

TP-LINK®

User Guide

TL-SC2020N

Wireless N Network 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:

- 1) This device may not cause harmful interference.
- 2) 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.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

"To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

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.

Canadian Compliance Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux norms CNR exemptes de licence d'Industrie Canada. Le fonctionnement est soumis aux deux conditions suivantes:

- (1) cet appareil ne doit pas provoquer d'interférences et
- (2) cet appareil doit accepter toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité de l'appareil.

This device has been designed to operate with the antennas listed below, and having a maximum gain of 3 dBi. Antennas not included in this list or having a gain greater than 3 dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

Industry Canada Statement:

Complies with the Canadian ICES-003 Class B specifications.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with RSS 210 of Industry Canada. This Class B device meets all the requirements of the Canadian interference-causing equipment regulations.

Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Korea Warning Statements:

당해 무선설비는 운용중 전파혼신 가능성이 있음.

NCC Notice:

注意!

依據 低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性或功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通行；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信規定作業之無線電信。低功率射頻電機需忍受合法通信或工業、科學以及醫療用電波輻射性電機設備之干擾。

安全諮詢及注意事項

- 請使用原裝電源供應器或只能按照本產品注明的電源類型使用本產品。
- 清潔本產品之前請先拔掉電源線。請勿使用液體、噴霧清潔劑或濕布進行清潔。

- 注意防潮，請勿將水或其他液體潑灑到本產品上。
- 插槽與開口供通風使用，以確保本產品的操作可靠並防止過熱，請勿堵塞或覆蓋開口。
- 請勿將本產品置放於靠近熱源的地方。除非有正常的通風，否則不可放在密閉位置中。
- 請不要私自打開機殼，不要嘗試自行維修本產品，請由授權的專業人士進行此項工作。



Продукт сертифіковано згідно с правилами системи УкрСЕПРО на відповідність вимогам нормативних документів та вимогам, що передбачені чинними законодавчими актами України.



Safety Information

- When product has power button, the power button is one of the way to shut off the product; when there is no power button, the only way to completely shut off power is to disconnect the product or the power adapter from the power source.
- Don't disassemble the product, or make repairs yourself. You run the risk of electric shock and voiding the limited warranty. If you need service, please contact us.
- Avoid water and wet locations.

This product can be used in the following countries:

| | | | | | | | |
|----|----|----|----|----|----|----|----|
| AT | BG | BY | CA | CZ | DE | DK | EE |
| ES | FI | FR | GB | GR | HU | IE | IT |
| LT | LV | MT | NL | NO | PL | PT | RO |
| RU | SE | SK | TR | UA | | | |

DECLARATION OF CONFORMITY

For the following equipment:

Product Description: **Wireless N Network Camera**

Model No.: **TL-SC2020N**

Trademark: **TP-LINK**

We declare under our own responsibility that the above products satisfy all the technical regulations applicable to the product within the scope of Council Directives:

Directives 1999/5/EC, Directives 2004/108/EC, Directives 2006/95/EC, Directives 1999/519/EC, Directives 2011/65/EU

The above product is in conformity with the following standards or other normative documents

ETSI EN 300 328 V1.7.1: 2006

ETSI EN 301 489-1 V1.8.1:2008& ETSI EN 301 489-17 V2.1.1:2009

EN 55022:2010

EN 55024:2010

EN 61000-3-2:2006+A1:2009+A2:2009

EN 61000-3-3:2008

EN60950-1:2006+A11:2009+A1:2010+A12:2011

EN62311:2008

The product carries the CE Mark:

CE1588

Person is responsible for making this declaration:



Yang Hongliang

Product Manager of International Business

Date of issue: 2014

TP-LINK TECHNOLOGIES CO., LTD.

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Package Contents

The following items should be found in your package:

- TL-SC2020N Wireless N Network 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 | 2 GB RAM |
| Operating System | Windows 2000 / Windows 2003 / Windows XP / Windows Vista / Windows 7 |
| Web Browser | Internet Explore 8 or higher |

 **Note:**

Please keep updating the latest Windows software and service package. (E.g.: 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 | |
|----------------------------|--|
| Resolutions | Up to 640 x 480 |
| Compressing format | Motion JPEG |
| Frame Rate | Up to 30 fps at 640 x 480 |
| Image settings | Brightness / Contrast / Saturation / Sharpness/ Exposure |
| | Overlay capabilities: time, date, text |
| Image snapshot | Yes |
| Video Recording | Yes |
| Full Screen Viewing | Yes |
| Digital Zoom | 10x digital |
| Audio | One-way with built-in microphone |
| | Audio compression: G.711 μ law |
| Security | Password Protection / HTTPS encryption |
| Alarm Buffer | Recording image and audio file pre-and-post disconnection up to 5 sec. |

| | |
|--------------------------------|--|
| Supported protocols | TCP/IP, DHCP, PPPoE, ARP, ICMP, FTP, SMTP, DNS, NTP, UPnP, RTSP, RTP, RTCP, HTTP, TCP, UDP |
| Simultaneous Connection | Up to 3 users |
| Operating conditions | 0°C ~ 40 °C (32°F ~ 104 °F) |
| HARDWARE | |
| Lens | F 2.4 fixed lens |
| Audio Output | 1 |
| Power | 5V DC, 1A |
| Wireless | IEEE 802.11b/g/n with WEP/WPA/WPA2. Up to 150 Mbps |
| WPS | 1 (Wi-Fi Protected Setup) |

2.3 Physical Overview

2.3.1 Front View



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

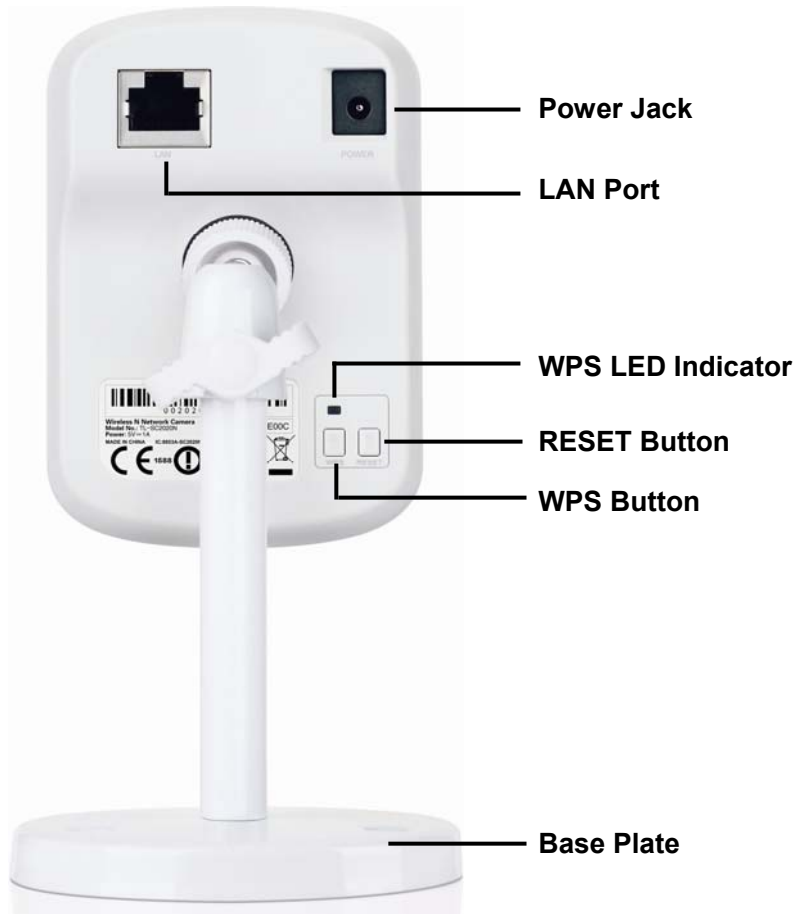
Power LED Indicator

- **Solid Red:** The Camera boots up.
- **Flash Red:** The Camera has finished booting up, but it isn't connected to any network.

- **Solid Blue:** The Camera has been connected to a network.

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

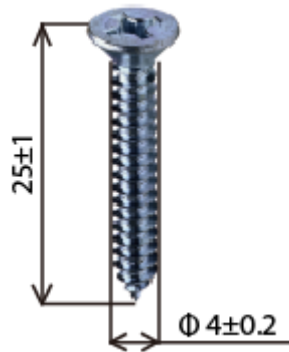
2.3.2 Rear View



- **Power Jack:** The power connector is where you connect the power adapter.
- RESET:** Press the button for more than 15 seconds, and the Camera will be restored to factory defaults.
- **LAN Port:** Through this port, you can connect the Camera to your computer or the other Ethernet network devices.
- **WPS (Wi-Fi Protected Setup):** This button is used to easily set up a wireless connection with the Router supporting WPS.
 - Step 1.** Press the WPS button on the router supporting WPS for 2 seconds.
 - Step 2.** Within 2 minutes, press the WPS button on the Camera for 2 seconds.
- **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±1 mm and the diameter is 4±0.2 mm.

2.4.2 Wall and Ceiling Mount

There are two ways to mount the Camera. See the following two pictures.



To mount the Camera, please follow the steps below:

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.

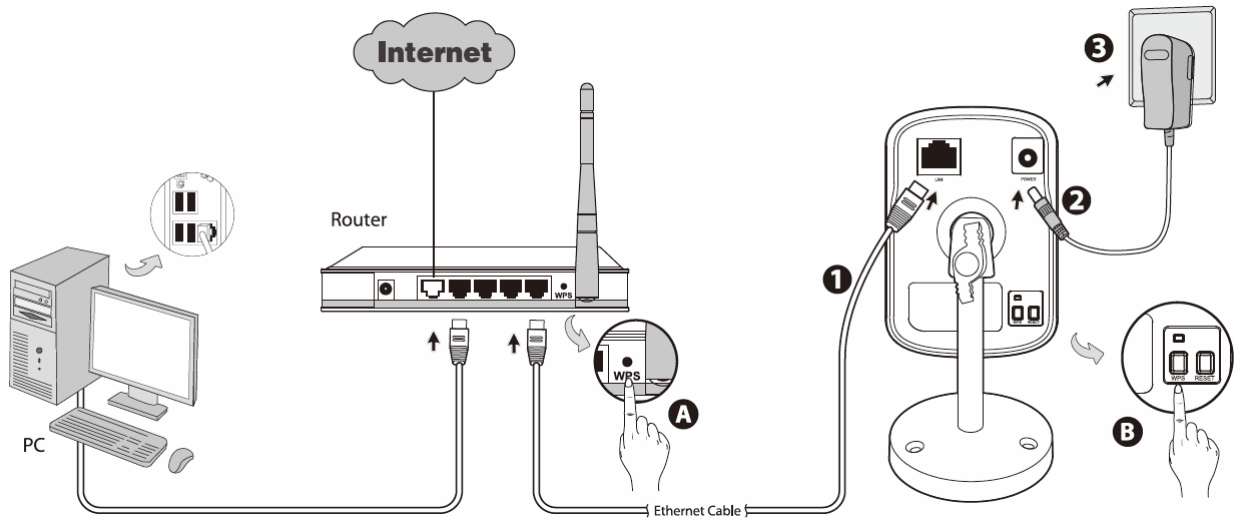
2.5 Hardware Connection

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-SC2020N, you can set up either a **Wired Connection** or a **Wireless Connection**. To set up a wireless connection, if your Router supports WPS (Wi-Fi Protected Setup), please follow [2.5.2 Wireless Connection \(by WPS\)](#) to finish connection; if your Router doesn't support WPS, please refer to the

Wireless section of [5.3.2 Network](#).

Please connect the Camera according to the following steps.



2.5.1 Wired Connection

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

2.5.2 Wireless Connection (by WPS)

Power on the Camera and make sure that the Power LED is flash red. Then take the following steps.

- A. Press the WPS button on the Router supporting WPS for 2 seconds.
- B. Within 2 minutes, press the WPS button on the Camera for 2 seconds.

After you press the WPS button on the Camera, the WPS LED will turn flash blue. Once the WPS Connection is successfully established, it will turn solid blue.

Chapter 3 Using 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.

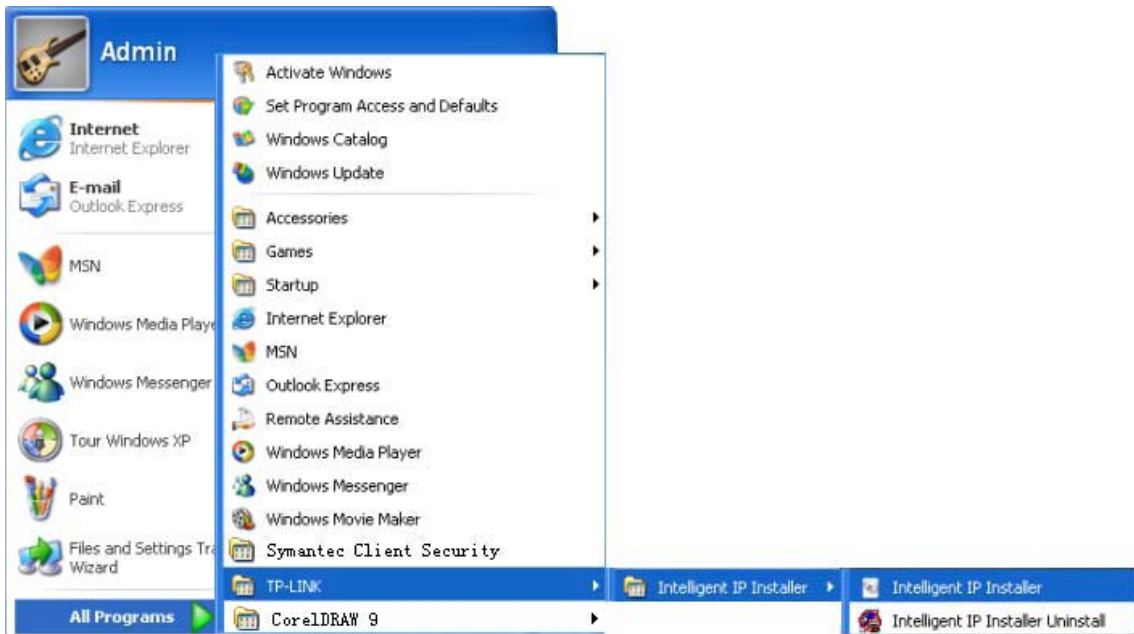


Figure 3-3

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.

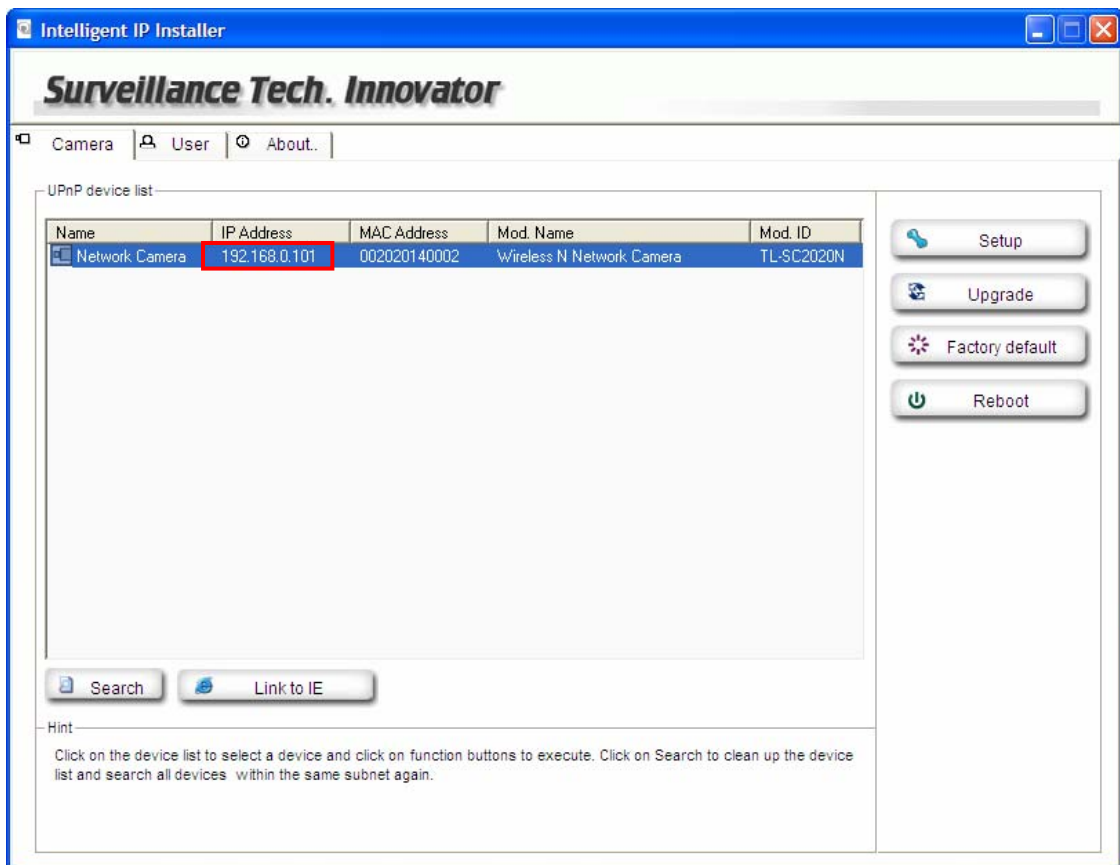
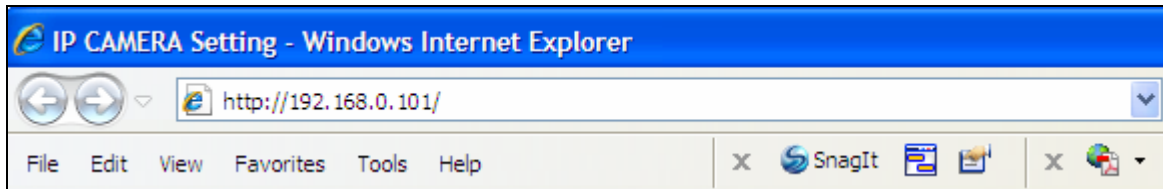


Figure 3-4

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 Camera in the Location / Address field of your browser.



- 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 "**Basic setup** → **Account**")



- 3 The monitor image will be displayed in your browser. In the far left side of main configuration are **Home, Information, Basic setup, System and Language.**



Chapter 4 Operating 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.mjpg” into your 3G Streaming Link. <IP> is the Public IP address of your Camera; <PORT> is the RTSP port of your Camera (Default value is 554.) Example: rtsp://100.10.10.1:554/video.mjpg.

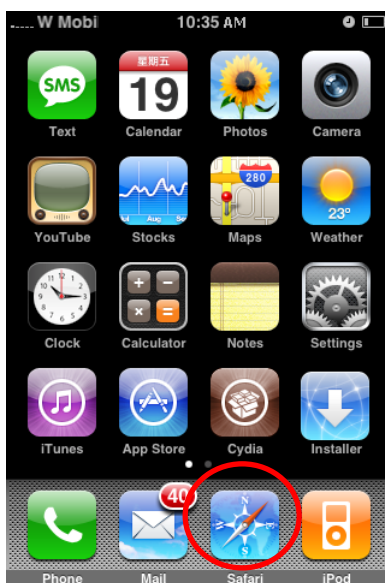
 **Note:**

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

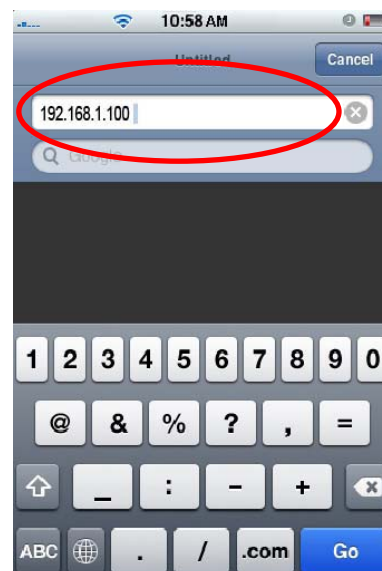
4.2 Using Camera via iPhone

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.

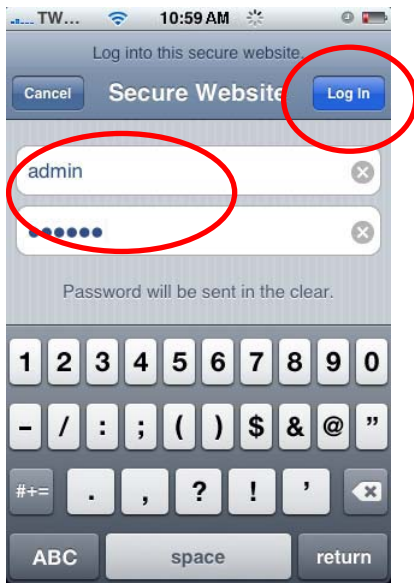
1. Select Safari function.



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:

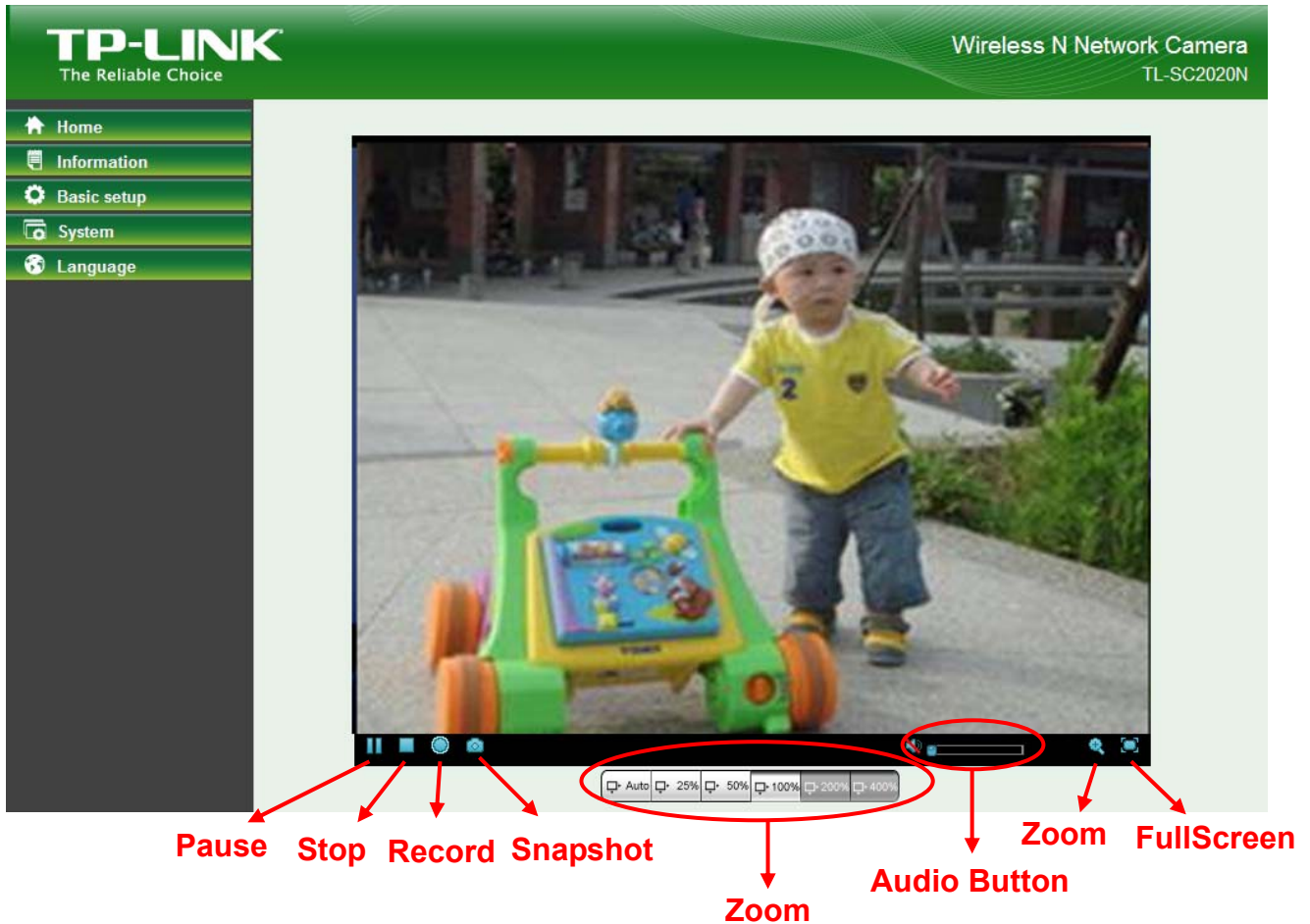
It will show continuous snapshots not a real time video streaming. Therefore, the recording feature is disabled.

Chapter 5 Configuration of Main Menu





In the left side of main configuration are **Home**, **Information**, **Basic setup**, **System** and **Language**.

5.1 Home

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



5.1.1 Video play buttons


| Symbols | Meaning |
|---|--------------------------|
|  | Pause the current video |
|  | Stop the current video |
|  | Record the current video |
|  | Full Screen |

Note:


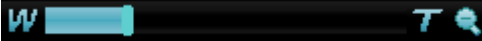
Concerning the recording storage requirement of your hard disk, please refer to the [Appendix / B. Storage Requirement Table](#).

5.1.2 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 |
| Save Image | Save the picture captured by snapshot into your computer |
| Close | Return to the view screen |

5.1.3 Digital zoom in/out the image via the monitor window

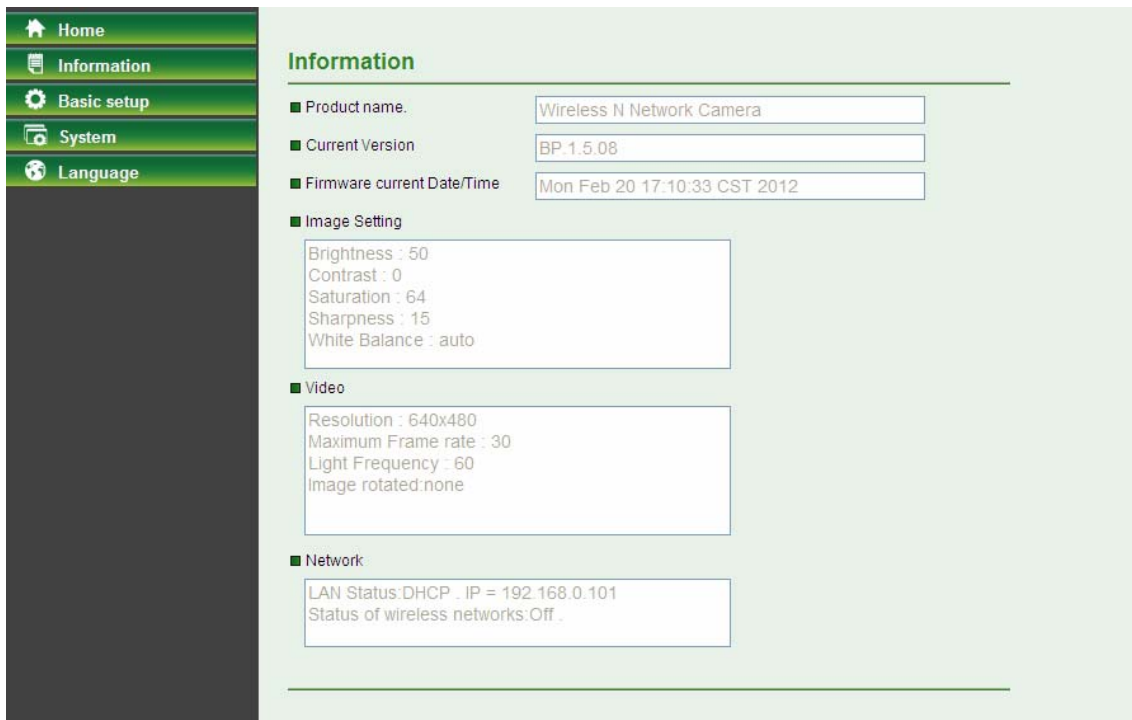
- Click  to display the digital zoom in window.
- Pull the  to adjust the digital zoom range, and it will be showed on the above window.
- Use the left click of your mouse to move to anywhere in the window area.

5.1.4 Audio buttons

| Symbols | Meaning | Note |
|---|--------------------|--|
|  | Mute off | mean you can broadcast to the connected Camera(s) via the Ethernet using your microphone |
|  | Mute on | mean you can't broadcast to the connected Camera(s) via the Ethernet using your microphone |
|  | Volume control bar | mean you can adjust the sound volume by the control bar |

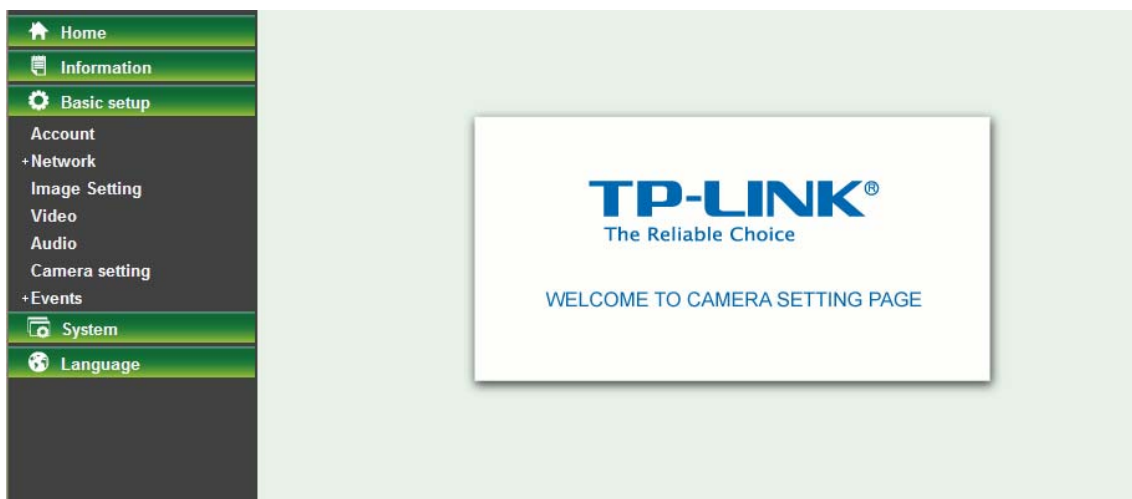
5.2 Information

The Information screen provides the product factory information which includes **Product Name**, **Current Version**, **Firmware current Date/Time**, **Image Setting**, **Video** and **Network**.



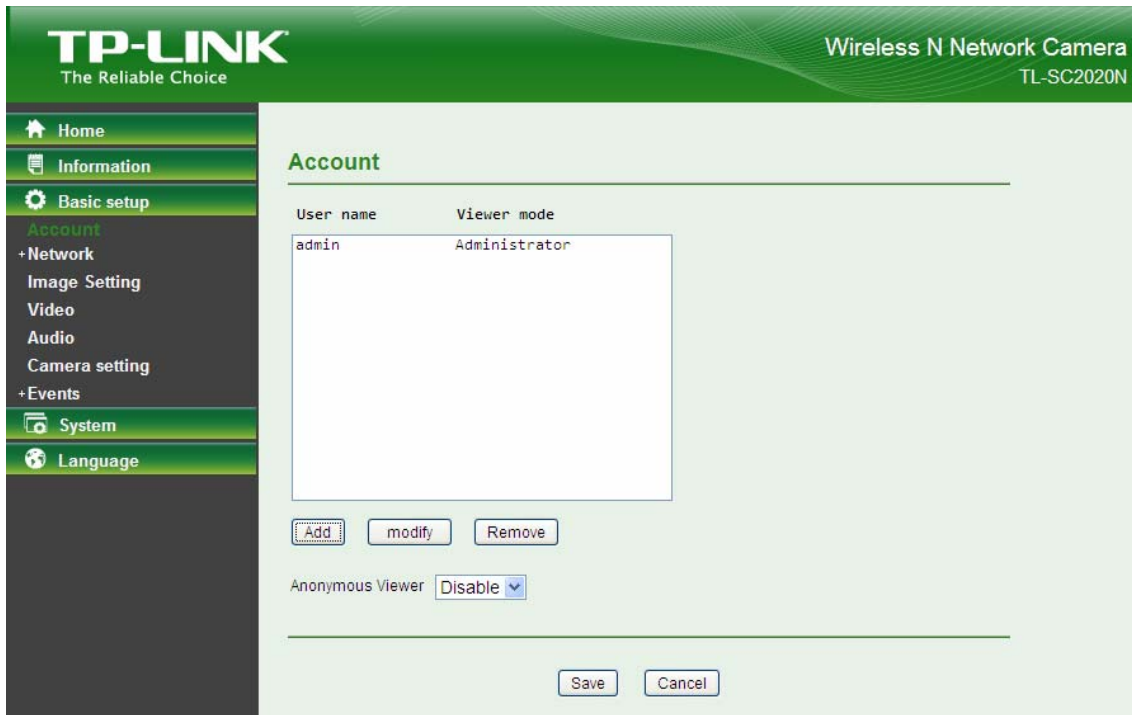
5.3 Basic setup

This function is only for the Administrator. Click **Basic setup** to display the submenus: **Account**, **Network**, **Image Setting**, **Video**, **Audio**, **Camera setting** and **Events**.



5.3.1 Account

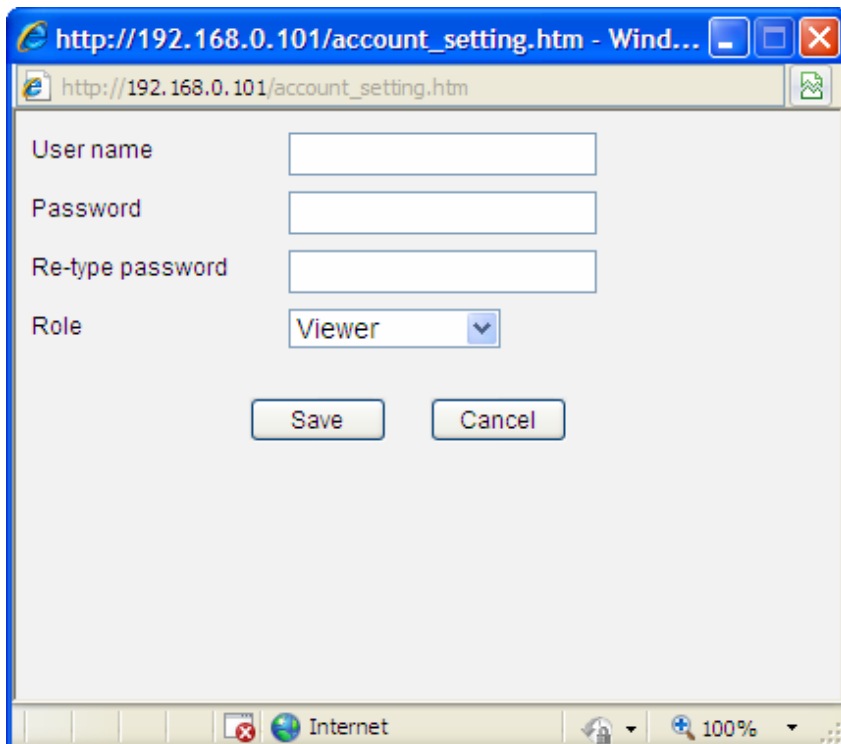
The device default account and password setting is "admin / admin". That means everyone who knows IP address can access the device including all configuration. It is necessary to assign a password if the device is intended to be accessed by others.



- **Add:** Click this button to add a new account.
- **Modify:** Click this button to edit the selected account.
- **Remove:** Click this button to delete the selected account.
- **Anonymous Viewer:** Select **Disable** and the anonymous viewers cannot access the Camera. Select **Enable** to and the anonymous users can access the Camera in **Viewer** mode.

To add a new account, please follow the steps below:

1. Click the **Add** button.
2. On the account-setting window as shown in the following figure, enter a **User name** and **Password** for the account, then select a **Role** from the drop-down list. Click **Save** to apply the settings.

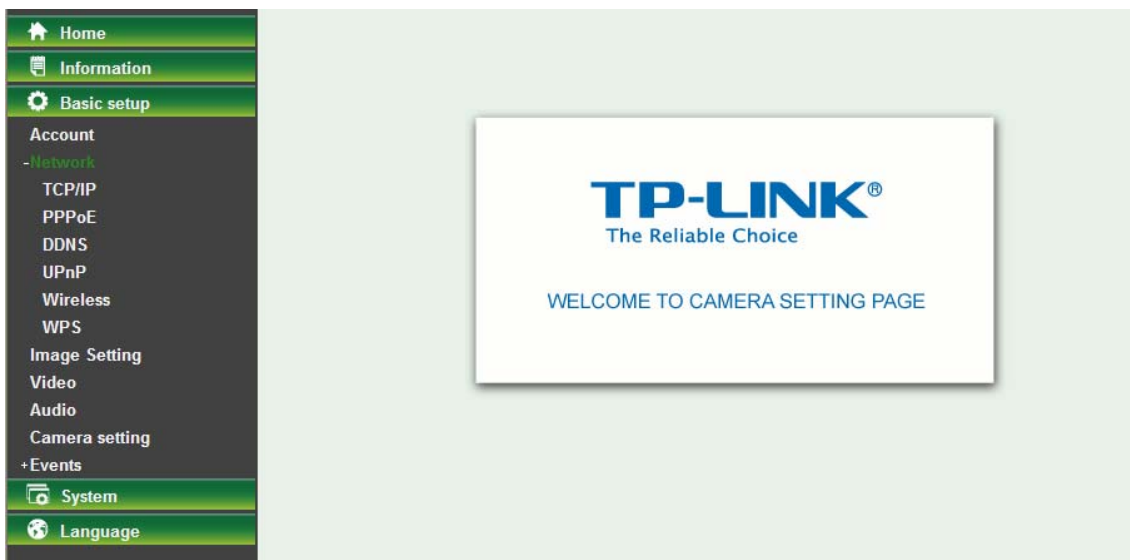


- **User Name:** Set a user name for the account.

- **Password:** Set a password for the account.
- **Re-type Password:** Re-type the password to confirm.
- **Viewer Mode:** Set the user mode among **Viewer**, **Operator** and **Administrator**. Different viewer mode has different limits of authority.
 - The **Viewer** mode only can view the Live View.
 - The **Operator** mode can not only view the Live View but also the **Information** page.
 - The **Administrator** mode has all authority of configuration.

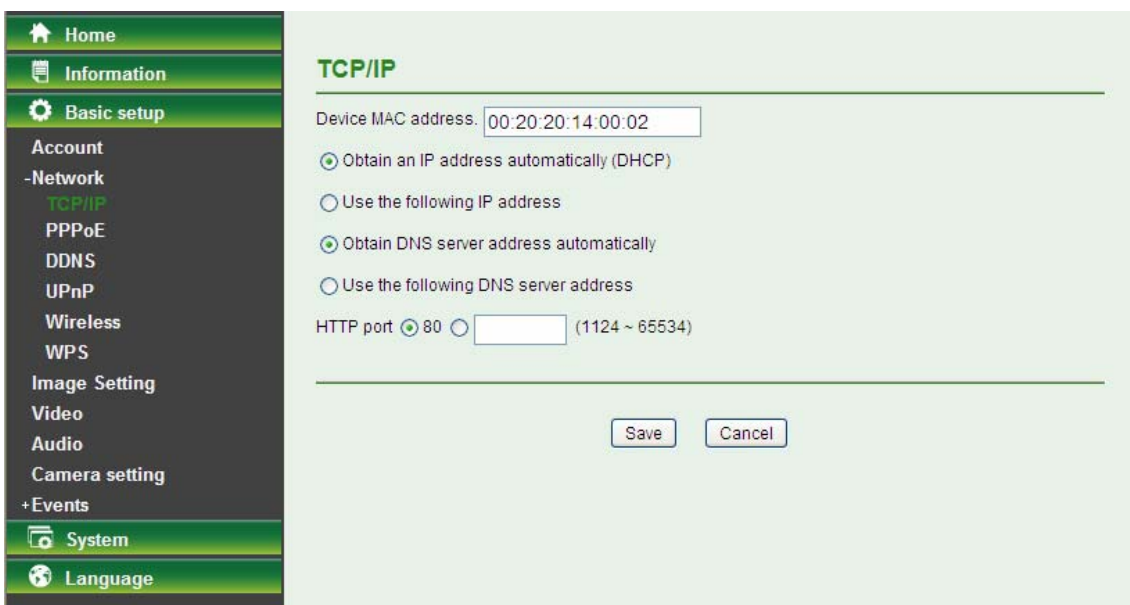
5.3.2 Network

Click the Network to display the submenus including **TCP/IP**, **PPPoE**, **DDNS**, **UPnP**, **Wireless** and **WPS**.



5.3.2.1 TCP/IP

This page displays the MAC address of the Camera and it's also used for the TCP/IP configuration.



- **Obtain an IP address automatically (DHCP):** If a DHCP server is installed on the network, select this option and the IP address is assigned by the DHCP server.

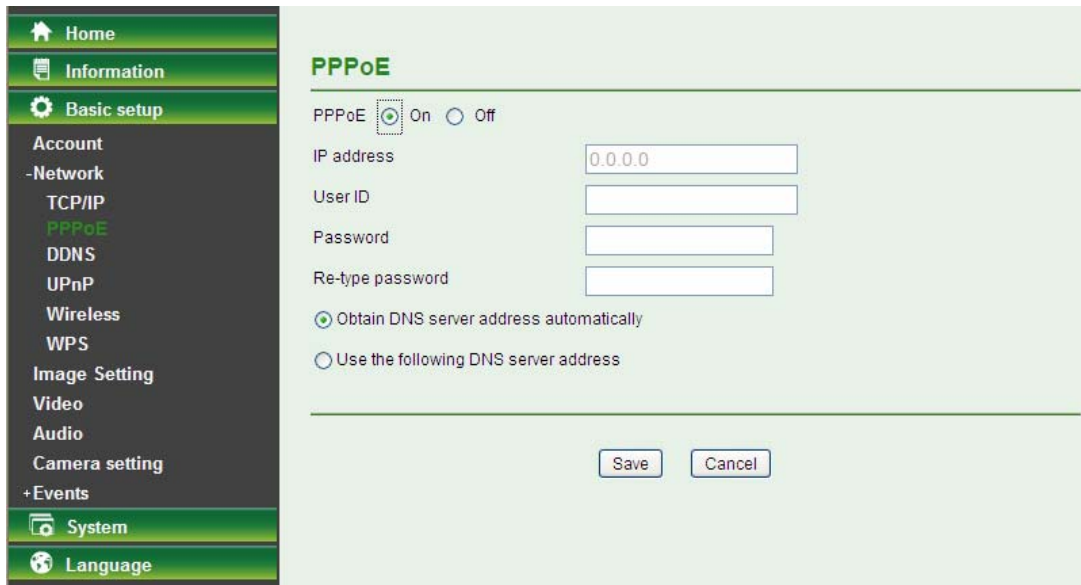
- **Obtain DNS server address automatically:** Select this option to obtain the address of DNS server automatically.

- **Use the following IP address:** Select this option when the fixed IP address is set as the IP address.
 - **IP address:** Enter the IP address of the device.
 - **Subnet mask:** Enter the subnet mask.
 - **Default gateway:** Enter the default gateway.
- **Use the following DNS server address:** Select this option when you set the fixed address as the IP address of DNS server.
 - **Preferred DNS server:** Enter the IP address of the Preferred DNS server.
 - **Alternate DNS Server:** Enter the IP address of the Alternate DNS Server, if necessary.
- **HTTP Port Number:** Select **80** in general situations. If you want to use a port number other than **80**, select the text box and enter a port number between 1124 and 65534.

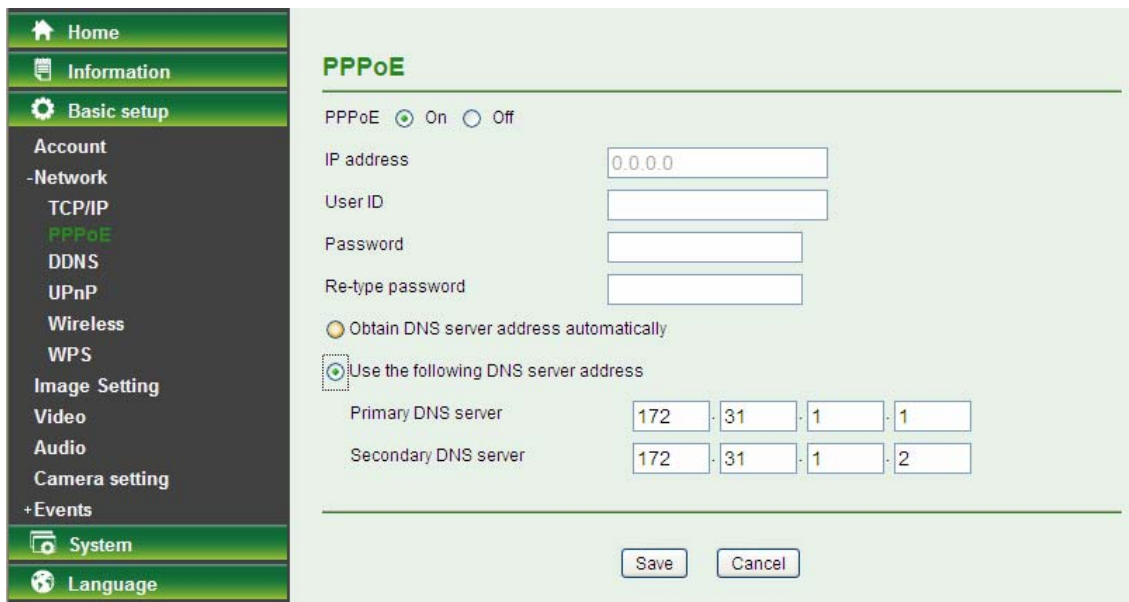
When you have set the HTTP port number to a number other than 80 on the Network setting page or in the Setup Program, access the device by typing the IP address of the device on the web browser as follows: for example, when HTTP port number is set to 2000 and the IP address of your camera is set to 192.168.1.100, you should type in <http://192.168.1.100:2000> to access the device.

5.3.2.2 PPPoE

If your ISP provides Dynamic IP with authentication by username and password, type all PPPoE information in this part. When using the PPPoE function, you need to turn on the DDNS or IP Notification function at same time.



- **IP Address:** The IP address obtained at the PPPoE connecting with network.
- **User ID:** Enter the user ID for authentication necessary for PPPoE connections. Type it up to 64 characters.
- **Password:** Enter the password for authentication necessary for PPPoE connections. Type it up to 32 characters.
- **Re-type Password:** Re-type the password to confirm.
- **Obtain DNS server address automatically:** Select this to obtain the address of DNS server automatically.
- **Use the following DNS server address:** Select this when you set the fixed address as the IP address of DNS server.



- **Primary DNS server:** Enter the IP address of the primary DNS server.
- **Secondary DNS server:** Enter the IP address of the secondary DNS server.

Note:

- 1) PPPoE (Point-to-Point Protocol over Ethernet): PPPoE is a network protocol for encapsulating Point-to-Point Protocol frames inside Ethernet frames. PPPoE connection is used mainly with ADSL service where individual users connect to the ADSL transceiver (modem) over Ethernet work. It also widely used in XDSL (digital affiliate line such as ADSL, VDSL or SDSL)

- 2) The Camera needs to be rebooted after it finishes changing the network completely. For more details, please refer to [5.4.1 Initialize](#).
- 3) You can reset the Camera to its factory default settings by pressing the Reset button. Then the Camera can be found by Intelligent IP Installer.

5.3.2.3 DDNS (Dynamic DNS)

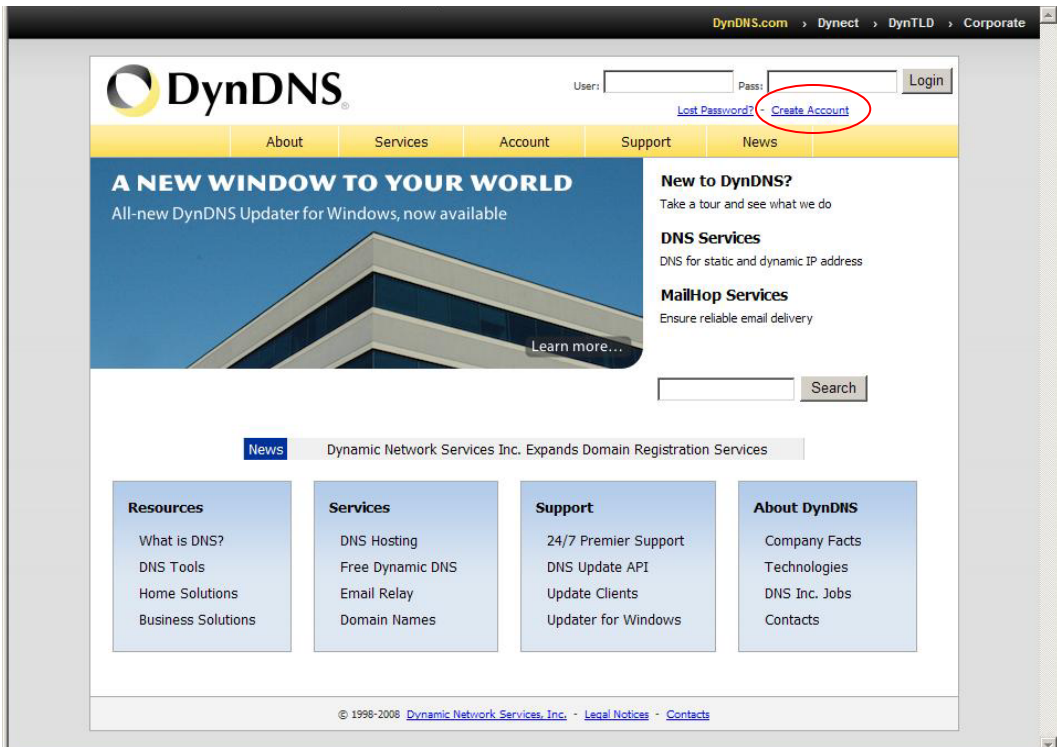
DDNS is a system which allows the domain name data held in a name server to be updated in real time. The most common use for DDNS is allowing an Internet domain name to be assigned to a computer with a varying/dynamic IP Address. This makes it possible for other sites on the Internet to establish connection to the machine without needing to track the IP Address themselves.

- **Server Name:** Choose the DDNS Server from the list.
- **User ID:** Enter the user ID for authentication necessary for DDNS connections. Type it up to 64 characters.
- **Password:** Enter the password for authentication necessary for DDNS connections. Type it up to 32 characters.
- **Re-type Password:** Re-type the password to confirm.
- **Host Name:** Enter the host name that is registered to the DDNS server.
- **Periodical Update:**
 - **Auto:** The domain name data will be updated automatically.
 - **Periodical:** The domain name data will be updated once in a period. The period can be chosen among 5, 10, 15, 30 and 60 minutes.

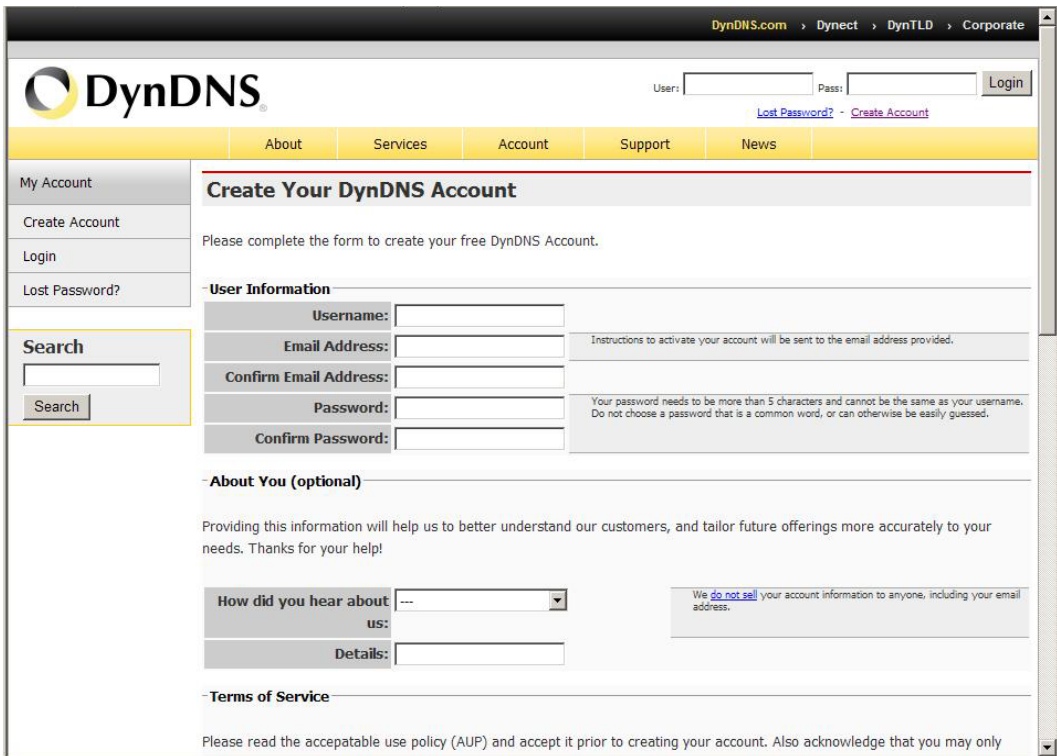
Note:

How to apply DDNS username and Host name? You can apply DDNS username and Host name by the following steps:

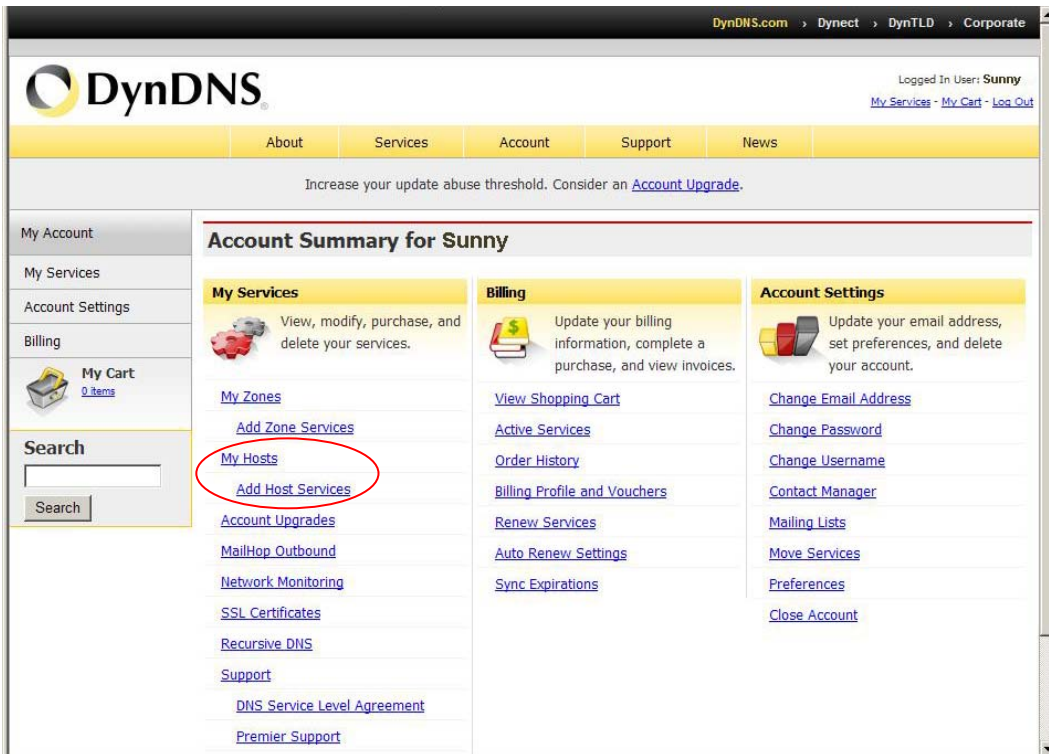
1. Login <http://www.dyndns.org>, click the **Creat Account**.



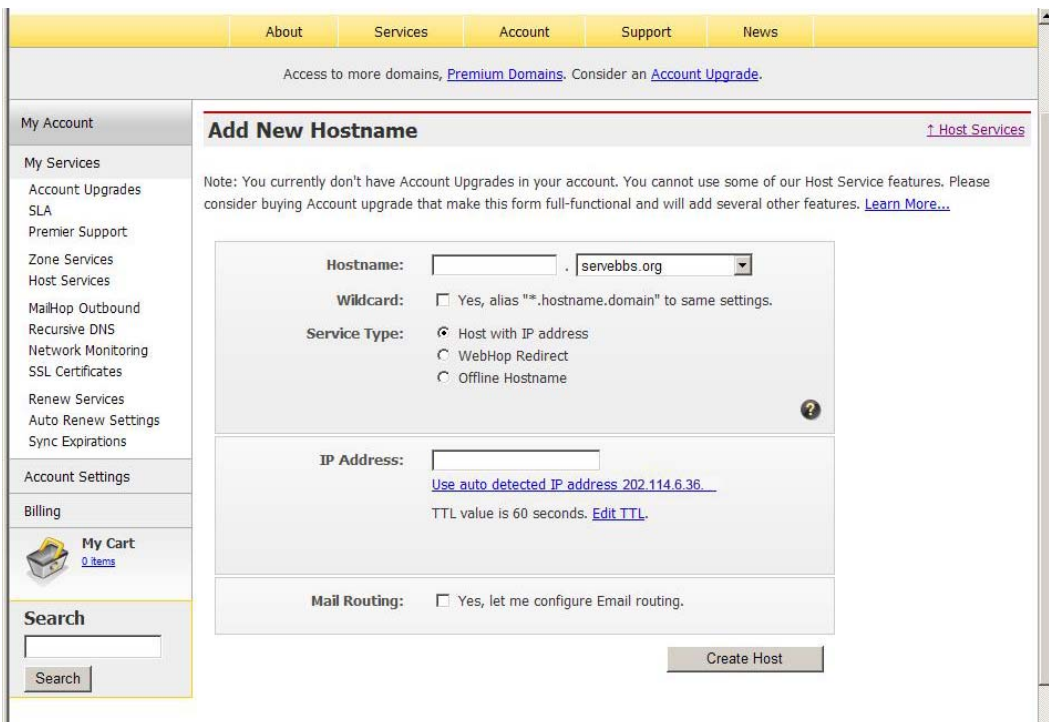
2. Input all information and follow step by step with DynDNS.



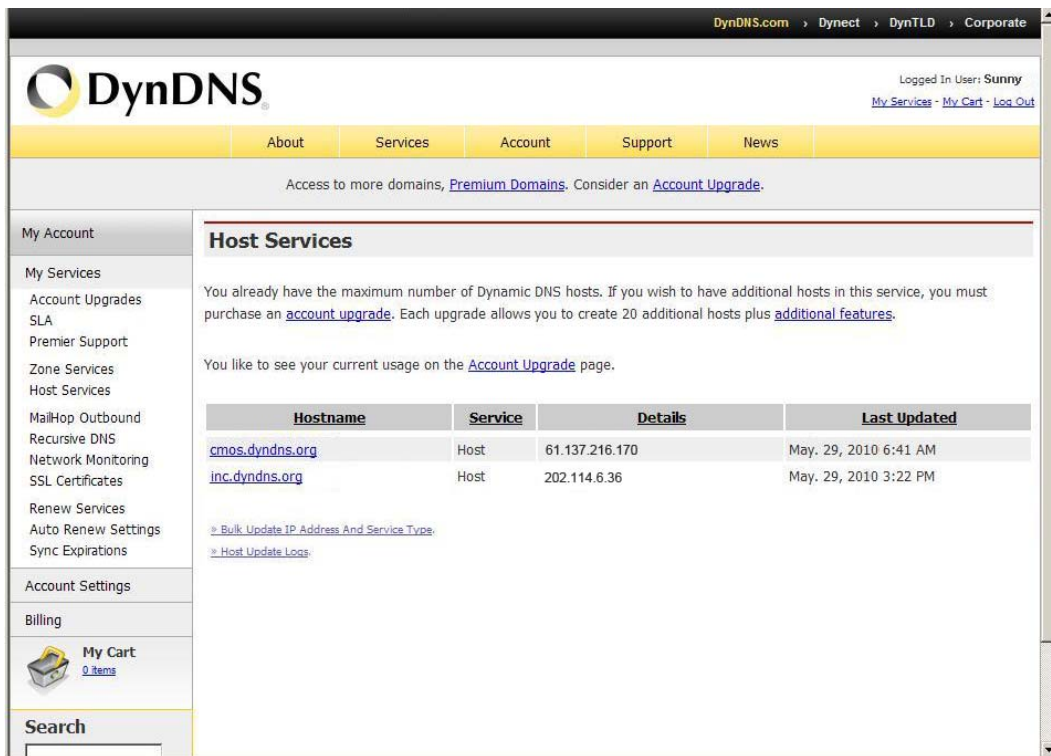
3. Login with new account and click **Account** → **My Hosts** → **Add Host Services**.



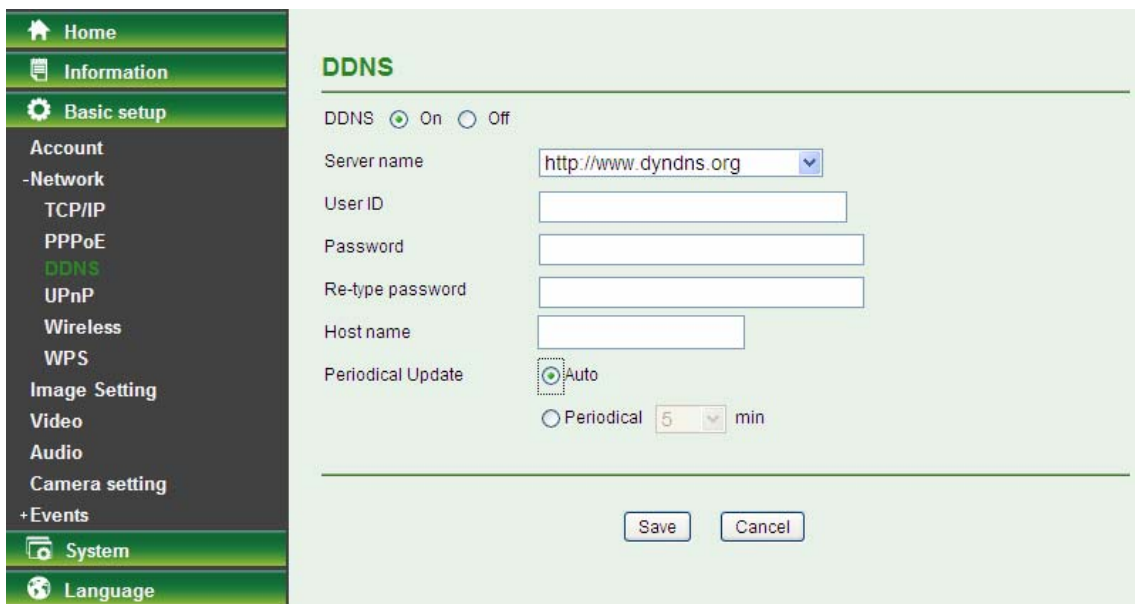
4. Type domain in the **Hostname** field and select **sub-domain**.



5. After typing information, check your DDNS service

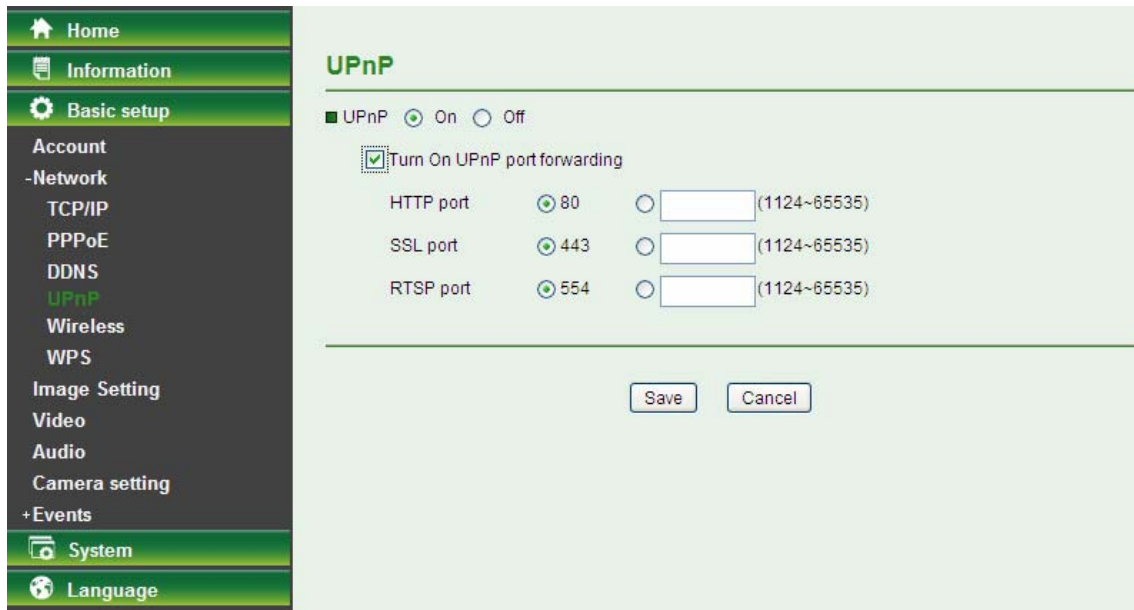


6. Type your DDNS User ID, Password and Host name in **Setting** → **Network** → **DDNS**. After completing setting, reboot the Camera.



5.3.2.4 UPnP (Universal Plug and Play)

If you have a Router to access to Internet and the Router supports UPnP IGD function, you need to turn on the UPnP Port Forwarding function.



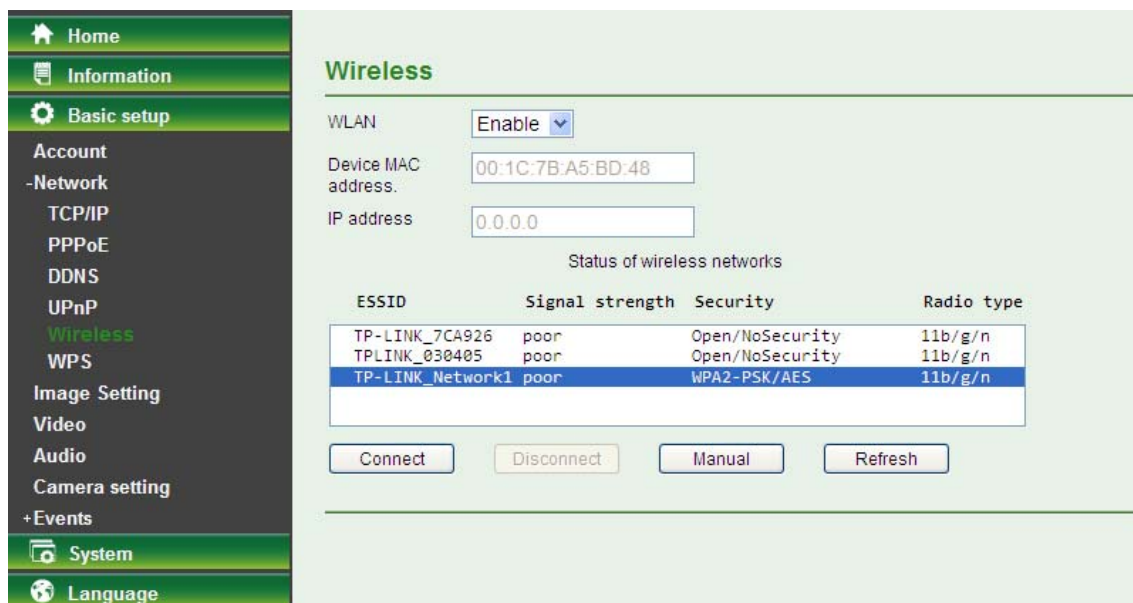
- **HTTP Port:** Enter the HTTP port number and default HTTP port is 80.
- **SSL Port:** Enter the SSL port number and default SSL port is 443.
- **RTSP Port:** Enter the RTSP port, default value is 554 for computer view.

Note:

UPnP (Universal Plug and Play): UPnP is a set of computer network protocol. It allows devices to connect seamlessly and simplify the implementation of networks in the home and corporate environments.

5.3.2.5 Wireless

The wireless network has to be set up by using cable network connection. After setting the Camera correctly, the wireless function can work without cable network connection. Wireless settings must be the same as the access point or ad-hoc device. When changing the settings they should always be made first in the Camera and then in the wireless access point. This ensures that the Camera is always accessible when making changes.



- **WLAN:** Select **Enable** to enable the wireless function; select **Disable** to disable the function.
- **Device Mac address:** This displays the MAC address of the Camera.
- **IP address:** This displays the IP address of the Camera. It displays blank, 0.0.0.0 or an IP Address. When it is blank, the Camera doesn't establish physical link with access point. The 0.0.0.0 means that physical link is established, and that Camera is trying to get the IP address. When it displays an IP address, users can use wireless network.
- **Status of Wireless Networks**

The list above is the result of network scan. The network currently linked to will be shown in blue. The following information is provided.

- **ESSID** - The name of a wireless network (or ad-hoc device). If the same name occurs several times this means that several access points for that network were found. The Camera cannot be configured to only associate with one particular access point.
- **Signal strength** - Shows the signal strength.
- **Security** - Shows which type of security the network uses. See below for the security types supported by the Camera.
- **Radio Type** - Displays the radio type of the wireless network.
- **Mode** - Shows if the network type is Managed (access point or router) or Ad-Hoc (another client).
- **Channel** - Shows the wireless channel currently in use.

Click the **Connect** button to connect the Camera to the selected wireless network. The ESSID will be automatically filled in and the IP address of the Camera will be obtained automatically.

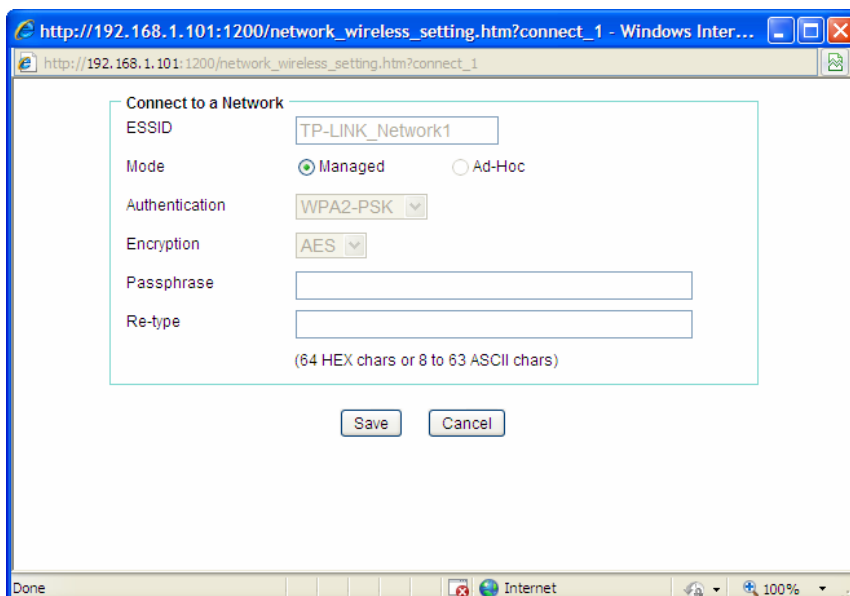
Click the **Disconnect** button to disconnect the Camera from the wireless networks.

Click the **Manual** button to connect the Camera to a wireless networks. The ESSID can be manually filled in; the IP address of the Camera can be obtained automatically or assigned manually.

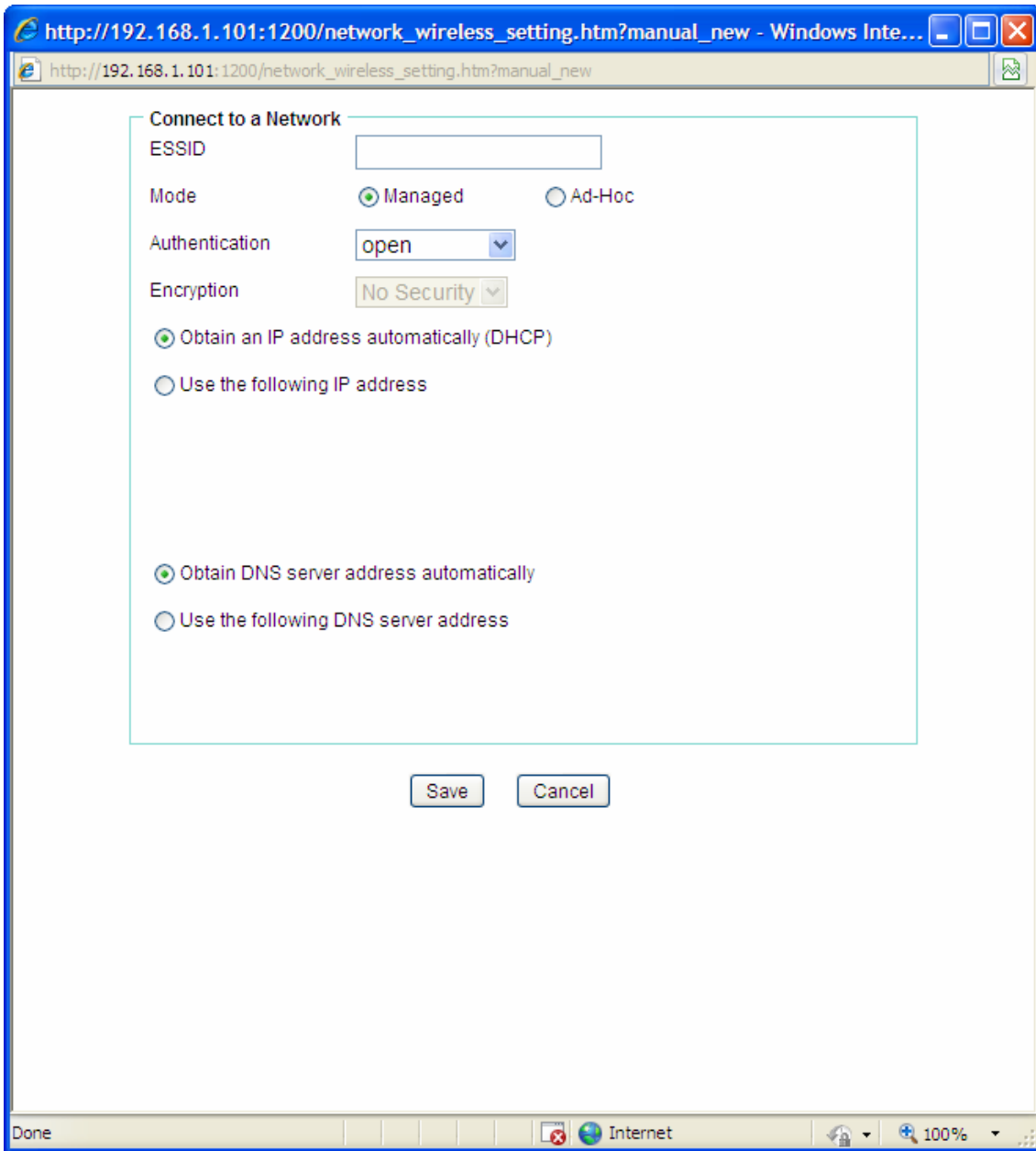
Click the **Refresh** button to rescan the existing wireless networks in the local area.

To connect to a network, please follow the instructions below:

If you want to automatically obtain the IP address of the Camera, you can select a wireless network and then click **Connect**. The network wireless setting page will display. Enter the Passphrase twice and click **Save** to apply the settings.

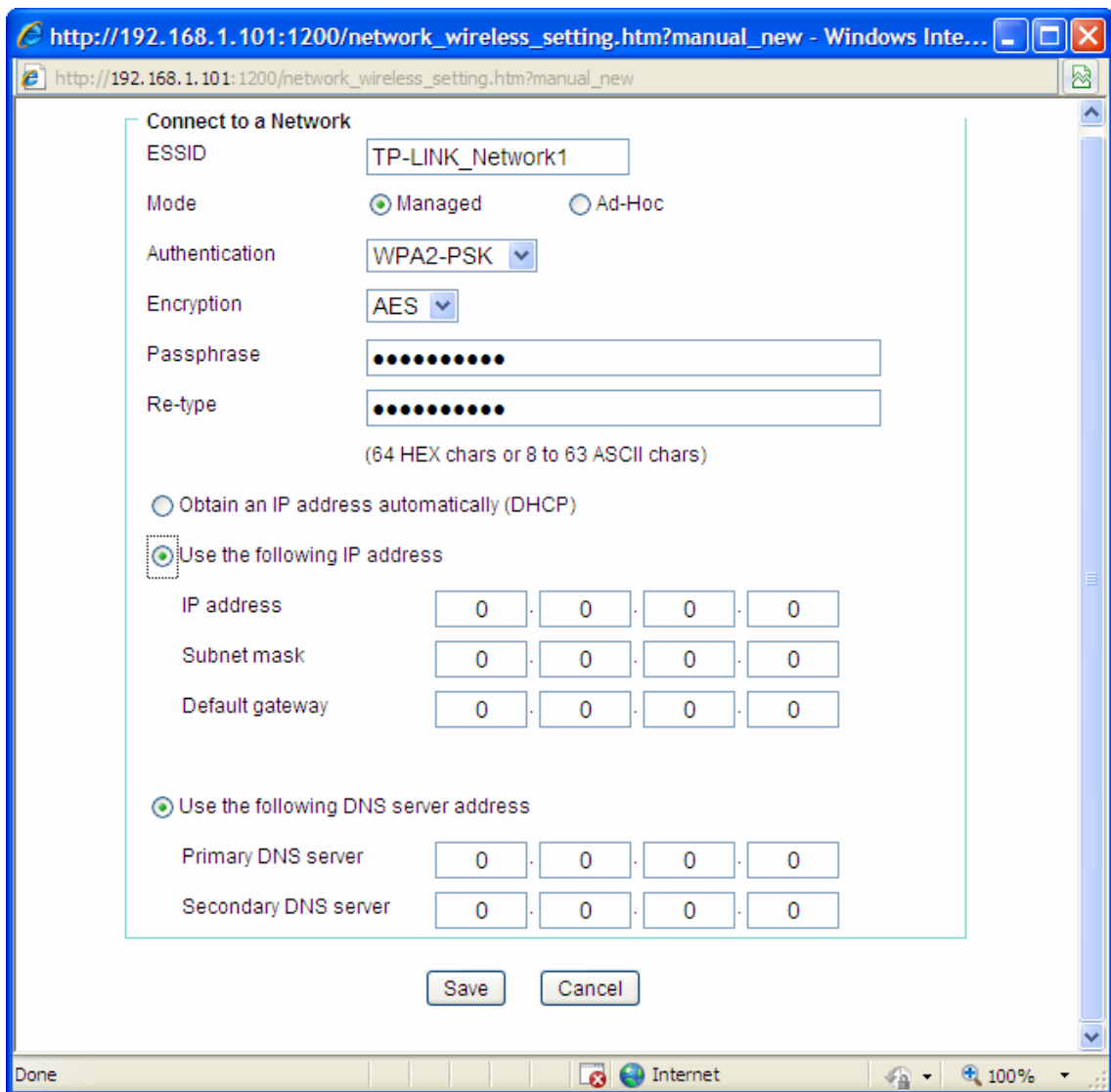


If you want manually fill in the ESSID of the wireless network, you can click **Manual** button. The network wireless setting page will display. Then enter the ESSID of the wireless network, select a mode, select the corresponding authentication and encryption, get an IP address for the Camera and click "**Save**".



- **ESSID** – Enter the name of a wireless network (or ad-hoc device).
- **Mode** – The **Managed** option means the Camera will attempt to connect to an access point. The **Ad-hoc** option allows the Camera to connect to other wireless device clients.
- **Authentication** – The authentication of the wireless network. All the parameters for authentication must be the same as that of the desired AP or Router. **Open**, **Open/Share**, **WPA-PSK** and **WPA2-PSK** encryption security are supported by the Camera. Enter the ESSID of the desired wireless network, the corresponding option should be selected as same as that of the desired AP or Router.

Here we take the wireless network with the ESSID of **TP-LINK_Network1** as an example. Its Authentication is **WPA2-PSK**. The figure will display as shown below:



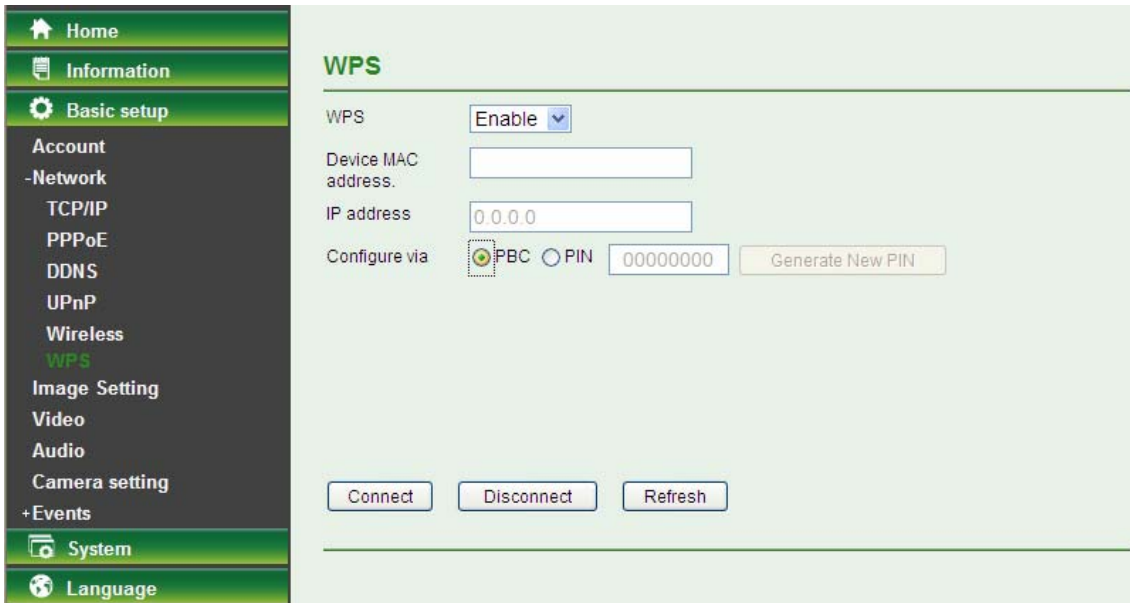
- **Encryption** – You can select **TKIP** or **AES**. Keep this option the same with that of the wireless network.
- **Passphrase** - Enter the desired AP/ Router's password here.
- **Re-type** – Enter the password above again to confirm it.
- **Obtain an IP address automatically (DHCP)** – If a DHCP server is installed and enabled on the network, to select this for the IP address can be assigned by the DHCP server.
- **Use the following IP address** - Select this when the fixed IP address is set.
 - ✧ **IP address:** Enter the IP address of the Camera, which must be in the same subnet with that of the desired AP/ Router.
 - ✧ **Subnet mask:** Enter the subnet mask.
 - ✧ **Default gateway:** Enter the default gateway.
- **Obtain DNS server address automatically** - If you select **Obtain an IP address automatically (DHCP)** above, this entry will display in the figure. Select this to obtain the address of DNS server automatically.
- **Use the following DNS server address** - Select this when you set the fixed address as the IP address of DNS server.
 - ✧ **Primary DNS server:** Enter the IP address of the primary DNS server.

- ✧ **Secondary DNS server:** Enter the IP address of the secondary DNS server, if necessary.

5.3.2.6 WPS

WPS (Wi-Fi Protected Setup) function allows you to add a new wireless device to an existing network quickly.

If the router supports Wi-Fi Protected Setup (WPS) or Quick Setup Security (QSS), you can establish a wireless connection between wireless Camera and router using either Push Button Configuration (PBC) method or PIN method.

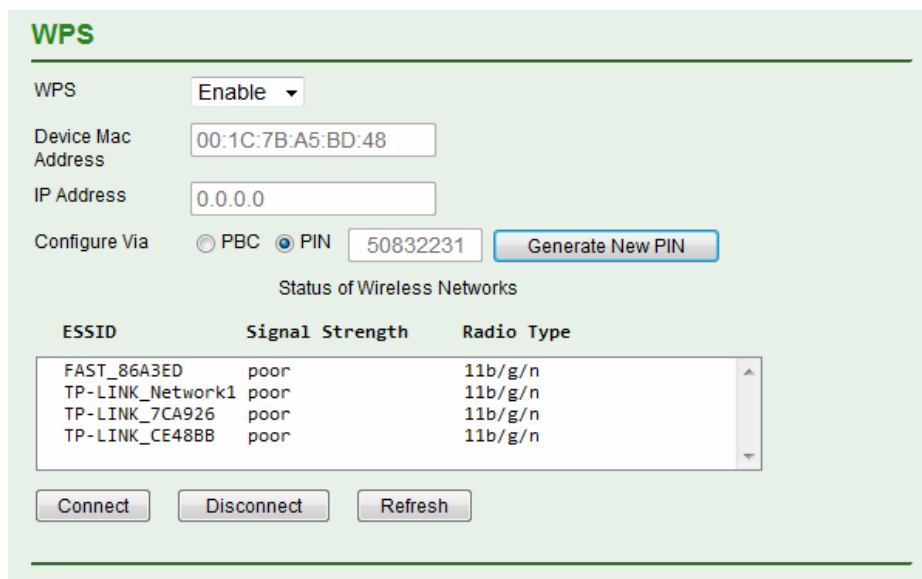


I. PBC (Push Button Configuration) method

1. Press the WPS/QSS button of the router.
2. Press the **WPS** button on the Camera in two minutes.

II. PIN method

1. Firstly, check **PIN** in the following screen. You can also click the **Generate new PIN** to get a new PIN.



- Secondly, open the router's Web-based Utility and click **WPS/QSS** link on the left of the main menu. Then the following screen will appear. Click **Add device**. And then select **Enter the new device's PIN**, enter the PIN value of the Camera and click **Connect**.

5.3.3 Image Setting

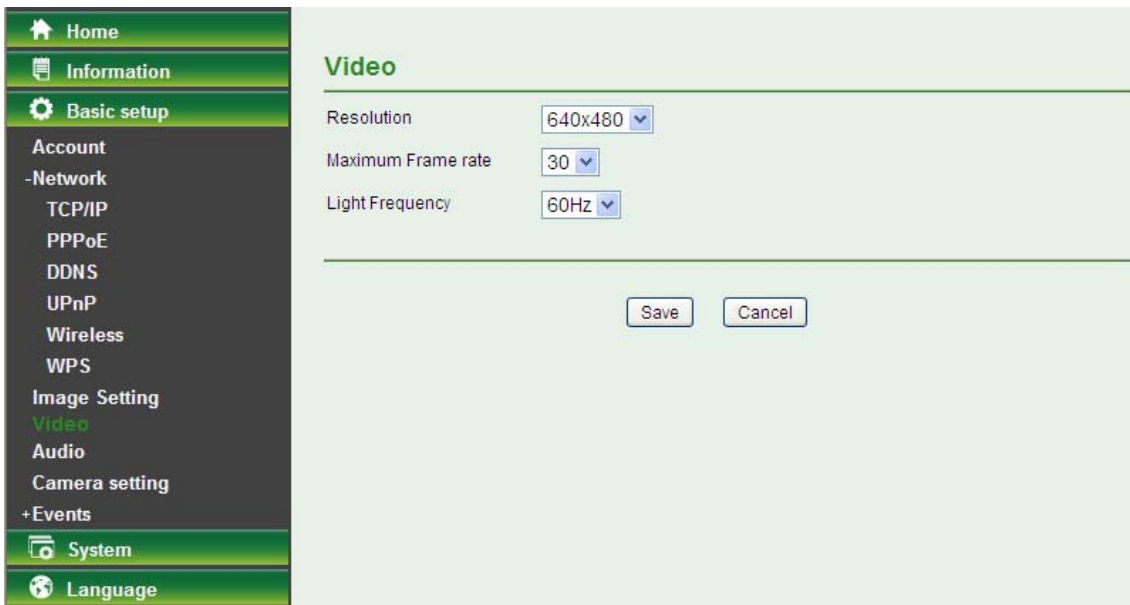
The tool bar can be adjusted to optimize video **Brightness, Saturation, Contrast, Sharpness** and **White Balance**.

- **Brightness:** The value range is 0~100. The higher value the brightness is, the brighter the image is.
- **Contrast:** The value range is 0~100. 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.
- **Saturation:** The value range is 0~100. 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.
- **Sharpness:** The value range is 0~100. It applies image processing techniques to adjust the sharpness of live view. However, the higher the value is, more the noise is.

- **Default:** After the adjustment of all setting, you can still click Default to make the setting back to the original setting.
- **Backlight Compensation:** Tick the box to enable the backlight compensation function.
- **White Balance:** Choose the white balance among **Auto**, **Florescent**, **Incandescent**, **Sunny** and **Cloudy**.

5.3.4 Video

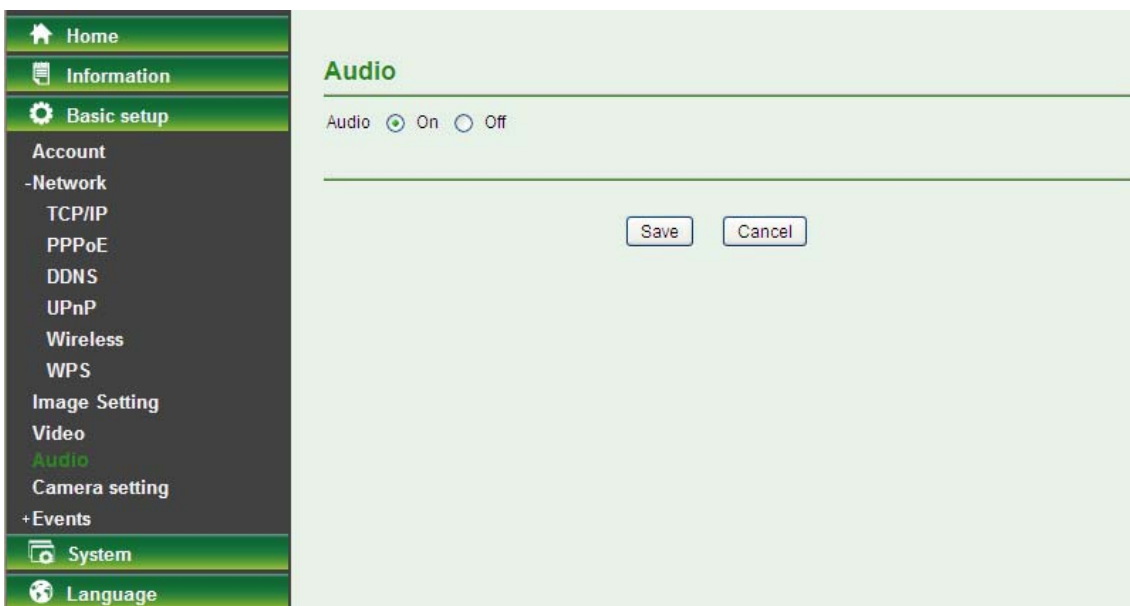
On this page, you can optimize the video by adjusting its **Resolution**, **Maximum Frame rate** and **Light Frequency**.



- **Resolution:** Select the video resolution among 640×480, 320×240 and 160×120.
- **Maximum Frame rate:** Select the maximum frame rate among 30, 20, 15, 10, 7, 5 and 1.
- **Light Frequency:** Select the light frequency among Auto, 60Hz and 50Hz.

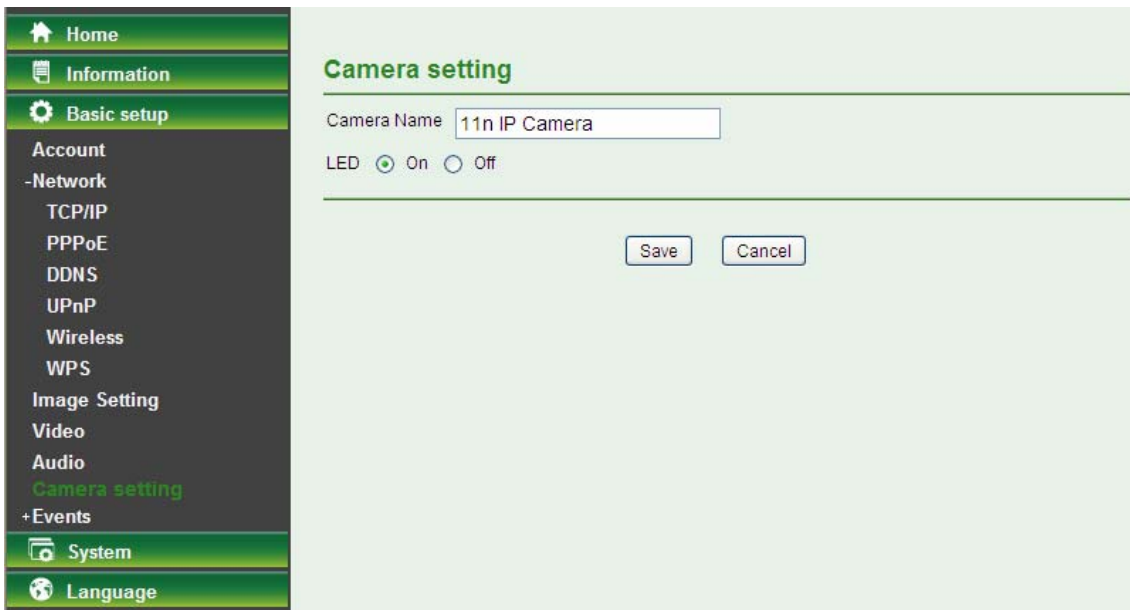
5.3.5 Audio

Select **On** to enable the audio; select **Off** to disable it.



5.3.6 Camera setting

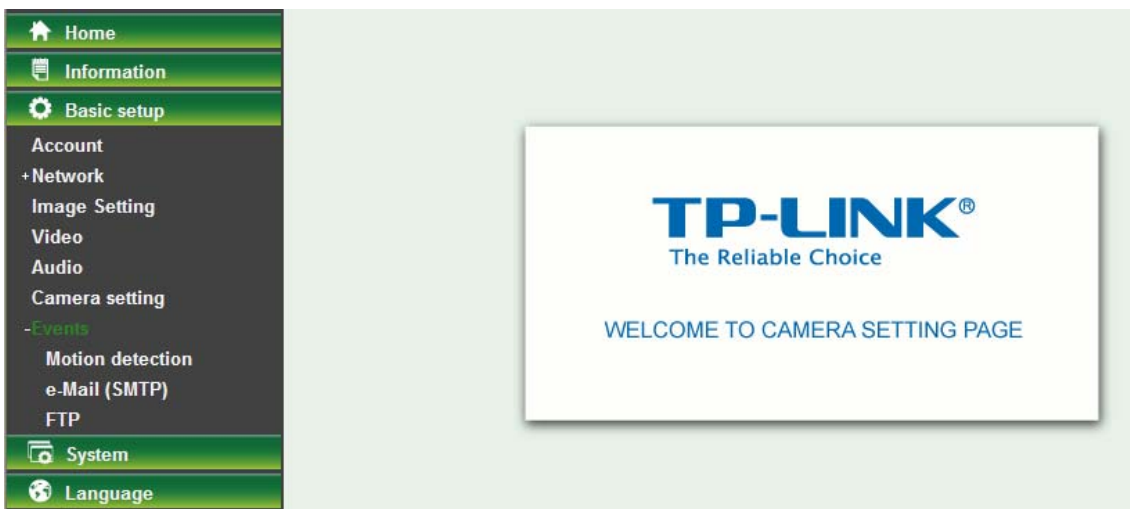
On this page, you can set the Camera Name and whether the LED is on or off.



- **Camera Name:** You can enter a new name for the Camera.
- **LED:** Select **On** to enable the LEDs; select **Off** to disable the LEDs.

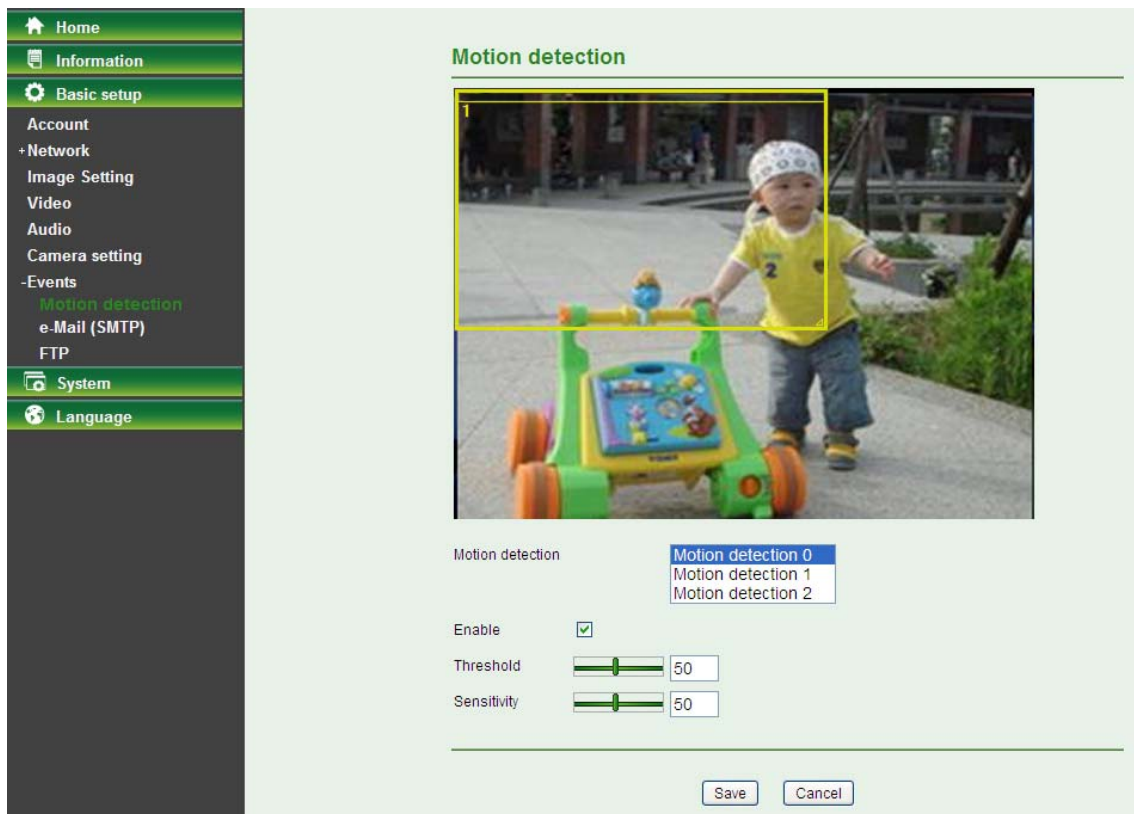
5.3.7 Events

Click **Events** to display the submenus including **Motion detection**, **e-Mail (SMTP)** and **FTP**.



5.3.7.7 Motion detection

There are three Motion Detection functions as sensors to set for different detecting zones. Each one has Threshold and Sensitivity inputs which you can adjust to specific zone sequentially.



- **Motion Detection:** Click to select motion detection.
 - **Motion Detection 1:** Click it on for using **Motion Detection 1** function as a sensor. You can adjust and move the detecting zone by using mouse.
 - **Motion Detection 2:** Click it on for using **Motion Detection 2** function as a sensor. You can adjust and move the detecting zone by using mouse.
 - **Motion Detection 3:** Click it on for using **Motion Detection 3** function as a sensor. You can adjust and move the detecting zone by using mouse.
- **Enable:** Tick the box to enable the selected motion detection.
- **Threshold:** It means the extent to which the alarm will be triggered. The default value is 50 and the value range is 0~100. The larger the value, the higher the threshold.
- **Sensitivity:** It means that how often the sensor will scan the image different. The higher sensitivity it is and the more frequently it scans. The default value is 50 and the value range is 0~100. The larger the value, the higher the sensitivity.

5.3.7.8 e-Mail (SMTP)

Set the e-Mail (SMTP) menu when you want to send an image or video clip via e-mail. By using e-Mail (SMTP) function, you can send a mail with attached file which has been shot linked with the external sensor input or with the built-in motion detection function. The file can also be sent periodically.

Select **On** when you use the e-Mail (SMTP) function. The common setting options are displayed below. Select **Off**, if you do not wish to use the e-Mail (SMTP) function.

- **SMTP Server Name:** Type the SMTP server name up to 64 characters, or the IP address of the SMTP server.
- **SMTP Server Port:** You can set port number from 1~65535 according to your mail server. The default value is 25.
 - **SSL:** Tick SSL box if the mail server you use has security restriction.

Note:

If you use g-mail as your mail server, you should set 25 as your port number and tick SSL box.

- **Authentication:** Select the authentication required when you send an email.
 - **Off:** Select if no authentication is necessary when an email is sent.
 - **On:** If authentication is necessary when an e-mail is sent, select one of the authentication methods from the followings.
- **SMTP:** Select if SMTP authentication is necessary for sending e-mail.
- **POP Before SMTP:** Select when POP before SMTP authentication is necessary for sending e-mail.

Note:

When you set to **On**, be sure to select either or both **SMTP** or / and **POP before SMTP**.

- **POP server name:** It is necessary when the **POP before SMTP** is selected in **Authentication**. Type the POP (receiving mail) server name up to 64 characters, or type the IP address of the POP server. This setting is necessary when the SMTP server which sends e-mails performs authentication using the POP user account.
- **User name, Password:** Type the user name and Password of the user who has the mail account. This setting is necessary when the SMTP server which sends e-mails performs authentication.

- **Recipient E-mail Address:** Type the recipient e-Mail address up to 64 characters. You can specify up to three recipient E-mail addresses.
- **Administrator E-mail Address:** Type the Administrator e-Mail address up to 64 characters. This address is used for reply mail and sending system messages from the SMTP server.
- **Attached File Type:** You can choose snapshot or video clip for alarm sending. Select “Snapshot,” one snapshot will be transmitted to the administrator’s e-mail address while motion detection / audio detection triggered. Select “Video Clip,” one 5-seconds video clip will be transmitted.
- **Subject:** Type the subject/title of the e-Mail up to 64 characters. With respect to mail which is sent according to the alarm detection when **Alarm sending** of the alarm tab is set to **On**, the characters standing for the sensor type added to the subject.
- **Message:** Type the text of the E-mail up to 384 characters. (A line break is equivalent to 2 characters.)
- **Test:** After setting the SMPT server information, you can tick the test key to test if the connection between IP CAM and the SMPT server work.
- **Effective Period:** Set the period when the periodical sending is effective.
 - **Always:** The periodical sending is always effective.
 - **Schedule:** You can specify the period when the periodical sending is effective in the schedule setting in the other section.

Select Schedule and click the **Schedule** button, and the Schedule setting page will appear.

- **Schedule Selection:** Select the list box to specify the schedule you want to set.
 - ✓ FTP -Alarm / E-mail (SMTP) -Alarm
- **Start Time, End Time:** Specify the **Start Time** and the **End Time**.
- **Use the same time schedule every day:** When this is checked, the **Start Time** and **End Time** set to **Mon** (Monday) are applied to all days. In this case, the **Start Time** and **End Time** of the other days than **Mon** (Monday) cannot be input.
 - ✓ **Mon (Monday) to Sun (Sunday):** The time period on the right of the checked day is the effective period of the schedule.

5.3.7.9 FTP

Use this menu to set up for capturing and sending an image or video clip to an FTP server. By using FTP client function, you can send files which has been shot and recorded linked with the external sensor input or with the built-in motion detection function to FTP server.



Select **On** when you use FTP function. The FTP client Setting screen appears.

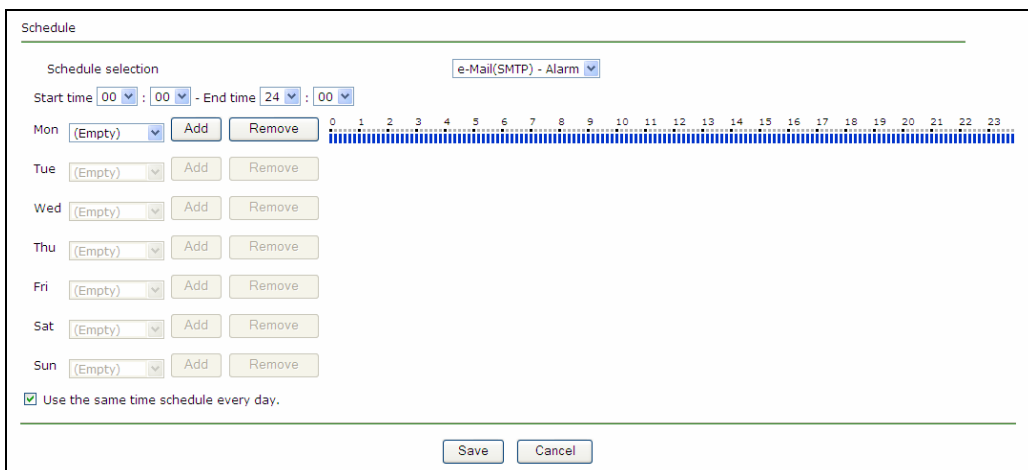
Select **Off**, when you do not wish to use the FTP client function.

Note:

The frame rate and operability on the main viewer may decrease while a file is being transmitted by the FTP client function.

- **FTP Server Name:** Type the FTP server name to upload still images up to 64 characters, or the IP address of the FTP server.
- **User Name:** Type the user name for the FTP server.
- **Password:** Type the password for the FTP server.
- **Re-type Password:** To confirm the password, type the same characters as you typed in the Password box.
- **Passive Mode:** Set whether you use the passive mode of FTP server or not when connecting to FTP server. Select **On** to connect to FTP server using the passive mode.
- **Test:** After setting the FTP server information, you can tick the test key to test if the connection between IP CAM and FTP server works.
- **Effective Period:** Set the period when the periodical sending is effective.
 - **Always:** The periodical sending is always effective.
 - **Schedule:** You can specify the period when the periodical sending is effective in the schedule setting in the other section.

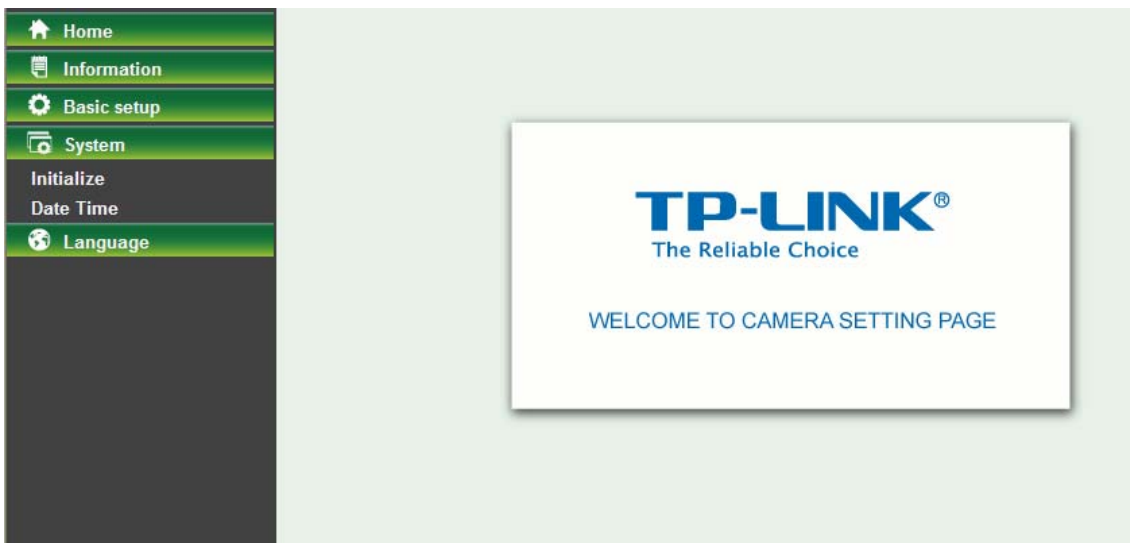
Select **Schedule** and click the **Schedule** button, and the Schedule setting page will appear.



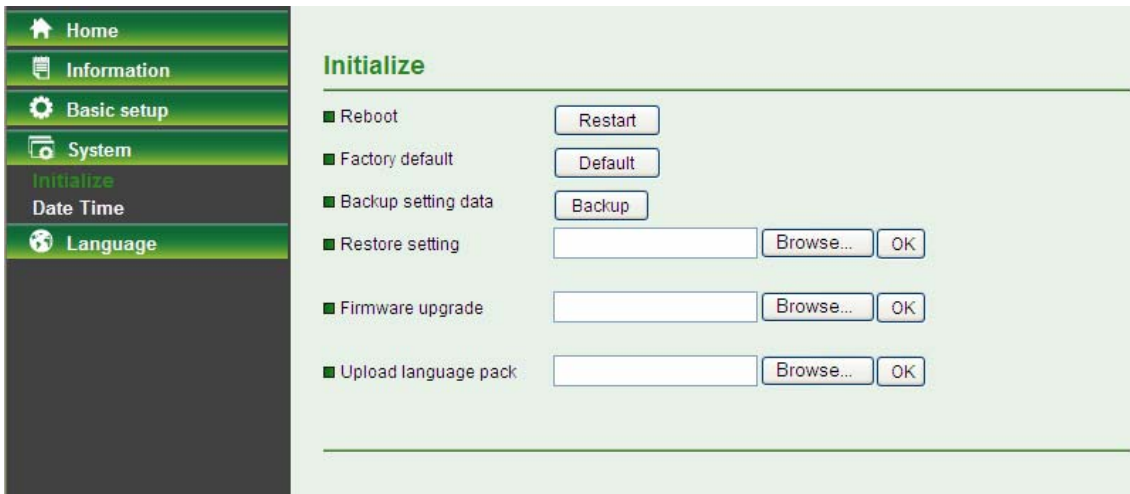
- **Schedule Selection:** Select the list box to specify the schedule you want to set.
 - ✓ FTP -Alarm / E-mail (SMTP) -Alarm
- **Start Time, End Time:** Specify the **Start Time** and the **End Time**.
- **Use the same time schedule every day:** When this is checked, the **Start Time** and **End Time** set to **Mon** (Monday) are applied to all days. In this case, the **Start Time** and **End Time** of the other days than **Mon** (Monday) cannot be input.
 - ✓ **Mon (Monday) to Sun (Sunday):** The time period on the right of the checked day is the effective period of the schedule.

5.4 System

Click **System** to display the sub-folders including **Initialize** and **Date Time**.



5.4.1 Initialize



- **Reboot:** Click this button to reboot this Camera. It takes one minute to complete the reboot process.
- **Factory Default:** Click this button to recover this Camera to the factory default setting. A confirmation dialogue will appear and then click **“OK”** to execute. The network indicator on this Camera will start to blink. This Camera will reboot automatically after completing adjustments to the default setting. Don't turn off this Camera until the device finish rebooting.
- **Backup Setting:** Click this button to save the setting data of this Camera into a file. Click **“Save”** and follow the instructions on the browser to save the setting data file to the location you specified.

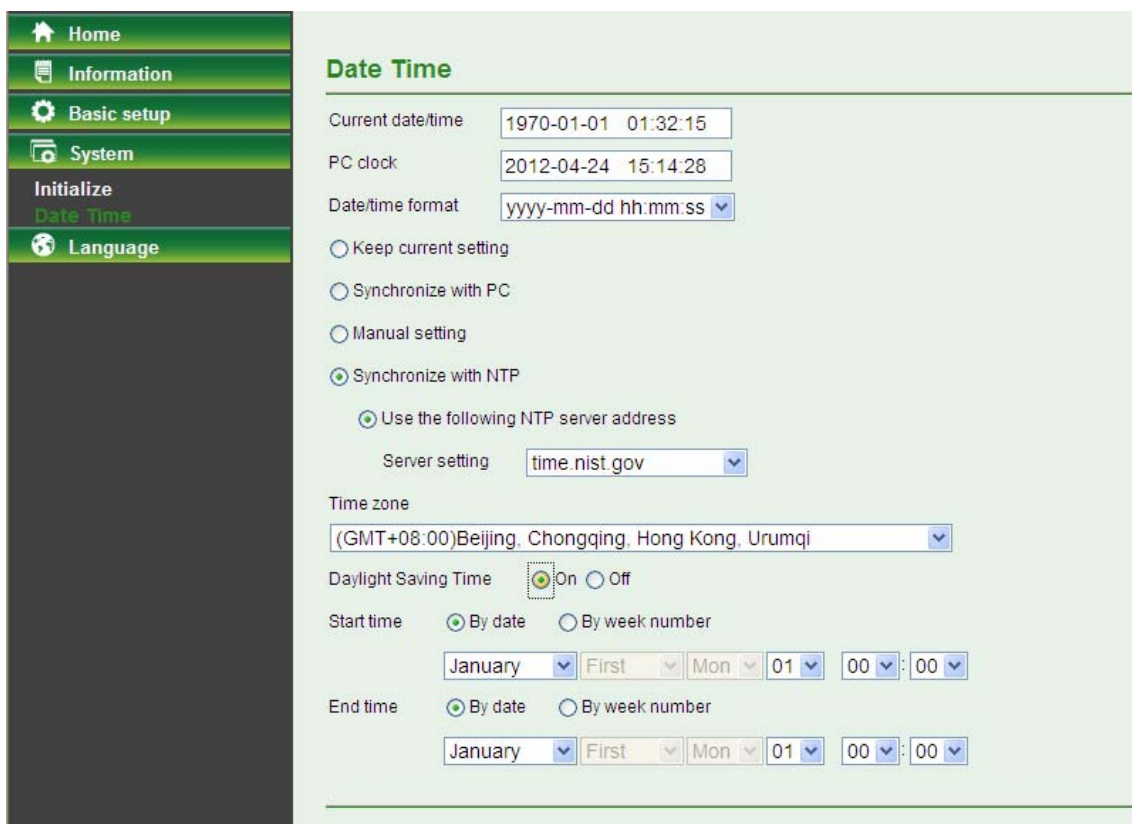
- **Restore Setting:** Download the saved setting data of this Camera. Click “**Browse**” and select saved file. Click “**OK**” and this Camera is adjusted according to the loaded data and then restarted.
- **Firmware Update:** Update the device software. Click “**Browse**” and select the file for updating. A confirmation dialogue will appear. Click “**OK**” to start. This Camera will reboot upon completion.
- **Upload language pack:** Click “**Browse**” and select the file for updating, and then 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**”.

 **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.

5.4.2 Date Time

The Date Time screen displays all options of time setting.



The screenshot shows the 'Date Time' configuration page. On the left is a navigation menu with options: Home, Information, Basic setup, System, Initialize, Date Time (highlighted), and Language. The main content area is titled 'Date Time' and contains the following settings:

- Current date/time:** 1970-01-01 01:32:15
- PC clock:** 2012-04-24 15:14:28
- Date/time format:** yyyy-mm-dd hh.mm.ss (dropdown menu)
- Synchronization options:**
 - Keep current setting
 - Synchronize with PC
 - Manual setting
 - Synchronize with NTP
 - Use the following NTP server address
 - Server setting:** time.nist.gov (dropdown menu)
- Time zone:** (GMT+08:00)Beijing, Chongqing, Hong Kong, Urumqi (dropdown menu)
- Daylight Saving Time:** On Off
- Start time:** By date By week number
 - Month: January (dropdown), Day: First (dropdown), Weekday: Mon (dropdown), Hour: 01 (dropdown), Minute: 00 (dropdown), Second: 00 (dropdown)
- End time:** By date By week number
 - Month: January (dropdown), Day: First (dropdown), Weekday: Mon (dropdown), Hour: 01 (dropdown), Minute: 00 (dropdown), Second: 00 (dropdown)

- **Current Date / Time:** This displays the current date and time of this Camera.
- **PC Clock:** This displays the date and time of the monitoring PC clock.
- **Date/Time Format:** You can click the drop-down list to select different time display formats.
- **Keep current setting:** Select this mode to keep the current date and time of this Camera.
- **Synchronize with PC:** Select this mode to keep the date and time of this Camera is the same as the monitoring PC.
- **Manual setting:** Select this mode to adjust manually the date and time of this Camera.
- **Synchronize with NTP:** Specify the NTP server name and the Refresh Interval to synchronize the date and time of this Camera with those of the time server, known as the NTP server.

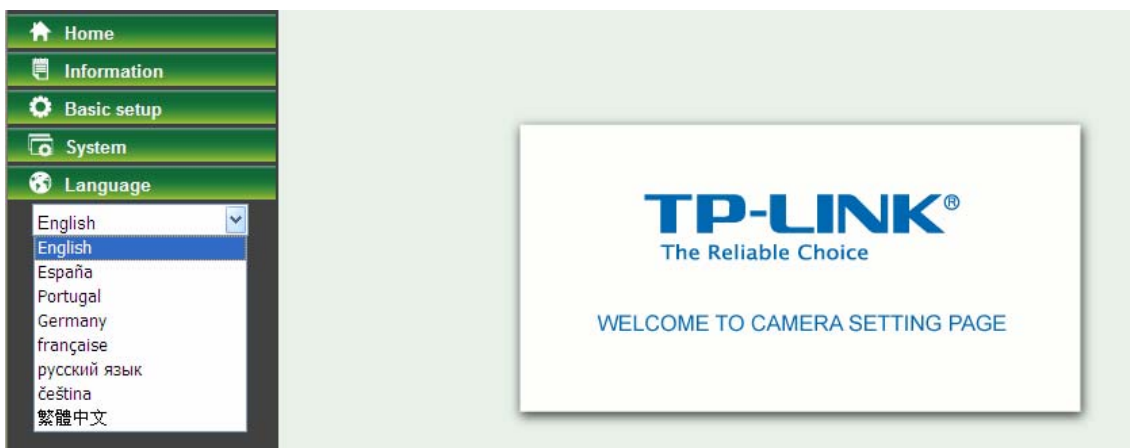
 **Note:**

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.

- **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.

5.5 Language

Select a language from the drop-down list, the present display language of WEB User Interface will be changed.



Appendix

A. Frame-rate and Bitrate Table – Help to set Camera with your network environment to access Internet.

Base on your network upload environment to choose the suitable Image-Quality setting. For example, if the network environment is ADSL 256Kb (upload) / 2Mb (download), the most fluent Image-Quality needs to set up under 256Kb situation.

MJPEG / Kbps, fps

| Image Size | Frame Rate Setting(FPS) | Current Bitrate(Kbps) | Current Frame Rate(FPS) |
|------------|-------------------------|-----------------------|-------------------------|
| 640*480 | 30 | 9746 | 29 |
| 640*480 | 20 | 6419 | 19 |
| 640*480 | 15 | 4970 | 14 |
| 640*480 | 10 | 3162 | 9 |
| 640*480 | 7 | 2427 | 7 |
| 640*480 | 5 | 1961 | 5 |
| 640*480 | 1 | 392 | 1 |
| 320*240 | 30 | 3416 | 29 |
| 320*240 | 20 | 2270 | 19 |
| 320*240 | 15 | 1770 | 14 |
| 320*240 | 10 | 1188 | 9 |
| 320*240 | 7 | 900 | 7 |
| 320*240 | 5 | 706 | 5 |
| 320*240 | 1 | 147 | 1 |
| 160*120 | 30 | 1493 | 29 |
| 160*120 | 20 | 989 | 19 |
| 160*120 | 15 | 756 | 14 |
| 160*120 | 10 | 499 | 9 |
| 160*120 | 7 | 346 | 7 |
| 160*120 | 5 | 302 | 5 |
| 160*120 | 1 | 62 | 1 |

B. Storage Requirement Table - Help to set Recording Storage System

Please refer to the following table to find out the capability for recording into your hard disk.

MJPEG Storage Requirement GB /1 Channel / Day

| Image Size | Frame Rate Setting(FPS) | Current Bitrate(Kbps) | GB /1Channel / 1Day |
|------------|-------------------------|-----------------------|---------------------|
| 640*480 | 30 | 9746 | 100.4 |
| 640*480 | 20 | 6419 | 66.1 |
| 640*480 | 15 | 4970 | 51.2 |

| | | | |
|---------|----|------|------|
| 640*480 | 10 | 3162 | 32.6 |
| 640*480 | 7 | 2427 | 25.0 |
| 640*480 | 5 | 1961 | 20.2 |
| 640*480 | 1 | 392 | 4.0 |
| 320*240 | 30 | 3416 | 35.2 |
| 320*240 | 20 | 2270 | 23.4 |
| 320*240 | 15 | 1770 | 18.2 |
| 320*240 | 10 | 1188 | 12.2 |
| 320*240 | 7 | 900 | 9.3 |
| 320*240 | 5 | 706 | 7.3 |
| 320*240 | 1 | 147 | 1.5 |
| 160*120 | 30 | 1493 | 15.4 |
| 160*120 | 20 | 989 | 10.2 |
| 160*120 | 15 | 756 | 7.8 |
| 160*120 | 10 | 499 | 5.1 |
| 160*120 | 7 | 346 | 3.6 |
| 160*120 | 5 | 302 | 3.1 |
| 160*120 | 1 | 62 | 0.6 |

C. System Requirement – Help to setup System

| Item | Requirements |
|------------------|--|
| CPU | Pentium 4 2.8GHz (or equivalent AMD) |
| Graphic Card | 256 MB RAM graphic cards (or equivalent on-board graphic cards) |
| RAM | 2 GB RAM |
| Operating System | Windows 2000 / Windows 2003 / Windows XP / Windows Vista / Windows 7 |
| Web Browser | Internet Explore 8 or higher |

Europe – EU Declaration of Conformity






This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:











| Clause | Description |
|---|--|
| EN 60950-1: 2001 | Safety of Information Technology Equipment |
| EN 50392: 2004 | Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz - 300 GHz) |
| EN 300 328 V1.6.1 (2004-11) | Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive |
| EN 301 489-17 V1.2.1 (2002-08) and EN 301 489-1 V1.5.1 (2004-11) | Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment |


This device is a 2.4 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies.

In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.

| | |
|---|--|
|  Český [Czech] | <i>[Jméno výrobce]</i> tímto prohlašuje, že tento <i>[typ zařízení]</i> je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES. |
|  Dansk [Danish] | Undertegnede <i>[fabrikantens navn]</i> erklærer herved, at følgende udstyr <i>[udstyrets typebetegnelse]</i> overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF. |
|  Deutsch [German] | Hiermit erkläre <i>[Name des Herstellers]</i> , dass sich das Gerät <i>[Gerätetyp]</i> in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet. |
|  Eesti [Estonian] | Käesolevaga kinnitab <i>[tootja nimi = name of manufacturer]</i> seadme <i>[seadme tüüp = type of equipment]</i> vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele. |
|  English | Hereby, <i>[name of manufacturer]</i> , declares that this <i>[type of equipment]</i> is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. |

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|---|--|
|  Español [Spanish] | Por medio de la presente [<i>nombre del fabricante</i>] declara que el [<i>clase de equipo</i>] cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE. |
|  Ελληνική [Greek] | ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ [<i>name of manufacturer</i>] ΔΗΛΩΝΕΙ ΟΤΙ [<i>type of equipment</i>] ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ. |
|  Français [French] | Par la présente [<i>nom du fabricant</i>] déclare que l'appareil [<i>type d'appareil</i>] est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE. |
|  Italiano [Italian] | Con la presente [<i>nome del costruttore</i>] dichiara che questo [<i>tipo di apparecchio</i>] è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE. |
| Latviski [Latvian] | Ar šo [<i>name of manufacturer / izgatavotāja nosaukums</i>] deklarē, ka [<i>type of equipment / iekārtas tips</i>] atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem. |
| Lietuvių [Lithuanian] | Šiuo [<i>manufacturer name</i>] deklaruoja, kad šis [<i>equipment type</i>] atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas. |
|  Nederlands [Dutch] | Hierbij verklaart [<i>naam van de fabrikant</i>] dat het toestel [<i>type van toestel</i>] in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG. |
|  Malti [Maltese] | Hawnhekk, [<i>isem tal-manifattur</i>], jiddikjara li dan [<i>il-mudel tal-prodott</i>] jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Dirrettiva 1999/5/EC. |
|  Magyar [Hungarian] | Alulírott, [<i>gyártó neve</i>] nyilatkozom, hogy a [<i>... típus</i>] megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak. |
|  Polski [Polish] | Niniejszym [<i>nazwa producenta</i>] oświadczam, że [<i>nazwa wyrobu</i>] jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC. |
|  Português [Portuguese] | [<i>Nome do fabricante</i>] declara que este [<i>tipo de equipamento</i>] está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE. |
|  Slovensko [Slovenian] | [<i>Ime proizvajalca</i>] izjavlja, da je ta [<i>tip opreme</i>] v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES. |
| Slovensky [Slovak] | [<i>Meno výrobcu</i>] týmto vyhlasuje, že [<i>typ zariadenia</i>] spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES. |
|  Suomi [Finnish] | [<i>Valmistaja = manufacturer</i>] vakuuttaa täten että [<i>type of equipment = laitteen tyyppimerkintä</i>] tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen. |

| | |
|--|---|
| <p> Svenska [Swedish]</p> | <p>Härmed intygar [<i>företag</i>] att denna [<i>utrustningstyp</i>] står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.</p> |
|--|---|

Federal Communication Commission Interference 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 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:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution:

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

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.