



User Manual

Wireless N H.264 Day/Night Network Camera

DCS-933L

Manual Overview

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Manual Revision

Revision	Date	Description
1.00	January 15, 2013	Initial release
1.10	April 01,2013	1.Change video clip size 2.Amend mydlink portal image

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Package Contents

- DCS-933L Wireless N H.264 Day/Night Network Camera
- CAT5 Ethernet Cable
- Power Adapter
- Manual and Software on CD
- Quick Install Guide
- Mounting Kit

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® 8/7/Vista/XP, or Mac with OS X 10.6 or higher
- PC with 1.3GHz or above and at least 128MB RAM
- Internet Explorer 7, Firefox 12, Safari 4, or Chrome 20 or higher version with Java installed and enabled
- Existing 10/100 Ethernet-based network or 802.11g/n wireless network

Introduction

Congratulations on your purchase of the DCS-933L Wireless N H.264 Day/Night Network Camera. The DCS-933L is a versatile and unique solution for your small office or home. Unlike a standard webcam, the DCS-933L is a complete system with a built-in CPU and web server that transmits high quality video images for security and surveillance. The IR LED provides around the clock surveillance regardless of the lighting conditions.

The DCS-933L 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 802.11 b/g/n wireless network, and its Repeater Mode even allows you to increase your wireless network's coverage. The DCS-933L also comes with remote monitoring and motion detection features for a complete and cost-effective home security solution.

Your DCS-933L is mydlink-enabled, which means that you can view and manage your camera from anywhere over the Internet through the mydlink website or through the mydlink mobile app for iOS and Android. You can view your live video feed, take snapshots, set a recording schedule, and more!

Features

Easy to Use and mydlink-Enabled for Easy Access and Management

The DCS-933L is a standalone surveillance camera that requires no special hardware or software, and can run independently even without a PC. This camera is also mydlink-enabled, which means you can view and manage your camera through the mydlink website, or through the mydlink mobile app for iOS and Android.

IR LEDs for Day and Night functionality

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

H.264 Codec for Smooth, Space-Efficient Video

This camera supports use of the H.264 video codec, which gives you high-quality video with reduced bandwidth requirements. This means that you can enjoy smoother, more reliable video streaming over the Internet, and less disk space is required to save recordings.

Motion and Sound Triggered Notifications and Recordings

The DCS-933L can send e-mail notifications with snapshots or video clips whenever motion or sound is detected. You can customize areas of the video to monitor for motion to keep watch over entryways, and you can set volume limits to detect when a loud sound is picked up by the camera.

Supports a Variety of Platforms

Supporting TCP/IP networking, HTTP, and other Internet related protocols. The DCS-933L can also be integrated easily into other Internet/Intranet applications because of its standards-based features.

802.11b/g/n Wireless or Ethernet/Fast Ethernet Support

The DCS-933L offers wireless 802.11b/g/n and Ethernet/Fast Ethernet connectivity, making the DCS-933L easy to integrate into your existing network environment. The DCS-933L works with a 10Mbps Ethernet based network or 100Mbps Fast Ethernet based network for traditional wired environments, and works with 802.11b/g/n routers or access points for added flexibility. The Site Survey feature also allows you to view and connect to any available wireless networks.

Repeater Mode Increases the Range of Your Wireless Network

You can use the DCS-933L's Repeater Mode to extend the range of your wireless network, giving your home or office better wireless coverage.

Remote Monitoring Utility

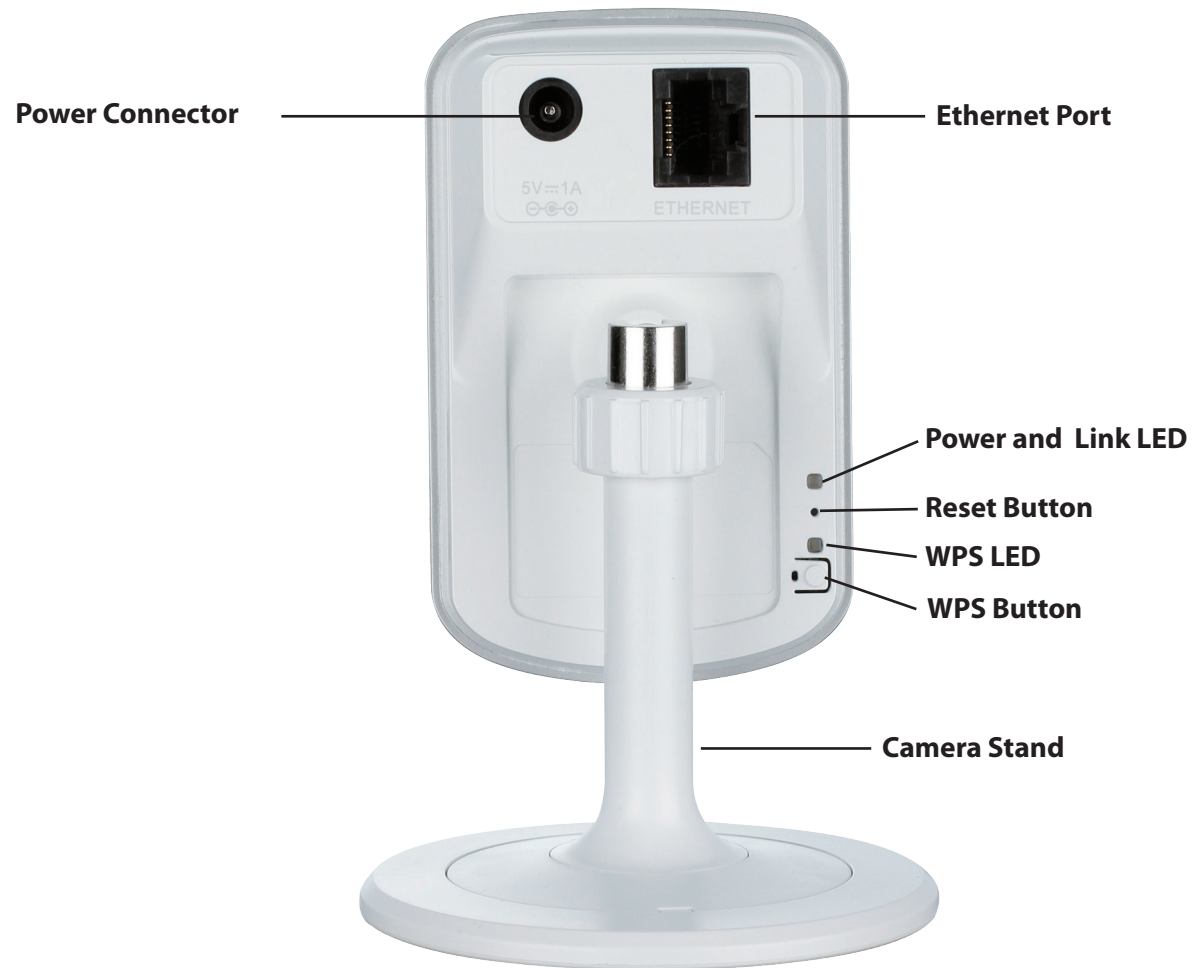
This camera also includes the D-ViewCam software, which adds enhanced features and functionality that helps you create a full surveillance system for up to 32 cameras. With D-ViewCam, you can view multiple cameras at the same time, record video, and set up scheduled and triggered recordings.

Hardware Overview

Front View



Rear View



Installation

There are three ways to set up your camera:

Zero Configuration Setup: If you have a mydlink-enabled router, this is the easiest way to set up your camera. Refer to page 10.

Camera Installation Wizard: If you do not have a mydlink-enabled router, use the Camera Installation Wizard to guide you through setup and initial configuration of your camera. Refer to page 13.

Manual Hardware Installation: This section shows you how to manually set up your camera, though in order to use the mydlink features of your camera, you will still need to run the Camera Installation Wizard. Refer to page 15.

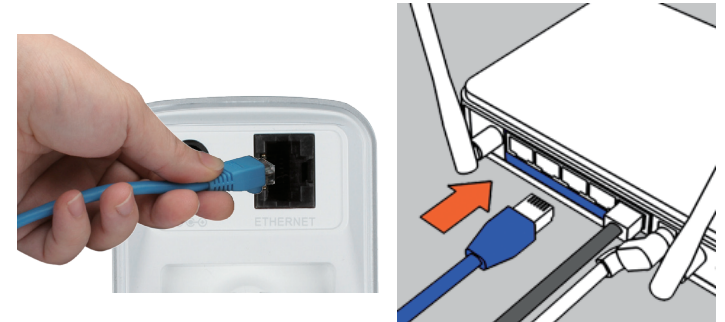
Zero Configuration Setup

If you have a mydlink-enabled Cloud Router, you can take advantage of Zero Configuration. Zero Configuration automatically configures your camera's settings for you, and adds it to your mydlink account automatically. This type of setup allows you to set up your camera by simply plugging it in and connecting it to your router.

Connect your camera to your mydlink-enabled Cloud Router and Zero Configuration will automatically configure your DCS-933L and automatically add the camera to your mydlink account. After the short time it takes to do this you can remotely access your camera from the www.mydlink.com website to manage and monitor your DCS-933L.

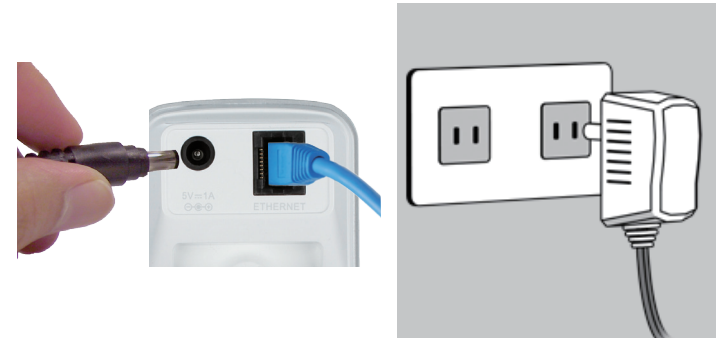
Connect the Ethernet Cable

Use the included Ethernet cable and plug it into the camera. Plug the other end into an available port on your router. If you wish to use your camera wirelessly, you will be able to remove the cable after Zero Configuration Setup is complete.



Attach the External Power Adapter

Connect the power adapter to the power connector on your camera, then plug the power adapter into a wall outlet.



Check Your mydlink Account

Open a web browser and login to your mydlink account. The mydlink page will check for new devices and display a **New device Found!** pop-up notification in the bottom-left corner. Click the notification to continue.

A summary and confirmation notification will appear with the automatically configured details. Make a note of the details and click **Yes** to add the camera to your account.

The screenshot shows the mydlink web interface. At the top, there's a navigation bar with 'My Devices', 'Shared Devices', 'My Services', and 'My Profile'. The main content area is titled 'Router Status' and shows details for a DIR-605L router (20019862). The details include: Model Name (DIR-605L), Network Name (SSID) (Taonet), Internet IP (192.168.1.103), LAN IP (192.168.0.1), and Connected Devices (5 device(s)). There are also indicators for upload and download speeds: 0000.3 KB and 0008.4 KB. Below this is a 'Connection List' table with columns for Device, Device Name, IP Address, MAC Address, and Block. The table lists five devices, including 'CardboardBox', 'HeiGuy', and several unnamed devices. At the bottom left, a 'New Devices!' notification is visible, showing 'DCS-933L'.

Device	Device Name	IP Address	MAC Address	Block
	CardboardBox	192.168.0.110	00:26:2D:02:FE:FA	<input type="checkbox"/>
	--	192.168.0.120	04:54:53:50:53:18	<input type="checkbox"/>
	HeiGuy	192.168.0.100	00:1A:92:E2:4D:C9	<input type="checkbox"/>
	--	192.168.0.121	28:E0:2C:DC:0A:BE	<input type="checkbox"/>
	--	192.168.0.101	F9:A2:25:AA:8C:C3	<input type="checkbox"/>

Confirming New Device

Do you want to add this new device to your mydlink account?

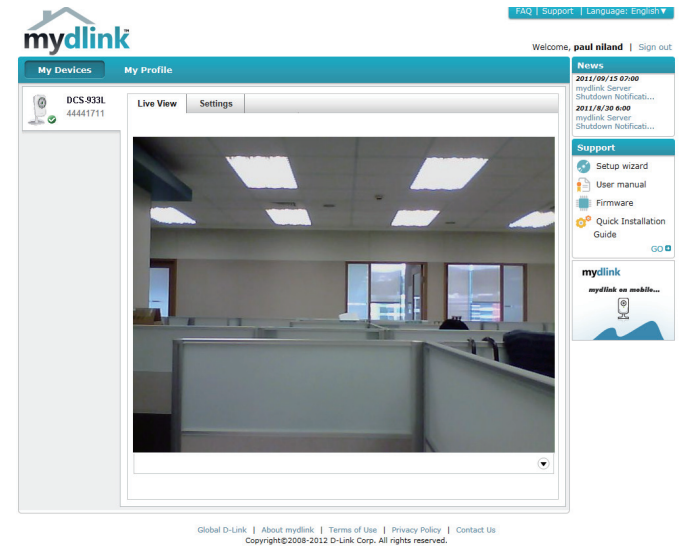
Device Name: DCS-933L
mydlink Number: 44441252
Network name (SSID): dddddd
Admin Password: oic953XZ

You can change these default settings by going to **Advanced Settings** after add it to your device list.

Zero Configuration will navigate to the mydlink Live View tab for your camera where you will see a screen similar to the following.

If you wish to connect your camera to your router wirelessly, you can simply disconnect the Ethernet cable and move the camera to its intended location; your router's wireless settings have been automatically transferred to the camera, and no further configuration is required.

Your camera is now set up, and you can skip to “mydlink” on page 18 to learn more about the mydlink features of this camera, or to “Configuration” on page 19 for advanced configuration of your camera.



Camera Installation Wizard

Windows Users

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

Simply click **Set up your Cloud Camera** to go through the Setup Wizard, which will guide you step-by-step through the installation process from connecting your hardware to configuring your camera and registering it with your mydlink account.



Note: If the autorun program does not open, go to My Computer, browse to your CD drive, and double-click on the autorun.exe file.



Mac Users

Insert the Installation CD-ROM into your computer's optical drive. On the desktop, open your CD drive and double-click on the **SetupWizard** file.



After about 20-30 seconds, the Setup Wizard will open, which will guide you step-by-step through the installation process from connecting your hardware to configuring your camera and registering it with your mydlink account.



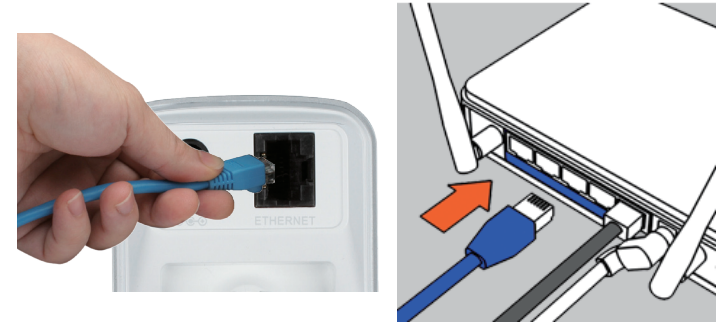
Manual Hardware Installation

If you wish to set up your camera without using the Camera Setup Wizard, please follow these steps.

Note: In order to use the mydlink features of this product, you will need to go through the Camera Setup Wizard or Zero Configuration Setup.

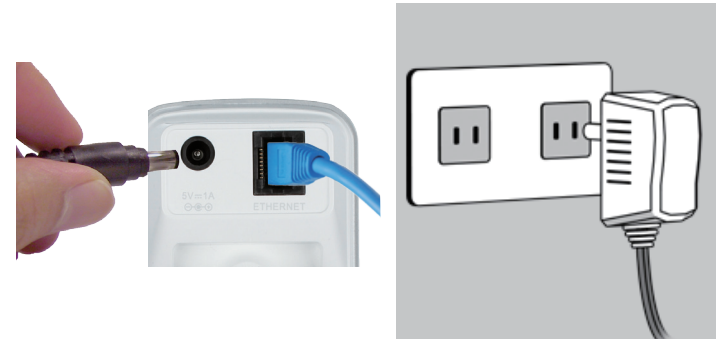
Connect the Ethernet Cable

Use the included Ethernet cable and plug it into the camera. Plug the other end into an available port on your router.



Attach the External Power Adapter

Connect the power adapter to the power connector on your camera, then plug the power adapter into a wall outlet.



Configure Your Camera

Refer to "Configuration" on page 19 for information on how to configure your camera.

Optional: Use WPS to Connect Wirelessly

You can use WPS to connect your camera to your network wirelessly. For more information, refer to "WPS - Push Button Setup" on page 17. If your router does not support WPS, you will still be able to set up your camera's wireless settings in the camera's web interface.

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.

WPS - Push Button Setup

Alternatively, you may create a secure wireless connection using the WPS Button on the back of the camera.

To create a WPS connection:

Step 1

Make sure the camera is plugged in, then press and hold the WPS button for three seconds. The blue WPS status LED will start blinking.

Step 2

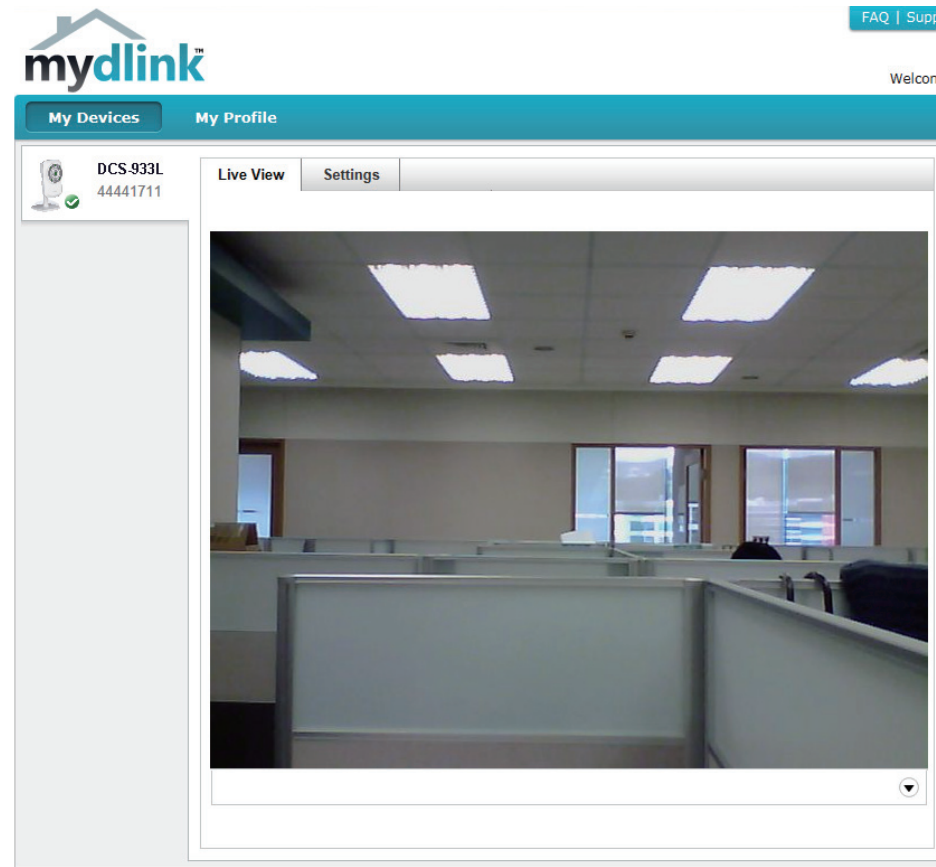
Press the WPS button on your router within 60 seconds. The WPS button is usually on the front or side of your router. On some routers, you may need to log in to the web interface and click on an on-screen button to activate the WPS feature. If you are not sure where the WPS button is on your router,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

The DCS-933L will automatically create a secure wireless connection to your router. While connecting, the green LED will flash and your camera will reboot.



mydlink

After registering your DCS-933L 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:



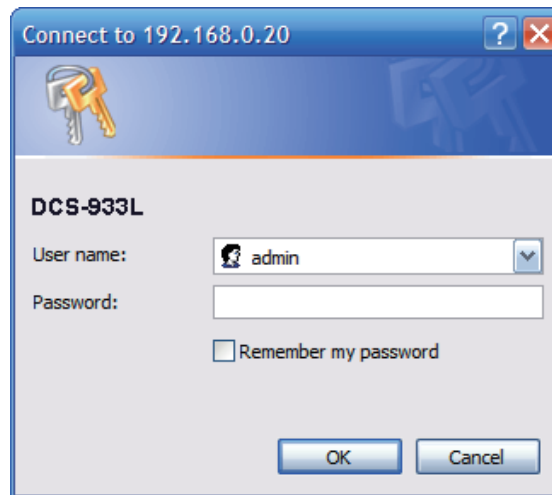
For more details on using your camera with mydlink, go to the **Support** section of the mydlink website and check the **User Manual** section for your product to find the latest instruction guide for your camera's mydlink features.

Configuration

Using the Web Configuration Interface

After completing the Camera Installation Wizard, you are ready to use your camera. The camera's built-in Web configuration interface is designed to allow you to easily access and configure your DCS-933L. At the end of the wizard, enter the IP address of your camera into a web browser, such as Internet Explorer®. 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**.

Note: If you are directly connecting your PC to the camera, or if you are using the camera on a closed network, the default IP is **192.168.0.20**.



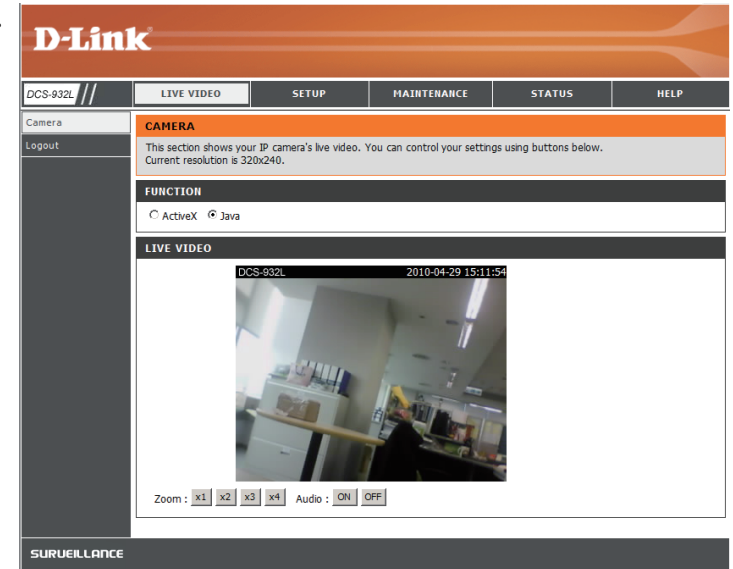
Live Video

The Live Video screen shows you the live video feed from your camera. For information on how to configure your Live Video streams, refer to “Video” on page 29.

Video Compression Format: Click the **H.264** or **MJPEG** radio button to choose which stream to view.

Zoom: Click on these buttons to zoom in and out of the video.

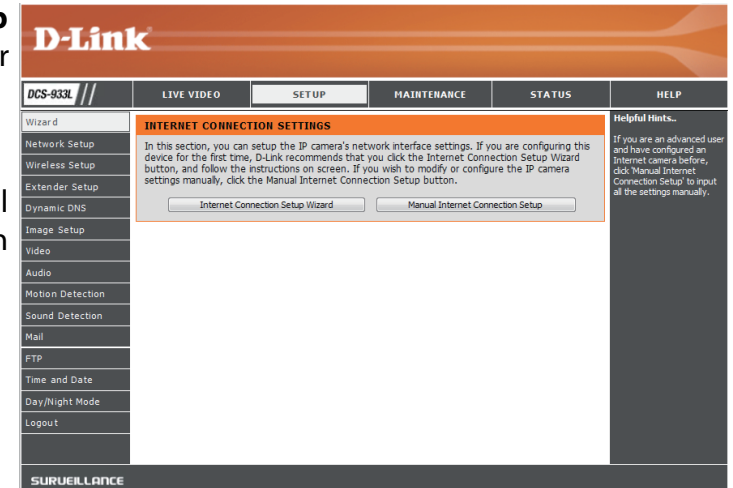
Audio: Click on these buttons to turn audio playback on and off.



Setup Wizard

You may choose to configure your network by using the **Internet Connection Setup Wizard** that includes step-by-step instructions. Otherwise, you may manually configure your connection using the **Manual Internet Connection Setup**.

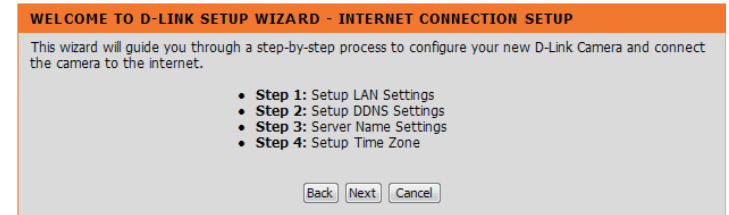
Note: To register your camera with mydlink and enable its mydlink-related features, you will need to use the Camera Installation Wizard. Please refer to “Camera Installation Wizard” on page 13 for more details.



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.

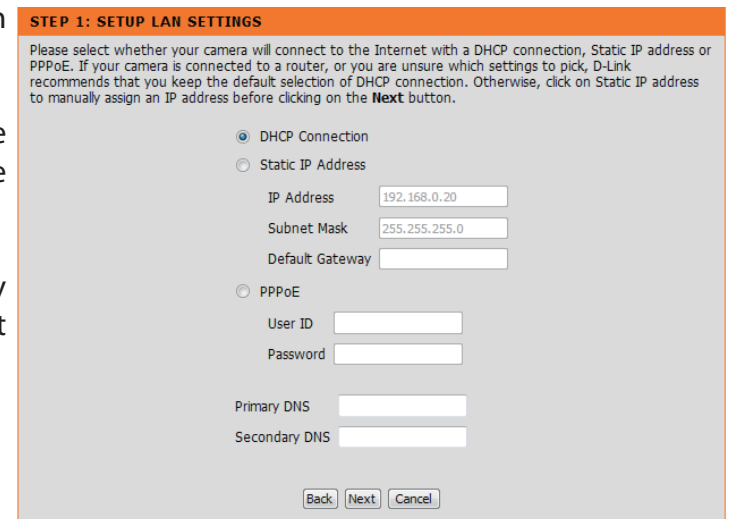
Click **Next** to continue.



Select what kind of Internet connection your camera should use:

- **DHCP Connection (Default):** If you are connected to a router, or are not sure which connection to use, select DHCP Connection.
- **Static IP Address:** This will allow you to manually enter your network settings for the camera. If you are not sure what settings to enter, check with your Internet Service Provider or network administrator.
- **PPPoE Connection:** If your camera is directly connected to a DSL modem, you may need to use PPPoE. Enter the username and password provided to you by your Internet Service Provider.

Click **Next** to continue.



Section 3 - Configuration

If you have a Dynamic DNS account and would like the camera to update your IP address automatically, select **Enable** and enter your host information. Otherwise, simply select **Disable**.

Click **Next** to continue.

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

Configure the correct time to ensure that all events are triggered, captured, and scheduled at the right time. Click **Next** to continue.

This page displays your configured settings. Click **Apply** to save and activate your changes, or click **Back** to change your settings.

STEP 2: SETUP DDNS SETTINGS

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

Enable
 Disable

Server Address << Select Dynamic DNS Server ▾

Host Name

User Name

Password

Timeout hours

STEP 3: SERVER NAME SETTINGS

D-Link recommends that you rename your camera for easy accessibility. Please assign a name of your choice before clicking on the **Next** button.

Camera Name

STEP 4: SETUP TIME ZONE

Please select the camera's timezone and then click on the **Next** button.

Current Time 01 Jan 2012 12:37:14 A.M.
Time Zone

STEP 5: SETUP COMPLETE

Here is a summary of your camera settings. Click **Back** to modify the settings, or click **Apply** if all settings are correct. It is recommended you write down this information for future access or reference.

IP Address	DHCP Connection
IP Camera Name	DCS-933L
Time Zone	(GMT-12:00) International Date Line West
DDNS	Disable

Network Setup

This section allows you to configure your network settings.

DHCP: 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 Client: 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.

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: 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.

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

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).

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, users must type **http://192.168.0.100:1010** instead of only "http://192.168.0.100".

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

D-Link

DCS-933L // LIVE VIDEO SETUP MAINTENANCE STATUS HELP

Wizard

Network Setup
Wireless Setup
Extender Setup
Dynamic DNS
Image Setup
Video
Audio
Motion Detection
Sound Detection
Mail
FTP
Time and Date
Day/Night Mode
Logout

NETWORK SETUP
You can configure your LAN and Internet settings here.
Save Settings Don't Save Settings

LAN SETTINGS

DHCP Connection Static IP Address PPPoE

IP Address: 192.168.0.20 User ID:

Subnet Mask: 255.255.255.0 Password:

Default Gateway:

Primary DNS:

Secondary DNS:

PORT SETTINGS

HTTP Port: 80

UPnP SETTINGS

UPnP: Enable Disable

UPnP Port Forwarding: Enable Disable

BONAOUR SETTINGS

Bonjour: Enable Disable

Bonjour Name: DCS-933L
(Characters you may use in a Bonjour Name: "upper or lower case letters", "numbers" and "hyphens".)

Save Settings Don't Save Settings

Helpful Hints...

Select "DHCP Connection" if you are running a DHCP server on your network and would like an IP address assigned to your camera automatically. You may choose to manually enter a Static IP Address and all the relevant network information or select PPPoE if you connect your DCS-933L directly to the Internet that uses a PPPoE service. If you choose PPPoE you must enter the user ID and password that was given by your Internet Service Provider.

DNS (Domain Name System) server is an Internet service that translates domain names (i.e. www.dlink.com) into IP addresses (i.e. 192.168.0.20). The IP addresses can be obtained from your ISP.

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

Secondary DNS: Secondary domain name server to backup the primary one.

Port Settings - Most ISPs do not open port 80 (a DCS-933L default video transfer port) for their residential customers; the DCS-933L has the ability to use a different port by enabling the second http port for its video streaming. Any unused ports can be used such as port 809, 801, etc. Remember that if the DCS-933L is behind a router, you will need to forward that.

Wireless Setup

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

Enable Wireless: Check this box to allow your camera to connect to your network wirelessly.

SSID: Enter the network name (SSID) of the wireless network you want to connect to. You can also click the **Site Survey** button below to choose an available network and fill in settings automatically.

Channel: If you are using **Ad-Hoc** as your connection mode, select the same channel that is being used by your wireless network.

Connection Mode: Select the connection mode used by your wireless network. In most cases, you should select **Infrastructure**. **Ad-Hoc** is only used if your camera is directly connecting to another PC or device.

Site Survey: Clicking this button will allow you to select an available wireless network to connect to, and will fill in the necessary settings for you.

Wireless Security Mode: Select the wireless security mode used by your wireless network. If you select WEP or WPA-PSK/WPA2-PSK, enter the password for your wireless network in the text box that appears.

The screenshot shows the D-Link web interface for the DCS-933L camera. The main navigation bar includes 'LIVE VIDEO', 'SETUP', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'SETUP' menu is expanded, showing options like Wizard, Network Setup, Wireless Setup, Extender Setup, Dynamic DNS, Image Setup, Video, Audio, Motion Detection, Sound Detection, Mail, FTP, Time and Date, Day/Night Mode, and Logout. The 'Wireless Setup' page is active, displaying the following configuration options:

- WIRELESS SETUP:** A section with a 'Save Settings' button and a 'Don't Save Settings' button.
- WIRELESS SETTINGS:**
 - Enable Wireless:** A checkbox that is checked.
 - SSID:** A text box containing 'dlink'.
 - Channel:** A dropdown menu showing '6'.
 - Connection Mode:** Radio buttons for 'Infrastructure' (selected) and 'Ad-Hoc'.
 - Site survey:** A button.
- WIRELESS SECURITY MODE:**
 - Security Mode:** Radio buttons for 'None' (selected), 'WEP', and 'WPA-PSK / WPA2-PSK'.
 - Save Settings** and **Don't Save Settings** buttons.

Helpful Hints on the right side of the page provide additional information:

- WIRELESS SETUP:** You may enable the wireless setting on your camera and connect to a wireless network by entering the SSID (unique name of your wireless network), or click the Site Survey button to select an available wireless network. Then you may choose a channel number. When there is interference from the wireless networks that overlap with one another, you may change the channel to obtain maximum performance from your connection.
- WIRELESS SECURITY MODE:** There are two connection modes. Infrastructure is a wireless connection using an access point as the 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-933L. For security there are three

Repeater Setup

This section allows you to setup and configure the wireless network extending feature of your camera. Repeater Mode allows your camera to extend the range of your existing wireless network. You can choose to use the same network name and settings as your existing wireless network, or you can create a new one.

Enable Repeater Mode: Check this box to enable Repeater Mode.

Host Wireless Network Name: This shows the name of the Host wireless network that the camera is connected to and will extend.

Extended Wireless Network Name (SSID): Select an option:

- **Same as Host Wireless Network Name:** Your extended network will use the same name and settings as your Host network. Your devices can use the same wireless information to connect to both the Host and Extended networks.
- **Create a New Wireless Network Name:** This allows you to manually set the name and security used for the extended network. You will need to add this information for each wireless device that connects to this Extended network.

Maximum Clients Allowed to Connect: Set the maximum number of clients that are allowed to connect to the extended network.

Security Mode: If you choose to **Create a New Wireless Network Name**, you can set your wireless security options here.

The screenshot shows the D-Link web interface for the DCS-933L camera. The 'SETUP' tab is selected, and the 'EXTENDER SETUP' page is displayed. The page includes a navigation menu on the left with options like Wizard, Network Setup, Wireless Setup, Extender Setup, Dynamic DNS, Image Setup, Video, Audio, Motion Detection, Sound Detection, Mail, FTP, Time and Date, Day/Night Mode, and Logout. The main content area is titled 'EXTENDER SETUP' and contains the following sections:

- EXTENDER SETUP:** A message explaining the feature and a 'Please note' warning that the camera must be connected to another wireless network. There are 'Save Settings' and 'Don't Save Settings' buttons.
- EXTENDED WIRELESS NETWORK SETTINGS:**
 - 'Enable Extender Mode' is checked.
 - 'Host Wireless Network Name' is set to 'dlink'.
 - 'Extended Wireless Network Name (SSID)' has two radio buttons: 'Same as Host Wireless Network Name' (selected) and 'Create a new Wireless Network Name'.
 - The 'Create a new Wireless Network Name' field contains 'dlink-A906'.
 - 'Maximum clients allowed to connect' is set to '3'.
- EXTENDED WIRELESS NETWORK SECURITY:**
 - 'Security Mode' has three radio buttons: 'None' (selected), 'WEP', and 'WPA-PSK / WPA2-PSK'.
 - 'Save Settings' and 'Don't Save Settings' buttons are at the bottom.

On the right side, there is a 'Helpful Hints...' section with security-related information.

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.

Enable: 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 used to connect to the DDNS.

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

The screenshot displays the D-Link web interface for the DCS-933L camera. The top navigation bar includes 'LIVE VIDEO', 'SETUP', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'SETUP' menu is expanded to show various configuration options: Wizard, Network Setup, Wireless Setup, Extender Setup, Dynamic DNS (selected), Image Setup, Video, Audio, Motion Detection, Sound Detection, Mail, FTP, Time and Date, Day/Night Mode, and Logout. The 'Dynamic DNS' section is active, showing a 'DYNAMIC DNS' header and a 'Helpful Hints...' sidebar. The main content area contains a 'DYNAMIC DNS SETTINGS' form with the following fields: 'Enable' (radio buttons for 'Enable' and 'Disable', with 'Disable' selected), 'Server Address' (text input), 'Host Name' (text input), 'User Name' (text input), 'Password' (text input), and 'Timeout' (text input with '576' and 'hours' labels). A 'Select Dynamic DNS Server' dropdown menu is positioned to the right of the 'Server Address' field. 'Save Settings' and 'Don't Save Settings' buttons are located at the bottom of the form.

Image Setup

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

Enable Antiflicker: If you have lights flickering in your camera video, try enabling antiflicker. Otherwise, you should leave this disabled.

Flip Image: Select this box to vertically flip the video.

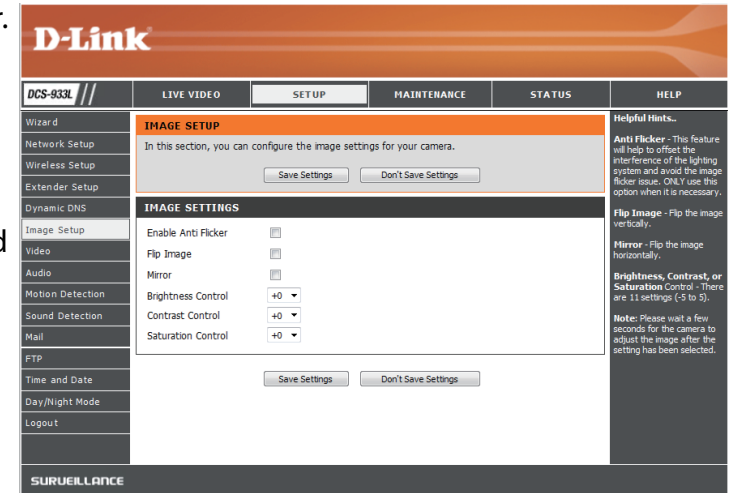
Mirror: Horizontally flip the video.

Note: If the camera is installed upside down, Flip Image and Mirror should both be checked

Brightness Control: Allows you to adjust the brightness level.

Contrast Control: Allows you to adjust the contrast level.

Saturation Control: Allows you to adjust the saturation level.



Video

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

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

Encode Type: Your camera has separate settings for the H.264 and MJPEG video streams.

Resolution: Select the desired video resolution from three formats: 640x480, 320x240, and 160x112. Higher settings offer better quality, but will require more bandwidth to stream.

FPS: Select the frame rate(FPS) to use for the video stream. Higher settings offer better quality, but will require more bandwidth to stream.

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

View Mode: Select the default encoding to use when viewing your video on the **Live Video** page.

Light Frequency: Select the frequency used by your lighting and power to help reduce image flicker.

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Extender Setup

Dynamic DNS

Image Setup

Video

Audio

Motion Detection

Sound Detection

Mail

FTP

Time and Date

Day/Night Mode

Logout

VIDEO

In this section, you can configure the camera video quality, resolution, and frame rate.

Save Settings Don't Save Settings

VIDEO PROFILE

Encode Type	Resolution	Bit Rate	Frame Rate
H.264	640 x 480	2 Mbps	30
Encode Type	Resolution	Jpeg Quality	Frame Rate
MJPEG	640 x 480	Medium	Auto

Default View Mode : H.264

LIGHT FREQUENCY

50 Hz 60 Hz

Save Settings Don't Save Settings

Helpful Hints...

Resolution - 3 settings are available:
 1.QVGA @ 160x112 - Usually used for display on handheld devices.
 2.QVGA @ 320x240 - Standard resolution for mobile phones, and PDAs.
 3.VGA @ 640x480 - Standard resolution for computer display.

Bit Rate (bits per second) - Select a fixed bandwidth for your camera operation. Higher value means a higher quality image but consumes more network bandwidth.

Frame Rate (frames per second) - The higher the frame rate, the smoother the video will appear. Note that a higher frame rate setting also uses more bandwidth.

Jpeg Quality - Default value is Medium.

Light Frequency - 2 options: 50 or 60 Hz. Default value is 60 Hz.

SURVEILLANCE

Audio

This section allows you to adjust the audio settings for your camera.

Note: Please wait a few seconds for the camera to adjust the audio after making changes.

Audio Settings: You may **Enable** or **Disable** the camera audio feed.

Volume Settings: Select the desired volume percentage level.

The screenshot displays the D-Link DCS-933L web interface. The top navigation bar includes 'LIVE VIDEO', 'SETUP', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'SETUP' tab is active, and the 'Audio' menu item is selected in the left sidebar. The main content area is titled 'AUDIO' and contains the following sections:

- AUDIO SETTINGS:** A text box stating 'In this section, you can configure the audio settings for your camera.' with 'Save Settings' and 'Don't Save Settings' buttons.
- AUDIO SETTINGS:** Radio buttons for 'Enable' (selected) and 'Disable'.
- VOLUME SETTINGS:** A dropdown menu showing '80'.
- Buttons for 'Save Settings' and 'Don't Save Settings' at the bottom.

Helpful Hints on the right side of the page:

- Audio Settings:** Enabling this feature to hear audio from the IP Camera's microphone.
- Volume Settings:** You can adjust the IP Camera's microphone volume using the volume level setting.

The bottom of the page features the 'SURVEILLANCE' logo.

Motion Detection

Motion detection allows you to mark areas of your camera's video to monitor for motion, which can be used to trigger snapshots or recordings. Refer to "Mail" on page 33 and "FTP" on page 35 for more details.

Motion Detection: Select whether you want to enable or disable the motion detection feature of your camera.

Time: Specify whether you want to **Always** have motion detection enabled, or according to a **Schedule** that you define.

Sensitivity: Specify the amount of difference required to determine whether there was motion.

Detection Areas: Use your mouse to click on the areas of the video that you would like to monitor for motion.

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MOTION DETECTION

In this section, you can configure the motion detection settings for your camera.

Please note that your computer needs to have Java installed in order to view the motion detection configuration window. If you do not see the live video below, please visit <http://www.java.com> to download and install Java.

Save Settings Don't Save Settings

MOTION DETECTION SETTINGS

Motion Detection Enable Disable

Time

Always

Schedule

Day Mon Tue Wed Thu Fri Sat Sun

Time Period Start : 00:00:00 (Example : 06:30:00)
Stop : 00:00:00 (Example : 22:30:00)

Sensitivity 90 % (0~100%, high sensitivity makes the motions easier to be detected.)

Detection Areas Use mouse to click the blocks where you want to monitor for motion.

Save Settings Don't Save Settings

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Sound Detection

Sound detection allows you to detect when there is a loud sound in the area, which can be used to trigger snapshots or recordings. Refer to “Mail” on page 33 and “FTP” on page 35 for more details.

Sound Detection: Select whether you want to enable or disable the sound detection feature of your camera.

Time: Specify whether you want to **Always** have motion detection enabled, or according to a **Schedule** that you define.

Detection Level: Specify the volume level that a sound must exceed in order to be “detected”.

The screenshot shows the D-Link DCS-933L web interface. The navigation menu on the left includes: Wizard, Network Setup, Wireless Setup, Extender Setup, Dynamic DNS, Image Setup, Video, Audio, Motion Detection, Sound Detection, Mail, FTP, Time and Date, Day/Night Mode, and Logout. The main content area is titled 'SOUND DETECTION' and contains the following settings:

- SOUND DETECTION:** In this section, you can configure the sound detection settings for your camera. Please note that your computer needs to have Java installed in order to view the sound dB/Time window. If you do not see the sound dB/Time window below, please visit <http://www.java.com> to download and install Java.
 - Buttons: Save Settings, Don't Save Settings
- SOUND DETECTION SETTINGS:**
 - Sound Detection: Enable Disable
 - Time:
 - Always
 - Schedule
 - Day: Mon Tue Wed Thu Fri Sat Sun
 - Time Period Start: 00:00:00 (Example: 06:30:00)
 - Stop: 00:00:00 (Example: 22:30:00)
 - Detection Level: 90 dB
 - Sound dB/Time window: A bar chart showing sound levels over time. The y-axis is labeled 'dB' and ranges from 50 to 100. The x-axis is labeled 'Time'. The chart shows several blue bars of varying heights, with one prominent purple bar reaching 100 dB. A red horizontal line is drawn at approximately 90 dB.
 - Buttons: Save Settings, Don't Save Settings

Mail

This section allows you to configure your camera to send snapshots and video clips to an e-mail address. If you are not sure what settings to use, check with your e-mail service provider.

- SMTP Server Address:** This is the domain name or IP address of your external e-mail server.
- Sender e-mail Address:** This is the e-mail address listed as the sender for your notification e-mails.
- Receiver e-mail Address:** This is the e-mail address that your notification e-mails will be sent to.
- User Name:** If the SMTP server uses authentication, enter your user name.
- Password:** If the SMTP server uses authentication, enter your password.

For example, if you want to use Gmail with SSL-TLS for e-mail notifications, you can follow the setup procedure as below:

- Step 1** - Enter "smtp.gmail.com" in SMTP Server Address.
- Step 2** - Change the SMTP server port number from 25 to **465**.
- Step 3** - Enter your gmail e-mail address in Sender E-mail Address.
- Step 4** - Enter the destination e-mail address in Receiver E-mail Address.
- Step 5** - Enter the user name required to access the SMTP server.
- Step 6** - Enter the password required to access the SMTP server.
- Step 7** - Select **SSL-TLS** and then click **Save Settings**.
- Step 8** - Click the **Test** button to send a test e-mail will be sent to the e-mail account listed above.

Note: You can also use **STARTTLS**, which will use SMTP server port number **587**.

Note: If you want to use a Yahoo SMTP server, the SMTP server address will be different between each registered region, and only SMTP port **465** is supported for **SSL-TLS**.

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DCS-933L // LIVE VIDEO SETUP MAINTENANCE STATUS HELP

Wizard

MAIL

This section allows you to setup and configure the email notification settings for your camera. If your details change or you are experiencing issues with alert notifications, you may need to modify these settings.

Save Settings Don't Save Settings

E-MAIL ACCOUNT

SMTP Server Address []

SMTP Server Port 25 (Default is 25)

Sender E-mail Address []

Receiver E-mail Address []

User Name []

Password []

Use SSL-TLS/STARTTLS No SSL-TLS STARTTLS

TIME SCHEDULE

Enable the emailing of images to an email account

Always

Schedule

Day Mon Tue Wed Thu Fri Sat Sun

Time Period Start: 00:00:00 (Example: 06:30:00) Stop: 00:00:00 (Example: 22:30:00)

Motion/Sound Detection

E-mail frame immediately

E-mail attached with 6 frames (3 frames before and 3 frames after detection)

Frame interval time: 1 second

E-mail Interval 300 Seconds

Enable the emailing of video clip to an email account

Always

Schedule

Day Mon Tue Wed Thu Fri Sat Sun

Time Period Start: 00:00:00 (Example: 06:30:00) Stop: 00:00:00 (Example: 22:30:00)

Motion/Sound Detection

E-mail Interval 300 Seconds

Video Limit: Size 2048 KBytes (max is 3072 KBytes) Time 10 Seconds (max is 15 Seconds)

TEST E-MAIL ACCOUNT

A test e-mail will be sent to the e-mail account listed above. Test

Save Settings Don't Save Settings

Helpful Hints...

SMTP Server Address: This is the domain name or IP address of your external email server.

Sender E-mail Address: This is the email address of the person sending the camera snapshots.

Receiver E-mail Address: This is the email address of recipient for the SMTP server.

User Name: The user name of your email account.

Password: The password of your email account.

Use SSL-TLS/STARTTLS: Select SSL-TLS or STARTTLS if SMTP server requires TLS authentication.

Enable the emailing of images to an email account: Select Always to enable the camera to always send images to the recipient's email account. Select Schedule if you would like to specify the time and day when the camera will start and stop sending images to the recipient's email account. The interval of the snapshot can be configured from 1 to 65535 seconds. Select Motion/Sound Detection if you would like the camera to send images to the recipient's email account only when motion/sound is detected.

Enable the emailing of video clip to an email account: Select Always to enable the camera to always send video clip to the recipient's email account. Select Schedule if you would like to specify the time and day when the camera will start and stop sending video clip to the recipient's email account. The interval of the video clip can be configured from 1 to 65535 seconds. Select Motion/Sound Detection if you would like the camera to send video clip to the recipient's email account only when motion/sound is detected.

SURVEILLANCE

Enable the e-mailing of images to an e-mail account:

Enabling this will allow snapshots to be e-mailed to you in different ways:

- Choosing **Always** will e-mail snapshots continuously based on the **E-mail Interval** specified.
- Choosing **Schedule** will allow you to schedule when to start and stop the e-mailing of snapshots.
- Select **Motion/Sound Detection** if you would like the camera to e-mail images only when motion or sound is detected. You can choose whether to e-mail a snapshot immediately, or e-mail 6 snapshots together, with 3 frames before and after motion/sound was detected. You can also set the **Frame interval time** to specify how far apart the snapshots should be.

E-mail Interval:

This sets the limit for how frequently e-mail notifications will be sent. This can be set from 1 to 65535 seconds.

Enable the e-mailing of video clips to an e-mail account:

Enabling this will allow video clips to be e-mailed to you in different ways. This is the same as e-mailing images, as specified above, but will take video clips according to the **Video Limit** settings you specify.

Test E-mail Account:

This will send a test e-mail according to the e-mail settings you have specified above.

TIME SCHEDULE

Enable the emailing of images to an email account

Always

Schedule
 Day Mon Tue Wed Thu Fri Sat Sun
 Time Period Start : (Example : 06:30:00)
 Stop : (Example : 22:30:00)

Motion/Sound Detection
 E-mail frame immediately
 E-mail attached with 6 frames (3 frames before and 3 frames after detection)
 Frame interval time : second

E-mail Interval Seconds

Enable the emailing of video clip to an email account

Always

Schedule
 Day Mon Tue Wed Thu Fri Sat Sun
 Time Period Start : (Example : 06:30:00)
 Stop : (Example : 22:30:00)

Motion/Sound Detection

E-mail Interval Seconds

Video Limit : Size KBytes (max is 3072 KBytes)
 Time Seconds (max is 15 Seconds)

TEST E-MAIL ACCOUNT

A test e-mail will be sent to the e-mail account listed above.

FTP

This section allows you to configure your camera to send snapshots and video clips to an FTP server.

Host Name: Enter the IP address of the FTP server that you will be connecting to.

Port: Enter the port of the FTP server that you will be connecting to.

User Name: Enter the user name of your FTP server account.

Password: Enter the password of your FTP server account.

Path: Enter the destination path/folder to save files to on the FTP server.

Passive Mode: Enabling passive mode may help you reach your FTP server if your camera is behind a router protected by a firewall.

Enable the uploading of images to an FTP server: Enabling this will allow snapshots to be uploaded in different ways:

- Choosing **Always** will upload snapshots continuously based on the **Image Frequency** specified.
- Choosing **Schedule** will allow you to schedule when to start and stop the uploading of snapshots.
- Select **Motion/Sound Detection** if you would like the camera to upload images only when motion or sound is detected.

Image Frequency: Set how frequently you want images to be taken and uploaded. You can choose to upload by frames per second, or by seconds per frame.

Base File Name: Set what you want the base file name to be for your snapshots.

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FTP

In this section, you can configure the camera to send images to an FTP server.

Save Settings Don't Save Settings

FTP SERVER

Host Name
Port (Default is 21)
User Name
Password
Path
Passive Mode Yes No

TIME SCHEDULE

Enable uploading of images to an FTP server

Always

Schedule

Day Mon Tue Wed Thu Fri Sat Sun
Time Period Start: (Example: 06:30:00)
Stop: (Example: 22:30:00)

Motion/Sound Detection

Image Frequency @ Frames/Second
 1 Seconds/Frame

Base File Name
File Overwrite
 Date/Time Suffix
 Create subfolder by
 Sequence Number Suffix Up to

Enable uploading of video clip to an FTP server

Always

Schedule

Day Mon Tue Wed Thu Fri Sat Sun
Time Period Start: (Example: 06:30:00)
Stop: (Example: 22:30:00)

Motion/Sound Detection

File Name Prefix
Video Limit: Size KBytes (max is 3072 KBytes)
Time Seconds (max is 15 Seconds)

TEST FTP SERVER

A JPEG file will be sent to the above FTP server for testing.
(File name: test_date_time.jpg)

Test

Save Settings Don't Save Settings

Helpful Hints.

Host Name: This is the IP address of the FTP server that you will be connecting to.

Port: The default port is 21.

User Name: The user name required for accessing the external FTP server.

Password: The password of the external FTP server.

Passive mode: Enabling passive mode will allow access to an external FTP server if your camera is behind a router protected by a firewall.

Enable uploading of images to an FTP server: Checking this box will enable the camera to upload images to FTP server shown above.

Select **Always** to enable the camera to always upload images to the FTP server. Select **Schedule** if you would like to specify the time and day when the camera starts and stops uploading images to the FTP server. Select **Motion/Sound Detection** if you would like the camera to upload images to the FTP server only when motion/sound is detected.

Image Frequency: User can choose and define the numbers for both Frames/Second and Seconds/Frame.

Base File Name: The name that contains the time stamp information. For example DCS-933L_2012072116425101.jpg. This means that the camera took a snapshot in the year 2012, July 21 at 16:42:51 (hour:minute) and 01 represents the 1st picture.

File: Select **Overwrite** and only one image filename is constantly refreshed. Select **Date/Time Suffix** and the pictures will be named with a date and time (refer to **Base File Name**). Enable this **Create subfolder** function to have the camera auto create the subfolder by 0.5 hour, 1 hour or 1 day. An example of this can be seen under the Base File Name category. Select **Sequence Number Suffix** up to 1024 and all the image files will be numbered from 1-1024. The total amount of images can be configured up to 1024.

File: Select how you want uploading of snapshots to be handled:

- **Overwrite** will replace the old snapshot with the new one. This means you will only have one snapshot that is updated every time a new one is taken.
- **Date/Time Suffix** will add the date and time to the end of the snapshot file name. You can also choose to make subfolders based on a period of time you specify to help you organize your snapshots.
- **Sequence Number Suffix** will add a number to the end of the snapshot file name up to the number you specify, after which the oldest files will be overwritten.

Test FTP Server: Clicking on the **Test** button will send a test JPEG snapshot to the FTP server specified above to make sure that your settings are correct.

This will send a test e-mail according to the e-mail settings you have specified above.

TIME SCHEDULE

Enable uploading of images to an FTP server

Always

Schedule
 Day
 Mon Tue Wed Thu Fri Sat Sun
 Time Period Start : (Example : 06:30:00)
 Stop : (Example : 22:30:00)

 Motion/Sound Detection

Image Frequency 1 Frames/Second
 1 Seconds/Frame

Base File Name

File
 Overwrite
 Date/Time Suffix
 Create subfolder by
 Sequence Number Suffix Up to

Enable uploading of video clip to an FTP server

Always

Schedule
 Day
 Mon Tue Wed Thu Fri Sat Sun
 Time Period Start : (Example : 06:30:00)
 Stop : (Example : 22:30:00)

 Motion/Sound Detection

File Name Prefix

Video Limit : Size KBytes (max is 3072 KBytes)
 Time Seconds (max is 15 Seconds)

TEST FTP SERVER

A JPEG file will be sent to the above FTP server for testing.
 (File name: test_date_time.jpg)

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.

Synchronize NTP Server: Enabling this will allow the camera to update its clock automatically from an NTP server. Select the NTP server closest to you, and select whether you want to apply daylight saving corrections.

Set the Date and Time Manually: If Synchronize NTP Server is disabled, you can set the date and time manually. You can also click on the **Copy Your Computer's Time Settings** to automatically set the date and time based on your computer's settings.

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TIME AND DATE

The Time Configuration option allows you to configure, update, and maintain the internal system clock. In this section you can set the time zone the camera is in, and set the NTP (Network Time Protocol) Server.

Save Settings Don't Save Settings

TIME CONFIGURATION

Current Time 01 Jan 2012 12:40:58 A.M.
Time Zone (GMT-12:00) International Date Line West

AUTOMATIC TIME CONFIGURATION

Synchronize NTP Server
NTP Server Used << Select NTP Server >>
Daylight Saving Enable Disable
Offset : +1:00
Month Week Day of Week Time
Start Jan Sat Sun 12 am
End Jan Sat Sun 12 am

SET THE DATE AND TIME MANUALLY

Year 2012 Month 1 Day 1
Hour 0 Minute 40 Second 56
Copy Your Computer's Time Settings
Save Settings Don't Save Settings

Helpful Hints...

Time Zone - The geographical zone for the local time setting.

Automatic Time Configuration - With this option selected, the camera will synchronize its date and time settings with an NTP server over the Internet upon camera start-up. If the timeserver cannot be reached, no time settings will be applied.

NTP server - The IP address or domain name of the Time Server.

Daylight Saving - Enable daylight saving that will adjust the time depending on the daylight saving time offset and date.

You may also **Set the Date and Time Manually** or **Copy your Computer's Time Settings**.

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Day/Night Mode

This section allows you to configure when Day and Night modes are used. Day mode uses the infrared cut filter to provide a corrected color image for times where there is available lighting. Night mode moves the filter out of the way to use all available light, and turns on the IR LED illuminators to allow for clear black and white video in dark areas with little to no light.

Auto: This mode will automatically switch between Day and Night mode based on the amount of available lighting.

Manual: This mode allows you to manually switch between modes through the **Live Video** page.

Always Day Mode: This sets the camera to always use Day mode.

Always Night Mode: This sets the camera to always use Night mode.

Day Mode Schedule: This sets the camera to use Day mode during the times you specify, and will switch to Night mode outside the times you specify.

DAY/NIGHT MODE

In this section, you can configure the Day/Night mode switching method. Day/Night mode ensures good video illumination in both day and night environments.

In Day mode, IR illumination is off, IR light is blocked and the video is in color. In Night mode, IR illumination is on, IR light is visible and the video is in black & white.

Save Settings Don't Save Settings

DAY/NIGHT MODE SETTINGS

Day/Night Mode

- Auto
- Manual
- Always Day Mode
- Always Night Mode
- Day Mode Schedule

Day	Start Time	End Time	Example
Mon	00:00	~ 00:00	(Example : 08:00 ~ 18:30)
Tue	00:00	~ 00:00	(Example : 08:00 ~ 18:30)
Wed	00:00	~ 00:00	(Example : 08:00 ~ 18:30)
Thu	00:00	~ 00:00	(Example : 08:00 ~ 18:30)
Fri	00:00	~ 00:00	(Example : 08:00 ~ 18:30)
Sat	00:00	~ 00:00	(Example : 00:00 ~ 00:00)
Sun	00:00	~ 00:00	(Example : 00:00 ~ 24:00)

Save Settings Don't Save Settings

Helpful Hints...

Auto - Camera automatically switches between Day and Night mode. The camera normally works in Day mode. It automatically changes to Night mode in darker lighting.

Manual - User can manually control the camera to work in Day or Night mode on the live video view page.

Always Day Mode - The camera always works in the Day mode.

Always Night Mode - The camera always works in the Night mode.

Day Mode Schedule - The camera works in Day mode based on the day and time configured in the schedule. The camera changes to Night mode during all other times. The example displayed on the right side of the Mon/Tue/Wed/Thu/Fri/Sat/Sun fields mean that the camera works in Day mode from 08:00 to 18:30 on Monday, Tuesday, Wednesday, Thursday and Friday, works in Night mode for all of Saturday, and works in Day mode for all of Sunday.

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 are allowed to access to your camera.

Admin Password: To change the admin password used to log into the web interface, enter the old password, then enter the new password and retype it in the next text box, then click **Apply**.

Camera Name: Specify a name for your camera

LED Control: Select **Normal** to enable the LED on the front of the device, or select **Off** to disable the LED. Turning this off may be useful if you do not want the camera to be noticeable.

User Access Control: Select **Enable** to enable user access control or **Disable** to allow only the administrator account to access the camera.

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

OSD Time: Select **Enable** to allow the current time to be added to the camera video, and select a color to use for the text.

Add User Account: You can create new users to provide viewing access for your camera's video. User accounts will only be able to access the **Live Video** section of the web configuration interface, but cannot access any other parts or change any settings.

To create a new user, enter a user name, password, and retype the password, then click **Add**. A maximum of 8 user accounts can be created.

User List: Displays the account names of authorized users. You can modify or delete an account by clicking on its modify or delete icon.

The screenshot shows the D-Link web interface for the Maintenance Admin section of a DCS-933L camera. The interface is divided into several sections:

- ADMIN:** A header section with a warning: "Here you can change the administrator's password and configure the server setting for your camera. You can also add, modify and/or delete the user account(s)." Below this is the "ADMIN PASSWORD SETTING" section with fields for "Old Password", "New Password", and "Retype Password", and "Apply" and "Cancel" buttons.
- SERVER SETTING:** Contains fields for "Camera Name" (DCS-933L), "LED Control" (radio buttons for Normal and Off), "User Access Control" (radio buttons for Enable and Disable), "Snapshot URL Authentication" (radio buttons for Enable and Disable, with a URL field), and "OSD Time" (radio buttons for Enable and Disable, with a "Color" dropdown menu set to Red). "Apply" and "Cancel" buttons are at the bottom.
- ADD USER ACCOUNT:** Fields for "User Name", "Password", and "Retype Password", with "Add" and "Cancel" buttons.
- USER LIST:** A table with columns "no.", "name", "modify", and "delete". It lists two users: "1 guest" and "2 guest2".

On the right side, there is a "Helpful Hints..." section with security advice: "For security reasons, it is recommended that you change the Password for the Administrator accounts. Be sure to write down the new Login Names and Passwords to avoid having to reset the camera in the event that they are forgotten."

At the bottom, the "SURVEILLANCE" logo and copyright information "Copyright 2012, D-Link Corporation / D-Link Systems, Inc. All rights reserved." are visible.

System

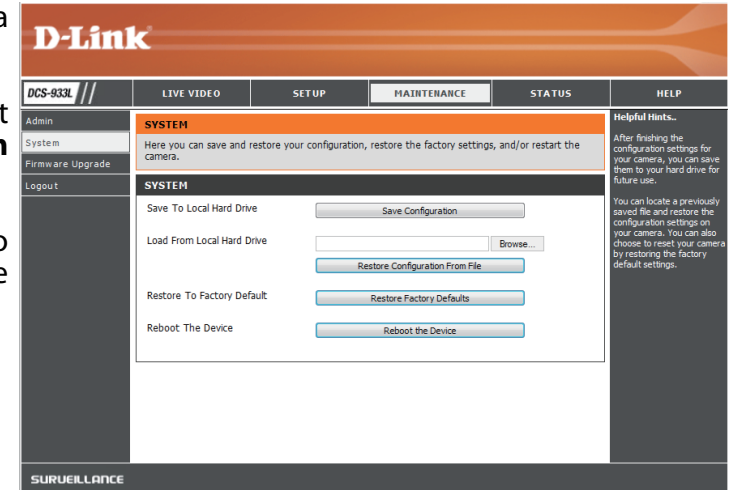
This section allows you to save and restore your configuration, restore the factory settings, and/or restart the camera.

Save To Local Hard Drive: Click the **Save Configuration** button to save the current camera configuration to your local PC.

Load From Local Hard Drive: To load a previously saved configuration, click the **Browse...** button, select your saved configuration file, then click the **Restore Configuration From File** button.

Restore To Factory Default: Click the **Restore Factory Defaults** button to reset all settings back to the factory defaults. Please note that this will erase any changes you have made to the settings of the camera.

Reboot The Device: Click the **Reboot the Device** button to reboot the camera.

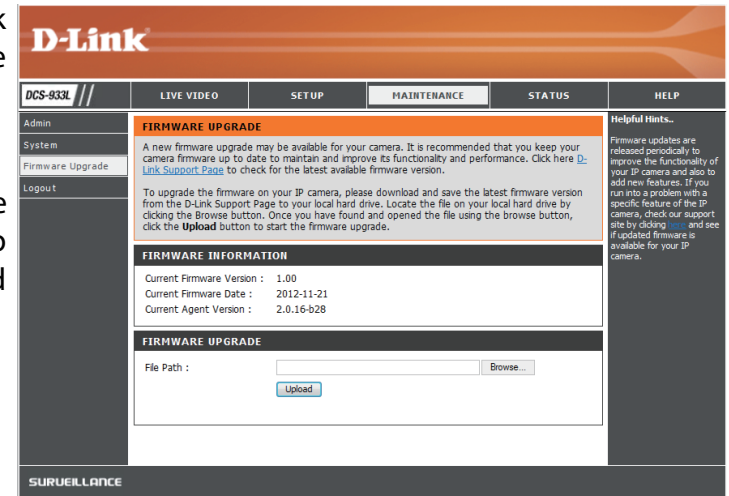


Firmware Upgrade

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-933L, download the latest firmware from the D-Link Support Page to your local hard drive. Click the **Browse...** button and select the firmware file, then click the **Upload** button to start the firmware upgrade.

Warning: The firmware upgrade process must not be interrupted or the camera may be damaged. When upgrading firmware, do not unplug the camera or your PC or close your web browser until the process is complete. It is also highly recommended that you use a wired connection for your camera and PC when upgrading firmware.



Status

Device Info

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

The screenshot shows the D-Link web interface for the DCS-933L camera. The top navigation bar includes 'LIVE VIDEO', 'SETUP', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'STATUS' tab is selected, and the 'DEVICE INFO' sub-tab is active. The main content area is divided into two sections: 'BASIC INFORMATION' and 'WIRELESS STATUS'. A 'Refresh' button is located at the bottom of the wireless status section. A sidebar on the left contains 'Device Info', 'Active User', and 'Logout' links. A sidebar on the right contains 'Helpful Hints..'. The bottom of the page features a 'SURVEILLANCE' banner.

BASIC INFORMATION	
Camera Name	DCS-933L
Time & Date	01 Jan 2012 12:41:58 A.M.
Firmware Version	1.00 (2012-11-21)
Agent Version	2.0.16-b28
MAC Address	28 10 7B 07 A9 06
IP Address	192.168.1.55
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
Primary DNS	192.168.1.1
Secondary DNS	0.0.0.0
DDNS	Disable
UPnP Port Forwarding	Disable
FTP Server Test	No test conducted.
E-mail Test	No test conducted.

WIRELESS STATUS	
Connection Mode	Infrastructure
Link	No
SSID	dlink (MAC : 00 00 00 00 00 00)
Channel	6
Encryption	No
Wireless Client List	<input type="button" value="Wireless Client List"/>

Active User

This page lists all the active users' information including the User Name, IP address, and the time that camera access began.

The screenshot shows the D-Link web interface for the DCS-933L camera. The top navigation bar includes 'LIVE VIDEO', 'SETUP', 'MAINTENANCE', 'STATUS', and 'HELP'. The left sidebar contains 'Device Info', 'Active User', and 'Logout'. The main content area is titled 'ACTIVE USER' and contains a description: 'This page lists active user information, including user name, IP address and the initial access time.' Below this is a 'USER LIST' table with the following structure:

no.	user name	IP address	time
-----	-----------	------------	------

A 'Refresh' button is located below the table. To the right of the main content area is a 'Helpful Hints..' section with the text: 'All of the active users are listed on this page. The time information indicates the time that each user started accessing the camera.'

SURUEILLANCE

Troubleshooting

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:

DCS-933L: <http://DCS-933L.mydlink.com>

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 front 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. 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 "Admin" on page 39 for information about how to enable the LED.

4. 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.

5. 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.

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

It could be that the image sensor has become overloaded when it has been exposed to bright light such as direct exposure to sunlight or halogen lights. Reposition the camera into a more shaded area immediately, as prolonged exposure to bright lights will damage the sensor.

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

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

8. 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.

You may also need to check your image settings to make sure the brightness, contrast, and other settings are set properly. For more, refer to "Image Setup" on page 28.

9. 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 6, then you will need to upgrade your Web browser software in order to view the streaming video transmitted by the Network Camera.

Technical Specifications

SYSTEM REQUIREMENTS

- Microsoft Windows® 8/7/Vista/XP, or Mac with OS X 10.6 or higher
- PC with 1.3 GHz or above and at least 128 MB RAM
- Internet Explorer 7, Firefox 12, Safari 4, or Chrome 20 or higher version with Java installed and enabled

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

BUILT-IN PROTOCOL

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

WIRELESS CONNECTIVITY

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

WIRELESS TRANSMIT OUTPUT POWER

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

SDRAM

- 64 MB

FLASH MEMORY

- 8 MB

RESET BUTTON

- Reset to factory default

VIDEO CODECS

- H.264
- MJPEG
- JPEG for still images

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

SENSOR

- VGA 1/5 inch CMOS sensor

IR LED

- 5 meter illumination distance with 4 LEDs and light sensor

MINIMUM ILLUMINATION

- Color: 1 lux @ F2.8 (Day)
- B/W: 0 lux @ F2.8 (Night)

VIEWING ANGLE

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

DIGITAL ZOOM

- Up to 4x

3A CONTROL

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

POWER

- Input: 100-240 V AC, 50/60 Hz
- Output: 5 V DC, 1 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

- 96.2 g (without bracket and stand)

MAX POWER CONSUMPTION

- 4 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