

User Manual

LPRC200

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English

Thank you for choosing our product. Please read the instructions carefully before operation. Follow these instructions to ensure that the product is functioning properly. The images shown in this manual are for illustrative purposes only.



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If there is any issue related to the product, please contact us.

ZKTeco Headquarters

Address ZKTeco Industrial Park, No. 26, 188 Industrial Road,
Tangxia Town, Dongguan, China.

Phone +86 769 - 82109991

Fax +86 755 - 89602394

For business related queries, please write to us at: sales@zkteco.com.

To know more about our global branches, visit www.zkteco.com.

About the Company

ZKTeco is one of the world's largest manufacturer of RFID and Biometric (Fingerprint, Facial, Finger-vein) readers. Product offerings include Access Control readers and panels, Near & Far-range Facial Recognition Cameras, Elevator/floor access controllers, Turnstiles, License Plate Recognition (LPR) gate controllers and Consumer products including battery-operated fingerprint and face-reader Door Locks. Our security solutions are multi-lingual and localized in over 18 different languages. At the ZKTeco state-of-the-art 700,000 square foot ISO9001-certified manufacturing facility, we control manufacturing, product design, component assembly, and logistics/shipping, all under one roof.

The founders of ZKTeco have been determined for independent research and development of biometric verification procedures and the productization of biometric verification SDK, which was initially widely applied in PC security and identity authentication fields. With the continuous enhancement of the development and plenty of market applications, the team has gradually constructed an identity authentication ecosystem and smart security ecosystem, which are based on biometric verification techniques. With years of experience in the industrialization of biometric verifications, ZKTeco was officially established in 2007 and now has been one of the globally leading enterprises in the biometric verification industry owning various patents and being selected as the National High-tech Enterprise for 6 consecutive years. Its products are protected by intellectual property rights.

About the Manual

This manual introduces the operations of LPRC200.

All figures displayed are for illustration purposes only. Figures in this manual may not be exactly consistent with the actual products.

Document Conventions

Conventions used in this manual are listed below:

GUI Conventions

For Software	
Convention	Description
Bold font	Used to identify software interface names e.g. OK, Confirm, Cancel
>	Multi-level menus are separated by these brackets. For example, File > Create > Folder.
For Device	
Convention	Description
< >	Button or key names for devices. For example, press <OK>
[]	Window names, menu items, data table, and field names are inside square brackets. For example, pop up the [New User] window
/	Multi-level menus are separated by forwarding slashes. For example, [File/Create/Folder].

Symbols






Convention	Description
	This implies about the notice or pays attention to, in the manual
	The general information which helps in performing the operations faster
	The information which is significant
	Care taken to avoid danger or mistakes
	The statement or event that warns of something or that serves as a cautionary example.

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Safety Precautions

Electrical safety

- Before connecting an external cable to the device, complete the grounding properly and set up surge protection; otherwise, static electricity will damage the mainboard.
- Ensure that the standard voltage applicable in your country or region is used (the rated voltage of the machine is 220V). Power mismatch may cause short circuit or device damage.

Operation safety

- The device hardware may be damaged by transportation and other unpredictable causes. Check whether the device has serious damage before installation. If the device has major defects, contact your dealer as soon as possible.
- Do not connect or disconnect cables to/from the device when it is in working state.
- Do not keep the device in a place that vibrates. Handle the device with care. Do not place heavy objects on top of the device.
- Do not apply rosin, alcohol, benzene, pesticides, and other volatile substances that can damage the device enclosure. Clean the enclosure with a piece of soft cloth or a small amount of cleaning agent.
- Non-professional personnel is not allowed to open the device cover. If you have any technical questions regarding usage, contact certified or experienced technical personnel.

1 Overview

1.1 About the Product

The LPRC200 is a high-performance H.264/H.265-based license plate recognition camera and it has the properties of:

- Integrating HD imaging
- Image collection
- License plate recognition
- Image decompression
- Storage of data on an embedded intelligent platform.

It automatically identifies the numbers, letters, and characters on license plates, and outputs the identified results. At the same time, it can identify vehicle details (such as colors, auto logos and vehicle models). It is mainly used in the field of parking charge and entry/exit management.

1.2 Features

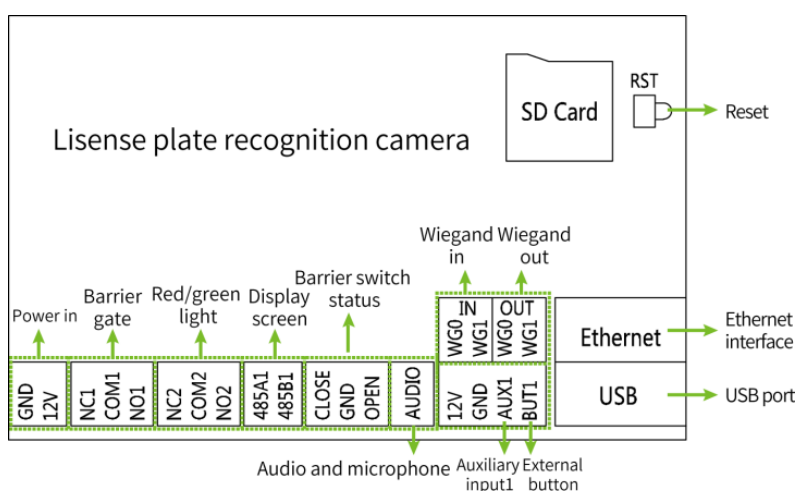
- High-performance architecture of dual-core processors, stable system architecture, powerful computing capacity, embedded capture, analysis and recognition features.
- Adopt modular structure design to ensure normal work under harsh environment.
- Complete SDK can support secondary development docking, system integration is simple.
- The algorithm is stable and reliable, with strong scene adaptability, and supports the recognition of ordinary blue, black, yellow, double-layer yellow and multiple national license plates.
- Support vehicle feature recognition, including body color, logo and vehicle type.
- 1/2.8" wide dynamic CMOS, 2 million HD lens, high-quality images, resolution up to 1920*1080.
- License plate recognition accuracy reaches more than 99% in the daytime and more than 98% at night, with a wide range of recognition angles.
- 4G module is optional to meet the construction requirements of field communication cabling free.
- It can support remote connection and debugging of equipment by mobile phone APP and computer client and set parameters. It is not distance-limited and can be readily adapted anytime and anywhere to simplify the operation, maintenance, installation and debugging of the product.

1.3 Appearance



1.4 Port Definition

- **Wiring terminal diagram:**



- **Port description:**

Pin	Description
Reset	Used to restore the original camera parameters
Ethernet	Standard Ethernet RJ45 socket, 10M/100M self-adaptive, can be connected with various network devices, such as switches, routers, hubs, etc.
USB	USB connection
GND +12V	Used to connect the power adapter. The camera's power supply voltage is 12V/3A DC. Do not use other power sources to prevent damage to the camera.

NC1 COM1 NO1	Used for connecting barrier gate
NC2 COM2 NO2	Indicator light connection (Red and Green)
485A1 485B1	RS485 transmission function used to connect the display screen and voice module of parking system
CLOSE GND OPEN	Barrier switch status
Audio	Used to connect audio and microphone of the parking system
WG0 WG1 IN	Wiegand in
WG0 WG1 OUT	Wiegand out
12V GND AUX1 BUT1	Auxiliary input and external button connection

2 Computer Connection Configuration

2.1 Software Environment

The camera must be connected to a switch or a PC over the standard Ethernet port. The PC which will be used to display images and control the camera should meet the following requirements:

- **CPU:** Intel Pentium 4 with processor speed of 2.4 GHz or above.
- **RAM:** 1GB or above.
- **Network port:** 100M Ethernet port.
- **Operating system:** 32-bit or 64-bit operating system, such as Windows 7, Windows 8, Windows 10.
- **Internet Explorer:** Microsoft Internet explorer 9.0 or later, Firefox ESR.

2.2 Network and IP Address Configuration

Set the IP address of the camera to be in the same network segment as the PC.

Note: IP addresses cannot be the same in the same LAN setting; otherwise, IP address conflict can lead to device malfunction.

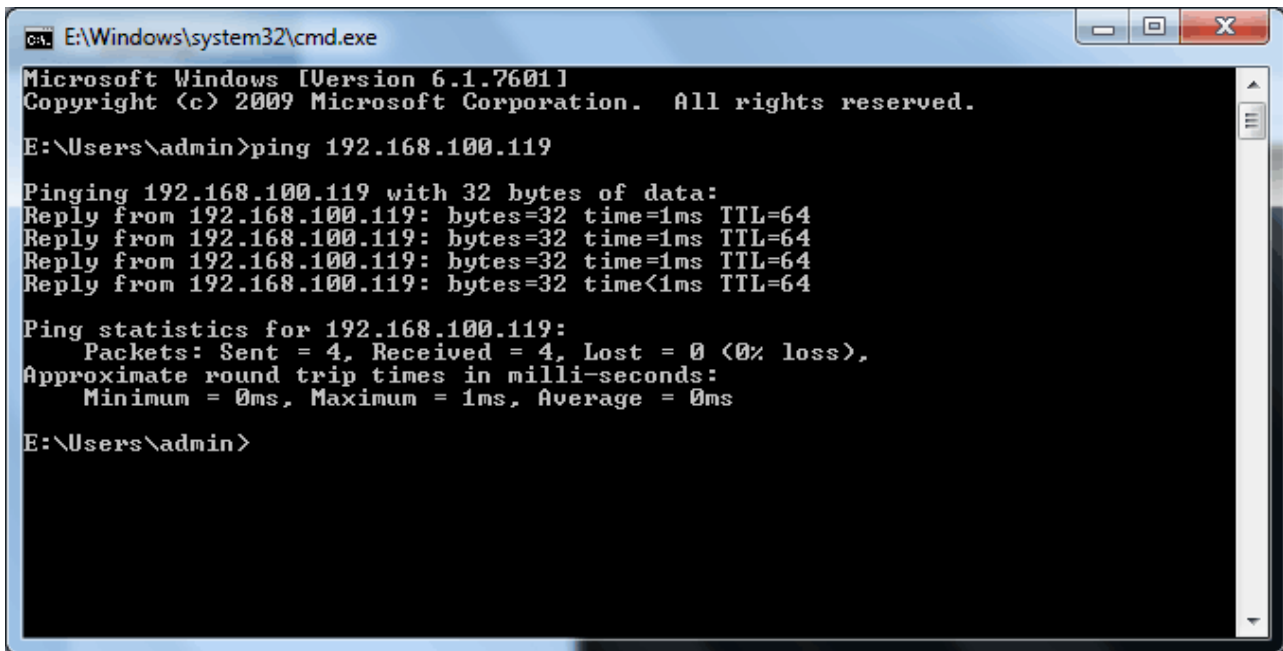
2.2.1 Default Parameter Settings

Before using the camera, set the IP address, gateway address, and other information of the camera properly. You can modify the default parameter settings according to requirements.

- **IP address:** 192.168.1.88
- **Subnet Mask:** 255.255.255.0
- **Gateway:** 192.168.1.1

2.2.2 Connectivity Test

Open the Start menu in the PC and type cmd in the search dialog box once the camera IP address is set. In the command prompt window, type Ping and camera IP address (e.g. Ping 192.168.0.18) to test the connectivity between the PC and camera.

A screenshot of a Windows Command Prompt window. The title bar shows the path 'E:\Windows\system32\cmd.exe'. The window content displays the following text:

```
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

E:\Users\admin>ping 192.168.100.119

Pinging 192.168.100.119 with 32 bytes of data:
Reply from 192.168.100.119: bytes=32 time=1ms TTL=64
Reply from 192.168.100.119: bytes=32 time=1ms TTL=64
Reply from 192.168.100.119: bytes=32 time=1ms TTL=64
Reply from 192.168.100.119: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.100.119:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

E:\Users\admin>
```

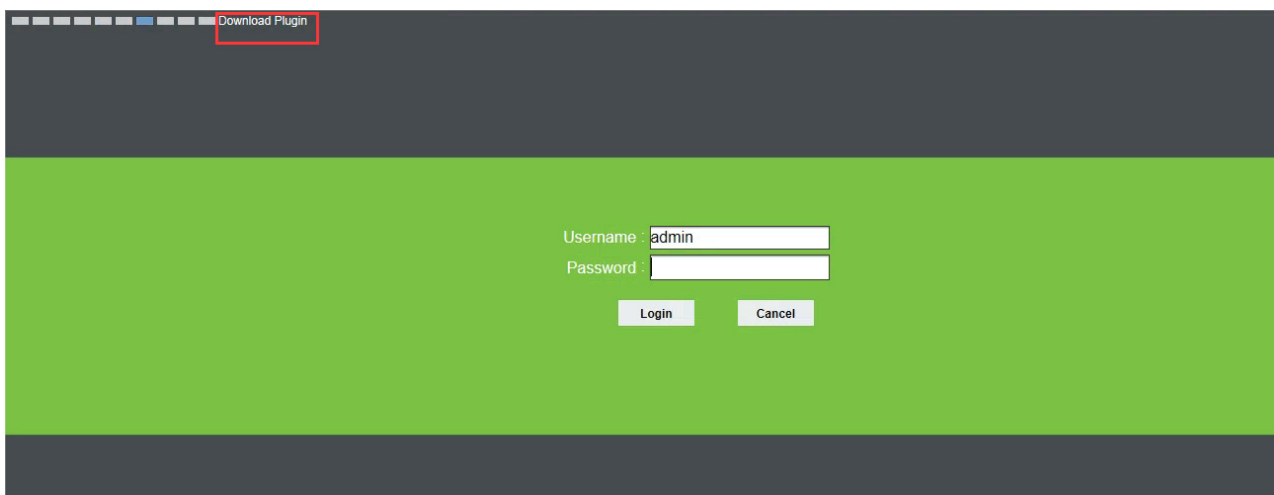
If the message is "Request timed out" or "Destination host unreachable", then it means the PC and the camera are not connected properly. Perform the following steps:

- Check whether hardware connection is correct.
- Check whether the TCP/IP addresses of the PC and the camera are in the same network segment.
- Check whether the ping command is disabled.

3 Camera Access over a Web Browser

3.1 Login

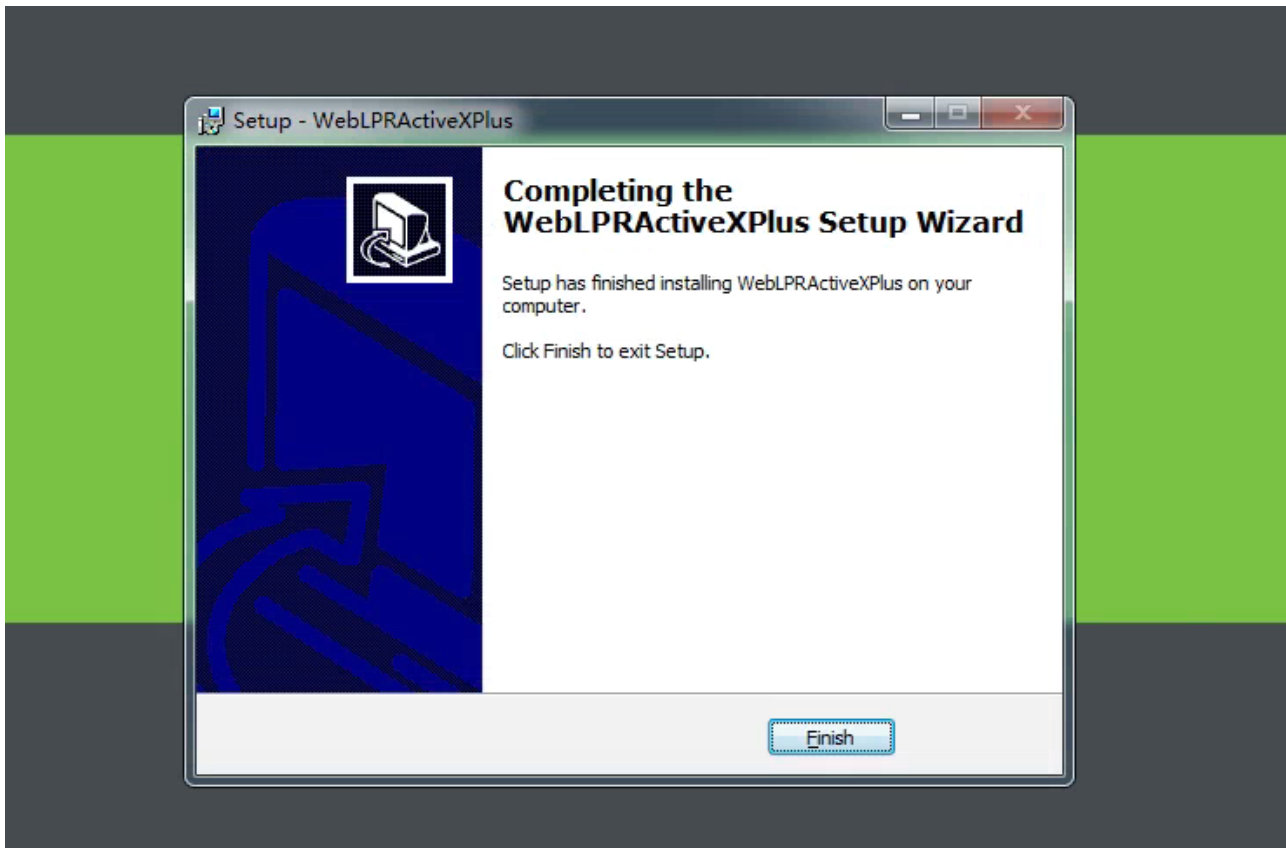
1. Type the IP address (default: 192.168.1.88) of the camera in the address bar of a web browser. Then enter your Username (default: admin) and password (default: 123456). as displayed in the below figure.



2. Installation of control upon initial login:

If you are accessing the device for the first time, you are asked to download a control. Please manually download and install the control. The control name is WebLPRActiveXPlus.exe.

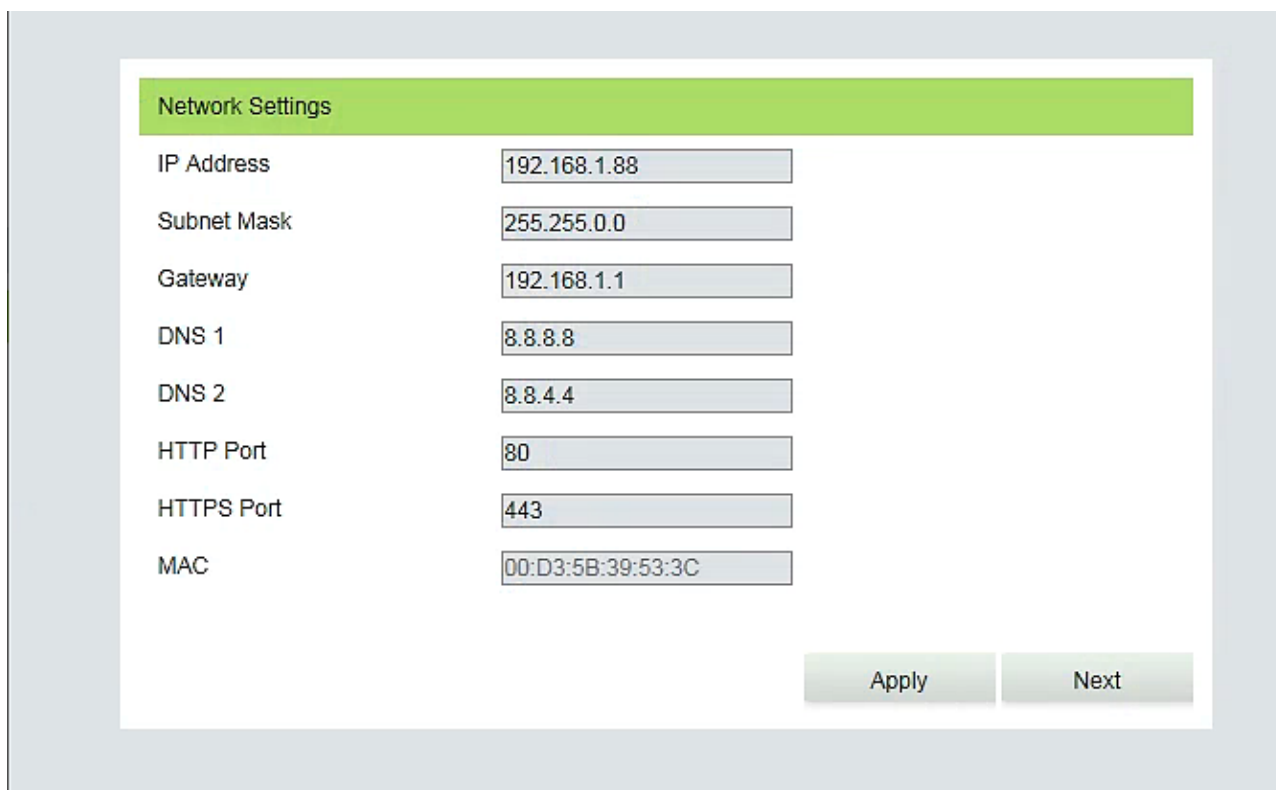
Click [Download Plugin] at the top left corner of the screen to download the WebLPRActiveXPlus.exe control, select the downloading path and click [Download]. After the downloading completes, access WebVideoActiveXPlus.exe to install it. The security prompt may be displayed during the installation. Click [Run] to continue the installation.



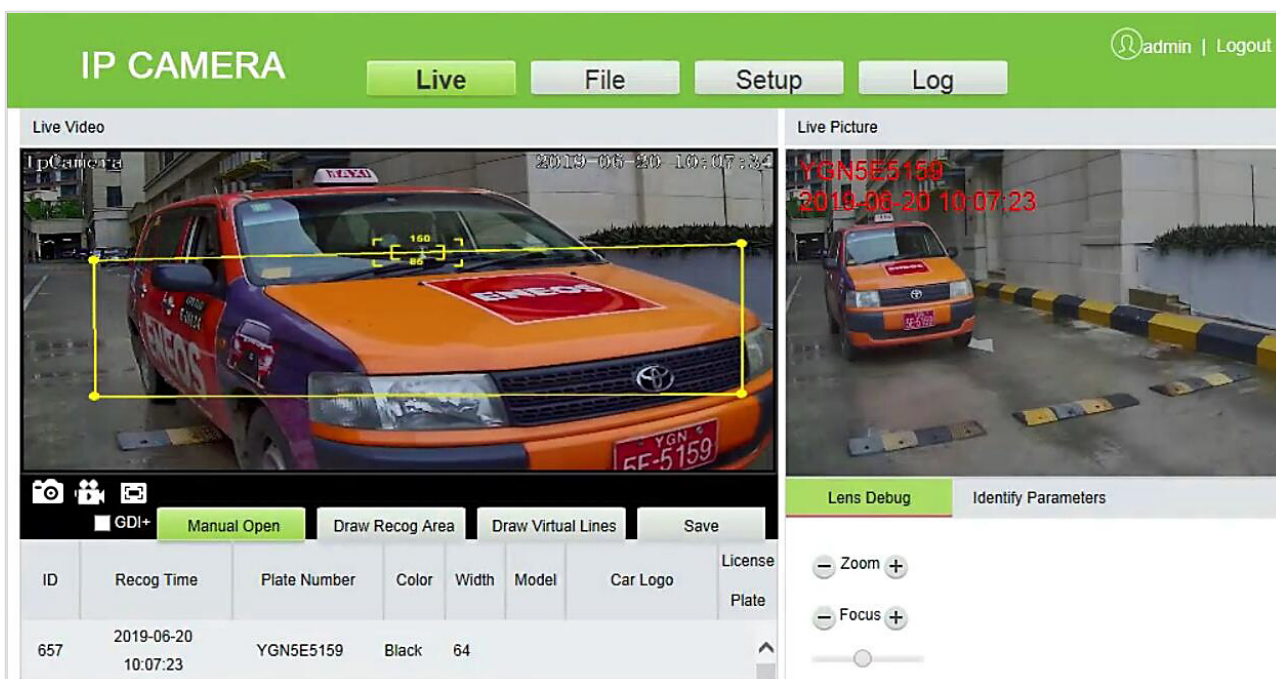
Note: The WebVideoActiveXPlus.exe control must be installed for viewing videos over a web browser. When the control is updated, it needs to be downloaded again.

3. After the installation is completed, return to the Web browsing page, enter the camera's default IP address (192.168.1.88) in the address bar, enter the default username and password and click [Login].

Note: When logging in with the default IP address, the setup wizard screen as displayed below will pop up each time. If default parameters are used, click [Apply] directly. If you need to modify the parameters, you can select [Next] to modify them. After changing the IP address, this wizard screen will no longer appear.



4. After setting the parameters successfully, you can preview the video, as displayed in the figure below:

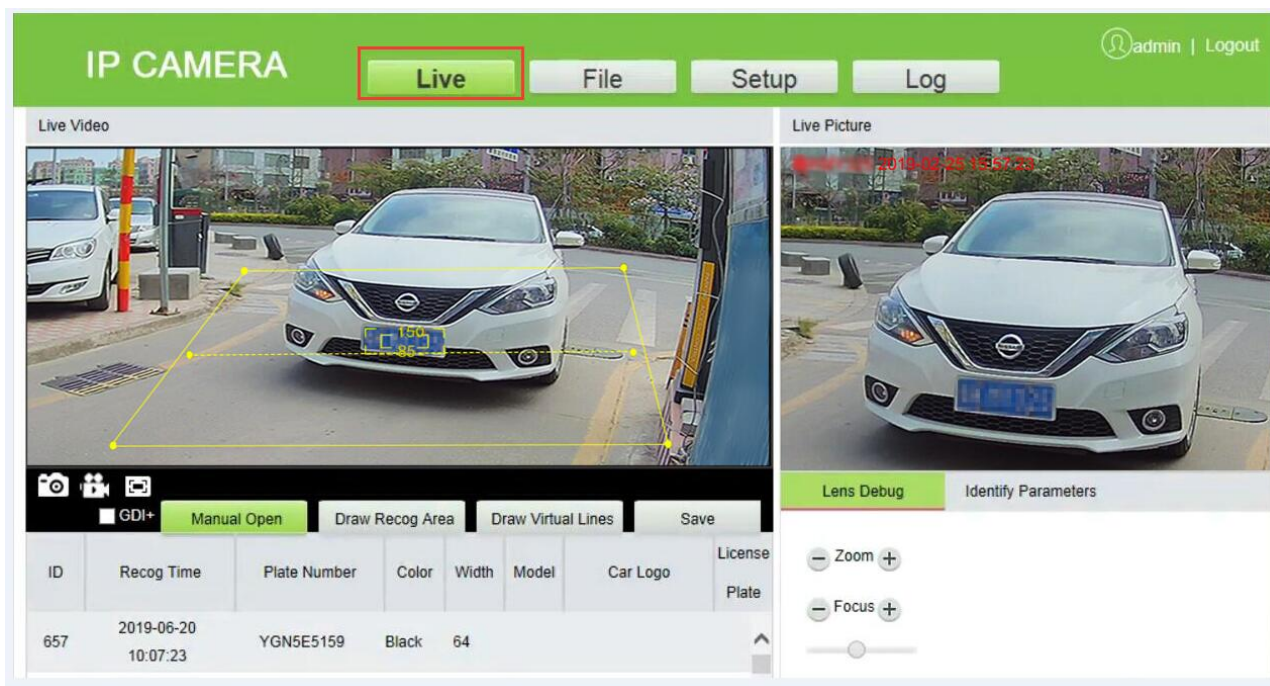



- **Live:** Click to access the live preview page to view live video and pictures. Under live video, you can capture live pictures, record live video and play live in full screen. Meanwhile, you can manually open the barrier gate, draw recognition area and virtual line on live video panel. Under live pictures, you can set lens debug, identify parameters and other features.



- **File:** Click to access the page where the required video clips or pictures can be viewed or downloaded based on the live video recorded.
- **Setup:** Click to access the parameter configuration page. On this page, you can view or modify the camera parameters, including Device Information, Time Settings, Display Settings, Streams, Video Parameters, Intelligent Analysis, Date Management, Push Configuration, P2P Configuration, 4G Configuration, Network Settings, FTP Settings, User Management, Firmware Upgrade, System Update, Auto Reboot, Restore and Local Settings.
- **Log:** Click to access the page to search and view the operation log.

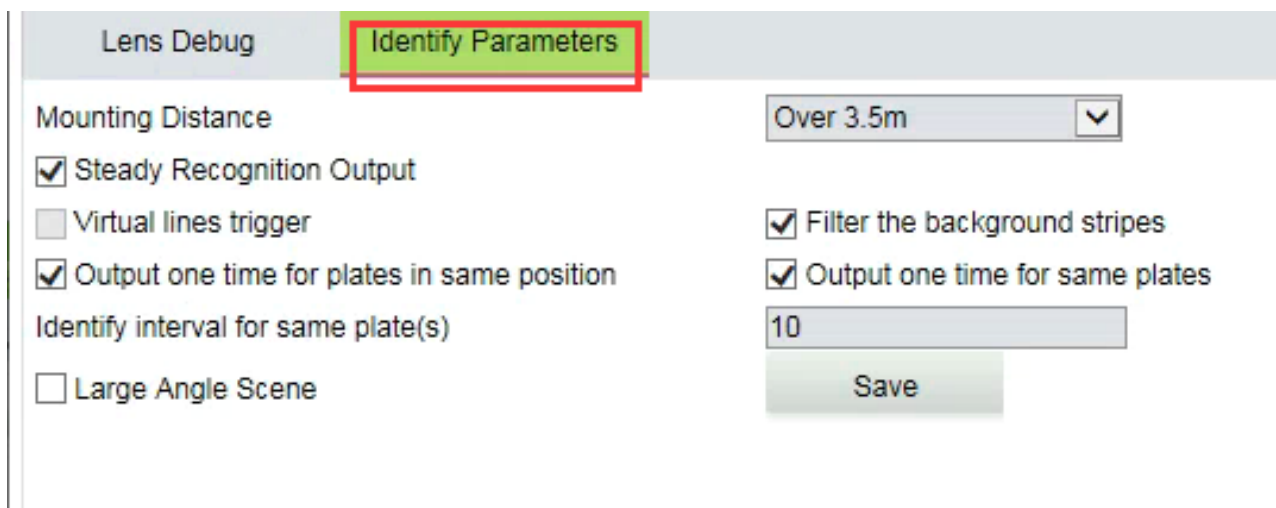
3.2 Live

Click [Live] to access the live preview page. You can preview the live video and set relevant parameters.



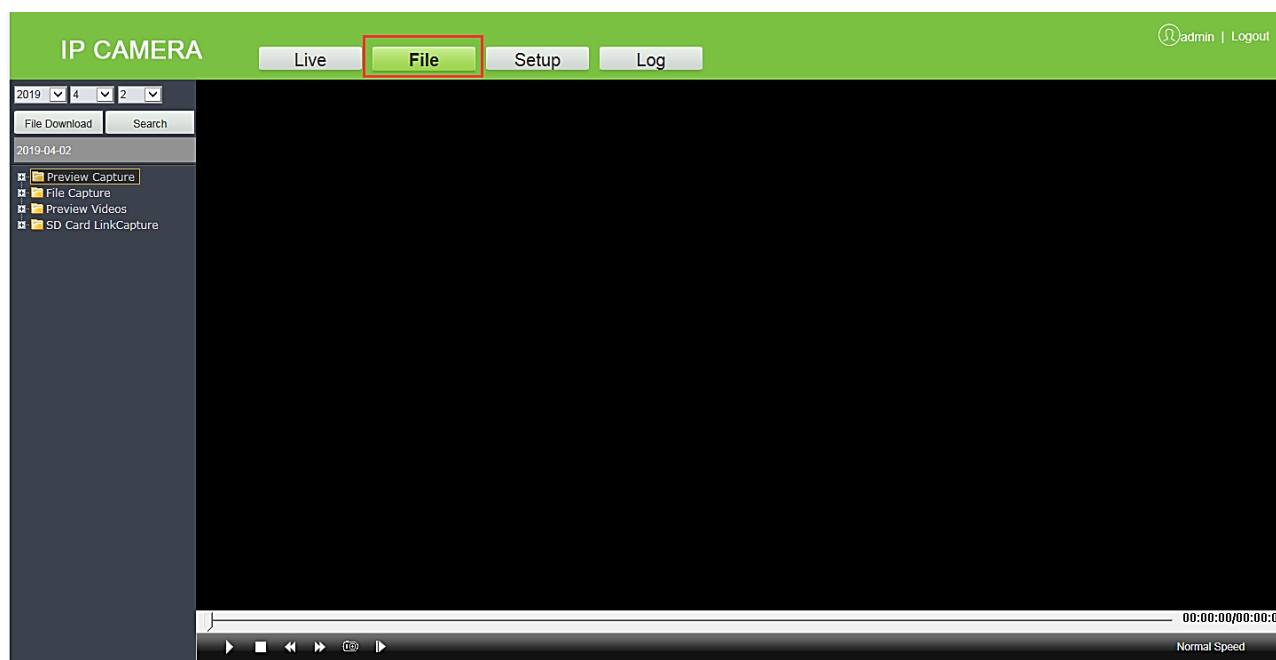
- **Snap:** Click the  icon to capture and save a photo from live preview video, and the storage location can be set in 3.4.16 Local Settings. The captured photos are stored automatically in a folder named after the current date and the photo is named after the capture time. For example, the file name of a photo is CH01_20180703_142004.jpg, and it is saved in the 20180703 folder, indicating that the snapshot date is 2018-07-03, the snapshot time is 14:20:04, and the sub-folder named after the IP address of the device will be automatically generated locally.

- **Record:** Click the  icon to organize real-time recording, and the storage location can be viewed in 3.4.16 Local Settings. The video is saved in a folder named year, month and day, and the video is named after recording time. For example, a video file titled CH01_main_20180703_142004. avi, and saved in the 20180703 folder, indicating the recording date is 2018-07-03, recording time is 14:20:04, while the local will automatically generate a subfolder named after the device's IP address.
- **Full:** Click the  icon to switch to full-screen mode and click Esc on the keyboard to exit the full screen.
- **GDI+:** Check [GDI+] to make the image lines in the recognition area smoother.
- **Note:** This function has certain requirements for PC graphics card (required to support DirectX function and acceleration function), otherwise video will be delayed, however it is recommended to choose according to the actual situation.
- **Manual Open:** Click [Manual Open] to manually open the barrier gate.
- **Draw Recog Area:** You can set the recognition area to avoid unnecessary interference and focus on the required area. Click [Draw Recog Area], then drag the four dots viewed in the screen to the desired area and click [Save]. Note: Complex background (such as dropdown of barrier gate or pillar) should be avoided inside the recognition area.
- **Draw Virtual Lines:** Draw virtual lines to trigger the recognition of the license plate. Click [Draw Virtual Lines], drag the yellow line with the two points within the recognition area displayed in the screen, and click [Save]. Note: The virtual line should be drawn inside the recognition area.
- **Lens Debug:** Adjust the lens parameters, including Zoom and Focus.
- **Identify Parameters:** Can set the parameters of identification, including Mounting Distance, Virtual line to trigger recognition, Filter the background bar, Output one time for plates in same position, Output one time for same plates, Identify interval for same plate(s), Large Angel Scene and so on.



3.3 File

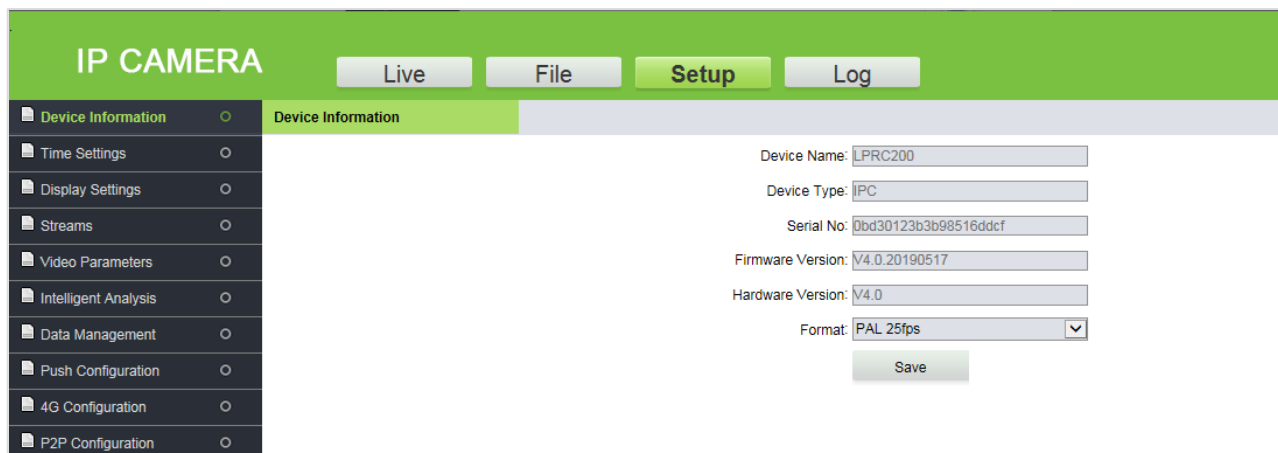
You can enter year, month and day to search for the required picture or videos, depending on your needs. In the meantime, you can view videos, open images and download the recorded images from SD card to your laptop.



3.4 Setup

You can view or modify camera parameters, including Device Information, Time Settings, Display Settings, Streams, Video Parameters, Intelligent Analysis, Date Management, Push Configuration, P2P Configuration, 4G Configuration, Network Settings, FTP Settings, User Management, Firmware Upgrade, System Update, Auto Reboot, Restore and Local Settings.

3.4.1 Device Information



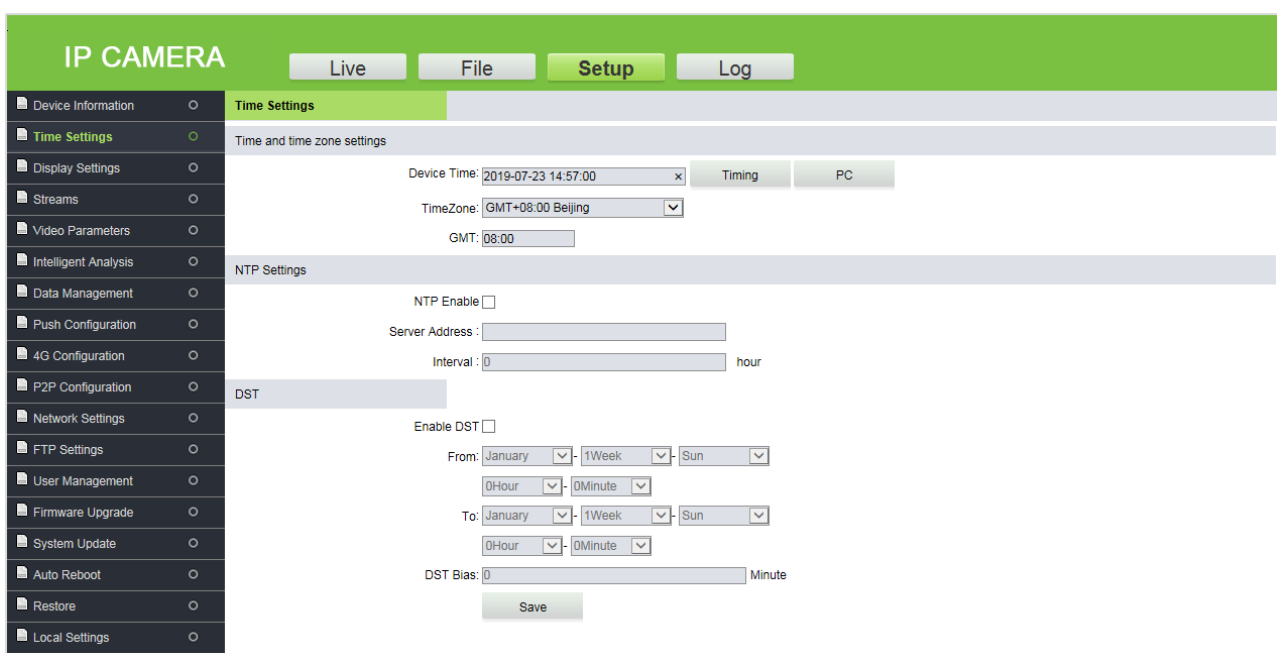
- **Device Information:** The basic parameters of the device, including device name, device type, serial number, firmware version, hardware version and format.
- **Format:** The analog output format, PAL or NTSC

Click [Save] after setting the parameters.

Note: Re-login is required to take effect after the parameters are modified.

3.4.2 Time Settings

It is used to set the system date and time. You can choose NTP Server, Synchronize with Local Computer or Set the Time Manually. You can set as needed and click [Save].



Time Zone (38 in total): The default time zone is GMT+08:00 Beijing.

NTP Server: Select the [NTP Enable] check box, enter the server address and interval (0-24 hours), and click [Save].

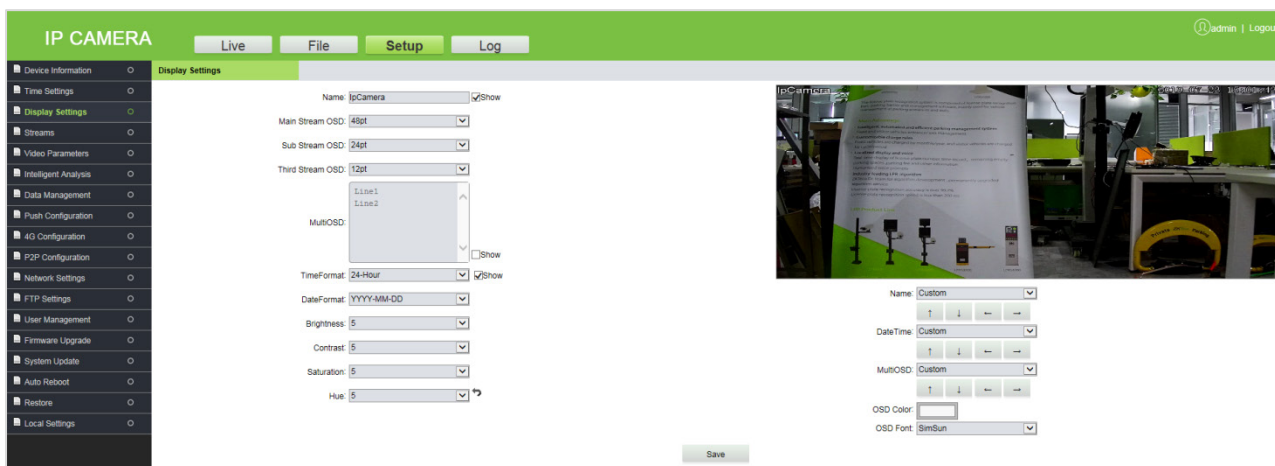
Synchronize with Local Computer: Click **PC**, the time setting is consistent with that on the local computer.

Set the Time Manually: Enter the date and time manually and click **Timing** to save the changes.

DST: Select the [Enable DST] check box and set the start and end time.

3.4.3 Display Settings

The text, date, time and color of video displayed in preview video can be set in the display setting interface. Click [Save] to examine the effect of the settings on the right, depending on the actual situation.



Name: You can change the name of the specific channel to a maximum of 31 bytes in length. Upon selecting the 'Show' check box, it will appear in the preview screen.

Main/Sub Stream OSD: Select the OSD text size of the mainstream/sub-stream preview window, and the range value is 12-96pt.

Multi OSD: Enter other text to be displayed, select [Show] check box so that it can be displayed in the preview window.

Time Format: Choose 24 hours or 12 hours. Select [Show] check box to display appropriate data on the screen.

Date Format: You can choose **YYYY-MM-DD**, **MM-DD-YYYY** or **DD-MM-YYYY**.

Brightness: It indicates the lighting intensity at a unit projecting area. Increasing the brightness helps in improving the general image effect; however, high brightness may cause insufficient transparency of images. The setting range is 1 to 10.

Contrast: It is the key factor to the visual effect. In general, the higher the contrast, the clearer the images, and the more distinct the color. A lower contrast makes the entire image dim. The setting range is 1 to 10.

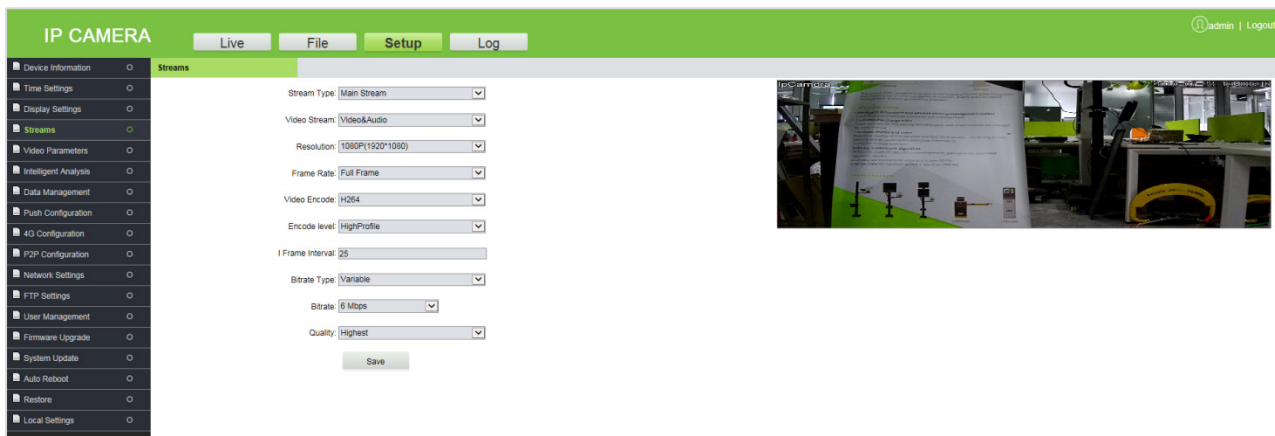
Saturation: It indicates the brilliance of color and is also called the purity of a color. The higher content of coloration, the higher the saturation. The higher content of discoloration, the lower the saturation. The setting range is 1 to 10.

Hue: The color is presented by brightness and hue. Hue indicates the color properties excluding the brightness and shows the tone of colors. The setting range is 1 to 10.

In the lower right corner of the interface, the display position of title text, date and time can be adjusted, and the color and font of text can also be set.

3.4.4 Streams

It is used to view or set video code. It includes parameters of Main Stream and Sub Stream. You can set this feature based on actual conditions and click [Save].

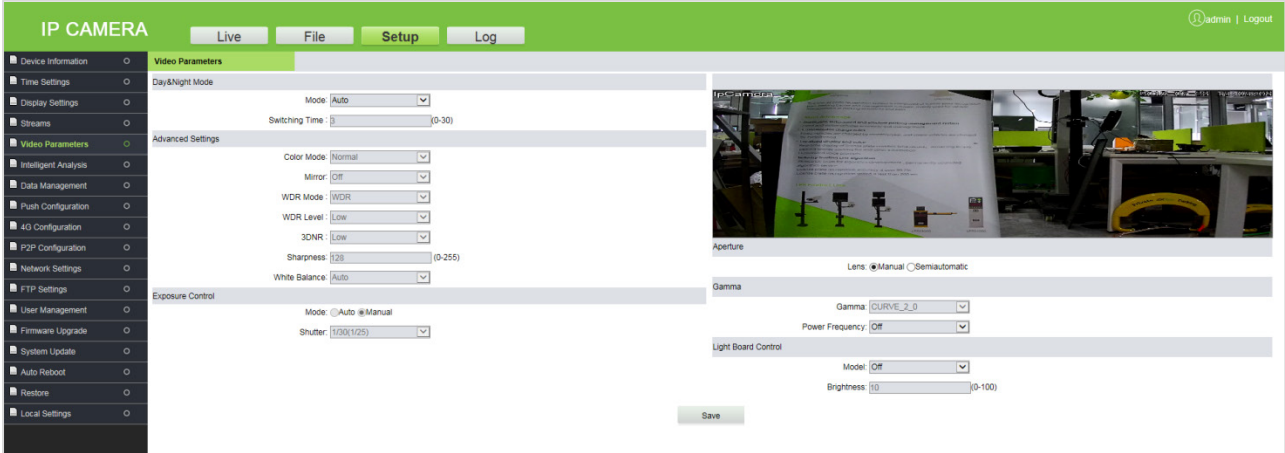


- **Stream Type:** "Mainstream", "Sub Stream" and "Third Stream" are available. The mainstream is generally larger, with high definition and large bandwidth. The sub stream and third stream reduce the image format under the image environment of the main stream, and the definition is lower than that of the main stream, occupying less bandwidth.
- **Video Stream:** Mainstream has two options: "Video & Audio" and "Video". Sub stream supports only Video & Audio.

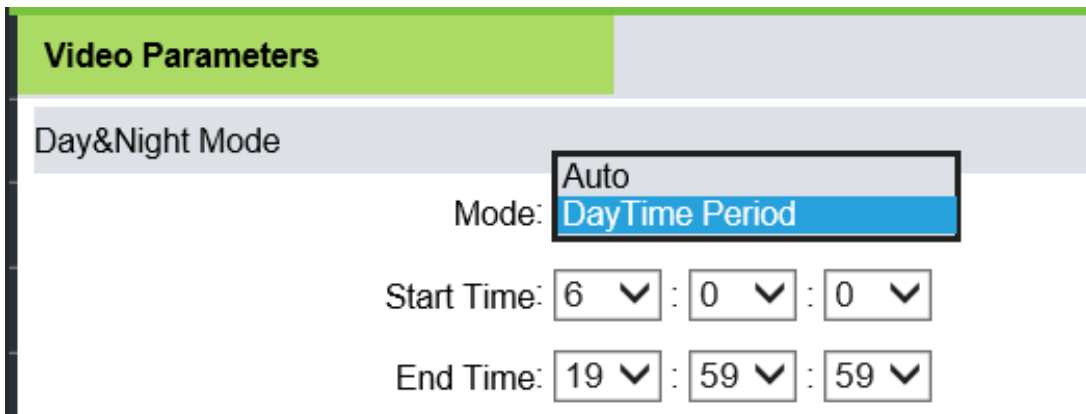
- **Resolution:** You can choose 1080P (1920 x 1080), 720P (1280 x 720), D1 (720 x 576), VGA (640 x 480) and CIF (352 x 288). (Note: The default resolution shall prevail.)
 - **Frame Rate (F/S):** It indicates the number of compressed frames transmitted in every second by the network module. The more frames, the more coherent the images, and also it lowers the performance of the CPU in processing other events. The setting range is 1 to 25 or full. The default is full.
 - **Video Encode:** It indicates the coding format. You can choose H264 or H265.
 - **Encode Level:** It indicates the level of video coding. You can choose the Baseline, Main Profile, or High Profile.
 - **I Frame Interval:** An I frame(Intraframe) is a complete key frame used in compressed code between frames, where the interval variation between I frames will also modify the duration of the GOP (Group of Pictures); i.e., the number of frames between two I frames may affect the speed of the GOP reading. If the interval between I frames is too large, B and P frames will be used automatically to reduce the consumption of total bandwidth. In this case, the image quality will be reduced. Therefore, it is recommended to avoid large interval between I frames. The setting range is 2 to 255.
 - **Bitrate Type:** Choose Variable or Constant.
 - **Variable:** It is used when the image quality is constant, and the network bandwidth is sufficient.
 - **Constant:** Images are transmitted over a fixed bandwidth.
 - **Bitrate:** It shows the maximum limit of the bit rate, which can be individually entered. The further the bit rate, the further the energy use, and the further the picture quality. The configuration variety is 16 Kbps ~16Mbps. (Note: the standard bitrate shall prevail).
- ✎ **Note:** The coding level is related to the coding algorithm. The coding levels comprise to Baseline, Main Profile, and High Profile when the coding algorithm is H264. The coding level cannot be edited when the coding algorithm is H265.
- **Quality:** You can choose the Highest, Higher, High, Bad, Worse, or Worst. When the image quality is set high, the images are clearer with better effect, and the higher the occupation of resources.

3.4.5 Video Parameters

Set video parameters (do not randomly change the default parameters), including Day & Night mode, Advanced Settings, Exposure Control, Aperture, Gamma and Light Board Control.



- **Day & Night Mode:** The day & night mode of the camera can be set using any one of the mode Auto, or DayTime Period. The default mode is Auto.
 - **Auto:** In this format, the day & evening format can be tuned automatically based on the camera's visibility and color of video images. Meanwhile, the camera fill light's (i.e., photographic lighting of the camera) brightness can be adapted or switched off automatically depending on the environment's requirements.
 - **DayTime Period:** In this format, set the parameters with the same number of intervals for the start and end period of the daytime so that the fill light will automatically be switched on during night-time. For example, if the start time is set as 06:00:00 and the end time is set as 18:00:00, then the camera's fill light does not work between 06:00:00 and 18:00:00, and the camera's fill light stays on from 18:00:01 to 05:59:59 of the next day.



- **Advanced Settings:** It is used to set Color, Mirror, WDR (Wide Dynamic Range Imaging) mode and its level, 3DNA (3-Dimensional Noise Reduction), Sharpness, and WB (White Balance) of the camera. It is unmodifiable by default.
 - **Color Mode:** It is Normal by default.
 - **Mirror:** Mirror mode is off by default.
 - **WDR Mode:** It is WDR by default.
 - **WDR Level:** It is Low by default.
 - **3DNR:** It is Low by default.
 - **Sharpness:** It is also referred to as clarity and is an indicator of uniform image clarity and edge sharpness. If the sharpness is increased, the detailed contrast on the image plane is higher, and the images are clearer. However, if the sharpness is too high, black lines can be lined with white lines, and the images look shaded and glaring. The default value is 128.
 - **White Balance:** It is used to set the white balance where colors are adapted to create the image more natural. It is Auto by default.
- **Exposure Control:** The default mode cannot be modified.
- **Shutter:** The faster the shutter speed, the higher the low brightness sensitivity, as well as the clarity that the sound would be. The automatic shutter speed defaults to Higher.
- **Aperture:** You can choose Manual or Semiautomatic.
- **Gamma:** Gamma defaults to CURVE_2_0 and cannot be modified.
- **Power Frequency:** "Off", "50HZ" and "60HZ", the default is Off.
- **Light Board Control:** Set the light board mode and brightness.
- **Mode:** There are three modes, "Off", "Manual" and "Auto", the default is Auto.
 - **Off:** That is, the light board is not controllable, the light board is normally closed.
 - **Manual:** The brightness of the light board can be adjusted by manually changing the parameters, where the adjustable range is 1-100. The more the parameter value is, the brighter the fill light will be, and the darker the image will become.
 - **Auto:** The camera dynamically adjusts the light-board brightness by obtaining the current image brightness, exposure and gain, to achieve the optimal image accuracy with the minimum power.

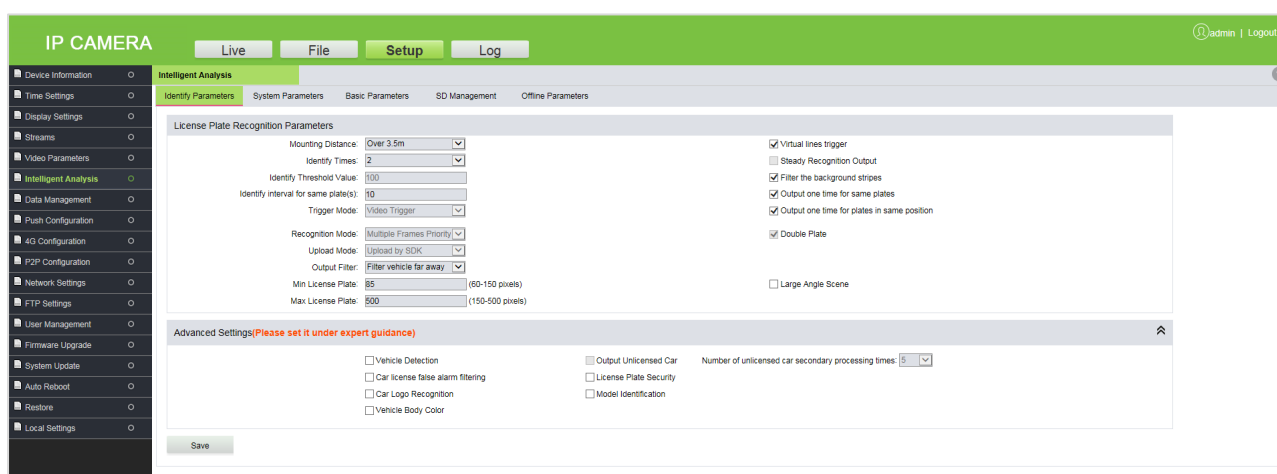
- **Brightness:** When the light board mode is Manual, the brightness of the light board can be controlled, and the adjustable range value is 0-100.

Click [Save], after setting the parameters.

3.4.6 Intelligent Analysis

This camera can identify vehicle features, such as body color, car logo and vehicle type. Recognizable license plate types are ordinary blue plate, black plate, yellow plate and double yellow plate.

1. Identify Parameters



- **License Plate Recognition Parameters**

Mounting Distance: It indicates the identification distance of a license plate. The default value is 3.5m-4.5m.

Identify Times: It indicates the number of verifications that is processed internally before displaying the actual output where the default verification options are 2, 3, or 4.

Identify Threshold Value: The default value is 100.

Identify interval for same plate(s): It indicates the difference between time periods to re-identify the same license plate which must be entered manually. The unit is “second”.

Trigger Mode: The default is Video Trigger.

Recognition Mode: The default is Multiple Frames Priority.

Upload Mode: The default is Upload by SDK.

Output Filter: The default is Filter vehicle far away.

Min/Max License Plate: The default is 60~500 pixels.

Virtual line to trigger recognition: When a vehicle enters the virtual line, the recognized area of the license plate is displayed. You can use this function by selecting this feature.

Steady Recognition Output: When selecting this option, the camera begins verifying the license plate from the identification zone entry, where distinct pictures are captured for the same license plate but provides a single clear image. Select the check box to use this feature. (Note: This function cannot be used at the same time when the virtual line to trigger recognition is selected. When checked, the virtual line in the live preview screen will no longer be displayed.)

Filter the background stripes: Automatically filters stripes or pillars in the background. Select the check box to use this feature.

Output one time for same plates: It ensures that the identification result for the same license plate are displayed only once. Select the check box to use this feature.

Output one time for plates in same position: It ensures that the identification results for license plates in the same position (still) are displayed only once. Select the check box to use this feature.

Double Plate: Whether to support double plate recognition. Select the check box to use this feature.

Large Angle Scene: It is suitable for wide angle range of access. Select the check box to use this feature.

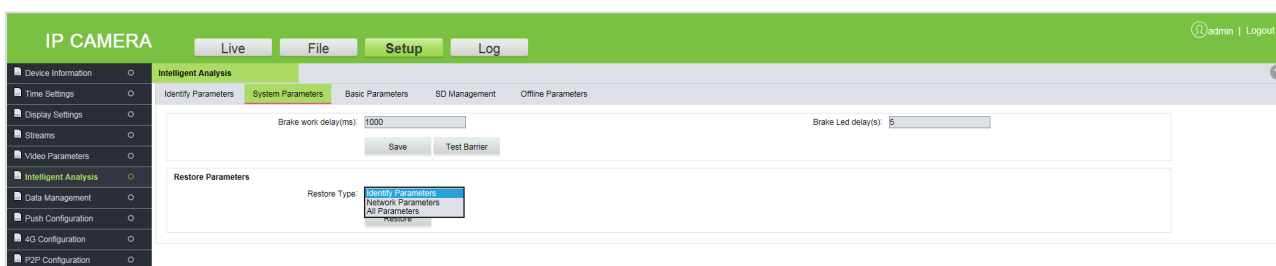
- **Advanced Settings (Please set it under expert guidance)**

This setting can carry out advanced recognition of vehicle features, including vehicle detection, car license false alarm filtering, car logo recognition, body color, output unlicensed car, number of unlicensed car secondary processing times and license plate security and model identification. You can enable these features as recommended.

Car license false alarm filtering: It is set to identify non-license plate data in the lens. Select the check box to use this feature.

Note: Please set it under expert guidance.

2. System Parameters



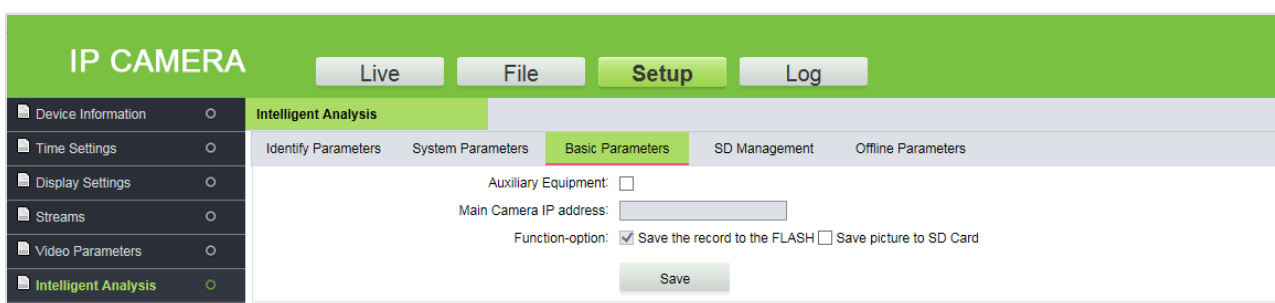
Barrier Open Duration (ms): It indicates the output duration of brake signals, which needs to be entered manually in the unit of millisecond (ms).

LED Indication Duration(s): It is the duration of the Red or Green signal.

Manual Verification: After passing the identification, manual confirmation is required before opening the barrier.

Restore Parameters: Click [Restore] to restore identify parameters, network parameters and all parameters (including all data records such as admission records, fixed vehicles, white list and charging rules, it should be carefully handled).

3. Basic Parameters

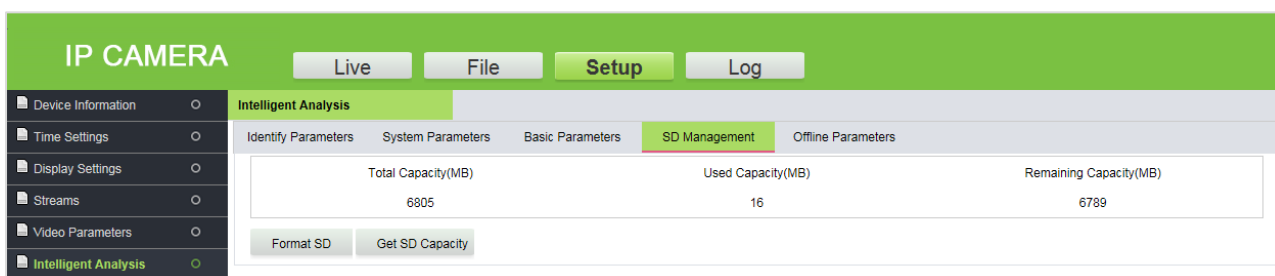


Auxiliary Equipment: The master-auxiliary mode recognizes the license plate and sends the recognition result to the main camera. Please select the Auxiliary Equipment check box if you want to use this feature.

Main Camera IP Address: The IP address of the Main Camera.

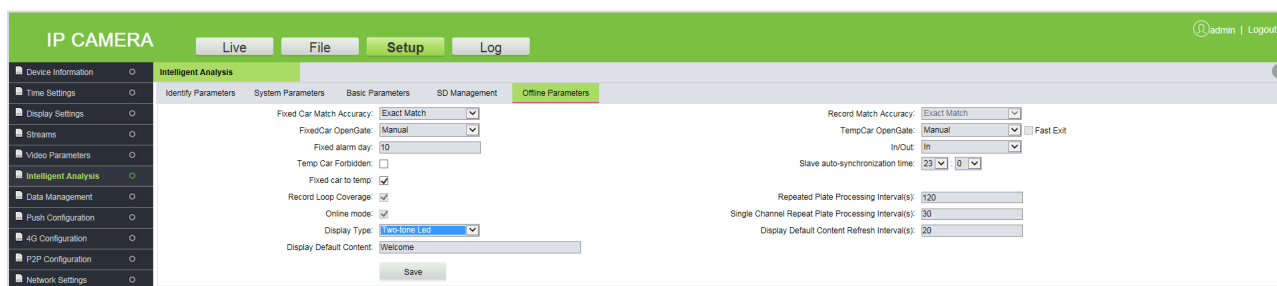
Function-option: Choose whether to save picture to SD card (this feature can be checked only when using the SD card).

4. SD Management



When the camera uses the SD card, this page shows the total capacity, used capacity and remaining capacity of the SD card. You can format and re-use the SD card.

5. Offline Parameters



Registered Car Match Accuracy: It is a feature through which the camera recognizes the registered vehicle's license plate accurately. The accuracy of recognition can be selected accordingly to the options provided, where the default option is Exact Match, and the other options are Allow 1 Letter Different, Allow 2 Letter Different and Allow 3 Letter Different. For example, if the option Allow 1 Letter Different is selected, and if the recognized license plate has only one letter different from the registered license plate, the camera considers it to be the same vehicle.

Record Match Accuracy: It is the matching accuracy of the license plate recognition. The default is Exact Match.

Registered Vehicle Barrier Access: You can choose "Manual" or "Auto" in order to open the barrier gate for the registered vehicle.

Temporary Vehicle Barrier Access: You can choose "Manual" or "Auto" in order to open the barrier gate for the temporary vehicle., you can even select the "Fast Exit" when the temporary vehicle charges 0 which automatically opens the barrier gate).

Fixed alarm day: Whenever the vehicle enters and exits, this option broadcasts the remaining valid days of a registered vehicle through an automated voice.

In/Out: Can be set as an exit or entrance.

Temp Car Forbidden: When selected, temporary vehicles are not allowed to enter.

Secondary Camera Auto-Synchronization Time: It is the time duration taken by the main camera to synchronize with the secondary camera.

Registered Vehicle to Temporary: When the validity of a registered vehicle is expired, this option replaces the same registered vehicle into a temporary vehicle in the database.

Record Loop Coverage: It allows the continuity of the previous access records into the new record once it becomes full.

Repeated Plate Processing Interval (s): It is the processing time interval for the same license plate.

Online mode: The device handles the charging and opening of the gate in offline mode if the interface does not display the real-time monitor screen. It is a default option and cannot be modified.

Single Channel Repeat Plate Processing Interval (s): In the single-channel mode, it is the process time interval taken to recognize the license plate by the entrance device and the exit device.

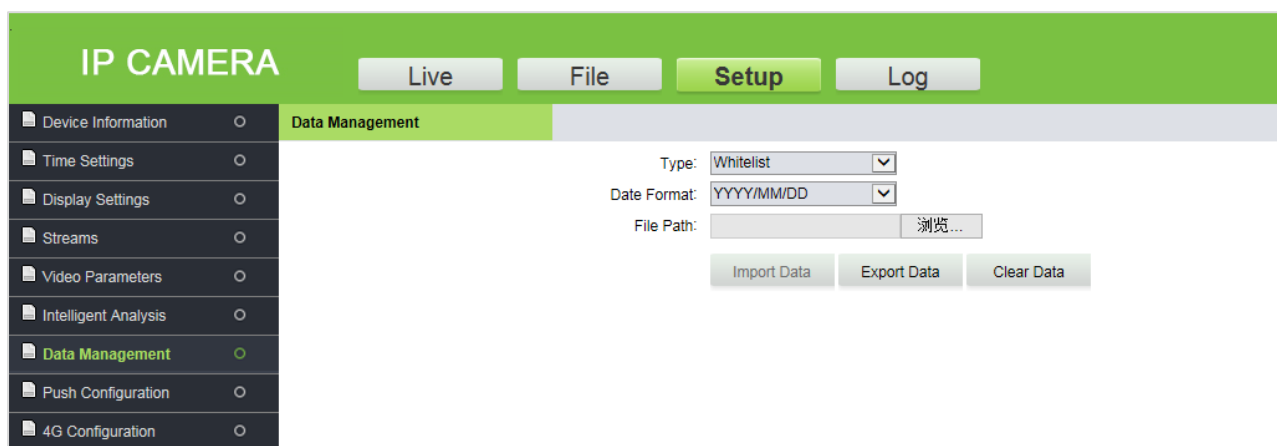
Display Type: The default is Two-tone LED.

Display Default Content Refresh Interval (s): The time interval between software and firmware to update the content in the display.

Display Default Content: It is the default content displayed on the display screen, which is not more than 31 bytes in length.

3.4.7 Data Management

It is used for the management of specific data such as whitelist, blacklist and fixed car. You can import, export and clear the data.



3.4.8 Push Configuration

Push protocol allows to communicate with various software platforms. In order to use this feature, the corresponding parameters need to be set here.

Push Enable: Select the check box to enable this feature.

Server Address: Enter the server address of the push configuration.

Alternate Server Address: When the push configuration main server address is invalid, the system automatically considers the alternative server address.

Server HTTP Port: Enter the corresponding port (the default port number is 8080).

SSL: That is the encryption mode, if checked the server address will be encrypted. It is available when the server supports the feature.

SSL Authentication Method: The default is Anonymous.

Server HTTPS Port: Enter the corresponding port (the default port number is 443).

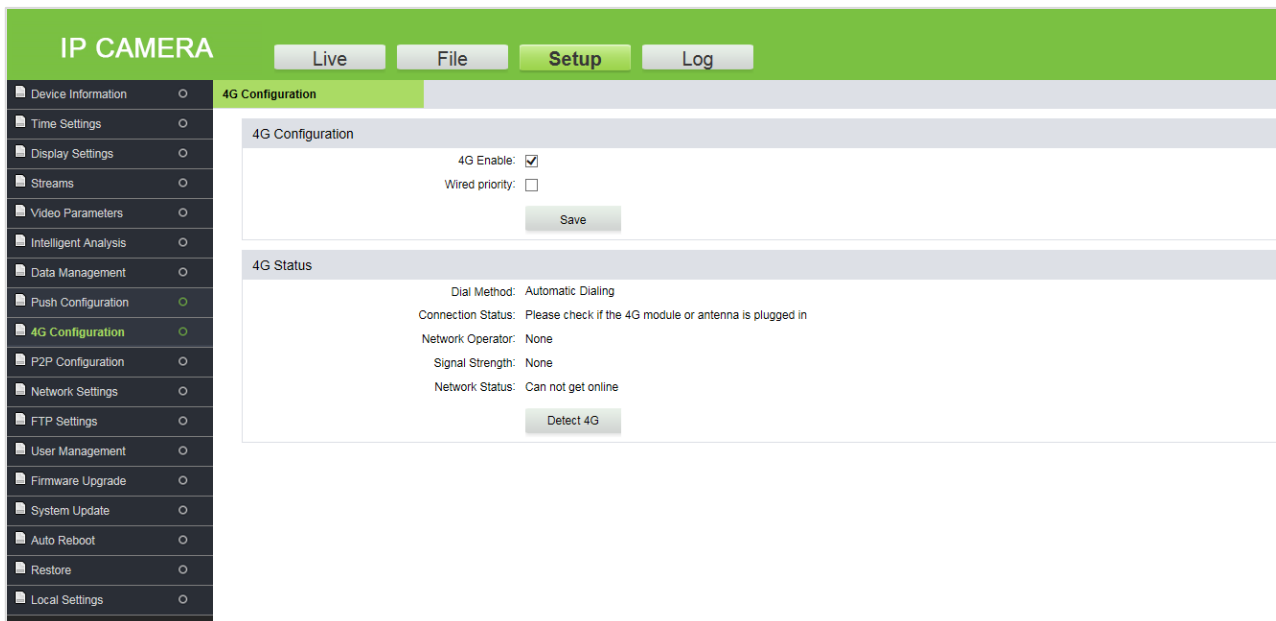
Timeout Time(s): The default value is 5 seconds.

Function-option: You can choose to send license plate or send license plate picture.

Click [Save], after setting the parameters.

3.4.9 4G Configuration

When the camera uses 4G module to communicate with PC software, the corresponding parameters should be set.



4G Enable: Select the check box to use this feature.

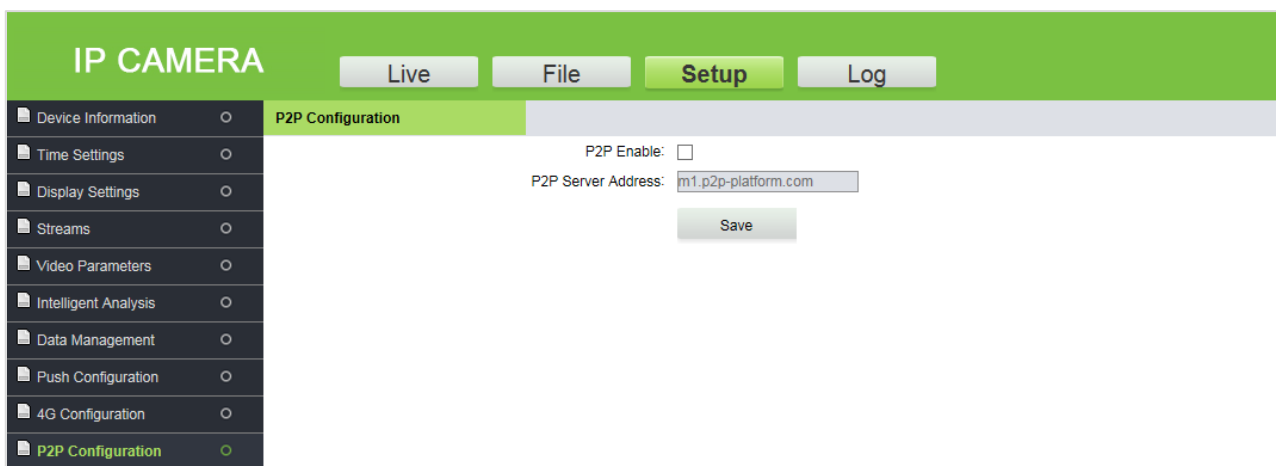
Wired priority: Select the check box to provide wired network.

4G Status: The 4G status displays the information, about the dial method, connection status, network operator, signal strength and network status. When the connection state is not stable, click [Detect 4G] to detect the current network.

Click [Save] after setting the parameters.

3.4.10 P2P Configuration

When the camera uses 4G module to communicate with PC software, the corresponding parameters should be set.



P2P Enable: Select the check box to use this feature.

P2P Server Address: Enter the P2P server address.

Click [Save] after setting the parameters.

3.4.11 Network Settings

To view or set camera network parameters, including LAN parameters, PPPOE parameters, RTSP parameters, etc.

LAN: Set the related parameters of a Local Area Network, including IP Address, Subnet Mask, Gateway, DNS and MAC according to the actual situation, click [Save].

DHCP: Dynamic Host Configuration Protocol, is one of the Open Transport protocols in the TCP/IP protocol family. It is used to allocate dynamic IP addresses for network clients. After this feature is selected, the IP address, subnet mask and gateway of the camera are automatically configured by the host. Otherwise, you need to set network parameters and ensure that the IP address and the gateway address are in the same network segment.

SNMP: To monitor devices connected to the network for any conditions that cause administrative concern. Select the check box to apply this feature.

Manager IP: Enter the corresponding SNMP host address.

Send Count: The total number of times the monitoring system sends the tracking messages to the camera at each interval.

Send Interval: It is to set the interval time (unit: seconds) for the monitoring system to send tracking messages to the camera. The time range is 2-250, and the value can be adjusted according to customer requirements.

HTTP Port: Enter the corresponding port (the default port number is 80).

HTTPS Port: Enter the corresponding port (the default port number is 443).

RTSP Port: Domain access login needs to be mapped to the RTSP (the default port number is 554).

RTSP Validation: Select the RTSP validation mode, "HTTP-Base64" and "HTTP-Digest". When the RTSP validation mode is enabled, the username and password need to be verified when activating the real-time RTSP stream.

RTMP Port: Domain access login needs to be mapped to the RTMP (the default port number is 1935).

UPNP: It is used to set the automatic mapping of the port. Select the check box to apply this feature.

Enable PPPoE: Select the check box to use this feature

- **Username:** Enter the PPPoE username.
- **Password:** Enter the PPPoE password.
- **Confirm Pwd:** Re-enter the PPPoE password.
- **PPPoE IP:** Enter the dynamic address of the device.

Click [Save], after setting the parameters.

3.4.12 FTP Settings

FTP allows to transfer files and images where you can configure this parameter to transfer the license plate recognition images to a specified server.

The screenshot shows the 'IP CAMERA' web interface. At the top, there are buttons for 'Live', 'File', 'Setup', and 'Log'. A sidebar on the left lists various settings categories, with 'FTP Settings' currently selected. The main content area is titled 'FTP Settings' and contains the following configuration options:

- Enable:** A checkbox that is currently unchecked.
- Passive Mode:** A checkbox that is checked.
- Server Address:** A text input field containing '192.168.1.100'.
- Port:** A text input field containing '21'.
- Username:** A text input field containing 'admin'.
- Password:** A text input field that is empty.
- Path:** A text input field containing 'Picture'.

At the bottom of the form is a 'Save' button.

Enable: Select the check box to use this feature.

Passive Mode: It is used for data transfer security. It is a default option when FTP is not selected.

Server Address: Enter the FTP server address.

Port: Enter the corresponding port.

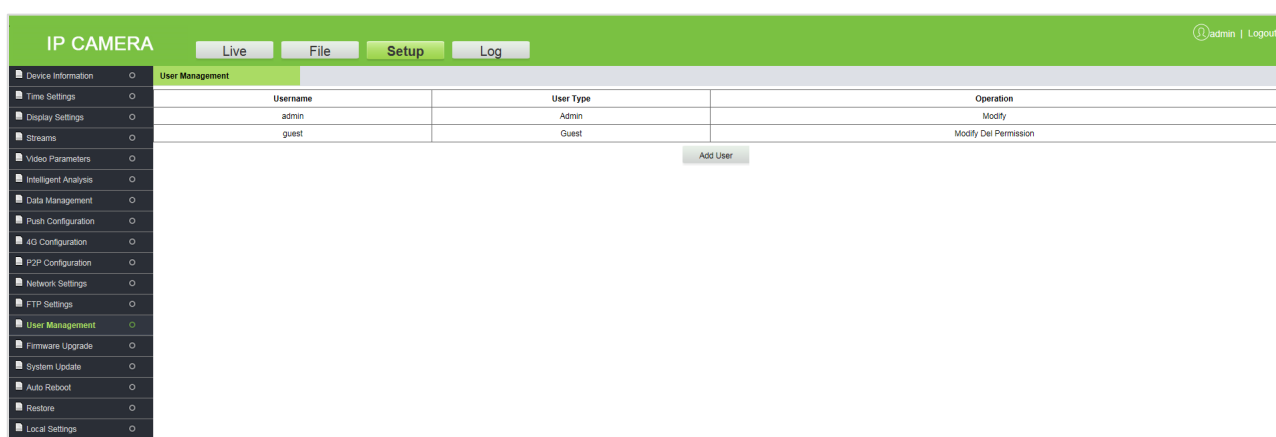
Username/Password: Enter the FTP username and password.

Path: Provide the storage path/ location to transfer/save the image of the captured license plate.

Click [Save], after setting parameters

3.4.13 User Management

It is used by the administrator to add or manage operators and normal users, and to modify usernames, passwords and permissions.



Modify: Modification preferences vary with different stages of users, where passwords can be modified only for administrators, and user type can be modified for normal users; whereas Username, password and user type can be modified for a new user by the administrator. New users can be set as normal user or operator. Different permissions can be assigned in "Permission".

Del: New users can be deleted.

Permission: Permissions can be assigned to normal users.

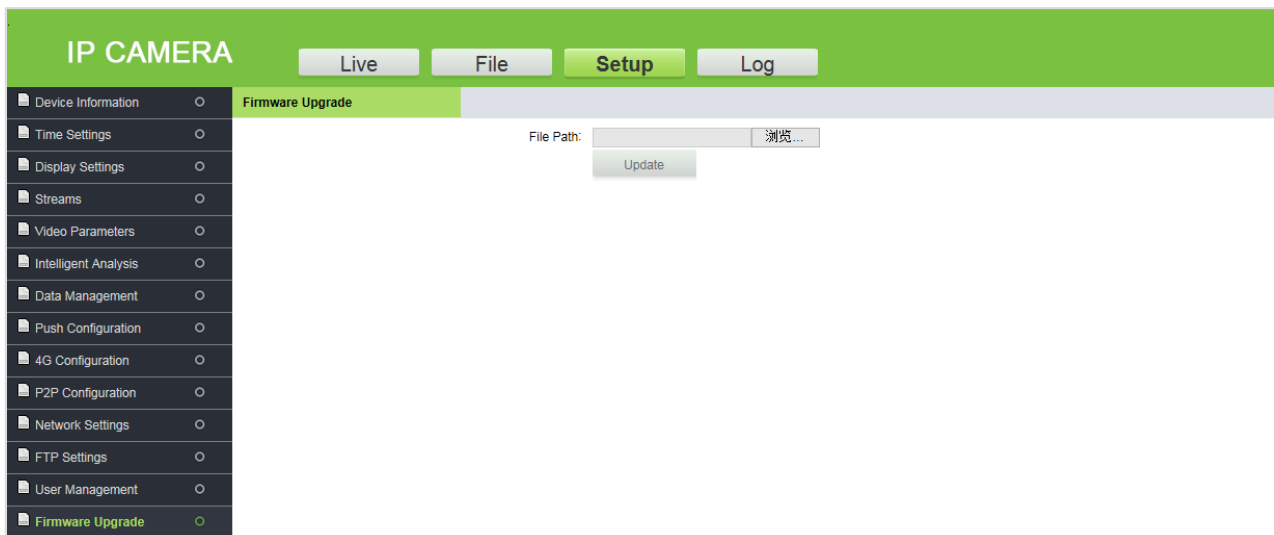
Add User: New users can be added on demand.

Note:

- A normal user can preview the videos only after login and cannot view or modify parameters.
- Username, Password may consist of a-z, 0-9, underscores, and a single dot (.), 1 to 15 characters; capitalization matters.
- When the username or password is modified, it is required to log in again in order to update the change.

3.4.14 Firmware Upgrade

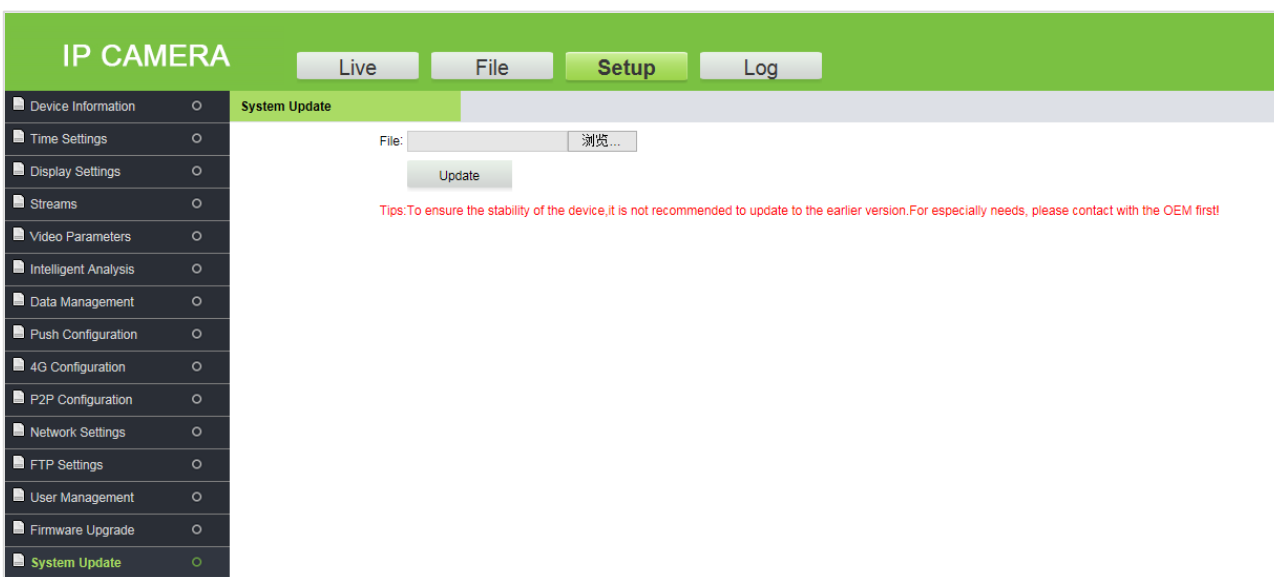
To upgrade the camera firmware, click and select the firmware upgrade file in the format of .tgz and click . After the upgrade, restart the camera.



Note: Contact corresponding technical personnel for upgrade package or for remote upgrade support.

3.4.15 System Update

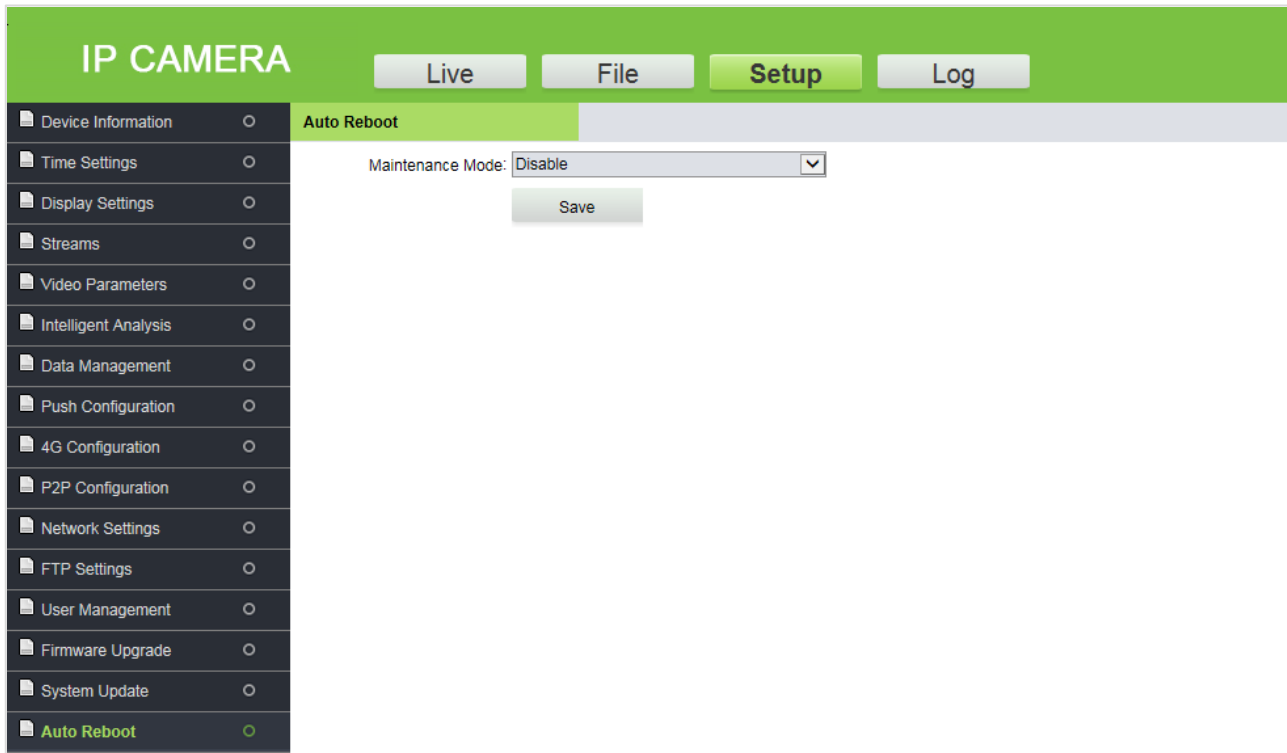
It is used for network module program update. Click and select update file and click . After the update, restart the camera.



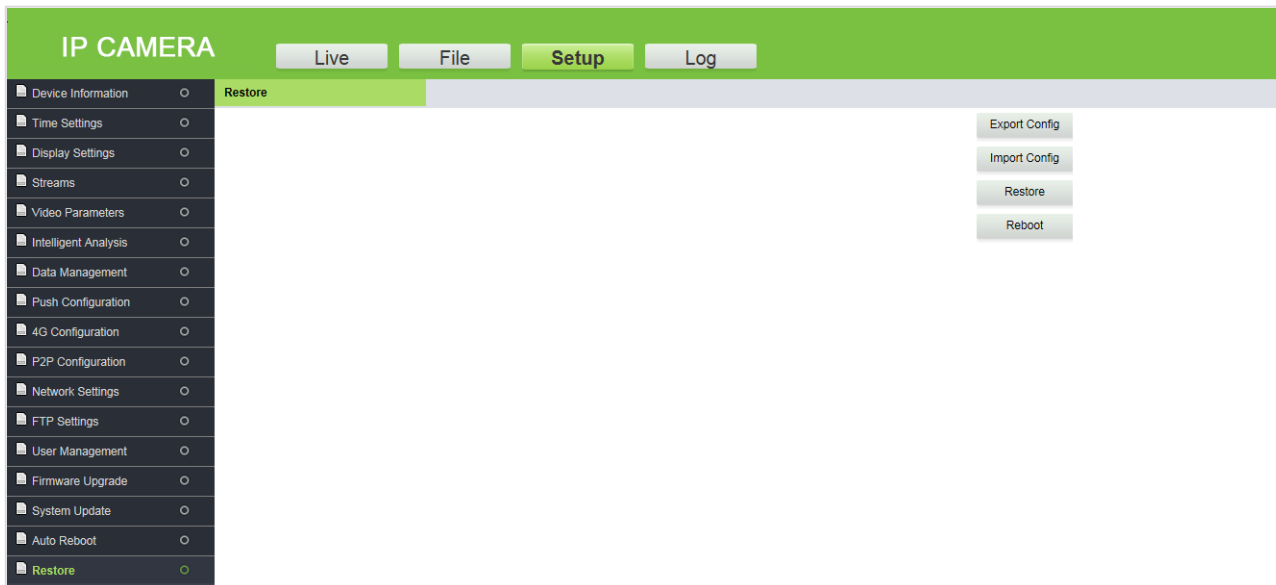
⚠ Note: Avoid performing the System Update feature in the absence of qualified professionals. Ensure that the device is ON while performing this operation.

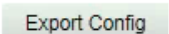
3.4.16 Auto Reboot

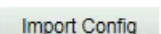
Automatic maintenance has five modes: "Disable", "Daily", "Weekly", "Single" and "Monthly". Select any one mode, and the device will restart in accordance with the selected mode.

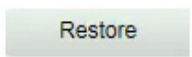


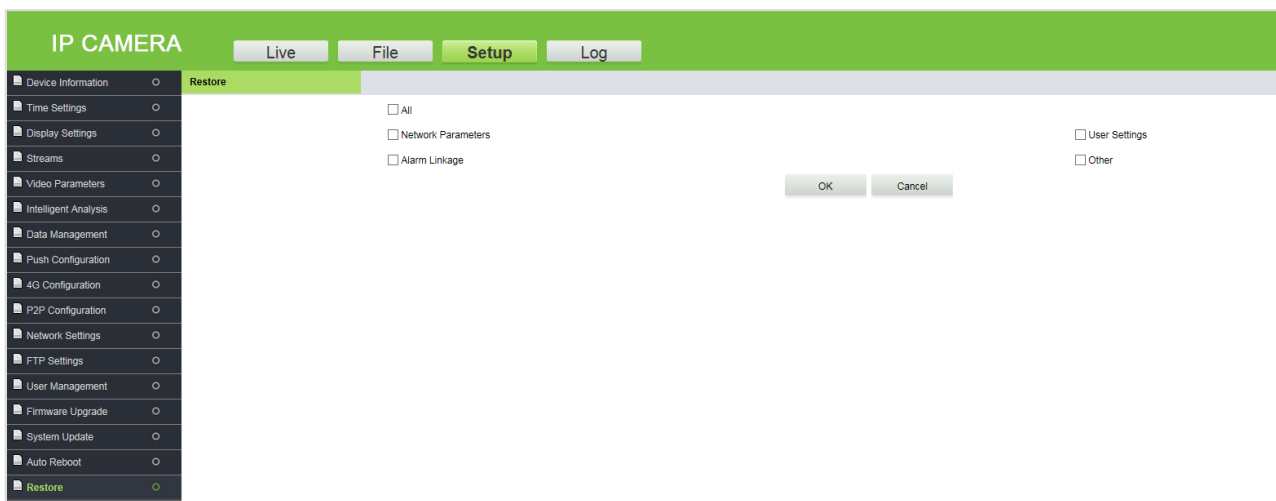
3.4.17 Restore



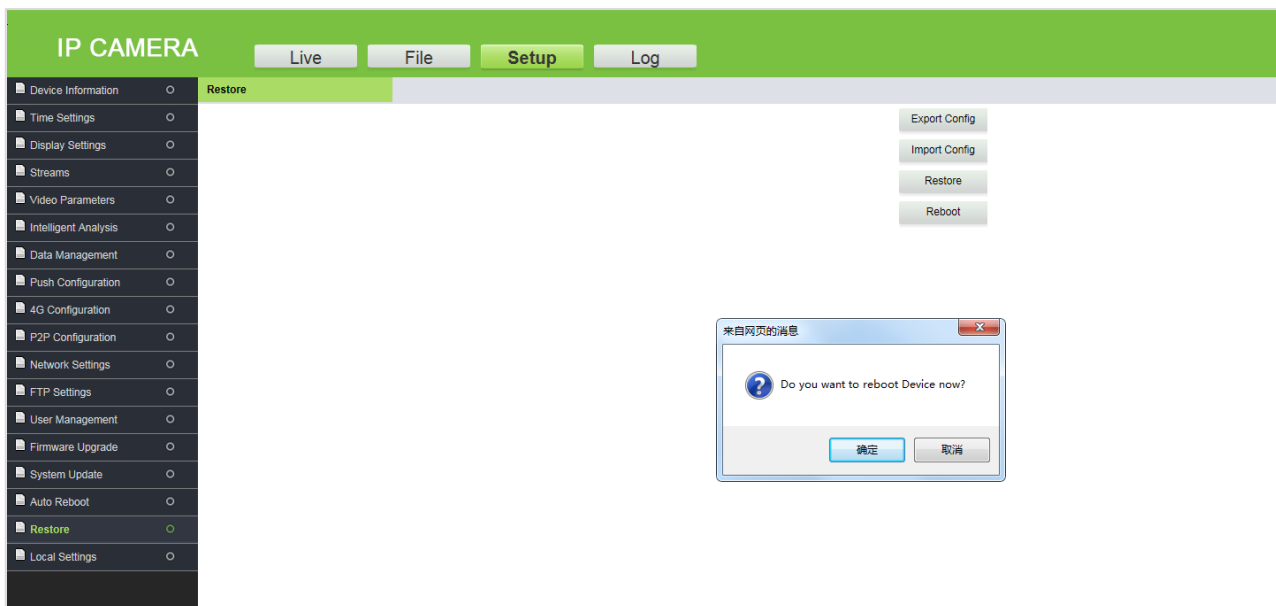
Export Config: Click  first, set the file name and save directory in the dialog box, and then click "Directly Open " or "Download".

Import Config: Click , select the file to be imported, and then click "Open".

Restore: Restore camera parameter settings. With this function, all settings of the device can be restored to factory default values. Click , tick the parameters to be restored, and click "OK".

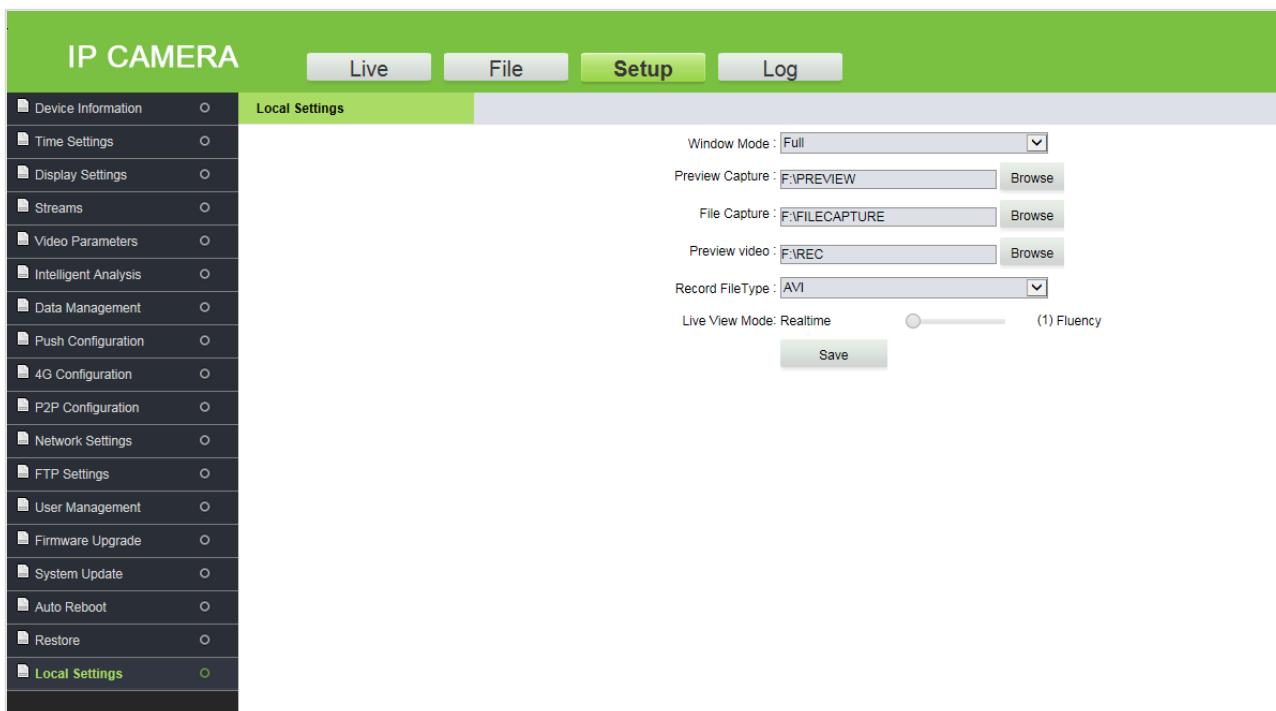


Reboot: To restart the system.



3.4.18 Local Settings

It is used to view or set the local configuration according to the actual situation. Click [Save], after setting the parameters.



Window Mode: Set the display ratio of preview window based on the four modes: "Full", "4:3", "16:9" and "original".

Preview Capture/Video: Set the storage path of capture/video in the camera.

File Capture: Set the storage path of snapshots in file management.

Record File Type: "I8" and "AVI" are available.

Live View Mode: There are two options "Realtime" and "Fluency" (the default is Realtime mode, where if the fluency mode is selected, the video will be slightly delayed).

Click [Save], After setting parameters.

3.5 Log

It is used to search the recording history. You can filter the search list with options such as search type, start time, end time, and the number of log results per page. After selecting the possibilities, click [Search] to view the outcomes of the log.

Index	Log Time	Main Type	Log Theme	Ch	User Address
1	2019-07-23 15:00:16	Setup	Set SENSOR	1	192.168.131.174
2	2019-07-23 15:00:16	Setup	Set Format Parameters	1	192.168.131.174
3	2019-07-23 15:00:16	Setup	Set SENSOR	1	192.168.131.174
4	2019-07-23 14:41:57	Operation	Remote Login		192.168.131.174
5	2019-07-23 14:41:57	Operation	Remote Login		192.168.131.174
6	2019-07-23 14:41:52	Operation	Remote Login		192.168.131.174
7	2019-07-23 14:41:52	Operation	Remote Login		192.168.131.174
8	2019-07-23 14:40:49	Operation	Remote Reboot	1	192.168.131.174
9	2019-07-23 13:56:43	Operation	Remote Login		192.168.131.174
10	2019-07-23 13:56:43	Operation	Remote Login		192.168.131.174
11	2019-07-23 13:56:37	Operation	Remote Login		192.168.131.174
12	2019-07-23 13:56:37	Operation	Remote Login		192.168.131.174
13	2019-07-23 13:55:33	Operation	Remote Reboot	1	192.168.131.174
14	2019-07-23 13:50:05	Setup	Set NTP Parameters	1	192.168.131.174
15	2019-07-23 13:50:04	Setup	Set Device Time	1	192.168.131.174
16	2019-07-23 13:50:04	Setup	Set NTP Parameters	1	192.168.131.174
17	2019-07-23 13:50:03	Setup	Set Device Time	1	192.168.131.174
18	2019-07-23 13:50:03	Setup	Set NTP Parameters	1	192.168.131.174
19	2019-07-23 13:50:02	Setup	Set Device Time	1	192.168.131.174
20	2019-07-23 05:50:28	Setup	Set NTP Parameters	1	192.168.131.174

FAQs

Q: After entering the IP address of the Login Camera in the Internet Explorer, the Login interface is not getting connected.

A: To install the plugin and turn on the ActiveX control permissions, click "Internet options" -- "Security" -- "Custom level" -- "Enable all ActiveX controls and plugins" in the IE toolbar.

Q: The license plate recognition equipment has been installed, but it does not recognize the vehicle entering the recognition area, nor broadcast voice.

A: Check the type of display screen chosen. Please check the serial port configuration information which is 115200 if it is still unresolved after replacement, then please the RS485 connection and reconnect it to try again.

Q: How to set the name of the camera, such as entry, exit, etc.?

A: Login the WEB of the camera, set the name in "Setup" -- "Display Settings" -- "Name" or "Multi OSD" and click "Save".

Q: Why does the image suddenly appear color cast?

A: Please check whether the camera video parameters, encoding settings and other relevant parameters have been modified. If you are not sure about which parameters should be modified, you can restore the factory settings.

Q: How to view the firmware version of the camera?

A: Log in the camera with the browser, click [Setup] -- [Intelligent Analysis], click the question mark in the upper right corner of the interface to query the version information.

ZKTeco Industrial Park, No. 26, 188 Industrial Road,

Tangxia Town, Dongguan, China.

Phone : +86 769 - 82109991

Fax : +86 755 - 89602394

www.zkteco.com

