

# TP-LINK®

## User Guide

**TL-SC3430N**

**Wireless N H.264 Megapixel Surveillance Camera**



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## FCC STATEMENT



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

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/ TV technician for help.

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

This device may not cause harmful interference.

This device must accept any interference received, including interference that may cause undesired operation.

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

## CE Mark Warning



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

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# Package Contents

The following items should be found in your package:

- TL-SC3430N Wireless N H.264 Megapixel Surveillance Camera
- Power Adapter
- Mounting Bracket with three screws, a Lock Ring, a Brace and a Base Plate
- RJ45 Cable
- Quick Installation Guide
- Resource CD, including:
  - This User Guide
  - Application Guide
  - Other helpful information

 **Note:**

Make sure that the package contains the above items. If any of the listed items is damaged or missing, please contact your distributor.

# Chapter 1 Safety Instructions

## ➤ Before you use this product

This product has been designed with safety in mind. However, the electrical products can cause fires which may lead to serious body injury if not used properly. To avoid such accidents, be sure to heed the following.

## ➤ Legal Caution

Video and audio surveillance can be forbidden by laws that vary from country to country. Check the laws in your local region before using this product for surveillance purposes.

## ➤ Don't open the housing of the product

Don't try to open the housing or remove the covers, for it may expose you to dangerous voltage or other hazards.

## ➤ Don't use the accessories not recommend by the manufacturer

## ➤ Heed the safety precautions

Be sure to follow the general safety precautions and the "Operation Notice."

## ➤ Operation Notice - Operating or storage location

Avoid operating or storing the Camera in the following locations:

- Extremely hot or cold places  
(Operating temperature: 0 °C to + 40 °C [32 °F to 104°F] )
- Exposed to direct sunlight for a long time, or close to heating equipment (e.g., near heaters)
- Close to water (e.g., near a bathtub, kitchen sink, laundry tub)
- Close to sources of strong magnetism
- Close to sources of powerful electromagnetic radiation, such as radios or TV transmitters
- Locations subject to strong vibration or shock

## ➤ In case of a breakdown

In case of system breakdown, discontinue use and contact your authorized dealer.

## ➤ In case of abnormal operation

- If the unit emits smoke or an unusual smell,
- If water or other foreign objects enter the cabinet, or
- If you drop the unit or damage the cabinet: 1. Disconnect the cable and the connecting cables.  
2. Contact your authorized dealer or the store where you purchased the product.

## ➤ Transportation

When transporting the camera, repack it as originally packed at the factory or in materials of equal quality.

## ➤ Ventilation

To prevent heat buildup, do not block air circulation around the device.

## ➤ Cleaning

- Use a soft, dry cloth to clean the external surfaces of the device. Stubborn stains can be removed using a soft cloth dampened with a small quantity of detergent solution, then wipe dry.
- Do not use volatile solvents such as alcohol, benzene or thinners as they may damage the surface.

## Chapter 2 Minimum System Requirement & Product Feature

### 2.1 System Requirement

For normal operation and viewing of the network camera, it's recommended that your system meets these minimum requirements for proper operation:

Item	Requirements
CPU	Pentium 4 2.8GHz (or equivalent AMD)
Graphic Card	256 MB RAM graphic cards(or equivalent on-board graphic cards)
RAM	1G
Operating System	Windows 2000 / Windows 2003 / Windows XP / Windows Vista / Windows 7
Web Browser	Internet Explore 6 or higher

 **Note:**

Please keep updating the latest Windows software and service package. (Ex: Net Framework, Windows Media Player, Enhance ActiveX Security)

### 2.2 Product Features

These easy-to-follow instructions make it quick and simple for setup and operation, so you'll also soon be enjoying the benefits of these product features:

SYSTEM	
<b>Resolutions</b>	H.264 / MPEG-4 / Motion JPEG: 4 resolutions from 1280 x 1024 to 320 x 240 via API and configuration web page 3GPP: 2 resolutions from 320 x 240 to 160 x120 via compatible cellphone.
<b>Screen Resolution</b>	Higher than 1024 * 720 pixels
<b>Compressing format</b>	H.264 / MPEG-4 / Motion JPEG
<b>Frame Rate</b>	Up to 15 fps at 1280 x 1024 Up to 30 fps at 640 x 480
<b>Image settings</b>	Rotation: Mirror, Flip, Mirror Flip
	Brightness / Contrast / Saturation / Sharpness/ Exposure
	Overlay capabilities: time, date, text and privacy image
<b>Image snapshot</b>	Yes
<b>Video Recording</b>	Yes
<b>Full Screen Viewing</b>	Yes
<b>Digital Zoom</b>	10x digital
<b>Audio</b>	Two-way (full / half duplex) with built-in microphone



	Audio compression: G.711 $\mu$ law, a law, and AMR
<b>Mobile Phone Live View</b>	Through 2.5 WAP, 3GPP, 3G Streaming, and 3G Browser
<b>Alarm Sending</b>	FTP Client / SMTP / Network Storage / Memory Card / HTTP event
<b>Security</b>	Password Protecton / HTTPS encryption / IP Filter
<b>Alarm Buffer</b>	Recording image and audio file pre-and-post disconnection up to 5 sec.
<b>Supported protocols</b>	Bonjour, TCP/IP, DHCP, PPPoE, ARP, ICMP, FTP, SMTP, DNS, NTP, UPnP, RTSP, RTP, HTTP, TCP, UDP, 3GPP/ISMA RTSP
<b>Simultaneous Connection</b>	Up to 10 users
<b>Operating conditions</b>	0°C ~ 40 °C (32°F ~ 104 °F)
<b>HARDWARE</b>	
<b>Lens</b>	F1.9, 4.5mm Megapixel board lens
<b>Audio Output</b>	1
<b>Power</b>	12V DC, 1A, Max 12W
<b>Wireless</b>	IEEE 802.11b/g/n (for wireless model) Up to 150 Mbps
<b>SD/SDHC Card Slot</b>	Supports SD/SDHC memory card
<b>WPS</b>	1 (Wi-Fi Protected Setup)

## 2.3 Physical Overview

### 2.3.1 Front View



**Focus Adjustment Ring:** Adjust the focus ring to get a clear image.

**Network LED Indicator:** It lights up when the IP Camera is well connected to the network. It flashes when there are data being transmitted.

#### **Power LED Indicator**

- **Red:** The IP Camera boots up.
- **Blue:** The IP Camera is working.

**Built-in Microphone:** The location where the voice from your partner comes out.

**SD/SDHC Card Slot:** Supports SD/SDHC memory card.

### 2.3.2 Bottom view



- **Power Connector:** The power connector is where you connect the power adapter.
- **RESET:** Please take the following steps to reset the camera to its defaults.  
Keep the camera powered on, then press and hold the **Reset** button for more than 15 seconds. Afterwards release it, and the Camera will be restored to factory defaults after rebooting.
- **Audio Out:** The Audio Out port is where the speaker is connected.
- **LAN (Network Connector):** Through this port, you can connect the IP Camera to your computer or the other Ethernet network devices.
- **WPS:** Press this button to quickly establish a connection between the Camera and the router supporting WPS (Wi-Fi Protected Setup).

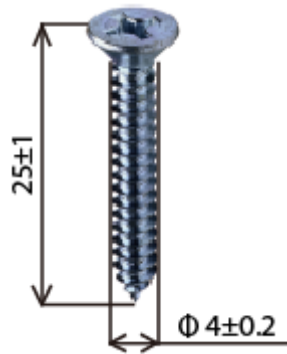
**Step 1.** Press the WPS button on the router supporting WPS for 2 seconds.

**Step 2.** Press the WPS button on the Camera within 2 minutes.

- **Lock Ring:** It is used to adjust the angle of the Camera.
- **Base Plate:** It is used to support the Camera and can be fixed to a flat surface with the supplied screws.

## 2.4 Mount the Camera

### 2.4.1 The Screw Size



There are three supplied screws for mounting the Camera. The length of the screws is  $25 \pm 1$  mm and the diameter is  $4 \pm 0.2$  mm.

### 2.4.2 Wall and Ceiling Mount

1. Use the three supplied screws to fix the base plate to a flat surface.
2. Loosen the lock ring to adjust the desired angle of the Camera.
3. Tighten the lock ring.

There are two ways to mounting the Camera on the wall. See the following two pictures.

#### (1) Ceiling Mount



## (2) Wall Mount

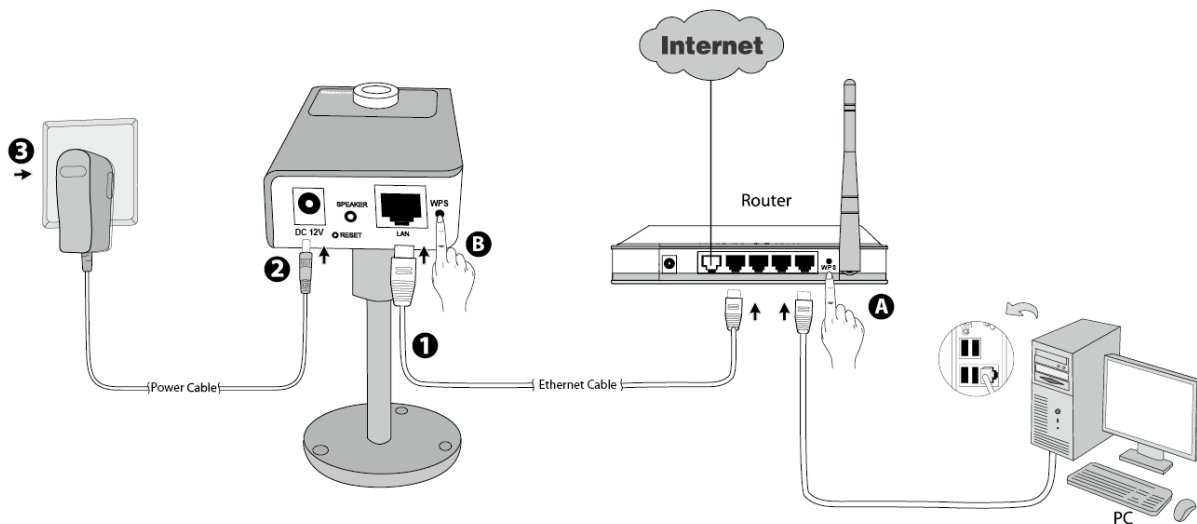


## 2.5 Hardware Connection

Before proceeding, confirm that your PC is connected to your router and can access the Internet. Make sure that your router's DHCP feature is enabled. If not, please refer to your router's instruction to enable it.

For TL-SC3430N, if your router supports WPS (Wi-Fi Protected Setup), you can also use WPS to setup a wireless connection quickly. You can also choose **Wired Connection**.

Please connect the Camera according to the following steps.



### 2.5.1 Method 1: Wired Connection

1. Connect the Camera to the LAN network (Router or Switch) via Ethernet cable.
2. Connect the power adapter cord to the DC In jack.
3. Plug the power adapter into the power outlet.

## **2.5.2 Method 2: WPS Connection**

Power on the Camera and make sure that the Power LED is blue before WPS Connection. Then take the following steps.

- A. Press the WPS button on the router supporting WPS for 2 seconds.
- B. Press the WPS button on the Camera within 2 minutes.

After you press the WPS button on the Camera, the Power LED will turn purple and flash, and when the WPS Connection is established successfully, it will return blue.

## Chapter 3 Using IP Camera via Web Browser

### 3.1 Obtain the IP Address

1. Insert the provided CD into your CD-ROM driver. The Setup Wizard will automatically pop up on your computer's screen as shown in the figure below.



Figure 3-1

2. Choose the **Intelligent IP Installer**, and then the next screen appears. Click on **Intelligent IP Installer** to begin the installation.



Figure 3-2

3. After the installation is finished, click **Start > All Programs > TP-LINK > Intelligent IP Installer** to start using the program.

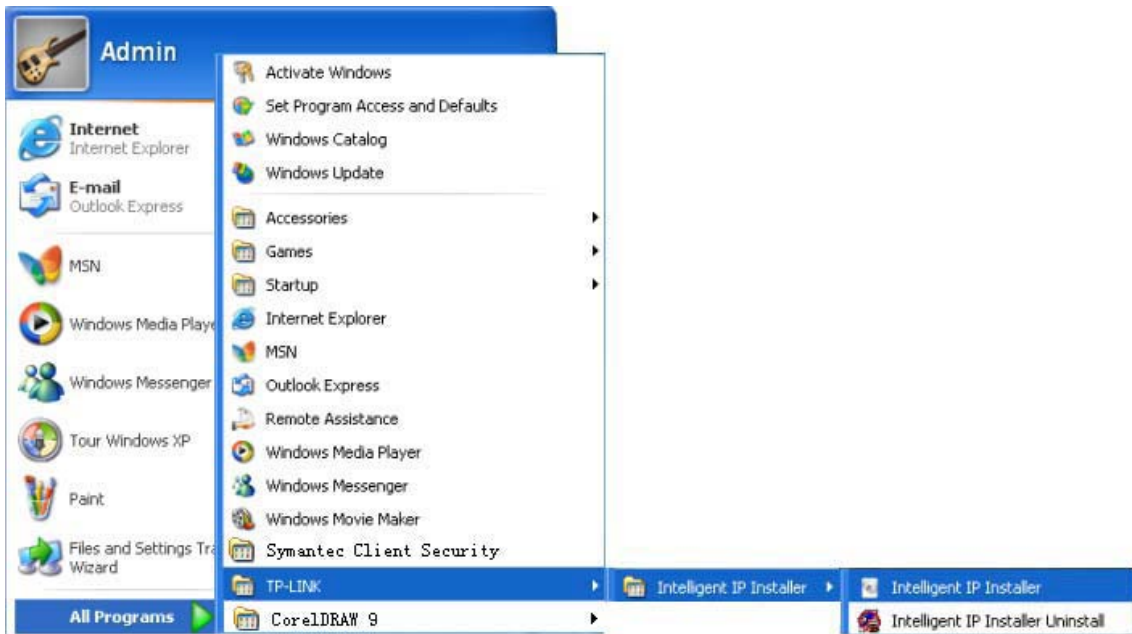


Figure 3-3

4. The following screen will then display. Click the **Search** button to search Network Cameras in the network; it displays Network Cameras information including IP Address.

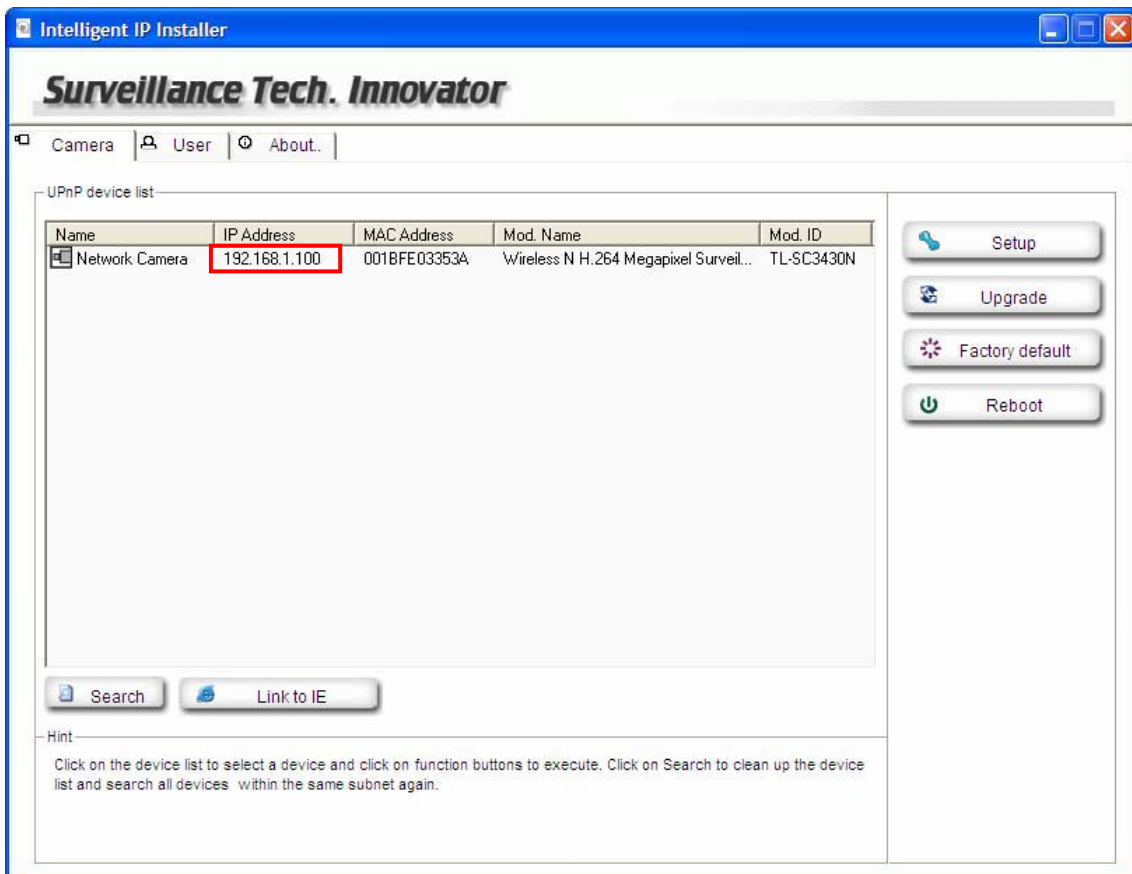
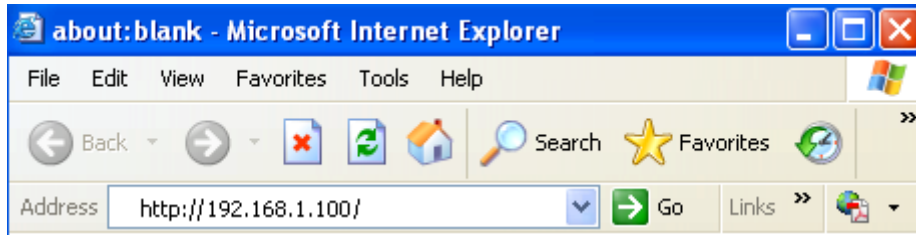


Figure 3-4

### 3.2 Windows Web Browser

The configuration of browser is similar in Windows XP/Vista/7. Here we take IE browser in Windows XP for example.

- 1 Click **Link to IE** button in Figure 3-4 directly. You can also launch your web browser and then enter the IP address or host name of the IP camera in the Location / Address field of your browser.



**Note:**

If you only want to view the video without accessing Setting screen, enter "http://<IP>/index2.htm" as your web URL.

- 2 Use the default User name **admin** and default Password **admin**.

**Note:**

The default User name "admin" and the Password "admin" are set at the factory for the administrator. You can change them in the Account Menu. (Please check "**Setting** → **Basic** → **Security** → **Account**")

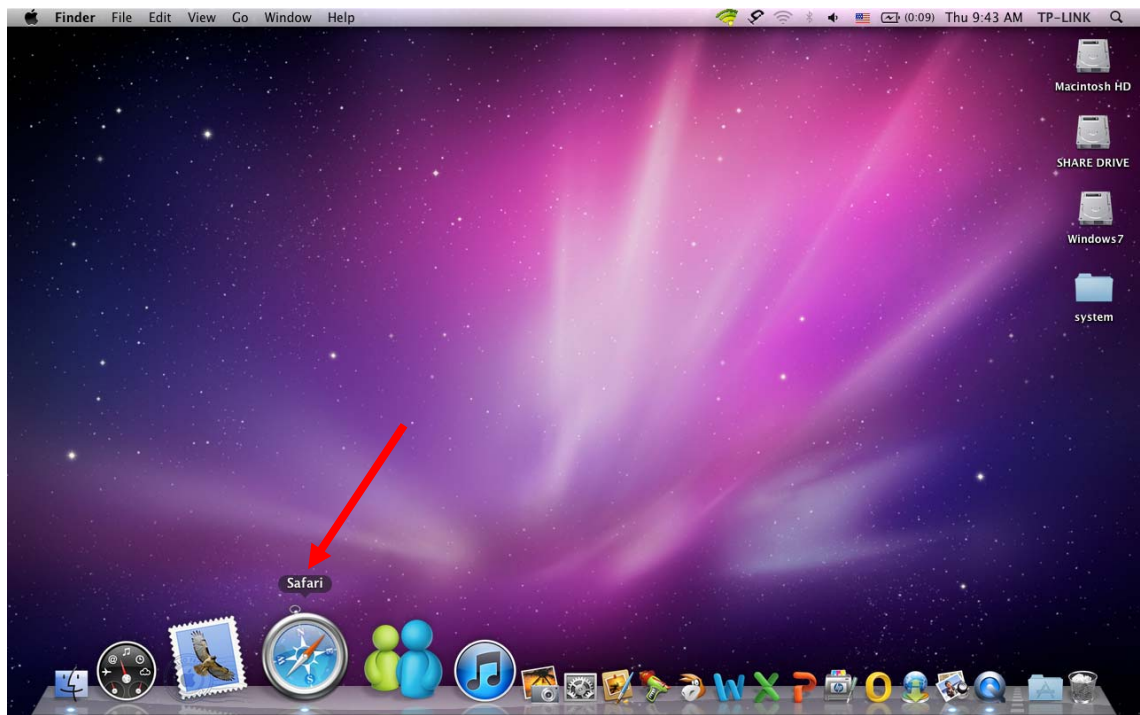


- 3 The monitor image will be displayed in your browser. In the far left side of main configuration are **Setting**, **Client Setting**, and **Image Setup**.

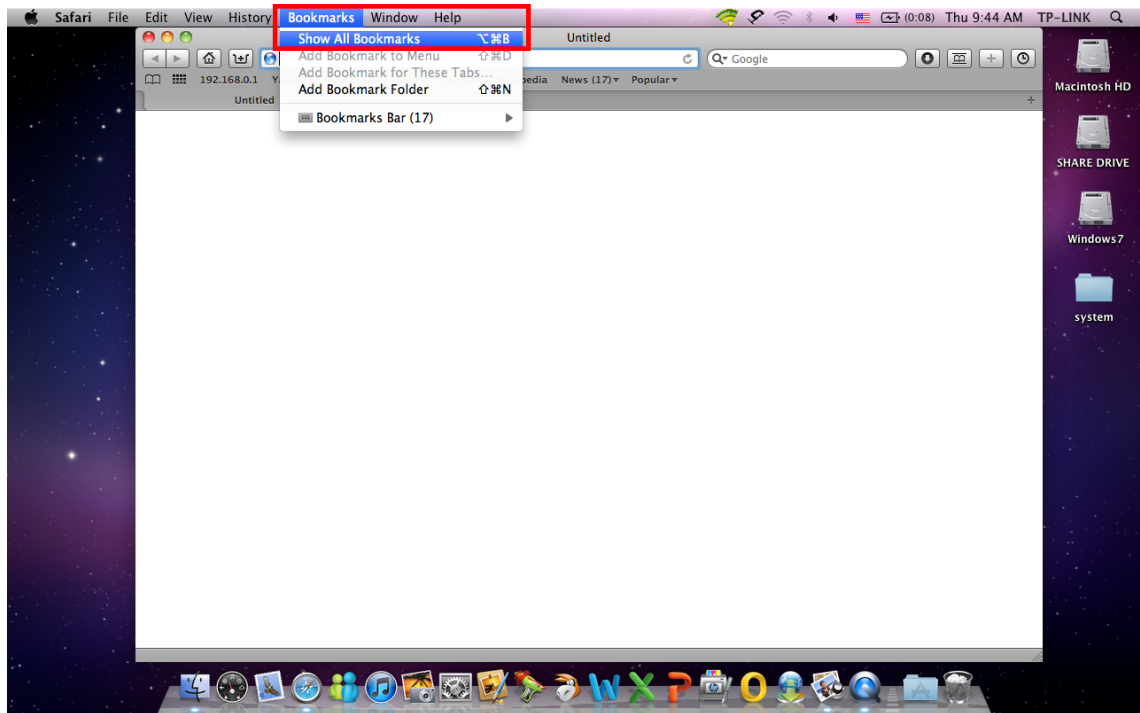


### 3.3 Mac Web Browser

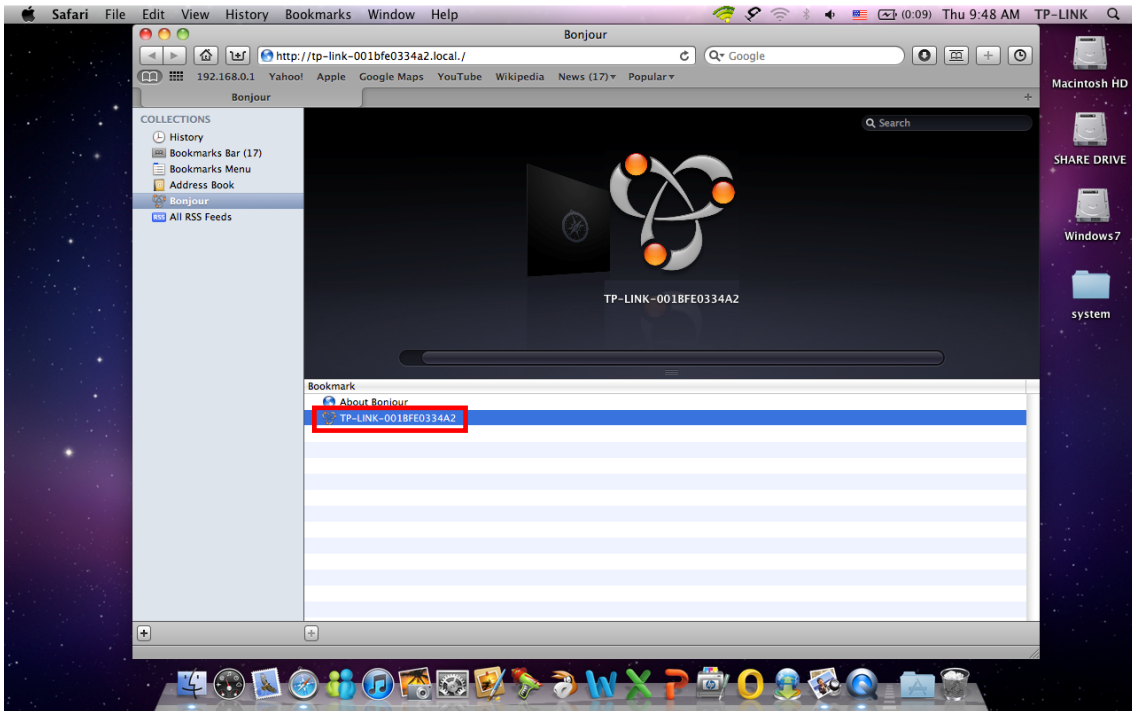
- 1 Click the **Safari** icon.



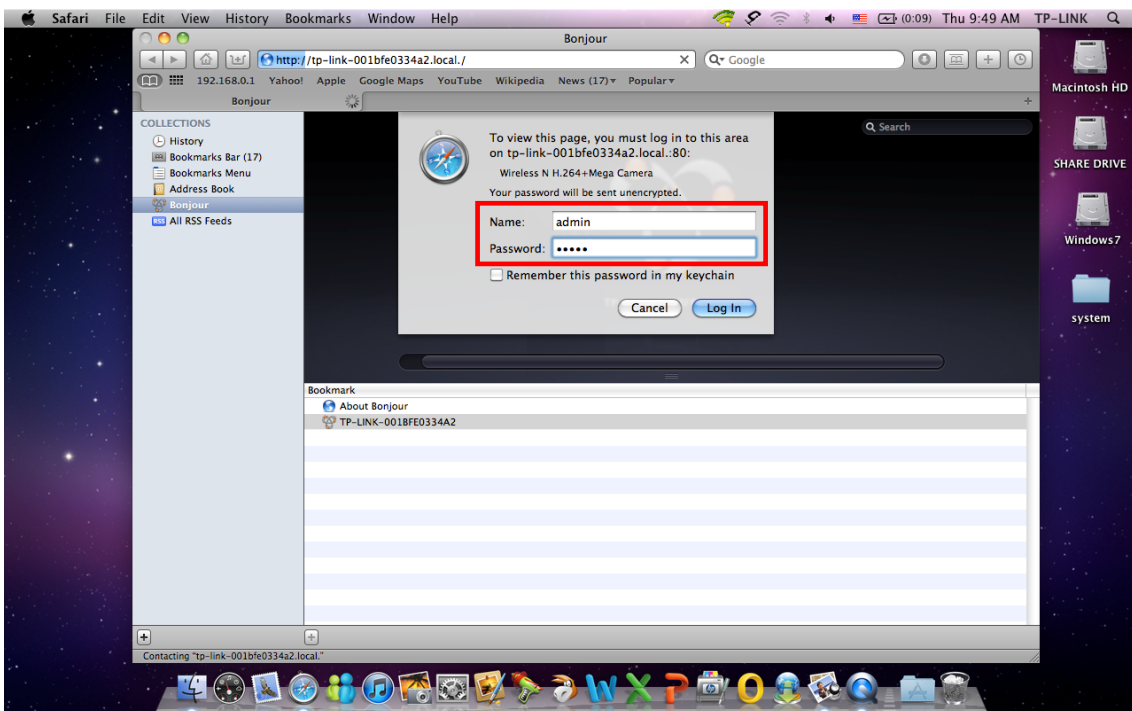
- 2 After the home page appears, click **Bookmarks** and then choose **Show All Bookmarks**.



- 3 Click **Bonjour** on the left of the following screen. Double click the Mac address of the Camera in the bookmark list. For example, **TP-LINK-001BFE0334A2**.



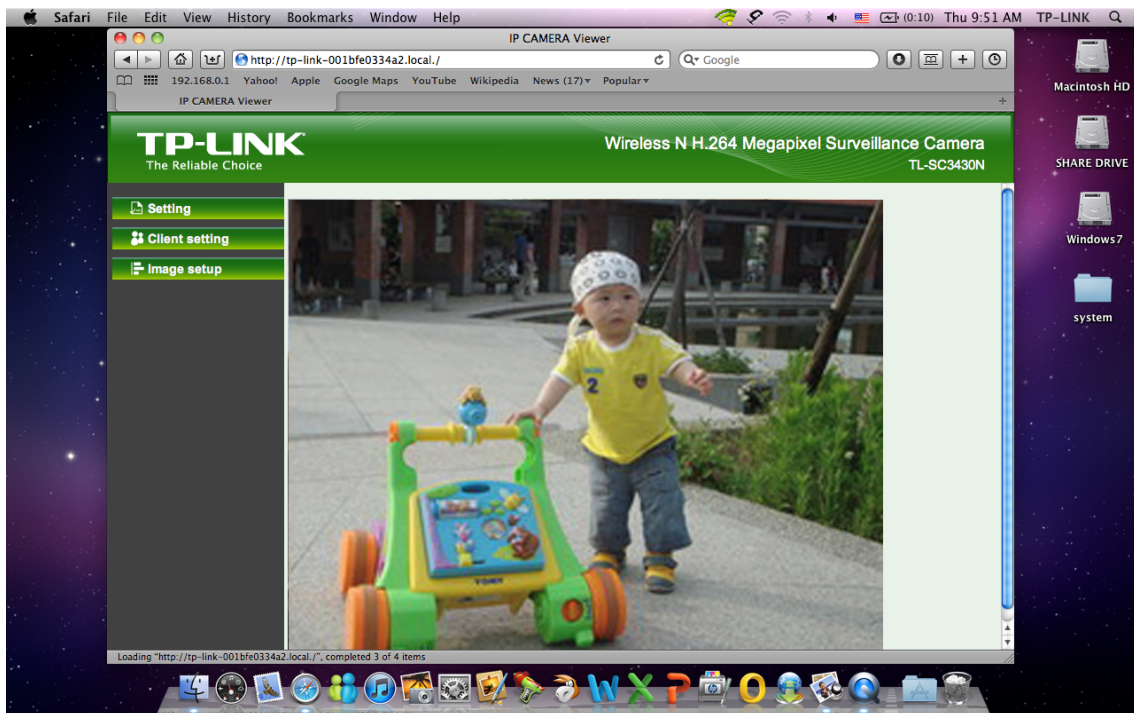
- 4 Enter the default Name **admin** and default Password **admin**. Click **Log In**.



**Note:**

The default user name “admin” and the password “admin” are set at the factory for the administrator. You can change them in the Account Menu. (Please check “**Setting** → **Basic** → **Security** → **Account**”)

- 5 The monitor image will be displayed in your browser. In the far left side of main configuration are **Setting, Client Setting** and **Image Setup**.



# Chapter 4 Operating IP Camera via Mobile Phone

## 4.1 Mobile Phone Viewing

### 4.1.1 3G Mobile Phone Streaming Viewing

For 3G mobile phone viewing, type “**rtsp://<IP>:<PORT>/video.3gp**” into your 3G Streaming Link. <IP> is the Public IP address of your IP Camera; <PORT> is the RTSP port of your IP Camera (Default value is 554.) Example: `rtsp://100.10.10.1:554/video.3gp`

 **Note:**

You can also use RTSP clients (RealPlayer, VLC, QuickTime Player...etc.) to view RTSP streaming, just type in “**rtsp://<IP>:<PORT>/video.3gp**” as the Player URL.

### 4.1.2 2.5G Mobile Phone WAP Viewing

For 2.5G mobile phone viewing, type “**http://<IP>/mobile.wml**” into your 2.5G WAP Browser. <IP> is the Public IP address of your IP Camera.

### 4.1.3 2.5G Mobile Phone Browser Viewing

For 2.5G mobile phone viewing, type “**http://<IP>/mobile.htm**” into your 2.5G Web Browser. <IP> is the Public IP address of your IP Camera.

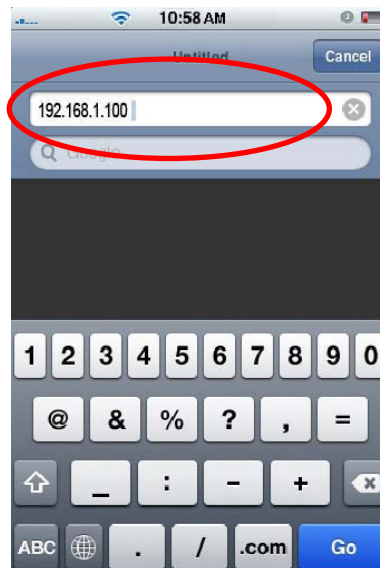
## 4.2 Using IP Camera via iPhone

You can use TP-LINK Web User Interface via iPhone. Please follow the setting process below. Then you can use TP-LINK Web UI via iPhone.

1. Select Safari function



2. Enter IP address in your web link.



3. Enter name and password. Default values are both admin. Then click Log in



4. The TP-LINK User Interface and live image will show up in the middle of the screen.

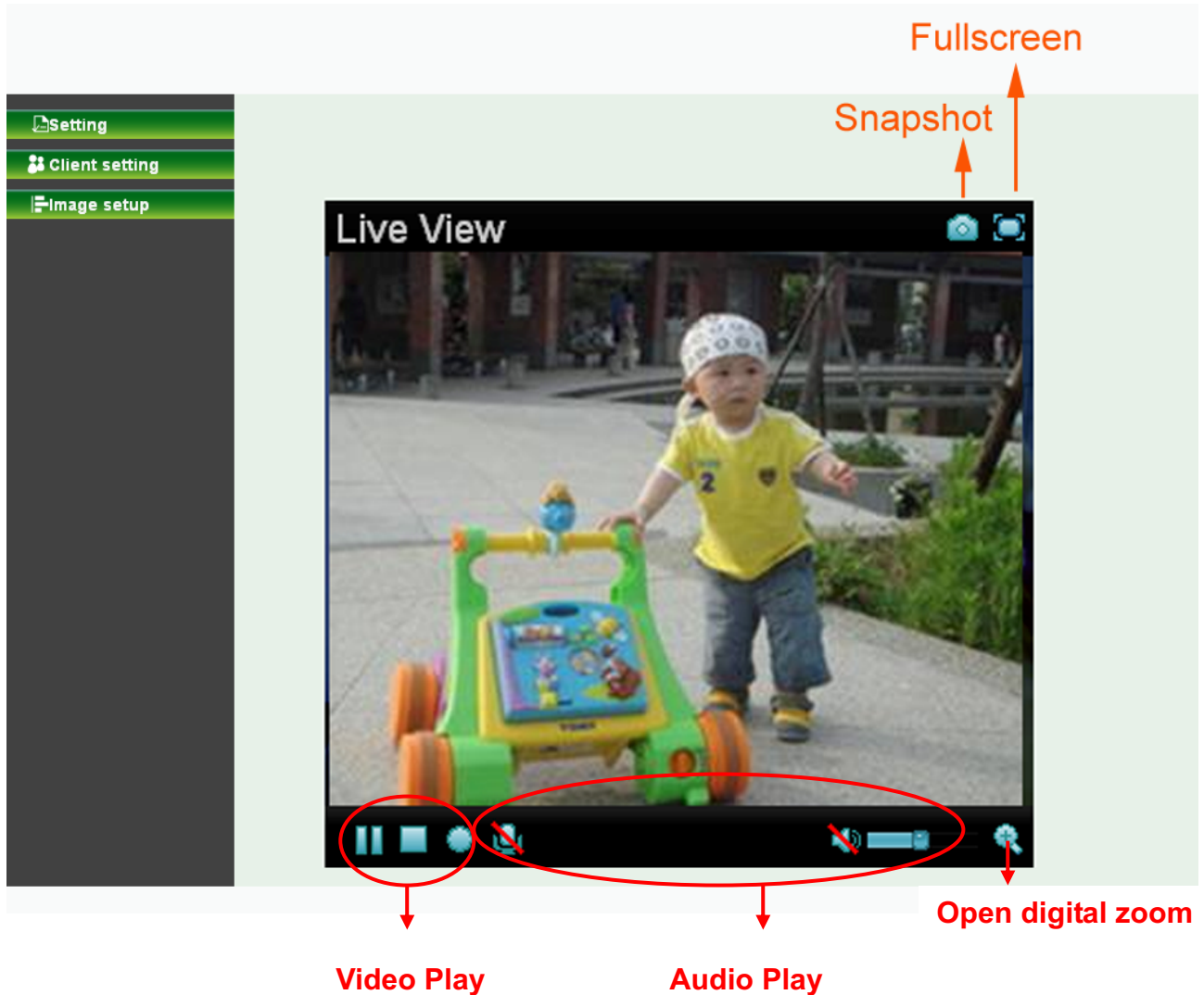


**Note:** It will show continuous snapshots not a real time video streaming. Therefore, the recording feature is disabled.

## Chapter 5 Configuration of Main Menu

In the left side of main configuration are **Setting**, **Client setting** and **Image setting**.



In the right side, you can control Live View in your main Browser. The functions include: **Snapshot**, **Open digital zoom**, **Audio**, and **Video Play**.





### 5.1 Live View

#### 5.1.1 Snapshot





You can capture a still image shot by clicking the Camera icon and save it in the operating computer.

Symbols	Meaning
	a snapshot window appears after clicking the icon
<b>Save</b>	Save the picture captured by snapshot into your computer
<b>Close</b>	Return to the view screen
	full Screen

### 5.1.2 Digital zoom in / out the image via the monitor window

- Click  to display the digital zoom in window.
- Pull the  to adjust the digital zoom range, and it will be showed on the above window.
- Use the left click of your mouse to move to anywhere in the window area.






### 5.1.3 Video play buttons

Symbols	Meaning
	Pause the current video
	Play the video
	Stop the current video
	Record the current video

 **Note:**

Concerning the recording storage requirement of your hard disk, please refer to the **CHAPTER 9. APPENDIX / B. Storage Requirement Table.**

### 5.1.4 Audio buttons

Symbols	Meaning	Note
	Speakers turned on	mean the speakers of your computer are turned on to transmit the sounds from the connected IP camera(s)
	Speakers turned off	mean the speakers of your computer are turned off to transmit the sounds from the connected IP camera(s)
	Mute off	mean you can broadcast to the connected IP camera(s) via the Ethernet using your microphone
	Mute on	mean you can't broadcast to the connected IP camera(s) via the Ethernet using your microphone
	Volume control bar	mean you can adjust the sound volume by the control bar

## 5.2 Setting

This function is only for the Administrator. Click "Setting" on the home page of web user interface to get into the **Basic** and **Advanced Settings** menu.

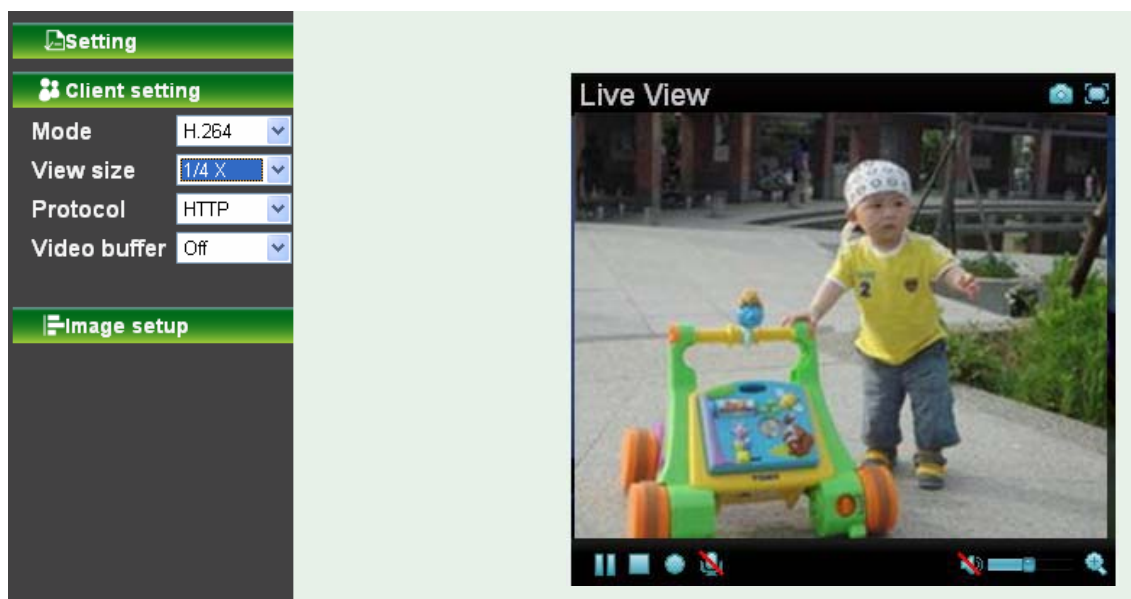


Click **Basic** folder, there are sub-folders including **System**, **Camera**, **Network**, and **Security**. For more information, you can see **Chapter 6**.

Click **Advanced** folder, there are sub-folders including **FTP Client**, **SMTP**, **Network Storage**, **Memory Card**, **HTTP event**, **Schedule**, **Alarm buffer**, **Motion detection**, **Audio detection**, and **System Log**. For more information, please see **Chapter 7**.

## 5.3 Client Setting

This function is only for the client. Click this button to control **Mode**, **View size**, **Protocol**, and **Video buffer**.



### 5.3.1 Mode

Click the pull-down box to choose video compression mode of **LIVE VIEW** among **H.264**, **MPEG4**, and **JPEG**.

#### Note:

As long as the operating system not able to afford loading under H.264 mode, please downgrade the mode to MPEG-4 or MJPEG.

### 5.3.2 View Size

Select the desired view size of image resolution among **1/4X**, **1/2X**, and **1X**.

### 5.3.3 Protocol

Select the transferring protocol among **TCP**, **UDP**, and **HTTP**.

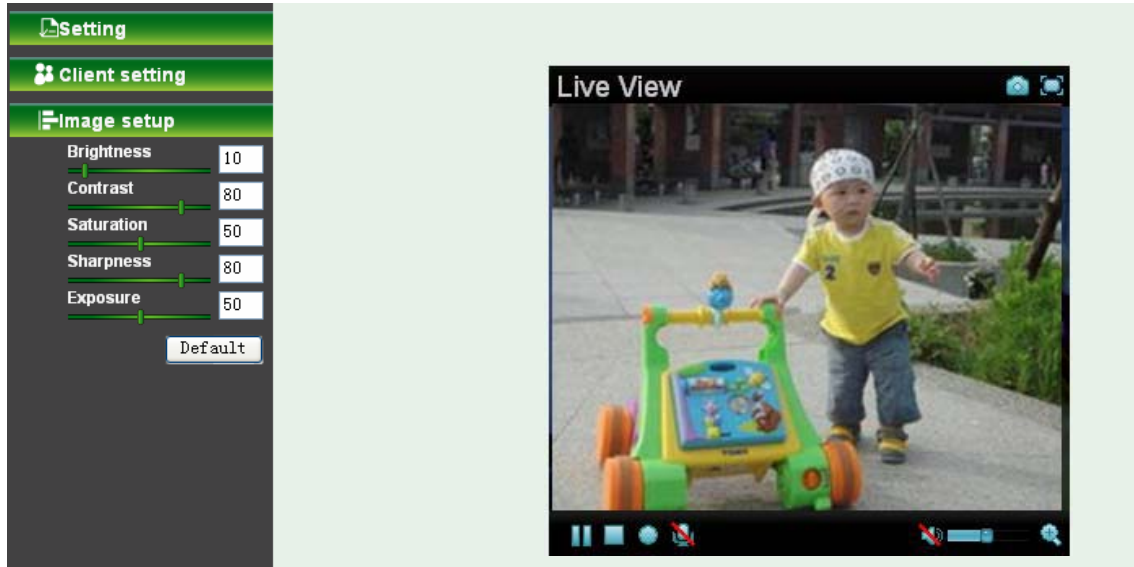


### 5.3.4 Video Buffer

Turn the Video Buffer function **On / Off**. The Video Buffer function makes the streaming more smooth in unsteady network environment, but might cause a little delay in live viewing.

## 5.4 Image Setup

The tool bar can be adjusted to optimize video **Brightness, Contrast, Saturation, Sharpness** and **Exposure**.



### 5.4.1 Brightness

The value range is 0~99. The higher value the brightness is, the brighter the image is.

### 5.4.2 Contrast

The value range is 0~99. The contrast is a measure of a display system, defined as the ratio of white to black that the system is capable of producing. The higher value the contrast is, the more delicate of color you can have.

### 5.4.3 Saturation

The value range is 0~99. The saturation of a color is determined by a combination of light intensity and how much it is distributed across the spectrum of different wavelengths. The higher value the saturation is, the more colorful the image will be.

### 5.4.4 Sharpness

The value range is 0~99. It applies image processing techniques to adjust the sharpness of live view. However, the higher the value is, more the noise is.

### 5.4.5 Exposure

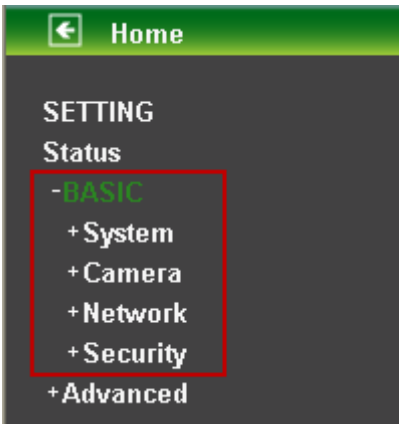
The value range is 0~99. The higher value the exposure is, the brighter the image is.

### 5.4.6 Default

After the adjustment of all setting, you can still click Default to make the setting back to the original setting.

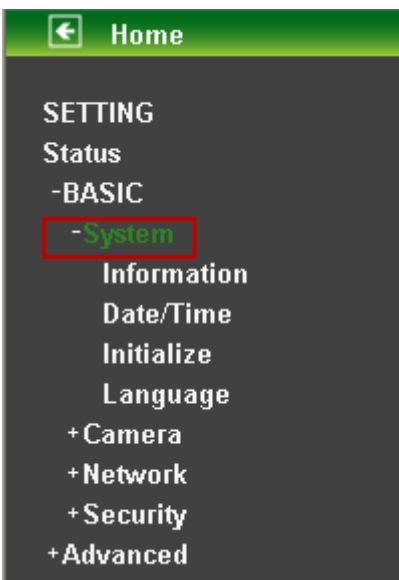
## Chapter 6 Setting-Basic

Click the **Basic** folder to display the sub folders including **System**, **Camera**, **Network**, and **Security**.



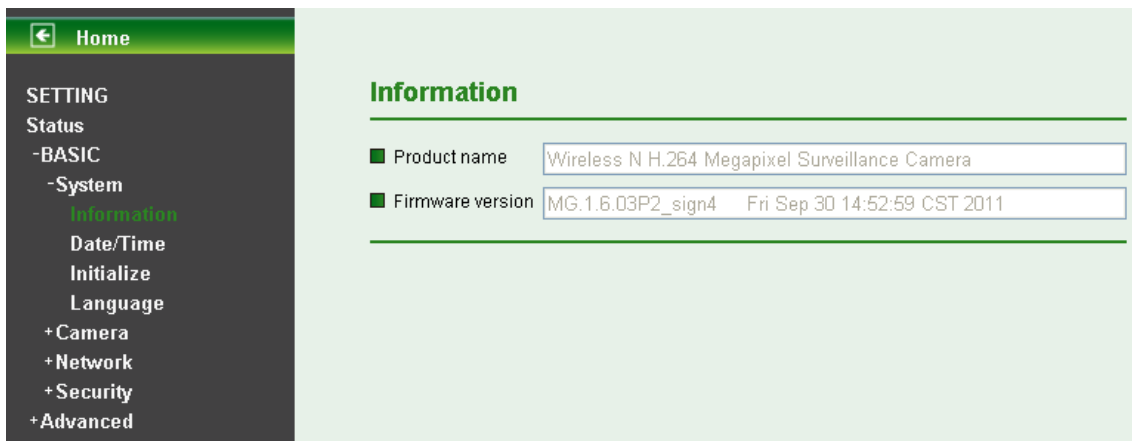
### 6.1 System

Click the folder of System to display the sub-folders including **Information**, **Date / Time**, **Initialize**, and **Language**.



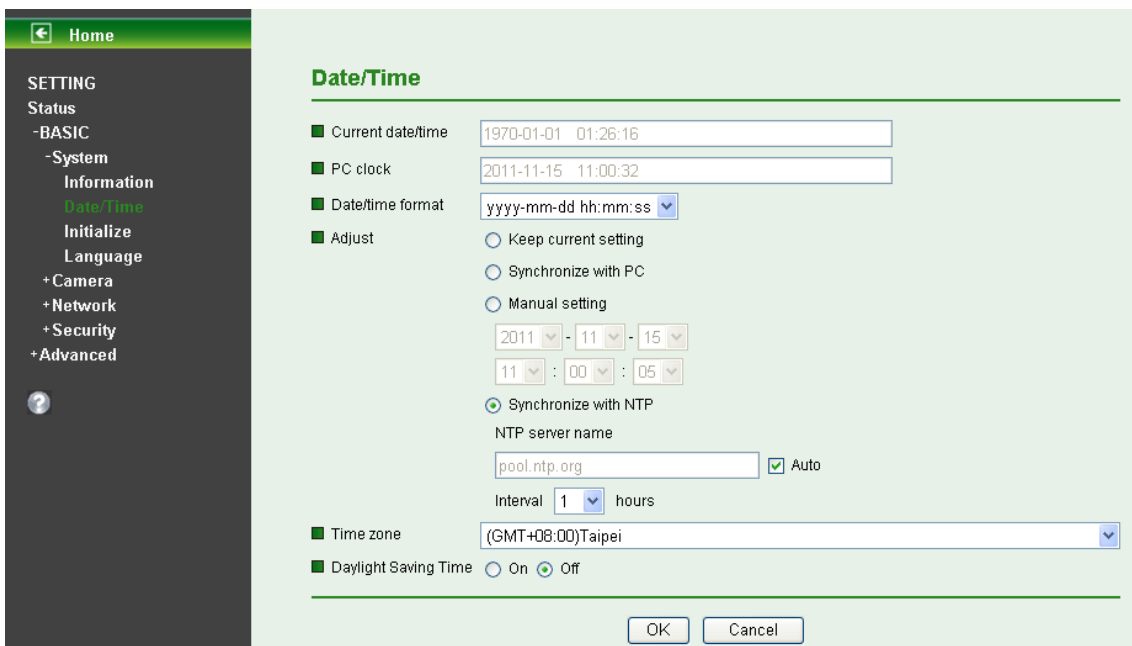
#### 6.1.1 Information

The Information screen provides the product factory information which includes **Product Name**, **Firmware Version**.



## 6.1.2 Date / Time

The Date/ Time screen displays all options of time setting.



- **Current Date / Time:** This displays the current date and time of this IP Camera.
- **PC Clock:** This displays the date and time of the monitoring PC clock.
- **Date / Time Format:** You can click the pull down box to select different time display formats.

### **Note:**

If you would like the Date / Time information shows on the Live View screen, please check “**Setting** → **Basic** → **Camera** → **General** → **Date / Time**” to execute the setting.

- **Adjust:** You can select one of those four adjusting modes for your IP Camera.
  - **Keep current setting:** Select this mode to keep the current date and time of this IP Camera.
  - **Synchronize:** Select this mode to keep the date and time of this IP Camera is the same as the monitoring PC.
  - **Manual setting:** Select this mode to adjust manually the date and time of this IP Camera.
  - **Synchronize with NTP:** Specify the NTP server name and the Refresh Interval to synchronize the date and time of this IP Camera with those of the time server, known as the NTP server.
- **Time Zone:** Select the Time Zone format of Greenwich Mean Time among different cities. The

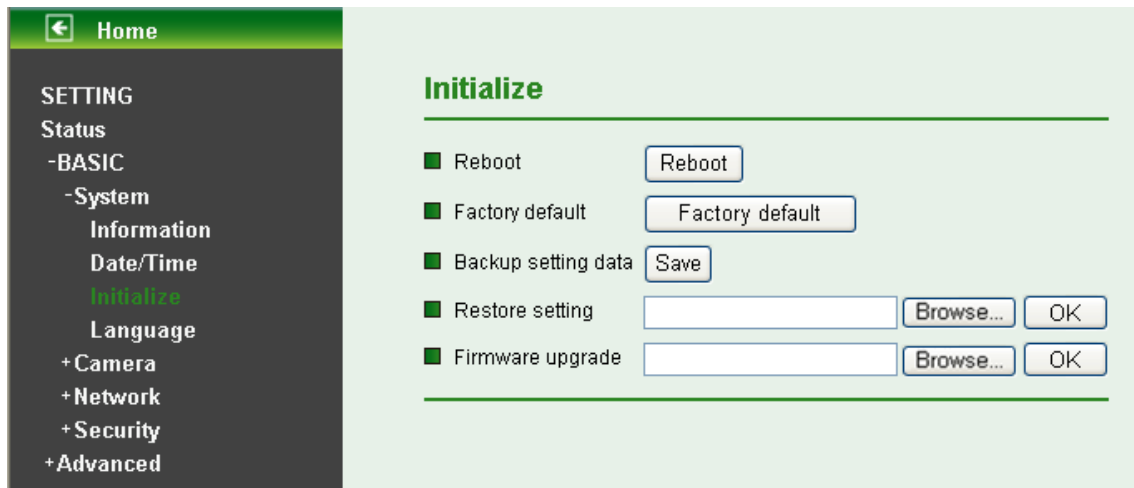
time display will be the same as the current date / time option.

- **Daylight Saving Time:** There are two modes to choose for setting up daylight saving time.
  - **By Date:** Set the start and end time by select month, day, hour, and minute.
  - **By Week Number:** Set the start and end time by select month, week, hour, and minute.

 **Note:**

The NTP server (Network Time Protocol) is the time server which is an Internet standard protocol built on the top of TCP / IP. This assures accurate synchronization to the millisecond of computer clock times in a network of computers.

### 6.1.3 Initialize

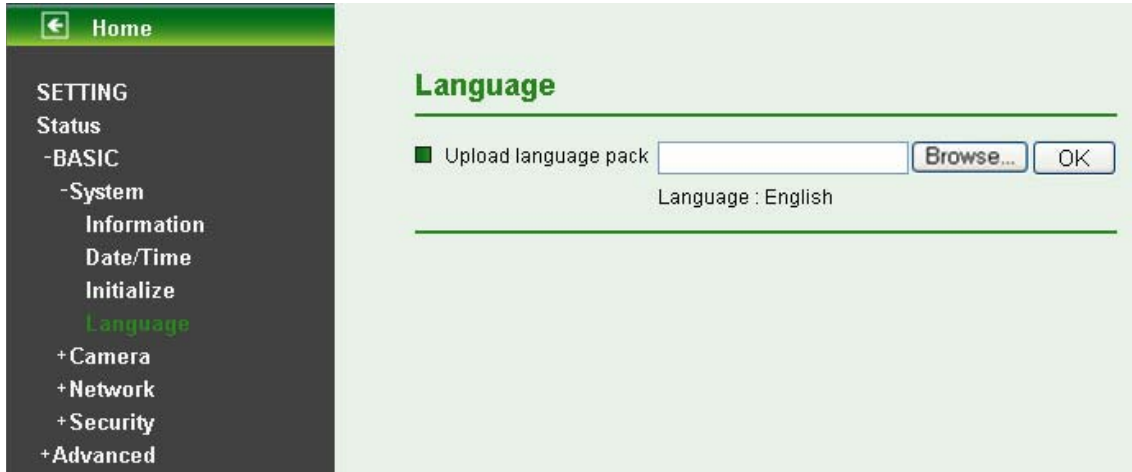


- **Reboot:** Click this button to reboot this IP Camera. A confirmation dialogue will appear and then click “OK” to execute. It takes one minute to complete the reboot process.
- **Factory Default:** Click this button to recover this IP Camera to the factory default setting. A confirmation dialogue will appear and then click “OK” to execute. The network indicator on this IP Camera will start to blink. This IP Camera will reboot automatically after completing adjustments to the default setting. Don't turn off this IP Camera until the device reboots.
- **Backup Setting:** You can save the setting data of this IP Camera into a file. Click “Save” and follow the instructions on the browser to save the setting data file to the location you specified.
- **Restore Setting:** Download the saved setting data of this IP Camera. Click “Browse” and select saved file. Click “OK” and this IP Camera is adjusted according to the loaded data and then restarted.
- **Firmware Update:** Update the device software. Click “Browse” and select the file for updating. A confirmation dialogue will appear. Click “OK” to start. This IP Camera will reboot upon completion.

 **Note:**

When updating the firmware version, please use the file specific for the model. Otherwise, some problems may occur. Unless the updating completed, please don't turn off the power or disconnect the network.

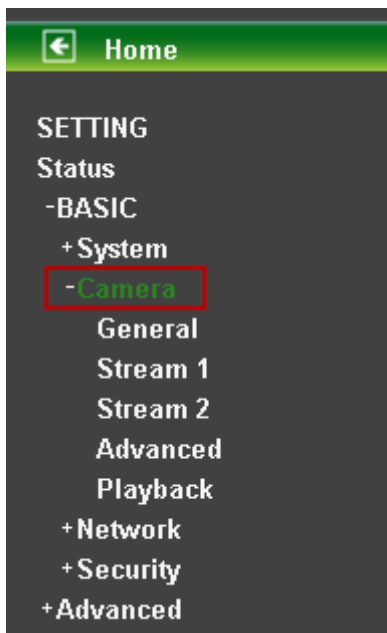
## 6.1.4 Language



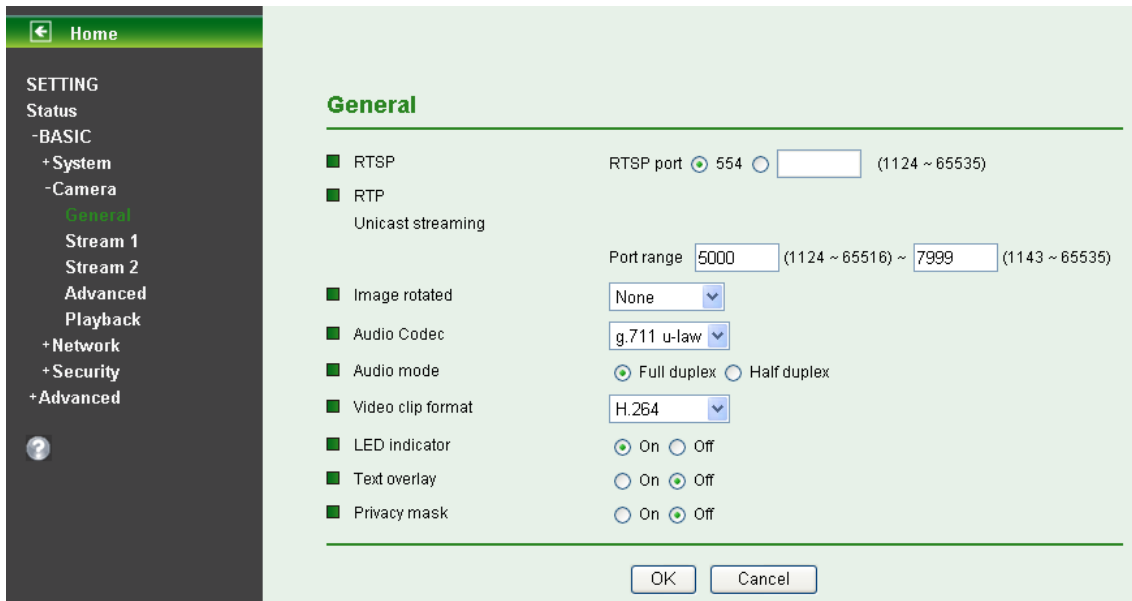
- **Upload Language Pack:** Clicking “Browse” and selecting the file for updating, the present language display of WEB User Interface could be changed. A confirmation dialogue will appear. Click “OK”, then the update will be applied immediately. The default language is “English”.

## 6.2 Camera

Click the folder of Camera to display the sub folders including **General**, **Stream 1**, **Stream 2**, **Advanced** and **Playback**.



## 6.2.1 General



- **RTSP:** The default value is 554. If the IP Cameras connected with router and installed outside are over 2 sets and all of them need support RTSP, please fill some value in the blank space in the range from 1024 to 65535.
- **RTP Unicast streaming:** The default value of port range is 5000 ~ 7999 and can be changed from 1024 to 65535.

### Note:

Under Unicast streaming mode, streaming video is delivered from the Camera to a single client device.

- **Image rotated:** Select the screen display “None”, “Flip”, “Mirror”, or “Mirror + Flip.”
- **Audio Codec:** Select one audio codec among G.711 U-law / G.711 A-law / AMR Audio / Off.
  - **G.711 U-law:** one codec for “Computer Audio”, used in North America & Japan areas.
  - **G.711 A-law:** another codec for “Computer Audio”, used in Europe and the rest of the world.
  - **AMR Audio:** an audio codec of the third generation communication for MOBIL
  - **Off:** Select Off, audio file won’t be transmitted by IP CAM.
- **Audio Mode:** You can select Full duplex or Half duplex.
  - **Full duplex:** Select it for simultaneous communication in both direction between the connected administrator and IP CAM. It means both parties can speak and be heard at the same time.
  - **Half duplex:** Select it for communication in both directions, but only one direction at a time (not simultaneously). It means one party begins receiving a signal, it must wait for the transmitter to stop transmitting, before replying. Therefore, once one party speak, he can’t hear any voice from the other party, just like the communication by radio set.
- **Video Clip Format:** Select RECORDING compression format H.264 or MPEG-4.
  - **MPEG-4:** MPEG-4 has the advantage of sending a lower volume of data per time unit across the network (bit-rate) compared to Motion JPEG and therefore provides a relatively high image quality at a lower bit-rate (bandwidth usage).
  - **H.264:** H.264 provides higher compression rate than MPEG-4. Thus, H.264 can decrease the bandwidth usage and further apply on 3G. However, H.264 will occupy more system resources than MPEG-4. As long as the operating system appears operating difficulties under H.264 format, please change to select MPEG-4.
- **LED Indicator:** The status of the LED indicators on the Camera. It’s turned on by default.