D-Link®
Building Networks for People

xSTACK

Hardware Installation Guide

Product Model: xStack® DGS-3200 Series

Layer 2 Managed Gigabit Ethernet Switch

IPv6 READY

June 2011 P/N 651GS3200045G

FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CE Mark Warning

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Warnung!

Dies ist ein Produkt der Klasse A. Im Wohnbereich kann dieses Produkt Funkstoerungen verursachen. In diesem Fall kann vom Benutzer verlangt werden, angemessene Massnahmen zu ergreifen.

Precaución!

Este es un producto de Clase A. En un entorno doméstico, puede causar interferencias de radio, en cuyo case, puede requerirse al usuario para que adopte las medidas adecuadas.

Attention!

Ceci est un produit de classe A. Dans un environnement domestique, ce produit pourrait causer des interférences radio, auquel cas l`utilisateur devrait prendre les mesures adéquates.

Attenzione!

Il presente prodotto appartiene alla classe A. Se utilizzato in ambiente domestico il prodotto può causare interferenze radio, nel cui caso è possibile che l`utente debba assumere provvedimenti adeguati.

VCCI Warning

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

Table of Contents

Intended Readers

The ***DGS-3200 Series Hardware Installation Guide*** contains information for set up and management of the Switch. This manual is intended for network managers familiar with network management concepts and terminology.

Typographical Conventions

Convention	Description
[ ]	In a command line, square brackets indicate an optional entry. For example: [copy filename] means that optionally you can type copy followed by the name of the file. Do not type the brackets.
Bold font	Indicates a button, a toolbar icon, menu, or menu item. For example: Open the **File** menu and choose **Cancel**. Used for emphasis. May also indicate system messages or prompts appearing on screen. For example: **You have mail**. **Bold** font is also used to represent filenames, program names and commands. For example: **use the copy command.**
`Boldface Typewriter Font`	Indicates commands and responses to prompts that must be typed exactly as printed in the manual.
Initial capital letter	Indicates a window name. Names of keys on the keyboard have initial capitals. For example: Click Enter.
Italics	Indicates a window name or a field. Also can indicate a variables or parameter that is replaced with an appropriate word or string. For example: type *filename* means that the actual filename should be typed instead of the word shown in italic.
Menu Name > Menu Option	**Menu Name > Menu Option** Indicates the menu structure. **Device > Port > Port Properties** means the Port Properties menu option under the Port menu option that is located under the Device menu.

Notes, Notices, and Cautions

A **NOTE** indicates important information that helps make better use of the device.

A **NOTICE** indicates either potential damage to hardware or loss of data and tells how to avoid the problem.

A **CAUTION** indicates a potential for property damage, personal injury, or death.

Safety Cautions

Use the following safety guidelines to ensure your own personal safety and to help protect your system from potential damage.

Throughout this safety section, the caution icon () is used to indicate ca utions and precautions that need to be reviewed and followed.

To reduce the risk of bodily injury, electrical shock, fire, and damage to the equipment, observe the following precautions.

- Observe and follow service markings.
  - Do not service any product except as explained in the system documentation.
  - Opening or removing covers that are marked with the triangular symbol with a lightning bolt may expose the user to electrical shock.
  - Only a trained service technician should service components inside these compartments.
- If any of the following conditions occur, unplug the product from the electrical outlet a nd replace the part or contact your trained service provider:
  - Damage to the power cable, extension cable, or plug.
  - An object has fallen into the product.
  - The product has been exposed to water.
  - The product has been dropped or damaged.
  - The product does not operate correctly when the operating instructions are correctly followed.
- Keep your system away from radiators and heat sources. Also, do not block cooling vents.
- Do not spill food or liquids on system components, and never operate the product in a wet environment. If the system gets wet, see the appropriate section in the troubleshooting guide or contact your trained service provider.

- Do not push any objects into the openings of the system. Doing so can cause fire or electric shock by shorting out interior components.
- Use the product only with approved equipment.
- Allow the product to cool before removing covers or touching internal components.
- Operate the product only from the type of external power source indicated on the electrical ratings label. If unsure of the type of power source required, consult your service provider or local power company.
- To help avoid damaging the system, be sure the voltage selection switch (if provided) on the power supply is set to match the power available at the Switch's location:
  - 115 volts (V)/60 hertz (Hz) in most of North and South America and some Far Eastern countries such as South Korea and Taiwan
  - 100 V/50 Hz in eastern Japan and 100 V/60 Hz in western Japan
  - 230 V/50 Hz in most of Europe, the Middle East, and the Far East
- Also, be sure that attached devices are electrically rated to operate with the power available in your location.
- Use only approved power cable(s). If you have not been provided with a power cable for your system or for any AC-powered option intended for your system, purchase a power cable that is approved for use in your country. The power cable must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cable should be greater than the ratings marked on the product.
- To help prevent electric shock, plug the system and peripheral power cables into properly grounded electrical outlets. These cables are equipped with three-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable. If using an extension cable is necessary, use a 3-wire cable with properly grounded plugs.
- Observe extension cable and power strip ratings. Make sure that the total ampere rating of all products plugged into the extension cable or power strip does not exceed 80 percent of the ampere ratings limit for the extension cable or power strip.
- To help protect the system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or uninterruptible power supply (UPS).
- Position system cables and power cables carefully; route cables so that they cannot be stepped on or tripped over. Be sure that nothing rests on any cables.
- Do not modify power cables or plugs. Consult a licensed electrician or your power company for site modifications. Always follow your local/national wiring rules.
- When connecting or disconnecting power to hot-pluggable power supplies, if offered with your system, observe the following guidelines:
  - Install the power supply before connecting the power cable to the power supply.
  - Unplug the power cable before removing the power supply.
  - If the system has multiple sources of power, disconnect power from the system by unplugging all power cables from the power supplies.
- Move products with care; ensure that all casters and/or stabilizers are firmly connected to the system. Avoid sudden stops and uneven surfaces.

General Precautions for Rack-Mountable Products

Observe the following precautions for rack stability and safety. Also, refer to the rack installation documentation accompanying the system and the rack for specific caution statements and procedures.

- Systems are considered to be components in a rack. Thus, "component" refers to any system as well as to various peripherals or supporting hardware.

CAUTION: Installing systems in a rack without the front and side stabilizers installed could cause the rack to tip over, potentially resulting in bodily injury under certain circumstances. Therefore, always install the stabilizers before installing components in the rack. After installing system/components in a rack, never pull more than one component out of the rack on its slide assemblies at one time. The weight of more than one extended component could cause the rack to tip over and may result in serious injury.

- Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.
- Always load the rack from the bottom up, and load the heaviest item in the rack first.
- Make sure that the rack is level and stable before extending a component from the rack.
- Use caution when pressing the component rail release latches and sliding a component into or out of a rack; the slide rails can pinch your fingers.
- After a component is inserted into the rack, carefully extend the rail into a locking position, and then slide the component into the rack.
- Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.
- Ensure that proper airflow is provided to components in the rack.
- Do not step on or stand on any component when servicing other components in a rack.

NOTE: A qualified electrician must perform all connections to DC power and to safety grounds. All electrical wiring must comply with applicable local or national codes and practices.

CAUTION: Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if uncertain that suitable grounding is available.

CAUTION: The system chassis must be positively grounded to the rack cabinet frame. Do not attempt to connect power to the system until grounding cables are connected. Completed power and safety ground wiring must be inspected by a qualified electrical inspector. An energy hazard will exist if the safety ground cable is omitted or disconnected.

CAUTION: When mounting the Switch on a cement wall, a proper concrete sleeve anchor should be used, such as the one that is included in the optional D-Link Wall Mount kit (DRE-KIT018).

Lithium Battery Precaution

CAUTION: Incorrectly replacing the lithium battery of the Switch may cause the battery to explode. Replace this battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Protecting Against Electrostatic Discharge

Static electricity can harm delicate components inside the system. To prevent static damage, discharge static electricity from your body before touching any of the electronic components, such as the microprocessor. This can be done by periodically touching an unpainted metal surface on the chassis.

The following steps can also be taken prevent damage from electrostatic discharge (ESD):

1. When unpacking a static-sensitive component from its shipping carton, do not remove the component from the antistatic packing material until ready to install the component in the system. Just before unwrapping the antistatic packaging, be sure to discharge static electricity from your body.
2. When transporting a sensitive component, first place it in an antistatic container or packaging.
3. Handle all sensitive components in a static-safe area. If possible, use antistatic floor pads, workbench pads and an antistatic grounding strap.

Section 1

Introduction

This manual describes the installation, maintenance, and configurations concerning the Switch.

Switch Description

D-Link's next-gene ration DGS-3200 Series is a high perform ancee member of the D-Link xStack® fam ily. Ranging f rom 10/100Mbps edge switches to core gigabit switches, the xStack® switch family has bee n future-proof designed to provide fault tolerance, flexibility, port de nsity, robust security and m aximum throughput with a user-friendly management interface for the networking professional

The Switch has a combination of 1000BASE-T ports and SFP ports that may be used in uplinking various network devices to the Switch, including PCs, hubs and other switches to provide a gigabit Ethernet uplink in full-duplex mode. The SFP (Small Form Factor Portable) combo ports are used with fiber-optical transceiver cabling in order to uplink various other networking devices for a gigabit link t hat m ay spa n great dis tances. T hese SFP ports s upport full-duplex tra nsmissions and ca n be used with DEM-310GT (1000BASE-LX), DEM-311GT (1000BASE-SX), DEM-312GT2 (100BASE-SX), DEM-314GT (1000BASE-LH), and D EM-315GT (1 000BASE-ZX) transceivers. A dditionally, the SFP po rts can be u sed w ith D EM-210 (Single Mode 100BASE-FX) and DEM -211 (Multi Mode 100 BASE-FX) tran sceivers. Users m ay al so u se one o f the WDM Sin gle Mode Transceivers, such as the DEM-330T/R or the DEM-331T/R.

Features

The list of features below highlights the significant features of the Switch.

- IEEE 802.3 compliant
- IEEE 802.3z compliant
- IEEE 802.3x Flow Control in full-duplex compliant
- IEEE 802.3u compliant
- IEEE 802.3ab compliant
- IEEE 802.1p Priority Queues
- IEEE 802.3ad Link Aggregation Control Protocol support up to five (DGS-3200-10), eight (DGS-3200-16), and 12 (DGS-3200-24) groups with eight ports per device
- IEEE 802.1X Port-based and Host-based Access Control
- IEEE 802.1Q VLAN
- IEEE 802.1D Spanning Tree, IEEE 802.1w Rapid Spanning Tree and IEEE 802.1s Multiple Spanning Tree support
- Support jumbo frame to 10K Bytes
- Access Control List (ACL) support
- ISM VLAN support
- Egress filter supported to drop DLF/multicast packets to zero
- DHCP local relay support
- Single IP Management support
- Access Authentication Control utilizing TACACS, XTACACS, TACACS+, and RADIUS protocols
- Supports Multiple Authentication
- Dual Image Firmware
- Power saving mode support
- Broadcast Ping support
- Dual configuration support
- Simple Network Time Protocol support
- System Log support
- SMTP Log support
- Maximum packet forwarding rate 14.88 million 64-byte packets per second (DGS-3200-10), 23.81 million 64-byte packets per second (DGS-3200-16), and 35.7 million 64-byte packets per second (DGS-3200-24)
- High performance switching engine performs forwarding and filtering at full wire speed up to 20Gbps (DGS-3200-10), 32Gbps (DGS-3200-16), and 48Gbps (DGS-3200-24)
- Full- and half-duplex for all gigabit ports. Full duplex allows the switch port to simultaneously transmit and receive data. It only works with connections to full-duplex-capable end stations and switches. Connections to a hub must take place at half-duplex.
- Support broadcast storm control
- Loopback Detection (LBD) v4.0 Trap support
- Non-blocking store and forward switching scheme capability to support rate adaptation and protocol conversion
- Supports Egress/Ingress bandwidth control
- Efficient self-learning and address recognition mechanism enables forwarding rate at wire speed

- Address table: Supports up to 8K (DGS-3200-10)/16K (DGS-3200-16 & DGS-3200-24) MAC addresses per device
- Supports a packet buffer of up to 1 Mbits (DGS-3200-10)/6 Mbits (DGS-3200-16 & DGS-3200-24)
- Port Trunking with flexible load distribution and fail-over function
- RADIUS Server failover
- Private VLAN
- IGMP Snooping support
- IGMP authentication support
- MLD Snooping support (MLD v1 and v2)
- IP-MAC-Port Binding (IMPB) v3.6 support
- SNMP support
- Support flash file system for SD card
- Secure Sockets Layer (SSL) and Secure Shell (SSH) support
- System Severity control
- Port Mirroring support
- MIB support for:
    - RFC 1213 MIB II
    - RFC 4188 Bridge
    - RFC 1907 SNMPv2
    - RFC 1757 RMON
    - RFC 2819 RMON
    - RFC 1643 Ether-like MIB
    - RFC 2358 Ether-like MIB
    - RFC 2665 Ether-like MIB
    - RFC 2233 Interface MIB
    - RFC 2863 IF MIB
    - RFC 2618 RADIUS Authentication Client MIB
    - Private MIB
    - RFC 2674 for 802.1p
    - IEEE 802.1X MIB
- Provides parallel LED display for port status such as link/act, speed, etc.
- Web-based GUI compatible with Internet Explorer 5.5 or later, Netscape 8.0 or later, and Firefox 2.0 or later

Ports

- Eight (DGS-3200-10) or 14 (DGS-3200-16) or 20 (DGS-3200-24) 10BASE-T/100BASE-TX/1000BASE-T Gigabit ports
- Two (DGS-3200-10 and DGS-3200-16) or four (DGS-3200-24) SFP Combo Ports (both 100FX and 1000BASE-X)
- Two (DGS-3200-10 and DGS-3200-16) or four (DGS-3200-24) 1000Mbps Copper Combo Ports (10BASE-T/100BASE-TX/1000BASE-T)
- One RS-232 DB-9 console port (DGS-3200-10 and DGS-3200-16) or one combo console with an RS-232 DB-9 console port and an RJ-45 (DGS-3200-24) connector. The combo console ports have two kinds of connectors, one is a female DCE RS-232 DB-9 console connector and the other is a RJ-45 console connector that is Cisco compatible. The RS-232 DB-9 console has the higher priority. The RJ-45 console port can just read information but not write when the RS-232 DB-9 and the RJ-45 are simultaneously connected to the device.

NOTE: For customers interested in D-View, D-Link Corporation's proprietary SNMP management software, go to the D-Link Website and download the software and manual.

Front-Panel Components

The front panel of the Switch consists of LED indicators for Power, Console, and for Link/Act for each port on the Switch including SFP port LEDs. A separate table below describes LED indicators in more detail.

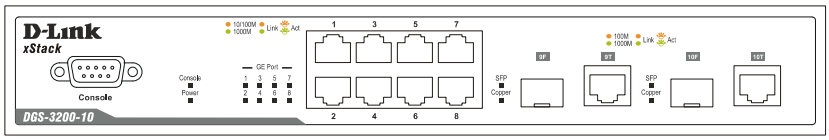


Figure 1- 1. Front Panel View of DGS-3200-10

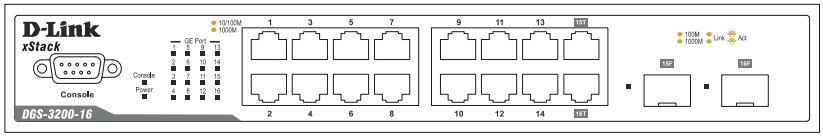


Figure 1- 2. Front Panel View of DGS-3200-16

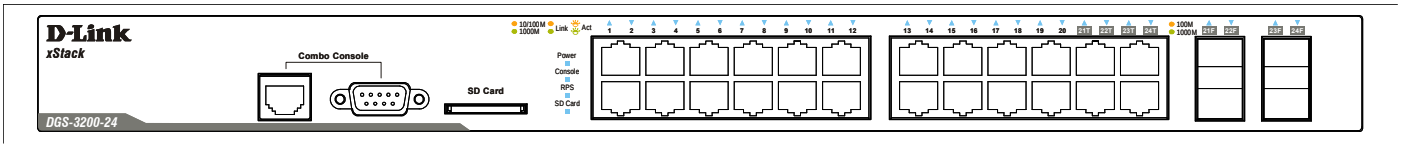


Figure 1- 3. Front Panel View of DGS-3200-24

LED Indicators

The DGS-3200-10 and the DGS-3200-16 support LED indicators for Power, Console, and Port LEDs.

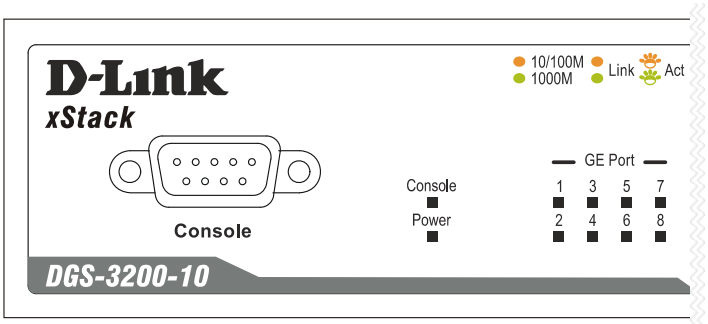


Figure 1- 4. LED Indicators for DGS-3200-10

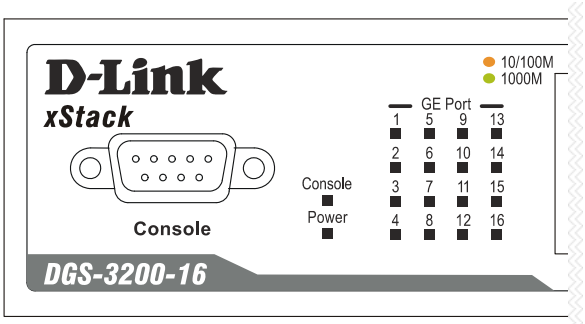


Figure 1- 5. LED Indicators for DGS-3200-16

The DGS-3200-24 supports LED indicators for Power, Console, RPS, SD Card, and Port LEDs.

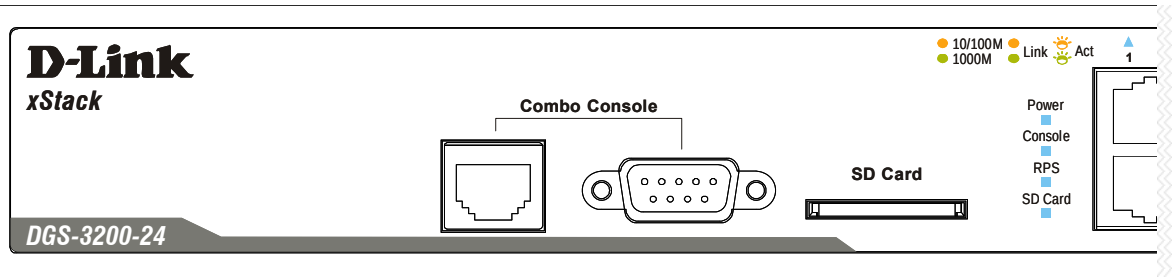


Figure 1- 6. LED Indicators for DGS-3200-24

LED	Description
Console	This LED will blink green during the Power-On Self Test (POST). When the POST is finished, the LED goes dark. The indicator will light steady green when an active console link is in session via the RS-232 console port/RJ-45 connector (DGS-3200-24 only).
Power	This LED will light green after powering the Switch on to indicate the ready state of the device. The indicator is dark when the Switch is no longer receiving power (i.e powered off).
RPS (DGS-3200-24 only)	This LED will light green if the Redundant Powers Supply is in use. If the indicator is off, the RPS is not in use.
SD Card (DGS-3200-24 only)	This LED will light green when an SD card is plugged in to the front of the Switch. The indicator will blink green when it is in the process of reading/writing data. If the LED is red, the read/write action has failed.
Port LEDs	One row of LEDs for each port is located above the ports on the front panel. The indicator above the left side of a port corresponds to the port below the indicator in the upper row of ports. The indicator above the right side of a port corresponds to the port below the indicator in the lower row of ports. A steady green light denotes a valid 1000Mbps link on the port while a blinking green light indicates activity on the port (at 1000Mbps). A steady amber light denotes a valid 10 or 100Mbps link on the port while a blinking amber light indicates activity on the port (at 10 or 100Mbps). These LEDs will remain dark if there is no link/activity on the port.
Combo SFP Ports	LED indicators for the Combo ports are located above the ports and numbered 1/9 and 2/10 (DGS-3200-10), 15F/15T, 16F/16T (DGS-3200-16), and 21F/21T, 22F/22T, 23F/23T, and 24F/24T (DGS-3200-24). A steady green light denotes a valid 1000Mbps link on the port while a blinking green one indicates activity on the port (at 1000Mbps). A steady amber light denotes a valid 100Mbps link on the port while a blinking amber one indicates activity on the port (at 100Mbps). These LEDs will remain dark if there is no link/activity on the port.

Rear Panel Description

The rear panel contains an AC power connector.

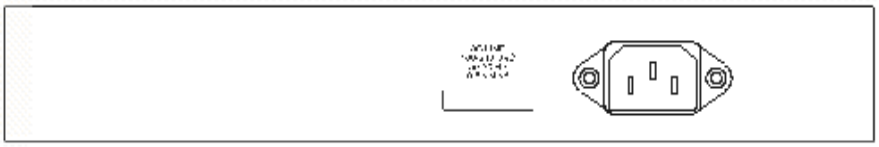


Figure 1- 7. Rear panel view of DGS-3200-10

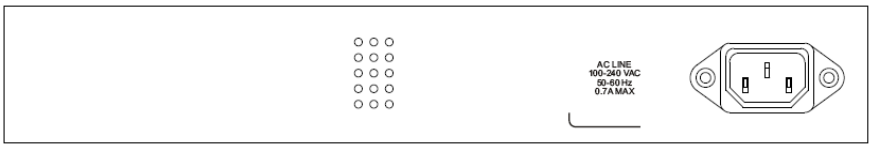


Figure 1- 8. Rear panel view of DGS-3200-16

Figure 1- 9. Rear panel view of DGS-3200-24

The AC power connector is a standard three-pronged connector that supports the power cord. Plug-in the female connector of the provided power cord into this socket, and the male side of the cord into a power outlet. The DGS-3200-10 and the DGS-3200-16 automatically adjust their power setting to any supply voltage in the range from 100 ~ 240 VAC at 50 ~ 60 Hz. The DSG-3200-24 automatically adjusts its power setting to any supply voltage in the range from 100 ~ 240 VAC at 60 Hz. In addition, an optional external Redundant Power Supply (DPS-200) can be plugged into the connector displayed above. When the internal power fails, this optional external RPS will take over all the power immediately and automatically.

Side Panel Description

The system heat vents located on each side dissipate heat. Do not block these openings. Leave at least 6 inches of space at the rear and si des of t he Switch for pro per v entilation. Be reminded th at witho ut pro per h eat d issipation and air circu lation, system components might overheat, which could lead to system failure or even severely damage components.

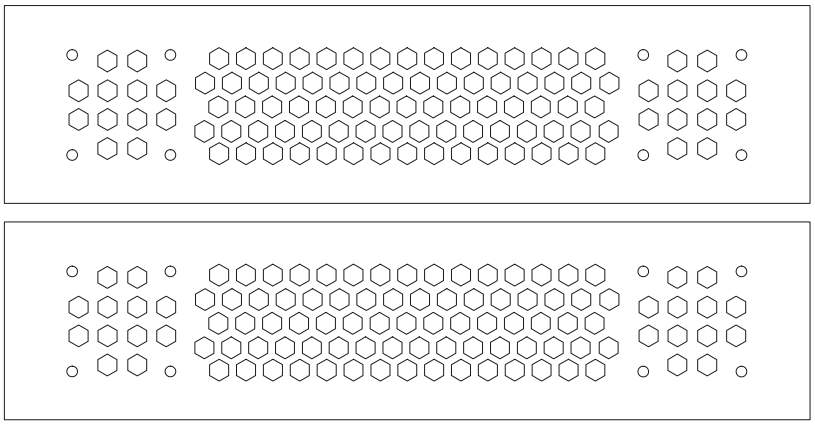


Figure 1- 10. Identical Side Panels of DGS-3200-10

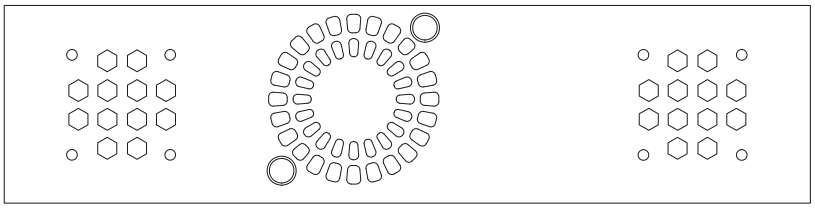


Figure 1- 11. Left Side Panel of DGS-3200-16

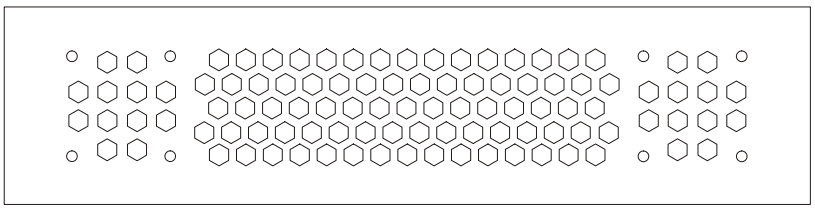


Figure 1- 12. Right Side Panel of DGS-3200-16

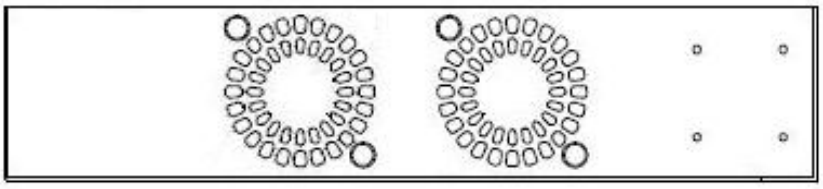


Figure 1- 13. Left Side Panel of DGS-3200-24

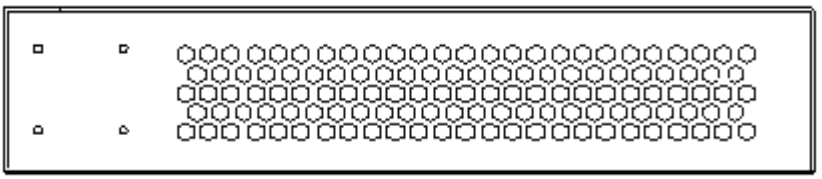


Figure 1- 14. Right Side Panel of DGS-3200-24

Section 2

Installation

Package Contents

Open the shipping carton of the Switch and carefully unpack its contents. The carton should contain the following items:

- DGS-3200-10, DGS-3200-16, or DGS-3200-24 Switch
- Quick Installation Guide
- AC power cord
- Power supply cable clip
- Mounting kit (two brackets and screws)
- Four rubber feet with adhesive backing
- RS-232 console cable for DGS-3200-10/DGS-3200-16 or combo RS-232/RJ-45 console cable for DGS-3200-24
- CD Kit for User's Guide/CLI/D-View module

If any item is missing or damaged, please contact your local D-Link Reseller for replacement.

Installation Guidelines

Please follow these guidelines for setting up the Switch:

- Install the Switch on a sturdy , level surface that can support at least 6.6 l b. (3 kg) of weight. Do not place heavy objects on the Switch.
- The power outlet should be within 1.82 meters (6 feet) of the Switch.
- Visually inspect the power cord and see that it is fully secured to the AC power port.
- Make sure that there is proper heat dissipation from and adequate ventilation around the Switch. Leave at least 10 cm (4 inches) of space at the front and rear of the Switch for ventilation.
- Install the Switch in a fairly cool and dry place for the acceptable temperature and humidity operating ranges.
- Install the Switch in a site free from strong electromagnetic field generators (such as motors), vibration, dust, and direct exposure to sunlight.
- When installing the Switch on a level surface, attach the rubber feet to the bottom of the device. The rubber feet cushion the Switch, protect the casing from scratches and prevent it from scratching other surfaces.

Installing the Switch without a Rack

First, attach the rubber feet included with the Switch if installing on a desktop or shelf. Attach these cushioning feet on the bottom at each corner of the device. Allow enough ventilation space between the Switch and any other objects in the vicinity.

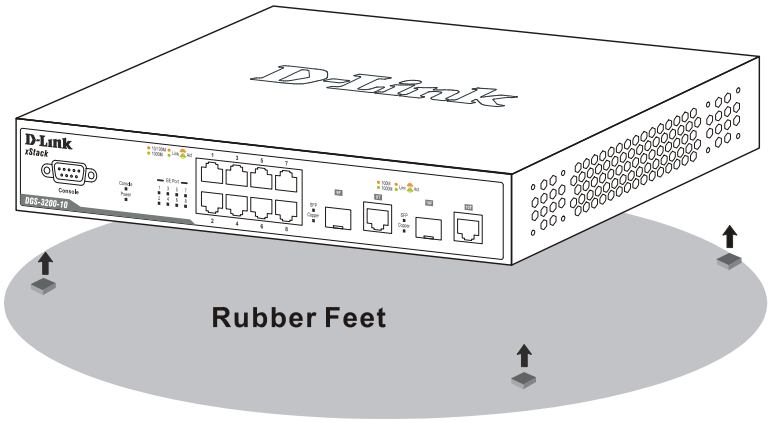


Figure 2- 1. Prepare DGS-3200-10 for installation on a desktop or shelf

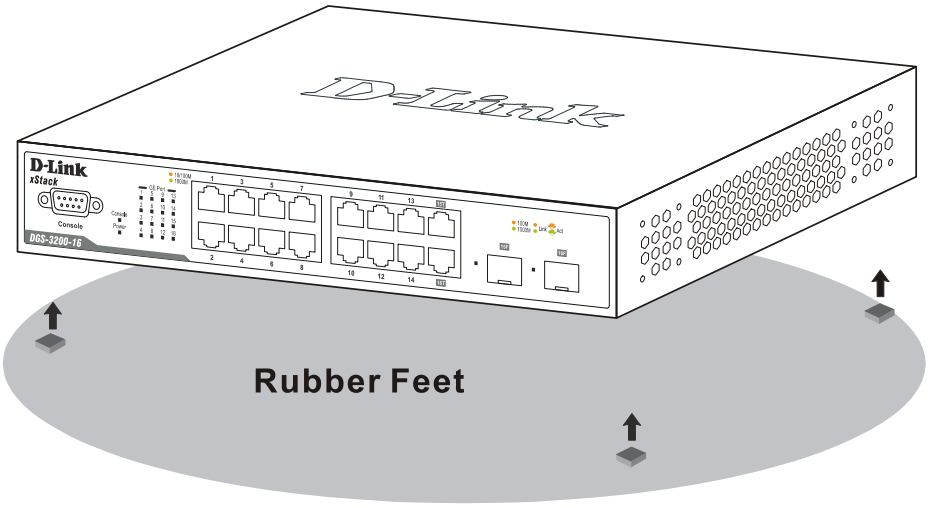


Figure 2- 2. Prepare DGS-3200-16 for installation on a desktop or shelf

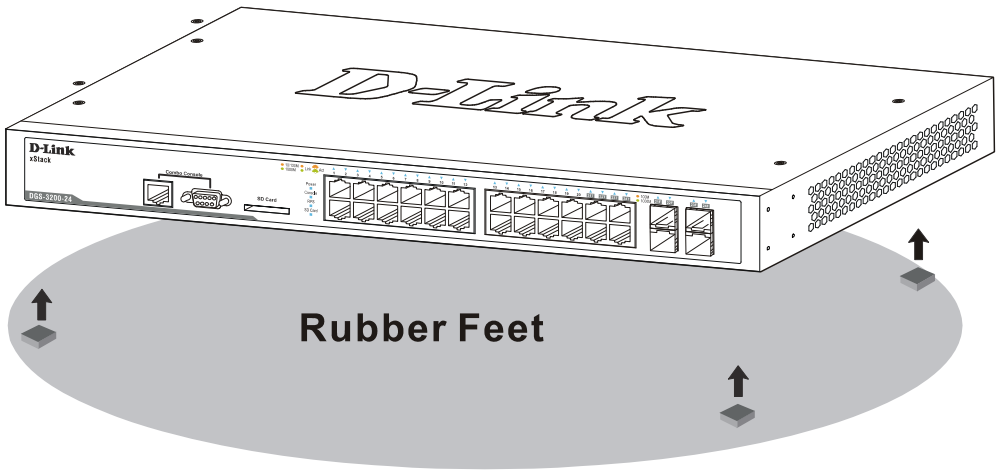


Figure 2- 3. Prepare DGS-3200-24 for installation on a desktop or shelf

Attaching Brackets to a Switch for Rack Mounting

The Switch can be mounted in a standard 19" rack using the provided mounting brackets. Use the following diagrams as a guide.

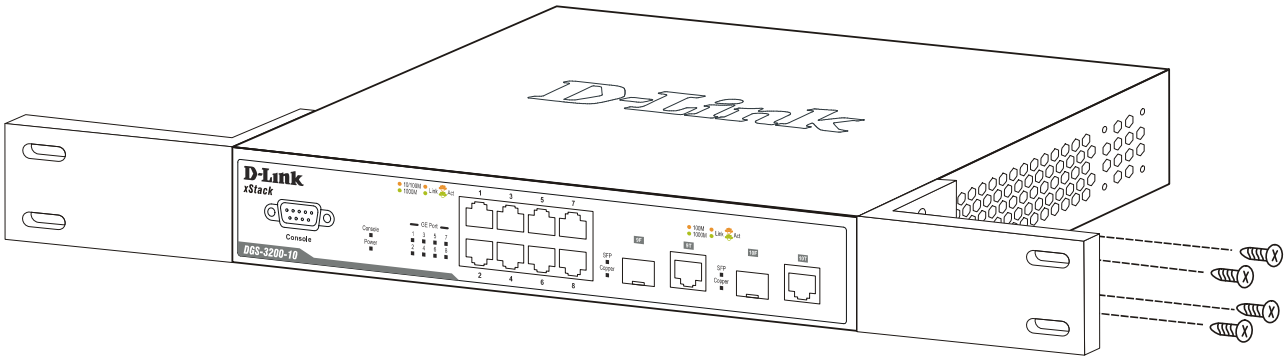


Figure 2- 4. Fasten mounting brackets on the DGS-3200-10

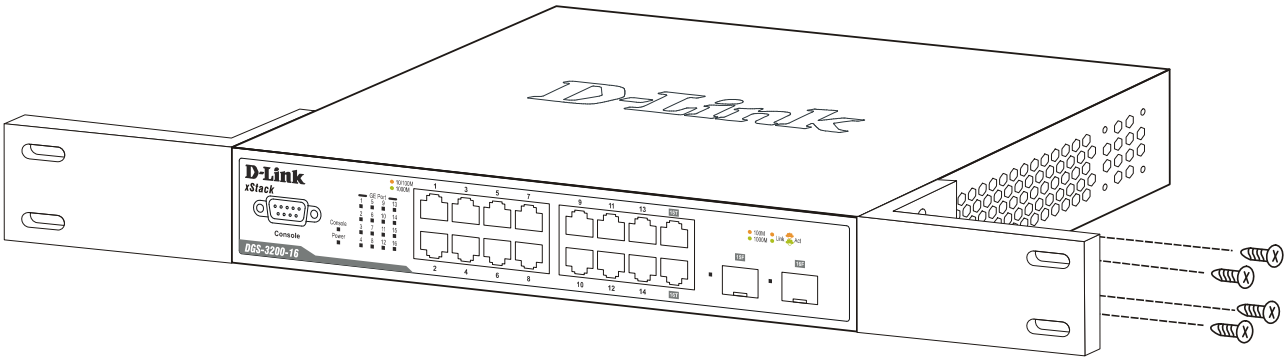


Figure 2- 5. Fasten mounting brackets on the DGS-3200-16

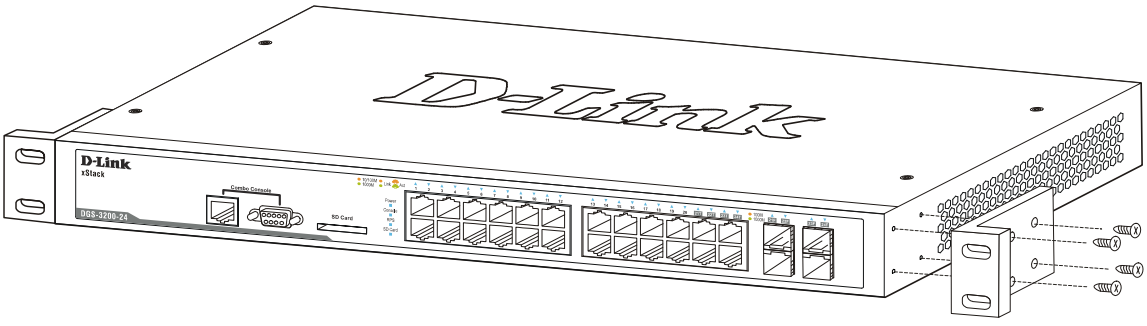


Figure 2- 6. Fasten mounting brackets on the DGS-3200-24

Fasten the mounting brackets to the Switch using the screws provided. With the brackets attached securely, the Switch can be mounted in a standard rack, as shown below.

Mounting the Switch in a Standard 19" Rack

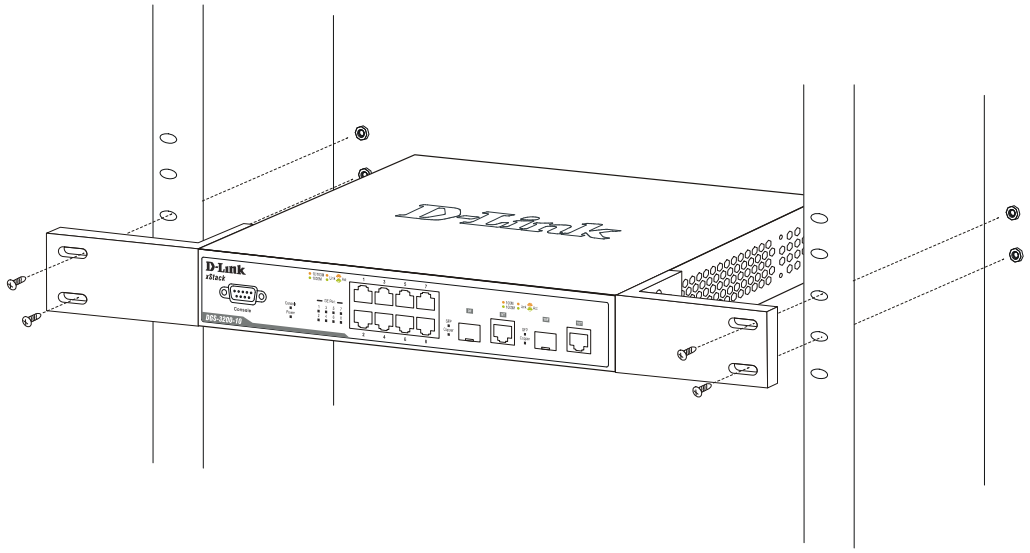


Figure 2- 7. Installing the DGS-3200-10 in a rack

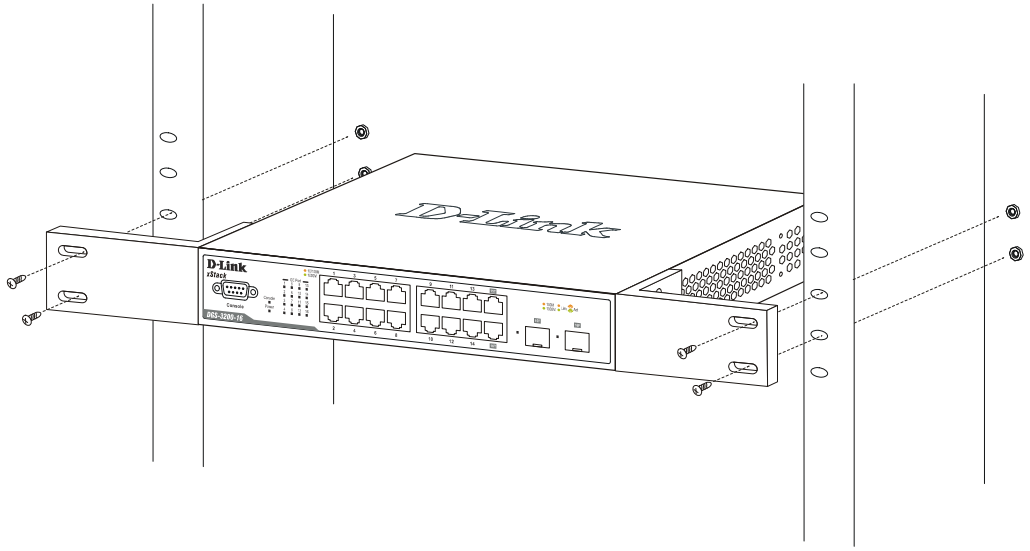


Figure 2- 8. Installing the DGS-3200-16 in a rack

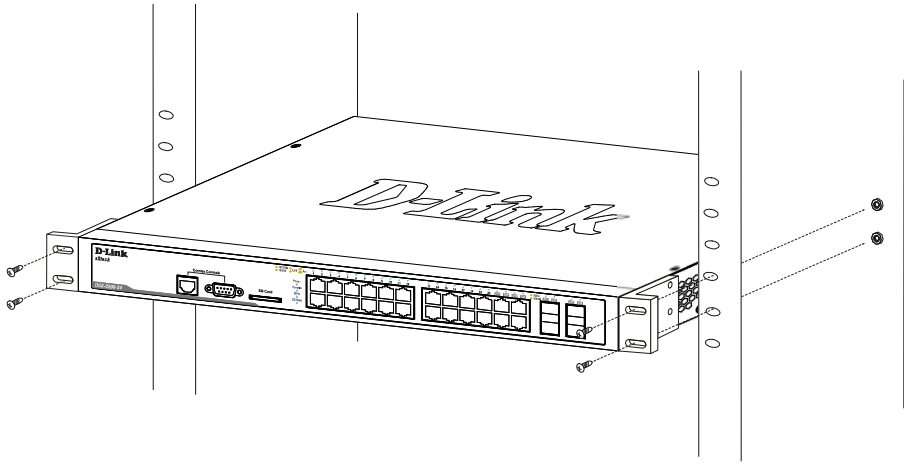
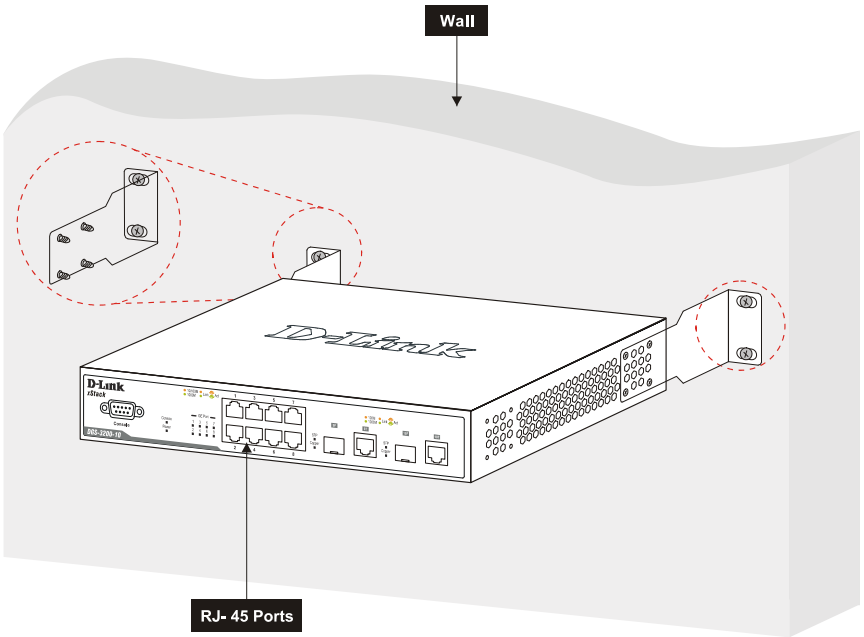


Figure 2- 9. Installing the DGS-3200-24 in a rack

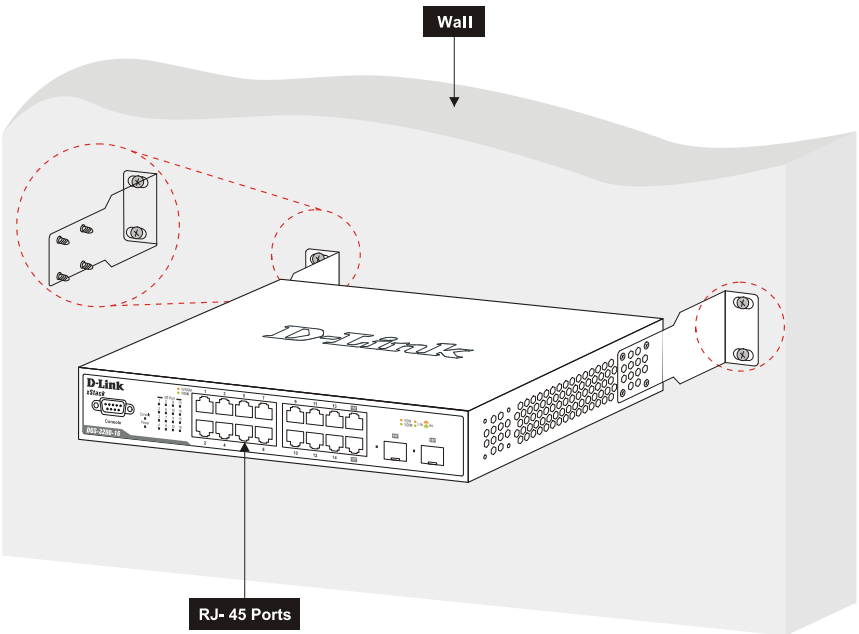
Installing the Switch on a Wall

The Switch can be mounted on a wall. Use the following diagrams and the installation steps on the next page as a guide.



NOTE: Wall mounted ears only supported on DGS-3200-10 hardware versions A3 & B1.

Figure 2- 10. Fasten mounting brackets on the back of the DGS-3200-10 to a wall



NOTE: Wall mounted ears only supported on DGS-3200-16 hardware version A2.

Figure 2- 11. Fasten mounting brackets on the back of the DGS-3200-16 to a wall

Wall Installation Steps

Before beginning installation, simulate hanging the Switch by holding it against the wall with the wall mounting ears and marking the positions of the oval holes. These holes will be used with the wall mounting ears for installing the concrete sleeve anchors.

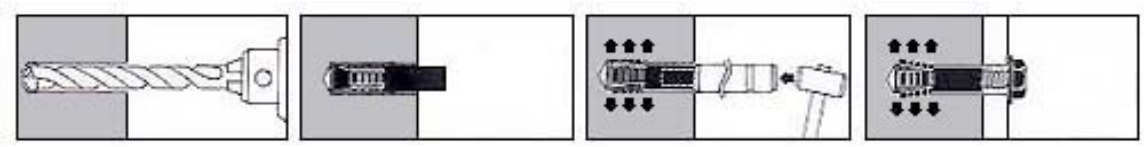


Figure 2- 12. Illustration of each installation step

1. Use a power drill with an 11mm diameter bit to drill four holes at the marked points, each of a depth of 37 to 40 mm.
2. For each hole, put the smaller end of one concrete sleeve anchor into the hole.
3. Use a hammer to firmly smack each concrete sleeve anchor into one of the four holes. Each sleeve anchor should be nearly flush with the wall the Switch is being mounted to.
4. Complete the installation by firmly tightening each screw.

If the Switch is being mounted on a cement wall, D-Link recommends using a concrete sleeve anchor, such as the one depicted below that is part of the optional D-Link Wall Mount kit, DRE-KIT018. The D-Link Wall Mount kit consists of 8 screws, 4 concrete sleeve anchors, and 2 wall ears.

Figure 2- 13. Concrete sleeve anchor

Power On

1. Plug one end of the AC power cord into the power connector of the Switch and the other end into the local power source outlet.
2. After powering on the Switch, the LED indicators will momentarily blink green. This blinking of the LED indicators represents a reset of the system.

Power Failure

As a precaution, in the event of a power failure, unplug the Switch. When power is resumed, plug the Switch back in.

Installing SFP Ports

The Switch is equipped with SFP (Small Form Factor Portable) ports, which are to be used with fiber-optical transceiver cabling in order to uplink various other networking devices for a gigabit link that may span great distances. These SFP ports support full-duplex transmissions, have auto-negotiation and can be used with DEM-310GT (1000BASE-LX), DEM-311GT (1000BASE-SX), DEM-312GT2 (1000BASE-SX), DEM-314GT (1000BASE-LH) and DEM-315GT (1000BASE-ZX) transceivers. See the figure below for installing the SFP ports in the Switch. In addition, DEM-210 (Single Mode, 100BASE-FX) and DEM-211* (Multi Mode, 100BASE-FX) SFP transceivers are supported. WDM transceivers supported include DEM-220T (Singlemode, TX-1550/RX-1310nm), DEM-220R (Singlemode, TX-1310/RX-1550 nm), Singlemode, DEM-330T (TX-1550/RX-1310nm), DEM-330R (TX-1310/RX-1550nm), DEM-331T (TX-1550/RX-1310nm), and DEM-331R (TX1310/RX-1550).

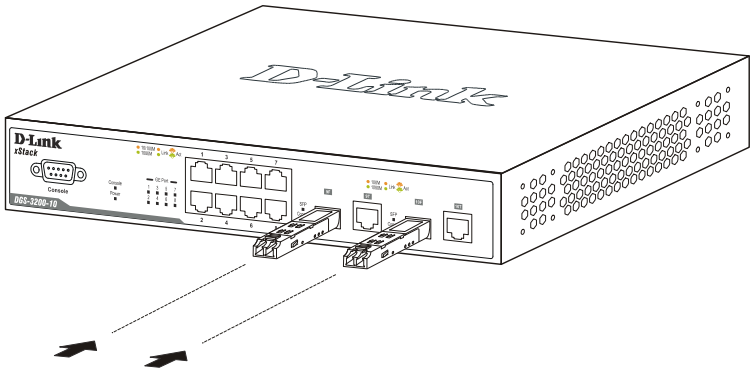


Figure 2- 14. Inserting the fiber-optic transceivers into the DGS-3200-10

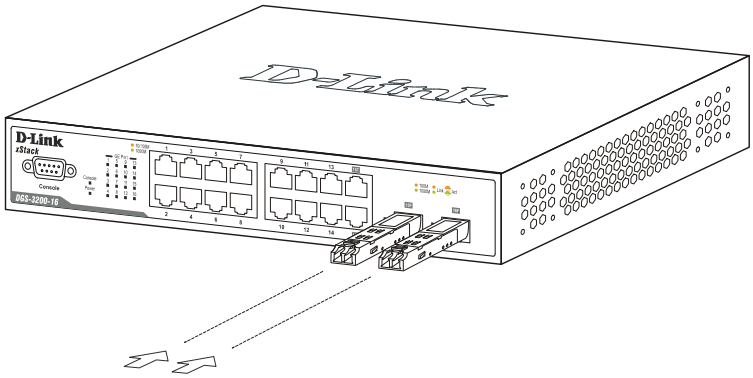


Figure 2- 15. Inserting the fiber-optic transceivers into the DGS-3200-16

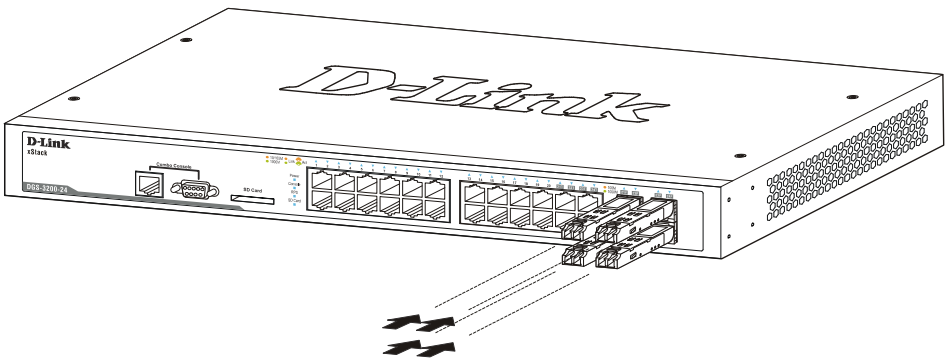


Figure 2- 16. Inserting the fiber-optic transceivers into the DGS-3200-24

NOTE: *The fiber-optic transceiver module DEM-211 may fail to link when inserted into the SFP ports if the two combo copper ports are both in linking status. The solution to this limitation is to remove the combo copper cable before using this module. Only module DEM-211 has this limitation.

Connect to RPS

The DPS-200 is connected to the Master Switch using a 14-pin DC power cable. A standard, three-pronged AC power cable connects the redundant power supply to the main power source.

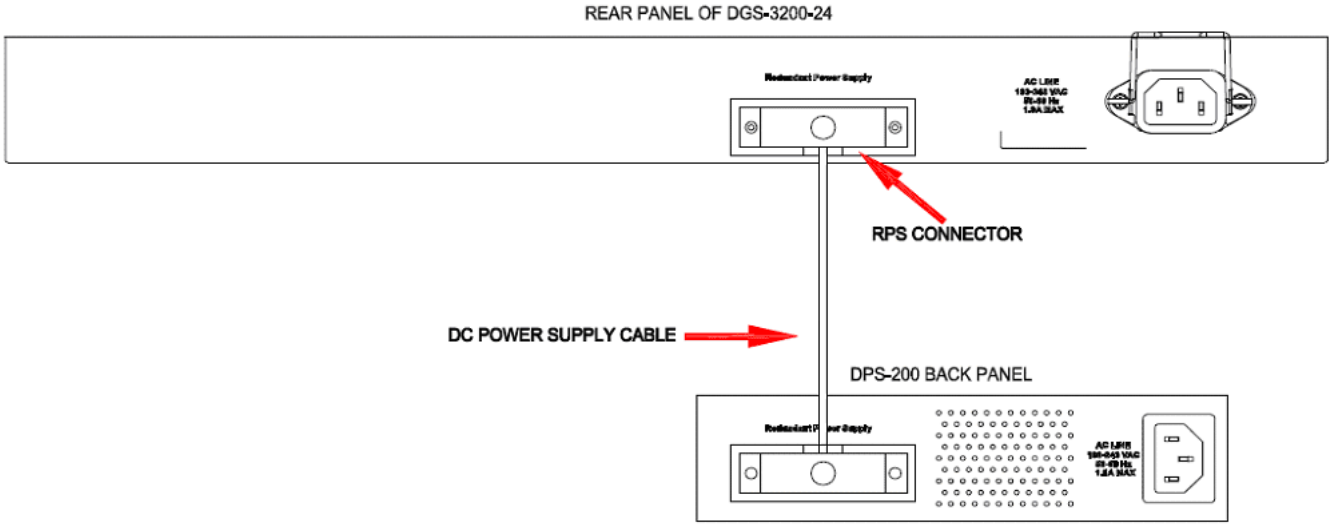


Figure 2- 17. Connecting the DGS-3200-24 to the DPS-200

1. Insert one end of the 14-pin DC power cable into the receptacle on the switch and the other end into the redundant power supply.
2. Using a standard AC power cable, connect the redundant power supply to the main AC power source. A green LED on the front of the DPS-200 will glow to indicate a successful connection.
3. Re-connect the switch to the AC power source. The n LED indicator will show that a redundant power supply is now in operation.
4. No change in switch configuration is necessary for this installation.

NOTE: See the DPS-200 documentation for more information.

CAUTION: Do not use the DGS-3200-24 with any redundant power system other than the DPS-200.

External Redundant Power System

The DPS-200 is a redundant power-supply unit designed to conform to the voltage requirements of the switches being supported. The DPS-200 can be installed into a DPS-900, or DPS-800 rack mount unit.

CAUTION: The AC power cord for the Switch should be disconnected before proceeding with installation of the DPS-200.

DPS-900

The DPS-900 is a standard-size rack mount (5 standard units in height) designed to hold up to eight DPS-200 redundant power supplies.

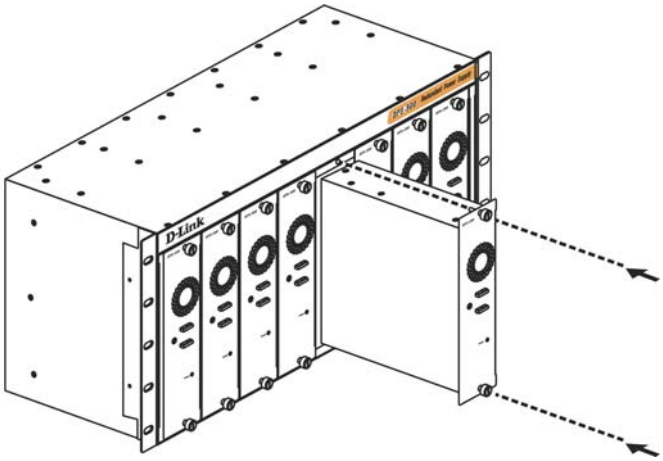


Figure 2- 18. Inserting the DPS-200 into the DPS-900

The RPS can be mounted in a standard 19" rack. Use the following diagram to guide you.

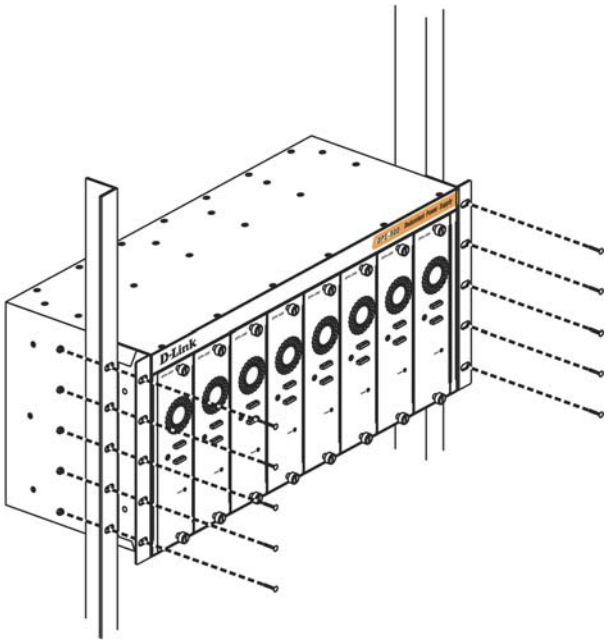


Figure 2- 19. Installing the DPS-900 into the equipment rack

CAUTION: Installing systems in a rack without the front and side stabilizers installed could cause the rack to tip over, potentially resulting in bodily injury under certain circumstances. Therefore, always install the stabilizers before installing components in the rack. After installing components in a rack, do not pull more than one component out of the rack on its slide assemblies at one time. The weight of more than one extended component could cause the rack to tip over and may result in injury.

DPS-800

The DPS-800 is a standard-size rack mount (1 standard unit in height) designed to hold up to two DPS-200 redundant power supplies.

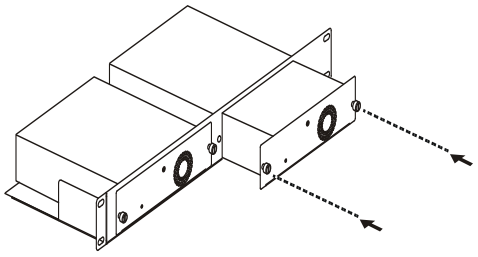


Figure 2- 20. Installing the DPS-200 in the DPS-800

The RPS can be mounted in a standard 19" rack. Use the following diagram to guide you.

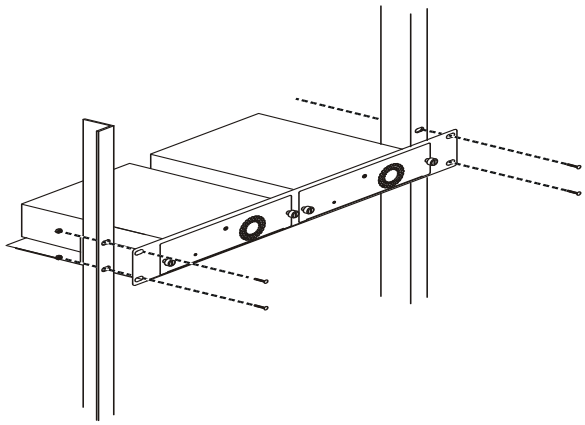


Figure 2- 21. Installing the DPS-800 in an Equipment Rack

Section 3

Connecting the Switch

Switch to End Node

Switch to Switch

Connecting To Network Backbone or Server

NOTE: All high-performance N-Way Ethernet ports can support both MDI-II and MDI-X connections.

Switch to End Node

End nodes include PCs outfitted with a 10, 100 or 1000 Mbps RJ-45 Ethernet Network Interface Card (NIC) and routers.

An end node connects to the Switch via a twisted-pair UTP/STP cable. Connect the end node to any of the 1000BASE-T ports of the Switch.

The Link/Act LEDs for each Ethernet port will light green or amber when the link is valid. A blinking LED indicates packet activity on that port.

Switch to Switch

There is a great deal of flexibility on how connections are made using the appropriate cabling.

- Connect a 10BASE-T hub or switch to the Switch via a twisted-pair Category 3, 4 or 5 UTP/STP cable.
- Connect a 100BASE-TX hub or switch to the Switch via a twisted-pair Category 5 UTP/STP cable.
- Connect 1000BASE-T switch to the Switch via a twisted pair Category 5e UTP/STP cable.
- Connect switch supporting a fiber-optic uplink to the Switch's SFP ports via fiber-optic cabling. See cabling guidelines in Appendix B for more information.

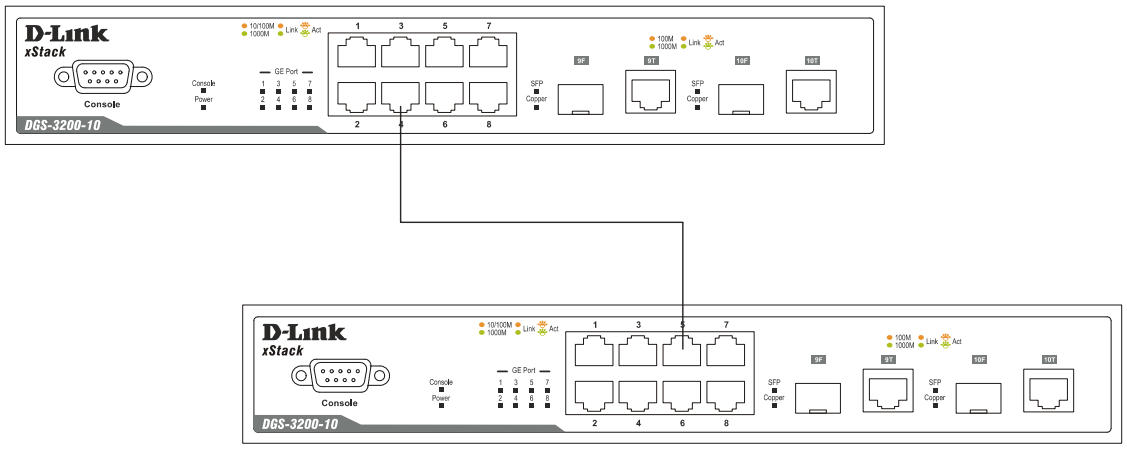


Figure 3- 1. Connect the Switch, e.g a DGS-3200-10, to a port on a switch with straight or crossover cable

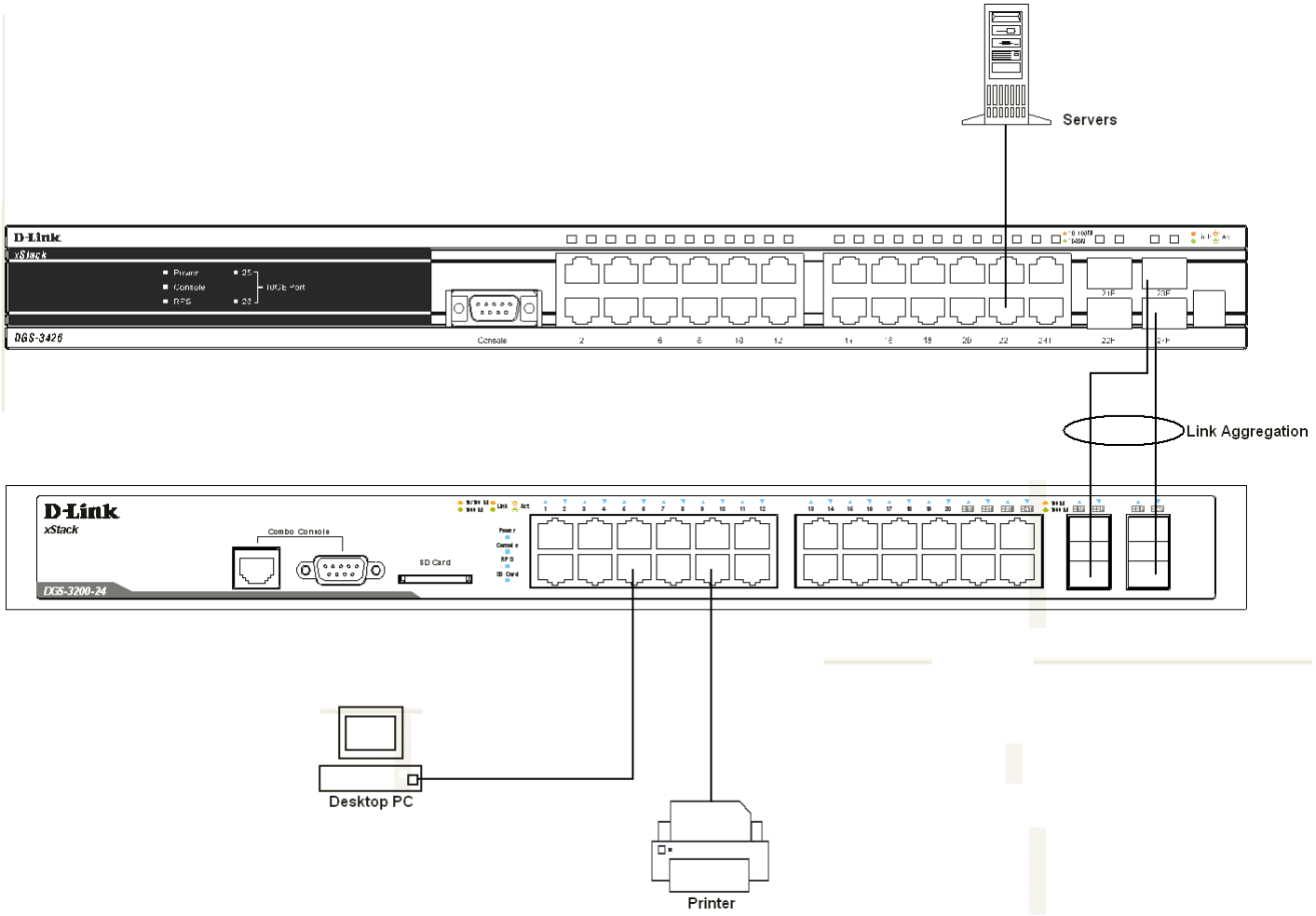


Figure 3- 2. An example of a typical Switch, e.g. DGS-3200-24, connection

Connecting To Network Backbone or Server

The combo SFP ports and the 1000BASE-T ports are ideal for uplinking to a network backbone, server or server farm. The copper ports operate at a speed of 1000, 100 or 10Mbps in full or half duplex mode. The fiber-optic ports can operate at both 100Mbps and 1000Mbps in full duplex mode.

Connections to the Gigabit Ethernet ports are made using a fiber-optic cable or Category 5e copper cable, depending on the type of port. A valid connection is indicated when the Link LED is lit.

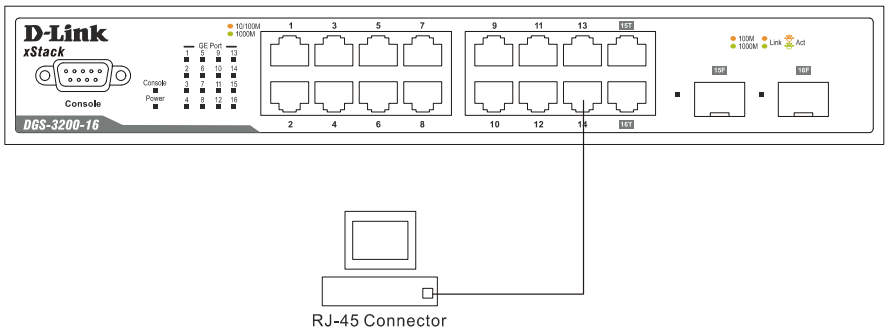


Figure 3- 3. Switch, e.g DGS-3200-16, uplink connection to a server, PC, or switch stack

Section 4

Introduction to Switch Management

Management Options

This system may be managed out-of-band through the console port on the front panel or in-band using Telnet. The user may also choose the web-based management, accessible through a web browser.

1. Web-based Management Interface

After successfully installing the Switch, the user can configure the Switch, monitor the LED panel, and display statistics graphically using a web browser, such as Netscape Navigator (version 6.2 and higher) or Microsoft® Internet Explorer (version 5.0 and higher).

2. SNMP-Based Management

The Switch can be managed with an SNMP-compatible console program. The Switch supports SNMP version 1.0, version 2.0 and version 3.0. The SNMP agent decodes the incoming SNMP messages and responds to requests with MIB objects stored in the database. The SNMP agent updates the MIB objects to generate statistics and counters.

3. Command Line Interface through the Serial Port

The user can also connect a computer or terminal to the serial console port to access the Switch. The command line interface provides complete access to all Switch management features.

Connecting the Console Port (RS-232 DCE/RJ-45)

The DGS-3200-10 and DGS-3200-16 provide an RS-232 serial port that enables a connection to a computer or terminal for monitoring and configuring the Switch. This port is a female DB-9 connector, implemented as a data terminal equipment (DTE) connection.

The DGS-3200-24 features a combo console with an RS-232 serial port and an RJ-45 console port to connect to the Switch's console. The RS-232 DB-9 console has a higher priority than the the RJ-45 console port. The RS-232 DB-9 console connection can read and write information, where as the RJ-45 console port can only read information when a user simultaneously connects to the Switch with the RS-232 DB-9 and RJ-45 console ports.

To use the console port, the following equipment is needed:

- A terminal or a computer with both a serial port and the ability to emulate a terminal.
- A null modem or crossover RS-232 cable with a female DB-9 connector for the console port on the Switch.

To connect a terminal to the console port:

Connect the female connector of the RS-232 cable directly to the console port on the Switch, and tighten the captive retaining screws.

Connect the other end of the cable to a terminal or to the serial connector of a computer running terminal emulation software. Set the terminal emulation software as follows:

- Select the appropriate serial port (COM port 1 or COM port 2).
- Set the data rate to 115200 baud.
- Set the data format to 8 data bits, 1 stop bit, and no parity.
- Set flow control to none.
- Under Properties, select VT100 for Emulation mode.
- Select Terminal keys for Function, Arrow and Ctrl keys. Make sure to use Terminal keys (not Windows keys) are selected.

NOTE: When using HyperTerminal with the Microsoft® Windows® 2000 operating system, ensure that Windows 2000 Service Pack 2 or later is installed. Windows 2000 Service Pack 2 allows use of arrow keys in HyperTerminal's VT100 emulation. See www.microsoft.com for information on Windows 2000 service packs.

- After you have correctly set up the terminal, plug the power cable into the power receptacle on the back of the Switch. The boot sequence appears in the terminal.
- After the boot sequence completes, the console login screen displays.
- If the user has not logged into the command line interface (CLI) program, press the Enter key at the User name and password prompts. There is no default user name and password for the Switch. The administrator must first create user names and passwords. If user accounts have been previously set up, log in and continue to configure the Switch.
- Enter the commands to complete desired tasks. Many commands require administrator-level access privileges. Read the next section for more information on setting up user accounts. See the ***DGS-3200 Series CLI Manual*** on the documentation CD for a list of all commands and additional information on using the CLI.
- To end a management session, use the logout command or close the emulator program.

If problems occur in making this connection on a PC, make sure the emulation is set to VT-100. The emulation settings can be configured by clicking on the File menu in the HyperTerminal window by clicking on Properties in the drop-down menu, and then clicking the Settings tab. This is where you will find the Emulation options. If you still do not see anything, try rebooting the Switch by disconnecting its power supply.

Once connected to the console, the screen below will appear on the console screen. This is where the user will enter commands to perform all the available management functions. The Switch will prompt the user to enter a user name and a password. Upon the initial connection, there is no user name or password and therefore just press enter twice to access the command line interface.

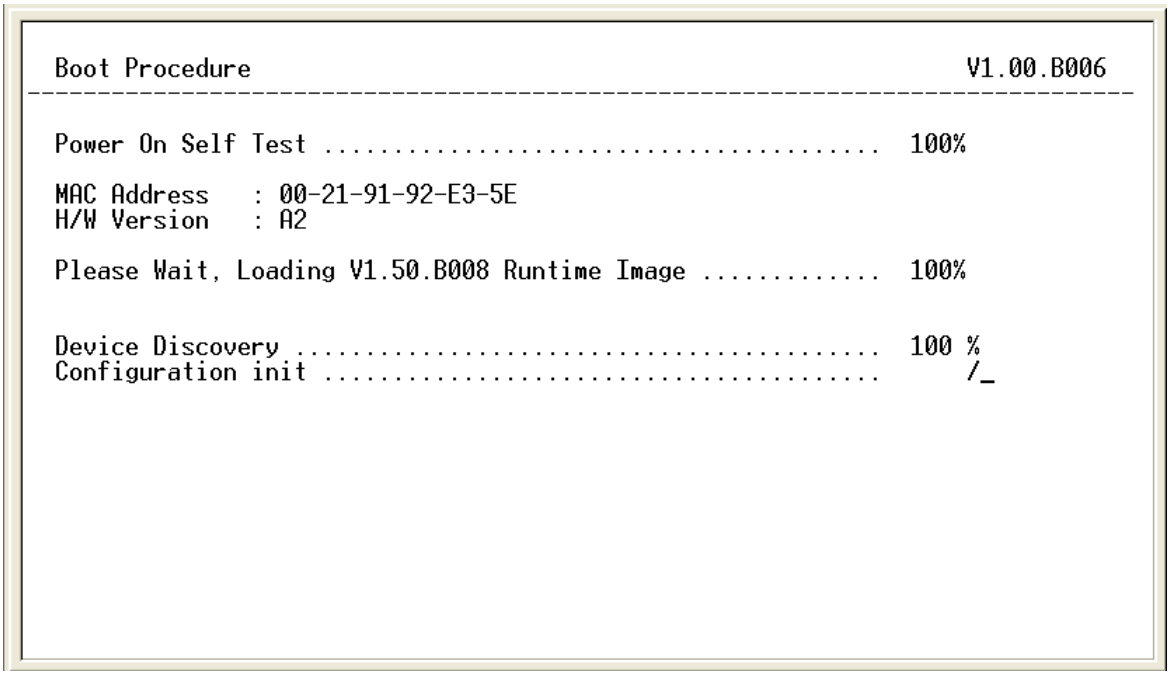


Figure 4- 1. Boot up display in console screen

Managing the Switch for the First Time

The Switch supports user-based security that can allow prevention of unauthorized users from accessing the Switch or changing its settings. This section tells how to log onto the Switch via out-if-band console connection.

NOTE: The passwords used to access the Switch are case-sensitive; for example, "S" is not the same as "s."

Upon initial connection to the Switch, the login screen appears (see example below).

NOTE: Press Ctrl+R to refresh the screen. This command can be used at any time to force the console program in the Switch to refresh the console screen.

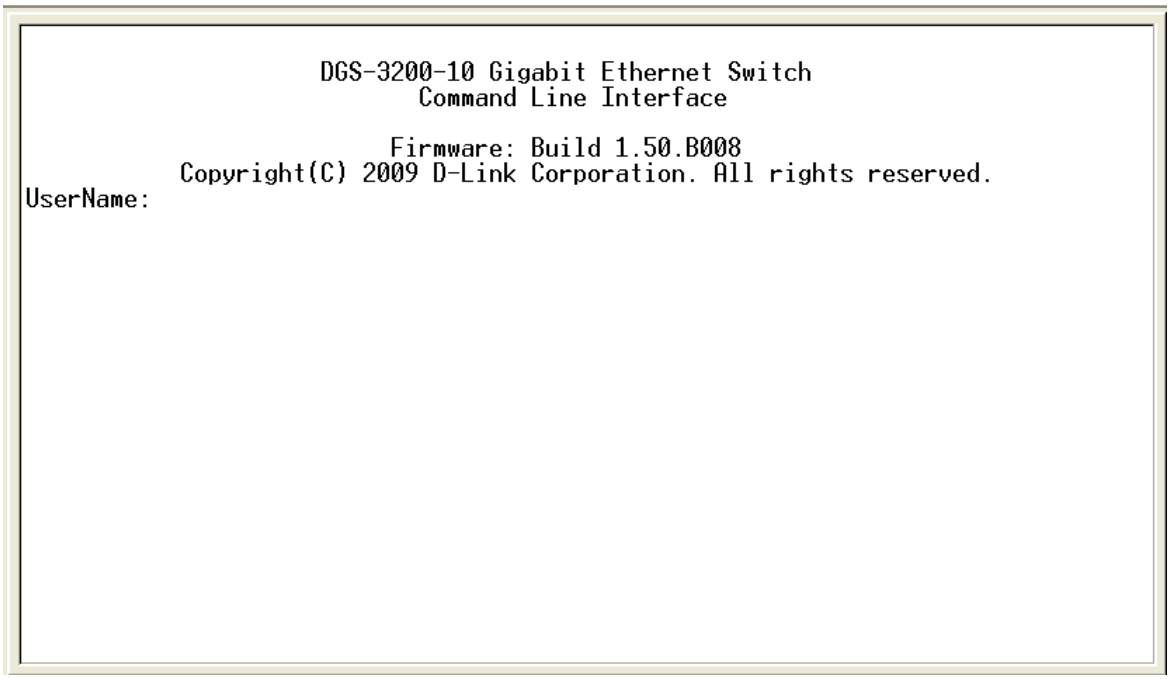


Figure 4- 2. Initial screen, first time connecting to the Switch

Press **Enter** in both the Username and Password fields. Then access will be given to enter commands after the command prompt **DGS-3200-10:4#**.

There is no initial username or password. Leave the Username and Password fields blank.

NOTE: The first user automatically gets Administrator level privileges. At least one Admin-level user account must be created for the Switch.

Password Protection

The switches do not have a default user name and password. One of the first tasks when settings up the Switch is to create user accounts. Logging in using a predefined administrator-level user name will give the user privileged access to the Switch's management software.

After the initial login, define new passwords for both default user names to prevent unauthorized access to the Switch, and record the passwords for future reference.

To create an administrator-level account for the Switch, do the following:

1. At the CLI login prompt, enter create account admin followed by the <*user name*> and press the **Enter** key.
2. The Switch will then prompt the user to provide a password. Type the <*password*> used for the administrator account being created and press the **Enter** key.
3. Once entered, the Switch will again ask the user to enter the same password again to verify it. Type the same password and press the **Enter** key.
4. A "Success" response by the Switch will verify the creation of the new administrator.

NOTE: Passwords are case sensitive. User names and passwords can be up to 15 characters in length.

The sample below illustrates a successful creation of a new administrator-level account with the user name "newmanager".

```
DGS-3200-10:4#create account admin newmanager
Command: create account admin newmanager

Enter a case-sensitive new password:********
Enter the new password again for confirmation:********

Success.

DGS-3200-10:4#
```

Figure 4- 3. Create administrator-level account screen

NOTICE: CLI configuration commands only modify the running configuration file and are not saved when the Switch is rebooted. To save all configuration changes in non-volatile memory, use the **save** command to copy the running configuration file to the startup configuration.

SNMP Settings

Simple Network Management Protocol (SNMP) is an OSI Layer 7 (Application Layer) designed specifically for managing and monitoring network devices. SNMP enables network management stations to read and modify the settings of gateways, routers, switches and other network devices. Use SNMP to configure system features for proper operation, monitor performance and detect potential problems in the Switch, switch group or network.

Managed devices that support SNMP include software (referred to as an agent), which runs locally on the device. A defined set of variables (managed objects) is maintained by the SNMP agent and used to manage the device. These objects are defined in a Management Information Base (MIB), which provides a standard presentation of the information controlled by the on-board SNMP agent. SNMP defines both the format of the MIB specifications and the protocol used to access this information over the network.

The Switch supports SNMP versions 1, 2c, and 3. The administrator may specify which version of SNMP to use to monitor and control the Switch. The three versions of SNMP vary in the level of security provided between the management station and the network device.

In SNMP v.1 and v.2, user authentication is accomplished using 'community strings', which function like passwords. The remote user SNMP application and the Switch SNMP must use the same community string. SNMP packets from any station that has not been authenticated are ignored (dropped).

The default community strings for the Switch used for SNMP v.1 and v.2 management access are:

- public - Allows authorized management stations to retrieve MIB objects.
- private - Allows authorized management stations to retrieve and modify MIB objects.

SNMP v.3 uses a more sophisticated authentication process that is separated into two parts. The first part is to maintain a list of users and their attributes that are allowed to act as SNMP managers. The second part describes what each user on that list can do as an SNMP manager.

The Switch allows groups of users to be listed and configured with a shared set of privileges. The SNMP version may also be set for a listed group of SNMP managers. Thus, a group of SNMP managers can be created to view read-only information or receive traps using SNMP v.1 while assigning a higher level of security to another group, granting read/write privileges using SNMP v.3.

Using SNMP v.3 individual users or groups of SNMP managers can be allowed to perform or be restricted from performing specific SNMP management functions. The functions allowed or restricted are defined using the Object Identifier (OID) associated with a specific MIB. An additional layer of security is available for SNMP v.3 in that SNMP messages may be encrypted. To read more about how to configure SNMP v.3 settings for the Switch read the section entitled Management.

Traps

Traps are messages that alert network personnel of events that occur on the Switch. The events can be as serious as a reboot (someone accidentally turned OFF the Switch), or less serious like a port status change. The Switch generates traps and sends

them to the trap recipient (or network manager). Typical traps include trap messages for Authentication Failure, Topology Change and Broadcast\Multicast Storm.

MIBs

The Switch in the Management Information Base (MIB) stores management and counter information. The Switch uses the standard MIB-II Management Information Base module. Consequently, values for MIB objects can be retrieved from any SNMP-based network management software. In addition to the standard MIB-II, the Switch also supports its own proprietary enterprise MIB as an extended Management Information Base. The proprietary MIB may also be retrieved by specifying the MIB Object Identifier. MIB values can be either read-only or read-write.

IP Address Assignment

An IP Address must be assigned to each switch, which is used for communication with an SNMP network manager or other TCP/IP application (for example BOOTP, TFTP). The Switch's default IP address is 10.90.90.90. The user may change the default Switch IP address to meet the specification of your networking address scheme.

The Switch is also assigned a unique MAC address by the factory. This MAC address cannot be changed, and can be found by entering the command "**show switch**" into the command line interface, as shown below.

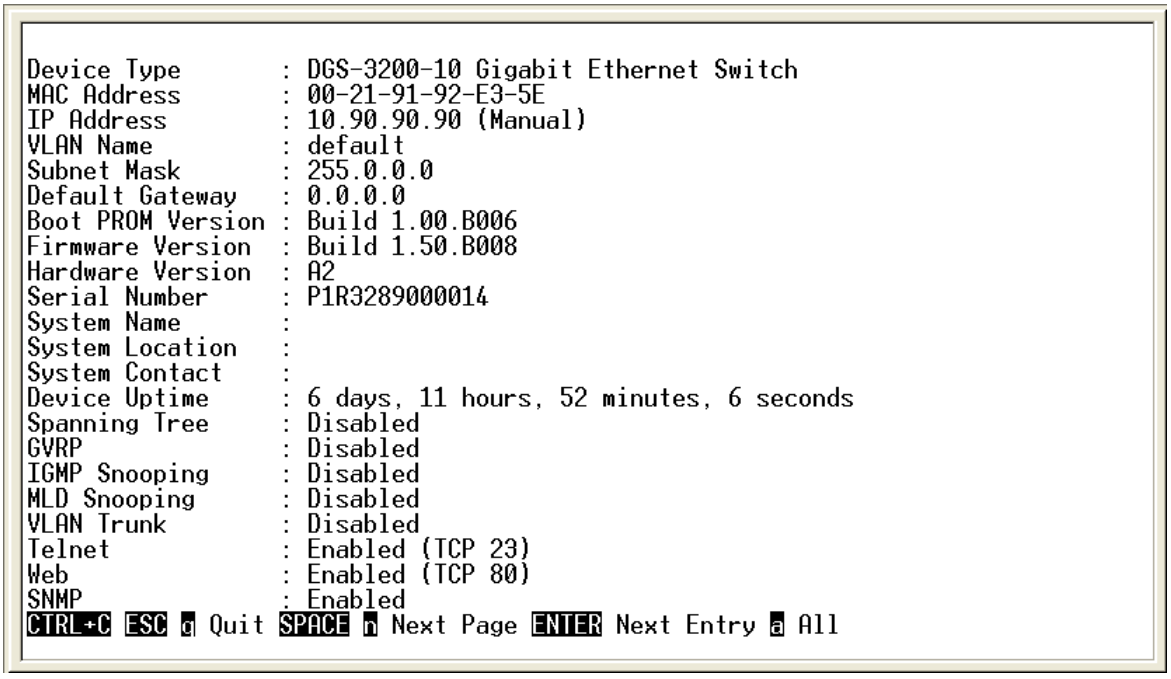


Figure 4- 4. "show switch" command

The Switch's MAC address also appears in the **Device Information** and **System Information** windows of the Web-based management interface. The IP address for the Switch must be set before using the Web-based manager. The Switch IP address can be automatically set using BOOTP or DHCP protocols, in which case the actual address assigned to the Switch must be known. The IP address may be set using the Command Line Interface (CLI) over the console serial port as follows:

Starting at the command line prompt, enter the command:

config ipif System ipaddress xxx.xxx.xxx.xxx/yyy.yyy.yyy.yyy

Where the x's represent the IP address to be assigned to the IP interface named System and the y's represent the corresponding subnet mask. Alternatively, the user can enter **config ipif System ipaddress xxx .xxx.xxx.xxx/z.** Where the x's represent the IP address to be assigned to the IP interface named System and the z represents the corresponding number of subnets in CIDR notation. The IP interface named System on the Switch can be assigned an IP address and subnet mask, which can then be used to connect a management station to the Switch's Telnet or Web-based management agent.

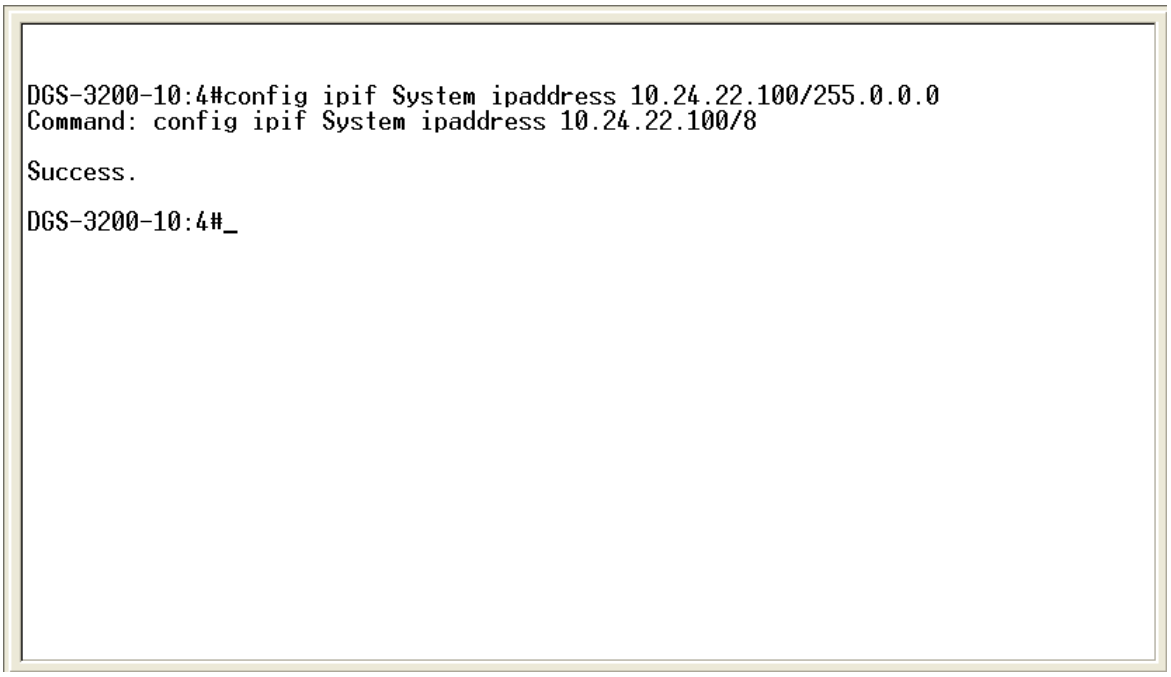


Figure 4- 5. Assigning the Switch an IP Address

In the above example, the Switch was assigned an IP address of 10.24.22.100 with a subnet mask of 255.0.0.0. The system message **Success** indicates that the command was executed successfully. The Switch can now be configured and managed via Telnet and the CLI or via the Web-based management.

Section 5

Web-based Switch Configuration

Introduction

All software functions of the Switch can be managed, configured, and monitored via the embedded web-based (HTML) interface. Manage the Switch from remote stations anywhere on the network through a standard browser, such as Internet Explorer 5.5 or later, Netscape 8.0 or later, or Firefox 2.0 or later. The browser acts as a universal access tool and can communicate directly with the Switch using the HTTP protocol.

The Web-based management module and the Console program (and Telnet) are different ways to access the same internal switching software and configure it. Thus, all settings encountered in web-based management are the same as those found in the console program.

Logging onto the Web Manager

To begin managing the Switch, simply run the browser installed on your computer and point it to the IP address you have defined for the device. The URL in the address bar should read something like: http://123.123.123.123, where the numbers 123 represent the IP address of the Switch.

NOTE: The factory default IP address is 10.90.90.90.

This opens the management module's user authentication window, as seen below.

Figure 5- 1. Enter Network Password window

Enter "admin" in both the User Name field and the Password field and click **OK**. This will open the Web-based user interface. The Switch management features available in the web-based manager are explained below.

Web-based User Interface

The user interface provides access to various Switch configuration and management windows, allows the user to view performance statistics, and permits graphical monitoring of the system status.

Areas of the User Interface

The figure below shows the user interface. Three distinct areas divide the user interface, as described in the table.

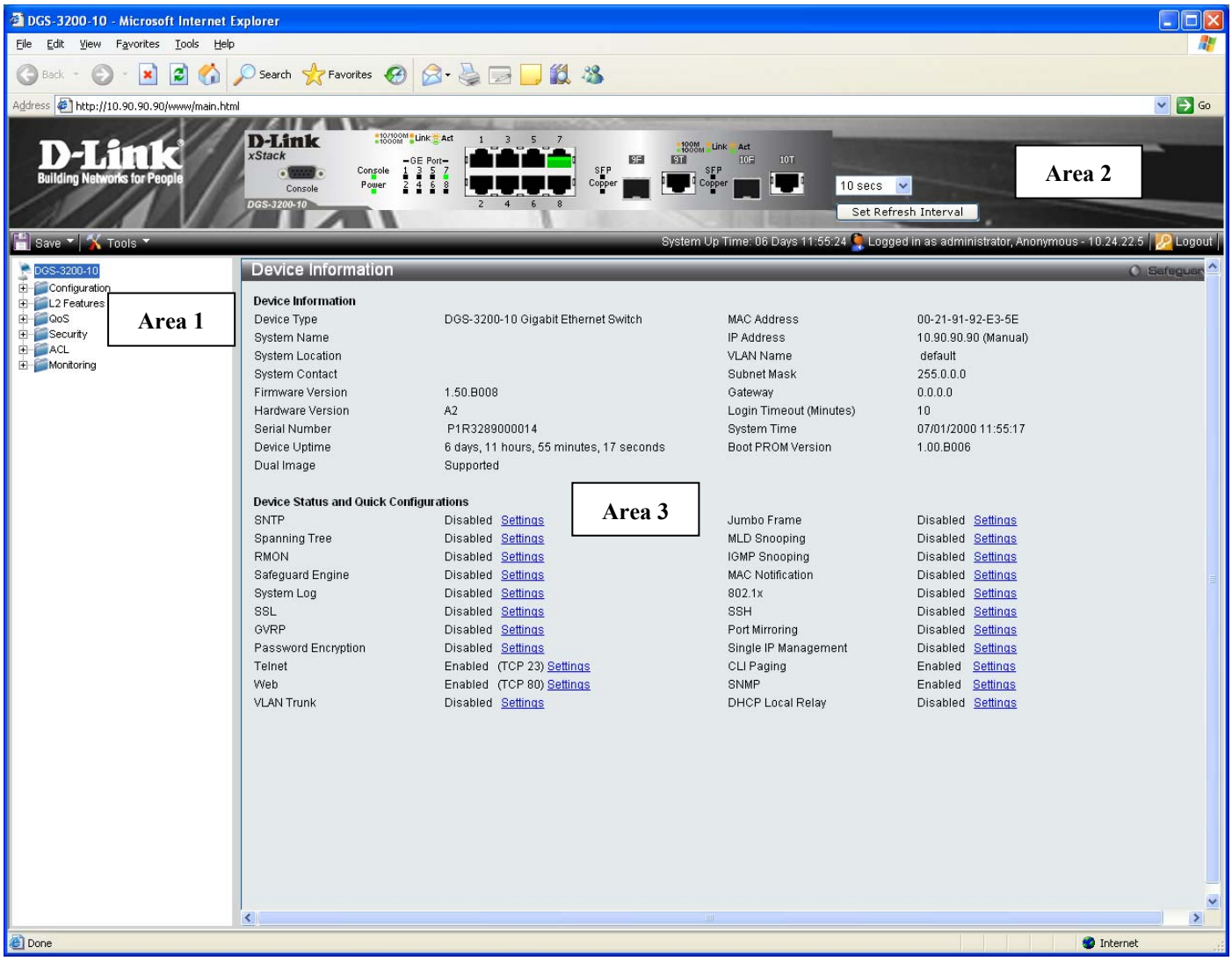


Figure 5- 2. Main Web-Manager window

Area	Function
Area 1	Select the folder or window to display. Open folders and click the hyperlinked window buttons and subfolders contained within them to display windows.
Area 2	Presents a graphical near real-time image of the front panel of the Switch. This area displays the Switch's ports and expansion modules and shows port activity, depending on the specified mode. Some management functions, including port monitoring are accessible here. Click the D-Link logo to go to the D-Link website.
Area 3	Presents Switch status based on user selection and the entry of configuration data. In addition, hyperlinks are offered for many Switch features to enable quick configuration.

Web Pages

When connecting to the management mode of the Switch with a Web browser, a login screen is displayed. Enter a user name and password to access the Switch's management mode.

Below is a list of the folders and windows available in the Web interface:

Configuration – Contains the following main folders, windows, and related windows: System Information, Serial Port Settings, IP Address, IPv6 Interface Settings, IPv6 Route Table, IPv6 Neighbor Settings, Port Configuration, Port Settings, Port Description, Port Error Disabled, Static ARP Settings, User Accounts, System Log Configuration, System Log Settings, System Log Host, System Severity Settings, DHCP/BOOTP Relay, DHCP/BOOTP Relay Global Settings, DHCP/BOOTP Relay Interface Settings, DHCP Local Relay Settings, DHCP Auto Configuration Settings, MAC Address Aging Time, Web Settings, Telnet Settings, Password Encryption, CLI Paging Settings, Firmware Information, Power Saving Settings, Dual Configuration Settings, SMTP Settings, Ping Test, SNTP Settings, Time Settings, TimeZone Settings, MAC Notification Settings, MAC Notification Global Settings, MAC Notification Port Settings, SNMP Settings, SNMP Global State Settings, SNMP Linkchange Trap Settings, SNMP View Table, SNMP Group Table, SNMP User Table, SNMP Community Table, SNMP Host Table, SNMP v6Host Table, SNMP Engine ID, SNMP Trap Configuration, RMON, CPU Filter L3 Control Packet Settings, Single IP Management, and Single IP Settings, Topology, Firmware Upgrade, Configuration File Backup/Restore, and Upload Log File, and SD Card FS Settings.

L2 Features – Contains the following main folders, windows, and related windows: Jumbo Frame, Egress Filter Settings, 802.1Q VLAN, Private VLAN Settings, 802.1v Protocol VLAN, 802.1v Protocol Group Settings, 802.1v Protocol VLAN Settings, MAC Based VLAN Settings, GVRP Settings, PVID Auto Assign Settings, Port Trunking, VLAN Trunk Settings, LACP Port Settings, Traffic Segmentation, IGMP Snooping, IGMP Snooping Settings, Data Driven Learning Settings, ISM VLAN Settings, ISM Profile Settings, IP Multicast Profile Settings, Limited Multicast Address Range Settings, Max Multicast Group Settings, MLD Snooping Settings, Port Mirroring, Loopback Detection Settings, Spanning Tree, STP Bridge Global Settings, STP Port Settings, MST Configuration Identification, STP Instance Settings, MSTP Port Information, Forwarding & Filtering, Unicast Forwarding, Multicast Forwarding, and Multicast Filtering Mode.

QoS – Contains the following main folders, windows, and related windows: Bandwidth Control, Traffic Control, 802.1p Default Priority, 802.1p User Priority, and QoS Scheduling Mechanism.

Security – Contains the following main folders, windows, and related windows: Safeguard Engine, Trusted Host, IP-MAC-Port Binding, IMP Global Settings, IMP Port Settings, IMP Entry Settings, DHCP Snooping Entries, MAC Block List, Port Security, Port Security Settings, Port Lock Entries, DHCP Server Screening, DHCP Screening Port Settings, DHCP Offer Filtering, Guest VLAN, 802.1X, 802.1X Settings, 802.1X User, Initialize Port(s), Reauthenticate Port(s), Authentic RADIUS Server, SSL Settings, SSH, SSH Configuration, SSH Authmode and Algorithm Settings, SSH User Authentication Mode, Access Authentication Control, Authentication Policy and Parameter Settings, Application Authentication Settings, Authentication Server Group, Authentication Server Host, Login Method Lists, Enable Method Lists, Configure Local Enable Password, Enable Admin, MAC-based Access Control, MAC-based Access Control Settings, MAC-based Access Control Local Settings, Web Authentication, WAC Global Settings, WAC User Settings, WAC Port Settings, JWAC, JWAC Global Settings, JWAC Port Settings, JWAC User Settings, JWAC Customize Page Language, JWAC Customize Page, Multiple Authentication, Authorization Network State Settings, Multiple Authentication Settings, Guest VLAN, IGMP Access Control Settings, and ARP Spoofing Prevention Settings.

ACL – Contains the following main folders, windows, and related windows: Access Configuration Wizard, Access Profile List, CPU Access Profile List, and Time Range Settings.

Monitoring – Contains the following main folders, windows, and related windows: Device Environment, Cable Diagnostics, CPU Utilization, Port Utilization, Packet Size, Packets, Received (RX), UMB_cast (RX), Transmitted (TX), Errors, Received (RX), Transmitted (TX), Port Access Control, RADIUS Authentication, RADIUS Account Client, Authenticator State, Authenticator Statistics, Authenticator Session Statistics, Authenticator Diagnostics, Browse ARP Table, Browse VLAN, Browse Router Port, Browse MLD Router Port, Browse Session Table, IGMP Snooping Group, MLD Snooping Group, WAC Authenticating State, JWAC Host Table, MAC Address Table, System Log, and MAC-based Access Control Authentication State.

Save – Contains links for Save Configuration, Save Log, and Save All.

Tools – Contains the following windows: Download Configuration/Download Configuration File to NV-RAM, Download Configuration File to SD Card, Download Firmware/Download Firmware to NV-RAM, Download Firmware to SD Card, Upload Configuration File/Upload Configuration File to TFTP, Upload Log File/Upload Log File to TFTP, Reset, and Reboot System.

NOTE: Be sure to configure the user name and password in the **User Accounts** window before connecting the Switch to the greater network.

Appendix A – Technical Specifications

General		
Standards	IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3ab 1000BASE-T Gigabit Ethernet IEEE 802.3z 1000BASE-T (SFP "Mini GBIC") IEEE 802.1D/2004/Spanning Tree (802.1s, 802.1w) IEEE 802.1Q-2005 VLAN IEEE 802.1p Priority Queues IEEE 802.1X Network Access Control IEEE 802.3 Nway auto-negotiation IEEE 802.3ad Link Aggregation Control IEEE 802.3x Full-duplex Flow Control IEEE 802.1u Fast Ethernet	
Protocols	CSMA/CD	
Data Transfer Rates:	Half-duplex	Full-duplex
Ethernet	10 Mbps	20Mbps
Fast Ethernet	100Mbps	200Mbps
Gigabit Ethernet	--	2000Mbps
Fiber Optic	SFP (Mini GBIC) Support IEEE 802.3z 1000BASE-LX (DEM-310GT transceiver) IEEE 802.3z 1000BASE-SX (DEM-311GT transceiver) IEEE 802.3z 1000BASE-SX (DEM-312GT2 transceiver) IEEE 802.3z 1000BASE-LH (DEM-314GT transceiver) IEEE 802.3z 1000BASE-ZX (DEM-315GT transceiver) IEEE 802.3z 100BASE-FX (DEM-210 transceiver) IEEE 802.3z 100BASE-FX (DEM-211 transceiver) WDM Single Mode Transceiver 10km (DEM-330T/R) WDM Single Mode Transceiver 40km (DEM-331T/R) WDM Single Mode Transceiver 20km (DEM-220T/R)	
Topology	Duplex Ring, Duplex Chain	
Network Cables	Cat.5 Enhanced for 1000BASE-T UTP Cat.5, Cat. 5 Enhanced for 100BASE-TX UTP Cat.3, 4, 5 for 10BASE-T EIA/TIA-568 100-ohm screened twisted-pair (STP)(100m)	

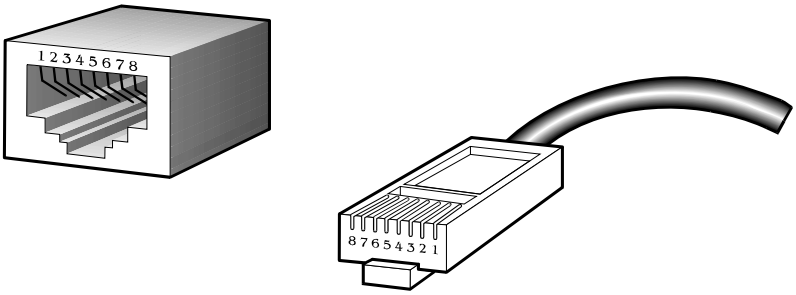
Physical and Environmental	
Internal Power Supply	DGS-3200-10 & DGS-3200-16: AC Input: 100 – 240 VAC, 50-60 Hz DGS-3200-24: AC Input: 100 – 240 VAC, 50-60 Hz, with RPS 200
Optional Redundant Power Supply (DGS-3200-24 only)	One connector in back to install optional external RPS. When internal power fails, the optional external RPS will take over all the power supply immediately and automatically. Supported RPS model: DPS-200
SD Card (DGS-3200-24 only)	• Supports file system. • Save multiple images, configuration files, and logs to SD card. • Boot Switch up with firmware and configuration files stored on SD card.
Fans	DGS-3200-10: No fan. DGS-3200-16: One smart fan (default off). DGS-3200-24: Two smart fans (default low speed).
Power Consumption	DGS-3200-10: 20.9 Watts (Max.) DGS-3200-16: 28.9 Watts (Max.) DGS-3200-24: 41.9 Watts (Max.)
Operating Temperature	DGS-3200-10: 0 - 40°C DGS-3200-16 & DGS-3200-24: 0 - 50°C
Storage Temperature	-40 - 70°C
Humidity	5 - 95% non-condensing
Dimensions	DGS-3200-10 & DGS-3200-16: 280mm (W) x 180mm (D) x 43mm (H) DGS-3200-24: 440mm (W) x 210mm (D) x 44mm (H)
Weight	DGS-3200-10: 1.69kg DGS-3200-16: 1.86kg DGS-3200-24: 2.43kg
EMI	CE Class A, FCC Class A, VCCI Class A, C-Tick Report
Safety	UL, CB Report

Performance	
Transmission Method	Store-and-forward
Packet Buffer	DGS-3200-10: 128K Byte (1M bit) per device DGS-3200-16 & DGS-3200-24: 786K Byte (6M bit) per device
Packet Filtering / Forwarding Rate	Full-wire speed for all connections 1,488,095 pps per port (for 1000Mbps)
MAC Address Learning	Automatic update. DGS-3200-10: Supports 8K MAC address DGS-3200-16 & DGS-3200-24: Supports 16K MAC address
Priority Queues	8 Priority Queues per port
Forwarding Table Age Time	Max age: 10-875 seconds, Default = 300

Appendix B – Cables and Connectors

When connecting the Switch to another switch, a bridge or hub, a normal cable is necessary. Please review these products for matching cable pin assignment.

The following diagrams and tables show the standard RJ-45 receptacle/connector and their pin assignments.



Appendix B- 1. The standard RJ-45 port and connector

RJ-45 Pin Assignments		
Contact	MDI-X Port	MDI-II Port
1	RD+ (receive)	TD+ (transmit)
2	RD- (receive)	TD- (transmit)
3	TD+ (transmit)	RD+ (receive)
4	1000BASE-T	1000BASE-T
5	1000BASE-T	1000BASE-T
6	TD- (transmit)	RD- (receive)
7	1000BASE-T	1000BASE-T
8	1000BASE-T	1000BASE-T

Appendix B- 2. The standard RJ-45 pin assignments

Appendix C – Module Specs and Cable Lengths

Use the following table to as a guide for the module specs and maximum cable lengths.

Standard	Media Type	Maximum Distance
Mini-GBIC	1000BASE-LX, Single-mode fiber module 1000BASE-SX, Multi-mode fiber module 1000BASE-LH, Single-mode fiber module 1000BASE-ZX, Single-mode fiber module	10km 550m / 2km 50km 80km
1000BASE-T	Category 5e UTP Cable	100m
100BASE-TX	Category 5 UTP Cable (100 Mbps)	100m
10BASE-T	Category 3, 4 or 5 UTP Cable (10 Mbps)	100m
DEM-310GT	1000Base-LX, Single-mode	10km
DEM-311GT	1000ase-SX, Mutli-mode	500m
DEM-312GT2	1000Base-SX, Multi-mode	2km
DEM-314GT	1000BASE-LH, Single-mode	50km
DEM-315GT	1000BASE-ZX, Single-mode	80km
DEM-210	100BASE-FX, Single-mode	15km
DEM-211	100BASE-FX, Multi-mode	2km
DEM-220T	100BASE-BX, Single-mode	up to 20km
DEM-220R	100BASE-BX, Single-mode	up to 20km
DEM-330T	TX-1550/RX-1310nm, Single-mode	up to 10km
DEM-330R	TX-1310/RX-1550 nm, Single-mode	up to 10km
DEM-331T	TX-1550/RX-1310 nm, Single-Mode	up to 40km
DEM-331R	TX-1310/RX-1550 nm, Single-Mode	up to 40km

Appendix D – Glossary

1000BASE-SX: A short laser wavelength on multimode fiber optic cable for a maximum length of 2 kilometers.

1000BASE-LX: A long wavelength for a "long haul" fiber optic cable for a maximum length of 10 kilometers.

100BASE-FX: 100Mbps Ethernet implementation over fiber.

100BASE-TX: 100Mbps Ethernet implementation over Category 5 and Type 1 Twisted Pair cabling.

10BASE-T: The IEEE 802.3 specification for Ethernet over Unshielded Twisted Pair (UTP) cabling.

aging: The automatic removal of dynamic entries from the Switch Database which have timed-out and are no longer valid.

ATM: Asynchronous Transfer Mode. A connection oriented transmission protocol based on fixed length cells (packets). ATM is designed to carry a complete range of user traffic, including voice, data and video signals.

auto-negotiation: A feature on a port which allows it to advertise its capabilities for speed, duplex and flow control. When connected to an end station that also supports auto-negotiation, the link can self-detect its optimum operating setup.

backbone port: A port which does not learn device addresses, and which receives all frames with an unknown address. Backbone ports are normally used to connect the Switch to the backbone of your network. Note that backbone ports were formerly known as designated downlink ports.

backbone: The part of a network used as the primary path for transporting traffic between network segments.

bandwidth: Information capacity, measured in bits per second, that a channel can transmit. The bandwidth of Ethernet is 10Mbps, the bandwidth of Fast Ethernet is 100Mbps.

baud rate: The switching speed of a line. Also known as line speed between network segments.

BOOTP: The BOOTP protocol allows automatic mapping of an IP address to a given MAC address each time a device is started. In addition, the protocol can assign the subnet mask and default gateway to a device.

bridge: A device that interconnects local or remote networks no matter what higher level protocols are involved. Bridges form a single logical network, centralizing network administration.

broadcast: A message sent to all destination devices on the network.

broadcast storm: Multiple simultaneous broadcasts that typically absorb available network bandwidth and can cause network failure.

console port: The port on the Switch accepting a terminal or modem connector. It changes the parallel arrangement of data within computers to the serial form used on data transmission links. This port is most often used for dedicated local management.

CSMA/CD: Channel access method used by Ethernet and IEEE 802.3 standards in which devices transmit only after finding the data channel clear for some period of time. When two devices transmit simultaneously, a collision occurs and the colliding devices delay their retransmissions for a random amount of time.

data center switching: The point of aggregation within a corporate network where a switch provides high-performance access to server farms, a high-speed backbone connection and a control point for network management and security.

Ethernet: A LAN specification developed jointly by Xerox, Intel and Digital Equipment Corporation. Ethernet networks operate at 10Mbps using CSMA/CD to run over cabling.

Fast Ethernet: 100Mbps technology based on the CSMA/CD network access method.

Flow Control: (IEEE 802.3X) A means of holding packets back at the transmit port of the connected end station. Prevents packet loss at a congested switch port.

forwarding: The process of sending a packet toward its destination by an internetworking device.

full duplex: A system that allows packets to be transmitted and received at the same time and, in effect, doubles the potential throughput of a link.

half duplex: A system that allows packets to be transmitted and received, but not at the same time. Contrast with full duplex.

IP address: Internet Protocol address. A unique identifier for a device attached to a network using TCP/IP. The address is written as four octets separated with full-stops (periods), and is made up of a network section, an optional subnet section and a host section.

IPX: Internetwork Packet Exchange. A protocol allowing communication in a NetWare network.

LAN - Local Area Network: A network of connected computing resources (such as PCs, printers, servers) covering a relatively small geographic area (usually not larger than a floor or building). Characterized by high data rates and low error rates.

latency: The delay between the time a device receives a packet and the time the packet is forwarded out of the destination port.

line speed: See baud rate.

main port: The port in a resilient link that carries data traffic in normal operating conditions.

MDI - Medium Dependent Interface: An Ethernet port connection where the transmitter of one device is connected to the receiver of another device.

MDI-X - Medium Dependent Interface Cross-over: An Ethernet port connection where the internal transmit and receive lines are crossed.

MIB - Management Information Base: Stores a device's management characteristics and parameters. MIBs are used by the Simple Network Management Protocol (SNMP) to contain attributes of their managed systems. The Switch contains its own internal MIB.

multicast: Single packets copied to a specific subset of network addresses. These addresses are specified in the destination-address field of the packet.

protocol: A set of rules for communication between devices on a network. The rules dictate format, timing, sequencing and error control.

resilient link: A pair of ports that can be configured so that one will take over data transmission should the other fail. See also main port and standby port.

RJ-45: Standard 8-wire connectors for IEEE 802.3 10BASE-T networks.

RMON: Remote Monitoring. A subset of SNMP MIB II that allows monitoring and management capabilities by addressing up to ten different groups of information.

RPS - Redundant Power System: A device that provides a backup source of power when connected to the Switch.

server farm: A cluster of servers in a centralized location serving a large user population.

SLIP - Serial Line Internet Protocol: A protocol which allows IP to run over a serial line connection.

SNMP - Simple Network Management Protocol: A protocol originally designed to be used in managing TCP/IP internets. SNMP is presently implemented on a wide range of computers and networking equipment and may be used to manage many aspects of network and end station operation.

Spanning Tree Protocol (STP): A bridge-based system for providing fault tolerance on networks. STP works by allowing the user to implement parallel paths for network traffic, and ensure that redundant paths are disabled when the main paths are operational and enabled if the main paths fail.

standby port: The port in a resilient link that will take over data transmission if the main port in the link fails.

switch: A device which filters, forwards and floods packets based on the packet's destination address. The switch learns the addresses associated with each switch port and builds tables based on this information to be used for the switching decision.

TCP/IP: A layered set of communications protocols providing Telnet terminal emulation, FTP file transfer, and other services for communication among a wide range of computer equipment.

Telnet: A TCP/IP application protocol that provides virtual terminal service, letting a user log in to another computer system and access a host as if the user were connected directly to the host.

TFTP - Trivial File Transfer Protocol: Allows the user to transfer files (such as software upgrades) from a remote device using your switch's local management capabilities.

UDP - User Datagram Protocol: An Internet standard protocol that allows an application program on one device to send a datagram to an application program on another device.

VLAN - Virtual LAN: A group of location- and topology-independent devices that communicate as if they are on a common physical LAN.

VLT - Virtual LAN Trunk: A Switch-to-Switch link which carries traffic for all the VLANs on each Switch.

VT100: A type of terminal that uses ASCII characters. VT100 screens have a text-based appearance.

Warranty and Support (USA Only)

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. (“D-Link”) provides this lifetime product warranty for hardware:

- Only for products purchased, delivered and used within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, or addresses with an APO or FPO, and;
- Only with proof of purchase.

Product Warranty: D-Link warrants that the hardware portion of the D-Link product, including internal and external power supplies and fans (“Hardware”), will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product (“Warranty Period”), except as otherwise stated herein.

The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Warranty will be, at D-Link’s option, to repair or replace the defective Hardware during the Warranty Period at no charge to the owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement hardware need not be new or have an identical make, model or part. D-Link may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace the defective Hardware, the actual price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware or part thereof that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

Software Warranty: D-Link warrants that the software portion of the product (“Software”) will substantially conform to D-Link’s then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days (“Software Warranty Period”), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Software Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link’s option, to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link’s functional specifications for the Software or to refund the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by D-Link in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Replacement Software will be warranted for the remainder of the original Warranty Period and is subject to the same limitations and exclusions. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

Non-Applicability of Warranty: The Warranty provided hereunder for D-Link's products will not be applied to and does not cover any products obtained through a special or unique pricing agreement, if such agreement provides for warranty terms different from those normally provided with the product or set forth herein, nor to any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold "As-Is" without any warranty whatsoever including, without limitation, the Warranty as described herein, notwithstanding anything stated herein to the contrary.

Submitting A Claim: The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product).
- The customer must obtain a Case ID Number from D-Link Technical Support by going to https://support.dlink.com, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization (“RMA”) number by completing the RMA form and entering the assigned Case ID Number at https://rma.dlink.com/.
- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Include any manuals or accessories in the shipping package.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery (“COD”) is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to **D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708**. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer.

D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link’s reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

What Is Not Covered: The Warranty provided herein by D-Link does not cover: Products that, in D-Link’s judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; and Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product. While necessary maintenance or repairs on your Product can be performed by any company, we recommend that you use only an Authorized D-Link Service Office. Improper or incorrectly performed maintenance or repair voids this Warranty.

Disclaimer of Other Warranties: EXCEPT AS SPECIFICALLY SET FORTH ABOVE OR AS REQUIRED BY LAW, THE PRODUCT IS PROVIDED “AS-IS” WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO NINETY (90) DAYS. EXCEPT AS EXPRESSLY COVERED UNDER THE WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

Limitation of Liability: TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK'S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NON-CONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY.

Lifetime Warranty: IF LOCAL LAW MANDATES THE USE OF A DEFINITION OF "LIFETIME WARRANTY" DIFFERENT FROM THAT PROVIDED HEREIN, THEN THE LOCAL LAW DEFINITION WILL SUPERSEDE AND TAKE PRECEDENCE, TO THE EXTENT NECESSARY TO COMPLY.

Governing Law: This Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This Warranty provides specific legal rights and you may also have other rights which vary from state to state.

Trademarks: D-Link is a registered trademark of D-Link Systems, Inc. Other trademarks or registered trademarks are the property of their respective owners.

CE Mark Warning: This is a Class A product. In a residential environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

FCC Statement: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. Operation of this equipment in a residential environment is likely to cause harmful interference to radio or television reception. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures**:**

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

For detailed warranty information applicable to products purchased outside the United States, please contact the corresponding local D-Link office.

Product Registration

Register your D-Link product online at http://support.dlink.com/register/
Product registration is entirely voluntary and failure to complete or return this form will not diminish your warranty rights.

Tech Support

Technical Support

You can find software updates and user documentation on the D-Link website.

D-Link provides free technical support for customers within the United States and within Canada for the duration of the service period, and warranty confirmation service, during the warranty period on this product. U.S. and Canadian customers can contact D-Link technical support through our website, or by phone.

Tech Support for customers within the United States:

D-Link Technical Support over the Telephone:

USA - 877-DLINK-55 (877-354-6555)

D-Link Technical Support over the Internet:

http://support.dlink.com

Tech Support for customers within Canada:

D-Link Technical Support over the Telephone:

877-354-6560

D-Link Technical Support over the Internet:

http://support.dlink.com

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Technical Support

United Kingdom (Mon-Fri)

Home Wireless/Broadband 0871 873 3000 (9.00am–06.00pm, Sat 10.00am-02.00pm)

Managed, Smart, & Wireless Switches, or Firewalls 0871 873 0909 (09.00am – 05.30pm)

(BT 10ppm, other carriers may vary.)

Ireland (Mon-Fri)

All Products 1890 886 899 (09.00am-06.00pm, Sat 10.00am-02.00pm)

€ 0.05ppm peak, €0.045ppm off peak Times

Internet

http://www.dlink.co.uk

ftp://ftp.dlink.co.uk

Technische Unterstützung

Deutschland:	Web:	http://www.dlink.de
	Telefon:	+49(0)1805 2787 0,14 € pro Minute
	Zeiten:	Mo. –Fr. 08:30 – 17:30 Uhr
Österreich:	Web:	http://www.dlink.at
	Telefon:	+43(0)820 480084 0,116 € pro Minute
	Zeiten:	Mo. –Fr. 08:30 – 17:30 Uhr
Schweiz:	Web:	http://www.dlink.ch
	Telefon:	+41(0)848 331100 0,08 CHF pro Minute
	Zeiten:	Mo. –Fr. 08:30 – 17:30 Uhr

* Gebühren aus Mobilnetzen und von anderen Providern können abweichen.

Assistance technique

Assistance technique D-Link sur internet :http://www.dlink.fr
Assistance technique D-Link par téléphone : 0820 0803 03
0.12 € TTC/min depuis un poste fixe
Du lundi au vendredi de 9h à 19h (hors jours fériés)

Asistencia Técnica

Asistencia Técnica Telefónica de D-Link: +34 902 30 45 45
0,067 €/min
De Lunes a Viernes de 9:00 a 19:00
http://www.dlink.es

Supporto tecnico

Supporto Tecnico dal lunedì al venerdì dalle ore 9.00 alle ore 19.00 con orario continuato
Telefono: 199400057
http://www.dlink.it/support

TECHNISCHE ONDERSTEUNING

Technische ondereuning voor klanten in Nederland:
www.dlink.nl / 0900 501 2007 / €0.15per minuut.
Tech Support for customers within Belgium:
www.dlink.be / 070 66 06 40 / €0.175per minuut(spitsuren), €0.0875per minuut(daluren)
Technische ondereuning voor klanten in Luxemburg:
www.dlink.be / +32 70 66 06 40

Pomoc techniczna

Telefoniczna pomoc techniczna firmy D-Link: 0 801 022 021
Pomoc techniczna firmy D-Link świadczona przez Internet:
http://www.dlink.eu/support/

Technická podpora

Web: http://www.dlink.cz/support/
E-mail: support@dlink.cz
Telefon ČR: +420 211 151 640 nebo SK: +421 (0)692 147 110
Telefonická podpora je v provozu: PO - PÁ od 09:00 do 17:00
Volání je zpoplatněno dle příslušných tarifů Vašeho operátora.

Technikai Támogatás

Tel. : 06 1 461-3001
Fax : 06 1 461-3004
Land Line 14,99 HUG/min - Mobile 49.99,HUF/min
email : support@dlink.hu
URL : http://www.dlink.hu

Teknisk Support

D-Link Teknisk Support over Internett: http://www.dlink.no
D-Link Teknisk telefonsupport: 820 00 755
(Hverdager 08:00-20:00)

Teknisk Support

D-Link teknisk support over telefonen: Tlf.: 9013 8899
Normale åbningstider: Hverdage kl. 08:00 - 20:00
D-Link teknisk support på Internettet: http://www.dlink.dk

Teknistä tukea asiakkaille Suomessa:

Internetin kautta : http://www.dlink.fi
Arkisin klo. 9 - 21
Numerosta : 0600 155 57

Teknisk Support

D-Link Teknisk Support via Internet: http://www.dlink.se
D-Link Teknisk Support via telefon: 0900-100 77 00
Vardagar 08:00-20:00

Assistência Técnica

Assistência Técnica da D-Link na Internet:
http://www.dlink.pt
e-mail: soporte@dlink.es

Τεχνική Υποστήριξη

D-Link Hellas Support Center
Κεφαλληνίας 64, 11251 Αθήνα,
Τηλ: 210 86 11 114 (Δευτέρα- Παρασκευή 09:00-17:00)
Φαξ: 210 8611114
http://www.dlink.gr/support

Tehnička podrška

Hvala vam na odabiru D-Link proizvoda. Za dodatne informacije, podršku i upute za korištenje uređaja, molimo vas da posjetite D-Link internetsku stranicu na www.dlink.eu

www.dlink.biz/hr

Tehnična podpora

Zahvaljujemo se vam, ker ste izbrali D-Link proizvod. Za vse nadaljnje informacije, podporo ter navodila za uporabo prosimo obiščite D-Link - ovo spletno stran www.dlink.eu

www.dlink.biz/sl

Suport tehnic

Vă mulțumim pentru alegerea produselor D-Link. Pentru mai multe informații, suport şi manuale ale produselor vă rugăm să vizitați site-ul D-Link www.dlink.eu

www.dlink.ro

Technical Support

You can find software updates and user do cumentation on the D-Link website.

Tech Support for customers in

Australia:
Tel: 1300-766-868
24/7 Technical Support
Web: http://www.dlink.com.au
E-mail: support@dlink.com.au

India:
Tel: +91-22-27626600
Toll Free 1800-22-8998
Web: www.dlink.co.in
E-Mail: helpdesk@dlink.co.in

Singapore, Thailand, Indonesia, Malaysia, Philippines, Vietnam:
Singapore - www.dlink.com.sg
Thailand - www.dlink.co.th
Indonesia - www.dlink.co.id
Malaysia - www.dlink.com.my
Philippines - www.dlink.com.ph
Vietnam - www.dlink.com.vn

Korea:
Tel : +82-2-2028-1810
Monday to Friday 9:00am to 6:00pm
Web : http://d-link.co.kr
E-mail : g2b@d-link.co.kr

New Zealand:
Tel: 0800-900-900
24/7 Technical Support
Web: http://www.dlink.co.nz
E-mail: support@dlink.co.nz

South Africa and Sub Sahara Region:
Tel: +27 12 661 2025
08600 DLINK (for South Africa only)
Monday to Friday 8:30am to 9:00pm South Africa Time
Web: http://www.d-link.co.za
E-mail: support@d-link.co.za

Saudi Arabia (KSA):
Tel: +966 01 217 0008
Fax: +966 01 217 0009
Saturday to Wednesday 9.30AM to 6.30PM
Thursdays 9.30AM to 2.00 PM
E-mail: Support.sa@dlink-me.com

D-Link Middle East - Dubai, U.A.E.
Plot No. S31102,
Jebel Ali Free Zone South,
P.O.Box 18224, Dubai, U.A.E.
Tel: +971-4-8809022
Fax: +971-4-8809066 / 8809069
Technical Support: +971-4-8809033
General Inquiries: info.me@dlink-me.com
Tech Support: support.me@dlink-me.com

Egypt
1, Makram Ebeid Street - City Lights Building
Nasrcity - Cairo, Egypt
Floor 6, office C2
Tel.: +2 02 26718375 - +2 02 26717280
Technical Support: +2 02 26738470
General Inquiries: info.eg@dlink-me.com
Tech Support: support.eg@dlink-me.com

Kingdom of Saudi Arabia
Office # 84 ,
Al Khaleej Building (Mujamathu Al-Khaleej)
Opp. King Fahd Road, Olaya
Riyadh - Saudi Arabia
Tel: +966 1 217 0008
Technical Support:
+966 1 2170009 / +966 2 6522951
General Inquiries: info.sa@dlink-me.com
Tech Support: support.sa@dlink-me.com

Pakistan
Islamabad Office:
61-A, Jinnah Avenue, Blue Area,
Suite # 11, EBC, Saudi Pak Tower,
Islamabad - Pakistan
Tel.: +92-51-2800397, 2800398
Fax: +92-51-2800399

Karachi Office:
D-147/1, KDA Scheme # 1,
Opposite Mudassir Park, Karsaz Road,
Karachi – Pakistan
Phone: +92-21-34548158, 34326649
Fax: +92-21-4375727
Technical Support: +92-21-34548310, 34305069
General Inquiries: info.pk@dlink-me.com
Tech Support: support.pk@dlink-me.com

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Technical Support

You can find software updates and user documentation on the D-Link website.

Tech Support for customers in

Iran
Unit 5, 5th Floor, No. 20, 17th Alley , Bokharest
St. , Argentine Sq. ,
Tehran IRAN
Postal Code : 1513833817
Tel: +98-21-88880918,19
+98-21-88706653,54
General Inquiries: info.ir@dlink-me.com
Tech Support: support.ir@dlink-me.com

Israel
רח' המגשימים 20
קרית מטלון, פ"ת 49348
ת.ד. 7060
טלפון: 077-11-277-73
אי-מאייל כללי: info@dlink.co.il
אי-מאייל תמיכה: support@dlink.co.il

Morocco
M.I.T.C
Route de Nouaceur angle RS et CT 1029
Bureau N° 312 ET 337
Casablanca , Maroc
Phone : +212 663 72 73 24
Email: support.na@dlink-me.com

Lebanon RMA center
Dbayeh/Lebanon
PO Box:901589
Tel: +961 4 54 49 71 Ext:14
Fax: +961 4 54 49 71 Ext:12
Email: taoun@dlink-me.com

Bahrain
Technical Support: +973 1 3332904

Kuwait:
Technical Support: + 965 22453939 / +965 22453949

Türkiye Merkez İrtibat Ofisi
Ayazağa Maslak yolu
Erdebil Cevahir İş Merkezi No: 5/A Ayazağa / Maslak İstanbul
Tel: +90 212 2895659
Ücretsiz Müşteri Destek Hattı: 0 800 211 00 65
Web:www.dlink.com.tr
Teknik Destek: support.tr@dlink.com.tr

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Техническая поддержка

Обновления программного обеспечения и документация доступны на Интернет-сайте D-Link.
D-Link предоставляет бесплатную поддержку для клиентов в течение гарантийного срока.
Клиенты могут обратиться в группу технической поддержки D-Link по телефону или через Интернет.

Техническая поддержка D-Link:
+7(495) 744-00-99

Техническая поддержка через Интернет
http://www.dlink.ru
e-mail: support@dlink.ru

Офисы

Украина,
04080 г. Киев , ул. Межигорская, 87-А, офис 18
Тел.: +38 (044) 545-64-40
E-mail: kiev@dlink.ru

Беларусь
220114, г. Минск, проспект Независимости,
169 , БЦ "XXI Век"
Тел.: +375(17) 218-13-65
E-mail: minsk@dlink.ru

Казахстан,
050008, г. Алматы, ул. Курмангазы, дом 143
(уг. Муканова)
Тел./факс: +7 727 378-55-90
E-mail: almaty@dlink.ru

Узбекистан
100015, г.Ташкент, ул. Нукусская, 89
Тел./Факс: +998 (71) 120-3770, 150-2646
E-mail: tashkent@dlink.ru

Армения
0038, г. Ереван, ул. Абеляна, 6/1, 4 этаж
Тел./Факс: + 374 (10) 398-667
E-mail: erevan@dlink.ru

Грузия
0162, г. Тбилиси,
проспект Чавчавадзе 74, 10 этаж
Тел./Факс: + 995 (32) 244-563

Lietuva
09120, Vilnius, Žirmūnų 139-303
Tel./faks. +370 (5) 236-3629
E-mail: info@dlink.lt

Eesti
Peterburi tee 46-205
11415, Tallinn, Eesti , Susi Bürookeskus
tel +372 613 9771
e-mail: info@dlink.ee

Latvija
Mazā nometņu 45/53 (ieeja no Nāras ielas)
LV-1002, Rīga
tel.: +371 6 7618703 +371 6 7618703
e-pasts: info@dlink.lv

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SOPORTE TÉCNICO

Usted puede encontrar actualizaciones de softwares o firmwares y documentación para usuarios a través de nuestro sitio www.dlinkla.com

SOPORTE TÉCNICO PARA USUARIOS EN LATINO AMERICA

Soporte técnico a través de los siguientes teléfonos de D-Link

PAIS	NUMERO
Argentina	0800 - 12235465
Chile	800 - 835465 ó (02) 5941520
Colombia	01800 - 9525465
Costa Rica	0800 - 0521478
Ecuador	1800 - 035465
El Salvador	800 - 6335
Guatemala	1800 - 8350255
México	01800 - 1233201
Panamá	011 008000525465
Perú	0800 - 00968
Venezuela	0800 - 1005767

Soporte Técnico de D-Link a través de Internet

Horario de atención Soporte Técnico en www.dlinkla.com

e-mail: soporte@dlinkla.com & consultas@dlinkla.com

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Suporte Técnico

Caso tenha dúvidas na instalação do produto, entre em contato com o Suporte Técnico D-Link por:

Chat Online

www.dlink.com.br/suporte

E-mail

suporte@dlink.com.br

Back Office

backoffice@dlink.com.br *

*Acionar Garantia para 4 ou mais equipamentos

Telefones

São Paulo: (11) 2755-6950

*GO: 4052-1850 (Ligação local)

*Nordeste: 0800-7024104

*Demais Estados: 4062-1850 (Ligação local)

*Apenas Modems ADSL

Garantia diferenciada vendida pela internet. Agilidade e tranquilidade para suas atividades**!**

Conheça: **http://garantiapremium.dlink.com.br**

Atendimento disponível das 9h as 21h de segunda a sexta feira e aos sábados das 9h as 15h

D-Link®

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D-Link 友訊科技 台灣分公司
技術支援資訊

如果您還有任何本使用手冊無法協助您解決的產品相關問題，台灣地區用戶可以透過我們的網站、電子郵件或電話等方式與D-Link台灣地區技術支援工程師聯絡。

D-Link 免付費技術諮詢專線

0800-002-615

服務時間：週一至週五，早上9:00到晚上9:00

（不含周六、日及國定假日）

網　　站：http://www.dlink.com.tw

電子郵件：dssqa_service@dlink.com.tw

如果您是台灣地區以外的用戶，請參考D-Link網站全球各地分公司的聯絡資訊以取得相關支援服務。

產品保固期限、台灣區維修據點查詢，請參考以下網頁說明：

http://www.dlink.com.tw

產品維修：

使用者可直接送至全省聯強直營維修站或請洽您的原購買經銷商。

D-Link®

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Dukungan Teknis

Update perangkat lunak dan dokumentasi pengguna dapat diperoleh pada situs web D-Link.

Dukungan Teknis untuk pelanggan:

Dukungan Teknis D-Link melalui telepon:

Tel: +62-21-5731610

Dukungan Teknis D-Link melalui Internet:

Email : support@dlink.co.id

Website : http://support.dlink.co.id

D-Link®

Building Networks for People

Technical Support

この度は弊社製品をお買い上げいただき、誠にありがとうございます。

下記弊社 Web サイトからユーザ登録及び新製品登録を
行っていただき、ダウンロードサービスにて
サポート情報、ファームウェア、ユーザマニュアルを
ダウンロードすることができます。

ディーリンクジャパン Web サイト
URL:http://www.dlink-jp.com

D-Link®
Building Networks for People

技术支持

办公地址：北京市东城区北三环东路 36 号 环球贸易中心 B 座
26F 02-05 室 邮编: 100013

技术支持中心电话：8008296688/ (028)66052968

技术支持中心传真：(028)85176948

各地维修中心地址请登陆官方网站查询

网址：http://www.dlink.com.cn

办公时间：周一到周五，早09:00到晚18:00

D-Link®
Building Networks for People

Registration Card
All Countries and Regions Excluding USA

Print, type or use block letters.

Your name: Mr./Ms_____

Organization: _____ Dept. _____

Your title at organization: _____

Telephone:_____ Fax:_____

Organization's full address: _____

_____

Country: _____

Date of purchase (Month/Day/Year): _____

Product Model	Product Serial No.	* Product installed in type of computer	* Product installed in computer serial No.

(* Applies to adapters only)

Product was purchased from:

Reseller's name: _____

Telephone: _____

Answers to the following questions help us to support your product:

1. Where and how will the product primarily be used?

☐Home ☐Office ☐Travel ☐Company Business ☐Home Business ☐Personal Use

2. How many employees work at installation site?

☐1 employee ☐2-9 ☐10-49 ☐50-99 ☐100-499 ☐500-999 ☐1000 or more

3. What network protocol(s) does your organization use ?

☐XNS/IPX ☐TCP/IP ☐DECnet ☐Others_____

4. What network operating system(s) does your organization use ?

☐D-Link LANsmart ☐Novell NetWare ☐NetWare Lite ☐SCO Unix/Xenix ☐PC NFS ☐3Com 3+Open ☐Cisco Network
☐Banyan Vines ☐DECnet Pathwork ☐Windows NT ☐Windows 98 ☐Windows 2000/ME ☐Windows XP
☐Others_____

5. What network management program does your organization use ?

☐D-View ☐HP OpenView/Windows ☐HP OpenView/Unix ☐SunNet Manager ☐Novell NMS
☐NetView 6000 ☐Others_____

6. What network medium/media does your organization use ?

☐Fiber-optics ☐Thick coax Ethernet ☐Thin coax Ethernet ☐10BASE-T UTP/STP
☐100BASE-TX ☐1000BASE-T ☐Wireless 802.11b and 802.11g ☐wireless 802.11a ☐Others_____

7. What applications are used on your network?

☐Desktop publishing ☐Spreadsheet ☐Word processing ☐CAD/CAM
☐Database management ☐Accounting ☐Others_____

8. What category best describes your company?

☐Aerospace ☐Engineering ☐Education ☐Finance ☐Hospital ☐Legal ☐Insurance/Real Estate ☐Manufacturing
☐Retail/Chain store/Wholesale ☐Government ☐Transportation/Utilities/Communication ☐VAR
☐System house/company ☐Other_____

9. Would you recommend your D-Link product to a friend?

☐Yes ☐No ☐Don't know yet

10. Your comments on this product?

_____

_____

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