



User Manual

Enhanced Wireless N Day & Night Home Network Camera

DCS-942L

Manual Overview

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Manual Revisions

Revision	Date	Description
1.0	July 21, 2011	DCS-942L Revision A1 with firmware version 1.00

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Package Contents



DCS-942L Enhanced Wireless N Day & Night Home Network Camera



Camera Stand and Mounting Kit



Camera CAT5 Ethernet Cable



Power Adapter



Manual and Software on CD



Quick Install 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.

System Requirements

- Computer with Microsoft Windows® 7, Vista®, or XP (for CD-ROM Setup Wizard), Mac OS or Linux
- PC with 1.3GHz or above; at least 128MB RAM
- Internet Explorer 7 or above , Firefox 3.5 or above, Safari 4 and Chrome 8.0 or above
- Existing 10/100 Ethernet-based network or 802.11n/g wireless network

Introduction

Congratulations on your purchase of the DCS-942L Enhanced Wireless N Day & Night Home Network Camera. The DCS-942L is a versatile and unique solution for your small office or home. Unlike a standard webcam, the DCS-942L is a complete system with a built-in CPU and web server that transmits high quality video images for security and surveillance. The DCS-942L can be accessed remotely and controlled from any PC/Notebook over your local network or through the Internet via a web browser. The simple installation and intuitive web-based interface offer easy integration with your Ethernet/Fast Ethernet or 802.11n/g wireless network. The DCS-942L also comes with remote monitoring and motion detection features for a complete and cost effective home security solution.

Features

Simple to Use

The DCS-942L is a stand-alone system with a built-in CPU requiring no special hardware or software such as PC frame grabber cards. The DCS-942L supports both ActiveX mode for Internet Explorer and Java mode for other browsers such as Firefox® and Safari®.

Supports a Variety of Platforms

Supporting TCP/IP networking, HTTP, and other Internet related protocols. The DCS-942L can also be integrated easily into other Internet/Intranet applications because of its standards-based features.

802.11n Wireless or Ethernet/Fast Ethernet Support

The DCS-942L offers wireless 802.11n and Ethernet/Fast Ethernet connectivity, making the DCS-942L easy to integrate into your existing network environment. The DCS-942L works with a 10Mbps Ethernet based network or 100Mbps Fast Ethernet based network for traditional wired environments, and works with 802.11n routers or access points for added flexibility. The Site Survey feature also allows you to view and connect to any available wireless network.

Web Configuration

Using a standard Web browser, administrators can configure and manage the Network Camera directly from its own Web page via Intranet or Internet. This means you can access your DCS-942L anytime, anywhere in the world.

Broad Range of Applications

With today's high-speed Internet services, the Network Camera can provide the ideal solution for delivering live video images over the Intranet and Internet for remote monitoring. The Network Camera allows remote access using a Web browser for live image viewing, and allows the administrator to manage and control the Network Camera anytime, anywhere in the world. Many applications exist, including industrial and public monitoring of homes, offices, banks, hospitals, child-care centers, and amusement parks.

Remote Monitoring Utility

The D-ViewCam application adds enhanced features and functionality for the Network Camera and allows administrators to configure and access the Network Camera from a remote site via the Internet. Other features include image monitoring, recording images to a hard drive, viewing up to 32 cameras on one screen, and taking snapshots.

IR LED for Day and night functionality

The built-in infrared LEDs enables night time viewing of up to 16 feet (5 meters).

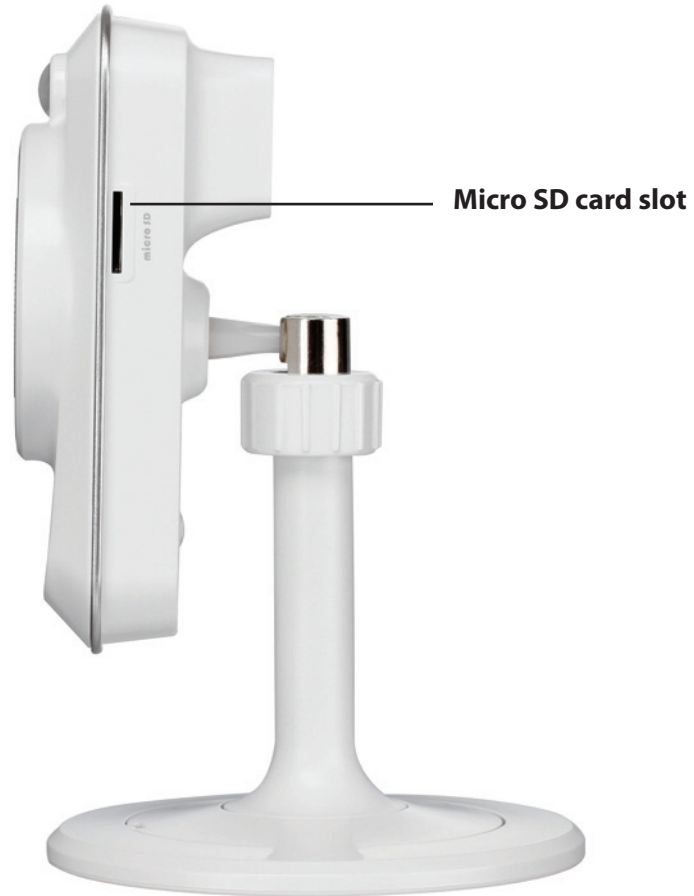
Hardware Overview

Front View

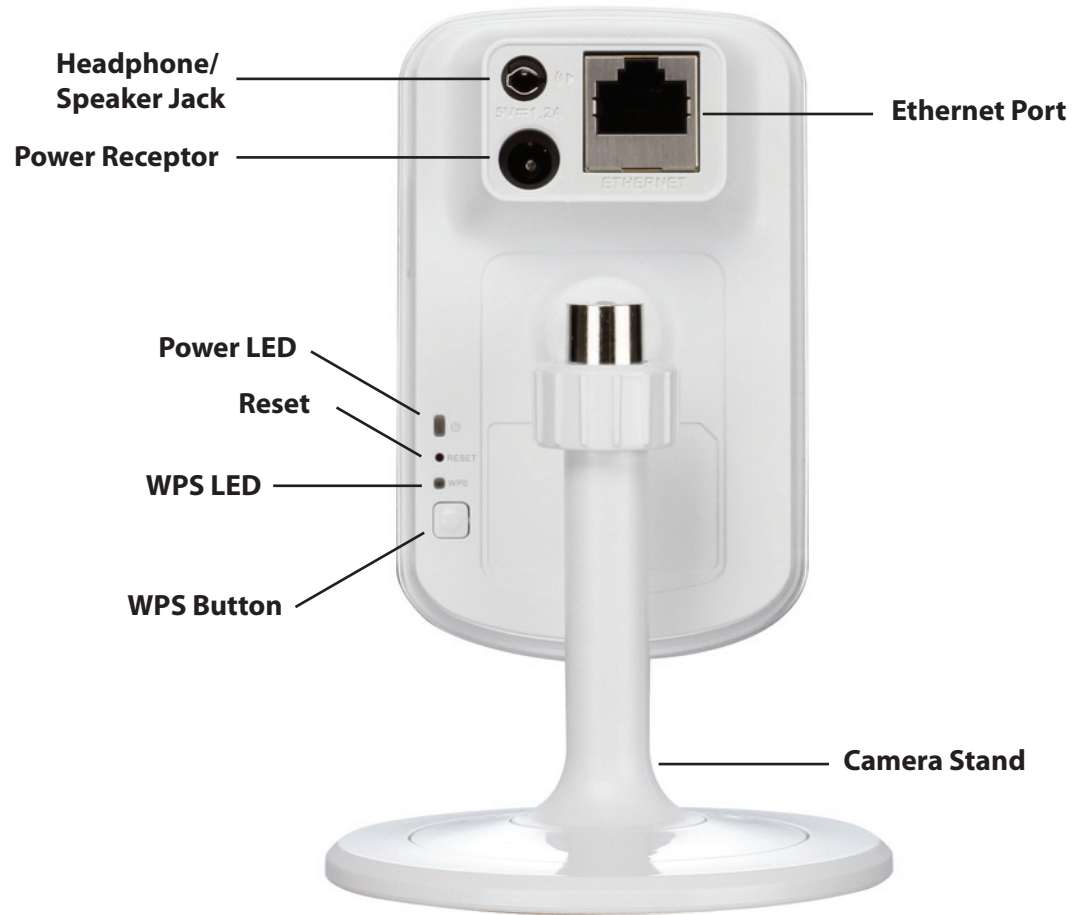


Hardware Overview

Side View



Rear View



Installation

Hardware Installation

Connect the Ethernet Cable

Connect the included Ethernet cable to the network cable connector located on the top panel at the rear of the DCS-942L and attach it to the network.



Attach the External Power Supply

Attach the external power supply to the DC Power receptor located on the rear panel of the DCS-942L and connect it to your wall outlet or power strip. Power is confirmed when the green LED Power Indicator located back on the DCS-942L is illuminated.



Wireless Installation Considerations

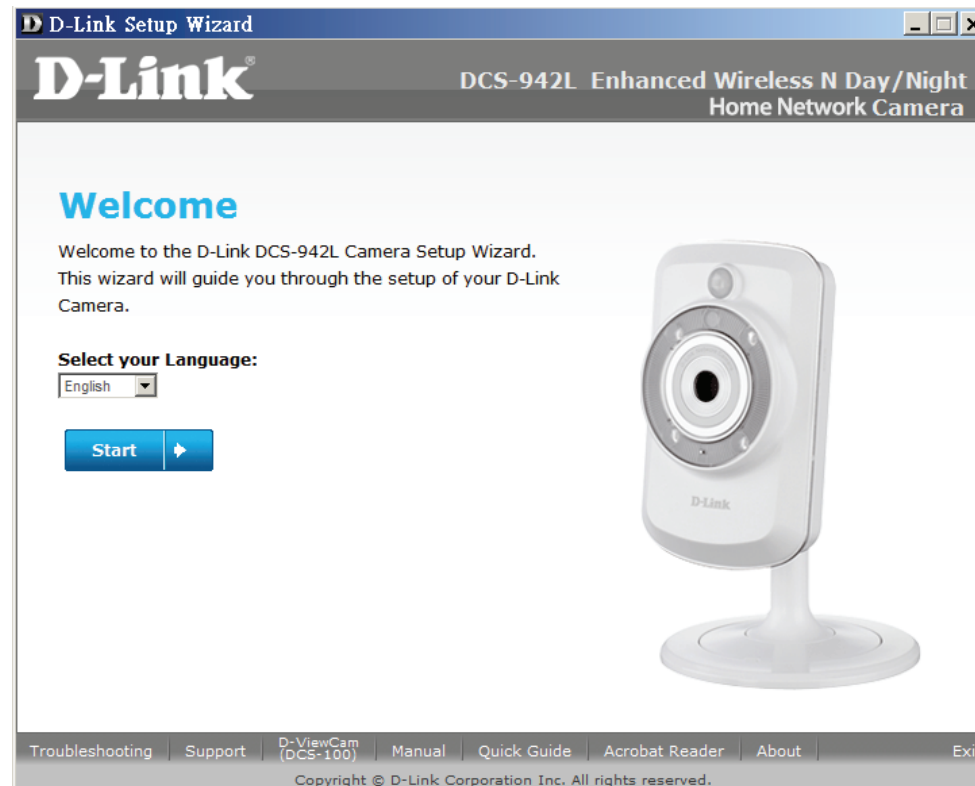
The D-Link Wireless Network Camera lets you access your network using a wireless connection from anywhere within the operating range of your wireless network. However, the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

1. Minimize the number of walls and ceilings between your adapter and other network devices (such as your Network Camera) - each wall or ceiling can reduce your adapter's range from 3-90 feet (1-30 meters).
2. Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle, it looks over 42 feet (14 meters) thick. Position your devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
3. Building Materials make a difference. A solid metal door or aluminum studs may weaken the wireless signal. Try to position your access points, wireless routers, and other networking devices where the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.
4. Keep your product at least 3-6 feet or 1-2 meters away from electrical devices or appliances that generate RF noise.
5. If you are using 2.4GHz cordless phones or other radio frequency sources (such as microwave ovens), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone is not in use.

Camera Installation Wizard

Insert the Installation CD-ROM into your computer's CD drive to start the autorun program.

The CD-ROM will open the Camera Installation Wizard. Simply click **Start** to go through the Installation Wizard, which will guide you through the installation process from connecting your hardware to configuring your camera.



WPS - Push Button Setup

Alternatively, you may create a connection to the camera using Wi-Fi Protected Setup (WPS).

To create a WPS connection:

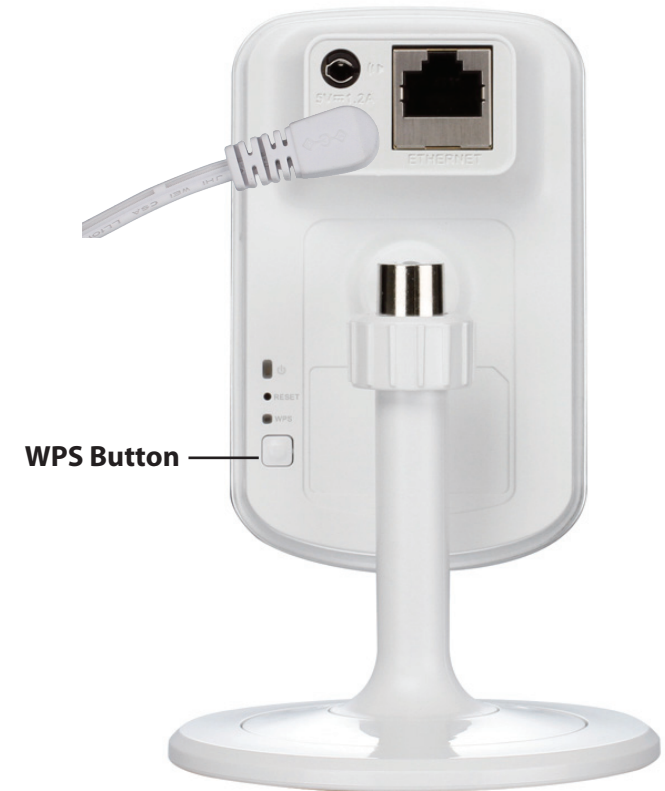
Step 1

Press and hold the WPS button for three seconds. The blue WPS status LED above the button will blink.

Step 2

Press the WPS button on your router within 60 seconds. The WPS button is usually on the front or side of your router. On some routers, you may need to log in to the web interface and click on an on-screen button to activate the WPS feature. If you are not sure where the WPS button is on your router, please refer to your router's User Manual.

The DCS-942L will automatically create a wireless connection to your router. While connecting, the green LED will flash and your camera will reboot.



mydlink Portal

After registering your DCS-942L camera with a mydlink account in the Camera Installation Wizard. You will be able to remotely access your camera from the www.mydlink.com website. After signing in to your mydlink account, you will see a screen similar to the following:



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Camera Status

Here, you can see the online status of each of your cameras. Your online status may be one of the following:



A green checkmark indicates that your camera is online and ready to use.



A yellow exclamation point indicates that your camera is online, but the camera password has changed. You will need to enter your new camera password to access your camera again.



A red X indicates that your camera is offline and currently cannot be accessed remotely.

If your camera is offline, try the following:

- Check to make sure that the Internet connection to your camera is working properly.
- Try restarting your Internet router.
- Check your camera's cable connections and make sure they are secure.
- Check to make sure that the LED on your camera is lit solid green.

If you still cannot access your camera, reset your camera and run the Camera Installation Wizard again from the CD-ROM included in your package.

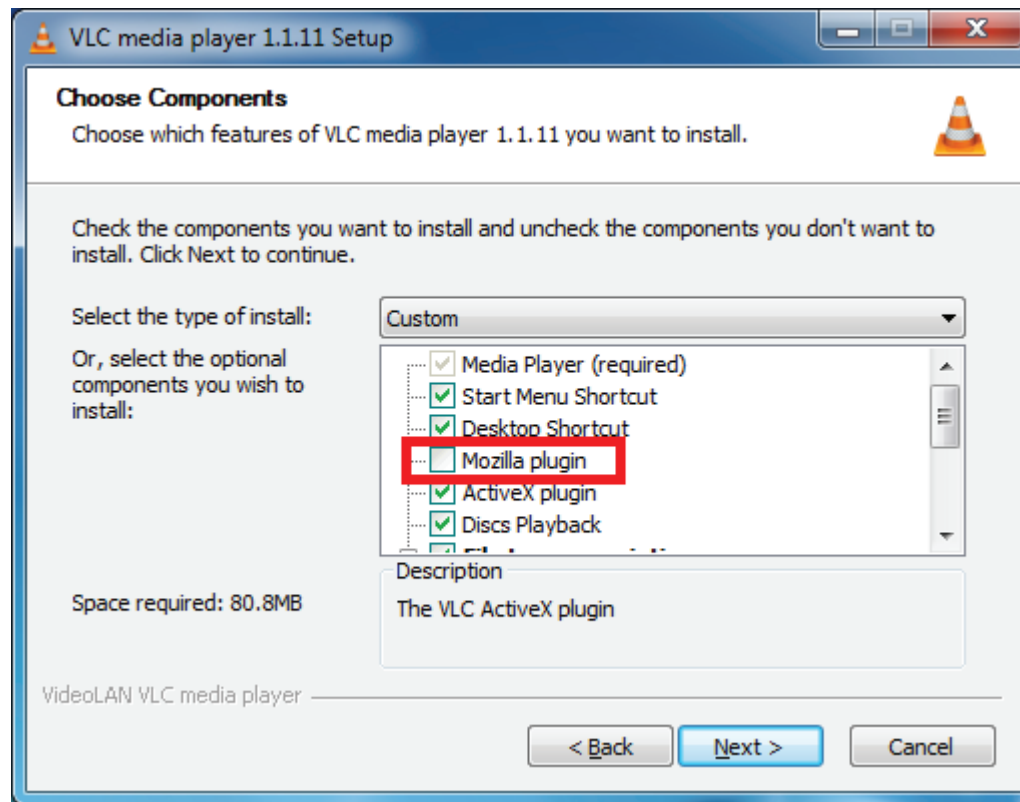
Live Video

In the main part of the screen, the Live Video tab will be selected by default. If the camera is available, a Live Video feed will be displayed. Video will be shown at VGA resolution (640x480) if viewing your camera from a PC on the same local network, or at QVGA resolution (320x240) if viewing your camera from a PC on a remote network.



NOTE: If using non-IE browsers to view the camera web manager, in order to have all functions working properly, make sure VLC Mozilla plug-in and Java JRE are both installed in your computer.

1. Download the VLC file from WEB site.
2. Execute the program and setup the configurations of the software.
3. Enable the “Mozilla plug-in” to install the components.



4. Finished the installation, then you can see the live video in the browser.

Camera Info

The Camera Info tab displays various details about your camera.

Device Name: The Device Name is a unique name that you can give to your device to help you identify it. Clicking on the **Device Name** will open a window for you to log in to your camera's configuration interface. Then, it will open the **Maintenance > Admin** page where you can change your Device Name.

Camera Password: Displays the current password for your camera's configuration interface. Clicking on the **Show Password** checkbox will either show or hide the password. Clicking on the Password will open a window for you to log in to your camera's configuration interface. Then, it will open the **Maintenance > Admin** page where you can change your Password.

mydlink No.: Displays the mydlink number of your device.

Model Name: Displays the model name of your device.

MAC Address: Displays the MAC address of your device.

Device activated On: Displays the time and date that your device was added to mydlink.

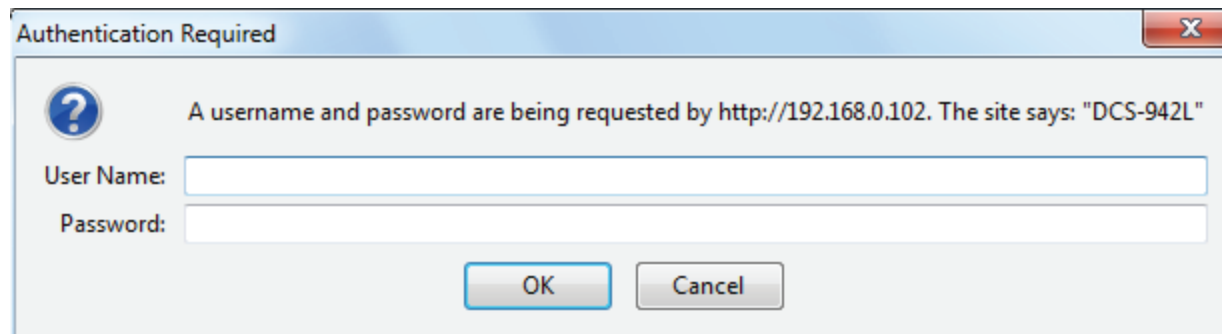
Support: This section provides you with links to various support websites and downloads related to your product.



Configuration

Using the Configuration Menu

After completing the Camera Installation Wizard, you are ready to use your camera. The camera's built-in Web configuration utility is designed to allow you to easily access and configure your DCS-942L. At the end of the wizard, click **Go To Camera**, or enter the IP address of your camera into a web browser. To log in, use the User name **admin** and the password you created in the Installation Wizard. If you did not create a password, the default password is blank. After entering your password, click **OK**.









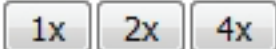


Please make sure that you have the latest version of Java application installed on your computer to ensure proper operation when viewing the video in Java mode. The Java application can be downloaded free from Sun's web site (<http://www.java.com>).

Live Video

A Live Video from the camera is displayed upon logging into the camera's web interface.



Icon	Button Name	Function
	Profile buttons	Use these buttons to switch between video profiles. Refer to page 33 for more information on setting up profiles.
	Full Screen button	Makes the video occupy the entire of the browser screen for easier viewing of the video.
	Snapshot button	Takes a snapshot of the image currently displayed on the screen and write it to a file on the hard drive in the folder specified using the Storage folder button.
	Video recording button	Triggers the camera's recording function. This will record the video displayed on the screen and write it to a file on the hard drive in the folder specified using the Storage folder button.
	Storage folder button	Sets the storage folder for snapshots and video recordings.
	Listen button	Sends the audio received from the camera's microphone through to the PC's speakers.
	Talk button	Sends audio from a microphone connected to the PC through to the speakers connected to the camera.
	IR LED On/Off button	Turns the Infrared lights on or off. (Icon only appears when you set to manual IR)
Zoom in/out: 	Zoom buttons	Zooms in or out of the picture.

Setup Wizard

You may choose to configure your network by using the **Internet Connection Setup Wizard** that includes step-by-step instructions. Alternatively, if you prefer to have finer control over settings, you can manually configure your connection using the **Manual Internet Connection Setup**.

Product: DCS-942L

Firmware version: 1.00

DCS-942L	LIVE VIDEO	SETUP	MAINTENANCE	STATUS	HELP
----------	------------	-------	-------------	--------	------

[Setup Wizard](#)
[Network](#)
[Wireless Setup](#)
[Dynamic DNS](#)
[Image Setup](#)
[Audio and Video](#)
[Time and Date](#)
[Video Clip](#)
[Snapshot](#)
[Motion Detection](#)
[SD Card](#)
[Logout](#)

INTERNET CONNECTION SETTINGS

In this section, you can setup the IP camera's network interface settings. If you are configuring this device for the first time, D-Link recommends that you select the Internet Connection Setup Wizard, and follow the instructions on screen. If you wish to modify or configure the IP camera settings manually, you may select the Manual Internet Connection Setup to input the network setting.

[Internet Connection Setup Wizard](#)
[Manual Internet Connection Setup](#)

IP CAMERA MOTION DETECTION SETTINGS

In this section, you can setup the IP camera's Motion Detection settings. If you are configuring this device for the first time, D-Link recommends that you select the Motion Detection Setup Wizard, and follow the instructions on screen. If you wish to modify or configure the Motion Detection manually, select the Manual Motion Detection Setup.

[Motion Detection Setup Wizard](#)
[Manual Motion Detection Setup](#)

Helpful Hints..

If you are an advanced user and have configured an Internet camera before, click 'Manual Internet Connection Setup' to input all settings manually.

If you consider yourself an advanced user and you want to manually set up motion detection settings, click 'Manual Motion Detection Setup' to input all the settings manually.

SURVEILLANCE

Internet Connection Setup Wizard

This wizard will guide you through a step-by-step process to configure your new D-Link Camera and connect the camera to the Internet.

Click **Next** to continue.

Select how the camera will connect to the Internet. If you are unsure how your camera will connect to the Internet, select **Automatic IP**. If your ISP has assigned you a static IP, select **Static IP Address** and enter the following details:

IP Address: The fixed IP address

Subnet Mask: The default value is "255.255.255.0." Used to determine if the destination is the same subnet.

Default Gateway (Router): The gateway used to forward frames to destinations in a different subnet. Invalid gateway settings may cause the failure of transmissions to a different subnet.

Optional Primary DNS: Primary domain name server that translates names to IP addresses.

Optional Secondary DNS: Secondary domain name server to backup the Primary DNS.

Click **Next** to continue.

WELCOME TO D-LINK SETUP WIZARD - INTERNET CONNECTION SETUP

This wizard will guide you through a step-by-step process to configure and connect your D-Link Camera to the internet. For your camera motion detection settings, please click Back button to close this wizard and select the Motion Detection Setup Wizard.

- Step 1: LAN Settings
- Step 2: Internet Settings
- Step 3: DDNS Settings
- Step 4: Camera Name Settings
- Step 5: Time Zone
- Step 6: Setup Complete

Back Next Cancel

STEP 1: LAN SETTINGS

Please select whether your camera will connect to the Internet with an Automatic or a Static IP Address. If your camera is connected to a router, or you are unsure which settings to pick, D-Link recommends that you keep the default selection of Automatic IP Address. Otherwise, select Static IP Address to manually assign an IP address before clicking on the Next button.

- ☐ Automatic IP Address
☒ Static IP Address

IPv4 Address 192.168.0.1

Subnet Mask 255.255.255.0

Default Gateway (Router) 192.168.0.1

Optional Primary DNS 172.19.10.32

Optional Secondary DNS 172.19.10.33

Back Next Cancel

Section 4 - Configuration

If you are required to connect using PPPoE, select **Enabled** and enter the Username and Password for your PPPoE connection.

STEP 2: INTERNET SETTINGS

If your ISP is using PPPoE, please enable this setting and enter your ISP Username and Password. Then, click on the Next button. Please contact your ISP if you do not know your Username and Password.

☒ Enabled

Username

(e.g. 123456@hinet.net)

Password

Back

Next

Cancel

A Dynamic DNS account allows you to access your camera over the Internet when you have an IP address that changes each time you connect to the Internet. If you have a Dynamic DNS account, click **Enable** and enter the following details:

Server Address: (Dynamic Domain Name Server) will hold a DNS host name and synchronize the public IP address of the modem when it has been modified. The username and password are required when using the DDNS service.

DDNS: Click to enable the DDNS function.

Server Address: Select your Dynamic DNS Server from the pull down menu.

Host Name: Enter the host name of the DDNS server.

User Name: Enter your username or e-mail address used to connect to the DDNS.

Password: Enter your password used to connect to the DDNS server.

Timeout: You can setup how often the camera notifies the DDNS server of its current global IP address by entering a whole number in hours.

STEP 3: DDNS SETTINGS

If you have a Dynamic DNS account and would like the camera to update the IP address automatically, please enable DDNS and enter your host information below. Then, click on the Next button to continue.

Sign up for D-Link's Free DDNS service at: <http://www.DlinkDDNS.com>

☒ Enable

Server Address

www.DynDNS.org

<< Select DDNS Server ▾

Host Name

User Name

Password

Verify Password

Timeout

576

Hour

Back

Next

Cancel

Click **Next** to continue.

Section 4 - Configuration

Enter a name for your camera. Click **Next** to continue.

STEP 4: CAMERA NAME SETTINGS

D-Link recommends that you rename your camera for easy accessibility. You can then identify and connect to your camera via this name. Please assign a name of your choice before clicking on the Next button.

Camera Name

Select the time zone that the camera is in so that scheduled events occur at the correct time. If your time zone observes daylight saving, check the **Enable Daylight Saving** box and select **Auto Daylight Saving** to have DST set automatically or select **Set date and time manually** to enable drop-down menus so that you can set the start and end time of daylight saving yourself.

Click **Next** to continue.

STEP 5: TIME ZONE

Please configure the correct time to ensure that all events are triggered, captured and scheduled at the right time. Then, click on the Next button.

Time Zone

☒ Enable Daylight Saving

☐ Auto Daylight Saving

☒ Set date and time manually

Offset

	Month	Week	Day of week	Hour	Minute
Start time	<input type="text" value="3"/>	<input type="text" value="2"/>	<input type="text" value="Sunday"/>	<input type="text" value="2"/>	<input type="text" value="0"/>
End time	<input type="text" value="11"/>	<input type="text" value="1"/>	<input type="text" value="Sunday"/>	<input type="text" value="2"/>	<input type="text" value="0"/>

A summary of the options you selected is displayed for confirmation. Click **Apply** to complete the Setup.

STEP 6: SETUP COMPLETE

Below is a summary of your camera settings. Click on the Back button to review or modify settings or click on the Apply button if all settings are correct. It is recommended to note down these settings in order to access your camera on the network or via your web browser.

IPv4 Address	192.168.0.1
IP Camera Name	DCS-942L
Time Zone	(GMT+08:00) Taipei
DDNS	Disable
PPPoE	Disable

Back

Apply

Cancel

Network

This section allows you to configure your network settings.

Automatic IP Address: Select this connection if you have a DHCP server running on your network and would like a dynamic IP address to be updated to your camera automatically.

Static IP Address: You may obtain a static or fixed IP address and other network information from your network administrator for your camera. A static IP address will ease you for accessing your camera in the future.

IPv4 Address: The fixed IP address

Subnet Mask: The default value is "255.255.255.0." Used to determine if the destination is the same subnet.

Default Gateway: The gateway used to forward frames to destinations in a different subnet. Invalid gateway settings may cause the failure of transmissions to a different subnet.

Optional Primary DNS: Primary domain name server that translates names to IP addresses.

Optional Secondary DNS: Secondary domain name server to backup the Primary DNS.

PPPoE Settings: If you are using a PPPoE connection, enable it and enter the User Name and Password for your PPPoE account. You can get this information from your Internet service provider (ISP).

Product: DCS-942L Firmware version: 1.00

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DCS-942L	LIVE VIDEO	SETUP	MAINTENANCE	STATUS	HELP
Setup Wizard					
Network					
Wireless Setup					
Dynamic DNS					
Image Setup					
Audio and Video					
Time and Date					
Video Clip					
Snapshot					
Motion Detection					
SD Card					
Logout					

NETWORK

You can configure your LAN and Internet settings here.

[Save Settings](#) [Don't Save Settings](#)

LAN SETTINGS

LAN SETTINGS

☐ Automatic IP Address

☒ Static IP Address

IPv4 Address:

Subnet Mask:

Default Gateway (Router):

Optional Primary DNS:

Optional Secondary DNS:

☒ PPPoE

User Name:

Password:

Confirm Password:

Status: Disabled

PORT SETTINGS

HTTP Port:

RTSP Port:

UPnP

☒ UPnP

☒ UPnP Port Forward

External HTTP:

External RTSP:

Apple

☒ Bonjour

[Save Settings](#) [Don't Save Settings](#)

Helpful Hints..

Select if you are running a DHCP server on your network and would like an IP address assigned to your camera automatically.

HTTP Port
Allocate the port of camera to allow you to connect via a standard web browser.

RTSP Port
Allocate the port of camera to allow you to connect by using QuickTime or streaming mobile devices.

UPnP
Enable UPnP will allow you to discover camera as an UPnP device in the network.

Bonjour
Enable Bonjour will allow you to discover camera with an Apple computer.

SURVEILLANCE

Port Settings: You may configure a Second HTTP port that will allow you to connect to the camera via a standard web browser. The port can be set to a number other than the default TCP ports 80. A corresponding port must be opened on the router. For example, if the port is changed to 1010, you must type **http://192.168.0.100:1010** instead of only "http://192.168.0.100".

UPnP: The RTSP port is used to establish and control media sessions between two endpoints for the Real Time Streaming Protocol. The default port is 554.

Enable this setting to configure your camera as a UPnP device in the network.

Apple: Checking the **Bonjour** box will allow the camera to be discoverable on the network and visible to Apple devices.

Click **Save Settings** to save your changes.

Wireless

This section allows you to setup and configure the wireless settings on your camera.

Network Name: This is the Service Set Identifier, an identifier for your wireless network.

Site Survey: The drop-down menu lists all wireless access points that the camera was able to detect. Click **Rescan** to refresh the list of wireless connections.

Wireless Mode: Infrastructure is a wireless connection using an access point as a transmission point of all wireless devices. **Ad-Hoc** is a wireless connection used without an access point, where your DCS-942L is directly connecting to your PC. This is done using the on-board wireless adapter on the DCS-942L connected to a wireless adapter on the PC.

Security Mode: The DCS-942L provides three options for wireless security; **None**, **WEP**, and **WPA-PSK / WPA2-PSK**. Select the same encryption method that is being used by your wireless device/router.

WEP provides security by encrypting data over your wireless network so that it is protected as it is transmitted from one wireless device to another. To gain access to a WEP network, you must know the key. The key is a string of characters that you create.

Key: An appropriate **Preshared Key**, which is needed in order to connect to the wireless network. Check the **Show Hidden Key** box to reveal the password you have entered.

Channel: The default setting is channel 6. Select the same channel that is being used by other wireless devices within your network. When there is an interference from the wireless networks that overlap with one another, you may change the channel to obtain maximum performance for your connection.

Click the **Save Settings** button to save your changes.

Product: DCS-942L

Firmware version: 1.00

DCS-942L

Setup Wizard

Network

Wireless Setup

Dynamic DNS

Image Setup

Audio and Video

Time and Date

Video Clip

Snapshot

Motion Detection

SD Card

Logout

WIRELESS SETUP

In this section, you can setup and configure the wireless settings for your camera.

Save Settings

Don't Save Settings

WIRELESS CONFIGURATION

☒ Wireless

Network Name

dlink

Site Survey

===SSID List===

Rescan

Wireless Mode

Ad-Hoc

Security Mode

WEP

Key

Show Hidden Key

Channel

6

Save Settings

Don't Save Settings

Helpful Hints..

Please enable wireless first before configuring camera's wireless connection. You may choose which wireless network for the connection by using the pull-down menu of 'Site Survey' or enter the SSID manually.

Network Name

Service Set Identifier (SSID) is the name of your wireless network such as Default, Conference, My network, and etc.

Wireless Mode

There are two connection modes. Infrastructure is a wireless connection using an access point as a transmission point of all wireless devices. Ad-Hoc is a wireless connection used without an access point, which connects the PC directly to the DCS-942L.

Security Mode

None

This option makes the camera visible to all devices on the network. No encryption is provided.

WEP

Allows communication only with other devices that have the identical Wired Equivalent Privacy (WEP) settings.

WPA-PSK, WPA2-PSK

Both modes will require you to input a pre-shared 'Key' for the connection that is held between the camera and the wireless device.

SURVEILLANCE

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DDNS

This section allows you to configure the DDNS setting for your camera. DDNS will allow all users to access your camera using a domain name instead of an IP address.

Product: DCS-942L Firmware version: 1.00

D-Link

DCS-942L // LIVE VIDEO SETUP MAINTENANCE STATUS HELP

Setup Wizard
Network
Wireless Setup
Dynamic DNS
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Time and Date
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DYNAMIC DNS

The Dynamic DNS feature allows you to use a domain name that you have purchased (www.yourdomain.com) to access your camera with a dynamically assigned IP address. Most broadband Internet service providers assign dynamic (changing) IP addresses. By using a DDNS service, you can enter your domain name to connect to your camera no matter what your IP address is. [Sign up for D-Link's Free DDNS service at www.DLinkDDNS.com.](http://www.DLinkDDNS.com)

Save Settings Don't Save Settings

DYNAMIC DNS SETTING

☒ DDNS

Server Address << Select DDNS Server

Host Name

User Name

Password

Confirm Password

Timeout hours

Status Disabled

Save Settings Don't Save Settings

Helpful Hints..

Dynamic DNS is useful if you have a DSL or Cable service provider that changes your modem IP address periodically. This will allow you to assign a website domain name to your camera instead of connecting through an IP address.

SURVEILLANCE

DDNS: Click to enable the DDNS function.

Server Address: Select your Dynamic DNS Server from the drop-down menu.

Host Name: Enter the host name of the DDNS server.

User Name: Enter your username or e-mail address used to connect to the DDNS.

Password: Enter your password used to connect to the DDNS server.

Timeout: You can setup how often the camera notifies the DDNS server of its current global IP address by entering a whole number in hours.

Image Setup

This section allows you to configure the image settings for your camera.

Brightness Control: Allows you to adjust the brightness level.

Contrast: Allows you to adjust the contrast level.

Mirror: Horizontally flip the video.

Light Source: This setting adjusts the light sensitivity of the lens for optimum performance for either indoor or outdoor settings.

White Balance: Allows you to set the camera to automatically set the white balance of the image.

Saturation: Allows you to adjust the saturation level.

B/W: Changes the images recorded on the camera to be in black and white.

Flip: Select this box to vertically flip the video. If the camera is installed upside down, Flip Image and Mirror should both be checked.

Frequency: Adjusts the video output. By default this is set to **Auto** but you may override the setting by manually selecting either **50Hz** or **60Hz** depending on the television system used in your region of the world.

Slow Shutter: Allows you to select a slow shutter speed so as to capture more light in the image. You can select from **1/15 second**, **1/10 second**, **1/7.5 second** or **1/3.75 second**.

Change to the image settings are effective immediately.

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Firmware version: 1.00

DCS-942L

LIVE VIDEO

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IMAGE SETUP

Your changes made for the image settings will be reflected immediately. The results can be seen and found in the Live Video window below.

LIVE VIDEO

IMAGE SETTINGS

Brightness

50

Saturation

100

Contrast

40

B/W

☐

Mirror

☐

Flip

☐

Light Source

Outdoor

Frequency

Auto

White balance

Disable

Slow Shutter

Disable

Reset to Default

Helpful Hints..

Brightness, Contrast, Saturation can be adjusted from 0 to 100, allowing you to fine-tune your image settings.

Brightness
It is used to compensate for backlit scenes.

Saturation
It controls the strength of color from black and white to bold colors.

Contrast
Adjustable to control the contrast of colors between the object. It helps to improve the image under a dull grey sky.

B/W
Select to enable or disable black-and-white mode for your camera.

Mirror
Select this feature to obtain mirror image.

Flip
Select this feature when your camera is installed up-side down on the ceiling.

Frequency
You may need to choose '50' or '60' Hz frequency (depends on country).

White balance
It is 'Auto' by default. It will remove the unrealistic color casts, so that objects which appear white are rendered white in the video.

Slow Shutter
Select minimum shutter speed when environment is in dim light.

SURVEILLANCE

Audio and Video

This section allows you to configure the audio and video settings for your camera.

Video Profile: This section allows you to change the **Encode Type**, **Resolution**, **FPS**, and **Quality**.

Encode Type: The compression format used when viewing your camera.

Resolution: Select the desired video resolution from three formats: 640x480, 320x240, and 160x120. The higher setting can obtain better quality. However, it will use more resource within your network.

FPS: Select the optimal setting depending on your network status. Please note that the higher setting can obtain better quality. However, it will use more resources within your network.

bps: Select the bitrate to assign the video. This is a constant bitrate. A higher bitrate will result in better looking video at the expense of a larger file size.

JPEG Quality: Select one of five levels of image quality: Highest, High, Medium, Low, and Lowest.

RTSP URL: The URL used to connect to the camera when viewing from QuickTime or a mobile device.

Day/Night Mode: Allows you to control the IR LEDs on the front of the camera.

Audio Setup: Allows you to enable or disable and adjust the volume level of the speaker and microphone.

Click **Save Settings** to save your changes.

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D-Link

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LIVE VIDEO SETUP MAINTENANCE STATUS HELP

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AUDIO AND VIDEO

You may configure audio and video settings (4 video profiles) here. Profile 3 has been set as the for snapshot while profile 4 is set for your mobile phone or PDA device.

Save Settings Don't Save Settings

VIDEO PROFILE 1

Encode Type	Resolution	FPS	bps	RTSP URL
H.264	640x480	30	2 Mbps	play1.sdp

VIDEO PROFILE 2

Encode Type	Resolution	FPS	bps	RTSP URL
H.264	320x240	30	1 Mbps	play2.sdp

VIDEO PROFILE 3

Encode Type	Resolution	FPS	JPEG Quality	RTSP URL
JPEG	640x480	10	Good	play3.sdp

VIDEO PROFILE 4 FOR MOBILE DEVICE ONLY

Encode Type	Resolution	FPS	bps	RTSP URL
MPEG4	320x240	5	384 Kbps	3gpp

DAY/NIGHT MODE

Day/Night mode Manual IR

AUDIO SETUP

☒ Speaker

Volume 50

☒ Microphone

Volume 50

Save Settings Don't Save Settings

Higher frame size, frame rate and bit rate rate gives better video quality. At the same time, it requires more network bandwidth.

Encode Type
Select the video codec 'MJPEG', 'MPEG4', or 'H.264'.

Resolution
3 options depend on display system used.

FPS
The amount of image frames rendered by the camera per second.

bps
Select a fixed bandwidth for your camera operation. Higher value means a higher quality image but consumes more network bandwidth.

JPEG Quality
Set the quality of JPEG image.

RTSP URL
The URL used to connect to the camera when viewing from QuickTime or a mobile device.

Day/Night mode
Select night mode to use camera's IR LED in a dim light area.

Speaker
When this option is selected, you can talk into your PC's microphone and your voice will be heard through the external speaker connected to the camera.

Microphone
Enable this feature to hear audio from the camera's microphone.

SURVEILLANCE

Time and Date

This section allows you to configure the settings of the internal system clocks for your camera.

Time Zone: Select the time zone for your region from the drop-down menu.

Enable Daylight Saving: Check this if the camera is in a region where daylight saving is observed.

Synchronize NTP Server: Network Time Protocol will synchronize your camera with an Internet time server. Choose the one that is closest to your camera.

Set the Date and Time Manually: Select this to set the time manually.

Copy your Computer's Time Settings: Click to synchronize the time information from your PC.

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DCS-942L	LIVE VIDEO	SETUP	MAINTENANCE	STATUS	HELP
Setup Wizard Network Wireless Setup Dynamic DNS Image Setup Audio and Video Time and Date Video Clip Snapshot Motion Detection SD Card Logout	<div> TIME AND DATE </div> <div> Here you may configure the internal clock of your camera. <input type="button" value="Save Settings"/> <input type="button" value="Don't Save Settings"/> </div> <div> TIME CONFIGURATION </div> <div> Time Zone: (GMT+08:00) Taipei <input checked="" type="checkbox"/> Enable Daylight Saving <input type="radio"/> Auto Daylight Saving <input checked="" type="radio"/> Set date and time manually Offset: +1:00 Start time: Month 3 Week 2 Day of week Sunday Hour 2 Minute 0 End time: Month 11 Week 1 Day of week Sunday Hour 2 Minute 0 </div> <div> AUTOMATIC TIME CONFIGURATION </div> <div> <input checked="" type="checkbox"/> Synchronize with NTP Server NTP Server: << Select NTP Server </div> <div> SET DATE AND TIME MANUALLY </div> <div> <input checked="" type="checkbox"/> Set date and time manually Year 2011 Month 1 Day 1 Hour 3 Minute 16 Second 56 <input type="button" value="Copy Your Computer's Time Settings"/> </div> <div> <input type="button" value="Save Settings"/> <input type="button" value="Don't Save Settings"/> </div>				Helpful Hints.. Setting the correct time and time zone will allow you to have accurate logs and proper scheduling for recordings.

SURVEILLANCE

Video Clip

Video Clip is a feature to send video clips via FTP , E-Mail or SD Card when a trigger is activated.

Video Clip: Check this box to enable the Video Clip function.

Trigger By: Select whether the event is triggered by **Motion**, **Schedule** or if the video is **Always** recording.

Video Clip Type: Displays the profile used for the recording and allows you to specify whether to start recording up to 5 seconds before the event to ensure the event is captured and the maximum duration of the video clip.

Target: Select where you want the video clip to be sent. It may be saved to an SD Card, uploaded to an FTP or E-mailed to an e-mail address.

Click **Save Settings** to save your changes.

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Firmware version: 1.00

DCS-942L

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VIDEO CLIP

Video Clip is a feature to send video clips via FTP , E-Mail or SD Card when a trigger is activated.

(The target can't be select both FTP and E-mail for the video clip.)

Save Settings

Don't Save Settings

VIDEO CLIP

☒ Video Clip

Trigger by

Motion

Ignore Following Motions in

60

Seconds (range 60 to 86400 seconds)

☒ Only during

Day:

☒ Sun

☒ Mon

☒ Tue

☒ Wed

☒ Thu

☒ Fri

☒ Sat

Time: Start

0

:

0

End

0

:

0

Video Clip Type

Source : Profile 2 (Configurable in [Audio And Video.](#))

Pre-event recording

5

Seconds (Between 0 to 5 seconds)

Maximum duration

10

Seconds (Between 5 to 10 seconds)

Target

☒ SD Card

Interval

60

Seconds (range 60 to 86400 seconds)

Keep Free Space:

64

MB (Global parameter, and minimum is 30)

☒ Cyclic (Global parameter)

☒ FTP to

:

21

User Name

Password

Path

Filename Prefix

Interval

300

Seconds (range 60 to 86400 seconds)

Passive Mode

☒

☐ E-mail to

Save Settings

Don't Save Settings

Helpful Hints..

Video clip is the ability to store or send Profile 2 (MPEG4/H.264) video clips to local SD Card or a remote email or FTP server based on motion detection, external sensor input triggered.

Trigger by

Motion

Begin video clipping after a motion is detected.

Schedule

Video clipping in a specified time.

Always

Continuous video clipping.

Pre-event recording

Specify how much seconds of video will be recorded, before the video clip is taken.

Maximum duration

Specify how much seconds of video clip.

Target

You can select the target as SD Card, FTP, or E-mail for the video clip.

SURVEILLANCE

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Snapshot

Snapshot is a feature to send static images captured by the camera via FTP , E-Mail or SD Card when a trigger is activated.

Snapshot: Check this box to enable the Snapshot function.

Trigger By: Select whether the event is triggered by **Motion**, **Schedule** or if the video is **Always** recording.

Snapshot Type: Select whether to take a single snapshot or to take 6 snapshots with a 1 second interval between them.

Target: Select where you want the snapshot to be sent. It may be saved to an SD Card, uploaded to an FTP or E-mailed to an e-mail address.

Click **Save Settings** to save your changes.

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SNAPSHOT

In order to enable your camera to take snapshots, you must select the checkbox of 'Enable Snapshot'. Then, you can determine the trigger event(s) and FTP and/or email notification(s).

Save Settings

Don't Save Settings

SNAPSHOT

☒ Snapshot

Trigger by Always

Snapshot Type

Source : Profile 3 (Configurable in [Audio And Video.](#))

☒ Single snapshot

☐ 6 snapshot with 1 second interval (3 frames before and 3 frames after motion frame)

Target

☐ SD Card

☒ FTP to : 21

User Name

Password

Path

Filename Prefix

Interval 300 Seconds (range 10 to 86400 seconds)

Passive Mode ☒

☐ E-mail to

Save Settings

Don't Save Settings

Helpful Hints..

Snapshot is the ability to store or send Profile 3 (JPEG) pictures to local SD Card or a remote email or FTP server based on motion detection, external sensor input triggered.

Trigger by

Motion
Begin snapshot after a motion is detected.

Schedule
Snapshot in a specified time.

Always
Continuous Snapshot.

6 snapshot
Select to take continuous 6 pictures for each snapshot.

Target
You can select the target as SD Card, FTP, or E-mail for the snapshot.

SURVEILLANCE

Motion Detect

Enabling Video Motion will allow your camera to use the motion detection feature. You may draw a finite motion area that will be used for monitoring.

Enable Video Motion: Check this box to enable the motion detection feature of your camera.

Enable PIR: When this option is selected, use PIR (passive infrared) to detect motion.

Sensitivity: Specifies the measurable difference between two sequential images that would indicate motion. Please enter a value between 0 and 100.

Drawing Mode: Select **Draw Motion Area** to select the area of the picture to monitor for movement to trigger recording or snapshot. Use your mouse to click on the blocks that you would like to monitor for motion. Select **Erase Motion Area** to remove the blocks and stop the camera from monitoring that area of the picture.

Clear: Clears all motion detection areas from the picture.

Refresh Image: Updates the image with a new one at the time the button is pressed.

Click **Save Settings** to save your changes.

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Firmware version: 1.00

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MOTION DETECTION

This section will allow you to enable or disable motion detection function, draw or erase motion area, as well as configure the sensitivity setting of your camera to detect movement. You must select the checkbox of 'Enable Video Motion' to turn on the feature.

Save Settings

Don't Save Settings

LIVE VIDEO

☒ Enable Video Motion
 ☒ Enable PIR



2011/01/01 04:57:12 B07 DCS-942L

Sensitivity

90 0%~100%

Drawing Mode

☒ Draw motion area
 ☐ Erase motion area

Clear

Refresh Image

Save Settings

Don't Save Settings

Helpful Hints..

Sensitivity
 Set the sensitivity of camera to trigger motion detection. High sensitivity makes the motions easier to be detected.

Draw motion area
 Drag your mouse to add motion detection range.

Erase motion area
 Drag your mouse to erase motion detection range.

Enable PIR
 When this option is selected, use PIR (passive infrared) to detect motion.

SURVEILLANCE

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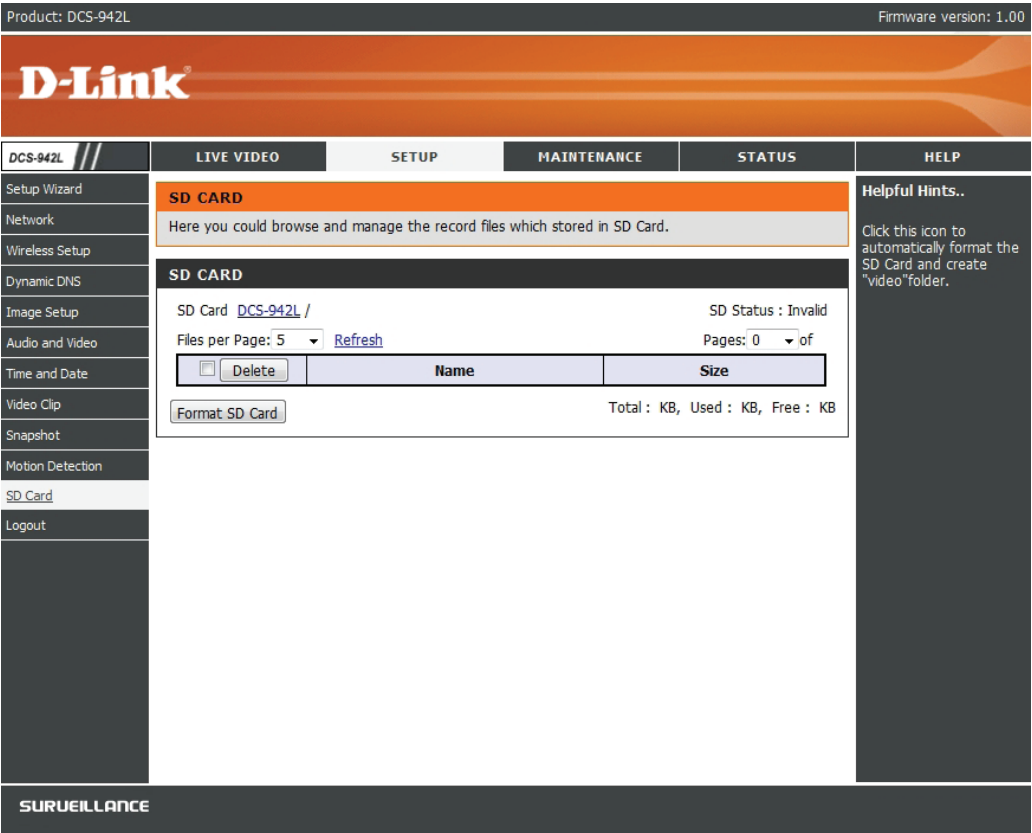
37

SD Card

This page allows you to browse and manage the recorded files on an SD card which is inserted into the camera.

A list of files stored on the inserted SD card is displayed. By selecting the check box, you can selectively delete video or images. If you want to erase the SD card or if it is a new one, click **Format SD Card**.

Note: Format SD Card will erase all the contents of the SD card.



Maintenance

Admin

This section allows you to change the administrator's password and configure the server settings for your camera. You can also manage the user account(s) that access to your camera.

Admin Password Setting: To change your password, enter your current password and then enter the new one in the **New Password** and **Confirm New Password** fields.

Add User Account: Create a new user for accessing the video image. Enter the user name, password, and password confirmation, and click **Add**. A maximum of 8 user accounts can be added into the user list.

User List: Select a user from the drop-down menu and click **Delete** to remove the user account from having access to the camera images.

RTSP Authentication: Enable user validation for RTSP streaming.

HTTP Authentication: Enable user validation for HTTP streaming.

Snapshot URL Authentication: Select **Enable** to allow access to the current camera snapshot via the web address indicated.

Camera Name: Specify a name for your camera.

OSD: In the **Label** field, you may enter a name to display on the image and check a box to put the current time on the image also.

LED Light: Select **Normal** to enable the LED on the front of the device, or select off to disable the LED. It can also be set to flicker on and off.

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System					
Firmware Upgrade					
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ADMIN

Here you can change the administrator's password for your account as well as add and/or delete user account(s). You can also configure a unique name for your camera, and enable its OSD (On-Screen Display) feature in order to display camera name and time stamp for both live video and recordings of your camera.

ADMIN PASSWORD SETTING

Old Password 30 characters maximum

New Password 30 characters maximum

Confirm New Password

ADD USER ACCOUNT

User Name 30 characters maximum

New Password 30 characters maximum

Confirm New Password

20 users maximum

USER LIST

User Name -- User list --

AUTHENTICATION

☐ RTSP Authentication

☒ HTTP Authentication

☒ Snapshot URL Authentication (<http://192.168.0.101/image/jpeg.cgi>)

DEVICE SETTING

Camera Name DCS-942L 36 characters maximum

☒ OSD

Label DCS-942L 30 characters maximum

☒ Time Stamp

LED light Power/Link

Helpful Hints..

For security purposes, it is recommended to change the password for your administrator account. Be sure to write down the new password to avoid having to reset the camera in the event that it is forgotten.

User Account
User account is given to an user a privilege to login into Live View page and use functions in the page.

RTSP Authentication
Enable user validation for RTSP streaming.

HTTP Authentication
Enable user validation for HTTP streaming.

Snapshot URL Authentication
Enable user validation for Snapshot URL.

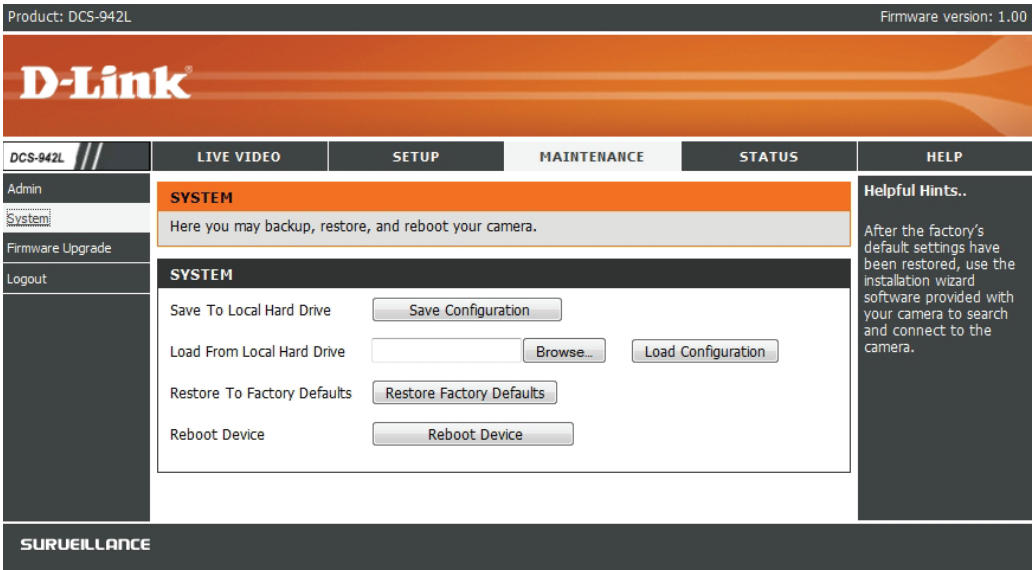
OSD
Enable OSD, the camera name and time will be displayed on the video screen.

LED light Power/Link
Normal LED blinking depending on power and linkage status.
Off
Always turn off LED.
Flicker
Always flicking LED.

SURVEILLANCE

System

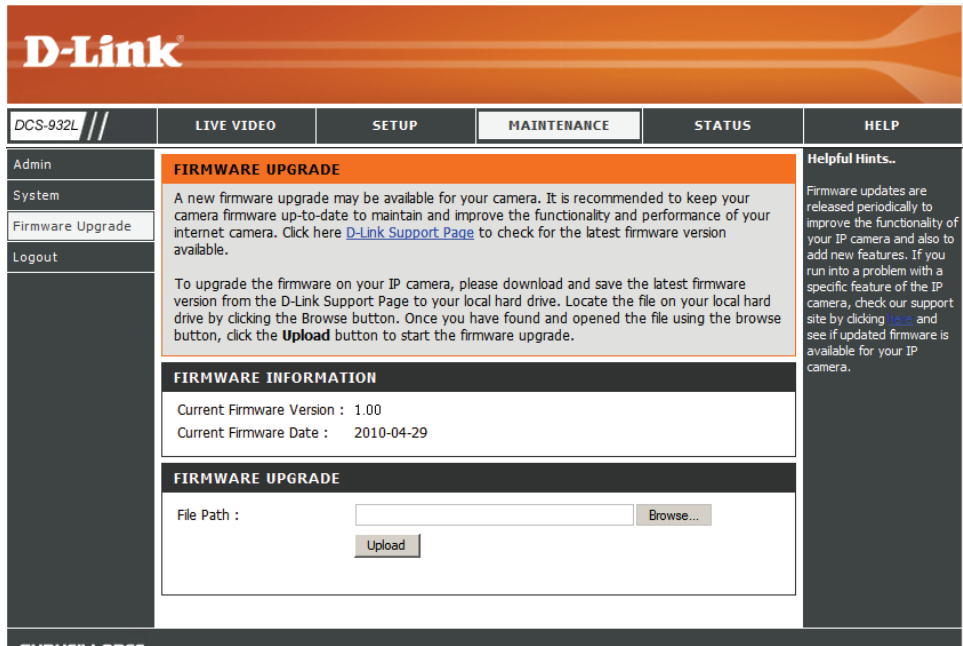
This section allows you to save and restore your configuration, restore the factory settings, and/or restart the camera.



Firmware Upgrade

Your current firmware version and date will be displayed on your screen. You may go to the D-Link Support Page to check for the latest firmware versions available.

To upgrade the firmware on your DCS-942L, please download and save the latest firmware version from the D-Link Support Page to your local hard drive. Locate the file on your local hard drive by using the **Browse** button. Then, click the **“Upload”** button to start the firmware upgrade.



Status

Device Info

This section displays detailed information about your device and network settings.

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Firmware version: 1.00

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DEVICE INFO

All of your network connection details are displayed on this page. The firmware version is also displayed here.

INFORMATION

Camera Name	DCS-942L
Time & Date	Sat Jan 1 05:29:03 2011 DST
Firmware Version	1.00
Firmware Build Number	0506
MAC Address	1C:AF:F7:74:AA:01
IPv4 Address	192.168.0.101
IPv4 Subnet Mask	255.255.255.0
IPv4 Default Gateway	192.168.0.1
IPv4 Primary DNS	192.168.0.1
IPv4 Secondary DNS	
PPPoE Status	Disable
DDNS Status	Disable

Helpful Hints..

This page displays all the information about the camera and network settings.

SURVEILLANCE

Log

The system log records camera events that have occurred.

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Firmware version: 1.00

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SYSTEM LOG

The system log records camera events that have occurred.

CURRENT LOG

2011-01-01 00:02:48 admin is streaming video.

2011-01-01 00:02:48 admin is streaming video.

2011-01-01 02:40:50 admin is streaming video.

2011-01-01 02:40:56 admin is streaming video.

Clear

Download

Helpful Hints..

You can save the log to your local hard drive by clicking the Download button, and you can clear the log by clicking on the Clear button.

SURVEILLANCE

Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders.

The DCS-942L offers the following types of security:

- WPA-PSK (Pre-Shared Key)
- WEP (Wired Equivalent Privacy)

What is WEP?

WEP stands for Wired Equivalent Privacy. It is based on the IEEE 802.11 standard and uses the RC4 encryption algorithm. WEP provides security by encrypting data over your wireless network so that it is protected as it is transmitted from one wireless device to another.

To gain access to a WEP network, you must know the key. The key is a string of characters that you create. When using WEP, you must determine the level of encryption. The type of encryption determines the key length. 128-bit encryption requires a longer key than 64-bit encryption. Keys are defined by entering in a string in HEX (hexadecimal - using characters 0-9, A-F) or ASCII (American Standard Code for Information Interchange – alphanumeric characters) format. ASCII format is provided so you can enter a string that is easier to remember. The ASCII string is converted to HEX for use over the network. Four keys can be defined so that you can change keys easily.

What is WPA?

WPA, or Wi-Fi Protected Access, is a Wi-Fi standard that was designed to improve the security features of WEP (Wired Equivalent Privacy).

The 2 major improvements over WEP:

Improved data encryption through the Temporal Key Integrity Protocol (TKIP). TKIP scrambles the keys using a hashing algorithm and, by adding an integrity-checking feature, ensures that the keys haven't been tampered with. WPA2 is based on 802.11i and uses Advanced Encryption Standard instead of TKIP.

User authentication, which is generally missing in WEP, through the extensible authentication protocol (EAP). WEP regulates access to a wireless network based on a computer's hardware-specific MAC address, which is relatively simple to be sniffed out and stolen. EAP is built on a more secure public-key encryption system to ensure that only authorized network users can access the network.

WPA-PSK/WPA2-PSK uses a passphrase or key to authenticate your wireless connection. The key is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?*&_) and spaces. This key must be the exact same key entered on your wireless router or access point.

Configuring the DCS-942L with a Router

D-Link's DCS-942L is a versatile and cost effective Network Camera offering both video and audio monitoring. It can also serve as a powerful surveillance system in security applications. The DCS-942L can be used with any wired or 802.11n/g wireless router. This section explains how to view the camera from either the Internet or from inside your internal network.

Components Needed:

- 1 DCS-942L Network Camera
- 1 Ethernet Cable
- A Wired or Wireless router such as the D-Link DIR-655 Wireless Router
- Ethernet based PC for system configuration

Setting up the DCS-942L for Use Behind a Router

Installing a DCS-942L Network Camera on your network is an easy 4-step procedure:

1. Assign a local IP address to your network camera.
2. View the network camera using your Internet Explorer web browser.
3. Access the router with your web browser.
4. Open virtual server ports to enable remote image viewing.

Note: *These are manual steps; however, if you decide to use the wizard, it will perform every step automatically.*

This section is designed to walk you through the setup process for installing your camera behind a router and enable remote video viewing. For the basic setup of the DCS-942L, follow the steps outlined in the Quick Install Guide.

After you have completed the setup of the DCS-942L outlined in the Quick Installation Guide you will have an operating camera that has an assigned IP Address. Because you are using a router to share the Internet with one or more PCs, the IP Address assigned to the Network Camera will be a local IP Address. This allows viewing within your Local Area Network (LAN) until the router is configured to allow remote viewing of the camera over the Internet.

1. Assign a Local IP Address to Your Camera

Run the setup wizard from the CD included with the DCS-942L. Follow the steps in the Quick Install Guide to configure the DCS-942L. The camera will be assigned a local IP Address that allows it to be recognized by the router. Write down this IP Address for future reference.

2. View the Network Camera Using Your Internet Explorer Web Browser

Run your Internet Explorer Web browser. In the address bar, type in the IP Address that was assigned to the Network Camera by the DCC program. The DCS-942L Live Video Page appears with a window displaying live video from the camera. You are able to view this screen from any PC running Internet Explorer on your LAN.

Click on the **Setup** button on the left side of the display. Scroll to the bottom of the Network Setup page to display the ports used by HTTP and Streaming audio and video.

DIR-655	SETUP	ADVANCED	TOOLS	STATUS	SUPPORT
DEVICE INFO	DEVICE INFORMATION				Helpful Hints... All of your WAN and LAN connection details are displayed here. More...
LOGS	All of your Internet and network connection details are displayed on this page. The firmware version is also displayed here.				
STATISTICS					
INTERNET SESSIONS					
WIRELESS					
WISH SESSIONS	GENERAL Time : 2007/10/10 PM 10:10:33 Firmware Version : 1.02, 2006/10/13				
	WAN Connection Type : DHCP Client QoS Engine : Active Cable Status : connected Network Status : connected Connection Up Time : N/A <input type="button" value="Renew"/> <input type="button" value="Release"/> MAC Address : 00:19:5B:03:04:E9 IP Address : 210.21.33.48 Subnet Mask : 255.255.255.248 Default Gateway : 210.21.33.254 Primary DNS Server : 168.95.1.1 Secondary DNS Server : 0.0.0.0				
	LAN MAC Address : 00:19:5B:03:04:E8 IP Address : 192.168.0.1 Subnet Mask : 255.255.255.0 DHCP Server : Enabled				
	WIRELESS LAN Wireless Radio : Enabled WISH : Active MAC Address : 00:19:5B:03:04:E8 Network Name (SSID) : dlink Channel : 4 Security Mode : Disabled Wi-Fi Protected Setup : Enabled/Not Configured				

The **Setup > Network** page displays the port settings for your camera. If necessary, these ports can be changed if they are already in use by other devices (e.g. in a multiple camera environment).

Note: Both the HTTP port and RTSP port are required to be opened for the DCS-942L.

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Firmware version: 1.00

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NETWORK

You can configure your LAN and Internet settings here.

Save Settings

Don't Save Settings

LAN SETTINGS

Automatic IP Address

Static IP Address

IPv4 Address

Subnet Mask

Default Gateway (Router)

Optional Primary DNS

Optional Secondary DNS

PPPoE

User Name

Password

Confirm Password

Status

Disabled

PORT SETTINGS

HTTP Port

RTSP Port

UPnP

UPnP

UPnP Port Forward

External HTTP

External RTSP

Apple

Bonjour

Save Settings

Don't Save Settings

Helpful Hints..

Select if you are running a DHCP server on your network and would like an IP address assigned to your camera automatically.

HTTP Port

Allocate the port of camera to allow you to connect via a standard web browser.

RTSP Port

Allocate the port of camera to allow you to connect by using QuickTime or streaming mobile devices.

UPnP

Enable UPnP will allow you to discover camera as an UPnP device in the network.

Bonjour

Enable Bonjour will allow you to discover camera with an Apple computer.

SURVEILLANCE

D-Link DCS-942L User Manual

48

Router Set-Up and Installation

The following steps generally apply to any router that you have on your network. The D-Link DIR-655 is used as an example to clarify the configuration process. Configure the initial settings of the DIR-655 by following the steps outlined in the DIR-655 Quick Installation Guide.

3. Access the Router with Your Web Browser

If you have cable or DSL Internet service, you will most likely have a dynamically assigned WAN IP Address. ‘Dynamic’ means that your router’s WAN IP address can change from time to time depending on your ISP. A dynamic WAN IP Address identifies your router on the public network and allows it to access the Internet. To find out what your router’s WAN IP Address is, go to the Status menu on your router and locate the WAN information for your router (as shown on the next page). The WAN IP Address will be listed. This will be the address that you will need to type in your Web browser to view your camera over the Internet.

Your WAN IP Address will be listed on the router’s
Status > Device Info page.

DIR-655

SETUP

ADVANCED

TOOLS

STATUS

SUPPORT

DEVICE INFO

LOGS

STATISTICS

INTERNET SESSIONS

WIRELESS

WISH SESSIONS

DEVICE INFORMATION

All of your Internet and network connection details are displayed on this page. The firmware version is also displayed here.

GENERAL

Time : 2007/10/10 PM 10:10:33
Firmware Version : 1.02, 2006/10/13

WAN

Connection Type : DHCP Client
QoS Engine : Active
Cable Status : connected
Network Status : connected
Connection Up Time : N/A

RenewRelease

MAC Address : 00:19:58:03:04:E9
IP Address : 210.21.33.48
Subnet Mask : 255.255.255.248
Default Gateway : 210.21.33.254
Primary DNS Server : 168.95.1.1
Secondary DNS Server : 0.0.0.0

LAN

MAC Address : 00:19:58:03:04:E8
IP Address : 192.168.0.1
Subnet Mask : 255.255.255.0
DHCP Server : Enabled

WIRELESS LAN

Wireless Radio : Enabled
WISH : Active
MAC Address : 00:19:58:03:04:E8
Network Name (SSID) : dlink
Channel : 4
Security Mode : Disabled
Wi-Fi Protected Setup : Enabled/Not Configured

LAN COMPUTERS

IP Address	Name (if any)	MAC
192.168.0.155	end_user	00:05:5d:ce:b3:8d

IGMP MULTICAST MEMBERSHIPS

Multicast Group Address
239.255.255.250

Helpful Hints...

All of your WAN and LAN connection details are displayed here.

More...

Note: Because a dynamic WAN IP 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. The Static IP Address will also allow you to access your camera attached to your router over the Internet.

4. Open Virtual Server Ports to Enable Remote Image Viewing

The firewall security features built into the DIR-655 router prevent users from accessing the video from the DCS-942L over the Internet. The router connects to the Internet over a series of numbered ports. The ports normally used by the DCS-942L are blocked from access over the Internet. Therefore, these ports need to be made accessible over the Internet. This is accomplished using the Virtual Server function on the DIR-655 router. The Virtual Server ports used by the camera must be opened through the router for remote access to your camera. Virtual Server is accessed by clicking on the **Advanced** tab of the router screen.

Follow these steps to configure your router's Virtual Server settings:

1. Click **Enabled**.
2. Enter a different name for each entry.
3. Enter your camera's local IP Address (e.g., 192.168.0.120) in the Private IP field.
4. Select TCP for HTTP port, both (TCP and UDP) for RTSP and both (TCP and UDP) for 5556 - 5559 ports.
5. If you are using the default camera port settings, enter 80 into the Public and Private Port section, click **Apply**.
6. Scheduling should be set to Always so that the camera images can be accessed at any time.

Repeat the above steps adding the port 554 to both the Public and Private Port sections. A check mark appearing before the entry name will indicate that the ports are enabled.

Note: Some ISPs block access to port 80 and other commonly used Internet ports to conserve bandwidth. 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 port the camera uses from 80 to something else, such as 800. Not all routers are the same, so refer to your user manual for specific instructions on how to open ports.

Enter valid ports in the Virtual Server section of your router. Please make sure to check the box next to the camera name on the Virtual Server List to enable your settings.

D-Link

DIR-655	SETUP	ADVANCED	TOOLS	STATUS	SUPPORT
----------------	--------------	-----------------	--------------	---------------	----------------

- VIRTUAL SERVER
- PORT FORWARDING
- APPLICATION RULES
- QOS ENGINE
- NETWORK FILTER
- ACCESS CONTROL
- WEBSITE FILTER
- INBOUND FILTER
- FIREWALL SETTINGS
- ADVANCED WIRELESS
- WISH
- WI-FI PROTECTED SETUP
- ADVANCED NETWORK

VIRTUAL SERVER

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.

24--VIRTUAL SERVERS LIST

	Name		Port	Traffic Type	
<input checked="" type="checkbox"/>	DCS-942L	<< HTTP	Public 80	Protocol TCP	Schedule Always
	IP Address 192.168.0.120	<< Computer Name	Private 80	6	Inbound Filter Allow All
<input checked="" type="checkbox"/>	DCS-942L	<< Application Name	Public 554	Protocol TCP	Schedule Always
	IP Address 192.168.0.120	<< Computer Name	Private 554	6	Inbound Filter Allow All
<input type="checkbox"/>		<< Application Name	Public 0	Protocol TCP	Schedule Always
	IP Address 0.0.0.0	<< Computer Name	Private 0	6	Inbound Filter Allow All

Helpful Hints...

Check the **Application Name** drop down menu for a list of predefined server types. If you select one of the predefined server types, click the arrow button next to the drop down menu to fill out the corresponding field.

You can select a computer from the list of DHCP clients in the **Computer Name** drop down menu, or you can manually enter the IP address of the computer at which you would like to open the specified port.

Select a schedule for when the virtual server will be enabled. If you do not see the schedule you need in

Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DCS-942L.

Read the following descriptions if you are having problems. (The examples below are illustrated in Windows Vista® and XP. If you have a different operating system, the screenshots on your computer will look similar to the following examples.)

1. What is Remote Access? How do I enable it?

Remote Access allows you to access your camera from any PC connected to the Internet through a web browser. This lets you view your camera feed and manage your camera's settings when you're away from home.

To enable Remote Access, simply go through the Camera Installation Wizard included on the Installation CD that came in your package. You can also download the wizard from the following websites:

The image shows two screenshots of the mydlink website with numbered annotations:

- 1. Select the language:** An arrow points to the 'Language English' dropdown menu in the top right corner of the homepage.
- 2. Click into the support page:** An arrow points to the 'Support' link in the bottom right corner of the homepage.
- 3. Support page for selecting Camera to download the online wizard:** An arrow points to the 'Wizard' section in the 'Support' page, specifically to the 'Wizard1' and 'Wizard2' links.

The homepage (left) features a sign-in form, navigation links, and a 'Support & Download' section. The support page (right) displays various camera models (DCS-930L, DCS-932L, DCS-1100, DCS-1100L) and links to the 'Wizard', 'User Manual', 'Firmware', and 'Quick Installation Guide'.

After going through the wizard, you should see Remote Status: Enabled on the summary page.

If you see Remote Status: Disabled, make sure that:

- ...the back LED on your camera is lit solid green

- ...your Internet connection is working

- ...your router's LAN & WAN connections are working properly

- ...your router has UPnP enabled (if your router does not support UPnP, please refer to Appendix A)

- ...your router can get a public IP

- ...your router is upgraded to the latest firmware

- ...you have tried rebooting your router by unplugging it, then plugging it back in

After checking the above items, you can click the Retry button to refresh the summary screen to see if Remote Access has been enabled.

2. What can I do if I forget my password?

If you forget your password, you will need to perform a hard reset of your camera. This process will change all your settings back to the factory defaults.

To reset your camera, please use an unfolded paperclip to press and hold the RESET button for at least 3 seconds while your camera is plugged in.

3. In addition to using mydlink.com, is there another way to access my camera remotely over the Internet?

Yes, you can access your camera over the Internet through the following URL after successfully installing your camera through the Camera Installation Wizard:

`http://[mydlink No.].mydlink.com`

For example, if your camera's mydlink No. was 12345678, you would be able to access your camera remotely by opening your web browser and going to `http://12345678.mydlink.com`

This URL will open a webpage where you will be asked to log in by entering your camera's password. After entering your password, your camera's Live View window will open, and you will be able to configure your camera as well.

4. Why does the LED not light up?

The power supply might be faulty. Confirm that you are using the provided DC 5V power supply for this network camera. Verify that the power supply is correctly connected. If the camera is functioning normally, the LED may have been disabled. See page 39 for information about how to enable the LED.

5. Why is the camera's network connection unreliable?

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 such as a hub or switch utilized by the Network Camera is not functioning properly. Please confirm the power for the devices are well connected and functioning properly.

6. Why does the Network Camera work locally but not remotely?

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 Network Camera to be accessible outside your local LAN. For more information, please refer to the section about installing your camera behind a router.

Make sure that the Network 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 allow the Network Camera to be accessed outside your local LAN.

7. 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 Network Camera into a more shaded area immediately as prolonged exposure to bright lights will damage the CMOS sensor.

8. The camera is producing noisy images. How can I solve the problem?

The video images might be noisy if the Network Camera is used in a very low light environment.

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

Make sure that your computer's 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 Network Camera image display is incorrect. The Web Configuration Video section of the Web management allows you to adjust the related-parameters for improved images such as: brightness, contrast, hue and light frequency. Please refer to the Web Configuration section for detailed information.

10. Why are no images available through the Web browser?

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 lower than 7, then you will need to upgrade your Web browser software in order to view the streaming video transmitted by the Network Camera.

Wireless Basics

D-Link wireless products are based on industry standards to provide easy-to-use and compatible high-speed wireless* connectivity within your home, business or public access wireless networks. Strictly adhering to the IEEE standard, the D-Link wireless family of products will allow you to securely access the data you want, when and where you want it. You will be able to enjoy the freedom that wireless networking delivers.

A wireless local area network (WLAN) is a cellular computer network that transmits and receives data with radio signals instead of wires. Wireless LANs are used increasingly in both home and office environments, and public areas such as airports, coffee shops and universities. Innovative ways to utilize WLAN technology are helping people to work and communicate more efficiently. Increased mobility and the absence of cabling and other fixed infrastructure have proven to be beneficial for many users.

Under many circumstances, it may be desirable for mobile network devices to link to a conventional Ethernet LAN in order to use servers, printers or an Internet connection supplied through the wired LAN. A Wireless Router is a device used to provide this link.

What is Wireless?

Wireless or WiFi technology is another way of connecting your computer to the network without using wires. WiFi uses radio frequency to connect wirelessly, so you have the freedom to connect computers anywhere in your home or office network.

Why D-Link Wireless?

D-Link is the worldwide leader and award winning designer, developer, and manufacturer of networking products. D-Link delivers the performance you need at a price you can afford. D-Link has all the products you need to build your network.

How does wireless work?

Wireless works similar to how cordless phone work, through radio signals to transmit data from one point A to point B. But wireless technology has restrictions as to how you can access the network. You must be within the wireless network range area to be able to connect your computer. There are two different types of wireless networks Wireless Local Area Network (WLAN), and Wireless Personal Area Network (WPAN).

Wireless Local Area Network (WLAN)

In a wireless local area network, a device called an Access Point (AP) connects computers to the network. The access point has a small antenna attached to it, which allows it to transmit data back and forth over radio signals. With an indoor access point as seen in the picture, the signal can travel up to 300 feet. With an outdoor access point the signal can reach out up to 30 miles to serve places like manufacturing plants, industrial locations, college and high school campuses, airports, golf courses, and many other outdoor venues.

Who uses wireless?

Wireless technology has become so popular in recent years that almost everyone is using it, whether it's for home, office, business, D-Link has a wireless solution for it.

Home

- Gives everyone at home broadband access
- Surf the Web, check email, instant message, and etc
- Gets rid of the cables around the house
- Simple and easy to use

Small Office and Home Office

- Stay on top of everything at home as you would at office
- Remotely access your office network from home
- Share Internet connection and printer with multiple computers
- No need to dedicate office space

Where is wireless used?

Wireless technology is expanding everywhere not just at home or office. People like the freedom of mobility and it's becoming so popular that more and more public facilities now provide wireless access to attract people. The wireless connection in public places is usually called "hotspots".

Using a D-Link Cardbus Adapter with your laptop, you can access the hotspot to connect to Internet from remote locations like: Airports, Hotels, Coffee Shops, Libraries, Restaurants, and Convention Centers.

Wireless network is easy to setup, but if you're installing it for the first time it could be quite a task not knowing where to start. That's why we've put together a few setup steps and tips to help you through the process of setting up a wireless network.

Tips

Here are a few things to keep in mind, when you install a wireless network.

Centralize your router or Access Point

Make sure you place the router/access point in a centralized location within your network for the best performance. Try to place the router/access point as high as possible in the room, so the signal gets dispersed throughout your home. If you have a two-story home, you may need a repeater to boost the signal to extend the range.

Eliminate Interference

Place home appliances such as cordless telephones, microwaves, and televisions as away as possible from the router/access point. This would significantly reduce any interfere that the appliances might cause since they operate on same frequency.

Security

Don't let you next-door neighbors or intruders connect to your wireless network. Secure your wireless network by turning on the WPA or WEP security feature on the router. Refer to product manual for detail information on how to set it up.

Wireless Modes

There are basically two modes of networking:

- **Infrastructure** – All wireless clients will connect to an access point or wireless router.
- **Ad-Hoc** – Directly connecting to another computer, for peer-to-peer communication, using wireless network adapters on each computer, such as two or more DCS-942L wireless network Cardbus adapters.

An Infrastructure network contains an Access Point or wireless router. All the wireless devices, or clients, will connect to the wireless router or access point.

An Ad-Hoc network contains only clients, such as laptops with wireless cardbus adapters. All the adapters must be in Ad-Hoc mode to communicate.

Networking Basics

Check your IP address

After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

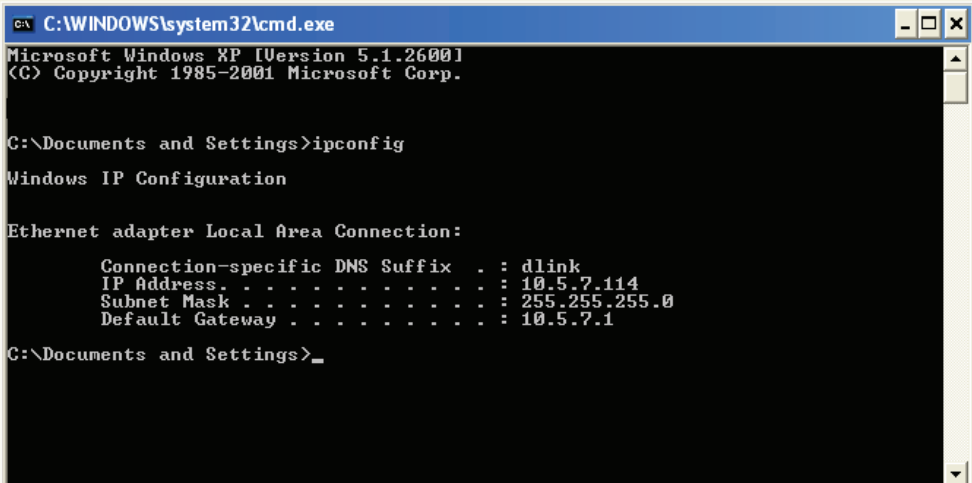
Click on **Start > Run**. In the run box type **cmd** and click **OK**. (Windows® 7/Vista® users type cmd in the Start Search box)

At the prompt, type **ipconfig** and press **Enter**.

This will display the IP address, subnet mask, and the default gateway of your adapter.

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your router. Some firewall software programs may block a DHCP request on newly installed adapters.

If you are connecting to a wireless network at a hotspot (e.g. hotel, coffee shop, airport), please contact an employee or administrator to verify their wireless network settings.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : dlink
    IP Address. . . . . : 10.5.7.114
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 10.5.7.1

C:\Documents and Settings>
```

Statically Assign an IP Address

If you are not using a DHCP capable gateway/router, or you need to assign a static IP address, please follow the steps below:

Step 1

Windows® 7- Click on **Start > Control Panel > Network and Internet > Network and Sharing Center**.

Windows® Vista - Click on **Start > Control Panel > Network and Internet > Network and Sharing Center > Manage Network Connections**.

Windows XP - Click on **Start > Control Panel > Network Connections**.

Step 2

Right-click on the **Local Area Connection** which represents your D-Link network adapter and select **Properties**.

Step 3

Highlight **Internet Protocol (TCP/IP)** and click **Properties**.

Step 4

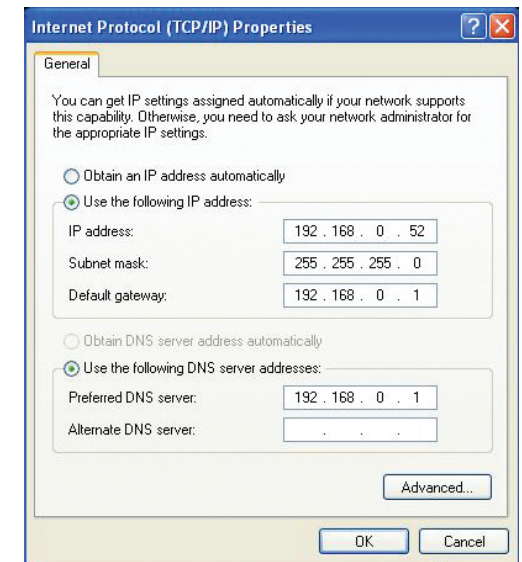
Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

Example: If the router's LAN IP address is 192.168.0.1, make your IP address **192.168.0.X** where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network. Set Default Gateway the same as the LAN IP address of your router (192.168.0.1).

Set Primary DNS the same as the LAN IP address of your router (**192.168.0.1**). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

Step 5

Click **OK** twice to save your settings.



Technical Specifications

SYSTEM REQUIREMENTS

- Operating System: Microsoft Windows® XP, Vista®, Windows® 7, Mac OS.
- Internet Explorer 7 or above , Firefox 3.5 or above, Safari 4 or Google Chrome

• NETWORKING PROTOCOL

- IPV4, ARP, TCP, UDP, ICMP
- DHCP Client
- NTP Client (D-Link)
- DNS Client
- DDNS Client (DynDNS and D-Link)
- SMTP Client
- FTP Client
- HTTP Server
- PPPoE
- UPnP Port Forwarding
- 3GPP (Video only)
- Bonjour

BUILT-IN NETWORK INTERFACE

- 10/100BASE-TX Fast Ethernet
- 802.11g/n WLAN

WIRELESS CONNECTIVITY

- 802.11g/n Wireless with WEP/WPA/WPA2 security

WIRELESS TRANSMIT OUTPUT POWER

- 16 dbm for 11b, 12 dbm for 11g,
12 dbm for 11n (typical)

SDRAM

- 128 MB

FLASH MEMORY

- 16 MB

RESET BUTTON

- Reset to factory default

VIDEO CODECS

- H.264
- MPEG-4
- MJPEG

VIDEO FEATURES

- Adjustable image size and quality
- Time stamp and text overlay
- Flip and Mirror

RESOLUTION

- 640 x 480 at up to 30 fps
- 320 x 240 at up to 30 fps
- 160 x 112 at up to 30 fps

LENS

- Focal length: 3.15 mm, F2.8
- Shutter Speed: 1/15, 1/10, 1/7.5, 1/3.75

SENSOR

- VGA 1/5 inch CMOS Sensor

MINIMUM ILLUMINATION

- 1 lux @ F2.8

VIEW ANGLE

- Horizontal: 45.3°
- Vertical: 34.5°
- Diagonal: 54.9°

IR LED

- 4 IR LEDs (5 Meter distance)

DIGITAL ZOOM

- Up to 4x

3A CONTROL

- AGC (Auto Gain Control)
- AWB (Auto White Balance)
- AES (Auto Electronic Shutter)

MICROPHONE

- Omni-directional
- Frequency 20 to 20,000 Hz
- S/N ratio: over 58 dB

AUDIO

- ADPCM

SD CARD SLOT

- Micro SD card

PIR SENSOR

- Built-in Piezoelectricity Passive Infrared sensor for motion detection

POWER

- Input: 100-240 V AC, 50/60 Hz
- Output: 5 V DC, 1.2 A
- External AC-to-DC switching power adapter

DIMENSIONS (W X D X H)

- Including the bracket and stand:
65.8 x 65 x 126 mm
- Camera only:
27.2 x 60 x 96 mm

WEIGHT

- 76.9 g (without bracket and stand)

MAX POWER CONSUMPTION

- 2 W

OPERATION TEMPERATURE

- 0 °C to 40 °C (32 °F to 104 °F)

STORAGE TEMPERATURE

- -20 °C to 70 °C (-4 °F to 158 °F)

HUMIDITY

- 20-80% RH non-condensing

EMISSION (EMI), SAFETY & OTHER CERTIFICATIONS

- FCC Class B
- IC
- C-Tick
- CE

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. DCS-942L)
- Hardware Revision (located on the label on the bottom of the Network Camera (e.g. rev A1))
- Serial Number (s/n number located on the label on the bottom of the Network Camera).

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

Internet Support:

<http://support.dlink.com>

For customers within Canada:

Phone Support:

(800) 361-5265

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 and fans): One (1) year
- Power supplies and fans: One (1) year
- Spare parts and spare kits: 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 DLink 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 (USA 1-877-453-5465 or Canada 1-800-361-5265), 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. Enter the assigned Case ID Number at <https://rma.dlink.com/> (USA only) or <https://rma.dlink.ca> (Canada only).

- 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.
- **USA residents** send to 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.
- **Canadian residents** send to D-Link Networks, Inc., 2525 Meadowvale Boulevard Mississauga, Ontario, L5N 5S2 Canada. 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 Purolator Canada or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in Canada, 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. RMA phone number: 1-800-361-5265 Hours of Operation: Monday-Friday, 9:00AM – 9:00PM EST

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:

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CE Mark Warning:

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

FCC Statement:

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

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

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

If this device is going to be operated in 5.15 ~ 5.25GHz frequency range, then it is restricted in indoor environment only.

IMPORTANT NOTICE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

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

Industry Canada Statement:

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

Radiation Exposure Statement:

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

This device has been designed to operate with an antenna having a maximum gain of 2 dB. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

Registration

Register your product online at registration.dlink.com



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

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