

Wifi HD PT Camera

EPK-HP10L1 (HP10)



Instruction Manual

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1. INTRODUCTION

This user manual will show the details to set up your camera with your computer; If you are viewing with a Smartphone, please check Quick Start Guide, as it is very easy to set up.

IMPORTANT NOTICE

The various screens throughout this owner's manual will look different depending on the browser you use. Full functionality is available when using Internet Explorer (IE) with EzykamOCX installed. Limited functionality is available with other browsers, such as Safari, Chrome, and Firefox.

Please Read this manual carefully, according to the browser you are using.

This is an integrated wireless IP Camera. It combines a high quality digital Video Camera with network connectivity and a powerful web server to bring clear pictures to your Desktop from anywhere on your local network or over the Internet.

The main function of the camera is to transmit remote video over IP network. The high quality video image can be transmitted with 30fps speed on the LAN/WAN by using H.264, MJPEG compression technology.

It is based on the TCP/IP standard, build-in WEB server which supports Internet Explorer. Therefore the management and maintenance of your camera becomes simple by using the network to achieve the remote configuration, start-up and to upgrade firmware.

You can use your IP Camera to monitor your home or your office. Also, controlling and managing images are simple by visiting the web site.

1.1. Features

- Powerful high-speed video protocol processor.
- High-sensitivity 1/4" CMOS sensor
- Picture total 1000K pixels (1megapixel)
- Supports Pan and Tilt (PT) control, Pan 320°, Tilt 120°
- Optimized H.264 MJPEG video compression for transmission
- Multi-level user management and passwords definition
- Embedded Web Server for users to visit by IE
- Supports wireless network (WI-FI/802.11/b/g/n)
- Supports Dynamic IP (DDNS) and UPNP LAN and Internet (ADSL, Cable Modem)
- Gives an alarm in case of motion detection
- Supports image snapshot

- Supports multiple protocols : TCP/IP, HTTP, DNS, DHCP, PPPoE, SMTP, FTP, SSL, TFTP, NTP, ARP/RARP, NFS, RTSP, RTP and RTCP.
- Supports WEP/WPA/WPA2 encryption
- Supports IE, Firefox, Safari, and Google chrome browsers

1.2. Packing List

- IP Camera
- Quick Setup Guide
- DC Power Supply
- CD
- Network Cable
- Mountings

1.3. Product Views

1.3.1. Front View



Wireless Antenna	WI-FI Antenna (rotate to vertical position as shown above).
Infrared LEDs	Infrared LEDs with 10-15 meters night vision.
LENS	Megapixel lens.
Network Interface	RJ-45/10-100 base T
Power Port	5 Volt DC and 2Amp
Network Light	The green LED will be on when the network is connected, the yellow LED will blink when data is transferred
SD card Slot	Max Support to 64 GB
Reset	If you press and hold the RESET button for about 10 seconds, all the parameters will be set back to the factory default settings. (Please keep the power on when doing a RESET).

1.4. PC System Requirements

System configuration requirements:

- **CPU:** 2.06 GHZ or above.
- **Memory:** 256M or above.
- **Network Card:** 10M or above.
- **Display Card:** 64M or above memory.
- **Recommended Operating system:** Windows XP, Windows Vista, Windows 7.

1.5. Hardware Installation

Follow the steps below to set up your camera hardware.

1. Install the Wi-Fi antenna.
2. Plug the power adaptor into the camera and into an AC outlet.
3. Plug the network cable into the camera and router/switch.
4. It takes approx 30 seconds to boot up the camera, then you will find the IP address from “IP Camera Tool” (Figure 2.1.5).
5. When the power is on and the network cable is connected, the green LED on the rear panel will stay on.
The yellow LED will keep flashing, and the Indicator LED on the front of the camera will flash.



2. INSTALLATION AND SETTINGS

System Requirement:

Operating System: Windows Vista / 7/ 8/ 10

Network Protocol: TCP/IP

Network Structure: Applies to all network connections 10/100M LAN platform

Browser: Internet Explorer 6.0 or above. Firefox, Google, Safari, or Chrome.

2.1. Network Connection

Intranet and Extranet Connection Reference:

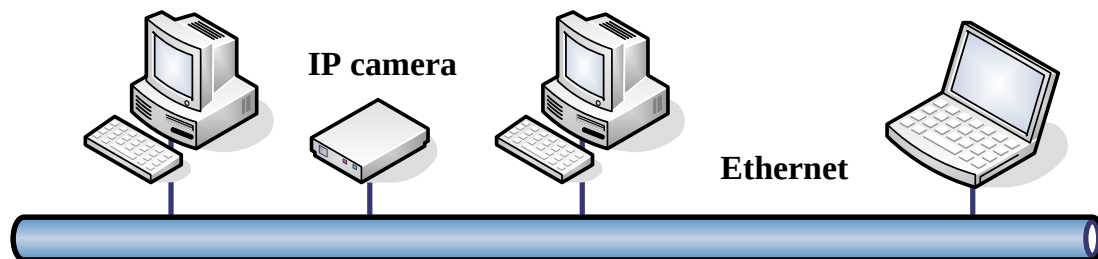
Extranet means public IP (i.e. The Internet), Intranet means private IP. If your IP belongs to the follow range, then it's a private IP:

Category A: 10.0.0.0 - 10.255.255.255

Category B: 172.16.0.0 - 172.31.255.255

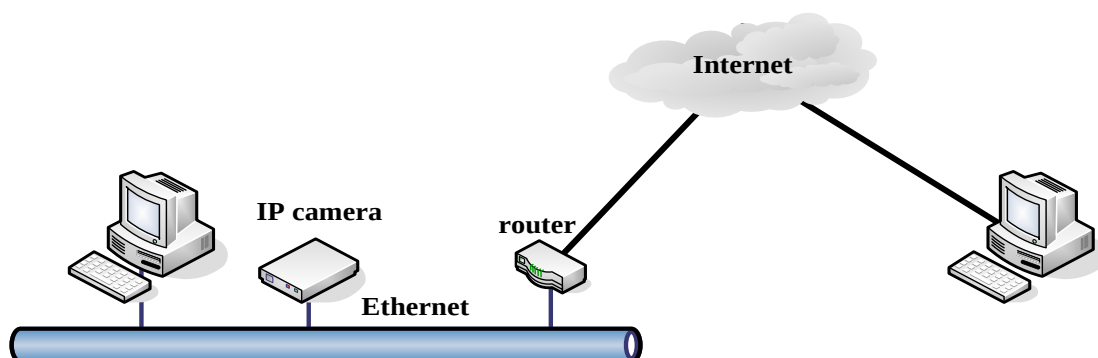
Category C: 192.168.0.0 - 192.168.255.255

Intranet Connection: The IP camera and your computer (device) should be under the same network environment, and both of the IPs should be under the same subnet, pictured as below:

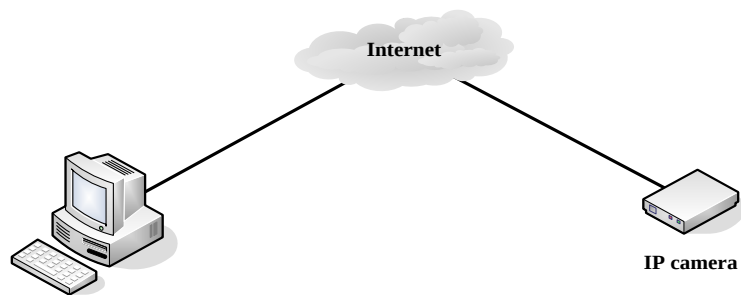


Extranet Connection: there are 2 ways as below:

(1). IP camera connects to the Internet via a router, here camera's IP is a private IP, client needs to connect to the IP camera through a router, with port forwarding to be connected correctly, as below:



(2). IP camera connects to the Internet directly, if it's a fixed IP provided by your ISP, just input it. If it's a floating IP, then input the account and password provided by your ISP to dial-up connection.



2.2. Browser Settings (For IE only)

EzykamOCX will be downloaded automatically when you login to the IP Camera, but you might have to set the IE browser to enable the EzykamOCX to be downloaded automatically after signing in. Steps as below:

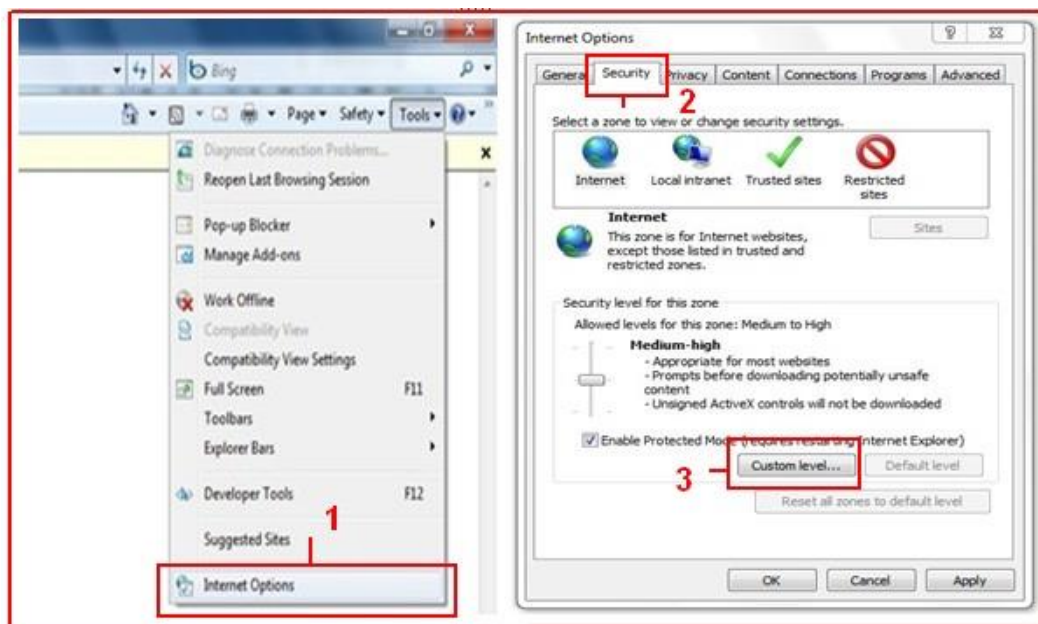
1. Close the firewall of your computer.
2. Change the ActiveX settings, “IE” browser > “Tool” > “Internet Options” > “Security” > “Custom Level” > “ActiveX control and Plug-ins”, all the ActiveX options set to be “Enable”:

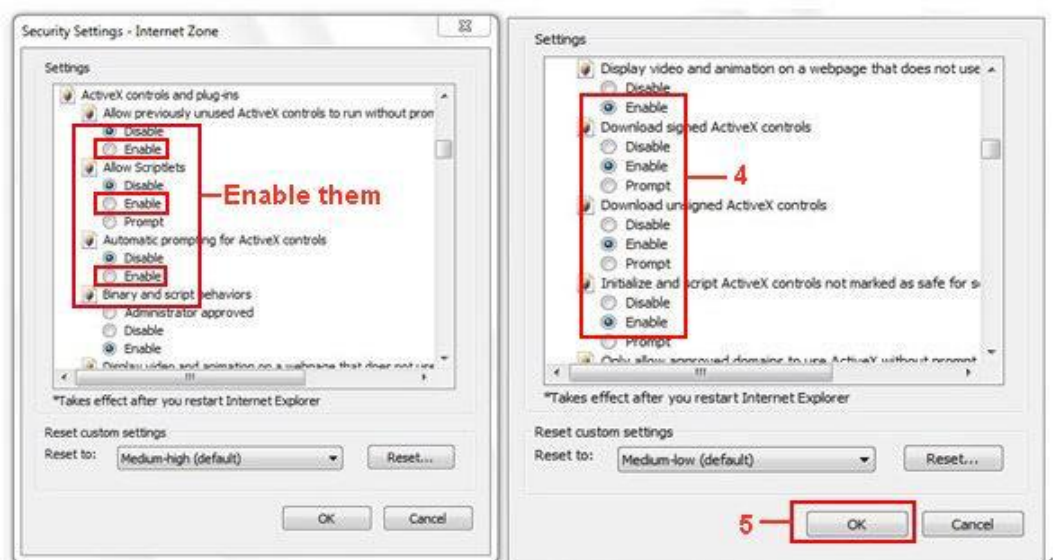
Especially:

Enable: Download unsigned ActiveX controls

Enable: Initialize and script ActiveX controls not marked as safe

Enable: Run ActiveX controls and plug-ins





You can also click **“Start”** menu->**“Internet Explorer”**, and choose **“Internet attributes”**, or via **“Control Panel”** ->**“Internet Explorer”**, to access Security settings.

NOTE: Make sure that your firewall or anti-virus software doesn't block the software or ActiveX. If you couldn't see live video, please close your firewall or anti-virus software, and try again.

2.3. UPnP Service

UPnP could help you to find your camera's IP more quickly. For Window XP, from **“Control Panel”** > **“Add or remove applications”** > **“Add or remove Windows component”** > **“Network service”** > **“Detailed data”** > **“UPnP users interface”**, the factory default settings is disabled. Enable it, then it can allow your operating system to support UPnP.

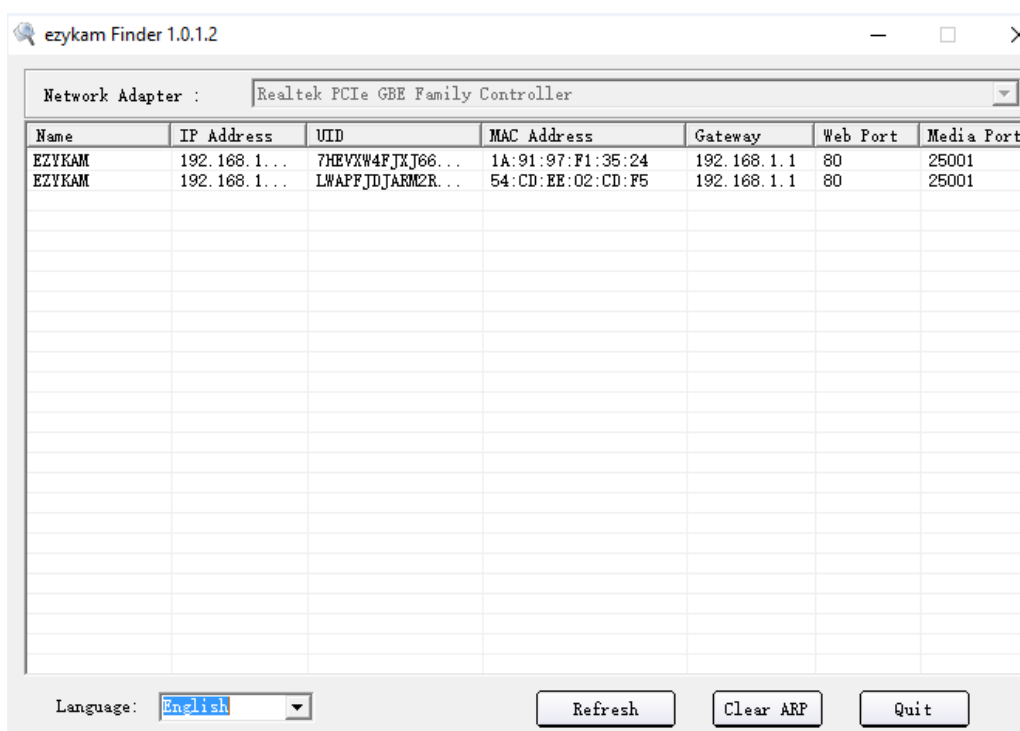
Alternatively, you can also click **“Start”** menu>**“Internet Explorer”**, and choose **“Internet attributes”**, or via **“Control Panel”** >**“Internet Explorer”**, enter to Security settings.

1.1. Ezykam Search Tool (for IE browser only)

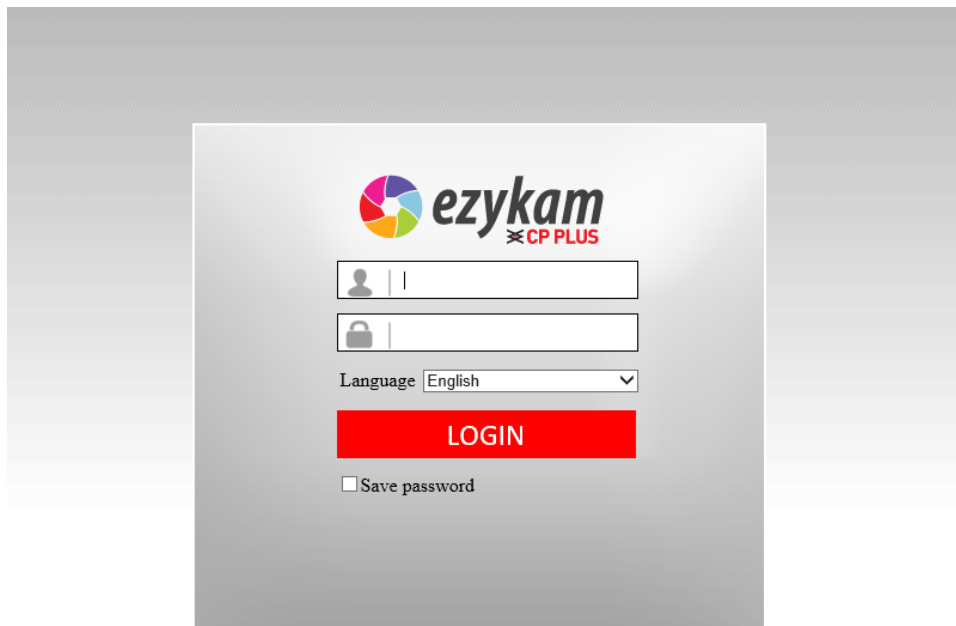
Step 1: Use tool “**Ezykam finder.exe**” to find IP address of LAN.



Step 2: Double click “**Ezykam finder**” on your desktop, the camera’s IP & MAC address will be displayed. If you want to search again, click “**Search**”.



Step 3: Double-click the IP address of your camera to enter the login interface. (Default user: admin; password: admin)



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2.4. Install the EzykamOCX (For IE only)

Install the Ezykam for the first time login; you will get tips after enter user and password in login page.

Download the OCX file, and then double click to install it automatically.

After OCX installed fully, and then input the user and password to login the camera.

2.4.1. For other Browsers, e.g., Safari, Firefox, Chrome, there is no need to install the ActiveX control, see below:

User can input the IP address in the other browsers, select the view mode such as Server Push; VLC, Quick time to view

If User cannot find the correct IP address, the default IP address for each camera is 192.168.1.155. You can run the browser, and input the IP address directly into your browser to login to the camera.

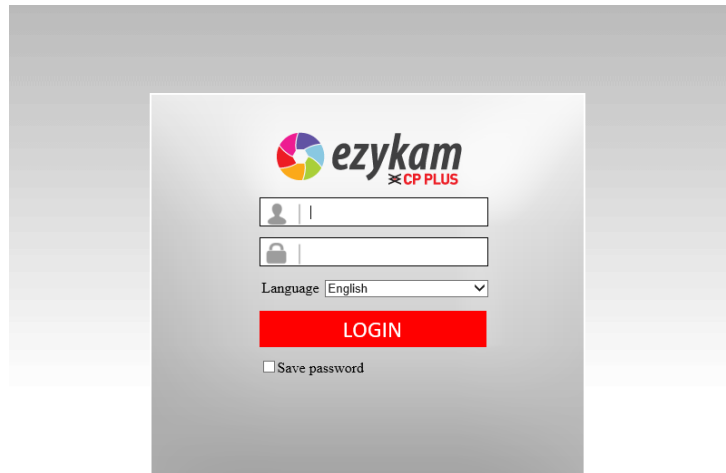
NOTE: If the IP segment of the computer is different from the camera, such as 192.168.0.xx, please change the IP segment of the computer's to the same as camera's, such as 192.168.1.xx, then connect the IP Camera to the computer via network cable directly, run the browser, input the IP address and the login screen below will pop-up:

3. SOFTWARE OPERATION

3.1. Software operation for IE Browser

Choose your desired language, input correct user name and password, and then click “Login”

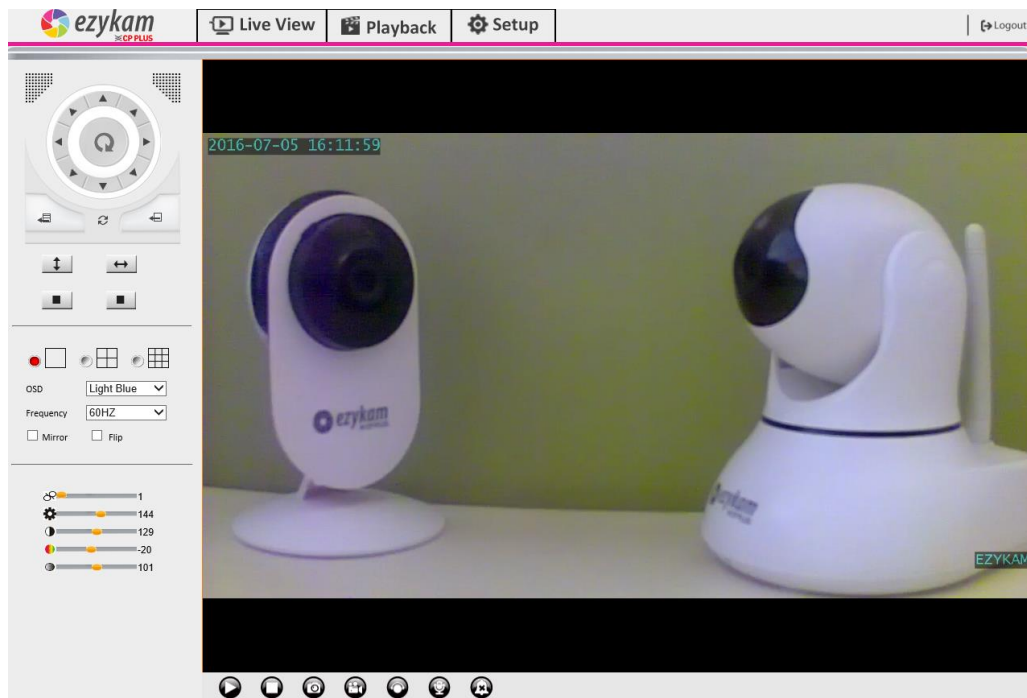
User name: admin **Password:** admin,



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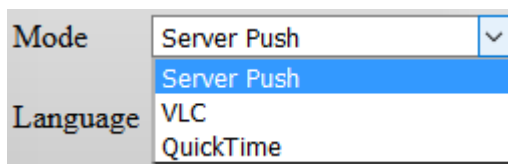
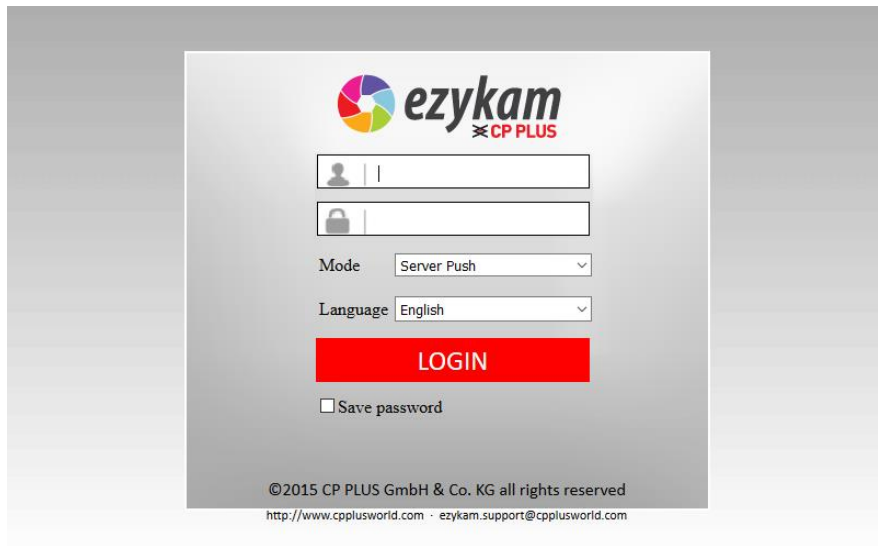
: Choose languages here



3.2. Software Operation for Chrome, Firefox, Safari:

Choose the suitable language, input correct user name and password, and then click “Login”

User name: admin **Password:** admin

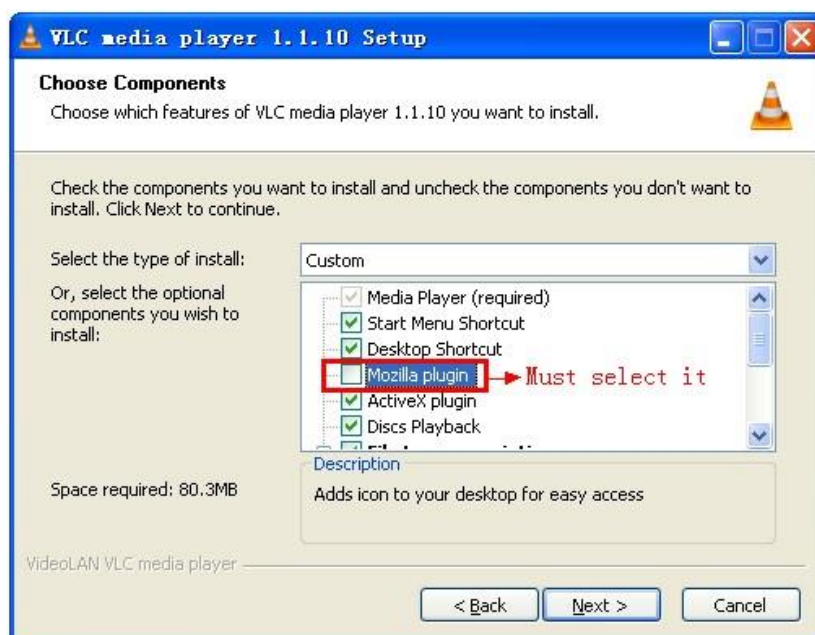


Choose the login mode.

Sever Push: For Firefox, Chrome, or Safari browser.

VLC: If you use VLC, should download the VLC player first.

During the VLC installation, you must enable Mozilla plug-in as the picture shows below:



QuickTime: Choose QuickTime, login to the camera directly. If there is prompt for installing the QuickTime player, just download and install it.

Language English : Choose languages here

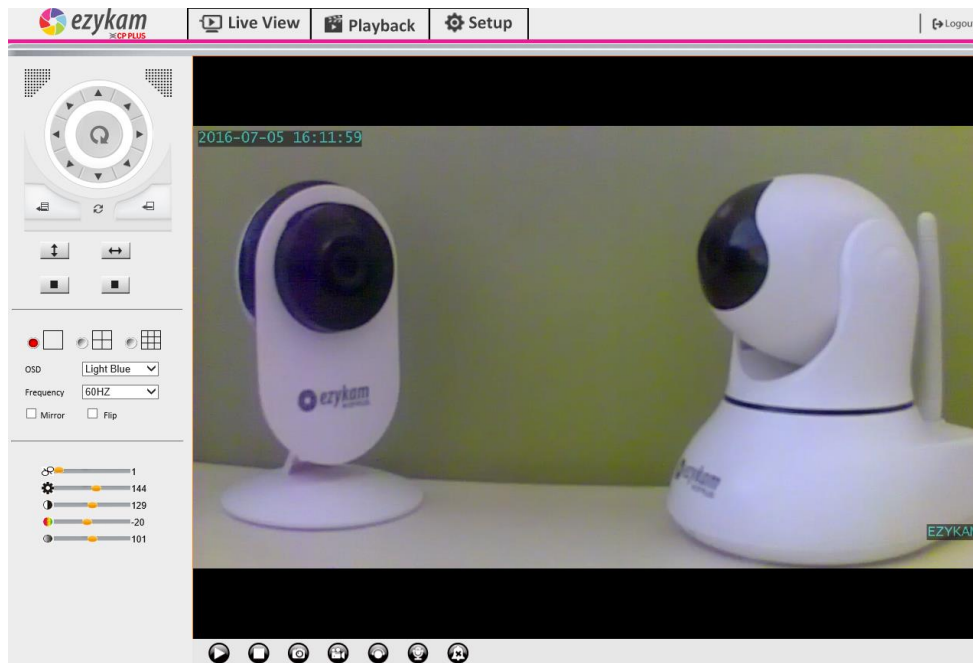
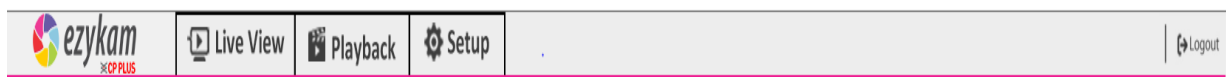


Figure 2.3

3.3. Functions

3.3.1. Three main functions (For IE):



: Click it, back to live video window from “**Playback**” or **Setup**”.



: Click to query and playback the video files (**Details see 5 Playback**)



: Setting the camera's parameters (**Details see 4 Setup**)

 Logout

: You will back to the login page.

3.3.2. Two main functions (For Safari, Chrome, Firefox)



: Click it, back to live video window from “Playback” or “Setup”



: Setting the camera's parameters (Details see 4 Setup)



: You will back to the login page

3.4. For Live Video (for IE browser)

3.4.1. Video Menu:



Play: Play the live video.



Stop: Stop the live video.



Snapshot: Click to take snapshot, the picture be saved in the PC to its appointed path as JPG format, and pop-up the prompt as below :(you can click “Save” to save the snapshot)





Record: Click to start record manually; the icon will change to green color.



Record file will be saved in the PC to its appointed path as AVI format. Click it again, will stop record function.



Audio: Click it to enable listen function, the icon will change to green color



can hear the live audio from camera via PC if audio is ON. Click it again, will stop listen function.



Talk: Click it to enable talk function, the icon will change to green color



can talk between PC and camera if audio device connected. Click it again, will stop talk function.



Clear Alarm: Click to stop the alarm manually when there is an alarm triggered, and pop-up prompt as

below:

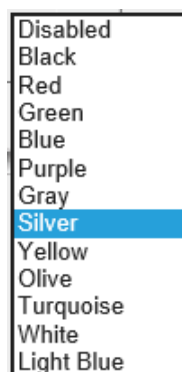


OSD Settings: Click it will pop-up the OSD settings interface, including OSD Color, Frequency, Image Mirror and Flip.



OSD: Means “On-Screen Display”

OSD Color: Including Disabled, Black, Red, Green, Blue, Purple, Gray, Silver, Yellow, Olive, Turquoise, White, Light Blue etc.

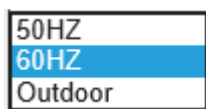


Frequency: Including 50HZ, 60HZ, Outdoor.

50HZ/60HZ for the users who use 50HZ/60HZ frequency, outdoor for the users who want to use this camera

to monitor an outdoor environment (through a window).

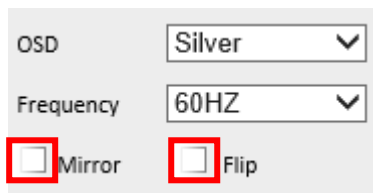
NOTE: The camera should only be used in a indoor environment



Mirror and Flip

Mirror: Select this checkbox to see a mirror image. Uncheck it to go back to normal.

Flip: Select this checkbox to flip the image upside down. Uncheck it to go back to normal.



NOTE: You can choose Mirror and Flip function if you set up the camera in a special position, upside down for example.

3.5. Live Video for Safari, Chrome, Firefox:

3.5.1. Play Menu for QuickTime Mode:



Capture: Click to take snapshot, the picture be saved in the PC to its appointed path as JPG format, will pop-up the snapshot, right click the picture to save it.



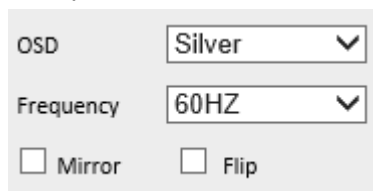
Full screen: Click to have full screen view;



: Click to exit full screen.

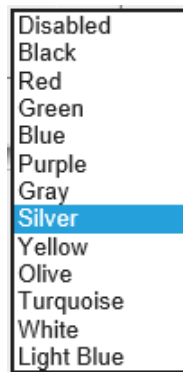


OSD Settings: Click it will pop-up the OSD settings interface, including OSD Color, Frequency, Image Mirror and Flip.



OSD: Means “On-Screen Display”

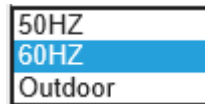
OSD Color: Including Disabled, Black, Red, Green, Blue, Purple, Gray, Silver, Yellow, Olive, Turquoise, White, Light Blue etc.



Frequency: Including 50HZ, 60HZ, Outdoor.

50HZ/60HZ for the users who use 50HZ/60HZ frequency, outdoor for the users who want to use this camera to monitor an outdoor environment (through a window).

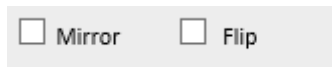
NOTE: The camera should only be used in an indoor environment.



Mirror and Flip

Mirror: Select this checkbox to see a mirror image. Uncheck it to go back to normal.

Flip: Select this checkbox to flip the image upside down. Uncheck it to go back to normal.



NOTE: You can choose Mirror and Flip function if you set up the camera in a special position, upside down for example.

3.5.2 Top Menu for VLC Mode:

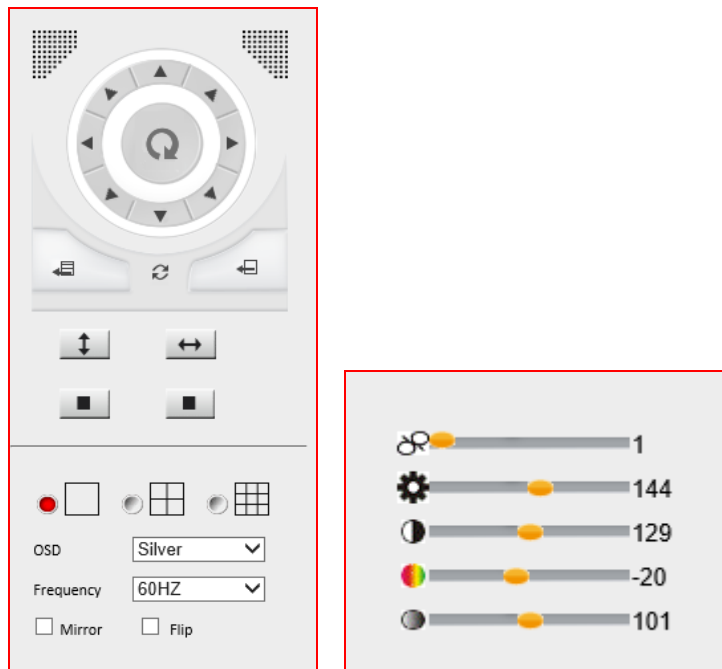


This will be the same as 3.3.1 TOP Menu For QuickTime Mode.

3.6 Left Side Menu:

3.6.1 Left Side Menu for IE browser

There are some basic operation icons listed on the left side menu as below:



PT Control: Set Pan/Tilt as upward, downward, leftward, rightward, up-left, down-left, up-right, down-right, etc directions.



Center: Click this icon, the camera will pan/tilt, then stop at the center. Normally it will rotate 1 rotation.

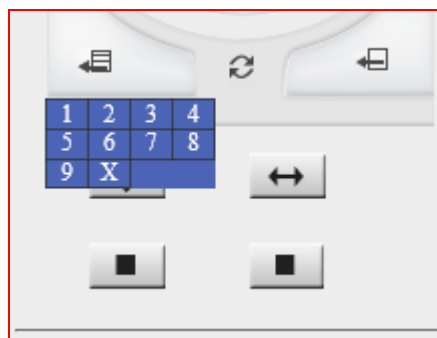


Up: Click this icon, camera will move up, you can click one by one or hold it to control the movement.



Down: Click this icon, camera will move down, click it step by step or hold on to control the movement

NOTE: It is the same operation as left, right, up-left, up-right, down-left, down-right etc.



Set Preset: It supports 9 preset positions. First, control the camera to rotate to the special position you

need to set, click **Set Preset** button  it will pop-up a dialog frame (Figure 4.0), choose any number (1-9).



Call Preset: It supports 9 preset positions. If you want to monitor an important area quickly and precisely, just click **Call Preset Position** button  it will pop-up a dialog frame (Figure 4.0), choose the

number, then the camera will rotate to the preset position automatically.

If you want to use **Call Preset**, you have to **Set Preset** first.

NOTE: if you set different positions with a same number, the camera will record the last position setting only.



Cruise: Preset cruise, camera can cruise according to the different presets you set.



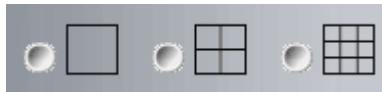
Click this icon; the camera will rotate up and down, i.e., vertical tilt, click  to stop it



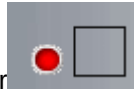
Click this icon; the camera will rotate left and right, i.e., horizontal pan, click  to stop it



Click this icon, IO output Switch ON. Click  to set it OFF.



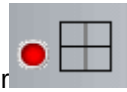
Click this one, you can view the main channel of the camera you login to, move the mouse to the



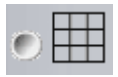
icon, the frame will change to red color.



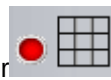
Click this one; you can view 4 Channels of cameras that are connected, from CH1 to CH4. Move



the mouse to the icon, the frame will change to red color.

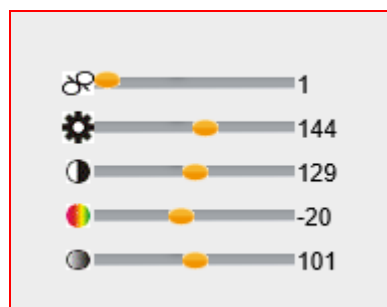


Click this one; you can view 9 Channels of cameras that are connected, from CH1 to CH9. Move



the mouse to the icon, the frame will change to red color.

NOTE: If you want to view 4/9 channels, you should set the Multi-Device firstly (See section 4.13 Multi-Device Settings).



PTZ speed: set value from 1 to 100, click the icon, it will change back to the factory settings.



Brightness: set value from 0 to 255, click the icon, it will change back to the factory settings.



Contrast: set value from 0 to 255, click the icon, it will change back to the factory settings.



Hue: set value from -128 to 127, click the icon, it will change back to the factory settings.

3.4.2 Left Side Menu for Safari, Chrome, Firefox:

There are some basic operation icons listed on the left side menu as below:

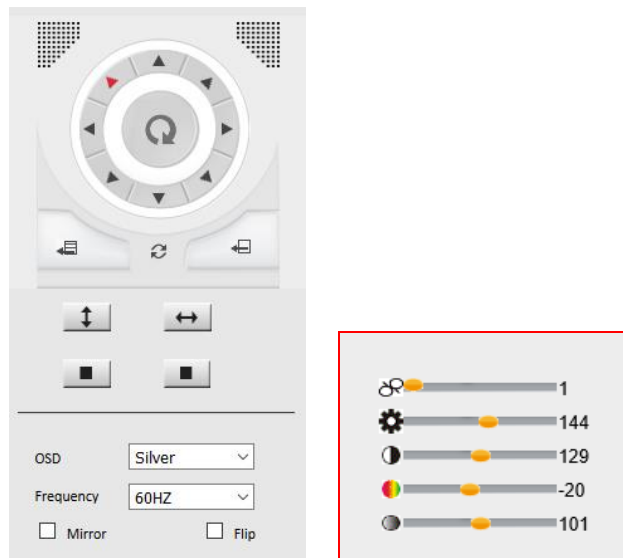


Figure 4.4

PT Control: Set Pan/Tilt as upward, downward, leftward, rightward, up-left, down-left, up-right, down-right, etc.



Center: Click this icon, the camera will pan/tilt, then stop at the center. Normally it will rotate 1 rotation.



Up: Click this icon, camera will move up, you can click step by step or hold it to control the movement.



Down: Click this icon, camera will move down, click it step by step or hold on to control the movement.

NOTE: It is the same operation as left, right, up-left, up-right, down-left, down-right etc.

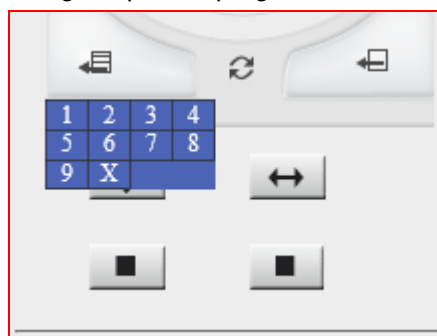


Figure 4.5



Set Preset: It supports 9 preset positions. First, control the camera to rotate to the special position you need to set, click **Set Preset** button  it will pop-up a dialog frame (Figure 4.5), choose any number (1-9).



Call Preset: It supports 9 preset positions. If you want to monitor an important area quickly and precisely, just click **Call Preset Position** button  it will pop-up a dialog frame (Figure 4.5), choose the number, then camera will rotate to the preset position automatically.

If you want to use **Call Preset**, you have to **Set Preset** first.

NOTE: If you set different positions with a same number, camera will record the last position setting only.



Cruise: Preset cruise, camera can cruise according to the different presets you set.



Click this icon; the camera will rotate up and down, i.e., vertical tilt, click  to stop it.



Click this icon, the camera will rotate left and right, i.e., horizontal pan, click  to stop it.



Click this icon, IO output Switch ON. Click  to set it OFF.

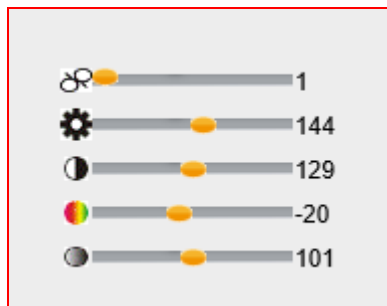


Figure 4.6



PTZ speed: set value from 1 to 100, click the icon to go back to the factory settings.



Brightness: set value from 0 to 255; click the icon to go back to the factory settings.



Contrast: set value from 0 to 255; click the icon to go back to the factory settings.



Hue: set value from -128 to 127; click the icon to go back to the factory settings.

4. Setup

4.1. Status → Device Info.



Click “ **Setup**” icon select “Status”, it will show the basic information such as “**Device ID**”, “**Device Client Version**”, “**Device System Version**”, “**Description**”, “**IP Address**”, “**UPNP Status**”, “**DDNS Status**” etc.

Default device name is “**IP Camera**”, users can change the camera’s description here, picture as below:

4.1.1. For IE, camera will show as below:

Device Info	
Device ID	D6C2EA9CB15C
Device Client Version	89.1.1.11
Device System Version	EPK-EP20L1
Description	EZYKAM
IP Address	192.168.1.149
UPNP Status	Fail

Figure 4.7

4.1.2. For Safari, Chrome, Firefox, camera will show like picture as below:

Device Info	
Device ID	D6C2EA9CB15C
Device Client Version	89.1.1.11
Device System Version	EPK-EP20L1
Description	EZYKAM
IP Address	192.168.1.149
UPNP Status	Fail

Figure 4.8

4.2. General Setting

4.2.1. User Permission

User can set 10 different usernames and passwords for different permission; Permission: Administrator, Operator, and Visitor.

Super Administrator: Every device has a super administrator, it has the highest permission, can set all the parameters.

Administrator: Lower permission than super administrator, it can set most of the parameters except adding or editing other administrator accounts.

Operator: Lower permission than administrator, can do some operation such as pan/tilt control and set some parameters.

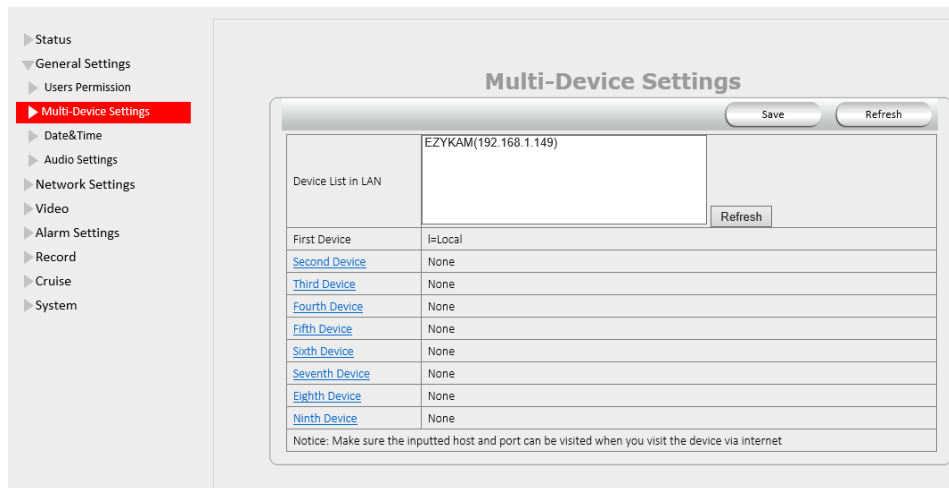
Visitor: The lowest permission, only can view live video, can't control the pan/tilt, parameter settings etc.

Serial Number	Username	Password	Permission
1	admin	•••••	Super Administrator
2			Visitor
3			Visitor
4			Visitor
5			Visitor
6			Visitor
7			Visitor
8			Visitor
9			Visitor
10			Visitor

4.2.2. Multi-Device Settings

Note: Multi-Device only can be set under IE Browser, for Firefox, Safari, Chrome; you cannot see these setting, as they do not support ActiveX.

Click “**Multi-Device Settings**” to enter the interface:



If you have more cameras in same LAN network, software can auto-detect them and list in “Device List in LAN” Enable the channel you want to add; Choose the IP, input host(for camera in different network, you will need to input external IP address/DDNS address), web port, media port, username, and password manually, click Add to submit.

4.2.3. Date & Time

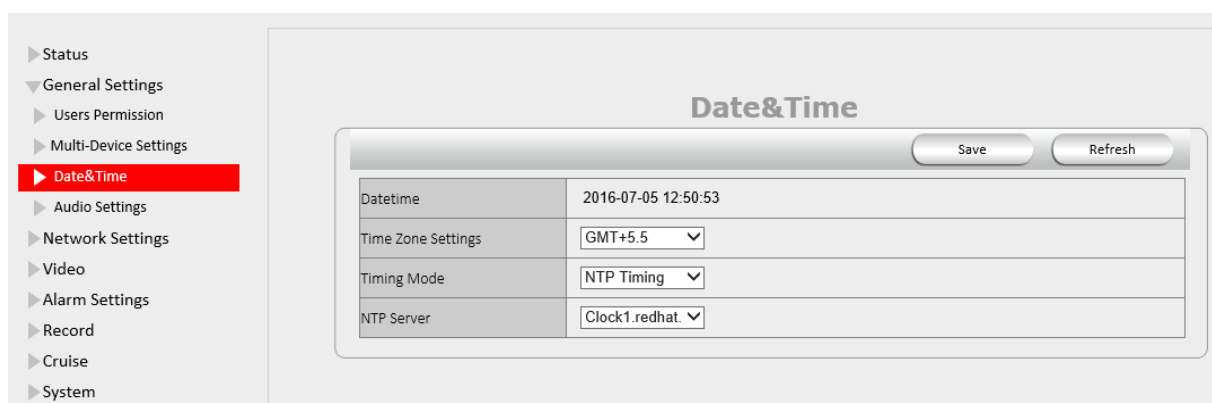
Date Time: Display the current date and time

Time Zone: Set the current time zone Select the working time server.

Time Mode: Can choose PC Time or NTP Time.

PC Timing: Camera will set the time the same as your PC.

NTP Server: User will need to select a working time server, and select the time zone.



4.2.4. Audio Settings

External Headset: User need to enable this feature, and connect external audio device like speak, Mic. So that this feature work.

Built-in Headset: This means the built-in Headset port; with located in the cable. User can connect to the audio devices;

Microphone Volume: User can adjust the volume of Microphone.

Speaker Volume: User can adjust the volume of Speaker.

Audio Settings		Save	Refresh
Microphone Volume	9		
Speaker Volume	8		

4.3. Network Settings

4.3.1. IP

Network Type: User can set Dynamic Address to obtain IP directly from router, or set a Static IP manually.

Media Port: User can set the Media port to transfer video if need to view camera remotely. (Work with DDNS or external IP)

Web Port: User can set the web port to transfer video if need to view camera remotely. (Work with DDNS or external IP)

ONViF: User can set ONViF port to work with other ONViF device like NVR Etc;

RTSP Port: Default 554;

DNS server: User can change DNS IP settings.

Network Settings	
Network Type	DHCP
Media Port	25001 (0~65535)
Web Port	80 (0~65535)
Push port	8099 (0~65535)
ONVIF Port	36000 (0~65535)
RTSP Port	554 (0~65535)
DNS Server	192.168.1.1
MAC Address	D6:C2:EA:9C:B1:5C
Note: All the Port Number Should not be the Same	

4.3.2. Wireless Settings

Click the icon “**Search**” to scan the wireless network in this environment automatically.

Using Wireless LAN: Set Wifi ON/OFF.

SSID: the ID of Wireless network, it should be the same SSID as the connected Wi-Fi router.

Network Type: Two modes:

- ✓ **Infra** (Infrastructure Mode), if using normal AP, choose **Infra** mode.

- ✓ **Ad-Hoc** Mode. If using point-to-point transmission, choose **Ad-Hoc** mode.

The factory setting is **Infra**.

- **Encryption**: WEP, TKIP, AES optional.
- **Authentication**: **WEP**: Open System or Share Key. **TKIP (AES)**: WPA-PSK or WPA2-PSK.
- **Select Key**: Choose the channel of WEP share Key.
- **Key**: Input the key the same as the settings in your router.

All the Wi-Fi encryption mode settings should be the same as your Wi-Fi router, and different encryption has different authentication menu.

The screenshot shows the 'Wireless Settings' page. On the left, a sidebar menu includes: Status, General Settings, Network Settings, IP, **Wireless Settings** (highlighted), UPnP Settings, DDNS Settings, P2P Settings, FTP Settings, E-mail(SMTP) Settings, Video, Alarm Settings, Record, Cruise, and System. The main panel is titled 'Wireless Settings' and has 'Save' and 'Refresh' buttons. It features a list of wireless networks with columns for name, mode, and encryption. The selected network is 'ASUS' with mode 'infra' and encryption 'aes wpa2-psk'. Below the list is a search button. The configuration section for the selected network includes: 'Enable WIFI' (checked), 'SSID' (ASUS), 'Network Type' (Infra), 'Encryption' (AES), 'Encryption' (WPA2-PSK), and 'Key' (masked with dots).

4.3.3. UPnP Settings

Enable UPNP: Set UPNP function ON/OFF.

Select it to enable UPNP, then the camera will do port forwarding automatically.

It's helpful for using DDNS, if your router support UPNP, then you no need do port forwarding in router.

NOTE: Here UPNP only for port forwarding now. It has much relation with security settings of your router; make sure the UPnP function of router is ON.

ATTENTION: If your router doesn't support UPNP function, it may show error information. So we recommend you do port forwarding manually in your router.

4.3.4. DDNS Settings

There are 2 options:

- ✓ **Cplusplusddns DDNS:** This domain is provided by the CPPlus.
 - ✓ **Third Party DDNS:** This domain is provided by a 3rd party, such as Dyndns, 3322 etc.
- **Enable DDNS:** Set DDNS function ON/OFF.
 - **DDNS Server Type:** Set DDNS server type, such as factory DDNS or third party DDNS server provider.
 - **DDNS User:** Registered user name from DDNS server. (If you use factory DDNS, it can't be modified.)
 - **DDNS Password:** Registered password from DDNS server. (If you use factory DDNS, it can't be modified.)
 - **DDNS Host Name:** Domain name set by user.

For the third party DDNS, you have to register an account first, keep the user, password, host, then input it.

NOTE: Only one DDNS can be chosen, for example, if you use Cplusplusddns, then 3rd one won't work, if you use a 3rd DDNS, then cplusplusddns won't work.

4.3.5. P2P Settings

User can see and change P2P GUID here

P2P Settings	
GUID	D59DW728983W492V111A
P2P Status	online

4.3.6. FTP Settings

Set FTP service, Snapshots will be delivered to appointed FTP server when alarmed.

Enable FTP: Set FTP function ON/OFF.

FTP Server: Set FTP server address.

FTP Port: Set the port of FTP server, default is 21.

FTP User: Set the user name of FTP server.

FTP Password: Set the password of FTP server.

Upload Folder: Set the path of remote FTP server. Make sure that the folder you plan to store images exists. (The camera cannot create the folder itself). Also, the folder must be erasable.

FTP Mode: It supports standard (POST) mode and passive (PASV) mode.

Click saves to submit, click test to check the settings.

NOTE: When alarmed, there will be 3 snapshots sent to the FTP server every 1 second

FTP Settings	
Enable FTP	☐
FTP Server	
FTP Port	21
FTP User	
FTP Password	
Upload Folder	
FTP Mode	PORT
Upload Image Now	☐

Pls save first then test

4.3.7 E-mail (SMTP) Settings

Enable Email: Set e-mail function ON/OFF.

Sender: Set sender's name or email address

Sender's email: Set sender's email address.

Receiver: Set receiver's email box. (Supports 3 receivers' emails simultaneously)

SMTP Server: The sender address SMTP server.

SMTP Port: The sender's SMTP Port usually is 25, some SMTP servers have their own port, and e.g, the SMTP port for Gmail is 465.

Auth User: Verify the user settings.

SMTP Username: Set sender's user name or email address.

SMTP password: Set sender's email address password.

Note: User can save the settings first, then click Test button to see if settings working. If not, pls double check your settings or spelling.

The screenshot displays the 'E-mail(SMTP) Settings' configuration window. On the left is a sidebar menu with options: Status, General Settings, Network Settings, IP, Wireless Settings, UPnP Settings, DDNS Settings, P2P Settings, FTP Settings, **E-mail(SMTP) Settings** (highlighted in red), Video, Alarm Settings, Record, Cruise, and System. The main panel is titled 'E-mail(SMTP) Settings' and contains the following settings:

Enable E-mail	☒
Sender	
Sender Email	
Receiver1	
Receiver2	
Receiver3	
SMTP Server	☐ SSL Login
SMTP Port	
Auth User	☐
SMTP Username	
SMTP Password	

At the top right of the settings panel are three buttons: 'Save', 'Refresh', and 'Test'. At the bottom of the panel is a message box that says 'Pls save first then test'.

4.4. Video

4.4.1. Video Info

Click “Video Info” to enter the interface as below:

Main-Stream	
Resolution	1280*720
Frame Rate	25
Bit Rate	1Mb/s
Image Quality	Standard

Sub-Stream	
Resolution	640*480
Frame Rate	25
Bit Rate	1Mb/s
Image Quality	Standard

Initial-Stream	
☒ Main-Stream	☐ Sub-Stream

There are two options for stream, **Main-Stream** and **Sub-Stream**, you can set the stream based on the actual operation environment, for example, if the bandwidth is good enough, set Main-Stream as Initial-Stream, or choose Sub-Stream if better.

Set the parameters of **Main-Stream** and **Sub-Stream** as below:

Resolution: 1280 x 720, 640 x 368, 320 x 208 optional.

Frame Rate: Set the frame rate according to the bandwidth. Frame rate could be “Auto” or “from 1 fps to 30 fps (Real time)”. If the network situation is not ideal, you can reduce the frame rate to control the coding rate, make the moving pictures smoother.

Bit Rate: Higher bite rate means better quality images, but takes more bandwidth, so adjust the settings according to the actual bandwidth available. The range of bit rate from 128 Kbps ~ 4 Mbps.

Bit Rate
128Kb/s
256Kb/s
384Kb/s
512Kb/s
768Kb/s
1Mb/s
2Mb/s
4Mb/s

Image Quality: Better image quality, higher bit rate value, but it will take more bandwidth, the image quality parameters could be set as below:

Image Quality	Standard
	Worse
	Soso
	Not bad
Resolution	Medium
	Standard
Frame Rate	Good
	Well
Bit Rate	Pretty good

NOTE: When the device runs, only can select Bit Rate or Image Quality either.

4.4.2. IR Control

Here we can control IR for specific time.

- Status
- General Settings
- Network Settings
- ▼ Video
 - Video Info
 - IR Control
 - DWDR
- Alarm Settings
- Record
- Cruise
- System

IR Control

IR Control

Auto

Save

Refresh

4.4.3. DWDR

To enable or disable DWDR option.

- Status
- General Settings
- Network Settings
- ▼ Video
 - Video Info
 - IR Control
 - DWDR
- Alarm Settings
- Record
- Cruise
- System

DWDR

DWDR

On

Save

Refresh

4.5. Alarm Settings

4.5.1. Motion Detection

Motion Detection	
Motion Detection	Off
Sensitivity	High
Sensitivity range	default value 60
Time Interval	30 S
Recoding Schedule	☐
Linkage With Alarm	
SD-Card Record	☐
Send E-mail	☐
FTP Image Upload	☐
FTP Video Upload	☐

Motion Detection Zone Armed: Can set all zones to be armed, or a specified zone armed.

Before setting a specified zone, you should set "**Motion Detection**" to "**ON**", then press left mouse, drag the mouse onto video area to set the detection zone, and save it, supports 3 areas.

Motion Detection	
Motion Detection	On
Sensitivity	High
Sensitivity range	default value 60
Time Interval	30 S
Recoding Schedule	☐
Linkage With Alarm	
SD-Card Record	☐
Send E-mail	☐
FTP Image Upload	☐
FTP Video Upload	☐

- **Detect All:** Setting the whole video window as the motion detect armed zone.
- **Clear Detect:** Clear all armed zone.
- **Motion Detection:** Set motion detection armed function ON/OFF.
- **Sensitivity:** Set detection sensitivity as Low, Middle, High, Higher, Highest.
- **Alarm Duration:** Set each alarm duration, can be forever, 5s, 10s, 15s, 30s, 60s.
- **Action with Alarm:** These are linkage actions optional for motion detection. User can select the alarm relative alarm convince to them.
- **Alarm output:** Select it to enable alarm output, unselect to stop.

- **SD-Card Record:** Select it to enable record to SD card, unselect to stop.
- **Send E-mail:** Select it to enable E-mail alert function, unselect to stop.
- **FTP Upload:** Select it to enable FTP upload function, unselect to stop.

Click **Save** to save all the settings.

Click **Update** to refresh the settings.

Linkage With Alarm	
Alarm Output	☒
SD-Card Record	☒
Send E-mail	☒
FTP Upload	☒

4.6. Record

4.6.1. Local Settings

Note: This feature will suitable for IE only, as other browsers not support IE activeX.

Enable Alarm Record: Camera will record to the path user set when Alarm happens.

Alarm Record time: User can set the record time when Alarm happens. Such as 2 min.

Manual Record Pack time: User can set the manual record time, such as 2 hours. Once click the “Record” button under the live video screen, camera will record as long as user set.

Path: This belongs to the PC path; user can set the PC path to store all records.

Local Settings	
Enable Alarm Record	☐
Alarm Record Time	30 Second ▼
Continuous Record Pack Time	30 Minute ▼
Record Path	D:\RecFiles Browse

4.6.2. SD Card info

Device Name: Display the name of SD card.

Total Size: Display the total size of SD card

Balance Space: Display the free space of SD card

Status: Display the state of SD card.

Format: Click it to delete all data and format the SD card. (All data will be lost if formatted).

Open Auto cover: Set SD card auto cover when it's full.

Open Pre-recording: Set Pre-recording function (Record the video before alarm triggered).

Pre-recording Time: Set the Pre-recording time, can be from 1 to 6 seconds.

Record Stream: Choose the stream here: Main Stream and Sub Stream.

▶ Status
▶ General Settings
▶ Network Settings
▶ Video
▶ Alarm Settings
▶ Record
▶ Local Settings
▶ SD card
▶ Cruise
▶ System

SD card

Save Refresh

Device Name			
Total Size	0	KB	
Balance Space	0	KB	
Status	Pullout		
Format			
Enable Auto-OverWrite	☐		
Record stream	Sub-Stream		
Continuous Rec	Close		
Alarm Record Time	20	Second	
Continuous Record Pack Time	10	Minute	

4.7. Cruise

Cruise works support 9 directions; User can set the locations, then camera can keep cruising under the directions.

Cruise Name: User can set a Name for the cruising Plan.

Status: Enable it, User can start settings.

Serial Number: User can set the locations or path for cruise.

Preset: Camera will follow from 1 to 9; User can set different location with different Number.

Resident Time: Camera stay time: Such as, Preset 1; Resident time: 3 seconds; Then when camera in preset 1 location, will stay for 3 seconds.

Speed: camera moving speed.

Note: After setup, user can go to live video screen, and call the “Cruse” under the panel.

▶ Status
▶ General Settings
▶ Network Settings
▶ Video
▶ Alarm Settings
▶ Record
▶ Cruise
▶ System

Cruise

Save Refresh Reset

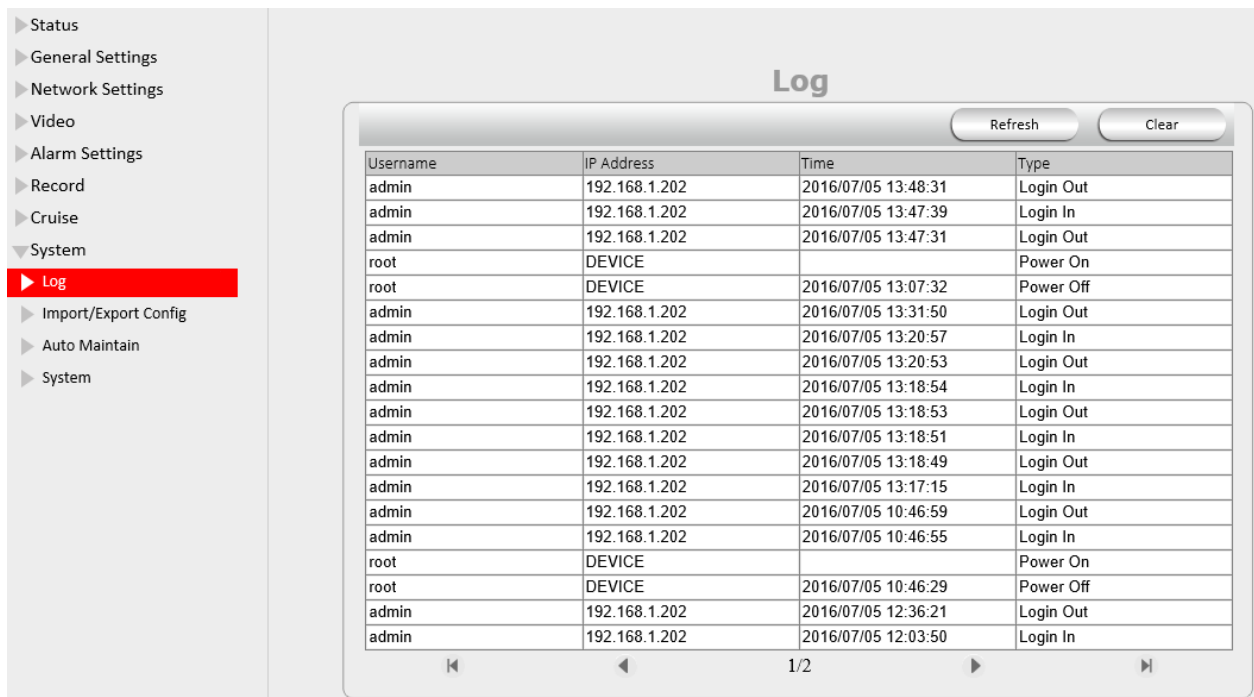
Cruise List			
xc [Valid]			
None [Invalid]			
None [Invalid]			
None [Invalid]			
None [Invalid]			
None [Invalid]			
None [Invalid]			
None [Invalid]			
None [Invalid]			
None [Invalid]			

Cruise Information			
Cruise Name		xc	
Status ☒			
Serial Number	Preset	Resident time	Speed
☒ 1	1 [Valid]	5	7
☒ 2	2 [Valid]	5	9
☒ 3	3 [Valid]	5	9
☒ 4	1 [Valid]	5	8
☐ 5	1 [Valid]	0	0
☐ 6	1 [Valid]	0	0
☐ 7	1 [Valid]	0	0
☐ 8	1 [Valid]	0	0
☐ 9	1 [Valid]	0	0

4.8. System

4.8.1. Log

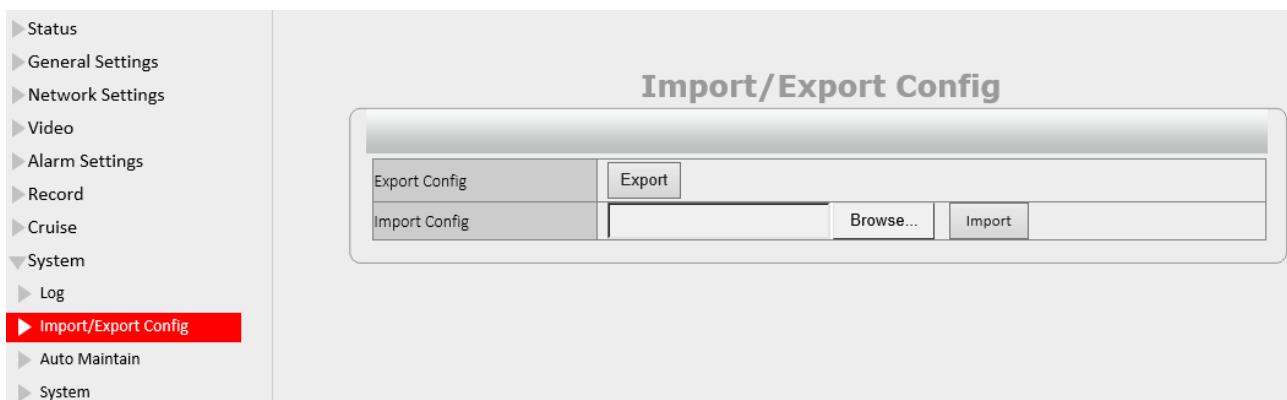
Log provides information of camera, login, log out, alarm, power on/off..etc;



Username	IP Address	Time	Type
admin	192.168.1.202	2016/07/05 13:48:31	Login Out
admin	192.168.1.202	2016/07/05 13:47:39	Login In
admin	192.168.1.202	2016/07/05 13:47:31	Login Out
root	DEVICE		Power On
root	DEVICE	2016/07/05 13:07:32	Power Off
admin	192.168.1.202	2016/07/05 13:31:50	Login Out
admin	192.168.1.202	2016/07/05 13:20:57	Login In
admin	192.168.1.202	2016/07/05 13:20:53	Login Out
admin	192.168.1.202	2016/07/05 13:18:54	Login In
admin	192.168.1.202	2016/07/05 13:18:53	Login Out
admin	192.168.1.202	2016/07/05 13:18:51	Login In
admin	192.168.1.202	2016/07/05 13:18:49	Login Out
admin	192.168.1.202	2016/07/05 13:17:15	Login In
admin	192.168.1.202	2016/07/05 10:46:59	Login Out
admin	192.168.1.202	2016/07/05 10:46:55	Login In
root	DEVICE		Power On
root	DEVICE	2016/07/05 10:46:29	Power Off
admin	192.168.1.202	2016/07/05 12:36:21	Login Out
admin	192.168.1.202	2016/07/05 12:03:50	Login In

4.8.2. Import/Export Config

Import/Export Config provide us to copy complete configuration setting of one camera to another camera.



Import/Export Config	
Export Config	Export
Import Config	Browse... Import

4.8.3. Auto Maintain

Auto Maintain provides an auto protection of hardware; Set a time such as 24:00; Then camera will auto reboot; and refresh the hardware performance.

The screenshot shows a web-based configuration interface for a camera. On the left is a sidebar menu with the following items: Status, General Settings, Network Settings, Video, Alarm Settings, Record, Cruise, System (expanded), Log, Import/Export Config, **Auto Maintain** (highlighted in red), and System. The main content area is titled "Auto Maintain" and contains a form with two rows: "Enable" with an unchecked checkbox, and "Time" with a dropdown menu set to "Sun" and a time dropdown set to "00:00". Above the form are "Save" and "Refresh" buttons.

Auto Maintain	
Enable	☐
Time	Sun 00:00

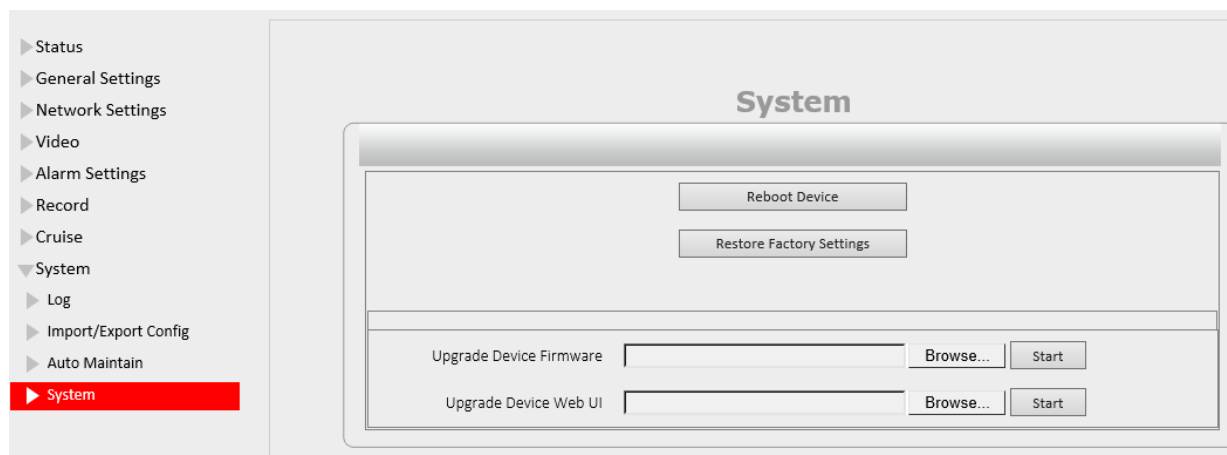
4.9. System

Reboot Device: Camera will get reboot.

Restore factory settings: User can restore factory settings once forget password, settings..etc.

Upgrade Device Firmware: To upgrade or degrade the camera firmware.(The firmware needs to store in the same camera you are viewing camera.)

Upgrade Device Web UI: To upgrade or degrade the camera web UI. (The firmware needs to store in the same camera you are viewing camera.)

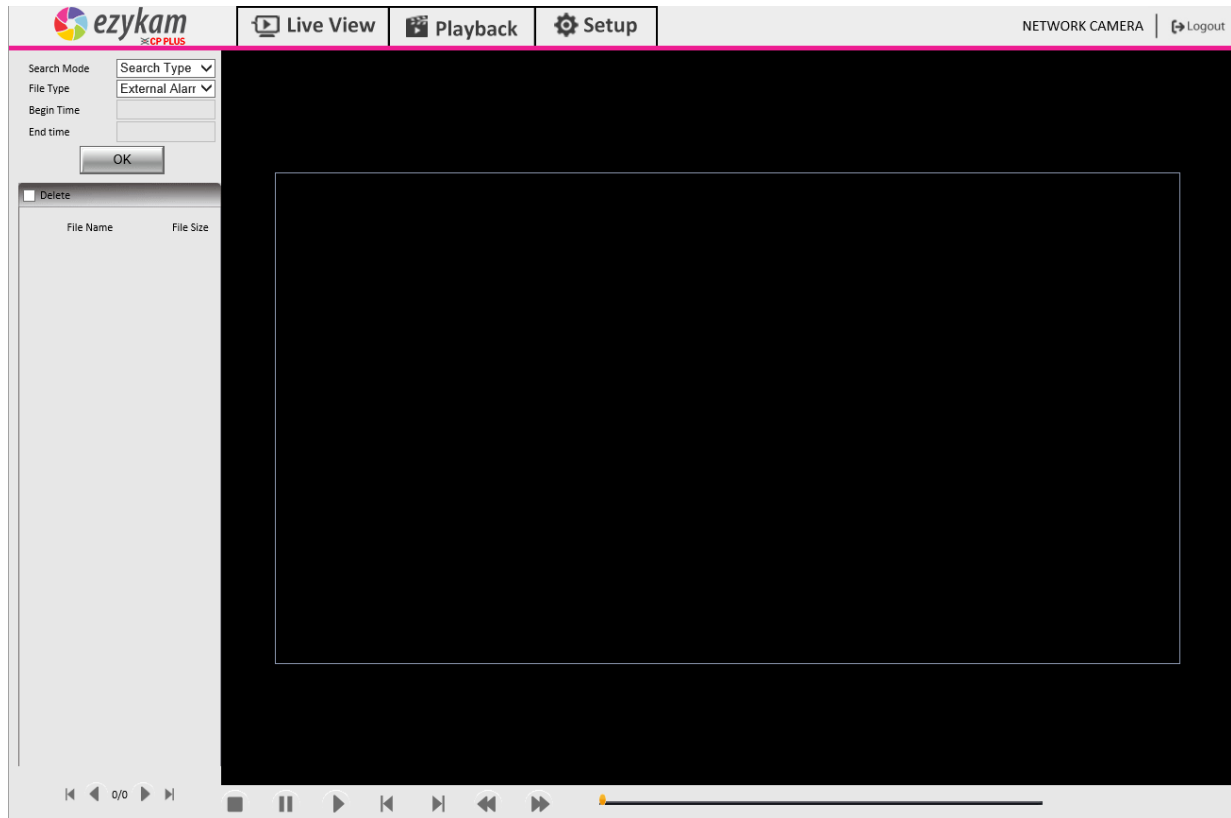


5. PLAYBACK for IE browser only

Note: Playback function shows under IE ActiveX mode only. Other browsers not support this feature.



Click login the playback interface, this is for SD Card files playback. So If User not have SD card in the camera or not have any file in SD card, will not work.



Search Mode: User can search the record, snapshot etc by different methods.

Search Type: External Alarm and Motion detection optional; Select External Alarm; Camera will search the alarm file from External alarm which comes from other device; Select motion detection, Camera will search the alarm file from motion detection.

Search All: Camera will search all file in SD Card.

File type: External Alarm and Motion detection optional. This option works only work when user selects Search Type from Search mode

Begin Time and End Time: This feature work when user select Search Time from Search mode; Select a begin time, and end time, camera will search these files in the time area.

Click “OK” icon, will pop-up a window for search file, set the mode or time, click OK to submit, then all the correlative files will be listed on the left side.

After searching, files will be listed on the left side window, choose the file, double click it or click play icon 

to start replay. Users can check the replay file information here; do other operation such as **Stop**, **Pause**, **Previous**, **Next**, **Fast Backward**, **Fast Forward** etc.



6. FREQUENTLY ASKED QUESTIONS

1. I have forgotten the administrator username and/or password

There is a **[RST]** button on the rear panel, keep the power on, hold the reset button for 30 seconds, it will restore back to factory default settings as below:

Username: admin

Password: admin

NOTE: Please don't press **RST** button unless you are sure you want to do it.

2. There is no picture displayed in IE browser (For IE only)

It maybe the ActiveX problem,

If using the IE browser for the first time, you should install the ActiveX control, details as below:

Before login, click the **EzykamOCX** at the right side of interface to download, save the file, run it to install the ActiveX.

3. Fail to visit IP camera via IE after upgrading (For IE Only)

Solution: Clear the browser buffer.

Steps: Open **IE**>click "**Tools**"> "**Internet Options**">"**General**">"**Delete**"> "**Internet temporary files**", delete the cookies and temporary files, then click "**OK**" and re-login.

4. The video is not smooth

Possible reason 1: The frame rate value is too small.

Solution: Increase the frame rate value.

Possible reason 2: Too many users are connecting to the device.

Solution: Close some connection or reduce the video frame rate.

Possible reason 3: Network bandwidth is too low, lots of lost packets.

Solution: Reduce the video frame rate or video compression bit rate.

5. Fail to visit IP camera via IE browser

Possible Reason 1: Network is disconnected.

Solution: Connect your PC to network, check whether the network works well or not. Check if there's a problem with the cable connection, or network problem caused by PC virus.

Possible reason 2: IP Address has been occupied by other devices.

Solution: Stop the connection between IP camera and network; connect the IP camera to PC.

Directly reset IP address according to the proper operations recommended.

Possible reason 3: IP addresses are in different subnets.

Solution: Check IP address, Subnet masking and Gateway.

Possible reason 4: Physical address of network conflicts with the IP camera.

Solution: modify the physical address of IP camera.

Possible Reason 5: Web port has been modified.

Solution: Contact as Network Administrator to obtain related information.

Possible Reason 6: Unknown.

Solution: Press RESET to restore to factory settings then connect it again, the default IP address is 192.168.1.155, subnet mask is 255.255.255.0

6. The color of image is abnormal (Green or other color)

Sometimes the IP camera images cannot be displayed properly because of different graphics cards, the images appears to be green or other colors, then you should run the program "Config.exe" from the downloaded OCT files.

(or run C:\windows\system32\Config.exe) to set the following parameters for the display buffer: auto-detection, used display card memory or system memory, then run IE, connect IP camera again.

7. There is no voice while monitoring

Possible Reason 1: No audio input connection.

Solution: Check audio connection of the host.

Possible Reason 2: the relative audio option of IP camera is OFF.

Solution: Check audio parameter settings to see if you have set the audio option ON, but without external audio input.

8. Image processing doesn't work properly

Possible Reason 1: System problem, DirectX function is disabled, which will cause slow display of images and abnormal color.

Possible Reason 2: Hardware problem, graphics card doesn't support image acceleration and hardware zooming functions. (For hardware issue, the only solution is to change your graphics card).

Solution: Install DirectX image driver, then click "Start">"Run">input "dxdiag", set enable "DirectDraw Acceleration" "Direct3D Acceleration" "AGP Texture Acceleration" functions.

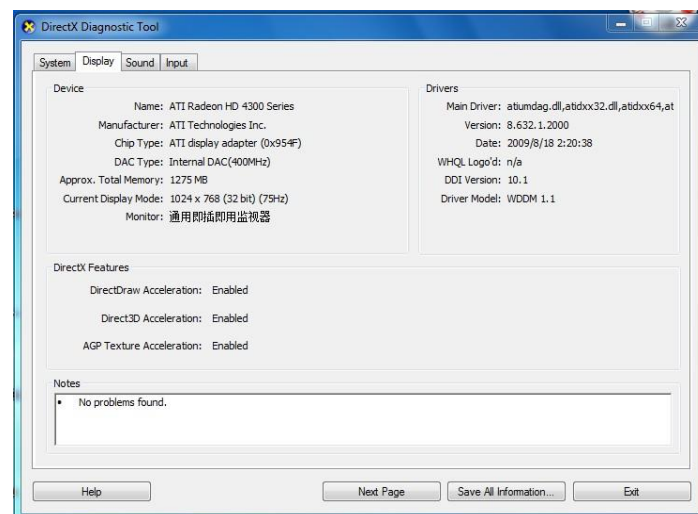


Figure 13.0

Note: If you are unable to do it, it means your DirectX is not installed properly or hardware doesn't support this

function.

9. Fail to use DDNS

Possible Reason 1: The PC or IP Camera can't connect to the internet.

Solution: Check the internet connection and settings.

Possible Reason 2: Port forward is not set in router.

Solution: Set the port forward of extranet in router correctly.

For example, if IP Camera address is: 192.168.1.100, Media port is 25001, Web port is 80, factory DDNS is <http://test.cpplusddns.com>.

Set Port forwarding in the router.

This is an important step. You need to set port forwarding in your router, to refer to the IP of your camera correctly, for DDNS to work. There are so many kinds of routers, so it's difficult to show fixed steps, but here are some samples of different router's port forwarding settings, just for reference:

TP-LINK:

1. Login to the router.



2. Choose "**Forwarding**", select "**Virtual Servers**"

3. Click the Add New button, pop-up below:

A screenshot of a web form titled 'Add or Modify a Virtual Server Entry'. The form has a light yellow background and a blue border. It contains several input fields and dropdown menus: 'Service Port' with a text box and '(000-XX or XX)' hint; 'IP Address' with a text box; 'Protocol' with a dropdown menu showing 'ALL'; 'Status' with a dropdown menu showing 'Enabled'; and 'Common Service Port' with a dropdown menu showing '-Select One-'. At the bottom right are 'Save' and 'Return' buttons.

Figure 13.1

Fill in the service port IP address of the camera, then click Save

NOTE: The port and IP address should be the same as the camera.

Fill in the **web port**, for example port 80, IP address as 192.168.1.100, click Save.

(1) Repeat step 3 above, it will pop-up the window again, fill in the **media port** as 25001, IP address as 192.168.1.100, then save.

(2) Then check the “Device Info” –“DDNS Status”,

It will show DDNS: <http://test.cpplussddns.com> , input this link in IE, then you can visit this camera remotely.

BELKIN:

1. Login to the router.
2. Choose “**Firewall**”, select “**Virtual Servers**”
3. Input the port (**don't use 80**) and IP address, then click save.

NOTE: The port and IP address should be the same as the camera.

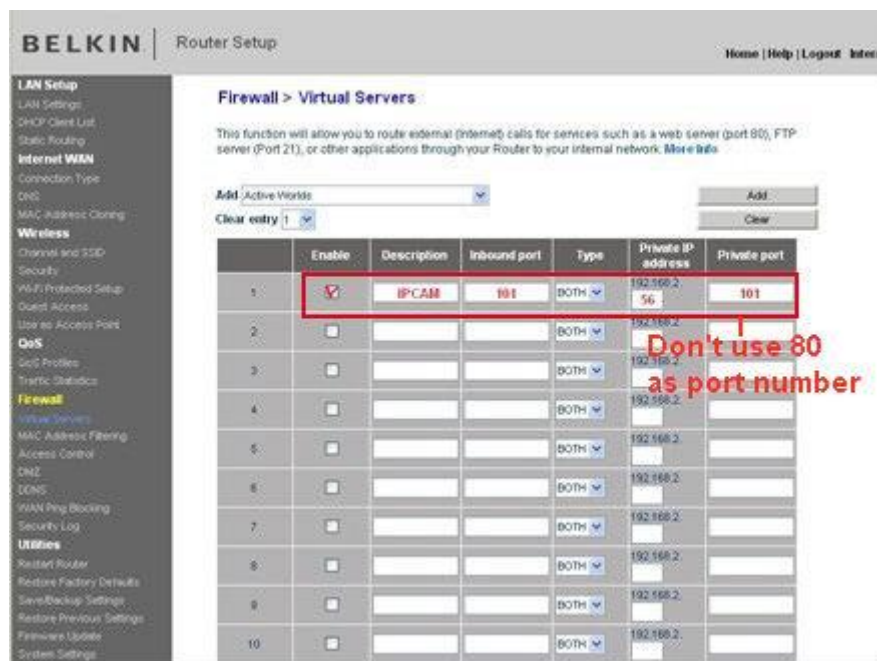


Figure 13.2

DLINK:

1. Login to the router.
2. Choose “**Advanced**”, select “**Virtual Servers**”
3. Input the port, IP address, Protocol, then click save.

NOTE: The “**public port**” & “**private port**” should be the same as camera’s port, choose the protocol to be “**both**”.

DIR-601	SETUP	ADVANCED	TOOLS	STATUS	SUPPORT																																										
VIRTUAL SERVER PORT FORWARDING APPLICATION RULES QOS ENGINE NETWORK FILTER ACCESS CONTROL WEBSITE FILTER INBOUND FILTER FIREWALL SETTINGS ROUTING ADVANCED WIRELESS ADVANCED NETWORK IPV6	VIRTUAL SERVER The Virtual Server option allows you to define a single public port on your router for redirection to an internal LAN IP Address and Private LAN port if required. This feature is useful for hosting online services such as FTP or Web Servers. Save Settings Don't Save Settings 24 --- VIRTUAL SERVERS LIST <table border="1"> <thead> <tr> <th></th> <th>Name</th> <th>Application Name</th> <th>Port</th> <th>Traffic Type</th> <th>Schedule</th> </tr> </thead> <tbody> <tr> <td>☐</td> <td>rivomaxcam</td> <td>HTTP</td> <td>Public Port: 81</td> <td>Protocol: Both</td> <td>Schedule: Always</td> </tr> <tr> <td></td> <td>IP Address: 192.168.0.107</td> <td>Computer Name</td> <td>Private Port: 81</td> <td>256</td> <td>Inbound Filter: Allow All</td> </tr> <tr> <td>☐</td> <td></td> <td>Application Name</td> <td>Public Port: 0</td> <td>Protocol: TCP</td> <td>Schedule: Always</td> </tr> <tr> <td></td> <td>IP Address: 0.0.0.0</td> <td>Computer Name</td> <td>Private Port: 0</td> <td>5</td> <td>Inbound Filter: Allow All</td> </tr> <tr> <td>☐</td> <td></td> <td>Application Name</td> <td>Public Port: 0</td> <td>Protocol: TCP</td> <td>Schedule: Always</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Private Port:</td> <td></td> <td>Inbound Filter:</td> </tr> </tbody> </table>					Name	Application Name	Port	Traffic Type	Schedule	☐	rivomaxcam	HTTP	Public Port: 81	Protocol: Both	Schedule: Always		IP Address: 192.168.0.107	Computer Name	Private Port: 81	256	Inbound Filter: Allow All	☐		Application Name	Public Port: 0	Protocol: TCP	Schedule: Always		IP Address: 0.0.0.0	Computer Name	Private Port: 0	5	Inbound Filter: Allow All	☐		Application Name	Public Port: 0	Protocol: TCP	Schedule: Always				Private Port:		Inbound Filter:	Helpful Hints... Check the Application Name drop down menu for a list of predefined server types. If you select one of the predefined server types, click the arrow button next to the drop down menu to fill out the corresponding field. You can select a computer from the list of DHCP clients in the Computer Name drop down menu, or you can manually enter the IP address of the LAN computer to which you would like to open the specified port. Select a schedule for when the virtual server will be enabled. If you do not see the schedule you need in
	Name	Application Name	Port	Traffic Type	Schedule																																										
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☐		Application Name	Public Port: 0	Protocol: TCP	Schedule: Always																																										
			Private Port:		Inbound Filter:																																										

Figure 13.3

7. SPECIFICATIONS

Image Sensor	Image Sensor	1/4" Color CMOS Sensor
	Display Resolution	1280 x 720 Pixels (1000K Pixels, i.e. 1.0 Megapixel)
	Lens	3.6mm
	Mini. Illumination	0.5 Lux
	Viewing Angle	60-90 Degree
Audio	Input	Built-in Microphone
	Output	Built-in Speaker
	Audio Compression	ADPCM
Video	Image Compression	H.264, MJPEG
	Image Frame Rate	30fps (VGA), 10fps (QVGA)
	Resolution	1280 x 720 (VGA), 640 x 480 (QVGA)
	Flip Mirror Images	Vertical / Horizontal
	Light Frequency	50Hz, 60Hz, Outdoor
	Video Parameters	Brightness, Saturation, Contrast, Hue
Communication	Ethernet Interface	Build in 10/100Mbps, Auto MDI/MDIX, RJ-45
	Supported Protocol	TCP/IP HTTP DNS DHCP PPPoE SMTP FTP SSL TFTP NTP ARP/RARP NFS RTSP RTP RTCP
	Compress rate level	128Kbps ~ 4Mbps
	Wireless Standard	IEEE 802.11b/g/n
	Data Rate	802.11b: 11Mbps (max.), 802.11g: 54Mbps (max.), 802.11n: 150Mbps (max.)
	Wireless Security	WEP & WPA WPA2 Encryption
Physical	Pan/Tilt Angle	Horizontal: 340° & Vertical: 130°
	Infrared Light	8 IR LEDs, Night visibility up to 10 meters
Power	Power Supply	DC 5V/2.0A (EU, US, AU adapter or other types optional)
	Power Consumption	7 Watts (Max.)
Environment	Operate Temper.	0° ~ 55°C (14°F ~ 131°F)
	Operating Humidity	20% ~ 85% non-condensing
	Storage Temper.	-10°C ~ 60° (14°F ~ 140°F)
	Storage Humidity	0% ~ 90% non-condensing
PC System Requirements	CPU	2.0GHZ or above (suggested 3.0GHZ)
	Memory Size	256MB or above (suggested 1.0GHZ)
	Display Card	64M or above
	Supported OS	Microsoft Windows 2000/XP/Vista/7
	Browser	IE6.0/7.0/8.0/Firefox/Safari/Google chrome or other standard browsers
Certification	CE, FCC, RoHS	

8. OBTAINING TECHNICAL SUPPORT

We hope your experience with your IP network camera is enjoyable, but if you experience any issues or have any questions that this User's Guide has not answered, please email us.

If your camera does not support some special functions shown in this manual, please contact our technical support team to obtain the latest Firmware and WEB UI file for upgrading.

Statement: If you found any bug of software, please kindly not discuss in the public place or website, contact us by email or phone, we will give you a quick shot.

FCC Caution

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 UNDESIRE OPERATION.

This equipment generates and uses radio frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, it may cause interference to radio and television reception. It has been type tested and found to comply with the limits for remote control devices in accordance with the specifications in Sub-Parts B and C of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by unplugging the equipment, try to correct the interference by one or more of the following measures.

- Reorient the antenna of the radio/TV experiencing the interference.
- Relocate the equipment with respect to the radio/TV.
- Move the equipment away from the radio/TV.
- Plug the equipment into an outlet on a different electrical circuit from the radio/TV experiencing the interference.
- If necessary, consult your local dealer for additional suggestions.

NOTE: Modifications to this product will void the user's authority to operate this equipment.

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.