User Manual

LPRC300

Date: May 2021

Doc Version: 1.0

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.

For further details, please visit our Company's website www.zkteco.com.

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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 LPRC300.

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

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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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Table of Contents

SAFETY PRECAUTIONS **6**

1 OVERVIEW **7**

1.1 FEATURES **7**
1.2 APPEARANCE **8**
1.3 PORT DEFINITION **8**

2 SYSTEM CONFIGURATION **9**

2.1 SOFTWARE ENVIRONMENT **9**
2.2 NETWORK AND IP ADDRESS CONFIGURATION **10**
2.2.1 DEFAULT PARAMETER SETTINGS 10
2.2.2 CONNECTIVITY TEST 10

3 CAMERA ACCESS OVER A WEB BROWSER **11**

3.1 LOGIN **11**
3.2 LIVE **14**
3.3 FILE **16**
3.4 SETUP **16**
3.4.1 DEVICE INFORMATION 17
3.4.2 TIME SETTINGS 17
3.4.3 DISPLAY SETTINGS 18
3.4.4 STREAMS 19
3.4.5 VIDEO PARAMETERS 20
3.4.6 LIST MANAGEMENT 22
3.4.7 INTELLIGENT ANALYSIS 23
3.4.8 DATA MANAGEMENT 27
3.4.9 COMM CONFIGURATION 27
3.4.10 P2P CONFIGURATION 28
3.4.11 ON-SCREEN VOICE 28
3.4.12 NETWORK SETTINGS 29
3.4.13 FTP SETTINGS 30
3.4.14 USER MANAGEMENT 31
3.4.15 FIRMWARE UPGRADE 32
3.4.16 SYSTEM UPDATE 32
3.4.17 AUTO REBOOT 33
3.4.18 RESTORE 34
3.4.19 LOCAL SETTINGS 35
3.5 LOG **35**

FAQ'S **37**

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Safety Precautions

Electrical safety

- Complete the grounding properly and set up surge protection before connecting an external cable to the device; otherwise, static electricity can damage the Mainboard.
- Make sure to use the standard voltage applicable in your country or region (the rated voltage of the device is 220V). Power mismatch may cause a short circuit or damage the device.

Operational safety

- Transportation and other issues may damage the device's hardware. Check if the device has significant 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 working.
- Do not keep the device in an unstable place. Handle the device with care. Do not place heavy objects on top of the device.
- Do not use rosin, alcohol, benzene, pesticides, and other volatile substances to clean the device, because they may damage the device enclosure. Clean the enclosure with a piece of soft cloth or a small amount of cleaning agent.
- Unauthorized persons are not allowed to open the unit. For any queries regarding the usage of the product, contact an authorized technician.

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1 Overview

The LPRC300 is a high-performance H.264/H.265-based license plate recognition camera. The prominent features of LPRC300 include:

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

It automatically identifies numbers, letters, and characters on the license plate and displays the identified results. It is mainly used in parking management.

1.1 Features

- The high-performance and stable architecture of dual-core processors, powerful computing capacity, embedded capture, analysis, and recognition features.
- Adopts modular structure design to ensure efficient working even in hard environments.
- Complete SDK can support secondary development docking, and the system integration is simple.
- The algorithm is stable, reliable, strong scene adaptability, and supports the recognition of ordinary blue, black, yellow, double-layer yellow, and multiple national license plates.
- 1/2.8" 3MP CMOS sensor, high-quality images, and resolution up to 2304*1296.
- License plate recognition accuracy reaches more than 99% in the daytime and more than 98% at night, with a wide range of recognition angles.

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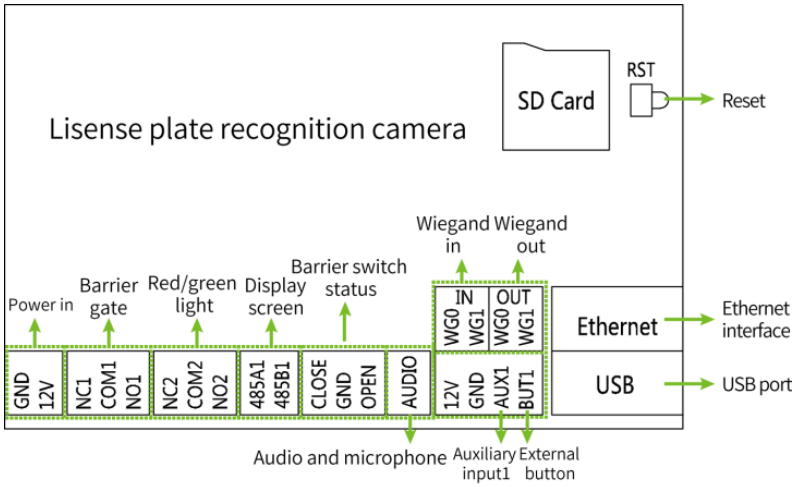
1.2 Appearance

1.3 Port Definition

Wiring Diagram



Port Description

Pin	Description
Reset	Restores the actual camera parameters
Ethernet	Standard Ethernet RJ45 socket, 10M/100M self-adaptive, and can be connected with various network devices, such as Switches, Routers, Hubs, etc.
USB	USB connection

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GND +12V	Connects to the Power adapter. The camera's power supply voltage is 12V/3A DC. Do not use other power sources to avoid damage to the camera.
NC1 COM1 NO1	Used for connecting the 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 the 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 (Only support the output of alphanumeric license plates)
12V GND AUX1 BUT1	Auxiliary input and external button connections

2 System Configuration

2.1 Software Environment

Connect the camera to a switch or a PC over the standard Ethernet port. The PC that displays the images and controls the camera must meet the following requirements:

- **CPU:** Intel Dual-core CPU A7@900MHz 0.5 TOPS
- **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 11.0 or later, and Firefox ESR.

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2.2 Network and IP Address Configuration

Set the IP address of the camera such that it remains in the same network segment as the PC.

Note: In the same LAN environment, the IP address cannot be the same. Otherwise, IP address conflict can lead to device malfunction.

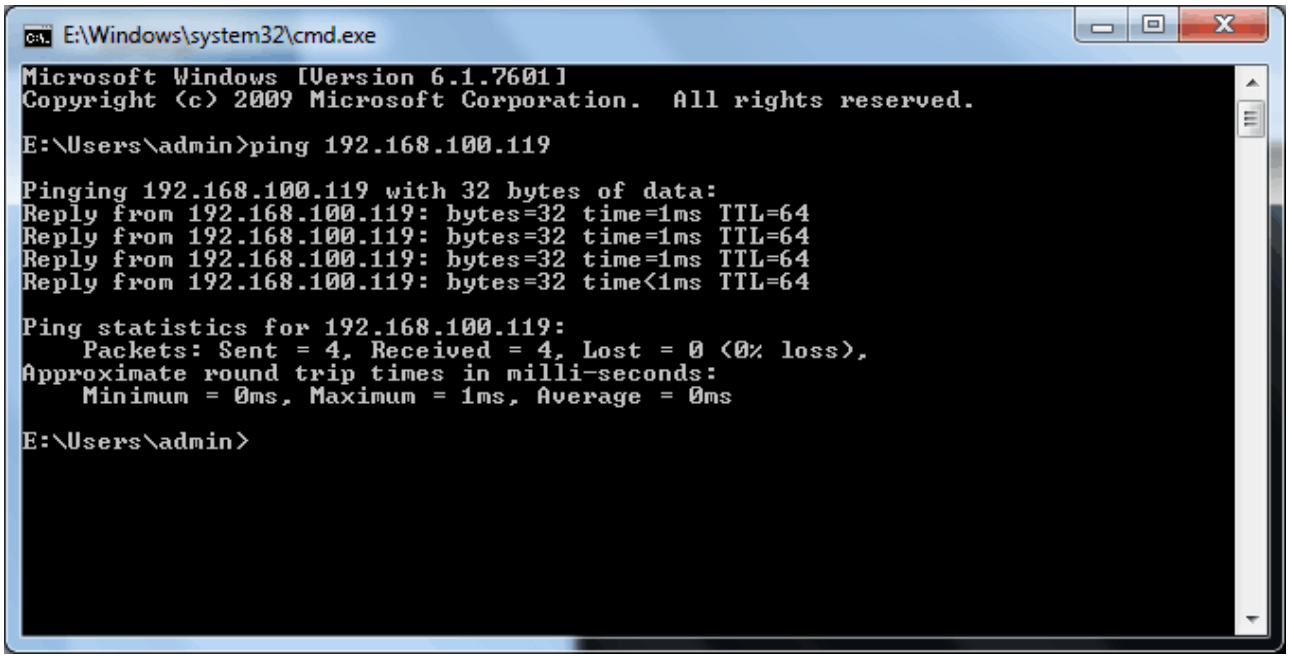
2.2.1 Default Parameter Settings

Before using the camera, set the IP address, Gateway address, and other information of the camera without any fault. The user 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 on the PC and type **cmd** in the search box once the camera IP Address is set. In the command prompt window, type ping and the camera IP Address (e.g., Ping 192.168.0.18) to test the connectivity between the PC and camera.



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

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

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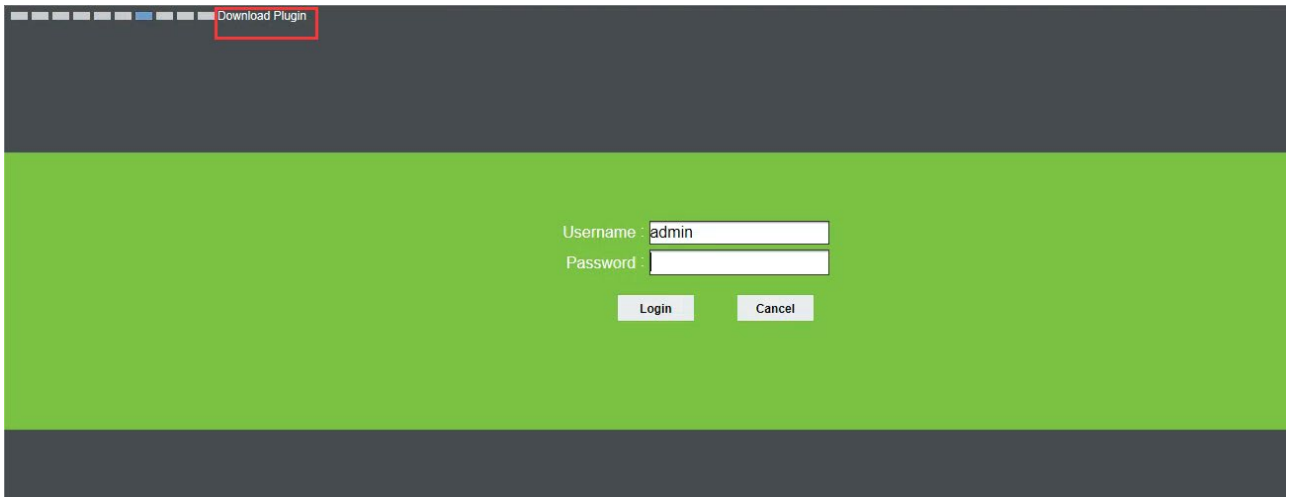
- Check whether the ping command is disabled.

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 the Username (default: admin) and password (default: 123456), as displayed in the below figure.



2. **Installation of Control Plugin upon initial login**

   If the user is accessing the device for the first time, the user needs to install the control plugin. 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 download path and click **[Download].** After downloading, access WebVideoActiveXPlus.exe to install it. A security prompt may be displayed during the installation. Click **[Run]** to continue the installation.

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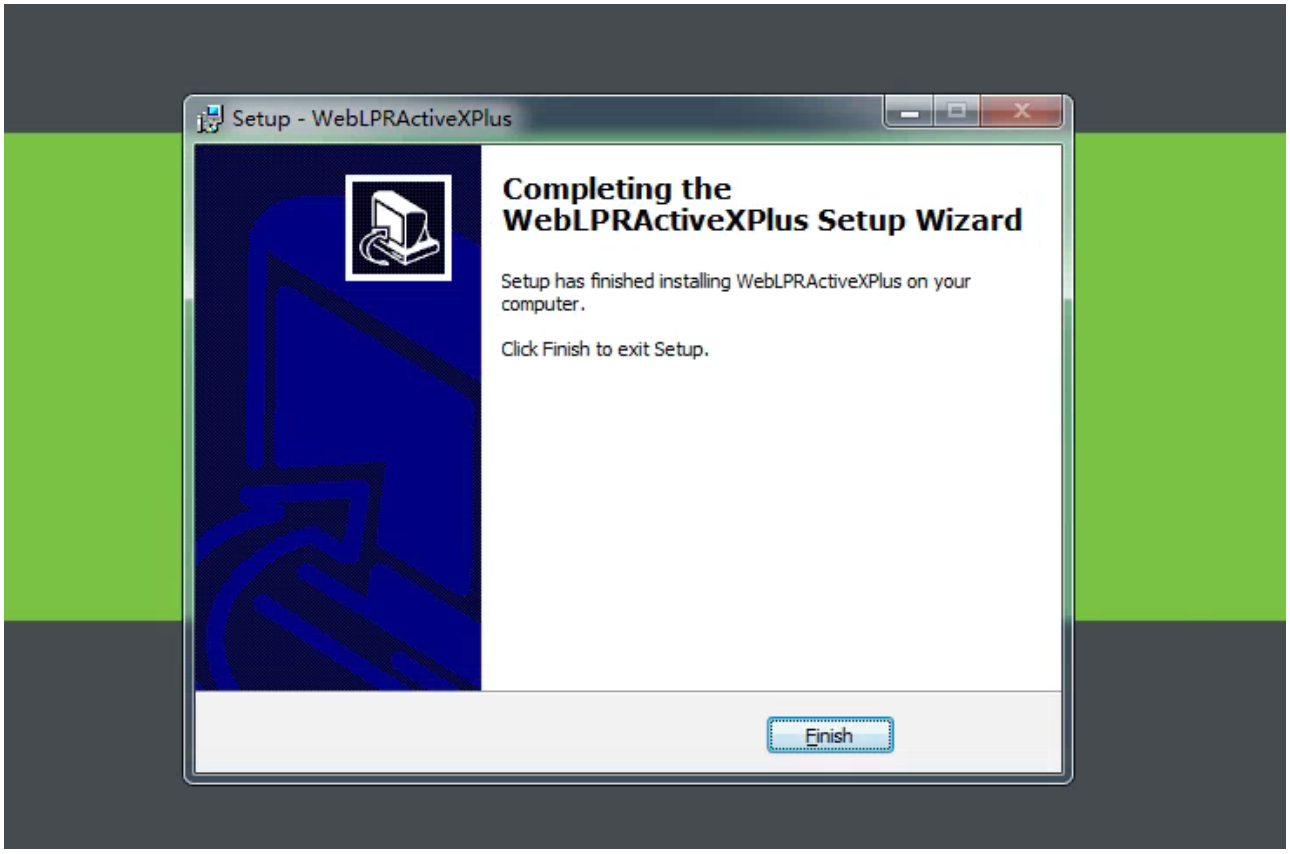

✍ **Note:** Install the **WebVideoActiveXPlus.exe** control to view the videos over a web browser. When the control is updated, it needs to be downloaded again.

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 the user needs to modify the parameters, select **[Next]** to modify them. After changing the IP Address, this wizard screen will no longer appear.

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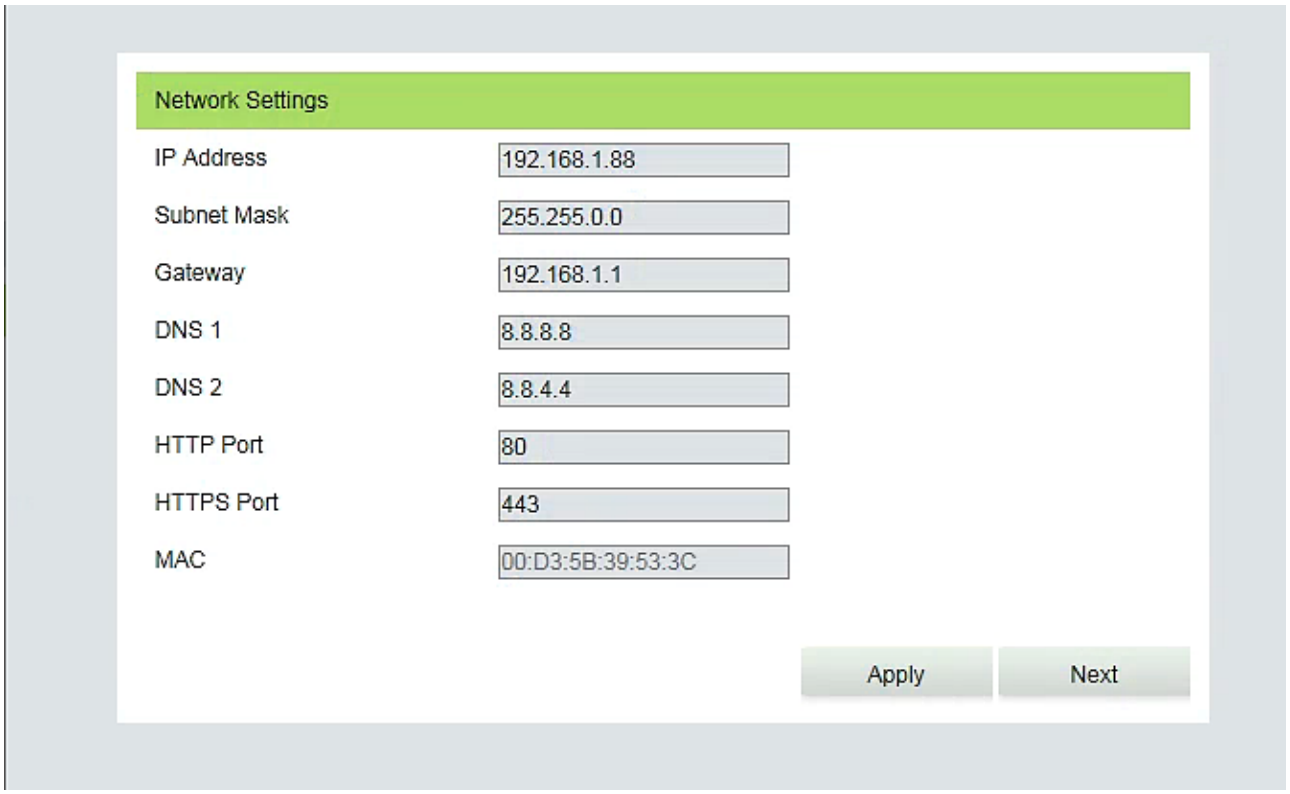

4. After setting the parameters successfully, the user can preview the video, as displayed in the figure below:

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

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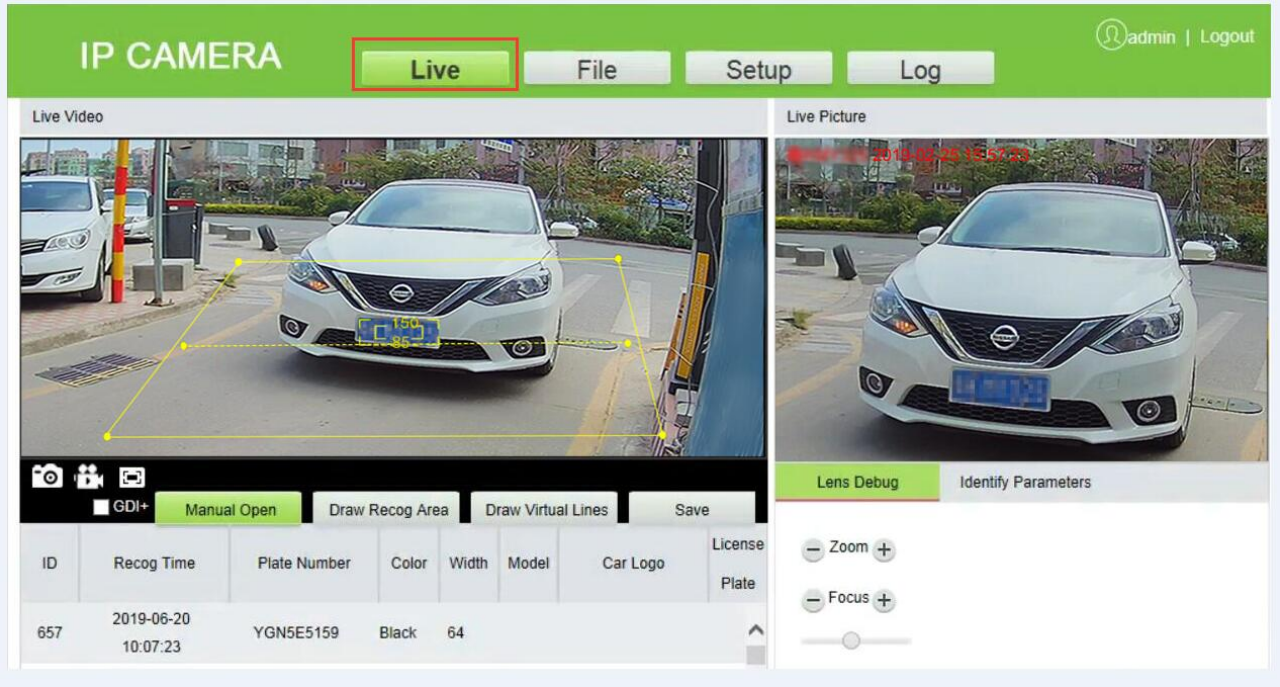
- **File:** Click to access the location where the required video clips or pictures can be viewed or downloaded based on the live video recorded.
- **Setup:** Click to access the Parameter Configuration page. On this page, the user can view or modify the camera parameters, including Device Information,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

3.2 Live

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



- **Snap:** Click the icon to capture and save a photo from a live preview video, and the storage location can be set in 3.4.19 Local Settings. The captured photos are stored automatically in a folder named after the current date and the photo is named after the captured time. For example, the file name of a photo is CH01_20180703_142004.jpg, and it is saved in the 20180703 folder. It indicates 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 3.4.19 Local Settings. The video is saved in a folder named after the year, month and day, and the video is named after the recording time. For example, a video file titled

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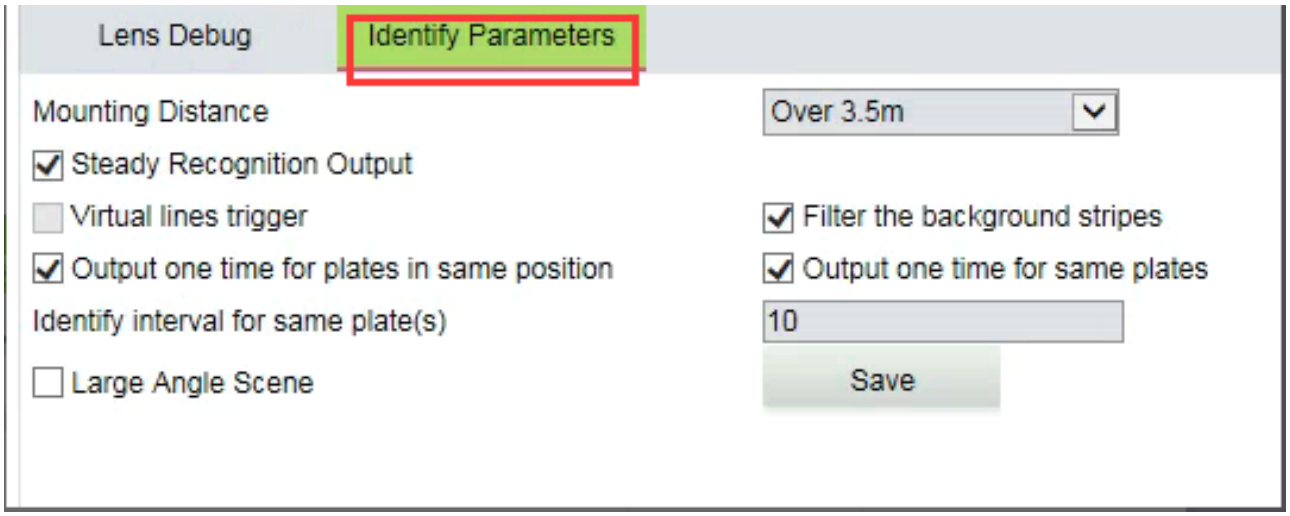
CH01_main_20180703_142004. avi, and saved in the 20180703 folder. It indicates that the recording date is 2018-07-03, the recording time is 14:20:04, while the system will automatically generate a subfolder named after the device's IP address.

- **Full:** Click the icon to switch to full-screen mode and click **Esc** on the keyboard to exit the full screen.
- **GDI+:** Select **[GDI+]** to make the smooth image lines in the recognition area.
  Note: This function has certain requirements for PC Graphics Card (required to support DirectX function and acceleration function), otherwise the video will be delayed. However, this feature can be used as per the requirements.
- **Manual Open:** Click **[Manual Open]** to manually open the barrier gate.
- **Draw Recognition Area:** The user 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]**, then drag the yellow line to two points within the recognition area displayed on 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:** Set the parameters of identification, including Mounting Distance, Virtual line to trigger recognition, Filter the background bar, One-time output for license plates in the same position, One-time output for the same license plates, Identification interval for the same plate(s), Large angle scene and so on.



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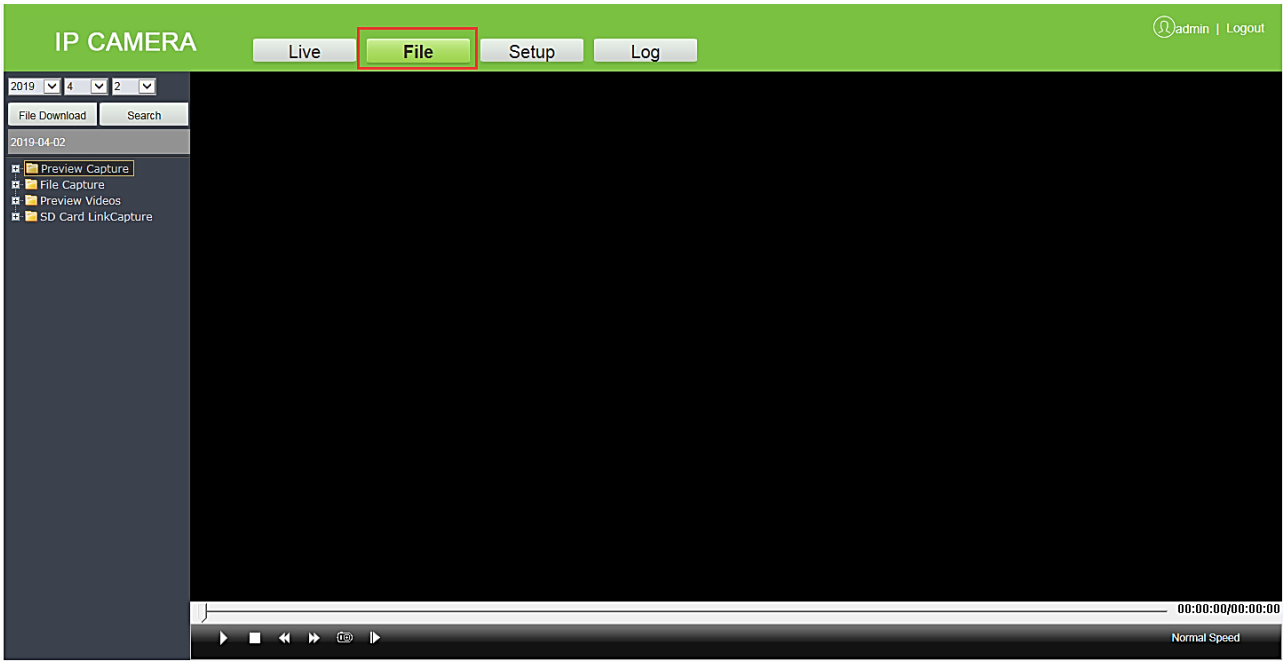
3.3 File

The user can enter the year, month, and day to search the required picture or videos, depending on requirements. Similarly, the user can view the videos, open images, and download the recorded images from the SD card to the laptop.



3.4 Setup

The user can view or modify the camera parameters, including Device Information, Time Settings, Display Settings, Streams, Video Parameters, List Management, Intelligent Analysis, Date Management, Comm Configuration, P2P Configuration, On-screen Voice, Network Settings, FTP Settings, User Management, Firmware Upgrade, System Update, Auto Reboot, Restore and Local Settings.

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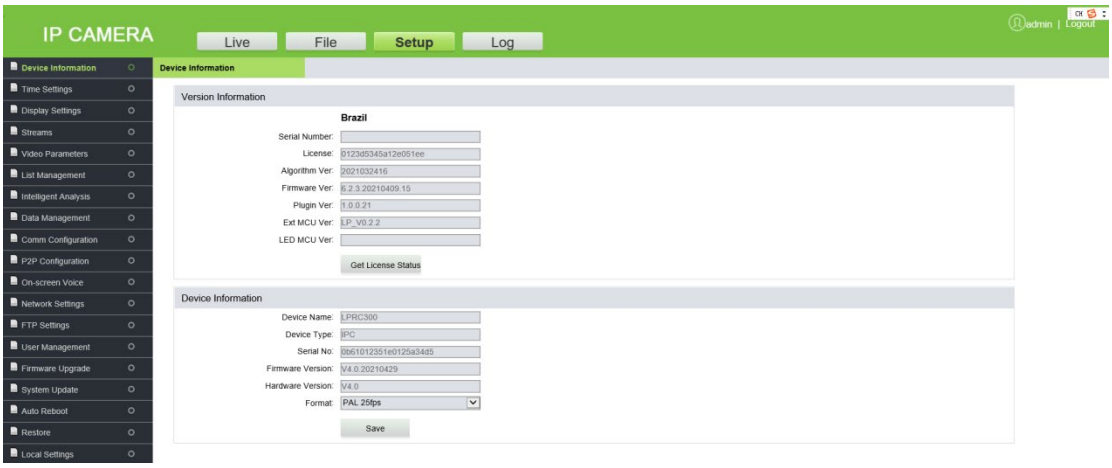
3.4.1 Device Information



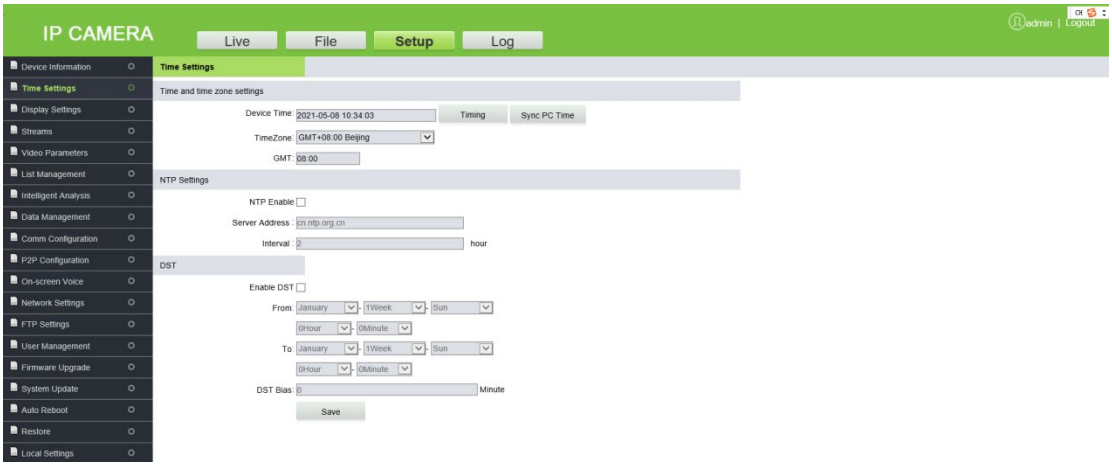
- **Device Information:** Displays the basic parameters of the device, including Device name, Device type, Serial number, Firmware version, Hardware version, and format.
- **Format:** Displays the analog output format, PAL, or NTSC.

Click **[Save]** after setting the parameters.

Note: Re-login is required to apply all the modified parameters.

3.4.2 Time Settings

Time Settings is used to set the system date and time. The user can choose NTP Server, synchronize with the local system, or set the time manually. The user can set the time 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]**.

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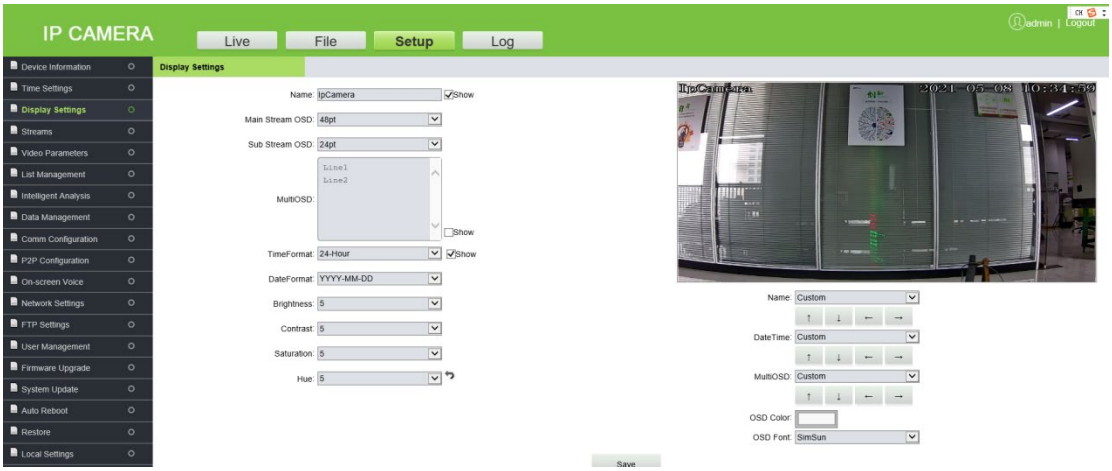
- **Synchronize with Local System:** Click PC, and the time will be consistent with the local computer.
- **Set the time manually:** Enter the date and time manually and click Timing to save the changes.
- **DST:** Select the **[Enable DST]** check box and set the start and end time.

3.4.3 Display Settings

Here, the user can set the text, date, time, and color of the video displayed in preview. Click **[Save]** to view the effect of the settings on the right side of the interface, based on actual requirements.



Name: The user 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 on the preview screen.

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

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

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

Date Format: The user 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.

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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.

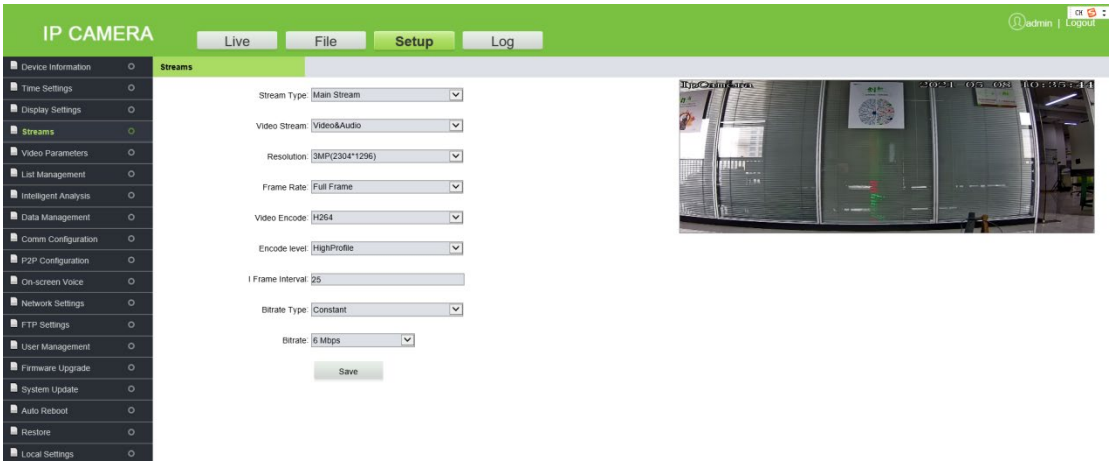
Saturation: It indicates the brilliance of color and is also called the purity of a color. The higher content of coloration, the higher the saturation. The higher content of discoloration, the lower the saturation. The setting range is 1 to 10.

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 the title text, date, and time can be adjusted, and the color and font of the text can also be set.

3.4.4 Streams

Stream is used to view or set the video code. It includes the parameters of Main Stream and Sub Stream. The user can set this feature based on requirements 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 the third stream has a reduced image format under the image environment of the mainstream, and the definition is lower than that of the mainstream, occupying less bandwidth.
- **Video Stream:** The Mainstream has two options: "Video & Audio" and "Video". The Sub-stream supports only Video & Audio.
- **Resolution:** The user 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 greater number of frames, the more coherent 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 video coding format. The user can choose H264 or H265.

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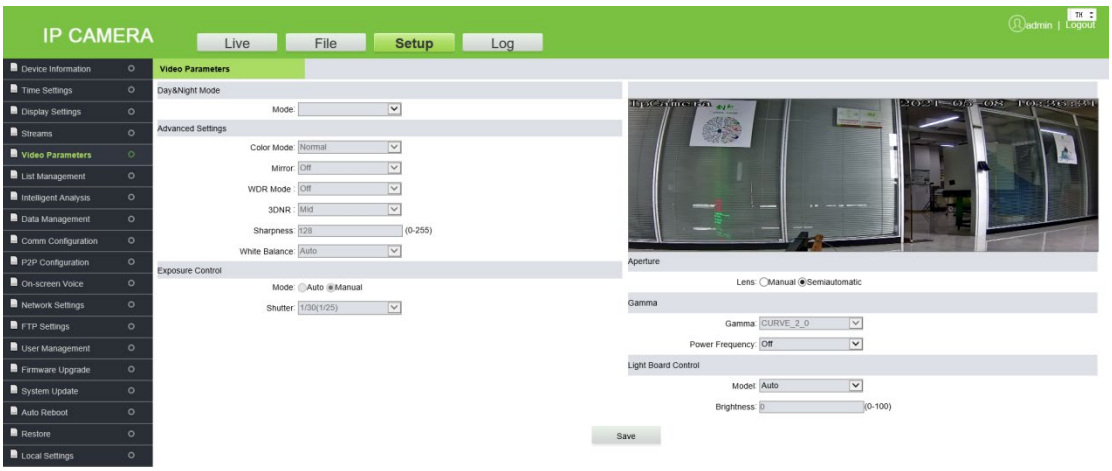
- **Encode Level:** It indicates the level of video coding. The user can choose the Baseline, Main Profile, or High Profile.
- **I-Frame Interval:** An I-frame (Intraframe) is a complete keyframe used in compressed code between frames, where the interval variation between I-frames will also modify the duration of the GOP (Group of Pictures). 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:** The bitrate type can be Variable or Constant.
  - **Variable:** It is used when the image quality is constant, and the network bandwidth is sufficient.
  - **Constant:** The images are transmitted over a fixed bandwidth.
- **Bitrate:** It shows the maximum limit of the bit rate, which can be individually entered. The larger the bit rate, the larger the energy use, and the greater the picture quality. The range is 16 Kbps to 16 Mbps. (Note: The standard bitrate shall prevail).
  - **Note:** The coding level is related to the coding algorithm. The coding levels comprise 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:** The user can choose from 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

Here, the user can set the 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.

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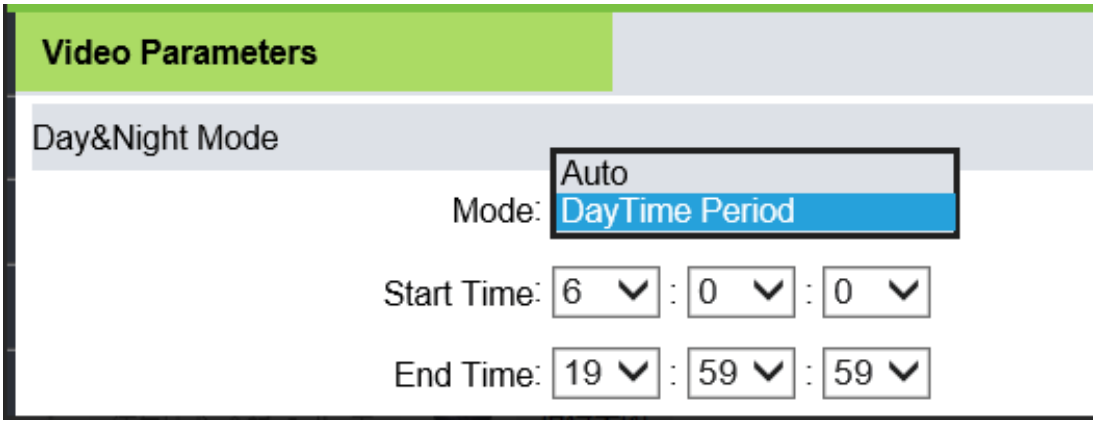
- **Auto:** In this format, the Day & Night format can be tuned automatically based on the camera's visibility and color of the video images. Meanwhile, the camera fill light (i.e., photographic lighting of the camera) brightness can be adapted or switched off automatically depending on the environment's 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 the 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 cannot be modified 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, block 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 make the images more natural. It is Auto by default.
- **Exposure Control:** The default mode cannot be modified.
- **Shutter:** The faster the shutter speed, the higher the brightness sensitivity, as well as the clarity that the sound would be. The automatic shutter speed defaults to Higher.
- **Aperture:** The user can choose Manual or semi-automatic.
- **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.

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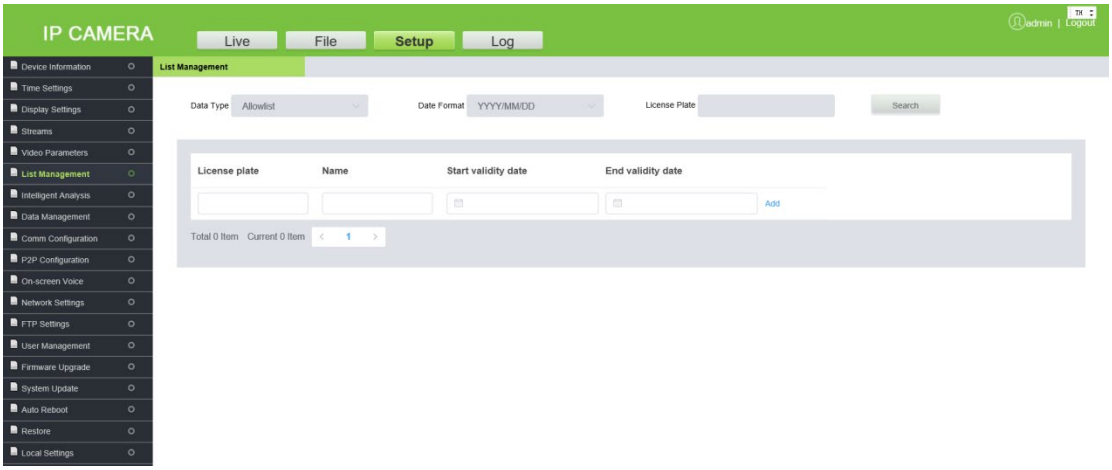
- **Off:** The light board is not controllable, and the light board is normally closed.
- **Manual:** The brightness of the light board can be adjusted by manually changing the parameters, where the adjustable range is 1 to 100. The more the parameter value is, the brighter the fill light will be, and 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 minimum power.

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

Click **[Save],** after setting the parameters.

3.4.6 List Management

Only regional host devices have synchronization capabilities. The user can add, modify, query, delete, synchronize block, and allow list, and fixed car vehicles.



- **Data Type:** Please select the data type as per requirements, allowlist, blocklist, and fixed vehicle list.
- **Date Format:** Set the date format.
- **License Plate:** The user can enter the license plate number for an exact search, or search for a license plate number by selecting the data type and date format. The corresponding license plate number will be displayed in the table below.
- **Search:** Click to search as per the data type, date format, and license plate number.
- **Sync:** Click the button to synchronize the block and whitelist of the vehicles.

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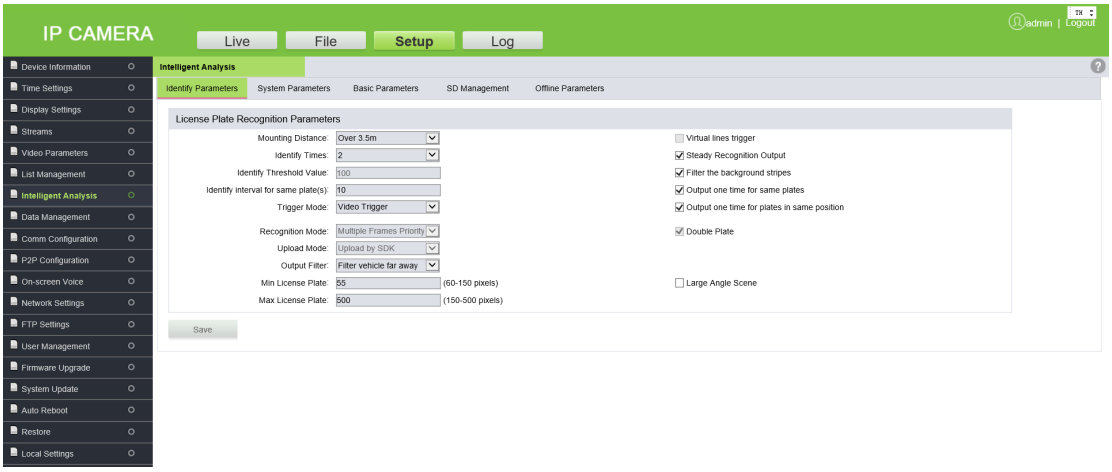
3.4.7 Intelligent Analysis

The recognizable license plate types are ordinary blue plate, block 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 to 4.5m.

Identify Times: It indicates the number of verifications that are 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 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 to 500 pixels.

Virtual line to trigger recognition: When a vehicle enters the virtual line, the recognized area of the license plate is displayed.

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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 selected, 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.

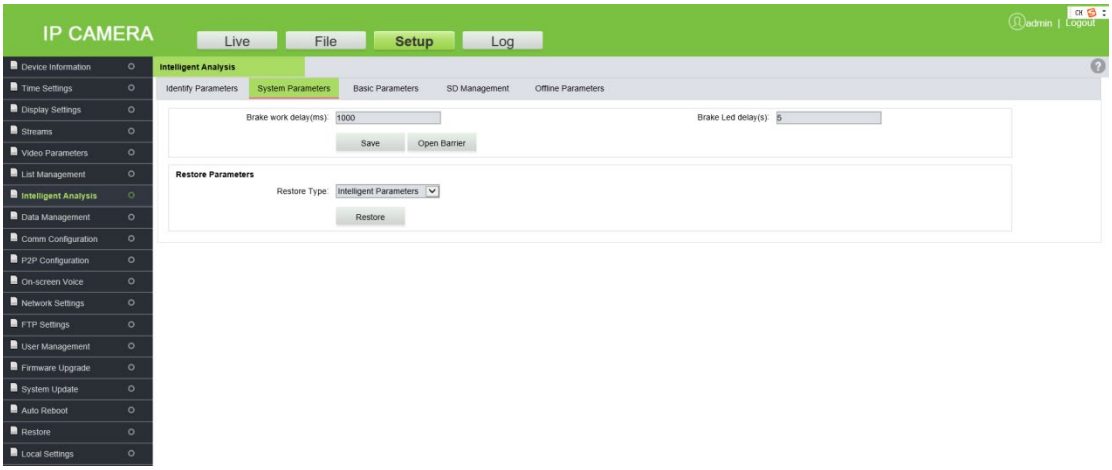
Output one time for same plates: It ensures that the identification results for the same license plate are displayed only once.

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.

Double Plate: Select the checkbox to support double plate recognition.

Large Angel Scene: It is suitable for a wide-angle range of access.

2. System Parameters



- **Barrier Open Duration (ms):** It indicates the open duration of brake signals, which need to be entered manually in milliseconds (ms).
- **LED Indication Duration(s):** It is the lighting duration of the Red or Green signal.
- **Manual Verification:** After successful identification, manual confirmation is required before opening the barrier.
- **Restore Parameters:** Click **[Restore]** to restore the identify parameters, network parameters, and all parameters (including all the data records such as admission records, fixed vehicles, allowlist list, and charging rules).
  Note: Make sure to use this feature carefully.

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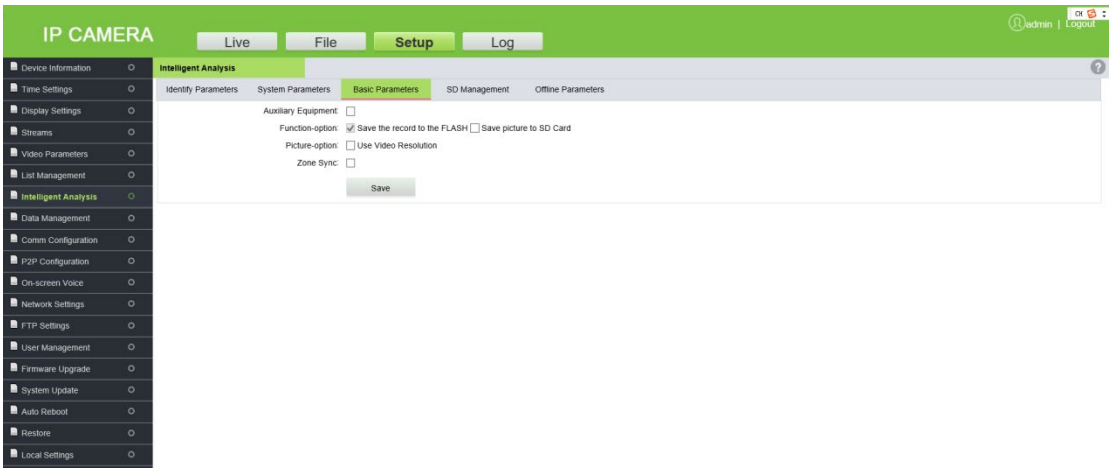
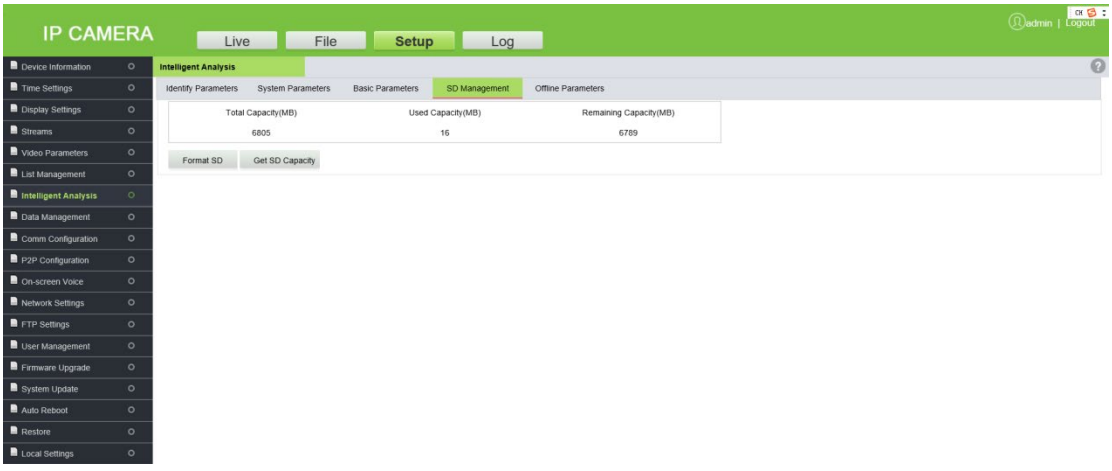
3. Basic Parameters



- **Auxiliary Equipment:** The master-auxiliary mode recognizes the license plate number and sends the recognition result to the main camera.
- **Function-option:** Choose whether to save the picture to an SD card (This feature can be selected only when using the SD card).
- **Zone Sync:** Select whether to synchronize the basic parameters of the zone.
- **Zone Master LPR:** When this feature is selected, the main camera device in the zone network synchronizes the block and allow list fixed car data to other zone network devices, and there can be only one zone master.
- **Zone IP List:** Displays the IP Addresses of all the LPR devices in the zone.

4. SD Management



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

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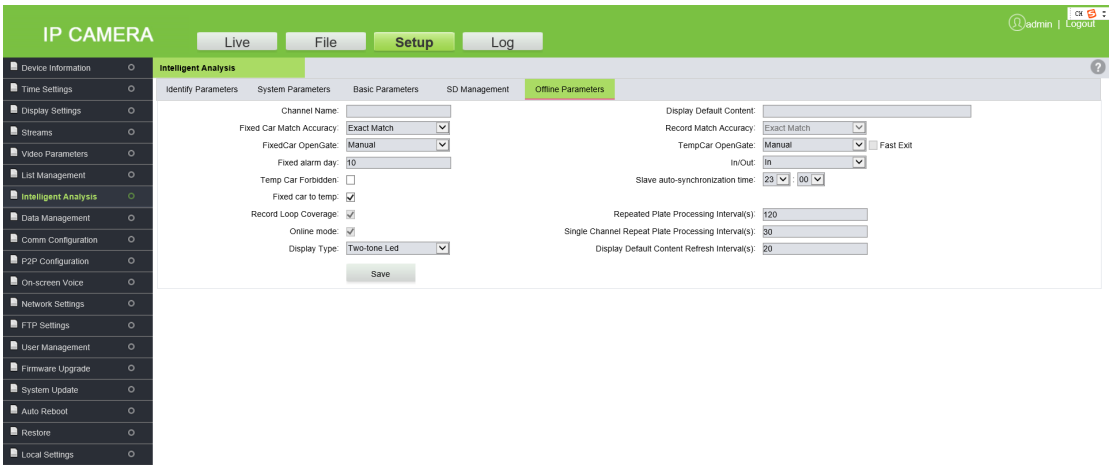
5. Offline Parameters



- **Channel Name:** Define the name of the channel.
- **Fixed Car Match Accuracy:** It is the matching accuracy of the license plate recognition. The default is **Exact Match**.
- **Fixed Car Open Gate:** The user can choose “Manual” or “Auto” to open the barrier gate for registered vehicles.
- **Fixed alarm day:** Whenever the vehicle enters and exits, this broadcasts the remaining validity period of the registered vehicle through an automated voice.
- **Temp Car Forbidden:** When selected, the entry of temporary vehicles is prohibited.
- **Fixed car to temp:** When the validity of a fixed vehicle is expired, this option changes the same registered vehicle into a temporary vehicle in the database.
- **Record Loop Coverage:** It allows the continuity of the previous access records to the new record once it becomes full.
- **Online mode:** The device handles the charging and opening of the gate in offline mode if the interface does not display the real-time monitoring screen. It is a default option and cannot be modified.
- **Display Type:** The default is Two-tone LED.
- **Display Default Content:** It is the default content displayed on the display screen, which is not more than 31 bytes in length.
- **Record Match Accuracy:** It is the matching accuracy of the license plate recognition. The default is Exact Match.
- **Temp Car Open Gate:** The user can choose “Manual” or “Auto” to open the barrier gate for the temporary vehicle. The user can even select the "Fast Exit" option when the temporary vehicle charge is 0 and the barrier opens automatically.
- **In/Out:** The location can be set as an exit or entrance.
- **Slave auto-synchronization time:** It is the time duration taken by the main camera to synchronize with the secondary camera.
- **Repeated Plate Processing Interval (s):** It is the processing time interval for the same license plate.

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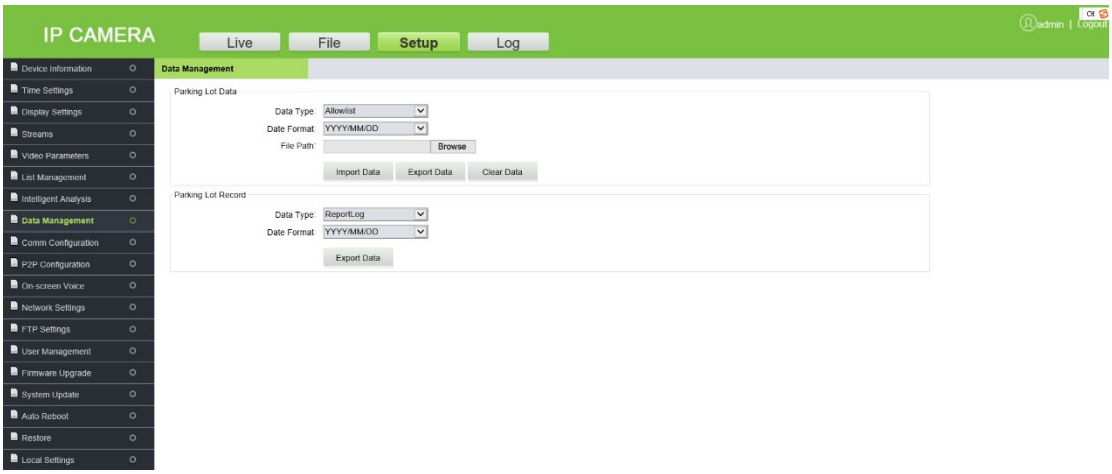
- **Single Channel Repeat Plate Processing Interval (s):** In the single-channel mode, it is the processing time interval taken to recognize the license plate by the entrance device and the exit device.
- **Display Default Content Refresh Interval (s):** The time interval between the software and firmware to update the content in the display.

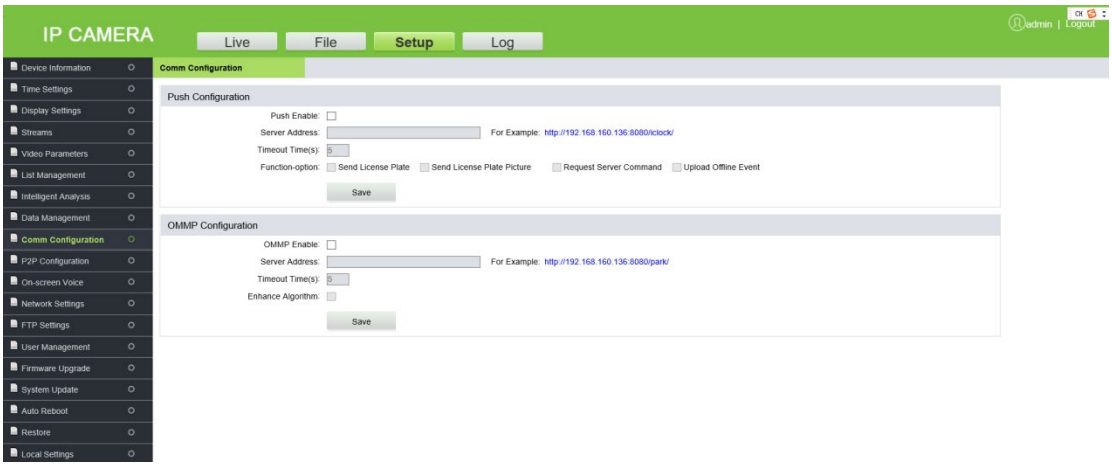
3.4.8 Data Management

This option is used for the management of specific data such as allowlist, blocklist, and fixed car management. The user can import, export, and clear the data as per the requirements.



3.4.9 Comm Configuration

Push protocol allows to communicate with various software platforms. To use this feature, set the corresponding parameters here.



- **Push Enable:** Select the check box to enable this feature.
- **Server Address:** Enter the Server Address of the push configuration.

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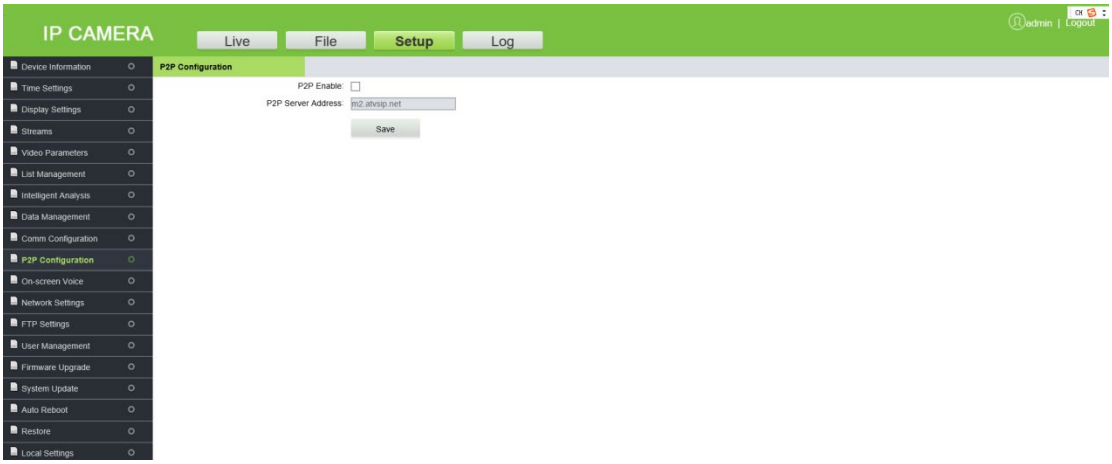
- **Alternate Server Address:** When the push configuration main Server Address is invalid, the system automatically considers the alternative Server Address.
- **Server HTTP Port:** Enter the corresponding port (the default port number is 8080).
- **SSL:** That is the encryption mode, if selected, the 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:** The user can choose to send the license plate number or license plate picture.

  Click **[Save]**, after setting the parameters.

3.4.10 P2P Configuration



- **P2P Enable:** Select the check box to enable P2P.
- **P2P Server Address:** Enter the P2P Server address.

Click **[Save]** after setting the parameters.

3.4.11 On-screen Voice

When the camera recognizes the license plate, it can broadcast a voice message.

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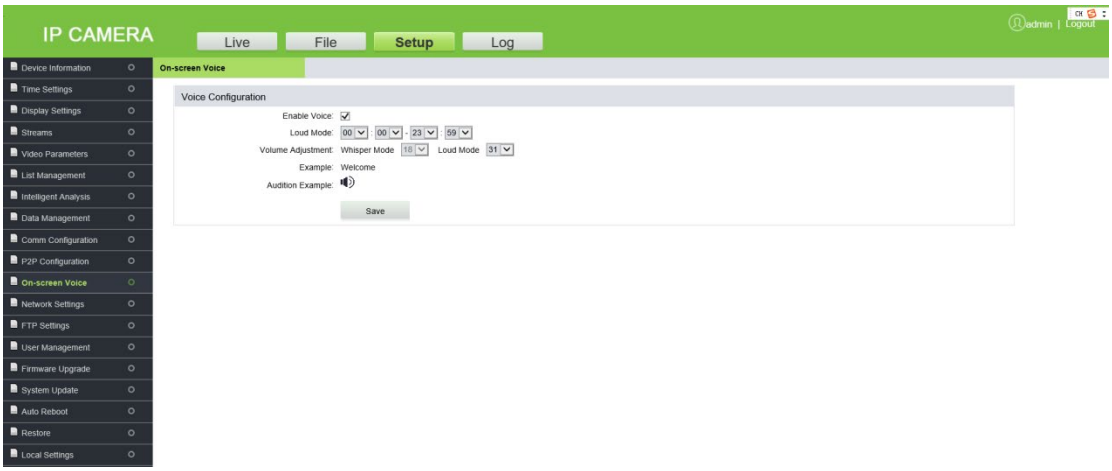

Enable Voice: Select the check box to enable the voice broadcast feature.

The time period and volume for working in loud mode can be set.

Click **[Save]** after setting the parameters.

3.4.12 Network Settings

Here, the user can view or set the camera network parameters, including LAN parameters, PPPOE parameters, RTSP parameters, etc.

LAN: Set the related parameters of the 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.

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SNMP: To monitor devices connected to the network for any conditions that cause administrative concern.

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 to 250, and the value can be adjusted according to 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 (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.

Enable PPPoE: Select the check box to enable PPPoE.

- **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.

3.4.13 FTP Settings

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

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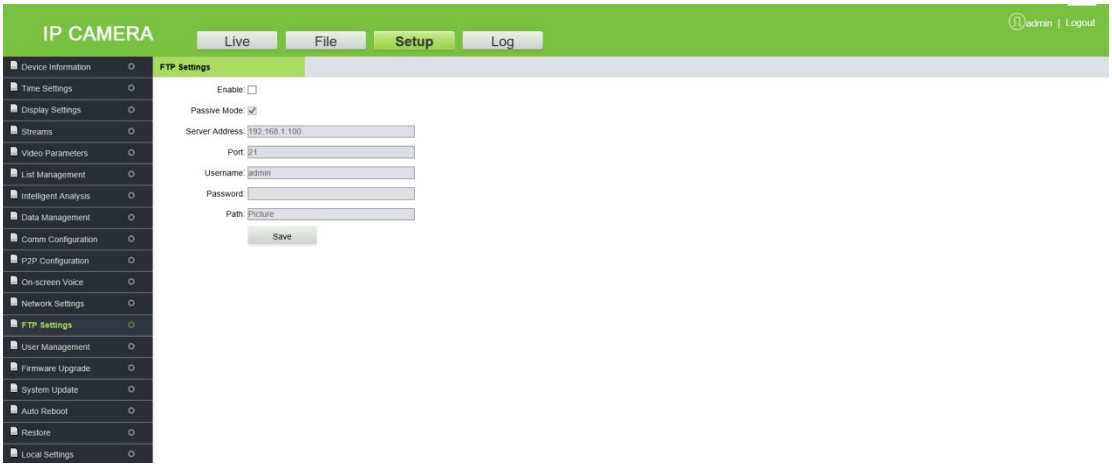
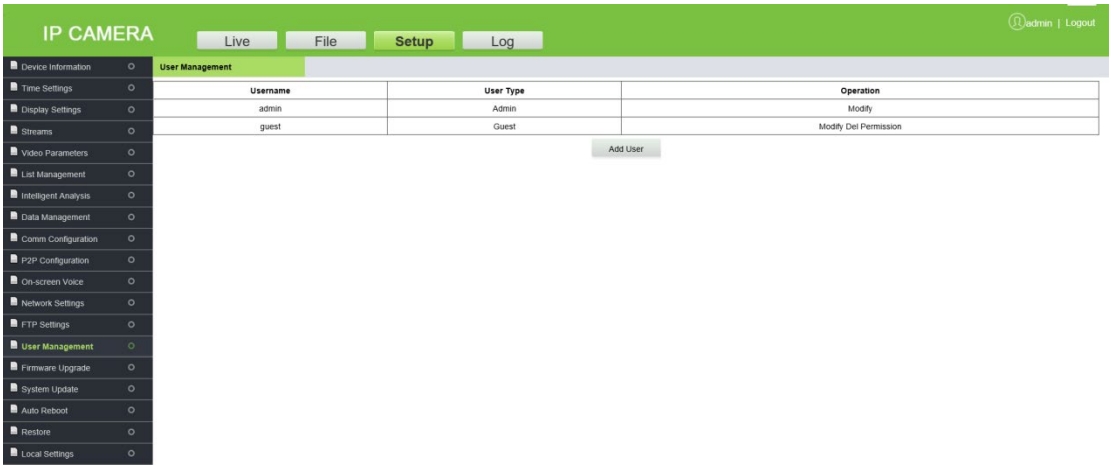


- **Enable:** Select the check box to enable FTP.
- **Passive Mode:** It is used for data transfer security. It is a default option when FTP is not selected.
- **Server Address:** Enter the FTP Server Address.
- **Port:** Enter the corresponding port.
- **Username/Password:** Enter the FTP Username and Password.
- **Path:** Select the storage path/ location to transfer/save the image of the captured license plate.

Click **[Save]**, after setting parameters

3.4.14 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. The Username, Password, and user type can be modified for a new user by the administrator. New users can be set as a normal user or operator. Different permissions can be assigned in "Permissions".

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Del: New users can be deleted.

Permission: Permissions can be assigned to normal users.

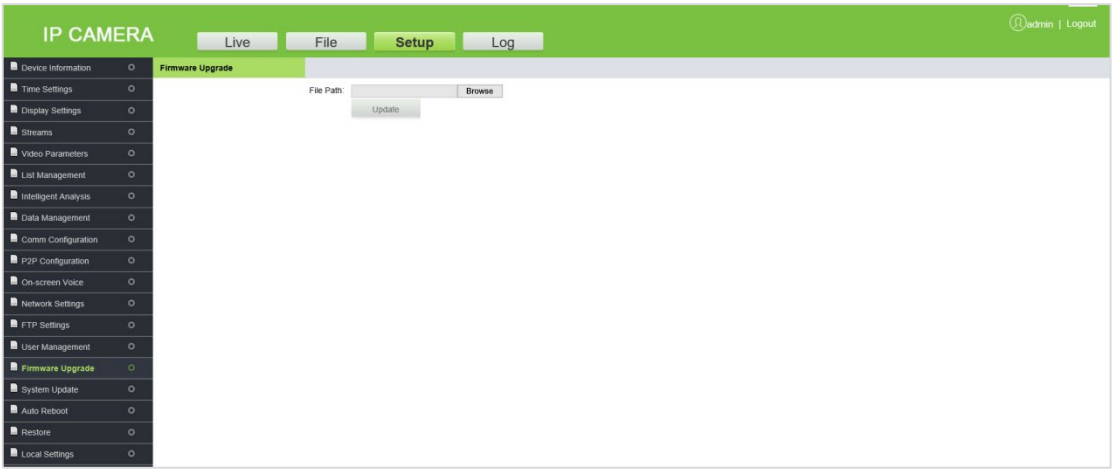
Add User: New users can be added on demand.

✍**Note:**

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

3.4.15 Firmware Upgrade

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



✍**Note:** Contact the corresponding technician for an upgrade package or remote upgrade support.

3.4.16 System Update

System Update is used for network module program updates. Click Browse and select the update file and click Update. After the system update, restart the camera.

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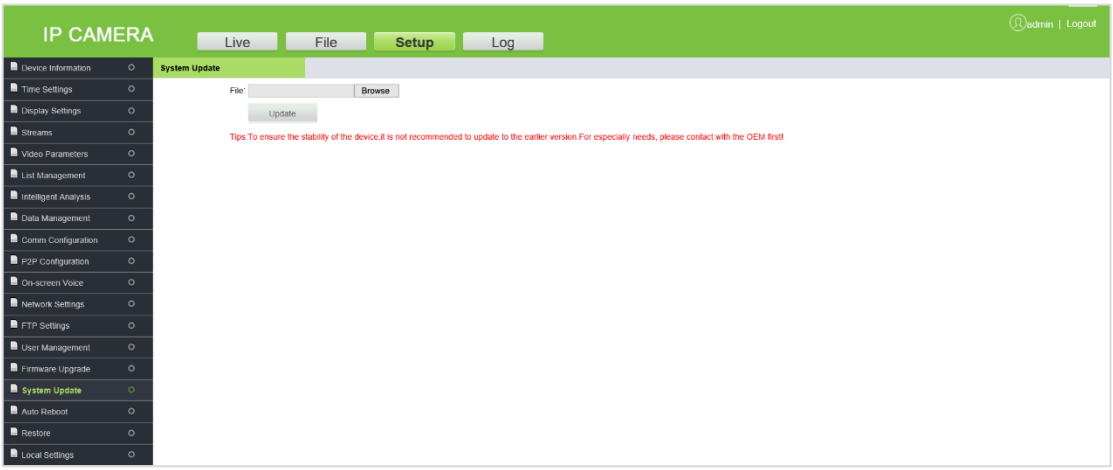
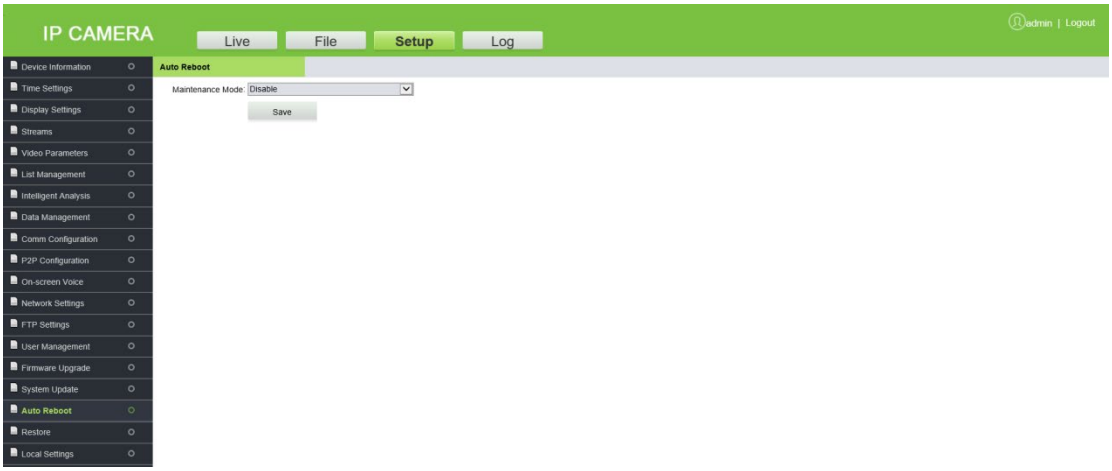


Note: Avoid performing the System Update feature in the absence of qualified professionals. Ensure that the device is ON while performing this operation.

3.4.17 Auto Reboot

The automatic maintenance has five modes: "Disable", "Daily", "Weekly", "Single" and "Monthly". Select any one mode, and the device will restart as per the selected mode.



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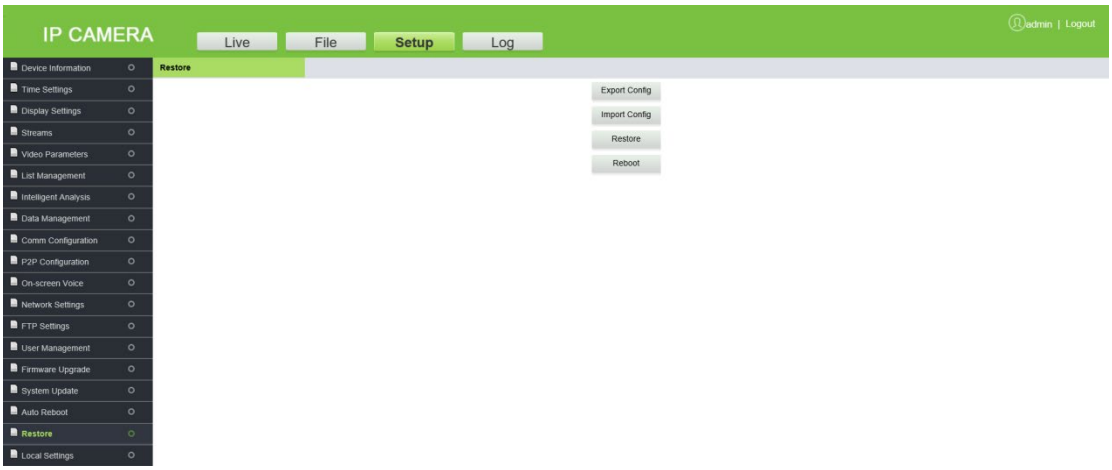
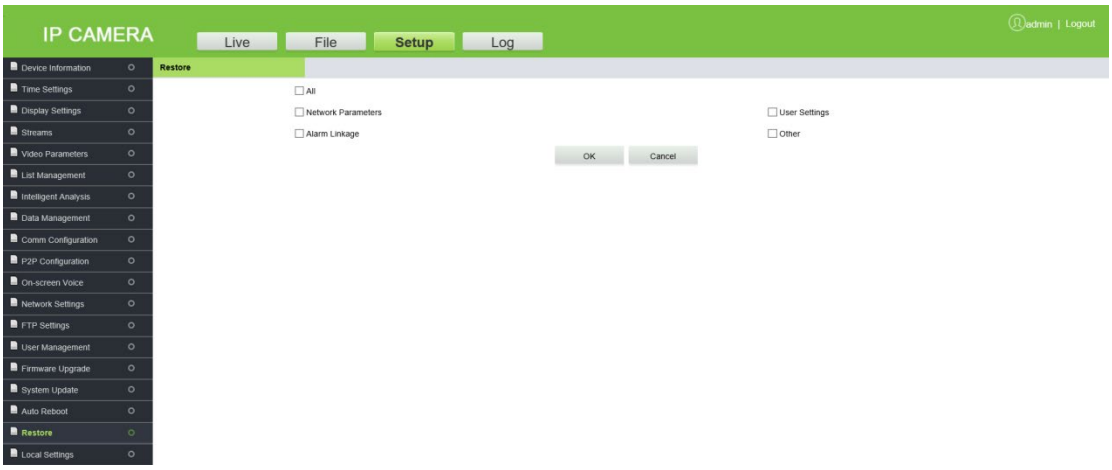
3.4.18 Restore



Export Config: Click Export Config , select the file name, and then click "Directly Open " or "Download".

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

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



Reboot: It restarts the system.

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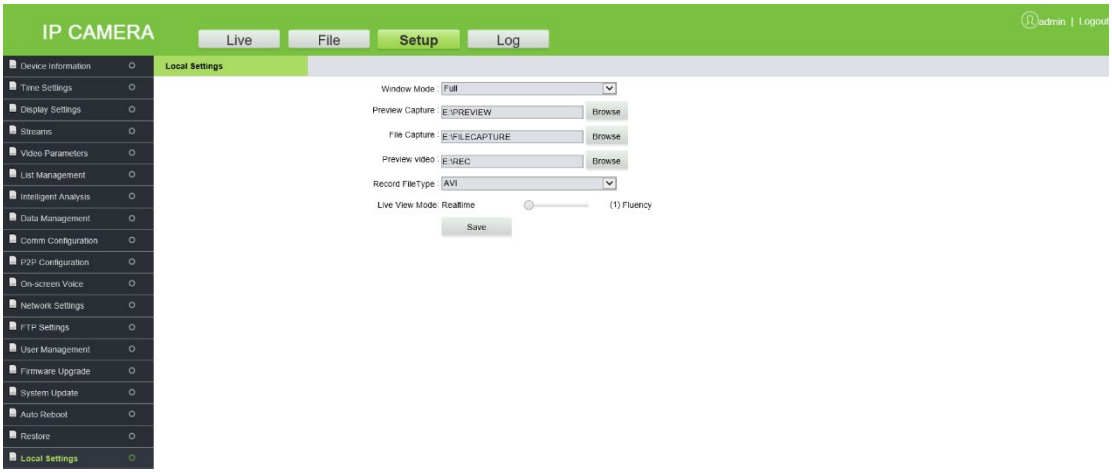
3.4.19 Local Settings

It is used to view or set the local configuration according to the requirements. 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 image/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 Real-time mode, where if the fluency mode is selected, the video will be slightly delayed).

Click **[Save]** after setting parameters.

3.5 Log

The log is used to search the recording history. The user 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 criteria, click **[Search]** to related logs.

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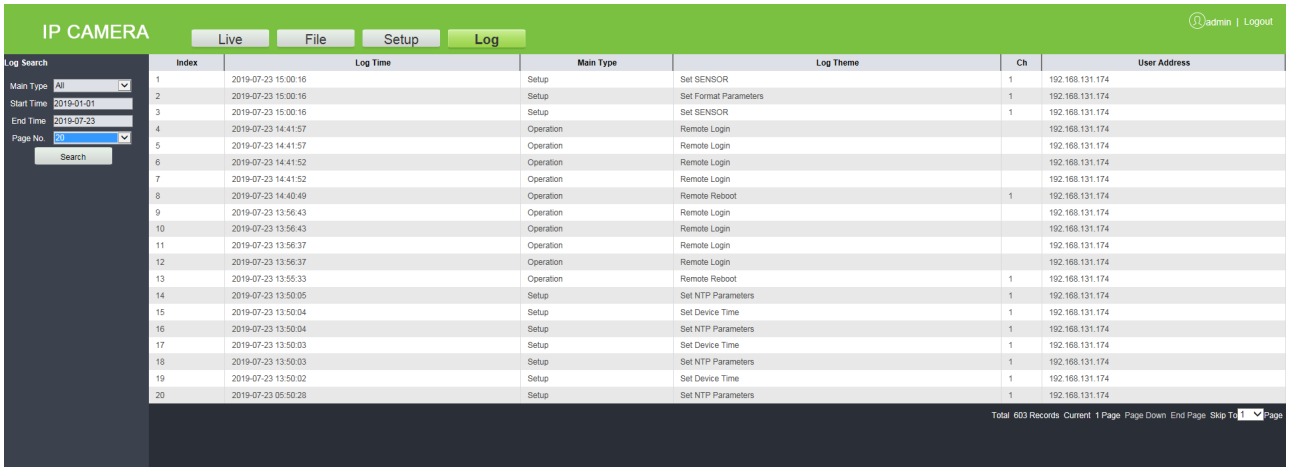

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FAQ's

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

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 device has been installed, but it neither recognizes the vehicle entering the recognition area nor broadcasts the 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 check 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 to the camera webpage, 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 icon on the upper right corner of the interface to query the version information.

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