APPRO®

H.264 | two-way | Motion | Day/Night | ICR | 10x zoom | 340° PAN | 115° TILT | SD / SDHC | ONVIF

HD Wireless Pan / Tilt IP Camera

LC-6790 720P / Day & Night / H.264

User Manual

Before trying to connect or operate this product, please read this manual completely.

Table of Contents

SAFETY PRECAUTIONS

All the following safety and operational instructions to prevent harm or injury to the operator(s) or other persons should be read carefully before the unit is activated.

WARNING

- To prevent fire or shock hazard, avoid exposing this unit to rain or moisture.
- Do not block ventilation openings.
- Do not place anything on top of the unit that might spill or fall into it.
- Do not attempt to service this unit yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Please refer all servicing to your distributor/ retailer.
- Do not use liquid cleaners or aerosols for cleaning.
- To prevent fire or electric shock, do not overload wall outlets or extension cords.
- PoE warning: If the PoE injector is used instead of the supplied power adaptor, all of the wiring to and from the injector must be routed/ installed inside a building/ plant and never routed/ installed outside of the building/ plant.
- Please only select a power adapter or power certified by UL and marked at 24Vac / 60 Hz, minimum 1A, class 2 or LPS.

CAUTION

Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

1 PRODUCT FEATURES

Product Instructions

Here's a new series from APPRO -- cameras that act as basic watchguards in your premises -- lightweight, simple formatted, inexpensive, and no fuss to install.

These watchkeepers are the ideal stuff for the safety of your home and office interiors.

Our Pan/Tilt camera brings you dependable video surveillance in a focused & targetted environment.

This is an easily installable, smart surveillance camera, ideal for low - light settings like your mini office or living spaces. It combines a high performance Megapixel sensor with a built - in IR LED that maintains close watch and clear vision in totally dark conditions. The camera has a built - in mechanical IR - cut filter for day and night applications equally. Its wireless capability means you can site your camera in any place within range of your wireless network.

The camera sets you up with a swift and dependable wireless connection which will help you see live video feeds from your camera in any place at any time. The Site Survey feature helps you easily see or link up to a wireless network close at hand. The camera's standard Ethernet port gives you connections to regular wired networks.

The camera's flexible connectivity by way of its input and output ports link you to network devices like IR sensors, switches and alarm relays.

Smooth to configure and operate, our camera comes with the Universal Plug-n-Play feature which gets computers running on Windows XP / Vista / 7 to automatically recognize the camera and add it to the network.

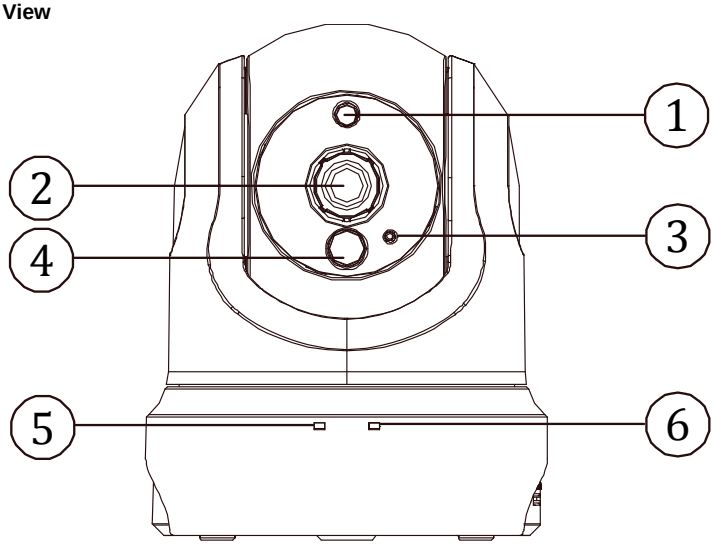
Product Features

- Simultaneous H.264 and MJPEG video compressions.
- Multi-profile applications: Selectable resolutions, frame rates, video qualities, and compression.
- High performance zoom lens: 10X digital zoom.
- Feature with a wide-angle lens- for your full area monitoring.
- Advanced motion detection (512 zones, sensitivity: 0~100 %).
- Supports ONVIF.
- Supports Wi-Fi.

2 DESCRIPTION OF THE SURFACE

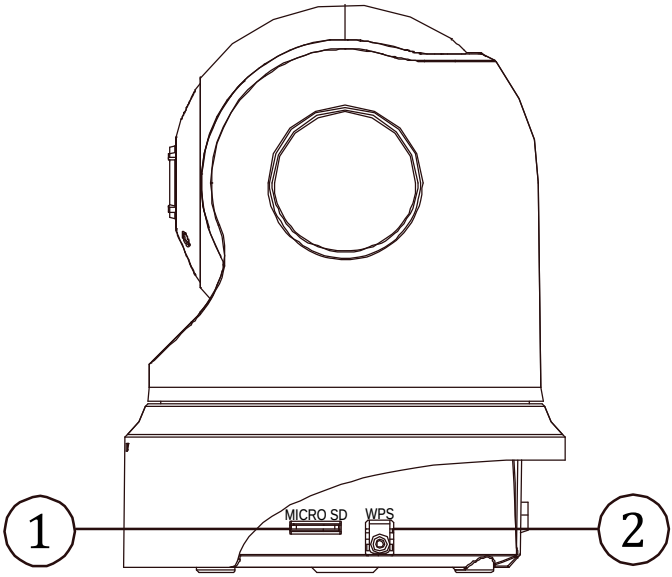
The Hardware View

The Front View



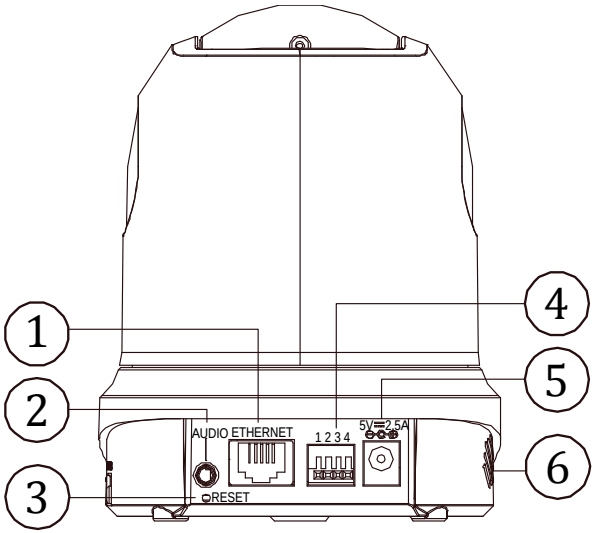
1. **Light Sensor:** Detects light levels and adjusts IR-LEDS accordingly.
2. **Camera Lens & Focus Adjustment Ring:** Records video of the surrounding area. Enables manual adjustment of the cameras focal length.
3. **Microphone:** Records audio from the surrounding area.
4. **Passive Infrared Sensor:** Passive Infrared (PIR) sensor for motion detection.
5. **Power/ Network Status LED:** Indicates the camera's current status. The LED will be solid red while the camera boots, performs a self-test, and searches for a network connection. The LED will switch to solid green when a proper connection has been achieved. The LED will blink green during data transfer.
6. **WPS Status LED:** Indicates the WPS connection status of the camera. While connecting, the blue LED will flash.

The Side View



1. **Micro SD Card Slot:** Insert a Micro SD card for local storage including recorded image and video.
2. **WPS Button:** Press this button, then push and hold another WPS button on your router for 5 seconds to set up a wireless connection automatically.

The Rear View:



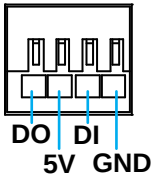
1. **Ethernet Port:** This is a standard RJ-45 connector for 10/100 Mbps Ethernet networks.
2. **Audio: Speaker:** Provides the camera's audio signal output.
3. **Reset Button:** Press and hold this button for 10 seconds to back to its factory default settings.
4. **DI/DO Connector:** I/O connectors for connecting with external devices.
5. **Power Connector:** A DC 5V inlet that connects to an external power supply.
6. **Built-in Speaker:** The speaker can be used in conjunction with the built-in microphone to enable the camera to acts as an intercom.

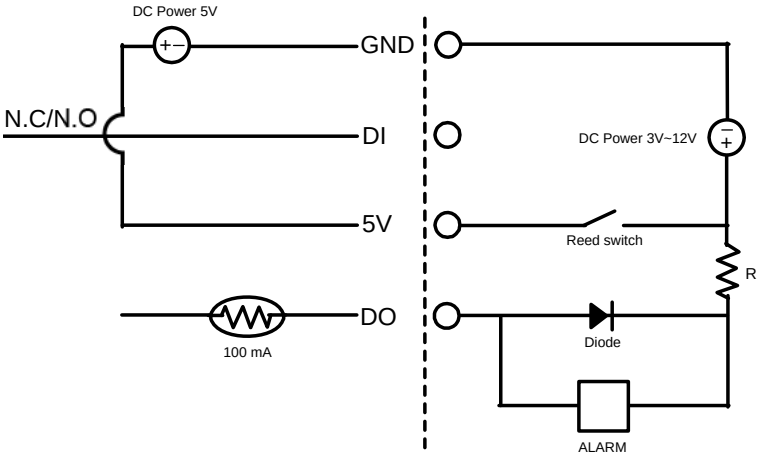
The Reset Button

You can use the **Reset** button to reset the camera operations back to default. Press the Reset button for about **10** seconds. Blue screens of the analog output are displayed, and a text saying **RESETTING…** appears.

The Alarm wiring diagrams

This is a 4-PIN connector including the Digital output/input, DC output and GROUND items for connecting with external devices.

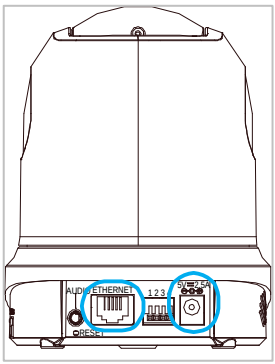




3 INSTALLATION

Please follow the instructions and the diagram below to set up the system.

Hardware Installation

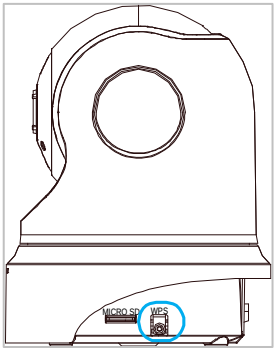


1. Connect Ethernet cable to the rear panel of the camera.
2. Plug in the power connection to the camera.
3. Confirm the correct network connection status.

WPS - Push Button Setup

To create a WPS connection:

1. Press and hold the WPS button for about 5~6 seconds. The WPS status LED will flash.
2. Press the WPS button on your router within 60 seconds. The camera will automatically create a wireless connection to your router. While connecting, the status LED will flash. After the connection process is complete, the status LED will turn solid.



Note

Please make sure that your router supports WPS, then you can use the WPS button on the camera to easily create a secure wireless connection to your network.

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.

Software Installation

Before installing the apps to your mobile phone for remote surveillance, make sure that you have checked the following:

1. Your mobile platform is iOS or Android.
2. You might be charged for Internet access via wireless or 3G/4G networks. For the Internet access rate details, please check with your local network operator or service provider.
3. Your IP camera is powered on and connected to Internet/ Intranet.

Where to download

App for Android

QR-code

App for iOS

QR-code

Configuration—Android Operating System

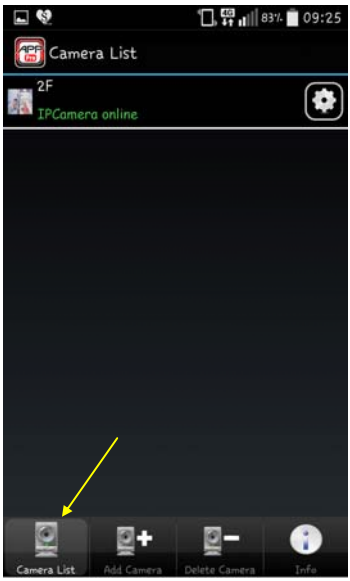
Browse to where **AppPro** is installed by default on your mobile phone when the installation is completed. Find **AppPro** and activate it.

Add Camera

Two methods to add a new camera.

1. **Scan QR code of the camera:** You can just scan the QR code to add a camera. Select “+” (Add) on the screen to add the new camera.
2. **Manually type in the camera ID and password:** Enter the information needed to access your device, such as the DeviceID and Password (default:9999). Select “+” (Add) on the screen to add the new camera.

Camera List



Start to monitor.

1. Choose the camera you want to access on the camera list. Your mobile phone will start connecting to your camera.
2. Select the  to enter the camera configuration setting page.

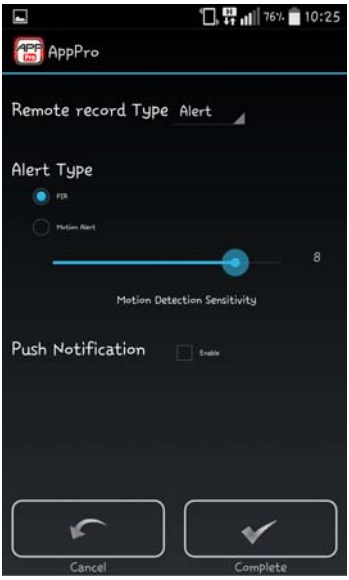
Configuration- Setting

Change the settings of resolution, video mode, video area, FPS, audio mode and enable/disable Reverse Image function. Then click ✔.

Configuration- Change Password

You can change the Password here. Click Yes to activate it. Please use the new password to connect the camera by using this app next time.

Configuration- Notification Setup



Please set the SD card Remote Record Type, Alert Type, Sensibility, and the Push Notification functions first. Then click ✔.

Configuration- Local Storage

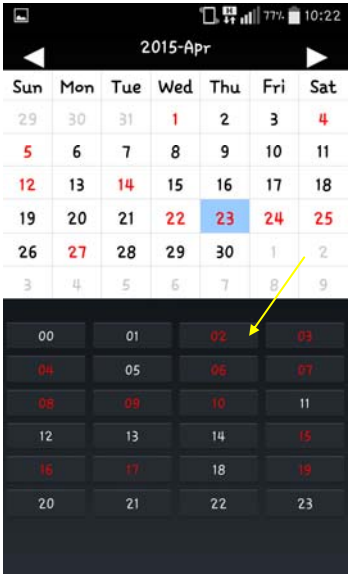
You can view the saved video clips and images in your mobile device here.

Configuration- Remote Storage (SD card)

You can view/ download the saved video clips and images in the SD card here.

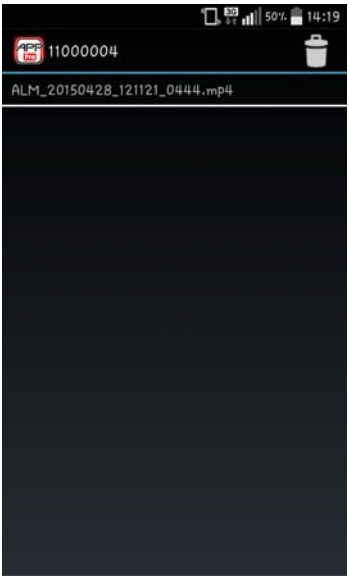
Note: Please insert an SD Card to the camera first.

Remote Storage- Normal/ Alert Record List



This allows you to search a recorded video stored in the SD card of the camera. Click the date and press the hour button to proceed.

Remote Storage- Downloaded Files



You can manage the exported SD card video clips to your mobile device here.

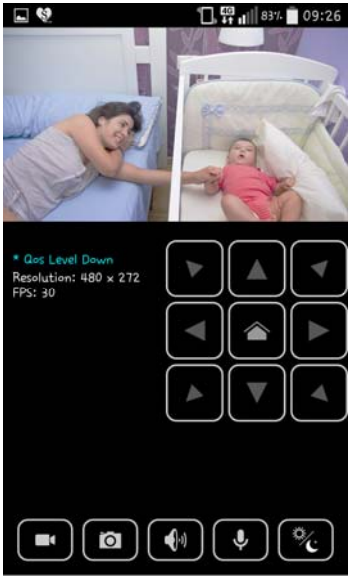
Delete Camera

Select and click Delete to remove the camera on the list.

Info

Set the Video time limit from 1, 3 and 5.
Enable/disable 2-way audio function.

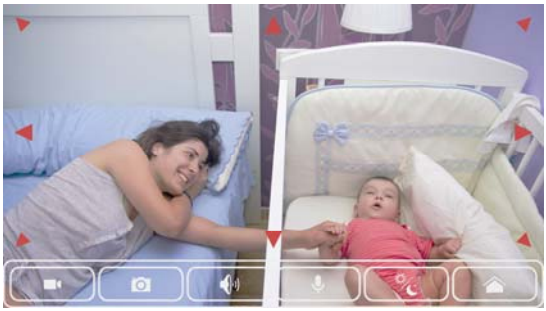
Live



Live- the icons

- Click on  to record a video clip.
- Click on  to take a snapshot.
- Click on  to start/stop audio out.
- Click on  to start/stop two-way audio.
- Click to select the Day & Night mode from:  (Auto mode),  (Night mode) and  (Day mode).
-  The ePTZ control panel. Click to control the camera's directions.

Live- Screen Orientation



Mobile devices generally offer two screen orientations: portrait and landscape. Users can simply rotate the device to initiate a change from one orientation to another. And the functions of the icons are the same with they described above.

Configuration—iOS Operating System

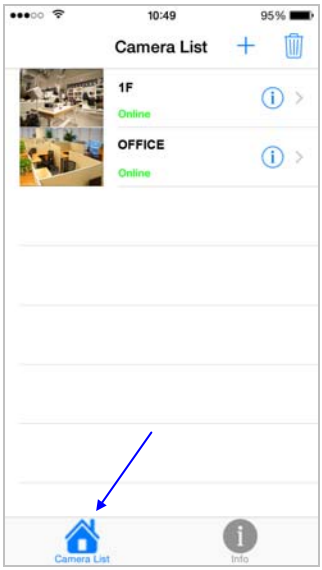
Browse to where **AppPro** is installed by default on your mobile phone when the installation is completed. Find **AppPro** and activate it.

Add Camera

Two methods to add a new camera.

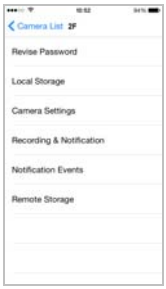
1. **Scan QR code of the camera :** You can just scan the QR code to add a camera. Select “ ” (OK) on the screen to add the new camera or click on “ ” to cancel.
2. **Manually type in the camera ID and password:** Enter the information needed to access your device, such as the DeviceID and Password (9999). Select “ ” (OK) on the screen to add the new camera or click on “ ” to cancel.

Camera List



Start to monitor.

1. Choose the camera you want to access on the camera list. Your mobile phone will start connecting to your camera.
2. Select the to enter the camera function setting page.



3. You can click on the “ ” icon to add a new camera or select “ ” to delete a chosen camera.

Camera Functions- Revise Password

You can change the Device ID and Password here. Select "☑" on the screen to activate it.

Camera Functions- Local Storage

You can view the saved video clips and images in your mobile device here.

Camera Functions- Camera Settings

Change the settings of resolution, video mode, video area and FPS. Then click Save.

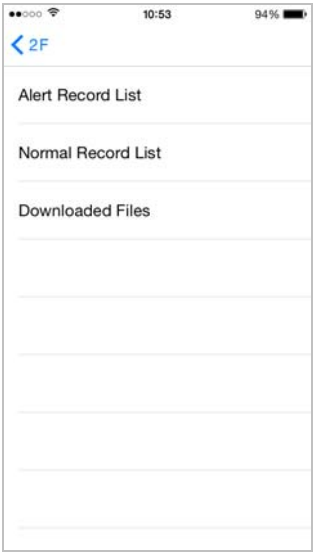
Camera Functions- Notification Setup

When push notification is enabled, the user can receive a push message on their device whenever motion is detected. Please set the SD card remote Recording mode, Alert Type, Sensibility, and the Push Notification functions first. Then click **Save**.

Camera Functions- Notification Events

This page shows the event list of your camera.

Camera Functions- Remote Storage (SD card)

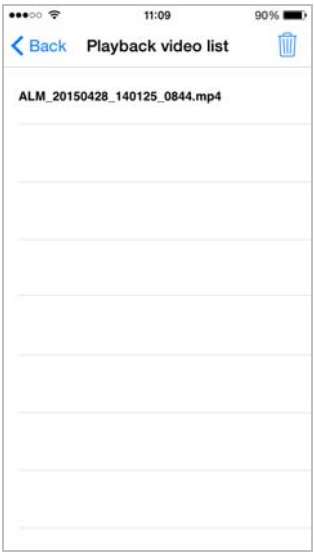


You can view/ download the saved video clips and images in the SD card here.
Note: Please insert an SD Card to the camera first.

Remote Storage- Normal/ Alert Record List

This allows you to search a recorded video stored in the SD card of the camera. Click the date and press the hour button to proceed.

Remote Storage- Downloaded Files



You can manage the exported SD card video clips in your mobile device here.

Live

Live- Screen Orientation

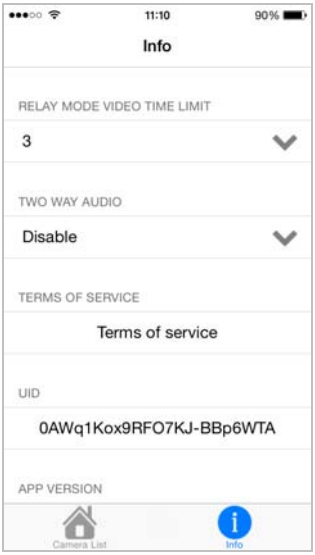
Mobile devices generally offer two screen orientations: portrait and landscape. Users can simply rotate the device to initiate a change from one orientation to another. And the functions of the icons are the same with they described above.

Live- the icons

The function of icons:

- Click to record a video clip.
- Click to start/stop audio out function.
- Click to start/stop two-way audio.
- Click to take a snapshot.
- Click to select the Day & Night mode from: (Auto mode), (Night mode) and (Day mode).
- The ePTZ control panel. Click to control the camera's directions.

Info



Set the Video time limit from 1, 3 and 5. Enable/disable 2-way audio function.

Updating System Software

If the system software of the IP Camera needs to be upgraded, please take the following steps to safely process it.

Important: Before carrying out the following procedures, please ensure the SD card is working and the file of the system firmware is intact

1. Create a directory named **UPGRADE** (upper-case or lower-case letters are no difference) in the SD card if it does not exist.
2. Copy the file of UPDATE.BIN to the **UPGRADE** -directory.
3. If the IP Camera is running, please power it off first.
4. Insert the SD CARD into the IP Camera.
5. Remove the Ethernet cable from the RJ-45 port and then power on the IP Camera.
6. In 5 to 10 seconds, a message reading "UPDATE PROCESSING" will show up on the screen on a blue background; if not, please check out steps 1 to 6 carefully or else inform your technical support while ignoring the following steps.
7. DO NOT power off the IP Camera while this update process is running until the message "UPDATE OK RESET PLEASE" appears on the screen; it might take 15 to 30 seconds to appear.
8. If the message "UPDATE NG RESET PLEASE" appears rather than "UPDATE OK RESET PLEASE", please write down the error messages shown on the screen and inform your technical support, while ignoring the following steps.
9. Power off the IP Camera when this update process is finished, then remove the SD card from the IP Camera.
10. Reconnect the Ethernet cable to the RJ-45 port if necessary.
11. Power ON the IP Camera and it will work normally if the entire update procedure goes correctly.
12. Verify the version of the system software.

WARNING:

- **You must perform Steps 1 to 2 on a PC.**
- **Ensure you are using the correct UPDATE.BIN file in Step 2, otherwise the IP Camera will not work properly.**
- **If the power of the IP Camera is suddenly lost in step 7, please remove the SD card first and turn on the IP Camera next to test its operation. If the IP Camera remains working normally, please go back to step 3; otherwise, please inform your technical support.**
- **In step 9, if the SD card is not removed and the IP Camera does not get online as well, the updating process must be repeated again after rebooting the IP Camera.**
- **Make sure that the SD card is inserted in a correct position in step 4, or the IP Camera will suffer permanent physical damage.**
- **If the message "CSUM ERROR" appears in step 7, it implies a problem in the file of UPDATE.BIN.**
- **Do not interrupt the process when the unit is updating, or it will crash.**

4 Network Configuration

Cable Connections

Please follow the instructions below to connect your IP camera to a computer or a network and to choose a proper RJ-45 cable configuration for connections.

Physical specifications of the RJ-45 cable for Ethernet

Wire Type	Cat. 5
Connector Type	RJ-45
Max. Cable Length	100 m
Hub Wiring Configuration	Straight Through
PC Wiring Configuration	Straight Through

Configure Your IP Camera Network Settings

Upon connecting with the network hardware, you need to activate the network function and configure the proper network settings of the IP camera.

Set IP Address

You need to set an IP address for the unit if the LAN unit isn't connected to a DHCP server. Otherwise, please follow the instructions given below:

Note: The default static IP is **192.168.1.168.**

Set the **IP**, **MASK** and **GATEWAY**. The following is a sample setting.

IP: 192.168.1.X
MASK: 255.255.255.0
GATEWAY: 0.0.0.0

Note

When only one IP camera is connected to a computer or LAN, you can freely assign an IP address for the IP camera. For example only, there is a range of IP camera's IP address from 192.168.1.1 to 192.168.1.254. When using IP ranges on a dedicated security link, you can use almost any IP if configured correctly, however, if using your corporate Network, please consult your IT Department before assigning any IPs.

When an IP camera is connected to a WAN, you must acquire a unique, permanent IP address and correctly configure the MASK and GATEWAY settings according to your network architecture. If you have any questions regarding those settings, please consult a qualified MIS professional or your ISP.

Note

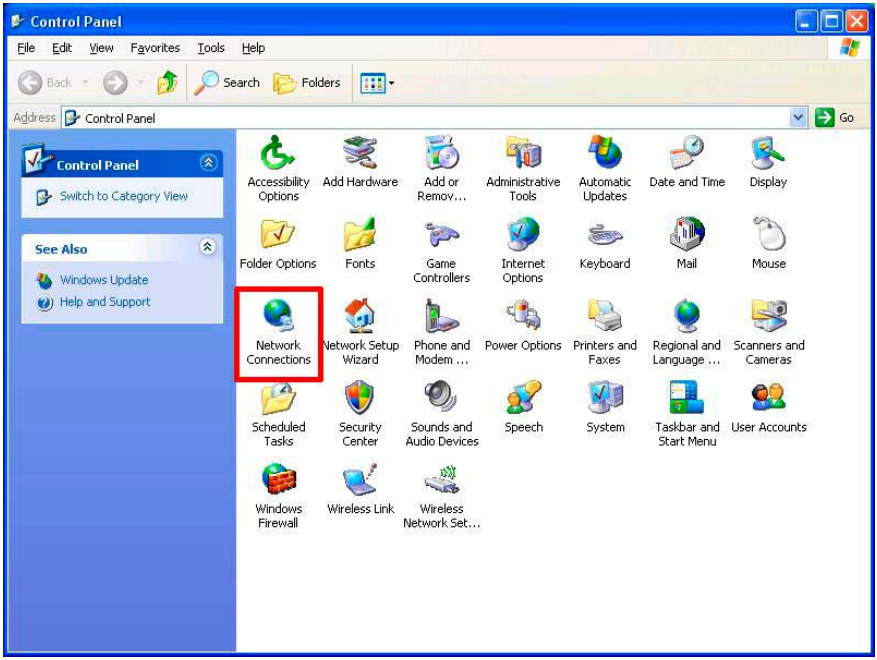
When connecting to a network, each connected IP camera must be assigned a unique IP, which must be in the same class type as your network address. IP addresses are written as four sets of numbers separated by periods; for example, 192.168.1.1 Therefore, if the connected network is identified as Class C, for example, the first three sets of numbers of the IP camera IP address must be the same as the network address. If the connected network is identified as Class B, the first two sets of numbers of the IP camera IP address must be the same as the network address. If you have any questions regarding these settings, please consult a qualified MIS professional or your ISP.

TCP/IP Communication Software

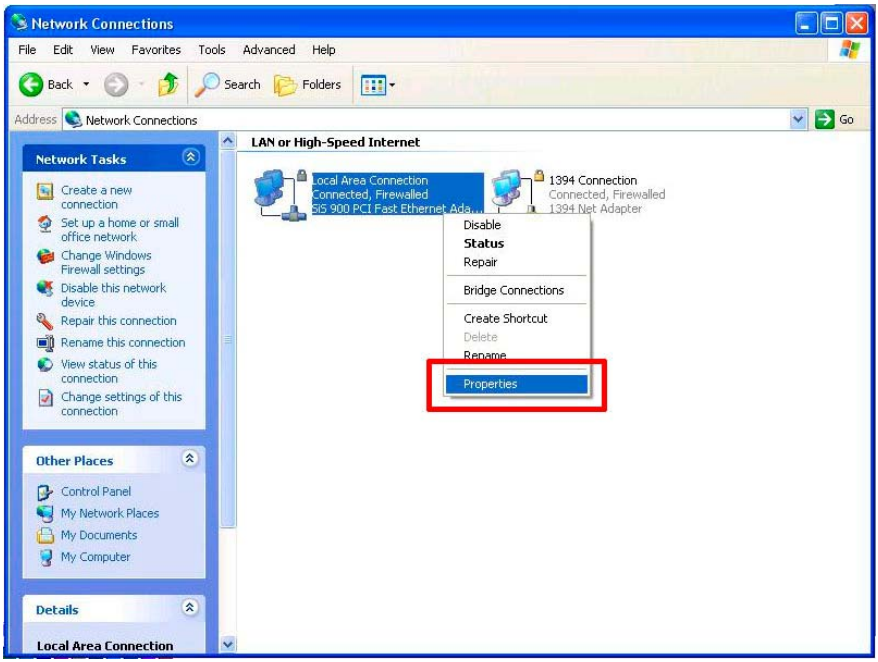
Follow the procedure below to install the TCP/IP communication program in your computer.

1. Click **Start**, and then click **Control Panel**.

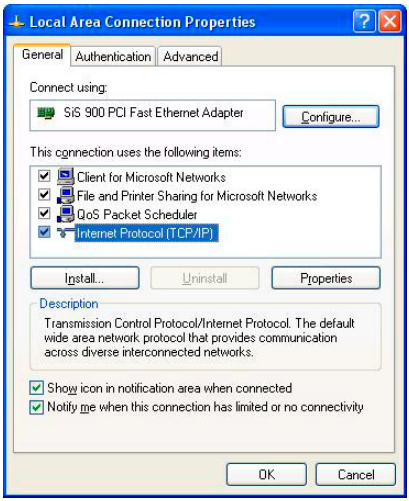
2. Double click the **Network Connections** icon to enter the windows.



1. Right-click your network connection and then click **Properties**.

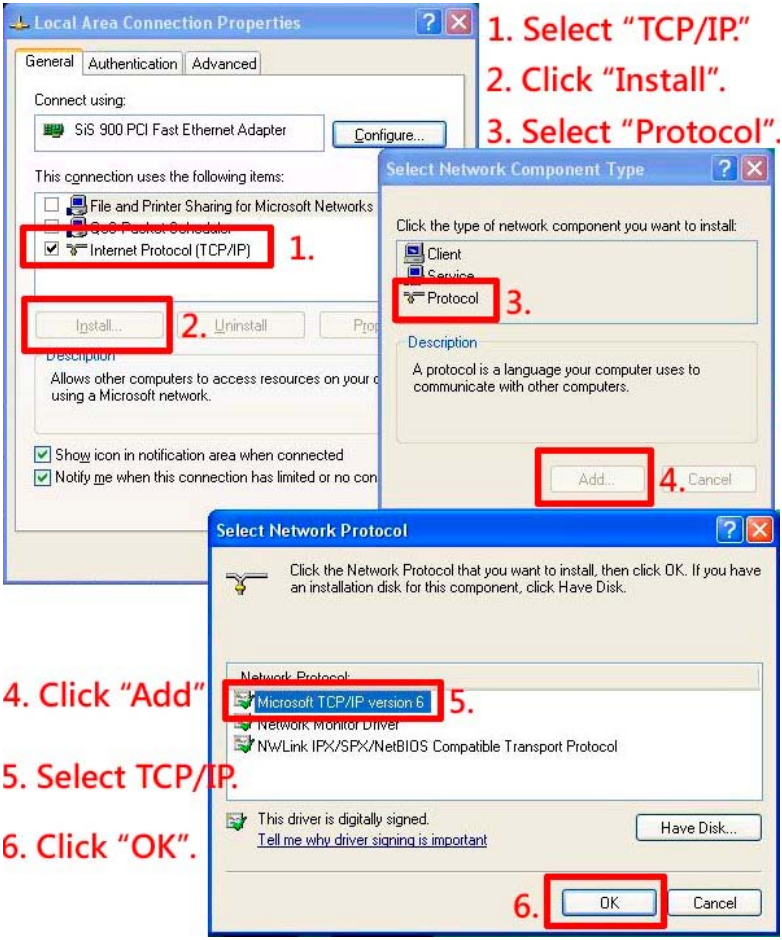


2. On the **General** tab, check if the Internet Protocol (TCP/IP) is included in the list. If the TCP/IP is included, please process section 4.5. If it is not included, please follow section 4.4 to install the TCP/IP.



TCP/IP Installation

On the **General** tab of the Connection Properties, under “This connection uses the following items”, click **Internet Protocol (TCP/IP)**. Then click **Install**. Select **Protocol** from the network component type then click **Add**. Select **Microsoft TCP/IP** from the network protocol then click **OK**. Click **Close** to return to the **Network Connections** window.

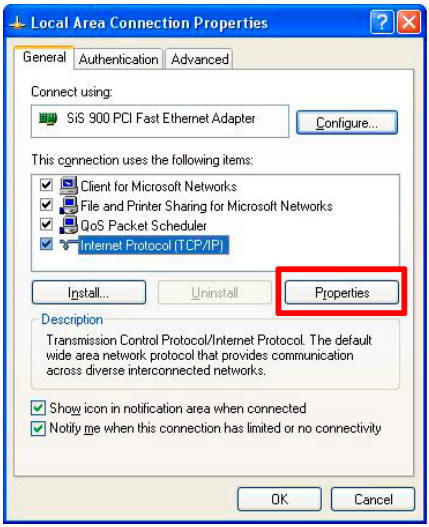


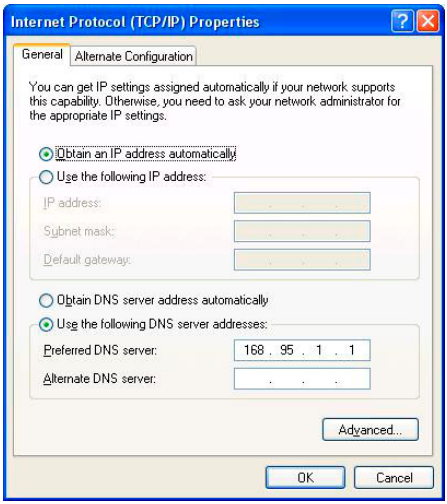
TCP/IP configuration setting

Click **Start** > **Control Panel** > **Network Connections**.

Select **Internet Protocol (TCP/IP)**, and then click **Properties**.

Before processing the IP camera installation in a WAN, please make sure the Internet connection works properly. If not, please contact your ISP provider.





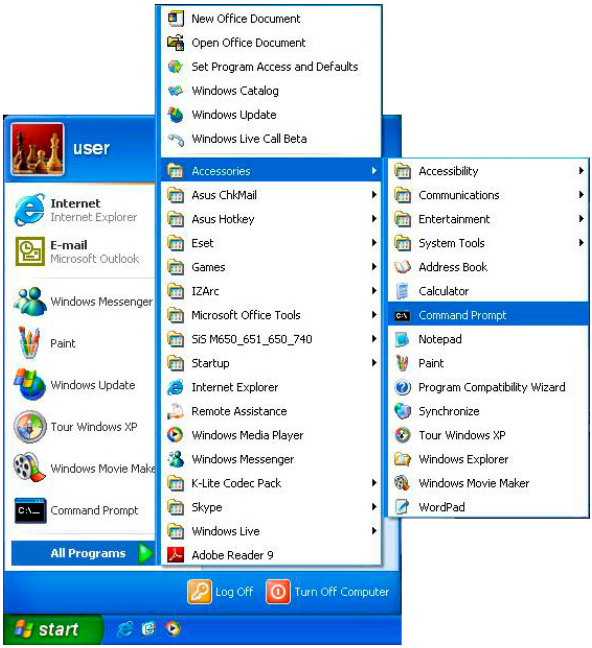
If you are using a DHCP server, please select **Obtain an IP address automatically**. Any assigned IP address for the connected IP cameras must be in the same class type as the server. If there is no DHCP server, please select **specify an IP address** enter the IP address, subnet mask and default gateway of your choosing of your PC. This IP address must be different from other network IP devices but in the same class type.

NOTE: The IP address of an IP camera in a network must be unique to itself as opposed to those of the other chosen PCs, but in the same class type.

Connection Testing

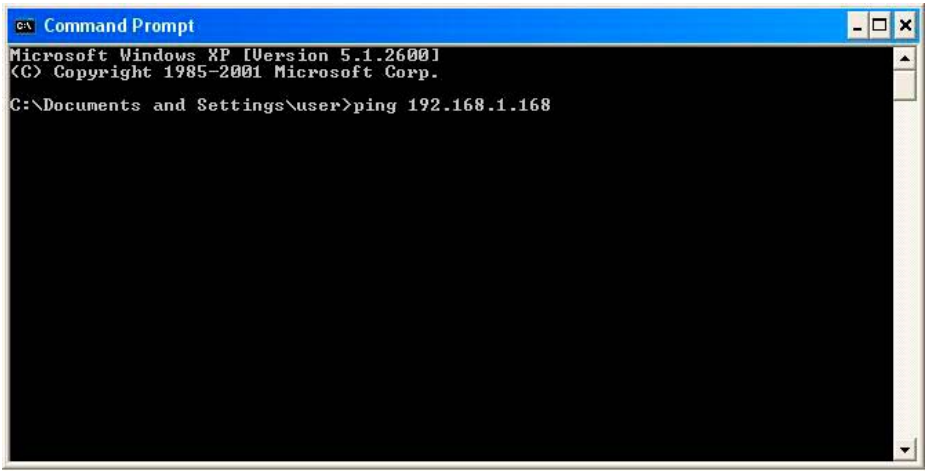
With the previous settings, follow the instructions below to ensure whether you have established the connection successfully.

1. Click **Start > All Programs > Command Prompt**.

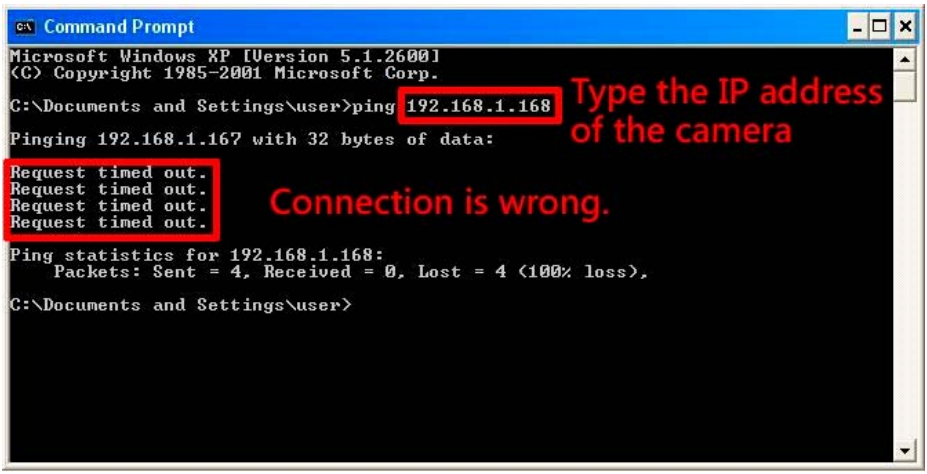


2. Enter **ping XXX.XXX.XXX.XXX** (the camera's IP address), then enter. (See the sample screen below).

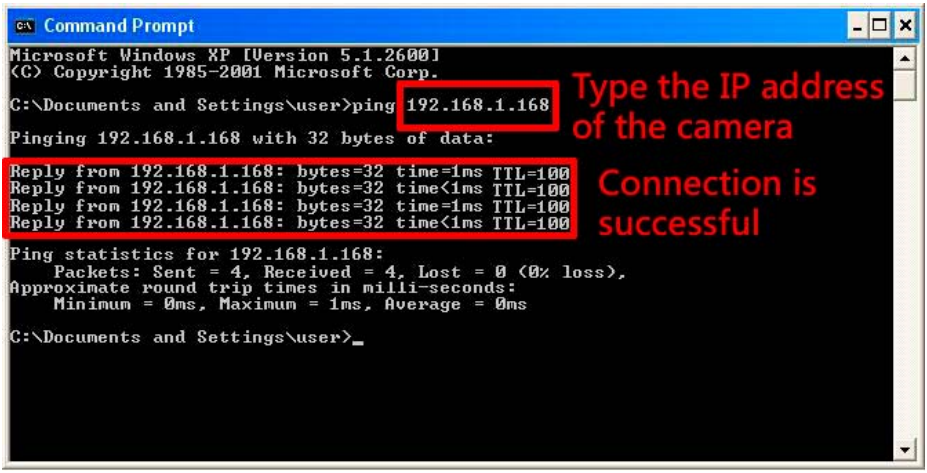
   *** This is the IP address for an IP camera that is assigned for the connected IP camera.*



If you receive a response as in the sample screen below, the connection hasn't been successfully established. Please re-check all the hardware and software installations by repeating last two sections. If you still can't establish the connection after rechecking, please contact your dealer.



If you receive a response as in the sample screen below, you have successfully made the connection.


Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\user>ping 192.168.1.168
Pinging 192.168.1.168 with 32 bytes of data:
Reply from 192.168.1.168: bytes=32 time=1ms TTL=100
Reply from 192.168.1.168: bytes=32 time<1ms TTL=100
Reply from 192.168.1.168: bytes=32 time=1ms TTL=100
Reply from 192.168.1.168: bytes=32 time<1ms TTL=100
Ping statistics for 192.168.1.168:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
C:\Documents and Settings\user>
Type the IP address of the camera
Connection is successful

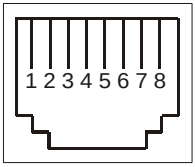
5 Configuration Using A Web Browser

The configuration pages accessed with a web browser provides the functions of configuring, monitoring remote zones or watching recorded data through the TCP/IP protocol. The details are listed as follows.

RJ-45 PIN configuration for Ethernet

PIN NO.	PIN Assignment
1.	TX +
2.	TX -
3.	RX +
4.	Not Connected
5.	Not Connected
6.	RX -
7.	Not Connected
8.	Not Connected

RJ-45 socket



Physical specification for Ethernet

Wire type	Cat. 5
Connector type	RJ-45
Max. cable length	100 m
Hub wiring configuration	Straight Through or Cross Over
PC wiring configuration	Straight Through or Cross Over

Web Configuration pages

Connecting the IP camera

1. Start Microsoft Internet Explorer, Mozilla Firefox, Google Chrome, etc.
2. Click on the URL block at the top of the window.
3. Enter the URL address of the IP camera into the URL block and press the “**Enter**” button to enter the home page.
4. Enter the "User Name" and "Password" in the appropriate spaces.
5. Select “**OK**”.

Note

The default "User Name" and "Password" are **DeviceID** and **9999**, respectively.

The page headlined "Enter Network Password” is shown below. Please enter the user name and password of the IP camera when you see it. If either the user name or the password is incorrect, please check the input data and rectify it as necessary.

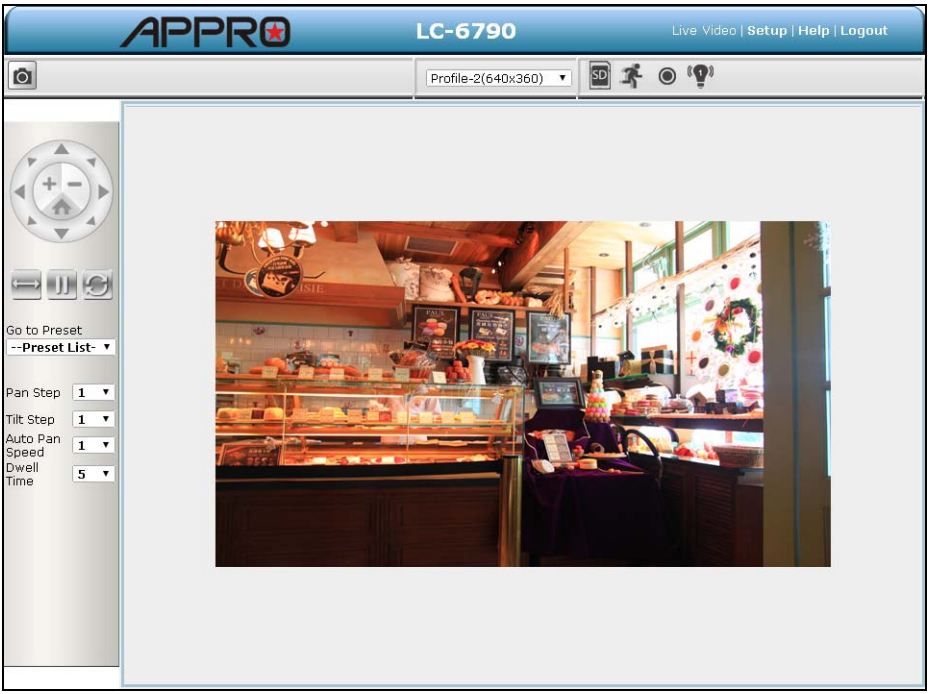
Once authorized successfully, the login page will not appear again until you close the window and reconnect it.

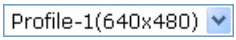
The initial sequence of proceeding is to type in your IP address and click the "Enter" button to access the home page. If and when you revise or change data in the "SYSTEM USERS" page, the sequence will alter to initially show the "Enter Network Password" page.

Live Video

The Live Video from the IP camera is displayed on the home page when your PC is online with the IP camera. There are also additional settings provided on the home page. The AJAX (default) and the ActiveX viewer types display different display formats on their home page.

The AJAX viewer type: Non-IE browsers support (for the JPEG mode only).



- Click  to change the pairs of resolution and quality which you already arranged in the “Audio and Video” setting page (for the JPEG mode).
-  SD card icon: Check if the SD card is inserted or not. When a SD card is inserted, the icon becomes red  .
-  Motion-on icon: When there is a detection of motion, the icon will appear in the right upper corner to warn the user. When the motion detection is triggered, the icon will blink red  .
-  Status Recording on icon: The icon will appear on the upper right corner. When the recording is triggered, the icon will become red  and record the images into the inserted

SD card.

-  Alarm on-icon: When there is a detection of external devices such as a sensor, The icon will appear on the upper right corner warn the user. When an alarm is triggered, the icon will blink red  .

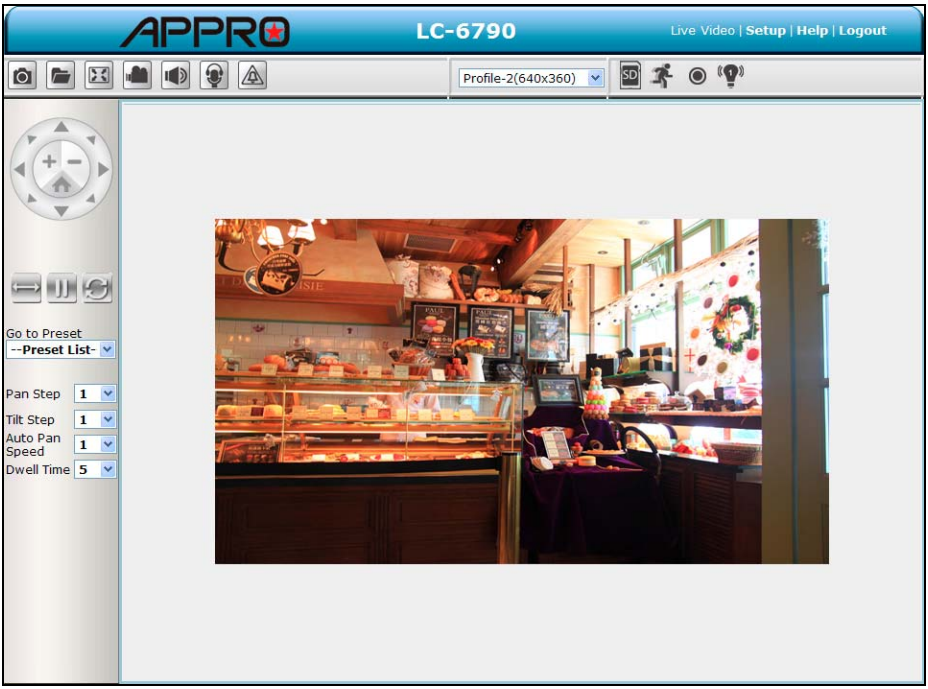
The ePTZ control panel:

- Click  to start the electronically pan, tilt, and zoom (ePTZ) within the camera's predefined view area, if one has been defined.
-  SD card icon: Starts the automatic panning function. The ROI will pan from back and forth within the FoV.
-  Motion-on icon: Stops automatic panning.
-  Preset Path: Starts the camera's motion along the predefined path.
- ePTZ Speed: You may select a value between 0 and 64. 0 is the slowest and 64 is the fastest.

Setup

The ActiveX viewer type:

You can select from the available thumbnails for your option of taking a Snapshot, setting the Storage Folder, selecting the Full Screen mode, Recording, Listen, Talk and Zoom.



- Snapshot: Click on the button to take a snapshot. The icon will change to a blue color while working effectively.
- Set Storage Path: Click on the button to set a storage folder for saving the snapshot and the video clips.
- Full Screen: Click on the button to enter the full screen mode. The icon will change to a blue color while working effectively.
- Record switch: Click on the button to record a video clip. The icon will change to a blue color while working effectively.
- Audio switch: Click on the button to start/stop the audio-in function (listen/stop listening). The icon will change to a blue color while working effectively.

- Talk switch: Click on the  button to start/stop audio out function (talk/stop talking). The icon will change to a blue color  while working effectively.
- Digital output: Click on the  button to start/stop digital output. The icon will change to a blue color  while working effectively.
- EPTZ: The Digital Zoom mode. The mode utilizes the high resolution feature of the mega pixel camera to simulate the mechanical functions of the PTZ camera. The mode helps the user to filter the image details more efficiently. When the digital zoom mode is active, the image can be zoomed in and out directly.

  Hold the left key of the mouse and move the mouse in the preferred direction in the Global View area. As the mouse moves, the live view area shows the corresponding image until the border of the image appears.
- Live Video: Click to go back to the device's homepage.
- Setup: Click to proceed to the advanced settings.
- Logout: Click to close the window.

Click on the **Setup** button on the home page to proceed to the advanced settings.

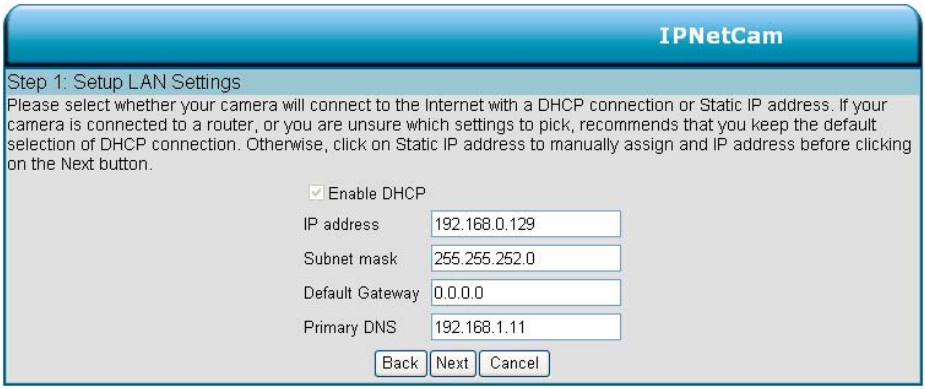
5.1.3.1 Wizard

To quickly configure your IP Camera, click **Wizard** on the top of the Setup pages.

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

Click **Next** to continue.

Step 1:

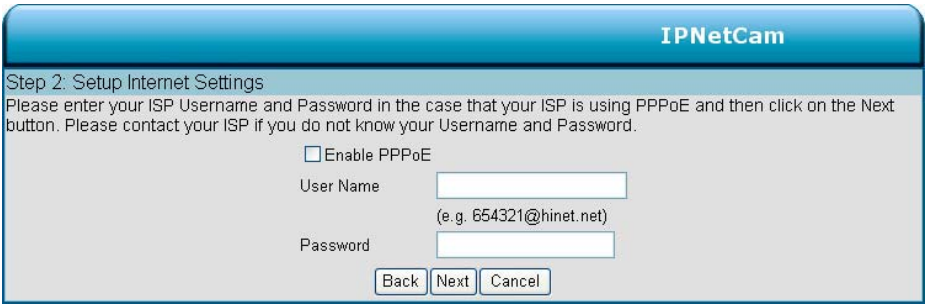


The IP Camera default setting is DHCP **On**. Use the DHCP protocol if the DHCP server is working in the LAN. The IP Camera will obtain an IP address automatically from the DHCP server. Or you can turn the DHCP **Off** to build the IP Camera working environment with a static IP address. The default static IP is **192.168.1.168.** You can set an IP address for the IP Camera if the LAN unit isn't connected to a DHCP server.

If your Internet Service Provider has provided you with connection settings, or you wish to set a static address within your home network, enter the accurate information for your static IP setting.

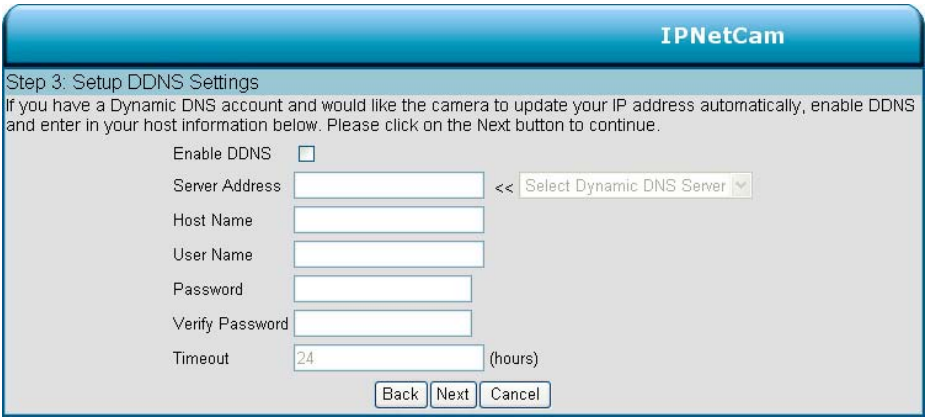
Click **Next** to continue.

Step 2:



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

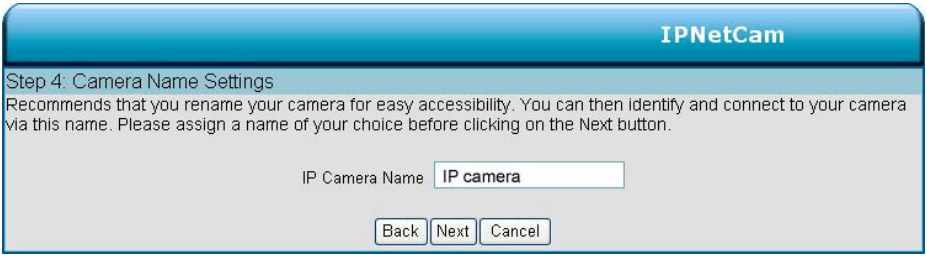
Step 3:



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.

Click **Next** to continue.

Step 4:

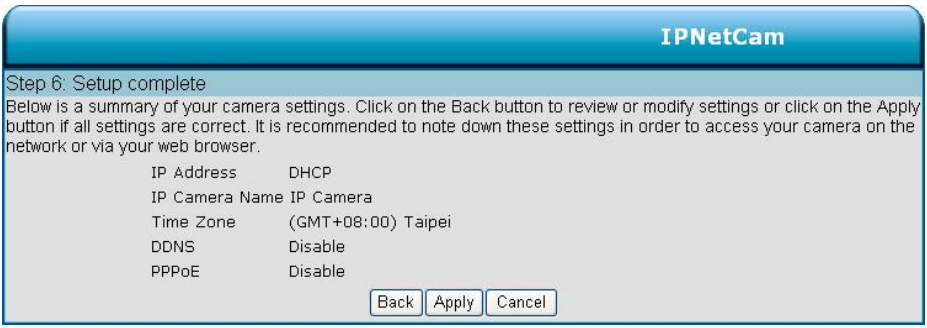


Enter a name for your camera and click **Next** to continue.

Step5:

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

Step 6:



If you have selected **DHCP**, you will see a summary of your camera's settings. Please note down all this information as you will need it for accessing your camera within the network.

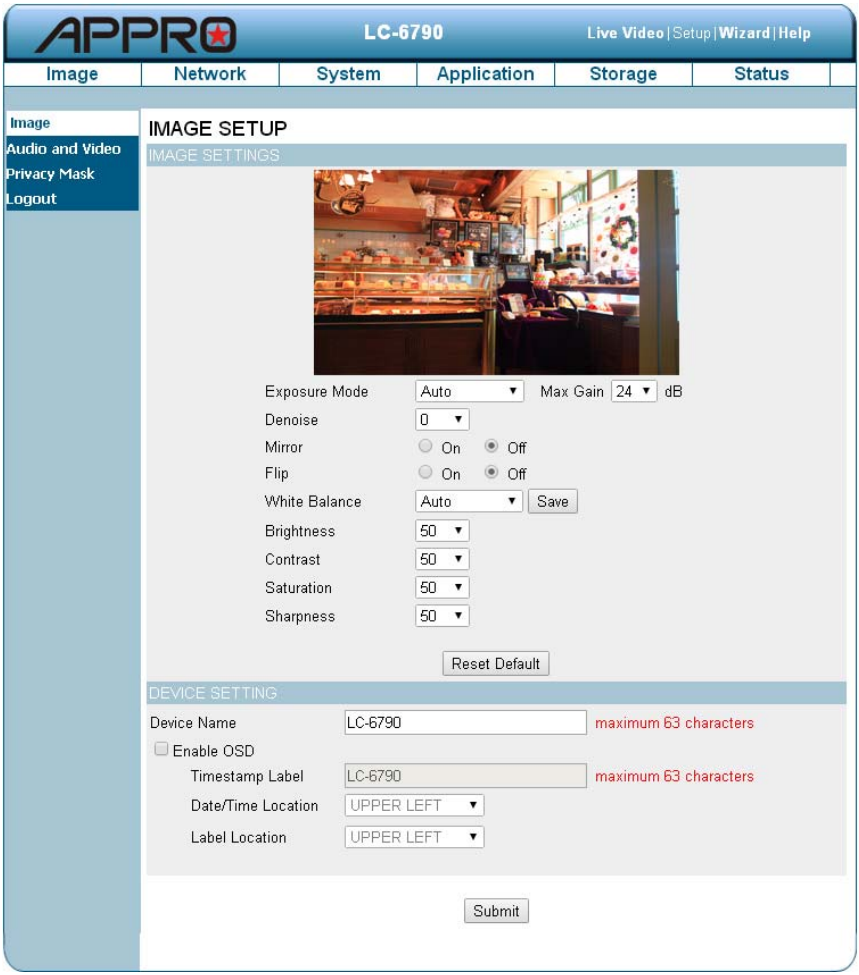
Click **Apply** to save your settings.

Change Image Setting

Please follow the steps below to change the video setting through the network as necessary. A preview of the image will be shown in the window of Live Video. Click **Submit** to activate and save your changes.

· *The Image Setup setting page*

1. Click on the **Image** button to enter the image-setting page.



2. Adjust the “Viewer Type”. Click to choose the viewer type of the “AJAX” or “ActiveX” mode (IE browser only).
3. Adjust the ”Image Settings”, including “Exposure Time“, “Denoise”, “Mirror”, “Flip”, “White Balance”, “Brightness”, “Contrast”, “Saturation” and “Sharpness” as necessary.
4. Adjust the ”Device Settings” including “Device Name” and “Timestamp”.

- Click “**Enable OSD**” to checkmark the box and activate the function.
- Enter the "Timestamp Label" you have chosen.
- Enter the "Timestamp Location" you have chosen.

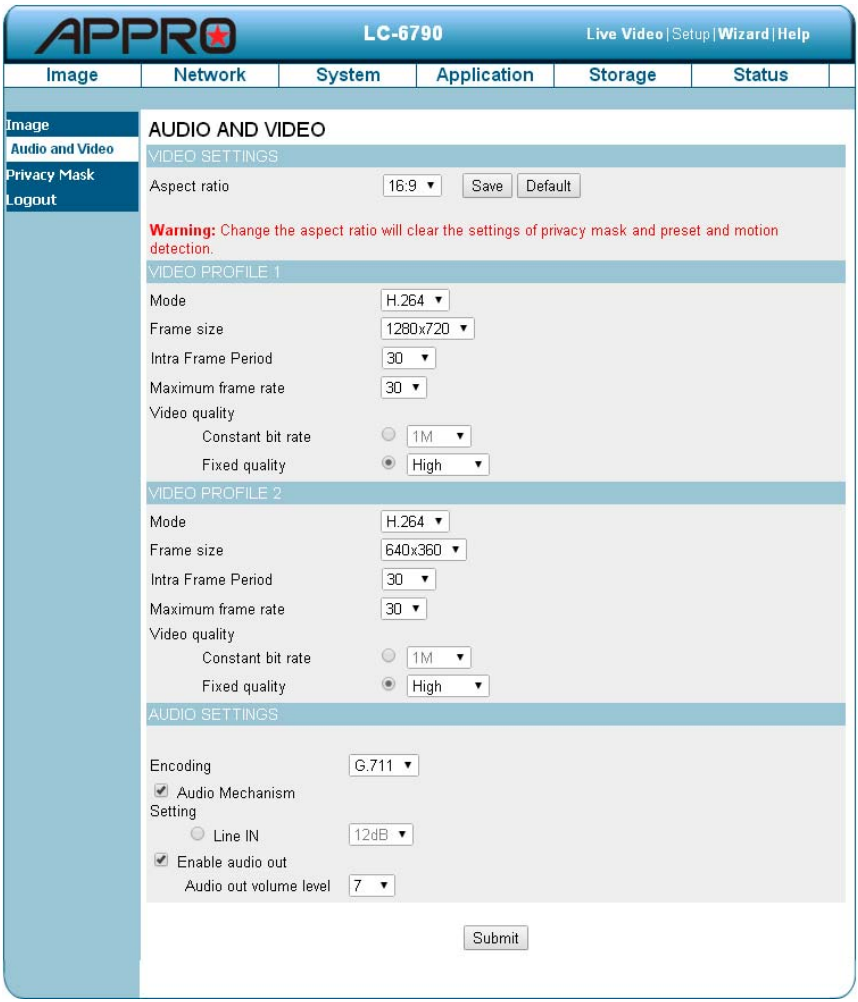
5. Click on the **Submit** button to submit the new image setting.

Description of function keys:

Exposure Mode	Exposure Mode controls a camera by shutter speed and the lens aperture. **Auto:** Automatic exposure mode. The default shutter time is 1/30~1/10000 (1/25~1/10000) and the maximum gain is 36 dB. **Indoor:** The optimum exposure setting is pre-programmed for the indoor environment. The default shutter time is 1/30~1/120 (1/25~1/100) and the maximum gain is 36 dB. **Outdoor:** The optimum exposure setting is pre-programmed for the outdoor environment. The default shutter time is 1/30~1/750 (1/25~1/750) and the maximum gain is 36 dB. **Night:** The optimum exposure setting is pre-programmed for the night environment. The default shutter time is 1/30~1/750 (1/25~1/500) and the maximum gain is 12 dB. **Moving:** The optimum exposure setting is pre-programmed for moving subjects. The default shutter time is 1/120~1/1,000 (1/100~1/1,000) and the maximum gain is 36 dB. **Low noise:** The optimum exposure setting is pre-programmed to reduce the noise. The default shutter time is 1/8~1/30 (1/7.5~1/25) and the maximum gain is 36 dB. **Customize 1-3:** You can customize an exposure mode by adjusting individual parameters like Gain and Shutter. **Schedule:** In the Schedule mode, you can set the customize schedule. Select a schedule and set the time period. You can assign one of the exposure modes to be the function mode of the Remaining time. Check and press to Save. **Note: The period of the schedule can’t be set across midnight. For example, if you want to set a schedule of Night mode from 22:00 to 04:00, you have to (1) check a schedule and select the Night mode and set the period from 22:00 to 24:00, then (2) enable the next schedule and set it to Night mode and set the period from 00:00 to 04:00. Remember to click Save to activate.**
Denoise	Denoise (noise reduction) is the process of removing noise from signals.
Mirror:	The mirror stores the images reflected by it so it can be used for surveillance or to simply take your own picture.
Flip	To flip the camera’s lens 180 degrees.
White Balance	White balance is the process of removing unnatural shades of color, so that objects which appear white in reality are rendered white in the images. Select your options from “Auto”, “Outdoor”, “Indoor”, “Fluorescent” and “Push Hold”.
Brightness	An adjustable setting to compensate for backlit scenes.
Contrast	The measurement for color intensity/strength.
Saturation	This setting controls the strength of colors from black and white to bold colors.
Sharpness	An adjustable setting to set the clarity of detail in the images.
Timestamp Label	Enter the timestamp label.
Timestamp Location	Click to open the list of four location modes to choose from: “UPPER LEFT”, “UPPER RIGHT”, “BOTTOM LEFT”, and “BOTTOM RIGHT”.
Submit	Click to set.

- *The Audio and Video setting page*

1. Click on the **Audio and Video** button to enter the Audio and video page to set the details of the device. You may configure video profiles with different settings for your camera. Hence, you may setup different profiles for your computer and mobile displays. In addition, you may also configure your audio setup for your camera. Click **Submit** to activate and save your changes.



2. Select the Profile Number from 1-2. Then set the Aspect ratio of 4:3 or 16:9. Click Save to activate it.
3. Set the “Mode”, “Frame size”, “Viewer window area”, “Maximum frame rate” and “Video quality” of the Video Profile as necessary.

4. Set the details of the audio functions.

5. Select 50 Hz or 60Hz of the Power Line.

6. Click on the **Submit** button to submit the new setting.

Description of function keys:

Aspect ratio:	The aspect ratio of an image is the ratio of the width of the image to its height. Select 4:3 or 16:9 of the ratio that best suits your needs.
Mode:	Choose the video format from “H.264” or “JPEG”. In JPEG mode, the video frames are independent.
Frame size:	This option allows the user to choose the video resolution of the live view area: 4:3 - 1024x768, 800x600, 640x480, 480x360, 320x240, 176x144. 16:9 - 1280x720, 800x450, 640x360, 480x270, 320x176, 176x144.
Viewer window area:	This option allows the user to choose the video resolution of the live view area: 4:3 - 1024x768, 800x600, 640x480, 480x360, 320x240, 176x144. 16:9 - 1280x720, 800x450, 640x360, 480x270, 320x176, 176x144.
Intra Frame Period:	In the H.264 mode, if there is little motion and most of the video content does not change from frame to frame, the H.264 encoding can compress the video by intra-frame way to keep the quality from loss. You can set the desired time period to use intra-frame compression.
Maximum frame rate:	Click on the drop-down list to choose the frame rates of “30FPS”, “15FPS”, “7FPS”, “4FPS” and “1FPS” in all resolution.
Video quality:	Selects the image quality level of JPEG images captured from “Highest”, “High”, “Medium”, “Low” and “Lowest”. Selects the image quality level of H.264 images captured from “Constant bit” (4M, 2M, 1M, 512K, 256K, 200K, 128K and 64K) or “Fixed Quality“ (Highest, High, Medium, Low and Lowest).
Audio Settings:	You can use the option to switch the external microphone on/off or adjust the volume.
Encoding:	Click on the drop-down list to choose the audio encoding of “G.711” and “G.726”. G.726 offers quality nearly identical to G.711, but it uses only half the bandwidth.
Audio Mechanism Setting:	Check to activate this function. Then select MIC or Line In. **NOTE: The option of 26dB is for long-distance audio receiving, especially longer than 3 meters.**
Enable audio out:	Check to activate this function. Then set the Audio out volume level.
Power Line	Select 50 Hz or 60Hz that depends on your local electric utility configuration.

Note

In order to use the Audio In/ Out signal function, please follow the steps given below.

1. Connect to the camera webpage over the PC IE Browser.

2. Ensure “Audio Mechanism Setting” & “Enable audio out” are both selected. Click Submit.

3. Connect the Mic to the PC, and connect the camera Audio out to the speaker.

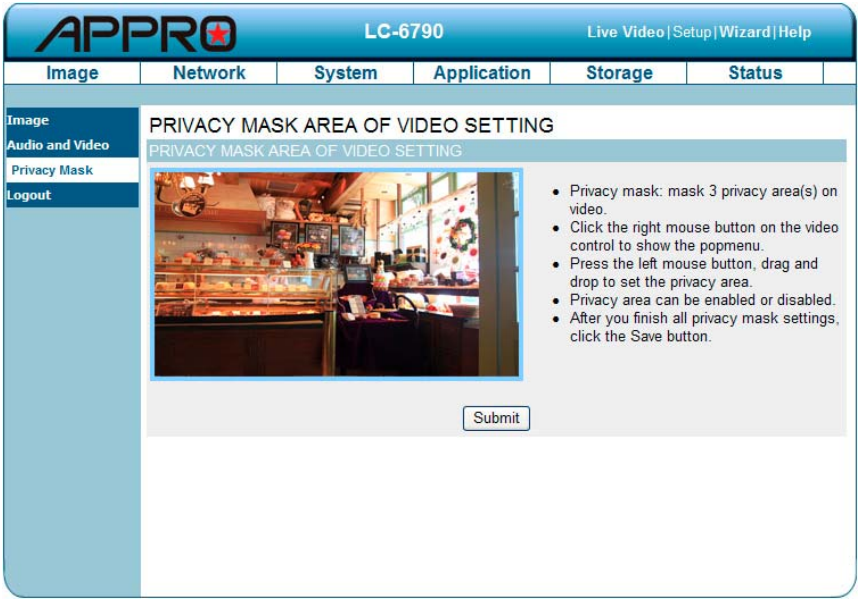
4. Select “Talk”  →  ; speak to the PC-connected microphone.

5. Confirm the sounds made in the camera-connected speaker.

6. Connect the Mic to the camera--Audio in; connect the speaker to the PC—AUDIO Out.
7. Click “Listen” in the webpage  →  ; the Mic sends audio signals to the camera.
8. Confirm the sounds from the PC speaker.

- *The Privacy Mask setting page*

Click on the **Privacy Mask** button to enter the Privacy Mask Area setting page. Mask 3 privacy area(s) on video to specify up to the area(s) on the camera's image to be blocked/excluded from recordings and snapshots.



1. Click the right mouse button on the video control to show the pop-menu.
2. Press the left mouse button, drag and drop to set the privacy area.
3. Privacy area can be enabled or disabled.
4. After you finish all privacy mask settings, click the **Submit** button.

5.1.3.3 Change the Network Setting

Please follow the steps below to change the network setting through the network as necessary.

- *Set the network options and IP address.*

1. Click on the **Network** button in the home page to enter the Network Setup page.

2. The accessible networks here are the “PPPoE”, “Port Detail”, ”Traffic”, “Dynamic DNS”, “HTTPS” and ”Access List”.

3. Set the details of the “LAN Settings” for your local area network as necessary.

4. Click on the **Submit** button to submit the new network setting.

Description of function keys:

DHCP:	If you have a DHCP server running on your network and would like a dynamic IP address to be updated to your camera automatically.
DNS	(The Domain Name System) is an Internet service that translates domain names into IP addresses (e.g., 192.168.0.20). The address can be obtained from your ISP or network gateway.
Enable UPnP Presentation:	Enable this setting to allow your camera to be configured as an UPnP device in your network.
Enable UPnP port forwarding:	Enable this setting to allow the camera to add port forwarding entries into the router automatically on a UPnP capable network.

- *Change the Network Setting — Wireless Setup.*

The “Network” page has, on its upper left, the “Wireless Setup” icon. This section allows you to set up and configure the wireless settings on your camera. You may choose which wireless network for the connection using the pull-down menu of Site Survey or enter the SSID manually. After making any changes, click the **Submit** button to save your changes.

1. Click on the **Wireless Setup** button on the upper left menu to enter the “Wireless Setup” Settings page.

2. Active the “Enable Wireless” status of the function. Click your choices to enable.
3. Click on the **Submit** button to submit the new setting.

Note

Please refer to section PPPoE & DDNS for more details.

Description of function keys:

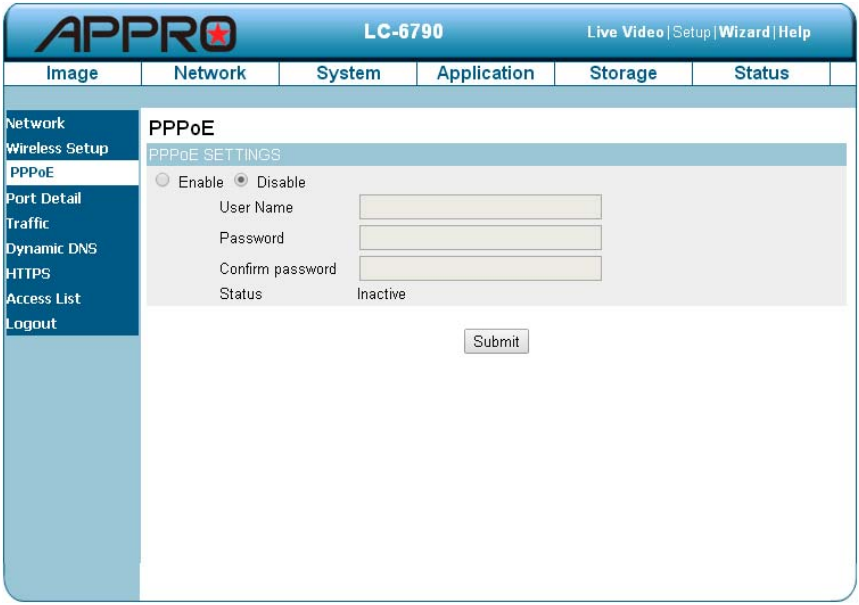
Site Survey	You can use the drop-down list to select an available wireless network. The related information (SSID, Wireless Mode, Channel, Authentication, Encryption) will be automatically filled in for you.
SSID	**SSID** (Service Set Identifier) is the name of your wireless network such as Default, Conference, My network, and etc. Enter the SSID of the wireless access point you wish to use.

Wireless Mode	Use the drop-down box to select the mode of the wireless network you wish to connect to. Infrastructure is normally used to connect to an access point or router. Ad-Hoc is usually used to connect directly to another computer.
Channel	If you are using Ad Hoc mode, select the channel of the wireless network you wish to connect to, or select Auto.
Authentication	Select the authentication you use on your wireless network - Open, Shared, WPA-PSK, or WPA2-PSK. **Open:** This option makes the camera visible to all devices on the network. No encryption is provided. **Shared:** Allows communication only with other devices that have the identical WEP (Wired Equivalent Privacy) settings. **WPA-PSK, WPA2-PSK:** Both modes will require you to input a pre-shared Key for the connection that is held between the camera and the wireless device.
Encryption	If you use WPA-PSK or WPA2-PSK authentication, you will need to specify whether your wireless network uses TKIP or AES encryption. If you use Open or Shared authentication, WEP encryption should be the setting.
Key:	If you use WEP, WPA-PSK, or WPA2-PSK authentication, enter the Key (also known as password) used for your wireless network.

- *Change the Network Setting — PPPoE.*

The “Network” page has, on its upper left, the “PPPoE” icon. Please follow the steps below to change the PPPoE setting through the network as necessary.

4. Click on the **PPPoE** button on the upper left menu to enter the “PPPoE Settings” page.



5. Active the “Enable” or “Disable” status of the PPPoE Settings function. Click your choices to enable.
6. Enter the PPPoE “Username” and the PPPoE “Password”, then confirm the password again.
7. Click on the **Submit** button to submit the new setting.

Note

Please refer to section PPPoE & DDNS for more details.

Description of function keys:

PPPoE Setting	If you use the 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.
Username:	Enter it in the given space.
Password:	Enter it in the required space.

- *Change the Network Setting — Port Detail.*

The “Network” page has, on its upper left, the “Port Detail” icon. It allows you to specify and reserve the ports for both the HTTP and RSTP streaming. Please follow the steps below to change the Port Detail setting through the network as necessary.

1. Click on the **Port Detail** button on the upper left menu to enter the “Port Detail” page.

2. Enter the “HTTP port” and the “Access name for stream” for the MJPEG streams of the HTTP.
3. Enter the “HTTPS port”. The default value is 443.
4. Enter the “RSTP port” and the “Access name for stream” for the MJPEG or JPEG streams of the RSTP.
5. Click on the **Submit** button to submit the new setting.

Note

If you want to use an RTSP player to access the IP camera, you have to use the following RTSP URL command to request transmission of the streaming data.

Description of function keys:

HTTP Port	HTTP ports allow you to connect to the camera via a standard web browser. This port can be set to a number other than the default HTTP port 80. A corresponding port must be opened on the router. For example, if the port is changed to 8080, users must type in the web browser 'http://192.168.0.100:8080' instead of 'http://192.168.0.100'.
HTTPS Port	HTTPS Port in a camera connects it with a PC via a secure web browser.
RTSP Port	The port number that you use for RTSP streaming to mobile devices, such as mobile phones or PDAs. 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.

Note

Using a RSTP player to view the video streams

(1) Launch the RTSP player.

(2) Choose “File”, and an “Open URL” dialog box will pop up.

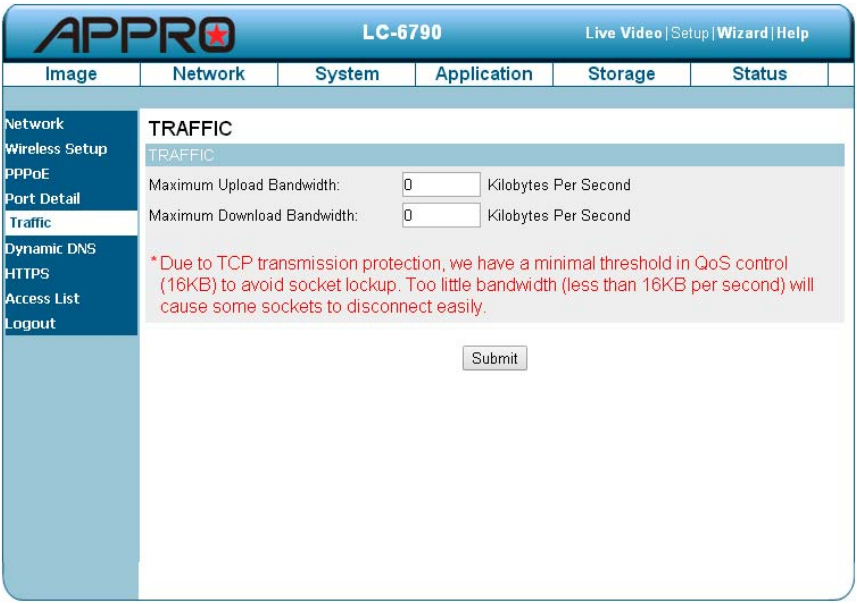
(3) Enter an Internet URL to open. The address format is rtsp://<ip address>:<rtsp port>/<RTSP streaming access name for stream1, stream2 or stream3>

(4) The live video will be displayed in your player.

- *Change the Network Setting —Network Traffic.*

The “Network” page has, on its upper left, the “Traffic” icon. Specifying the maximum download/upload bandwidth for each socket is useful when connecting your device to a busy or heavily loaded network. Please follow the steps below to change the setting through the network as necessary.

1. Click on the **Traffic** button on the upper left menu to enter the “Traffic” page.



2. Enter the “Maximum Upload Bandwidth” and the “Maximum Download Bandwidth”.
3. Click on the **Submit** button to submit the new setting.

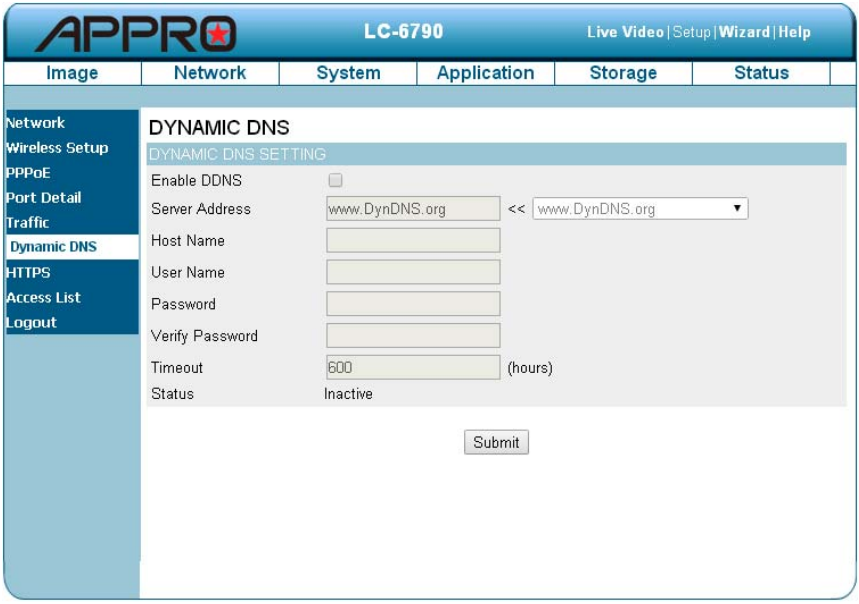
Description of function keys:

Maximum Upload Bandwidth:	Enter it in the given space from a range of 0 to 102400.
Maximum Download Bandwidth:	Enter it in the required space from a range of 0 to 102400.
Submit:	Click to set.

- *Change the Network Setting — DDNS.*

The 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. The user name and password are required when using the DDNS service. The “Network” page has, on its upper left, the “DDNS” icon. Please follow the steps below to change the DDNS setting through the network as necessary.

1. Click on the **Dynamic DNS** button on the upper left menu to enter the “Dynamic DNS” page.



2. Click “Enable DDNS” to checkmark the box and activate the function.
3. Fill in your dynamic “Server Address”, “Host Name”, “User Name”, “Password”, “Verify Password”, “Timeout”, “IP Address” and “Email Address”.
4. Click on the **Submit** button to submit the new setting.

Note

Please refer to section PPPoE & DDNS for more details.

Description of function keys:

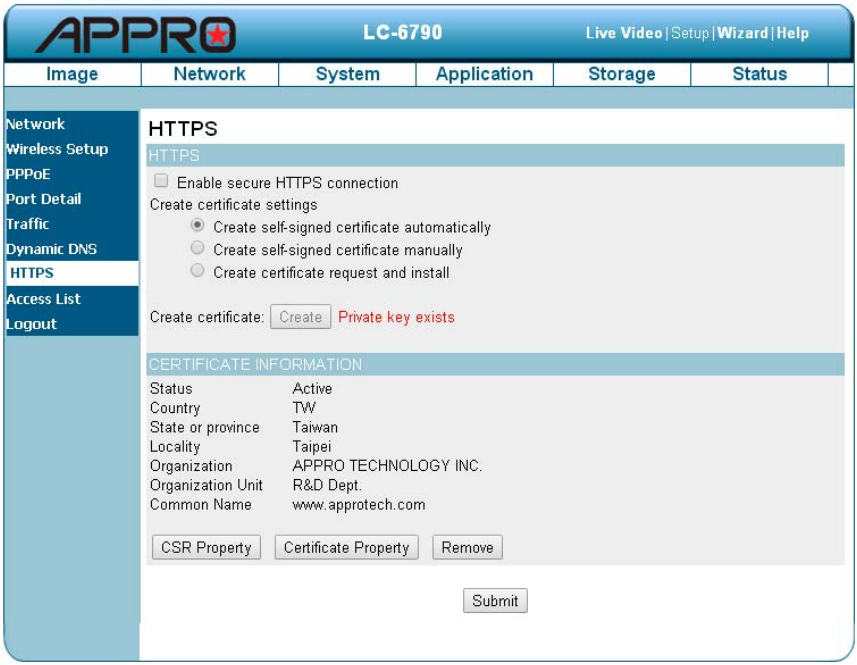
Enable DDNS Function:	Checkmark to activate the function.
DNS	(The Domain Name System) is an Internet service that translates domain names into IP addresses (i.e. 192.168.0.20). The address can be obtained from your ISP or network gateway.
Server Address:	Select your Dynamic DNS provider from the pull down menu or enter the server address manually.

Host Name:	Enter the host name of the DDNS server.
User name:	Enter your user name or e-mail used to connect to the DDNS
Password:	Enter your password used to connect to the DDNS server.
Verify Password	Enter your password again to connect to the DDNS server.
Timeout:	Enter the DNS Timeout values for registering the IP address.
Status:	Indicate the connection status, automatically determined by the system.

- *Change the Network Setting — HTTPS.*

The “Network” page has, on its upper left, the “HTTPS” icon. Please follow the steps below to change the HTTPS setting through the network as necessary.

1. Click on the **HTTPS** button on the upper left menu to enter the “HTTPS Setting” page.



2. Mark the “Enable HTTPS secure connection” to activate the function.
3. Click to select the “Create certificate method” from “Create self-signed certificate automatically”, “Create self-signed certificate manually” and “Create certificate request and install”.
4. Click “Create” to save the create certificate settings.
5. The Certification Information will show below.
6. Click “CSR Property” to see the Certificate Signing Request information.
7. Click “Certificate Property” to see the Certificate information.
8. Click “Remove” to remove the created certificate.
9. Click on the **Submit** button to submit the new setting.

Note

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

Methods of creating and installing the certificate:

1. Create self-signed certificate automatically

Before using HTTPS for communication with the IP camera, a Create self-signed certificate automatically:

(1) Enable HTTPS secure connection.

(2) Select the “Create self-signed certificate automatically” option.

(3) Click the Create button.

(4) The new Certification Information will show in the third column on the HTTPS setting page.

(5) Click Home to return to the main page. Change the address from “http://” to “https://“ in the address bar and press Enter on your keyboard. Some Security Alert dialogs will pop up. Click OK or Yes to enable HTTPS.

2. Create self-signed certificate manually

(1) Enable HTTPS secure connection.

(2) Click “Create self-signed certificate manually” to open the Create certificate column.

(3) Click the Create button.

(4) The new Certification Information will show in the third column on the HTTPS setting page.

3. Create certificate request and install

(1) Enable HTTPS secure connection.

(2) Click “Create self-signed certificate automatically” to open the Create certificate column.

(3) Click the Create button.

(4) If you see an Information bar, click OK and click on the Information bar at the top of the page to allow pop-ups.

(5) The pop-up windows will show a certificate request.

(6) Look for a trusted certificate authority that issues digital certificates. Enroll the IP camera. Wait for

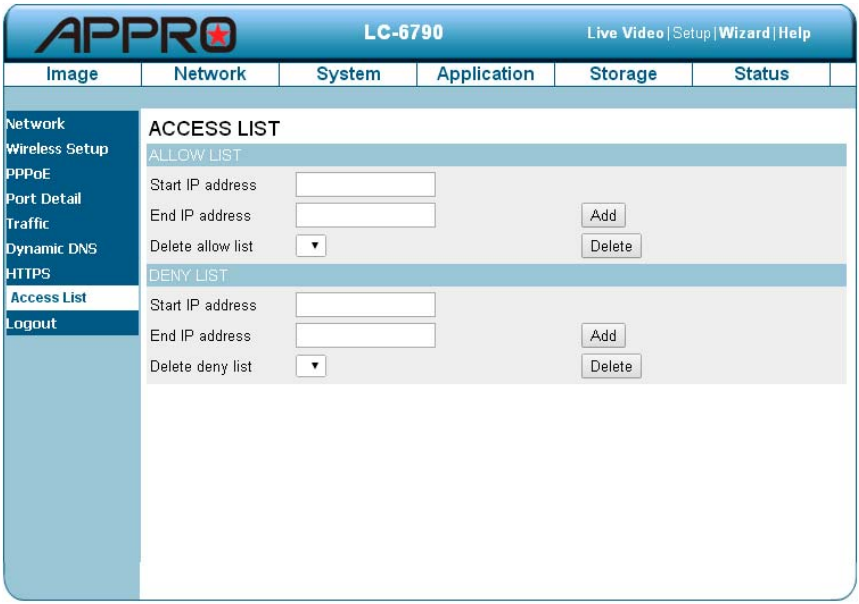
the certificate authority to issue a SSL certificate; click “Browse...” to search for the issued certificate, then click “Upload” on the Create certificate column.

(7) The new Certification Information will show in the third column on the HTTPS setting page.

- *Change the Network Setting —Access List.*

The “Network” page has, on its upper left, the “Access List” icon. Please follow the steps below to change the Access List setting through the network as necessary.

1. Click on the **Access List** button on the upper left menu to enter the “Access List” page.



2. Fill in the “Start IP address”, “End IP address” and “Delete allow list” details of the “Allow List”. Press the “Add” button to add or press “Delete” to erase it.
3. Fill in the “Start IP address”, “End IP address” and “Delete deny list” details of the “Deny List”. Press the “Add” button to add or press “Delete” to erase it.
4. Click on the **Submit** button to submit the new setting.

Description of function keys:

Allow List:	
Start IP Address	The starting IP Address of the devices (such as a computer) which have permission to access the video of the camera.
End IP Address	The ending IP Address of the devices (such as a computer) which have permission to access the video of the camera.
Delete Allow List	Remove the customized setting from the Permission List.
Deny List:	
Start IP Address	The starting IP Address of the devices (such as a computer) which don’t have permission to access the video of the camera.
End IP Address	The ending IP Address of the devices (such as a computer) which don’t have permission to access the video of the camera.
Delete Deny List	Remove the customized setting from the Permission List.

Note

If there are any conflicts between the range of the Allow List and the range of the Deny List, the Access List within the range of the Deny List has the higher priority over the range of the Allow List.

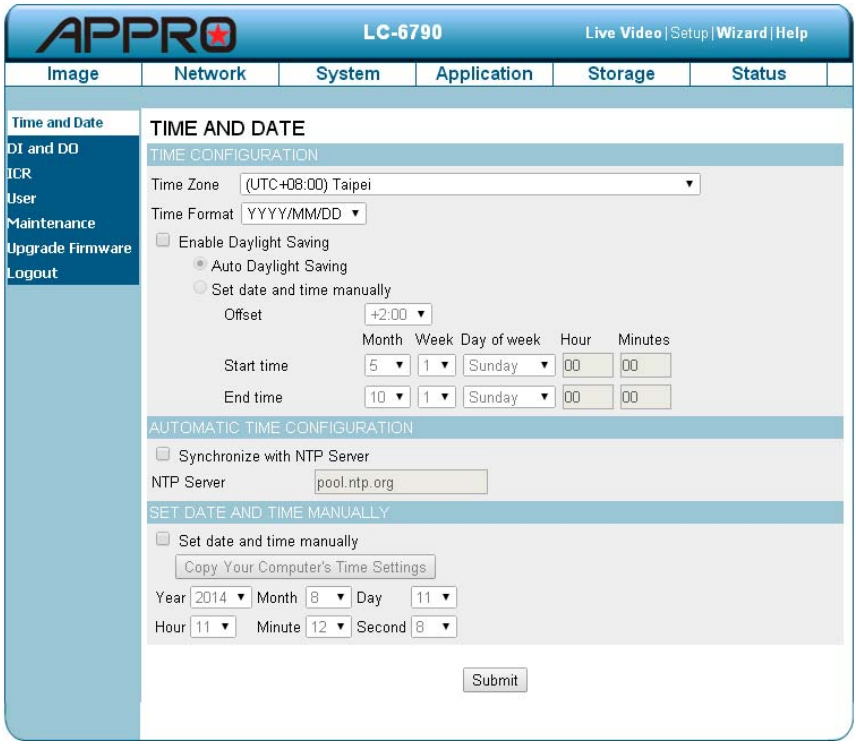
For example, the range of the Allow List is set from 1.1.1.0 to 192.255.255.255 and the range of the Deny List is set from 1.1.1.0 to 170.255.255.255. Only users with IPs located between 171.0.0.0 and 192.255.255.255 can access the IP camera.

5.1.3.4 Change the System Setting

Please follow the steps below to change the date and time of the system setting through the network as necessary.

- *Set the Time and Date of the system*

1. Click on the **System** button to enter the “Time And Date” page (default). From this section, you may automatically or manually configure, update and maintain the internal system clock for your camera.



2. To set the Time Configuration, please select your time zone from the drop-down menu. Select this to enable the daylight saving time. Then Select ”Auto Daylight Saving” or “Set date and time manually”.
3. To set the Automatic Time Configuration, please checkmark “Synchronize with NTP Server” and enter the address of the NTP Server.
4. To set the Date and Time Manually, please checkmark “Set date and time manually”. Press “Copy Your Computer’s Time Settings” as necessary to synchronize the time information from your PC or just manually set the date and time from the drop-down lists.
5. Click on the **Submit** button to submit the new Date and Time settings.

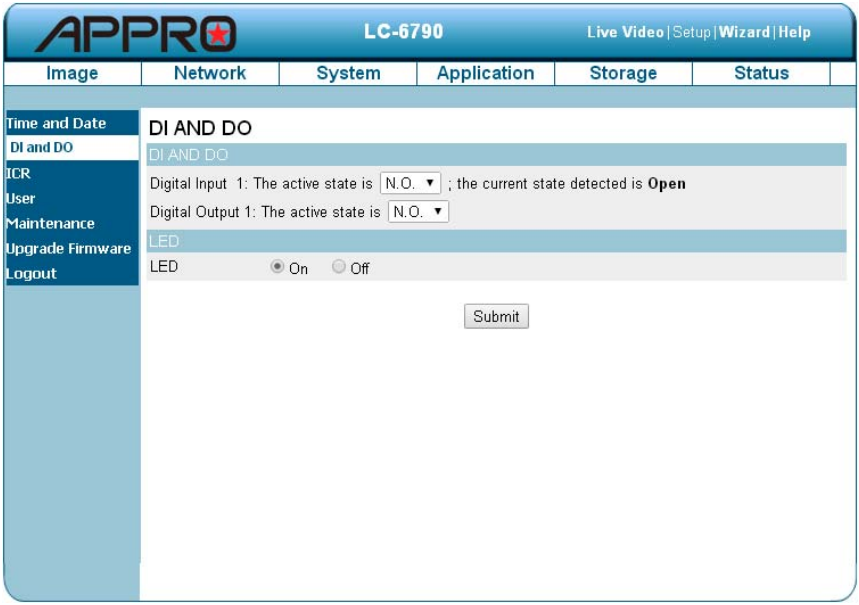
Description of function keys:

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:	Select this option so that your camera will configure the Daylight Saving setting automatically.
Set date and time manually:	Select this option so that you may 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 configuration automatically from the NTP server.
NTP Server:	The Network Time Protocol (NTP) synchronizes the device 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.

- *Change the System Setting — Digital Input &Output.*

You may enable the **Digital Input** (D/I) and **Digital Output** (D/O) feature and configure the source of events for your camera.

1. Click on the **DI and DO** button on the left side of the “System” page to enter the “DI and DO” page.



2. Select the active state of the Digital Input 1 from the drop-down list.
3. Select the active state of the Digital Output 1 from the drop-down list.
4. Click to set the LED “On” or “Off’.
5. Click on the **Submit** button to submit the new user’s setting.

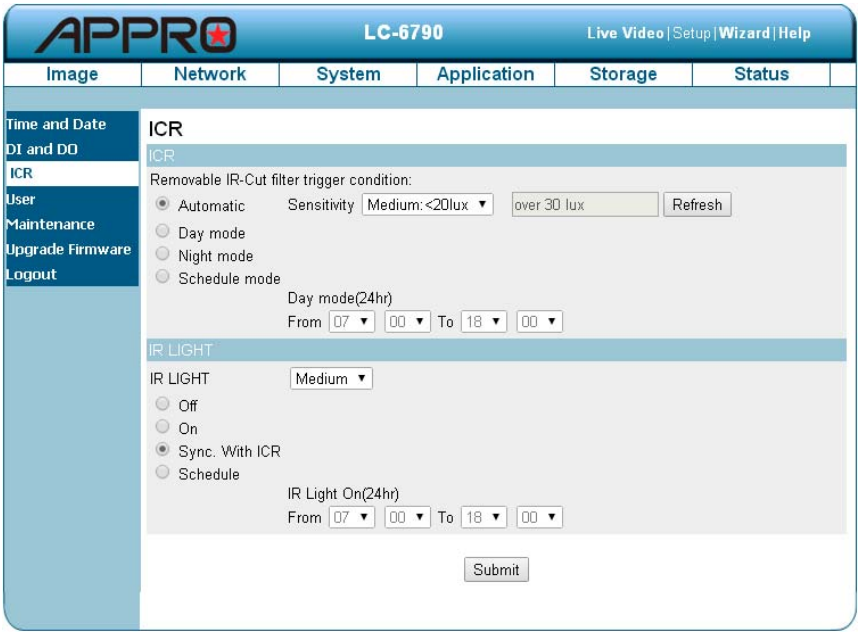
Description of function keys:

Digital Input:	Select “N.O.” or “N.C.” as the active state of the Digital Input, in order to use the GPIO connector function.
Digital Output:	Select “N.O.” or “N.C.” as the active state of the Digital Output, in order to use the GPIO connector function.
LED	Select “ON” or “OFF” to use the item, which indicates a camera’s status.

- *Change the System Setting — ICR.*

Please follow the steps below to change the IR cut function through the network as necessary.

1. Click on the **ICR** button on the left side of the “System” page to enter the “ICR” page.



2. For the “IR-Cut Removable filter trigger condition”, mark your options from “Automatic”, “Day Mode”, “Night Mode” or “Schedule”. Click your choices to enable.
3. Mark the IR light power from “Off”, “On”, “Sync, with ICR” or “Schedule”. Click your choices to enable.
4. Click on the **Submit** button to submit the new user’s setting.

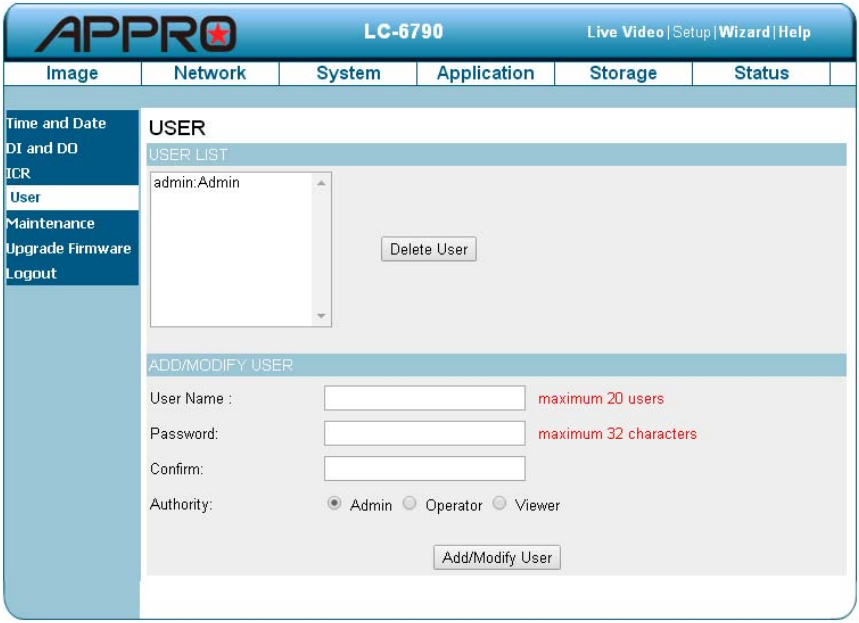
Description of function keys:

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 disables the IR Cut Filter.
Night mode	The Night mode enables 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.

- *Change the System Setting — Users.*

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 the unique name and configure the OSD setting for your camera. Please follow the steps below to change/add the users' authority through the network as necessary.

1. Click on the **Users** button on the left side of the "System" page to enter the "Users" page.



2. Add, modify or delete any user's data if necessary.
3. Click the **Add/ Modify User** button to submit the new user's settings.
4. Click the **Home** button to return to the home page.

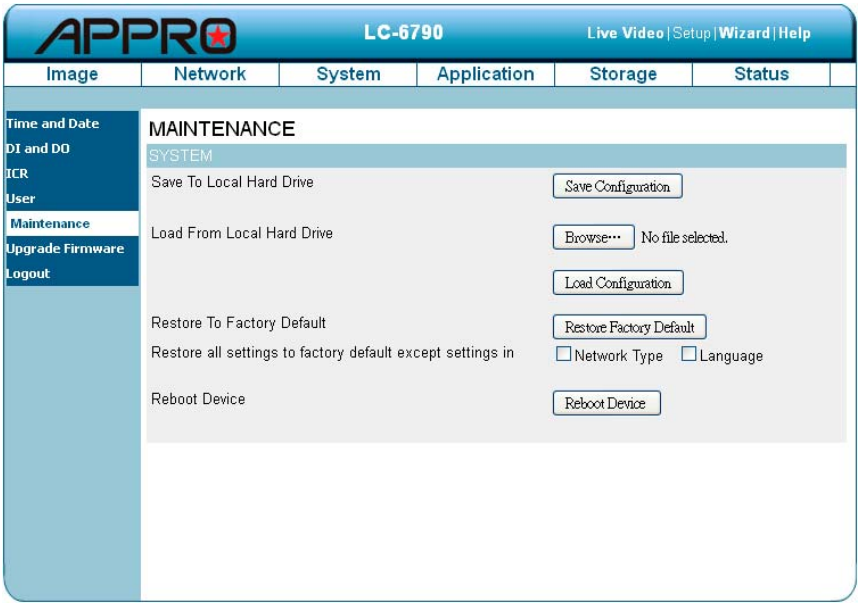
Description of function keys:

User List:	The list shows the registered user(s) and the corresponding authority.
Delete:	Deletes a selected user.
Name:	Enter the user's name, which will be added or modified.
Password:	Enter the new password of the user's name above.
Confirm:	Type in the password again for verification.
Authority:	Choose an authority option of the user's name from: Admin, Operator, and Viewer.
Add/ Modify User:	Click to submit the new setting to the IP camera.

- *Change the System Setting — Maintenance.*

Please follow the steps below to change the system setting through the network as necessary.

Click on the **Maintenance** button on the left side of the “Date and Time” page to enter the “Maintenance” page.



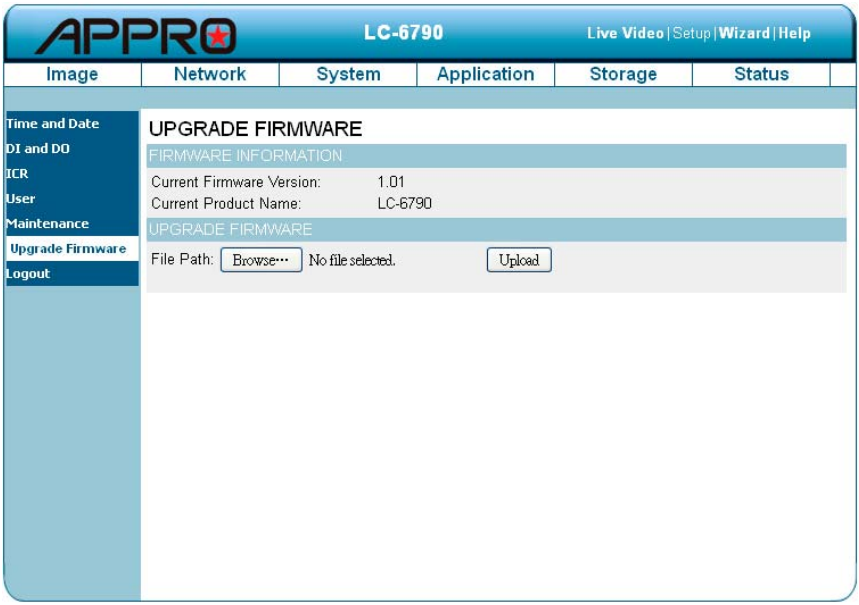
Description of function keys:

Save Configuration	Click on “Save Configuration” to save the configuration files to the local hard drive.
Load Configuration	Browse and click on the “Load Configuration” to load the configuration files to the local hard drive.
Restore Factory Defaults	Click on “Restore Factory Defaults” to restore the factory defaults. You may browse and load the configuration file. This option will restore the pre-configured or saved settings
Reboot Device	Click on “Reboot Device” to reboot the device. This option will restart the camera.

- *Change the System Setting — Update Firmware.*

Please follow the steps below to update the firmware through the network as necessary.

1. Click on the **Firmware Upgrade** button on the left side of the “Date and Time” page to enter the “Firmware Upgrade” page.



2. Click on the “Browse…” button to select the UPDATE.BIN file which was copied into your computer.
3. Click on the “Upload” button.

Note

DO NOT power off the IP camera while updating firmware.

Don’t interrupt the process while the unit is updating itself.

Please make sure that the UPDATE.BIN file is appropriate to the model of the unit. Updating with the wrong UPDATE.BIN file may cause physical damage to the device.

The Temporary Internet Files (or cache) folder contains Web page content that is stored in your hard disk for quick viewing. We suggest deleting the Temporary Internet Files immediately after updating the firmware. To delete the files in the Temporary Internet Files folder, follow these steps:

1. Quit Internet Explorer and quit any instances of Windows Explorer.
2. Click **Start**, click **Control Panel**, and then double-click **Internet Options**.
3. On the **General** tab, click **Delete Files** under **Temporary Internet Files**.
4. Select the **Delete all offline content** check box in the **Delete Files** dialog box, and then click **OK**.
5. Click **OK**.

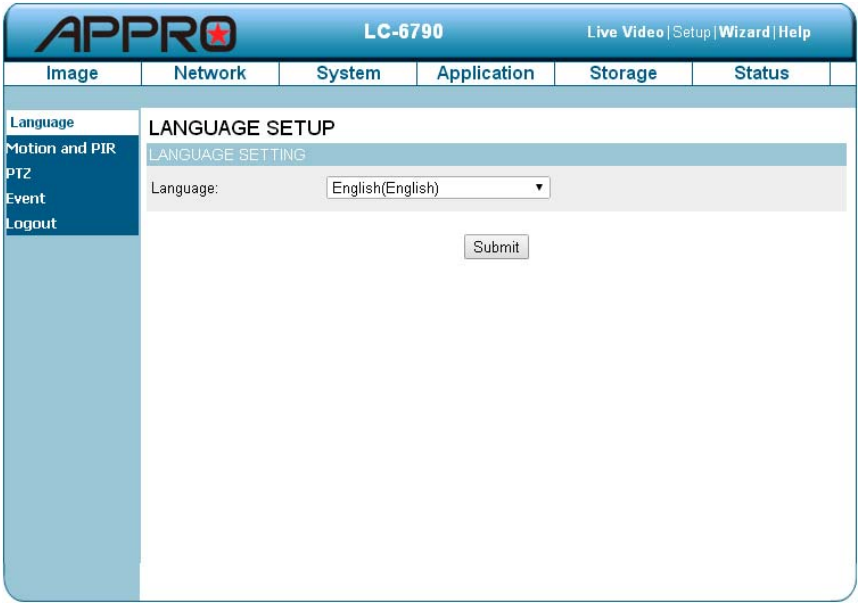
5.1.3.5 Change the Application Setting

Please follow the steps below to change the application setting through the network as necessary.

- *Change the Application Setting —Language Setting.*

Please follow the steps below to change the Language setting via the network as necessary.

1. Click on the **Language** button on the left side to enter the “Language Setting” page.



You have an option as to which language to use.

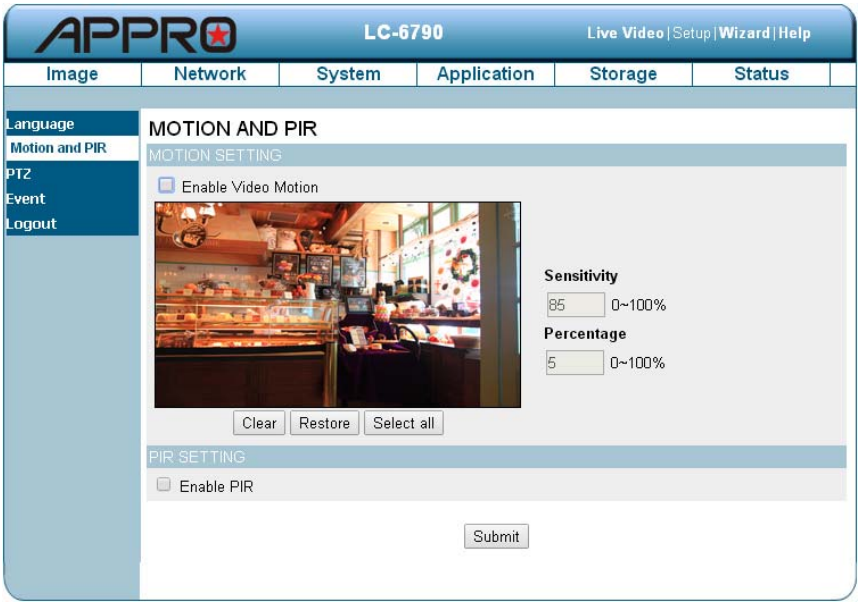
2. Choose your selected language and click **Submit** to set it.

- *Change the Application Setting —Motion And PIR.*

Please follow the steps below to enable changes in the motion detection function of the alarm through the network as necessary.

Set the motion detection:

1. Click on the **Motion and PIR** button on the left side of the Alarm to enter the “Motion Detection” page.



2. Click and drag the mouse across a targeted zone to draw a rectangle on the image.

Note

You can set more than one targeted zone depending on your requirement.

3. Enables / disables the motion detection function.
4. Click on the **Submit** button to submit the new setting of the recording.

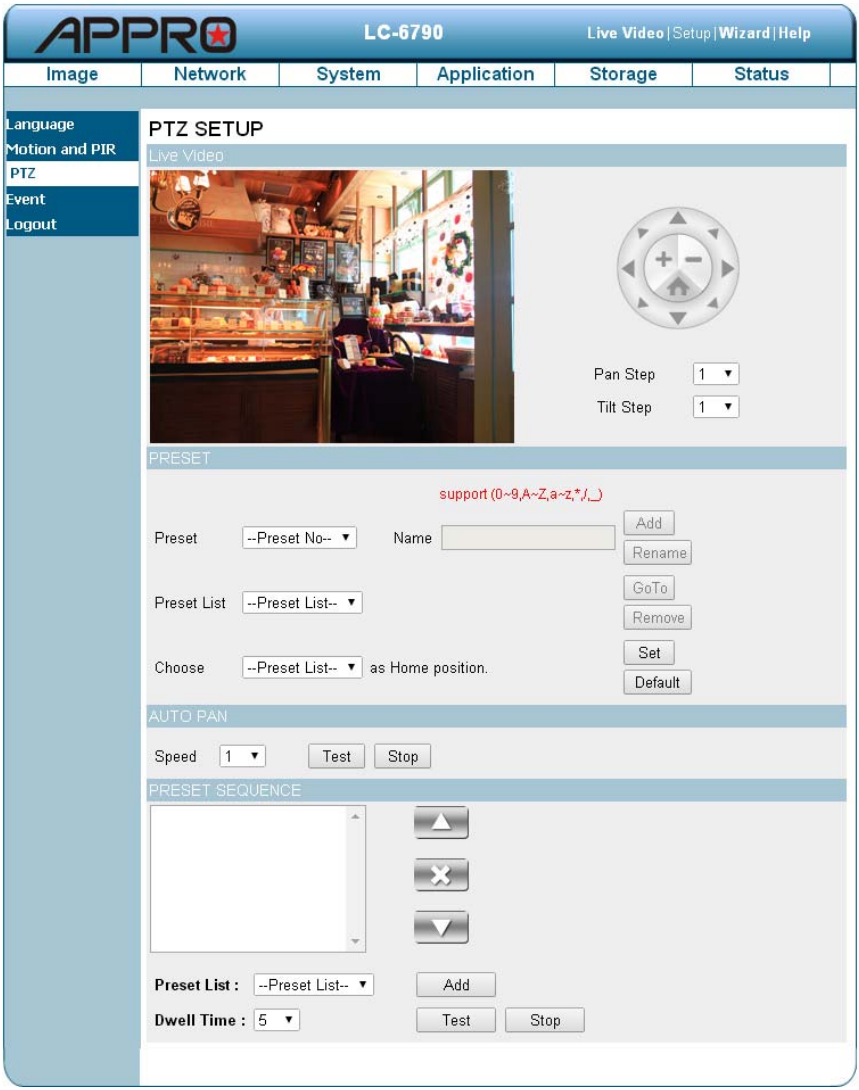
Description of function keys:

Enable Video Motion	Select this option to enable motion detection for your camera.
Sensitivity	The sensitivity bar allows you to specify how much movement is required to trigger the motion detection.
Percentage	Adjusting the percentage allows you to set a requirement on how much of the motion window must be filled by movement. For example: If you set this function at 50%, then the selected window must be half filled by a moving object before it triggers motion detection.
Enable PIR	When this option is selected, use PIR (passive infrared) to detect motion.

- *Change the Application Setting —ePTZ.*

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.

1. Click on the **ePTZ** button on the left side of the Alarm to enter the “Motion Detection” page.



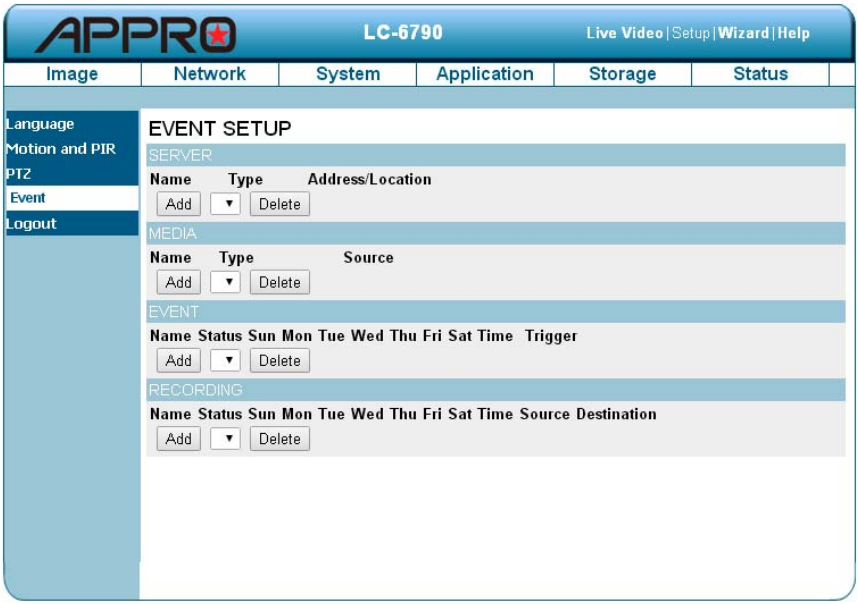
Description of function keys:

Video Profile:	This selects which video profile to use.
ePTZ Speed:	You may select a value between 0 and 64. 0 is the slowest and 64 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. Using the Pan, Tilt and Zoom (PTZ) controls, move the camera view to the required position and simply by selecting the preset's name.
Add	Saves a preset position in the camera.
GoTo	Tests the preset the preset position.
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. A preset sequence is an automated series of camera movements from one preset position to another. A guard tour can be set up to display the video streams from different preset positions in a pre-determined order, and for configurable time periods. **Add:** Set up a new preset sequence, Modify to change, and Remove to remove an existing preset sequence.

- *Change the Application Setting —Event.*

In this section, you can configure and schedule the recording setting for your IP camera.

Click on “Add” to enter the setting pages of the Server, Media, Event and Recording to make the advanced settings. Or click on “Delete” to erase the settings.



The Event Setup page includes 4 different sections: Server, Media, Event and Recording.

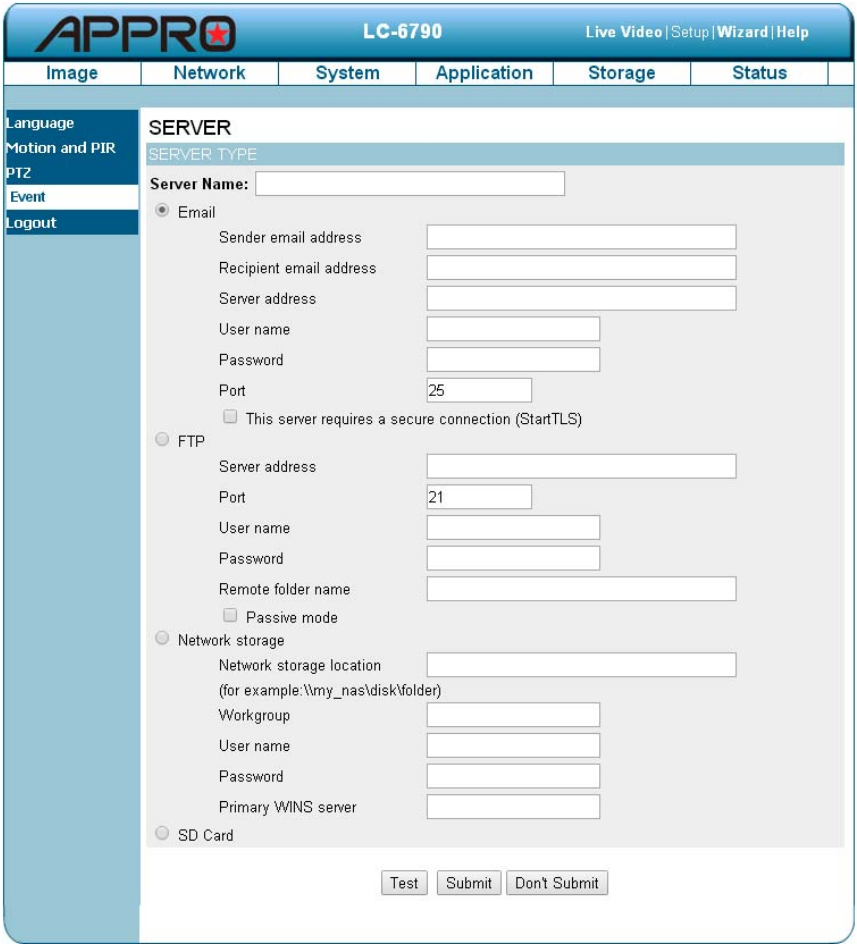
1. To add a new item - "event, server or media," click Add.
2. To delete the selected item from the pull-down menu of event, server or media, click Delete.
3. Click on the item name to enter the window for modifying.

Note

You can add up to five servers, five media fields, three event schedules, and two recording schedules.

Server:

Click on the **Add** button in the Server column to enter the “Server” setting page.



1. Enter the Server name, the unique name for a server. There are four kinds of servers supported. They are email server, FTP server, HTTP server and network storage.
2. Set the details of the Email. **"Sender email address":** The email address of the sender. **"Recipient email address":** The email address of the recipient.
3. Set the details of the FTP. **"Remote folder name":** An authorized folder on the external FTP server. The string must conform to that of the external FTP server. Some FTP servers cannot accept a 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 uploading. **"Passive Mode":** Check it to enable the passive mode in transmission.

4. Set the details of the Network storage. Only one network storage is supported. **"Network storage location":** The path to upload the media. **"Workgroup":** The workgroup for network storage.
5. Click on the SD card to activate the function. Use the SD card for recording media.
6. Click on “Submit” to save or click on “Don’t Submit” to go back to the Event main page.

Server settings:

(1) Click **Add** under the Sever column on Event Settings page to open the Server setting page. On this page, you can specify where the notification has been sent when a trigger is activated. A total of 5 server settings can be configured.

Note

The maximum server settings amount is five, however, you can set the Network storage or the SD card for only one.

(2) Enter the Server Name for the server setting.

(3) Select the Server Type. There are four choices of server types available: Email, FTP, Network storage and SD card. Select one of the server types.

- **Email:** Select to send the media files via the email when a trigger is activated.
  - (a) Sender email address: Enter the email address of the sender.
  - (b) Recipient email address: Enter the email address of the recipient.
  - (c) Server address: Enter the domain or IP address of the email server.
  - (d) User name: Enter the user name of the email account if necessary.
  - (e) Password: Enter the password of the email account if necessary.
  - (f) Port: The default email server port is 25. You can also manually set another port.
  - (g) To verify if the email setting is correctly configured, click the Test button. The result will be shown in above this setting page (TEST OK or TEST ERROR). If successful, you will receive an email indicating the result.
  - (h) Click Submit to activate the setting.

- **FTP:** Select to send the media files to an FTP server when a trigger is activated.
  (a) Server address: Enter the domain or IP address of the FTP server.
  (b) Port: The default FTP server port is 21. It can also be assigned to another port number.
  (c) User name: Enter the login name of the FTP account.
  (d) Password: Enter the password of the FTP account.
  (e) Remote folder name: Enter the folder where the media file will be placed. If the folder name does not exit, the IP camera will create one on the FTP server.
  (f) Passive mode: Most firewalls do not accept new connections initiated from external requests. If the FTP server supports passive mode, select this option to enable passive mode FTP and allow data transmission to pass through the firewall.
  (g) To verify if the FTP setting is correctly configured, click the Test button. The result will be shown in above this setting page (TEST OK or TEST ERROR).
  (h) Click Submit to activate the setting.

- **Network storage:** Select to send the media files to a network storage location when a trigger is activated. Please fill in the information for your server.
  (a) Network storage location: Enter the network storage path (\\ server name or IP address\ folder name).
  (b) Workgroup: Enter the workgroup name for the network storage server.
  (c) User name: Enter the user name for the server.
  (d) Password: Enter the password for the server.
  (e) Primary WINS server:
  (f) To verify if the storage setting is correctly configured, click the Test button. The result will be shown in above this setting page (TEST OK or TEST ERROR).
  (g) Click Submit to activate the setting.

- **SD card:** Select to send the media files to an SD card when a trigger is activated.
  (a) Insert your SD card first.
  (b) To verify if the storage setting is correctly configured, click the Test button. The result will be shown in above this setting page (TEST OK or TEST ERROR).
  (c) Click Submit to activate the setting.

(4) When completed, click Submit to enable the settings to exit this page. The new server settings will appear on the Event Settings page.

Note

To remove a server setting from the list (Application> Event>), select a server name from the drop-down list and click Delete.

Note that only when the server setting is not being applied to an event setting (Application> Event> Event> The “Action” option) can it be deleted or the camera won’t take any action when a trigger is activated.

Media:

Click on the **Add** button in the Media column to enter the “Media” setting page.

1. Enter the Media name, the unique name for media. There are three kinds of media: snapshot, video clip and system log.
2. Set the details of the Snapshot.

   "Source": Select the video source.

   "Send Pre-event images": The number of pre-event images.

   "Send Post-event images": The number of post-event images.

   "File name prefix": The prefix name will be added on the file name of the snapshot images.

   "Add date and time suffix to file name": Check it to add timing information as file name suffix.
3. Set the details of the Video Clip.

   "Source": Select the video source.

   "Pre-event recording": The interval of pre-event recording in seconds. There are two limitations for video clip file.

"Maximum duration": The maximum recording file duration in seconds.

"Maximum file size": The maximum file size would be generated.

4. Click on the System log to activate the function.
5. Click on “Submit” to save, or click on “Don’t Submit” to go back to the Event main page.

Media settings:

(1) Click **Add** under the Media column on Event Settings page to open the Media setting page. On this page, you can specify the type of media that will be sent when a trigger is activated. A total of 5 media settings can be configured.

(2) Enter the Media Name for the media setting.

(3) Select the Media Type. There are three choices of media types available: Snapshot, Video Clip and System log. Select one of the media types.

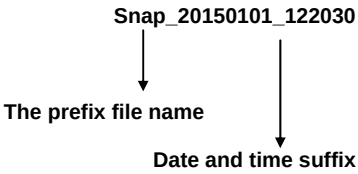
- **Snapshot:** Select to send snapshots when a trigger is activated.
  - (a) Source: Select to take snapshots from the video profile.
  - (b) Send pre-event image(s) [0~4]: The IP camera has a buffer area; it temporarily holds data up to a certain limit. Enter a number to decide how many images to capture before a trigger is activated. Up to 4 images can be generated.
  - (c) Send post-event image(s) [0~7]: Enter a number to decide how many images to capture after a trigger is activated. Up to 7 images can be generated.

Note

For example, if both the Send pre-event images and Send post-event images are set to 4, a total of 8 images are generated after a trigger is activated.

  - (d) File Name Prefix: Enter the text that will be appended to the front of the file name.

    For example, the file name will be in this form:



(e) Add date and time suffix to file name: Select the option to add the date/ time suffix to the file name.

(f) Click Submit to activate the setting.

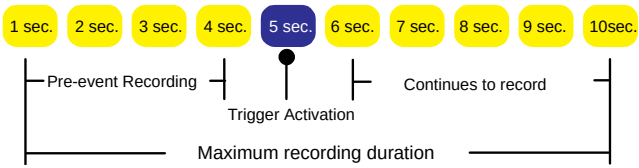
- **Video Clip:** Select to send video clips when a trigger is activated.

(a) Source: Select to record video clips from the video profile.

(b) Pre-event recording: The IP camera has a buffer area; it temporarily holds data up to a certain limit. Enter a number to decide the duration of recording before a trigger is activated. Up to 4 seconds can be set.

(c) Maximum duration: Specify the maximum recording duration in seconds. Up to 100 seconds can be set.

NOTE: For example, if pre-event recording is set to 4 seconds and the maximum duration is set to 10 seconds, the IP camera continues to record for another 5 seconds after a trigger is activated.



(d) Maximum file size: Specify the maximum file size allowed.

(e) File Name Prefix: Enter the text that will be appended to the front of the file name.

(f) Click Submit to activate the setting.

- **System log:** Select to send a system log when a trigger is activated. Click Submit to activate the setting.

(4) When completed, click Submit to enable the settings to exit this page. The new media settings will appear on the Event Settings page.

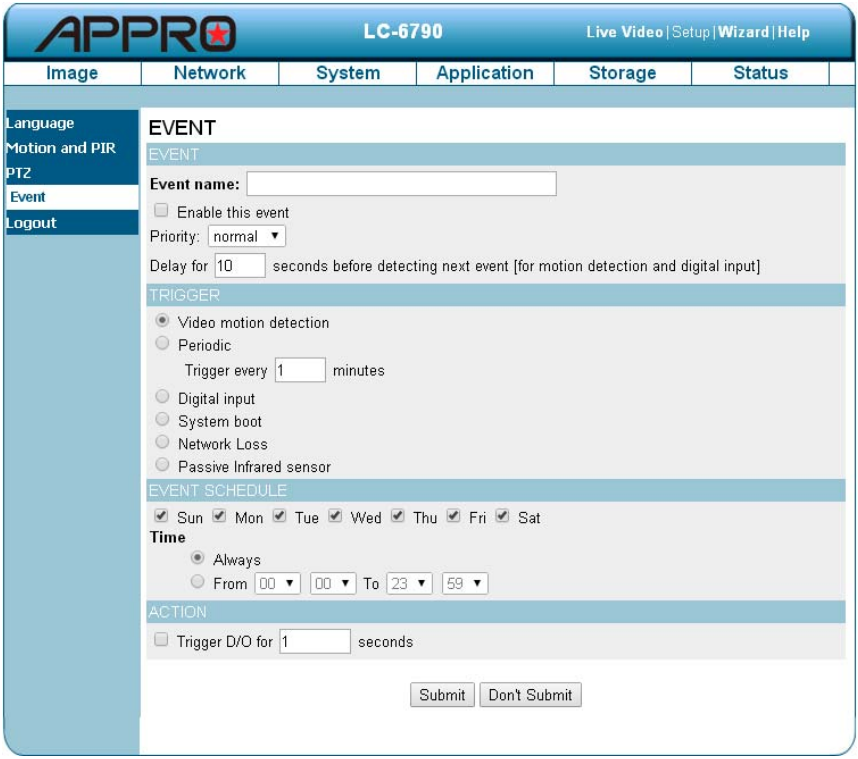
Note

To remove a media setting from the list (Application> Event>), select a media name from the drop-down list and click Delete.

Note that only when the media setting is not being applied to an event setting (Application> Event> Event> The “Attached media” item) can it be deleted or you can’t get the images/ logs when a trigger is activated.

Event:

Click on the **Add** button in the Event column to enter the “Event” setting page.



1. Enter the Event name. Checkmark the “Enable this event” box and activate the function. Then set the Priority and the Source from the drop-down list.

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

2. Select the event trigger mode.

   "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 a minute.

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

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

   "Network Loss": The event is triggered when the network disconnect.

3. Set the recording schedule time.
4. Set the Trigger D/O of activating the action. Check it to trigger digital output for specific seconds when an event is triggered.
5. Click on “Submit” to save or click on “Don’t Submit” to go back to the Event main page.

Event settings:

(1) Click **Add** under the Event column on Event Settings page to open the Event setting page. On this page, you can arrange three parts –Trigger, Event Schedule, and Action to set an event. A total of 3 event settings can be configured.

(2) Enter the Event Name for the event setting.

(3) Select “Enable this event” option to enable the event setting.

(4) Set the event priority from: “normal”, “high” and “highest”. Events with a higher priority will be executed first.

(5) Enter the duration in seconds to pause motion detection after a motion is detected (for the trigger types - motion detection and digital input – use only).

(6) An event is an action initiated by a user-defined trigger source; it is the causal arrangement of the following three parts: Trigger, Event Schedule, and Action. Set the event details of each part.

- **Trigger:** This option defines when to trigger the IP camera. The trigger source can be configured to use the IP camera’s built-in motion detection mechanism, periodic, external digital input devices or system boot. There are several choices of trigger sources as shown below.

  (a) Video motion detection: This option makes use of the built-in motion detection mechanism as a trigger source. To enable this function, you need to configure a motion detection windows first.

Note

For example, when the event status is on, once an event is triggered by motion detection, the IP Camera will automatically send snapshots, video clips or System log via the server type as your settings.

(b) Periodic: This option allows the IP camera to trigger periodically for every

other defined minute(s). UP to 99999 minutes.

(c) Digital input: This option allows the IP camera to use an external digital input device or sensor as a trigger source. Depending on your application, there are many choices of digital input devices on the market which helps to detect changes in temperature, vibration, sound, and light, etc.

(d) System boot: This option triggers the IP camera when the power to the IP camera is disconnected.

(e) Network Loss: This option triggers the IP camera when the network to the IP camera is disconnected.

- **Event Schedule:** Specify the period for the event.
  (a) Select the days of the week.
  (b) Set the recording schedule in the 24-hour time format.
- **Action:** Define the actions to be performed by the IP camera when a trigger is activated.
  (a) Trigger D/O for ~ seconds: Select this option to turn on the external digital output device when a trigger is activated. Specify the length of the trigger interval in the text box.
  (b) If you want to set an event with recorded video or snapshots, it is necessary to configure the server and media settings first so that the IP camera will know what action to take (such as which server to send the media files to) when a trigger is activated.
  Checkmark the one of the Server Names which you have set already, then select the Attached media (the media name) from the drop-down list.

(7) When completed, click Submit to enable the settings to exit this page. The new event settings will appear on the Event Settings page.

Note

The new event settings / server settings / media settings will appear in the event drop-down list on the “Application> Event>” page.

Recording:

Click on the **Add** button in the Recording column to enter the “Recording” setting page.

1. Enter the Recording entry name. Checkmark the “Enable this recording” box and activate the function. Enable this option if you want to upload the recording to a shared folder in the network. Then set the Priority and the Source from the drop-down list.
2. Set the recording schedule time. Select the day(s) according to when you want the camera to make a video clip.
3. Set the details of the recorded file.

   "Always": This enables the camera to make video clips continuously.

   "From": The time range specified for the video clip.
4. Click on “Submit” to save or click on “Don’t Submit” to go back to the Event main page.

Record settings:

(1) Click **Add** under the Record column on Event Settings page to open the Record setting page. In this page, you can define the recording source, recording schedule and recording capacity. A total of 2 recording settings can be configured.

(2) Enter the Record entry name for the event setting.

(3) Select “Enable this recording” option to enable the recording setting.

(4) Select the recording priority from: “normal”, “high” and “highest”. Recording with a higher priority will be executed first.

(5) Select the recording source from the drop-down list (profiles).

(6) Specify the recording schedule and the recording settings.

- **Recording Schedule:**
  - (a) Select the days of the week.
  - (b) Set the recording schedule in the 24-hour time format.

- **Recording Settings:**
  - (a) Destination: You can select the SD card or SAMBA (Network storage) that was set up for the recorded video files.
  - (b) Total cycling recording size: When the maximum capacity is reached the value you set, the oldest file will be overwritten by the latest one. The reserved amount is reserved for cyclic recording to prevent malfunction. The limited value is 200~200000000 Mbytes.
  - (c) Size of each file for recording: Set the maximum file size of each recording video files.
  - (d) File Name Prefix: Enter the text that will be appended to the front of the file name.

(7) When completed, click Submit to enable the settings to exit this page. The new media settings will appear on the Event Settings page.

5.1.3.6 Change the Storage Setting

Please follow the steps below to change the SD card setting through the network as necessary.

- *Change the SD card Setting.*

Please follow the steps below to change the setting via the network as necessary.

1. Click on the “storage” button at the top of the Setup page to enter the “SD Card” screen.

2. The SD Card page contains two image modes, the Video and the Picture.
3. Click “Video” or “Picture” to enter its sub year-month folder.
4. Click to enter its sub date folder.
5. Click the desired file to display the images therein.
6. Each file can be deleted by checking and pressing the OK button.

5.1.3.7 Status

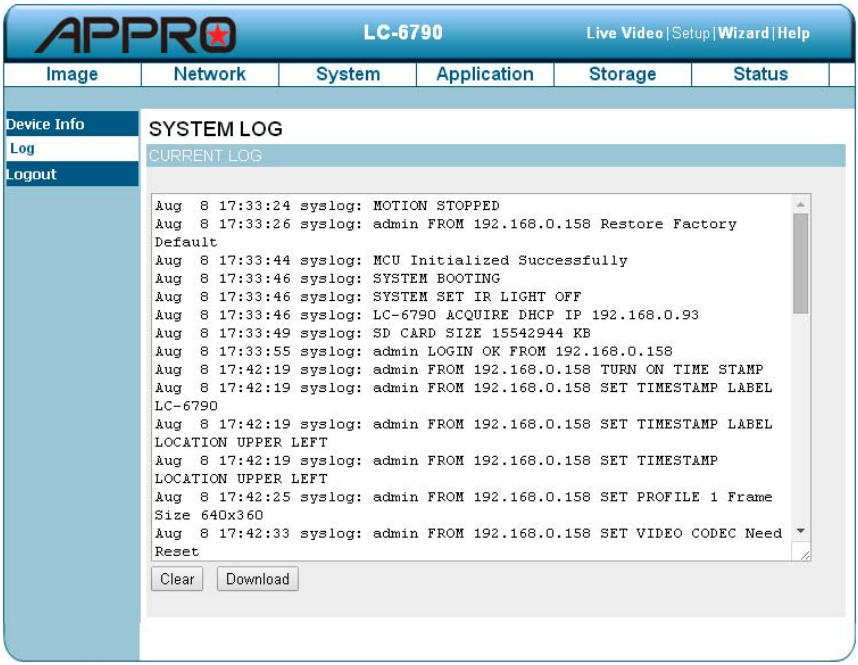
- *The device information.*

This page displays all the information about your device and network connection.

Click on the “Device info” button of the Status page to enter the “Device info” screen.

- *The device information.*

This page displays the log information of your camera.



1. Click on the “Device info” button of the Status page to enter the “Device info” screen.
2. Click on the “Clear “ to erase all of the logs. You may also download the information by clicking “Download”.

Using the PPPoE

1. Install the XDSL software (obtained from your ISP dealer) in your PC.
2. Search your IP camera's IP address: you can connect the IP camera and the Video monitor. The monitor screen will show the IP address on its right side.
3. Turn off the DHCP function (of the IP camera) if it is “ON”.
4. Installing an IP address in your PC or notebook.

   Desktop → Move the mouse focus to the Network neighborhood and click the right key of the mouse → Choose the properties → Choose your local connection → Choose the properties and select the configuration → Select the TCP / IP → Choose the properties → Enter the IP address in a four-part formula, for example “192. 168. 1.101” (the first three parts must be identical to the above numbers, only the last part can be changed to your own number, which must never exceed 255) → Click on the mask and the mask input, namely “255. 255. 255. 0” (a fixed formula) → Click “OK” → Click “OK”.
5. Desktop → Choose IE browser → Enter the IP camera IP address in the URL (check step # 2 above) → Enter → IP camera images will appear.

PPPoE Settings

1. Enter the IP camera home page → Choose the network → Enter “User Name: DeviceID” and “Password: 9999” → Click “OK’.
2. Choose PPPoE → PPPoE mode: Select “ON” → Enter “Account” → Enter “Password” → Submit → Unplug the power connection.
3. Plug in the IP camera and it will receive an IP address from the ISP dealer (this IP address is dynamic --- every time you unplug and plug in again you’ll get a new IP address).

Test: Go to the Internet.

1. Set your PC to enter the Internet.

2. Desktop → IE browser → Enter the IP camera IP address (the same address as in the PPPoE settings and step 3 above) → You can see the IP camera images.

DDNS settings

1. Check your IP camera's IP address (monitor) → open your IE browser → Use the address to connect to the IP camera or view the images → Choose the network → Enter "User name : DeviceID" and "Password : 9999" → Click "OK" .
2. Choose the "DDNS" → Click "Enable DDNS" → Enter the "DDNS host name", for example "abc123. homeip.net" → Enter "DDNS Account", for example "abc123" → Enter the "DNS Password", for example "7777" → Submit → The settings are now complete → Close the IE browser.
3. Open the IE browser again → Enter the Website address you just applied for, such as "abc123.homeip.net" → You can look at your IP camera images right away. The procedure is complete.

Note

These settings are only for your ADSL Dynamic IP configuration. If your configuration is fixed (true IP), you don't need to proceed with the PPPoE and DDNS settings. The DDNS is just for your convenience.

6 FREQUENTLY ASKED QUESTIONS

Question 1:

How do I view live images of the IP camera via the Internet Explorer on a Desktop PC or a laptop computers in a situation where there are no monitors?

◇To get the IP address of the IP camera without a monitor, use one of the following two methods to get the IP address: UPnP.

UPnP: Please refer to **APPENDIX 1**.

Question 2:

How do I activate UPnP?

1. Follow the default settings to set up the related settings, and connect the hardware.
2. Activate the Web browser and enter the IP camera's URL.
3. SETUP→Network button.
4. Select "Enable UPnP presentation".
5. Select "Enable UPnP port forwarding"; make the "Forwarding Port" setting.

Note

1. Follow step 4 above then turn on computer's "My Web Neighbors" and find the IP camera. Then click to go to the IP camera's home page.
2. Follow step 5 above and make the Route UPnP port forwarding setting.
3. Your computer can access an IP camera through a router by opening a port on the router (port forwarding) if the router is configured to a specific port. For example port "8080", you can enter the IP address as http://xxx.xxx.xxx.xxx:8080 on the URL entry box of the web browser to access the IP camera.

Question 3:

How to change the Video Profiles 1 & 2?

・On Live page click Profiles 1 & 2.

Question 4:

How do I set up the motion detection area and its sensitivity?

1. Go to SETUP→ Application button →Motion Detection button.
2. Select "Enable Video Motion".
3. Set up the target zone and setup the Sensitivity and Percentage.
4. Click the **Submit** button to submit the setting.
5. When a person or object moves within the target zone under a setting, the Motion Detection

will display the response signal in the Live Video and Video Out.

Question 5:

How do I use the DynDNS to connect the IP camera by using its Sub Hostname via the intranet?

◇Set the DDNS function

1. Click the **Network** button on the home page.
2. Click the **Dynamic DNS** button on the left side of the page to enter the “Dynamic DNS” page.
3. Click “Enable DDNS” to activate.
4. Enter the DDNS Host Name, DDNS Account and DDNS Password which you created in the www.dyndns.com website.
5. Click the **Submit** button to save the settings.

◇Set the PPPoE function

1. Click the Network button on the home page.
2. Click the PPPoE button on the left side of the page to enter the “PPPoE” page.
3. Choose “Enable” to activate the function.
4. Enter the Account and the Password which are provided by your ISP.
5. Click the Submit button to save the setting.

◇Use the Sub Hostname to view the IP camera

1. Click the URL block at the top of the computer screen.
2. Enter the DDNS Host Name of the IP camera into the URL block and press the “Enter” key to enter the login page.
3. Enter the user name and password.
4. Click the “OK” button and enter the home page of the IP camera.

Question 6:

How do I add or modify the users and their authority to use the IP camera?

◇Entering the setting page

1. Click the **System** button in the Setup page.
2. Click the **User** button on the left side of the page to enter the “USER” page.

◇Add a new user

1. Enter the user name, the password, the confirmed password and choose the authority level. There are three levels of authority: Admin, Operator and Viewer.

   Admin: The user who accesses with the admin name and password has the full rights to change the settings of the IP camera.

   Operator: Has access to viewing and functionality.

   Viewer: Has limited viewing rights.
2. Click the **Add/Modify User** button to submit the new user setting.

◇**Modify the user**

1. Click the user name you want to modify from the **USER LIST**.
2. Enter the password, the confirmed password and choose authority level.
3. Click the **Add/Modify User** button to submit new setting.

◇**Delete a user**

1. Click the user name you want to delete from the **USER LIST**.
2. Click the **Delete User** button.

Question 7:

How do I create the self-signed certificate manually?

1. Go to Setup→Network button →HTTPS button
2. Select “Enable secure HTTPS connection”.
3. Create certificate settings→ Create self-signed certificate manually→Create.
4. Fill in the relevant data in the text boxes titled Country, State or province, Locality, Organization, Organization Unit, Common Name & Validity; click “Create”.

Question 8:

How do I download the log list?

1. Click Setup→ Status →Log.
2. The display will show the log list page.
3. Click First Page, Previous 20 or Next 20 to view the recording list.
4. Click Download; select the file path, and download the recording list.

7 SPECIFICATIONS

Model	LC-6790	
Camera	Lens	1/4”Megapixel Progressive CMOS sensor
	Minimum illumination	0 lux with IR LED on
	IR cut filer	Built-in Infrared-Cut Removable (ICR) Filter module
	IR range	8 meter IR illumination distance
	Focus range	Focal length 3.6 mm
	Angle of view	(H) 70°, (V) 53°, (D) 92°
	Aperture	F2.0
	Exposure Time	1/7.5 sec. to 1/10,000 sec.
	Configuration	- Configurable image size, quality, frame rate, and bit rate - Time stamp and text overlays - Configurable motion detection windows - Configurable shutter speed, brightness, saturation, contrast, mirror, flip
	Pan speed	Manual Pan Speed: 5-80 ° per second
	Pan range	-170° to 170°
	Tilt range	-25° to 90°
	Tilt speed	Manual Tilt Speed: 5-80 ° per second
	Preset position	32 points
	Digital Zoom	10x
Image	Video Compression	H.264 / MJPEG.
	Frame rate & Resolution	- 16:9 (supports frame rates up to 30 fps): 1280 x 720, 800 x 450, 640 x 360, 480 x 270, 320 x 176 - Others (supports frame rates up to 30 fps): 1024 x 768, 800 x 600, 640 x 480, 480 x 360, 320 x 240
	Video streaming	- Simultaneous H.264 and MJPEG. - Multi-profile: resolution / compression / frame rate / video quality.
	Profiles	2 (selectable)
	Image settings	- Adjustable image size, quality, and bit rate. - Flip & Mirror. - AGC, AWB. - Time stamp and text caption overlay. - Privacy masks. - Exposure Mode.
	Video management software	SDK, including HTTP-API / ActiveX / ONVIF.

Audio	Audio	Built-in microphone and speaker
	Compression	G.711
	Audio bit rate	G.711u 64kbps
Network	Security	Multi-level password protections, IP address filtering, HTTPS encryption, User access log.
	Network Interface	IEEE 802.11n; 10/100 BASE-TX Fast Ethernet
	Protocols	IPv6, IPv4,TCP/IP,UDP,ICMP,DHCP client, NTP client, DNS client, DDNS client, SMTP client, FTP client, HTTP / HTTPS, Samba client, PPPoE, UPnP port forwarding, RTP / RTSP/ RTCP, IP filtering, QoS, CoS, Multicast, IGMP, ONVIF compliant
	Users	Access by 10 simultaneous users.
	Firmware update	SD card / HTTP.
Advanced Features	Remote Management	- Take snapshots/video clips and save to local hard drive via web browser. - Configuration accessible via web browser.
	Security	- Administrator and user group protected. - Password authentication. - HTTP and RTSP authentication.
	Surveillance	- Record video continuously. - Record video according to a weekly schedule. - Record video when motion is detected. - Upload snapshots/video clips via e-mail. - Upload snapshots/video clips via FTP.
	Mobile App Support	- Take snapshots/video clips and save to local hard drive via web browser. - Configuration accessible via web browser.
System Requirements	Operating System	Microsoft Windows 8/7/Vista/XP SP3.
	Compatible Browsers	- Microsoft Internet Explorer 8, Firefox 12, Chrome 20, Safari 4 - Other Java-enabled browser.
	Supported Mobile Devices	Mobile app for iPhone, iPad, and Android mobile devices.
Connectors	RJ-45	10 BASE - T / 100 BASE -TX.
	Digital I / O	4 pin-contact terminal block (DO, DI, 5V, GND)
	Audio	Single audio input/output port
	Reset	Reset for factory default.
	Local storage device	MicroSD/ SDHC Slot

General	LED indicators	Network / Power/ WPS
	Buttons	Reset/ WPS
	Power consumption	≦10W
	Power	Input: 5 V DC, 2.5 A
	Operating conditions	0 to 40 °C (32 to 104 °F); 20% to 80% non-condensing
	Storage conditions	-20 to 70 ºC (-4 to 158 ºF)
	Approval	CE, FCC, CE LVD, C-Tick
	Dimensions	120 x 103.2 x 130 mm (4.72 x 4.06 x 5.11 inches)
	Package Weights	340 grams (0.75 lb)
	Accessories included	- Quick Installation Guide - CD x 1 (includes User's Manual) - Power adapter - RJ-45 cable x 1

* Design and specifications are subject to change without notice.

Appendix: The Playback Utility Tool-- CMS

This section provides instructions for installing and using the **CMS** which is included with the device. The utility discovers and displays devices on your network.

Introduction to the CMS

The **CMS** allows you to access many units of the device from a remote desktop or a laptop in a TCP/IP networking environment. It can perform the following functions.

- The recorded data of the camera will be automatically downloaded to the user's computer for backup.
- Views live images in a smooth sequential flow from an IP camera.
- Stores, searches, and reviews recorded video from a PC or an SD card quickly.

Note

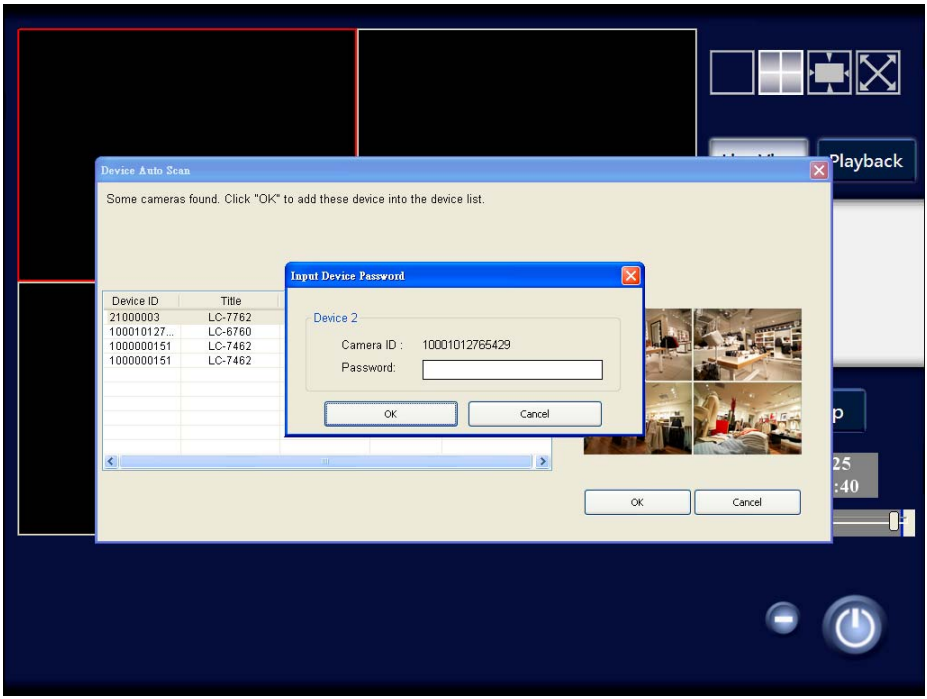
Before you view images from a desktop, you need to have your device networked by obtaining a 10/100 base-TX Ethernet data cable (Standard RJ-45) to connect the device to your LAN/WAN. Now enter the main menu to set the IP address.

Install the CMS in your PC

Install the CMS from the supported CD-R.

1. Exit all applications currently running in the selected PC.
2. Insert the supported CD in the CD-ROM drive. The program will execute the installation automatically. Follow the on-screen instructions to proceed with the rest of the installation procedure as they appear.
3. After the installation is complete, pop up the **START** menu from your computer, and point to **Programs / CMS / CMS** to open up the program selection page as shown below. Click on the **CMS** tag to start the **CMS** program.

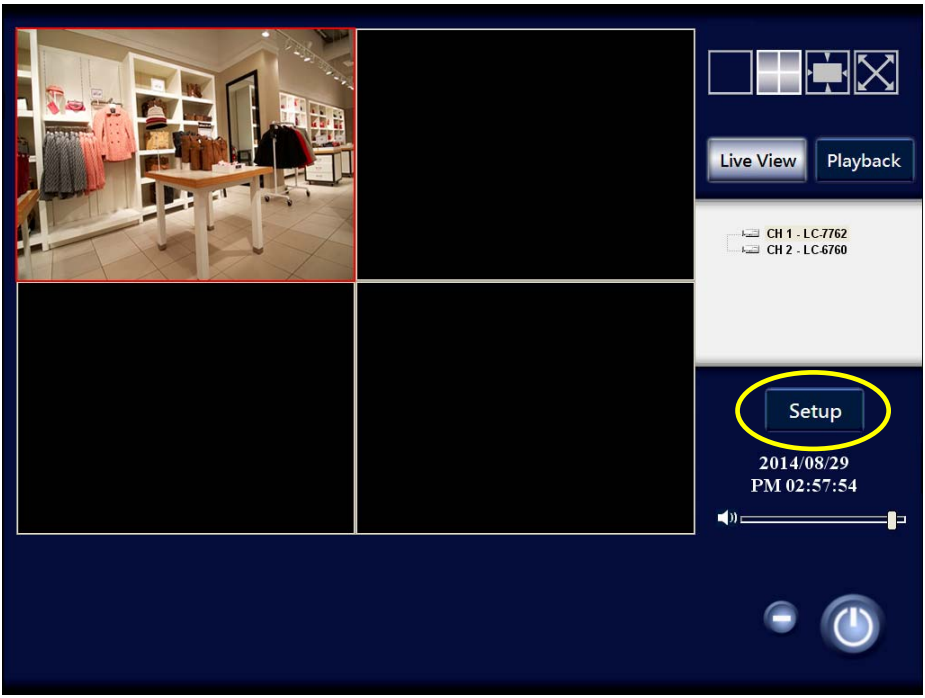
Start to use the CMS



Once the connection has been established, the software will discover the connection of the devices in the LAN. The Device Auto Scan screen will display the connection of the all-type device. Please enter the password and click **OK** to add the new device.

View the video from a remote PC

Use the **CMS** to browse the video from a remote location.



Search and add a new camera

The user can manually add a new connection of the camera in the LAN.

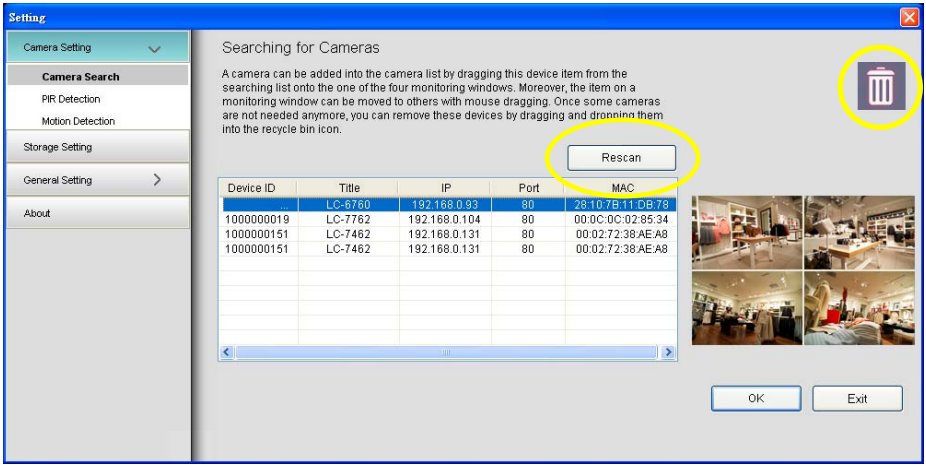
1. Click the **Setup** button to open the **Setting** window.
2. Click **Rescan**, then select and drag the camera into the quad-monitoring area. Click **OK** to confirm.

Note

You can use the mouse to switch from one image to another.

Note

You can remove the devices by drugging and dropping them into the recycle bin icon.



Operation

Live View

Once the connection has been established, you will see the Live View window (see the sample screen below).

1. The live view area.

Note

Pop-menu: You can use the mouse to move to each channel. Click the right key of the mouse to show a window. You can select "Full Screen", "Capture" or “Print”. Double-click the red frame live-viewing window to switch between single or quad channel modes.

2. Select the division mode of the live view area: Single View, Quad View, Actual View and Full Screen.
3. You can switch between these modes by clicking the Live View and Playback buttons.
4. The camera list.
5. Click the Setup button to open the Setting window.
6. Shows current local time and date.
7. The audio function: Click the audio icon to play the live audio and click once again to deactivate. Use the scroll bar to control the volume.
8. Click to minimize the window or turn off the software.

Playback

The Playback window (see the sample screen below).

1. The display area.

   Note

   Pop-menu: You can use the mouse to move to each channel. Click the right key of the mouse to show a window. You can select "Full Screen", "Capture" or “Print”.

2. Select the division mode of the live view area: Single View, Quad View, Actual View and Full Screen.
3. You can switch between these modes by clicking the Live View and Playback buttons.
4. The system will search for a recorded video stored in the device. The dates marked in blue color indicate there are record videos on those days.
5. Click the Setup button to open the Setting window.
6. Shows current local time and date.
7. The audio function: Click the audio icon to play the playback audio and click once again to

deactivate. Use the scroll bar to control the volume.

8. The playback function bar.
9. You can click or pull the indicator on the scroll bar to the point you want to see.
10. Click to minimize the window or turn off the software.

Settings

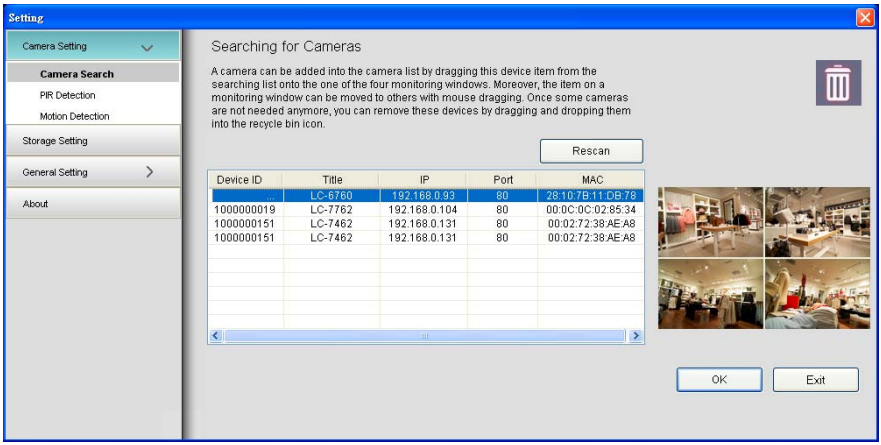
Press the **Setup** button to enter the Setting page.

Camera Setting

Searching for Cameras

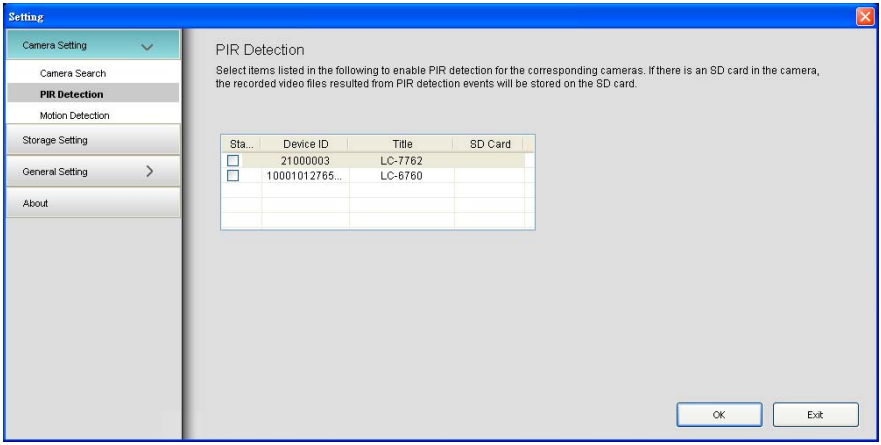
The user can manually add a new connection of the camera in the LAN.

1. Click the Setup button to open the Setting window.
2. Click Rescan, then select and drag the camera into the quad-monitoring area. Click OK to confirm.



PIR Detection

Select the camera from the list to activate its PIR detection function. Click OK to confirm.



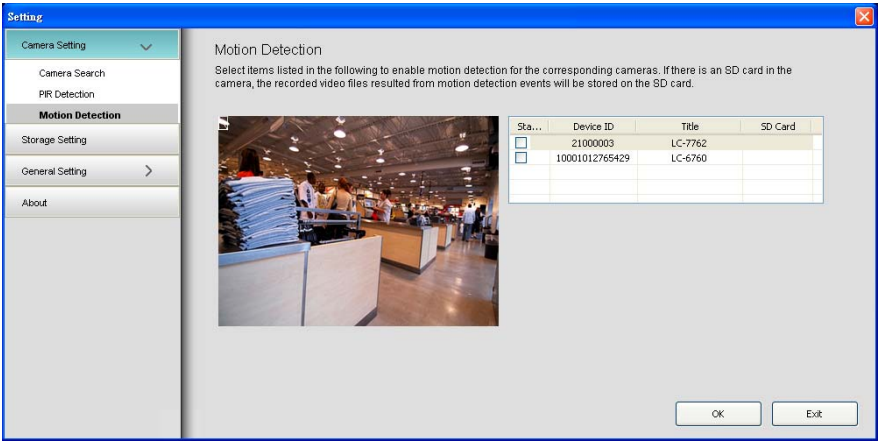
Motion Detection

1. Select the camera from the list to activate its motion detection function.
2. Click and drag the mouse across a targeted zone to draw a red rectangle on the image.

   Every cell in the grid represents a detection area.
3. Click OK to confirm.

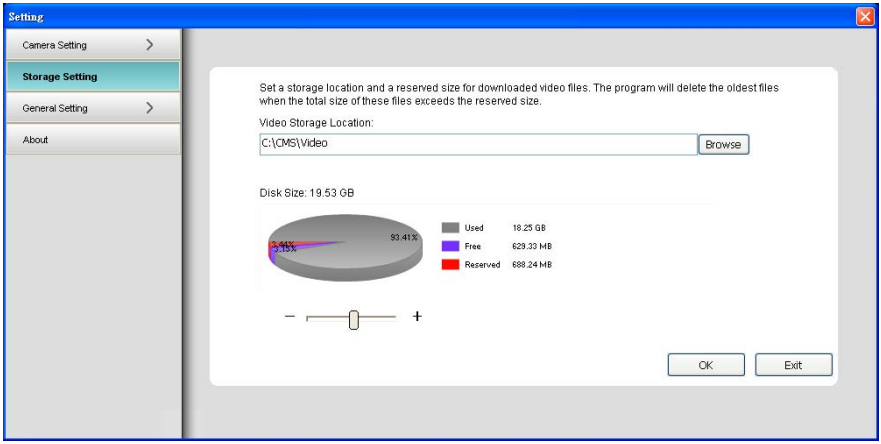
Note

Click the right key of the mouse to show a window. You can select "Select all", "Clear all" or “Restore”.



Storage Setting

Set the directory for saving the recording data. You can set the reserved hard disk space by using the scroll bar. Click on the **OK** button to submit the new setting of the storage setting.



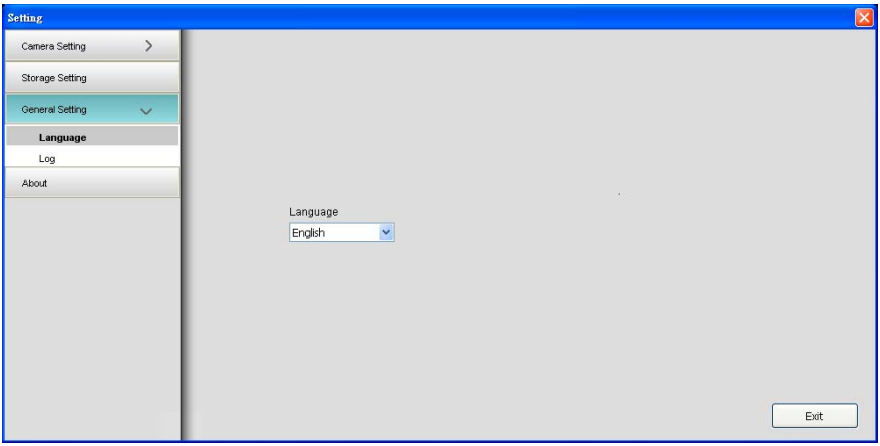
Note

The recorded data of the camera will be automatically downloaded to the user's computer for backup. The software will check the latest recorded date every two minutes and download the data automatically. When the recording data limit is reached, the new data will overwrite the oldest one.

General Setting

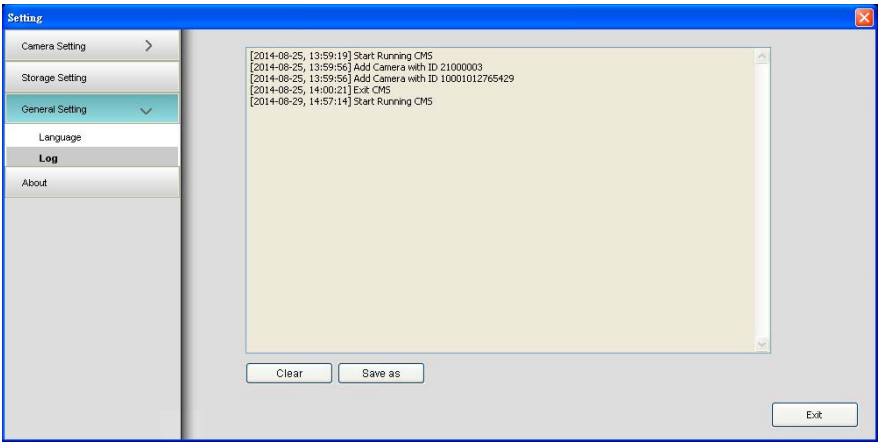
Language

You have an option as to which language to use. Choose your selected language from the drop-down list.



Log

This page displays the log information of your camera. Click on the “Clear“ to erase all of the logs. You may also download the information by clicking “Save as”.




WiFi