



Product Highlights

Flexible Choices

- 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

Enhanced L2+ Features

- IPv4/v6 Static Routing
- RIP/RIPng



DGS-3420 Series

xStack L2+ Managed Stackable Gigabit Switches

Features

Reliability

- Redundant Power Supply (RPS) support
- 802.1D/802.1w/802.1s Spanning Tree

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

Traffic Monitoring/Bandwidth Control

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

OAM

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

Configuration/Management

- Web-based GUI
- Command Line Interface (CLI)
- SNMP v1, v2c, v3
- D-Link Single IP Management (SIM)
- Telnet
- Multiple Images/Configurations
- DHCP Server
- sFlow
- LLDP, LLDP-MED

Overview

The xStack DGS-3420 series of next generation Layer 2+ Gigabit switches delivers performance, flexibility, security, multi-layer QoS, and accessibility, along with redundant power options 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 a departmental access layer or aggregation switches to form a multilevel network. Service providers can take advantage of the high SFP density (DGS-3420-28SC) to structure the aggregation of Fiber to the Building (FTTB) networks that can be extended to subscribers' sites.

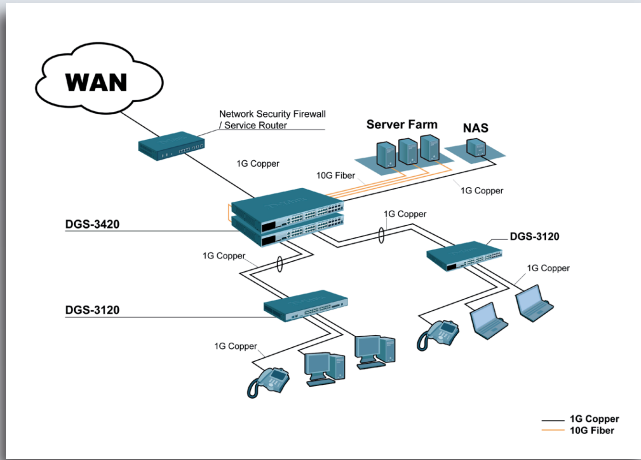
Unparalleled Flexibility

Easily deployed and simple to manage, the DGS-3420 can be stacked with any switch that supports D-Link's Single IP Management to form a multi-level network with centralized management. 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.

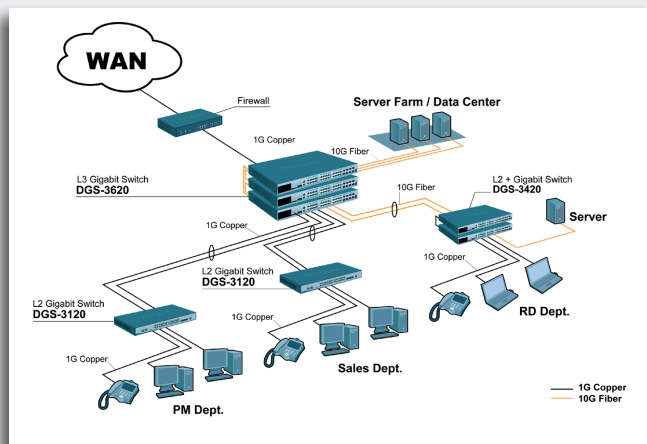
Redundant Ring Stacking

Alternatively, depending on whether linear or 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 and return on investment.

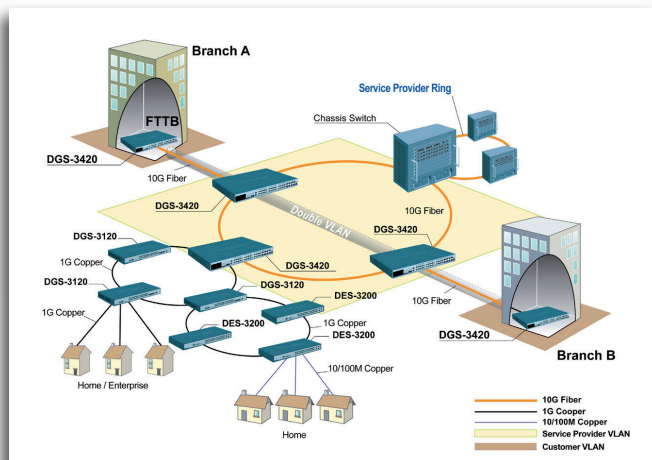
SMB Network Deployment



xStack DGS-3420 Series in Large Enterprise Networks



xStack DGS-3420 Series in Service Provider Networks



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 the switch's reliability, serviceability and availability to prevent malicious traffic flooding 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.



IPv6 Technology

The DGS-3420 Series also features comprehensive IPv6 support, including IPv6 Tunnel, ICMPv6, DHCPv6, RIPng and more. With 10-Gigabit connectivity and IPv6 support, the series enables you to future-proof your network for cost efficiency and longevity.

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.



| Technical Specifications | | DGS-3420-28TC | DGS-3420-28SC |
|--------------------------|---------------------------------|---|---|
| | |  |  |
| General | Interfaces | <ul style="list-style-type: none"> • 20 10/100/1000BASE-T ports • 4 Combo 10/100/1000BASE-T/SFP ports • 4 SFP+ ports | <ul style="list-style-type: none"> • 20 SFP ports • 4 Combo 10/100/1000BASE-T/SFP ports • 4 SFP+ ports |
| | Optional Redundant Power Supply | • DPS-500 | |
| | Console Port | • RS232 Serial Port, RJ45 to DB9 Cable included | |
| | Management Port | • 10/100BASE-T, Dedicated Management Port | |
| | Alarm Port | • 2 input, 1 output, (42VAC or 60VDC) | |
| | SD Card Slot | • 1 | |
| Performance | Switch Fabric | • 128 Gbps | • 128 Gbps |
| | Packet Forwarding Rate | • 95.24 Mpps | • 95.24 Mpps |
| | Packet Buffer | • 2MB | |
| | MAC Address Table | • 16K Entries | |
| | IP v4/v6 Routing Table | • 1K/512 Entries | |
| | IP v4/v6 L3 Forwarding Table | • 2K/1K Entries | |
| | Jumbo Frame Size | • 13000 bytes | |
| Physical | MTBF (Hours) | • 287763 hours | • 300371 hours |
| | Acoustic | <ul style="list-style-type: none"> • At Operation Temperature of: below 86 °F: < 38.7 dB • above 86 °F: < 46.5 dB | <ul style="list-style-type: none"> • At Operation Temperature of: below 86°F: < 38.9 dB • above 86°F: < 46.2 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) | • 17.36 x 12.2 x 1.72in (441 x 310 x 44 mm) | • 17.36 x 12.2 x 1.72in (441 x 310 x 44 mm) |
| | Weight | • 9.1lbs (4.12 kg) | • 8.9lbs (4.06 kg) |
| | Ventilation | • via Temperature Controlled Smart Fan (> 102.2 °F: High Speed; < 102.2 °F Low Speed) ³ | |
| | Operating Temperature | • 32-°122F (0-50 °C) | |
| | Storage Temperature | • -40 to 158 °F (-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, C-Tick | |
| | Safety | • CB, cUL, LVD | |
| Certification | • IPv6 Ready Logo Phase 2 | | |

| Technical Specifications | | DGS-3420-28PC | DGS-3420-52T | DGS-3420-52P |
|--------------------------|---------------------------------|--|--|--|
| | |  |  |  |
| General | Interfaces | <ul style="list-style-type: none"> • 20 10/100/1000BASE-T ports • 4 Combo 10/100/1000BASE-T PoE/SFP ports • 4 SFP+ portss | <ul style="list-style-type: none"> • 48 10/100/1000BASE-T PoE ports • 4 SFP+ ports | <ul style="list-style-type: none"> • 48 10/100/1000BASE-T PoE ports • 4 SFP+ ports |
| | Optional Redundant Power Supply | • DPS-700 | • DPS-500 | • DPS-700 |
| | Console Port | • RS232 Serial Port, RJ45 to DB9 Cable included | | |
| | Management Port | • 10/100BASE-T, Dedicated Management Port | | |
| | Alarm Port | • 2 input, 1 output, (42VAC or 60VDC) | | |
| | SD Card Slot | • 1 | | |
| Performance | Switch Fabric | • 128 Gbs | • 176 Gbps | • 176 Gbps |
| | Packet Forwarding Rate | • 95.24 Mpps | • 130.95 Mpps | • 130.95 Mpps |
| | Packet Buffer | • 2MB | | |
| | MAC Address Table | • 16K Entries | | |
| | IP v4/v6 Routing Table | • 1K/512 Entries | | |
| | IP v4/v6 L3 Forwarding Table | • 2K/1K Entries | | |
| | Jumbo Frame Size | • 13000 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 | MTBF (Hours) | • 287763 hours | • 301667 hours | • 300371 hours |
| | Acoustic | • At Operation Temperature of: below 86 °F: < 40.3 dB above 86 °F < 52.5 dB | • At Operation Temperature of: below 86 °F: < 40.6 dB above 86 °F: < 51.1 dB | • At Operation Temperature of: below 86 °F: < 38.9 dB above 86 °F: < 46.2 dB |
| | Heat Dissipation | • 200.5 BTU/hr | • 187.6 BTU/hr | • 205.3 BTU/hr |
| | Power Input | • 100 to 240 V AC, 50/60Hz | • 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) | • 17.1 x 17.4 x 1.7in (441 x 380 x 44 mm) | • 17.1 x 17.4 x 1.7in (441 x 380 x 44 mm) | • 17.1 x 17.4 x 1.7in (441 x 380 x 44 mm) |
| | Weight | • 12.7lbs (5.75 kg) | • 11.2lbs (5.07 kg) | • 14.1lbs (6.24 kg) |
| | Ventilation | • via Temperature Controlled Smart Fan (> 39 °C: High Speed; < 36 °C: Low Speed) ³ | | |
| | Operating Temperature | • 32 - 122 °F (0-50 °C) | | |
| | Storage Temperature | • -40 - 251.6°F (-40 to 70 °C) | | |

| | | |
|---------------------|--------------------|---|
| Physical (continue) | 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 | <ul style="list-style-type: none"> • Virtual Stacking Support <ul style="list-style-type: none"> • D-Link Single IP Management • Up to 32 devices per virtual stack | <ul style="list-style-type: none"> • Physical Stacking <ul style="list-style-type: none"> • Supports Duplex Chain/Ring topology • Up to 40G stacking bandwidth • Up to 12 units per stack |
| L2 Features | <ul style="list-style-type: none"> • MAC Address Table: 16K • Flow Control • 802.3x Flow Control <ul style="list-style-type: none"> • HOL Blocking Prevention • Jumbo Frames up to 13000 bytes • IGMP snooping <ul style="list-style-type: none"> • IGMP v1/v2/v3 Snooping • Supports 960 groups • Port/Host-based • IGMP Snooping • Fast Leave • MLD Snooping <ul style="list-style-type: none"> • MLD v1/v2 Snooping • Supports 480 groups • Host-based MLD Snooping Fast Leave | <ul style="list-style-type: none"> • Spanning Tree <ul style="list-style-type: none"> • 802.1D-2004 STP • 802.1w RSTP • 802.1Q-2005 MSTP • BPDU filtering <ul style="list-style-type: none"> • Root Restriction • Loopback Detection • 802.3ad Link Aggregation <ul style="list-style-type: none"> • Max. 32 groups per device <ul style="list-style-type: none"> • 8 Gigabit ports or 2 10-Gigabit port per group • Port Mirroring <ul style="list-style-type: none"> • Supports 4 Mirroring Groups • Supports One-to-One, Many-to-One, • Flow-based, and RSPAN mirroring <ul style="list-style-type: none"> • L2 Protocol Tunneling • ERPS (Ethernet Ring Protection Switching) |
| VLAN | <ul style="list-style-type: none"> • VLAN Group <ul style="list-style-type: none"> • Max. 4K Static VLAN Groups • Max. 255 Dynamic VLAN Groups • 802.1Q Tagged VLAN • 802.1v Protocol VLAN • GVRP | <ul style="list-style-type: none"> • Double VLAN (Q-in-Q) <ul style="list-style-type: none"> • Port-based Q-in-Q • Selective Q-in-Q4 • MAC-based VLAN • VLAN Trunking • 802.1Qbb4 |
| L3 Features | <ul style="list-style-type: none"> • 256 IP interfaces • Loopback interface • IPv6 Tunneling | <ul style="list-style-type: none"> • Proxy ARP • Gratuitous ARP |
| L3 Routing | <ul style="list-style-type: none"> • 1K routing entries shared by IPv4/v6 <ul style="list-style-type: none"> • Max. 1K IPv4 routes • Max. 512 IPv6 routes • 2K L3 forwarding entries shared by IPv4/v6 <ul style="list-style-type: none"> • Max. 2K IPv4 entries • Max. 1K IPv6 entries | <ul style="list-style-type: none"> • 256 static routing entries for IPv4, 128 entries for IPv6 • RIP v1/v2 • RIPng |
| QoS (Quality of Service) | <ul style="list-style-type: none"> • 802.1p Class of Service (CoS) • 8 queues per port • Queue Handling <ul style="list-style-type: none"> • Strict • Weighted Round Robin (WRR) • Strict + WRR • CoS based on <ul style="list-style-type: none"> • Switch Port • VLAN ID • 802.1p Priority Queues • MAC Address • IPv4/v6 Address • DSCP • Protocol Type | <ul style="list-style-type: none"> • IPv6 Traffic Class • IPv6 Flow Label • TCP/UDP Port • User-defined Packet Content • Supports following actions for flows: <ul style="list-style-type: none"> • 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 64 Kbps) • Flow-based (Ingress, min. granularity 64 Kbps) • Time-based QoS |

Software Features Continued

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|----------------------------------|--|--|
| <p>ACL (Access Control List)</p> | <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/v6 Address • DSCP • Protocol Type • TCP/UDP Port Number | <ul style="list-style-type: none"> • IPv6 Traffic Class • IPv6 Flow Label • User-defined Packet Content • 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 Statistics • Time-based ACL • CPU interface filtering |
| <p>Security</p> | <ul style="list-style-type: none"> • SSH v2 • SSL v1/v2/v3 • Port Security for up to 64 MAC addresses per port • Broadcast/Multicast/Unicast Storm Control • Traffic Segmentation • CPU Interface Filtering • ARP Spoofing Prevention • BPDU Attack Protection • DHCP Server Screening | <ul style="list-style-type: none"> • 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 |
| <p>AAA</p> | <ul style="list-style-type: none"> • 802.1X <ul style="list-style-type: none"> • Port-based Access Control • Host-based Access Control • Dynamic VLAN Assignment • Web-based Access Control (WAC) <ul style="list-style-type: none"> • Port-based Access Control • Host-based Access Control • Dynamic VLAN Assignment • MAC-based Access Control (MAC) <ul style="list-style-type: none"> • Port-based Access Control • Host-based Access Control • Dynamic VLAN Assignmen | <ul style="list-style-type: none"> • Japan Web-based Access Control (JWAC) <ul style="list-style-type: none"> • Host-based Access Control • Microsoft® NAP <ul style="list-style-type: none"> • Supports 802.1X NAP • Supports DHCP NAP • Guest VLAN • RADIUS and TACACS+ authentication for switch access • 4-Level user account |
| <p>Management</p> | <ul style="list-style-type: none"> • Web-based GUI • Command Line Interface (CLI) • Telnet Server • Telnet Client • TFTP Client • ZModem • SNMP v1/v2c/v3 • SNMP Trap • System Log • 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 • sFlow • LLDP/LLDP-MED • BootP/DHCP Client • DHCP Auto-Configuration • DHCP Relay | <ul style="list-style-type: none"> • 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 |
| <p>OAM</p> | <ul style="list-style-type: none"> • 802.3ah Ethernet Link OAM • 802.3ah D-Link Extension: D-Link Unidirectional Link Detection (DULD) • IEEE1588 Precision Time Protocol (PTP) | <ul style="list-style-type: none"> • Cable Diagnostics • Connectivity Fault Management (CFM) • ITU-T Y.1731 |
| <p>Green</p> | <ul style="list-style-type: none"> • Power saving by Link Status • Power saving by Cable Length • Time-based PoE | |

Software Features Continued

MIB/IETF Standards

- 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 (CIDR)
- RFC2620 RADIUS Accounting Client MIB
- Ping MIB
- Traceroute MIB
- D-Link Private MIB
- RFC768 UDP
- RFC783 TFTP
- RFC 791 IP
- RFC 793 TCP
- RFC 826 ARP
- RFC854 Telnet
- RFC951, 1542 BootP
- RFC2068 HTTP
- RFC3056, 5214 IPv6 Tunnel
- RFC2138 RADIUS
- RFC2139 RADIUS Accounting
- RFC1492 TACACS
- RFC3176 sFlow
- RFC2598 DiffServ Expedited Forwarding

Warranty

- | | |
|----------|-------------------------|
| Warranty | • Lifetime ⁶ |
|----------|-------------------------|

Ordering Information

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|---------------|--|
| DGS-3420-28TC | • 20 10/100/1000BASE-T and 4 Combo 10/100/1000BASE-T/SFP and 4 SFP+ ⁵ |
| DGS-3420-26SC | • 20 SFP and 4 Combo 10/100/1000BASE-T/SFP and 2 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 Products

Optional Management Software

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|----------------------|---|
| DV-600S | • D-View 6.0 Network Management Software Standard Edition |
| DV-600P | • D-View 6.0 Network Management Software Professional Edition |
| DV-601P ⁷ | • E2ES Console Plug-in for D-View 6.0 |

Optional 10 Gbps SFP+ Transceivers

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|---------------|--|
| 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-433XT-DD | • 10GBASE-ER SFP+ Transceiver (with DDM), 40 km |
| 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 |

Optional 1 Gbps SFP Transceivers

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|-----------|--|
| 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-211 | • SFP transceiver, 100BASE-FX multi-mode fiber, max. distance 2 km, 3.3 V operating voltage |

DGS-3420 Series xStack L2+ Managed Stackable Gigabit Switches

Optional Products continued

Optional 10 Gbps SFP+ Direct Attach Cables

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|------------|---------------------------------------|
| DEM-CB100S | • 10-GbE SFP+ 1 m Direct Attach Cable |
|------------|---------------------------------------|

| | |
|------------|---------------------------------------|
| DEM-CB300S | • 10-GbE SFP+ 1 m Direct Attach Cable |
|------------|---------------------------------------|

Optional 10 Gbps SFP+ Direct Attach Cables

| | |
|---------|-----------------------------------|
| DPS-500 | • 140-watt redundant power supply |
|---------|-----------------------------------|

| | |
|----------------------|-----------------------------------|
| DPS-700 ⁸ | • 589-watt redundant power supply |
|----------------------|-----------------------------------|

¹For DGS-3420-28TC/28SC/28PC models. ²For DGS-3420-28PC/52P. ³By default, the fan speed is low. When the temperature inside the chassis is over 102.2°F (39°C), the fan switches to high speed and remains high until the temperature is down to 96.8°F (36°C). ⁴Functions available in future firmware upgrade. ⁵Stacking cable and SD Card are not included. ⁶Lifetime Warranty available only in the USA and Canada. ⁷Product will be available in the future. ⁸Supported in DGS-3420-28PC and DGS-3420-52P only

Updated 11/15/11

DGS-3420-28TC



DGS-3420-28SC



DGS-3420-28PC



DGS-3420-52T



DGS-3420-52P



For more information

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