



DGS-3100-24



DGS-3100-24P

DGS-3100-48

DGS-3100-48P

### High Performance:

- + Fixed-in 20Gig Full-duplex Stacking Ports
- + Up to 6 Units per Stack
- + Up to 288Gbps Bandwidth per Stack
- + Jumbo Frame Support (up to 10240 bytes)

### Advanced Features:

- + IGMP Snooping
- + MLD Snooping
- + Spanning Tree
- + 802.1p QoS (4 Queues)
- + RMON
- + SNMPv1/2/3
- + CLI or Web GUI Interface
- + LAG (32 groups / 8 ports)
- + Rate Limiting Down to 64Kb
- + Support for 100FX or 1000X Fiber Options
- + Spanning Tree Loopback Detection
- + Cross Stack Port Mirroring and Trunking
- + Broadcast Storm Control

### Security:

- + 802.1x Authentication
- + Enhanced Access Control List
- + DoS Prevention
- + Port-based Security
- + Guest and Private VLANs
- + 4K 802.1Q VLANs
- + TACACS+ and RADIUS
- + SSH/SSL
- + Asymmetric VLANs and Traffic Segmentation

## Managed 10/100/1000BASE-T Stackable L2 Switch with 4 Combo SFP Expansion Slots and 2 Fixed-in 10Gig Stacking Ports

### Overview

Introducing the D-Link DGS-3100 family of gigabit stackable switches designed for growing companies looking for scalability and robust security features. There are four models in the family including a 24-Port Gigabit Managed Switch with 4 combo SFP gigabit or 100BASE-FX fiber ports, a 48-Port Gigabit Managed Switch with 4 combo SFP ports, and a PoE version of each model. The D-Link DGS-3100 family is equipped with robust features that fulfill the most demanding network needs in today's multimedia-intensive world. Stackable up to 6 units under a single IP, the switches provide a total of up to 288Gbps aggregated bandwidth, each with 20Gbps full-duplex of fixed stacking bandwidth. Designed with efficient QoS features, these D-Link switches facilitate smooth videos and jitter-free VoIP deployments. To help secure your network, D-Link implements both the Safeguard Engine to prevent Denial-of-Service attacks, and Access Control List to enhance security to your network. The 3100 family is equipped with industry standard management features such as an easy-to-use web-based administrator interface and CLI interface. D-Link provides features on a cost-effective platform that will increase your company's productivity and protect your investment.

### Stackable up to 6 Units

Each switch in the DGS-3100 family includes two built-in stacking ports that can provide up to 20Gbps in stacking backplane. This will enhance your overall network performance for those switches transmitting large files. Under stacking mode, the switches are hot-swappable meaning that in a stack configuration, any of the switches can be replaced or removed without affecting the network. There is no need to reconfigure a replacement switch; simply give the new switch the same stack number ID as the old switch and the new switch will carry the same configuration as before. This minimizes the downtime of a network and maximizes the productivity of your business. Also, cross stack port mirroring and port trunking are supported to facilitate network administration.

### The D-Link Safeguard Engine and Security

The DGS-3100 incorporates advanced mechanisms to detect an attack against the central processing unit of the switch and to take corrective action on the attacking interface. When a Denial of Service attack is waged against the DGS-3100 switches, the D-Link Safeguard Engine detects the threat and prevents an overload of the central processor, ensuring network integrity and helping to maintain open network bandwidth channels.

In addition, D-Link switches support 802.1x authentication, which is a secure implementation that allows users to log onto your network. When used in conjunction with a RADIUS server, 802.1x requires each workstation attached to the DGS-3100 to provide a username and password before gaining access to the local area network. D-Link also utilizes security features such as the Access Control List, allowing an administrator to restrict the access of a network through a variety of means including MAC address, IP, UDP/TCP, and even VLAN ID. Time-based ACL<sup>1</sup> is especially useful for K-12 or college environments when access can be limited based on time.

### Voice and Video Applications

For today's business, having voice, data, and video on the same network is common practice. This challenge is met by the D-Link 3100 family, which supports 802.1p Quality of Service (QoS) with 4 queues. The administrator can designate the priority of the traffic based on a variety of means including IP and MAC address, so that voice data is always clear and jitter-free. Video traffic can also be assigned with the same priority. In addition, the D-Link 3100 family provides IGMP Snooping, which allows the forwarding of multicast packets without increasing network broadcast congestion. By snooping IGMP registration information within a frame, a list of workstations who have joined the multicast group is created. This list then allows the switch to intelligently forward packets to only the appropriate member workstations. For IPv6 traffic, the DGS-3100 supports MLD snooping<sup>1</sup>. The DGS-3100 family also supports 802.1Q VLANs, allowing QoS and security to be achieved on a data laden network.



### Power over Ethernet

To facilitate and expedite deployments, Power Over Ethernet (PoE) 802.3af may be required for a network. For access points, IP cameras, and even IP phones, each port on the DGS-3100-24P and DGS-3100-48P provide up to 15.4 Watts of power, providing a total of 370 Watts of PoE budget on each switch. The DGS-3100 provides a generous supply of PoE budget for those devices that may require higher power consumption or for devices that are further away from the switch (the further away a device is, the more power draw is required). IEEE 802.3af compliant, the DGS-3100's PoE models will provide power to devices that support the IEEE 802.3af standard.

### Ease of Management

The DGS-3100 supports SNMP v1/2/3 so traps can be set on abnormal events and information can be polled to maximize the productivity of the network. Other standard management features also supported include RMON and IEEE 802.1d spanning tree. Users can interface using either an intuitive web-based browser graphic interface or a standard Command Line Interface (CLI), both of which are protected through SSL or SSH encryptions.

### Technical Specifications

Interface	DGS-3100-24	DGS-3100-24P	DGS-3100-48	DGS-3100-48P
10/100/1000BASE-T Ports	24	24	48	48
Combo SFP Slots	4	4	4	4
RS-232 Console Port	Yes	Yes	Yes	Yes
Optional Redundant Power Supply	-	DPS-600	DPS-500	DPS-600

### Stacking

HDMI Stacking Ports	2	2	2	2
Number of Unit Per Stack (Max)	6	6	6	6
	Up to 10Gbps with Linear, Topology Up to 20Gbps with Bi-Directional Redundant Ring Topology			

### Power Over Ethernet

802.3af PoE Support	-	Per 10/100/1000BASE-T Port	-	Per 10/100/1000BASE-T Port
Power Provision Per Port (Max.)	-	15.4W	-	15.4W
System PoE Power Budget	-	370W	-	370W
Auto Power/Device Discovery	-	Yes	-	Yes
Over-Current Protection	-	Yes	-	Yes

### Performance

Switch Capacity	68Gbps	68Gbps	116Gbps	116Gbps
64-Byte Packet Forwarding Rate	50.60Mpps	50.60Mpps	86.31Mpps	86.31Mpps
MAC Address Table Size	8K	8K	8K	8K
Packet Buffer	768KB	768KB	1.5MB	1.5MB
Jumbo Frame (Max.)	10,240 Bytes	10,240 Bytes	10,240 Bytes	10,240 Bytes



DGS-3100-24



DGS-3100-24P

DGS-3100-48

DGS-3100-48P

### Physical & Environmental

Power Input	100 to 240 VAC, 50 to 60 Hz Internal Universal Power Supply			
Power Consumption (Max)	49.39W	555.50W	102.63W	619.30W
Dimensions	17.3in x 8.3in x 1.7 in (440mm x 210mm x 44mm)	17.3in x 12.2in x 1.7 in (440mm x 310mm x 44mm)	17.3in x 12.2in x 1.7 in (440mm x 310mm x 44mm)	17.3in x 16.9in x 1.7 in (440mm x 430mm x 44mm)
	19-inch Rack Mount Width, 1U Height			
Weight	6.7lbs (3.04kg)	12.31lbs (5.58kg)	12.11lbs (5.50kg)	16.4lbs (7.43kg)
Heat Dissipation	168.53 BTU/hr	1895.48 BTU/hr	350.19 BTU/hr	2113.18 BTU/hr
MTBF	212,377 hrs	117,136 hrs	103,924 hrs	96,648 hrs
Operating Temperature	32° to 104° F (0° to 40° C)			
Storage Temperature	-14° to 158° F (-10° to 70° C)			
Operating Humidity	10% to 90% non-condensing			
Storage Humidity	5% to 90% non-condensing			
EMI/EMC	FCC Class A, ICES-003 Class A, CE, C-Tick, VCCI Class A			
Safety	cUL, CB			

### Software Functions

L2 Features	<ul style="list-style-type: none"> <li>+ IGMP snooping v1, v2                             <ul style="list-style-type: none"> <li>- Up to 256 IGMP snooping groups</li> <li>- Up to 64 static multicast address</li> <li>- IGMP Per VLAN</li> </ul> </li> <li>- IGMP snooping fast leave</li> <li>+ MLD snooping<sup>1</sup></li> <li>+ Spanning Tree                             <ul style="list-style-type: none"> <li>- 802.1D STP</li> <li>- 802.1w RSTP</li> <li>- 802.1s MSTP</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>+ STP Loopback Detection</li> <li>+ BPDU filtering</li> <li>+ 802.3ad Link Aggregation: max. 32 groups per device, 8 ports per group</li> <li>+ Mirroring                             <ul style="list-style-type: none"> <li>- One-to-one mode</li> <li>- Many-to-one mode</li> </ul> </li> </ul>
VLAN	<ul style="list-style-type: none"> <li>+ 802.1Q</li> <li>+ 802.1v protocol VLAN<sup>1</sup></li> <li>+ VLAN Groups: total 256 VLAN groups, max. 256 static</li> <li>- VLAN groups, max. 256 dynamic VLAN groups</li> </ul>	<ul style="list-style-type: none"> <li>+ GVRP</li> <li>+ Double VLAN<sup>1</sup></li> <li>+ Asymmetric VLAN<sup>1</sup></li> </ul>
ACL (Access Control List)	<ul style="list-style-type: none"> <li>+ Maximum Mask/Profiles: 15 profiles, 240 rules per profile</li> <li>+ Time Based ACL<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>+ Content-based ACL according to:                             <ul style="list-style-type: none"> <li>- 802.1p priority</li> <li>- MAC address</li> <li>- IP address</li> <li>- L4 Protocol type</li> <li>- VID</li> <li>- Ether type</li> <li>- DSCP</li> <li>- TCP/UDP port number</li> </ul> </li> </ul>
QoS (Quality of Service)	<ul style="list-style-type: none"> <li>+ Priority queues number: 4 queues</li> <li>+ 802.1p standard</li> <li>+ Queue handling: WRR/Strict/ST+WRR modes</li> <li>+ Bandwidth Control:                             <ul style="list-style-type: none"> <li>- Port and Flow based bandwidth control</li> <li>- Granularity: down to 64Kbps</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>+ Class of Service based on:                             <ul style="list-style-type: none"> <li>- 802.1p priority</li> <li>- Ether type</li> <li>- DSCP</li> <li>- TCP/UDP port number</li> <li>- VLAN MAC address</li> <li>- IP address</li> <li>- Protocol type</li> </ul> </li> </ul>
Security	<ul style="list-style-type: none"> <li>+ Traffic Segmentation</li> <li>+ SSH v2</li> <li>+ SSL v3</li> </ul>	<ul style="list-style-type: none"> <li>+ Port Security: 16 MACs per port</li> <li>+ Broadcast Storm Control</li> <li>+ D-Link Safeguard Engine</li> </ul>



AAA	<ul style="list-style-type: none"> <li>+ Port/MAC-Based 802.1X Access Control</li> <li>+ Guest VLAN</li> <li>+ RADIUS Auth. for Management Access</li> </ul>	<ul style="list-style-type: none"> <li>+ TACACS+ Auth. for Mgmt Access</li> <li>+ Web-based Access Control<sup>1</sup></li> <li>+ MAC-based Access Control<sup>1</sup></li> </ul>
Management	<ul style="list-style-type: none"> <li>+ Web-based GUI</li> <li>+ CLI</li> <li>+ Device Locator</li> <li>+ Telnet Server</li> <li>+ Telnet Client</li> <li>+ TFTP Client</li> <li>+ SNMP v1, v2c, v3</li> <li>+ SNMP Traps</li> </ul>	<ul style="list-style-type: none"> <li>+ System Log</li> <li>+ RMON v1</li> <li>+ BootP/DHCP Client</li> <li>+ DHCP Auto-configuration</li> <li>+ SNTP</li> <li>+ Port Description</li> <li>+ CPU Monitoring</li> <li>+ Web GUI Traffic Monitoring</li> </ul>
MIB	<ul style="list-style-type: none"> <li>+ MIB II (RFC 1213)</li> <li>+ Bridge MIB (RFC 1493)</li> <li>+ SNMP v2 MIB (RFC 1907)</li> <li>+ RMON MIB (RFC 1757, 2819)</li> <li>+ Ether-like MIB (RFC 2021)</li> </ul>	<ul style="list-style-type: none"> <li>+ 802.1p MIB (RFC 1643, 2358, 2665)</li> <li>+ IF MIB (RFC 2674)</li> <li>+ RADIUS Authentication Client MIB (RFC 2233, 2863)</li> <li>+ RADIUS Accounting Client MIB (RFC 2618)</li> <li>+ Private MIB</li> </ul>
Warranty	Limited Lifetime	

### Ordering Information

<u>Part Number</u>	Description
DGS-3100-24	Managed 24-Port Gigabit Stackable Layer 2 Switch, 4 combo SFP, 20 Gig Stacking
DGS-3100-48	Managed 48-Port Gigabit Stackable Layer 2 Switch, 4 combo SFP, 20 Gig Stacking
DGS-3100-24P	Managed 24-Port Gigabit PoE Stackable Layer 2 Switch, 4 combo SFP, 20 Gig Stacking
DGS-3100-48P	Managed 48-Port Gigabit Stackable PoE Layer 2 Switch, 4 combo SFP, 20 Gig Stacking
DEM-211	100BASE-FX 155Mbps MMF fiber LC SFP Transceiver
DEM-310GT	1000BASE-LX SFP LC Transceiver, up to 10Km
DEM-311GT	1000BASE-SX SFP LC Transceiver, up to 500m
DPS-500	Redundant Power Supply for DGS-3100-48
DPS-500DC	Redundant Power Supply –48V DC power input
DPS-600	Redundant Power Supply for PoE models DGS-3100-24P, DGS-3100-48P

<sup>1</sup>Features available in future free firmware upgrade