snooping

 Supports 480 groups

 Host-based MLD Snooping Fast Leave

 Spanning Tree

 802.1D-2004 STP

 802.1w RSTP

 802.1Q-2005 MSTP

 BPDU filtering

 Root Restriction

- Root Restriction
 Loopback Detection
 802.3ad Link Aggregation
 Max. 32 groups per device
 8 Gigabit ports or 2 10-Gigabit ports - 8 Gigabit ports of 2 To-Gigabit ports per group
 - Port Mirroring
 - 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 Group

 Max. 4K Static VLAN Groups

 Max. 255 Dynamic VLAN Groups

 802.1Q Tagged VLAN

 202.1 Under State VLAN
- 802.1v Protocol VLAN
- GVRP
- Double VLAN (Q-in-Q)
 Port-based Q-in-Q
 Selective Q-in-Q4
- MAC-based VLAN
- **VLAN Trunking**
- · 802.1Qbb4
- L3 Features
 256 IP interfaces
- Loopback interfaceIPv6 Tunneling
- Proxy ARP
- Gratuitous ARP
- 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

- QoS (Quality of Service)
 802.1p Class of Service (CoS)
- 8 queues per port
 Queue Handling
- Strict
- Weighted Round Robin (WRR)
- Strict + WRR
- CoS based on
- Switch Port VLAN ID 802.1p Priority Queues MAC Address

- IPv4/v6 Address DSCP

- Protocol Type IPv6 Traffic Class IPv6 Flow Label TCP/UDP Port

- TCP/ODP Port
 User-defined Packet Content
 Supports following actions for flows:
 Remark 802.1p Priority Tag
 Remark TOS/DSCP Tag
 Bandwidth Control

- Flow Statistics
- Flow Statistics
 Committed Information Rate (CIR), min. granularity 1 Kbps.
 Bandwidth Control
 Port-based (Ingress/Egress, min. granularity 64 Kbps)
 Flow-based (Ingress, min. granularity 64 Kbps)
- 64 Kbps)
- Time-based QoS

- ACL (Access Control List)
 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 Protocol Type TCP/UDP Port Number IPv6 Traffic Class IPv6 Flow Label
- User-defined Packet Content
- **ACL Statistics**
- Time-based ACL CPU interface filtering

Security

- SSH v2 SSL v1/v2/v3
- Port Security for up to 64 MAC
- addresses per port

 Broadcast/Multicast/Unicast Storm

- 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

- 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

- FOIL-Dased Access Control
 Host-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 ServerTelnet ClientTFTP Client
- ZModem
- SNMP v1/v2c/v3
- SNMP Trap
- System Log
 RMON v1
 Supports 1,2,3,9 Groups
 RMON v2
- Supports ProbeConfig Group

- Supports ProbeConfig Gro s Flow 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 Images
 Multiple Configurations
 CPU Monitoring
 Debug Command

- Debug Commal
 SNTP
 ICMPv6
 DHCPv6 Client
 DHCPv6 Relay
 DHCPv6 Server
 Trusted Host

- MTU Setting
 Microsoft® NLB Support
- · UDP helper

- 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

- Power saving by Link StatusPower saving by Cable LengthTime-based PoE

- MIB/IETF Standards
 RFC1213 MIB-II
- RFC1213 MIB-II
 RFC1493 Bridge MIB
 RFC1907 SNMPv2 MIB
 RFC2571~2576 SNMP MIB
 RFC1271, 2819 RMON MIB
 RFC2021 RMON v2 MIB
 RFC2665 Ether-like MIB
 RFC2668 MAU MIB

- RFC2674 802.1p MIB
 RFC2233, 2863 IF MIB
- RFC2618 RADIUS Authentication Client MIB RFC1724 RIP v2 MIB
 RFC2096 IP Forwarding Table MIB
- RFC2620 RADIUS Accounting Client
- MIB
- · Ping MIB

- Ping MIB
 Traceroute MIB
 D-Link Private MIB
 RFC768 UDP
 RFC783 TFTP
 RFC 791 IP
 RFC 793 TCP
 RFC 826 ARP
 RFC854 Telnet
 RFC2058 HTTP
 RFC3056, 5214 IPv6 Tunnel
 RFC2138 RADIUS RFC2138 RADIUS

- RFC2138 RADIUS
 RFC2139 RADIUS Accounting
 RFC1492 TACACS
 RFC3176 sFlow
 82RFC2598 DiffServ Expedited Forwarding

Ordering Informat	ion		
DGS-3420-28TC	• 20 10/100/1000BASE-T and 4 Combo 10/100/1000BASE-T/SFP and 4 SFP+5		
DGS-3420-28SC	• 20 SFP and 4 Combo 10/100/1000BASE-T/SFP and 4 SFP+ ⁵		
DGS-3420-28PC	• 20 10/100/1000BASE-T PoE and 4 Combo 10/100/1000BASE-T PoE/SFP and 4 SFP+5		
DGS-3420-52T	• 48 10/100/1000BASE-T and 4 SFP+5		
DGS-3420-52P	• 48 10/100/1000BASE-T PoE and 4 SFP+ ⁵		
Optional Manage	ment Software		
DV-600S	• D-View 6.0 Network Management Software Standard Edition		
DV-600P	D-View 6.0 Network Management Software Standard Edition		
Optional 10 Gbps	SFP+ Transceivers		
DEM-431XT	• 10 GBASE-SR SFP+ Transceiver (w/o DDM), 80 m: OM1 & OM2 MMF, 300 m: OM3 MMF		
DEM-431XT-DD	• 10 GBASE-SR SFP+ Transceiver (with DDM), 80 m: OM1 & OM2 MMF, 300 m: OM3 MMF		
DEM-432XT	• 10 GBASE-LR SFP+ Transceiver (w/o DDM), 10 km		
DEM-432XT-DD	• 10 GBASE-LR SFP+ Transceiver (with DDM), 10 km		
Optional 1 Gbps S	FP Transceivers		
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, single-mode fiber, max. distance 50 km, 3.3 V operating voltage		
DEM-312GT2	• SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 2 km, 3.3 V operating voltage		
DEM-314GT	• SFP transceiver, 1000BASE-LXH standard, single-mode fiber, max. distance 50 km, 3.3 V operating voltage		
DEM-315GT	• SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 80 km, 3.3 V operating voltage		
DEM-330T	• 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, singlemode 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, singlemode 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, singlemode fiber, max. distance 40 km, 3.3 V operating voltage, Tx wavelength 1310 nm, Rx wavelength1550 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 multi-mode fiber, max. distance 15km, 3.3 V operating voltage		
Recommended 10	Gbps SFP+ Direct Attach Stacking Cables ⁸		
DEM-CB100S	• 10-GbE SFP+ 1 m Direct Attach Stacking Cable		
DEM-CB300S	• 10-GbE SFP+ 3 m Direct Attach Stacking Cable		
Optional Redunda	nt Power Supplies		
DPS-500	• 140-watt redundant power supply		
DPS-500DC	• 140-watt DC redundant power supply		
DPS-700 ⁷	• 589-watt redundant power supply		

- Functions available in future firmware upgrade
 Stacking cable and SD card are not included
 Product available in future
 Supported in DGS-3420/28PC and DGS-3420/52P only
 These stacking cables are not included but are recommended to be purchased separately for the physical stacking functionality.



For more information: www.dlink.eu

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