



User Manual

Full HD Day & Night Outdoor Network Camera

DCS-7413

Preface

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.

Manual Revisions

Revision	Date	Description
1.0	July 10, 2012	DCS-7413 Revision A1 with firmware version 1.00
1.1	September 17, 2013	DCS-7413 Revision A2

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Product Overview

Package Contents



DCS-7413 Full HD Day & Night Outdoor Network Camera



Wire in Bracket and Mounting Shoe



CAT5 Ethernet cable



Power adapter



CD-ROM with User Manual and software



Mounting Plate



Alignment Sticker and Fixings Kit



Quick Installation Guide



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

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.

Introduction

Congratulations on your purchase of the DCS-7413 Full HD Day & Night Outdoor Network Camera. The DCS-7413 is a professional surveillance and security solution for small, medium, and large enterprises alike. The DCS-7413 uses a 2 megapixel progressive scan CMOS sensor; the professional sensor results in low noise and high sensitivity capabilities ideal for surveillance applications.

The DCS-7413 is a complete system built with an ARM SoC CPU that incorporates a web server, allowing it to transmit excellent real-time Full HD resolution video quality for security and outdoor surveillance.

The DCS-7413 can be accessed remotely, controlled and configured 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 configuration across the full range of its advanced feature set, including granular control over multiple video streams with different configurations and multicast video/audio streams which helps you manage your network load.

The DCS-7413 has an IP68 certified weatherproof housing designed for both indoor and outdoor applications. The built-in removable IR-cut filter and IR LEDs give the DCS-7413 the capability to view up to 30M at night. The DCS-7413 also incorporates Power over Ethernet (PoE), allowing it to be easily installed in a variety of locations without the need for supplemental power cabling. The combination of IP68 housing, IR-Cut Filter, IR LEDs and PoE make the DCS-7413 an ideal solution for a dependable and cost-effective 24 hour surveillance solution with an easy clutter-free installation.

System Requirements

- Computer with Microsoft Windows® 8, 7, Vista®, or XP (for CD-ROM Setup Wizard), Mac OS or Linux
- PC with 1.3GHz or above; at least 128MB RAM
- Internet Explorer 7 or above , Firefox 3.5 or above, Safari 4 and Chrome 8.0 or above
- Existing 10/100 Ethernet-based network
- An SD memory card (optional) is required for recording to onboard storage. SDHC Class 6 or above is recommended.
- Broadband Internet connection

Features

Simple to Maintain

The DCS-7413 is a stand-alone system with a built-in CPU, requiring no special hardware or software. The DCS-7413 supports both ActiveX mode for Internet Explorer and Java mode for other browsers such as Chrome®, Firefox® and Safari®.

Supports a Variety of Platforms

Supporting TCP/IP networking, HTTP, and other Internet related protocols. The DCS-7413 can also be integrated easily into other Internet/Intranet applications because of its standards-based features. The DCS-7413 works with any 10/100 Ethernet network, making the DCS-7413 easy to integrate into your existing network environment.

Advanced Event Management

The DCS-7413 can be set up to send e-mail notifications with snapshots when an event occurs, such as when motion is detected. Events can be triggered from several sources, such as motion detection, timer based events or digital input based events.

Automatic Thermostat Temperature Regulation

The DCS-7413 monitors and automatically regulates its temperature to ensure it can perform at its optimal ability. It balances fan use against a built in heater based on a range of preset thermostatic settings. This gives the DCS-7413 the ability to perform in the most demanding of environments.

Remote Monitoring Utility

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

IR LED for Day and Night Functionality

The built-in infrared LEDs enables night time viewing of up to 30 meters (98 feet).

IP66 Weatherproof Housing

The DCS-7413 uses an IP68 weatherproof housing, allowing you to rest assured that in the toughest of conditions, it will continue to provide round-the-clock surveillance.

PoE (Power over Ethernet) for Flexible Installation

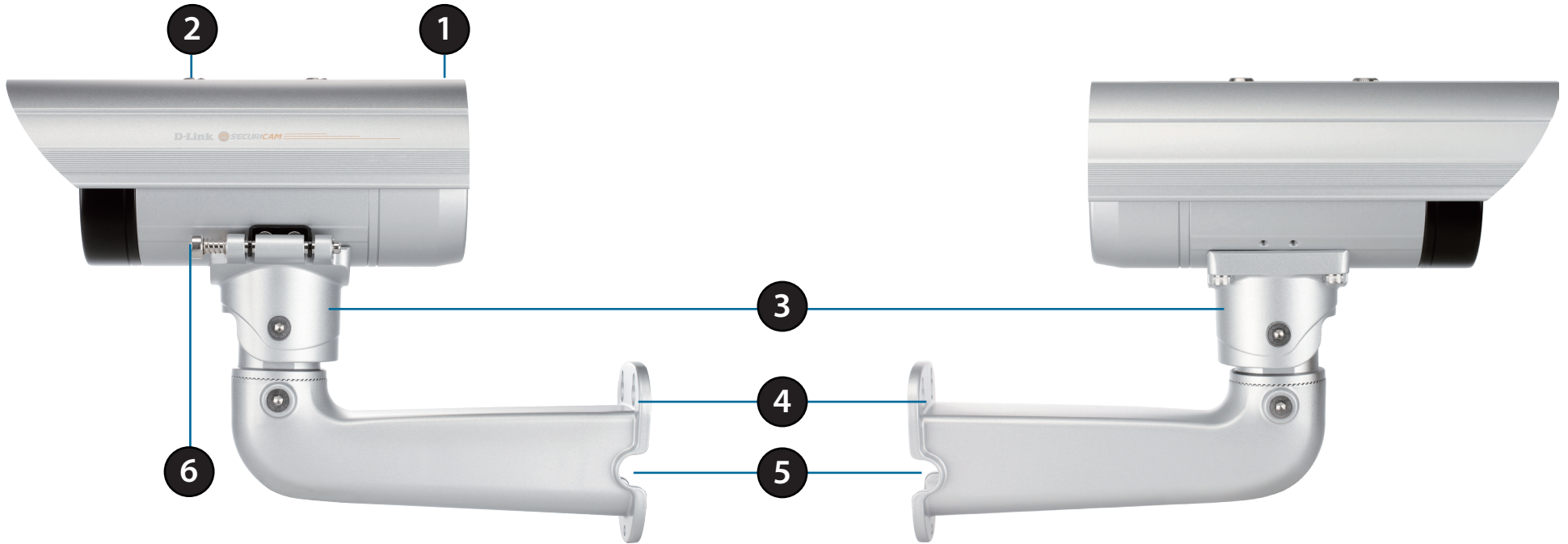
The DCS-7413 can draw all the power it needs from a PoE switch or PoE injector for a simple and clutter-free installation.

Hardware Overview Front



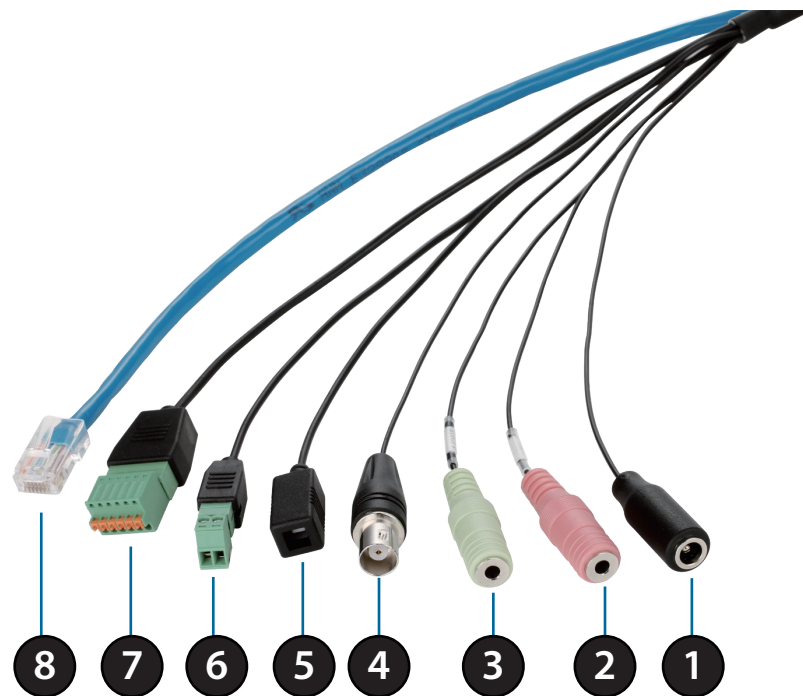
1	Camera Lens	Fixed lens to record video of the surrounding area
2	ICR Sensor	The IR-Cut Removable sensor measures the lighting conditions and switches between color and infrared accordingly
3	IR LEDs	Infrared LEDs illuminate the camera's field of view at night
4	Power/Status LED	Indicates the camera's current status
5	Weatherproof Casing	The camera is housed in an IP66 certified weatherproof casing, which protects it against rain and dust.

Sides



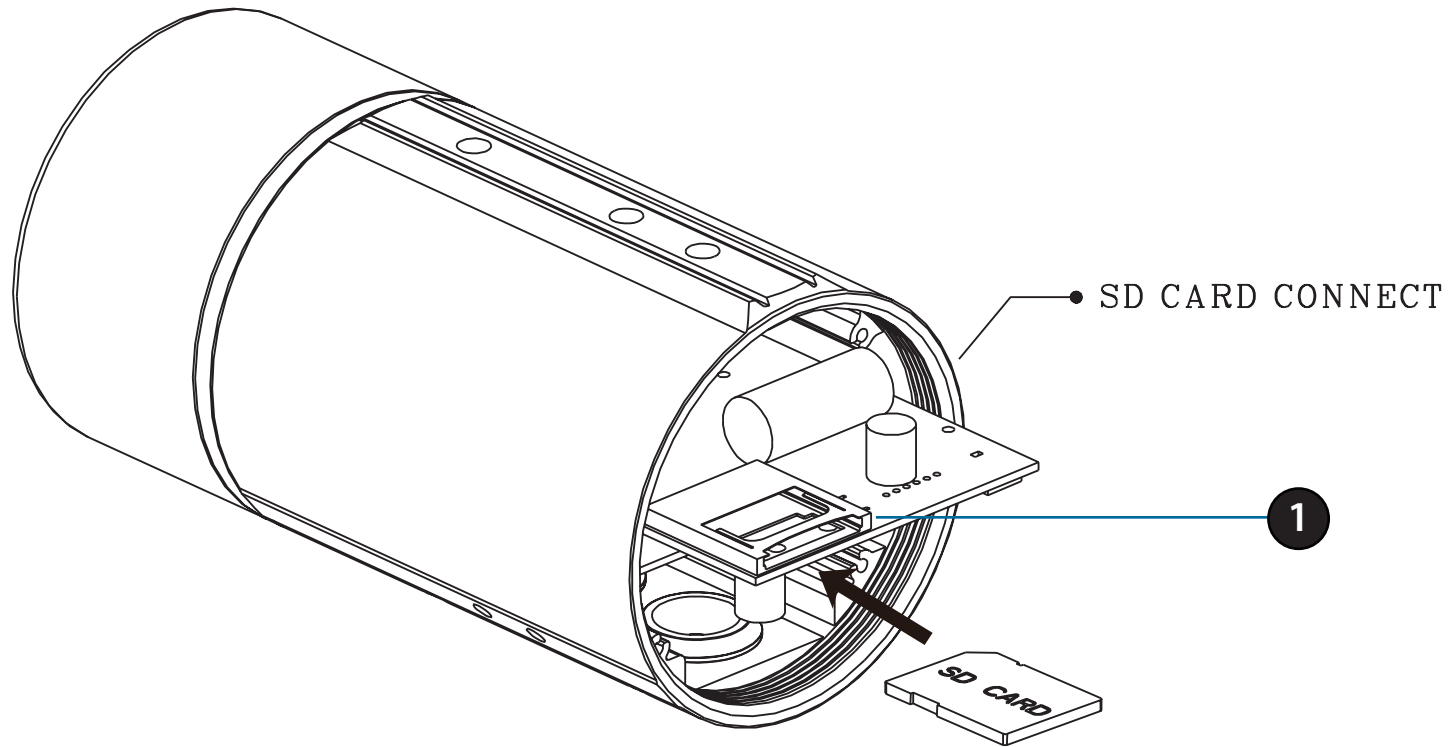
1	Adjustable Top Shield	Shields the camera sensor from direct sunlight.
2	Adjustment Screw	Allows adjustment of the Top Shield.
3	Camera Shoe	Adjustable mounting seat.
4	Wire in Bracket	Tightly assembles and protects the cables from outdoor wear and tear.
5	Cable Channel	Channel for cable placement.
6	Quick Release Rod	Allows the camera to be swiveled into position for easy maintenance.

Cable Harness



1	Power Connector	Power connector for the provided 12V DC power adapter.
2	Audio In (Red)	Connects to a microphone.
3	Audio Out (Green)	Connects to a speaker.
4	BNC Connector	The BNC connector is recommended for use with handheld monitors to check the Field of View during installation.
5	Reset Button	Press and hold the recessed button for 10 seconds to reset the camera.
6	24 V Power Connector	Connects to 24 V AC power supply.
7	DI/DO Connector	I/O connectors for external devices. 12V DC output.
8	Ethernet Jack	Connects to an RJ45 Ethernet port. Can be replaced with a PoE cable to provide power to the camera.

Internal



1	SD Card Slot	Insert an SD card for Local storage for storing recorded image and video
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Note: For step-by-step instruction on how to insert an SD card please skip to "Installing an SD Card" on page 11.

Assembly and Installation

Installing an SD Card

Step 1

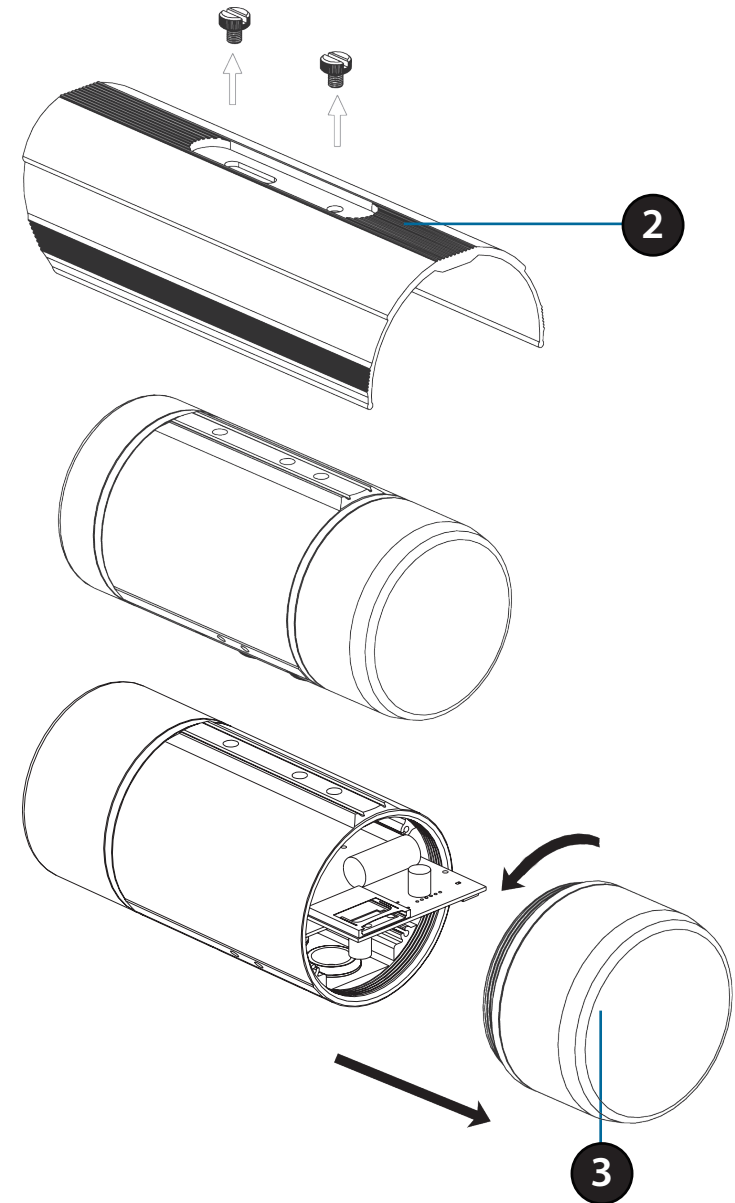
Place the camera face down on a non-slip flat surface.

Step 2

Remove the adjustable top shield by removing the two retaining screws.

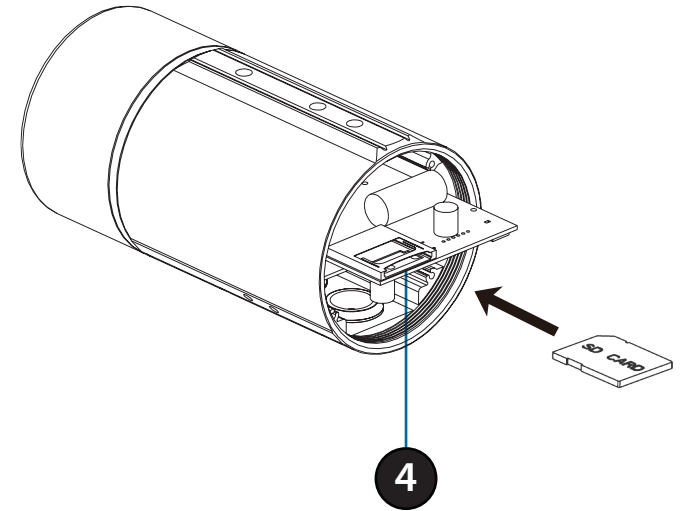
Step 3

Remove the base of the camera by holding the camera firmly and rotating the base in a counter clockwise direction.



Step 4

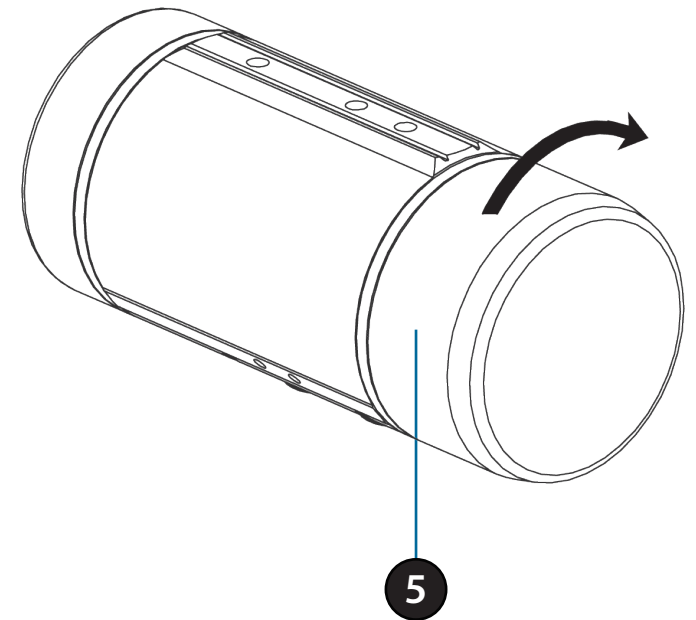
Insert your SD memory card into the slot with the notch oriented to the fore of the camera.



Step 5

Replace the base of the camera by holding the camera firmly and rotating the base in a clockwise direction ensuring a tight fit.

Note: Users are advised to ensure that the weatherproof seals are secured firmly in place.



Mounting the Camera

The DCS-7413 is suitable for mounting to a wall using the camera shoe and wire-in bracket provided.

Step 1

Straighten the two sets of cables from the camera side by side.

Step 2

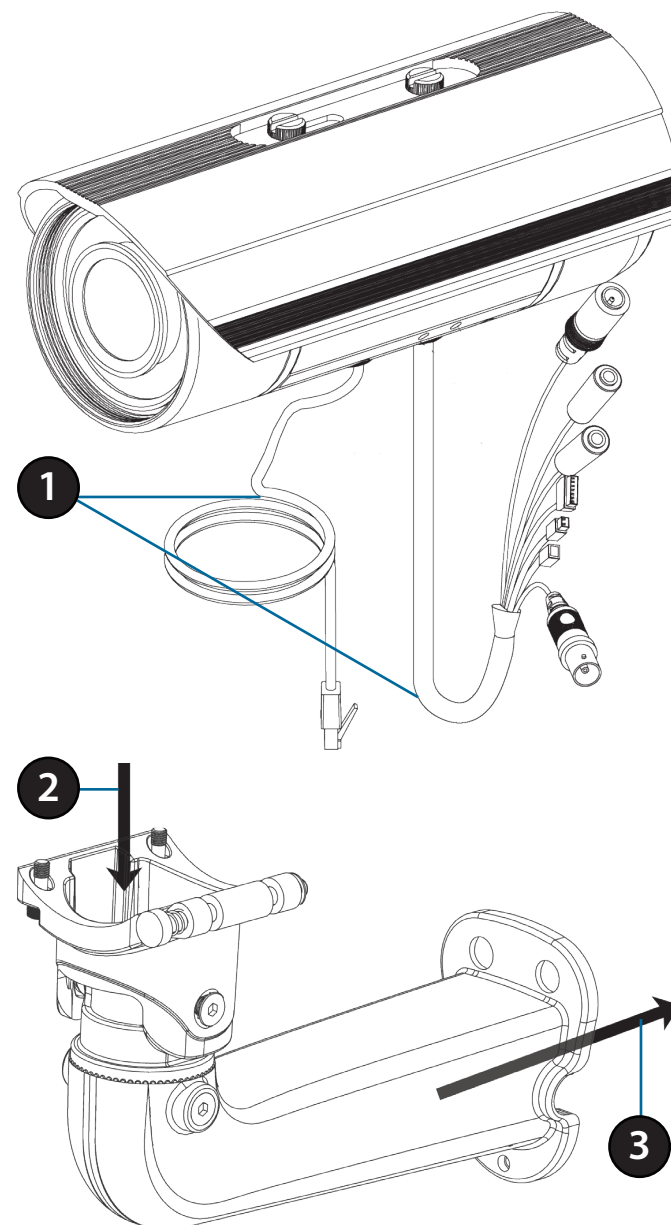
Pass individual cables into the wire-in bracket ensuring the head of each has fully passed through the bend.

Step 3

Once all the cables are in the wire-in bracket push the cable until you are able to pull them through the base of the bracket.

Step 4

Attach the camera bracket to the wire-in bracket following the steps outlined in "Attaching the Camera to the Wire-in Bracket" on page 14.



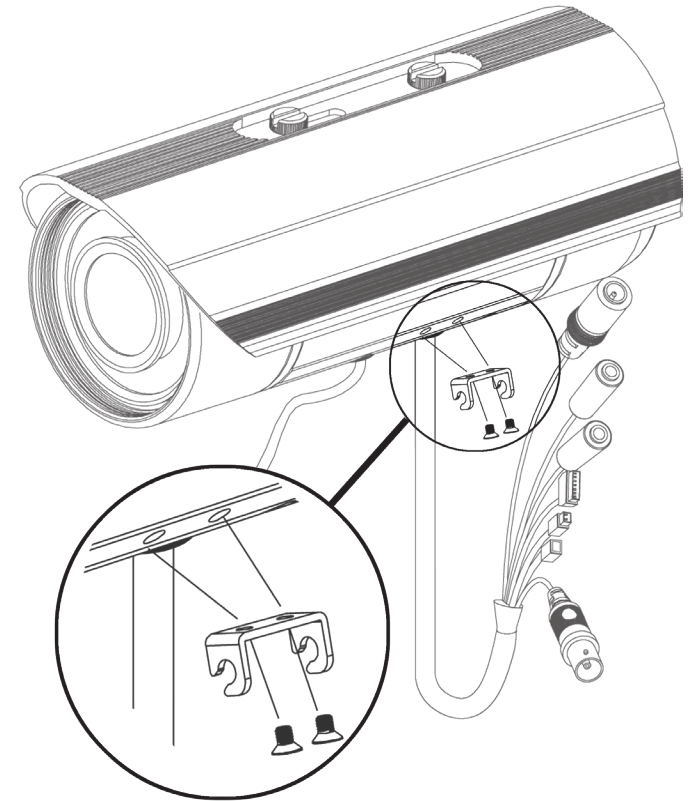
Attaching the Camera to the Wire-in Bracket

Note:

Before attaching the camera to the wire-in bracket, ensure the camera shoe is oriented correctly for its final position. For instructions on how to orient the camera shoe skip to "Orienting the Camera" on page 16.

Step 1

Using the two screws provided attach the quick release retention clip to the underside of the camera.



Step 2

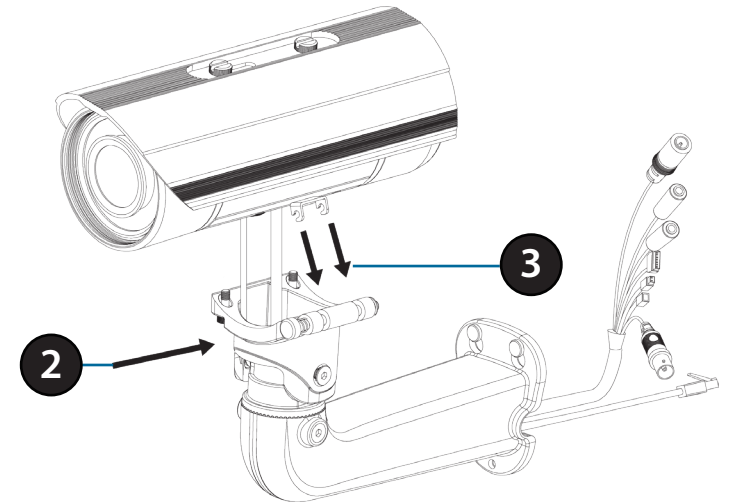
Push the quick release rod to reveal the attachment notches.

Step 3

Slot the quick release retention clip over the quick release rod.

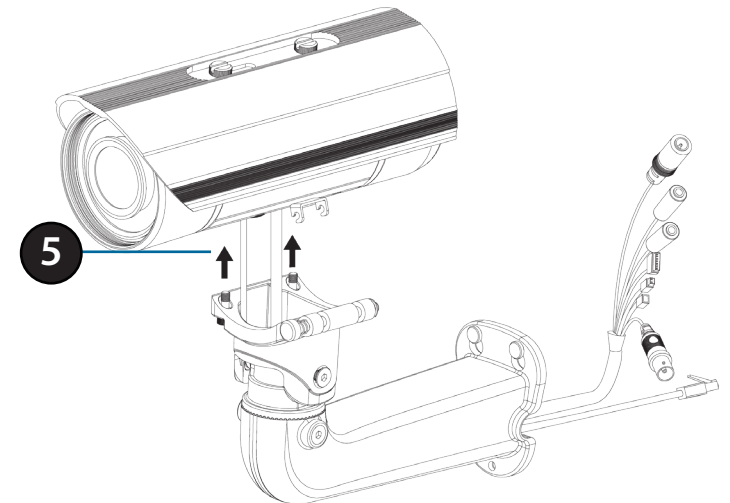
Step 4

Allow the quick release rod to return.



Step 5

Using the Allen Wrench provided, tighten the two remaining fixing bolts.



Orienting the Camera

The DCS-7413 can be adjusted to ensure an optimal viewing position when mounted to a wall by following the steps outlined.

Step 1

Using the Allen Wrench provided, loosen the adjusting bolts on both sides of the camera shoe. This will allow you to adjust the vertical orientation of the camera.

Step 2

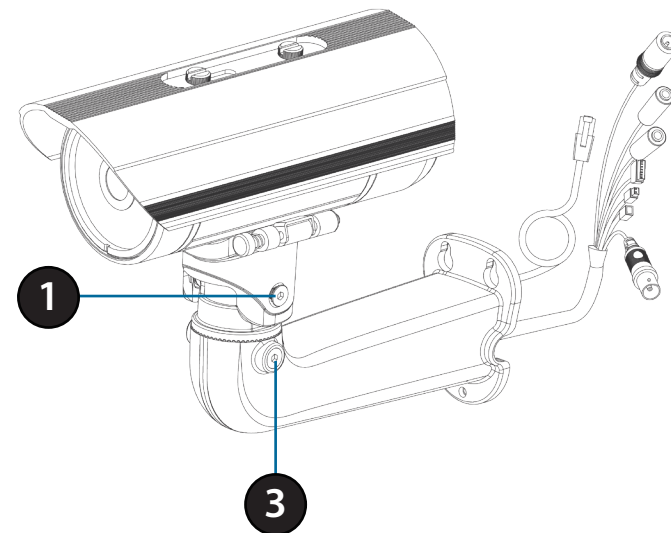
Firmly tighten the adjustment bolts on both sides of the camera shoe.

Step 3

Using the Allen Wrench provided, loosen the adjusting bolts on both sides of the wire-in bracket. This will allow you to adjust the horizontal orientation of the camera.

Step 4

Firmly tighten the adjustment bolts on both sides of the wire-in bracket.



Deploying the Camera

Note: Before deploying the camera to a fixed location, it is recommended that you take a photo from the desired location to ensure an adequate field-of-view.

Step 1

Position the Alignment Sticker in the desired location making sure the Camera and Wire-in-Bracket have sufficient space. Use the dimension diagrams in "Dimensions" on page 68 for additional reference.

Step 2

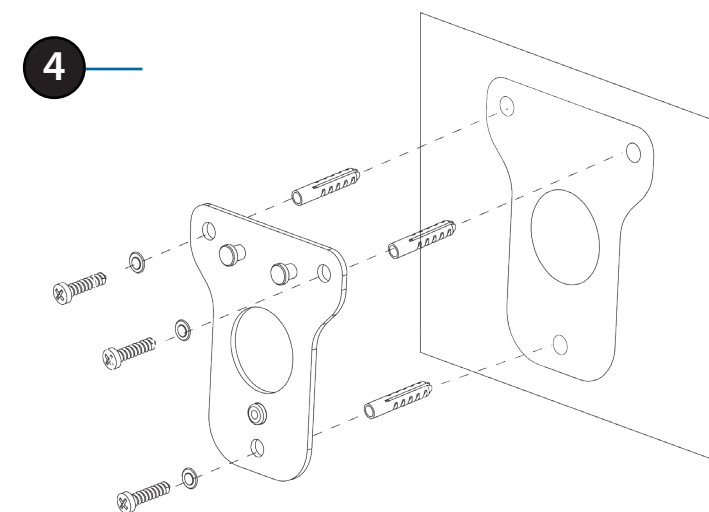
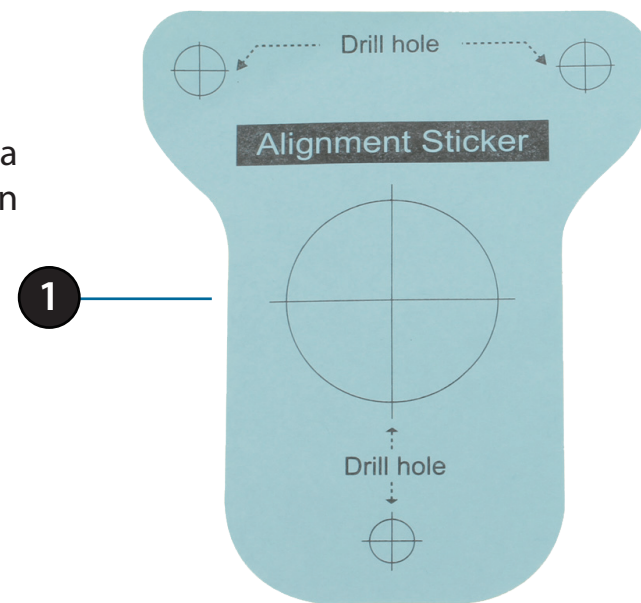
Use a 6mm drill bit to make required holes approximately 30mm deep.

Step 3

Remove the Alignment Sticker.

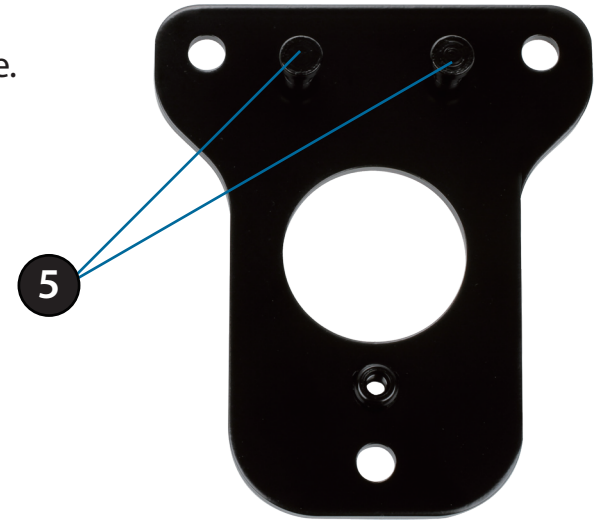
Step 4

Insert wall anchors and affix the mounting plate using the screws provided.



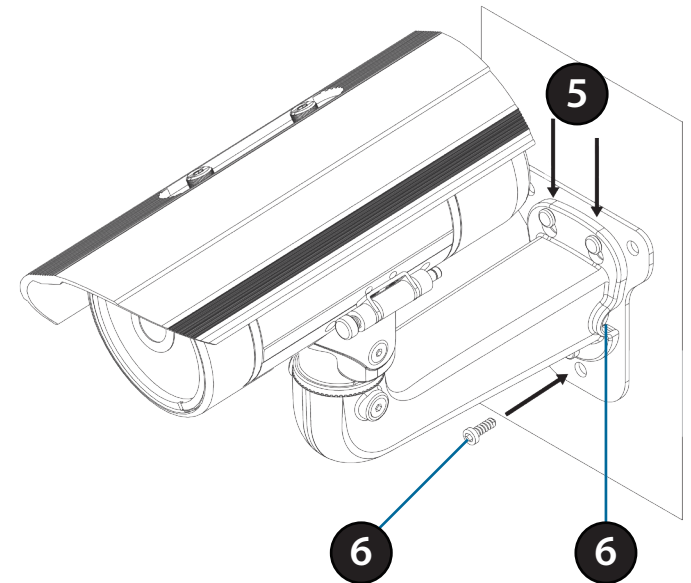
Step 5

Suspend the camera and wire-in bracket from the two lugs on the mounting plate.



Step 6

Fasten the camera firmly to the mounting plate using the screw provided ensuring clear passage for the cables through the cable channel or via the mounting plate cut-out.



Camera Installation Wizard

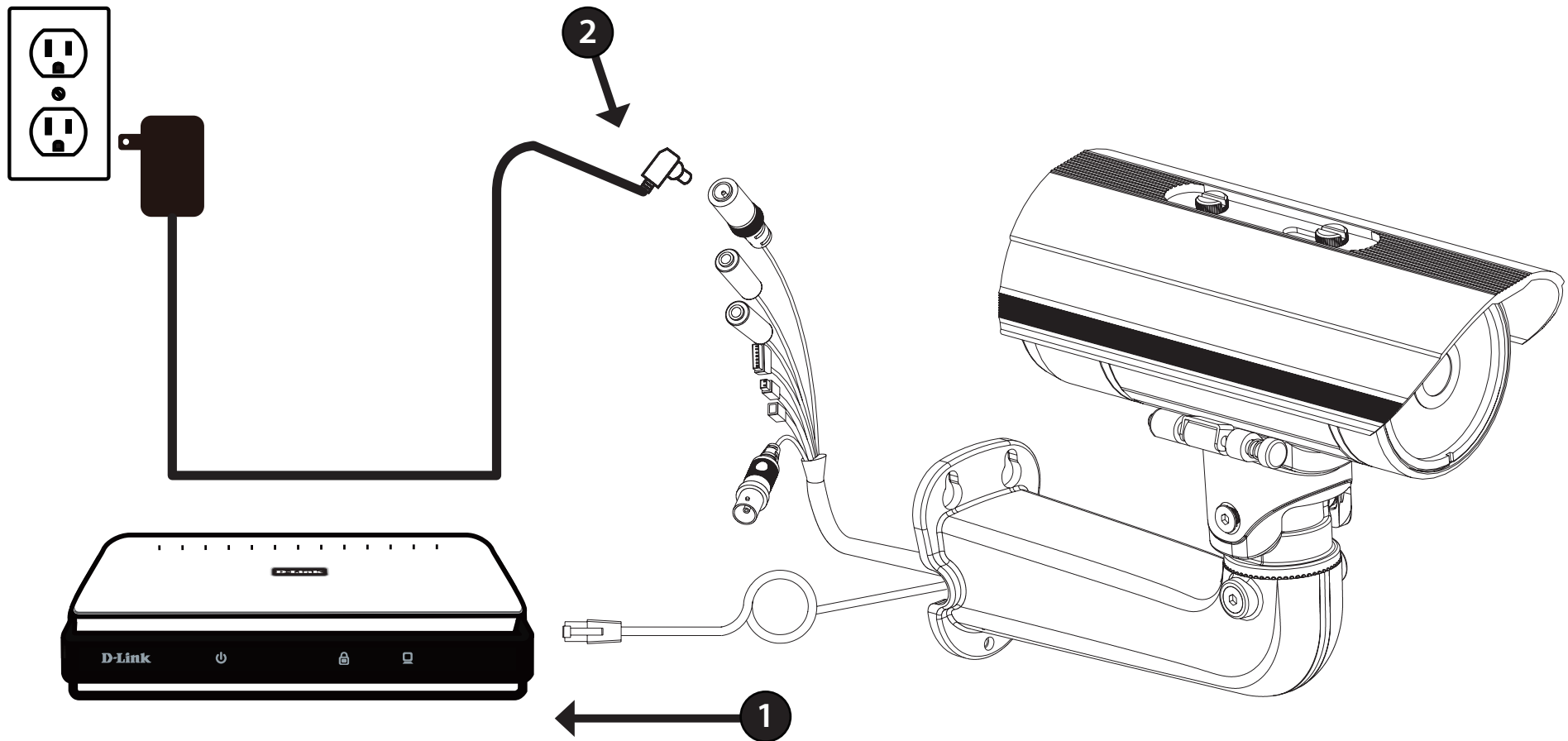
Connection with 12 V DC Power Adapter

Step 1

Connect the network camera to a hub via an Ethernet cable.

Step 2

Connect the supplied power cable from the camera to a power outlet.



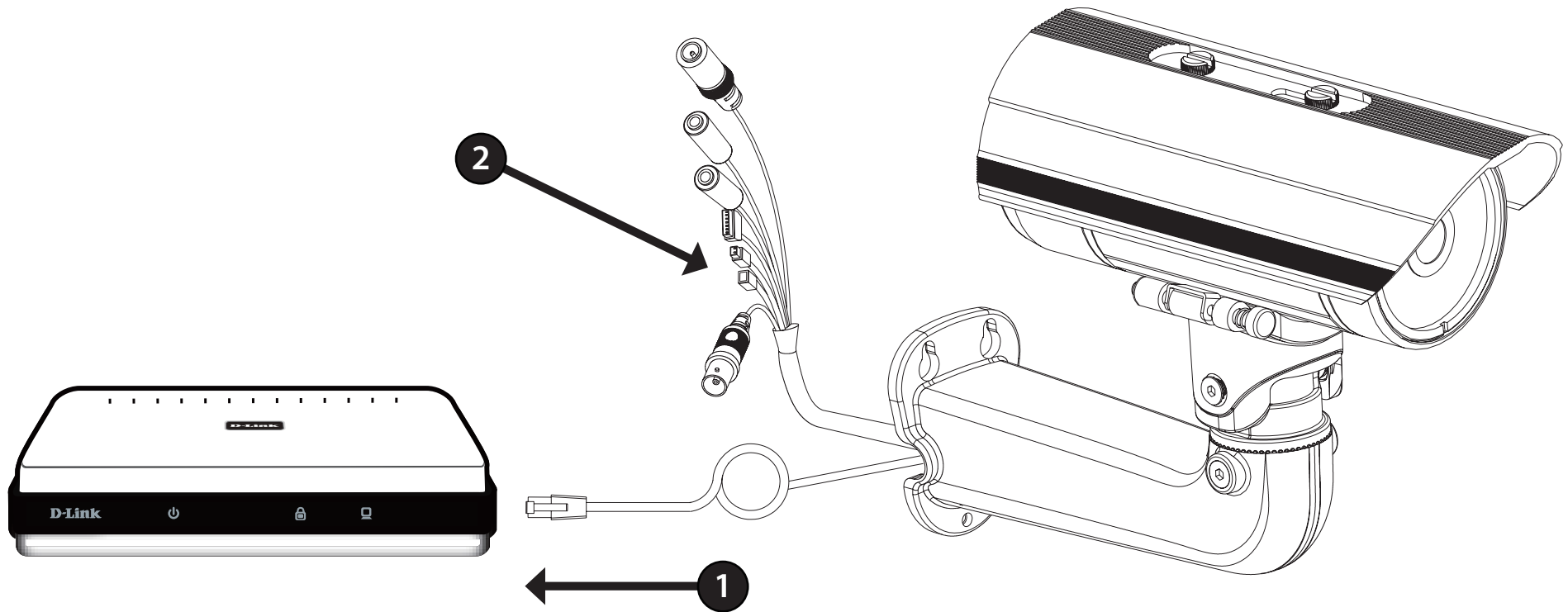
Connection with 24 V AC Power Wiring

Step 1

Connect the network camera to a hub via an Ethernet cable.

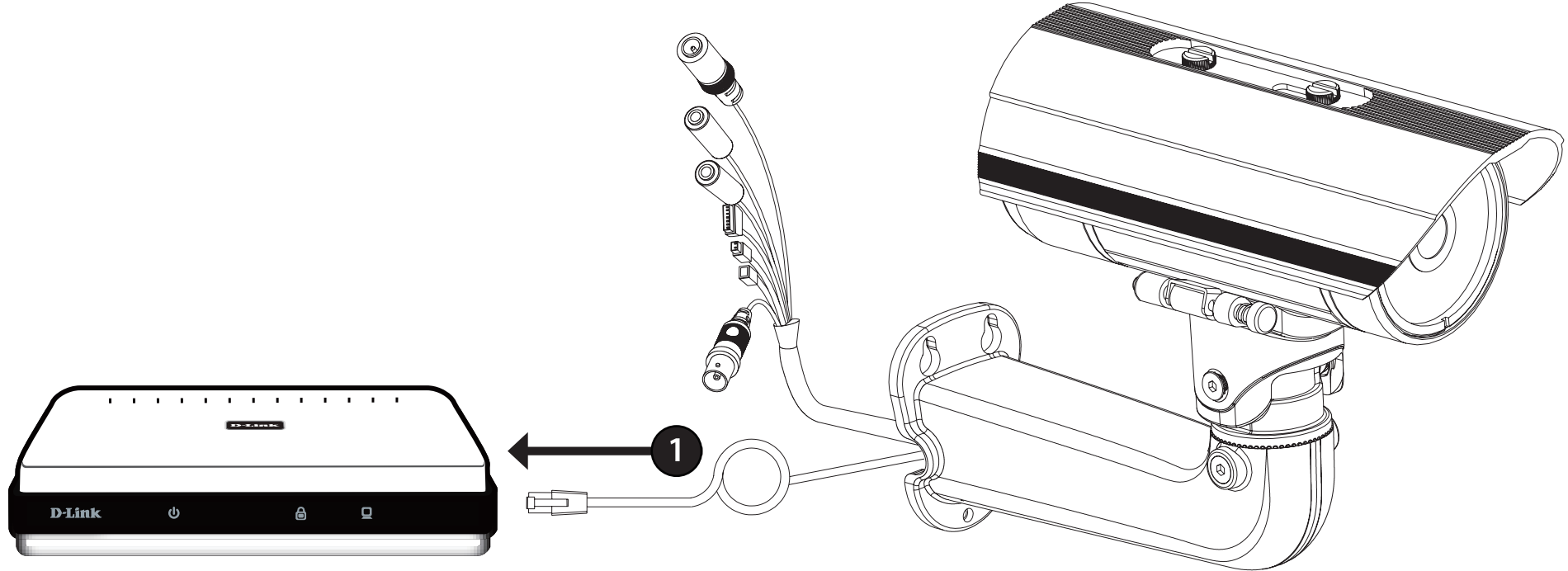
Step 2

Connect the supplied power cable from the camera to a power source such as your building's emergency power.



Connection with Power over Ethernet

Step 1
If you are using a PoE hub, connect the IP camera to the hub via an Ethernet cable, which will provide transmission of both power and data over a single cable.



Step 4

By default the **Admin ID** is "admin" and the password is blank.

It is recommended that you create and confirm a password for your device. Click **Next** to continue.



Step 5

Select **Static IP** if your Internet Service Provider has provided you with connection settings, or if you wish to set a static address within your home network. Enter the correct configuration information and click **Next** to continue.

Note: Select DHCP if you are unsure of which settings to choose.

Click **Next** to continue.



Step 6

Confirm your camera login details and IP address details and click **Restart**.

The LED on the front of the DCS-7413 will blink, then turn solid green once it successfully connects to your network.



Step 7

Your DCS-7413 camera is now set up, Click **Exit** to exit the wizard and can skip to "Configuration" on page 25 for advanced configuration of your camera.



Configuration

Using the Configuration Interface

After completing the Camera Installation Wizard, you are ready to use your camera. The camera's built-in Web configuration utility is designed to allow you to easily access and configure your DCS-7413. At the end of the wizard, click **Link**, or enter the IP address of your camera into a web browser, such as Mozilla Firefox. 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**.

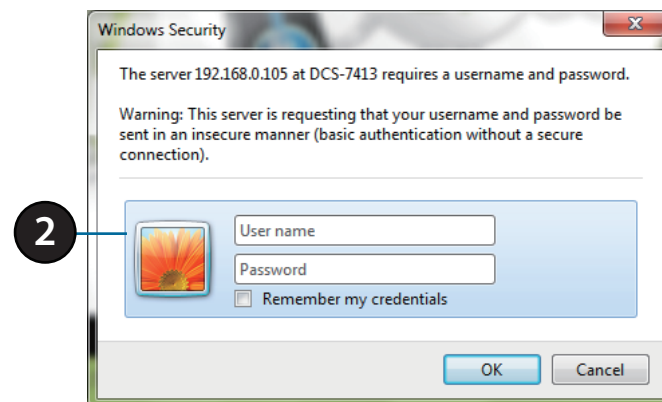
Step 1

Click the **Link** button on the Wizard.



Step 2

Enter your credentials to access the configuration interface.










Live Video

This section shows your camera's live video. You may select any of the available icons listed below to operate the camera. You may also select your language using the drop-down menu on the left side of the screen.

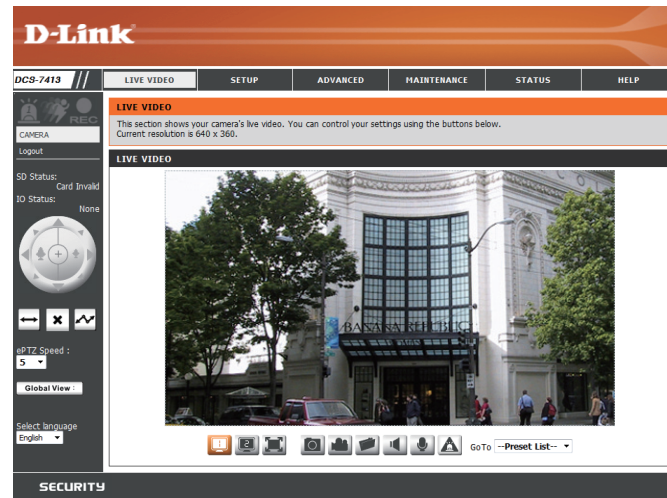
You can zoom in and out on the live video image using your mouse. Right-click to zoom out or left-click to zoom in on the image.

SD Status: This option displays the status of the SD card. If no SD card has been inserted, this screen will display the message "Card Invalid."

IO Status: This option displays the status of your I/O device if a device has been connected.











	Digital Input Indicator	This indicator will change color when a digital input signal is detected.
	Motion Trigger Indicator	This indicator will change color when a trigger event occurs. Note: The video motion feature for your camera must be enabled.
	Recording Indicator	When a recording is in progress, this indicator will change color.
	Control Pad	This control pad can be used to electronically pan, tilt, and zoom (ePTZ) within the camera's predefined view area, if one has been defined.
	Auto Pan	Starts the automatic panning function. The ROI will pan from back and forth within the FOV
	Stop	Stops the camera ePTZ motion
	Preset Path	Starts the camera's motion along the predefined path

ePTZ Speed: You may select a value between 0 and 10. 0 is the slowest and 10 is the fastest.

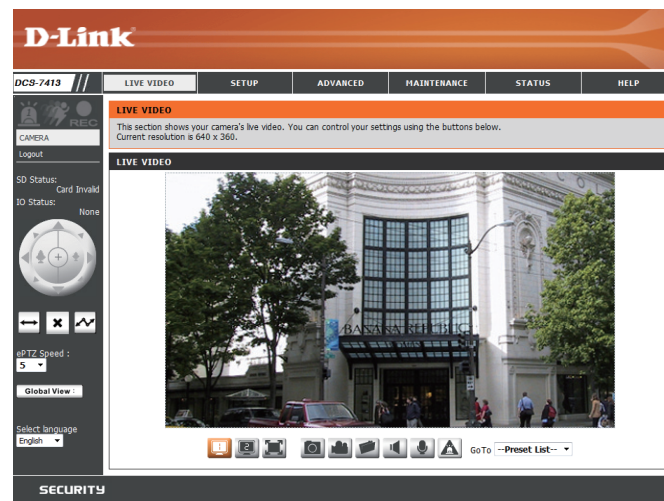


Global View: This window indicates the total field of view (FOV) of the camera. The red box indicates the visible region of interest (ROI).

Language: You may select the interface language using this menu.

- | | |
|---|--|
|  Video Profile 1 |  Record a Video Clip |
|  Video Profile 2 |  Set a Storage Folder |
|  Video Profile 3 |  Listen/Stop Audio In (from microphone) |
|  Full screen mode |  Start/Stop Audio Out (to speaker) |
|  Taking a Snapshot |  Start/Stop Digital Output |

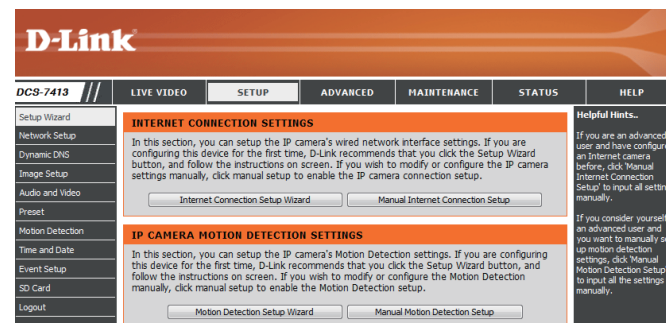
Go To: If any presets have been defined, selecting a preset from this list will (**Preset List**) display it.



Setup Setup Wizard

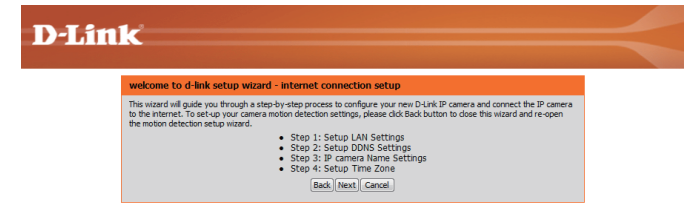
To configure your Network Camera, click **Internet Connection Setup Wizard**. Alternatively, you may click **Manual Internet Connection Setup** to manually configure your Network Camera and skip to "Network Setup" on page 34.

To quickly configure your Network Camera's motion detection settings, click **Motion Detection Setup Wizard**. If you want to enter your settings without running the wizard, click **Manual Motion Detection Setup** and skip to "Motion Detection" on page 44.



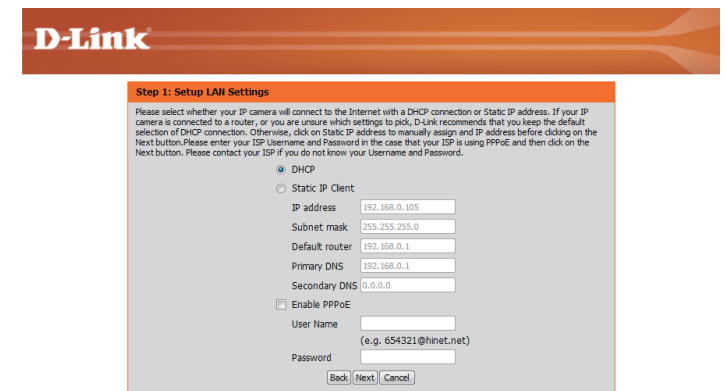
Internet Connection Setup Wizard

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.



Note: Select DHCP if you are unsure of which settings to choose.

Click **Next** to continue.



Section 3: Configuration

Select **Static IP** if your Internet Service Provider has provided you with connection settings, or if you wish to set a static address within your home network. Enter the correct configuration information and click **Next** to continue.

If you are using PPPoE, select **Enable PPPoE** and enter your user name and password, otherwise click **Next** to continue.

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

Enter a name for your camera and click **Next** to continue.

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Step 1: Setup LAN Settings

Please select whether your IP camera will connect to the Internet with a DHCP connection or Static IP address. If your IP 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 and IP address before clicking on the Next button. Please enter your ISP Username and Password in the case that your ISP is using PPPoE and then click on the Next button. Please contact your ISP if you do not know your Username and Password.

DHCP
 Static IP Client

IP address 192.168.0.103
Subnet mask 255.255.255.0
Default router 192.168.0.1
Primary DNS 192.168.0.1
Secondary DNS 0.0.0.0

Enable PPPoE

User Name _____
(e.g. 654321@hinet.net)

Password _____

Back Next Cancel

D-Link

Step 2: Setup DDNS Settings

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

Enable DDNS

Server Address www.dlinkddns.com << www.dlinkddns.com

Host Name _____

User Name _____

Password _____

Verify Password _____

Timeout 24 (hours)

Back Next Cancel

D-Link

Step 3: IP camera Name Settings

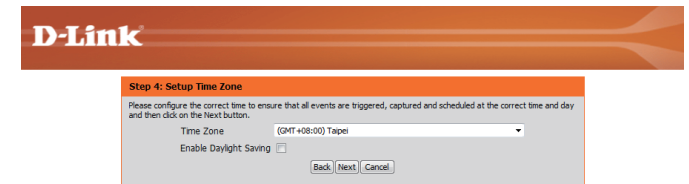
D-Link recommends that you rename your IP camera for easy accessibility. You can then identify and connect to your IP camera via this name. Please assign a name of your choice before clicking on the Next button.

IP camera Name DCS-7413

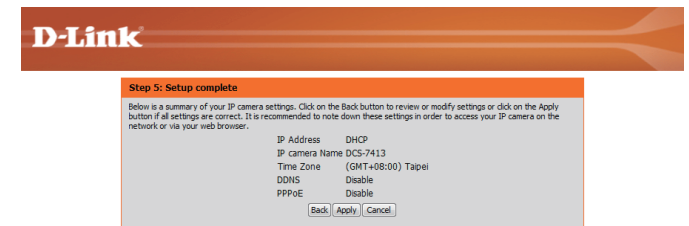
Back Next Cancel

Section 3: Configuration

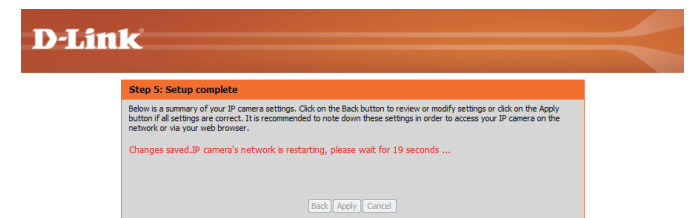
Configure the correct time to ensure that all events will be triggered as scheduled. Click **Next** to continue.



Confirm the settings are correct and click **Apply** to save them.



The settings will be saved to the DCS-7413 and the camera will restart.



Motion Detection Setup Wizard

This wizard will guide you through a step-by-step process to configure your camera's motion detection functions.

Click **Next** to continue.

Step 1

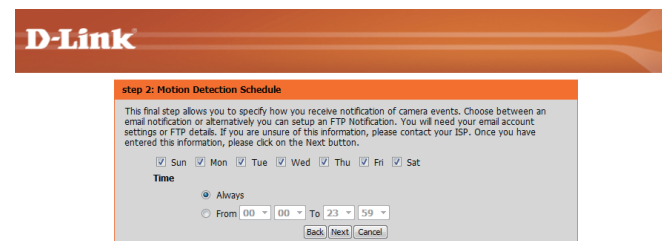
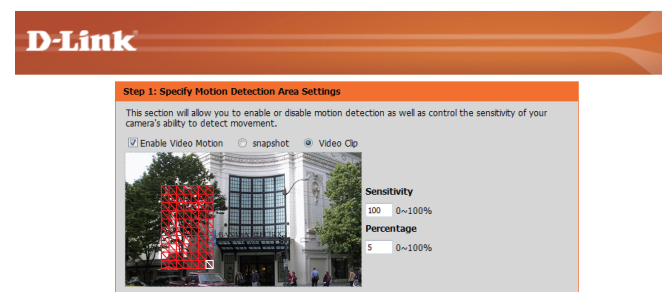
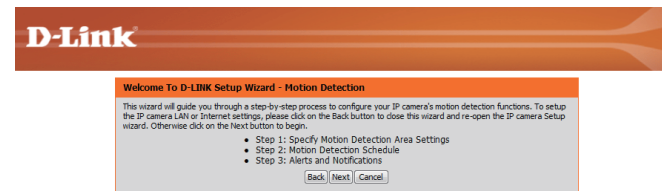
This step will allow you to enable or disable motion detection, specify the detection sensitivity, and adjust the camera's ability to detect movement.

You may specify whether the camera should capture a snapshot or a video clip when motion is detected.

Please see the **Motion Detection** section on "Motion Detection" on page 44 for information about how to configure motion detection.

Step 2

This step allows you to enable motion detection based on a customized schedule. Specify the day and hours. You may also choose to always record whenever motion is detected.



Step 3

This step allows you to specify how you will receive event notifications from your camera. You may choose not to receive notifications, or to receive notifications via e-mail or FTP.

Please enter the relevant information for your e-mail or FTP account.

Click **Next** to continue.

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Step 3: Alerts and Notification

This final step allows you to specify how you receive notification of camera events. Choose between an email notification or alternatively you can setup an FTP Notification. You will need your email account settings or FTP details. If you are unsure of this information, please contact your ISP. Once you have entered this information, please click on the Next button.

The Sender email address should be filled.

Do not notify me

Email

Sender email address: d@link.com

Recipient email address: d@link.com

Server address: mail.dlink.com

User name: dee

Password: ****

Port: 25

FTP

Server address: []

Port: 21

User name: []

Password: []

Remote folder name: []

Back Next Cancel

Step 4

You have completed the Motion Detection Wizard.

Please verify your settings and click **Apply** to save them.

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Step 4: Setup Complete

You have completed your IP camera setup. Please click the Back button if you want to review or modify your settings or click on the Apply button to save and apply your settings.

Motion Detection : Enable

EVENT : Video Clip

Schedule Day : Sun , Mon , Tue , Wed , Thu , Fri , Sat ,

Schedule Time : Always

Alerts and Notification : Email

Back Apply Cancel

Please wait a few moments while the camera saves your settings and restarts.

D-Link

Step 4: Setup Complete

You have completed your IP camera setup. Please click the Back button if you want to review or modify your settings or click on the Apply button to save and apply your settings.

Changes saved. IP camera's network is restarting, please wait for 6 seconds ...

Back Apply Cancel

Network Setup

Use this section to configure the network connections for your camera. All relevant information must be entered accurately. After making any changes, click the **Save Settings** button to save your changes.

LAN Settings: This section lets you configure settings for your local area network.

DHCP: Select this connection if you have a DHCP server running on your network and would like your camera to obtain an IP address automatically.

If you choose DHCP, you do not need to fill out the IP address settings.

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 may simplify access to your camera in the future.

IP Address: Enter the fixed IP address in this field.

Subnet Mask: This number is used to determine if the destination is in the same subnet. The default value is 255.255.255.0.

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: The primary domain name server translates names to IP addresses.

Secondary DNS: The secondary DNS acts as a backup to the primary DNS.

D-Link

DCS-7413 // LIVE VIDEO SETUP ADVANCED MAINTENANCE STATUS HELP

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

LAN SETTINGS

DHCP

Static IP Client

IP address: 192.168.0.105
Subnet mask: 255.255.255.0
Default router: 192.168.0.1
Primary DNS: 192.168.0.1
Secondary DNS: 0.0.0.0

Enable UPnP presentation
 Enable UPnP port forwarding
Forwarding Port: 1024 [Test]
Forwarding Status: UPnP forwarding is inactive

PPPOE SETTINGS

Enable Disable

User Name: _____
Password: _____
Confirm password: _____
PPPoE Status: PPPoE is inactive.

HTTP

HTTP port: 80
Access name for stream1: video1.mjpg
Access name for stream2: video2.mjpg

HTTPS

HTTPS port: 443

RTSP

Authentication: Disable
RTSP port: 554
Access name for stream1: live1.sdp
Access name for stream2: live2.sdp

COS SETTINGS

Enable CoS

VLAN ID: 1 [0-4095]
Live video: 0
Live audio: 0
Event/Alarm: 0
Management: 0

QoS SETTINGS

Enable QoS

Live video: 0
Live audio: 0
Event/Alarm: 0
Management: 0

Helpful Hints...

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

UPnP: Enabling UPnP settings will allow you to configure your IP camera as an UPnP device in the network.

PPPoE Setting: If you use the IP camera to connect directly to the Internet, you will need to enter the username and password, which were given to you when you set up your account with your Internet Service Provider. If the camera is behind a router or a gateway, you do not need to configure this setting.

HTTP: HTTP Port is the port you allocate in order to connect to the IP camera via a standard web browser.

HTTPS: HTTPS Port is a IP camera connects it with a PC via a secure web browser.

RTSP: RTSP Port is the port you allocate in order to connect to a IP camera by using streaming mobile device(s), such as a mobile phone or PDA.

CoS (Class of Service): CoS is a network traffic control based on the L2 protocol. Class of Service techniques do not guarantee a level of service in terms of bandwidth and delivery time, they offer a "best-effort".

QoS (Quality of Service): Priority-based traffic control, a resource reservation control mechanism. Quality of service guarantees are important if the network capacity is insufficient, especially for real-time streaming multimedia applications.

Enable UPnP Presentation: Enabling this setting allows your camera to be configured as a UPnP device on your network.

Enable UPnP Port Forwarding: Enabling this setting allows the camera to add port forwarding entries into the router automatically on a UPnP capable network.

Enable PPPoE: Enable this setting if your network uses PPPoE.

User Name / Password: Enter the username and password for your PPPoE account. Re-enter your password in the Confirm Password field. You may obtain this information from your ISP.

HTTP Port: The default port number is 80.

Access Name for Stream 1~3: The default name is video#.mjpg, where # is the number of the stream.

HTTPS Port: You may use a PC with a secure browser to connect to the HTTPS port of the camera. The default port number is 443.

Authentication: Choose to enable or disable RTSP digest encryption. Digest encryption uses MD5 hashes.

RTSP Port: The port number that you use for RTSP streaming to mobile devices, such as mobile phones or PDAs. The default port number is 554. You may specify the address of a particular stream. For instance, live1.sdp can be accessed at rtsp://x.x.x.x/video1.sdp where the x.x.x.x represents the ip address of your camera.

LAN SETTINGS	
<input checked="" type="radio"/> DHCP	
<input type="radio"/> Static IP Client	
IP address	<input type="text" value="192.168.0.105"/>
Subnet mask	<input type="text" value="255.255.255.0"/>
Default router	<input type="text" value="192.168.0.1"/>
Primary DNS	<input type="text" value="192.168.0.1"/>
Secondary DNS	<input type="text" value="0.0.0.0"/>
<input checked="" type="checkbox"/> Enable UPnP presentation	
<input type="checkbox"/> Enable UPnP port forwarding	
Forwarding Port	<input type="text" value="1024"/> <input type="button" value="Test"/>
Forwarding Status	UPnP forwarding is inactive

PPPOE SETTINGS	
<input type="radio"/> Enable	<input checked="" type="radio"/> Disable
User Name	<input type="text"/>
Password	<input type="text"/>
Confirm password	<input type="text"/>
PPPoE Status	PPPoE is inactive.

HTTP	
HTTP port	<input type="text" value="80"/>
Access name for stream1	<input type="text" value="video1.mjpg"/>
Access name for stream2	<input type="text" value="video2.mjpg"/>

HTTPS	
HTTPS port	<input type="text" value="443"/>

RTSP	
Authentication	<input type="text" value="Disable"/>
RTSP port	<input type="text" value="554"/>
Access name for stream1	<input type="text" value="live1.sdp"/>
Access name for stream2	<input type="text" value="live2.sdp"/>

COS SETTINGS	
<input type="checkbox"/> Enable CoS	
VLAN ID	<input type="text" value="1"/> [0~4095]
Live video	<input type="text" value="0"/>
Live audio	<input type="text" value="0"/>
Event/Alarm	<input type="text" value="0"/>
Management	<input type="text" value="0"/>

Enable CoS: Enabling the Class of Service setting implements a best-effort policy without making any bandwidth reservations.

Enable QoS: Enabling QoS allows you to specify a traffic priority policy to ensure a consistent Quality of Service during busy periods. If the Network Camera is connected to a router that itself implements QoS, the router's settings will override the QoS settings of the camera.

Enable IPv6: Enable the IPv6 setting to use the IPv6 protocol. Enabling the option allows you to manually set up the address, specify an optional IP address, specify an optional router and an optional primary DNS.

Enable Multicast for stream The DCS-7413 allows you to multicast each of the available streams via group address and specify the TTL value for each stream. Enter the port and TTL settings you wish to use if you do not want to use the defaults.

COS SETTINGS

Enable CoS
 VLAN ID [0~4095]
 Live video
 Live audio
 Event/Alarm
 Management

QOS SETTINGS

Enable QoS
 Live video
 Live audio
 Event/Alarm
 Management

IPv6

Enable IPv6

 Manually setup the IP address
 Optional IP address / Prefix length /
 Optional default router
 Optional primary DNS

MULTICAST

Enable multicast for stream 1
 Multicast group address
 Multicast video port
 Multicast RTCP video port
 Multicast audio port
 Multicast RTCP audio port
 Multicast TTL [1~255]
 Enable multicast for stream 2
 Multicast group address
 Multicast video port
 Multicast RTCP video port
 Multicast audio port
 Multicast RTCP audio port
 Multicast TTL [1~255]

Dynamic DNS

DDNS (Dynamic Domain Name Server) will hold a DNS host name and synchronize the public IP address of the modem when it has been modified. A user name and password are required when using the DDNS service. After making any changes, click the **Save Settings** button to save your changes.

Enable DDNS: Select this checkbox to enable the DDNS function.

Server Address: Select your Dynamic DNS provider from the pull down menu or enter the server address manually.

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

User Name: Enter the user name or e-mail used to connect to your DDNS account.

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

Timeout: Enter the DNS timeout values you wish to use.

Status: Indicates the connection status, which is automatically determined by the system.

The screenshot shows the D-Link DCS-7413 web interface. The main content area is titled 'DYNAMIC DNS' and contains the following text: 'The Dynamic DNS feature allows you to use a domain name that you have purchased (www.yourdomain.com) to access your IP camera with a dynamically assigned IP address. Most broadband Internet service providers assign dynamic (changing) IP addresses. By using a DDNS service, you can enter your domain name to connect to your IP camera no matter what your IP address is.' Below this text is a link: 'Sign up for D-Link's Free DDNS service at www.DLinkDDNS.com'. There are two buttons: 'Save Settings' and 'Don't Save Settings'.

The 'DYNAMIC DNS SETTING' section includes:

- Enable DDNS:
- Server Address: <<
- Host Name:
- User Name:
- Password:
- Verify Password:
- Timeout: (hours)
- Status:

 At the bottom of this section are 'Save Settings' and 'Don't Save Settings' buttons.

Image Setup

In this section, you may configure the video image settings for your camera. A preview of the image will be shown in Live Video.

Enable Privacy Mask: The Privacy Mask setting allows you to specify up to 3 rectangular areas on the camera's image to be blocked/excluded from recordings and snapshots.

You may click and drag the mouse cursor over the camera image to draw a mask area. Right clicking on the camera image brings up the following menu options:

Disable All: Disables all mask areas

Enable All: Enables all mask areas

Reset All: Clears all mask areas.

Mirror: This will mirror the image horizontally.

Flip: This will flip the image vertically. When turning Flip on, you may want to consider turning Mirror on as well.

Power Line: Select the frequency used by your power lines to avoid interference or distortion.

White Balance: Use the drop-down box to change white balance settings to help balance colors for different environments. You can choose from Auto, Outdoor, Indoor, Fluorescent, and Push Hold.

Exposure Mode: Changes the exposure mode. Use the drop-down box to set the camera for Indoor, Outdoor, or Night

The screenshot shows the D-Link DCS-7413 web interface. The top navigation bar includes 'LIVE VIDEO', 'SETUP', 'ADVANCED', 'MAINTENANCE', 'STATUS', and 'HELP'. The 'SETUP' tab is active, and the 'IMAGE SETUP' sub-tab is selected. Below the navigation, there is a 'LIVE VIDEO' section with a camera preview and a 'Privacy Mask' checkbox. The 'IMAGE SETTINGS' section contains various controls: Mirror (On/Off), Flip (On/Off), Power Line (60 Hz/50 Hz), White Balance (Auto), Exposure Mode (Indoor), Denoise (0), Brightness (128), Contrast (128), Saturation (128), and Sharpness (128). A 'Reset Default' button is located at the bottom of the settings section. On the right side, there is a 'Helpful Hints...' section with text explaining the Privacy Mask, Mirror, Flip, Power Line, White Balance, Exposure Mode, Max Gain, Denoise, Brightness, and Contrast settings.

environments, or to Moving to capture moving objects. The Low Noise option will focus on creating a high-quality picture without noise. You can also create 3 different custom exposure modes. The Max Gain setting will allow you to control the maximum amount of gain to apply to brighten the picture.

Denoise: This setting controls the amount of noise reduction that will be applied to the picture.

Brightness: Adjust this setting to compensate for backlit subjects.

Contrast: Adjust this setting to alter the color intensity/strength.


Saturation: This setting controls the amount of coloration, from grayscale to fully saturated.

Sharpness: Specify a value from 0 to 8 to specify how much sharpening to apply to the image.

Reset Default: Click this button to reset the image to factory default settings.

PRIVACY MASK AREA OF VIDEO SETTING

Enable Privacy Mask Setting



- Privacy mask: mask 3 privacy area(s) on video.
- Click the right mouse button on the video control to show the popmenu.
- Press the left mouse button, drag and drop to set the privacy area.
- Privacy area can be enabled or disabled.
- After you finish all privacy mask settings, click the Save button.

Save

IMAGE SETTINGS

Mirror On Off

Flip On Off

Power Line 60 Hz 50 Hz

White Balance

Exposure Mode Max Gain dB

Denoise

Brightness

Contrast

Saturation

Sharpness

Reset Default

Audio and Video

You may configure up to 3 video profiles with different settings for your camera. Hence, you may set up different profiles for your computer and mobile display. In addition, you may also configure the two-way audio settings for your camera. After making any changes, click the **Save Settings** button to save your changes.

Aspect ratio: Set the aspect ratio of the video to 4:3 standard or 16:9 widescreen.

Mode: Set the video codec to be used to JPEG, MPEG-4, or H.264.

Frame size / View window area: Frame size determines the total capture resolution, and View window area determines the Live Video viewing window size. If the Frame size is larger than the Live Video size, you can use the ePTZ controls to look around.

16:9	1920 x 1080 (up to 15 fps), 1280 x 720, 800 x 450, 640 x 360, 480 x 270, 320 x 176, 176 x 144 up to 30 fps
4:3	1440 x 1080 (up to 15 fps), 1280 x 960, 1024 x 768, 800 x 600, 640 x 480, 320 x 240, 176 x 144 up to 30 fps

Note: If your View window area is the same as your Frame size, you will not be able to use the ePTZ function.

Maximum frame rate: A higher frame rate provides smoother motion for videos, and requires more bandwidth. Lower frame rates will result in stuttering motion, and requires less bandwidth.

The screenshot displays the D-Link DCS-7413 web interface for configuring audio and video settings. The interface includes a navigation menu on the left with options like Setup Wizard, Network Setup, Dynamic DNS, Image Setup, Audio and Video, Preset, Motion Detection, Time and Date, Event Setup, SD Card, and Logout. The main content area is titled 'AUDIO AND VIDEO' and contains the following sections:

- VIDEO SETTINGS:** Includes a dropdown for 'Number of active profiles' (set to 2), an 'Aspect ratio' dropdown (set to 16:9) with a warning: 'Warning: Change the aspect ratio will clear the settings of privacy mask and preset and motion detection.', and buttons for 'Save' and 'Default'.
- VIDEO PROFILE 1:** Includes a 'Mode' dropdown (set to H.264), 'Frame size' (640x360), 'View window area' (640x360), 'Maximum frame rate' (15), and 'Video quality' options (Constant bit rate: 2M, Fixed quality: Excellent).
- VIDEO PROFILE 2:** Includes a 'Mode' dropdown (set to JPEG), 'Frame size' (640x360), 'View window area' (640x360), 'Maximum frame rate' (30), and 'Video quality' (Excellent).
- AUDIO SETTINGS:** Includes checkboxes for 'Audio in off' and 'Audio out off', and volume level dropdowns for 'Audio in gain level' (20dB) and 'Audio out volume level' (10).

Helpful hints on the right side of the interface provide additional information:

- Higher frame size, frame rate and bit rate gives better video quality.** At the same time, it requires more network bandwidth.
- For best viewing results on a mobile phone, we suggest setting the Frame Rate to 5fps and the Bit Rate to 64kbps.**
- Number of active profiles:** The maximum number of profiles that you wish to activate. The maximum profiles are three.
- Aspect Ratio:** An aspect ratio is the ratio between the width and height of an image.
- Mode:** It can be H.264, JPEG or MPEG4. In JPEG mode, the video frames are independent. MPEG4 consumes much less network bandwidth than JPEG, and H.264 can use less bandwidth but better image quality.
- Frame Size:** 7 options exist for the sizes of the video display. It is recommended using 176x144 for mobile viewing and 320x240 for computer viewing.
- View window area:** The viewing region of the current video stream.
- Max frame rate:** The maximum number of frames that is displayed in 1 second. 30fps is the highest video quality for this camera. In general, any frame rate above 15 fps is imperceptible to the human eye.
- Video Quality:** This limits the maximal refresh frame rate, which can be combined with the 'Fixed quality' to optimize the bandwidth utilization and video quality. If the user wants to fix the bandwidth utilization regardless of the video quality, choose 'Constant bit rate' and select the desired bandwidth.
- Audio Settings:** You can use the option to switch the external microphone on/off or adjust the volume.

Video Quality:

This limits the maximum frame rate, which can be combined with the "Fixed quality" option to optimize the bandwidth utilization and video quality. If fixed bandwidth utilization is desired regardless of the video quality, choose "Constant bit rate" and select the desired bandwidth.

Constant bit rate:

The bps will affect the bit rate of the video recorded by the camera. Higher bit rates result in higher video quality.

Fixed quality:

Select the image quality level for the camera to try to maintain. High quality levels will result in increased bit rates.

Audio in off:

Selecting this checkbox will mute incoming audio.

Audio in gain level:

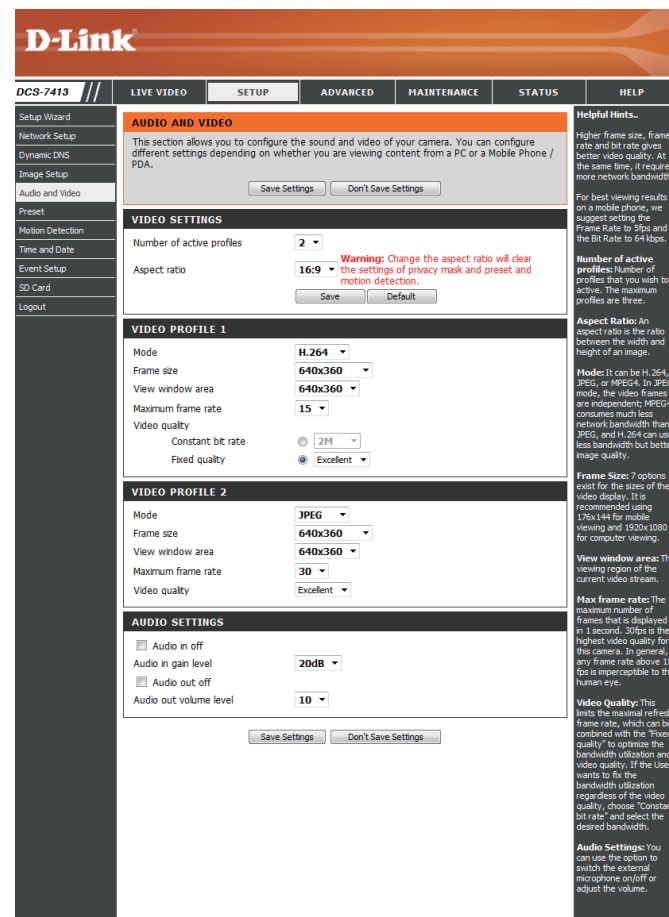
This setting controls the amount of gain applied to incoming audio to increase its volume.

Audio out off:

Selecting this checkbox will mute outgoing audio.

Audio out volume level:

This setting controls the amount of gain applied to outgoing audio to increase its volume.



Preset

This screen allows you to set preset points for the ePTZ function of the camera, which allows you to look around the camera's viewable area by using a zoomed view. Presets allow you to quickly go to and view a specific part of the area your camera is covering, and you can create preset sequences, which will automatically change the camera's view between the different presets according to a defined order and timing you can set.

Note: If your View window area is the same as your Frame size, you will not be able to use the ePTZ function.

Video Profile: This selects which video profile to use.

ePTZ Speed: You may select a value between 0 and 10. 0 is the slowest and 10 is the fastest.

Arrow Buttons and Home Button: Use these buttons to move to a specific part of the viewing area, which you can then set as a preset. Click the Home button to return to the center of the viewing area.

Input Preset Name: Enter the name of the preset you want to create, then click the **Add** button to make a new preset. If an existing preset has been selected from the Preset List, you can change its name by typing in a new name, then clicking the **Rename** button.

Preset List: Click this drop-down box to see a list of all the presets that have been created. You can select one, then click the **GoTo** button to change the displayed camera view to the preset. Clicking the **Remove** button will delete the currently selected preset.

Preset Sequence: This section allows you to create a preset sequence, which automatically moves the camera's view between a set of preset views.

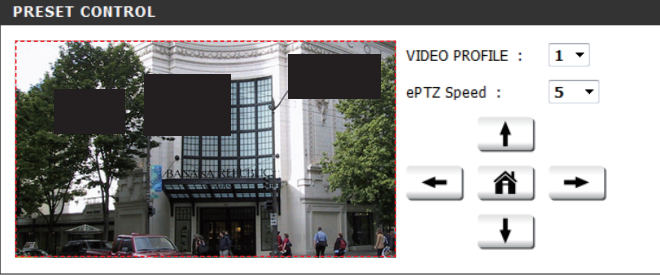


Preset List: To add a preset to the sequence, select it from the drop-down box at the bottom of this window, set the **Dwell time** to determine how long the camera view will stay at that preset, then click the **Add** button. The preset name will appear in the list, followed by the dwell time to view that preset for.

You can rearrange your presets in the sequence by selecting a preset in the sequence, then clicking the arrow buttons to move it higher or lower in the current sequence.

Clicking the trash can button will remove the currently selected preset from the sequence.

If you want to change the dwell time for a preset, select it from the list, enter a new dwell time, then click the **Update** button.



PRESET CONTROL

VIDEO PROFILE : 1
ePTZ Speed : 5

Navigation buttons: Up, Home, Down, Left, Right

PRESET

Input Preset Name : **Add** **Rename**
Support(0-9,A-Z,a-z,-,*,/,_)

Preset List : --Preset List-- **GoTo** **Remove**

PRESET SEQUENCE

Preset Name : Dwell time

Navigation buttons: Up, Trash, Down

Preset List : --Preset List-- **Add**

Dwell time : 10 **Update** Second(s)[3~30]

Motion Detection

Enabling Video Motion will allow your camera to use the motion detection feature. You may draw a finite motion area that will be used for monitoring. After making any changes, click the **Save Settings** button to save your changes.

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

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

Percentage: Specifies the amount of motion in the window being monitored that is required to initiate an alert. If this is set to 100%, motion is detected within the whole window will trigger a snapshot.

Draw Motion Area: Draw the motion detection area by dragging your mouse in the window (indicated by the red square).

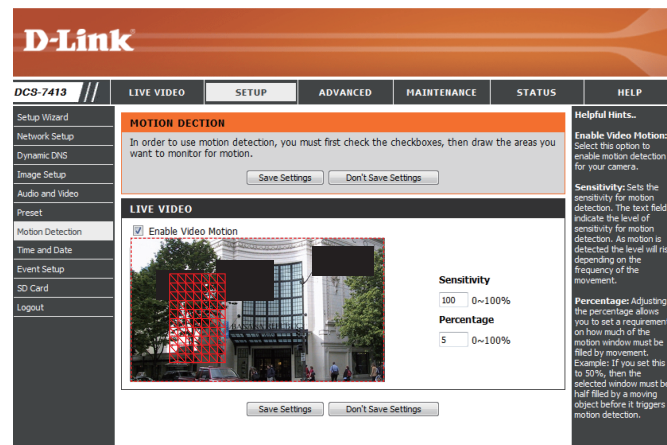
Erase Motion Area: To erase a motion detection area, simply click on the red square that you wish to remove.

Right clicking on the camera image brings up the following menu options:

Select All: Draws a motion detection area over the entire screen.

Clear All: Clears any motion detection areas that have been drawn.

Restore: Restores the previously specified motion detection areas.



Time and Date

This section allows you to automatically or manually configure, update, and maintain the internal system clock for your camera. After making any changes, click the **Save Settings** button to save your changes.

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

Enable Daylight Saving: Select this to enable Daylight Saving Time.

Auto Daylight Saving: Select this option to allow your camera to configure the Daylight Saving settings automatically.

Set Date and Time Manually: Selecting this option allows you to configure the Daylight Saving date and time manually.

Offset: Sets the amount of time to be added or removed when Daylight Saving is enabled.

Synchronize with NTP Server: Enable this feature to obtain time automatically from an NTP server.

NTP Server: Network Time Protocol (NTP) synchronizes the DCS-7413 with an Internet time server. Choose the one that is closest to your location.

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

Copy Your Computer's Time Settings: This will synchronize the time information from your PC.

D-Link

DCS-7413 // LIVE VIDEO SETUP ADVANCED MAINTENANCE STATUS HELP

TIME AND DATE
You can set the current time for the IP camera.
Save Settings Don't Save Settings

TIME CONFIGURATION
Time Zone (GMT+08:00) Taipei
 Enable Daylight Saving
 Auto Daylight Saving
 Set date and time manually
 Offset: +2:00
 Start time: Month 5, Week 1, Day of week Sunday, Hour 00, Minutes 00
 End time: Month 10, Week 1, Day of week Sunday, Hour 00, Minutes 00

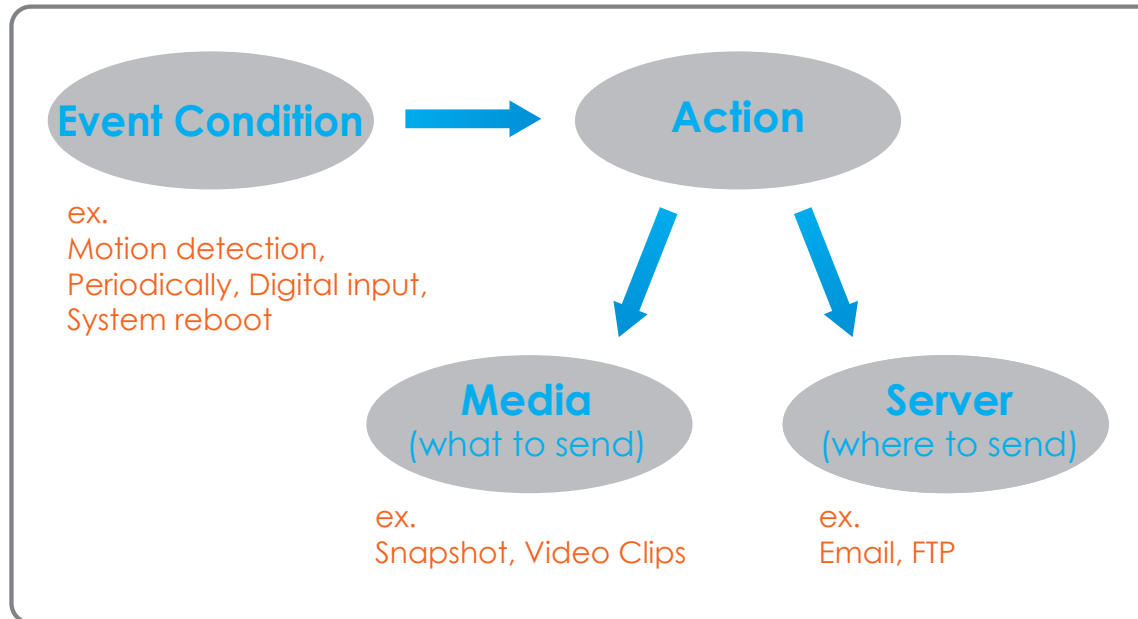
AUTOMATIC TIME CONFIGURATION
 Synchronize with NTP Server
 NTP Server: ntp.dlink.com.tw << Select NTP Server >>

SET DATE AND TIME MANUALLY
 Set date and time manually
 Year: 2011, Month: 1, Day: 1
 Hour: 0, Minute: 20, Second: 19
 Copy Your Computer's Time Settings
 Save Settings Don't Save Settings

Helpful Hints...
 Good timekeeping is important for accurate logs and scheduled renewal rules.
Time Zone: Select your time zone from the drop-down menu.
Enable Daylight Saving: Select this to enable the daylight saving time.
Auto Daylight Saving: When you select it, the clock is automatically adjusted according to the daylight saving time of the selected time zone.
Offset: Select the time offset, if your location observes daylight saving time.
Synchronize with NTP Server: With the option selected, the camera will synchronize the time settings with the NTP server over the Internet whenever the camera starts up. If the timeserver cannot be reached, no time settings will be applied.
NTP Server: Network Time Protocol (NTP) synchronizes the IP camera with an Internet time server. Choose the one that is closest to your location.
Copy Your Computer's Time Settings: This will synchronize the time information from your PC.

Event Setup

In a typical application, when motion is detected, the DCS-7413 sends images to a FTP server or via e-mail as notifications. As shown in the illustration below, an event can be triggered by many sources, such as motion detection. When an event is triggered, a specified action will be performed. You can configure the Network Camera to send snapshots or videos to your e-mail address or FTP site.



To start plotting an event, it is suggested to configure server and media columns first so that the Network Camera will know what action shall be performed when a trigger is activated.

The Event Setup page includes 4 different sections.

- Event
- Server
- Media
- Recording

1. To add a new item - "event, server or media," click **Add**. A screen will appear and allow you to update the fields accordingly.
2. To delete the selected item from the pull-down menu of event, server or media, click **Delete**.
3. Click on the item name to pop up a window for modifying.

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DCS-7413 // LIVE VIDEO SETUP ADVANCED MAINTENANCE STATUS HELP

Setup Wizard
Network Setup
Dynamic DNS
Image Setup
Audio and Video
Preset
Motion Detection
Time and Date
Event Setup
SD Card
Logout

EVENT SETUP

There are four sections in Event Setup page. They are event, server, media and recording. Click Add to pop a window to add a new item of event, server, media or recording. Click Delete to delete the selected item from event, server, media or recording. Click on the item name to pop a window to edit it. There can be at most 3 events and 2 recording. There can be at most 5 server and 5 media configurations.

SERVER

Name	Type	Address/Location
Server1	Email	mail.dlink.com

[Add](#) [Server 1](#) [Delete](#)

MEDIA

Media freespace: 6700KB

Name	Type	Source
Media1	Video clip	Profile 1

[Add](#) [Media 1](#) [Delete](#)

EVENT

Name	Status	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Time	Trigger
Event1	ON	V	V	V	V	V	V	V	00:00~23:59	Motion

[Add](#) [Event1](#) [Delete](#)

RECORDING

Name	Status	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Time	Source	Destination
------	--------	-----	-----	-----	-----	-----	-----	-----	------	--------	-------------

[Add](#) [Delete](#)

Helpful Hints...

Suggest setting server and media first before setting event. The servers and media which selected in event list are not be able to modify or delete. Please remove them first from the event if you want to delete or modify them. Recommend using different media in different event to make use all media be produced and received correctly. If using the same media in different events and the events trigger almost simultaneously, the servers in the second triggered event will not receive any media; there would be only notifications.

Add Server

You can configure up to 5 servers to save snapshots and/or video to. After making any changes, click the **Save Settings** button to save your changes.

Server Name: Enter the unique name of your server.

E-mail: Enter the configuration for the target e-mail server account.

FTP: Enter the configuration for the target FTP server account.

Network Storage: Specify a network storage device. Only one network storage device is supported.

SD Card: Use the camera's onboard SD card storage.

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DCS-7413 // LIVE VIDEO SETUP ADVANCED MAINTENANCE STATUS HELP

SERVER

You can set at most 5 different servers here for different event.

Test Save Settings Don't Save Settings

SERVER TYPE

Server Name:

Email

Sender email address

Recipient email address

Server address

User name

Password

Port

This server requires a secure connection (StartTLS)

FTP

Server address

Port

User name

Password

Remote folder name

Passive mode

Network storage

Network storage location

(for example: \\my_nas(disk)/folder)

Workgroup

User name

Password

Primary WINS server

SD Card

Test Save Settings Don't Save Settings

Helpful Hints...

"Server name" The unique name for server. There are four kinds of servers supported. They are email server, FTP server, HTTP server and network storage.

"Sender email address" The email address of the sender.

"Recipient email address" The email address of the recipient.

FTP server: "Remote folder name" Granted folder on the external FTP server. Some FTP servers cannot accept preceding slash symbol before the path without virtual path mapping. Refer to the instructions for the external FTP server for details. The folder privilege must be open for upload.

"Passive Mode" Check it to enable passive mode in transmission.

Network storage: Only one network storage is supported.

"Network storage location" The path to upload the media.

"Workgroup" The workgroup for network storage.

SD card: Use the SD card for recording media.

Add Media

There are three types of media, **Snapshot**, **Video Clip**, and **System Log**. After making any changes, click the **Save Settings** button to save your changes.

Media Name: Enter a unique name for media type you want to create.

Snapshot: Select this option to set the media type to snapshots.

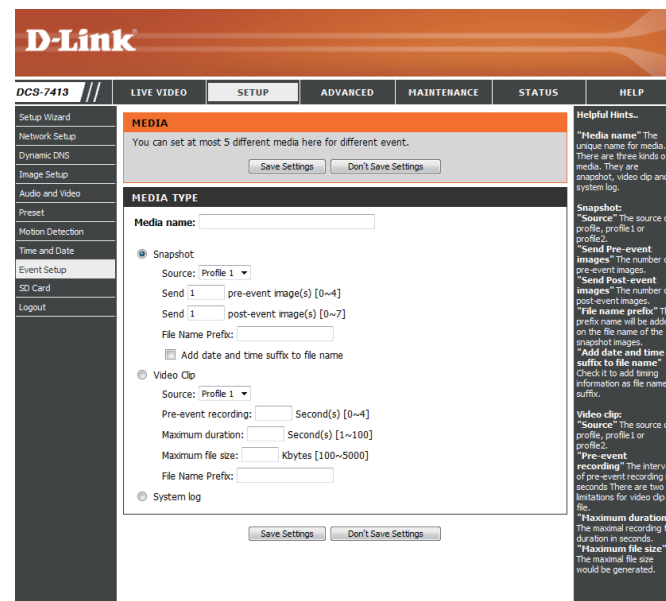
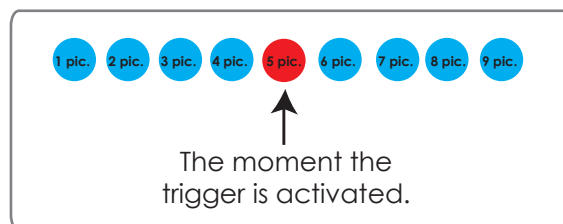
Source: Set the video profile to use as the media source. Refer to **Audio and Video** on "Audio and Video" on page 40 for more information on video profiles.

Send pre-event image(s) [0~4]: Set the number of pre-event images to take. Pre-event images are images taken before the main event snapshot is taken.

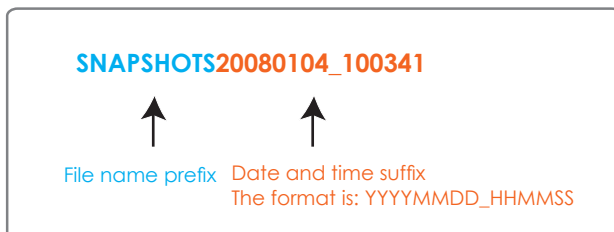
Send post-event image(s) [0~7]: Set the number of post-event images to take. Post-event images are images taken after the main event snapshot is taken. You can set up to 7 post-event images to be taken.

For example:

If both the Send pre-event images and Send post-event images are set to four, a total of 9 images are generated after a trigger is activated.



File name prefix: The prefix name will be added on the file name.



Add date and time suffix to file name: Check this to add timing information as file name suffix.

Video clip: Select this option to set the media type to video clips.

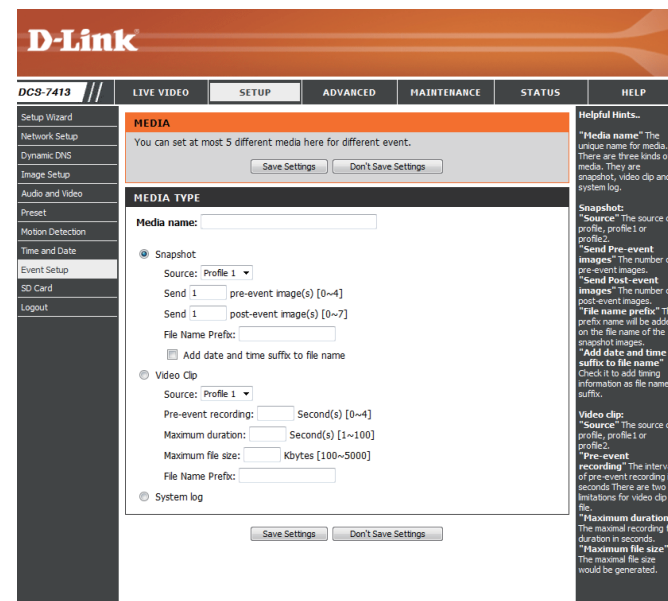
Source: Set the video profile to use as the media source. Refer to "Audio and Video" on page 40 for more information on video profiles.

Pre-event recording: This sets how many seconds to record before the main event video clip starts. You can record up to 4 seconds of pre-event video.

Maximum duration: Set the maximum length of video to record for your video clips.

Maximum file size: Set the maximum file size to record for your video clips.

System log: Select this option to set the media type to system logs. This will save the event to the camera system log, but will not record any snapshots or video.



Add Event

Create and schedule up to 3 events with their own settings here. After making any changes, click the **Save Settings** button to save your changes.

Event name: Enter a name for the event.

Enable this event: Select this box to activate this event.

Priority: Set the priority for this event. The event with higher priority will be executed first.

Delay: Select the delay time before checking the next event. It is being used for both events of motion detection and digital input trigger.

Trigger: Specify the input type that triggers the event.

Video Motion Detection: Motion is detected during live video monitoring. Select the windows that need to be monitored.

Periodic: The event is triggered in specified intervals. The trigger interval unit is in minutes.

Digital Input: The external trigger input to the camera.

System Boot: Triggers an event when the system boots up.

Network Lost: Triggers an event when the network connection is lost.

Time: Select **Always** or enter the time interval.

Server: Specify the location where the event information should be saved to.

D-Link

DCS-7413 // LIVE VIDEO SETUP ADVANCED MAINTENANCE STATUS HELP

EVENT

You can set at most 3 events like motion detection or digital input trigger here and arrange the detection schedule at the same time.

Save Settings Don't Save Settings

EVENT

Event name:

Enable this event

Priority: normal

Delay for 10 seconds before detecting next event [For motion detection and digital input]

TRIGGER

Video motion detection

Periodic

Trigger every 1 minutes

Digital input

System boot

Network lost

EVENT SCHEDULE

Sun Mon Tue Wed Thu Fri Sat

Time

Always

From 00 To 23 59

ACTION

Trigger D/O for 1 seconds

Server1

Attached media: Media1

Save Settings Don't Save Settings

Helpful Hints...

Priority: The event with higher priority will be executed first.

Delay second(s) before detecting next event: The delay to check next event. It is used in motion detection and digital input trigger type.

There are five kinds of trigger supported.

Video motion detection: Select the windows which need to be monitored.

Periodic: The event is triggered in specified intervals. The unit of trigger interval is minute.

Digital input: The event is triggered when the DI status changed by external device.

System boot: The event is triggered when the system boot up.

Network lost: The event is triggered when the network service is not available or disconnection.

Sun ~ Sat: Select the days of the week to perform the event.

Time: show "Always" or input the time interval.

The default action are triggering DO and storing media on SD card. If there are servers configured, the user can select them from "Server name", too.

Trigger DO: Check it to trigger digital output for specific seconds when event is triggered.

Note: Please Format SD card before use. The entire data in the SD card will be erased after formatting.

Add Recording

Here you can configure and schedule the recording settings. After making any changes, click the **Save Settings** button to save your changes.

Recording entry name: The unique name of the entry.

Enable this recording: Select this to enable the recording function.

Priority: Set the priority for this entry. The entry with a higher priority value will be executed first.

Source: The source of the stream.

Recording schedule: Scheduling the recording entry.

Recording settings: Configuring the setting for the recording.

Destination: Select the folder where the recording file will be stored.

Total cycling recording size: Please input a HDD volume between 1MB and 2TB for recording space. The recording data will replace the oldest record when the total recording size exceeds this value. For example, if each recording file is 6MB, and the total cyclical recording size is 600MB, then the camera will record 100 files in the specified location (folder) and then will delete the oldest file and create new file for cyclical recording.

Please note that if the free HDD space is not enough, the recording will stop. Before you set up this option please make sure your HDD has enough space, and it is better to not save other files in the same folder as recording files.

The screenshot shows the D-Link DCS-7413 web interface. The main content area is titled "RECORDING" and contains the following sections:

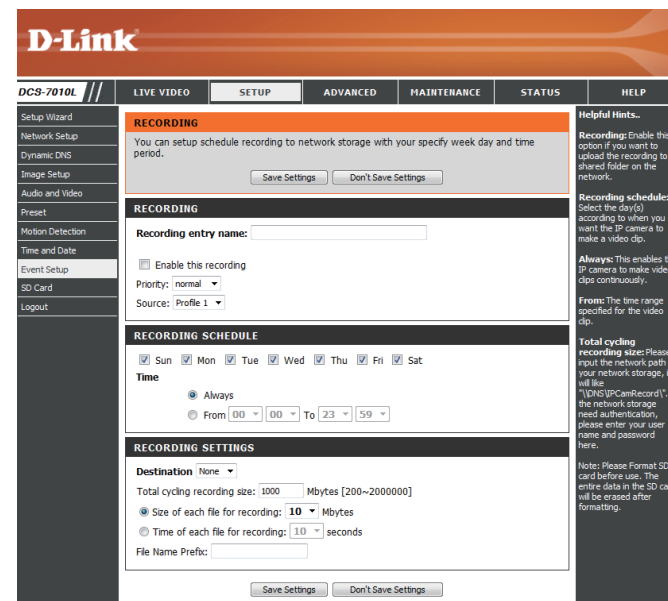
- RECORDING:** Includes a checkbox for "Enable this recording", a "Priority" dropdown menu (set to "normal"), and a "Source" dropdown menu (set to "Profile 1").
- RECORDING SCHEDULE:** Includes checkboxes for days of the week (Sun, Mon, Tue, Wed, Thu, Fri, Sat) and a "Time" section with radio buttons for "Always" and "From" (set to 00:00 to 23:59).
- RECORDING SETTINGS:** Includes a "Destination" dropdown menu (set to "None"), a "Total cycling recording size" of 1000 Mbytes, a "Size of each file for recording" of 10 Mbytes, and a "Time of each file for recording" of 10 seconds.

There are "Save Settings" and "Don't Save Settings" buttons at the bottom of each section. A sidebar on the right contains "Helpful Hints..." and "Recording Schedule:" information.

Size of each file for recording: If this is selected, files will be separated based on the file size you specify.

Time of each file for recording: If this is selected, files will be separated based on the maximum length you specify.

File Name Prefix: The prefix name will be added on the file name of the recording file(s).



SD Card

Here you may browse and manage the recorded files which are stored on the SD card.

Format SD Card: Click this icon to automatically format the SD card and create "picture" & "video" folders.

View Recorded Picture: If the picture files are stored on the SD card, click on the picture folder and choose the picture file you would like to view.

Playback Recorded Video: If video files are stored on the SD card, click on the video folder and choose the video file you would like to view.

Refresh: Reloads the file and folder information from the SD card.

The screenshot shows the D-Link DCS-7413 web interface. The main content area is titled "SD CARD" and contains the following information:

SD Card: / SD Status: Ready
 Files per Page: 10 Refresh 1 of 1

Delete	File	Num of files	Size
<input type="checkbox"/>	dcsm	0	
<input type="checkbox"/>	Video	0	
<input type="checkbox"/>	Picture	0	
<input type="checkbox"/>	2011_06_22_HALF at Lights out Day	1	
<input type="checkbox"/>	nkon001.dsc		1

Format SD Card Total:15981056KB, Used:7878368KB, Free:8102688KB

Helpful Hints...
Format SD Card: Click this icon, system will automatically format SD card and create "picture" & "video" folders.
View recorded picture: If SD stored recorded picture files, enter picture link and choose which picture file you desire to view. You will view picture via image viewer SW. (ie. Windows Image Viewer)
Playback recorded video: If SD stored recorded video files, enter video link and choose which video file you desire to playback. Windows will guide you to open/download video file (AVI format) so that you can playback file via video decoder SW. (ie. Windows Media Player)

Advanced Digital Input/Output

This screen allows you to control the behavior of digital input and digital output devices. The I/O connector provides the physical interface for digital output (DO) and digital input (DI) that is used for connecting a variety of external alarm devices such as IR-Sensors and alarm relays. The digital input is used for connecting external alarm devices and once triggered images will be taken and e-mailed. After making any changes, click the **Save Settings** button to save your changes.

Select D/I or D/O Mode: The camera will send a signal when an event is triggered, depending upon the type of device connected to the DI circuit.

N.C. stands for **Normally Closed**. This means that the normal state of the circuit is closed. Therefore events are triggered when the device status changes to "Open."

N.O. stands for **Normally Open**. This means that the normal state of the circuit is open. Therefore events are triggered when the device status changes to "Closed."

LED: You may specify whether or not to illuminate the status LED on the camera.

Video Output: Enable/ disable the BNC terminal TV output signal.



ICR and IR

Here you can configure the ICR and IR settings. An IR(Infrared) Cut-Removable(ICR) filter can be disengaged for increased sensitivity in low light environments.

Automatic: The Day/Night mode is set automatically. Generally, the camera uses Day mode and switches to Night mode when needed.

Day Mode: Day mode enables the IR Cut Filter.

Night Mode: Night mode disables the IR Cut Filter.

Schedule Mode: Set up the Day/Night mode using a schedule. The camera will enter Day mode at the starting time and return to Night mode at the ending time.

IR Light Control: The camera can enable or disable the IR (infrared) light according to your preferences. This setting provides additional controls depending on your specific application.

Off: The IR light will always be off.

On: The IR light will always be on.

Sync: The IR light will turn on when the ICR sensor is on.

Schedule: The IR light will turn on or off according to the schedule that you specify below.

D-Link

DCS-7413 // LIVE VIDEO SETUP ADVANCED MAINTENANCE STATUS HELP

DI and DD
ICR and IR
HTTPS
Access List
Logout

ICR AND IR

An IR(Infrared) Cut-Removable(ICR) filter can be disengaged from the image path for increased sensitivity in low light environments. The ICR filter will automatically engage depending on the ambient light, allowing the camera to be effective in day/night environments.
1. Select the Day/Night from the radio button. The available options are Automatic, Schedule mode, Day mode and Night mode.
2. The default value is Automatic.

IR Light
The built-in IR light illuminators will be activated automatically or manually so as to supplement the low light situation without additional equipment.

Save Settings Don't Save Settings

ICR

Removable IR-Cut filter trigger condition:

Automatic Sensitivity: Medium:<20lux over 30 lux Refresh

Day mode

Night mode

Schedule mode

Day mode(24hr)
From 07:00 To 18:00

IR LIGHT

IR Light Control: Medium:20m

Off

On

Sync. With ICR

Schedule

IR Light Control On(24hr)
From 07:00 To 18:00

Save Settings Don't Save Settings

Helpful Hints...

ICR and IR:
Automatic: The day/Night mode is set automatically. It is normally set in the Day mode and changes to the Night mode in a dark place.
Day mode: The Day mode means disable the IR Cut Filter.
Night mode: The Night mode means enable the IR Cut Filter.

Schedule mode: Set the Day/Night mode using the schedule. Fill in the time so the Day/Night mode is normally set to Day mode and it enters the Day mode at the start time and returns to the Night mode at the end time.

IR Light Control: In poor light conditions, open IR Light Control to automatically turn on the light to enable you to take clear picture. The IR Light Control has 4 options: Off, On, Sync, with ICR, and Schedule. Off: This option disable the IR Light Control. On: This option automatically opens the IR Light Control to enable a camera to take clear images in poor light conditions. Sync. with ICR: In this option, the IR Light Control will open automatically and follow the ICR setting. Schedule: In this option, you have to customize the settings to set the time period you want. Please set the Start time and the End time of your chosen schedule.

HTTPS

This page allows you to install and activate an HTTPS certificate for secure access to your camera. After making any changes, click the **Save Settings** button to save your changes.

Enable HTTPS Secure Connection: Enable the HTTPS service.

Create Certificate Method: Choose the way the certificate should be created. Three options are available:

- Create a self-signed certificate automatically
- Create a self-signed certificate manually
- Create a certificate request and install

Status: Displays the status of the certificate.

Note: The certificate cannot be removed while the HTTPS is still enabled. To remove the certificate, you must first uncheck **Enable HTTPS secure connection**.



Access List

Here you can set access permissions for users to view your DCS-7413.

Allow list: The list of IP addresses that have the access right to the camera.

Start IP address: The starting IP Address of the devices (such as a computer) that have permission to access the video of the camera. Click **Add** to save the changes made.

Note: A total of seven lists can be configured for both columns.

End IP address: The ending IP Address of the devices (such as a computer) that have permission to access the video of the camera.

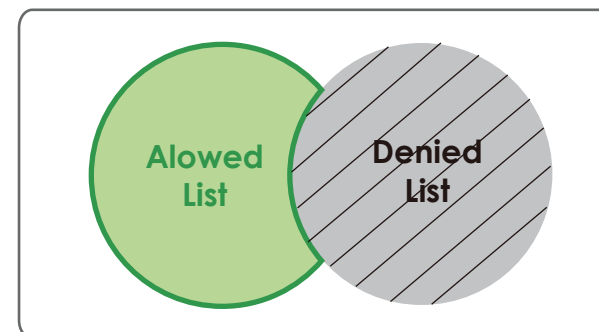
Delete allow list: Remove the customized setting from the Allow List.

Deny list: The list of IP addresses that have no access rights to the camera.

Delete deny list: Remove the customized setting from the Delete List.

For example:

When the range of the Allowed List is set from 1.1.1.0 to 192.255.255.255 and the range of the Denied List is set from 1.1.1.0 to 170.255.255.255. Only users with IPs located between 171.0.0.0 and 192.255.255.255 can access the Network Camera.



Maintenance

Device Management

You may modify the name and administrator's password of your camera, as well as add and manage the user accounts for accessing the camera. You may also use this section to create a unique name and configure the OSD settings for your camera.

Admin Password Setting: Set a new password for the administrator's account.

Add User Account: Add new user account.

User Name: The user name for the new account.

Password: The password for the new account.

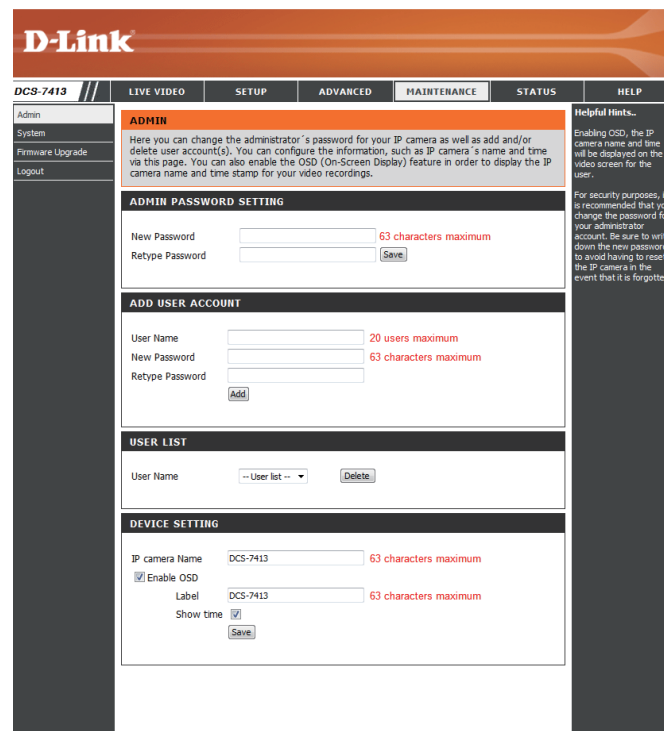
User List: All the existing user accounts will be displayed here. You may delete accounts included in the list, but you may want to reserve at least one as a guest account.

Camera Name: Create a unique name for your camera that will be added to the file name prefix when creating a snapshot or a video clip.

Enable OSD: Select this option to enable the On-Screen Display feature for your camera.

Label: Enter a label for the camera, which will be shown on the OSD when it is enabled.

Show Time: Select this option to enable the time-stamp display on the video screen.



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DCS-7413 // LIVE VIDEO SETUP ADVANCED MAINTENANCE STATUS HELP

ADMIN

Here you can change the administrator's password for your IP camera as well as add and/or delete user account(s). You can configure the information, such as IP camera's name and time via this page. You can also enable the OSD (On-Screen Display) feature in order to display the IP camera name and time stamp for your video recordings.

ADMIN PASSWORD SETTING

New Password 63 characters maximum
Retype Password

ADD USER ACCOUNT

User Name 20 users maximum
New Password 63 characters maximum
Retype Password

USER LIST

User Name -- User list --

DEVICE SETTING

IP camera Name DCS-7413 63 characters maximum
 Enable OSD
Label DCS-7413 63 characters maximum
Show time

Helpful Hints..

Enabling OSD, the IP camera name and time will be displayed on the video screen for the user.

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

System

In this section, you may backup, restore and reset the camera configuration, or reboot the camera.

Save To Local Hard Drive: You may save your current camera configuration as a file on your computer.

Load From Local Hard Drive: Locate a pre-saved configuration by clicking **Browse** and then restore the pre-defined settings to your camera by clicking **Load Configuration**.

Restore to Factory Default: You may reset your camera and restore the factory settings by clicking **Restore Factory Defaults**.

Reboot Device: This will restart your camera.



Firmware Upgrade

The camera's current firmware version will be displayed on this screen. You may visit the D-Link Support Website to check for the latest available firmware version.

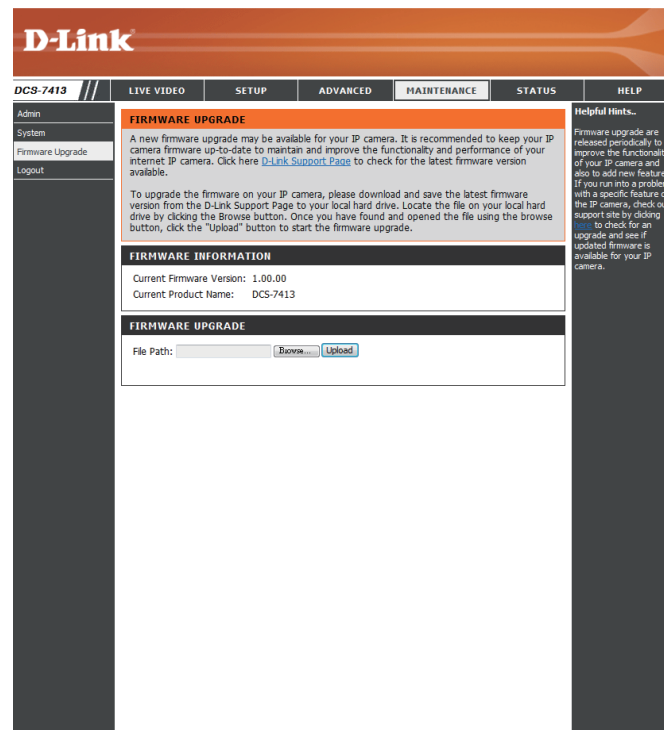
To upgrade the firmware on your DCS-7413, please download and save the latest firmware version from the D-Link Support Page to your local hard drive. Locate the file on your local hard drive by clicking the **Browse** button. Select the file and click the **Upload** button to start upgrading the firmware.

Current Firmware Version: Displays the detected firmware version.

Current Product Name: Displays the camera model name.

File Path: Locate the file (upgraded firmware) on your hard drive by clicking **Browse**.

Upload: Uploads the new firmware to your camera.



Status

Device Info

This page displays detailed information about your device and network connection.

The screenshot shows the D-Link web interface for the DCS-7413 device. The top navigation bar includes links for LIVE VIDEO, SETUP, ADVANCED, MAINTENANCE, STATUS (selected), and HELP. The left sidebar contains links for Device Info (selected), Log, and Logout. The main content area is titled 'DEVICE INFO' and contains a message: 'All of your network connection details are displayed on this page. The firmware version is also displayed here.' Below this is an 'INFORMATION' table with the following data:

INFORMATION	
IP camera Name	DCS-7413
Time & Date	Sat Jan 1 00:21:40 2011
Firmware Version	1.00.00
MAC Address	F0:7D:68:74:13:01
IP Address	192.168.0.105
IP Subnet Mask	255.255.255.0
Default Gateway	192.168.0.1
Primary DNS	192.168.0.1
Secondary DNS	0.0.0.0
PPPoE	Disable
DDNS	Disable
TV Output Mode	NTSC

On the right side, there is a 'Helpful Hints..' section with the text: 'This page displays all the information about the IP camera and network settings.'

Logs

This page displays the log information of your camera. You may download the information by clicking **Download**. You may also click **Clear** to delete the saved log information.

D-Link

DCS-7413 // LIVE VIDEO SETUP ADVANCED MAINTENANCE STATUS HELP

Device Info
Log
Logout

SYSTEM LOG
The system log records IP camera events that have occurred.

CURRENT LOG

1. 2011-01-01 00:19:42 admin FROM 192.168.0.100 TURN ON MASK AREA 1
2. 2011-01-01 00:17:50 IP CAMERA Received MOTION Trigger
3. 2011-01-01 00:17:50 admin FROM 192.168.0.100 SET EVENT SERVER 1 ; Name : Server1, Type : Email
4. 2011-01-01 00:17:50 admin FROM 192.168.0.100 SET EVENT MEDIA 1 ; Name : Media1, Type : Video Clip
5. 2011-01-01 00:17:50 admin FROM 192.168.0.100 SET MOTION BLOCK TABLE
6. 2011-01-01 00:17:50 admin FROM 192.168.0.100 SET EVENT TYPE 1 ; Trigger : Motion Detection
7. 2011-01-01 00:17:50 admin FROM 192.168.0.100 TURN ON VIDEO MOTION
8. 2011-01-01 00:10:59 admin FROM 192.168.0.100 SET VIDEO CODEC Need Reset
9. 2011-01-01 00:10:59 admin FROM 192.168.0.100 SET PROFILE 1 Viewer window area 640x360
10. 2011-01-01 00:10:59 admin FROM 192.168.0.100 SET PROFILE 1 Frame Size 640x360
11. 2011-01-01 00:03:37 admin LOGIN OK FROM 192.168.0.100
12. 2011-01-01 00:03:12 IP CAMERA ACQUIRE DHCP IP 192.168.0.105
13. 2011-01-01 00:03:09 SYSTEM SET IR LIGHT OFF
14. 2011-01-01 00:03:09 SYSTEM BOOTING
15. 2011-01-01 00:02:03 admin LOGIN OK FROM 192.168.0.100
16. 2011-01-01 00:01:17 SYSTEM SET IR LIGHT ON
17. 2011-01-01 00:00:21 IP CAMERA ACQUIRE DHCP IP 192.168.0.105
18. 2011-01-01 00:00:19 NETWORK RECONNECT
19. 2011-01-01 00:00:02 NETWORK LOSS
20. 2011-01-01 00:00:00 SYSTEM SET IR LIGHT OFF

First Page Previous 20 Next 20
Clear Download

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

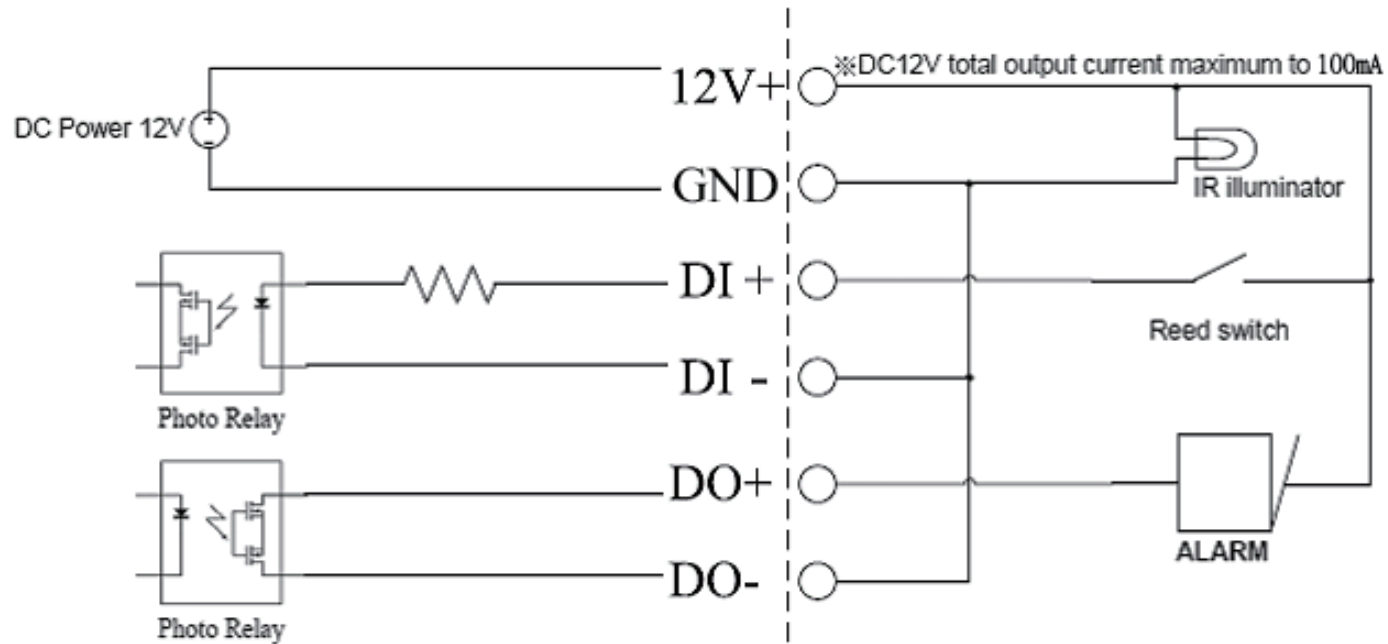
Help

This page provides helpful information regarding camera operation.

The screenshot shows the D-Link DCS-7413 web interface. At the top is the D-Link logo. Below it is a navigation bar with tabs for LIVE VIDEO, SETUP, ADVANCED, MAINTENANCE, STATUS, and HELP. The HELP tab is selected. On the left side, there is a sidebar with 'Help' and 'Logout' links. The main content area is titled 'HELP' and contains a list of links organized into sections: LIVE VIDEO (Camera), SETUP (Setup Wizard, Network Setup, Dynamic DNS, Image Setup, Audio and Video, Preset, Motion Detection, Time and Date, Event Setup, SD Card), ADVANCED (DI and DO, ICR and IR, HTTPS, Access List), MAINTENANCE (Admin, System, Firmware Upgrade), and STATUS (Device Info, Log).

DCS-7413	LIVE VIDEO	SETUP	ADVANCED	MAINTENANCE	STATUS	HELP
Help Logout	HELP <ul style="list-style-type: none">LIVE VIDEOSETUPMAINTENANCEADVANCEDSTATUS LIVE VIDEO <ul style="list-style-type: none">Camera SETUP <ul style="list-style-type: none">Setup WizardNetwork SetupDynamic DNSImage SetupAudio and VideoPresetMotion DetectionTime and DateEvent SetupSD Card ADVANCED <ul style="list-style-type: none">DI and DOICR and IRHTTPSAccess List MAINTENANCE <ul style="list-style-type: none">AdminSystemFirmware Upgrade STATUS <ul style="list-style-type: none">Device InfoLog					

DI/DO Specifications



Technical Specifications

Camera	Camera Hardware Profile	<ul style="list-style-type: none"> ▪ 1/2.7" 2 Megapixel progressive CMOS sensor ▪ 30 meter IR illumination distance ▪ Minimum illumination: 0 lux with IR LED on ▪ Built-in Infrared-Cut Removable (ICR) Filter module ▪ 10x digital zoom ▪ Minimum object distance 0.84M 	<ul style="list-style-type: none"> ▪ Focal length: 3.6 mm ▪ Aperture: F1.8 ▪ Angle of view: <ul style="list-style-type: none"> ▪ (H) 88° ▪ (V) 50.4° ▪ (D) 101°
	Camera Housing	IP-68 compliant weatherproof housing	Wire-in bracket
	Image Features	<ul style="list-style-type: none"> ▪ Configurable image size, quality, frame rate, and bit rate ▪ Time stamp and text overlays ▪ Configurable motion detection windows 	<ul style="list-style-type: none"> ▪ Configurable privacy mask zones ▪ Configurable shutter speed, brightness, saturation, contrast, and sharpness
	Video Compression	<ul style="list-style-type: none"> ▪ Simultaneous H.264/MPEG-4/MJPEG format compression ▪ H.264/MPEG-4 multicast streaming 	<ul style="list-style-type: none"> ▪ JPEG for still images
	Video Resolution	16:9 - 1920 x 1080 (up to 15 fps), 1280 x 720, 800 x 450, 640 x 360, 480 x 270, 320 x 176, 176 x 144 up to 30 fps	4:3 - 1440 x 1080 (up to 15 fps), 1280 x 960, 1024 x 768, 800 x 600, 640 x 480, 320 x 240, 176 x 144 up to 30 fps
	Audio Support	G.726	G.711
	External Device Interface	<ul style="list-style-type: none"> ▪ 10/100 BASE-TX Fast Ethernet port ▪ Supports 802.3af PoE 	<ul style="list-style-type: none"> ▪ SD/SDHC card slot ▪ Audio input/output
Network	Network Protocols	<ul style="list-style-type: none"> ▪ IPv6 ▪ IPv4 ▪ TCP/IP ▪ UDP ▪ ICMP ▪ DHCP client ▪ NTP client (D-Link) ▪ DNS client ▪ DDNS client (D-Link) ▪ SMTP client ▪ FTP client 	<ul style="list-style-type: none"> ▪ HTTP / HTTPS ▪ Samba client ▪ PPPoE ▪ UPnP port forwarding ▪ RTP / RTSP/ RTCP ▪ IP filtering ▪ QoS ▪ CoS ▪ Multicast ▪ IGMP ▪ ONVIF compliant
	Security	Administrator and user group protection Password authentication	HTTP and RTSP authentication

Appendix A: Technical Specifications

System Management	System Requirements for Web Interface	<ul style="list-style-type: none"> ▪ Browser: Internet Explorer, Firefox, Chrome, Safari 	
	Event Management	<ul style="list-style-type: none"> ▪ Motion detection ▪ Event notification and uploading of snapshots/video clips via e-mail or FTP 	<ul style="list-style-type: none"> ▪ Supports multiple SMTP and FTP servers ▪ Multiple event notifications ▪ Multiple recording methods for easy backup
	Remote Management	<ul style="list-style-type: none"> ▪ Take snapshots/video clips and save to local hard drive 	<ul style="list-style-type: none"> ▪ Configuration interface accessible via web browser
	Mobile Support	Windows 2000/XP/Vista/Windows 8/7/iPhone/iPad/Android	
	D-ViewCam™ System Requirements	<ul style="list-style-type: none"> ▪ Operating System: Microsoft Windows 7/Vista/XP ▪ Web Browser: Internet Explorer 7 or higher 	<ul style="list-style-type: none"> ▪ Protocol: Standard TCP/IP
	D-ViewCam™ Software Functions	<ul style="list-style-type: none"> ▪ Remote management/control of up to 32 cameras ▪ Viewing of up to 32 cameras on one screen 	<ul style="list-style-type: none"> ▪ Supports all management functions provided in web interface ▪ Scheduled motion triggered, or manual recording options
General	Weight	1920g (with bracket and sunshield)	
	External Power Adapter	Input: 100 to 240 V AC, 50/60 Hz	Output: 12 V DC 1.25 A
	Power Consumption	11.2 +-5% Watt	
	Temperature	Operating: -40 to 50 °C (-40 to 122 °F)	Storage: -20° to 70° C (-4° to 158° F)
	Humidity	Operating: 20% to 80% non-condensing	Storage: 5% to 95% non-condensing
	Certifications	CE CE LVD	FCC C-Tick

