



User Manual

Wireless N H.264 Day/Night Network Camera

DCS-933L

Manual Overview

D-Link reserves the right to revise this publication and to make changes in the content hereof without obligation to notify any person or organization of such revisions or changes. Information in this document may become obsolete as our services and websites develop and change. Please refer to the www.mydlink.com website for the most current information.

Manual Revision

Revision	Date	Description
1.00	January 15, 2013	Initial release

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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.

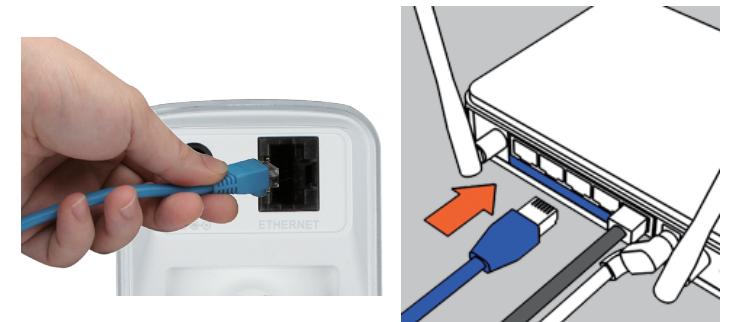
Zero Configuration Setup

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.

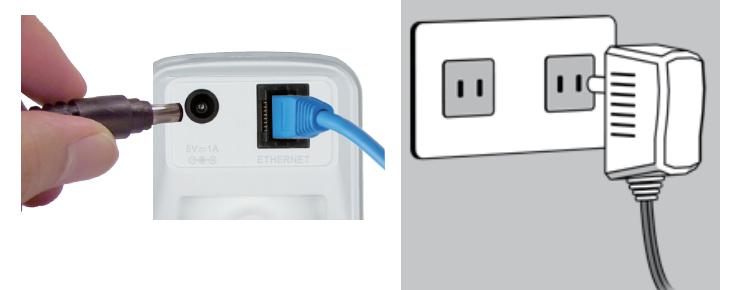
Connect the Ethernet Cable

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.



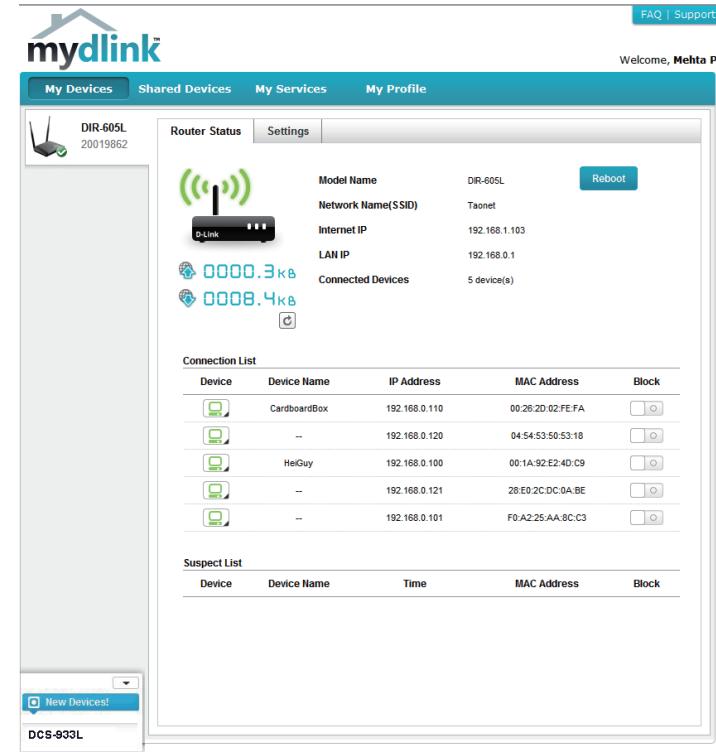
Attach the External Power Adapter

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

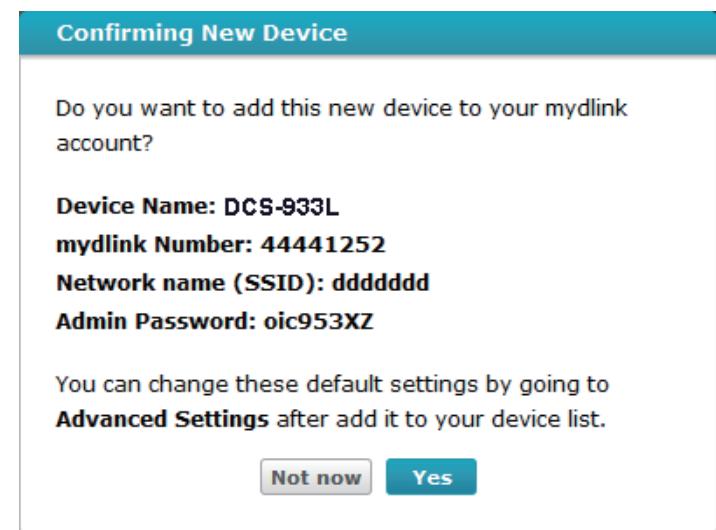


Check Your mydlink Account

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.

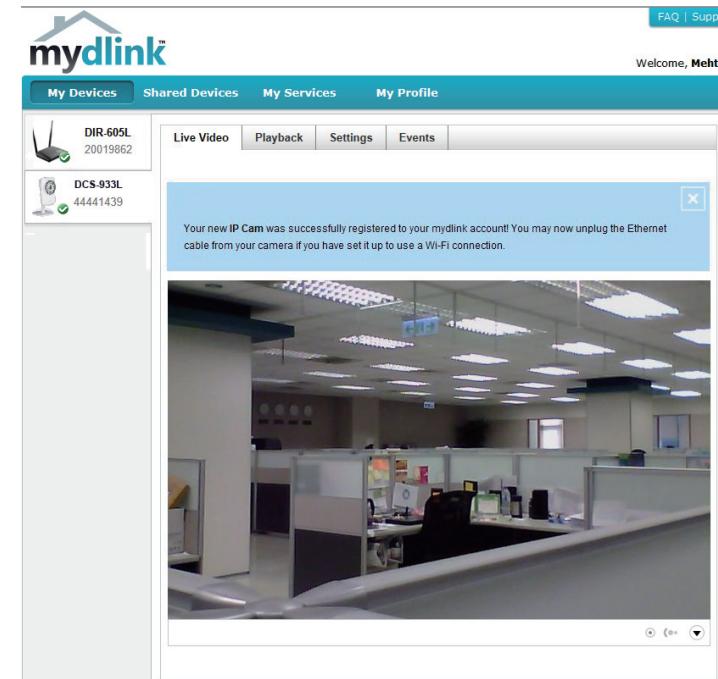


Section 2 - Installation

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.

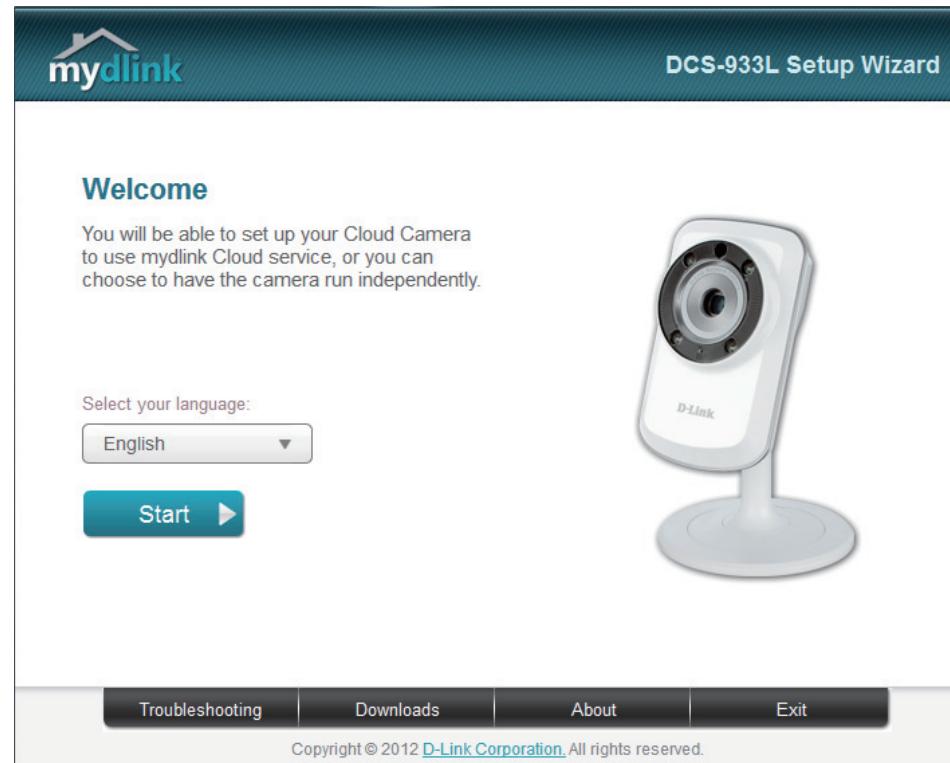


Mac Users

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.



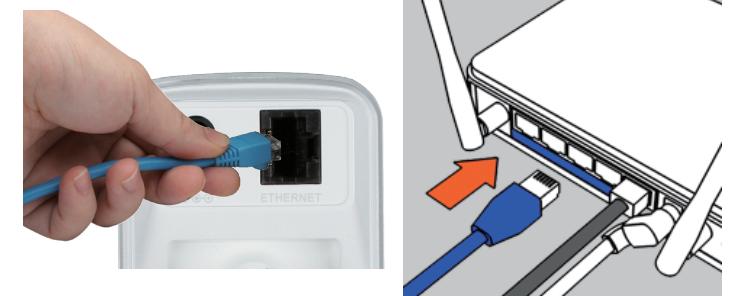
Manual Hardware Installation

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.

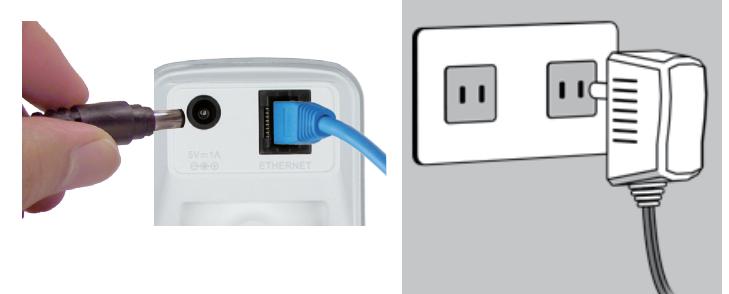
Connect the Ethernet Cable

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

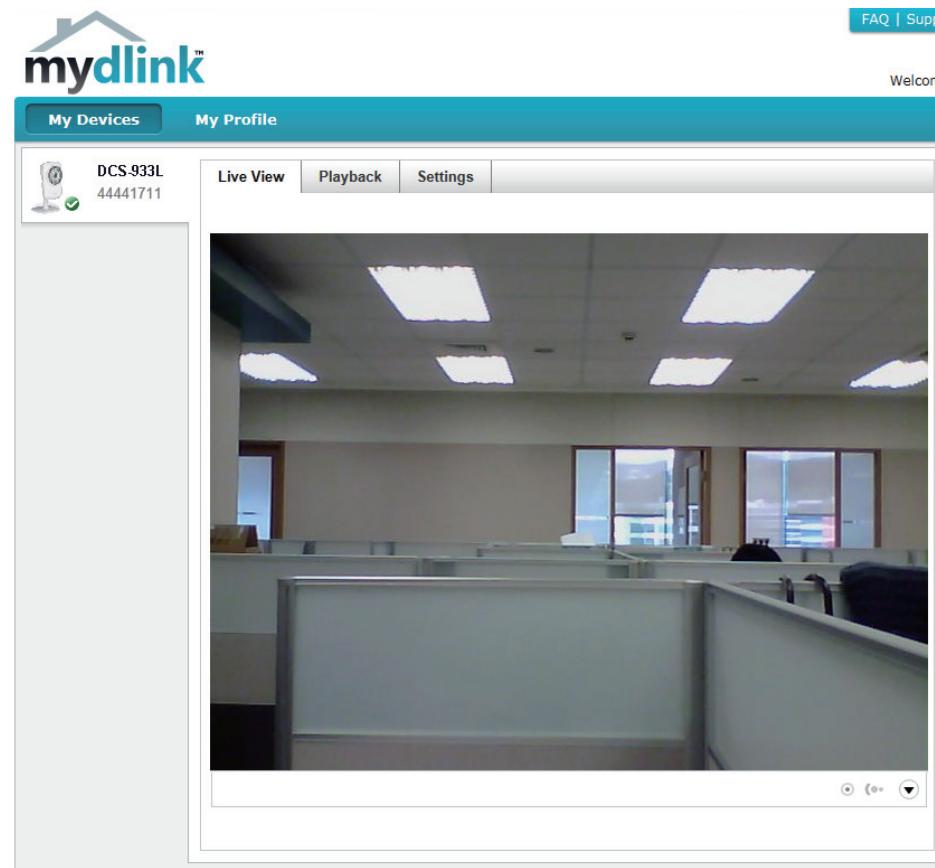
Press the WPS button on your router within 60 seconds. The WPS button is usually on the front or side of your router. On some routers, you may need to log in to the web interface and click on an on-screen button to activate the WPS feature. If you are not sure where the WPS button is on your router,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



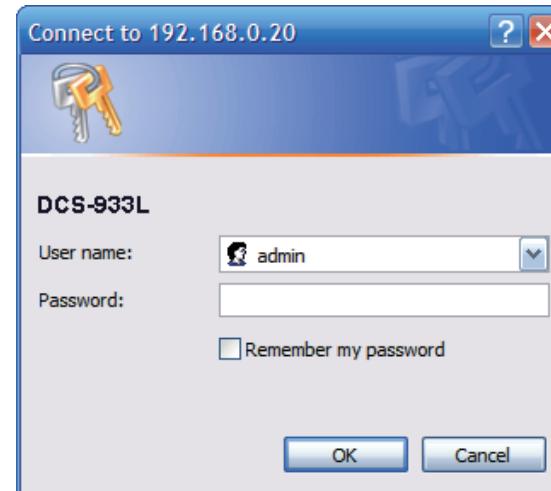
For more details on using your camera with mydlink, go to the **Support** section of the mydlink website and check the **User Manual** section for your product to find the latest instruction guide for your camera's mydlink features.

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 **administrator** and the password you created in the Installation Wizard. If you did not create a password, the default password is administrator. 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.



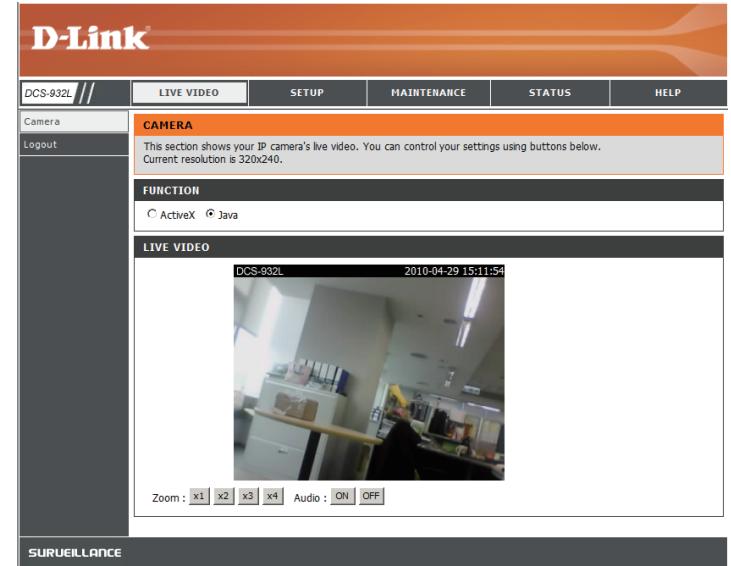
Live Video

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.

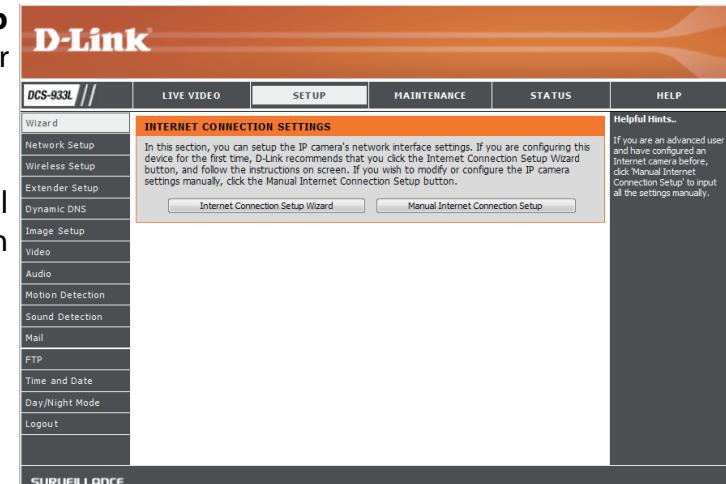
Audio: Click on these buttons to turn audio playback on and off.



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.



The screenshot shows the 'STEP 1: SETUP LAN SETTINGS' screen. It asks the user to select whether their camera will connect to the Internet with a DHCP connection, Static IP address, or PPPoE. A note states: 'Please select whether your camera will connect to the Internet with a DHCP connection, Static IP address or PPPoE. 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 DHCP connection. Otherwise, click on Static IP address to manually assign an IP address before clicking on the Next button.' The 'DHCP Connection' option is selected. Other fields include 'IP Address' (192.168.0.20), 'Subnet Mask' (255.255.255.0), 'Default Gateway' (empty), 'User ID' (empty), 'Password' (empty), 'Primary DNS' (empty), and 'Secondary DNS' (empty). At the bottom are three buttons: 'Back', 'Next', and 'Cancel'.

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.

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 576 hours

[Back](#) [Next](#) [Cancel](#)

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

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 DCS-933L

[Back](#) [Next](#) [Cancel](#)

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

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 (GMT-12:00) International Date Line West ▾

[Back](#) [Next](#) [Cancel](#)

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

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

[Back](#) [Apply](#) [Cancel](#)

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.

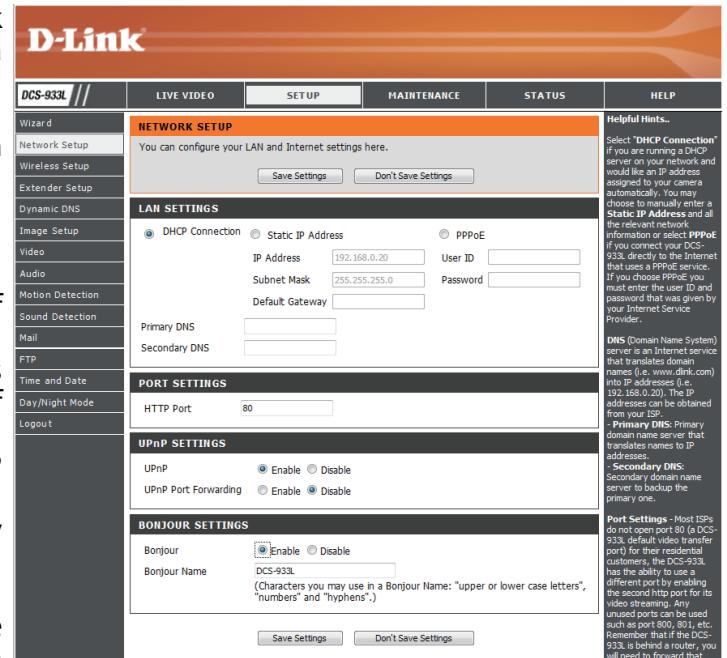
Primary DNS: Primary domain name server that translates names to IP addresses.

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.



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.

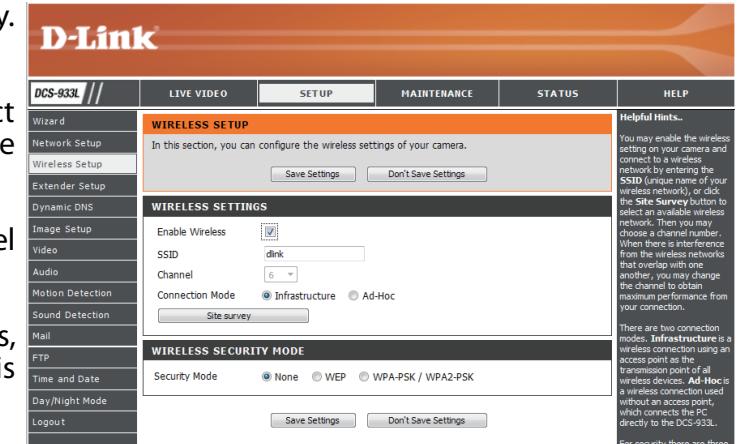
SSID: Enter the network name(SSID) of the wireless network you want to connect to. You can also click the **Site Survey** button below to choose an available network and fill in settings automatically.

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.

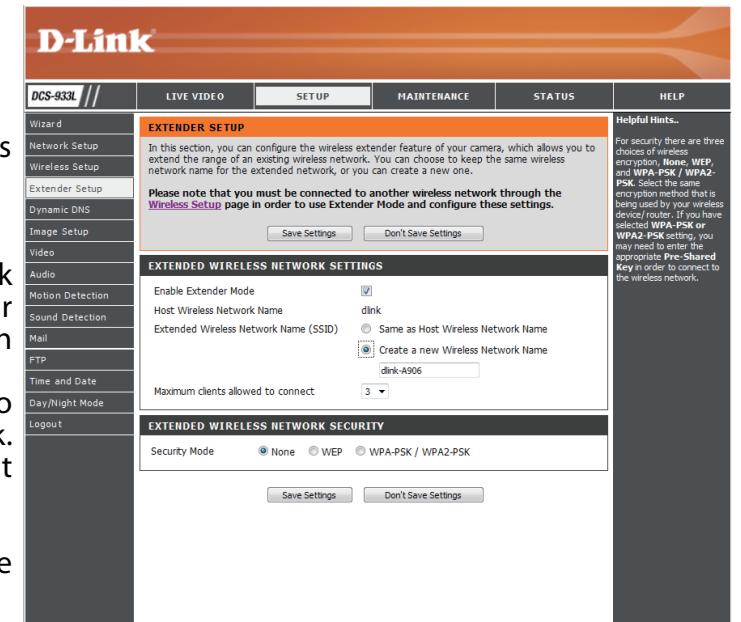
Wireless Security Mode: Select the wireless security mode used by your wireless network. If you select WEP or WPA-PSK/WPA2-PSK, enter the password for your wireless network in the text box that appears.



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: <ul style="list-style-type: none"> 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.



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.

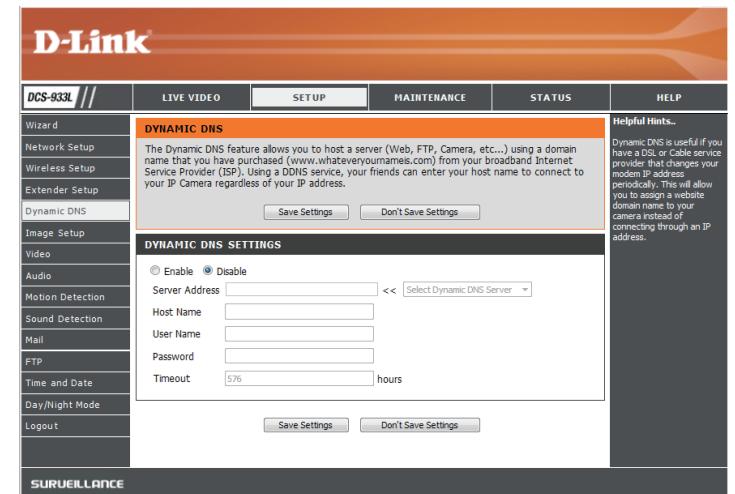


Image Setup

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.

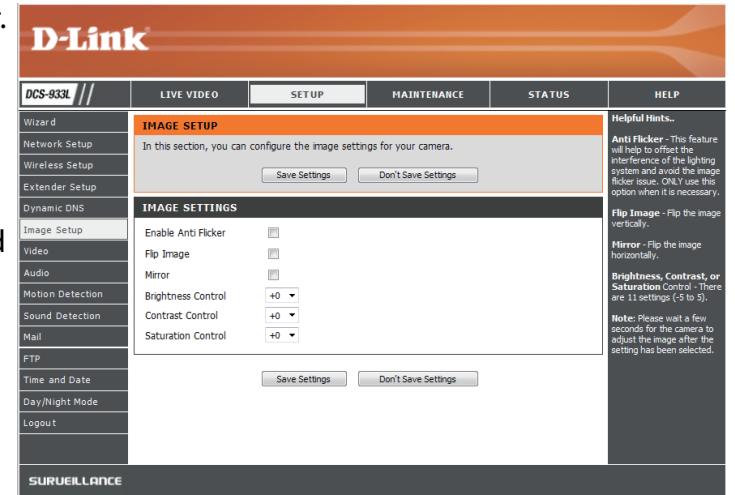
Mirror: Horizontally flip the video.

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.

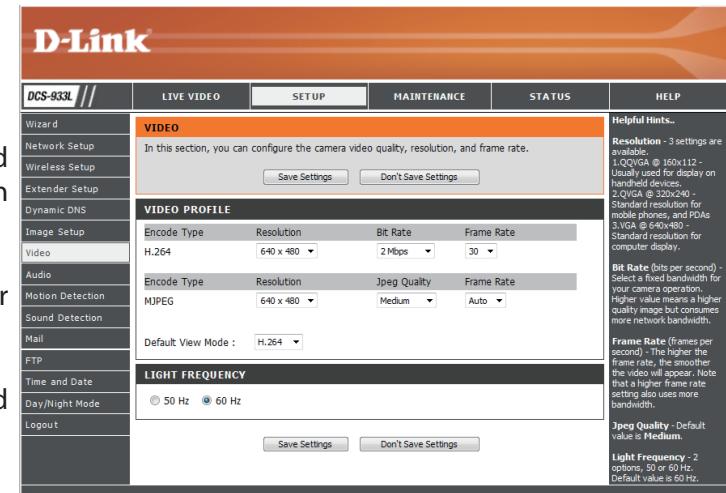
Resolution: Select the desired video resolution from three formats: 640x480, 320x240, and 160x112. Higher settings offer better quality, but will require more bandwidth to stream.

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.



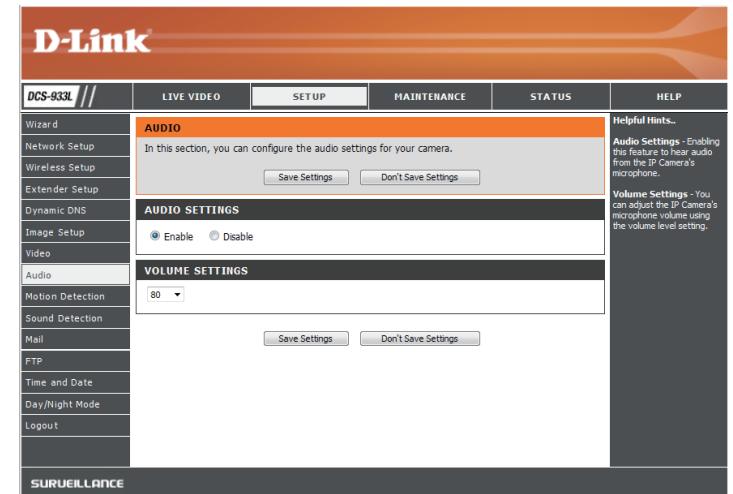
Audio

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.



Motion Detection

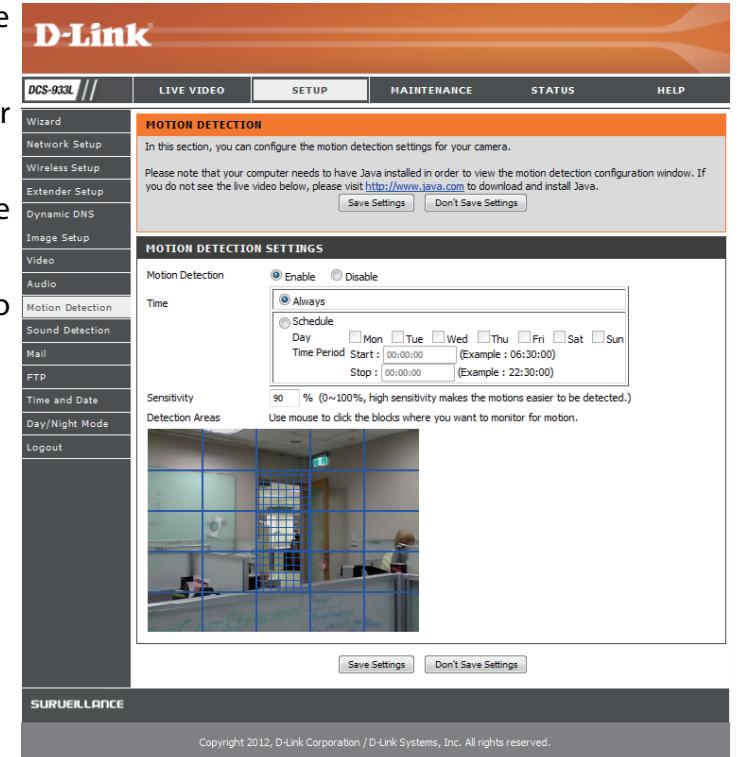
Motion detection allows you to mark areas of your camera's video to monitor for motion, which can be used to trigger snapshots or recordings. Refer to "Mail" on page 33 and "FTP" on page 35 for more details.

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.



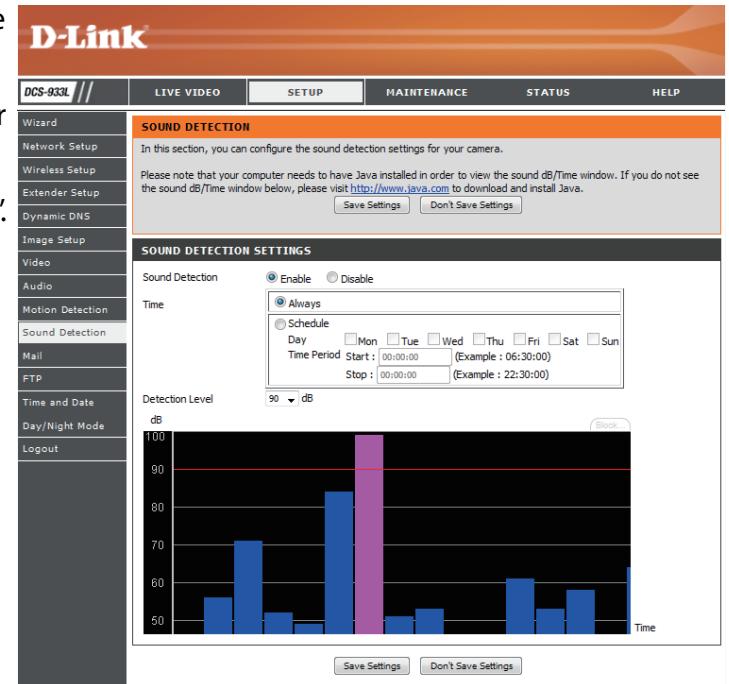
Sound Detection

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".



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.

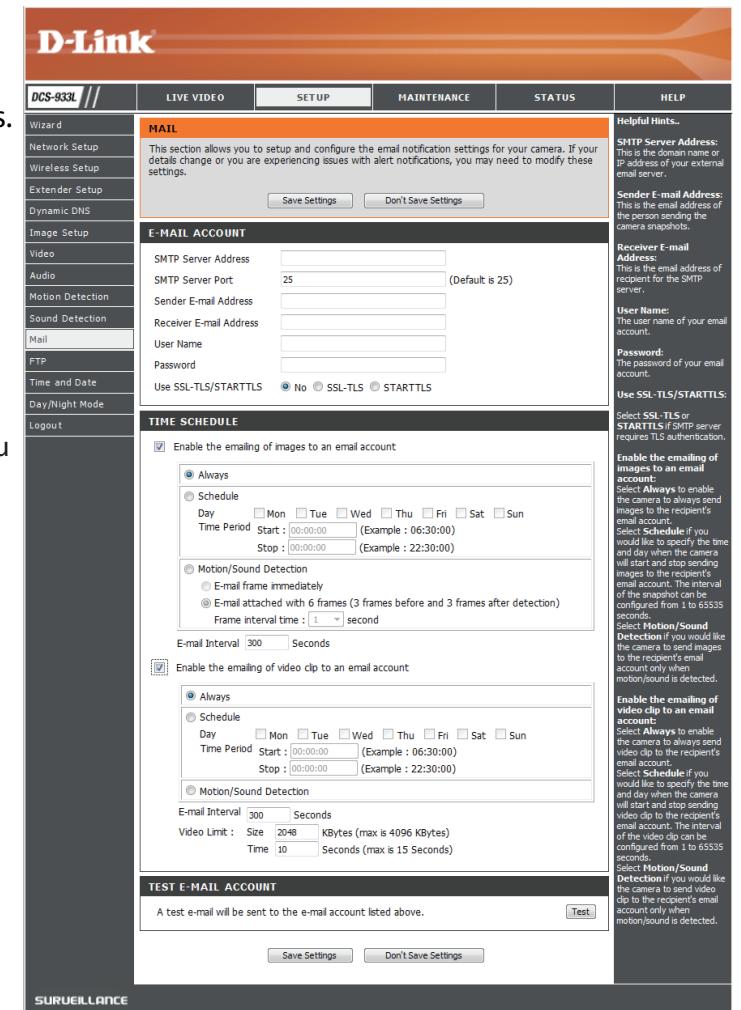
Step 6 - Enter the password required to access the SMTP server.

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**.



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.

The screenshot shows the configuration interface for email scheduling and testing. It includes sections for enabling email of images and video clips, setting up schedules for both, and a test email account section.

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 4096 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

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.

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.

The screenshot shows the 'FTP SERVER' configuration page of the D-Link DCS-933L web interface. The main form includes fields for Host Name, Port (set to 21), User Name, Password, Path (/), and Passive Mode (set to Yes). Below this are two sections for 'TIME SCHEDULE': 'Enable uploading of images to an FTP server' (with options for Always, Schedule, or Motion/Sound Detection) and 'Enable uploading of video clip to an FTP server' (with options for Always, Schedule, or Motion/Sound Detection). At the bottom is a 'TEST FTP SERVER' section with a 'Test' button and a note about sending a JPEG file for testing. A sidebar on the right contains helpful hints for various parameters, such as 'Host Name' (IP address of the FTP server), 'Port' (default 21), 'User Name' (required for external access), 'Password' (password for the external FTP server), 'Passive mode' (allows access to an external FTP server if behind a router), and 'Image Frequency' (choose between frames/second or seconds/frame).

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.

The screenshot shows the configuration interface for the D-Link DCS-933L. It includes sections for 'TIME SCHEDULE' and 'TEST FTP SERVER'.

TIME SCHEDULE

Enable uploading of images to an FTP server

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

Image Frequency: 1 Frames/Second
 1 Seconds/Frame

Base File Name: DCS-933L

File: Overwrite
 Date/Time Suffix
 Create subfolder by 0.5 hour
 Sequence Number Suffix Up to 1024

Enable uploading of video clip to an FTP server

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

File Name Prefix: DCS-933L

Video Limit: Size 2048 KBytes (max is 4096 KBytes)
Time 10 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)

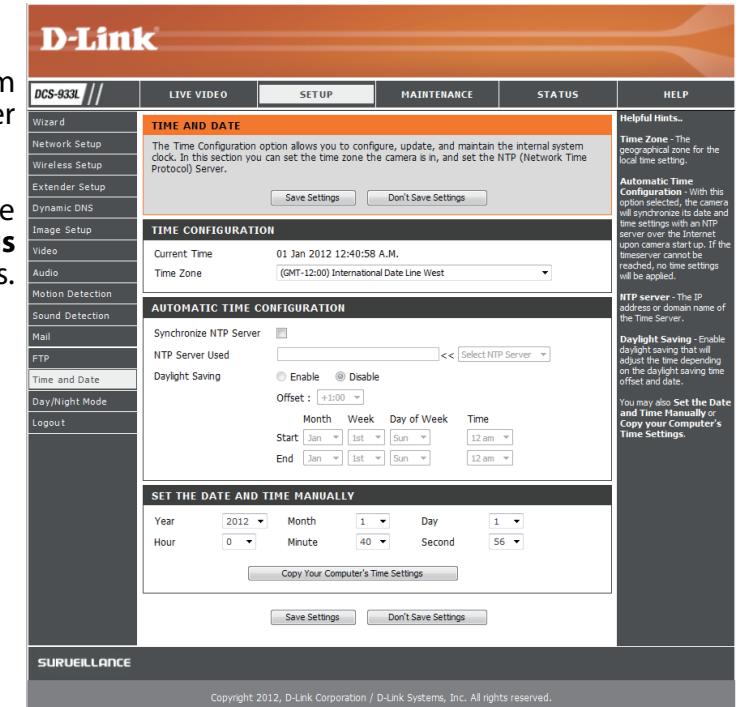
Time and Date

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.



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

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

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

The screenshot shows the D-Link DCS-933L configuration interface. The left sidebar includes 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 (which is selected), and Logout. The main content area has tabs for LIVE VIDEO, SETUP, MAINTENANCE, STATUS, and HELP. The 'Day/Night Mode' tab is active, displaying instructions about the Day/Night mode switching method. It shows that 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. Below this are 'Save Settings' and 'Don't Save Settings' buttons. The 'Day/Night Mode Settings' section contains radio buttons for Auto, Manual, Always Day Mode, and Always Night Mode, along with a 'Day Mode Schedule' table. The table lists specific time intervals for each day of the week (Mon-Sun) from 00:00 to 24:00, with examples provided for each entry. At the bottom of the settings section are 'Save Settings' and 'Don't Save Settings' buttons. The footer of the page says 'SURVEILLANCE'.

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.

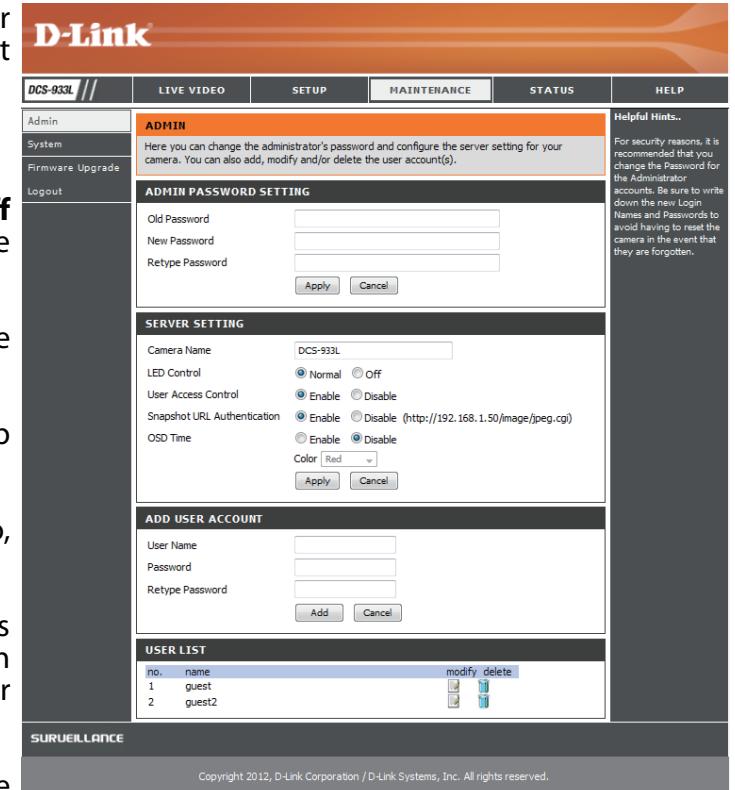
Snapshot URL Authentication: Select **Enable** to allow access to the current camera snapshot via the web address indicated.

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.



System

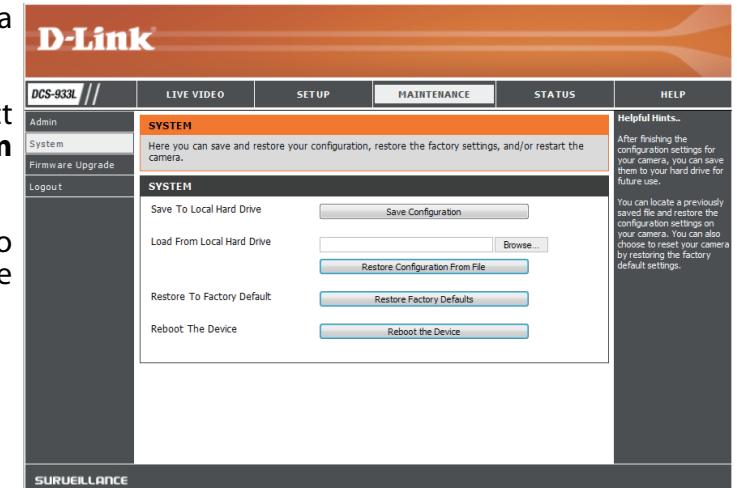
This section allows you to save and restore your configuration, restore the factory settings, and/or restart the camera.

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.

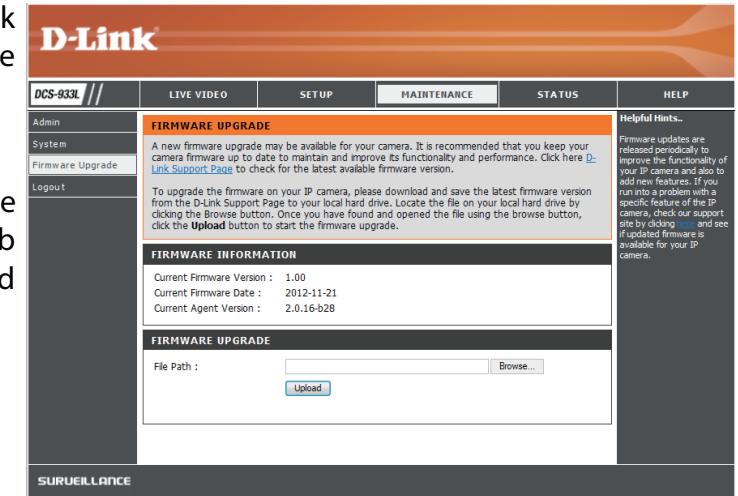


Firmware Upgrade

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 'DEVICE INFO' page of the D-Link DCS-933L configuration interface. The page is divided into several sections:

- DEVICE INFO:** A summary message stating: "All of your network connection details are displayed on this page. The firmware version is also displayed here."
- BASIC INFORMATION:** A table of network parameters:

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:** A table of wireless parameters:

Connection Mode	Infrastructure
Link	No
SSID	dlink (MAC : 00 00 00 00 00 00)
Channel	6
Encryption	No
Wireless Client List	Wireless Client List
- SURVEILLANCE:** A dark grey footer bar.

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 'ACTIVE USER' page of the D-Link DCS-933L web interface. The top navigation bar includes links for 'LIVE VIDEO', 'SETUP', 'MAINTENANCE', 'STATUS' (which is selected), and 'HELP'. A left sidebar titled 'Device Info' contains 'Active User' and 'Logout' options. The main content area has a header 'ACTIVE USER' with a descriptive message: 'This page lists active user information, including user name, IP address and the initial access time.' Below this is a 'USER LIST' table with columns: no., user name, IP address, and time. A 'Refresh' button is located at the bottom of the list. To the right of the list is a 'Helpful Hints...' section stating: 'All of the active users are listed on this page. The time information indicates the time that each user started accessing the camera.' The bottom of the page features a 'SURVEILLANCE' banner.

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