

## Product Highlights

### Flexibility and Reliability

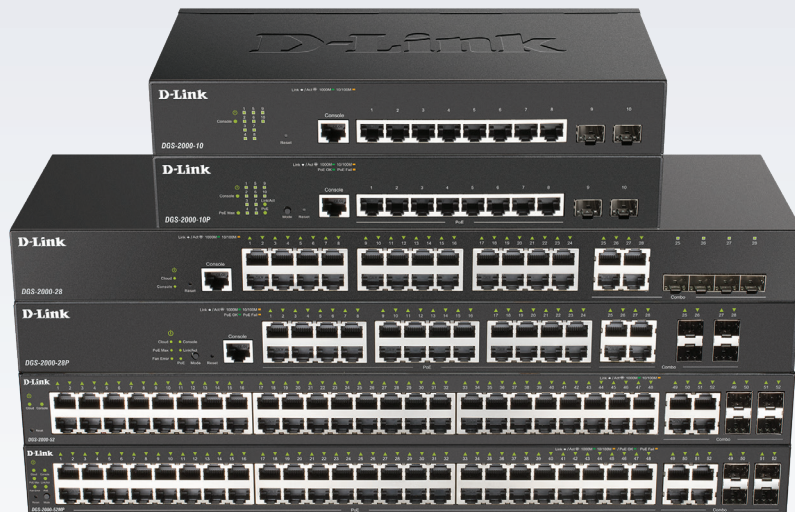
A combination of RJ-45, SFP, and Combo ports provides the necessary flexibility to adapt to a wide range of applications and environments

### Management made Easy

A multilingual Web UI, full CLI, SNMP, and a variety of management features allow the switches to integrate with your existing network

### Layer 3 Functions

Wired speed inter-VLAN routing helps by reducing the pressure of routers and backbone networks, improving the overall network efficiency



## DGS-2000 Series

# Gigabit Managed Switches

## Features

### Flexible Hardware Design

- Available in multiple configurations:
  - Different combinations of 1000BASE-T, 100/1000 Mbps GbE/SFP combo, and 10/1000 Mbps SFP
  - PoE and non-PoE variations
- Designed for standard 1U rack-mounting

### Advanced Features

- Auto Surveillance VLAN 2.0
- Auto Voice VLAN
- LLDP/LLDP-MED
- Static Routing

### Layer 2 Features

- 8K or 16K MAC address table
- IEEE 802.1D STP, 802.1w RSTP, and 802.1s MSTP
- Loopback detection
- Supports IEEE 802.3ad Link Aggregation
- Port-based Q-in-Q

### Security and Authentication

- Access Control Lists (ACLs)
- Smart IP-MAC-Port Binding
- D-Link Safeguard Engine helps the CPU resist broadcast/multicast/unicast flooding

### Intuitive Management

- D-Link Network Assistant (DNA) utility or Web UI
- Full Command Line Interface (CLI) through Telnet, SSH or RJ-45 Console Port

The DGS-2000 Series Gigabit Managed Switches provide a diverse range of Gigabit port densities to accommodate various needs of enterprise and public sector access layer connectivity. With options such as PoE to conveniently power edge devices, SFP ports to extend network connectivity, advanced Layer 2 functionalities, the DGS-2000 Series is the ideal choice for any enterprise access layer or large multi-site deployment. With advanced network security features and QoS, the DGS-2000 Series allows businesses to build a more secure and efficient network.

The DGS-2000 Series comes with the D-Link Network Assistant (DNA) that enables administrators to control their network down to the port level. It allows customers to quickly and easily discover multiple D-Link Managed Access Switches within the same network. Administrators can simultaneously configure and setup all discovered devices, including password changes and firmware upgrades. The DGS-2000 Series also supports Command Line Interface (CLI) through Telnet, SSH and the console port.

## D-Link Assist

Next Business Day Service

Your network is the backbone of your business. Keeping it running is essential, even if the unexpected happens. D-Link Assist is a rapid-response technical support service that replaces faulty equipment quickly and efficiently. Maximising your uptime and giving you the confidence that instant support is only a phone call away.

All D-Link products with 5-year or Limited Lifetime warranty come with complimentary Next Business Day Service. D-Link will send out a replacement product to you on the next business day after acceptance of a product failure. On receipt of the replacement product, you simply arrange the return of the defective product to us. Any products with a 2-year/3-year warranty can also benefit from the Next Business Day advance replacement service when the optional 3-year warranty extension has been purchased.

Find out more at [eu.dlink.com/services](http://eu.dlink.com/services)

Technical Specifications			
Interface	DGS-2000-10	DGS-2000-10P	DGS-2000-28
Size	<ul style="list-style-type: none"> <li>• 11-inch standard rack-mount width</li> <li>• 1U height</li> </ul>		<ul style="list-style-type: none"> <li>• 19-inch standard rack-mount width</li> <li>• 1U height</li> </ul>
Interfaces	<ul style="list-style-type: none"> <li>• 8 x 10/100/1000BASE-T ports</li> <li>• 2 x 100/1000 Mbps SFP ports</li> </ul>	<ul style="list-style-type: none"> <li>• 8 x 10/100/1000BASE-T PoE ports</li> <li>• 2 x 100/1000 Mbps SFP ports</li> </ul>	<ul style="list-style-type: none"> <li>• 24 x 10/100/1000BASE-T ports</li> <li>• 4 x 100/1000 Mbps GbE/SFP combo ports</li> </ul>
Console Port	<ul style="list-style-type: none"> <li>• RJ-45 Connector</li> </ul>		
Port Standards & Functions	<ul style="list-style-type: none"> <li>• IEEE 802.3 10BASE-T Ethernet,</li> <li>• IEEE 802.3u 100BASE-TX Fast Ethernet</li> <li>• IEEE 802.3ab 1000BASE-T Gigabit Ethernet               <ul style="list-style-type: none"> <li>• Auto-negotiation</li> <li>• IEEE 802.3x Flow Control</li> </ul> </li> <li>• IEEE 802.3z 1000BASE-X Gigabit Fiber</li> </ul>		
Network Cables	<ul style="list-style-type: none"> <li>• UTP Cat. 5, Cat. 5e (100 m max.)</li> </ul>		
Full/Half-Duplex	<ul style="list-style-type: none"> <li>• Full/half-duplex for 10/100 Mbps speeds</li> <li>• Full-duplex for 1000 Mbps speed</li> </ul>		
Media Interface Exchange	<ul style="list-style-type: none"> <li>• Auto MDI/MDIX adjustment for all twisted-pair ports</li> </ul>		
Performance			
Switching Capacity	<ul style="list-style-type: none"> <li>• 20 Gbps</li> </ul>		<ul style="list-style-type: none"> <li>• 56 Gbps</li> </ul>
Forwarding Method	<ul style="list-style-type: none"> <li>• Store-and-forward</li> </ul>		
MAC Address Table Size	<ul style="list-style-type: none"> <li>• 8K entries</li> </ul>		
MAC Address Update	<ul style="list-style-type: none"> <li>• Up to 256 static MAC entries</li> </ul>		
64-byte Max. Forwarding Rate	<ul style="list-style-type: none"> <li>• 14.88 Mpps</li> </ul>		<ul style="list-style-type: none"> <li>• 77.4 Mpps</li> </ul>
CPU Memory	<ul style="list-style-type: none"> <li>• 256 MB DDR3</li> </ul>		
Packet Buffer	<ul style="list-style-type: none"> <li>• 4.1 Mbits</li> </ul>		
Flash Memory	<ul style="list-style-type: none"> <li>• 32 MB</li> </ul>		
Power over Ethernet (PoE)			
PoE Standards	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<ul style="list-style-type: none"> <li>• IEEE 802.3af/at</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
Maximum PoE Budget	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<ul style="list-style-type: none"> <li>• 65W</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
Physical/Environmental			
MTBF	<ul style="list-style-type: none"> <li>• 1,380,058 hours</li> </ul>	<ul style="list-style-type: none"> <li>• 729,258 hours</li> </ul>	<ul style="list-style-type: none"> <li>• 992,594 hours</li> </ul>
Acoustic	<ul style="list-style-type: none"> <li>• 0 dB(A)</li> </ul>		
Heat Dissipation	<ul style="list-style-type: none"> <li>• 21.59 BTU/hr</li> </ul>	<ul style="list-style-type: none"> <li>• 279.59 BTU/hr</li> </ul>	<ul style="list-style-type: none"> <li>• 59.09 TU/hr</li> </ul>
Power Input	<ul style="list-style-type: none"> <li>• AC Input: 100 to 240 V AC, 50/60 Hz internal universal power supply</li> </ul>	<ul style="list-style-type: none"> <li>• AC Input: 54.0 V DC external power supply</li> </ul>	<ul style="list-style-type: none"> <li>• AC Input: 100 to 240 V AC, 50/60 Hz internal universal power supply</li> </ul>
Maximum Power Consumption	<ul style="list-style-type: none"> <li>• 6.33 W</li> </ul>	<ul style="list-style-type: none"> <li>• 81.9 W (PoE on)</li> <li>• 7.6 W (PoE off)</li> </ul>	<ul style="list-style-type: none"> <li>• 17.32 W</li> </ul>
Standby Power Consumption	<ul style="list-style-type: none"> <li>• 2.07 W</li> </ul>	<ul style="list-style-type: none"> <li>• 2.5 W</li> </ul>	<ul style="list-style-type: none"> <li>• 6.49 W</li> </ul>
Dimensions (W x D x H)	<ul style="list-style-type: none"> <li>• 280 x 126 x 44 mm</li> </ul>	<ul style="list-style-type: none"> <li>• 280 x 126 x 44 mm</li> </ul>	<ul style="list-style-type: none"> <li>• 440 x 140 x 44 mm</li> </ul>
Ventilation	<ul style="list-style-type: none"> <li>• Fanless</li> </ul>		
Weight	<ul style="list-style-type: none"> <li>• 0.98 kg</li> </ul>	<ul style="list-style-type: none"> <li>• 0.95 kg</li> </ul>	<ul style="list-style-type: none"> <li>• 2.15 kg</li> </ul>
Operating Temperature	<ul style="list-style-type: none"> <li>• -5 to 50 °C (23 to 122 °F)</li> </ul>		
Storage Temperature	<ul style="list-style-type: none"> <li>• -40 to 70 °C (-40 to 158 °F)</li> </ul>		
Operating Humidity	<ul style="list-style-type: none"> <li>• 10% to 90% non-condensing</li> </ul>		
Storage Humidity	<ul style="list-style-type: none"> <li>• 5% to 90% non-condensing</li> </ul>		
EMI	<ul style="list-style-type: none"> <li>• FCC class A, CE class A, IC, VCCI, BSMI</li> </ul>		
Safety Certifications	<ul style="list-style-type: none"> <li>• cUL, UL, CB, BSMI</li> </ul>		

Technical Specifications			
Interface	DGS-2000-28P	DGS-2000-52	DGS-2000-52MP
Size	<ul style="list-style-type: none"> <li>• 19-inch standard rack-mount width</li> <li>• 1U height</li> </ul>		
Interfaces	<ul style="list-style-type: none"> <li>• 24 x 10/100/1000BASE-T PoE ports</li> <li>• 4 x 100/1000 Mbps GbE/SFP combo ports</li> </ul>	<ul style="list-style-type: none"> <li>• 48 x 10/100/1000BASE-T ports</li> <li>• 4 x 100/1000 Mbps GbE/SFP combo ports</li> </ul>	<ul style="list-style-type: none"> <li>• 48 x 10/100/1000BASE-T PoE ports</li> <li>• 4 x 100/1000 Mbps GbE/SFP combo ports</li> </ul>
Port Standards & Functions	• Ports 1 to 24 compliant with IEEE 802.3at	• Ports 1 to 48 compliant with IEEE 802.3ab	• Ports 1 to 48 compliant with IEEE 802.3at
Console Port	• RJ-45 Connector		
Other Port Standards & Functions	<ul style="list-style-type: none"> <li>• IEEE 802.3 10BASE-T Ethernet,</li> <li>• IEEE 802.3i 10BASE-T Ethernet (twisted-pair copper)</li> <li>• IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper)</li> <li>• IEEE 802.3ab 1000BASE-T Gigabit Ethernet (twisted-pair copper)               <ul style="list-style-type: none"> <li>• Auto-negotiation</li> <li>• IEEE 802.3x Flow Control</li> </ul> </li> <li>• IEEE 802.3z 1000BASE-X Gigabit Fiber</li> </ul>		
Network Cables	• UTP Cat. 5, Cat. 5e (100 m max.)		
Full/Half-Duplex	<ul style="list-style-type: none"> <li>• Full/half-duplex for 10/100 Mbps speeds</li> <li>• Full-duplex for 1000 Mbps speed</li> </ul>		
Media Interface Exchange	• Auto MDI/MDIX adjustment for all twisted-pair ports		
Performance			
Switching Capacity	• 56 Gbps		• 104 Gbps
64-byte Max. Forwarding Rate	• 41.7 Mpps		• 77.4 Mpps
MAC Address Table Size	• 8K entries		• 16K entries
CPU Memory	• 256 MB DDR3		
Packet Buffer	• 4.1 MBits		• 12 MBits
Flash Memory	• 32 MB		
Power over Ethernet (PoE)			
PoE Standards	• IEEE 802.3af/at	• N/A	• IEEE 802.3af/at
Maximum PoE Budget	• 193W	• N/A	• 370W
Physical/Environmental			
MTBF	• 469,262 hours	• 400,667 hours	• 236,667 hours
Acoustic	<ul style="list-style-type: none"> <li>• High speed: 51.7 dB(A)</li> <li>• Low speed: 44.9 dB(A)</li> </ul>	• 0 dB(A)	<ul style="list-style-type: none"> <li>• High speed: 52.4 dB(A)</li> <li>• Low speed: 47.6 dB(A)</li> </ul>
Heat Dissipation	• 900.36 TU/hr	• 118.92 TU/hr	• 1634.01 TU/hr
Power Input	• AC Input: 100 to 240 V AC, 50/60 Hz internal universal power supply		
Maximum Power Consumption	<ul style="list-style-type: none"> <li>• 236.9 W (PoE on)</li> <li>• 30.6 W (PoE off)</li> </ul>	• 34.85 W	<ul style="list-style-type: none"> <li>• 478.9 W (PoE on)</li> <li>• 54.4 W (PoE off)</li> </ul>
Standby Power Consumption	• 16.6 W	• 13.9 W	• 31.6 W
Dimensions (W x D x H)	• 440 x 250 x 44 mm	• 440 x 210 x 44 mm	• 440 x 430 x 44 mm
Ventilation	• 2 x Smart fan	• Fanless	• 3 x Smart fan
Weight	• 3.75 kg	• 3.46 kg	6.26 kg
Operating Temperature	• -5 to 50 °C (23 to 122 °F)		
Storage Temperature	• -40 to 70 °C (-40 to 158 °F)		
Operating Humidity	• 10% to 90% non-condensing		
Storage Humidity	• 5% to 90% non-condensing		
EMI	• FCC class A, CE class A, VCCI, BSMI		
Safety Certifications	• CE, LVD, UL, CB		

Software		
L2 Features	<ul style="list-style-type: none"> <li>• MAC address table: 8K or 16K entries</li> <li>• Spanning Tree Protocols               <ul style="list-style-type: none"> <li>- 802.1D STP</li> <li>- 802.1w RSTP</li> <li>- 802.1s MSTP</li> </ul> </li> <li>• Loopback detection</li> <li>• Jumbo Frame: 10000 Bytes</li> </ul>	<ul style="list-style-type: none"> <li>• Mirroring               <ul style="list-style-type: none"> <li>- Supports 1 mirroring group</li> <li>- Supports One-to-One, Many-to-One,</li> <li>- Supports mirroring based on Tx and Rx</li> </ul> </li> <li>• Link aggregation               <ul style="list-style-type: none"> <li>- Compliant with 802.3ad</li> <li>- Supports max. 8 groups, 8 ports per group</li> </ul> </li> </ul>
L2 Multicasting	<ul style="list-style-type: none"> <li>• IGMP Snooping               <ul style="list-style-type: none"> <li>- IGMP v1/v2/v3 snooping, v3 awareness</li> <li>- Supports 512 groups, 4k groups for models DGS-2000-52/52MP</li> <li>- IGMP authentication/ filtering</li> <li>- VLAN/host-based IGMP snooping fast leave</li> <li>- Per VLAN IGMP Snooping</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• MLD Snooping               <ul style="list-style-type: none"> <li>- MLD v1, MLD v2</li> <li>- Supports 512 groups, 4k groups for models DGS-2000-52/52MP</li> <li>- Per VLAN MLD Snooping</li> <li>- Fast Leave</li> <li>- MLD Snooping Querier</li> </ul> </li> </ul>
VLAN	<ul style="list-style-type: none"> <li>• 802.1Q tagged VLAN</li> <li>• VLAN groups               <ul style="list-style-type: none"> <li>- Max. 256</li> </ul> </li> <li>• Port-based VLAN</li> <li>• Asymmetric VLAN</li> </ul>	<ul style="list-style-type: none"> <li>• Port-based Q-in-Q</li> <li>• ISM VLAN (multicast VLAN)</li> <li>• Voice VLAN</li> <li>• Auto surveillance VLAN</li> <li>• VLAN Translation</li> </ul>
L3 Features	<ul style="list-style-type: none"> <li>• Max. 128 ARP entries</li> <li>• Supports 128 static ARP entries</li> <li>• IPv4/v6 Interface               <ul style="list-style-type: none"> <li>- Max. 4 IPv4/IPv6 interfaces</li> <li>- Max. 1 IP interface per VLAN</li> </ul> </li> <li>• Static Route               <ul style="list-style-type: none"> <li>- Max. 128 IPv4 entries</li> <li>- Max. 128 IPv6 entries</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Default route</li> <li>• IPv6 Neighbor Discovery (ND)               <ul style="list-style-type: none"> <li>- 256 Entries</li> </ul> </li> <li>• ARP               <ul style="list-style-type: none"> <li>- 128 Entries</li> </ul> </li> </ul>
Quality of Service (QoS)	<ul style="list-style-type: none"> <li>• CoS based on:               <ul style="list-style-type: none"> <li>- Switch port</li> <li>- DSCP</li> </ul> </li> <li>• Bandwidth control               <ul style="list-style-type: none"> <li>- Port-based (ingress, egress, min. granularity 16 Kbps)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Queue handling               <ul style="list-style-type: none"> <li>- Strict priority (SPQ)</li> <li>- Weighted Round Robin (WRR)</li> </ul> </li> <li>• 8 outbound queues</li> </ul>
Access Control List (ACL)	<ul style="list-style-type: none"> <li>• ACL based on               <ul style="list-style-type: none"> <li>- MAC address</li> <li>- TOS</li> <li>- IPv4/v6 address</li> <li>- DSCP</li> <li>- TCP/UDP port</li> <li>- Protocol</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Up to 200 ingress access rules</li> <li>• Up to 150 ingress access profiles</li> <li>• ACL action (permit/deny)</li> </ul>
Authentication, Authorization, and Accounting (AAA)	<ul style="list-style-type: none"> <li>• 802.1X               <ul style="list-style-type: none"> <li>- Host-based access control</li> <li>- Port-based access control</li> <li>- Port default 802.1p priority setting</li> <li>- Ingress/egress bandwidth control</li> <li>- Dynamic VLAN assignment</li> </ul> </li> <li>• MAC-based Access Control (MAC)<sup>1</sup></li> <li>• Compound Authentication<sup>2</sup></li> <li>• Ping</li> <li>• Guest VLAN</li> </ul>	<ul style="list-style-type: none"> <li>• RADIUS accounting</li> <li>• Trusted Host               <ul style="list-style-type: none"> <li>- Supports IPv4/v6 host</li> <li>- Max trusted host (IP range)</li> <li>- Telnet</li> <li>- SNMP</li> <li>- HTTP</li> <li>- SSH</li> </ul> </li> <li>• Authentication for management access               <ul style="list-style-type: none"> <li>- Local, RADIUS</li> </ul> </li> </ul>
Security	<ul style="list-style-type: none"> <li>• Port security (Up to 64 MAC addresses per port)</li> <li>• Smart IP-MAC-Port Binding (Smart IMPB)               <ul style="list-style-type: none"> <li>• ARP Inspection                   <ul style="list-style-type: none"> <li>• Max. 256 entries</li> </ul> </li> <li>• IPv4 Inspection                   <ul style="list-style-type: none"> <li>• Max. 127 entries</li> </ul> </li> <li>• IPv6 Inspection                   <ul style="list-style-type: none"> <li>• Max. 63 entries</li> </ul> </li> <li>• DHCP Snooping                   <ul style="list-style-type: none"> <li>• Max. 512 entries</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Broadcast/Multicast/Unicast storm control</li> <li>• IP inspection</li> <li>• Duplicate Address Detection (DAD)</li> <li>• D-Link Safeguard Engine</li> <li>• DoS attack prevention</li> <li>• Traffic segmentation</li> <li>• SSH               <ul style="list-style-type: none"> <li>• SSHv2</li> <li>• Support IPv4</li> <li>• Support IPv6</li> <li>• Configurable TCP port number</li> </ul> </li> </ul>

# DGS-2000 Series Gigabit Managed Switches

Operations, Administration, and Maintenance (OAM)	<ul style="list-style-type: none"> <li>• 802.3ah Ethernet Link OAM               <ul style="list-style-type: none"> <li>- Supports 802.3ah link layer remote loopback and discovery (System log and SNMP)</li> <li>- 802.3ah D-Link extension: D-Link Unidirectional Link Detection (DULD), (System log and SNMP)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Cable diagnostics               <ul style="list-style-type: none"> <li>- Diagnostic RJ-45 cables of copper ports</li> </ul> </li> </ul>
Management	<ul style="list-style-type: none"> <li>• Web-based GUI (IPv4/IPv6)</li> <li>• Command Line Interface (CLI) through Telnet or SSH</li> <li>• Telnet Server/Client (Support IPv4/IPv6)</li> <li>• Command logging</li> <li>• SNMP v1/v2c/v3</li> <li>• SNMP traps</li> <li>• System log</li> <li>• RMON v1</li> <li>• LLDP</li> <li>• BootP/DHCP client</li> <li>• DHCP auto-configuration</li> <li>• Text-editable config file</li> </ul>	<ul style="list-style-type: none"> <li>• Trusted host</li> <li>• DHCP relay (IPv4/IPv6)               <ul style="list-style-type: none"> <li>- DHCP relay agent/local relay</li> <li>- DHCP relay option 82</li> </ul> </li> <li>• PPPoE Circuit-ID tag insertion</li> <li>• SNTP</li> <li>• LLDP-MED (for PoE models only)</li> <li>• Password encryption</li> <li>• Dual Image</li> <li>• Ping</li> <li>• Traceroute</li> </ul>
MIB	<ul style="list-style-type: none"> <li>• RFC1213 MIB II</li> <li>• RFC1065, 1151, 2578 MIB Structure</li> <li>• RFC1493 Bridge MIB</li> <li>• RFC1157, 2573, 2575, 2576 SNMP MIB</li> <li>• RFC1907 SNMPv2 MIB</li> </ul>	<ul style="list-style-type: none"> <li>• RFC1398, 1643, 2665 Ether-like MIB</li> <li>• RFC2674 802.1p MIB</li> <li>• RFC 2233 Interface Group MIB</li> <li>• RFC2925 Ping &amp; Traceroute MIB</li> </ul>
IETF Standard	<ul style="list-style-type: none"> <li>• RFC768 UDP</li> <li>• RFC791 IP</li> <li>• RFC792 ICMPv4</li> <li>• RFC2463, 4443 ICMPv6</li> </ul>	<ul style="list-style-type: none"> <li>• RFC793 TCP</li> <li>• RFC826 ARP</li> <li>• RFC1321, 2284, 2865, 2716, 3580 Extensible Authentication Protocol (EAP)</li> </ul>
IPv6	<ul style="list-style-type: none"> <li>• RFC1981 Path MTU Discovery</li> <li>• RFC2460 IPv6</li> <li>• RFC2461, 4861 Neighbor Discovery</li> </ul>	<ul style="list-style-type: none"> <li>• RFC2462, 4862 IPv6 Stateless Address Auto-configuration</li> <li>• RFC2893, 4213 IPv4/IPv6 dual stack function</li> </ul>
<b>Optional SFP Transceivers</b>		
DEM-211	100BASE-FX, multi-mode, 2 km	
DGS-712	1000BASE-T copper, 100 m	
DEM-310GT	1000BASE-LX, single-mode, 10 km	
DEM-311GT	1000BASE-SX, multi-mode, 550 m	
DEM-312GT2	1000BASE-SX, multi-mode, 2 km	

<sup>1</sup> Available in Q1, 2021.

<sup>2</sup> Available in Q2, 2021.



For more information: [www.dlink.com](http://www.dlink.com)

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