USER MANUAL

DCS-900

VERSION 4.0

D-Link®

NETWORK CAMREA

Table of Content

Package Contents 1
Minimum System Requirements 1
Introduction 1
Features and Benefits 2
Hardware Overview 3
    Connections 3
    LEDs 3
Hardware Installation 4
    Attach the Swivel Stand 4
    Connect the Ethernet Cable 4
    Attach the External Power Supply 4
Security 5
Auto-Run Installation 6
Quick Installation 7
Multicamera Management 20
Using the Configuration Menu 30
    LIVE VIDEO 31
        LIVE VIDEO > Camera 31
    SETUP 32
        SETUP > Network Setup 32
        SETUP > Dynamic DNS 34
        SETUP > Video 35
        SETUP > Mail 37
        SETUP > FTP 39
        SETUP > Time and Date 41
    MAINTENANCE 42
        MAINTENANCE > Device Management 42
        MAINTENANCE > Backup and Restore 44
        MAINTENANCE > Firmware Update 45
    STATUS 46
        STATUS> Device Info 46
    HELP 47
Installing the DCS-900 Behind a Router 48

Assigning and Opening the HTTP Port on the DCS-900 48
1) Open the HTTP Port 48
Router Setup and Installation 49
Assigning and Opening Virtual Server Ports 50
2) Open Virtual Server Ports To Enable Remote Image Viewing 50
Viewing Your Camera 51
IPView SE Application Installation 52
IPView SE 58
IPView SE Icon Description 59
How to Add a New Camera 60
How to Delete a Camera 62
How to Change the IP Address 63
How to Format the Camera View 64
How to Rotate the View 65
View/List 66
Zoom 66
Color Setting 67
Wake Up Control Panel 67
Always on Top 67
Close 67
How to take a Snap-Shot with the Camera 68
How to Start Recording 69
How to Stop Recording 69
Camera Settings 69
Configure Camera from Web 69
Motion Setting 70
Manual Recording 71
Schedule Recording 71
Motion Recording 73
Scan 74
Camera's Extra Information 74
Play 75
System Configure 76
About 80

Uninstall IPView SE 81
Frequently Asked Questions 82
    Wired Network Camera Features 82
    Wired Network Camera Installation 83
How to Ping Your IP Address 84
Adjusting the Camera Focus 86
Technical Specifications 87

Package Contents

- D-Link DCS-900 Wired Network Camera
- Power Adapter (5.0V, 2.5A)
- CAT5 Ethernet Cable
- Camera Stand
- CD-ROM with Software and Manual
- Quick Installation Guide

NOTE: Using a power supply with a different voltage than the one included with your product will cause damage and void the warranty for this product.

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

Minimum System Requirements

- Local Area Network: 10Base-T Ethernet or 100Base-TX Fast Ethernet
- PC with 1.3GHz processor, 128MB RAM and 20MB of available hard disk space.
- Windows 2000/XP/Vista
- A CD-ROM drive
- An existing 10/100 Ethernet-based network.

Introduction

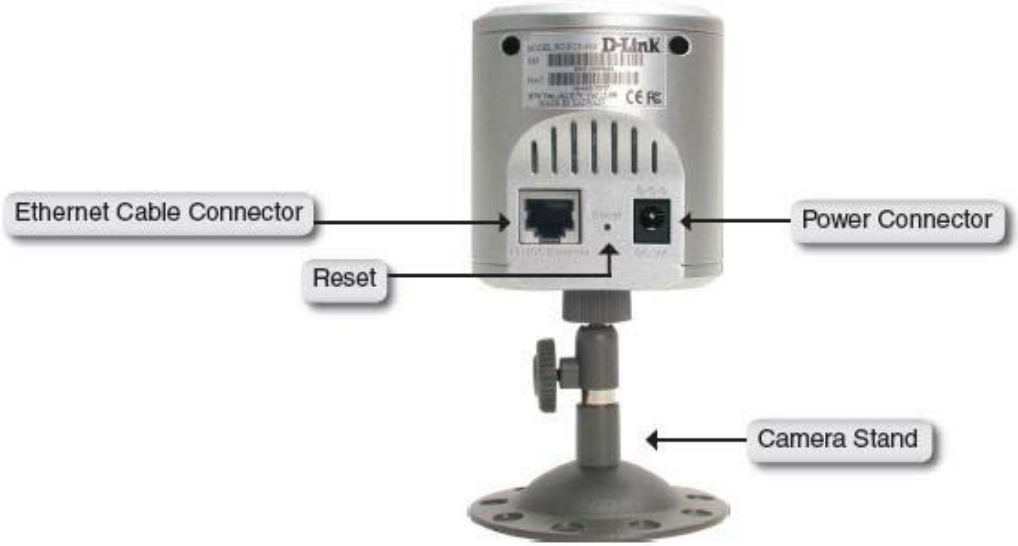
Congratulations on your purchase of the DCS-900 Wired Network Camera! The DCS-900 is a versatile and unique solution for your small office or home. Unlike a PC Camera, the DCS-900 is a stand-alone system with a built-in CPU and Web server that transmits high quality video images for monitoring. The DCS-900 can be accessed remotely, and controlled from any PC/Notebook over the Intranet or Internet via a web browser. The simple installation procedure and intuitive web-based interface offer easy integration with your Ethernet or Fast Ethernet network. The DCS-900 also comes with remote monitoring capability for a complete and cost-effective home security solution.

Features and Benefits

■ Simple to Use - The DCS-900 is a stand-alone system with a built-in CPU, requiring no special hardware or software such as PC frame grabber cards. The DCS-900 supports both ActiveX mode for Internet Explorer and Java mode for Internet Explorer and Netscape Navigator .
■ Supports a Variety of Platforms - Supporting TCP/IP networking, HTTP, and other Internet related protocols. The DCS-900 can also be integrated easily into other Internet/Intranet applications because of its standards-based features.
■ Web Configuration - Using a standard Web browser, Administrators can configure and manage the Internet Camera directly from its own Web page via the Intranet or Internet. This means you can access your DCS-900 at anytime from anywhere in the world!
■ Remote Monitoring Utility - The IPView SE application adds enhanced features and functionality for the Internet Camera and allows administrators to configure and access the Internet Camera from a remote site via Intranet or Internet. Other features include image monitoring, recording images to a hard drive, viewing up to 4 cameras on one screen, and taking snapshots.
■ Broad Range of Applications - With today's high-speed Internet services, the Internet Camera can provide the ideal solution for live video images over the Intranet and Internet for remote monitoring. The Internet Camera allows remote access from a Web browser for live image viewing and allows the administrator to manage and control the Internet Camera at anytime, from anywhere in the world. Many applications exist, including industrial and public monitoring of homes, offices, banks, hospitals, child-care centers, and amusement parks.

Hardware Overview

Connections



LEDs

Hardware Installation

Attach the Swivel Stand

Locate the stand mount on the bottom panel of the DCS-900 and screw on the swivel stand to the base of the DCS-900.

Connect the Ethernet Cable

Connect the included Ethernet cable to the network cable connector located on the back panel of the DCS-900 and attach it to the network. Network connectivity is confirmed when the green LED Indicator on the DCS-900, located below the Power LED, is illuminated.

Attach the External Power Supply

Attach the external power supply to the DC power input connector located on the rear panel of the DCS-900 and connect it to a wall outlet or power strip.

NOTE: Power source is confirmed when the red LED Power Indicator located to the right of the lens on the DCS-900 is illuminated.

Security

To ensure the highest security and prevent unauthorized usage of the DCS-900, the Administrator has the exclusive privilege to create all users. The DCS-900 supports multi-level password protection/access that can be restricted by the Administrator for defined users who have a User Name and Password.
The Administrator can release a public User Name and Password so that when remote users access the DCS-900 they will be allowed to view the images transmitted by the DCS-900.

NOTE: When the DCS-900 is used for the first time, it is highly recommended that the Administrator set the Admin ID and Admin Password to restrict user access to the DCS-900 since the default settings are Null String (no password). Once the ID and Password are defined, only the Administrator has access to the management of the DCS-900. This procedure should be done as soon as possible since the security features of the DCS-900 will not be enabled until the Admin ID and Admin Password is defined.

Auto-Run Installation

Insert the Installation CD-ROM into your computer's CD-ROM drive to initiate the Auto-Run program. The content of the Installation CD-ROM includes:

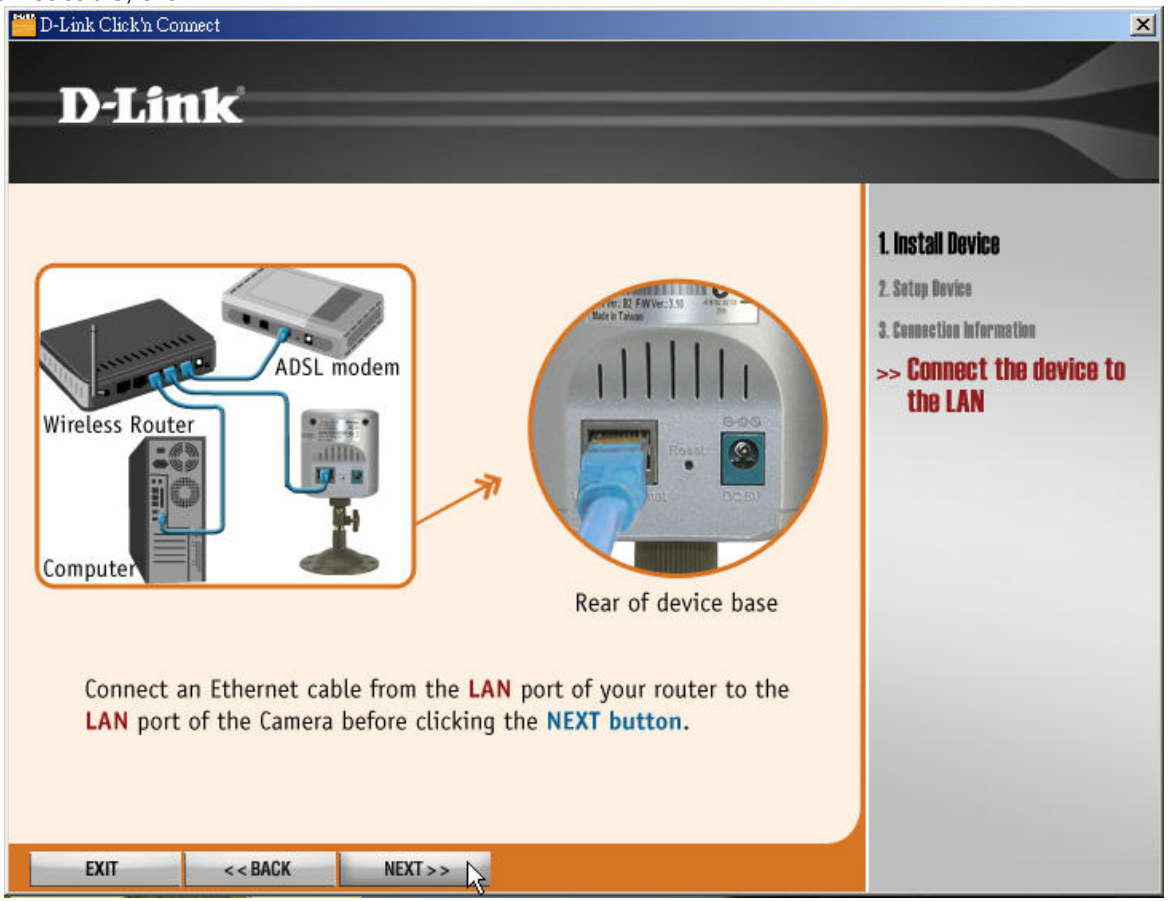
- **View Quick Installation Guide** - click to preview the *Quick Installation Guide* in PDF format for step-by-step instructions of the DCS-900 Installation.
- **View Manual** – click to preview the *User's Guide* in PDF format for detailed information of the DCS-900.
- **Multicamera Management** – click to install and use Setup Wizard to complete further settings for your Internet camera.
- **IPView SE** – click to install and use IPView SE to manage your cameras by enabling you to search, configure, and preview all the DCS-900s from one location.
- **Install Acrobat Reader** – click to launch Acrobat Reader for the viewing and printing of PDF files in the Installation CD-ROM.
- **Technical Support** – Click to display the technical support information.
- **Quick Installation** – Click to start a quick installation.
- **Exit** – click to close the Auto-Run program.

Quick Installation

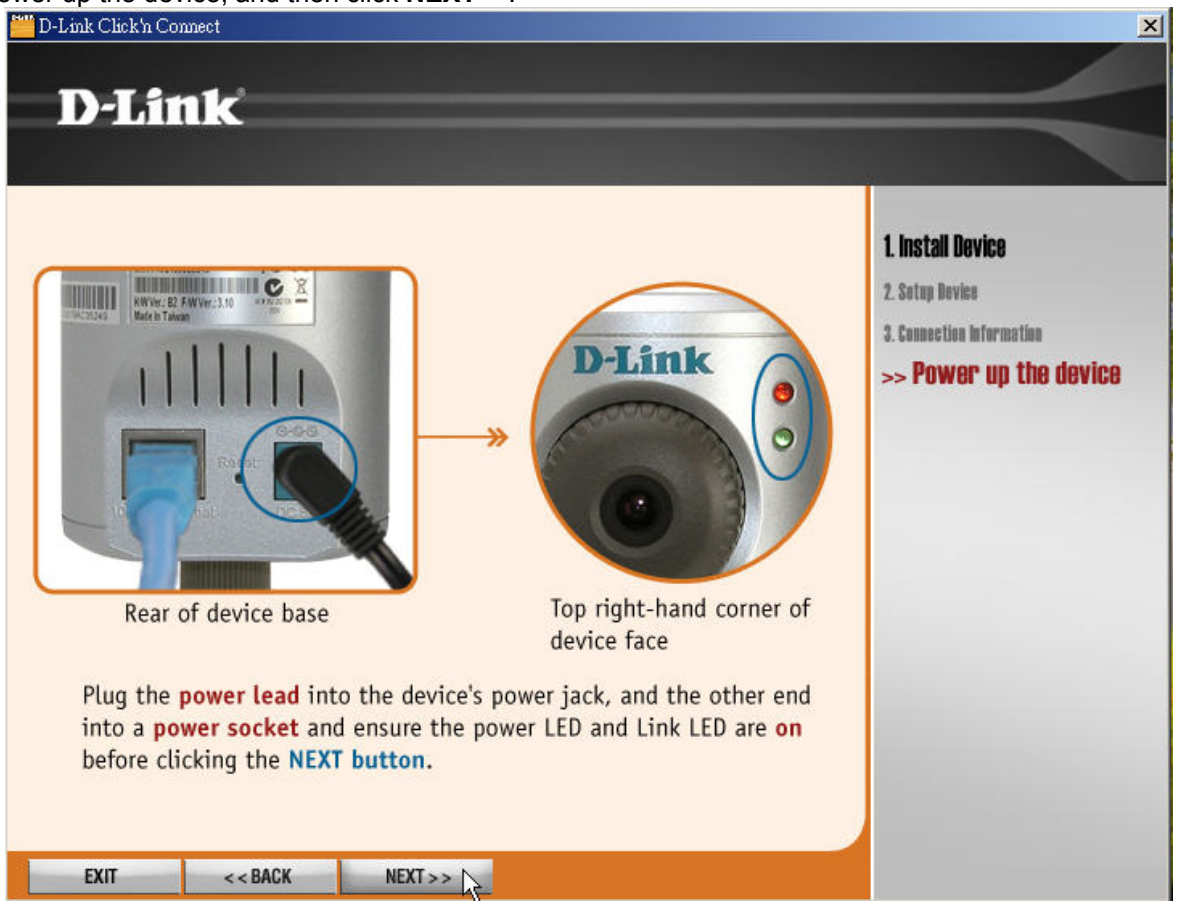
Click the **Start** button to start the **Quick Installation**.

Follow the simple steps below to quickly install the device, click **NEXT>>**.

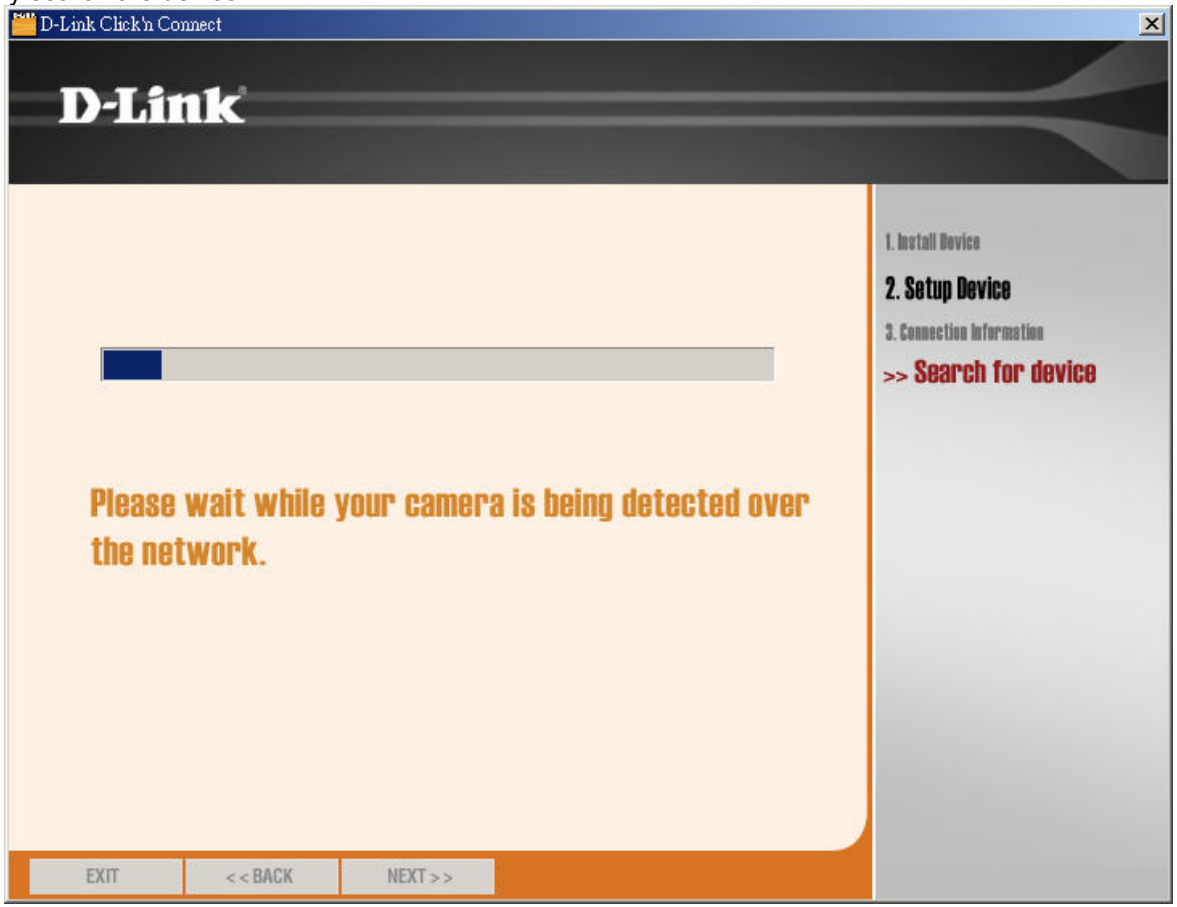
After done the connection of Ethernet cable, click **NEXT>>**.



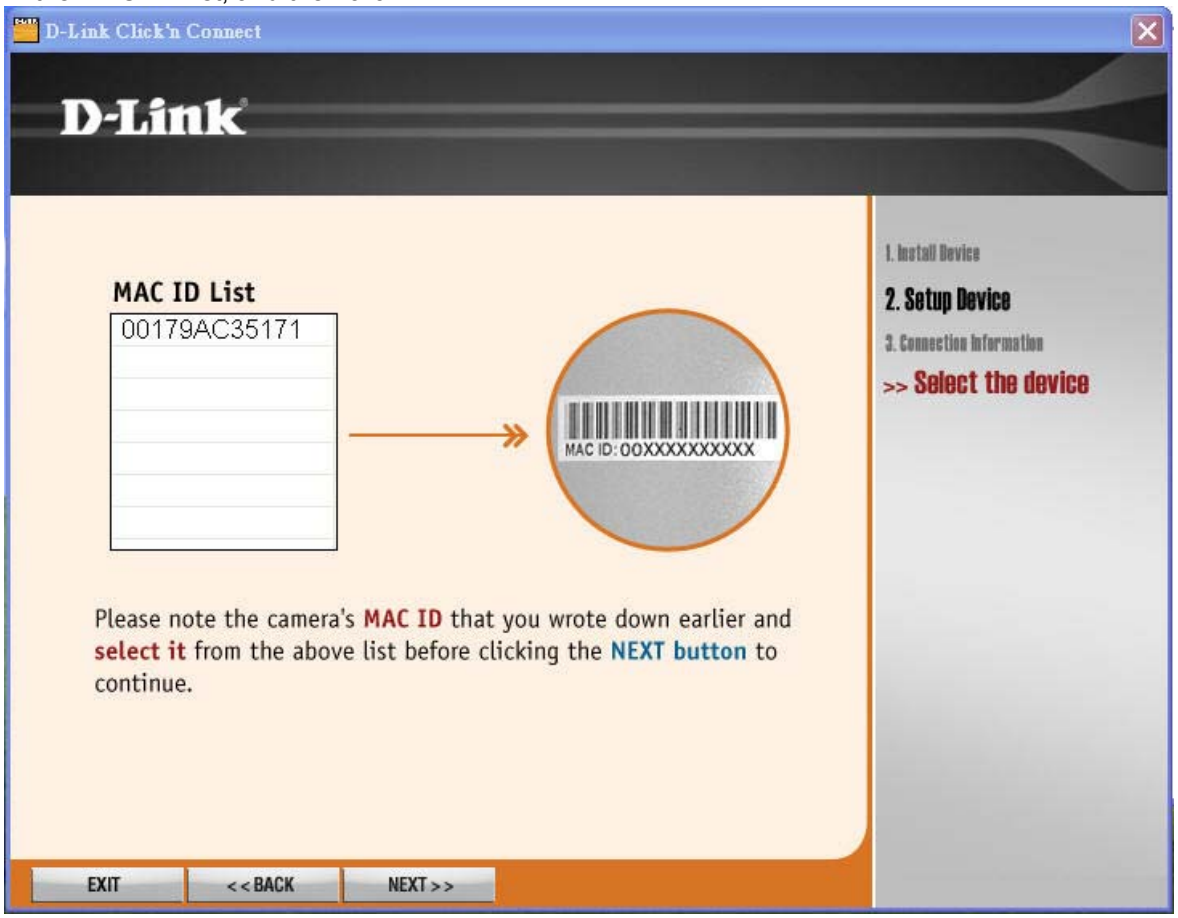
Follow the instruction below to power up the device, and then click **NEXT>>**.



Then the system will automatically search the device.



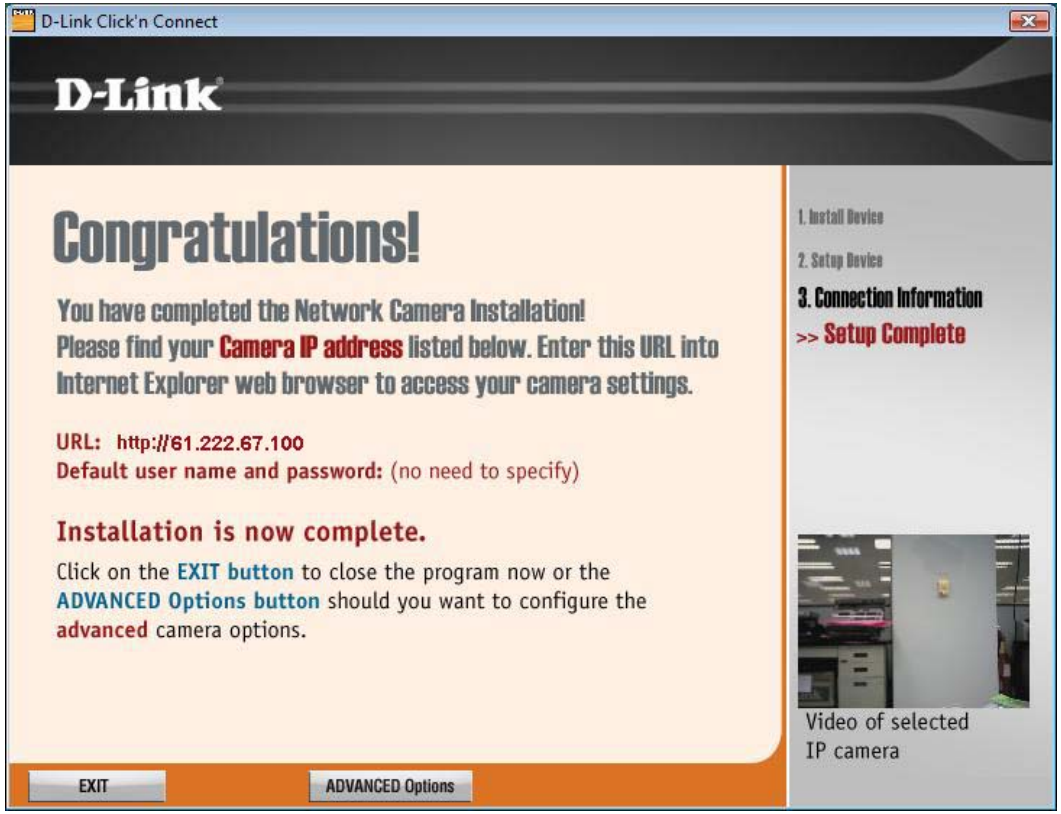
Select your camera's MAC ID from the MAC ID List, and then click **NEXT>>**.



DCC (D-Link Click'n Connect) will auto-detect whether your Internet connection with or without DHCP and diagnose that if DHCP is also available for your IP camera or not in order to display the next corresponding screen.

With DHCP:

Since DHCP is available for your Internet connection and IP camera, **DCC** will start DHCP assign automatically for your IP camera and display the following screen when the process is done.

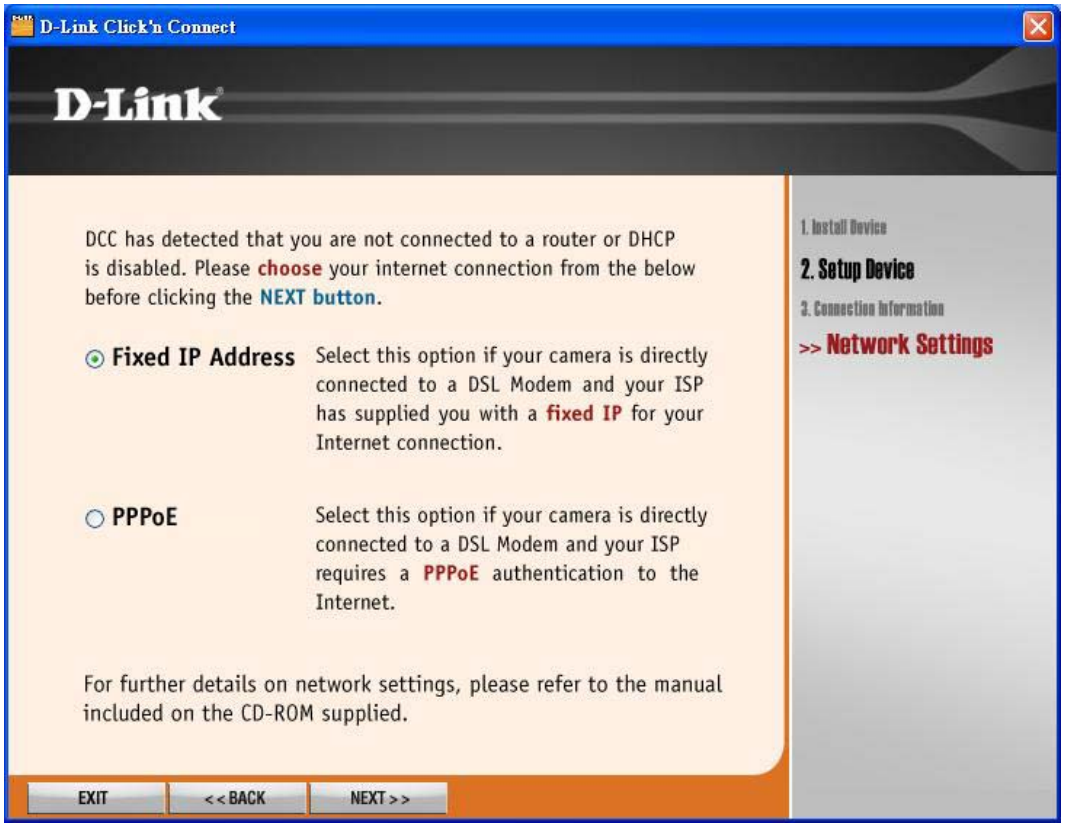


Without DHCP:

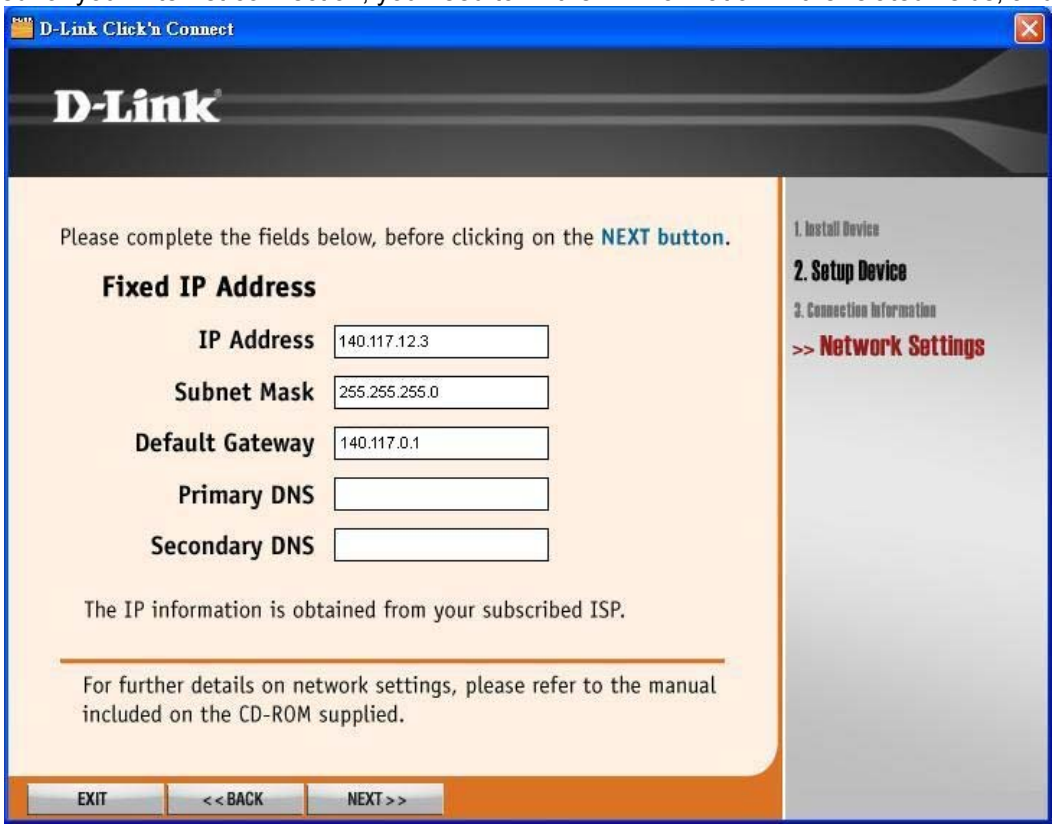
If DHCP is not available for your network and IP camera, the following screen will show up to allow you select **Fixed IP Address** or **PPPoE** for your Internet connection.

For Fixed IP Address:

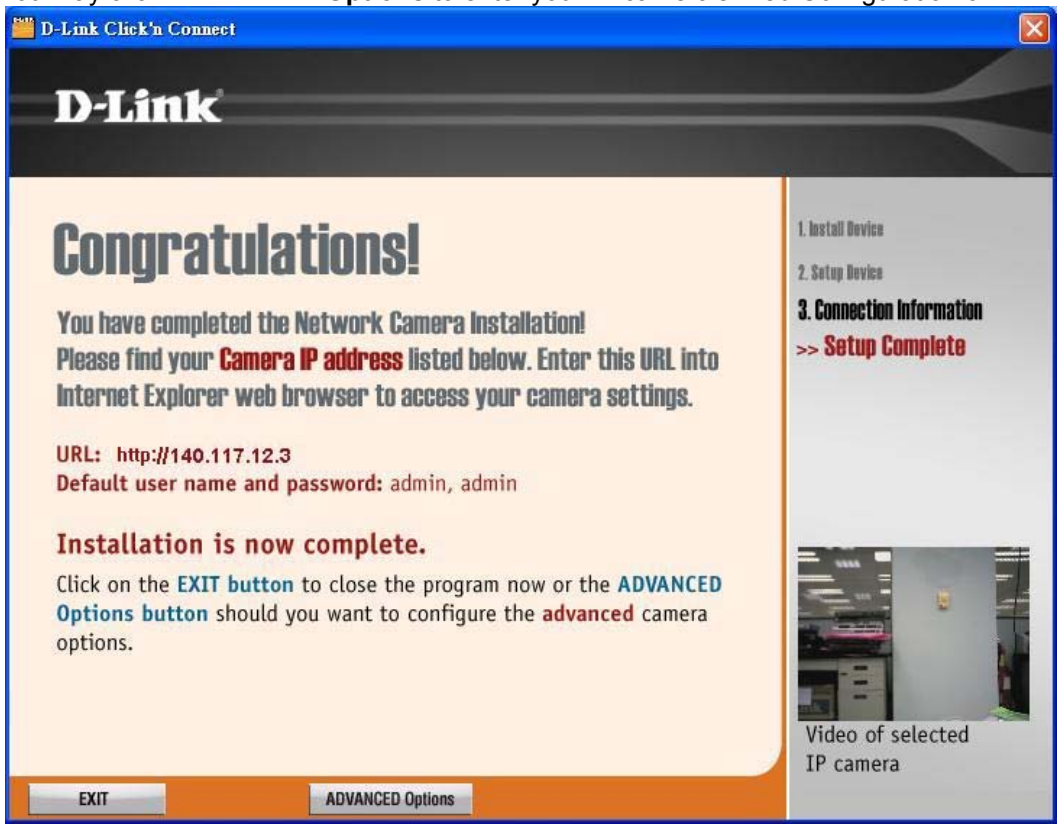
If your camera is directly connected to a DSL Modem and your ISP has supplied you with a fixed IP for your Internet connection, you may select this option and click **NEXT>>** button to continue.



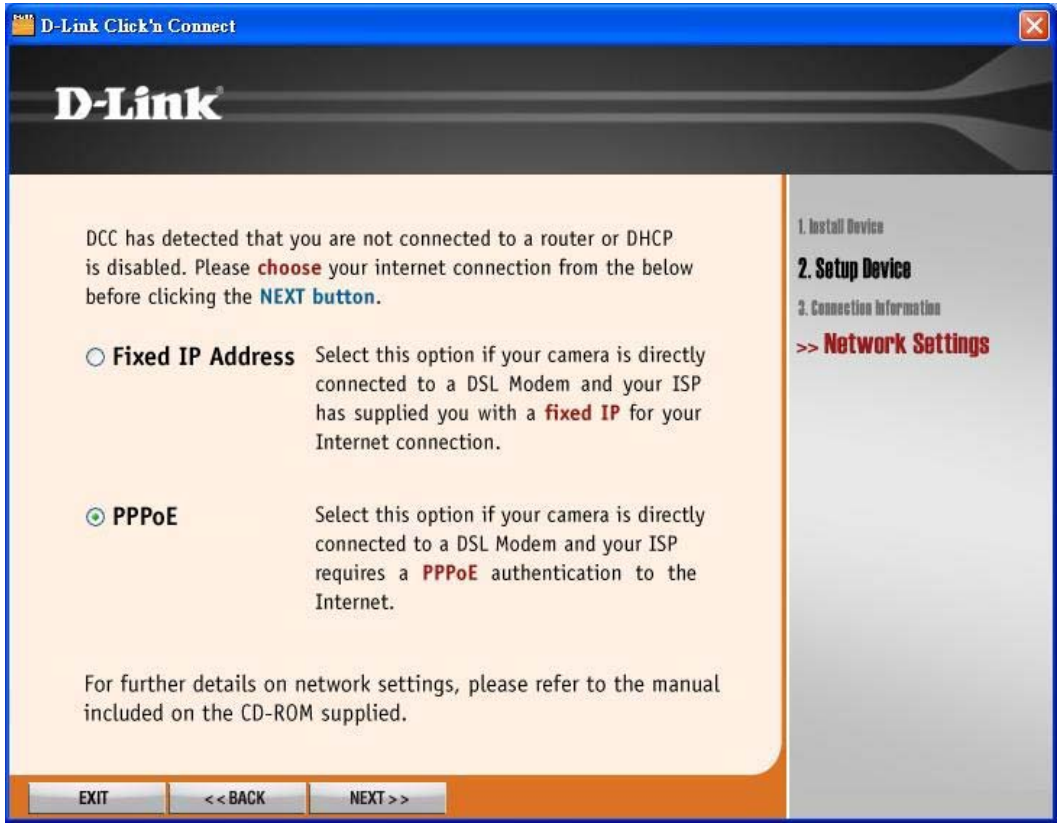
When **Fixed IP Address** is selected for your Internet connection, you need to fill the IP information in the related fields, and then click **NEXT>>**.



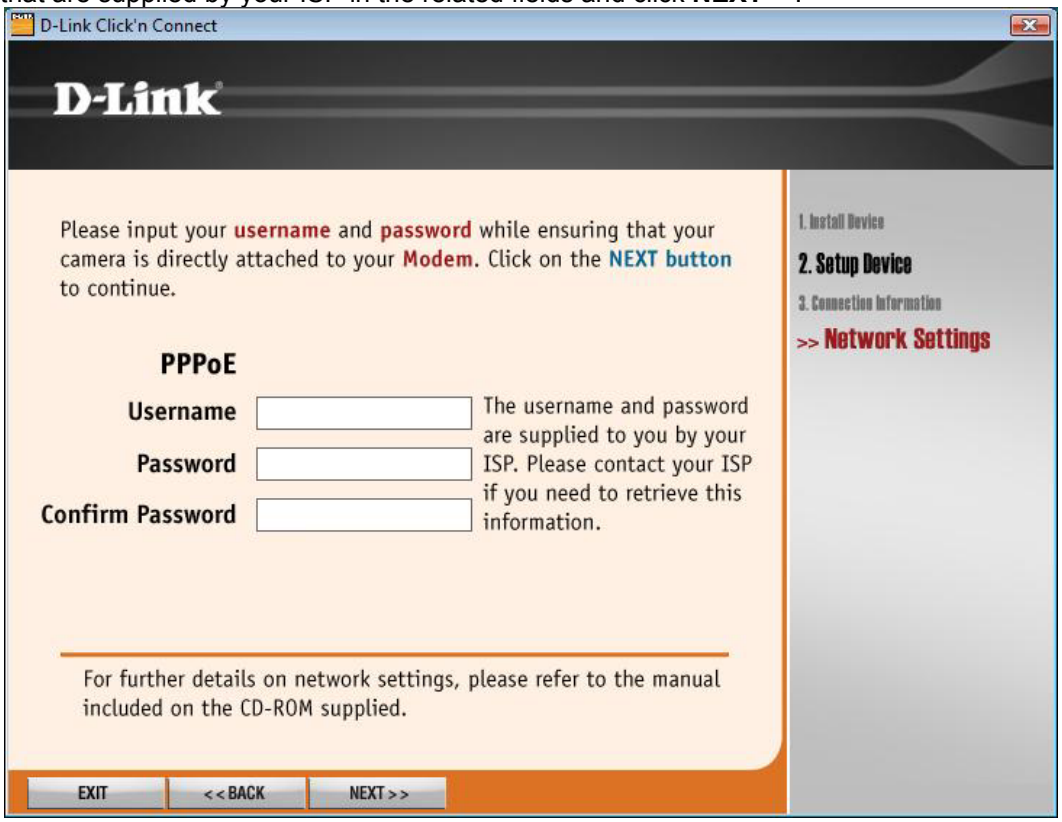
The installation is now complete. You may click **ADVANCED Options** to enter your IP camera's Web Configuration or **EXIT** to leave the screen.



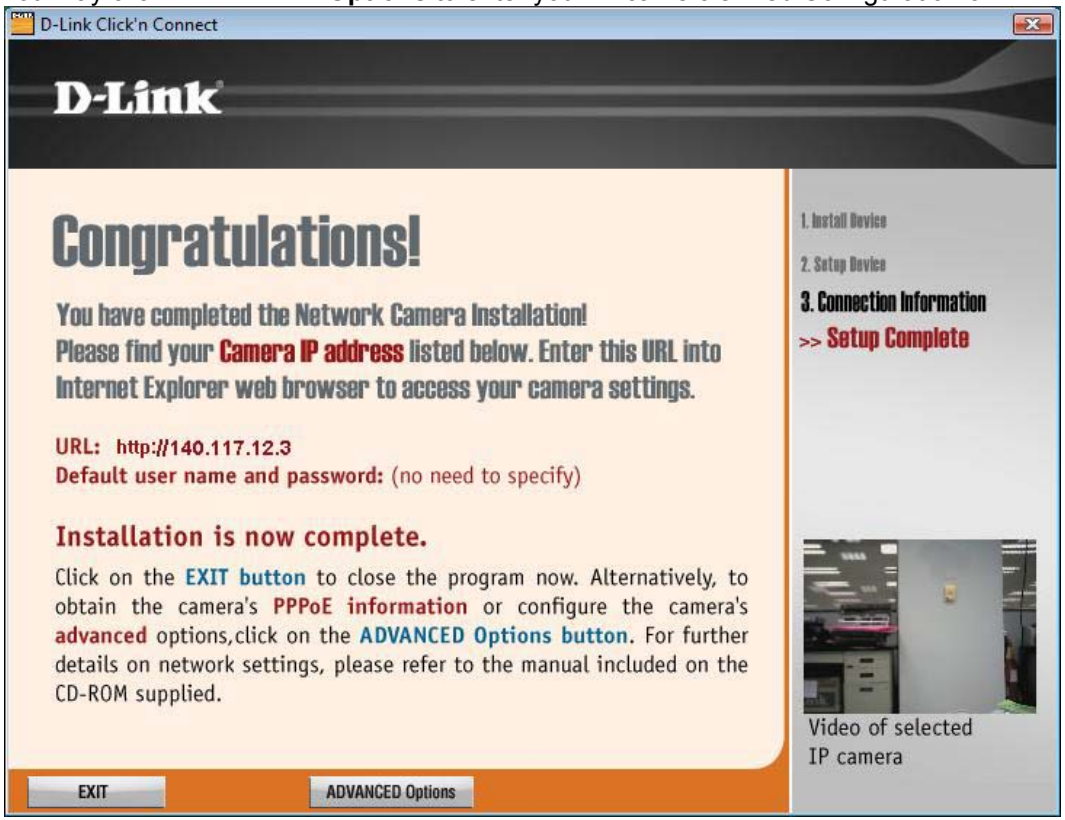
For PPPoE:
Select **PPPoE** option and click **NEXT>>** button.



Enter **Username** and **Password** that are supplied by your ISP in the related fields and click **NEXT>>**.



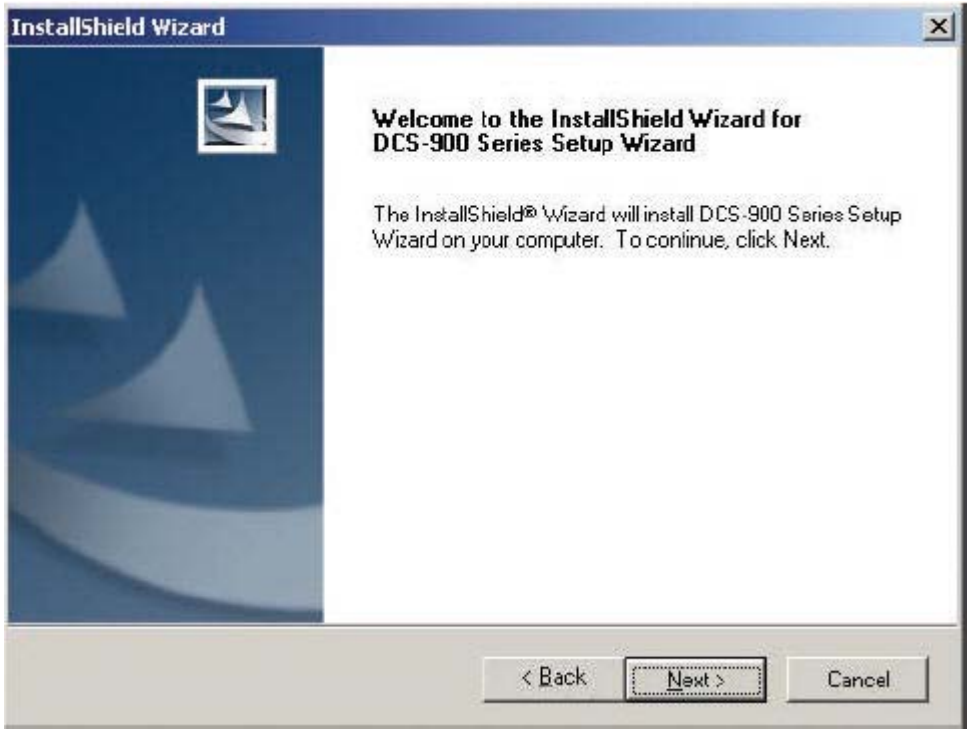
The installation is now complete. You may click **ADVANCED Options** to enter your IP camera's Web Configuration or **EXIT** to leave the screen.



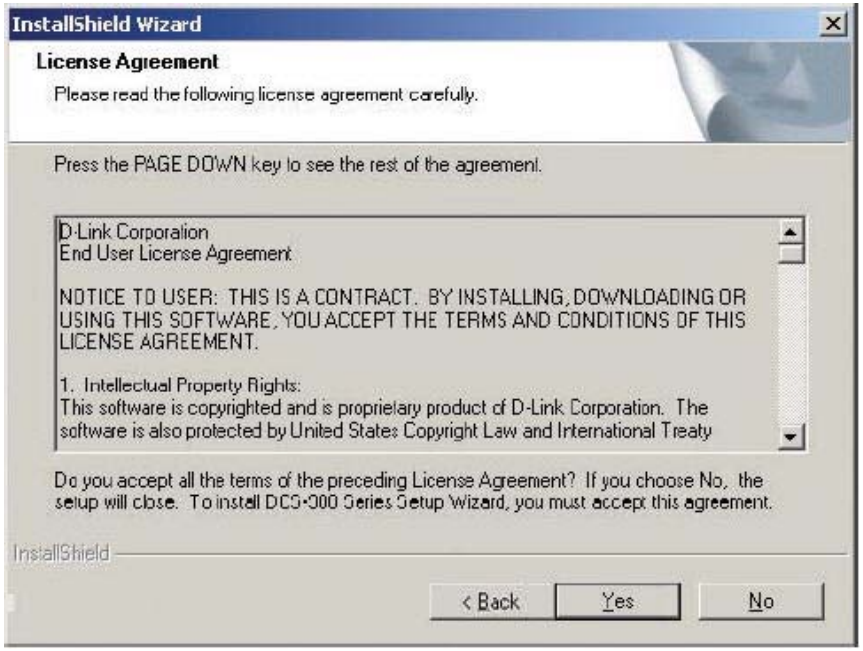
Multicamera Management

Click **Multicamera Management** of the Installation CD.

Follow the simple steps below to run the Setup Wizard to guide you quickly through the installation process.
Click **Next**.



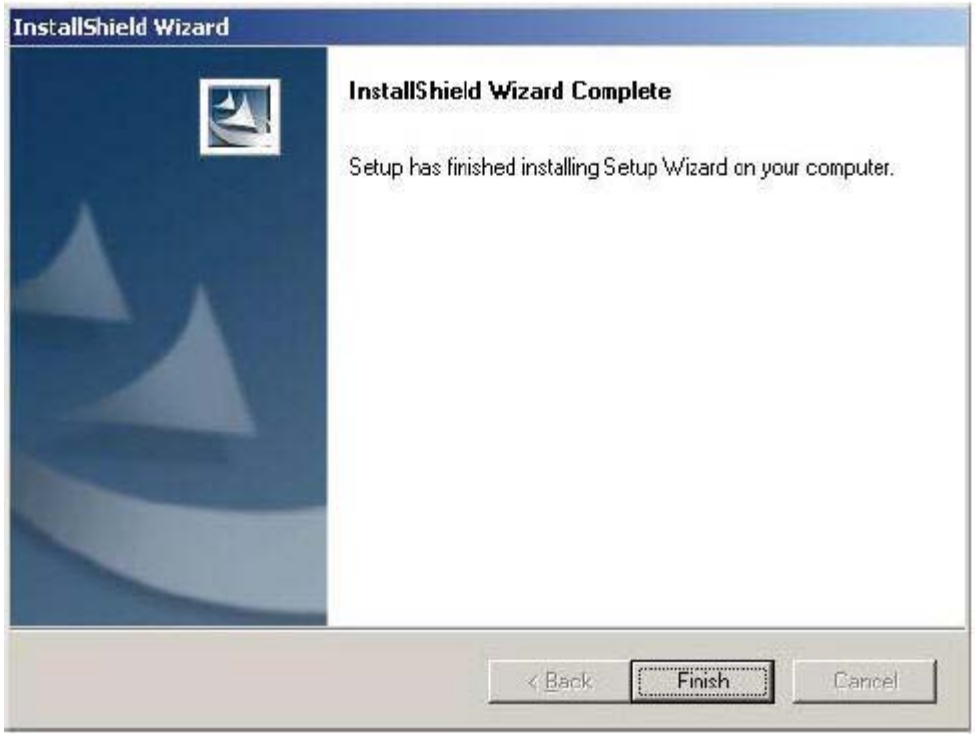
Click **Yes**.


InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
Press the PAGE DOWN key to see the rest of the agreement.
D-Link Corporation
End User License Agreement
NOTICE TO USER: THIS IS A CONTRACT. BY INSTALLING, DOWNLOADING OR USING THIS SOFTWARE, YOU ACCEPT THE TERMS AND CONDITIONS OF THIS LICENSE AGREEMENT.
1. Intellectual Property Rights:
This software is copyrighted and is proprietary product of D-Link Corporation. The software is also protected by United States Copyright Law and International Treaty
Do you accept all the terms of the preceding License Agreement? If you choose No, the setup will close. To install DCS-900 Series Setup Wizard, you must accept this agreement.
InstallShield
< Back
Yes
No

Click **Next**.

InstallShield Wizard
Choose Destination Location
Select folder where Setup will install files.
Setup will install Setup Wizard in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files\D-Link
Browse...
InstallShield
< Back
Next >
Cancel

Click **Finish**.



Be aware that the **Setup Wizard** is offered for you to do configuration of your camera in the future only. Not necessary to run the **Setup Wizard** for your first time using the camera.
To run the **Setup Wizard**, click on **Start→ Programs→ D-Link Setup Wizard**. Your camera's IP Address will be displayed under the heading of **Current IP Address** along with its corresponding MAC Address. Click **Wizard**.

You must change the **Admin ID** and **Password** immediately to protect your camera against unauthorized access. By default, the **Admin ID** and **Password** are blank. To change the Admin ID and Password, select both Change boxes and enter a **New ID** and **New Password**. Click **Next**.

Enter an **IP Address** and **Subnet Mask** for your camera if you want to change the current settings. Enter your **Gateway** and **DNS** settings. These settings must correspond with your network settings for you to access the camera. If you are unsure of what these settings should be, check with your network administrator. If you are connecting to a router, the **Gateway** and **DNS 1** entries should be the IP address of your router. Click **Next**.

If you need to make any changes, click **Back** to modify your settings. Otherwise, click **Restart** to save your settings.

Your setup is now complete!
Click **Link** to launch your web browser and view your images.

Using the Configuration Menu

After completing the Setup Wizard, you are ready to use your camera. The Web configuration utility is designed to easily access and configure your DCS-900. Click the “Link” button will open up the main configuration page.

The Home screen of your camera can be accessed from the Setup Wizard using the **Link** button. You can also use your favorite Web browser, type “http://address” in the address box where address is the IP address that you assigned to the DCS-900 from the previous section. Press Enter.

After login in the Web Configuration menu, the home screen will show up. Use the following displayed sections to set up and view your Internet Camera:

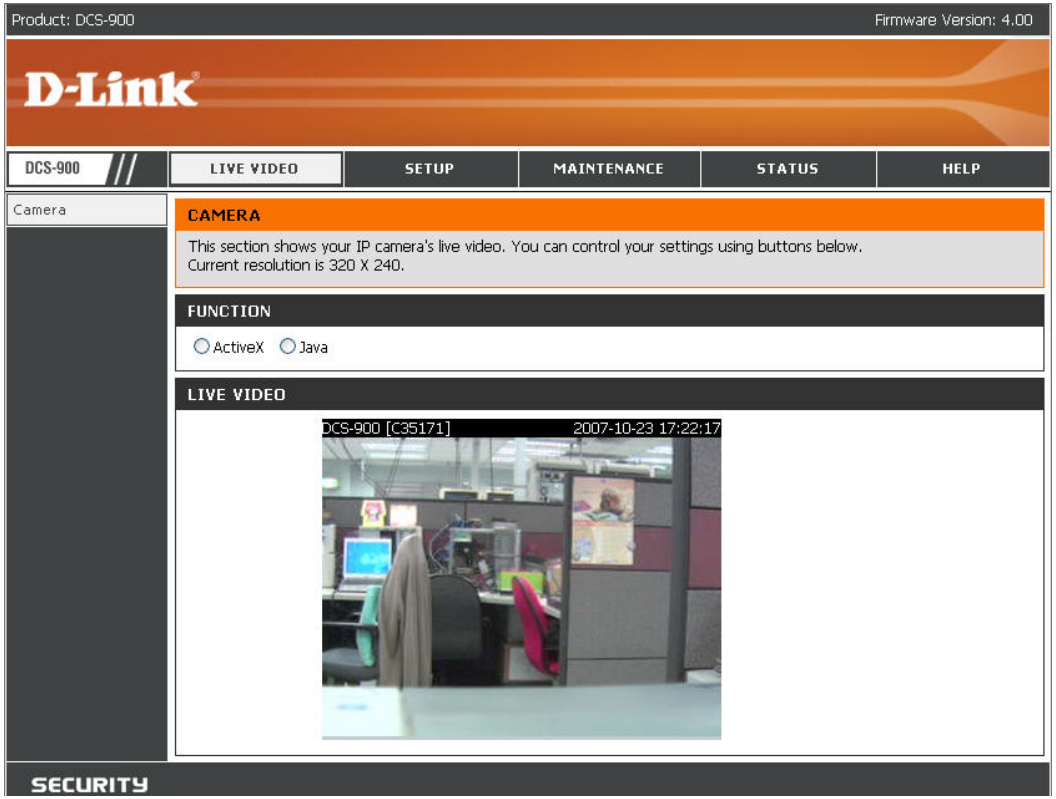
- **LIVE VIDEO**
- **SETUP**
- **MAINTENANCE**
- **STATUS**
- **HELP**

LIVE VIDEO

This section allows you to display your IP camera's live video by using Activex or Java.

LIVE VIDEO > Camera

- Please make sure that you have the latest version of Java installed on your computer to ensure proper operation when viewing the video in Java mode. Java can be downloaded for free from Sun's web site. (http://www.java.com)
- When you connect to the home page, you will be prompted to download ActiveX. If you want to use ActiveX to view your video images instead of Java, then you must download ActiveX.



Function –

- **Activex**: For Windows® users that do not have Java installed, please choose this option to view video streaming on the Home page.
- **Java**: For Windows® users that have Java installed can also use this for viewing video. Mac® users should also choose this mode to view video.

SETUP

This section allows you to further set up or change the configuration of your IP camera.

SETUP > Network Setup

This option, **Network Setup**, allows you to configure your LAN and Internet configuration, including the settings for LAN, PPPoE, and port. After done the configuration, you may click Save Settings button to save the new settings or Don't Save Settings button to abandon it.

IP Address Mode –

- **Fixed IP/ DHCP**: If you are using a LAN connection, select either DHCP Connection or Static IP Address. If manually assigning a Static IP, enter your IP Address, IP Subnet Mask, and Gateway IP Address into the fields provided.
- **PPPoE Settings**: If you are using a PPPoE connection, enable it and enter the User ID and Password for your PPPoE account.

DNS IP Address – This is the IP Address of your ISP's Domain Name Server, if you are using a fixed IP Address you will need to know this, if not you will need to contact your ISP or your network administrator.

Second HTTP Port – Most ISPs do not open port 80 (a DCS-900 default video transfer port) for their residential customers, the DCS-900 has the ability to use a different port by enabling the second http port for its video transfer.

If the **Second HTTP Port** is enabled, it will automatically disable the default port 80. Any unused ports can be used such as port 800, 801, etc. Remember that if the DCS-900 were behind a router you would need to forward that port to the DCS-900's IP Address. When accessing the camera you would need to type the camera's IP Address + the port number (http://xxx.xxx.xxx.xxx:port number, or http://192.168.0.20:800 for example). Please refer to "Installing the DCS-900 Behind a Router" of this manual.

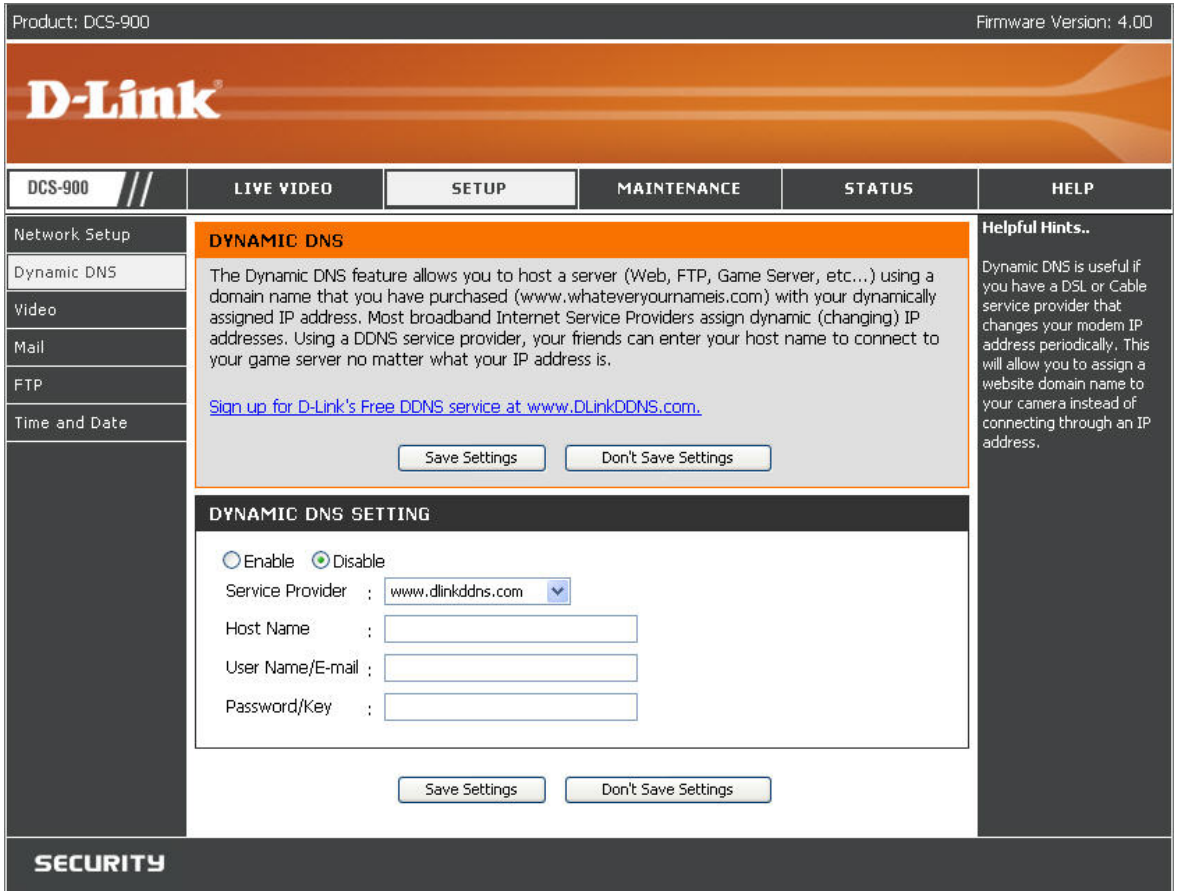
UPnP – Short for **Universal Plug and Play**. It is a networking architecture that provides compatibility among networking equipment, software, and peripherals. The DCS-900 is an UPnP enabled Internet camera, and this function will work with operating systems such as Windows® XP. If you do not want to use the UPnP functionality, you can disable it by selecting Disabled option. This function is enabled by default.

SETUP > Dynamic DNS

If you have a DSL or Cable service provider that changes your modem IP address periodically, Dynamic DNS (Domain Name Service), a method of keeping a domain name linked to a dynamic IP address, is useful. With most Cable and DSL connections, you are assigned a dynamic IP address and that address is used only for the duration of that specific connection. With the DCS-900, you can set up your DDNS service and the DCS-900 will automatically update your DDNS server every time it receives a different IP address. Depending on the service, this update may take a few hours.

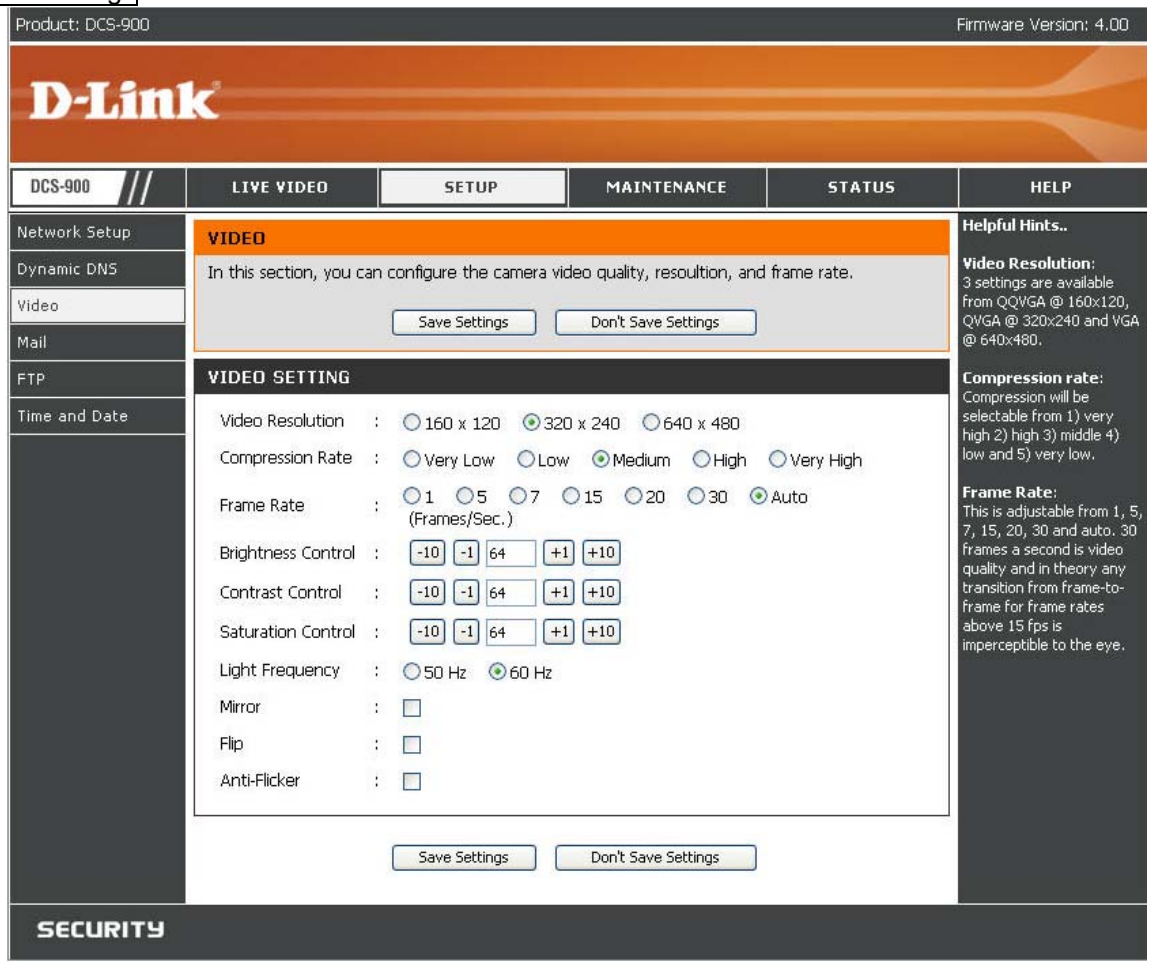
If you are using a DDNS connection, select Enable option and enter in your Host Name, User Name, and Password. After done the configuration, you may click Save Settings button to save the new settings or

Don't Save Settings button to abandon it.



SETUP > Video

This **Video** option allows you to set up your IP camera's video quality, resolution, and Frame rate. After done the configuration, you may click Save Settings button to save the new settings or Don't Save Settings button to abandon it.



Video Setting –

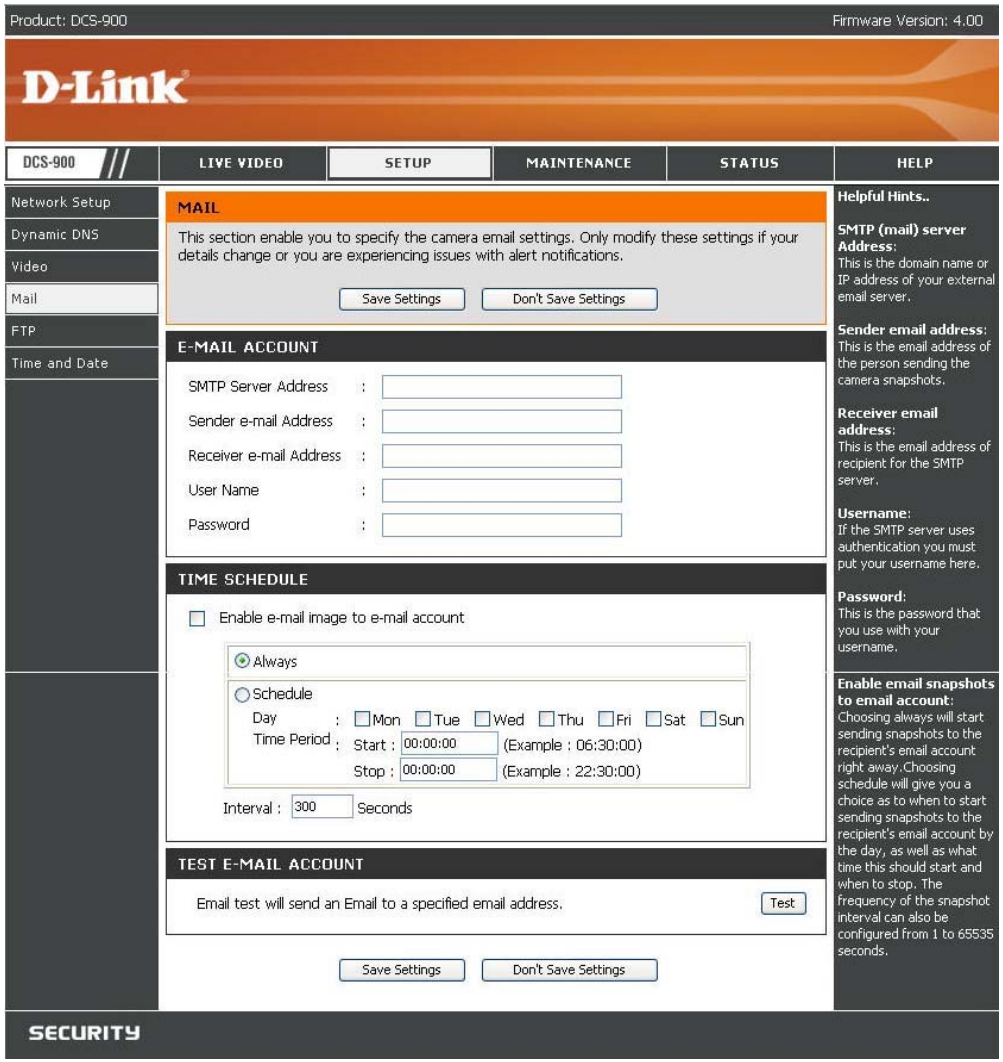
- **Video Resolution**: There are three settings available to choose from 160x120, 320x240, and 640x480.
- **Compression Rate**: Four options are available for this parameter: Very Low, Low, Middle (default), High, and Very High.
- **Frame Rate** (fps): Three options are available for the refresh frame rate: 1, 5, 7, 15, 20, 30 frames per second (fps), and Auto. By default the frame rate is set to

Auto.

- **Brightness Control**: Allows you to adjust the brightness level. The default setting is 64.
- **Contrast Control**: Allows you to adjust the contrast level. The default setting is 64.
- **Saturation Control**: Allows you to adjust the saturation level. The default setting is 64.
- **Light Frequency**: Adjust the light frequency to suit your area of operation. **50Hz** and **60Hz** are available to accommodate the different light frequencies found in USA (**60H**z) and Europe (**50Hz**) for optimal image quality.
- **Mirror**: Horizontally rotates the video. Check this option if the camera is installed upside down.
- **Flip**: Vertically rotates the video.
- **Enable Anti Flicker**: This option adjust the camera sensor's setting to avoid the image flickering issue under certain light sources. Only use this option when it is necessary.

SETUP > Mail

This option allows you to configure mail settings. If you want to specify the IP camera email settings, you may check **By E-mail** checkbox and modify the further related settings on the **Mail Settings** section. If you are setting up motion detection and will not be recording onto a PC, you can setup an FTP or SMTP account in the camera. You will be emailed or sent images when motion is detected. After done the configuration, you may click Save Settings button to save the new settings or Don't Save Settings button to abandon it.



E-Mail Account –

- **SMTP Server Address**: The domain name or IP address of external mail server.
- **Sender e-mail Address**: The e-mail address of the person sending the camera snapshots.
- **Receiver e-mail Address**: The e-mail address of recipient for the SMTP server.
- **User Name**: If the SMTP server uses authentication you must enter your user name here.
- **Password**: This is the password that you use with your user name to connect to the SMTP server.

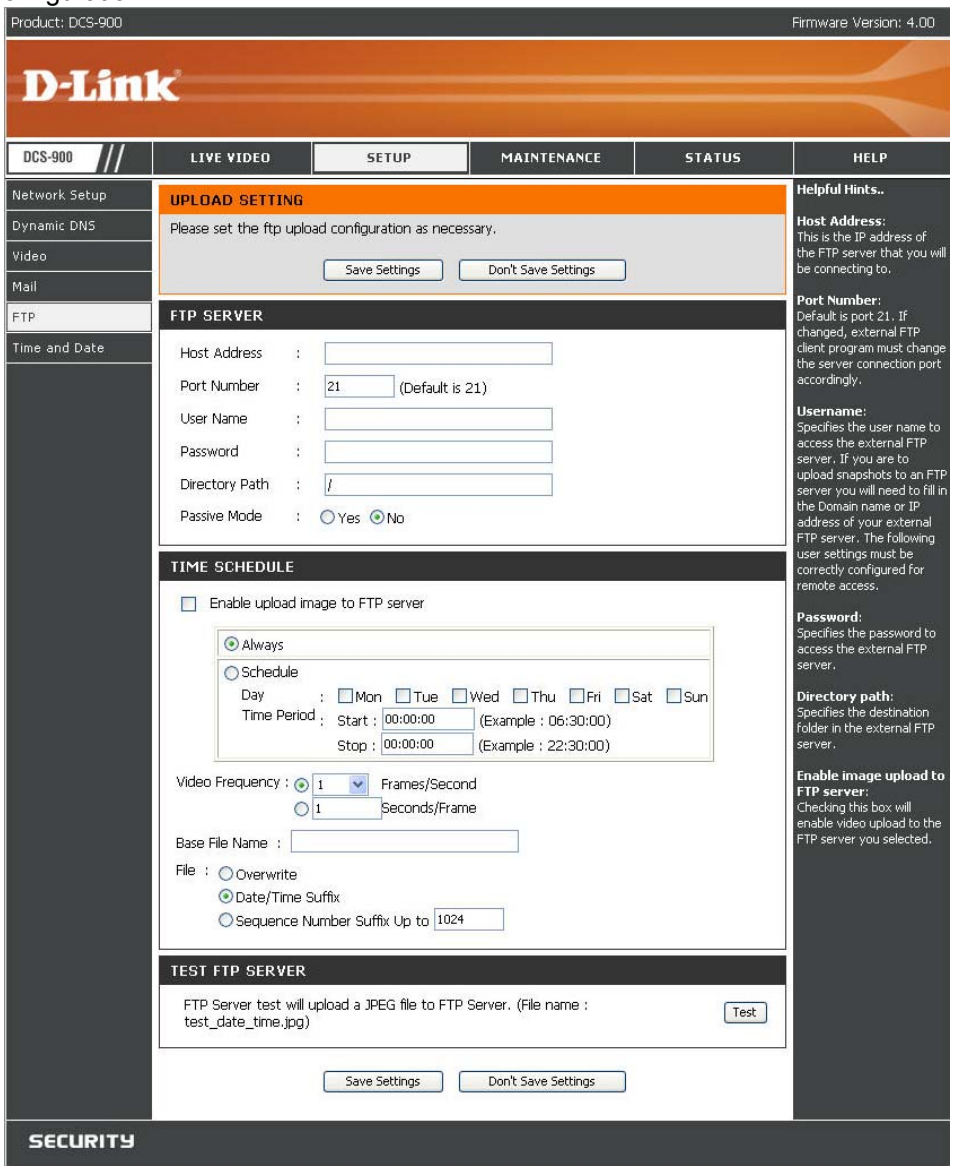
Time Schedule –

- **Enable e-mail image to e-mail account**: Choosing always will start sending snapshots to the recipient's e-mail account right away. Choosing schedule will give you a choice as to when to start sending snapshots to the recipient's e-mail account by the day, as well as what time this should start and when to stop.

Test E-Mail Account – This will send a snapshot to the e-mail account that you have configured in the E-mail section. If you have configured the SMTP account correctly you will be able to send a test file to the e-mail account of the recipient.

SETUP > FTP

This option is used to set up FTP upload configuration.



FTP Server –

- **Host Address**: This is the IP address of the FTP server that you will be connecting to.
- **Port Number**: Default is port 21. If changed, external FTP client program must change the server connection port accordingly.
- **User Name**: Specifies the user name to access the external FTP server. If you are to upload snapshots to an FTP server you will need to fill in the Domain name or IP address of your external FTP server.
- **Password**: Specifies the password to access the external FTP server.
- **Directory Path**: Specifies the destination folder in the external FTP server.
- **Passive Mode**: Enabling passive mode will allow access to an external FTP server if your camera is behind a router protected by a firewall.

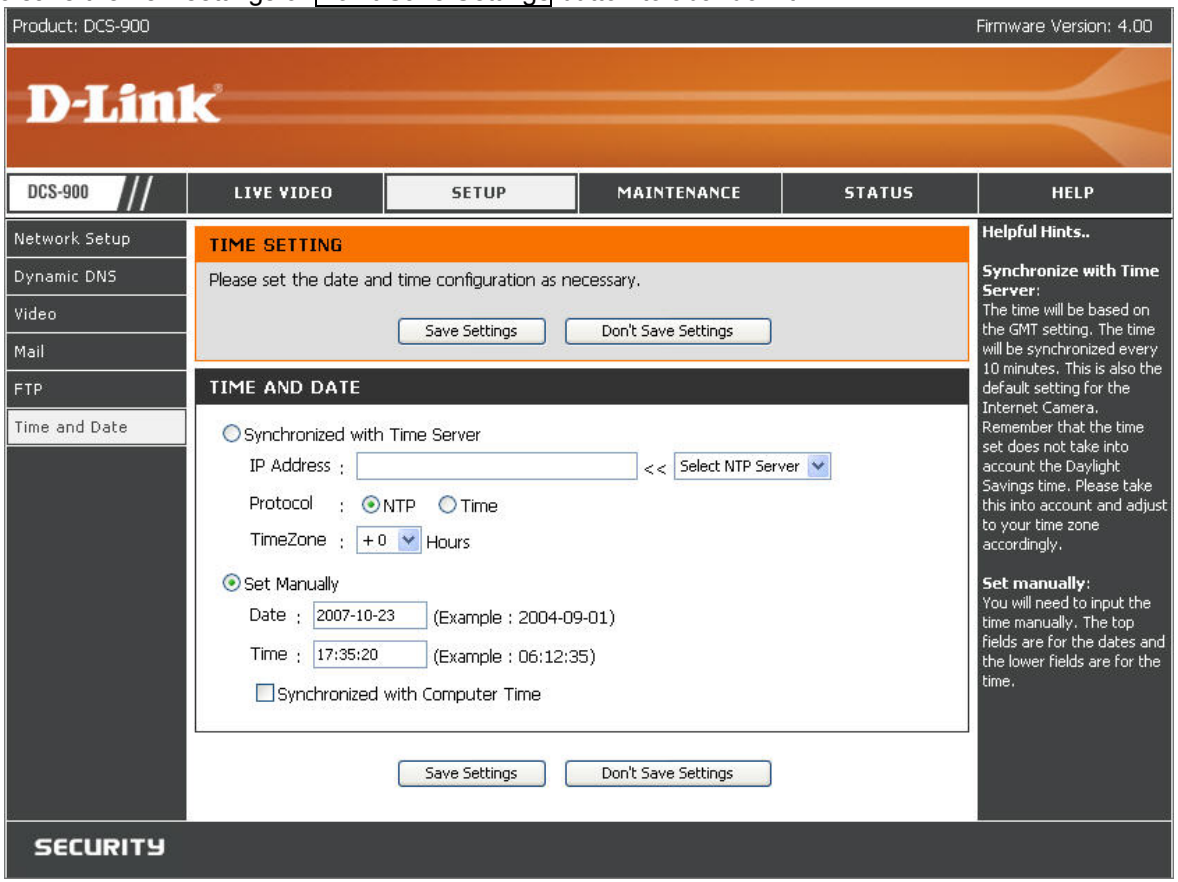
Time Schedule – Checking this box will enable video upload to the FTP server you selected.

- **Always**: Selecting this will allow snapshot upload to your FTP as soon as you click Apply.
- **Schedule**: Selecting this will allow you to configure the times that you want the snapshots to be uploaded to your FTP server by the days, hours, minutes, and seconds.
- **Video Frequency**: User can select in frames per second (1, 2, 3 or auto, in auto this could go to 4). The user can also select how many seconds (from 1 to 65535 seconds) for each frame.
- **Base File Name**: This will be the name that precedes the time, for example, 900200507211642510 1.jpg. This means that the camera took a snapshot in the year 2005, July 21 at 16th hour (4 o'clock), 42 minutes and 51 seconds and it is picture number one.
- **File:**
  - Select **overwrite** and there will only be a few images that are constantly refreshed depending on how many snapshots you choose to have sent.
  - Select **date/time suffix** and the pictures will be named with a date and time also. An example of this can be seen above under the Base file name category.
  - Select **sequence number suffix up to 1024** and all the pictures will be numbered from 1-1024. The total amount of pictures can be configured up to 1024 pictures. Picture number 1025 will be 1 again.

Test FTP Server – Click **Test** button will send a snapshot to the FTP server that you have configured in the Upload section. If you have configured the FTP correctly you will be able to see a test file in your FTP server.

SETUP > Time and Date

This option allows you to configure, update, and maintain the correct time on the internal system clock. From this section you can set the time zone that you are in and set the NTP (Network Time Protocol) Server. Daylight Saving can also be configured to automatically adjust the time when needed. After done the configuration, you may click Save Settings button to save the new settings or Don't Save Settings button to abandon it.

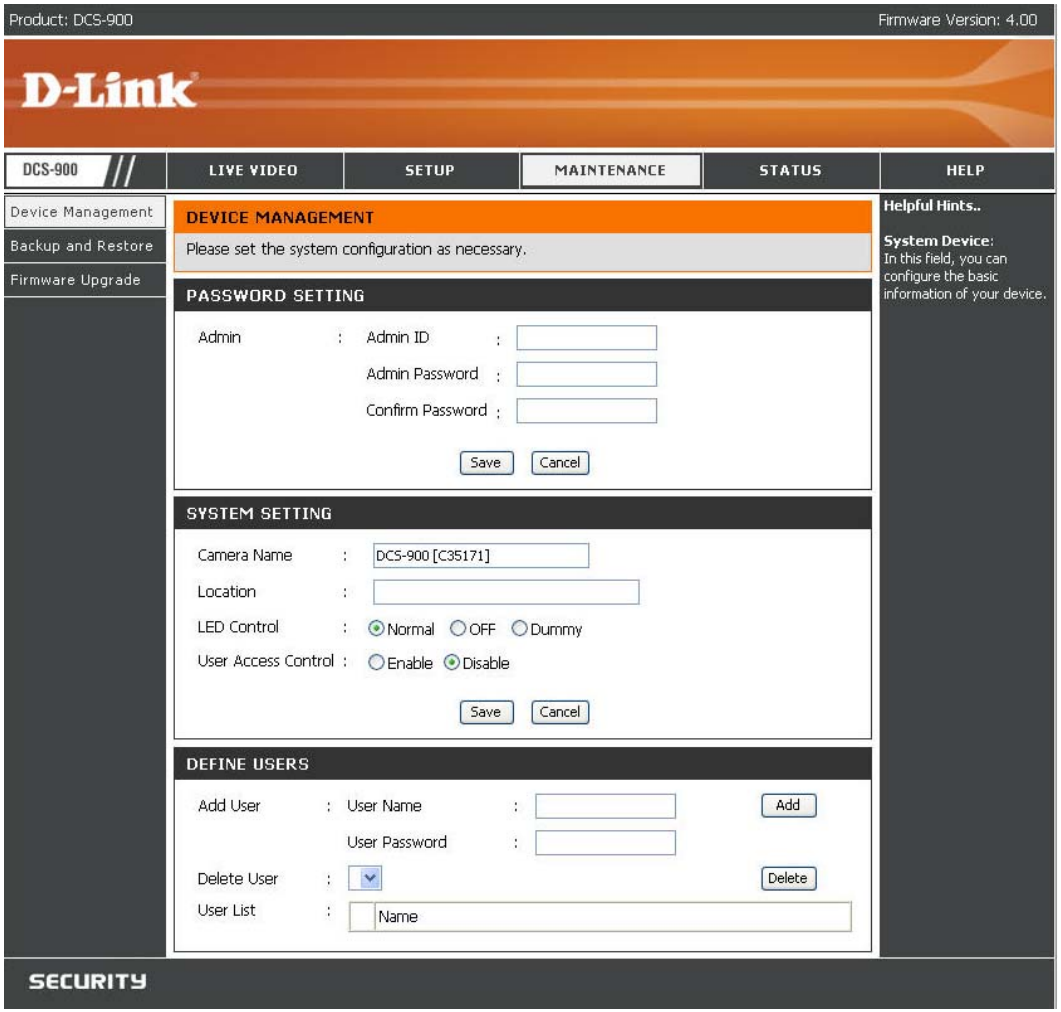


Time and Date –
The system of your IP camera provides you two methods of time configuration: Automatic or Manual:
For automatic method, check the **Synchronize NTP Server** checkbox first, and then enter the IP address or domain name of the time server. Leaving the box blank will connect the camera to default time servers.
For manual method, check the **Set Manually**. It will allows you to manually set the time by specifying a specific date [yyyy-mm-dd] and time [hh:mm:ss]. Otherwise, you may synchronize the date and time of the camera with the local computer by checking the **Synchronized with Computer Time** box.

MAINTENANCE

MAINTENANCE > Device Management

To ensure the highest security and prevent unauthorized usage of your IP camera, the Administrator has the exclusive privilege to authorize all users. The DCS-900 supports multi-level password protection/access that can be restricted by the Administrator for defined users who have a User Name and User Password.
The Administrator can release a public User Name and Password so that when remote users access the DCS-900 they will be allowed to view the images transmitted by the DCS-900.



Password Setting –

- **Admin**: Allow you to specify and save the Administrator's ID name and password.

System Setting –

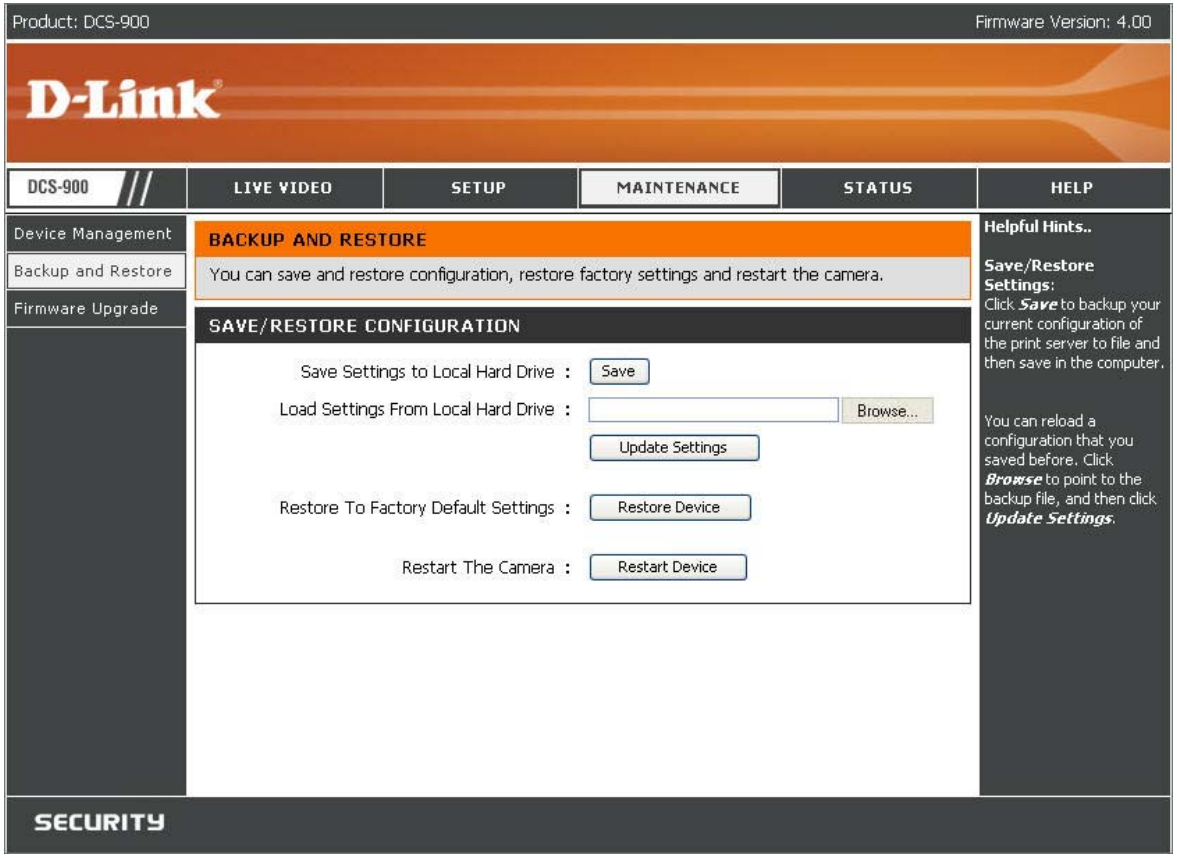
- **Camera Name**: Allow you to specify a name for your IP camera.
- **Location**: Enter information of where your camera is located.
- **LED Control**: You can set the LED of the DCS-900 to on (Normal), off (OFF), or blink randomly (Dummy).
- **User Access Control**: Allow you to enable or disable user access control.

Define Users –

- **Add User**: This will enable you to add users. You must click Add each time you add a user to the User List.
- **Delete User**: Select a user from the pull-down list and click the Delete button to remove the user from the list.
- **User List**: This list shows all of the users added.

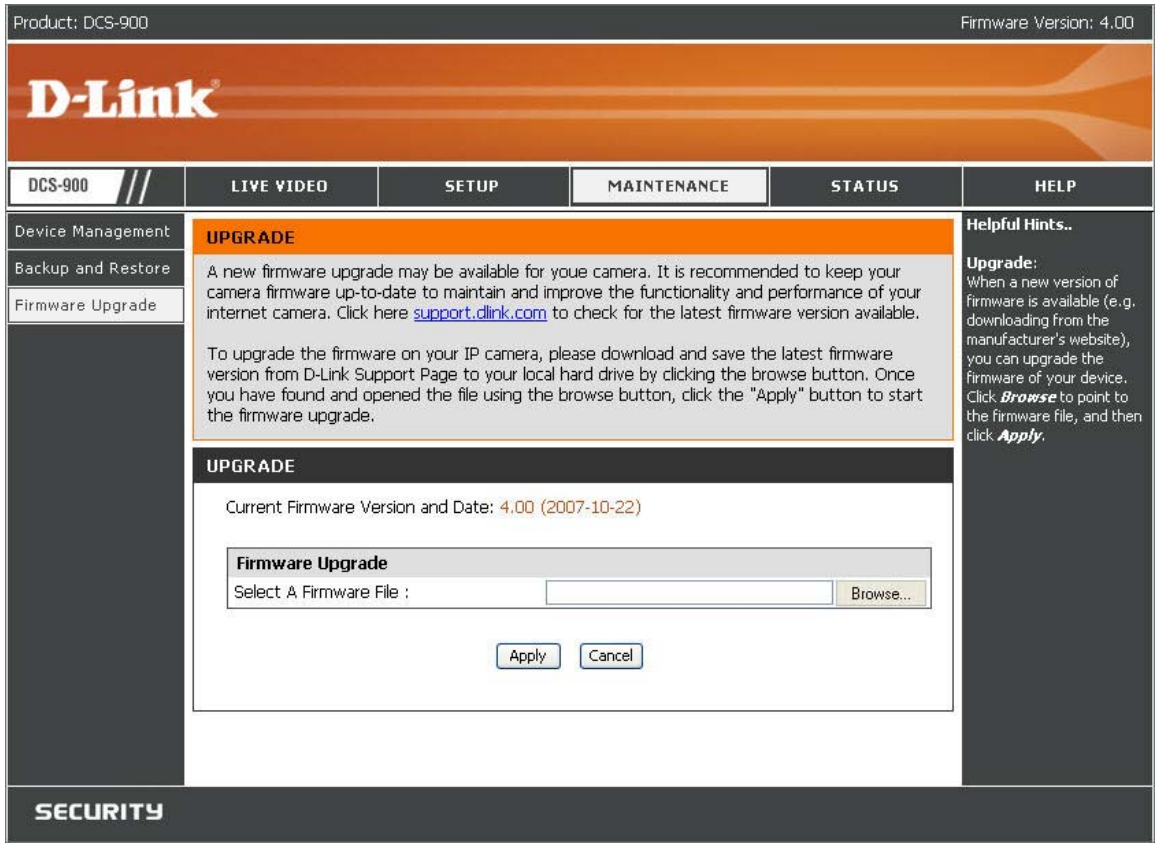
MAINTENANCE > Backup and Restore

The **Backup and Restore** option not only allows you to save the current configuration in a computer for backup by clicking Save button, but also allows you to reload a configuration that you saved before by clicking Browse to direct to the backup file, and then clicking Update Settings button for reloading with rebooting the device. Beside, you are also allowed to return your IP camera to the default settings by clicking Restore Device button, and restart the camera by clicking Restart Device button.



MAINTENANCE > Firmware Update

The **Firmware Update** option displays you the current firmware's information of your IP camera, and also allows you to upgrade the firmware of the IP camera when a new version of firmware is available.
First, check the D-Link support site for firmware updates at http://support.dlink.com. Make sure that the firmware you want to use is saved on the local hard drive of your computer. Click on Browse to search the local hard drive for the firmware that you downloaded from the D-Link Website (support.dlink.com) to be used for the update. Upgrading the firmware will not change any of your system settings but it is recommended that you save your system settings before doing a firmware upgrade.

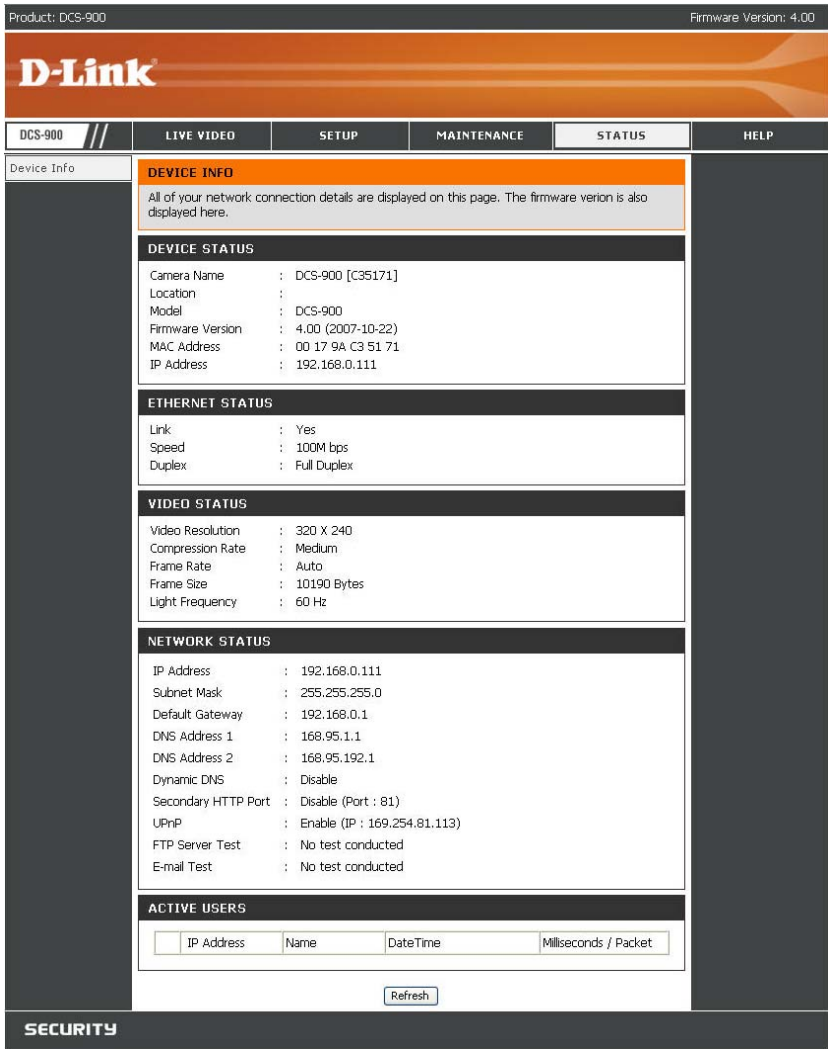


STATUS

The Status section provides the detail information about your IP camera.

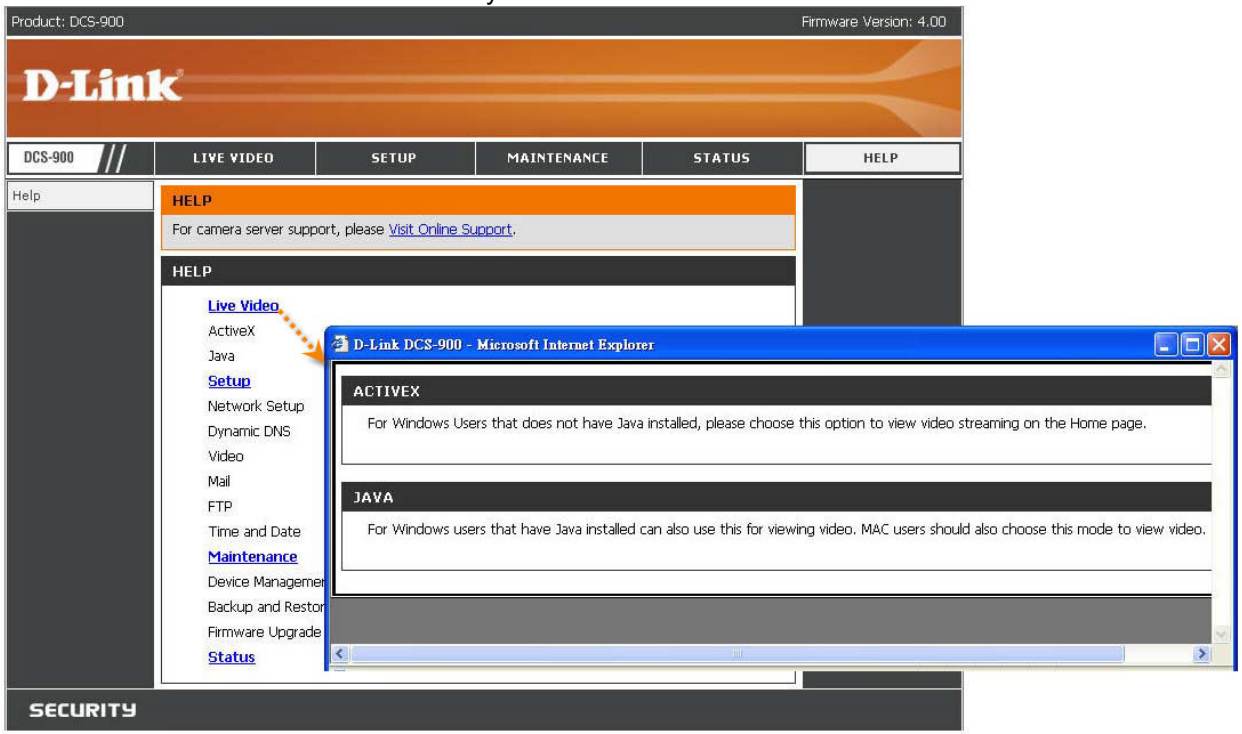
STATUS> Device Info

The **Device Info** option lists the following important settings that are currently set for your DCS-900, including detail information about Device Status, Ethernet Status, Video Status, Network Status, and Active Users.



HELP

The **Help** screen provides you brief information about the DCS-900 for your reference.



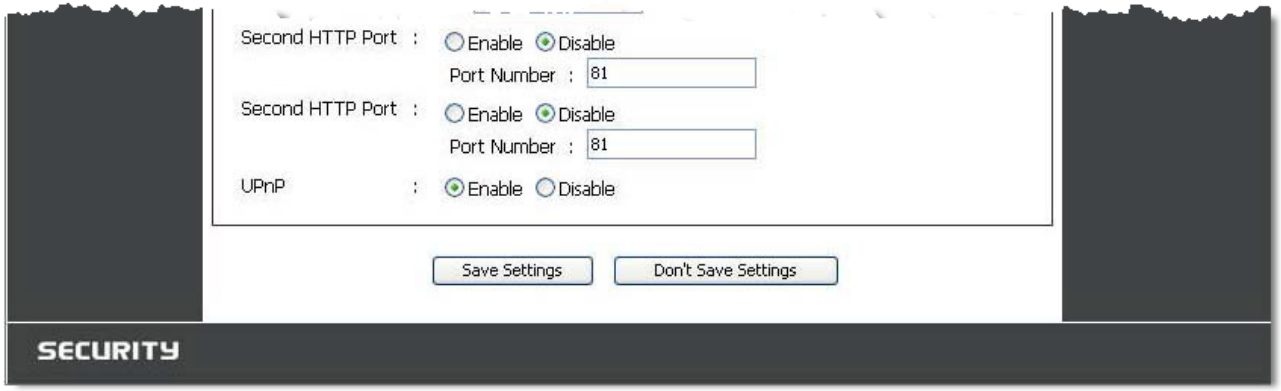
Installing the DCS-900 Behind a Router

Assigning and Opening the HTTP Port on the DCS-900

(For Installing Multiple Cameras)
Opening ports will allow users to view the camera via the Internet. The ports that are opened must be unique for each camera in order to successfully view the images remotely.

1) Open the HTTP Port

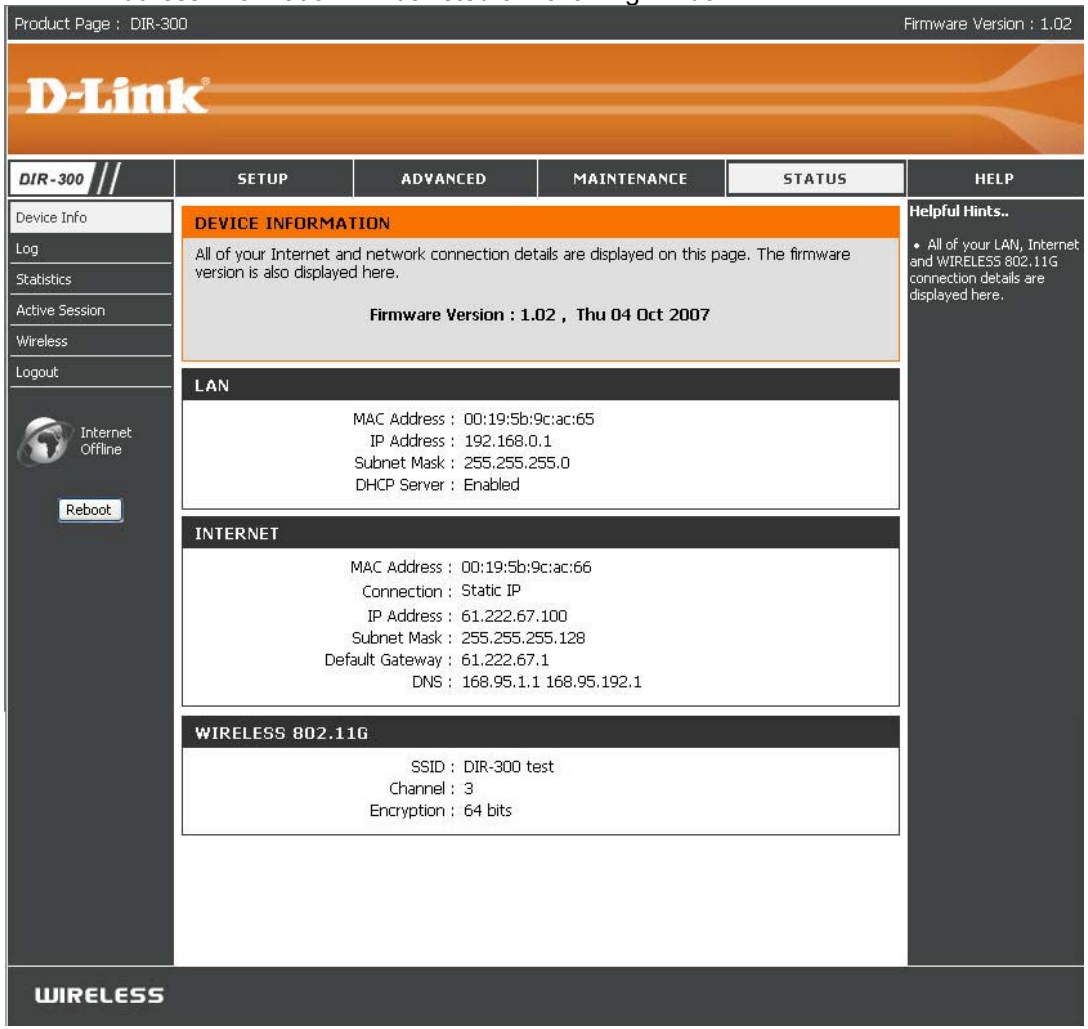
The HTTP Port option is used when multiple cameras are being installed behind a single public IP address and will be accessed remotely OR for using a port other than the default port for image viewing. For each additional camera that is installed, you must assign the appropriate Web server port for each camera to enable remote viewing.
By default, port 80 (Web server port) is open. If these ports are available for use, you DO NOT have to open a second port and can proceed to the next section. If port 80 is not available (for example, if you are already using port 80 to run a Web server or your ISP blocks access on port 80*) you MUST open a second port and designate a new Web server port (800, 801, 802,…etc).
IMPORTANT: Be sure to take note of these settings since these same settings will be used to configure your router.



NOTE: Some ISPs block traffic on commonly used ports like port 80 to prevent consumers from putting a server on their network. Be sure to check with your ISP so that you can open the appropriate ports accordingly. If your ISP does not pass traffic on port 80, you will need to change the Web server port the camera uses from 80 to something else, like 800. If you are behind a router, you will need to open a corresponding port on your router as well. Not all routers are the same, please refer to your router's user's manual for specific instructions on how to forward ports.

Router Setup and Installation

The following steps generally apply to any router that you have on your network. The D-Link DIR-300 is used as an example to clarify the configuration process. Your WAN IP Address information will be listed on following window.



NOTE: Because a dynamic WAN IP address can change from time to time depending on your ISP, you may want to obtain a Static IP address from your ISP. A Static IP address is a fixed IP address that will not change over time and will be more convenient for you to use to access your camera from a remote location.

Assigning and Opening Virtual Server Ports

2) Open Virtual Server Ports To Enable Remote Image Viewing

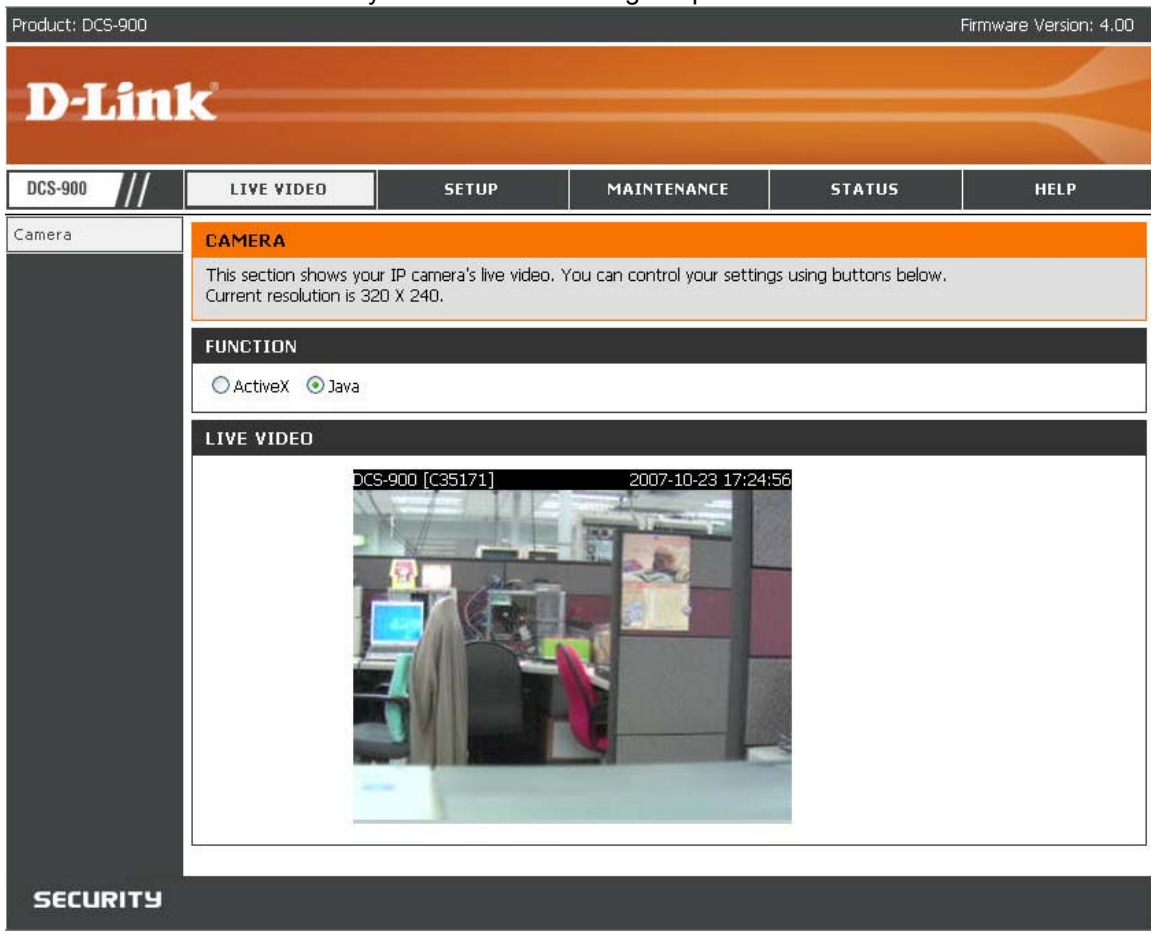
The Virtual Server Ports of your router must be opened for remote access to your camera. This is also referred to as port forwarding. Please proceed as follows:

- Select **Enabled** to enable virtual server settings.
- Select a camera name.
- Enter your camera's Local IP Address in the **Private IP** field.
- Select **TCP** under **Protocol Type**.
- If you are using the default camera port settings, enter **80** in to the Public and Private Port section.
- **Schedule** should be set to **Always** so that the camera images can be accessed at any time.
- In the **Virtual Servers List**, a check mark appearing before the camera name will indicate that the ports are enabled.
- Click **Apply** to save your settings.

NOTE: If you are installing multiple cameras, be sure to open ONE Web port per additional camera installed: port 81, 82, etc. for Web server.

Viewing Your Camera

After all settings have been entered correctly, a user inside or outside your network will have access to the camera through a standard Web browser. To access from the Internet, simply type in the IP Address of the router given to you by your ISP, a colon, and the port number that you gave your camera. (e.g. http://205.163.122.96:83). To access from a computer on your local (home) network, simply enter the local IP Address of your camera (e.g. 192.168.0.35). If using a port other than port 80, you must enter the IP address followed by a colon and the assigned port number.

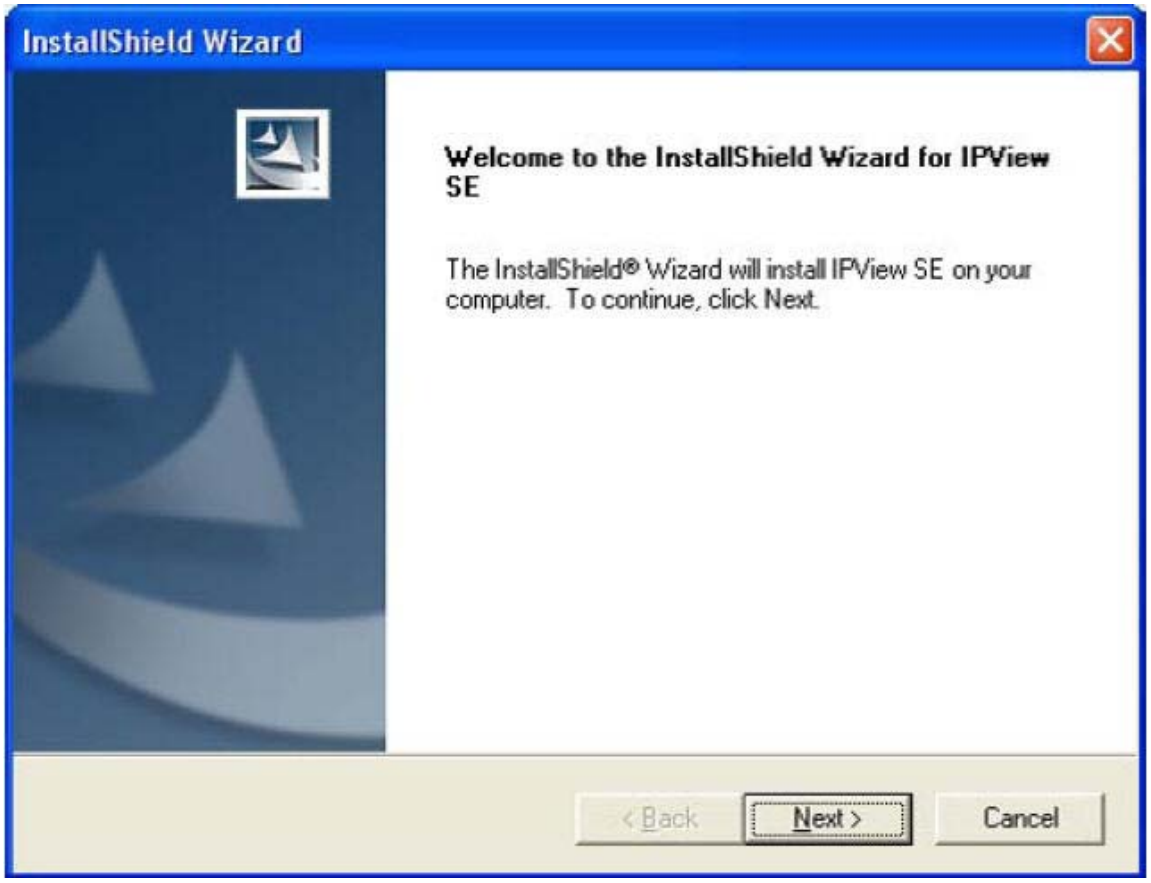


IPView SE Application Installation

Click **IPView SE** of the Installation CD.

IPView SE software is included for administrators to manage up to 4 DCS-900s remotely. Administrators can also record to hard drive and configure advanced settings for the DCS-900. IPView SE is a complete software management tool for the DCS-900 and includes all configurable settings available in the web configuration utility.

Click **Next**.


InstallShield Wizard
Welcome to the InstallShield Wizard for IPView SE
The InstallShield® Wizard will install IPView SE on your computer. To continue, click Next.
< Back
Next >
Cancel

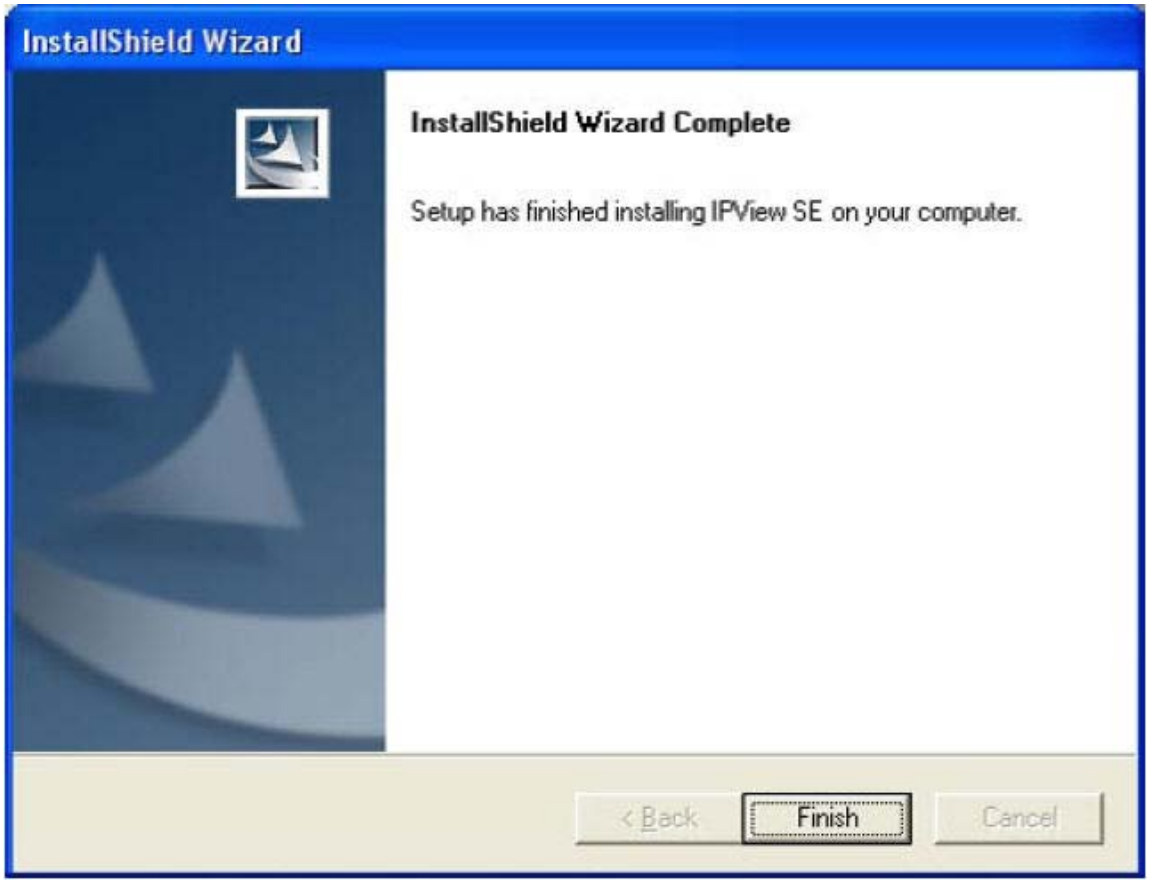
Click **Yes**.

InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
Press the PAGE DOWN key to see the rest of the agreement.
D-Link Software License Agreement
General Terms
IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING
PLEASE READ THIS AGREEMENT CAREFULLY BEFORE USING THIS SOFTWARE.
D-LINK SYSTEMS, INC. ("D-LINK") WILL LICENSE THE SOFTWARE TO YOU ONLY IF
YOU FIRST ACCEPT THE TERMS OF THIS AGREEMENT. BY INSTALLING AND/OR
USING THE SOFTWARE YOU AGREE TO THESE TERMS. IF YOU DO NOT AGREE
TO THE TERMS OF THIS AGREEMENT, PROMPTLY RETURN THE UNUSED
SOFTWARE TO THE PARTY (D-LINK OR ITS AUTHORIZED RESELLER) FROM
Do you accept all the terms of the preceding License Agreement? If you choose No, the setup will close. To install IPView SE, you must accept this agreement.
InstallShield
< Back
Yes
No

Click **Next**.

InstallShield Wizard
Choose Destination Location
Select folder where Setup will install files.
Setup will install IPView SE in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files\D-Link
Browse...
InstallShield
< Back
Next >
Cancel

Click **Finish**.



After successfully installing the IPView SE, the application program for the DCS-900 is automatically installed to \Programs\IPView SE Directory.
To start running the IPView SE click on **Start→ Programs→ IPView SE→ IPView SE**.
Once the IPView SE application control panel is executed, the interface will appear.

IPView SE

This section describes the operation of the IPView SE application user interface with detailed procedures for using the application. IPView SE allows you to manage your cameras by enabling you to search, configure, and preview all the DCS-900s from one location. It is designed with a user-friendly interface for ease of control and navigation.

IPView SE Icon Description

System Configure

Connect/Disconnect

Assign IP to a Camera

Liberate Camera

Camera's Extra Information

Configure Camera from Web

Motion Setting

Manual Recording

Schedule Recording

Motion Recording

Scan

Combine

Play

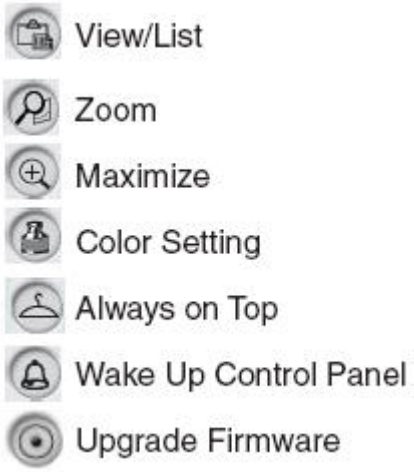
Help/About

Minimize

Close

Rotate

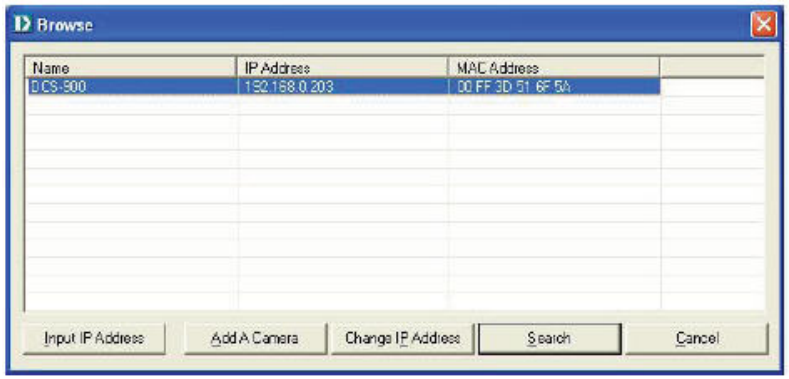
Snapshot



How to Add a New Camera

To add a new camera, select the **Camera** button from the IPView SE. Make sure that the green lights are on when clicking the camera button.

Select the camera you would like to connect to and click **Add A Camera**. If the camera is not listed in this list, click the **Input IP Address** button. Enter the IP Address of the camera in the specified field and click **Add**. If the IP Address is entered incorrectly or if you have a bad network connection, a dialog box will appear to notify you of the error. To add cameras in IPView SE, check that you have your network configured correctly. To add a remote camera, you need to have Internet access.



If you are unsure of the IP Address of the camera, you can click on **Search** to search for all available cameras that are installed on your local area network.

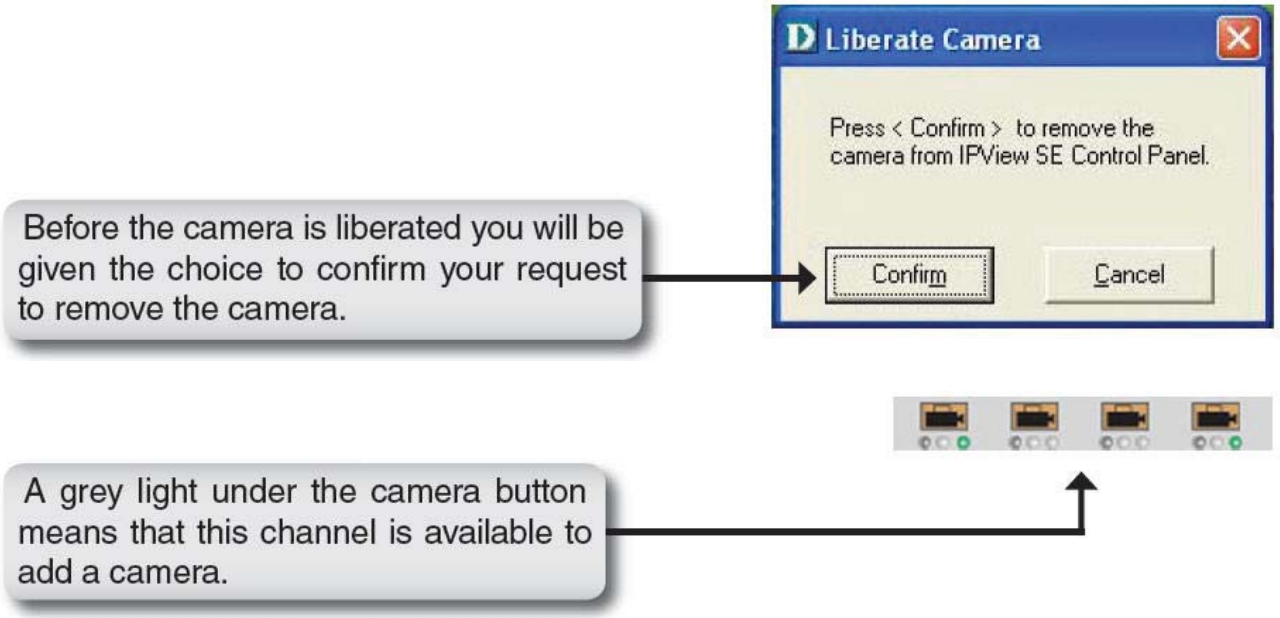
NOTE: Only cameras on your local area network can be located using Search in IPView SE. If you want to add a camera via the Internet, you must enter in a public IP Address. Please note that if your camera is behind a router, you will need to enter your router's WAN IP followed by a colon, then the port number that is assigned to your camera. As in example 10.10.10.80:800, where 10.10.10.80 is your router's WAN IP and :800 is the port that your camera is using.

Highlight the camera you wish to add and click on **Add**. The camera will automatically be added into the IPView SE list view. If you add the same camera more than once you will receive the following message (see below).

If the **Login Camera** dialog box appears, make sure to enter the correct **User Name** and **Password**. Click **OK**. The camera will be added into IPView SE. If the **User Name** and **Password** are entered incorrectly, the camera will not be added into IPView SE.
The Login Camera dialog box will appear only if your have already set the **Username** and **Password** during the Web Configuration setting.

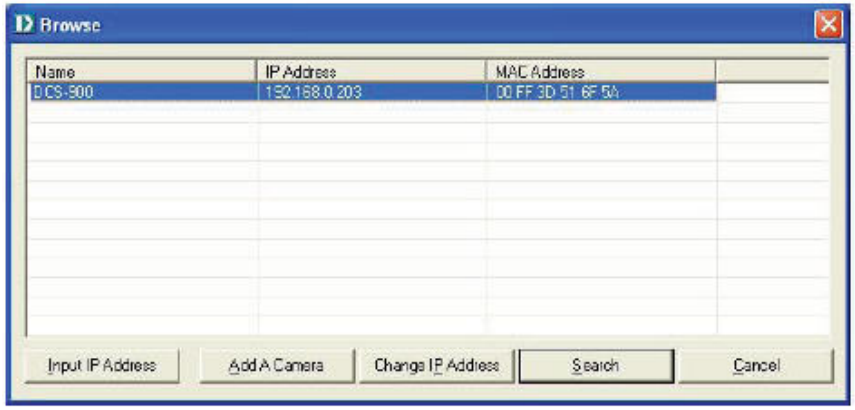
How to Delete a Camera

Click the **Liberate Camera** button on the IPView SE, while you are connected to the camera you would like deleted. The IPView SE camera button becomes available as soon as you click on the **Liberate Camera** button. The green light from under the camera button will become grey.



How to Change the IP Address

To change a camera's IP Address, you must highlight the camera you wish to change. Click the **Change IP Address** button and the Change IP Address dialog box will appear. Select Manually Assign IP if you want to connect manually to the camera by providing the IP Address, Subnet Mask, and Default Gateway. Select DHCP if you do not wish to assign an IP address to your camera.

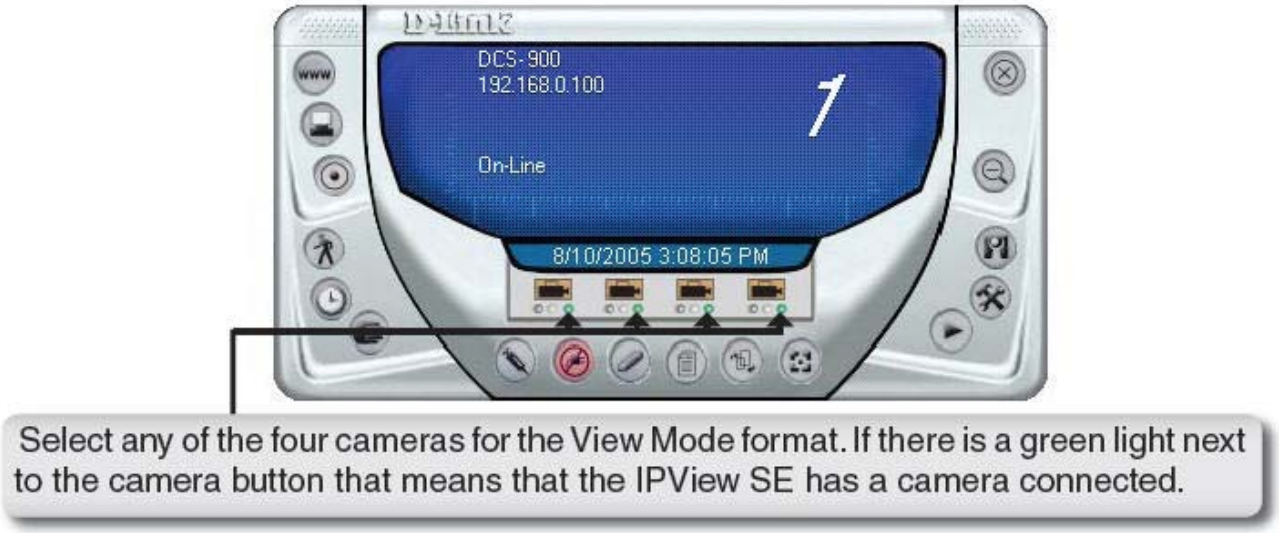


You may also click the Assign IP to a Camera button on the IPView SE, which will bring up the Browse screen from above. Simply click the Change IP Address button and the Change IP Address dialog box will appear. Select Manually Assign IP if you want to connect manually to the camera by providing the IP Address, Subnet Mask, and Default Gateway. Select DHCP if you would like to connect to only cameras on your network.

How to Format the Camera View

Select the **Combine** button on the IPView SE and you should see all four cameras combined (see image below).

A maximum of 4 cameras can be viewed simultaneously with IPView SE.

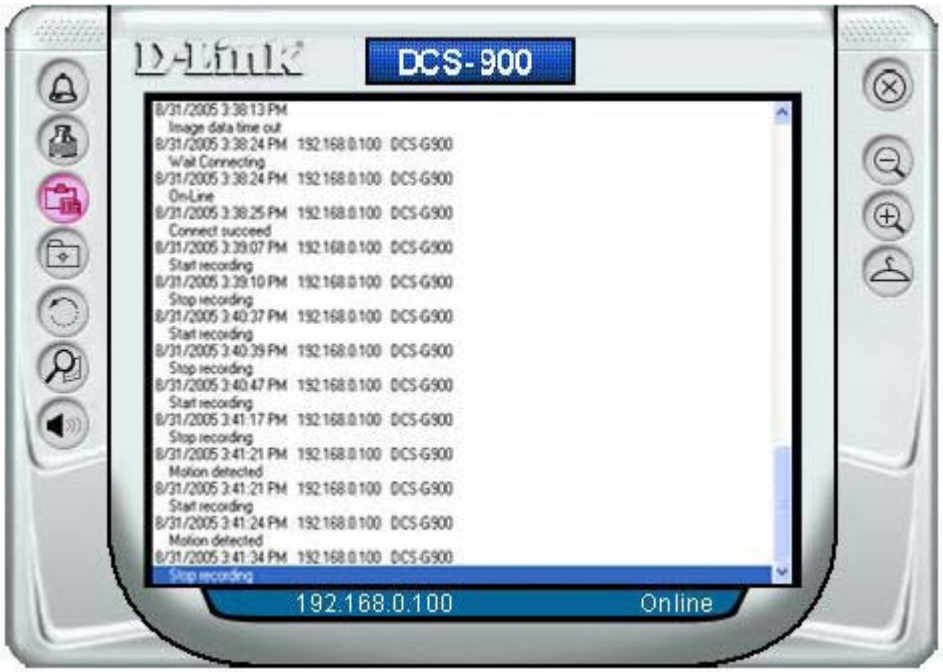


How to Rotate the View

In View Mode format, click on the **Rotate** button and the image should rotate 90° to the left (see image below).

View/List

Click the **View/List** button . All the cameras and their properties, such as the camera name IP Address, user name, and functional information, will be displayed in the View/List screen.



Zoom

Click the **Zoom** button to zoom in on the camera image. The options under zoom are Fit Window x1, x1.5, x2, x2.5, x3, x3.5, and x4.

Color Setting

Click the **Color Setting** button to adjust the Brightness, Contrast, and Hue.

Wake Up Control Panel

Click the **Wake Up Control Panel** button to open the control panel again when it is closed.

Always on Top

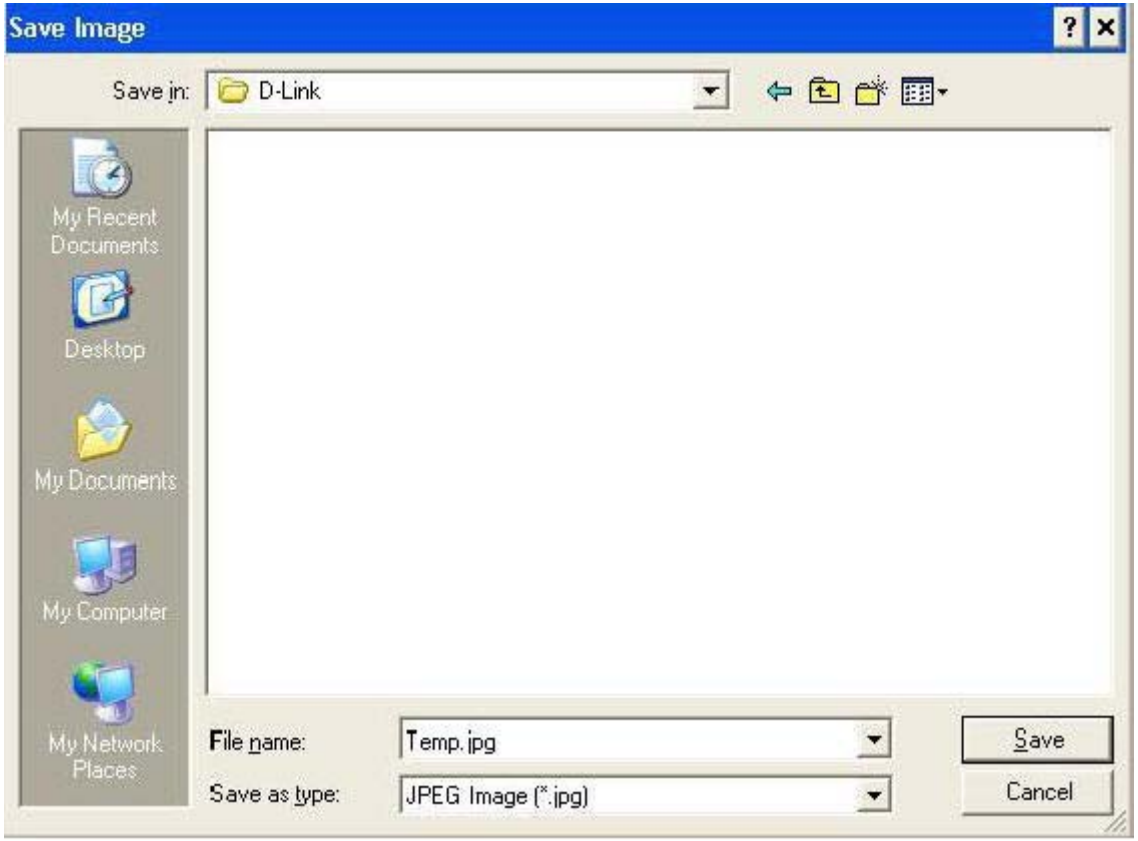
Click the **Always on Top** button to have the display screen always appear on top.

Close

Click the **Close** button to close the display screen of the camera.

How to take a Snap-Shot with the Camera

In View Mode format select the **Snapshot** button located on the upper left corner of the screen. A Save Image dialog box will appear for you to save the snapshot picture.



How to Start Recording

To start recording with a camera, click the **Manual Recording** button . An AVI file will appear in your IPView SE folder.

NOTE: You must stop recording before changing any camera settings.

How to Stop Recording

To stop recording with a camera, click the **Manual Recording** button again.

Camera Settings

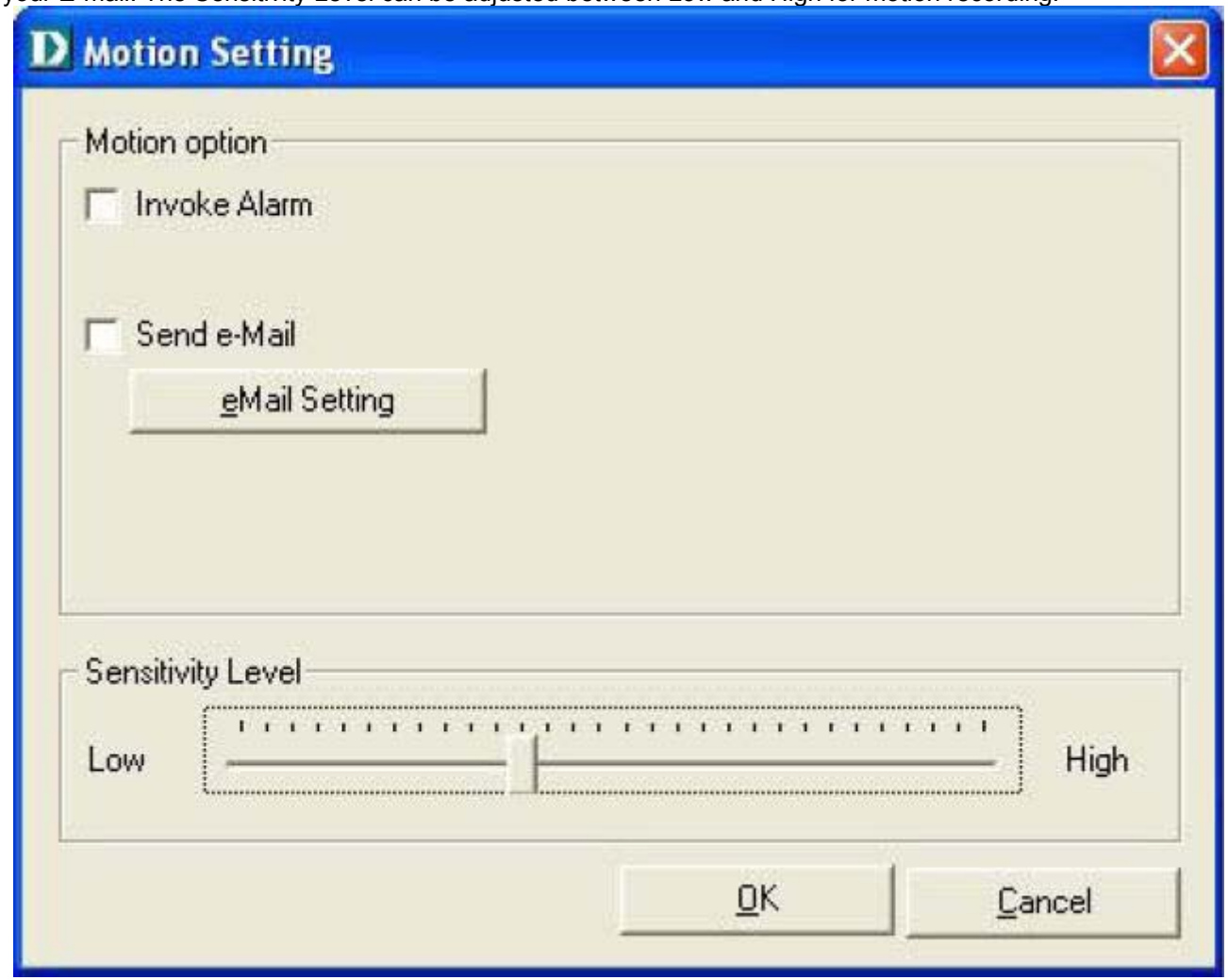
Once you have completed the initial configuration of the DCS-900 using the Web-based interface, you can review or change your configuration using either the Web-based configuration utility or the Settings in the DCS-900 IPView SE.

Configure Camera from Web

Click the **Configure Camera from Web** button to start configuring your camera from the web again (see page 24).

Motion Setting

Click the **Motion Setting** button to setup the options for motion recording. On this screen you can select to Invoke Alarm and/or Sent E-mail. Click the E-mail Setting button to configure your E-mail. The Sensitivity Level can be adjusted between Low and High for motion recording.

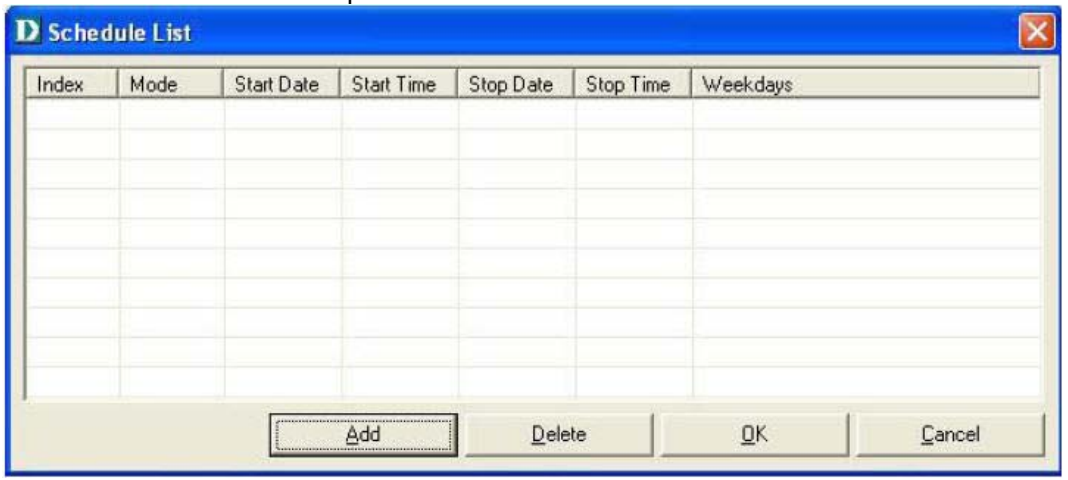


Manual Recording

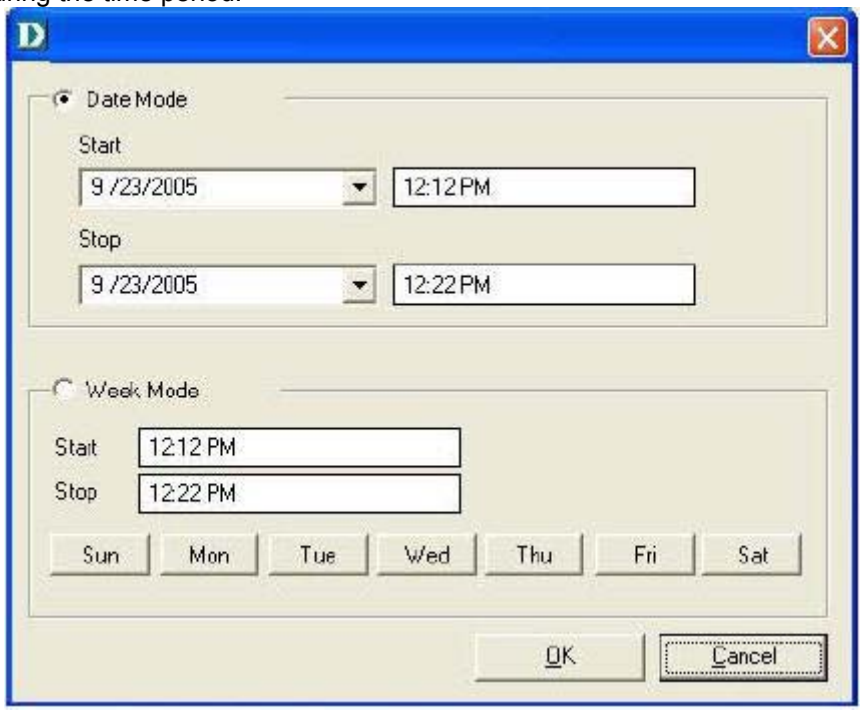
Click the **Manual Recording** button to begin recording images from you camera.

Schedule Recording

Click the **Schedule Recording** button to record based on a specific time and date. Click Add to set the time and date recording.



Select Date Mode and enter in the Start date/time, and Stop date/time. The camera will start to record according to the specified date and time period entered. Select Week Mode to specify which date to record during the time period.



Motion Recording

Clicking on the **Motion Recording** button will record images upon motion detection. When this option is selected and the camera detects motion within the range of the viewing window, recording will be triggered. Recording will continue until no motion is detected. Click on the **Motion Setting** button to set the sensitivity levels for motion recording.

Scan

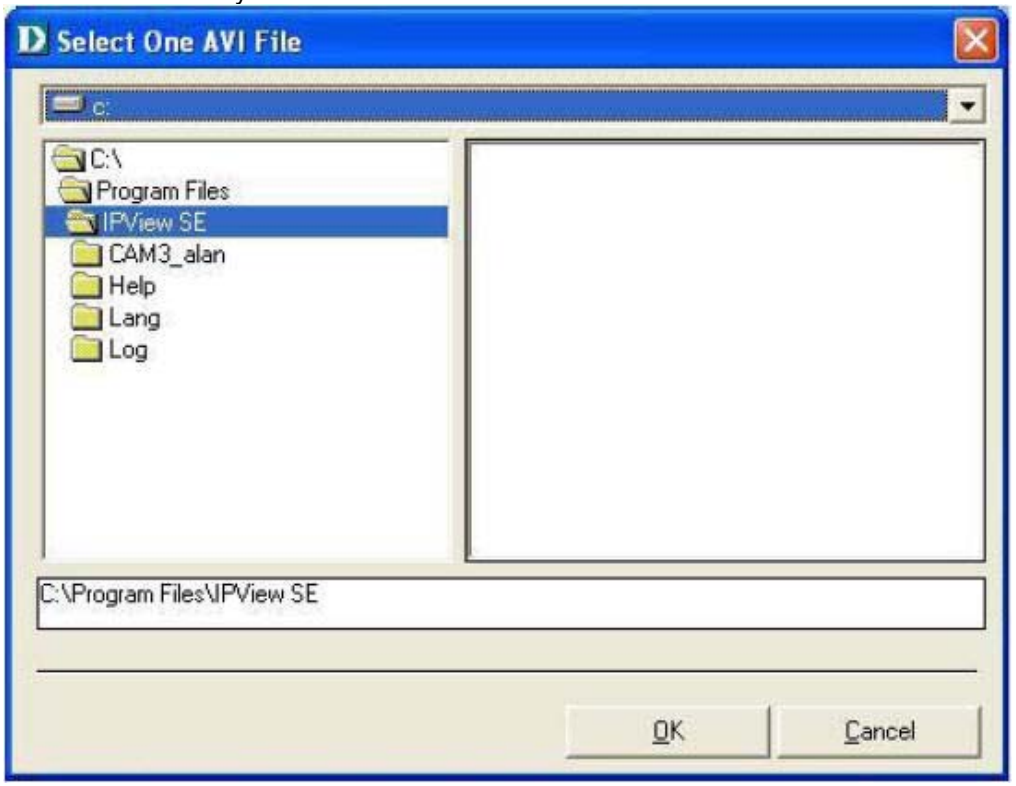
Click the **Scan** button to display each camera one by one. When this option is selected the camera(s) will briefly display their images in the View Mode format.

Camera's Extra Information

Click the **Camera's Extra Information** button to view information about your camera.

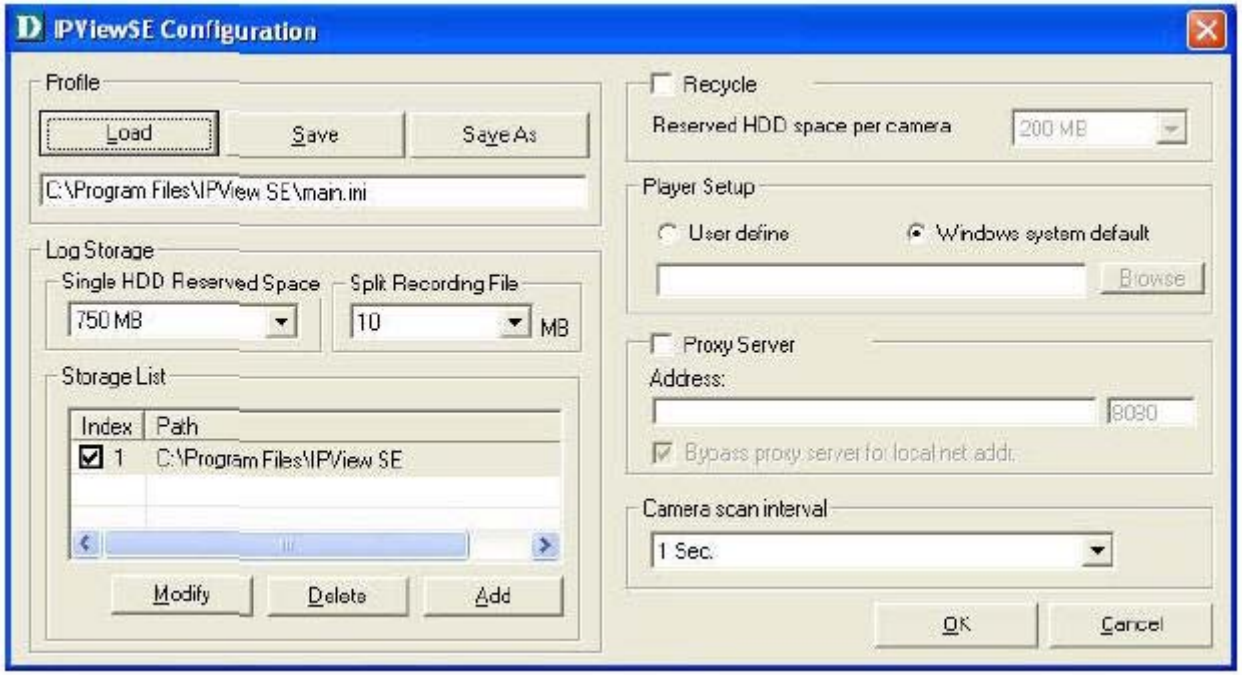
Play

Click the **Play** button to playback video recorded from your camera.

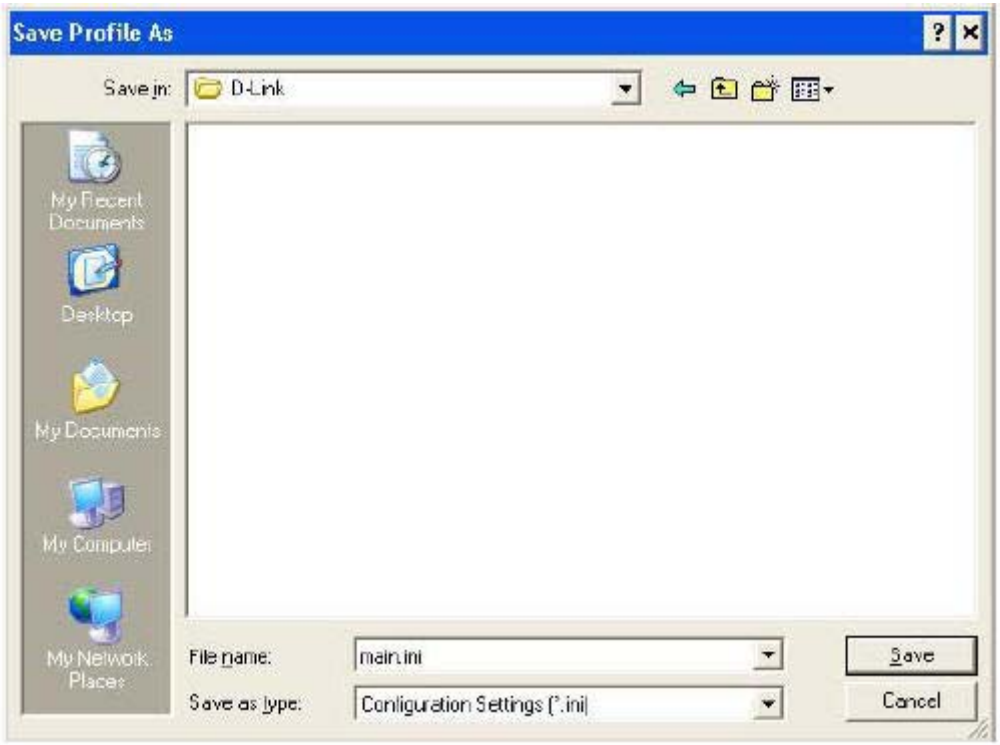


System Configure

Click the **System Configure** button on the IPView SE.



Profile: The DCS-900 will not have a profile to load initially, you will have to select all of your cameras and then click the Save or Save As buttons to save your profile. Up to four cameras can be saved per configuration, there are no limits as to how many configurations can be saved. Click the Load button to load any of your configurations.

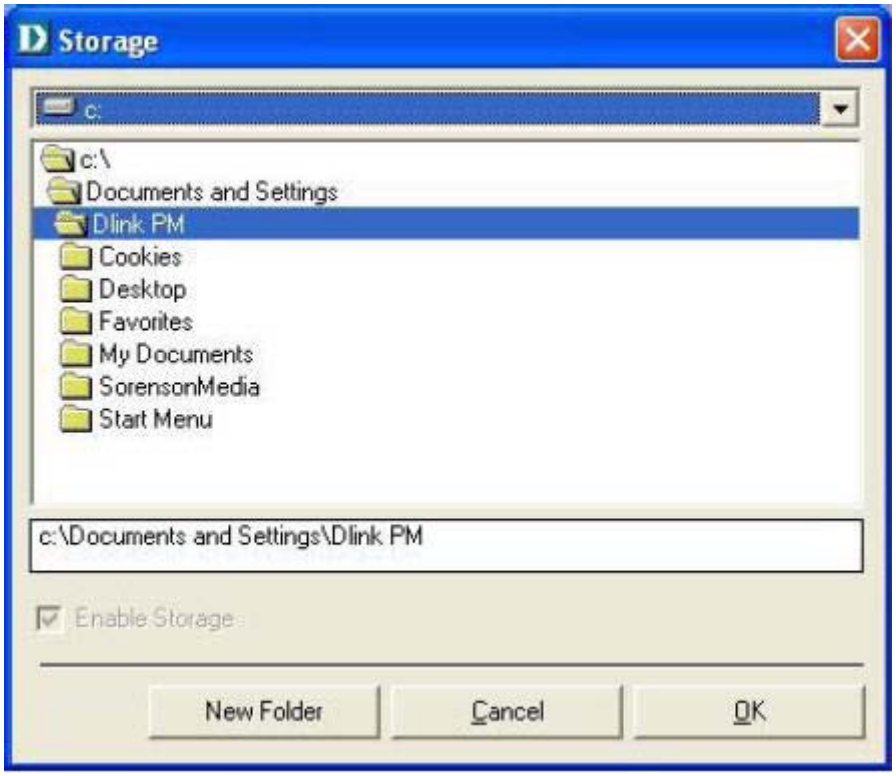


Log Storage: The Single HDD Reserved Space option permits reserved HDD space from 500 MB to 1000 MB.

The Split Recording File option is used to adjust the file size for recording the video images (the default setting is 10MB). If the recorded video files reach the file size, video images will be recorded into another file automatically.

By File Size - permits recording by file size from 10 MB to 50 MB.

Storage List: To add another storage, simply click the Add button. The following Storage dialog box will appear, allowing you to select a drive and to Enable Storage on that drive.



To modify the storage, click the Modify button. You should see the storage dialog box again.
To delete a record of storage, select the path and click the Delete button. If you try to delete the very last storage in the list, you will receive a warning message telling you to keep one record of storage at least.

Recycle: The Reserved HDD space per camera option allows old video files to be overwritten and replaced by new recording files. This field refers to

the amount of space left on your drive before overwrite takes place. For instance if you select 1000 MB and your total hard drive space is 3000MB, as soon as your drive reaches over a 1000 MB capacity your files will be overwritten. You can specify between 300MB to 10GB hard drive reserve space, depending on the free space available on your hard drive.
Note: Selecting the Recycle option will disable the Recording File Path Settings in the Recording menu.

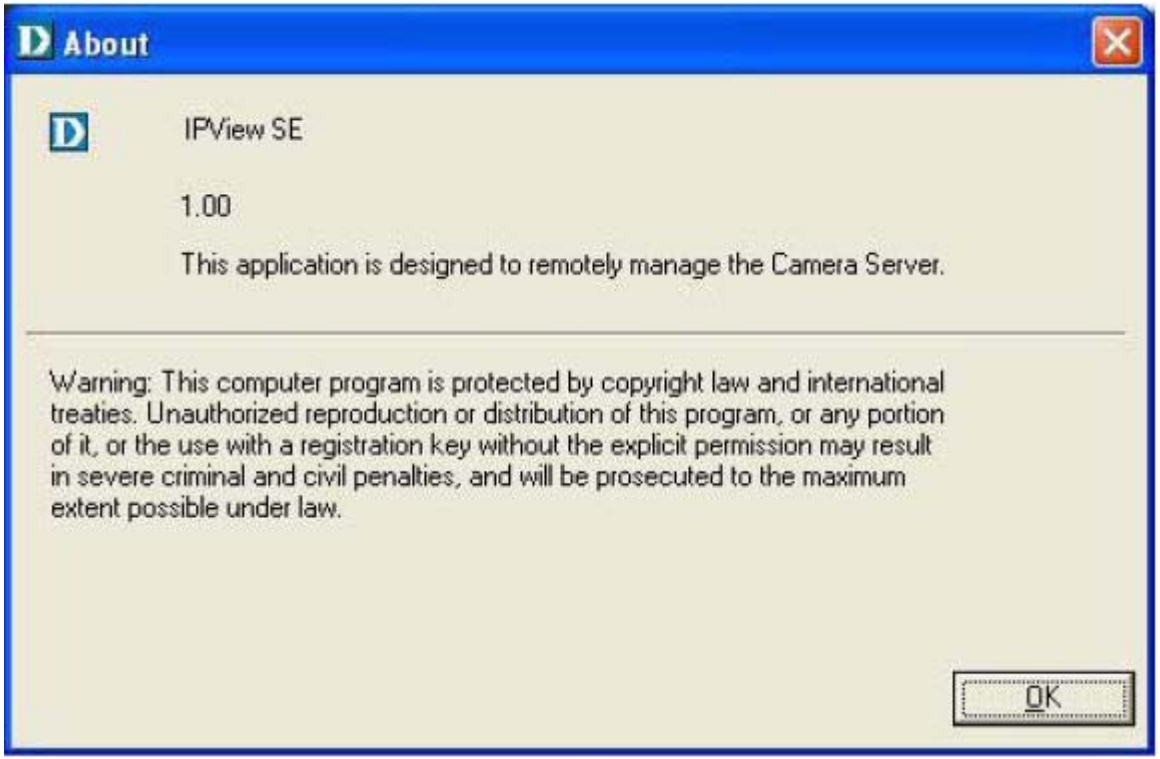
Player Setup: In this section you may choose Windows system default or User define for the video player desired for playback of recorded video files. Selecting User define will allow you to Browse for your desired video player.

Proxy Server: Select this option to enable Proxy Server support.

Camera Scan Interval: It allows you to display for each camera one by one. The time interval for each camera can be from 1 Sec. to 20 Sec.

About

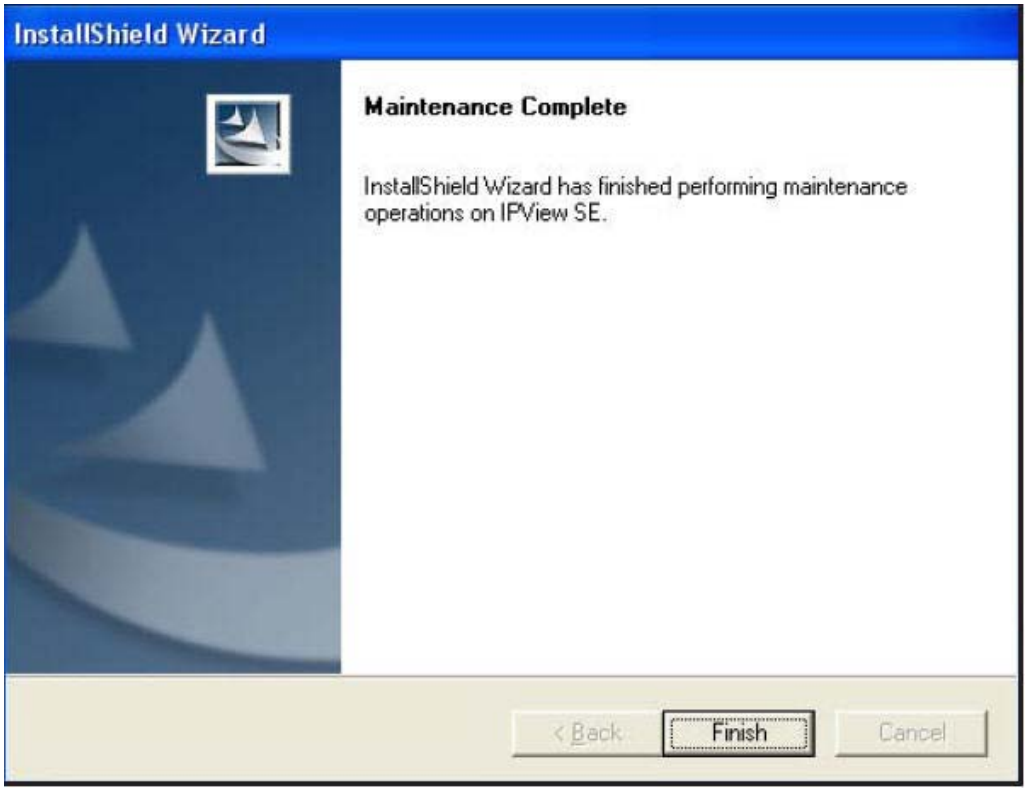
Click the **Help/About** icon, and then select **About** for camera details such as software version.



Uninstall IPView SE

Click on **Start Menu→ Programs→ IPView SE→ Uninstall IPView SE**. A new prompt screen will be displayed like the one below confirming the removal. At the Confirm Uninstall dialog box, click **OK** to continue the process.

The **InstallShield** Wizard prompt will appear. Click Finish to complete the uninstallation procedure.



Frequently Asked Questions

Wired Network Camera Features

1 What is an Internet Camera?

The Internet Camera is a standalone system connecting directly to an Ethernet or Fast Ethernet network and supported by the wireless transmission based on the IEEE 802.11g standard. It is different from the conventional PC Camera. The Internet Camera is an all-in-one system with built-in CPU and web-based solutions providing a low cost solution that can transmit high quality video images for monitoring. The Internet Camera can be managed remotely, accessed and controlled from any PC/Notebook over the Intranet or Internet via a Web browser.

2 What is the maximum number of users that can be allowed to access DCS-900 simultaneously?

The maximum number of users that can log onto the Internet Camera at the same time is 8. Please keep in mind the overall performance of the transmission speed will slow down when multiple users are logged on.

3 What algorithm is used to compress the digital image?

The Internet Camera utilizes MPEG-4 Simple Profile image compression technology to provide high quality images. MPEG-4 Simple Profile is a standard for image compression and can be applied to various web browser and application software without the need to install extra software.

4 Can I capture still images from the Internet Camera?

Yes you are able to capture still images with the snapshot function from the IPView SE application supplied with the Internet Camera CD-ROM. You may also record snapshots using the snapshot feature on the Home page. When viewing this page, press the “snapshot” button on your Web browser to capture the image and save to your hard drive.

5 Can the Internet Camera be used outdoors?

The Internet Camera is not weatherproof. It needs to be equipped with a weatherproof case to be used outdoors and it is not recommended.

6 What network cabling is required for the Internet Camera?

The Internet Camera uses Category 5 UTP Twisted-pair cable allowing 10 Base-T and 100 Base-T networking.

7 Can the Internet Camera be setup as a PC-cam on the computer?

No, the Internet Camera is used only on Ethernet and Fast Ethernet network or supported by wireless transmission. The D-Link DSB-C110, DSB-C310 can be used as a PC Camera (Webcam).

8 Can the Internet Camera be connected on the network if it consists of only private IP Addresses?

Yes, the Internet Camera can be connected to a LAN with private IP Addresses.

9 Can the Internet Camera be installed if a firewall exists on the network?

If a firewall exists on the network, port 80 is open for ordinary data communication. You will need to do port forwarding by opening a port to the camera. Please refer to your firewall’s product manual for detailed instructions.

10 Why can’t I access the Internet Camera from a Web browser?

The possible cause might be the IP Address for the Internet Camera is already being used by another device. To correct the possible problem, you need to first disconnect the Internet Camera from the network. Then run the PING utility (follow the instructions in the section titled “PING Your IP Address:). If there is a reply, it indicates that there is another device on the network with the same IP address. You will need to run the Install Wizard again and change the IP address of the camera.

Other possible problems might be due to the network cable. Try replacing your network cable. Test the network interface of the product by connecting a local computer directly to the unit, utilizing a standard Crossover Cable, and run the PING utility. If the problem is not solved, the Internet Camera might be faulty.

Wired Network Camera Installation

11 Why does the Power LED not light up constantly?

The power supply used might be at fault. Confirm that you are using the provided power supply, which is DC 5V, for the Internet Camera and verify that the power supply is well connected.

12 Why does the LAN LED not light up properly?

There might be a problem with the network cable. To confirm that the cables are working, PING the address of a known device on the network. If the cabling is OK and your network is reachable, you should receive a reply similar to the following (…bytes = 32 time = 2 ms).

Another possible problem may be that the network device utilized by the Internet Camera is not functioning properly, such as hubs or switches. Confirm the power for the devices are well connected and functioning properly.

13 Why does the Internet Camera work locally but not externally?

This might be caused by the firewall protection. Check the Internet firewall with your system administrator. The firewall may need to have some settings changed in order for the Internet Camera to be accessible outside your local LAN. Refer to page 47 for more information about installing your camera behind a router.

Make sure that the Internet Camera isn't conflicting with any web server you may have running on your network.

The default router setting might be a possible reason. Check that the configuration of the router settings allows the Internet Camera to be accessed outside your local LAN.

14 Why does a series of broad vertical white lines appear through out the image?

It could be that the CMOS sensor (a square panel situated behind the lens that measures the light signals and changes it into a digital format so your computer can present it into an image that you are familiar with) has become overloaded when it has been exposed to bright lights such as direct exposure to sunlight or halogen lights. Reposition the Internet Camera into a more shaded area immediately as prolonged exposure to bright lights will damage the CMOS sensor.

15 The focus on the Internet Camera is bad, how can I correct it?

Adjust the Internet Camera focus manually as described in the section titled "Adjusting the Camera Focus" on this manual.

16 Noisy images occur. How can I solve the problem?

The video images might be noisy if the Internet Camera is used in a very low light environment. To solve this issue you need more lighting, or click on the Nightshot button on the Home page.

17 The images are poor quality, how can I improve the image quality?

Make sure that your computers display properties are set to at least 6-bit color. Using 16 or 256 colors on your computer will produce dithering artifacts in the image, making the image look as if it is of poor quality.

The configuration on the Internet Camera image display is incorrect. Through the Web Configuration Video section of the web management you need to adjust the image related parameters for improved images such as: brightness, contrast, hue and light frequency. Please refer to the Web Configuration section for detailed information.

18 Why are no images available through the Web browser?

The ActiveX might be disabled. If you are viewing the images from Internet Explorer make sure ActiveX has been enabled in the Internet Options menu. You may also need to change the security settings on your browser to allow the ActiveX plug-in to be installed.

If you are using Internet Explorer with a version number of lower than 5, then you will need to upgrade your Web browser software in order to view the streaming video transmitted by the Internet Camera.

How to Ping Your IP Address

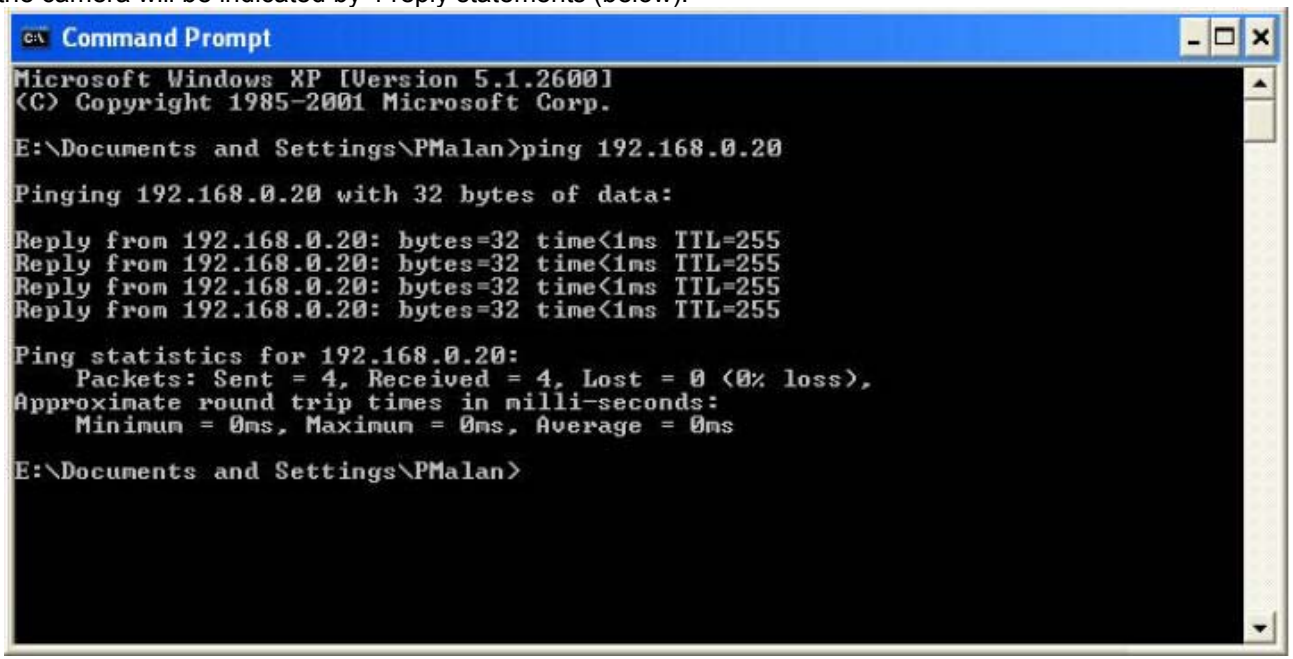
The PING (Packet Internet Groper) command can determine whether a specific IP Address is accessible by sending a packet to the specific address and waiting for a reply. It is a very useful tool to confirm if the IP Address conflicts with the Internet Camera over the network.

Follow the step-by-step procedure below to utilize the PING command.

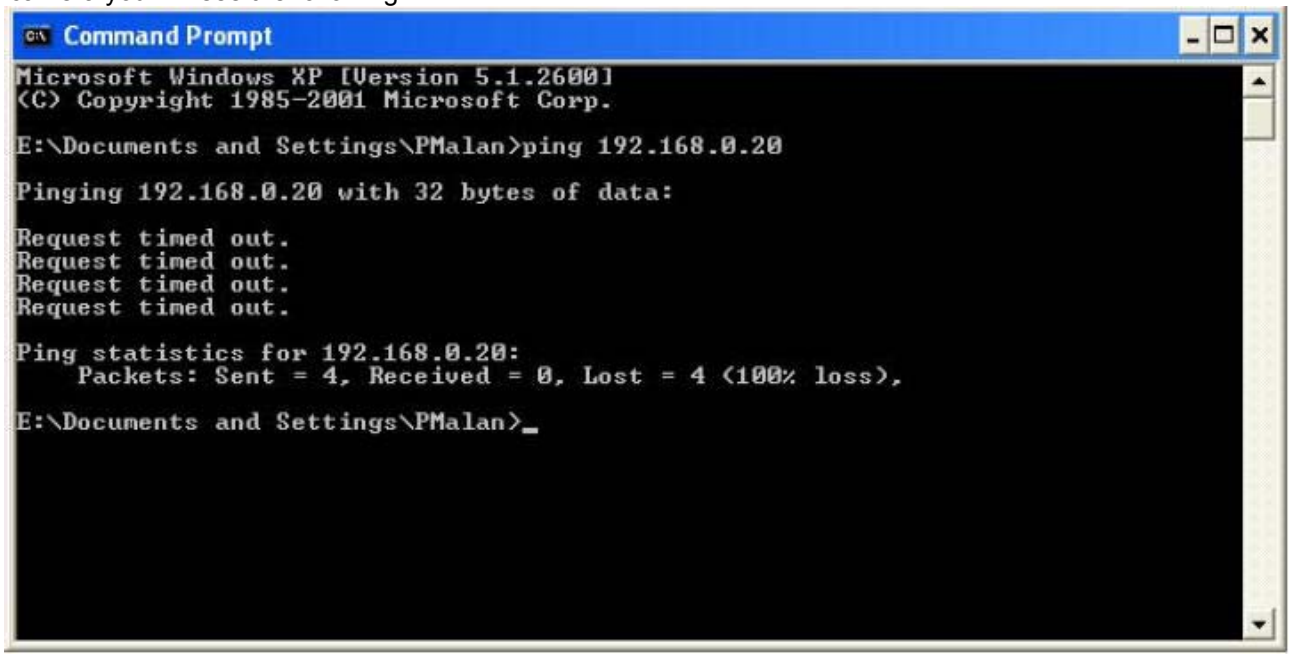
Start a **DOS** window **Start→ Program→ Accessories→ Command Prompt**.

Type **ping x.x.x.x**, where **x.x.x.x** is the IP Address of the Internet Camera.

A successful connection to the camera will be indicated by 4 reply statements (below).



If you fail to connect to your camera you will see the following:



Check to see if you have entered your camera's IP Address correctly or reassign your camera's IP Address.

Adjusting the Camera Focus

To help you get the best image quality, keep in mind that while adjusting the DCS-900 focus you can preview the image quality from your Web browser.

NOTE: You can further adjust the Internet Camera's image quality through the Web Configuration under SETUP > Video. Please refer to the Web Configuration section for further details.

Warning: Direct exposure to sunlight may cause permanent damage to the CMOS sensor. Therefore do not expose the Internet Camera's lens directly to sunlight.
The Internet Camera is designed for indoor usage and if your application requires prolonged exposure to sunlight, a sun visor is recommended to protect the Internet Camera.

Technical Specifications

Network

- TCP/IP (DHCP or Static IP Address)
- Wired LAN: 10/100Mbps

Web Access Requirements

- Any Java-Enabled or ActiveX compatible Web Browser,. i.e. current versions of Microsoft Internet Explorer or Netscape Navigator .

Media Streaming Protocol

- HTTP

Video Specification

- Resolution: 640 x 480
- Sensor: 1/4” color CMOS sensor
- Gain Control: 56dB
- Exposure: Automatic
- White Balance: Automatic
- Shutter: Electronics 1/60 ~ 1/15,000 sec
- Minimum Illumination: 2.5lux@F1.4
- Focal Length: 6.0mm
- Aperture: F=1.8

Image (Video Setting)

- Motion-JPEG compression
- Frame rate: 1, 5, 7, 15, 20, 30 frames per second (fps), and Auto
- Compression Rate Selection: 5 level (Very Low, Low, Medium, High, Very High)
- Video Resolution: 160x120, 320x240, 640x480

Web Configuration Requirements

- Internet Explorer 5.0 or above or Netscape 6.0 or above
- 266 MHz processor
- 32MB memory (64MB recommended)
- VGA Card Resolution: 800 x 600 or above

Dimensions

- H x W x L: 5.31” x 2.59” x 2.59”

PC System Requirements

- Windows 2000/XP/Vista
- 1.3 GHz processor
- 128MB memory
- 20GB available hard disk space
- CD-ROM drive

Power Source:

- 5V, 2.5A

Power Consumption

- 5W

Environmental specification

- Operating temperature: 5° C to 50° C
- Storage temperature: -25° C to 50° C
- Operating relative humidity: 5% to 95% non-condensing