Flexible Choices
- Up to 48 10/100/1000BASE-T or 24 SFP Slots
- 4 Combo 10/100/1000BASE-T/SFP ports
- 2 or 3 Open Slots for Optional Single-Port 10-Gigabit Uplinks
- Stackable Through 10-Gigabit Coaxial or Fiber Ports
- Optional External Redundant Power Supply

xStack Integration
- Virtual Stack of Up to 32 Units Using Single IP Management
- Physical Stack of Up to 12 Units, 576 Gigabit Ports

Quality of Service
- 802.1p Priority Queues/Multi-Layer CoS
- IP Multicast Support for Bandwidth-Intensive Applications
- Committed Information Rate

Security
- L2/L3/L4 Multi-Layer Access Control
- External RADIUS/TACACS+ Authentication Support
- 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
- Granular Broadcast Storm Control Down to 1 pps Per Port
- 802.3ad Link Aggregation
- RMON Support
- Port Mirroring

Configuration/Management
- Web-based GUI
- Command Line Interface (CLI)
- SNMP v1, v2c, v3
- D-Link Single IP Management (SIM) v.1.6
- Telnet
- Dual Images/Configurations
- DHCP Server
- sFlow
- LLDP

The xStack DGS-3600 Series of next generation Layer 3 Gigabit switches delivers performance, flexibility, security, multi-layer QoS and access, as well as redundant power options for SMBs and enterprises. With high Gigabit port densities, SFP support, 10-Gigabit uplink options and advanced software functions, these switches can act as departmental access layer devices or core switches to form a multi-level network structured with high-speed backbone and centralized servers. Telecom service providers can also take advantage of the high SFP density switches to form the core of their Fiber to the Building (FTTB) network that extends to the subscribers’ sites.

Unparalleled Flexibility
Easy to deploy and simple to manage, the DGS-3600 Series can be stacked with any switch supporting D-Link’s Single IP Management to form a multi-level network structured with backbone and centralized high-speed servers. This virtual stack can comprise units located anywhere on the same network domain, and uses optional 10-Gigabit uplinks to move intra-stack traffic at 20 Gbps full duplex. It can eliminate single point of failure, cable distance barriers, physical stacking method limitations and the need for stacking cabling.

Redundant Ring Stacking
Alternatively, users can install one or two 10-Gigabit uplinks, depending on whether linear or fault-tolerant ring stacking is implemented, to create a physical stack. Up to 12 units or 576 Gigabit ports can be configured for a stack. Using coaxial or fiber cables as the medium to stack switches together, the DGS-3600 Series provides not only high-bandwidth stacking but also the cost control capability that allows users to add 10-Gigabit uplinks strictly as needed. Modules with single 10-Gigabit XFP can also be installed in any of the open slots for uplink to servers or a fiber backbone.

L3 Gigabit Stack

Security, Performance & Availability
The DGS-3600 Series provides a complete set of security features, which includes L2/L3/L4 multi-layer Access Control Lists and 802.1X user authentication via TACACS+ and RADIUS servers. Built-in D-Link ZoneDefense technology allows businesses to integrate the switch stack with D-Link NetDefend firewalls to implement a full coverage, proactive security architecture.

The DGS-3600 Series offers extensive VLAN support including GARP/GVRP and 802.1Q VLAN to enhance security and performance. To support converged applications including VoIP, ERP, Intranet and video conference, a robust set of L2/L3/L4 QoS/CoS features ensures that critical network services are served with proper priority. To prevent malicious flooding traffic caused by worm/virus infections, the DGS-3600 Series provides D-Link’s Safeguard Engine to increase the switch’s reliability, serviceability and availability. 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.

Furthermore, the DGS-3600 Series features comprehensive IPv6 support, including IPv6 Tunnel, ICMPv6, DHCPv6, RIPv3 and OSPFv3. With 10-Gigabit connectivity and IPv6 support, the DGS-3600 Series enables you to future-proof your network for cost efficiency and longevity while meeting the requirements for IPv6 capable network devices in the coming years.
## Technical Specifications

<table>
<thead>
<tr>
<th>DGS-3612</th>
<th>DGS-3612G</th>
<th>DGS-3627</th>
<th>DGS-3627G</th>
<th>DGS-3650</th>
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<tbody>
<tr>
<td><strong>Interface</strong></td>
<td></td>
<td></td>
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<tr>
<td>10/100/1000BASE-T Ports</td>
<td>12</td>
<td>-</td>
<td>24</td>
<td>-</td>
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<tr>
<td>SFP Slots</td>
<td>-</td>
<td>12</td>
<td>-</td>
<td>24</td>
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<tr>
<td>Combo SFP Slots</td>
<td>4</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>Combo 10/100/1000BASE-T Ports</td>
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<td>-</td>
<td>4</td>
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<tr>
<td>Open Slot for 10 Gigabit Uplink Modules</td>
<td>-</td>
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<td>3</td>
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<td>RS-232 Console Ports</td>
<td>1</td>
<td>1</td>
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<td><strong>Physical Stacking</strong></td>
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<tr>
<td>Installable Module for Stacking</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Single-Port DEM-410CX or DEM-410X</td>
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<tr>
<td>Max Number of Stacking Ports Installable</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2 CX4 or XFP Ports</td>
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<tr>
<td>Stacking Speed (Per Port)</td>
<td>20 Gbps (Full-Duplex)</td>
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<td></td>
<td></td>
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<tr>
<td>No. of Units Per Stack</td>
<td>12</td>
<td>12</td>
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<tr>
<td><strong>Optional 10-Gigabit Uplink</strong></td>
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</tr>
<tr>
<td>Single XFP Slot Module (DEM-410X)</td>
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</tr>
<tr>
<td>Single CX4 Port Module (DEM-410CX)</td>
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<tr>
<td><strong>Performance</strong></td>
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<tr>
<td>Switching Fabric</td>
<td>24 Gbps</td>
<td>24 Gbps</td>
<td>108 Gbps</td>
<td>108 Gbps</td>
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<tr>
<td>Packet Forwarding Rate</td>
<td>17.86 Mpps</td>
<td>17.86 Mpps</td>
<td>80.36 Mpps</td>
<td>80.36 Mpps</td>
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<tr>
<td>Packet Buffer</td>
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<td>2 MB</td>
<td>2 MB</td>
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<tr>
<td>MAC Address Table</td>
<td>16K Entries</td>
<td>16K Entries</td>
<td>16K Entries</td>
<td>16K Entries</td>
</tr>
<tr>
<td>IP v4/v6 Routing Table</td>
<td>12K Entries</td>
<td>12K Entries</td>
<td>12K Entries</td>
<td>12K Entries</td>
</tr>
<tr>
<td>IP v6 Routing Table</td>
<td>6K Entries</td>
<td>6K Entries</td>
<td>6K Entries</td>
<td>6K Entries</td>
</tr>
<tr>
<td>IP v4 Host Table</td>
<td>8K Entries</td>
<td>8K Entries</td>
<td>8K Entries</td>
<td>8K Entries</td>
</tr>
<tr>
<td>IP v6 Host Table</td>
<td>4K Entries</td>
<td>4K Entries</td>
<td>4K Entries</td>
<td>4K Entries</td>
</tr>
<tr>
<td>Jumbo Frame Size</td>
<td>9,216 Bytes</td>
<td>9,216 Bytes</td>
<td>9,216 Bytes</td>
<td>9,216 Bytes</td>
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<tr>
<td><strong>Power</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Power Supply</td>
<td>100 to 120 V AC, 200 to 240 V AC, 50/60 Hz, Internal Power Supply</td>
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<tr>
<td>Power Consumption (Max.)</td>
<td>42.2 W</td>
<td>43.7 W</td>
<td>94.3 W</td>
<td>75.6 W</td>
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<tr>
<td>Optional Redundant Power Supply</td>
<td>DPS-200</td>
<td>DPS-500</td>
<td>DPS-500</td>
<td>DPS-500</td>
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</table>
**Technical Specifications**

<table>
<thead>
<tr>
<th>Physical &amp; Environmental</th>
<th>DGS-3612</th>
<th>DGS-3612G</th>
<th>DGS-3627</th>
<th>DGS-3627G</th>
<th>DGS-3650</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Dissipation</td>
<td>143.99 BTU/Hr</td>
<td>149.11 BTU/Hr</td>
<td>321.77 BTU/Hr</td>
<td>257.96 BTU/Hr</td>
<td>469.18 BTU/Hr</td>
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<tr>
<td>Acoustics</td>
<td>&lt;52.1 dB</td>
<td>&lt;51.1 dB</td>
<td>&lt;51.6 dB</td>
<td>&lt;51.3 dB</td>
<td>&lt;48.1 dB</td>
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<tr>
<td>Dimensions</td>
<td>441 x 309 x 44 mm</td>
<td>441 x 389 x 44 mm</td>
<td>441 x 389 x 44 mm</td>
<td>441 x 389 x 44 mm</td>
<td>441 x 389 x 44 mm</td>
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<tr>
<td>Size</td>
<td>19-Inch Rack-Mount Width, 1U Height</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight (Without Optional Module)</td>
<td>3.7 kg</td>
<td>5.0 kg</td>
<td>5.5 kg</td>
<td>5.5 kg</td>
<td>5.7 kg</td>
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<tr>
<td>Operating Temperature</td>
<td>0 to 40 °C</td>
<td>0 to 45 °C</td>
<td>0 to 45 °C</td>
<td>0 to 40 °C</td>
<td>0 to 40 °C</td>
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<td>Storage Temperature</td>
<td>-40 to 70 °C</td>
<td>-40 to 70 °C</td>
<td>-40 to 70 °C</td>
<td>-40 to 70 °C</td>
<td>-40 °C to 70 °C</td>
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<tr>
<td>Operating Humidity</td>
<td>10% to 90% RH</td>
<td>10% to 90% RH</td>
<td>10% to 90% RH</td>
<td>10% to 90% RH</td>
<td>10% to 90% RH</td>
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<tr>
<td>Storage Humidity</td>
<td>5% to 90% RH</td>
<td>5% to 90% RH</td>
<td>5% to 90% RH</td>
<td>5% to 90% RH</td>
<td>5% to 90% RH</td>
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<tr>
<td>EMI</td>
<td>FCC Class A, CE, C-Tick, VCCI</td>
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<tr>
<td>Safety</td>
<td>cUL, CB</td>
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<tr>
<td>MTBF</td>
<td>402,111 hours</td>
<td>342,646 hours</td>
<td>287,631 hours</td>
<td>289,946 hours</td>
<td>246,838 hours</td>
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<tr>
<td>3rd Party Certifications</td>
<td>MEF 9.14 (EPL, EVPL, E-LAN)</td>
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</tbody>
</table>

**Software Features**

**Stackability**
- Virtual Stacking Support
  - D-Link Single IP Management v1.6
  - 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 9,216 Bytes
- IGMP snooping
  - IGMP v1/v2/v3 Snooping
  - Supports 1 K groups
  - Port/Host-based
  - IGMP Snooping
  - Fast Leave
- MLD Snooping
  - MLD v1 Snooping
  - Supports 1 K groups
  - Host-based MLD Snooping Fast Leave
- Spanning Tree
  - 802.1D STP
  - 802.1w RSTP
- 802.1s MSTP
- Per port / per device BPDU filtering
- Root Restriction
- Loopback Detection
- 802.3ad Link Aggregation
- Max. 32 groups per device
- 8 Gigabit ports or 2 10 Gigabit ports per group
- Port Mirroring
  - One-to-One
  - Many-to-One
  - Flow-based Mirroring
  - RSPAN
- 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
  - Selective Q-in-Q
- MAC-based VLAN
- VLAN Trunking
- Super VLAN

**L3 Features**
- 256 IP interfaces
- Loopback interface
- VRRP
- IPv6 Tunneling
  - Static
  - ISATAP
  - GRE
  - 6to4
- IPv6 Ready Phase 1/2
- Proxy ARP
- Gratuitous ARP

**L3 Routing**
- 12K hardware routing entries shared by IPv4/v6
  - Max. 12K IPv4 routes
  - Max. 6K IPv6 routes
- 8K hardware L3 forwarding entries shared by IPv4/v6
  - Max. 8K IPv4 entries
  - Max. 4K IPv6 entries
- 256 static routing entries for IPv4, 128 entries for IPv6
  - Supports ECMP/WCMP
- Policy-based Routing
  - RIP v1/v2
  - RIPng (IPv6)
  - OSPF
  - OSPF v2
  - OSPF v3 (IPv6)
  - OSPF Passive Interface
  - Stub/NSSA Area
  - OSPF Equal Cost Route
  - BGP v4

**Multicasting**
- 1K hardware multicast groups
- PIM-DM
- PIM-SM
- PIM Sparse-Dense Mode
- DVMRP v3
- IGMP v1/v2/v3

**QoS (Quality of Service)**
- 802.1p Class of Service (CoS)
  - 6 queues
  - 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
L3 Gigabit Stack

- Protocol Type
- IPv6 Traffic Class
- 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 64 Kbps)
- Flow-based (Ingress, min. granularity 64 Kbps)
- Time-based QoS

ACL (Access Control List)
- Up to 1792 access rules
- ACL based on:
  - 802.1p Priority
  - VLAN ID
  - MAC Address
  - Ether Type
  - IPv4/IPv6 Address
  - DSCP
  - Protocol Type
  - TCP/UDP Port Number
  - IPv6 Traffic Class
  - IPv6 Flow Label
  - User-defined Packet Content
- ACL Statistics
- Time-based ACL

Security
- SSH v1/v2
- SSL v1/v2
- Port Security up to 16 MAC addresses per port
- 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
- BFDP Attack Protection

AAA
- 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
  - Host-based Access Control
  - Dynamic VLAN Assignment
- Japan Web-based Access Control (JWAC)
  - Port-based Access Control
  - Host-based Access Control
  - Dynamic VLAN Assignment

Management
- Web-based GUI
- Command Line Interface (CLI)
- Telnet Server
- TFTP Client
- ZModem
- User-defined Packet Content
- DHCPv6 Client
- DHCPv6 Relay
- DHCPv6 Server
- Cable Diagnostics
- D-Link Unidirection Link Detection (DULD)
- Trusted Host
- MTU Setting
- Microsoft® NLB Support

MIB/IEFT Standards
- RFC1213 MIB-II
- RFC1493 Bridge MIB
- RFC1997 SNMPv2 MIB
- RFC2571-2576 SNMP MIB
- RFC1271, 2199 RMON MIB
- RFC2021 RMON v2 MIB
- RFC2655 DHCPv6 MIB
- RFC2666 MAU MIB
- RFC2674 802.1p MIB
- RFC2233, 2863 IF MIB
- RFC2618 RADIUS Authentication Client MIB
- RFC1724 RIP v2 MIB
- RFC1890 OSPF v2 MIB
- RFC2096 IP Forwarding Table MIB (CIDR)
- RFC2787 VRRP MIB
- RFC2832 IPv4 Multicast Routing MIB
- RFC2834 PIM MIB for IPv4
- RFC2620 RADIUS Accounting Client MIB
- RFC2633 IGMP MIB
- Ping MIB *
- Traceroute MIB *
- D-Link Private MIB
- RFC768 UDP
- RFC373 TFTP
- RFC 791 IP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC2654 Telnet
- RFC3951, 1542 BootP
- RFC2098 HTTP
- RFC2233 VRRP
- RFC2529, 3093, 3056 IPv6 Tunnel
- RFC2138 RADIUS
- RFC2139 RADIUS Accounting
- RFC1492 TACACS
- RFC3176 sFlow

* Function available with future firmware upgrade
Deploying the DGS-3600 in an Enterprise Network

Deploying the DGS-3600 in a Carrier Network
## 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
- **DV-601P** *: E2E Console Plug-in for D-View 6.0

### Optional 10 Gbps Uplink Modules

- **DEM-410X**: 1-Slot 10 Gigabit XFP uplink module
- **DEM-410CX**: 1-Port 10 Gigabit CX4 uplink module

### Optional 10 Gbps XFP Transceivers

<table>
<thead>
<tr>
<th>Transceiver</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEM-421XT</td>
<td>XFP transceiver, 10GBASE-SR standard, multi-mode fiber, max. distance 300 m, 3.3/5 V</td>
</tr>
<tr>
<td>DEM-422XT</td>
<td>XFP transceiver, 10GBASE-LR standard, single-mode fiber, max. distance 40 km, 3.3/5 V</td>
</tr>
<tr>
<td>DEM-423XT</td>
<td>XFP transceiver, 10GBASE-ER standard, single-mode fiber, max. distance 40 km, 3.3/5 V</td>
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### Optional 1 Gbps SFP Transceivers

<table>
<thead>
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<th>Transceiver</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>DEM-310GT</td>
<td>SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage</td>
</tr>
<tr>
<td>DEM-311GT</td>
<td>SFP transceiver, 1000BASE-SX standard, multi-mode fiber, max. distance 550 m, 3.3 V operating voltage</td>
</tr>
<tr>
<td>DEM-312GT2</td>
<td>SFP transceiver 1000BASE-SX standard, multi-mode fiber, max. distance 2 km, 3.3 V operating voltage</td>
</tr>
<tr>
<td>DEM-314GT</td>
<td>SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 50 km, 3.3 V operating voltage</td>
</tr>
<tr>
<td>DEM-315GT</td>
<td>SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 80 km, 3.3 V operating voltage</td>
</tr>
<tr>
<td>DEM-330T</td>
<td>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</td>
</tr>
<tr>
<td>DEM-330R</td>
<td>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</td>
</tr>
<tr>
<td>DEM-330T</td>
<td>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</td>
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<tr>
<td>DEM-331T</td>
<td>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</td>
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</tbody>
</table>

### Optional Redundant Power Supplies

<table>
<thead>
<tr>
<th>Power Supply</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPS-500</td>
<td>140-watt redundant power supply</td>
</tr>
<tr>
<td>DPS-500DC</td>
<td>140-watt DC redundant power supply</td>
</tr>
<tr>
<td>DPS-800</td>
<td>2-Slot redundant power supply chassis</td>
</tr>
<tr>
<td>DPS-900</td>
<td>8-Slot redundant power supply chassis</td>
</tr>
</tbody>
</table>

* Product available in the future