

TP-LINK®

User Guide

TL-SC4171G

Wireless Pan/Tilt 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-SC4171G Wireless Pan/Tilt Surveillance Camera
- Power Adapter
- Camera Mount Kit & Pads
- Ethernet 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 are damaged or missing, please contact your distributor.

Chapter 1 Safety Instruction

➤ 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 which may expose yourself to dangerous voltage or other hazards.

➤ Don't use the accessories not recommended 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 + 50 °C [32 °F to 122°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

We strongly recommend your computers follow our minimum requirements in order to use this IP-Camera normally. If computer level is lower than this, it might cause some problems.

Item	Requirements
CPU	Pentium 4 1600MHz (or equivalent AMD)
Graphic Card	64 MB RAM graphic cards(or equivalent on-board graphic cards)
RAM	512 MB
Operating System	Windows 98, Windows ME (Please see  Note:), Windows 7, Windows 2000, 2003, XP, Vista, Mac OS X Leopard, Linux
Web Browser	Internet Explore 6 or later

Note:

1. If you are using Windows 98 or Windows ME, please install IP Installer before using WEB UI to ensure the system runs normally.
2. If you can't view the record video file, please install Xvid codec while installing Intelligent IP Installer. (For Windows 98, ME or 2000 server, the codec might not work properly. You'll need to download Xvid codec 1.0 from the internet.
3. Please always update the latest Windows component. (.Net Framework, Windows Media Player, Enhance ActiveX Security)

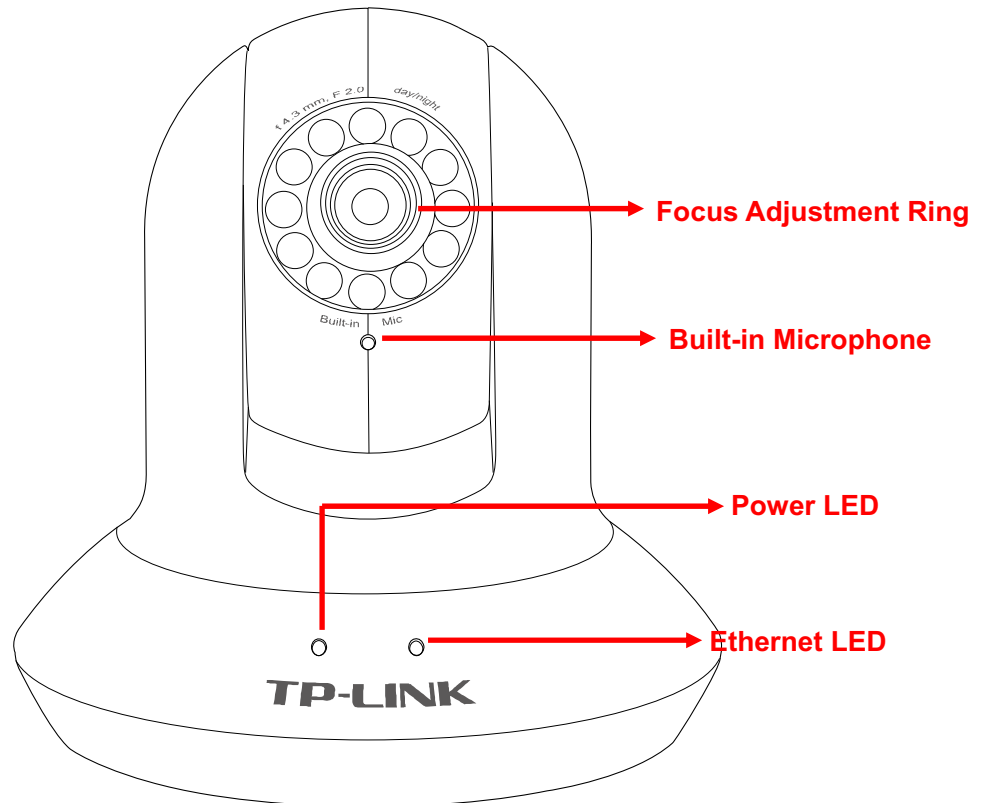
2.2 Product Feature

SYSTEM	
Resolutions	MPEG-4/Motion JPEG/JPEG: 3 resolutions from 640x480 to 160x120 via API and configuration web page
Compressing format	MPEG-4 / Motion JPEG / JPEG
Frame Rate	MPEG-4: Up to 30 fps at 640x480 Motion JPEG: Up to 15 fps at 640x480
Image settings	Rotation: Mirror, Flip, Mirror Flip
	Brightness/Contrast/Saturation/Hue
	Overlay capabilities: time, date, text and privacy image

Shutter Time	1/7.5 ~ 1/120 sec.
Image snapshot	Yes
Video Recording	Yes
Full Screen Viewing	Yes
Digital Zoom	10x digital
Audio	Two-way (full/half duplex) with built-in microphone
	Audio compression: G.711 PCM, 8kHz, 64kbit/s
Instant Messenger	Support MSN Live View
Mobile Phone Live View	Through 2.5 WAP, 3GPP, 3G Streaming, and 3G Browser
Alarm Sending	FTP Client/SMTP/HTTP Event
Security	Password Protection/HTTPS encryption/WEP64/128 bit, WPA/WPA2-PSK
Alarm and Event Management	Input: alarm input, motion detection Output: FTP/SMTP/HTTP Event
Supported protocols	Bonjour, TCP/IP, DHCP, PPPoE, ARP, ICMP, FTP, SMTP, DNS, NTP, UPnP, RTSP, RTP, HTTP, TCP, UDP, 3GPP/ISMA RTSP
Simultaneous Connection	Up to 5 users
Operating conditions	0°C ~ 50°C (32°F ~ 122°F)
HARDWARE	
Lens	F1.8, 4.2 mm Megapixel board lens
IR LEDs / Working Distance	5 φ LEDs x 12 (850nm)/10M
Input / Output	Alarm Output Max 30W
Power	12V DC, 1A, Max 5W
Wireless	IEEE 802.11b/g (for wireless model)

2.3 Physical Overview

2.3.1 Front view



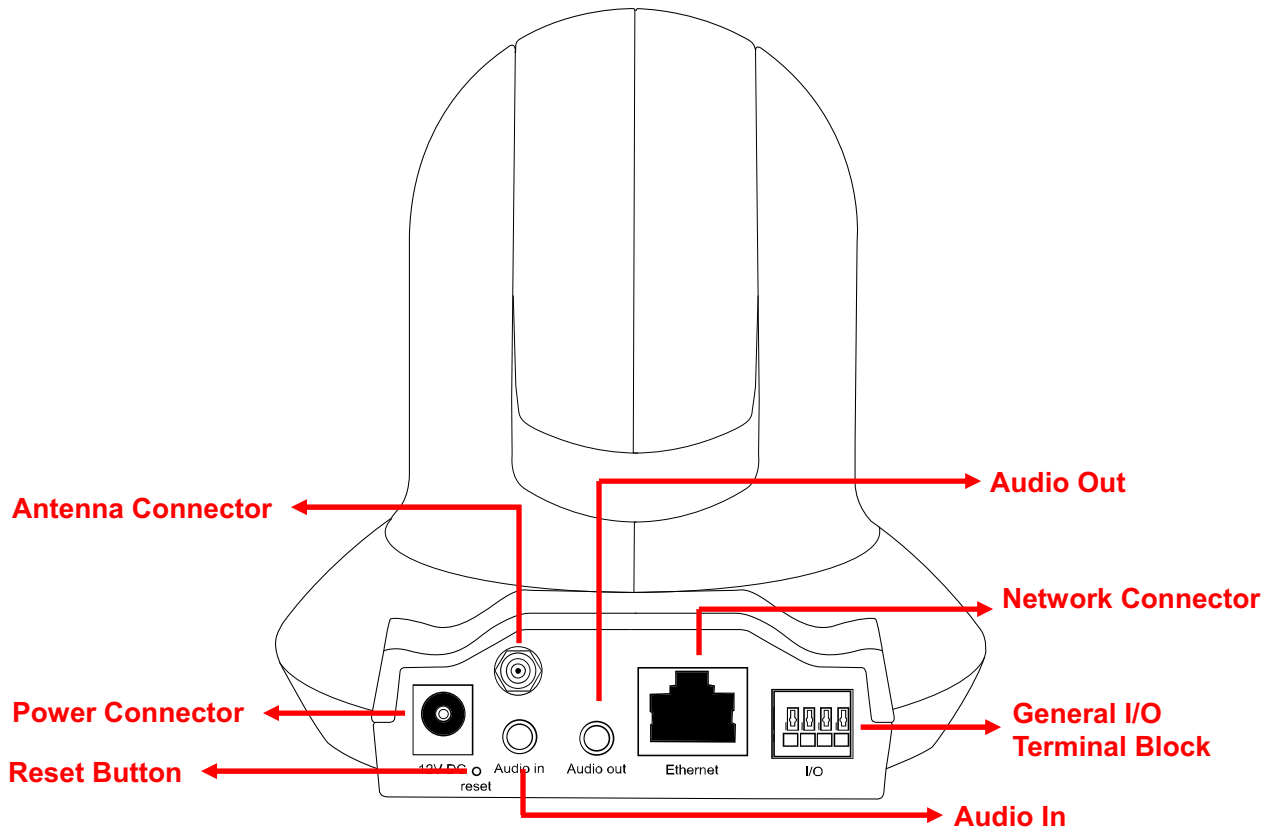
Focus Adjustment Ring: Adjust the focus to get a clear image.

Built-in Microphone: Built-in microphone for two-way audio.

Power LED: Power LED will light up after completing the boot process.

Ethernet LED: Ethernet LED will light up after successfully connecting to the Ethernet.

2.3.2 Rear view



Power Connector: For connection of 12V DC input.

Reset Button: To reset the IP camera, please carry out the following steps.

- Make sure the camera is powered on for at least 30 seconds to complete its normal startup.
- Keep the camera powered on, then press and hold the **Reset** button for more than 10 seconds. Afterwards release it, and the camera will be restored to factory defaults after rebooting.

Antenna Connector: For connection of IEEE 802.11b/g wireless network.

Audio In: To support audio in with Microphone for two way audio.

Audio Out: To support audio out with earphones or speakers for two way audio.

Network Connector: For connection to the Ethernet via Ethernet cable.

General I/O Terminal Block: Input/Output to support External Alarm and Sensor used for motion detection, event triggering and alarm notification, etc.

Chapter 3 Using IP Camera via Web Browser

3.1 Obtain the IP Address

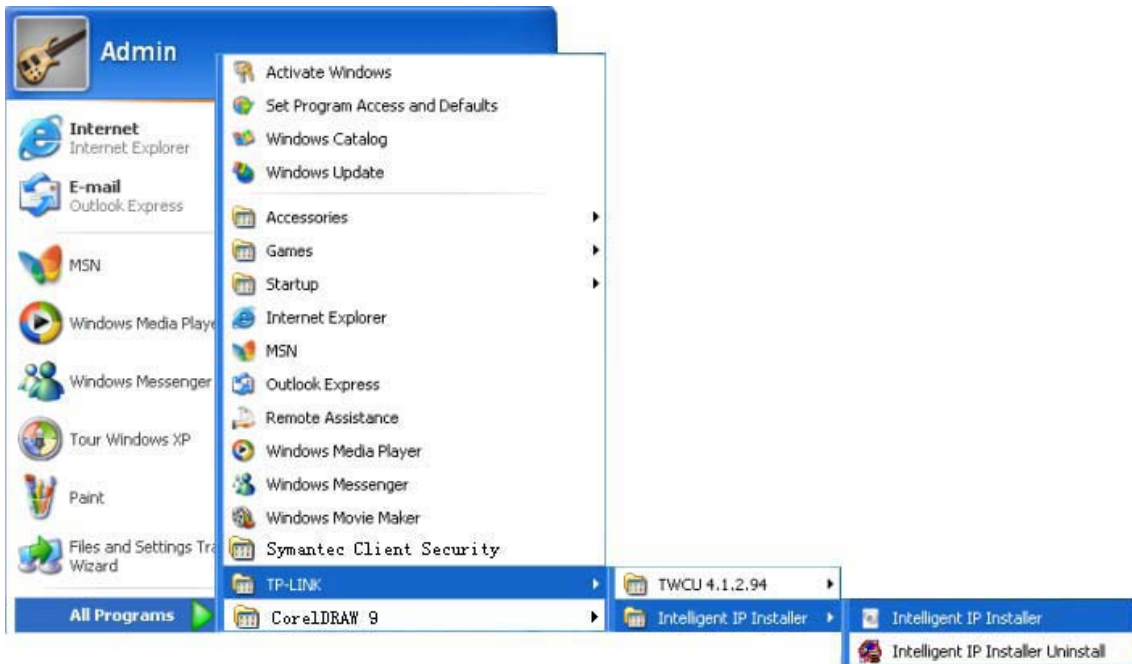
1. Insert the provided CD into your CD-ROM driver. The Setup Wizard will automatically pop up on your computer's screen as shown in the figure below.



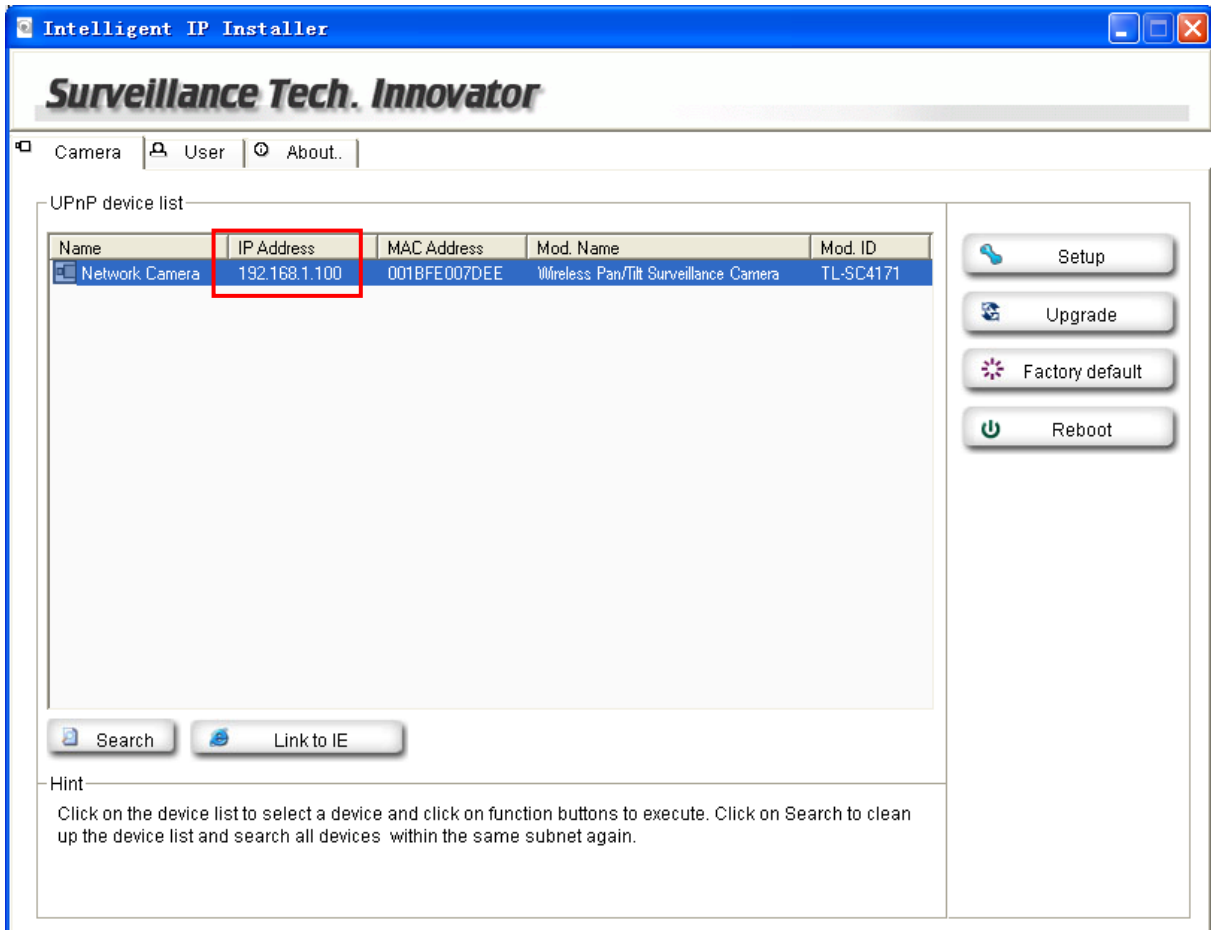
2. Choose the **Intelligent IP Installer**, and then the next screen appears. Click on **Intelligent IP Installer** to begin the installation.



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



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.

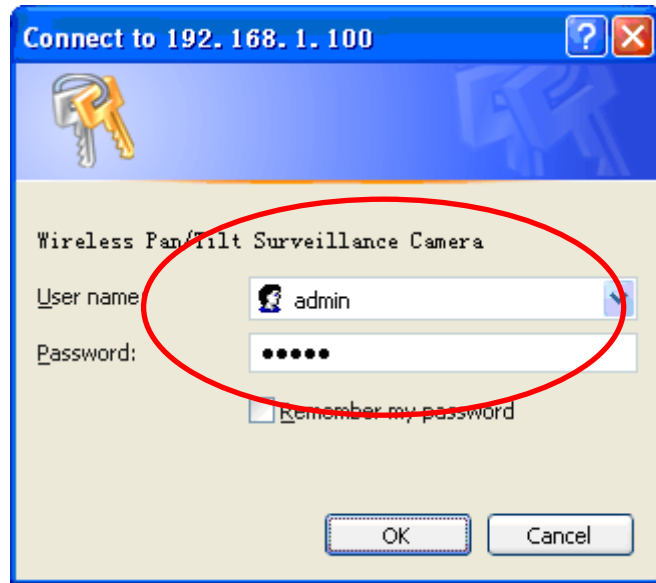


3.2 Windows Web Browser

1. Click **Link to IE** button or launch your web browser, and enter the IP address (obtain from the figure above) of the IP camera in the Location / Address field of your browser.

Note:

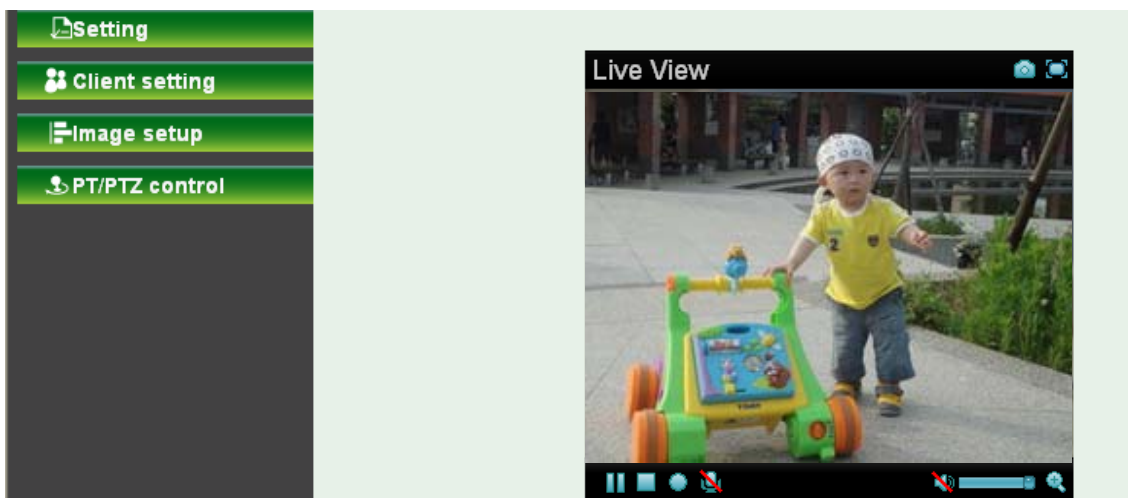
- 1) For the first time login with IE, you will need to enable “**Download signed ActiveX controls**”. Please go to **Tool→Internet Options...→Security→Custom Level...** and find **Download signed ActiveX controls** to prompt it. For detailed information, please refer to the Quick Installation Guide.
 - 2) If you only want to view the video without setting page, enter “<http://<IP>/index2.htm>” as your web URL. For example, you can enter “<http://192.168.1.100/index2.htm>” as your web URL to view the video without setting page.
2. Enter the default User name “admin” and password “admin” in the login window as shown below.



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, Image Setup and PT/PTZ control**. For more details, you can check [Section 6.2](#)、[Section 6.3](#), [Section 6.4](#) and [Section 6.5](#).



3.3 Mac Web Browser

1. Click the **Safari** icon, and enter the IP address of the IP camera in the Location / Address field of your browser.

 **Note:**

If you only want to view the video without setting page, enter “<http://<IP>/index2.htm>” as your web URL.



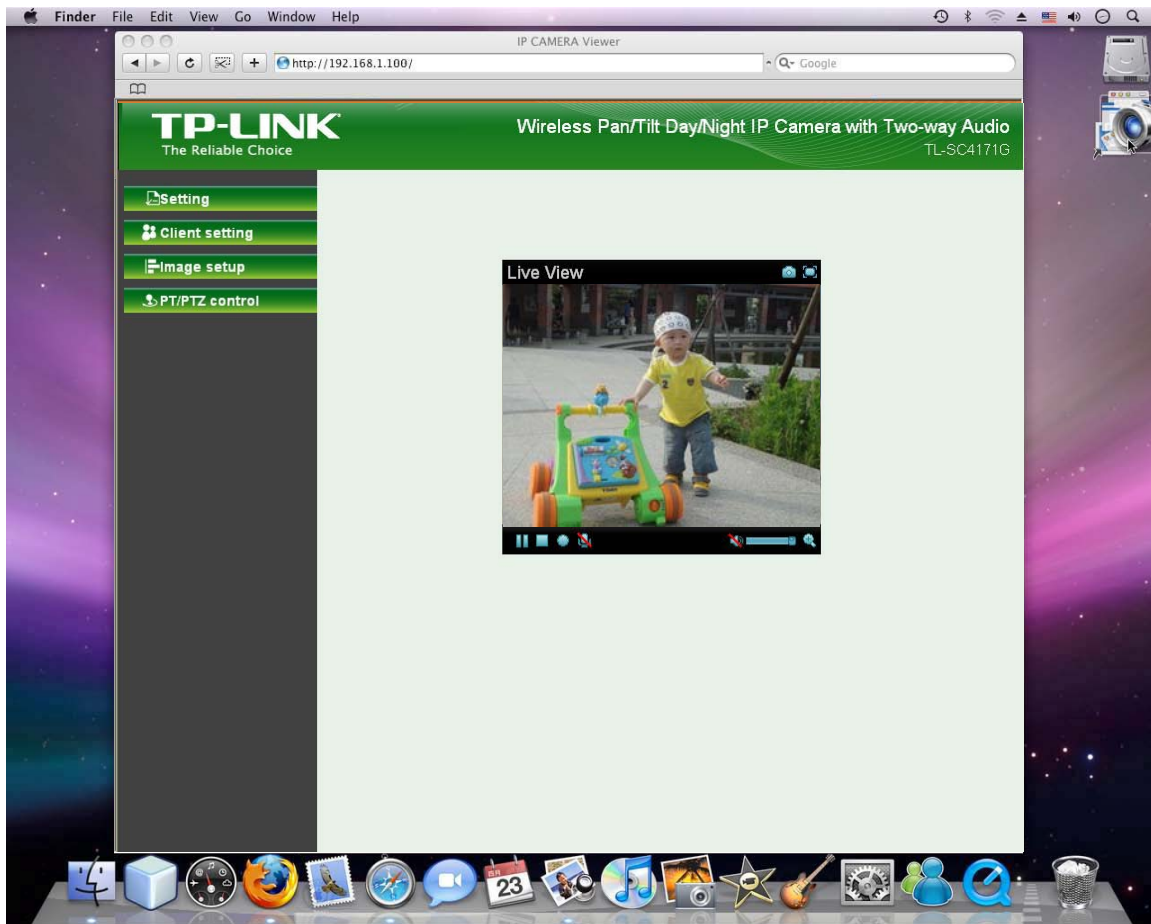
2. Enter the default User name “admin” and password “admin” in the dialog box as shown below.

Note:

The default user name “admin” and the password 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, Image Setup** and **PT/PTZ control**. For more details, you can check [Section 6.2](#), [Section 6.3](#), [Section 6.4](#) and [Section 6.5](#).



Chapter 4 Using IP Camera via Mobile Phone

4.1 Mobile Phone Viewing

To use IP cameras via mobile phones, please make sure your RTSP is set to “On” (Default is “On”). To change the settings of IP cameras, Please check “**Settings** → **Basic** → **Camera** → **General**.”

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 (to obtain the IP Address, please refer to [Section 3.1](#)); <PORT> is the RTSP port of your IP camera (Default value is 554.) Example: rtsp://192.168.1.100:554/video.3gp.

 **Note:**

You can also use RTSP clients (RealPlayer, VLC, QuickTime layer 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 (to obtain the IP Address, please refer to [Section 3.1](#)).

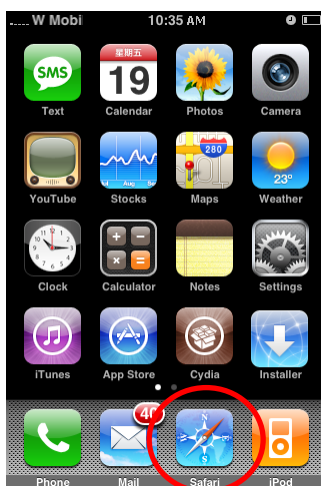
4.1.3 2.5G Mobile Phone Browser Viewing

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 (to obtain the IP Address, please refer to [Section 3.1](#)).

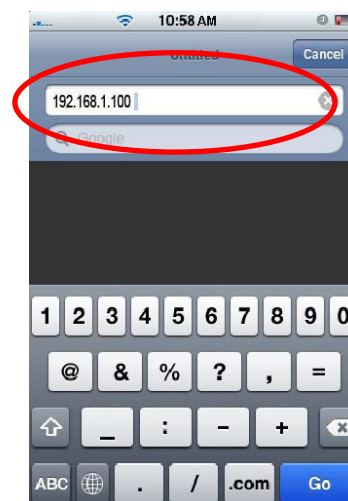
4.2 Using IP Camera via iPhone

You can use TP-LINK Web User Interface via iPhone. If you want to use TP-LINK web UI via iPhone, please follow the setting process below.

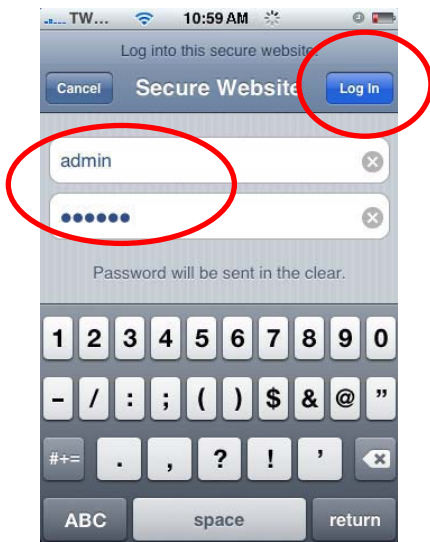
1. Select Safari function



2. Enter IP address in your web link.



3. Type name and password. Default value is admin / admin. Then click Login In.



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



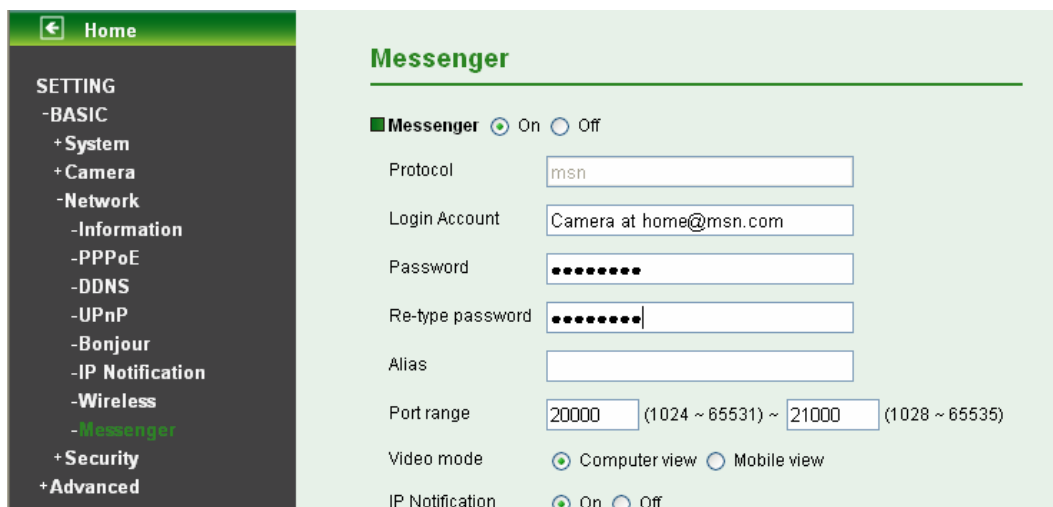
Note: It will show continuous snapshots, not a real time video streaming. Therefore, the recording feature is disabled.

Chapter 5 MSN Messenger (Supports up to Windows Live Messenger version 8089)

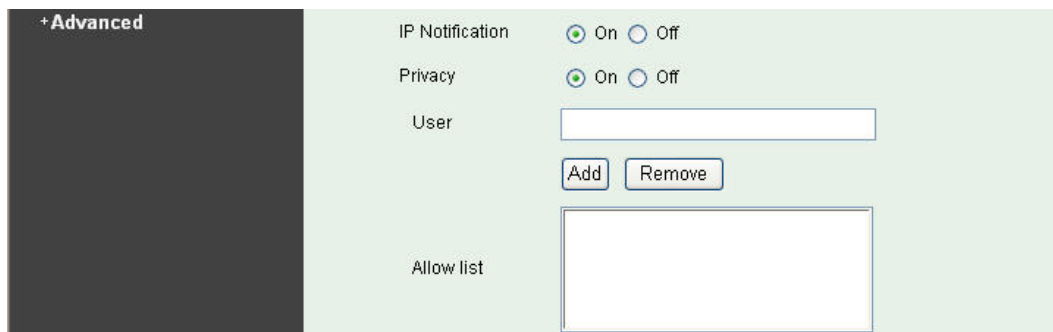
Please follow the steps below to set up the Messenger function.

1. **Application of a new MSN account:** You can download MSN software freely and create a new MSN account (e.g. camera at home@msn.com) to use Microsoft Live Messenger.
2. **Login Account and Password:** Go to **Setting**→**Basic**→**Network**→**Messenger**, set the Messenger to “On”. Then, enter the new account (camera at home@msn.com) and password to login.

 **Note:** This account (e.g. camera at home@msn.com) is not your commonly used MSN account but a new one applied for IP Camera.

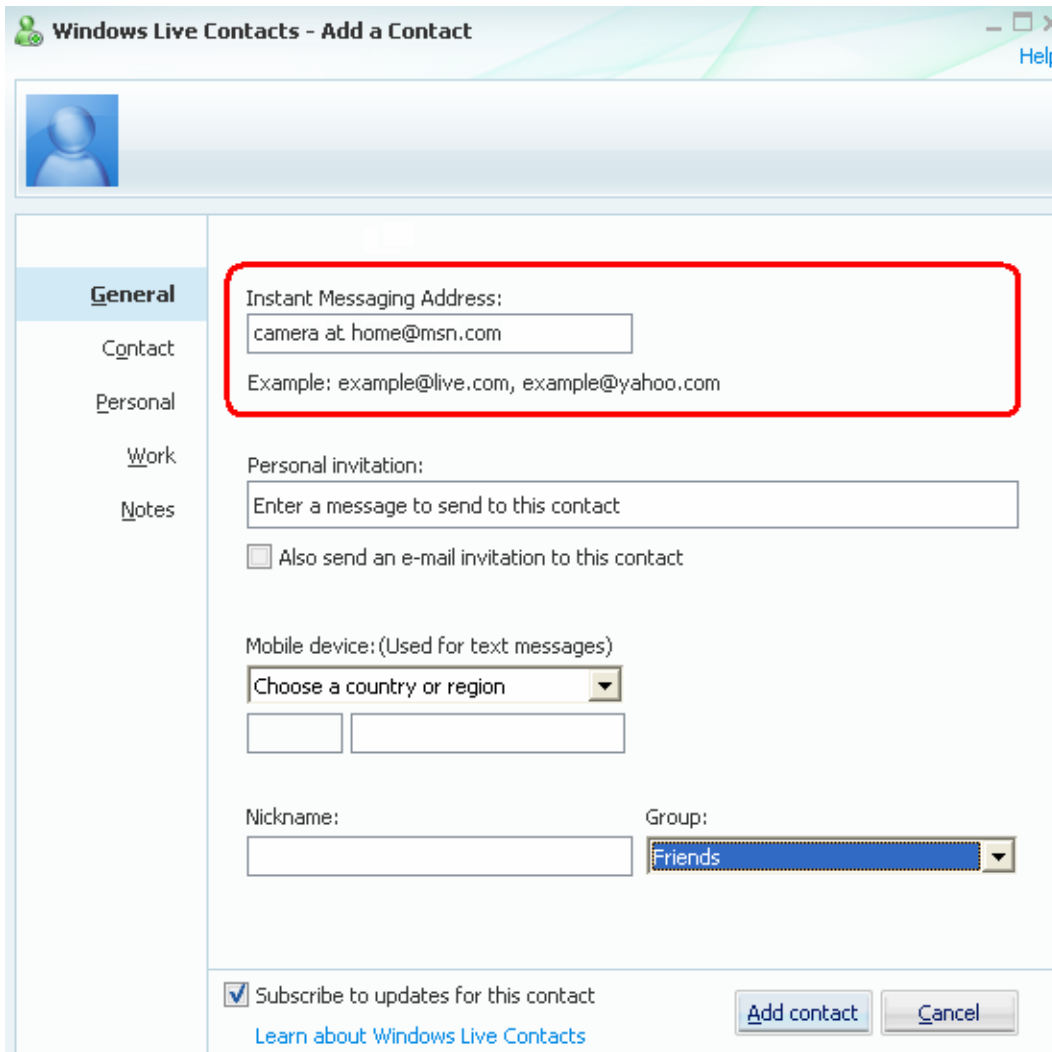


3. **IP Notification:** Choose “On” at the option of IP Notification. If this feature switches On, camera will send IP notification to the users who are allowed.

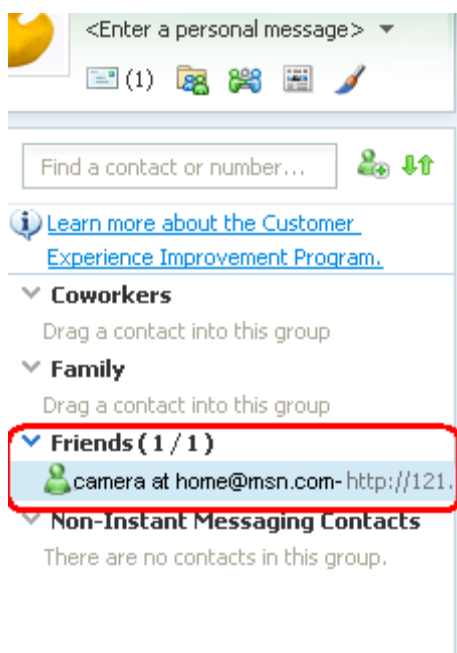


4. **Privacy & User & Allow List:** Choose “On” at the option of Privacy, then User column will appear and be able to build Allow List, so that only the users listed can access the camera via MSN.

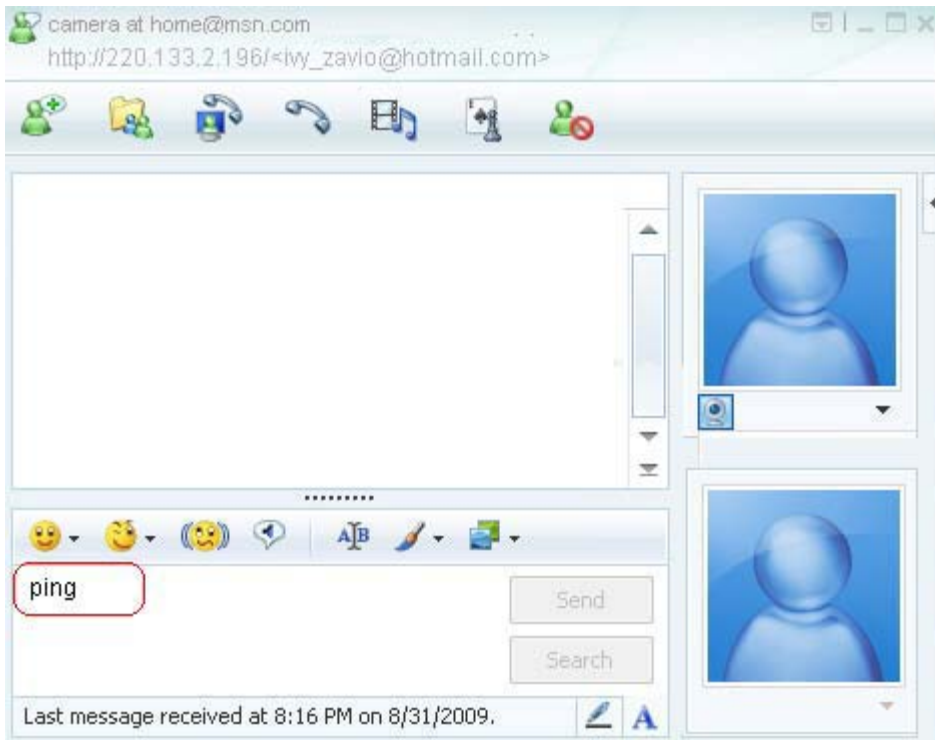
5. **Log in Working Account:** Use your working account to login in the Messenger software. And add the camera's MSN account (camera at home@msn.com) as a contact.



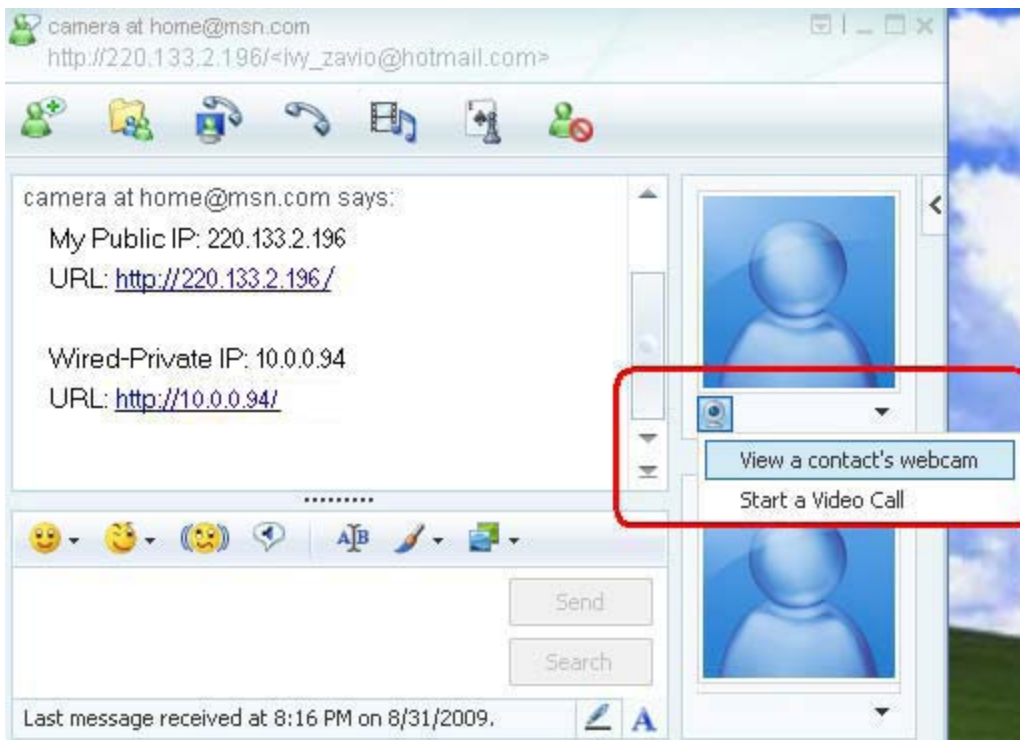
6. Check its status. Normally it should be online.



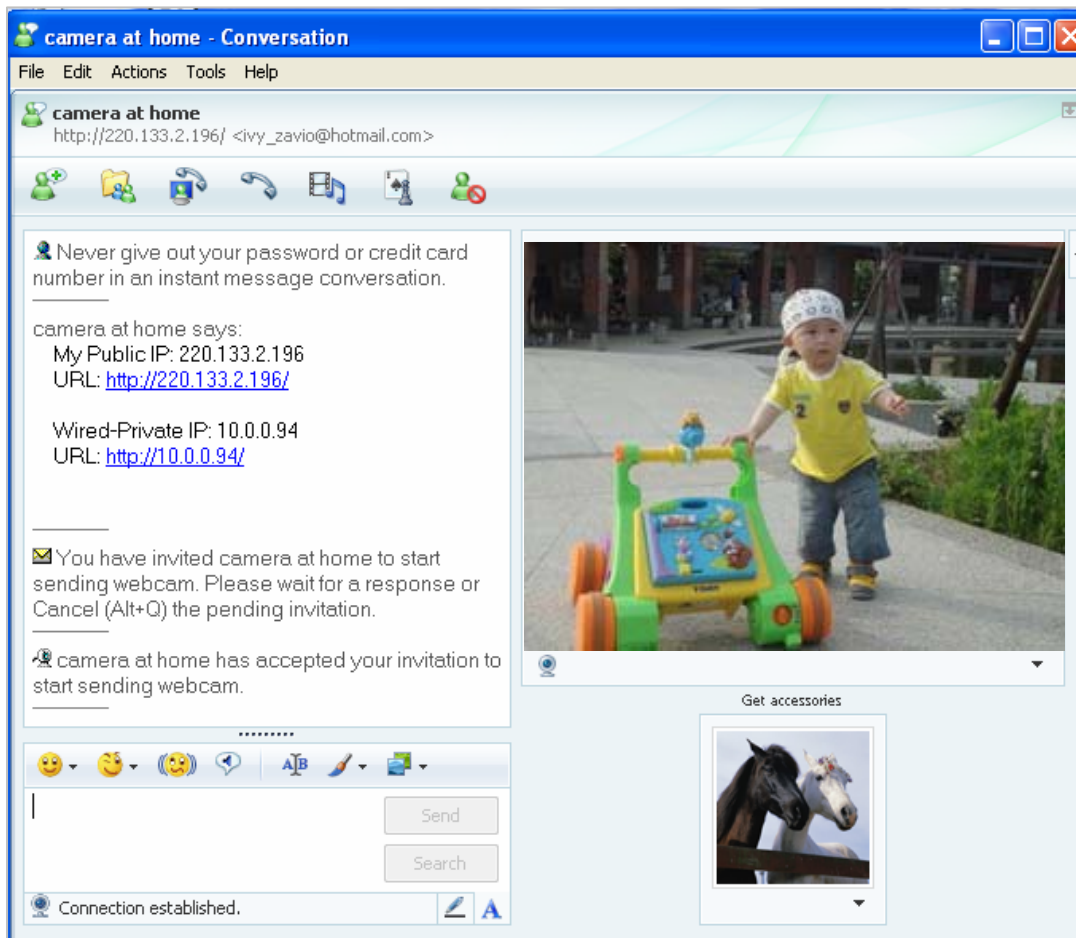
7. The Camera at home will show up with its Public IP and Private IP after sending a message of “Ping” in the lower key (if the option of IP Notification is “On”).



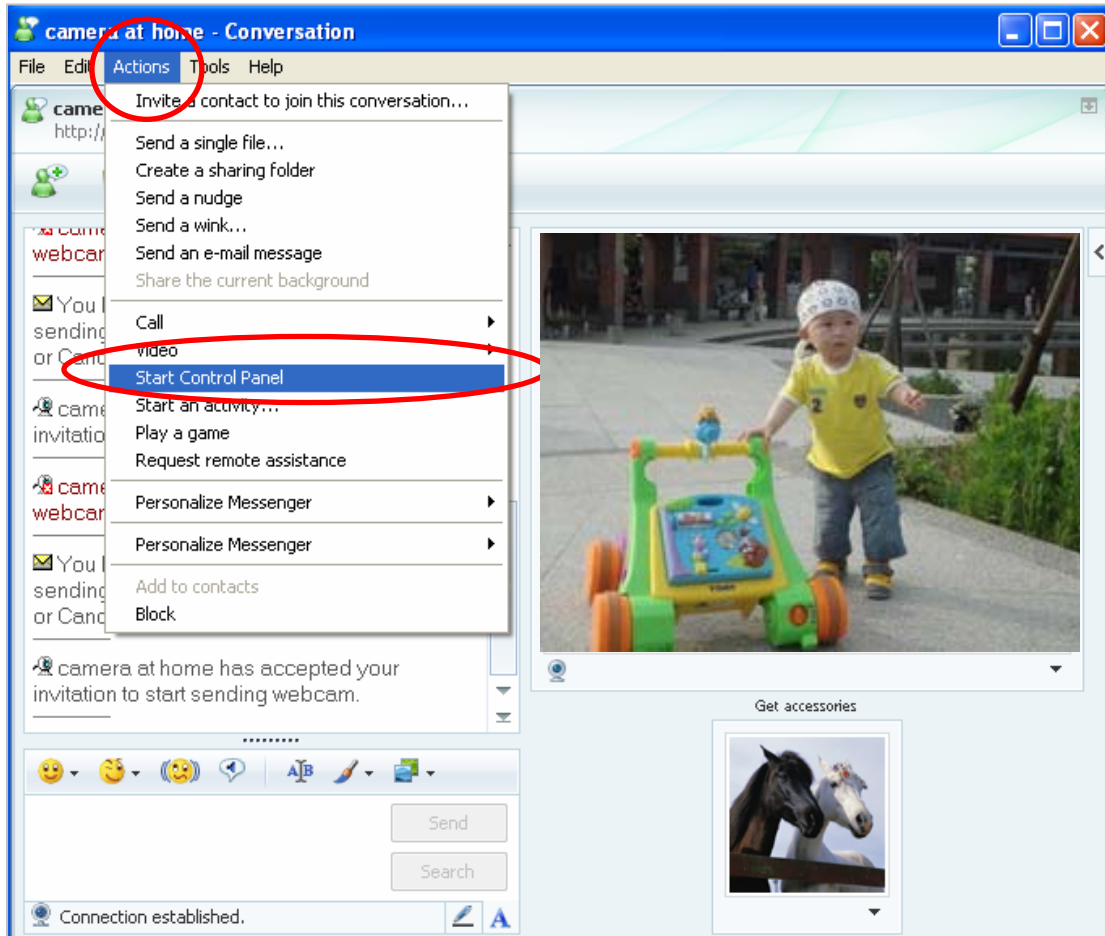
8. Click the camera icon  and select **View a contact's webcam** to view the video.



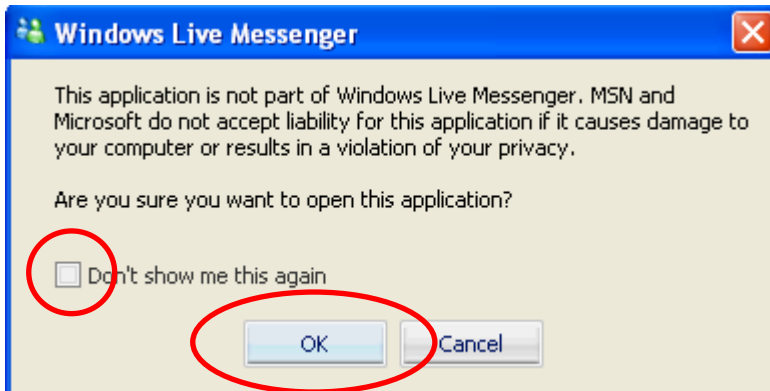
9. The IP Camera will accept your invitation; the live video will show up in the right screen after few seconds.



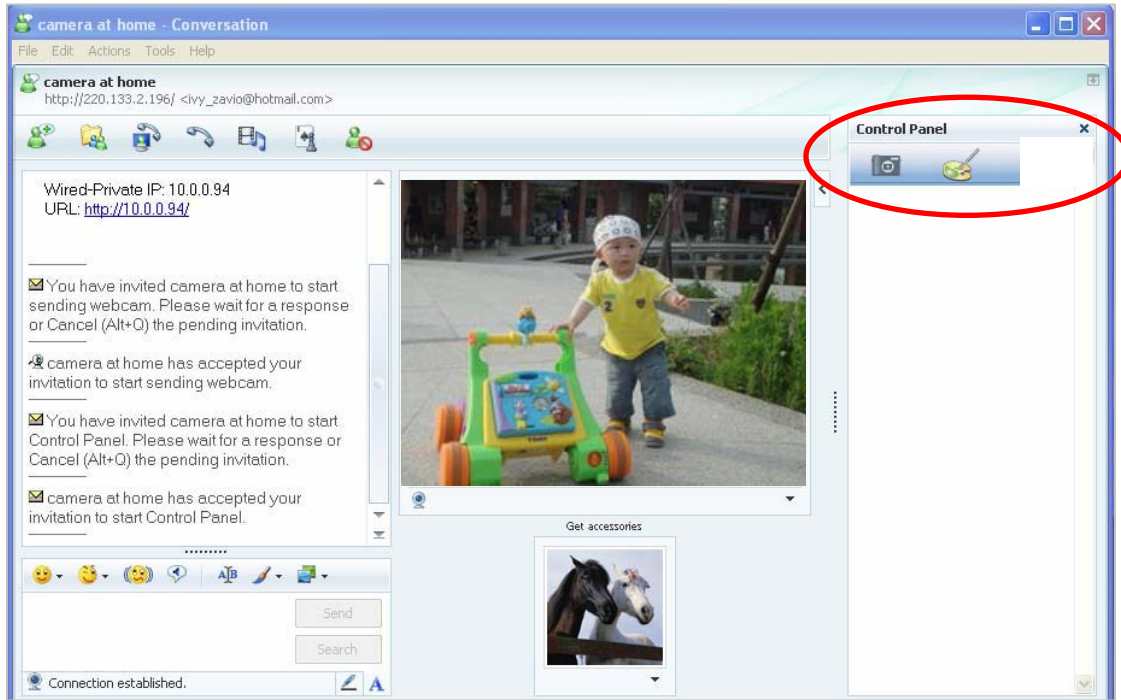
10. Click **Action** button and choose **Start Control Panel** to use control panel.




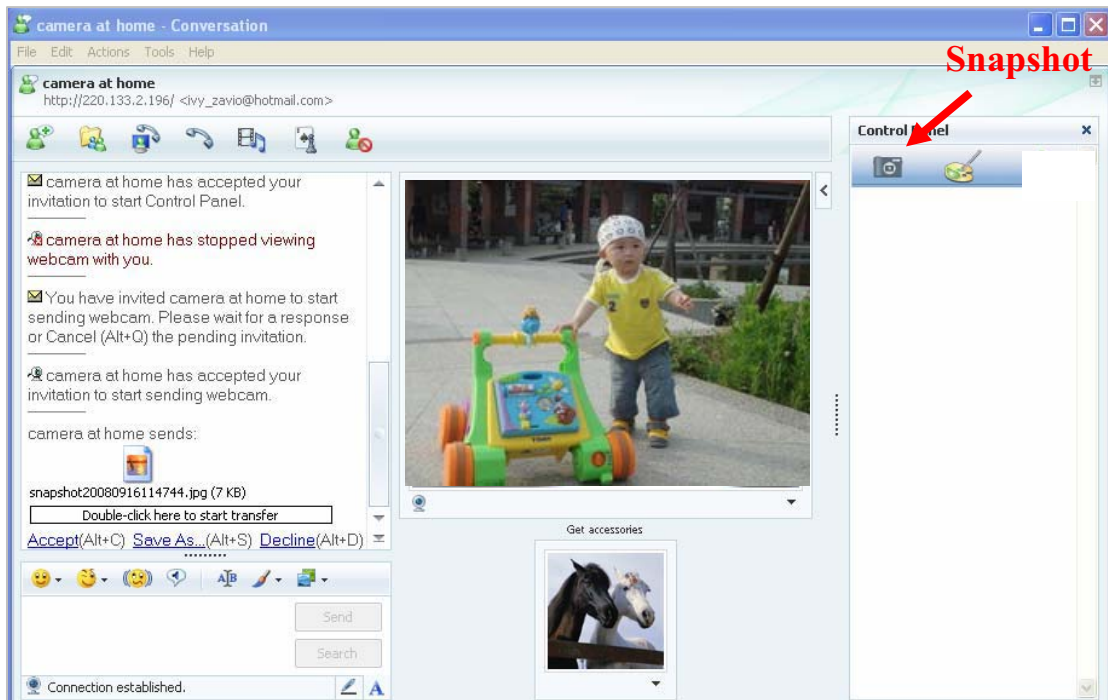
11. The dialog box will show up with "This application is not part of Windows Live Message..." Tick the box of "Don't show me this again" and click **OK**.



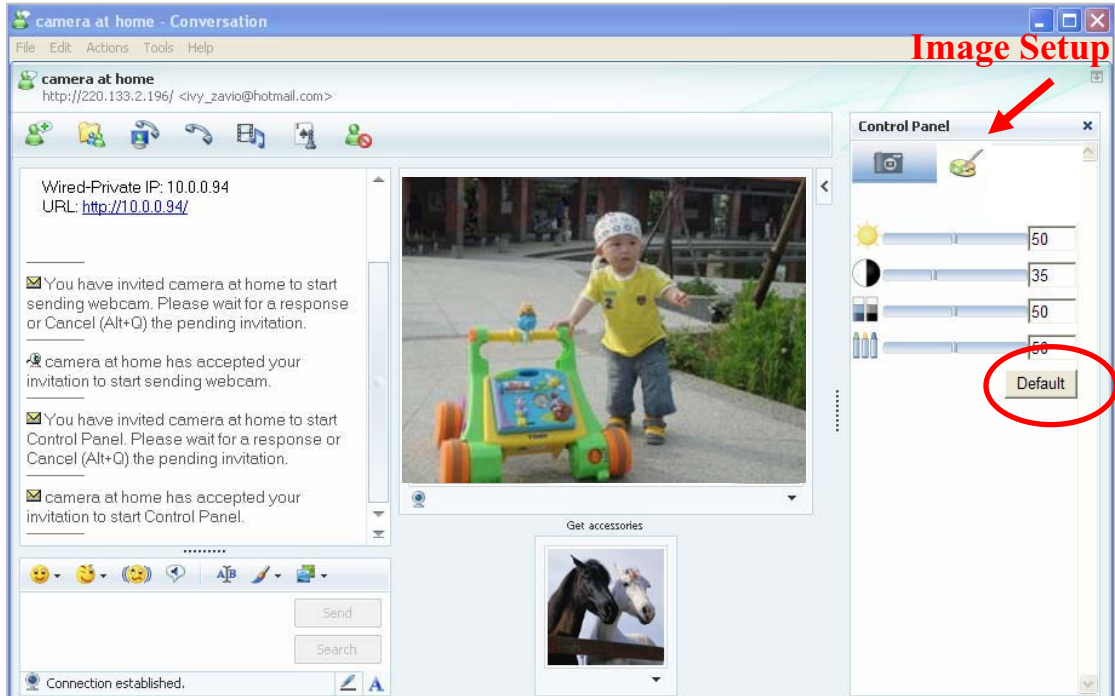
12. The IP Camera will accept your invitation to start Control Panel.



13. You can click Camera icon  to snapshot then the picture will send to you immediately.

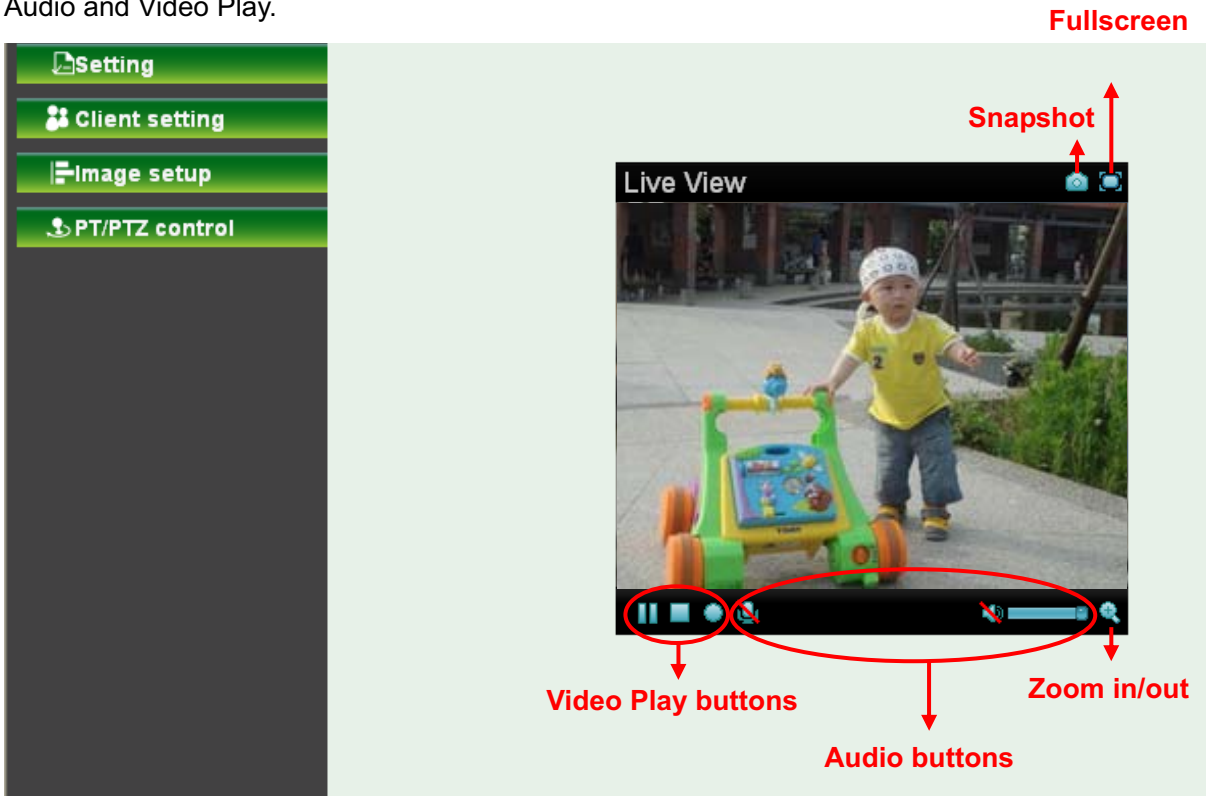


14. You can click paint palette icon  showing up with tool bar to set up image. Then, you can use the tool bar to optimize video Brightness , Contrast , Saturation  and Hue . After the adjustment of all setting, you can still click  to make the setting back to the original setting.



Chapter 6 Configuration of Main Menu



In the far left side of main configuration are **Setting, Client Setting, Image Setup** and **PT/PTZ control**. Please see the content behind for more details. In the right hand side of the below picture, you can see the Live View screen of web user interface. There are some functions, such as Snapshot, Zoom and Audio and Video Play.



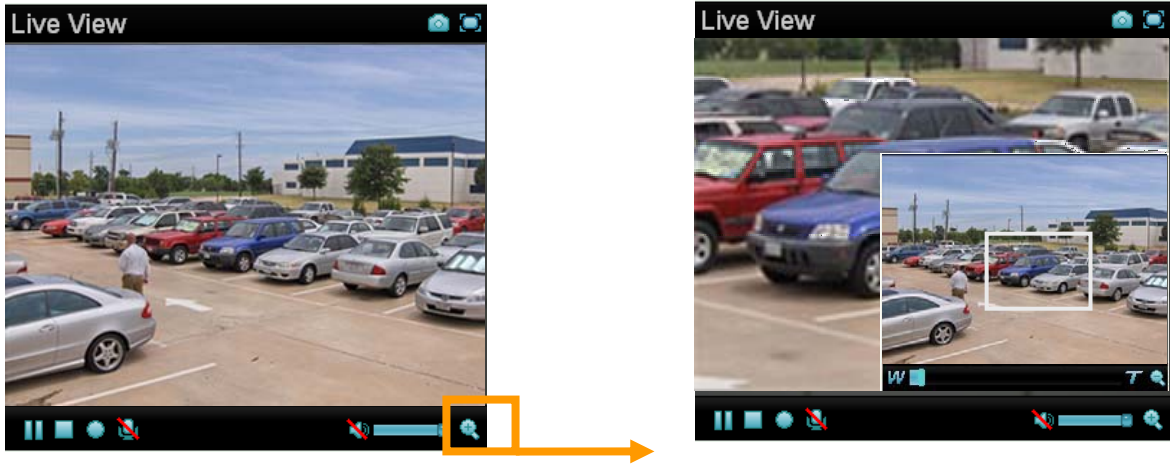
6.1 Live View




6.1.1 Snapshot

You can capture a still image shot by the camera and save it in your computer.





Symbols	Meaning
	A snapshot window will appear
Save	Save the picture in your computer
Close	Return to the view page
	Full Screen

6.1.2 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.
- You can use the left click of your mouse to move the  to any where on the window.


6.1.3 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 [APPENDIX B. Storage Requirement Table](#).

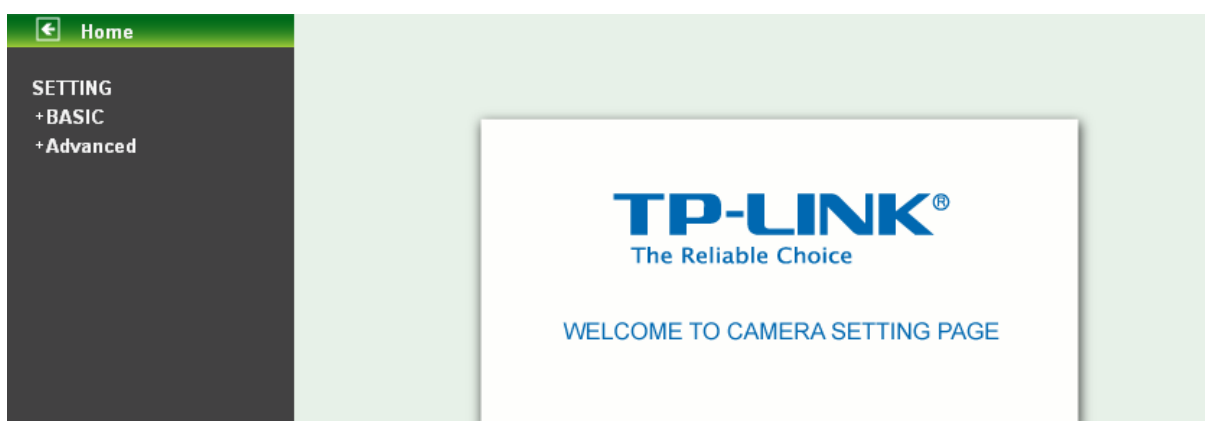
6.1.4 Audio buttons

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	
	Microphone turned on	mean you can broadcast to the connected IP camera(s) via the Ethernet using your microphone
	Microphone turned off	
	Volume control bar	

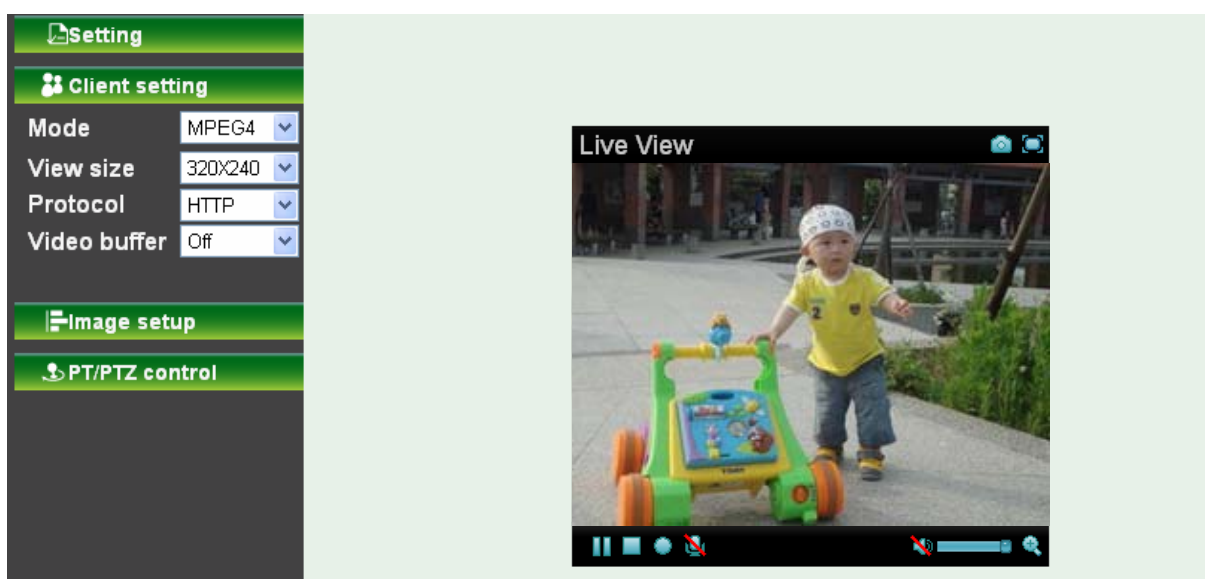
6.2 Setting

This function is only for the Administrator. Click **SETTING** to get into the **Basic** and **Advanced Setting** menu. The former includes for sub-folders, such as **System**, **Camera**, **Network**, and **Security**. The latter includes **PT/PTZ control**, **Preset position**, **Patrol**, **FTP Client**, **SMTP**, **Http Event**, **Alarm output**, **Schedule**, **Alarm input**, **Motion Detection**, and **System Log**.



6.3 Client Setting

This function is only for the client.



Click Client Setting to control **Mode**, **View Size**, **Protocol**, and **Video Buffer**.

6.3.1 Mode

Click the pull-down box to choose between MPEG-4 MJPEG, and JPEG video compression mode. MJPEG streaming is unavailable if RTSP mode is "On." (Please check **Setting** → **Basic** → **Camera** → **General**.)

6.3.2 View Size

Select the desired display image size to 640X480 or 320X240.

6.3.3 Protocol

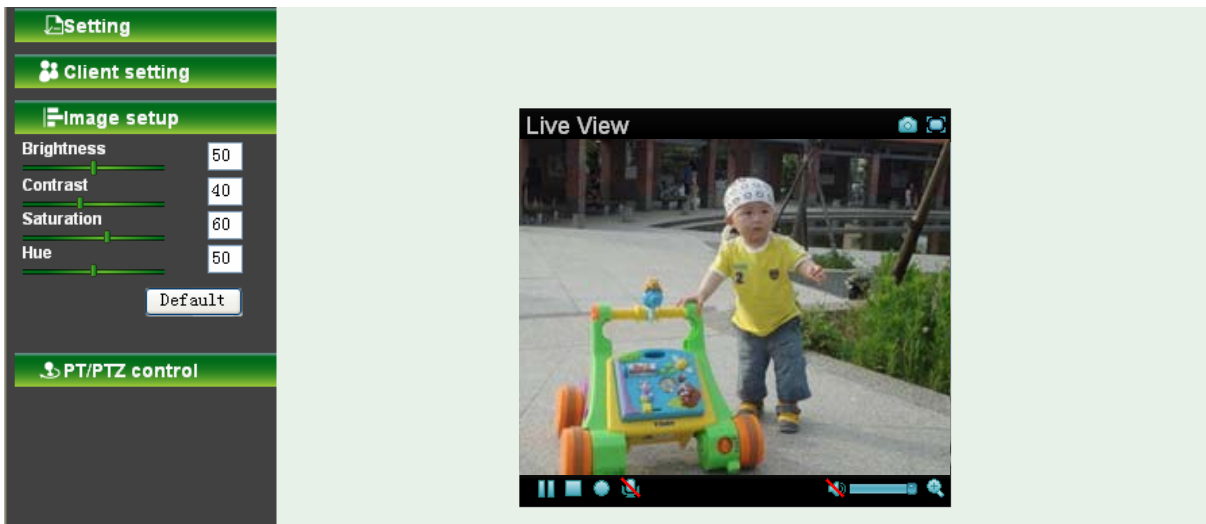
Select the transferring protocol from TCP, UDP, HTTP and Multicast.

6.3.4 Video Buffer

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

6.4 Image Setup

You can use the tool bar to optimize video Brightness, Contrast, Saturation and Hue.



6.4.1 Brightness

The higher value the brightness is, the brighter the image is.

6.4.2 Contrast

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.

6.4.3 Saturation

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.

6.4.4 Hue

Hue is one of the three main attributes of perceived color, affected by different wavelength of color. With higher value of hue, color will be much more vivid.

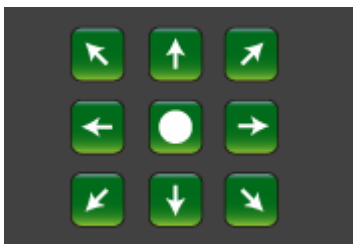
6.4.5 Default


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

6.5 PT/PTZ Control

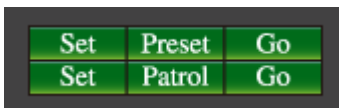


6.5.1 Pan / Tilt / Home control buttons



If you want the IP camera to move, please click the arrow button of the corresponding direction. When you click  button, the camera will return to “home position”—a preset position which can be set by yourself. For more detailed information, please refer to [Section 8.2](#).

6.5.2 Other camera control functions



➤ Preset:

- **Set:** Click **Set** button to save the current position of the camera as a preset position.
- **Go:** Click **Go** button and choose one of the preset positions, then the camera will move to the preset position.

➤ Patrol:

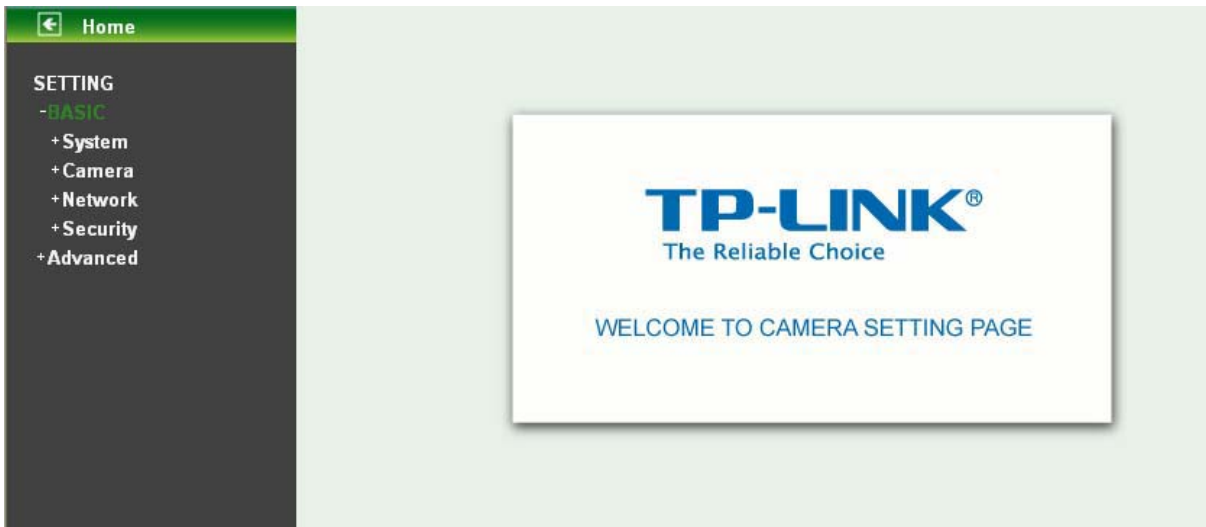
- **Set:** Click **Set** button and choose one of the patrol tours, then the chosen tour will be set as default.
- **Go:** Click **Go** button, then the camera will move along the default tour path.

 **Note:**

Before you start this function, you need to specify Guard tour setting in **Setting** → **Advance** → **Patrol**.
For more detailed information about Patrol functions, please refer to [Section 8.3](#).

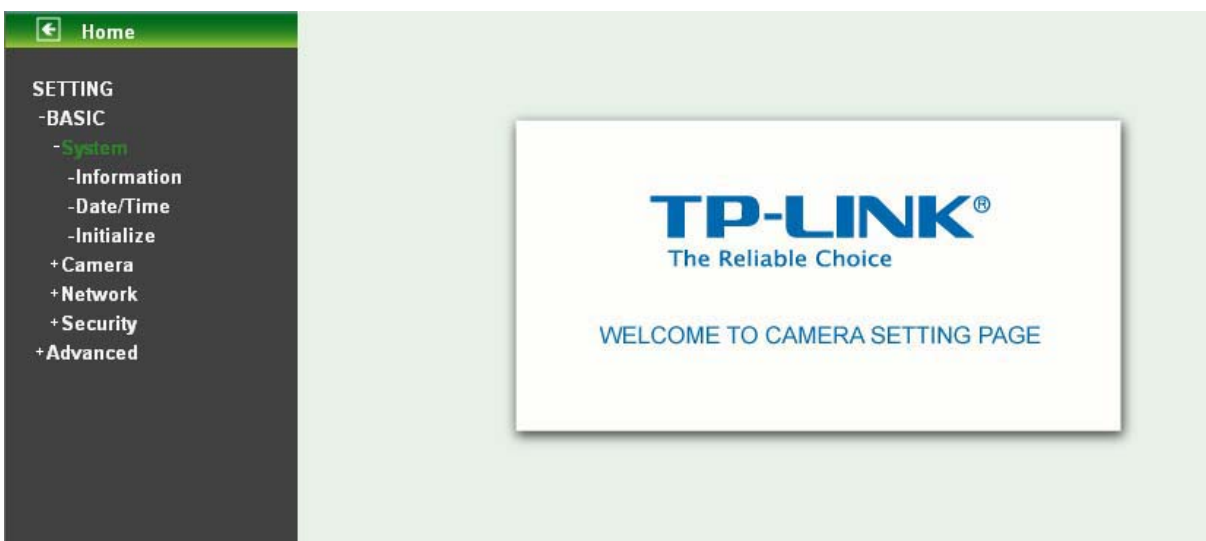
Chapter 7 Setting-Basic

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



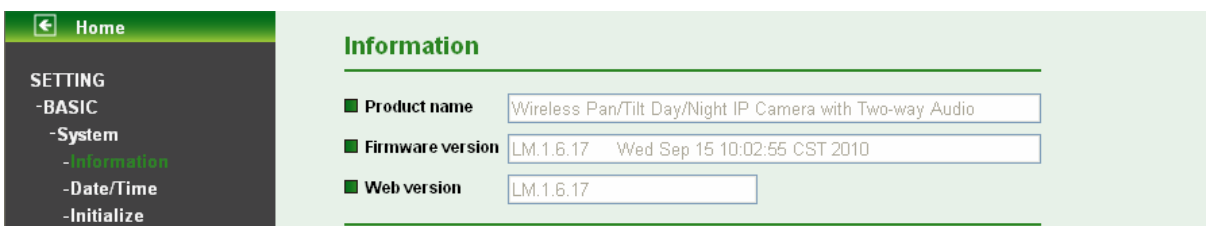
7.1 System

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



7.1.1 Information

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



7.1.2 Date/Time

The **Date/ Time** page displays all options of time setting.

The screenshot shows the 'Date/Time' configuration page. On the left is a navigation menu with 'Date/Time' selected. The main area contains the following settings:

- Current date/time:** 70-01-01 00:04:48
- PC clock:** 10-11-05 15:45:08
- Date/time format:** yy-mm-dd hh:mm:ss
- Adjust:** Radio buttons for 'Keep current setting', 'Synchronize with PC', and 'Manual setting'. The 'Synchronize with NTP' option is selected, with a text field for 'NTP server name' containing 'pool.ntp.org' and a checked 'Auto' checkbox. Below it is an 'Interval' dropdown set to '1' hours.
- Time zone:** A dropdown menu showing '(GMT+08:00)Beijing, Chongqing, Hong Kong, Urumqi'.
- Daylight Saving Time:** Radio buttons for 'On' and 'Off'. Below are two sections for 'Start time' and 'End time', each with radio buttons for 'By date' and 'By week number'. The 'By date' options are expanded to show: 'January', 'First', 'Mon', '1', '0', ':00'.

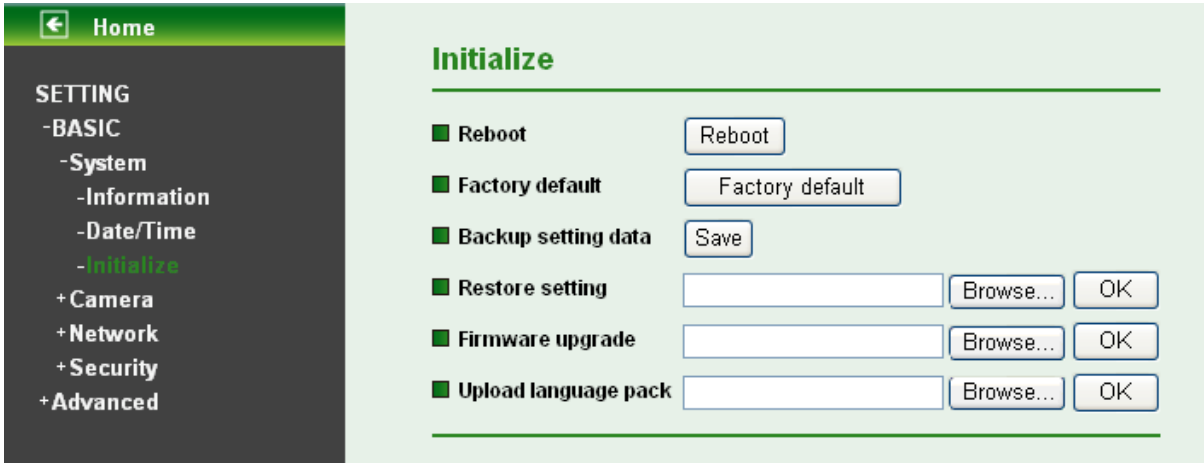
At the bottom right are 'OK' and 'Cancel' buttons.

- **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.
- **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 with PC:** 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:** You can select the Time Zone of the format from Greenwich Mean Time. The time will display 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.

7.1.3 Initialize



- **Reboot:** Click this button to reboot. A confirmation dialogue will appear and then click “OK” to process. It takes two minutes to reboot this IP Camera.
- **Factory Default:** Click this button to reset this IP Camera to the factory default setting. A confirmation dialogue will appear and then click “OK” to process. Don't turn off this IP Camera until the device reboots.
- **Backup Setting data:** 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 your specified location.
- **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; the camera will restart.
- **Firmware Update:** Upgrade the device software. Click “Browse” and select the file for upgrading. A confirmation dialogue will appear. Click “OK” to start upgrading. This IP Camera will reboot upon completion.

 **Note:**

Use only upgrade files that are special for this IP Camera. Otherwise problems may occur. Don't turn off the IP Camera power or disconnect the network until the upgrading is completed.

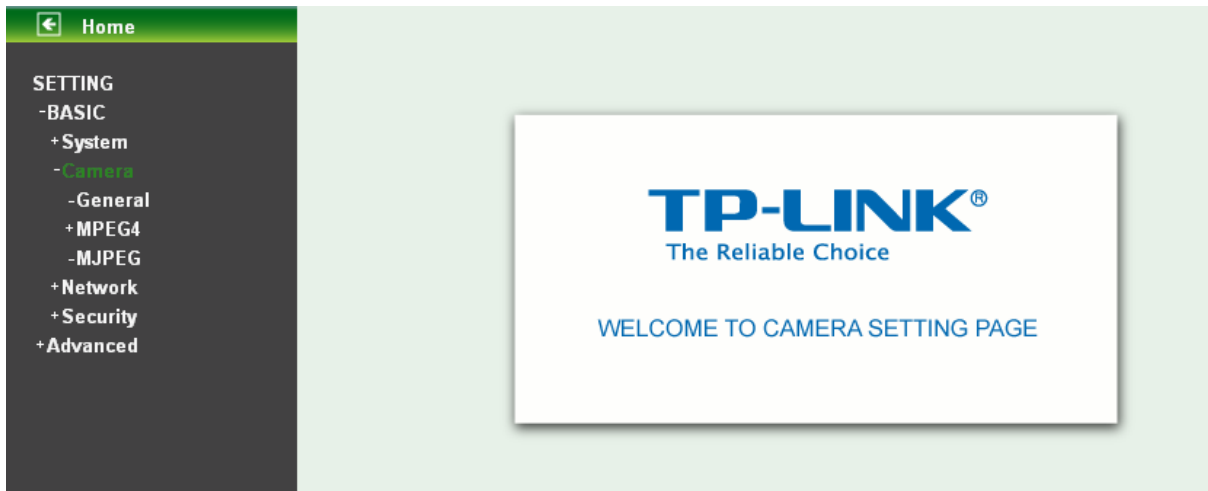
 **Note:**

After upgrading new firmware, please execute “Factory Default” first to make it work.

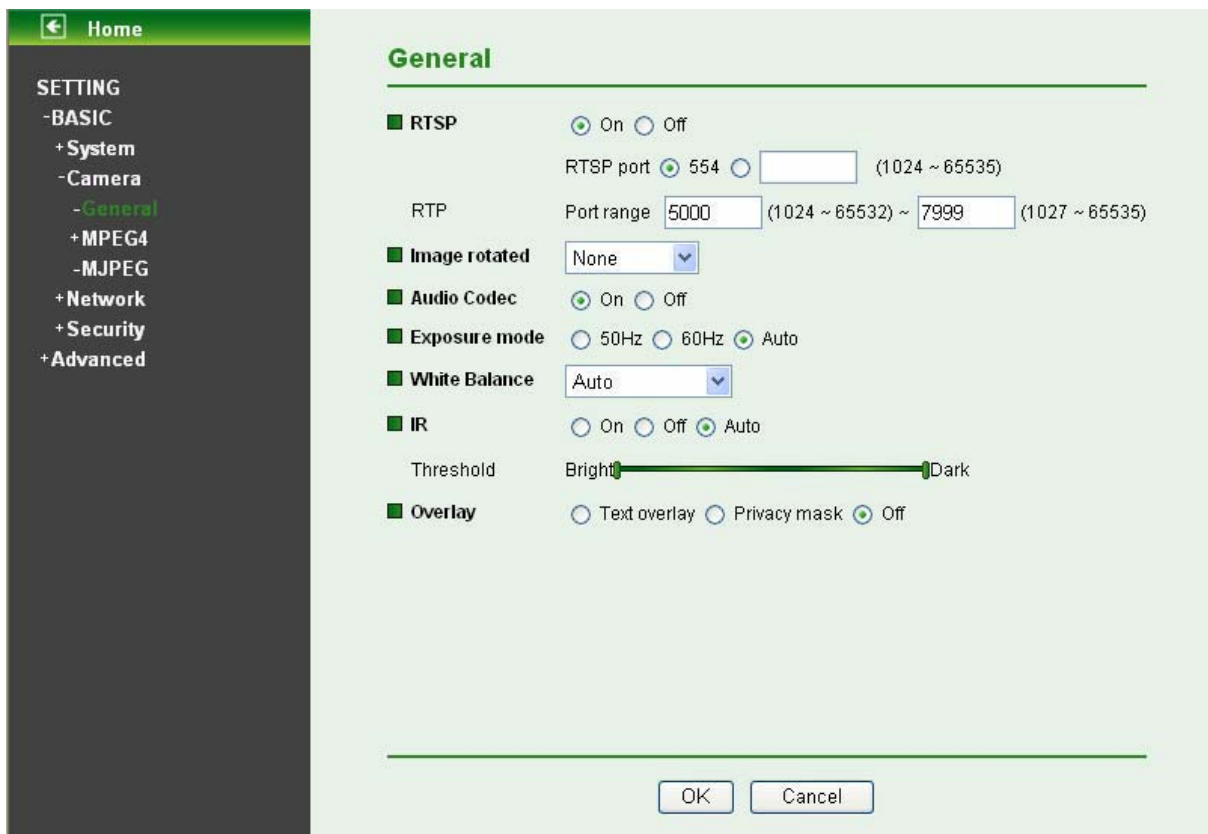
- **Upload Language Pack:** Upgrade the device language pack. Click “Browse” and select the file for upgrading. A confirmation dialogue will appear. Click “OK” to start upgrading. The upgrade is applied immediately. The default language is “English”.

7.2 Camera

Click the folder of **Camera** to display the sub folders including **General**, **MPEG4** and **MJPEG**.



7.2.1 General



- **RTSP:** Switch RTSP “On” or “Off.” When the RTSP mode is “On”, MJPEG streaming is unavailable.
 - **RTSP Port:** Specify the transmission port number of RTSP streaming. The default value is 554.
 - **Port Range:** Specify the transmission port range of RTP streaming video. RTP will select a port randomly from this range.

 **Note:**

RTSP (Real Time Streaming Protocol) is a protocol for use in streaming media system which allows clients to remotely control a streaming video server. RTSP is supported by most of the media clients such as Real Player, QuickTime and VLC etc.

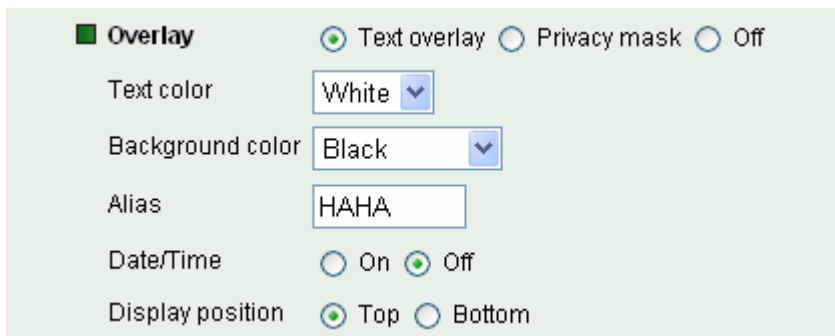
- **Image Rotate:** Select the screen display “flip”, “mirror”, or “flip + mirror.”
- **Audio Codec:** If this option is selected “On”, the microphone will start sound reception.
- **Exposure mode:** You can choose 50Hz, 60Hz or Auto. If you choose Auto option, the camera will adjust automatically to perform well.
- **White Balance:** You can choose the white balance to Auto, Florescent, Incandescent and Black & White.
- **IR:** You can turn IR light On/Off or Auto. If you select Auto mode, you can adjust threshold for IR Auto-On and Auto-Off respectively. In the right hand side of threshold bar, if the tool bar is closer to the right, the IR will auto-on easily in the dark environment. Conversely, in the left hand side of threshold bar, if the tool bar is more approached to the left, the IR will auto-off easily in the bright environment.

 **Note:**

1. The effective range of the IR (Infrared) light is 10 meters (33 feet), and it is strongly suggested that you install it in a place without any barriers within 3 meters of the field of view (10 feet). Reflected light from a large closed barrier (such as a wall) may cause the camera to shut down the infrared light.
2. Normally, 10 seconds after the environment becomes darker than the threshold, the camera will turn on the IR (Infrared) light. One typical abnormal situation is that a barrier is very close to the camera and shields all available light.

➤ **Overlay:**

- **Text Overlay:** You can see some information on the display screen which includes **Text color**, **Background color**, **Alias**, **Date/Time** and **Display position**.



Overlay Text overlay Privacy mask Off

Text color

Background color

Alias

Date/Time On Off

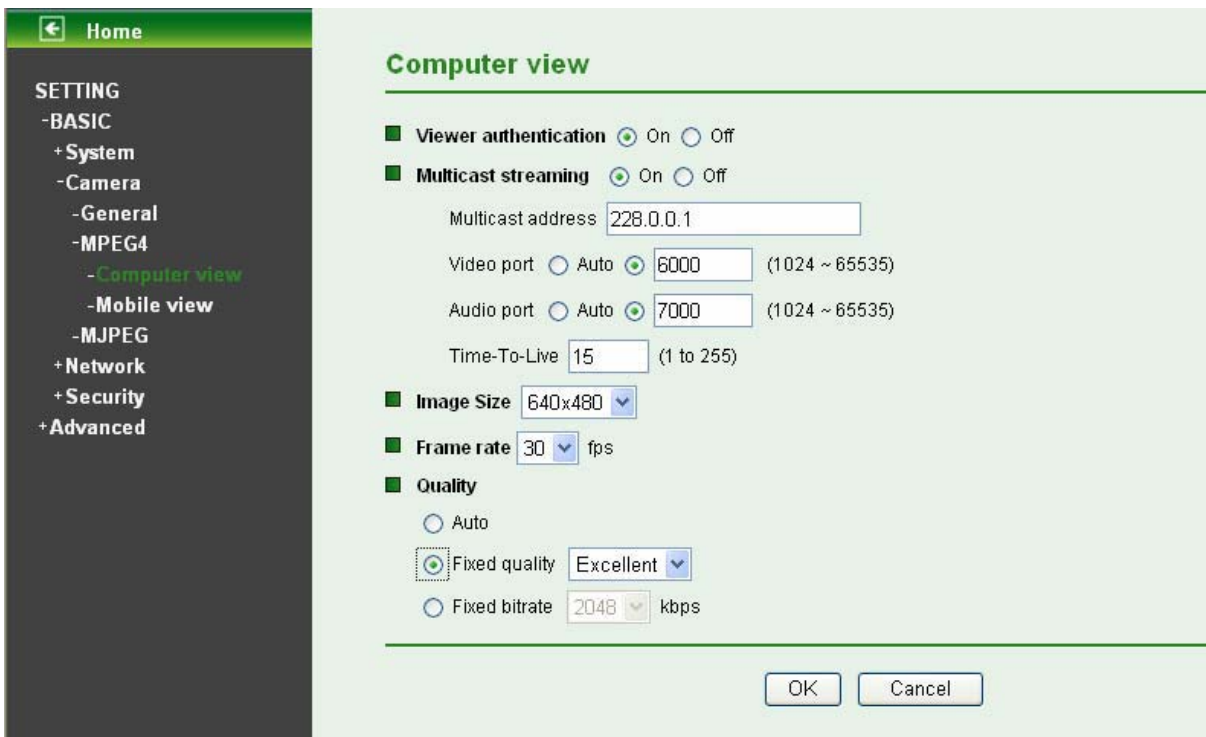
Display position Top Bottom

- **Privacy Mask:** You can cover a specific area of the video image with the black bar. The black bar can be moved.



7.2.2 MPEG-4

A. Computer View



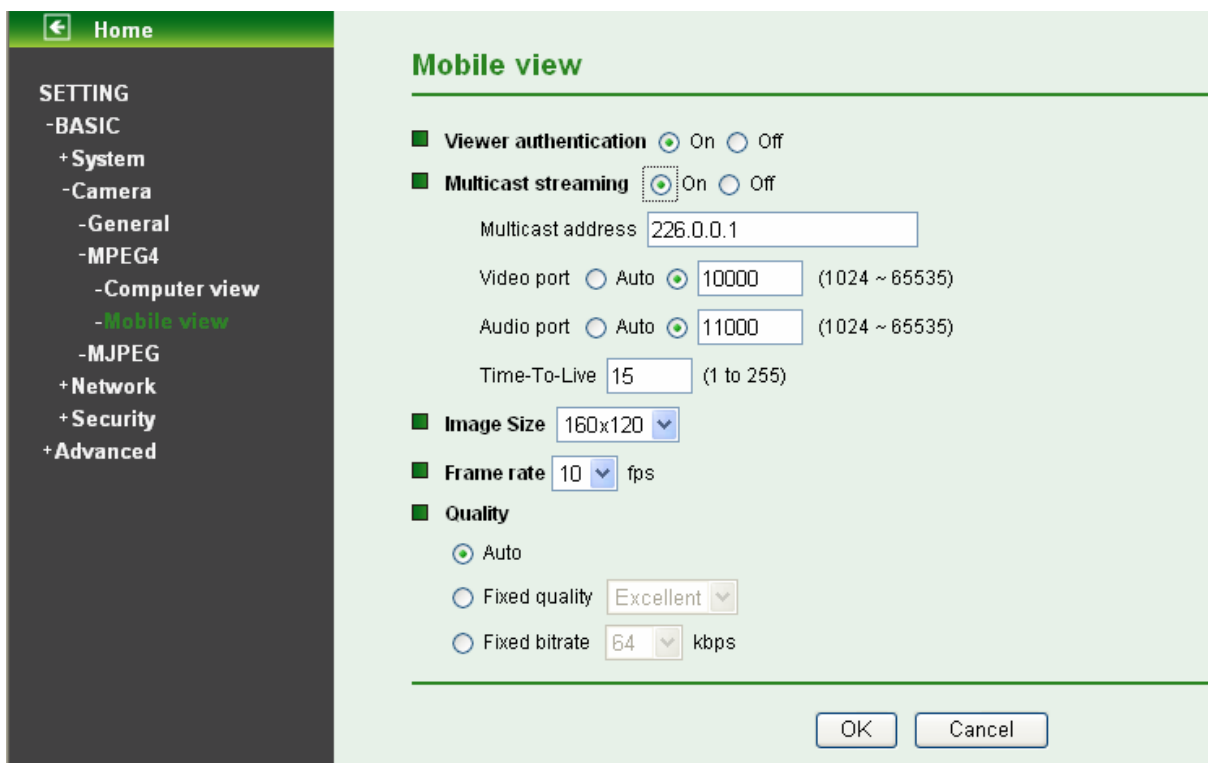
If RTSP is On (please check “**Setting** → **Basic** → **Camera** → **General**”), the option of **Viewer Authentication** and **Multicast Streaming** will appear.

- **Viewer Authentication:** If the viewer authentication is **On**, the users will be requested to key in username and password when viewing through RTSP.
- **Multicast Streaming (If it's on):**
 - **Multicast Address:** Specify the multicast server address.
 - **Video / Audio Port:** Specify the transmission port number of the video data. Specify an even number from 1024 to 65535.
 - **Time-to-Live:** Set the maximum TTL that multicast can pass through. Specify the value from 1 to 255.
- **Image Size:** Specify the image size when the network camera transmits. You can choose among 640 x 480, 320 x 240, and 160 x 120.
- **Frame Rate:** Set the frame rate of the MPEG4 image. You can choose values from 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, and 30 fps. The unit “fps” stands for “frames per second”.
- **Quality:**
 - **Auto:** The quality and bitrate will be adjusted automatically according to the frame rate.
 - **Fixed Quality:** You can select the value of quality among Medium, Standard, Good, Detailed and Excellent.
 - **Fixed Bitrate:** Set the bitrate of MPEG4 image transmission for a line. You can select the value from 64, 128, 256, 384, 512, 768, 1024, 1280, 1536, and 2048 kbps.

 **Note:**

Concerning how to select the suitable image quality for Fixed Quality or Fixed Bitrate, please refer to the [APPENDIX A. Frame-rate & Bitrate Table](#).

B. Mobile View



If RTSP is **On** (please check “**Setting** → **Basic** → **Camera** → **General**”), the option of **Viewer Authentication** and **Multicast Streaming** will appear.

 **Note:**

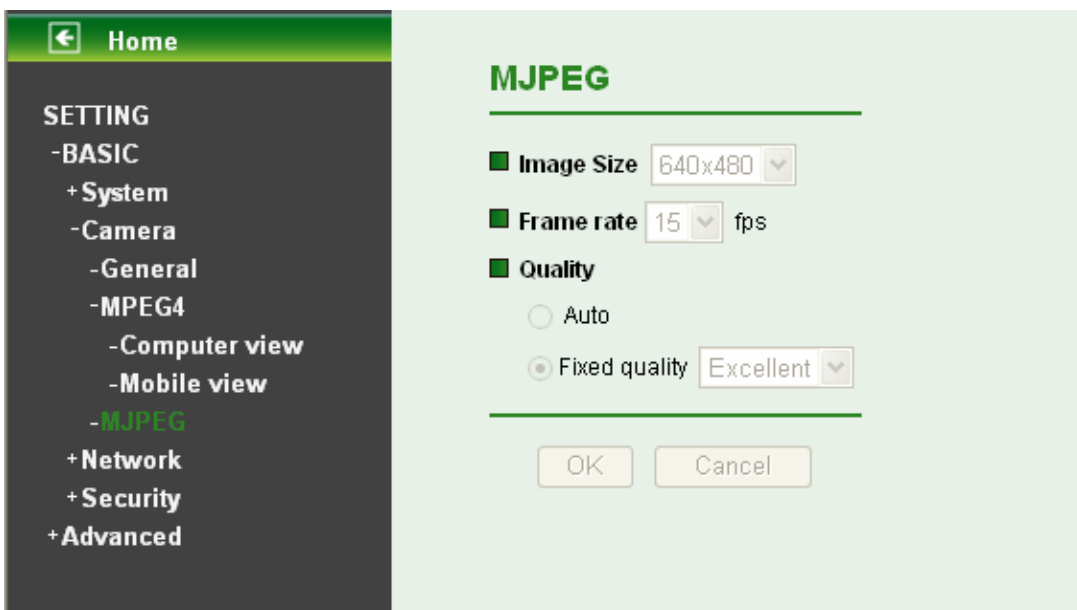
If RTSP is off, Mobile View will be disabled.

- **Viewer Authentication:** If the viewer authentication is On, the users will be requested to key-in username and password when viewing through RTSP.
- **Multicast Streaming (If it's on):**
 - **Multicast Address:** Specify the multicast server address.
 - **Video / Audio Port:** Specify the transmission port number of the video data. Specify an even number from 1024 to 65535.
 - **Time-To-Live:** Set the maximum TTL that multicast can pass through. Specify the value from 1 to 255.
- **Image Size:** The image size of Mobile View is fixed at 320x240 or 160 x 120.
- **Frame Rate:** Set the frame rate of the MPEG4 image. You can choose values from 5 and 10fps. The unit “fps” stands for “frames sent per second”.
- **Quality:**
 - **Auto:** The quality and bitrate will be adjusted automatically according to the frame rate.
 - **Fixed Quality:** You can select the value of quality among Medium, Standard, Good, Detailed and Excellent.
 - **Fixed Bitrate:** Set the bitrate of MPEG4 image transmission for a line. You can select the value from 16, 32, 48, 64, 128, and 256 kbps.

 **Note:**

Concerning how to select the suitable image quality for Fixed Quality or Fixed Bitrate, please refer to the [APPENDIX A. Frame-rate and Bitrate Table](#).

7.2.3 MJPEG



If RTSP is **Off** (please check “**Setting** → **Basic** → **Camera** → **General**”), the option of **Image Size**, **Frame rate** and **Quality** will appear.