

USER MANUAL

DNS-323

VERSION 1.0



Table of Contents

Product Overview	3	UPnP AV Server	33
Package Contents.....	3	iTunes Server	34
System Requirements	3	DHCP Server	36
Introduction	4	Tools	37
Features.....	5	Admin.....	37
Hardware Overview	6	Time	38
Front View	6	System	39
Rear Panel (Connections).....	7	Firmware.....	40
Installation	8	E-Mail Alerts	41
Hardware Setup.....	8	Disk Utilities	44
Configuration	11	Power Management.....	45
Easy Search Utility.....	11	RAID	46
Getting Started	12	Status.....	48
Web UI.....	17	Device Info	48
Setup	18	Support.....	49
Wizard.....	18	Mapping a Drive.....	50
LAN	22	Download Scheduling.....	53
Device Settings.....	23	Scheduling	55
Advanced.....	24	Scheduling Settings	56
Users	24	USB Print Server	57
Groups	25	Contacting Technical Support	65
Quotas	26	Warranty	66
Network Access	29	Registration	70
FTP Server	30		

Product Overview

Package Contents

- D-Link DNS-323 Network Enclosure
- CD-ROM with Manual and Software
- Quick Installation Guide
- Power Adapter (12V; 3A , 5V; 3A)
- Power Cable Clip
- Cat 5 Ethernet Cable



Note: Using a power supply with a different voltage than the one included with the DNS-323 will cause damage and void the warranty for this product.

If any of the above items are missing, please contact your reseller.

System Requirements

For best results, the following System Requirements are recommended:

- Computer with: 1Ghz processor / 512 MB RAM / 200 MB available space / CD-ROM drive
- Internet Explorer version 6.0 or Mozilla Firefox 1.0 and above
- 3.5" SATA Hard Drive
- Windows XP SP2 or Windows 2000 SP6

Introduction

The D-Link DNS-323 2-Bay Network Storage Enclosure shares your documents, photos, music, and videos across the network and on the Internet (via FTP server) so family members, friends, or employees can access them. This enclosure, which can hold two 3.5" SATA hard drives of any capacity¹, creates a central network point for backing up valuable files. The built-in RAID 1² mirroring technology protects these files from drive failure. Other options such as Standard, JBOD, and RAID 0 are also available.

The DNS-323 shares files over the Internet via the built-in FTP server³. Users and groups can be created and assigned to folders with either read or read/write permissions. Quotas can be set per user or group to restrict space usage. In addition, the DNS-323 can be used to stream photos, music, and videos to UPnP AV compatible network media players⁴.

The included CD contains D-Link's Easy Search Utility. This utility allows you to locate the DNS-323 on the network and map drives to your computer. Backup software is also included on the CD. This software allows you to backup your files from a computer to the DNS-323 manually, by a schedule, or in real-time. Real-time backups are a great way to safeguard against unfortunate accidents that may result in the loss of important files.

Combining ease of use with practical, high performance features, the DNS-323 is an organized solution for any network. Free up disk space on computers and centralize data on your network with the DNS-323 2-Bay Network Storage Enclosure!

1 Hard Drive(s) not included.

2 RAID 1 mirroring requires the use of 2 internal SATA drives.

3 Note that use of an FTP Server to access files over the Internet does not provide for secure or encrypted transmissions.

4 D-Link cannot guarantee full compatibility or proper playback with all codecs. Playback capability depends on the codec support of the UPnP™ AV media player.

Features

The DNS-323 is designed for easy installation and allows remote access to important data via the LAN or WAN:

- Two Hard Drive Bays for 3.5" SATA Hard Drives of Any Capacity¹
- Simplified Hard Drive Installation Process – No Tools Required
- Four Hard Drive Configurations: Standard, JBOD (Linear), RAID 0, and RAID 1²
- High Performance Gigabit Ethernet Connectivity (Up to 23/15MBps or 184/120Mbps Read/Write)³
- Built-in FTP Server for File Access from Over the Internet⁴
- Scheduled Downloads from Web or FTP Sites
- Full or Incremental Backups
- Real Time Backups With the Included Backup Software
- Users and Groups Can Be Assigned to Folders with Read or Read/Write Permissions
- Quotas For Users and Groups
- Automatic E-Mail Notifications
- Scandisk and Defragment Utilities
- Power Management for Conserving Energy and Extending Hard Drive Life
- UPnP AV Server for Streaming Music, Photos, and Video to Compatible Media Players⁵
- iTunes® Software will be able to automatically find and play music directly from the DNS-323
- Built-in USB Print Server for printing from any PC on the Network
- D-Link Easy Search Utility
- Configurable by Web Browser

1 Hard Drive(s) not included.

2 RAID 1 mirroring requires the use of 2 internal SATA drives.

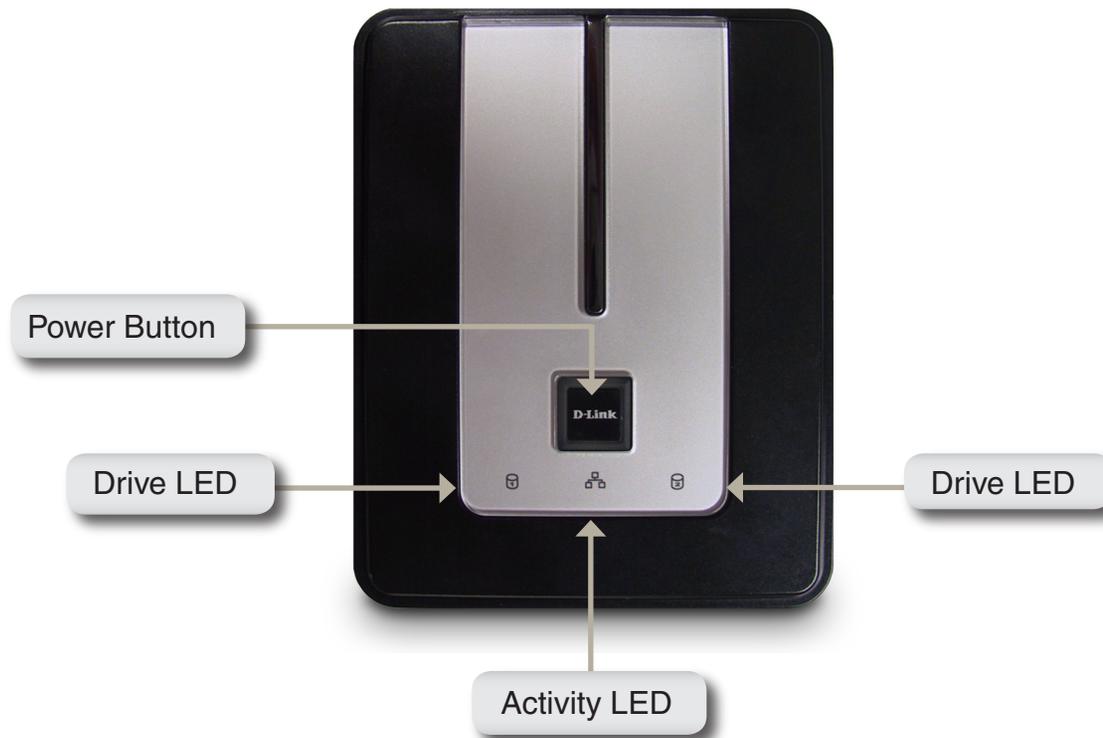
3 Speed results will vary depending on the benchmark utility, hard drive configuration, and the network environment used for testing.

4 Note that use of an FTP Server to access files over the Internet does not provide for secure or encrypted transmissions.

5 D-Link cannot guarantee full compatibility or proper playback with all codecs. Playback capability depends on the codec support of the UPnP™ AV media player.

Hardware Overview

Front View



Power Button:

Press once to power on the DNS-323. Press and hold the button until it begins to blink to power down the DNS-323.

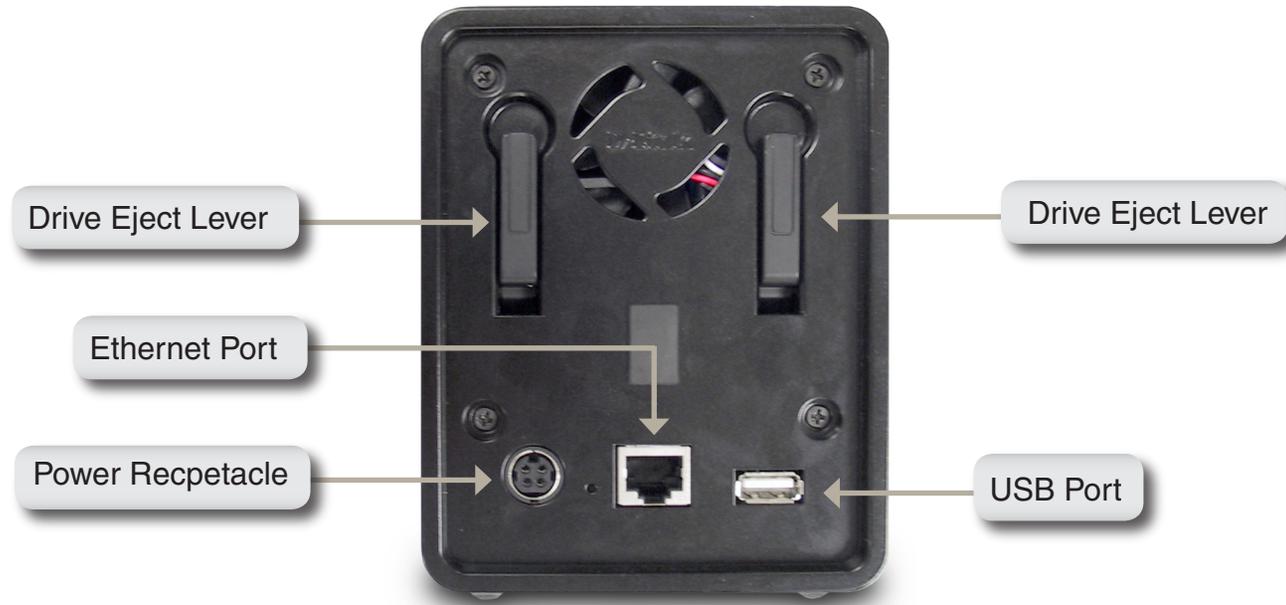
Drive LEDs:

These LEDs will be solid BLUE when drives are connected but inactive. The LEDs will blink when the drives are being accessed, formatted or synchronized. They will illuminate AMBER if a drive has failed.

Activity LED:

The Activity LED will be solid BLUE when there is an Ethernet connection. It will blink to indicate LAN traffic.

Rear Panel (Connections)



Power Receptacle:

The 12V 3A / 5V 3A power supply connects here.

Ethernet Port:

A Gigabit Ethernet port that connects the DNS-323 to the local network.

USB Port:

USB Print Server port for connecting a USB printer.

Drive Eject Lever:

Use the provided levers to eject the hard drives. The front panel must be removed before ejecting the drives.

Installation

Hardware Setup

This section provides unpacking and installation information for the DNS-323. Open the shipping carton for the DNS-323 and carefully unpack its contents. To install the DNS-323 on your local network, refer to the steps below:

1. Access the drive bays by sliding the faceplate up until it unlatches from the device.



2. Once the faceplate is unlatched, pull it off the device, exposing the drive bays.



3. Insert a 3.5" SATA hard drive into each available drive bay. Make sure to align the drive connectors to the endpoints in the DNS-323. Gently push the drive in until it connects.



4. Attach the faceplate to the front of the device.



5. Connect an Ethernet cable into the available Ethernet port. This cable should connect the DNS-323 to your local network or directly to a computer for configuration.



6. Finally, connect the power adapter to the power receptacle.



Configuration

Easy Search Utility

When first powered on, during the initial boot sequence, the DNS-323 will wait to be assigned an IP address via DHCP. If it does not receive a DHCP assigned IP address, by default it will have a self-assigned IP address of 192.168.0.32. It is recommended to use the included D-Link Easy Search Utility when accessing and configuring the DNS-323 for the first time. If you want to change this IP address before logging in or are unable to connect to the DNS-323 IP address, you can use the Easy Search Utility provided on the product CD to locate the device on your network and make any needed changes.

Network Storage Device The Easy Search Utility displays any DNS-323 devices it detects on the network here.

Refresh Refreshes the device list.

Configuration Click **Configuration** to access the Web UI of the DNS-323.

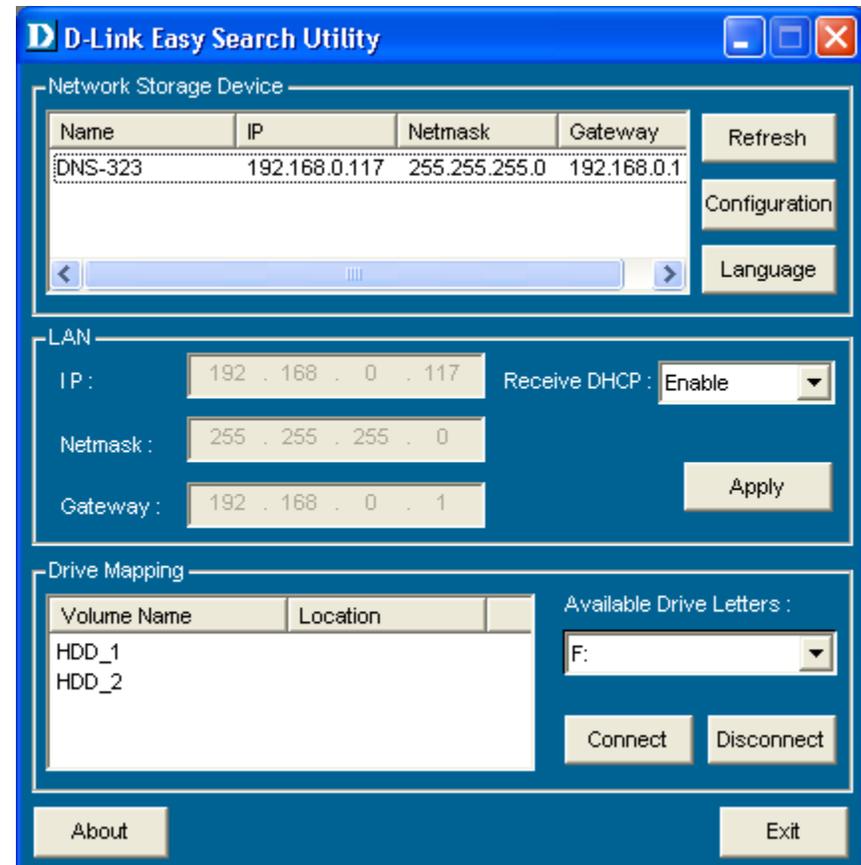
LAN Configure the LAN Settings for the DNS-323 here.

Apply Click **Apply** to save changes to the LAN Settings.

Drive Mapping Volumes available for mapping are displayed here.

Available Drive Letters Choose an available drive letter. Click **Connect** to map the selected volume. Click **Disconnect** to disconnect the selected mapped volume.

Exit Click **Exit** to close the utility.



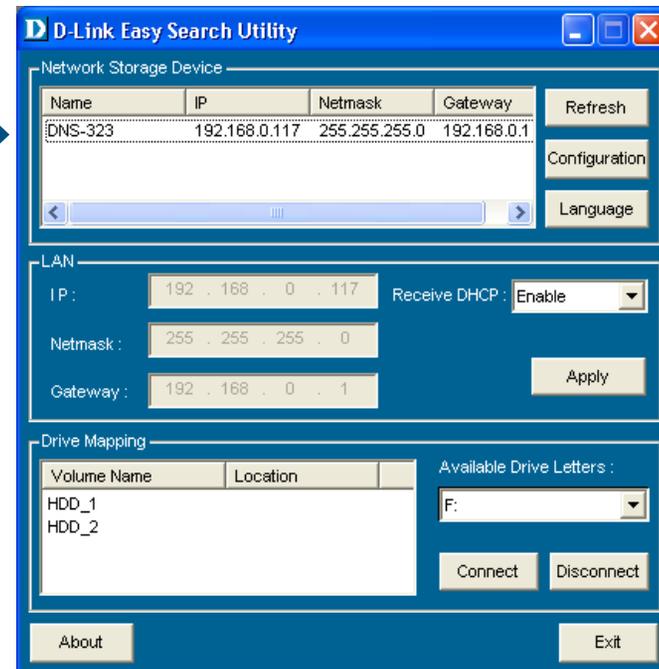
Getting Started

To run the Easy Search Utility, insert the DNS-323 CD into your CD-ROM drive:

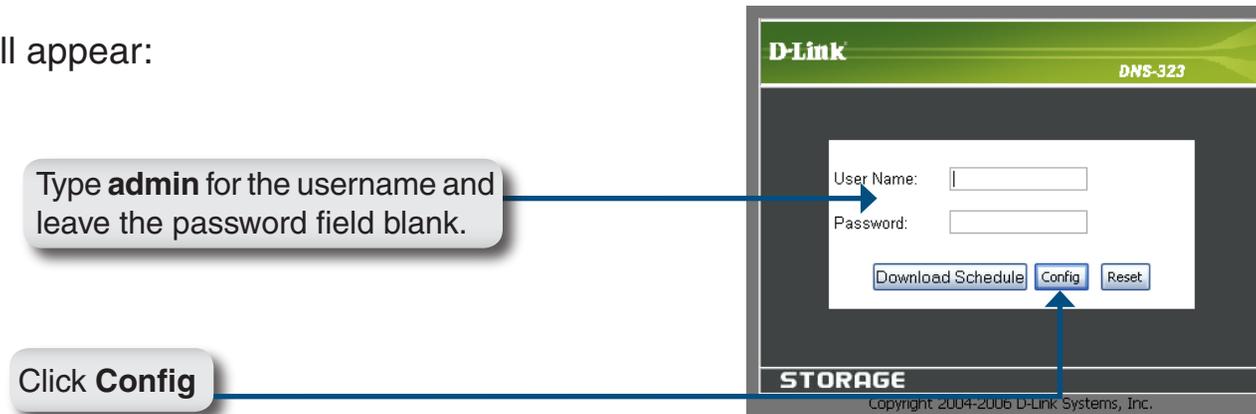
Click **Easy Search Utility**.



Highlight an available DNS-323 and click **Configuration** to access the web-based utility.



The Login screen will appear:



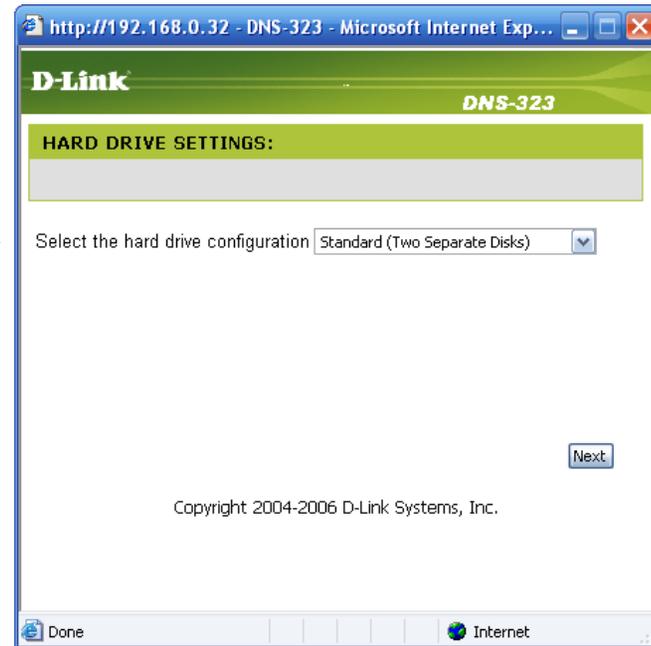
When logging into the DNS-323 for the first time, you will be asked to choose a drive configuration and format the drives. There are four options, Standard, JBOD, RAID 0 and RAID 1. Standard configures each disk as a separate volume, while JBOD combines both disks into a single volume. See page 46 for more details on using the RAID configurations.

You will also need to select the disk format type. Available options are **Ext2** and **Ext3**, with Ext2 providing better performance and Ext3 providing better support for crash recovery.

Note: All data will be erased during the format process.

When prompted to configure the Hard Drive Settings:

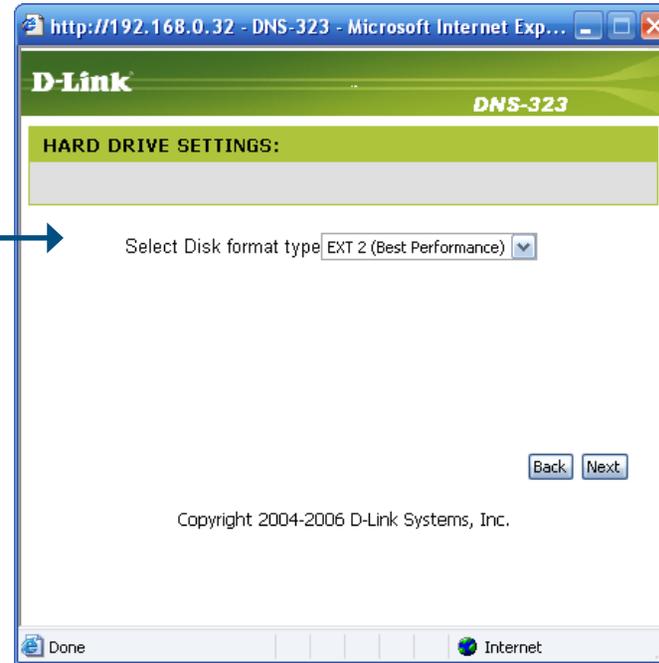
Select the type of hard drive configuration, Standard, JBOD, RAID 0 or RAID 1.



A warning message appears informing you that your drives will be formatted and all data erased. Click OK to continue.



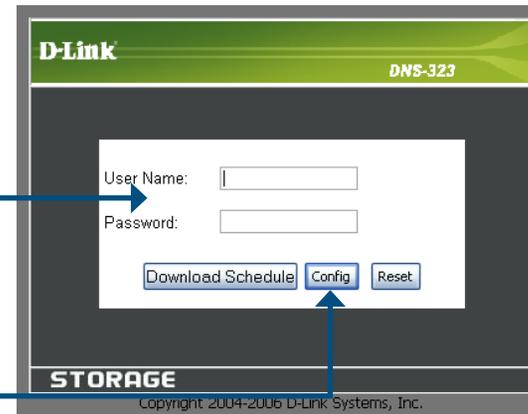
Select the disk format type, EXT2 or EXT3.



When formatting of the drive completes, the DNS-323 will restart. A restart countdown screen will appear, and when the restart is complete, the login screen will appear:

Type **admin** for the username and leave the password field blank.

Click **Config**



Note: After logging in to the DNS-323 for the first time it is recommended to add a password to the admin account. (See p. 37 for details.)

After logging in, you will be redirected to the DNS-323 web UI:

The screenshot displays the D-Link DNS-323 web user interface. At the top, it shows 'Product Page: DNS-323' on the left and 'Firmware Version: 1.00' on the right. Below this is a green banner with the 'D-Link' logo. A navigation menu contains tabs for 'DNS-323', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', 'SUPPORT', and 'LOGOUT'. The 'SETUP' tab is active, and the 'WIZARD' sub-tab is selected in the left sidebar. The main content area is titled 'WIZARD SETTINGS' and contains the following text: 'The DNS-323 2-Bay Network Storage Enclosure provides a convenient and safe location on the network for storing data and media. The Setup Wizard will let you adjust basic settings for your device.' Below the text is a 'Run Wizard' button. On the right side of the main content area, there is a 'Helpful Hints..' section with the text: 'These basic settings can be configured individually in other sections.'

Web UI

The DNS-323 web UI defaults to the *Setup* page. The main categories for configuration are located in the menu tabs at the top of the page. These categories include:

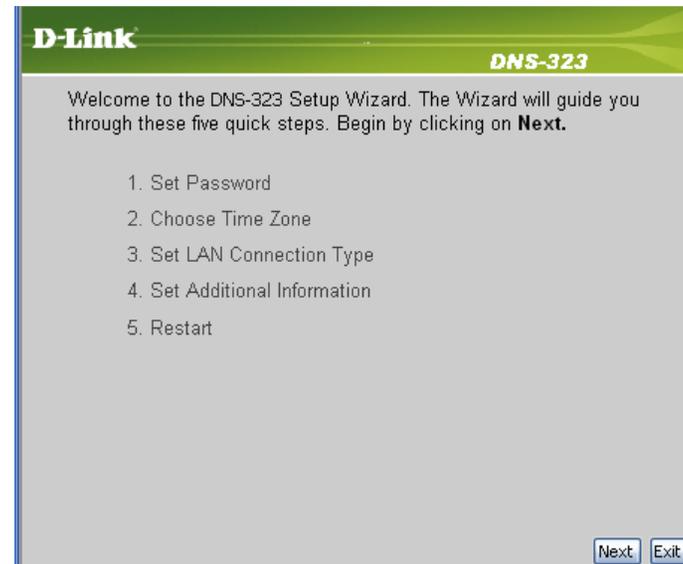
- **Setup** - Contains the DNS-323 setup wizard, as well as the LAN configuration settings and device settings.
- **Advanced** - Allows the DNS-323 administrator to configure users, groups of users and their storage quotas. The UPnP AV server, iTunes server, FTP server and DHCP server settings are all contained here as well.
- **Tools** - Contains configuration options for the Admin account, the time and system settings, and e-mail alerts. Disk utilities, power management options and RAID configuration options are also available from the Tools page.
- **Status** - Contains a summary of DNS-323 information.
- **Support** - Contains the DNS-323 help files.
- **Logout** - Clicking this button will log the admin out and end the DNS-323 configuration session.

These pages and their configuration options will be discussed in detail in the following pages of this manual.

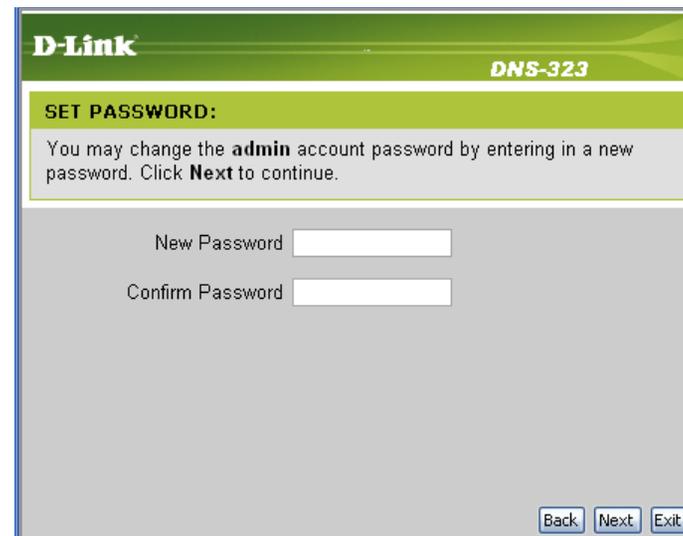
Setup Wizard

The DNS-323 has a setup Wizard that allows you to quickly configure some of the basic device settings.

When running the DNS-323 setup wizard, the welcome screen details the five steps of the wizard. Click **Next** to continue.



It is recommended you set an admin password here. Enter the new password and re-enter it for confirmation. Click **Next** to continue.



Set the appropriate Time Zone and click **Next** to continue.

D-Link **DNS-323**

CHOOSE TIME ZONE:
Select the appropriate time zone for your location and click **Next** to continue.

(GMT-08:00) Pacific Time (US & Canada);Tijuana

Back Next Exit

Copyright 2004-2006 D-Link Systems, Inc.

Edit or change the DNS-323 LAN information, or to keep the current settings, click **Next** to continue.

D-Link **DNS-323**

SELECT LAN CONNECTION TYPE:
Select your connection type and fill out the IP information if necessary. Click **Next** to continue.

DHCP Client
 Static IP

IP Address 192.168.0.32
Subnet Mask 255.255.255.0
Gateway IP Address 192.168.0.1
DNS1 67.130.140.2
DNS2 4.2.2.2

Back Next Exit

Copyright 2004-2006 D-Link Systems, Inc.

Enter a workgroup, name, and description for the DNS-323, or leave the default values and click Next to continue.

D-Link **DNS-323**

SET ADDITIONAL INFORMATION:

Enter your Workgroup, Name, and Description for the DNS-323 if necessary. Otherwise you may accept the default values and click **Next** to continue.

Workgroup

Name

Description

Copyright 2004-2006 D-Link Systems, Inc.

When the wizard completes, click Back to go back and make changes or click Restart to restart the DNS-323 and save the configuration.

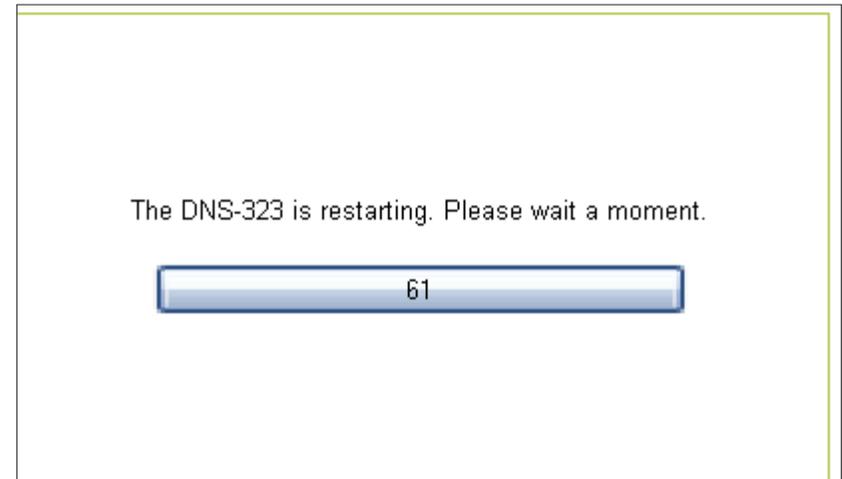
D-Link **DNS-323**

SETUP COMPLETED:

The Setup Wizard is complete. Click **Back** to make any changes. Click **Restart** to save the current settings and restart the DNS-323.

Copyright 2004-2006 D-Link Systems, Inc.

While the DNS-323 is restarting, a countdown will appear.



When the login prompt appears, login using the new administrator password.



LAN

The Local Area Network settings for the DNS-323 are configured on the LAN page.

Link Speed The LAN Link Speed is set to Auto by default, but can be manually set to 100Mbps or 1000Mbps.

DHCP Client Selecting DHCP Client will cause the DNS-323 to obtain an IP address from the local DHCP server.

Static IP Selecting Static IP requires the user to assign the IP information for the DNS-323 manually.

Product Page: DNS-323 Firmware Version: 1.00

D-Link

DNS-323 // SETUP ADVANCED TOOLS STATUS SUPPORT LOGOUT

WIZARD
LAN
DEVICE

LAN SETTINGS :
Select your connection type and fill out the IP information if necessary.
Save Settings Cancel

LAN SETTINGS :
Speed 100 Mbps
Link Speed Auto 100 1000 Apply

DHCP Client
 Static IP
IP Address :
Subnet Mask :
Gateway IP Address :
DNS1 :
DNS2 :

Helpful Hints..
A Static IP is recommended if you will be using the FTP server.

Device Settings

The device settings page allows you to assign a workgroup, name and description to the DNS-323.

Workgroup Assigns a workgroup name to the DNS-323.

Name Assigns a name to the DNS-323. The name can be used to access the device from a web browser instead of the IP address, for example, `http://DNS-323`.

Description Assigns a unique device description to the DNS-323.

Product Page: DNS-323 Firmware Version: 1.00

D-Link

DNS-323 // SETUP ADVANCED TOOLS STATUS SUPPORT LOGOUT

WIZARD
LAN
DEVICE

DEVICE SETTINGS :
Enter a workgroup, name, and description.

DEVICE SETTINGS :

Workgroup
Name
Description

Helpful Hints..
DEVICE: You can access this device by using the name in your web-browser. For example: By default you can enter `http://DNS-323`.

Advanced Users

The DNS-323 supports up to 64 unique users. The users can be specified by group, or created individually. The users are created to allow access to specific folders on the DNS-323, via FTP or the local network.

Create a User This section contains required attributes for a new user, including group, user name and password.

Group Select a previously created Group for the user to join.

User Name Set a unique name for the user.

Password Set a unique password for the user.

Confirm Password Confirm the assigned password for the user.

User List Users and their groups are displayed in this list.

Product Page: DNS-323 Firmware Version: 1.00

D-Link

DNS-323 // SETUP ADVANCED TOOLS STATUS SUPPORT LOGOUT

USERS :
Create users and their passwords. Assign users to groups if desired.

CREATE A USER :

Group: (dropdown)

User Name:

Password:

Confirm Password:

USER LIST :

No.	User Name	Group Name	: Change Password	: Delete
1	TestUser	Users		

Helpful Hints..
User passwords must be at least five characters long. A user name can not be the same as a group name.

Groups

The DNS-323 supports up to 10 unique groups. Users can be assigned to Groups for ease of management, and to aid in organization when setting up access rules and quotas.

Create A Group Create a new Group by assigning a unique group name.

Groups List All created groups are displayed here.

Product Page: DNS-323 Firmware Version: 1.00

D-Link

DNS-323 // SETUP ADVANCED TOOLS STATUS SUPPORT LOGOUT

GROUPS :
Create new groups that users can be assigned to.

CREATE A GROUP :

Add new group :

GROUPS LIST :

No.	Group name	User name	Del
1	Users	TestUser	

Helpful Hints..
Using groups will make rule creation easier if many users need the same permissions.

Quotas

The DNS-323 supports storage quotas for both groups and individual users. Assigning a quota to a group or user will limit the amount of storage they are allocated. By default, users and groups do not have a quota.

User Quota Settings

User quotas are displayed here. Quotas can be edited by clicking on the notepad icon.

Group Quota Settings

Group quotas are displayed here. Quotas can be edited by clicking on the notepad icon.

Quota Status

Displays the current status of the quota feature. The quota function can be started or stopped here.

Product Page: DNS-323 Firmware Version: 1.00

D-Link

DNS-323 // SETUP ADVANCED TOOLS STATUS SUPPORT LOGOUT

USERS

GROUPS

QUOTAS

NETWORK ACCESS

FTP SERVER

UPNP AV SERVER

ITUNES SERVER

DHCP SERVER

QUOTA SETTINGS :

Assign hard drive space quotas for users or groups.

USER QUOTA SETTINGS :

No.	User Name	HDD_1		HDD_2		Edit
		Used	Limit	Used	Limit	
1	TestUser	0 MB	250 MB	0 MB	250 MB	

GROUP QUOTA SETTINGS :

No.	Group Name	HDD_1		HDD_2		Edit
		Used	Limit	Used	Limit	
1	Users	unlimited				

QUOTA STATUS :

Status: Started

Helpful Hints..
The hard drives must be finished synchronizing before quotas can be set.

Configuring Quotas

By default, all users and groups are displayed on the Quota Settings page. Users and groups are automatically listed on this page, and cannot be deleted. The default quota setting is “Unlimited”.

To add a quota:

Click the notepad icon of the user you want to add a quota to.

QUOTAS SETTINGS :
Assign hard drive space quotas for users or groups.

USER QUOTA SETTINGS :

No.	User Name	HDD_1		HDD_2		Edit
		Used	Limit	Used	Limit	
1	test		unlimited			
2	test2		unlimited			

Set a quota amount (MB) for the user and click **Apply**.

QUOTAS SETTINGS :
Assign hard drive space quotas for users or groups.

USER QUOTA SETTINGS :

User Name

Quota Amount MB

The user, their amount of storage used, and their storage limit are displayed.

QUOTAS SETTINGS :

Assign hard drive space quotas for users or groups.

USER QUOTA SETTINGS :

No.	User Name	HDD_1		HDD_2		Edit
		Used	Limit	Used	Limit	
1	test	0 MB	210 MB	0 MB	210 MB	
2	test2	unlimited				

Network Access

The Network Access settings allow you to assign users and groups to specific folders or volumes. By default, all users are allowed Read/Write access to all volumes. Before specific user or group rules can be created, the default rules must be deleted.

Network Access Settings

Assign permissions for users and groups on the local network here.

Category

Determines whether the access rule will apply to a group or individual user.

Group / User

Select the group or user the access rule will apply to.

Folder

Browse to and select the folder or directory you are controlling access to.

Permission

Set the user or group permission to Read Only or Read/Write.

Comment

Enter a comment for reference or description of the rule.

Network Access List

Lists all defined access rules.

Product Page: DNS-323 Firmware Version: 1.00

D-Link

[DNS-323](#) //
 [SETUP](#)
[ADVANCED](#)
[TOOLS](#)
[STATUS](#)
[SUPPORT](#)
[LOGOUT](#)

NETWORK ACCESS SETTINGS :
Assign permissions for users and groups on the local network.

NETWORK ACCESS SETTINGS :

Category: Group User

Group:

Folder:

Permission:

Comment:

NETWORK ACCESS LIST :

Share	Path	User/Group	Comment	R/W	
					<input checked="" type="checkbox"/> : Read/Write <input type="checkbox"/> : Read Only <input type="button" value="Modify Setting"/> <input type="button" value="Delete"/>
HDD_1	HDD_1		Hard Drive / Flash Drive / Single Function CardReader	<input checked="" type="checkbox"/>	<input type="button" value="v"/> <input type="button" value="v"/>
HDD_2	HDD_2		Hard Drive / Flash Drive / Single Function CardReader	<input checked="" type="checkbox"/>	<input type="button" value="v"/> <input type="button" value="v"/>

Helpful Hints..
By default, each hard drive or volume will have an open-access rule. These rules must be deleted before user or group specific rules can be created.

FTP Server

The DNS-323 is equipped with a built in FTP Server. The server is easy to configure and allows users access to important data whether they are on the local network or at a remote location. The FTP server can be configured to allow user access to specific directories, and will allow up to 10 users to access the DNS-323 at a time.

FTP Server Settings

This section contains the configuration settings for the DNS-323 FTP Server. **Click Apply** to save the settings.

FTP Server Status

The current settings and status of the DNS-323 FTP Server are displayed here.

Product Page: DNS-323
Firmware Version: 1.00

D-Link

DNS-323
SETUP
ADVANCED
TOOLS
STATUS
SUPPORT
LOGOUT

- USERS
- GROUPS
- QUOTAS
- NETWORK ACCESS
- FTP SERVER
- UPNP AV SERVER
- ITUNES SERVER
- DHCP SERVER

FTP SERVER SETTINGS :

Assign permissions for users and groups who will be accessing the FTP server from over the Internet.

FTP SERVER SETTINGS:

Category Group User

Group

Folder root

Permission

Max User

Idle Time (1~10 Minutes)

Port (1~65535,Default:21)

Flow Control Unlimited x 10 KBs

FTP ACCESS LIST:

Group Name	Path	<input checked="" type="checkbox"/> :Read/Write <input type="checkbox"/> :Read Only <input type="button" value="v"/> :Modify Setting <input type="button" value="v"/> :Delete

FTP SERVER STATUS :

Status	Stopped
Port	21
Max User	5
Flow Control	Unlimited
Idle Time	2 Minutes

Helpful Hints..

If your DNS-323 is connected to a router, you will need to forward port 21 (in the router configuration) to the IP address of the DNS-323. From the outside world, remember to access this FTP server by using the WAN address of your router.

FTP Server Settings

- Category** Determines whether the FTP server rule will apply to a group or individual user.
- Group / User** Select the group or user the FTP server rule will apply to.
- Folder** Browse to and select the folder or directory you are granting FTP access to. Select **root** to grant access to all volumes.
- Permission** Set the user or group permission to Read Only or Read/Write.
- Add** Click **Add** to add the user or group FTP rule.
- Max User** Sets the maximum amount of users that can connect to the FTP server.
- Idle Time** Sets the amount of time a user can remain idle before being disconnected.
- Port** Sets the FTP port. Default is 21.
- Flow Control** Allows you to limit the amount of bandwidth available for each user.
- FTP Access List** Lists all defined FTP Rules.

FTP SERVER SETTINGS:

Category Group User

Group ▼

Folder root Browse

Permission ▼ Add

Max User ▼

Idle Time (1~10 Minutes)

Port (1~65535,Default:21)

Flow Control Unlimited x 10 KBs Apply Cancel

FTP ACCESS LIST:

:Read/Write
 :Read Only
 :Modify Setting
 :Delete

Group Name	Path
User Name	Path

If you are behind a router, you will need to forward the FTP port from the router to the DNS-323. Additional filtering and firewall settings may need to be modified on your router to allow FTP Access to the DNS-323 from the Internet. Once the port has been forwarded on the router, users from the internet will access the FTP server through the WAN IP address of the router.

If you are using a D-Link router, such as the WBR-2310 used in the example below, your port forwarding rule should be similar to the following:

- Name** Name the DNS-323 FTP server rule.
- IP Address** Enter the IP address of the DNS-323.
- Public Port** Enter the public FTP port. By default, the port is 21.
- Private Port** Enter the private FTP port. By default, the port is 21.
- Traffic Type** Set the traffic type to TCP.

Product Page: WBR-2310 Hardware Version: A1 Firmware Version: 1.01

D-Link

WBR-2310 // SETUP ADVANCED TOOLS STATUS SUPPORT

VIRTUAL SERVER RULES :

The Virtual Server option allows you to define a single public port on your router for redirection to an internal LAN IP Address and Private LAN port if required. This feature is useful for hosting online services such as FTP or Web Servers.

Save Settings Don't Save Settings

20 - VIRTUAL SERVER RULES

	Name	IP Address	Port	Traffic Type	Schedule
<input checked="" type="checkbox"/>	DNS-323_FTP	192.168.0.32	Public 21	TCP	Always
<input type="checkbox"/>			Public	TCP	Always

Helpful Hints..

- Check the **Application Name** drop down menu for a list of pre-defined applications that you can select from. If you select one of the pre-defined applications, click the arrow button next to the drop down menu to fill out the appropriate fields.
- You can select your computer from the list of DHCP clients in the **Computer Name** drop down menu, or enter the IP address manually of the computer you would like to open the specified port to.
- In order to apply a schedule to a Virtual Server Rule, you must first define a schedule on the **Tools>Schedules** page.

If you use an FTP port other than 21, then users accessing the FTP server using an FTP client will have to specify the non-standard port, and users who are using a browser will have to specify the port in the URL (e.g. ftp://ftp.dns323.com:3000).

UPnP AV Server

The DNS-323 features a UPnP AV Server. This server provides the ability to stream photos, music and videos to UPnP AV compatible network media players. If the server is enabled, the DNS-323 will be automatically detected by UPnP AV compatible media players on your local network.

UPnP AV Server Select Enable or Disable to enable or disable the DNS-323 UPnP AV server.

Folder Specifies the folder or directory that will be shared by the UPnP AV server. Select root to share the entire volume, or click Browse to select a specific folder.

Refresh Click **Refresh** after adding new files to be used by UPnP AV compatible devices.

The screenshot displays the D-Link DNS-323 web interface. At the top, it shows 'Product Page: DNS-323' and 'Firmware Version: 1.00'. The D-Link logo is prominently displayed. Below the logo is a navigation menu with tabs for 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', 'SUPPORT', and 'LOGOUT'. The 'ADVANCED' tab is selected, and the 'UPNP AV SERVER' option is highlighted in the left sidebar. The main content area is titled 'UPNP AV SETTINGS :'. It contains a section for setting a path to media content with 'Save Settings', 'Refresh', and 'Cancel' buttons. Below this, the 'UPNP AV SETTINGS :' section shows the 'UPNP AV Server' is enabled (radio button selected), and the 'Folder' is set to 'root'. A 'Browse' button is available to select a specific folder. The current folder path is 'DNS-323_SHARE'. A 'Helpful Hints..' box on the right side of the page states: 'After adding new media content to the DNS-323, click the refresh button.'

iTunes Server

The DNS-323 features an iTunes Server. This server provides the ability to share music and videos to computers on the local network running iTunes. If the server is enabled, the DNS-323 will be automatically detected in the iTunes program and the music and videos contained in the specified directory will be available to stream over the network.

iTunes Server Select Enable or Disable to enable or disable the DNS-323 iTunes server.

Folder Specifies the folder or directory that will be shared by the iTunes server. Select root to share the entire volume, or click Browse to select a specific folder.

Password Sets password for the iTunes server.

Refresh Click **Refresh** after adding new files to be used with iTunes.

Product Page: DNS-323 Firmware Version: 1.00

D-Link

DNS-323 // SETUP ADVANCED TOOLS STATUS SUPPORT LOGOUT

USERS
GROUPS
QUOTAS
NETWORK ACCESS
FTP SERVER
UPNP AV SERVER
ITUNES SERVER
DHCP SERVER

ITUNES SERVER SETTINGS:
Configure iTunes server settings for streaming music directly to iTunes software.
Save Settings Refresh Cancel

ITUNES SERVER :

iTunes Server Enable Disable

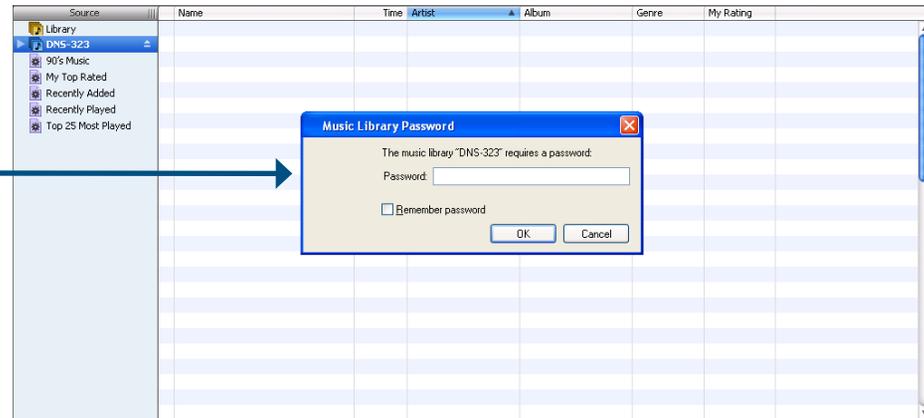
Folder Browse

Password
DNS-323_SHARE

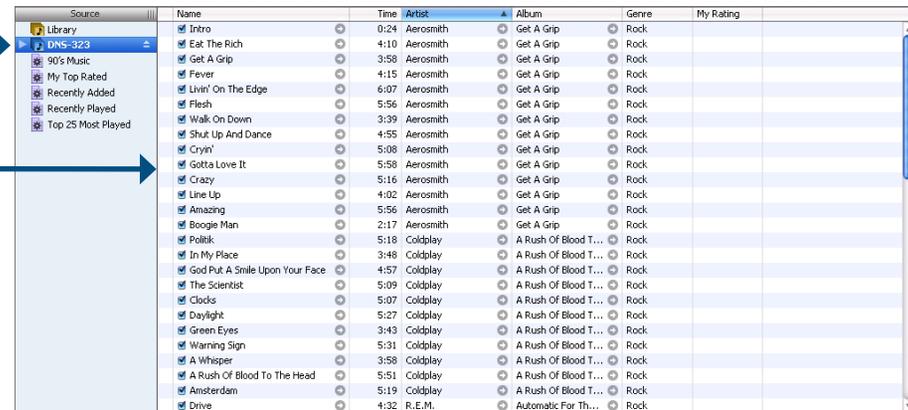
Helpful Hints..
iTunes will automatically detect the DNS-323 on the network. It will be listed on the left side of the program, below Library.

After enabling the iTunes server on the DNS-323, launch iTunes. When iTunes detects the DNS-323, select it and you will be prompted to enter the iTunes server password.

Select the DNS-323. When prompted, enter in the iTunes server password. Click **OK**.



Media stored on the DNS-323 will then be available for use in iTunes.



DHCP Server

The DNS-323 can also be used as a DHCP Server. As a DHCP server, it can be used to serve IP addresses to devices on your local network, however, this feature should not be enabled if you already have a DHCP server, such as a router on your local network.

- DHCP Server** Enables or Disables the DNS-323 DHCP Server.
- Starting IP Address** Enter the starting IP address for the range of addresses assigned by the DHCP server.
- Ending IP Address** Enter the ending IP address for the range of addresses assigned by the DHCP server.
- Lease Time** Sets the duration of time that an IP address will remain assigned to a device.

Product Page: DNS-323 Firmware Version: 1.00

D-Link

DNS-323 // SETUP ADVANCED TOOLS STATUS SUPPORT LOGOUT

DHCP SERVER SETTINGS :
Enable the DHCP server to distribute IP addresses on the network.

DHCP SERVER:

DHCP Server : Enabled Disabled

Starting IP Address :

Ending IP Address :

Lease Time :

DHCP CLIENT LIST :

Host	IP Address	MAC Address	Expired Time
<input type="button" value="Refresh"/>			

Helpful Hints..
If you already have a router assigning DHCP to the network, do not enable this feature.
The DHCP server should be used when no other DHCP server is available.

Tools

Admin

The Admin menu allows you to set a password for the admin account. It is recommended to set an admin account password when first configuring the DNS-323.

User Name The administrator user name is *admin*, and this cannot be changed.

Password Enter the current password.

New Password Enter the new password.

Confirm Password Enter the new password again for confirmation.

The screenshot shows the D-Link DNS-323 web interface. At the top, it displays 'Product Page: DNS-323' and 'Firmware Version: 1.00'. The D-Link logo is prominently featured. Below the logo is a navigation menu with tabs for 'DNS-323', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', 'SUPPORT', and 'LOGOUT'. The 'TOOLS' tab is selected, and the 'ADMIN' sub-tab is active. The main content area is titled 'ADMINISTRATOR SETTINGS :'. It contains the instruction 'Set the administrator's password.' and two buttons: 'Save Settings' and 'Don't Save Settings'. Below this is the 'ADMINISTRATOR :' section with four input fields: 'User Name' (pre-filled with 'admin'), 'Password', 'New Password', and 'Confirm Password'. On the right side, there is a 'Helpful Hints..' section with a warning: 'For security reasons, it is recommended that you change the Password for the Administrator . Be sure to write down the new Passwords to avoid having to reset the DNS-323 in the event that they are forgotten.'

Click Save Settings to save the new password.

Time

The DNS-323 Time menu contains several different options for setting the device's internal clock. It is important that accurate time is set so that scheduled backups and downloads will be accurate.

NTP Server Network Time Protocol (NTP) synchronizes the DNS-323 with an Internet time server.

Enter the IP Address or domain name of the time server you want to sync the DNS-323 with and click **Set Time**.

From My Computer This option will synchronize the DNS-323 clock with the computer being used to configure it.

Click **Set Time** to sync with the local computer.

Set Time Manually This option allows you to set the time and date manually.

Enter the appropriate time and date and click **Set Time**.

Daylight Saving Time Available Daylight Saving Time options are **None**, **USA**, or **EU** (Europe).

Select the appropriate option and click **Set Time**.

Product Page: DNS-323 Firmware Version: 1.00

D-Link

DNS-323 // SETUP ADVANCED TOOLS STATUS SUPPORT LOGOUT

ADMIN
TIME
SYSTEM
FIRMWARE
E-MAIL ALERTS
DISK UTILITIES
POWER MANAGEMENT
RAID

SYSTEM TIME SETTINGS :
Set the system time by synching with NTP, synching with your computer, or manually entering it.
Time 08 : 52 : 02 Date 05 / 31 /06

NTP SERVER :
NTP Server
Time Zone

FROM MY COMPUTER :
Set time from my computer.

SET THE DATE AND TIME MANUALLY :
Month Day Year
Hour Minute Second

DAYLIGHT SAVING TIME :
Daylight Saving Time :

Helpful Hints..
Using the NTP option will guarantee the time to be accurate provided that the DNS-323 is connected to the Internet and your DNS values (in SETUP > LAN) are valid.

System

The DNS-323 System menu provides options for system restarts, saving and loading configuration settings, and setting idle times.

Restart Click **Restart** to reboot the DNS-323.

Restore Defaults Click **Restore** to reset the DNS-323 to it's factory default settings. This will erase all previous configuration changes.

Configuration Settings Click **Save** to save the current DNS-323 configuration settings to a file on the local computer. If at a later time you need to reload this configuration after a system reset, browse to the file and click **Load**.

Idle Time Enter the time (in minutes) that the administrator will be allowed to remain idle while accessing the DNS-323 configuration settings or that users will be allowed to remain idle while accessing the download schedule settings.

Click **Apply** to save the settings.

Product Page: DNS-323 Firmware Version: 1.00

D-Link

DNS-323 // SETUP ADVANCED TOOLS STATUS SUPPORT LOGOUT

SYSTEM SETTINGS :
Restart the system, restore to factory defaults, save or load configuration settings, and change the idle time.

RESTART :
System Restart.

DEFAULTS :
Restore To Factory Default Settings.

CONFIGURATION SETTINGS :
Save Configuration Settings.
Load Configuration Settings.

IDLE TIME :
Config Inactivity Timer (Minutes)
Download Schedule Inactivity Timer (Minutes)

Helpful Hints..
If you restore to factory defaults, all current settings will be erased.

Firmware

The DNS-323 Firmware menu makes it simple to check for new firmware releases and upload them to the device.

Firmware Upgrade

This section provides a link to check for new firmware on the D-Link support website.

If a new firmware is available, download the file to your local computer.

Current Firmware Info

This section provides information about the current DNS-323 firmware.

When upgrading the firmware, click **Browse** to select the new firmware file on your local computer.

Click **Apply** to begin the firmware upgrade process.

The screenshot displays the web interface for the DNS-323 device. At the top, it shows 'Product Page: DNS-323' and 'Firmware Version: 1.00'. The D-Link logo is prominently displayed. Below the logo is a navigation menu with tabs for 'DNS-323', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', 'SUPPORT', and 'LOGOUT'. The 'DNS-323' tab is selected, and the 'FIRMWARE' sub-tab is active in the left sidebar.

The main content area is divided into two sections:

- FIRMWARE UPGRADE :** This section contains a message: 'There may be new firmware for your DNS-323 to improve functionality and performance. [Click here to check for an upgrade on our support site.](#)' Below this, it provides instructions: 'To upgrade the firmware, locate the upgrade file on the local hard drive with the Browse button. Once you have found the file to be used, click the Apply button below to start the firmware upgrade.' There are 'Apply' and 'Cancel' buttons.
- CURRENT FIRMWARE INFO :** This section displays the current firmware details: 'Current Firmware Version : 1.00' and 'Firmware Date : 05/30/2006'. It includes a 'File path' input field with a 'Browse...' button next to it.

On the right side of the interface, there is a 'Helpful Hints..' section with the following text: 'Firmware updates are released periodically to improve the functionality of your DNS-323 and also to add features. If you run into a problem with a specific feature of the DNS-323, check our support site by clicking on the **Click here to check for an upgrade on our support site** link and see if an updated firmware is available for your DNS-323.'

E-Mail Alerts

With the DNS-323 E-Mail Alerts, you can configure e-mails to be sent alerting you to certain operational conditions and drive status conditions. These alerts can prove helpful with the management and safeguarding of important data.

Alert Settings This section contains the configuration settings for the outgoing e-mail account and the receiving e-mail account.

Once configured, use the **Test E-Mail** button to send a test e-mail and confirm your settings are correct.

Alert Types This section contains the alert options and their configuration settings.

Product Page: DNS-323
Firmware Version: 1.00

D-Link

DNS-323 //
SETUP
ADVANCED
TOOLS
STATUS
SUPPORT
LOGOUT

ADMIN
TIME
SYSTEM
FIRMWARE
E-MAIL ALERTS
DISK UTILITIES
POWER MANAGEMENT
RAID

E-MAIL ALERTS :

E-mail yourself alerts for certain conditions or for drive space status updates.

Save Settings
Don't Save Settings
Clear Saved Settings

E-MAIL ALERT SETTINGS:

Login Method : Account Anonymous

User Name :

Password :

SMTP Server :

Sender E-mail :

Receiver E-mail :

Test E-Mail

ALERT TYPES:

Space Status Interval: (Hours) (Minutes)

Hard Drive Is Full

A Critical Error Has Occurred

The Administrator's Password Has Been Changed

Firmware Has Been Upgraded

System Temperature Has Exceeded °F

Helpful Hints..

The SMTP server is your outgoing mail server. If you aren't sure what this is, contact the company that provides e-mail services for you.

E-Mail Alert Settings

Login Method Select either **Account** or **Anonymous**. Choosing **Anonymous** does not require a User Name or Password.

User Name Enter the appropriate user name for your e-mail account.

Password Enter the appropriate password for your e-mail account.

SMTP Server Enter the IP address or domain name of your outgoing mail server. If you are unsure of this value, contact your e-mail provider.

Sender E-Mail Enter the “from” e-mail address (e.g. alerts@dns323.com). This field does not require a valid e-mail address. However, if your e-mail client is filtering spam, make sure you allow this address to be received.

Receiver E-Mail Enter the e-mail address you want to send the alerts to. This address must correspond with the SMTP server configured above.

Test E-Mail Click the Test E-Mail button to send a test alert and confirm your settings are correct.

E-MAIL ALERT SETTINGS:

Login Method : Account Anonymous

User Name :

Password :

SMTP Server :

Sender E-mail :

Receiver E-mail :

E-MAIL ALERT SETTINGS:

Login Method : Account Anonymous

SMTP Server :

Sender E-mail :

Receiver E-mail :

E-Mail Alert Types

- Space Status** Select an interval in hours and minutes to have a status of space remaining on the drives e-mailed.
- Hard Drive is Full** An alert will be sent when the hard drive is full.
- Critical Error** An alert will be sent if a critical error occurs on one of the drives.
- Administrator Password Change** An alert will be sent if the admin password is changed.
- Firmware Upgraded** An alert will be sent if the firmware is upgraded.
- System Temperature Exceeded** An alert will be sent if the DNS-323 device temperature exceeds the set threshold.

ALERT TYPES:

- Space Status Interval: 0 (Hours) 0 (Minutes)
- Hard Drive Is Full
- A Critical Error Has Occurred
- The Administrator's Password Has Been Changed
- Firmware Has Been Upgraded
- System Temperature Has Exceeded Fahrenheit 140 °F

Disk Utilities

The DNS-323 has Scan Disk and Defragment utilities to help the device performance.

Scan Disk Select the disk you want to scan. Check **All disks** to scan all the disks. Check **Fix** if you want the DNS-323 to fix any problems found during the scan.

Click **Scan Disk** to begin the scan.

Defragment The way files are organized on your drives can have an effect on the drive performance.

The Defragment utility can improve drive performance by removing any data fragmentation thus increasing the read/write speed of the disk.

Select the disk you want to defragment or check **All disks** to defragment all disks.

Click **Defragment** to begin the defragment process.

The screenshot shows the D-Link DNS-323 web interface. At the top, it displays 'Product Page: DNS-323' and 'Firmware Version: 1.00'. The D-Link logo is prominently featured. Below the logo is a navigation menu with tabs for 'DNS-323', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', 'SUPPORT', and 'LOGOUT'. The 'TOOLS' tab is selected, leading to the 'DISK UTILITIES' section. This section contains a header 'DISK UTILITIES : Scan your hard drives for errors and defragment them for improved performance.' Below this are two main utility sections: 'SCAN DISK' and 'DEFRAGMENT'. Each section has a 'Disk' dropdown menu (set to 'Please select a disk'), checkboxes for 'All disks' and 'Fix' (in the scan section), and a corresponding action button ('Scan Disk' or 'Defragment'). A 'Helpful Hints..' sidebar on the right provides advice: 'For best performance, you should run scandisk and defrag at least once per month.'

Power Management

The DNS-323 Power Management feature allows you to configure the drives to shut down while power remains constant to the device. The drives will power up again when data is accessed.

Power Management Enable or Disable Power Management on the DNS-323.

Turn off Hard Drives Set the amount of time before idle drives will shut down.

Click **Apply** to save the settings.

The screenshot shows the D-Link DNS-323 web interface. At the top, it displays 'Product Page: DNS-323' and 'Firmware Version: 1.00'. The D-Link logo is prominently featured. Below the logo is a navigation menu with tabs for 'DNS-323 //', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', 'SUPPORT', and 'LOGOUT'. The 'POWER MANAGEMENT' option is selected in the left-hand navigation menu. The main content area is titled 'POWER MANAGEMENT SETTINGS :'. It contains a warning box stating: 'Enabling this feature will cause the hard drives to hibernate after the specified time of inactivity. They will wake-up when new activity is detected.' Below this, the settings are: 'Power Management : Enable Disable' and 'Turn off hard drives : After 5 mins' (with a dropdown arrow). At the bottom of the settings area are 'Apply' and 'Cancel' buttons. On the right side, there is a 'Helpful Hints..' section with the text: 'Save on electricity costs and extend the life of your hard drives by using power management.'

RAID

The DNS-323 supports four different disk configuration types: **Standard**, where each drive is a unique volume, **JBOD**, which combines both drives in a linear fashion to create one volume, as well as **RAID 0** and **RAID 1**.

RAID Settings Click **Change Drive Settings** to change the current drive configuration.

All data will be lost when changing the drive configuration.

Product Page: DNS-323 Firmware Version: 1.00

D-Link

DNS-323 // SETUP ADVANCED TOOLS STATUS SUPPORT LOGOUT

ADMIN
TIME
SYSTEM
FIRMWARE
E-MAIL ALERTS
DISK UTILITIES
POWER MANAGEMENT
RAID

HARD DRIVE SETTINGS :
Change the hard drive configuration. Your data will be erased during this process.

RAID SETTINGS :
Change Drive Settings

Helpful Hints..
To see information on the current hard disk configuration, go to the STATUS page.

A pop-up window will appear with the drive configuration options:

D-Link DNS-323

HARD DRIVE SETTINGS:

Select the hard drive configuration

- Standard (Two Separate Disks)
- JBOD (Linear - Combines Both Disks)
- Raid 0 (Striping - Best Performance)
- Raid 1 (Mirroring - Keeps Data Safe)

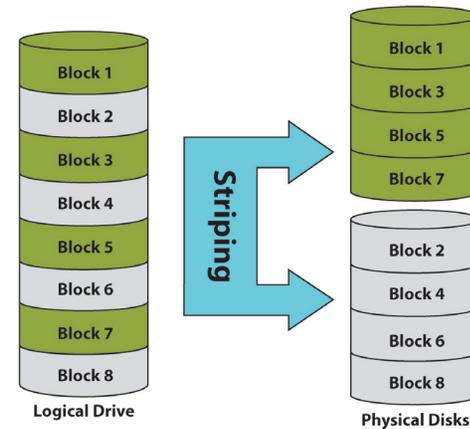
What is RAID?

RAID, short for Redundant Array of Independent Disks, is a combination of two or more disks with the aim of providing fault tolerance and improving performance. There are several different levels of RAID, with each providing a different method of sharing or distributing data amongst the drives. The DNS-323 supports RAID levels 0 and 1.

RAID 0 RAID 0 provides *data striping*, which spreads out blocks of data over both drives, but does not provide data redundancy.

Although performance is improved, the lack of fault tolerance means that if one drive fails, all data in the array will be lost.

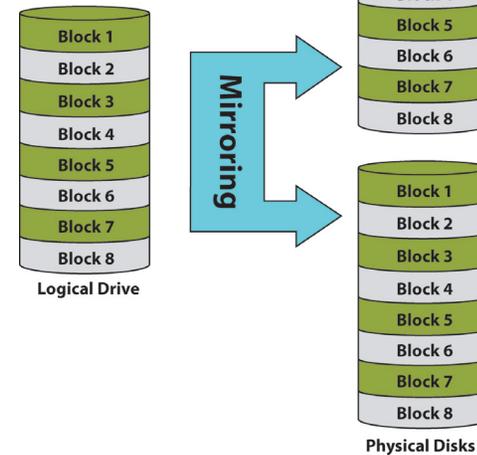
RAID 0



RAID 1 RAID 1 provides *mirroring* over both disks, with the same read/write speed of a single disk. A RAID 1 array can only be as large as its smallest member disk.

Because the data is stored on both disks, RAID 1 provides fault tolerance and protection, in addition to performance advantages.

RAID 1



Status

Device Info

- LAN Info** Displays the local network settings of the DNS-323.
- Device Info** Displays the workgroup, name, description and current temperature of the DNS-323.
- Printer Info** Displays information for a connected USB printer.
- Hard Drive Info** Displays the hard drive information, including the disk mode, total size, used and remaining drive space.

Product Page: DNS-323 Firmware Version: 1.00

D-Link

DNS-323 // **SETUP** **ADVANCED** **TOOLS** **STATUS** **SUPPORT** **LOGOUT**

DEVICE INFO

DEVICE INFORMATION:
View a summary of device information here.

LAN INFO:
IP Address: 192.168.0.32
Subnet Mask: 255.255.255.0
Gateway IP Address: 192.168.0.1
Mac Address: 00:00:F0:11:22:19

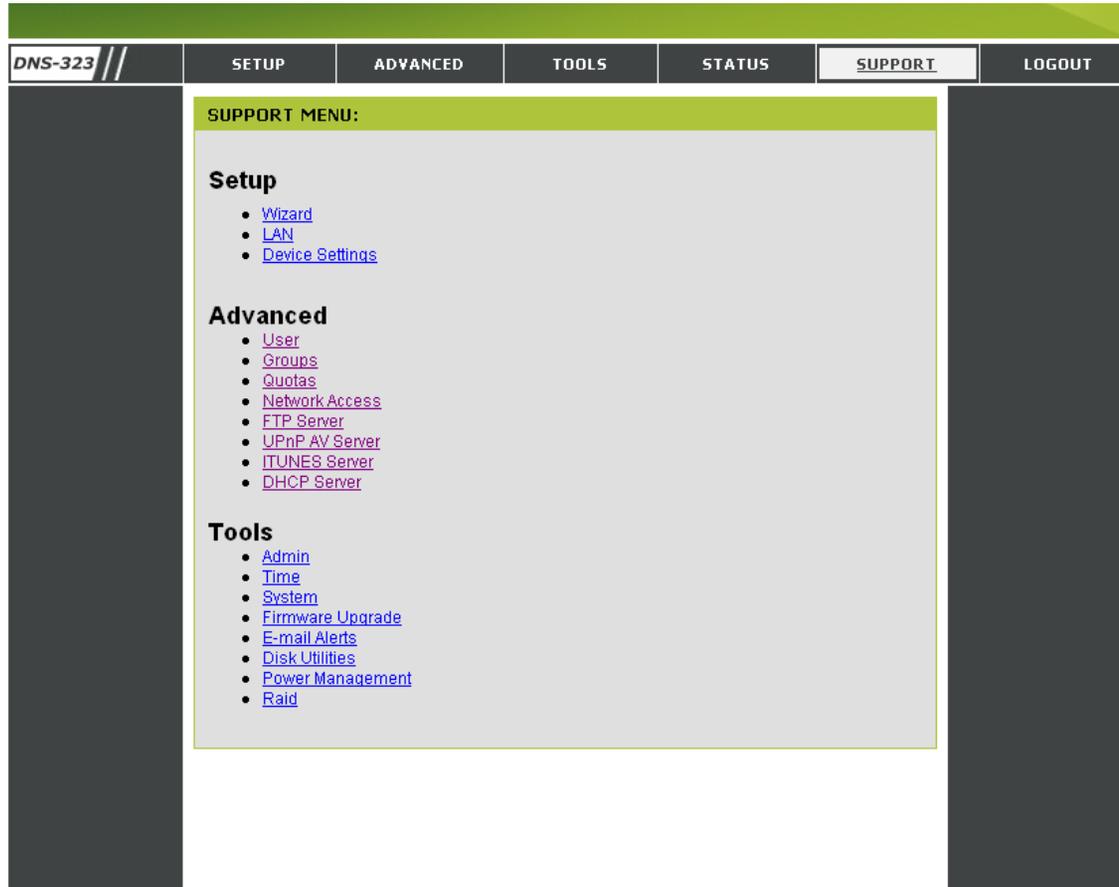
DEVICE INFO :
Workgroup: workgroup
Name: DNS-323
Description: DNS-323
System Temperature: 107°F

PRINTER INFO:
Manufacturer: None
Product: None

HARD DRIVE INFO :
Device Name: HDD_1
Disk Mode: Linear
Total Disk Size: 191676 MB
Used Space: 0 MB
Disk Size Remaining: 191676 MB

Support

The DNS-323 Support page provides a menu of Support topics explaining the features of the device.



Mapping a Drive

You can use the D-Link Easy Search Utility to map drives to your computer. Insert the DNS-323 CD into your CD-ROM drive.

Click **Easy Search Utility**.



The Easy Search Utility will load and detect any DNS-323 devices that are on the local network.

If the DNS-323 you are working with does not show up in the device list, click **Refresh**.

The screenshot shows the D-Link Easy Search Utility window. It is divided into three main sections: Network Storage Device, LAN, and Drive Mapping. The Network Storage Device section contains a table with columns for Name, IP, Netmask, and Gateway. The LAN section contains input fields for IP, Netmask, and Gateway, along with a Receive DHCP dropdown menu and an Apply button. The Drive Mapping section contains a table with columns for Volume Name and Location, an Available Drive Letters dropdown menu, and Connect and Disconnect buttons. Three callout boxes with arrows point to specific elements: 'Highlight an available DNS-323.' points to the 'DNS-323' entry in the Network Storage Device table; 'Available volumes will be displayed under Drive Mapping. Highlight the volume you want to map.' points to the 'HDD_1' and 'HDD_2' entries in the Drive Mapping table; 'Select an available drive letter from the drop-down menu and click **Connect**.' points to the 'Available Drive Letters' dropdown menu.

Highlight an available DNS-323.

Available volumes will be displayed under Drive Mapping. Highlight the volume you want to map.

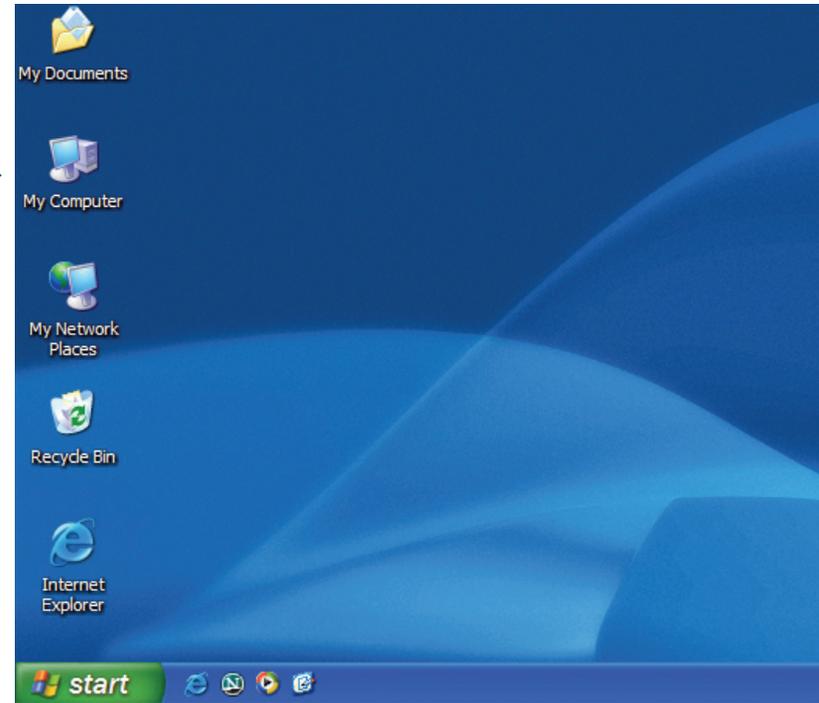
Select an available drive letter from the drop-down menu and click **Connect**.

Name	IP	Netmask	Gateway
DNS-323	192.168.0.117	255.255.255.0	192.168.0.1

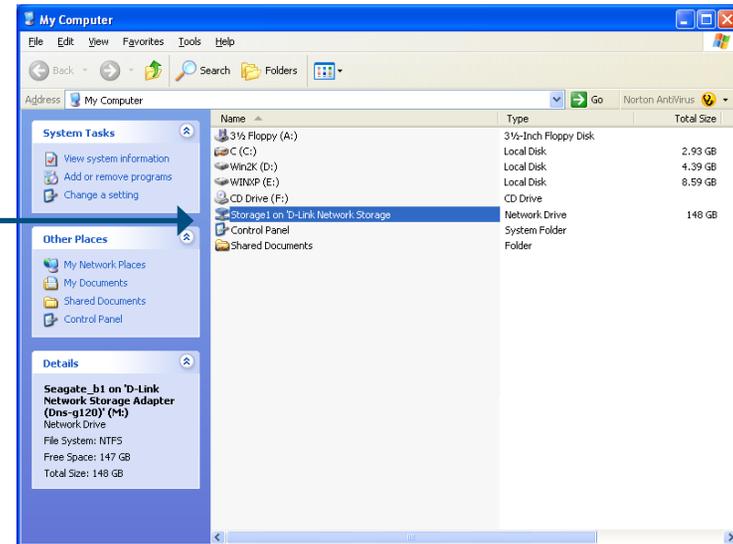
Volume Name	Location
HDD_1	
HDD_2	

Once connected, your mapped drive(s) will appear in **My Computer**.

Double-click the **My Computer** icon on your desktop.



Double-click on the mapped drive to access the files and folders.



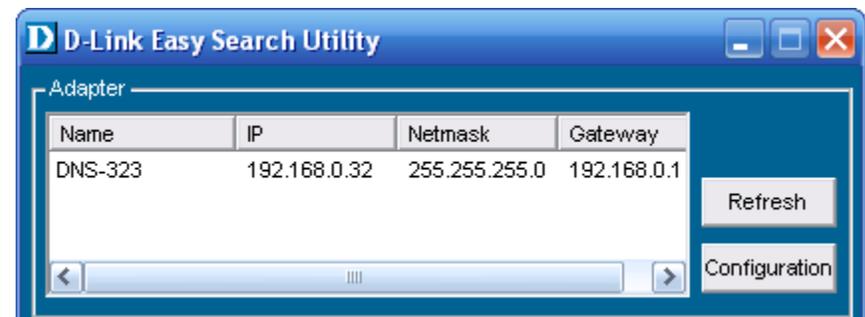
Download Scheduling

The DNS-323 Download Scheduling feature allows you to set up scheduled folder or file downloads and backup sessions.

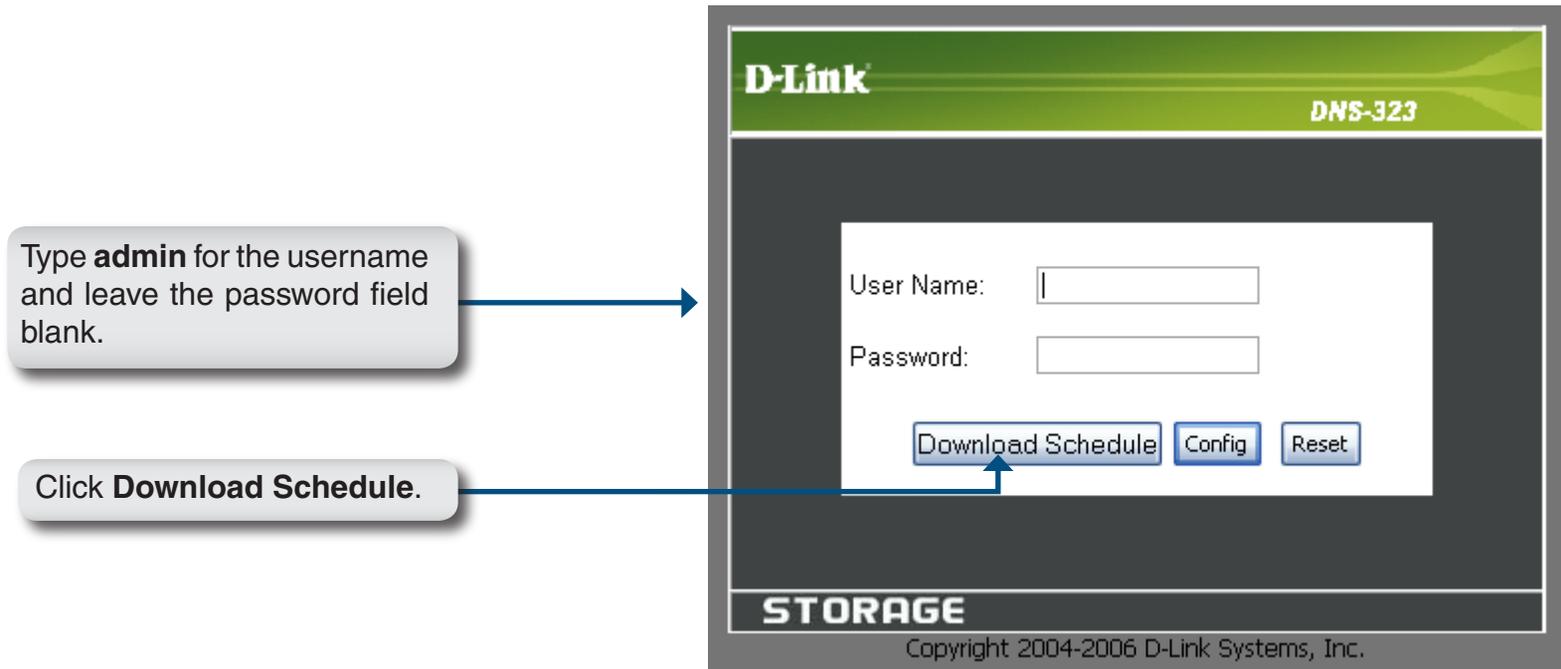
Begin by accessing the configuration of the DNS-323:

Click **Easy Search Utility**.

Highlight an available DNS-323 and click **Configuration** to access the web-based utility.



The DNS-323 login screen will appear:



The DNS-323 Download Scheduling configuration will appear.

Scheduling

Scheduling Settings

Configure download and backup schedules here.

Schedule List

The Schedule List will display all completed, active, and pending scheduled downloads and backups.

Product Page: DNS-323 Firmware Version: 1.00

D-Link

DNS-323 // SCHEDULING STATUS SUPPORT LOGOUT

SCHEDULING SETTINGS :

Schedule downloads of files and folders from an FTP server, web server, or local network share.

SCHEDULING SETTINGS :

Login Method: Account Anonymous

User Name:

Password:

Type:

URL:

Save To:

When: Date: 05 / 31 / 2006
Time: 08 : 27

Recurring Backup:

Incremental Backup (Only for local backup)

SCHEDULE LIST :

Status	Download Path	Save To	Time	Del
🔴	\\192.168.0.32\HDD_1\	HDD_2\systemfile\	05/31/06 08:25	🗑

Helpful Hints..

Always test the URL before applying changes. This will help to ensure a successful download.

Scheduling Settings

Login Method Select the appropriate login method to access the files for download. If the site requires login credentials, select Account and enter a valid username and password.

Type Select File or Folder, depending on what you want to download or backup.

URL Enter the URL of the site or server you are initiating a transfer from.

E.g. ftp://123.456.789/Test
ftp://123.456.789/test.txt
http://www.test.com/test.txt

Test Click **Test** to test the URL is valid and the user name and password are correct.

Local Click **Local** to set the source file or folder from one of the internal drive volumes. Browse to the file or folder, and click Ok to accept the network path.

Save To Enter a valid destination drive on the DNS-323, or click Browse and browse to the destination.

When Enter the date and time you want the scheduled backup or download to occur.

Recurring Backup Designate the interval and time you want the backup or download to run unattended.

Incremental Backup By default all local backups and file/folder downloads are in Overwrite mode, meaning that identical files in the destination folder will be overwritten by the source files. Checking Incremental Backup will have the DNS-323 compare identical file names at the source and destination. Files will only be overwritten if the source file is more recent.

SCHEDULING SETTINGS :

Login Method Account Anonymous

User Name

Password

Type

URL

Save To

When Date : /

Time : :

Recurring Backup :

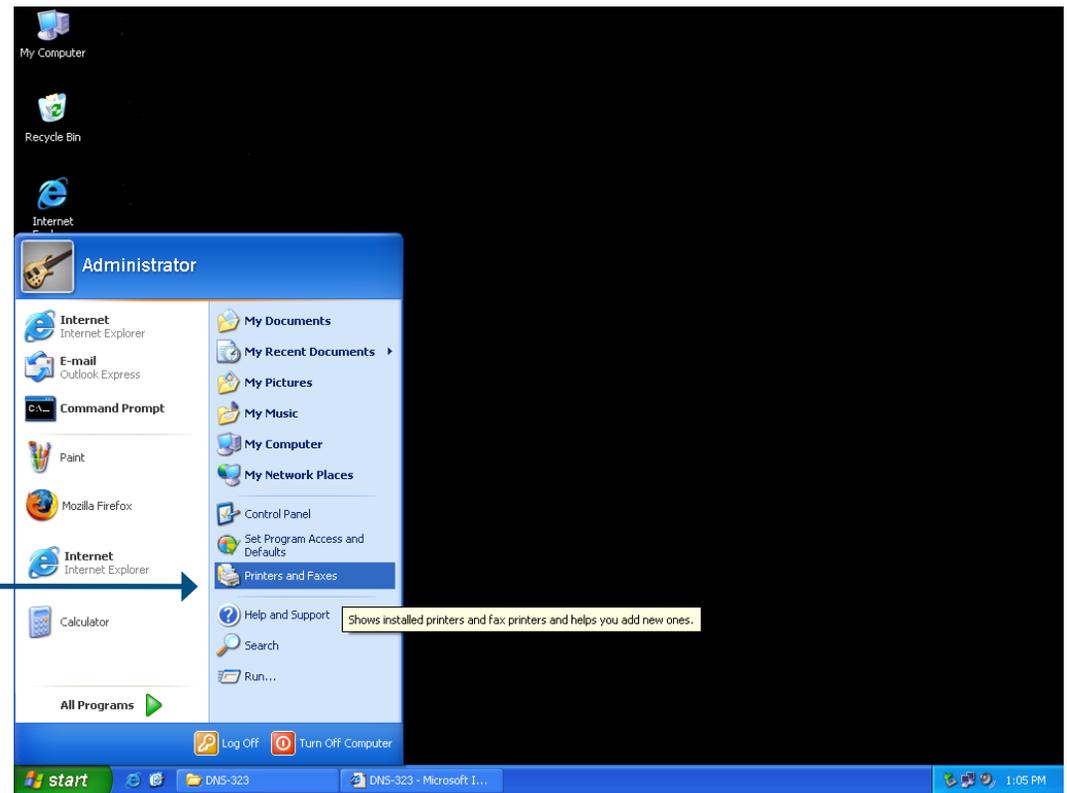
Incremental Backup (Only for local backup)

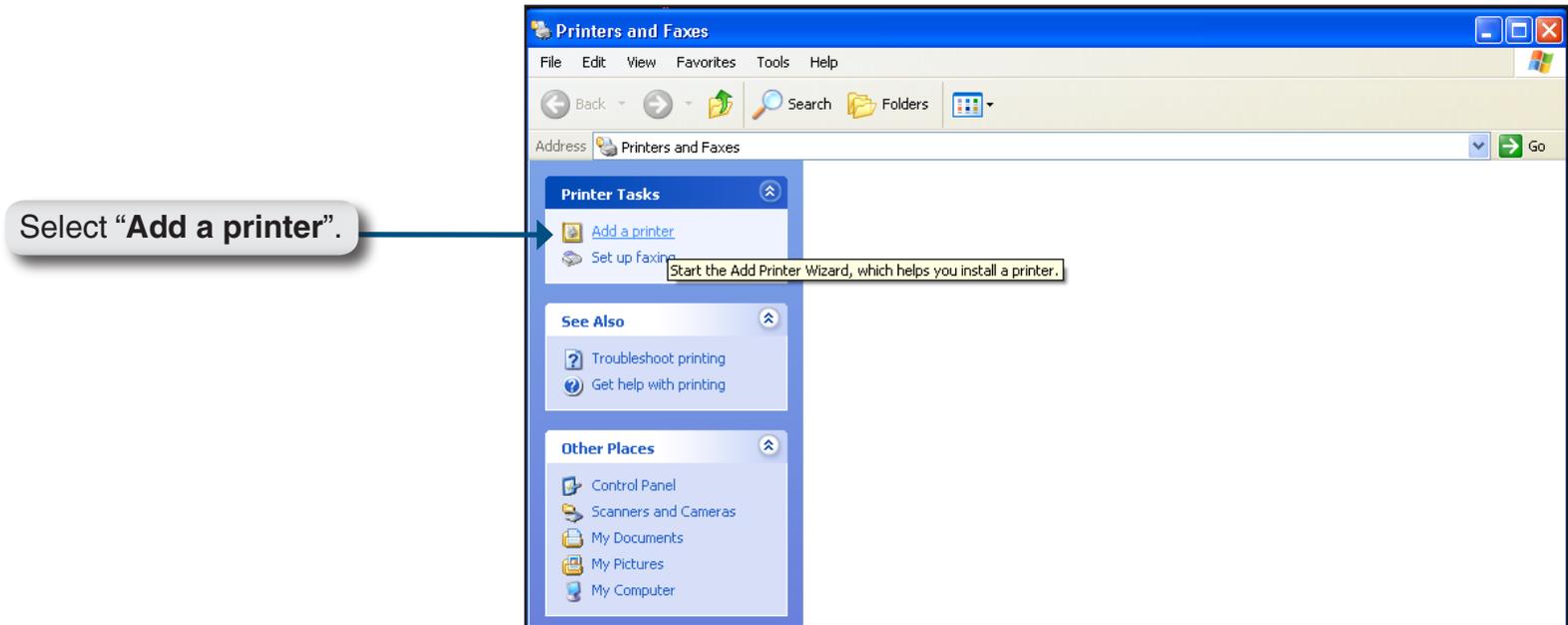
USB Print Server

The DNS-323 features a built-in USB print server, giving users the ability to share a printer on their local network. Connect a USB printer to the USB port on the back of the DNS-323. It is important to ensure that any of the printer manufacturer's drivers are already installed on any computer you want to print from.

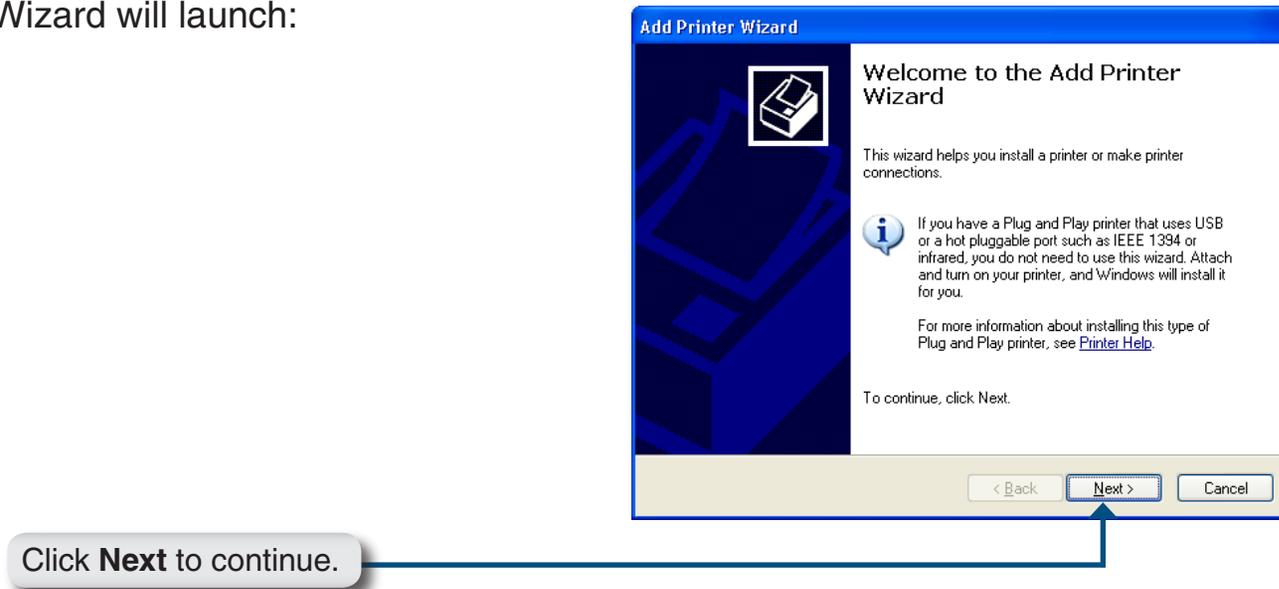
To add a printer:

Click **Start**, and select Printers and Faxes.

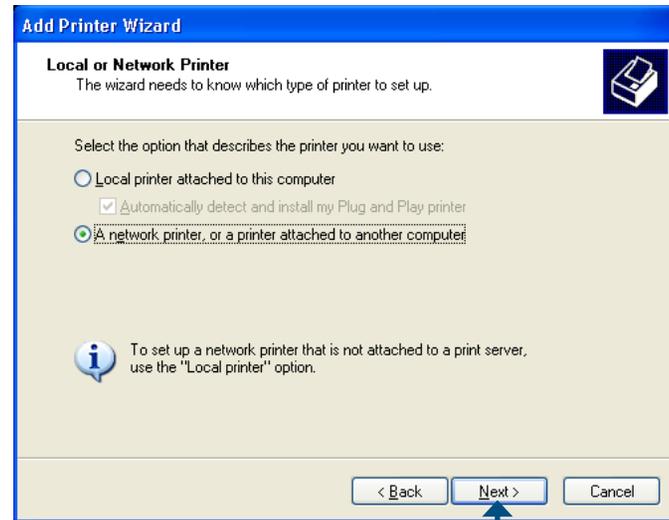




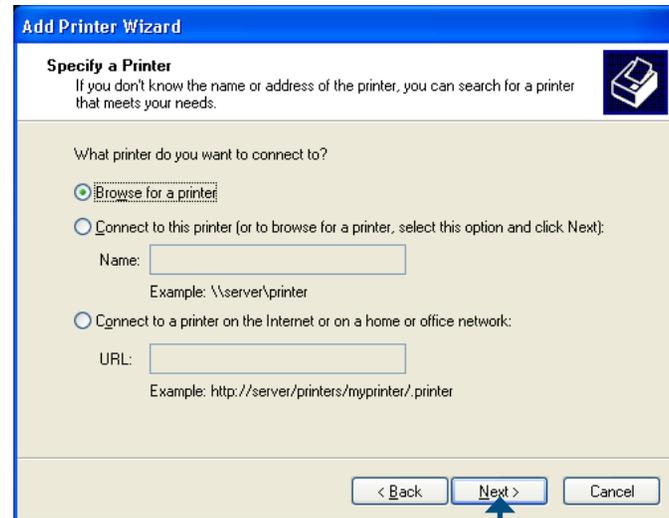
The Windows Add Printer Wizard will launch:



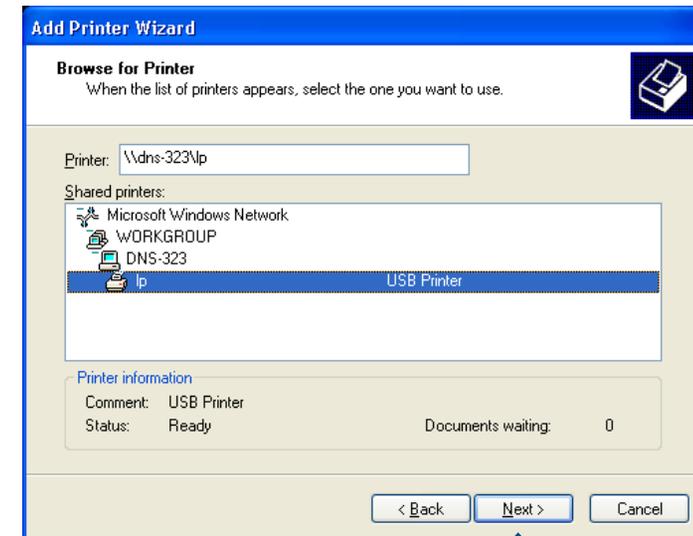
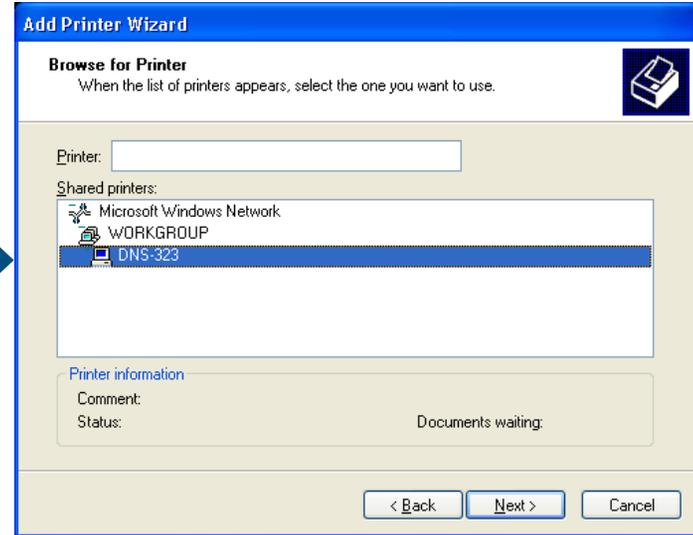
When prompted to choose a local, or network printer, select **“A network printer, or a printer attached to another computer.”** Click **Next** to continue.



Select **“Browse for a printer”** and click **Next** to continue.



Double-click "DNS-323" from the Shared Printers list to expand the tree.



Select the available USB printer, and click **Next** to continue.

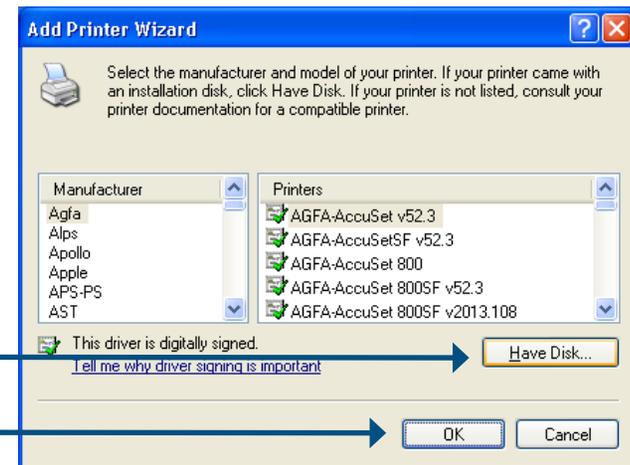
The following printer driver messages will appear:



Click **Next** to continue.

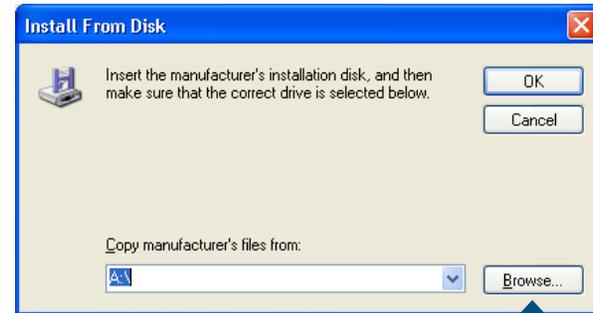


Click **OK** to continue and select a printer driver.

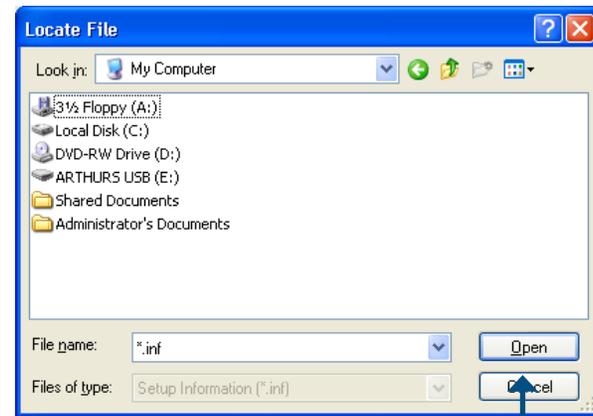


Select the appropriate printer driver from the list and click **OK** to complete the wizard. If the driver is not in the list, select **Have Disk**.

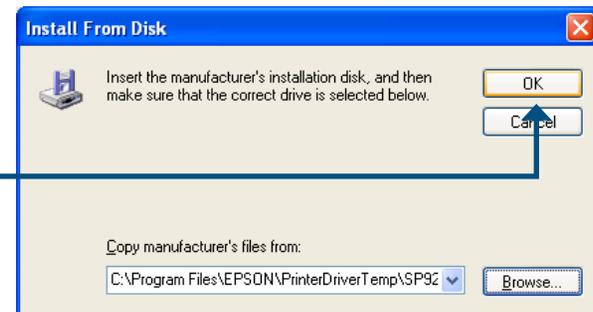
Insert the print driver CD or browse to the appropriate directory.

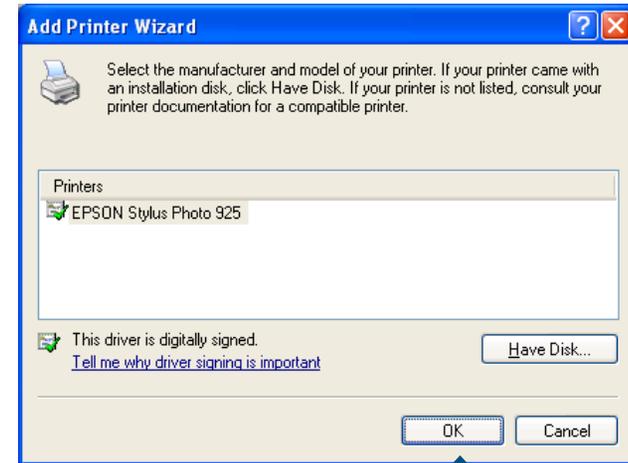


Select the appropriate driver file, and click **Open** to continue.



Click **OK** to continue.



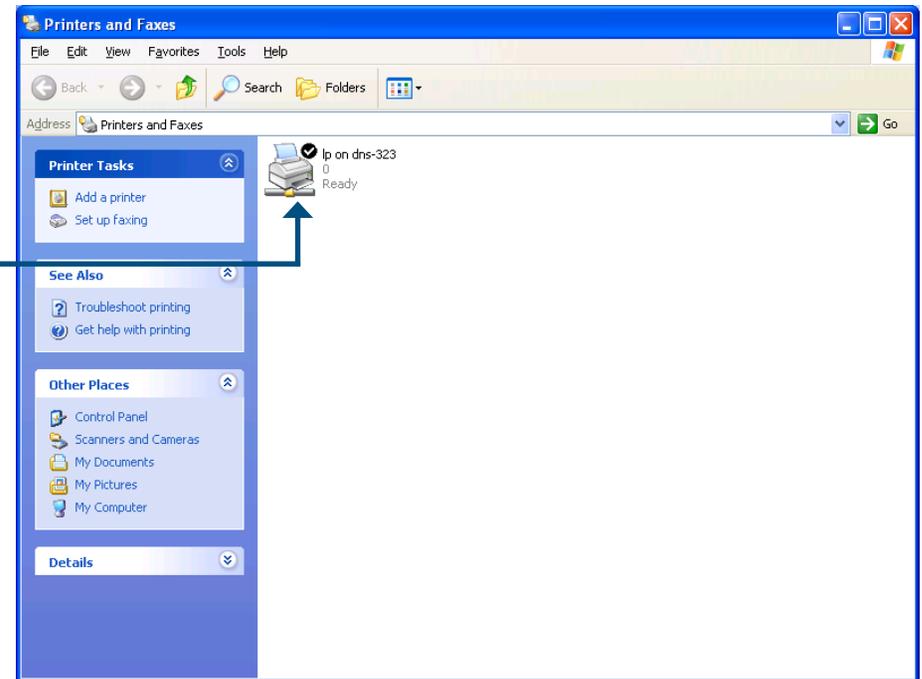


Verify the driver is correct, and click **OK** to continue.



The wizard will install the printer drivers, and return a completion screen. Click **Finish**.

The printer should now appear as an available printer.



Contacting Technical Support

U.S. and Canadian customers can contact D-Link technical support through our web site or by phone.

Before you contact technical support, please have the following ready:

- Model number of the product (e.g. DNS-323)
- Hardware Revision (located on the label on the bottom of the switch (e.g. rev A1))
- Serial Number (s/n number located on the label on the bottom of the device).

You can find software updates and user documentation on the D-Link website as well as frequently asked questions and answers to technical issues.

For customers within the United States:

Phone Support:

(877) 453-5465

24 hours a day, seven days a week.

Internet Support:

<http://support.dlink.com>

For customers within Canada:

Phone Support:

(800) 361-5265

Monday to Friday 7:30am to 9:00pm EST

Internet Support:

<http://support.dlink.ca>

Warranty

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. (“D-Link”) provides this Limited Warranty:

- Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor, and
- Only for products purchased and delivered 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.

Limited Warranty:

D-Link warrants that the hardware portion of the D-Link product described below (“Hardware”) will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product, for the period set forth below (“Warranty Period”), except as otherwise stated herein.

- Hardware (excluding power supplies): One (1) year
- Free Technical Support - Basic Installation: Ninety (90) days

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 repair or replace the defective Hardware during the Warranty Period at no charge to the original 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.

Limited 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 Limited Warranty provided hereunder for Hardware and Software portions of D-Link’s products will not be applied to and does not cover 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 Limited 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) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-877-453-5465, 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. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the product and will not ship back any accessories.
- 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 Limited 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 Limited Warranty.

Disclaimer of Other Warranties:

EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, 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 THE DURATION OF THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED 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 LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NONCONFORMING 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.

Governing Law:

This Limited 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 Limited 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.

Copyright Statement:

No part of this publication or documentation accompanying this product may be reproduced in any form or by any means or used to make any derivative such as translation, transformation, or adaptation without permission from D-Link Corporation/D-Link Systems, Inc., as stipulated by the United States Copyright Act of 1976 and any amendments thereto. Contents are subject to change without prior notice.

Copyright ©2005-2006 by D-Link Corporation/D-Link Systems, Inc. All rights reserved.

Registration



Product registration is entirely voluntary and failure to complete or return this form will not diminish your warranty rights.

Version 1.0
June 14, 2006