IP Camera Manual

Please note

This manual may have some technical details that are inaccurate or have a typographical error. If you find that the user manual cannot assist with a problem, please contact our technical department for assistance. The content of this manual will be updated from time to time without notice.

❖ **Warning**

❖ ➤ **Installation area:**

- **Keep away from heat sources and hot environments; avoid direct sunlight.**

- **To ensure normal heat dissipation from the network camera, avoid installing in places with poor ventilation and pay attention to waterproofing, moisture, and protection from lightning. If you need to install it outdoors, you need to install the camera in a waterproof box.**

- **This unit should be installed horizontally or mounted on a wall. Avoid installation in locations where vibration may occur. Do not place any other equipment on top of the unit.**

- **Avoid electric currents and fire sources.**

- **Remember not to touch the power supply or the camera with wet hands.**

- **Do not spill any liquid on the camera, to avoid short circuits or fires in the machine.**

- **Do not place any other equipment directly on top of this camera.**

- **Non-experts should not disassemble the equipment by themselves, to avoid damage and electric shocks.**

❖ ➤ **Transport and handling:**

- **The machine's packaging is designed to avoid shocks and has been tested to ensure that the camera will not be accidentally damaged during transportation, so it is best to use the original packing materials and cartons when moving the machine.**

- **Avoid moving the cameras from places that are too cold to one that is overheated, to prevent condensation occurring inside the machine and affecting the service life.**

- **Do not move the unit while the power supply is connected, this will damage the motherboard.**

Table of Contents

1 Product Overview

The IP Camera is a product using an embedded Web server. It has multifunctional image options. It is a

monitoring system that can be installed independently, has a built-in CPU and web server, and

transmits high-quality images via the Internet.

The IP Camera allows the use of mobile phones to remotely monitor images and control the rotation of

the PTZ.(optional)

2 Product Features

- 32-bit processor and professional video codec chip with megapixel processing capability.

- Uses H.264 Main Profile and Baseline profile compression algorithm, the image is clearer and

  the code stream is smaller, thus facilitating network transmission and saving storage space.

- Supports simultaneous dual-stream monitoring.

- Supports monitoring via mobile phones, which can control IP Camera PTZ rotation. (Optional).

- Supports 6 users monitoring IP Camera at the same time (3 users for the first stream and 3

  for the second stream respectively).

- Built-in microphone and speaker, supports external microphone, but also can be connected

  to external audio capture devices (such as microphones), to achieve voice capture, remote

monitoring of live sound; can also use external speakers for remote transmission of sound to the scene, to achieve two-way intercom function.(optional)

• Built-in WEB SERVER, supports IE browsing and parameter settings, uses a port to send all data, user-friendly network settings.

• Supports 802.11b/g/n protocol, built-in Wi-Fi module, flexible set up for wireless monitoring of environment.

• Supports ONVIF protocol.

• Supports P2P platform, fully implemented plug and play.

• Supports UPNP to implement automatic port mapping on the router.

• Supports 8 preset positions to enable self-check for centering.(optional)

• Supports up to maximum 64G TF card storage, timing capture, timing recording, alarm photography and alarm recording.

• Supports four-area motion detection, supports link from alarm to call preset numbers.

• Saves field alarm records to SD card, e-mail, and FTP mode.

• Supports remote upgrades.

3   Appearance and Description

Note: The interface connections for different models of products may not be exactly the same, please check the one being used.

4   Equipment Installation

4.1   Operating Environment

Operating System： Windows 2000/2003/XP/vista/7/8

Network Protocol： TCP/IP

Client PC：P4/128MRAM/40GHD/ Graphic card that supports zooming，DirectX8.0 support

4.2   Equipment Installation

1. Connect the network camera to your network or use a suitable cable to connect directly to the PC.

2. Turn on the power

3. Network connection: Under normal conditions, the connection light (orange) on the network interface lights up within 5 seconds, and the data light (green) blinks. At this time, the network camera's connection is complete.

5. Network settings
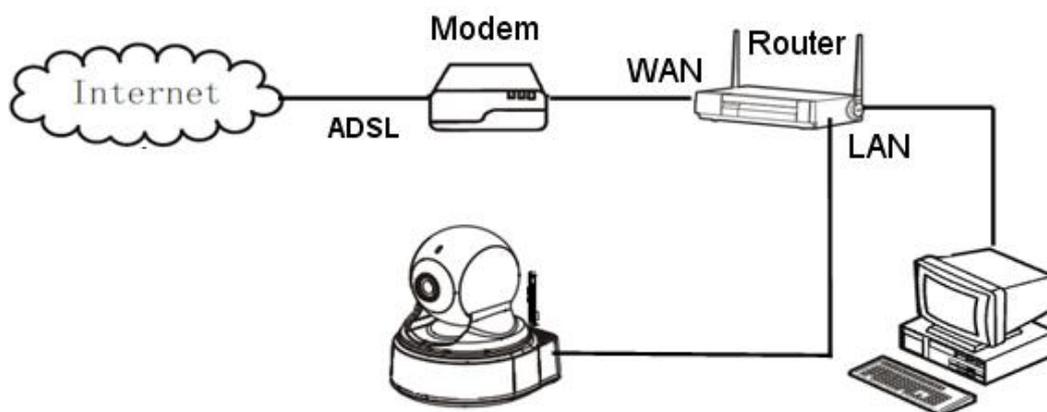
Network connection diagram

5.1 Using the installation wizard to configure the IP camera

1. **Connect the IP Camera to the network (or PC) via a network cable and then power on the IP Camera, as shown in the above figure.**

   Note: If the IP Camera is directly connected to the PC, the IP address of the PC must be manually assigned, and the PC's IP address segment and the IP Camera must be on the same network segment to access the camera.

2. **After the IP Camera starts up, visit our website: www.alptopsecurity.com to download the search tool and install it. After installation, click on the desktop shortcut "SearchTool".**

3. **Click on "Next" to bring up the menu as shown below:**

4.After selecting the device and clicking "Next", the menu shown in the following figure will pop up:
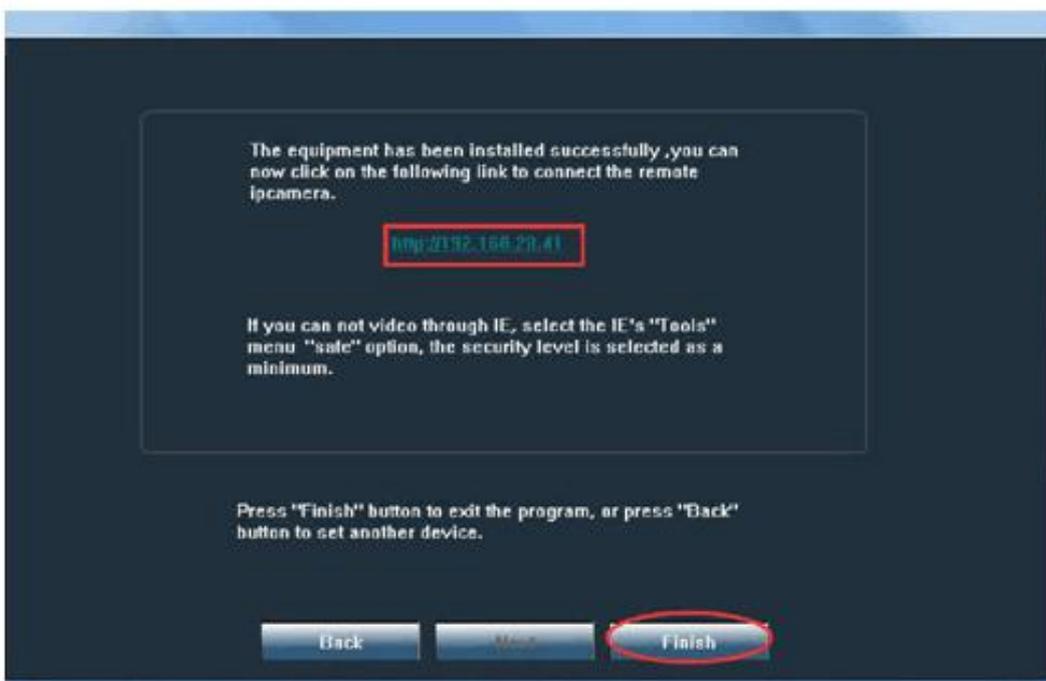
5.Click "Next" to configure the IP Camera parameters. When the following menu is displayed, the IP

Camera parameters are configured successfully. Click "Finish" to exit the installation wizard.

5.2 Accessing IP Camera

1)   Enter the IP address of the camera on IE, when login screen pops up enter the username: admin, password: admin as shown in the following figure:

2) Enter the user name and password and click "OK", to display screen shown in the figure
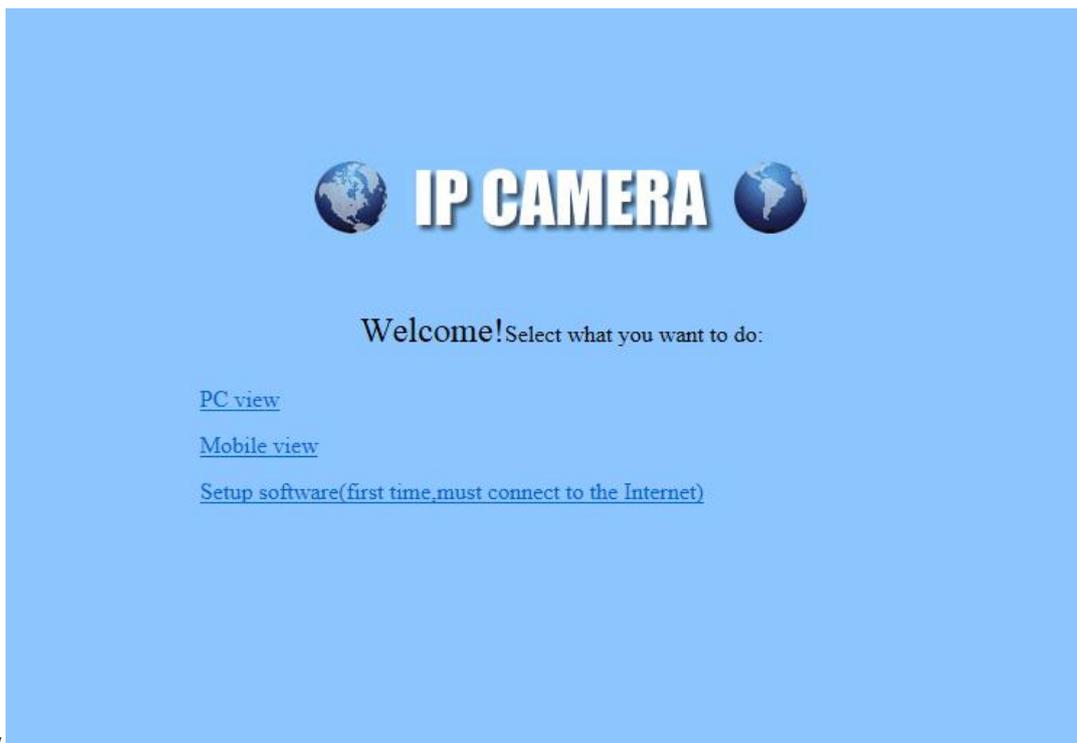
below

3) Click "PC View" to enter the camera web screen

4) Click "Download Control", click "Run" button, install the control (use IE browser and save as download)

5）After the control installation is complete, click "Real-time monitoring" to browse

5.3 Configuring IP Camera WIFI Settings (Requires WIFI Connection)

1. Click "Settings" - "Network" - "Wireless" - "On" - "Search" as shown below
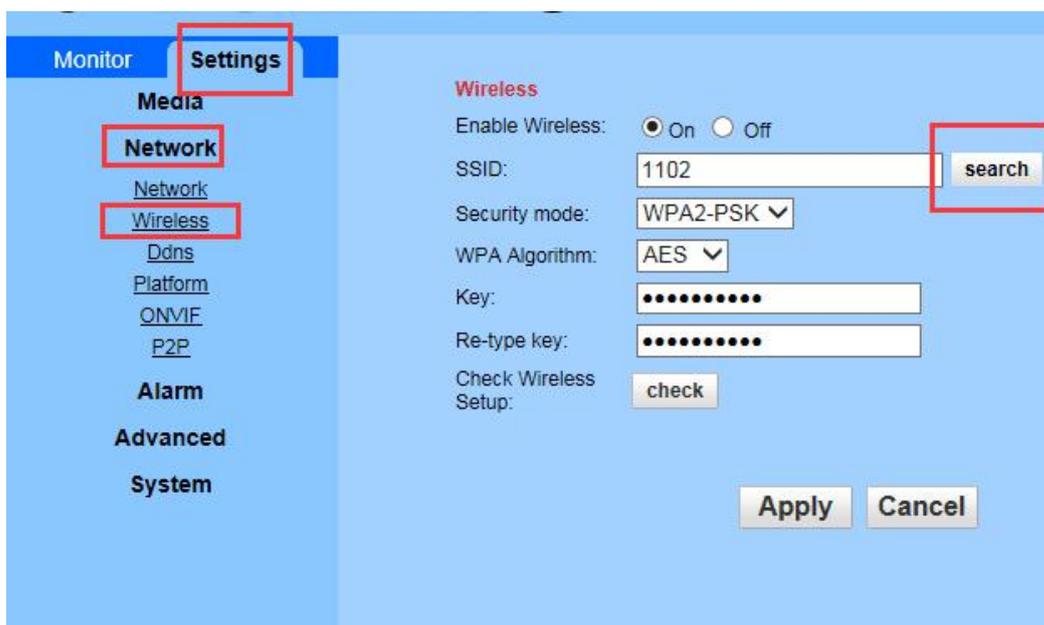
Click "Join" after the corresponding SSID of the popup page appears, After entering the corresponding password, click "Check" to test whether the WIFI configuration is correct, as shown in the following figure:
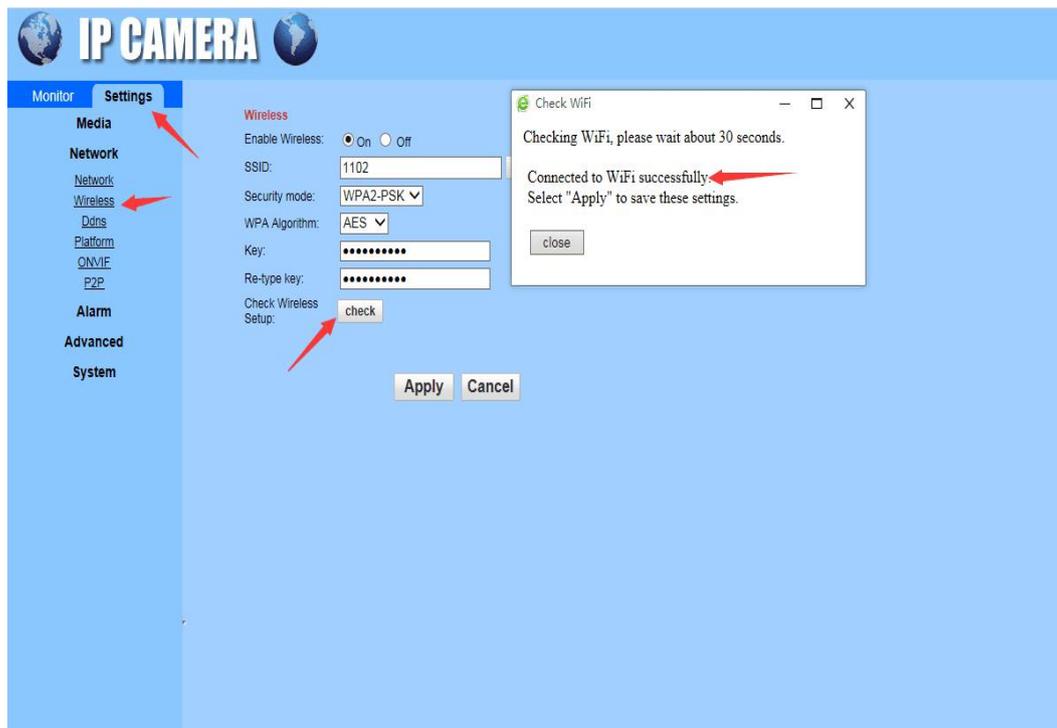
If no password is set on the router's wireless settings, you do not need to enter a password. Click "Check"

If the connection fails, check whether the router frequency is 2.4Ghz

2. After disconnecting the IP Camera cable, power off the IP Camera and use the WIFI connection

Note: After the WIFI function is enabled, if you need to use the wired connection, you must first connect the network camera to the Internet cable, and then power on the network camera. Otherwise, the IP camera will automatically enter the wireless connection status.

6 Function Settings

6.1 Real-time monitoring
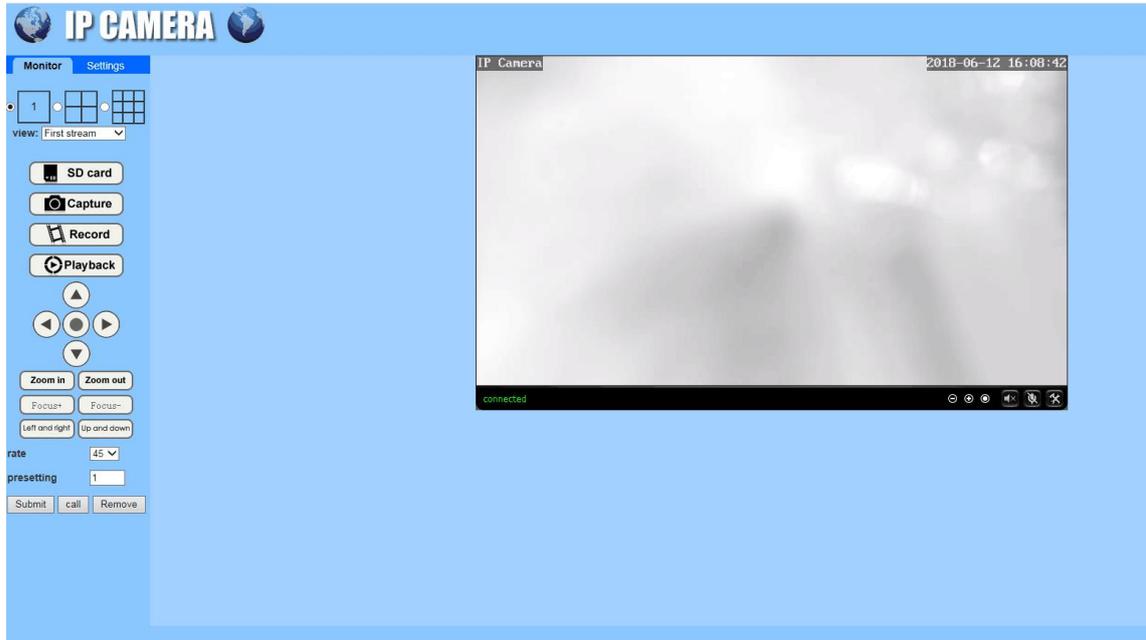
6.1.1 Menu

All pages include two types of menu bar: real-time monitoring and parameter settings.

Real-time monitoring is to display the camera's screen and related operation function keys;

parameter setting is mainly to set camera related parameters.

6.1.2 Video playback screen

The video playback area is consistent with the video resolution. The larger the resolution, the

larger the playing area becomes. You can use the mouse to double-click on the play area, the

video will then be displayed in full screen, double-click again, to restore to the original size.

If motion detection is switched on, when an object is detected moving in a certain area, a box

will be displayed to remind the user that something in that area is abnormal。

There is a status bar below the playback area as shown in the

figure.

1） :IPCAM current status

2） : **Audio play button: The sound recorded by the device can be played back on the computer.**

Click again to turn off this function. Optional

3） : **Audio Send button: The sound recorded by the computer can be transmitted and played by the audio player connected to the device. Click again to turn off this function. Optional**

4） : **Video and picture storage path selection**

6.1.3　Monitor

According to your requirements, the window can be set for different monitor levels. These are: the first stream: 720P (1280 * 720) and the second stream: VGA (640 * 352). There are two types of window to for the monitor, and you can choose the either the first stream, or the second stream to monitor the images.

6.1.4　Multi-view screen
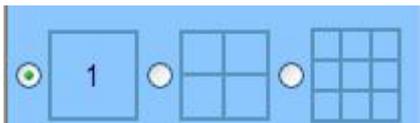
The firmware of the device will support up to 9 cameras, for simultaneous monitoring. Settings can be made for multiple devices. You can add other network cameras.

6.1.5　SD Card

If an SD card is inserted, click on the SD card button. On the popup screen, the contents of the SD card will be listed as shown.

Index of /sd/

Name	Modified	Size
Parent directory	-	-
20170829/	29-Aug-2017 04:13	[DIRECTORY]
20180508/	08-May-2018 09:06	[DIRECTORY]
20180509/	09-May-2018 05:39	[DIRECTORY]
20180510/	10-May-2018 09:06	[DIRECTORY]
20180511/	11-May-2018 00:10	[DIRECTORY]
20180512/	12-May-2018 00:10	[DIRECTORY]
20180513/	13-May-2018 00:10	[DIRECTORY]
20180521/	21-May-2018 22:31	[DIRECTORY]
20180522/	22-May-2018 08:24	[DIRECTORY]
20180523/	23-May-2018 09:36	[DIRECTORY]
20180528/	28-May-2018 07:21	[DIRECTORY]
20180530/	30-May-2018 09:17	[DIRECTORY]
20180601/	01-Jun-2018 11:01	[DIRECTORY]
20180602/	02-Jun-2018 00:10	[DIRECTORY]
20180603/	03-Jun-2018 00:10	[DIRECTORY]
20180604/	04-Jun-2018 00:10	[DIRECTORY]
20180605/	05-Jun-2018 17:34	[DIRECTORY]
20180606/	06-Jun-2018 22:44	[DIRECTORY]
20180607/	07-Jun-2018 12:21	[DIRECTORY]
20180608/	08-Jun-2018 10:57	[DIRECTORY]
20180609/	09-Jun-2018 08:38	[DIRECTORY]
20180610/	10-Jun-2018 22:19	[DIRECTORY]
20180611/	11-Jun-2018 21:09	[DIRECTORY]
20180612/	12-Jun-2018 00:10	[DIRECTORY]

In the figure above, [] indicates the directory. Click on the directory to view the recorded pictures and videos. Click on the required picture on the SD card, and the picture will be displayed; click on a video on the SD card, and you can automatically download it, and use the computer's player to play it back.

6.1.6   Capture

Click on the Capture button. This will save the currently playing screen as a picture in the set path.

6.1.7   Record

Click the record button, you can record the video stream and audio stream to the path set by the local computer. During recording, the video is shown being recorded in the status bar of the video playback area. Click the video button again to stop recording.

6.1.8   Playback

Click the Playback button, a player will pop up, as shown in the figure, you can play the recorded video from the local hard disk and SD

card.
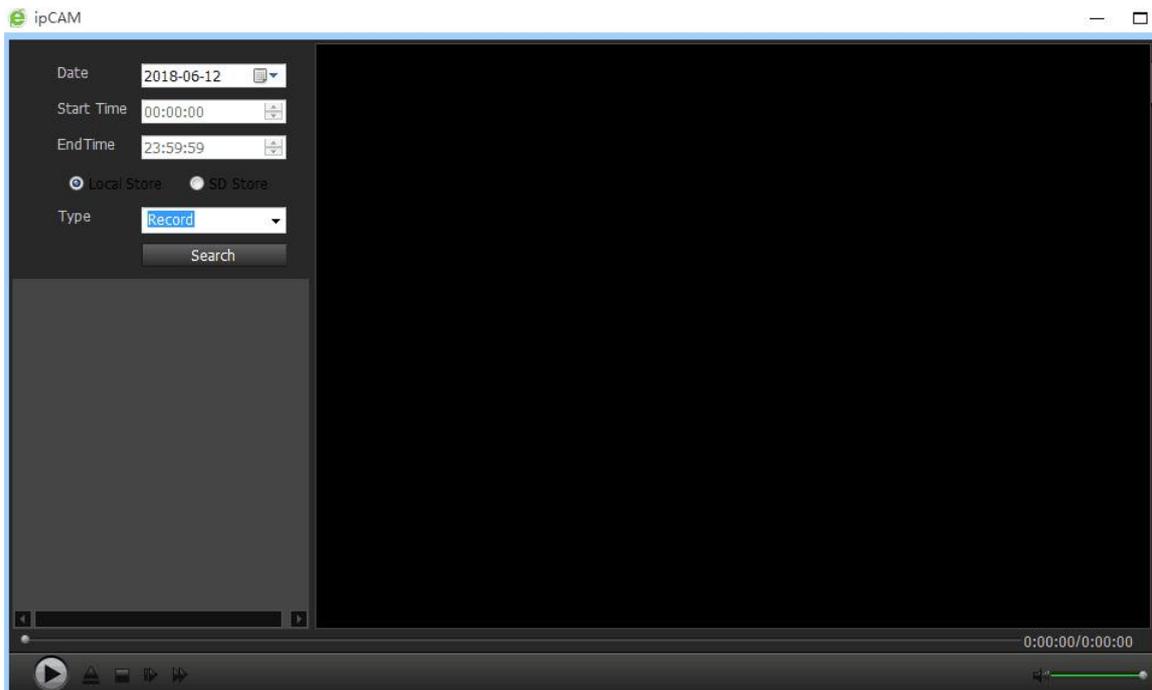
6.1.9 PTZ (optional)

In the PTZ control area, users can control the direction of rotation of the PTZ, using the direction indicated by the arrow (up, down, left and right rotation). When the user's mouse is on these control buttons, a prompt message will pop up, indicating the role of the button.

When the pan/tilt has rotated to the desired position, you can click the "Set Preset" button. When the control PTZ rotates to other positions, just click the "Call Preset" button, and the PTZ will immediately return to the preset position that had been set.
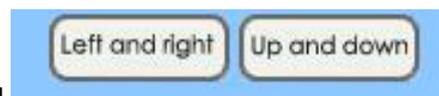
For more detailed settings, please refer to the client manual.

"Left and Right" means that the equipment's head will turn left and right and then return to the original position it was in. "Up and down" means the position of the equipment's head will move up and down and then return to the original position it was in.

 Click this button to move the PTZ to the center position.

6.2 Video and Audio Settings

6.2.1 Image Settings

1). **Color Adjustment**

Drag the sliders in the figure above to adjust Brightness, Saturation, Contrast, and Exposure of the image to meet user's preferences.

2). **Flip and Mirror Images**

The screen can be flipped upside down and mirrored left and right.

3). **Aemode**

You can select from, Auto, indoor or outdoor. The default is Auto.

4). Default

Click the "Default" button to restore the image parameter values to factory settings

6.2.2 Video Settings

1） **Video Coding：Settings are: mainprofile and baseline; the default is mainprofile.**

2） **Resolution**

First stream：720P (1280*720) and Q720P (640*352). Second stream: Q720P (640*352) and QQ720P (320*176). The larger the resolution, the clearer the image; however with the larger data stream, a greater network bandwidth is required.

3） **Bit rate**

The user can specify the data stream size. Generally speaking, the larger the stream is, will mean the clearer the picture will be. However, the configuration of the data stream must be combined with the network bandwidth. When the network bandwidth is very narrow and a very large data stream is configured, the video stream will not be transmitted properly and the pictures will be poor.

4）Note: The stream size ranges are: 32 ~ 6144Kpbs. Default bit rate: first stream: 2048Kpbs; second stream: 512Kbps.

5) Maximum frame rate

Set the maximum transmission frame rate per second. In the case of limited network bandwidth, it is recommended to reduce the bit rate and frame rate.

6) **Interval between frames**

Set the interval between two frames. The larger the interval is, the slower the response may be when the image is opened for the first time.

7) Bit rate control
There are two modes of bitstream control, fixed bitstream (CBR) and variable bitstream (VBR). When the fixed stream is selected, the video encoder encodes according to the stream speed in the stream setting; in the variable stream mode, the video encoder considers the image quality based on the set stream speed, but it is not fully encoded at this speed。

6.2.3 Audio Settings (optional)

Audio：Select "On" to add audio signal during encoding. Select "Off" and no audio signal is added during the encoding. Select first stream, second stream, or third stream respectively to enable audio collection.

**Audio Type**：You can choose any of G711 or G726 audio formats

Input Type：Definable input volume and output volume, volume range: 1-100

Microphone：Default input volume: 31; output volume: 79

Line in：Default input volume: 15; output volume: 79

6.3 Network

6.3.1 LAN Settings

LAN Settings

IP Configuration Type: Dynamic IP Address   ▾

DNS Configuration Type: From DHCP Server   ▾

HTTP&RTSP

HTTP Port number: 80   (80 or1024~49151)

RTSP Port: 554   (554 or1024~49151)

RTMP Port: 1935

RTSP Permission check: ○ On   ● Off   (Note:Modify the settings, reboot the device)

Apply   Cancel

1）IP Configuration

Default IP address of the device is automatically obtained; IP is automatically assigned by the router

2）HTTP Port

The IP address identifies a device on the network. Multiple network programs can be run on the device. Each network program uses the network port for data transmission. Therefore, data transmission can also be performed between the ports. The port setting on this page sets which port the WEB SERVER program uses to transfer data. When doing port mapping, it needs to be consistent with this port (the

default factory port is 80).

3） RTSP Port

The Network Camera supports RTSP protocol and can be played directly using software such as VLC

4） RTSP Permission Check

Select On to indicate that you need to enter the camera's login user name and password when using RTSP connection, and select Off to indicate that you can connect using RTSP without entering the camera's user name and password.

6.3.2 Wireless

The setting menu, when WIFI is enabled, is as shown in the following figure. The user can click the "Search" button, and a page will pop up to display the WIFI networks found by the device. After selecting the network used by the mobile phone, all parameters of the network will be automatically filled in to the menu. In the displayed parameter fields (such as SSID, encryption algorithm, etc.), the user only needs to fill in the password and confirm the password. After configuration, you can also click the "check" button to check the configuration is correct.

Note: Before configuring the WIFI network, please verify whether the device has a built-in WIFI wireless module, if not, it cannot use the wireless network.
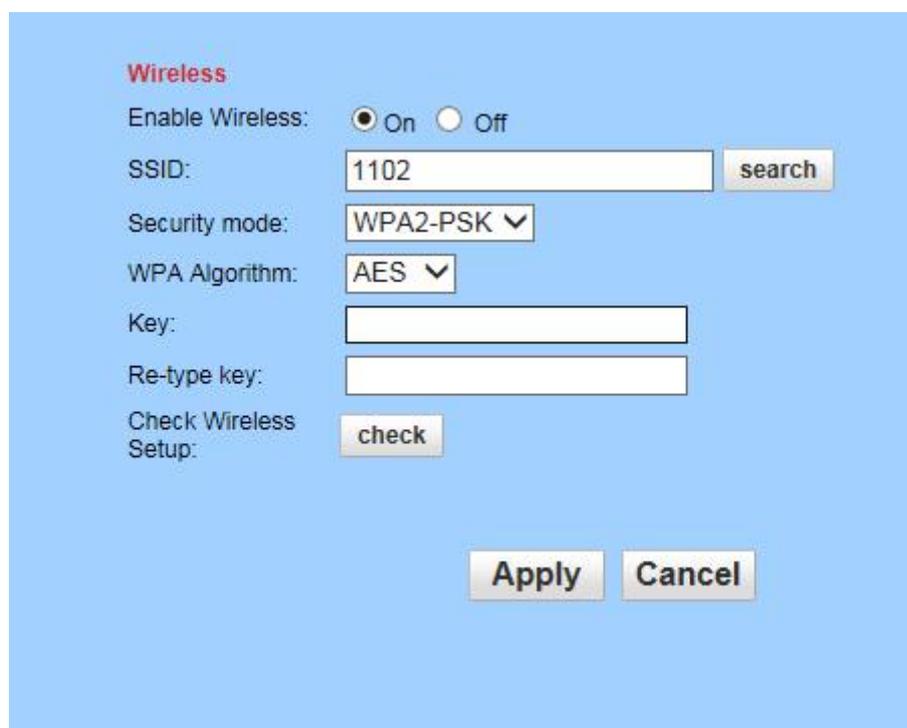
6.3.3   DDNS

1）Internet IP address

Click the "Show" button as shown in the following figure, a new page will pop up showing the network on which the device is connected to the Internet using the displayed IP address, (ensure that the network is connected to the Internet).


2）Main DDNS

When using the manufacturer's domain name, enter the user name and password provided by the manufacturer
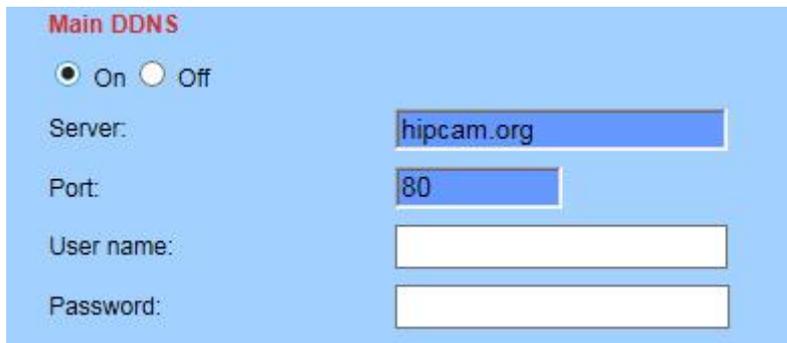

3th **DDNS**

As shown in the figure below, select the required "service provider" 3322.org, and enter the user name and password requested on the 3322.org server. The "host name" is the domain name assigned on the 3322.org server.org
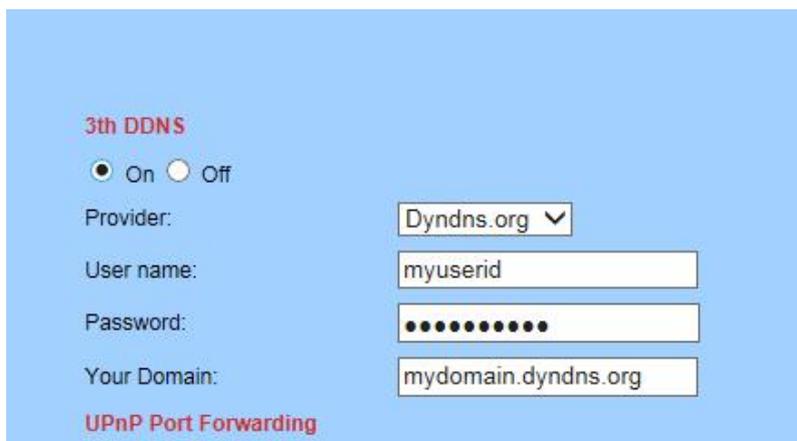
3) UPNP

UPNP means plug and play; if UPNP is enabled, when the IP Camera is connected to the LAN, it will automatically communicate with the router in the LAN, and let the router open a port to map with its own port, so the user is not required to login to the router and do the port mapping.
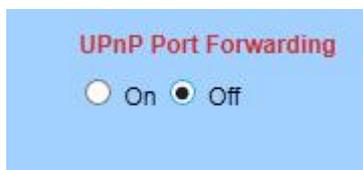
When using this function, the user needs to confirm that the router has also been enabled with UPNP; due to the large number of router models, UPNP may not be always supported. It is recommended that the router and the supporting router work properly, if not, we recommend not enabling this function. The current test works well with TP-LINK routers.

6.3.4   Platform

As shown in the figure below, after opening the platform settings, you need to enter "Device ID", "Password", "Server (address)" (ID, password and server address provided by the platform service provider)

Note: When the camera is connected to the platform server, the "connection status" will show "Online", otherwise it will display "Offline"

6.3.5　ONVIF
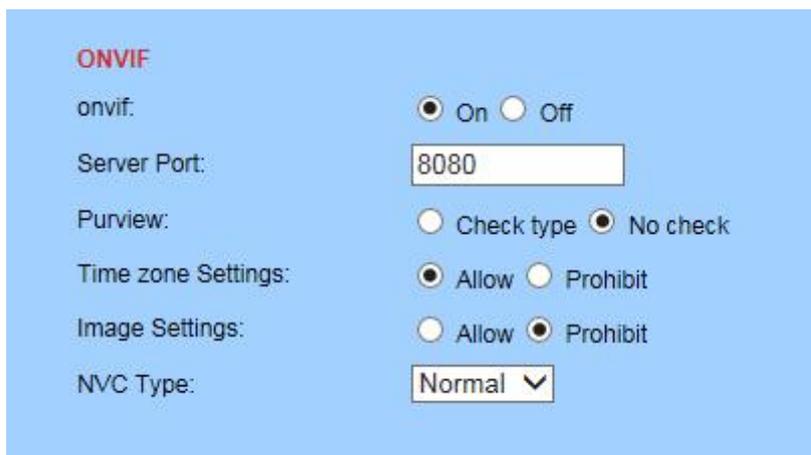
ONVIF switch: On by default

Port: The default port is 8080

Permissions: The default is no verification (depending on the backend device, as some backend devices do not support permission verification)

Time zone setting: disabled (does not allow the backend device to change the camera time)

Image parameter settings: disabled (does not allow the backend device to change image parameters)

6.3.6　P2P

Can obtain P2P platform related parameters: device serial number. (Note: Each set of serial numbers is unique, and cannot be repeated)

6.4 Alarm

6.4.1 Audio Alarm (optional)

If the port has an external alarm detector, you can check "External alarm input", which will enable the external alarm. If the alarm is a normally open switch alarm, please select "normally open", if the alarm is a normally closed type switch alarm, please select "normally closed".

6.4.2 Motion Detection

If the user is monitoring a certain area permanently, and an alarm occurs when there is an abnormality in the area, the motion detection function can be selected. The motion detection-setting menu is shown in the following figure. The device supports the setting up of four areas. Enable the corresponding area by checking the option box at the bottom of the page. After starting a certain area, the selected area will be displayed on the screen, and the area number will be listed. Move the mouse to the selected area, then drag that block to anywhere on the screen, or move the mouse to the lower right corner of the area box. Drag and change the red box to amend the size. After setting, click Apply and the motion detection settings will take effect.
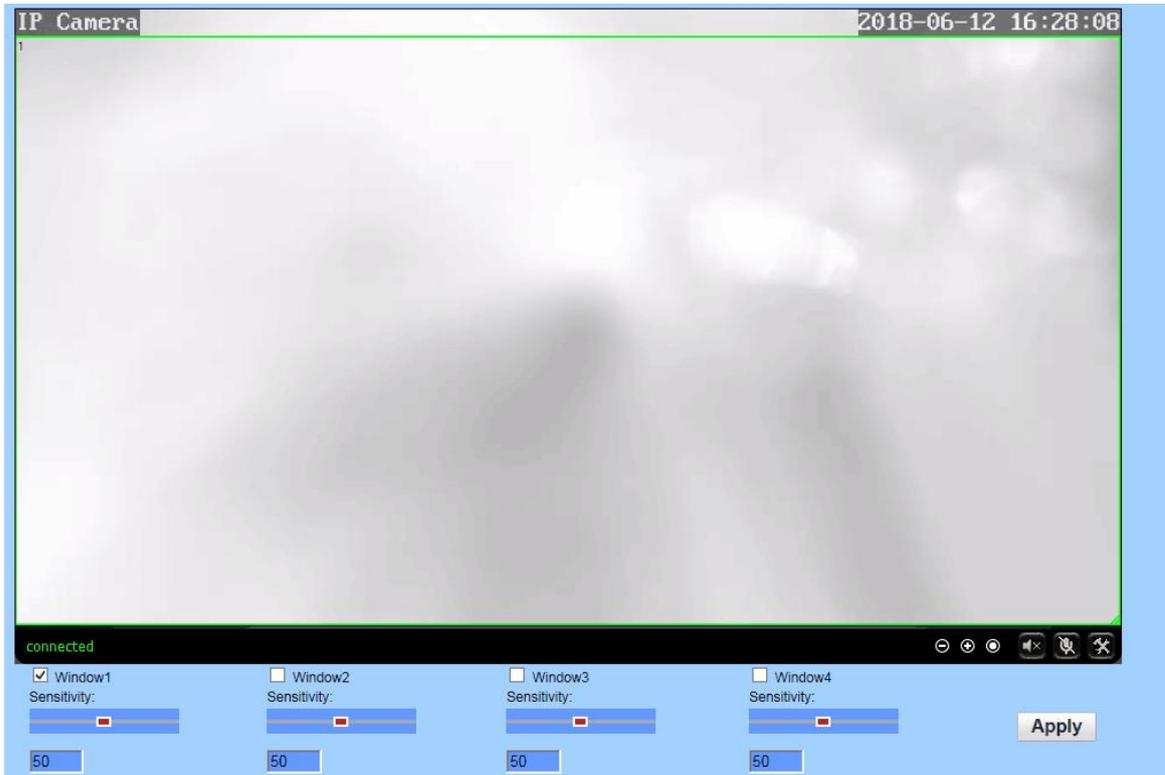
6.4.3 Alarm-linkage

When an alarm is triggered, the device can react to the alarm in many ways, as shown in the following figure:
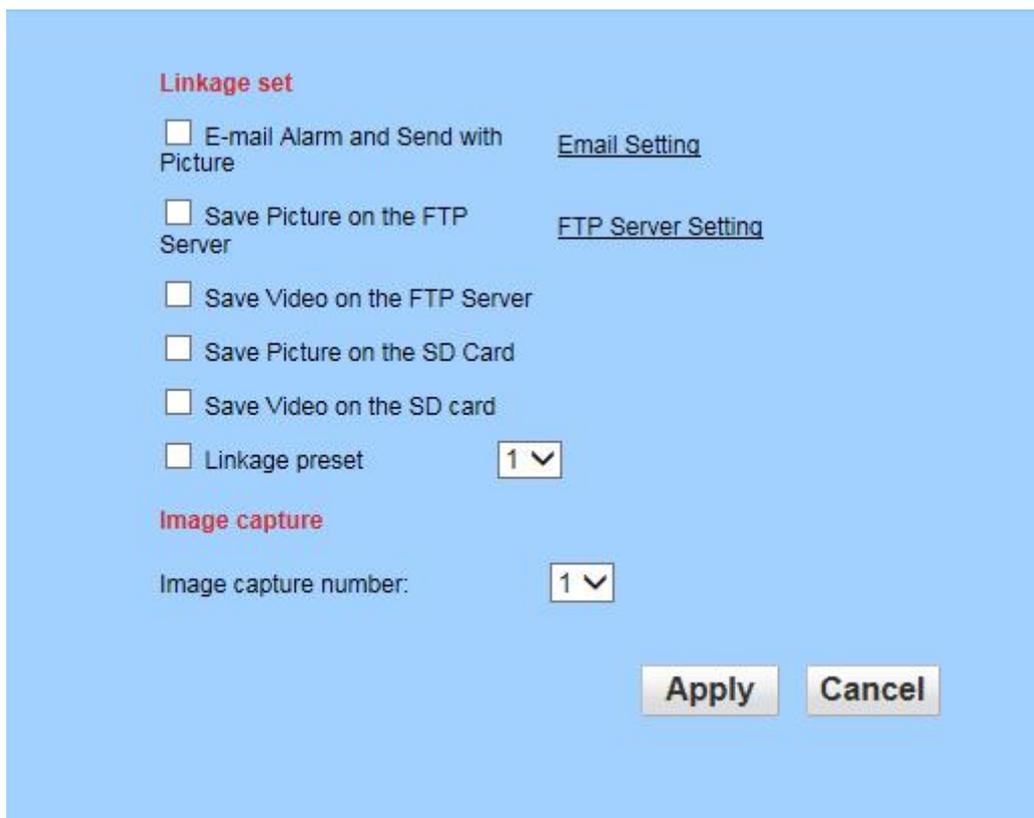
6.4.4 Schedule

The device will trigger an alarm only when an alarm is detected during a time period when the alarm is set, so you need to carefully choose which time period to set the alarm for.

Note that when setting the time; please adjust the system time first.

6.5 Advanced

6.5.1 User

The system has set three levels of user rights, corresponding to three user names, admin/user/guest. Among them, the admin user has the highest privileges and can perform any settings. The User can only operate the PTZ, browse videos, perform video recording on the PC, capture pictures, etc., and

cannot set the system. Guest users can only browse videos and cannot perform any operation on the device.

At the factory, the default passwords for the three users are "admin", "user", and "guest" respectively. When the user uses it for the first time, modify these three passwords immediately to prevent unauthorized users from logging in.

6.5.2   Auto snap

Check "Save picture to SD card" or "Save picture to FTP server", and at regular intervals (which can be set, as shown above), the device will save the captured pictures to an SD card.

Note: Snapshot cannot be seen on the phone app. It is only available on the browser.

Click SD card on setting's main page to download.

6.5.3   Time record

Recorded files duration：The length of the video file can be set, the default is 600 seconds

Whether to set to record：Choose whether to record video to T.F/SD card

Stream：Video streaming can be set up

Recording time: Set the timing of recordings according to your needs

After the setting is completed, the timed recording files will be stored on the computer D drive by default. If you want to set motion detection recording to be stored on the computer, please download our client server to set it.

6.5.4   Email

After the content has been filled in, first click on the application to perform a test. After the test is completed, the test will show a screen stating whether it was successful.

Note: 1. The sending mail server needs to support POP3 protocol. At present, many mail servers need to verify whether the server supports POP3 when selecting the sending mail server, in order to enhance security and reduce spam. Send will show as unsuccessful if not supported.

2. For some ssl-certified mail servers, the ssl option must be checked to send successfully.

3. Gmail and Yahoo Mail need to set APP password.

6.5.5   FTP
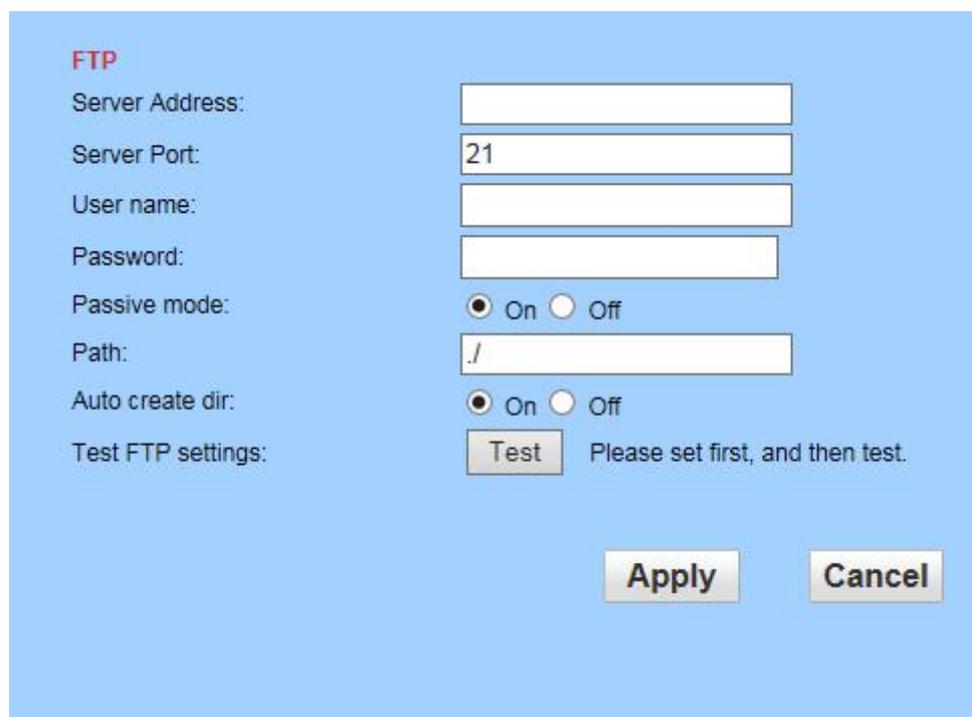
Note: In order to use the FTP function, you must first apply for a username and password on the FTP server; in addition you need to apply for a certain amount of storage space at the same time, and permit the user to have permission to write and create subdirectories to the storage space.

6.5.6   Multiple settings

1)   Multi-viewer can be viewed in the browser using multiple settings

2)   According to the information obtained by the search configuration tool, fill in the camera IP address, port number, user name and password, and then add it, as shown in the following figure：
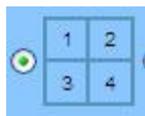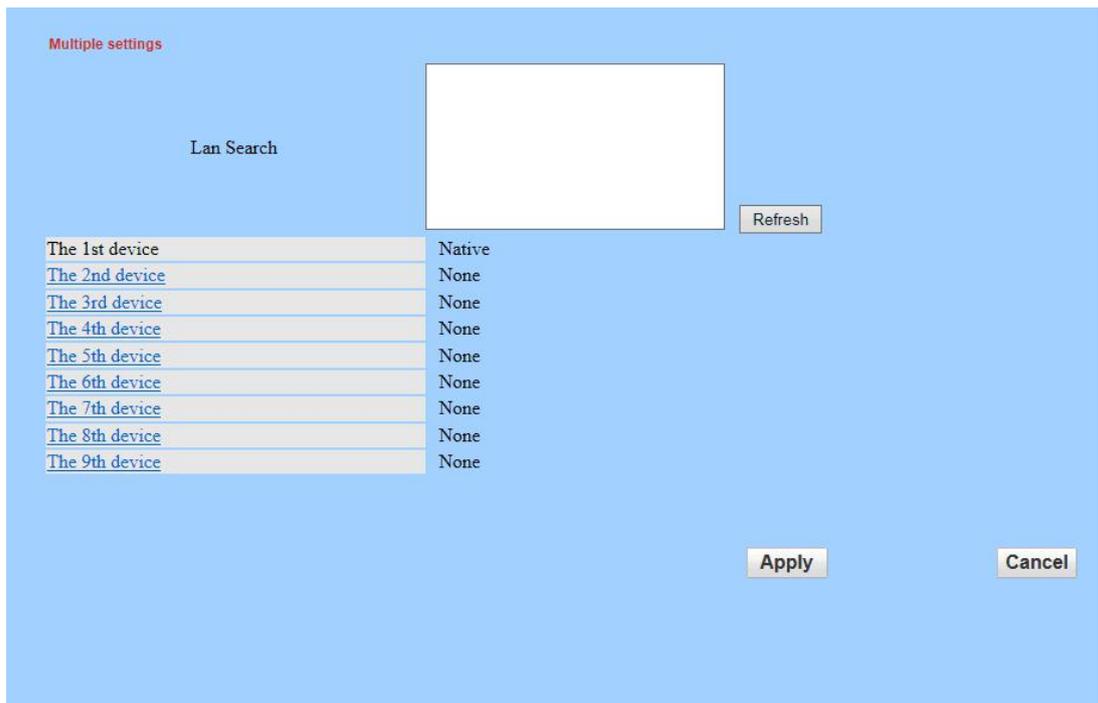
3) Return to the monitoring screen, and click, to watch four screens

6.6 System

6.6.1 Time

As shown in the figure above, please specify the time zone first, and then synchronize with PC time or NTP server.

6.6.2   Initialize

- ➢ Click the reboot button and the device will restart. If preset is set, the pan/tilt will turn to preset position when restarting.
- ➢ Click factory defaults, all settings will be restored to the factory default settings, and it will restart.
- ➢ Click the Save button to save all current system settings.
- ➢ In the restore box, select the saved settings file and click OK to restore all settings.
- ➢ In the Update field, select the firmware file to be updated and click OK to upgrade the device over the network. After the upgrade, the system returns to the factory default values. It does takes a long time to upgrade. Please wait patiently until a dialog box appears indicating that the upgrade was successful.

6.6.3 Device information

- ➢ If a wired connection is used, the network connection status will show wired connection, if a wireless connection is used, the network connection status will be wireless connection.
- ➢ If a TF card is inserted, there will be a prompt in the TF status bar and an indication of how much free space remains. Click on "Browse TF card", "Format FAT32 TF card", and "Stop TF card" to allow TF card content browsing, formatting of TF card, and stopping of TF card.

Note: The system supports 64G TF card. Please use "FAT32 format TF card" before use.
When ordering TF cards in bulk, first test whether that type of TF card is compatible with the system.

7 Others

7.1 Product specifications

Camera	Operating system	Embedded Linux
	Main processing chip	Hass 3518
	Image Sensor	1/4-inch 1-megapixel progressive CMOS sensor
	Minimum illumination	0.1 Lux
	Lens	Standard 3.6 MM
	Infrared night vision	10 m
	PTZ	Supports 8 preset positions; horizontal: 355 degrees, vertical: 80 degrees
Compression standard	Video compression algorithm	H.264 Main profile and Baseline profile can be set
	Audio compression algorithm	G.726/G.711 (default is G.726)
	Compression transmission rate	32Kbps-6Mbps, can be customized, default 4Mbps
Image	Video code rate	The first stream: 720P (1280x720), Q720P (640x352) can be set
		The second stream: Q720 (640x352), QQ720P (320x176) can be set
		The third stream: QQ720P (320x176)
		JPEG bit rate: Q720P (640x352), QQ720P (320x176) can be set (for mobile monitoring)
	Video frame rate	25fps(50HZ), 30fps(60HZ)
	Character super-imposing	Supports OSD name, date and time information overlay (can be turned on and off)
	Image settings	Brightness, Contrast, Saturation, Exposure, Up/Down, Mirror Adjustable
Features	Storage	Maximum supported is 32Gb TF card storage, support for regular video storage
	Motion Detection	4 independent detection areas can be set (sensitivity 1-100 can be set)
	Alarm linkage	Send pictures to designated mailboxes by alarm; upload pictures and videos by alarm to FTP server; alarm pictures and videos are written to SD card
	Network protocol	TCP/IP, HTTP, TCP, ICMP, UDP, ARP, IGMP, SMTP, FTP, DHCP, DNS, DDNS, NTP, UPNP, RTSP, etc.
	Access protocol	Supports ONVIF 2.0 protocol and supports permission verification (by default, permission checking is turned off)
Interface	Audio input	1 input, support MIC input / linear input (pickup)
	Audio output	1 output, support for connecting headphones or devices
	Network Interface	10Base-T/100Base-TX Ethernet interface;
		Wi-Fi 802.11b/g/n wireless network (optional)
General	Input power	DC 12V 1A

specifications	Maximum power consumption	6W
	Dimensions	135mmx124mmx132mm
	Operating temperature	-20 ~ +55 ℃
	Operating humidity level	10 ~ 95%RH

7.2 Network ports used by the camera

IP Camera: By default, the following network ports are used:

TCP	80	Web port
		Communication port, audio and video data transmission port, intercom data transmission port
UDP	554	RTSP port
ONVIF	8080	ONVIF port

7.3 Frequently Asked Questions

- **What if I forget my login password?**

  Solution: There is a [RESET] button on the IP Camera rear panel or above the connection cable. With the power on, press this button for more than 5 seconds to restore all parameters to the default values (factory value). Name and password are admin。

• What if there is no video image on the IE browser?

Possible cause: No plugin installed?

Solution: When using the Internet Explorer to access the IP Camera for the first time, you must install the plug-in.

Installation method: access IP Camera address, click [Download Control], a pop-up file download dialog box will appear, select [Run] or [Save] to download. After the download is completed, the installation interface will pop up and will automatically install the line control; after the installation is complete, the video image will be displayed.

• What can I do if I cannot access the IP Camera via Internet Explorer?

- **Possible cause 1: The network is disconnected**

Solution: Use a PC to access the network to test whether the network is working properly. First check the cable and the PC for faults, and then check for network failure caused by a virus. Test whether PC's can ping each other.

- **Possible cause 2: The IP address is being used by another device**

Solution: Disconnect the IP Camera from the network and connect the IP Camera to the PC separately. The recommended solution is to reset the IP address.

- **Possible cause 3: IP addresses are in different sub-networks**

Solution: Check the server's IP address, subnet mask address, and gateway settings.

- **Possible cause 4: The MAC address in the network and the MAC value of the IP Camera are already used.**

- **Possible cause 5: The web port is incorrect**

Solution: The web port is occupied by another device. Open the IP Camera Quick Setup Wizard and change the port of the device.

- **I cannot hear any sound?**

  - **Possible cause 1: No audio input is connected?**

  Solution: Please check the audio connection of the host

  - **Possible cause 2: IP Camera does not turn on the audio option of the corresponding channel?**

  Solution: Please check the IP Camera audio parameters, open the monitor function

Thank you for using this webcam. Please feel free to contact the manufacturer at any time if you notice differences between models, or if the system software may have been upgraded, which may have created differences in appearance or functions from those in this manual. We apologize for any such changes, as we may not be able to notify you in time.