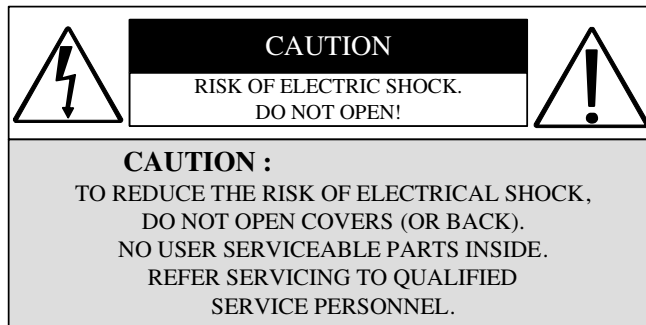


**Full HD / 2M Real Time D&N
Fixed Indoor
IR Cube IP Camera**

User Manual





It is advised to read the Safety Precaution Guide through carefully before operating the product, prevent any possible danger.

 **WARNING:** This symbol is intended to alert the user to the presence of un-insulated “dangerous voltage”.

 **CAUTION:** This symbol is intended to alert the user to presence of important operating and maintenance (Servicing) instructions in the literature accompanying the appliance.

 **Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems).**

 symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product. The power cord is the main power connection. Therefore, constantly plug and unplug of the power cord might result in malfunction of the product.

  CE / FCC Mark.

This apparatus is manufactured to comply with radio interference requirement.

Do not install the product in an environment where the humidity is high.

Unless the product is waterproof or weatherproof, otherwise it can cause the image quality to be poor.

Do not drop the product or subject them to physical shocks.

Except for vandal-proof or shockproof product, otherwise it will result malfunctions to occur.

Never keep the product to direct strong light.

It can damage the product.

Do not spill liquid of any kind on the product.

If it gets wet, wipe it dry immediately. Alcohol or beverage can contain minerals that corrode the electronic components.

Do not expose to extreme temperatures.

Use the product at temperatures within 0°C ~ 50°C.

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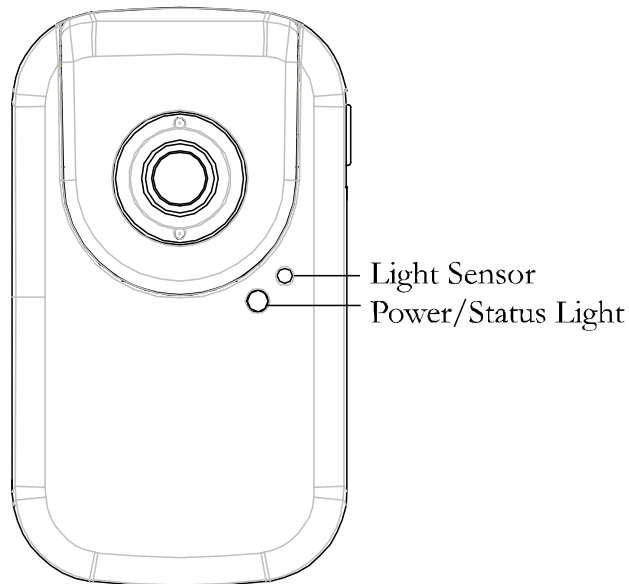
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Product Feature

- 2 Megapixel image; resolution is up 1920x1080.
- Support H.264 / MJPEG codec, video quality is adjustable, video type can be divided into H.264_1 、H.264_2(3GPP) and MJPEG
- Built-in speaker, easier to broadcast through camera directly.
- Instant record button, record live image to Micro SD card.
- Support G.711 codec, two ways audio is supported.
- Support high performance network transmission algorithm, provide low-latency video and audio stream.
- Support event and schedule recording.
- Support multiple events search (alarm and motion) for basic and intelligent playback. (Function is provided by bundle software)
- Support motion detection; detection area and sensitivity are adjustable.
- Support multiple alarm and event trigger.
- Video stream bit rate, frame rate and resolution are adjustable.
- Multi-language supported.
- Support multi-level password and protection in order to provide the highest security.
- Support Micro SD Card, Local-flash or external USB storage media for pre-event and post-event recording image data, support for remote backup video files.
- Support remote setup, live view, recording, snapshot, ftp and firmware upgrade by web page or bundled software.
- Provide SecuUtility for searching and network setting up supportive device in LAN.
- Network protocol supported: HTTP, UPnP, DNS, DDNS, RTSP, RTP, RTCP, RTSP over HTTP, TCP/IP, UDP/IP, ICMP, DHCP, PPPoE, FTP, NTP, SMTP, Bonjour, Multi-Casting.
- Support auto re-connecting after network or power shortage.
- Free bundle 32 channel surveillance software. Support maximum 32 channels live view and 16 channels playback simultaneously.

Physical Description

Front Panel Description



■ **Light Sensor**

Detect incoming light sensor. While the incoming light is too low, image will display in monochrome automatically.

■ **Power/Staus Light**

The power lighting is a two color indicator.

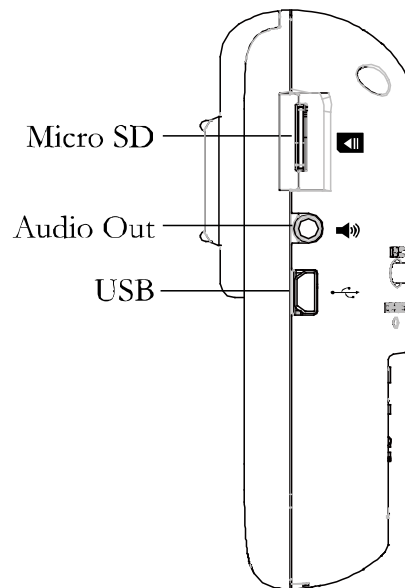
➤ **Red Light**

When power light, red light, on means device boots up successfully; power light off means there is no power input. When power light blinking means device operation system is being loaded or hardware resets.

➤ **Orange Light**

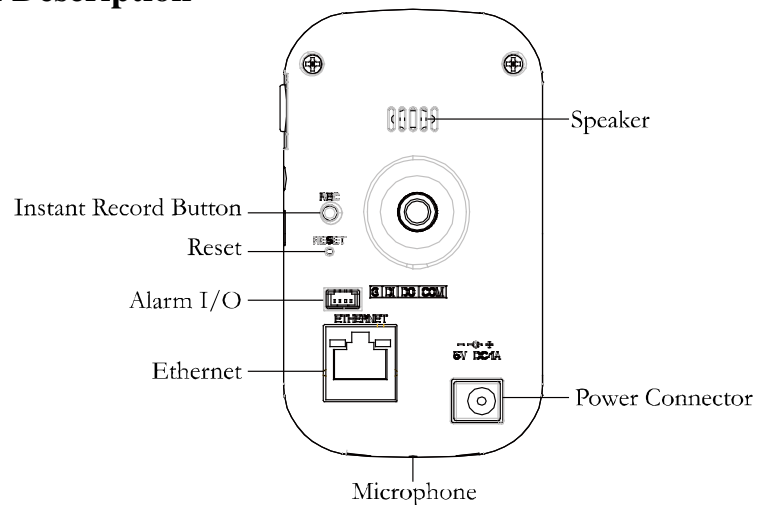
When the light turns orange means instant record is on. When instant record is off, light returns back to red lighting.

Side Panel Description



- **Micro SD**
Support Micro SD card, the maximal capacity could be up to 32 GB. Device doesn't support Micro SD hot swapping, please reboot system after insert or remove Micro SD card.
- **Audio Out**
Slot for audio out connector.
- **USB**
USB connector, can be an external wireless dongle or external storage devices function. External storage media (USB flash) can support up to 32GB.

Rear Panel Description



■ Speaker

Built-in speaker; audio output to speaker and audio out device at the same time when user uses broadcast function.

■ Instant Record Button

Press the button to record live image as video into Micro SD. This button is designed for long-term record function. When the instant record enables, lighting in front panel turns orange light. To stop record, please press the button again. Please note that event record will stop until instant record finish.

Instant record file is saved as AVI format, 5 minute a file. To enable overwrite function please refer to Backup Device description, chapter 3.5. If overwrite function is not enabled, system will stop recording automatically when micro SD card capacity is less than 200MB.

■ RESET

When system is frozen, please press the reset button and keep it depressed for 5 seconds, after the power light is blinking, then release the reset button, the system will finish rebooting procedure in one minute. When the power light is on; the device is booted up successfully.

■ Alarm I/O

To connect external alarm I/O devices, please refer to below for Alarm I/O pin definition. User can find a 4 pin and 2 pin connectors in product package.

G	DI	DO	COM
---	----	----	-----

G: ground wire.

DI: connect to alarm in device.

DO: connect to N.O(normal open) alarm out device.

COM: connect point that corresponds to alarm in.

■ Ethernet

Connect to Ethernet network.

■ 5V DC/1A Power Connector

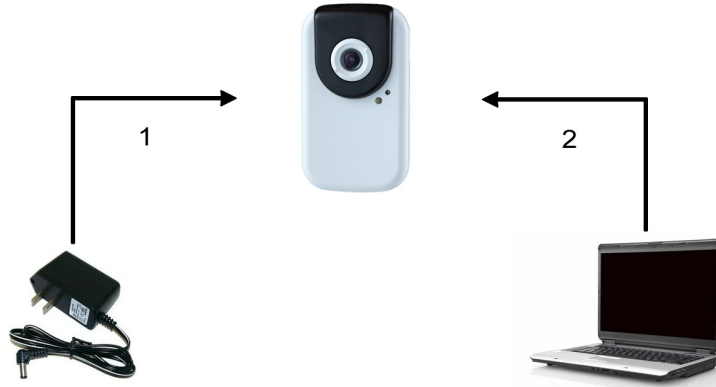
Connect to 12V DC power adapter.

■ Microphone

Built-in microphone.

Quick Installation

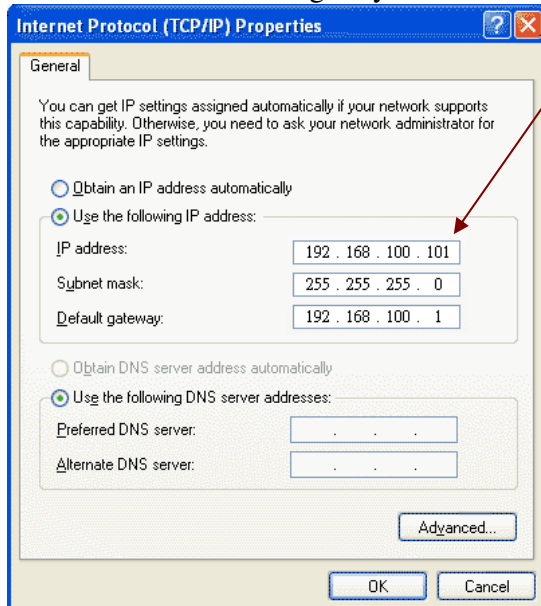
Basic Connection



1. Connect the 5V DC adaptor to the power jack of the IP camera.
2. Use Ethernet cable to make connection from the Ethernet 10/100 RJ45 socket of IP camera to the PC.

Network Setting

After completing the basic hardware connection, make sure that the PC and the IP camera IP address are both in the same network segment. Example: Setup preset IP camera IP to 192.168.100.100 and configure your PC IP address as the figure description below.



Setup format :

IP Address : 192.168.100.xxx

Subnet Mask : 255.255.255.0

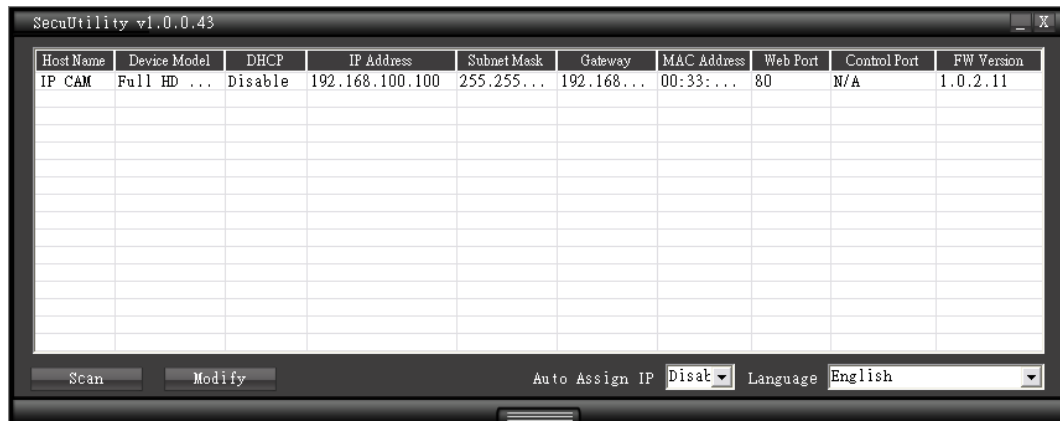
Default Gateway : 192.168.100.1

※Note

xxx address ranges from 1~254, please avoid using “100” which has been used by IP camera.

SecuUtility

1. Please install SecuUtility from the product CD. (Please refer to chapter 3.3.1 for installation procedures.)
2. Start SecuUtility.
3. After starting SecuUtility, the program will automatically search and display supportive devices in local LAN.



4. Choose which device you would like to access, the default IP address on the device is 192.168.100.100
5. Double click on the IP address, will automatically open the selected device web image.
6. Please select on the device you would like to modify its setting and click “Modify”.

The screenshot shows the 'System Setting' dialog box in MikroTik WinBox. The dialog has a dark grey header with the title 'System Setting'. Below the header, there are several configuration fields, each with a label on the left and a text input field on the right. The fields are: Username (admin), Password (*****), Host Name (IP_CAM), DHCP (unchecked checkbox), IP Address (192.168.100.100), Subnet Mask (255.255.255.0), Gateway (192.168.100.1), Web Port (80), Control Port (N/A), FW Version (1.0.2.11), and FW Upgrade (unchecked checkbox). To the right of the Password field is a 'Login' button. To the right of the Control Port field is a 'Save' button. At the bottom right of the dialog is a 'Cancel' button. The background of the WinBox interface is visible behind the dialog.

Field	Value
Username	admin
Password	*****
Host Name	IP_CAM
DHCP	☐
IP Address	192.168.100.100
Subnet Mask	255.255.255.0
Gateway	192.168.100.1
Web Port	80
Control Port	N/A
FW Version	1.0.2.11
FW Upgrade	☐

- Please fill in username and password. (Default username and password is admin/admin)
- User can manually modify system setting: connection type and web port. Please click “Save” button before complete change.
- SecuUtility provides firmware upgrade, please click on firmware upgrade checkbox, and select new firmware (.bin and .crc) in pop-up window. System will automatically start firmware upgrade.

Above system setting function only works in firmware version is later than V1.x.x.x. If the firmware version of the device is not supportive, please notify your system administrator for firmware upgrade.

7. Click “Scan” to refresh searching supportive devices in local LAN.
8. If there is no DHCP server in local LAN, SucuUtility can automatically assign IP address for connected network device. When SecuUtility searches network device which IP address is 192.168.100.100 in LAN, system will automatically assign an IP address of which is the same network segment as client PC. To enable this function, please “Enable” on Auto Assign IP item. Please notice that **DO NOT** enable this function when there is already a DHCP server in LAN in case of IP conflict issues.

Device Login

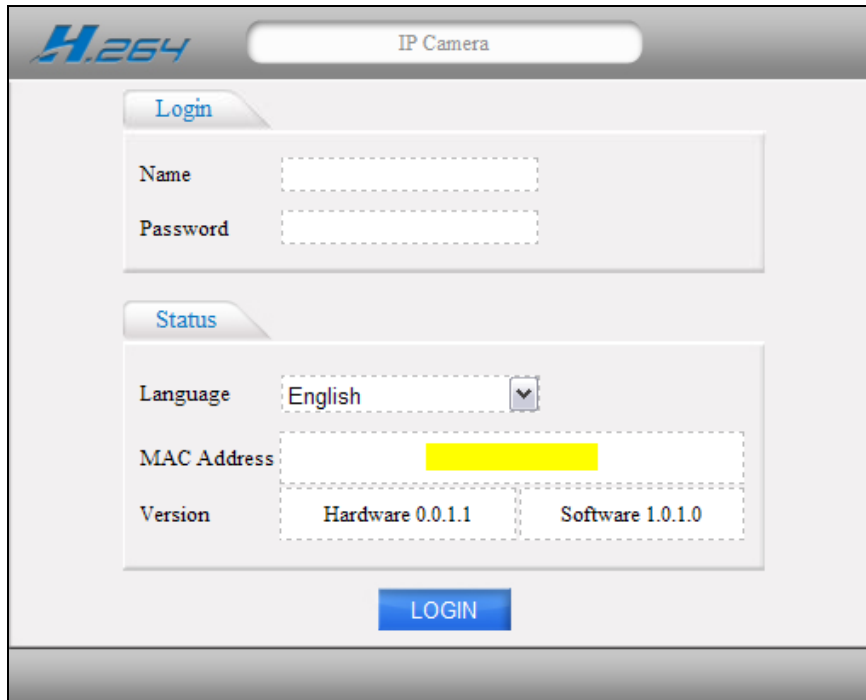
Once you have logged in, you will see a pop-up information bar requiring your attention for installing ActiveX Control, use mouse right click to install ActiveX control.



Then a window will appear asking you to confirm whether or not you want to install the ActiveX control. Select “Install”.

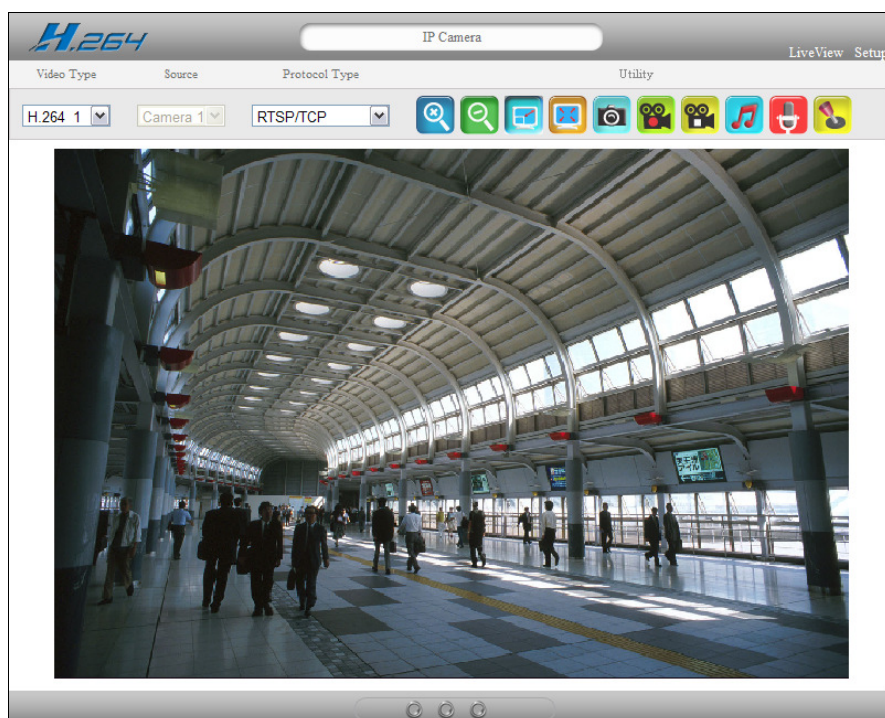


After Active control has been successfully installed, website login page appears on the screen. Login device with default username and password: **admin / admin**.



The screenshot shows the login interface for an H.264 IP Camera. The page has a grey header with the 'H.264' logo on the left and 'IP Camera' in the center. Below the header, there are two main sections: 'Login' and 'Status'. The 'Login' section contains two input fields: 'Name' and 'Password'. The 'Status' section contains a 'Language' dropdown menu set to 'English', a 'MAC Address' field with a yellow highlight, and a 'Version' section showing 'Hardware 0.0.1.1' and 'Software 1.0.1.0'. At the bottom of the 'Status' section is a blue 'LOGIN' button.

Live view image after successfully login.



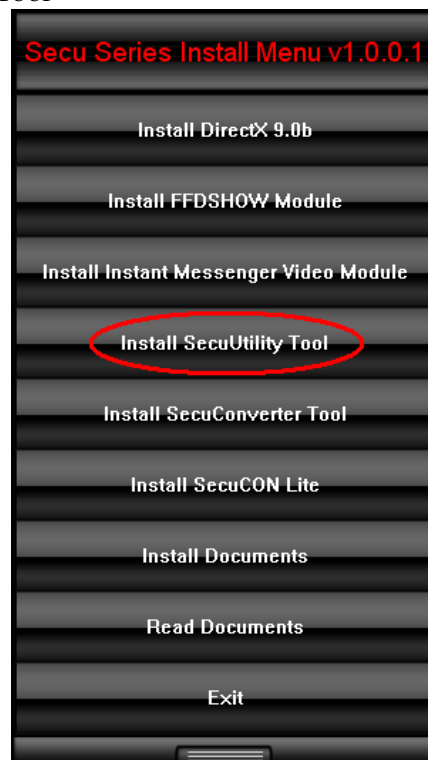
If user cannot see video stream with H.264 format, please install FFDshow decode software from installation CD.

Software Installation

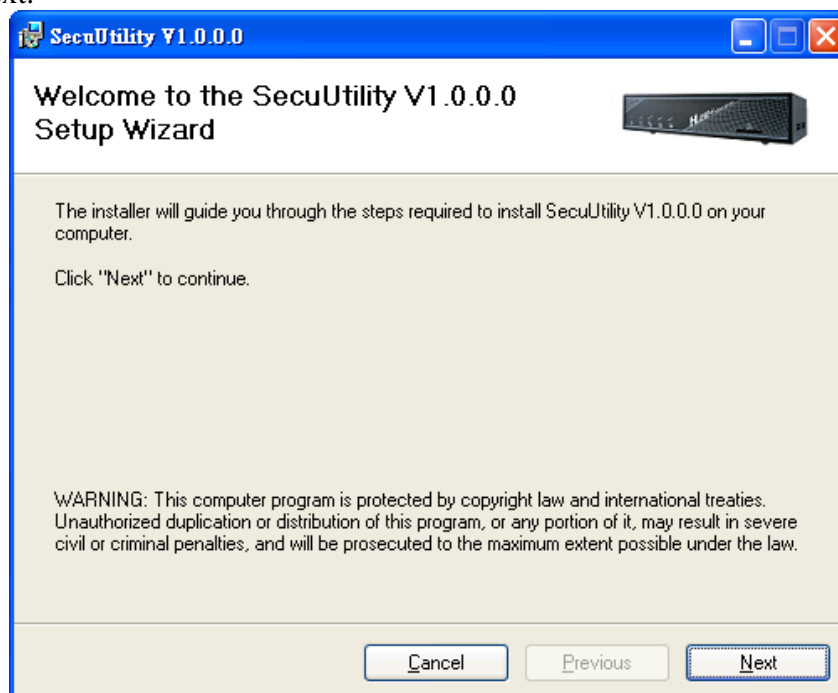
Please install following software from installation CD.

Install SecuUtility

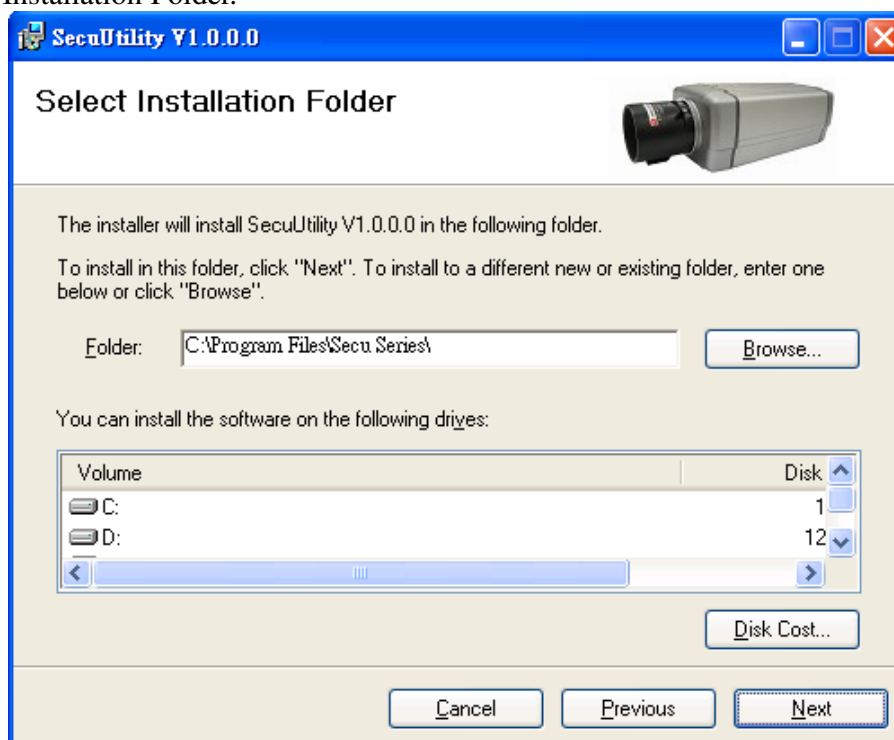
(1) Click Install SecuUtility Tool



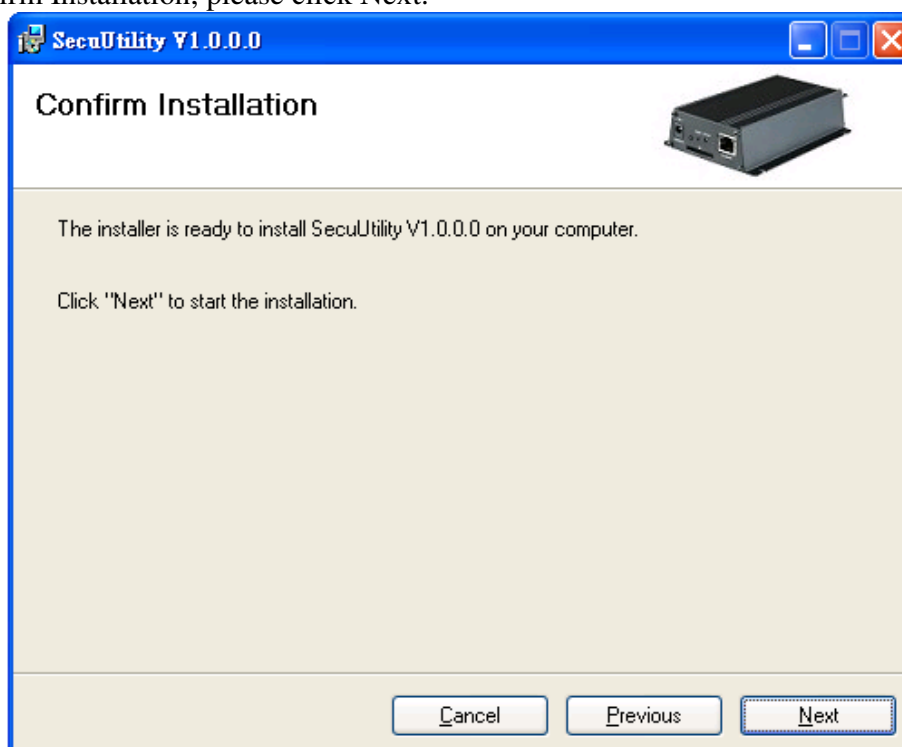
(2) Click Next.



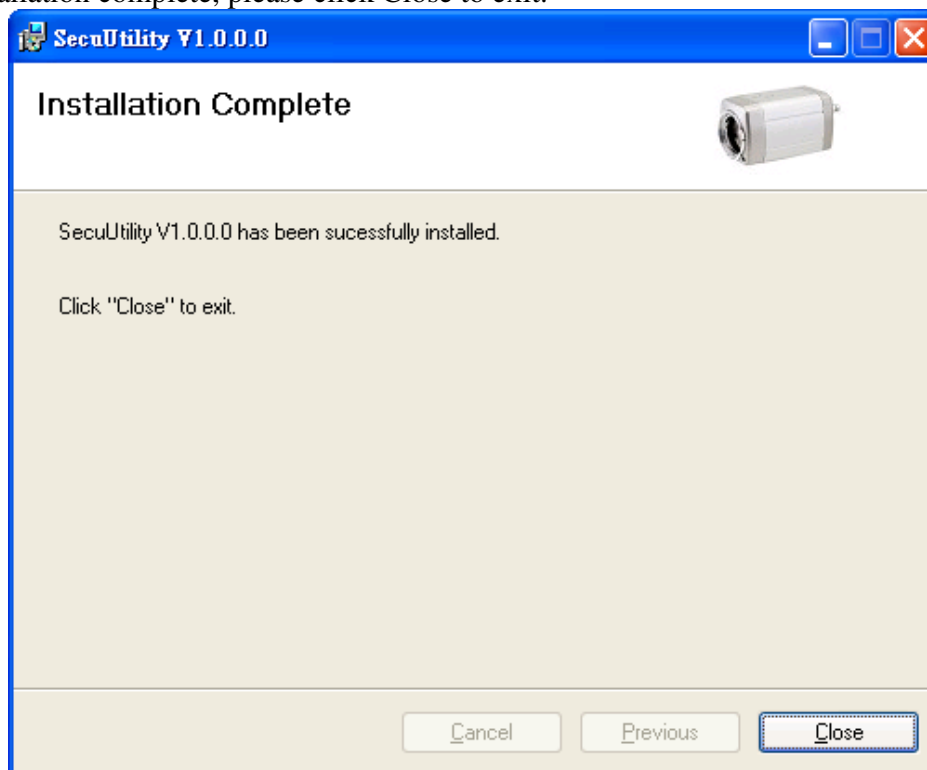
(3) Select Installation Folder.



(4) Confirm Installation, please click Next.

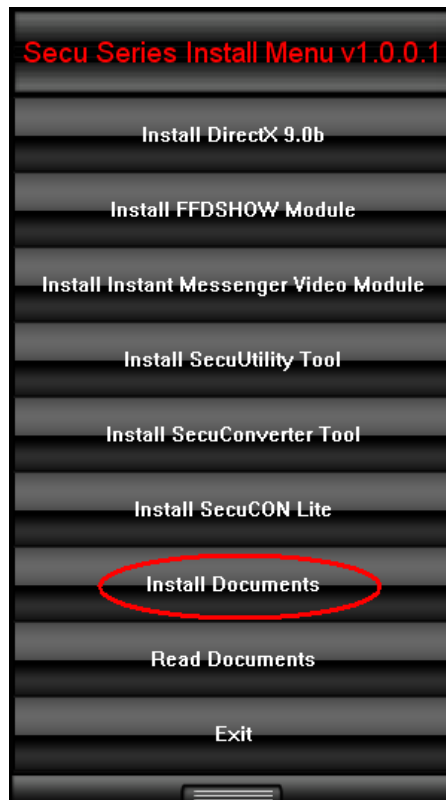


(5) Installation complete, please click Close to exit.

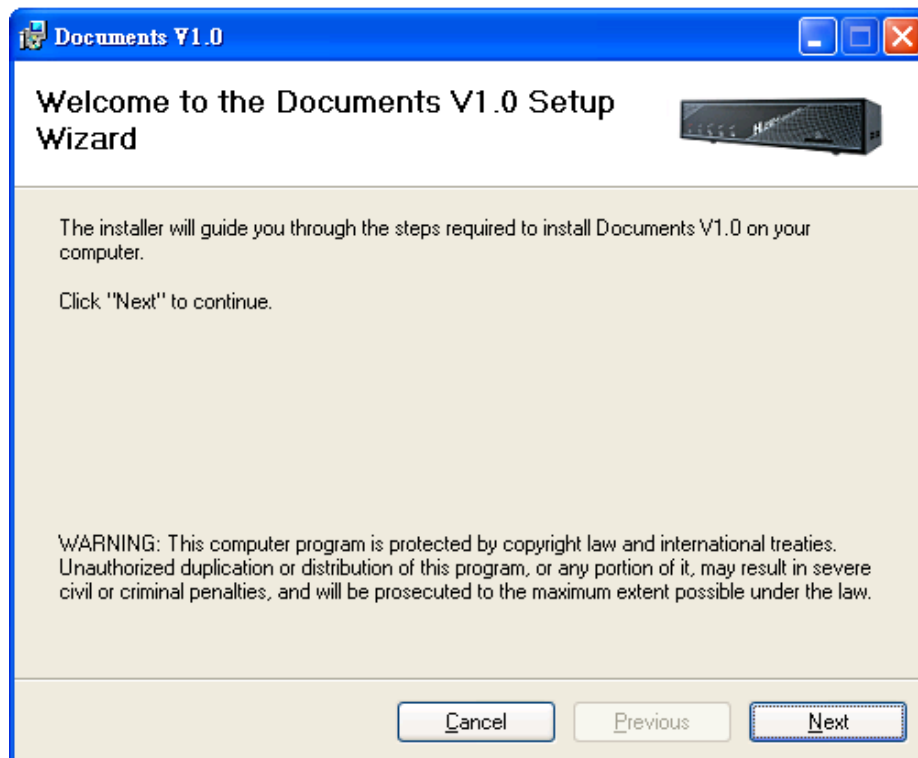


Install Secu Series Documents

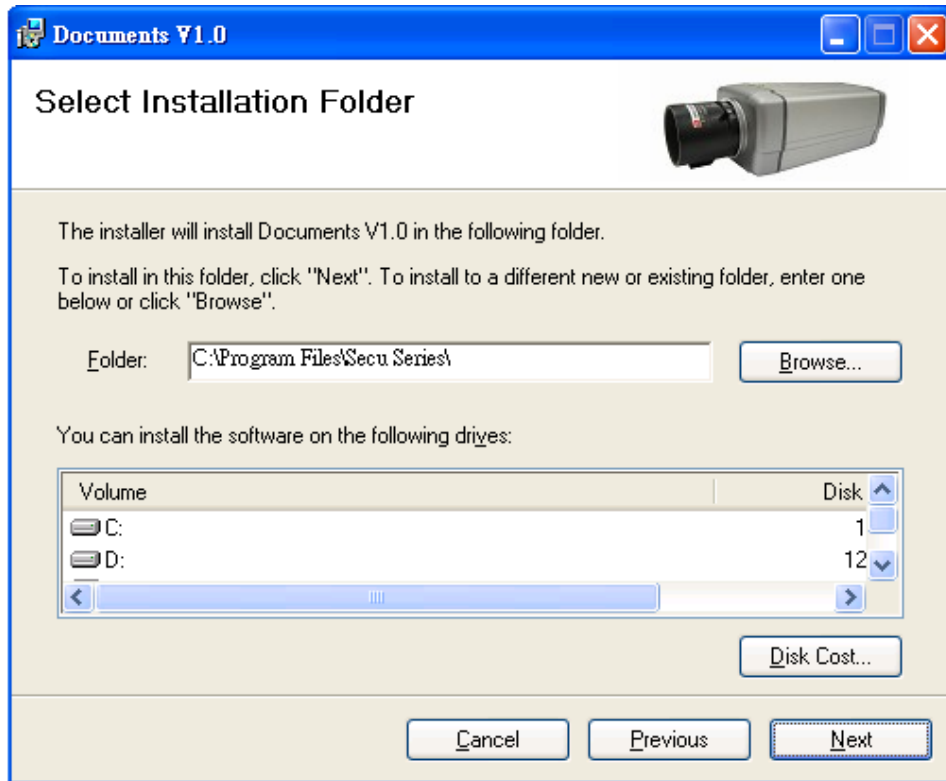
(1) Click Install Documents.



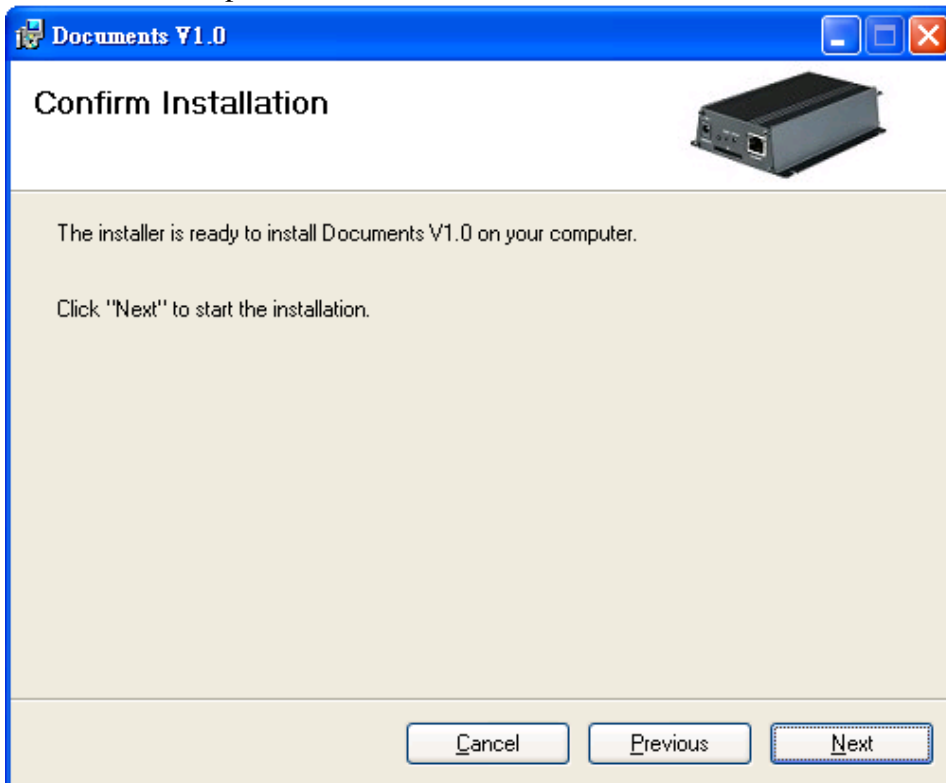
(2) Click Next.



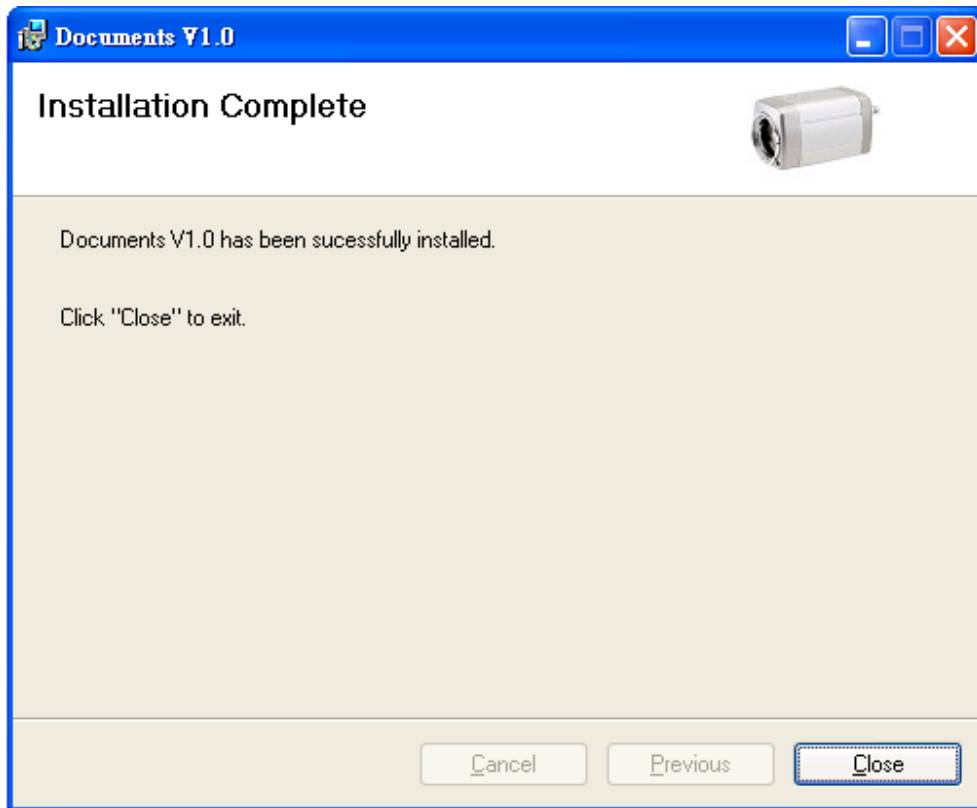
(3) Select Installation Folder.



(4) Confirm Installation, please click Next.



(5) Installation complete, please click Close to exit.



Recommended Computer Equipment

CPU	Intel® Core 2 Due E7200 or above
RAM	1GB or above
Audio Card	Needed
Operation System	Windows 2000, Windows XP SP2 and above, Windows Vista, Windows 7
Browser	IE6 SP2 and above

1. User Login

[illegible]

One minute after the device is powered on, please start SecuUtility. The program will automatically search and display supportive devices in local LAN. Please click on the device you would like to access, and then enter login page of the device.
Login device with default username and password: **admin / admin**.

The screenshot displays the web interface of an H.264 IP Camera. The interface has a grey header bar with the 'H.264' logo on the left and the text 'IP Camera' in the center. Below the header, there are two main sections: 'Login' and 'Status'. The 'Login' section contains two input fields: 'Name' and 'Password'. The 'Status' section contains a 'Language' dropdown menu set to 'English', a 'MAC Address' field with a yellow highlight, and a 'Version' section showing 'Hardware 0.0.1.1' and 'Software 1.0.1.0'. A blue 'LOGIN' button is located at the bottom of the interface.

H.264 IP Camera

Login

Name

Password

Status

Language ▼

MAC Address

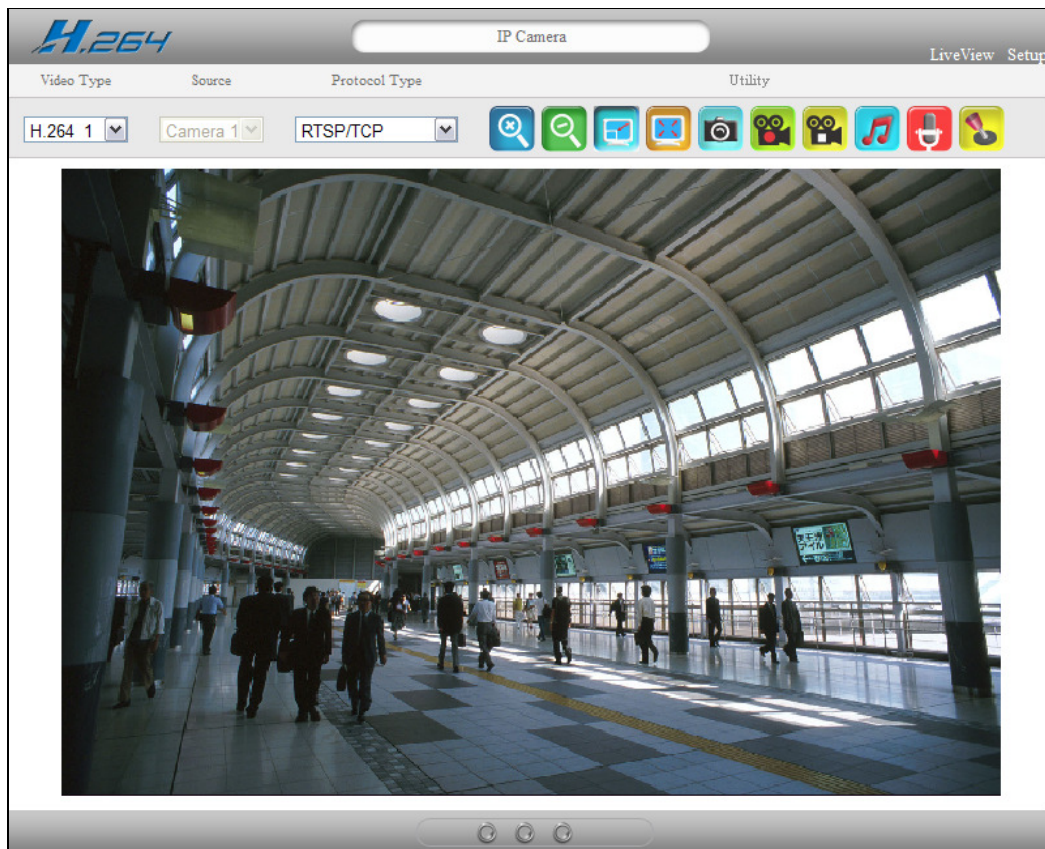
Version

Hardware 0.0.1.1	Software 1.0.1.0
------------------	------------------

LOGIN

User can switch to preferred language to login system. Also, device information such as MAC address and hardware and software version, displays in login page.

2. Live View Page



2.1 Video Type

Video type can be divided into H.264_1、H.264_2(3GPP) and MJPEG.

2.2 Source

Device receive single camera source. This item is unchangeable.

2.3 Protocol Type

Select image streaming transmission protocol.

■ RTSP/ TCP

Choose this item while the network is under low bandwidth. Video and audio streaming transmits through network TCP layer.

■ RTSP/ UDP

Choose this item to get smooth live streaming. Video and audio streaming transmits through network UDP layer.

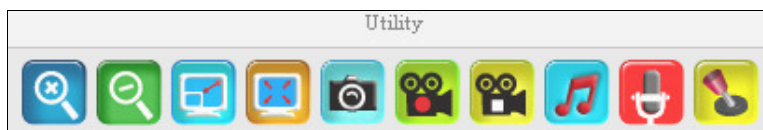
※NOTE:

- (1) When the network environment is not in LAN, please choose RTSP/TCP protocol type to obtain image.
- (2) RTSP / UDP protocol is not applicable for different network segments.

■ RTSP over HTTP

Choose this item to get the HTTP port to transmits live streaming. Video and audio streaming transmits through network TCP layer.

2.4 Utility



■ Zoom In

Click on the button to zoom in image. Image can zoom 8 times for maximum. To return back to normal image size, please click on zoom out button.



■ Zoom Out

Click on the button to zoom out image. The button has no effect when the image has back to original size.



■ Stretch

When image resolution greater than 720x480, click on the icon to adjust image size to 720x480. To return back original size, please click on the button again.



■ Full Screen

Click on the button or double click on the image, the full screen mode will be activated. Double click on the image can return to standard mode.



■ Snapshot

Click on the button, the image will be snapshot, all image taken will be stored in default path., regarding the default path, please see chapter 3.6.2. (Advanced setting)



■ Recording

Click on the button to start recording. Record file will be stored in default path. Regarding the default path, please see chapter 3.6.2. (Advanced setting) Recording file is cut every 5 minutes; when the remaining space is less than 1GB or system setting is changed, recording will automatically stop.



■ Stop Recording

Click on the button to stop recording.



■ Audio

Click on the button to play audio; click again to stop playing.



■ **Broadcast**

Click on the button to start broadcast, click again to stop broadcasting.



■ **PTZ**

Click on the button to start PTZ control panel, click again to hide the panel. Before operating this panel, please make sure that the DigitalZoom function is enabled; please refer to chapter 3.1.3、3.2.1 for detail. Right-click on the control panel to display quick menu, select the digital zoom mode for control image direction.

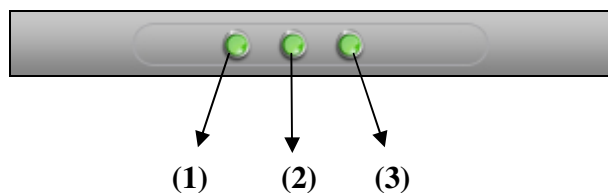


➤ **Direction Control**

Control the angles and direction of image, with up, down, left, right, up left, up right, down left, and down right. Press a direction button; Image will rotate in this direction until releasing the button. The middle button is for back to home.

2.5 **Light Status**

The lights from left to right are recording, audio and broadcast function status.



(1) Recording Status

It is off by default, click on recording button, light will keep flashing; click on stop recording button, light will be off.

(2) Audio Status

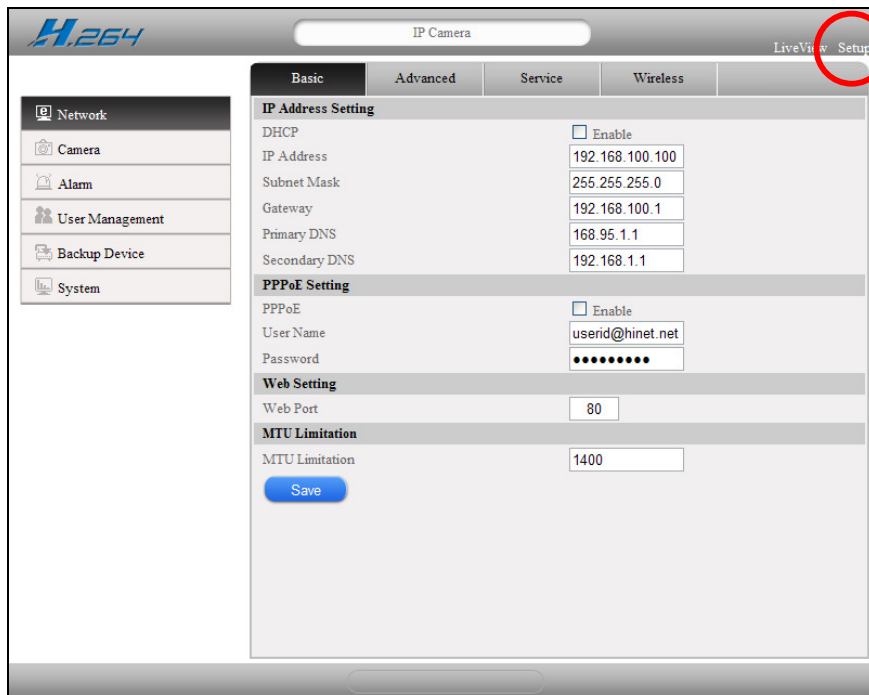
It is off by default, click on audio button to enable audio function, light will keep flashing; click on the audio button again, light will be off.

(3) Broadcast Status

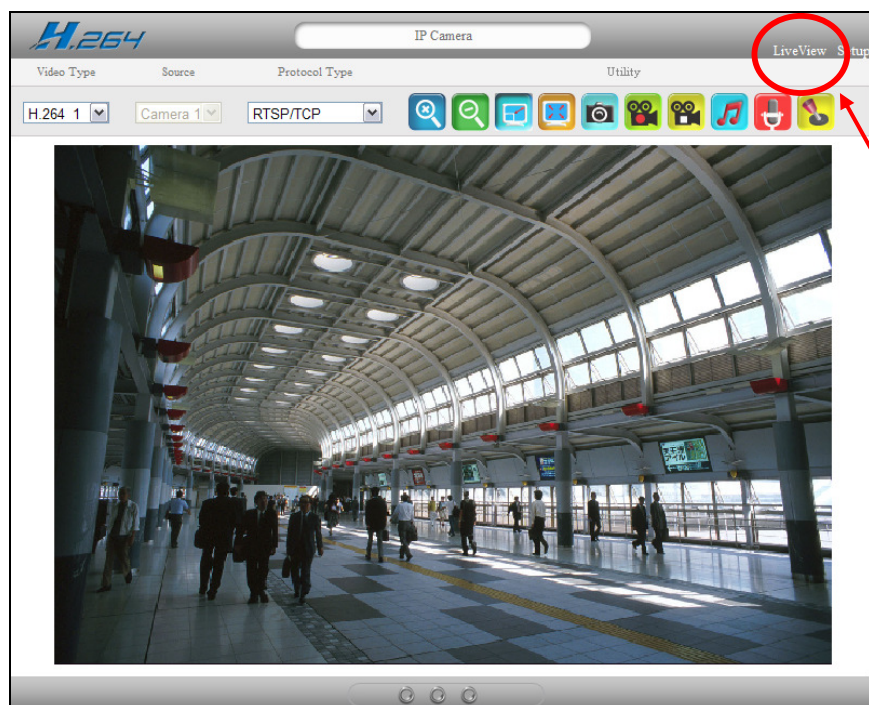
It is off by default, click on broadcast button to enable broadcast function, light will keep flashing; click on the broadcast button again, light will be off.

3. Setting

Click on Setting” on the top right corner of the web page to configure the device, click on “LiveView” to return back to live view image.



Click Setup



Click LiveView

3.1 Network Setting

3.1.1 Basic Setting

Basic	Advanced	Service	Wireless
IP Address Setting			
DHCP		☐ Enable	
IP Address		192.168.100.100	
Subnet Mask		255.255.255.0	
Gateway		192.168.100.1	
Primary DNS		168.95.1.1	
Secondary DNS		192.168.1.1	
PPPoE Setting			
PPPoE		☐ Enable	
User Name		userid@hinet.net	
Password		••••••••	
Web Setting			
Web Port		80	
MTU Limitation			
MTU Limitation		1400	
Save			

■ IP Address Setting

User can setup device IP address.

- **DHCP**
Click on enable to activate DHCP; the device will get IP address from DHCP server.
- **IP Address**
Enter IP address for the device.
- **Subnet Mask**
Enter a subnet mask of the device, If IP address of this device is changed, adjust the subnet mask accordingly.
- **Gateway**
Enter the IP address of the gateway (the router).
- **Primary DNS**
Define the primary DNS server IP address. This is used for identifying this device by name instead of IP address.
- **Secondary DNS**
The IP address of the secondary DNS server; it will be used once the primary DNS server fails.

■ PPPoE Setting

Connect the device to internet by PPPoE through ISP.

- **PPPoE**
Click on enable to activate PPPoE function.
- **User Name**
Enter the user name of the ISP account.
- **Password**
Enter the password of the ISP account.

■ Web Port Setting

Setup device web port number, default is 80. To change to another port number, take 8080 for instance, set hyperlink format as below:

<http://192.168.100.100:8080>

Do not duplicate web port with advanced ports. Recommended setting range is from 1000 to 65535.

■ MTU

MTU, Maximum Transmission Unit, is the value that transmitting package that can pass through network protocol. Set this value to prevent data unable to deliver during cross network domain or insufficient bandwidth environment.

3.1.2 Advanced Setting

When image protocol type is set as RTSP/ UDP, below advanced ports will use to transmit video and audio streaming.

RTSP/UDP Port Setting	
Start Port	12003 [2001 ... 65530] Port 12004 shall be retained.
Event Port	12003
Broadcast Port	12005
FTP Server Port	12006
Video H264 RTP Port	12007
Video H264 RTCP Port	12008
Audio H264 RTP Port	12009
Audio H264 RTCP Port	12010
Video MJPEG RTP Port	12011
Video MJPEG RTCP Port	12012
Audio MJPEG RTP Port	12013
Audio MJPEG RTCP Port	12014
3GPP Video RTP	12023
3GPP Video RTCP	12024
3GPP Audio RTP	12025
3GPP Audio RTCP	12026
Save	

■ Start Port

Define the RTSP/UDP ports segment of the device. Setting range starts from 2001 to 65530. Port 12004 shall be retained. RTSP/UDP ports only set as continuous port numbers. Except start port and 3GPP serial ports, the other ports are set automatically by system.

■ **Event Port**

Port for sending event message (alarm and motion detection).

■ **Broadcast Port**

Port for broadcasting audio stream.

■ **FTP Port**

Port for transferring files to client PC.

■ **Video H.264 RTP Port**

RTP port for sending video stream of H.264 media session.

■ **Video H.264 RTCP Port**

RTCP port for sending video stream of H.264 media session.

■ **Audio H.264 RTP Port**

RTP port for sending audio stream of H.264 media session.

■ **Audio H.264 RTCP Port**

RTCP port for sending audio stream of H.264 media session.

■ **Video MJPEG RTP Port**

RTP port for sending video stream of MJPEG media session.

■ **Video MJPEG RTCP Port**

RTCP port for sending video stream of MJPEG media session.

■ **Audio MJPEG RTP Port**

RTP port for sending audio stream of MJPEG media session.

■ **Audio MJPEG RTCP Port**

RTCP port for sending audio stream of MJPEG media session.

■ **Video 3GPP RTP Port**

RTP port for sending video stream of 3GPP media session.

■ **Video 3GPP MJPEG RTCP Port**

RTCP port for sending video stream of 3GPP media session.

■ **Audio 3GPP MJPEG RTP Port**

RTP port for sending audio stream of 3GPP media session.

■ **Audio 3GPP MJPEG RTCP Port**

RTCP port for sending audio stream of 3GPP media session.

※Please click on Save button to finish configuration.

3.1.3 Service Setting

■ DDNS Setting

DDNS Setting	
DDNS	☐ Enable
Server	dyndns.org ▼
Host Name	username.dyndns.org
User Name	username
Password	●●●●●●●●

- **DDNS**
Enable this item to activate DDNS function.
- **Server**
Select DDNS service system: dyndns.org or dhs.org, please access the DDNS websites below to apply for DDNS service.

<http://www.dyndns.com>
<http://www.dhs.org>
- **Host Name**
Host name that user register for the device in DDNS website.
- **User Name**
Username that user register in DDNS website.
- **Password**
Password that user register in DDNS website

■ SMTP Setting

Please fill in SMTP setting if alarm is set to trigger Email warning.

SMTP Setting	
Sender Address	sender@mail.com
Number	1
Recipient Address	receiver@mail.com
User Name	sender_id
Password	••••••••
Mail Server Address	192.168.1.5
Server Port	25

- **Sender Address**
Fill in sender E-mail address.
- **Number**
Select a sequence number to identify recipient e-mail address.
- **Recipient Address**
Fill in recipient E-mail addresses.
- **User Name**
Username that user uses to access SMTP server.
- **Password**
Password that user uses to access SMTP server.
- **Mail Server Address**
Fill in SMTP server address.
- **Server Port**
Fill in the server port, default port is 25.

■ RTSP Setting

Setup RTSP port and ports for RTSP/UDP multicast.

RTSP Setting	
RTSP/UDP, RTSP/TCP	
RTSP Port	554
RTSP/UDP Multi-cast	
Status	☐ Enable
IP Address	230.0.0.1
Video H.264 RTP Port	6050
Video H.264 RTCP Port	6051
Audio H.264 RTP Port	6052
Audio H.264 RTCP Port	6053
Video MJPEG RTP Port	6054
Video MJPEG RTCP Port	6055
Audio MJPEG RTP Port	6056
Audio MJPEG RTCP Port	6057

RTSP/UDP, RTSP/TCP

- **RTSP Port**
RTSP streaming port, port number is 554(unchangeable).

RTSP/UDP Multicast

- **Status**
Enable this item to start multi-cast streaming. Due to system limitation, live view can only see multicast streaming when this function enable. Notice that if more than one network device in LAN use multi-cast function, please change multi-cast IP address or port numbers to prevent network package conflict.
- **IP Address**
Fill in Multicast IP address.
- **Video H.264 RTP Port**
RTP port for sending video stream of H.264 media session.
- **Video H.264 RTCP Port**
RTCP port for sending video stream of H.264 media session.
- **Audio H.264 RTP Port**
RTP port for sending audio stream of H.264 media session.
- **Audio H.264 RTCP Port**
RTCP port for sending audio stream of H.264 media session.
- **Video MJPEG RTP Port**
RTP port for sending video stream of MJPEG media session.

- **Video MJPEG RTCP Port**
RTCP port for sending video stream of MJPEG media session.
- **Audio MJPEG RTP Port**
RTP port for sending audio stream of MJPEG media session.
- **Audio MJPEG RTCP Port**
RTCP port for sending audio stream of MJPEG media session.

Live View Video Stream with QuickTime

Please follow the steps below to live view video stream with QuickTime:

- Starts QuickTime.
- Select File and then open URL from the function bar. Please enter IP address of the device in the pop-up window. Different video type has different link.
-

When Multicast status is disabled, RTSP link as following the way:

Connecting H.264 image, please fill in **rtsp://IP address/h264**

Connecting MJPEG image, please fill in **rtsp://IP address/mjpeg**

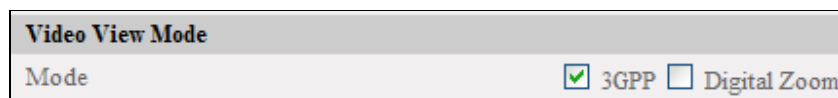
When Multicast status is enabled, RTSP link as following the way:

Connecting H.264 image, please fill in **rtsp://IP address/h264m**

Connecting MJPEG image, please fill in **rtsp://IP address/mjpegm**

Please follow below procedures to setup QuickTime while the QuickTime version is later than 7.5.5 and not able to view live image. Select Edit > Preferences > QuickTime Preferences; click Advanced tag and disable “Enable Direct3D video acceleration” item.

■ Video View Mode



➤ 3GPP

Enable the service, you can connect the camera on mobile phone to view video. When you enable this service, the resolution will increase H.264_2 choices.

Please input below link on stream player of your mobile phone.

rtsp://IP address/3gpp

When modifying a non-554 RTSP port number, please add the port number to the connection address field, address format as shown below:

rtsp://IP address:Port/3gpp

➤ **Digital Zoom**

Enable digital zoom function, image resolution will be 1920x1080, image size default value is 352x240. To modify the image size, please follow the setup as follow: [camera] → [Digital Zoom]

■ **UPnP Setting**

Enable this function to open UPnP service. Device can be found in “My network places”.

UPnP Setting	
UPnP	☒ Enable

■ **FTP Setting**

Please fill in FTP setting if alarm is set to trigger recording file upload to FTP server.

FTP Setting	
FTP Server	192.168.100.101
FTP Port	21
User Name	username
User Password	●●●●●●●●
Motion Path	/motion
AlarmIn Path	/alarm

➤ **FTP Server**

Fill in FTP server address.

➤ **FTP Port**

FTP port number, default port is 21.

➤ **User Name**

Username that user uses to access FTP server.

➤ **Password**

Password that user uses to access SMTP server.

➤ **Motion Path**

Fill in FTP server provides file upload path.

➤ **AlarmIn Path**

Fill in FTP server provides file upload path.

※ In above path fields, [/] means root directory path that provided by remote FTP server; [pathname] means saving files under ‘pathname’ folder. If the folder hasn’t existed, system will create it automatically.

■ Utility Protocol

Define which protocol that device uses for sending message to SecuUtility. Default is set as Bonjour mode.

Utility Protocol	
Protocol	☒ Bonjour ☐ Broadcast
Multi-cast IP	224.0.0.251
Multi-cast Port	5353

➤ Protocol

Select protocol type as Bonjour or Broadcast.

- **Bonjour**

Send camera existing message to request clients. Use can manually modify camera setting through SecuUtility with this protocol.

- **Broadcast**

Send camera existing message to every client. Use can only get camera information through SecuUtility but unable to change setting.

➤ Multi-cast IP

Multi-cast IP address for selected protocol. This value is unchangeable.

➤ Multi-cast Port

Multi-cast port for selected protocol. This value is unchangeable.

■ ONVIF

Device supports transmitting stream through ONVIF protocol. After enable this service, integrated software can connect to the device by standard ONVIF protocol.

ONVIF	
Status	☐ Enable
Multi-cast IP	239.255.255.250
Multi-cast Port	3702

➤ Status

Enable this item to start ONVIF service of the device.

➤ Multi-cast IP

Multi-cast IP address for ONVIF. This value is unchangeable.

➤ Multi-cast Port

Multi-cast port for ONVIF. This value is unchangeable.

■ HTTPS Setting

Select “Enable” to open the HTTPS protocol. Web connection is mandatory to HTTPS protocol. Default port is 443.

HTTPS Setting	
Status	☐ Enable
Port	443

Connection applying HTTPS protocol, the connection address is as follows:

https://IP address

When modifying a non-443 HTTPS port number, please add the port number to the connection address field, address format as shown below:

https:// IP address: port number

■ QoS Setting

QoS service is available to image, audio, event, management functions, default value is 0 (DSCP Setup Range: 0 to 63). To apply this feature, please refer to the QoS settings of the relative synchronization setups, section on network device.

QoS setting (Diffserv)	
Video DSCP	0
Audio DSCP	0
Event DSCP	0
Management DSCP	0

3.1.4 Wireless Network Setting

This function only supports device with wireless dongle.

Basic	Advanced	Service	Wireless
Wireless Network Setting			
WLAN		☒ Enable	
Communication Mode		Infrastructure	
SSID		SSID	
Wireless Mode		802.11b/g/n	
Wireless Encryption		Disabled (Open System)	
Save			

■ WLAN

Click Enable to active wireless function.

■ Communication Mode

Set communication mode as infrastructure.

■ SSID

Enter SSID of wireless AP router.

■ Wireless Mode

Wireless mode is 802.11b/g/n, system will select automatically.

■ Wireless Encryption

Select wireless encryption type: Open System, WEP(Shared key), and WPA-PSK.

➤ WEP(Shared key) Mode

The screenshot shows the 'Wireless Network Setting' window. The 'WLAN' checkbox is checked and labeled 'Enable'. The 'Communication Mode' is set to 'Infrastructure'. The 'SSID' field is empty. The 'Wireless Mode' is set to '802.11b/g/n'. The 'Wireless Encryption' is set to 'WEP (Shared key)'. Under this encryption type, 'WEP Mode' is set to '128 bit', 'ASCII/HEX Mode' is set to 'ASCII', and 'Default Key ID' is set to '1'. There are four text input fields for keys: 'Key 1' contains 'A1B2C3D4E5F6G', 'Key 2' contains '111111111111', 'Key 3' contains 'aaaaaaaaaaaa', and 'Key 4' contains 'cccccccccccc'. A blue 'Save' button is at the bottom left.

▪ WEP Mode

Select 64bit or 128 bit for WEP encryption encoding.

▪ ASCII/HEX mode

Select key format as ASCII mode or Hex mode. Please check below table for available input length and letters.

WEP Mode	64 bit	128 bit
ASCII	5 characters (0~9 , A~Z , a~z)	13 characters (0~9 , A~Z , a~z)
HEX	10 characters (0~9 , A~F , a~f)	26 characters (0~9 , A~F , a~f)

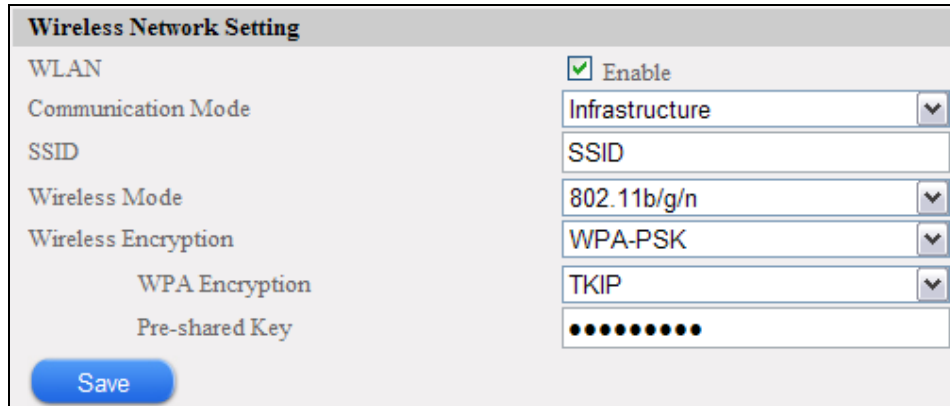
▪ Default Key ID

Select Key ID from 1 to 4.

- **Key1~Key4**

Enter Key 1~4 that correspond to wireless AP setting.

- **WPA-PSK Mode**



The image shows a 'Wireless Network Setting' dialog box. It has a title bar 'Wireless Network Setting'. Inside, there are several settings: 'WLAN' with a checked 'Enable' checkbox; 'Communication Mode' set to 'Infrastructure'; 'SSID' as an empty text field; 'Wireless Mode' set to '802.11b/g/n'; 'Wireless Encryption' set to 'WPA-PSK'; 'WPA Encryption' set to 'TKIP'; and 'Pre-shared Key' as a masked text field with 10 dots. A 'Save' button is at the bottom left.

WLAN	☒ Enable
Communication Mode	Infrastructure
SSID	
Wireless Mode	802.11b/g/n
Wireless Encryption	WPA-PSK
WPA Encryption	TKIP
Pre-shared Key	••••••••••

Save

- **WPA Encryption**

Select encryption type: TKIP, AES.

- **Pre-shared Key**

Enter pre-shared key that corresponds to wireless AP setting.

3.2 Camera Setting

3.2.1 Camera Setting

Camera Setting	
Camera	Camera 1
Title	Camera_0
Sound record	ON ▼
Motion Detection	Setting
Privacy Area	Setting
Image	Setting
OSD	Setting
Digital Zoom	Setting

■ Title

Define the camera name, the characters can be Arabic alphabet 0~9, capitalized or non-capitalized English alphabet, and symbol "-", "_", and ".". The maximum inputs are 20 characters.

■ Sound Record

Enable audio function while recording.

■ Motion Detection

Set up motion detection area. While motion is triggered, the selected trigger action will start working. Motion trigger interval is 10 seconds, continuous trigger is available. Please notice that motion detection is not working when pre-event and post-event recording is set to 0 second.

There are three color blocks for setting motion detection area: red, green, and blue. Select the designate color block to define detection area.

Motion Detection Setting : Camera 1



Detection Rect.

3 (Blue) ▼

Delete

Select All

Clear All

Status ☐ Enable

Sensitivity ▼

Alarm Out ▼

Save to ▼

Log ☐ Enable

E-mail ☐ Enable

FTP ☐ Enable

Save

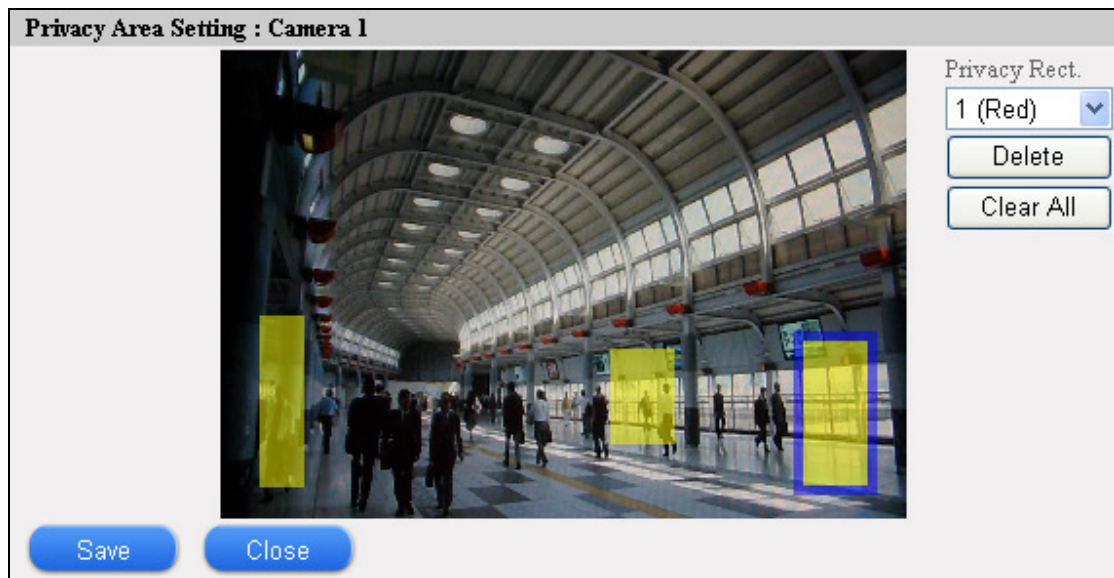
Close

- **Status**
Enable this item to activate motion detection.
- **Sensitivity**
Select motion detective sensitivity. Adjustable range is from 0 to 10, insensitive to sensitive.
- **Alarm out**
Enable to trigger alarm out while motion is detected.
- **Log**
Enable to store log in backup device while motion is detected.
- **E-mail**
Enable to send E-mail with snapshot while motion is detected.
- **FTP**
Enable to upload event recording files to FTP site while motion is detected.
- **Save to**
Enable to save snapshot and event recording files to Micro SD Card / Local Flash while motion is detected. Available storages are [None / SD Card / External USB / Local Flash]. Please notice that choosing storage none means no files will be saved.
- **Delete**
Click the button to delete the designated color detection rectangle.
- **Select All**
Click the button to enable full area detection.
- **Clear All**
Click the button to clear selected detection area.

※ Please click on “Save” button to save settings and click on “Close” button to finish. It takes 10 seconds to overwrite the new setting into system file; any operation needs to wait for 10 seconds.

■ Privacy Area

Define privacy area to hide blocks from monitoring. Please notice that motion in privacy area can't be triggered.



- **Privacy Rect.**
Select rectangle color and select range on image to define privacy area.

※The motion can't enable in privacy area .

- **Delete**
Click the button to delete privacy of chosen rectangle color.
- **Clear All**
Click the button to clear all privacy areas.

※ Please click on “Save” button to save settings and click on “Close” button to finish. Privacy setting area is related to image resolution, to avoid position inaccuracy, please set up privacy rectangle after setting resolution.

■ Image

Image Setting : Camera 1



Image Color ☒ Color ☐ Mono

Brightness 

Saturation 

Contrast 

Hue 

Sharpness 

Scene Mode 

Camera Mode 

Shutter speed  - Max

 - Min

Gain Control 

Flicker Control 

Flip ☐ Enable

Mirror ☐ Enable

- **Image Color**
Select image color in color or memo.
- **Brightness**
Adjust image brightness parameter; the higher the value, the brighter the image.
- **Saturation**
Adjust image saturation parameter; the higher the value, the more saturate the image.
- **Contrast**
Adjust image contrast parameter; the higher the value, the higher the contrast of image.
- **Hue**

- Adjust video hue parameter, the smaller the value, the bluer the video is; reversely, the higher the value is, the redder the video is.
- **Sharpness**
Adjust image sharpness parameter; the higher the value, the shaper the image.
 - **Scene Mode**
Select scene mode to choose ICR(IR Cut Filter Removable) switch mode. Default setting is Auto mode.
 - **Auto:** ICR switches automatically by light sensor detection. In low light condition, ICR switches to night mode; live image turns to mono color as well.
 - **OFF:** ICR keeps at day mode regardless of scene change. IR lights are disabled either.
 - **Camera Mode**
Select camera mode to adjust shutter speed and gain control. Default is General mode.
 - **General mode:** Adjust shutter speed or gain control. User can adjust the value by different shooting range.
 - **De-flicker mode:** shutter speed is fixed at 1/30 second to decrease external environment that caused by the flicker.
 - **Shutter Speed**
Shutter speed setting range is from 1/7.5~1/10000 second. The faster the shutter speed, the dimmer the image is. Likewise, the slower the shutter speed, the brighter the image is.
 - **Maximum Shutter Speed**
Maximum shutter speed setup under manual mode, adjustment range:
1/7.5~1/10000
 - **Minimum Shutter Speed**
Minimum shutter speed setup under manual mode, adjustment range:
1/30~1/10000

※Camera shutter speed is various between maximal and minimal shutter speed.

- **Gain Control**
Default gain control level is 12. The setting value means the maximal gain control level, which means the gain level is various between 0 to the setting value. Adjust level is from 0 to 24db.
- **Flicker Control**
Optional 50HZ (PAL) or 60HZ (NTSC) different power frequencies.
- **Flip**
Enable to flip over image. System needs to reconnect stream to refresh preview window. Before clicking save button, system would not reconnect the stream.
- **Mirror**
Enable to mirror image. System needs to reconnect stream to refresh preview window. Before clicking save button, system would not reconnect the stream.
- **Default**
Click the button to restore default value of image parameters. Please notice this setting applies without click “Save” button.

Please click on “Save” button to save settings and click on “Close” button to finish.

■ OSD (On Screen Display)

OSD Setting : Camera 1

Real Time OSD Setting

Display items ☐ Title ☐ FPS Color Red

Position Top-Left Background Color White

Transparency ☐ Enable

Recording OSD Setting

Date/Time ☒ Enable

Title ☐ Enable

Save Close

Real Time OSD

Display OSD on live view image.

- **Display Items**
Select display items: camera title, and frame per second of live view image.
- **Position**
Select placement for OSD: Top-Left, Top-Right, Bottom-Left and Bottom-Right. Please note that when choose the position as Top-Right, the real time OSD may cover recording OSD.
- **Color**
Select OSD font color: White, Black, Red, Green, Blue, Yellow, Cyan, and Magenta.
- **Background Color**
Select OSD background color: White, Black, and Transparency.
- **Transparency**
Enable this item to make OSD transparent.

Recording OSD

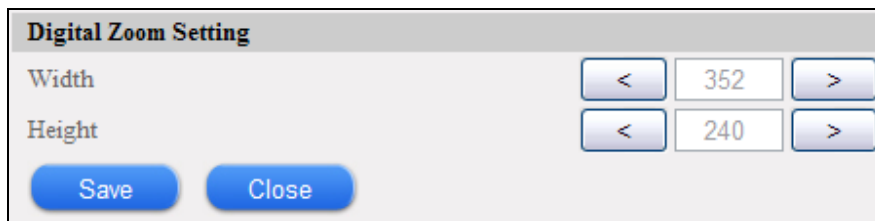
Display OSD on record files.

- **Date/Time**
Enable to display system date and time on recording OSD.
- **Title**
Enter desired title and select Enable to display title on the recorded video image. Maximal word length is 16 characters.

※ Please click on “Save” button to save settings and click on “Close” button to finish.

■ Digital Zoom

Enable digital zoom viewing mode, and adjust image size of the digital zoom.



The 'Digital Zoom Setting' dialog box contains two rows of controls. The first row is for 'Width', showing a value of 352 with left and right arrow buttons. The second row is for 'Height', showing a value of 240 with left and right arrow buttons. At the bottom of the dialog are two buttons: 'Save' and 'Close'.

➤ Digital Zoom Setup

■ Width

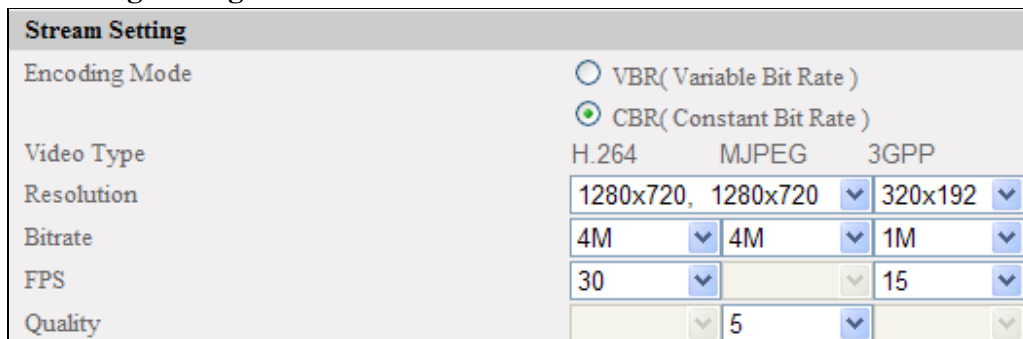
When digital zoom is applied, the width of the screen is adjustable (Setup Range: 352 ~ 1280).

■ Hight

When digital zoom is applied, the height of the screen is adjustable (Setup Range: 240 ~ 720).

※After the above setup has been completed, click “Save” and “Close” to complete the setup.

3.2.2 Streaming Setting



The 'Stream Setting' dialog box has several settings. 'Encoding Mode' has two radio buttons: 'VBR(Variable Bit Rate)' and 'CBR(Constant Bit Rate)', with 'CBR' selected. 'Video Type' has three tabs: 'H.264', 'MJPEG', and '3GPP', with 'H.264' selected. Below these are five rows of settings, each with three dropdown menus. The first row is 'Resolution' with values '1280x720', '1280x720', and '320x192'. The second row is 'Bitrate' with values '4M', '4M', and '1M'. The third row is 'FPS' with values '30', an empty field, and '15'. The fourth row is 'Quality' with values an empty field, '5', and an empty field.

■ Encoding Mode

Select encoding mode for stream: VBR (Variable Bit Rate) or CBR (Constant Bit Rate).

- **VBR mode** transmit stream with variable bit rate according to the variation of image, the maximal bit rate consuming will still be under the set bit rate.
- **CBR mode** transmit stream with constant bit rate.

■ Video Type

System provides three video type streams: H.264_1 、 H.264_2 and MJPEG.

■ Resolution

H.264 and MJPEG each have corresponding adjustable resolution, please refer to below table.

H.264	MJPEG	3GPP
640 x 480	640 x 480	320 x 192
720 x 480	720 x 480	320 x 240
1280 x 720	1280 x 720	640 x 480
1280 x 960	1280 x 960	
1920 x 1080	None	

When 3GPP service disables, image options is switching as below resolution.

H.264	MJPEG
640 x 480	640 x 480
720 x 480	720 x 480
1280 x 720	1280 x 720
1280 x 960	1280 x 960
1920 x 1080	None
None	1920 x 1080

■ Bitrate

Bit rate for image stream, the higher the value, the more delicate the image is.
For different image format and resolution, different adjustment ranges are:

H.264 → 32K~ 8M
MJPEG → 1M~ 8M
3GPP → 32K~ 1M

※ Adjustment range of MJPEG bit rate changes by different resolution.

■ FPS

Frame rate for H.264 stream. Setting range is from 1 to 30; the more frame rate per second, the smoother the image stream.

Under the default bit rate, 4M, all resolution can reach 30 fps. 3GPP can reach average 30 fps under bit rate 1Mbps.

Base on different network environment, frame rate of camera may be different. Above description is used for reference only.

■ Quality

Image quality of MJPEG video type. Setting range is from 1 to 5; the higher the value is the better image quality would be.

Base on different resolution, using bandwidth, bitrates and quality, the image FPS may be different. The following chart is giving a reference FPS value for single connection of device.

Bit Rate \ Quality	8 M	4M	2M
1	15~30 (fps)	8~15 (fps)	3~5 (fps)
2	10~30	3~15	1~5
3	10~25	3~10	1~3
4	8~20	2~10	1~3
5	5~20	2~8	0~3

3.2.3 Event Record

Define pre-event and post-event recording duration for event record files. Event video recording file as AVI format, that don't need via video converter to play.

Event Record	
Pre-event Recording (sec.)	0
Post-event Recording (sec.)	5

■ Pre-event Recording (sec.)

Select pre-event recording duration; setting range is from 0 to 10.

■ Post-event Recording (sec.)

Select post-event recording duration; setting range is from 0 to 10.

The corresponding set recording duration, please refer to below table.

H.264	MJPEG	Pre-event Recording	Post-event Recording
640 x 480	640 x 480	10	10
720 x 480	720 x 480	10	10
1280 x 720	1280 x 720	3	3
1280 x 960	1280 x 960	3	3
1920 x 1080	None	0	0
None	1920 x 1080	0	0

※Note that event will not be triggered when pre-event and post-event recording duration both are set to 0.

※Please click on “Save” button to save settings.

3.3 Alarm

Alarm setting is similar to motion detection setting. The difference is that alarm doesn't repeat trigger action for the same event.

The screenshot shows the 'Alarm Setting' window. On the left is a list of settings: Alarm Mode, Alarm In, Status, Alarm Out, Log, E-mail, FTP, and Save to. On the right, 'Alarm Mode' has three radio button options, with 'Alarm In/Out mode' selected. 'Alarm In' is set to '1'. 'Status', 'Log', 'E-mail', and 'FTP' each have an 'Enable' checkbox. 'Alarm Out' has a dropdown menu currently showing 'ON'. 'Save to' has a dropdown menu currently showing 'None'. A blue 'Save' button is located at the bottom left of the window.

■ Alarm In/ Out Mode

Select alarm mode to setup alarm event trigger On/ Off.

➤ Status

Enable this item to activate alarm trigger.

➤ Alarm Out

Enable to trigger alarm out while alarm is triggered.

➤ Log

Enable to store log in backup device while alarm is triggered.

➤ E-mail

Enable to send E-mail with snapshot while alarm is triggered.

➤ FTP

Enable to upload event recording files to FTP site while alarm is triggered.

➤ Save to

Enable to save snapshot and event recording files to Micro SD Card / Local Flash while alarm is triggered. Storage can be divided into [None / SD Card / External USB / Local Flash]. Please notice that choosing storage none means no files will be saved.

■ External IR illuminator control mode

External IR illuminator is triggered by alarm in. When trigger is on, external IR illuminator keeps on; image switches to night mode regardless of light sensor detection.

■ IR illuminator trigger by CDS detection mode

External IR illuminator is triggered by light sensor. When light sensor detects night mode, external IR illuminometer keeps on; image switches to night mode.

※Please click on “Save” button to save settings. It takes 10 seconds to overwrite the new setting into system file; any operation needs to wait for 10 seconds.

3.4 User Management

Change Password			
User Name	Old Password	New Password	Change
admin			change
Add User			
User Name	Password	User Level	Add
		Supervisor v	add
User List			
#	User Name	User Level	Delete
0	admin	Administrator	Delete
1	Kitty	Supervisor	Delete
2	Anson	Operator	Delete
3	Ken	Guest	Delete

■ Change Password

Enter the original password and new password, click on “change” button to finish password change.

Password of operator and guest accounts are not changeable, if user wants to change the password of operator and guest accounts, please login as administrator or supervisor, and delete operator or guest account, and create new accounts.

■ Add User

Enter username and password, select the user group level and click on “add” button. The maximal users can be set up to 15. The account name characters should follow the restrictions below:

- Enter user name and password; the characters can be Arabic alphabet 0~9, capitalized or non-capitalized English alphabet, and symbol“-”, “_”and “.”. The maximum inputs are 32 characters. English upper and lower case are seen as different character.

Admin is unique. Admin can create supervisor, operator and guest level users. Supervisor lever users can create operator and guest level users. Operator and guest level users have no right to add user.

■ User List

List all users in the table. Click on “Delete” button to delete user.

■ User Security Level

System provides four levels users; please refer to below table for each level’s permission.

User Level	Live View Image	Live View Utility	Setting	User Management
Administrator	⊙	⊙	⊙	⊙
Supervisor	⊙	⊙	⊙	⊙
Operator	⊙	⊙		
Guest	⊙			

3.5 Backup Device

The system backup device supports Micro SD memory card, external USB storage media and local flash. System doesn't support hot swapping, please power off camera when insert or remove micro SD card and USB storage media.

SD Memory Card	
Total Capacity (GB)	N/A
Used Capacity (GB)	N/A
Remaining Capacity (%)	N/A
Full Action	Setting

External USB Storage Media	
Total Capacity (GB)	N/A
Used Capacity (GB)	N/A
Remaining Capacity (%)	N/A
Full Action	Setting

Local Flash	
Total Capacity (MB)	64.00
Used Capacity (MB)	2.00
Remaining Capacity (%)	96.87
Full Action	Setting

■ Total Capacity

Display the total capacity of the backup device.

■ Used Capacity

Display the used space of the backup device.

■ Remaining Capacity

Display free space of the backup device.

■ Full Action

Setup trigger action item after backup device is full.

Status	☐ Enable
Overwrite	☐ Enable
Alarm Out	OFF
Log	☐ Enable
E-mail	☐ Enable
Save Close	

- **Status**
Enable this item to activate full action.
- **Overwrite**

Enable to overwrite when backup storage is full. Overwrite function can only overwrite files that are built by event trigger. Files that create by other methods can't be overwritten. Overwrite function works independently, has not related with status enable or not.

- **Alarm Out**
Enable to trigger alarm out while backup device is full.
- **Log**
Enable to store log in backup device while backup device is full.
- **E-mail**
Enable to send E-mail with snapshot while backup device is full.

Please click on “Save” button to save settings and click on “Close” button to finish. It takes 10 seconds to overwrite the new setting into system file; any operation needs to wait for 10 seconds.

Micro SD / external USB storage / local flash of the device is configured are the same.

Accessing data in Local Flash

To access data in local flash, use built-in FTP sever to retrieve data. Please open a new widows explorer and type following information in URL.

ftp://user account@ IP address:FTP server port

- **User Account**
Please enter account username with supervisor or administrator authority. And fill in account password in pop-up window.
- **Camera IP Address**
Please enter the IP address of the connected network camera.
- **FTP Server Port**
Please enter the FTP Server Port for advanced network settings. For more information of FTP Server Port, please refer to section 3.1.2.

Example: Default camera setting

ftp://admin@192.168.100.100:12006

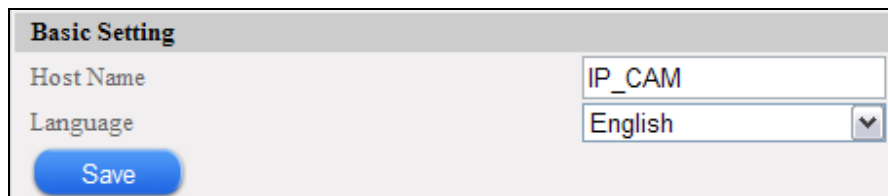
Please type above link in URL. There will be a window popping up for password input. Afterwards, you can see data in local flash.

- ※ Image and video recording files are created in following folders. Both folders are created automatically when system boot up, DO NOT delete both folders in case event trigger action error.

/mnt/local_flash/image	(image files in local flash)
/mnt/local_flash/video	(video recording files in local flash)

3.6 System

3.6.1 Basic Setting



The Basic Setting dialog box contains two input fields: 'Host Name' with the value 'IP_CAM' and 'Language' with a dropdown menu set to 'English'. A blue 'Save' button is located at the bottom left.

■ Host Name

Define the device name. After UPnP function is enabled, the device can be found in My Network Places. The modified host name will simultaneously display in the SecuUtility.

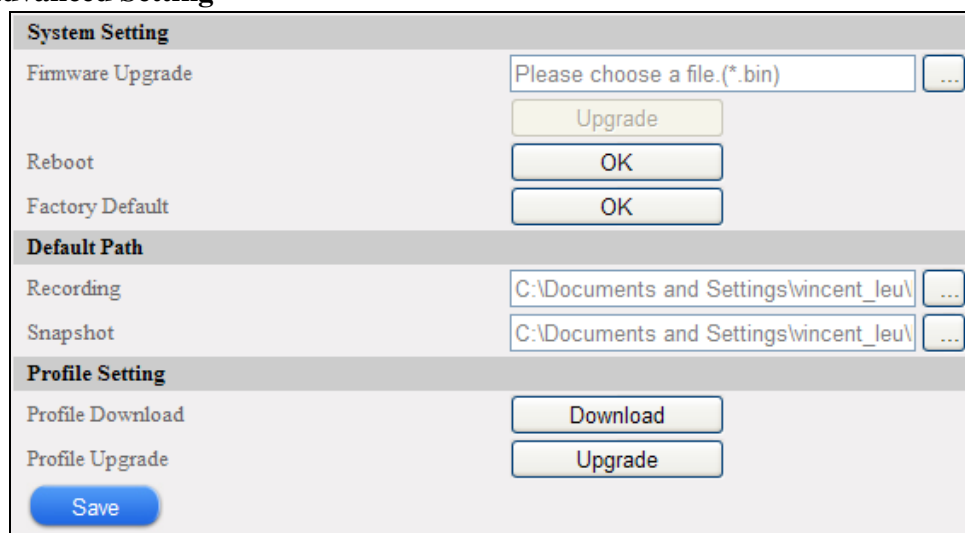
The input characters can be Arabic alphabet 0~9, capitalized or non-capitalized English alphabet, and symbol "-", "_", and ".". The maximum inputs are 32 characters.

■ Language

Select preferred language for user interface.

Please click on "Save" button to save settings.

3.6.2 Advanced Setting



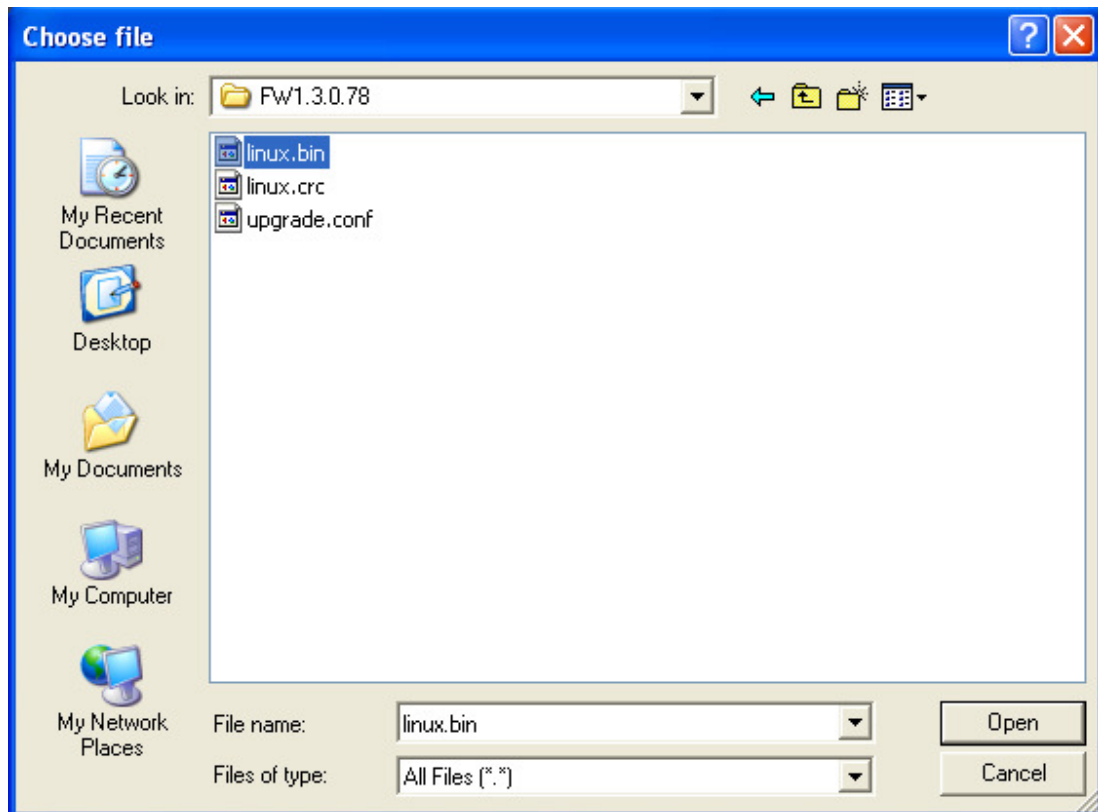
The System Setting dialog box is divided into several sections. The 'Firmware Upgrade' section has a file selection field showing 'Please choose a file.(*.bin)', an 'Upgrade' button, and an 'OK' button. The 'Reboot' section has an 'OK' button. The 'Factory Default' section has an 'OK' button. The 'Default Path' section has two file selection fields for 'Recording' and 'Snapshot', both showing 'C:\Documents and Settings\vincent_leu\'. The 'Profile Setting' section has 'Download' and 'Upgrade' buttons. A blue 'Save' button is at the bottom left.

■ System Setting

➤ Firmware Upgrade

Before start firmware upgrade, please put linux.bin and linux.crc in the same folder. To perform firmware upgrade, click on firmware upgrade button. Choose new firmware file, linux.bin, and click "Upgrade" button. System will automatically perform firmware upgrade. The whole process may take about 5 minutes to complete. **DO NOT power off device during firmware upgrade in case system malfunction occur.**

For local firmware upgrade, please refer to Appendix A.



- **Reboot**
Click on the button to reboot the device.
- **Factory Default**
Click on the button to reset the device back to factory default settings.

■ Default Path

- **Recording**
Select to change saving path of web recording files. Default is at “My Documents”.
- **Snapshot**
Select to change saving path of web snapshot files. Default is at “My Documents”.

Please click on “Save” button to save settings.

■ Profile Setting

- **Profile Download**
Click this button to download the camera's parameters profile.
- **Profile Upgrade**
Click this button to update the parameters of the camera profile.

3.6.3 Time Setting

The screenshot shows a web-based configuration window titled "Time Setting". It includes the following elements:

- Date:** A text input field containing "2011/08/16" with a placeholder format "(yyyy/mm/dd)".
- Time:** A text input field containing "09:02:05" with a placeholder format "(hh:mm:ss)".
- Time Zone:** A dropdown menu currently displaying "(GMT+08:00) Beijing, Hong Kong, Singapo".
- Synchronization:** A checkbox that is checked, with the label "Enable".
- NTP Server:** A text input field containing "time.stdtime.gov.tw".
- Synchronize with Local PC:** A button labeled "Sync now".
- Save:** A blue button at the bottom left of the window.

■ Date

Fill in system date, the format should be: yyyy/mm/dd.

■ Time

Fill in system time, the format should be: hh:mm:ss (24-hour clock).

■ Time Zone

Define time zone of current area.

■ Synchronization

Enable to synchronize time with NTP server every hour.

■ NTP Server

Fill in NTP server address. User can choose any one of below public NTP servers to use.

- time.stdtime.gov.tw
- asia.pool.ntp.org
- tw.pool.ntp.org
- us.pool.ntp.org
- europe.pool.ntp.org
- oceania.pool.ntp.org
- south-america.pool.ntp.org

Please click on "Save" button to save settings.

■ Synchronize with Local PC

When system does not enable NTP server synchronization, click "Sync now" to synchronize camera system time as client PC time.

※ System time in this web page can't refresh automatically, please switch pages to refresh manually.

3.6.4 DST (Daylight Saving Time)

Daylight Saving Time	
DST	☐ Enable
Start Date	00/00 (mm/dd)
Start Time	00:00 (hh:mm)
End Date	00/00 (mm/dd)
End Time	00:00 (hh:mm)
Save	

■ DST

Enable this item to activate day light saving function.

■ Start Date

Fill in the start date of DST, the format should be: mm/dd.

■ Start Time

Fill in the start time of DST, the format should be: mm/dd.

■ End Date

Fill in the end date of DST, the format should be: mm/dd.

■ End Time

Fill in the end time of DST, the format should be: mm/dd.

※Please click on “Save” button to save settings.

Appendix A – Upgrade Firmware at Local Device

Upgrade newer version firmware to the device, there is another method that you can do at local device besides the firmware upgrade on website. During the processing, you can tell the status by lighting. The procedures to upgrade as following:

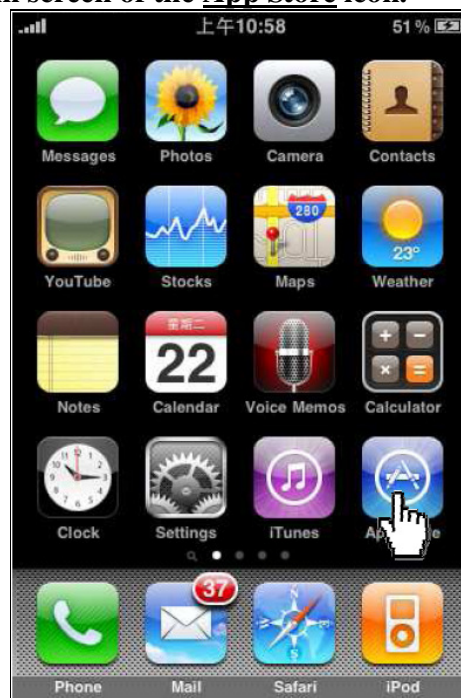
- (1) Turn off the device power supply.**
- (2) Copy the upgraded firmware file from personal PC to compatible Micro SD memory card.**
- (3) Confirm the firmware file which was copied to Micro SD card is as following file:**
Firmware file→ linux.bin and upgrade.conf
File name has to be exactly the same as above to upgrade system.
- (4) Put the Micro SD card with firmware file to device.**
- (5) Turn on the device power supply.**
System automatically upgrade; it takes 2~3 minutes for system upgrade. During the process, power lighting continues blinking. After system reboot complete, the power lighting stays on.
- (6) Remove the Micro SD card on device.**
Please remove Micro SD card while loading system has completed.

Please make sure the step 6 has been executed, otherwise, the system will upgrade again while system reboot next time.

Appendix B – 3GPP on iPhone

※ Before using this function, please enable 3GPP service, set path :
[Setup]→[Network]→[Service].

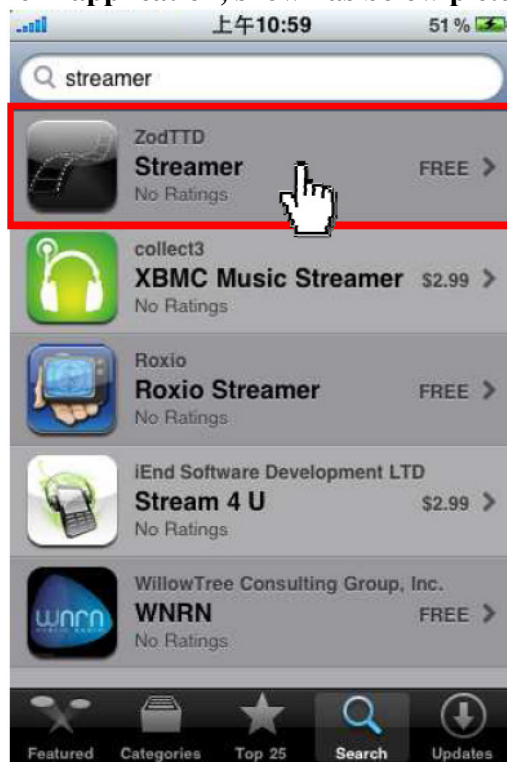
(1) Please click on the main screen of the App Store icon.



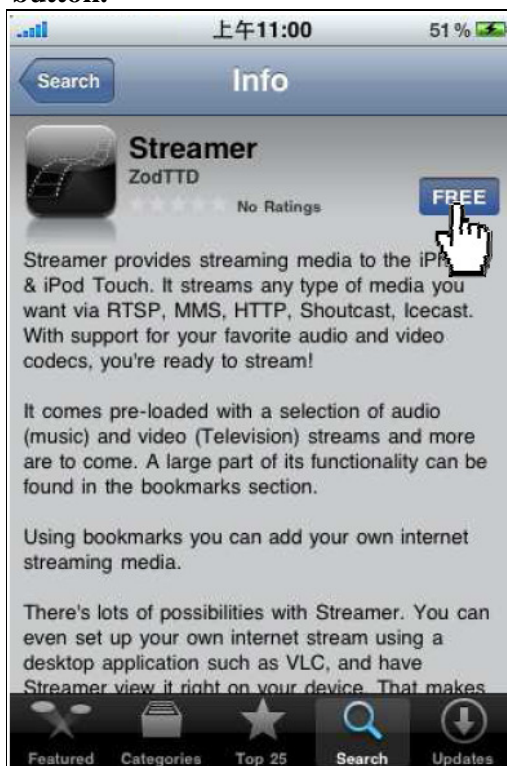
(2) Click "Search" icon.



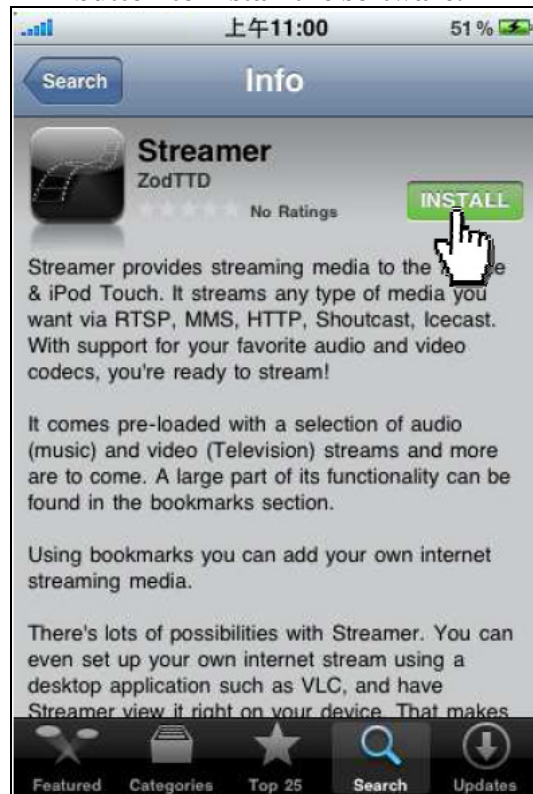
(3) Please search "Streamer" application, shown as below picture.



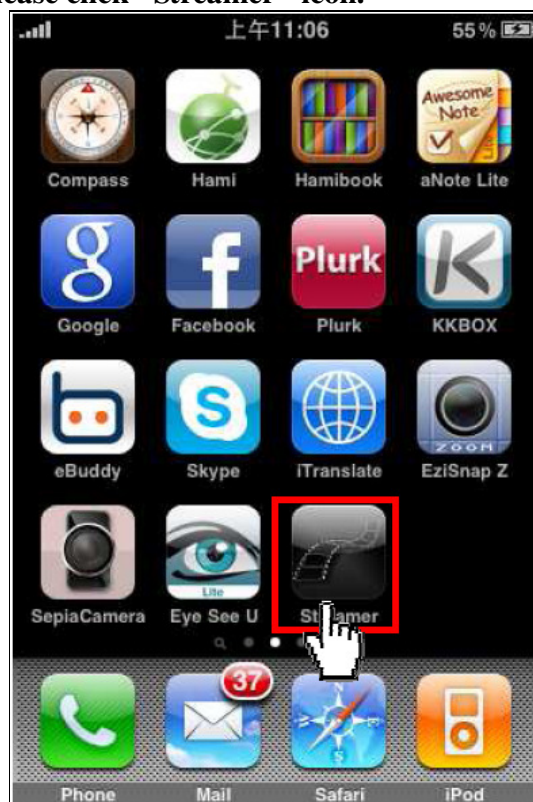
(4) Click "Free" button.



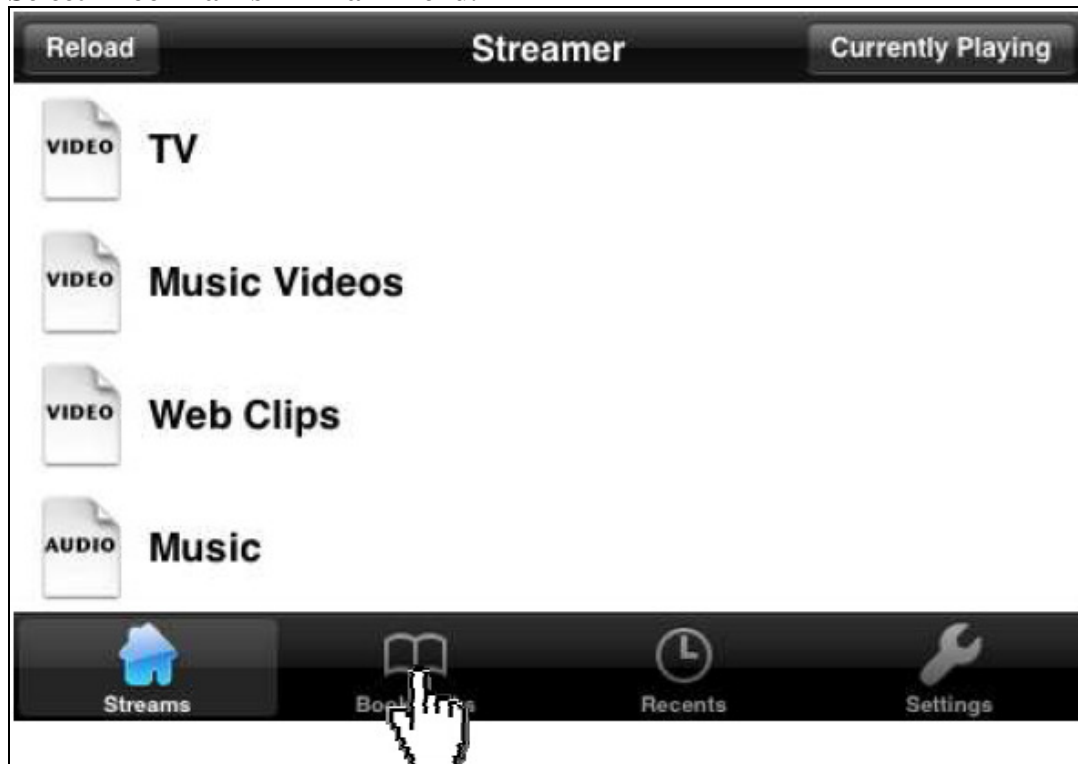
(5) Please click "INSTALL" button to install the software.



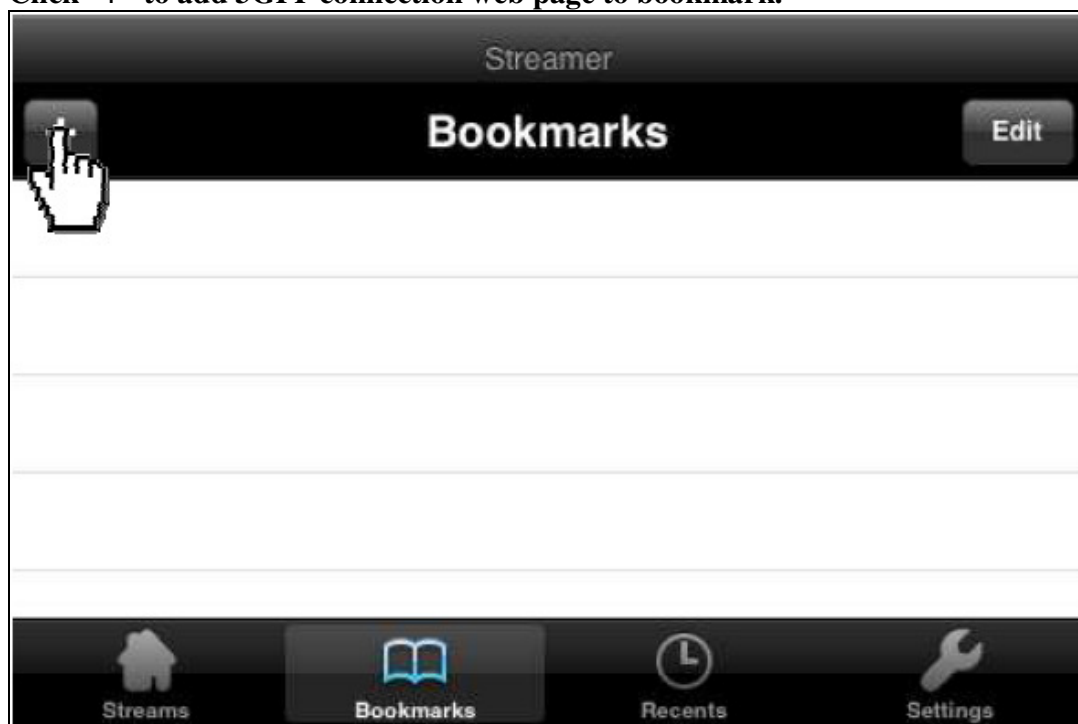
(6) After installation, please click "Streamer" icon.



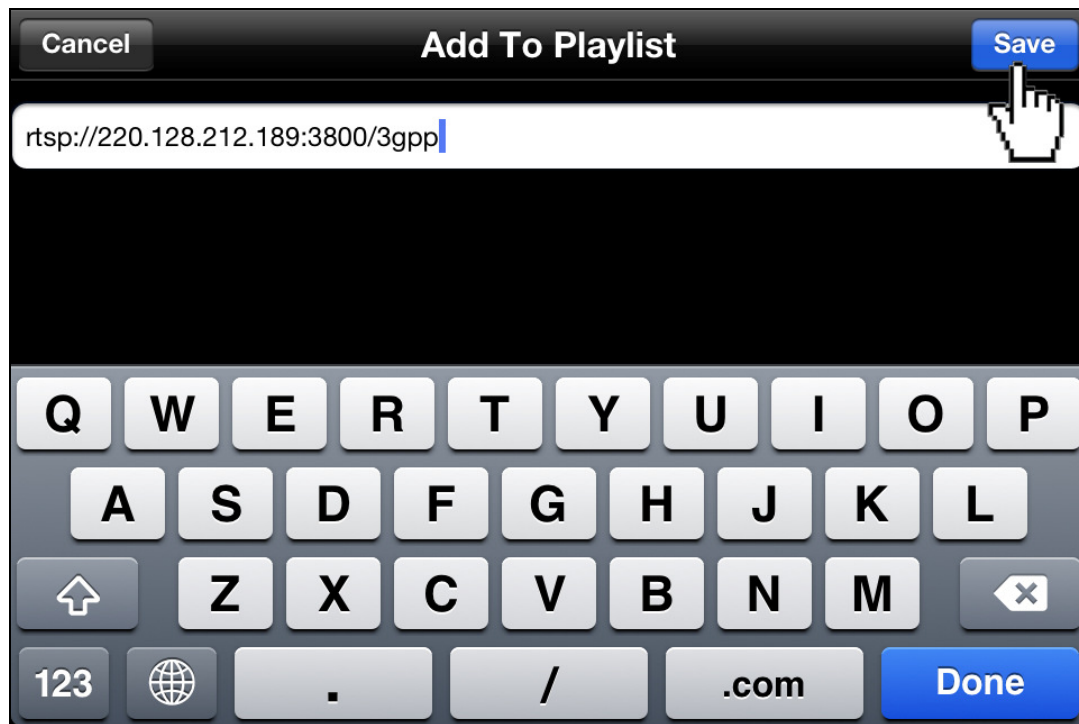
(7) Select “Bookmarks” in main menu.



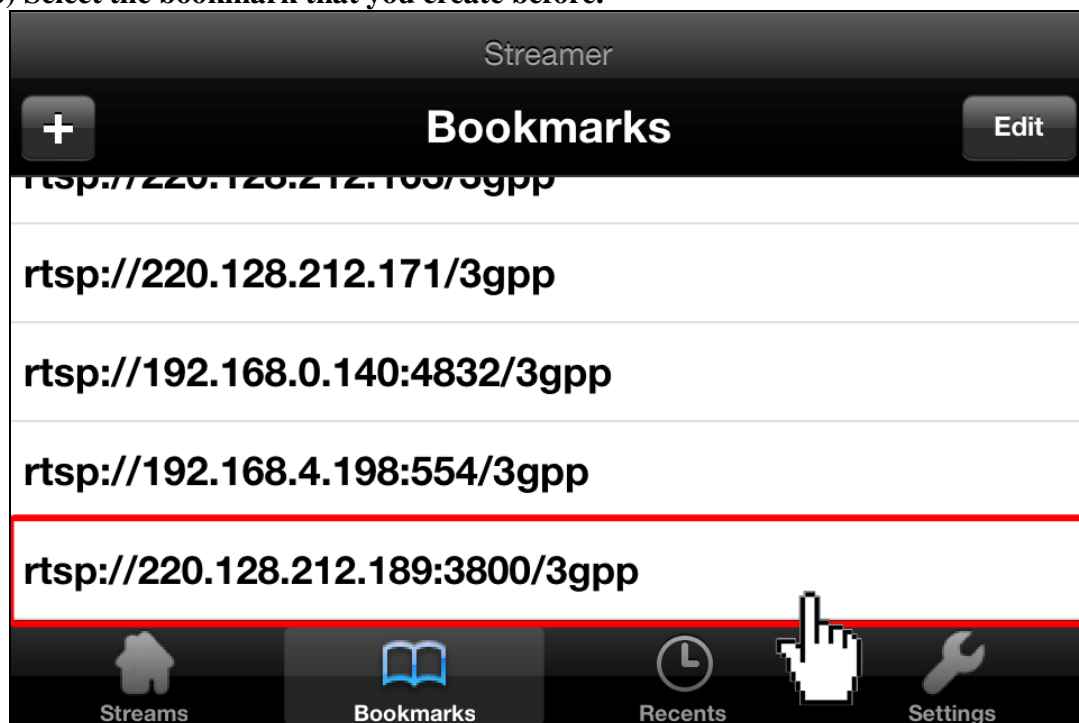
(8) Click “+” to add 3GPP connection web page to bookmark.



(9) Type 3GPP connection RTSP URL, then click “Save”. Please make sure RTSP port is correct. To check RTSP port number, please refer to setting page: [Setup] → [Network] → [Service] → [RTSP Setting] → [RTSP Port].



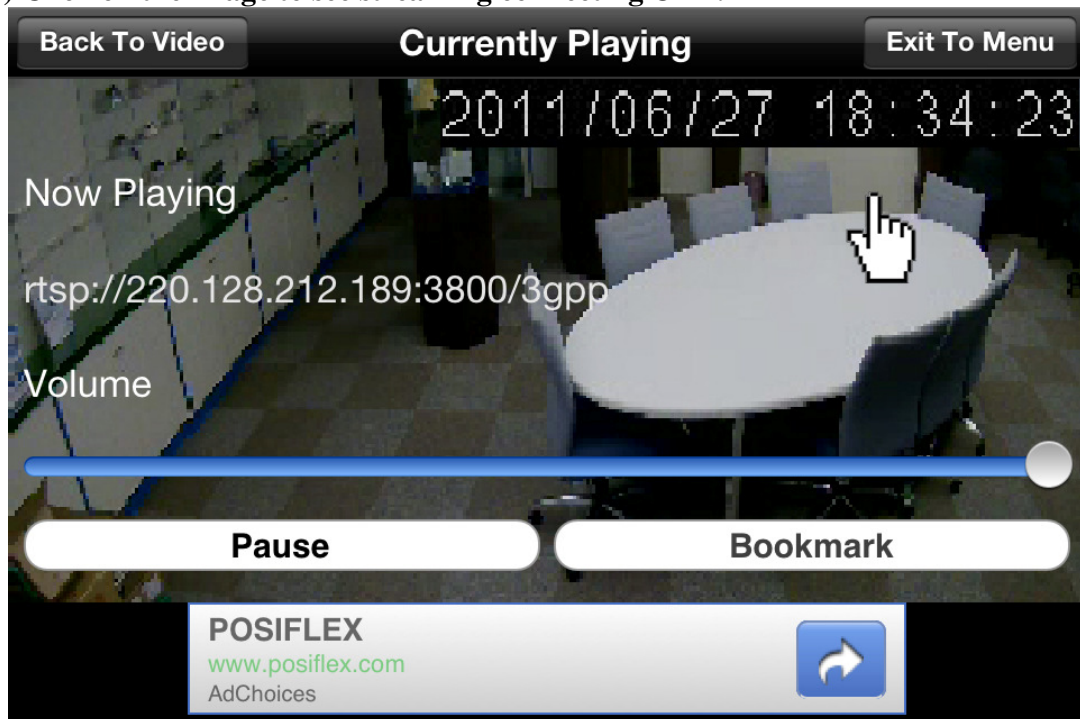
(10) Select the bookmark that you create before.



(11) Live stream will appear in your screen.



(12) Click on the image to see streaming connecting URL.



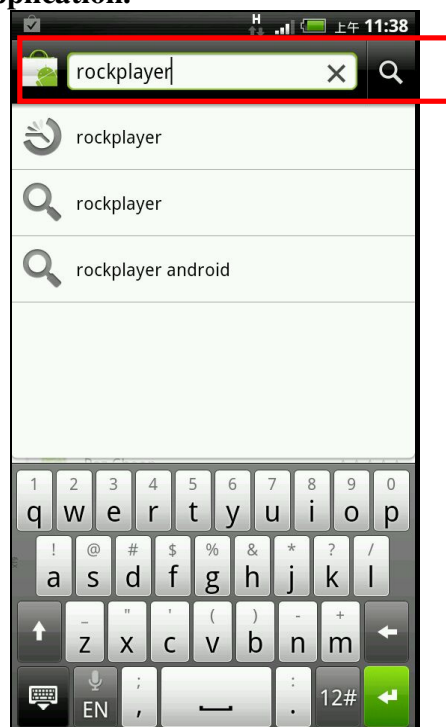
Appendix C – 3GPP on Android Phone

※ Before using this function, please enable 3GPP service, set path :
[Setup]→[Network]→[Service].

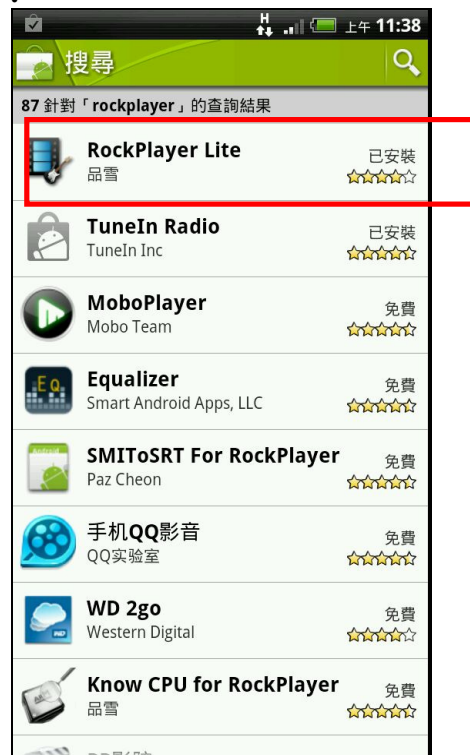
(1) Click “Market” application icon.



(2) Search "RockPlayer" application.



(3) Click “RockPlayer Lite”.



(4) Click "Free" button and to install the software.



(5) After installation, start “Internet” application.



- (6) Type 3GPP connection RTSP URL, then click go to icon. RTSP URL format is rtsp://camera IP address:rtsp port number/3gpp.
For example, rtsp://220.128.212.189:3800/3gpp.
Please make sure RTSP port is correct. To check RTSP port number, please refer to setting page: [Setup] → [Network] → [Service] → [RTSP Setting] → [RTSP Port].



- (7) Media player will ask for proper streaming player for RTSP streaming, please

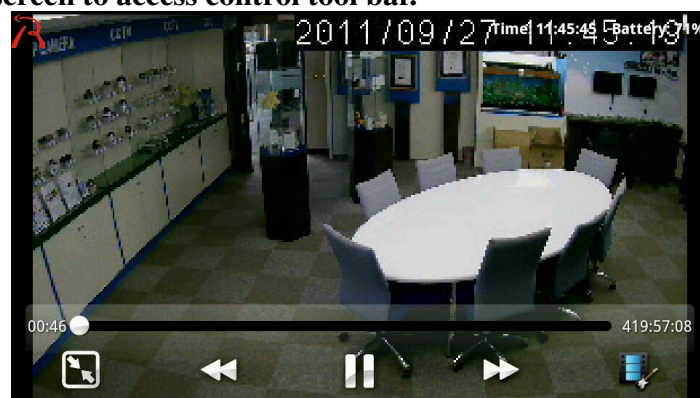
choose “RockPlayer Lite”.



(8) Live stream will appear in your screen.



(9) Click on the screen to access control tool bar.



Appendix D – Specifications

GENERAL	
Image Sensor	1/2.7" Progressive CMOS
Lens	Fixed-focal, f=4.2mm, F=1.8
Shutter Time	1/7.5–1/10000
Minimum Illumination	0.5Lux @ F1.8
IR Distance	10 M
VIDEO	
Video Compression	H.264 & M-JPEG
Video Streaming	Triple streaming
Frame Rate	1920 x 1080 (Full HD) @ 30fps
	1280 x 1024 (SXGA) @ 30fps
	1280 x 960 (960p) @ 30fps
IMAGE	
Flip & Mirror	Yes
AGC, AWB, AES	Yes
BLC	Yes
Privacy Mask	Yes (3 areas)
DNR	2D Noise Filter
AUDIO	
Audio Compression	G.711 (PCM 8KHz 64kbit/s)
2way Audio	Yes
Audio In	Mic x 1 (built in)
Audio Out	3.5mm Phone jack x 1 / speaker x 1 (built in)
NETWORK	
Ethernet	10/100 Base T Ethernet (RJ-45)
Protocol	HTTP, HTTPs, TCP/IP, UDP/IP, ICMP, DHCP, PPPoE, DDNS, SMTP, FTP server, FTP client, NTP, Bonjour, QoS, UPnP, RTSP, RTP, RTCP, Multicast
Password Protection	Yes
Live Viewing User	20
Wireless	802.11 b/g/n Wireless USB dongle (Optional)
EVENT & ALARM	
Motion Detection	Yes
D/I & D/O	1 & 1
Event Notification	Yes
Event List	Yes
RECORDING & STORAGE	
Continuously Recording	Yes
Pre-alarm Recording	Yes
Post-alarm Recording	Yes
Backup Device	Micro SD (capacity up to 32GB) / Built-in 64MB flash memory / External-USB
OTHERS	
SDK	Yes
Recording Software	Free bundle 32 CH recording Software
Power	DC 5V
PoE	Yes
Dimension (W x H x D)	60 x 104 x 37 (mm)
Weight	0.4(kg)
Humidity	0% ~ 90 % RH
Operating Condition	0°C~ 50°C