KILOVIEW®

P3 5G Wireless Bonding Encoder

USER MANUAL

Changsha KILOVIEW Electronics Co.,Ltd

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1 Product Introduction

P3 is a new generation wireless bonding encoder created by Kiloview based on KiloLink transmission technology. P3 supports simultaneous multiple wireless bonding connections: 4 channels of 4G/5G cellular networks, WIFI (2.4G/5G dual-band), and Ethernet; Dual battery module design, built-in battery capacity: 3500mAh @ 7.2V 25.2W, external battery capacity 7000mAh @ 7.2V 50.4W , providing over 5 hours of continuous operation without battery replacement, and supporting all-day use with uninterrupted operation by hot-swapping batteries; the 5G/4G communication module, WIFI communication module, recording storage module, and battery module are all modularly designed and can be selected as needed.

P3 is equipped with 3G-SDI and HDMI video input interfaces. The HDMI interface supports video input up to 4Kp30, while the 3G-SDI supports 1080p60 video input. It supports H.264 (AVC) and H.265 (HEVC) video encoding. When paired with the free KiloLink Server Pro software, it enables aggregation services. KiloLink Server Pro supports multiple media access protocols such as RTSP, RTMP, SRT, HLS, and NDI HX for external access.

1.1 Product Features

- Simultaneous multiple wireless aggregation connections: 4 channels of 4G/5G cellular networks, WIFI (2.4G/5G dual-band), Ethernet.
- Dual battery module design, built-in battery capacity: 3500mAh @ 7.2V 25.2W, external battery capacity 7000mAh @ 7.2V 50.4W., providing over 5 hours of continuous operation without replacement.
- Hot-swappable battery module for uninterrupted operation.
- Supports V-mount battery interface (via D-Tap adapter) for power supply.
- Modular design for flexible selection (5G/4G communication module, WIFI communication module, recording storage module, and battery module).
- 4.3-inch touch display screen.
- Supporting 3G-SDI and HDMI 1.4b video input interfaces
- Using the HDMI video interface **that** supports H.264 (AVC) and H.265 (HEVC) video encoding with resolution up to 4Kp30.
- Using the 3G-SDI video interface that supports H.264 (AVC) and H.265 (HEVC) video encoding with resolution up to 1080p60 g.
- Audio support for analog interface (3.5mm), HDMI (up to 4 channels), and SDI (up to 4 channels) inputs.
- Supporting streaming forwarding service and network streaming application via KiloLink Server Pro.
- Live broadcast with backpack form, flexible and lightweight.

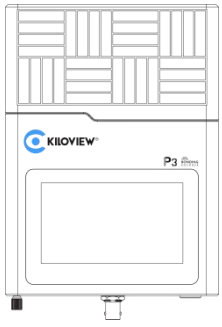
2 Product Parameters

Function and Performance	
Video Resolution Support	HDMI ： support of input 3840×2160p30fps 1920×1080p23.98/24/25/29.97/30/50/59.94/60fps 1920×1080i50/59.94/60fps 1280×720p29.97/30/50/59.94/60fps 720×576i50fps(PALSD)720×480i59.94fps(NTSCSD) SDI ： support of input 1920×1080p23.98/24/25/29.97/30/50/59.94/60fps 1920×1080i50/59.94/60fps 1280×720p25/29.97/30/50/59.94/60fps 720×576i50fps(PALSD)720×480i59.94fps(NTSCSD)
Encoding Format	H.264(AVC): Baseline/Main/High profile, Level 5.1 H.265(HEVC): Main profile, Level 5.0
Streaming Protocol Support	NDI HX/RTMP/SRT/RTSP/HLS/TS over UDP and other media protocols (with Kiloview KiloLink Server Pro aggregation platform)
Bonding Performance	4 channels of 5G (or 4 channels of 4G) cellular networks, WIFI (2.4G/5G dual-band), wired Ethernet port, USB extended network
Recording Function	SD card slot for local recording, USB Storage local recording
Text and Image Overlay Function	Supports customized text and image overlay function, allowing being overlaid at any position on the screen
Voice Intercom	Supports integration with Kiloview Intercom Server (KIS)
General Parameters	
Video Input Interfaces	1*HDMI1.4b
	1*3G-SDI
Audio Input	4-channel embedded audio input via SDI
	4-channel embedded audio input via HDMI
	interface of 1*3.5mm audio Line-in
USB	1 * USB 2.0 Type-A
Wireless Network	4 * 4G/5G communication modules (flexible combination supported, refer to the corresponding "Quick Start Guide" for supported standards and frequencies of the 4G/5G modules) 1 * Wi-Fi 5 communication module

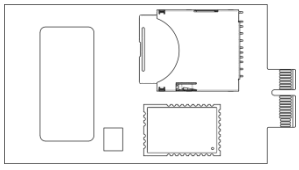
Storage	SD card / expandable USB Storage coexisting with Wi-Fi 5 communication module
Display and Indication	4.3-inch LCD touch screen display
Network Interface	1×10M/100M/1000M RJ45 Ethernet port
Management Method	LCD operation/Web operation/KiloLink Server Pro remote management
Battery Capacity	Dual battery module design, built-in battery capacity: 3500mAh @ 7.2V 25.2W, external battery capacity 7000mAh @ 7.2V 50.4W.
Battery runtime	Battery runtime of ≥5 hours without changing the battery
Operating temperature	-15℃~45℃
Charging temperature	0℃~45℃
Power Supply	DC 12V/3A Input
Size	211.20x143.00x68.00mm
Weight	2000g （host）

3 Packing List and Device Interface

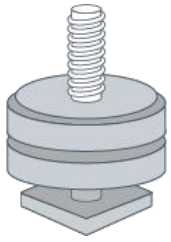
3.1 Packing List



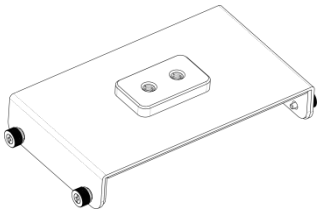
(1) **P3 Encoder ×1**



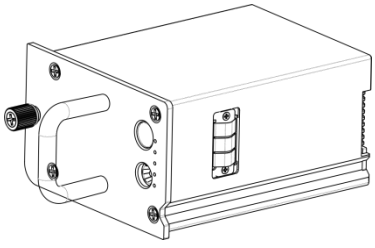
(2) Wi-Fi and SDcard module×1



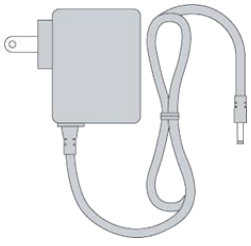
(3) Cold boot screw ×1



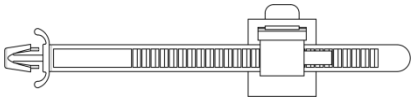
(4) Bracket x1



(5) Battery x1



(6) Power Adapter x1

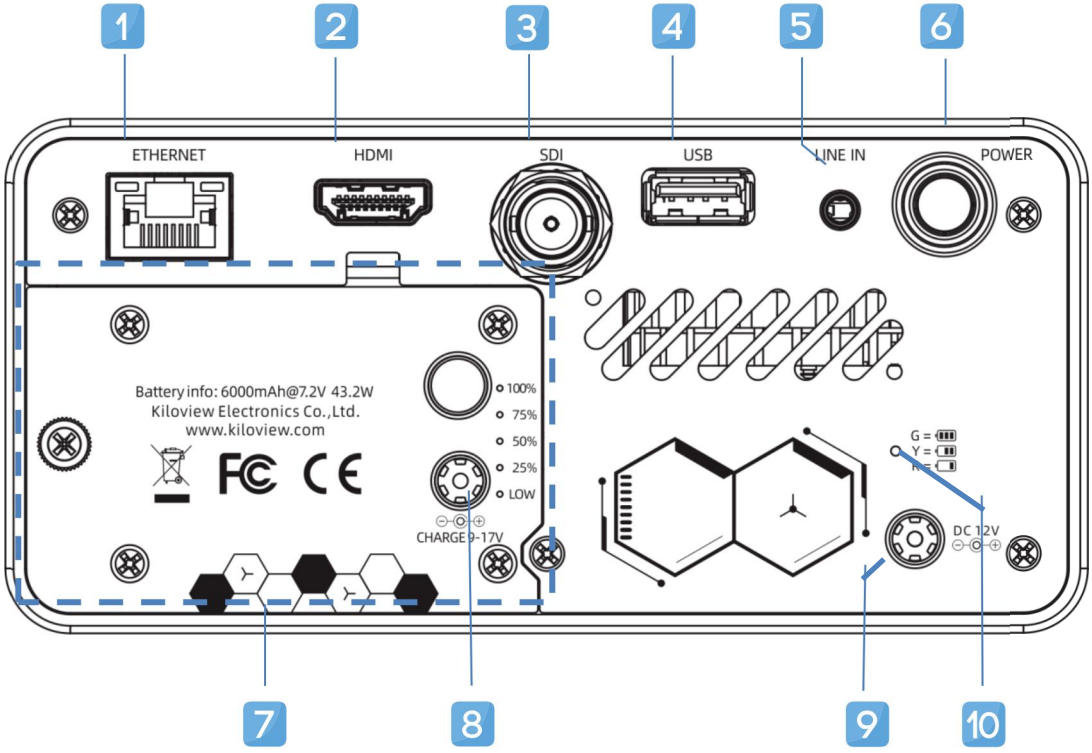


(7) **HDMI Cable Straps x1**

(8) Warranty Card ×1

(9) Quick Start Guide ×1

3.2 Device Interface

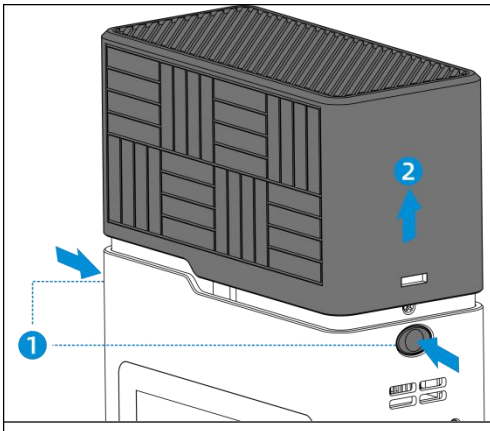
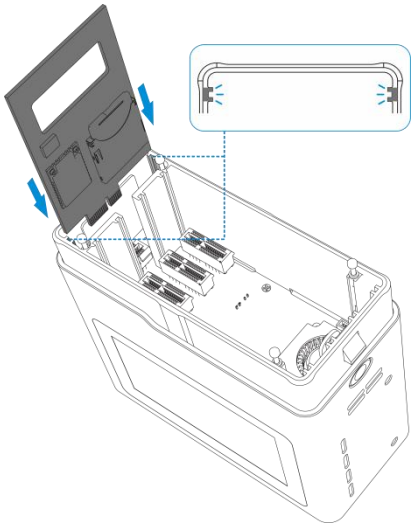


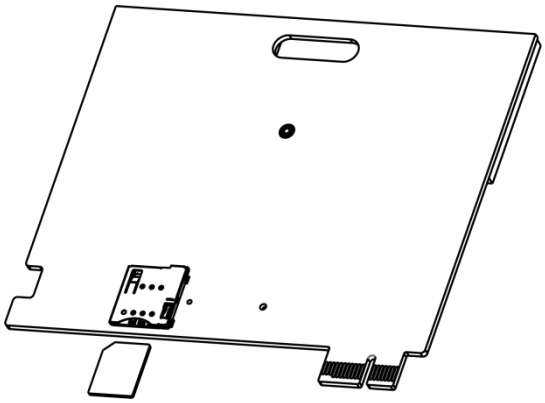
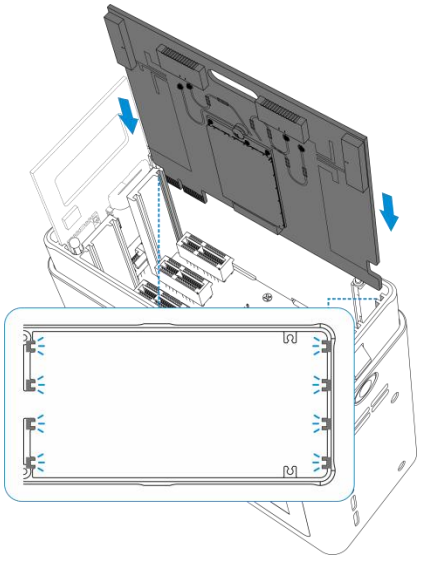
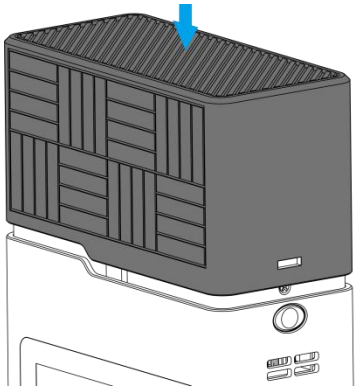
(1) 1000M Ethernet
(2) HDMI Input
(3) SDI Input
(4) USB TYPE-A 2.0
(5) 3.5mm LINE IN
(6) Power Switch
(7) Battery(removable)
(8) Battery Charging Port
(9) PowerPort(supporting internal battery charging)
(10) Built-in Battery Indicator Light

4 Device installation

4.1 Installation of 4G/5G/WIFI Modules

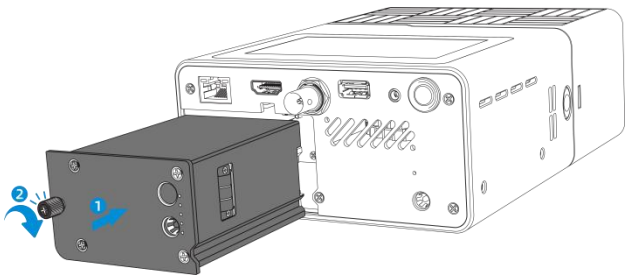
P3 supports a Wi-Fi module and up to four 4G/5G modules for flexible configuration based on user needs.In the default configuration of the P3 product,the Wi-Fi and 4G/5G communication modules are housed internally.To install these communication modules,follow these steps:

	**Opening the top cover:** As shown in Figure ① on the left - simultaneously press the top cover release switches on both sides of the device, causing the cover to slightly pop up. Then, as shown in Figure ② on the left, lift the top cover upwards.
	**Installing the Wi-Fi module:** Connect the Wi-Fi module to the device via the side-edge gold finger interface of P3. Align both sides of the Wi-Fi module into the guide slots as shown in the left diagram, push it downwards until fully seated, ensuring the gold fingers are completely inserted into the interface slot. (Note the correct orientation of the module. If insertion is difficult, try reversing its orientation.) **Installing the SD card:** To install the SD card, align the metal contacts of the SD card towards the PCB board of the module. Insert the SD card with the notched corner facing inward until it clicks into place.

	**Installing the SIM card for the 4G/5G module:** The 4G/5G module supports a Micro SIM card. As shown in the left diagram, align the metal contacts of the SIM card towards the PCB board of the 4G/5G module. Insert it with the notched corner facing inward.
	**Installing the 4G/5G module:** Connect the 4G/5G module to the device via the internal horizontal gold finger of P3 (P3 supports up to 4 4G/5G modules). Align the gold fingers of the 4G/5G module downwards into the gold finger interface slot as shown in the left diagram. Insert it into the guide slots on both sides and push it downwards until fully seated, ensuring the gold fingers are completely inserted into the interface slot.
	**Closing the top cover:** Push the device's top cover down to the bottom until it securely latches into place. (Please ensure the outer cover is securely latched to prevent any components from loosening during use.)

4.2 Battery Installation

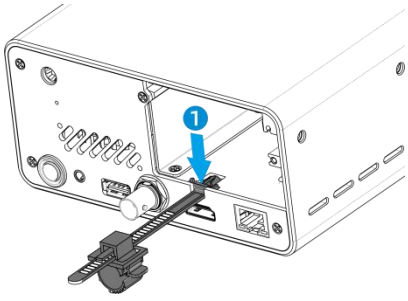
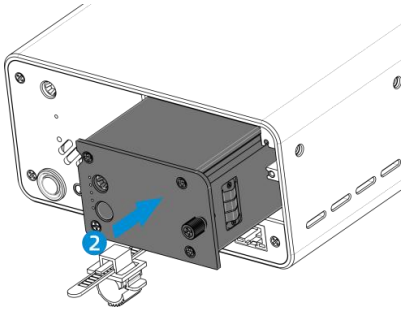
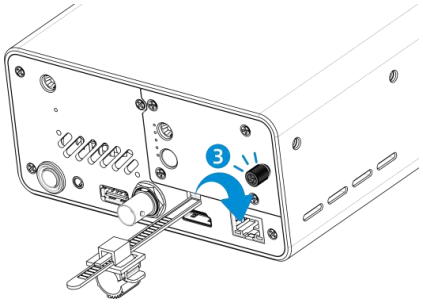
Installing the battery is performed as follows:

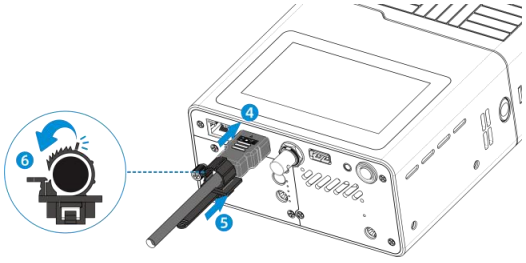
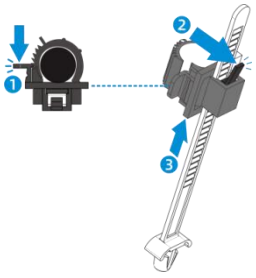
	On the external battery of P3, there is a hand-screwed screw. To install the battery, as shown in Figure ① on the left, align the battery with the battery slot and push it down to the bottom. Then, as shown in Figure ② on the left, tighten the screw on the battery to complete the battery installation. To replace the battery, first loosen the hand-screwed screw, then remove the battery. Insert the new battery and tighten the screw.

In addition to the external battery on P3, the device also has an internal battery. The internal battery can power the device during the process of replacing the external battery on P3, ensuring uninterrupted operation.

4.3 Installation of HDMI Cable Strap

The HDMI cable tie is used to help secure the HDMI cable and prevent it from becoming loose. The installation procedure for the HDMI cable tie is as follows:

	Remove the battery and install the HDMI cable strap as shown in the diagram.
	Insert the battery into the P3 device as shown in the diagram.
	Tighten the fixing screw on the battery to secure the battery and HDMI cable on the device.

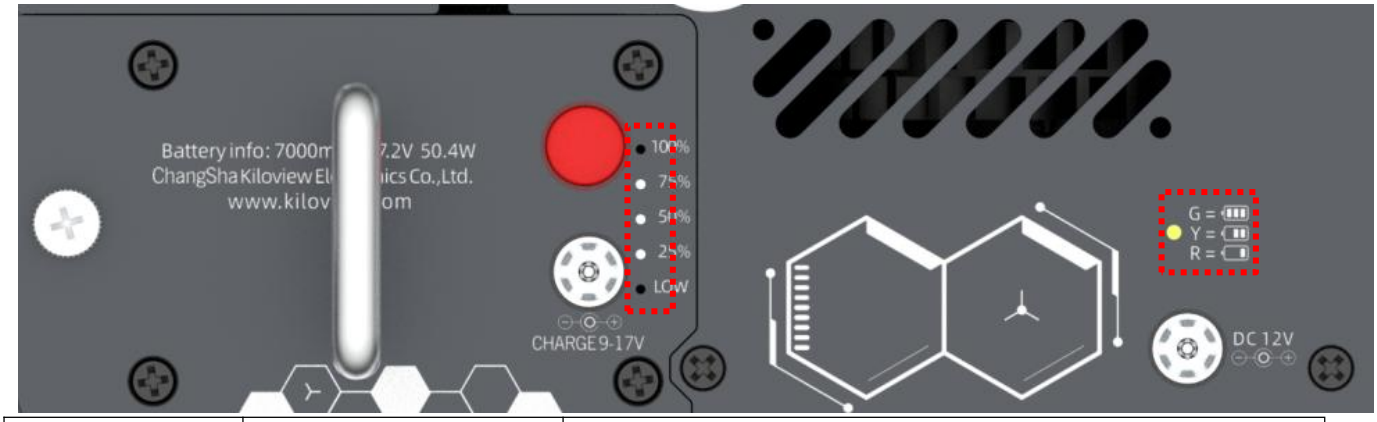
	Insert the HDMI cable and fasten it with the buckle on the HDMI cable strap.
	If it is necessary to remove the bound HDMI cable, unlock the two buckles as shown in the illustration, and then take out the HDMI cable.

Note

- The device is equipped with a Wi-Fi module integrated with a SD card slot, allowing users to insert a SD card for video recording.
- When inserting the module, ensure it aligns with the card slot, and the orientation matches the interface.
- After installing the module and closing the top cover, make sure to push the cover to the bottom and securely fasten it with the latch. Failure to do so may cause the module to shake during use, potentially damaging the hardware.
- The 4G/5G module is optional, and users can purchase it flexibly according to their needs. Please contact your dealer or purchase from the official channel.
- In addition to the built-in battery, the device is also equipped with an external battery as standard. If you need to replace the external battery during use, please contact your dealer or purchase from the official channel.

4.4 Battery indicator light

After the battery is installed, the P3 battery indicator light can help users understand the current device power usage. The colors of the indicator light correspond to different states as follows:



Indicator light	Status	Explanation
Internal Battery	Red	Current remaining battery <25%
	Orange	Current remaining battery 25%~50%
	Green	Current remaining battery >50%
External Battery	1. On the external battery there are 5 different indicators reflecting the remaining battery level from low, 25%, 50%, 75%, 100%.Each light correspond to indicate the remaining battery charge. 2. When the external battery power is less than 25%, the red indicator light will turn on, indicating low battery level. 3. When the external battery power is in the range of 25% to 100%, the corresponding battery level indicator lights will remain solid.	

Note:

- Pressing the red switch on the external battery allows you to check the current remaining battery power.
- When the LOW light (red light) and the 25% light (white light) alternate blinking, it indicates a battery abnormality with the following explanations:

  One red blink followed by one white blink: Battery communication abnormality.

  One red blink followed by two white blinks: Charging abnormality.

  Two red blinks followed by one white blink: Both battery communication and charging abnormalities.

5 First Boot Guide

When the new device is powered on for the first time, the P3 display screen will show the system startup process and guide users through the device initialization. Device initialization consists of three steps: language selection, confirmation of user license agreement, and network configuration, guiding users to complete the initial device setup.

5.1 Select Default Language

P3 supports either Chinese or English interfaces. During the initial setup, users are prompted to choose the default language of the device(refer to Figure 1). If users wish to change the default language later, they can do so in the system settings. After selecting the language, users can click **"->"** to proceed to the user license agreement confirmation.

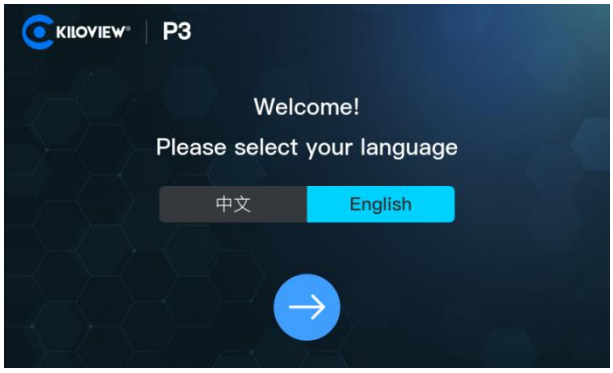


Figure 1: Initial Boot Language Selection Guide Page

5.2 User License Agreement

According to relevant legal requirements, users must read and agree to the user license agreement before using the device. Therefore, after selecting the language, users need to read and click the **"I have read and agree"** option to officially use the device.

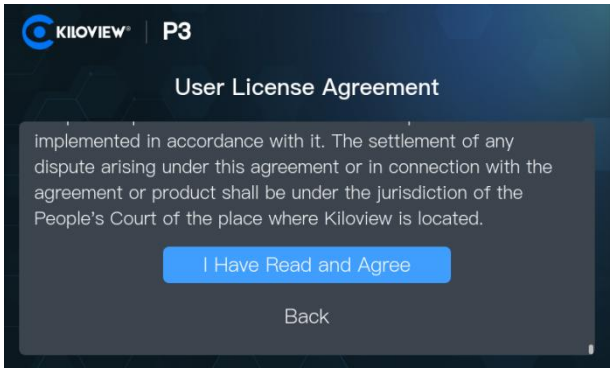


Figure 2: User License Agreement Guide Page

5.3 Network Configuration

The P3 device needs to be used in a connected environment, so during the initial setup process, users need to configure the network. For detailed instructions on network configuration, please refer to section 6.6.3. If you prefer not to configure the network at this time, you can skip the relevant options and later configure the network connection through the device's LCD screen.

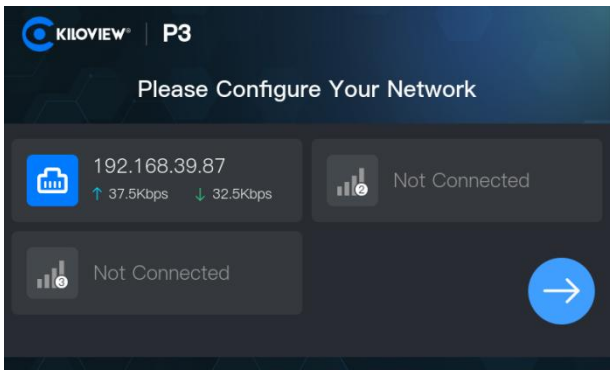


Figure 3: Initial Boot Network Configuration Guide Page

5.4 Boot Guide Completion

After the initial startup guide of P3 is completed, the system will prompt the device's WEB management address and a QR code for quick login. Users can use a computer to log in or scan the QR code with a mobile phone to perform more detailed settings on the device, or click **'Configuration Completed'** to start using the device.

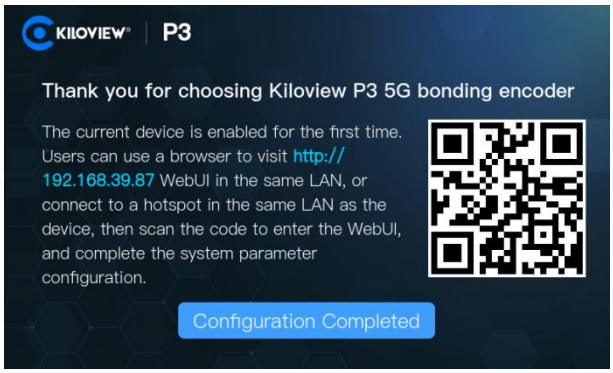


Figure 4: Initial Boot Configuration Completion Guide Page

5.5 Default Username and Password

Note:

The default username for the initial login to the device is **admin**, and the password is **admin**. It is recommended to change the default password during your first login.

6 LCD Screen Operation Instructions

6.1 LCD Screen Main Interface

After the startup guide is completed, P3's LCD display will show the main interface. This interface is divided into the top navigation bar (1), operation menu (2), video preview area (3), and bottom information bar (4) (refer to Figure 5).

Figure 5: LCD Screen Main Interface

The main interface includes a top navigation bar, video preview area, operation menu, and bottom information bar. The top navigation bar displays the network signal status, current network upload data transmission rate, battery usage, and other information. The video preview area allows users to view the current video feed, and clicking on the previewed video enables full-screen viewing. The operation menu provides access to various device functions and configurations. The bottom information bar displays video status of the P3 device.

6.2 Video Sources

By clicking the **"Source"** button on the main interface operation menu, you can enter the video source selection and video source encoding settings interface(refer to figure 6). In the video source interface, you can quickly set encoding parameters such as video source, encoding protocol, output resolution, frame rate, bitrate, and audio source. Corresponding parameter explanations:

- Video Source: HDMI/SDI optional.
- Encoding: H.264/H.265 optional.
- Scaling: Default is AUTO, which maintains the video resolution of the encoded output consistent with the actual HDMI/SDI input resolution. You can also specify scaling to a specific resolution (choose from the list).
  Note: Currently, P3 does not support video magnification, so scaling will not work if the selected scaling resolution is larger than the actual input resolution.
- Frame Rate: Default is AUTO, which automatically matches the frame rate based on the input source. You can also choose half frame rate (when frame rate >= 50, it halves the original frame rate). Alternatively, you can specify other frame rates (choose from the list).
  Note: Currently, P3 does not support frame interpolation, so selecting a frame rate higher than the actual input frame rate will not work.
- Bitrate: Supports selectable rates from 512K to 40M, defaulting to 6M bitrate.
- Audio Source: Defaults to using the same audio source as the video source, or Line IN can be selected as the audio source.

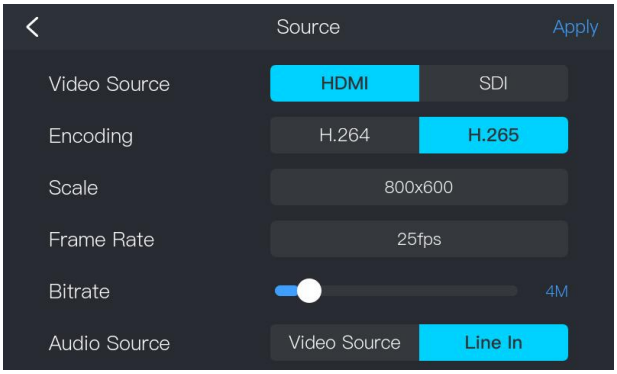
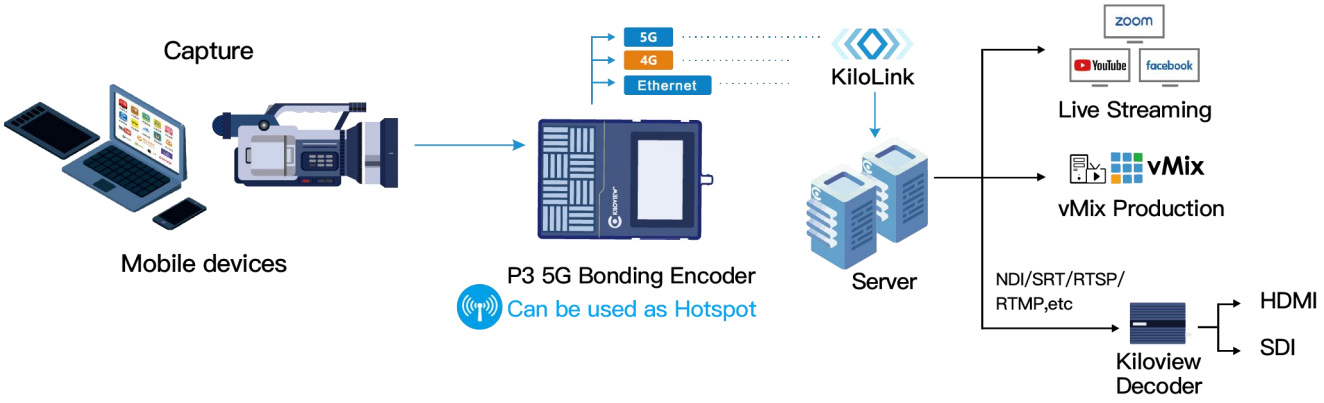


Figure 6 LCD screen 'Source' configuration interface

6.3 Bonding

Bonding (or Link Bonding), refers to the technology of combining multiple physical network links into a single logical link. The principle behind this is bundling several physical links together to increase bandwidth, enhance reliability, and achieve load balancing. Leveraging the proprietary KiloLink bonding algorithm developed by Kiloview Company, it achieves highly stable multi-link bonding transmission capabilities.It can flexibly combine various network links such as 4G/5G, Wi-Fi, and Ethernet, using encryption algorithms to achieve bandwidth aggregation, adaptive load balancing, and dynamic bitrate adjustment for automatic calibration. This ensures stable data transmission even in complex and fluctuating weak network environments. Additionally, users can customize buffer times in the Kilolink Server Pro backend to further reduce the likelihood of buffering during live broadcasts.



To achieve P3 bonding transmission, you need a KiloLink Server Pro server and configure the registration information of the P3 device on the server side (please refer to the KiloLink Server Pro operation manual for the configuration and detailed use of the KiloLink Server Pro server); before performing bonding transmission on the P3 device side, you also need to configure the corresponding parameters for the connection between the P3 device and KiloLink Server Pro on the device side.

Click the **"Bonding"** button in the main interface operation menu to navigate to the bonding setup page (refer to Figure 7).To configure the connection with KiloLink Server Pro, follow these steps:

1.Navigate to the bonding setup page by clicking the "Bonding" button in the main interface operation menu.

2.Enter the server address, server port, authorization code, and select the network communication links to participate in the bonding communication.

3.Click the **"Apply"** button to configure and establish the connection parameters.

After completing these steps, the device will be capable of simultaneously transmitting audiovisual information through multiple communication links bonded together.

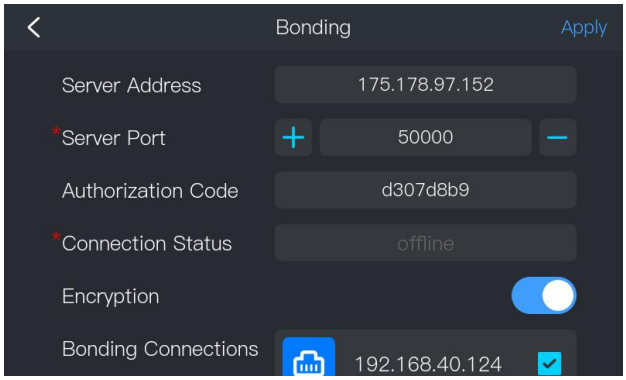


Figure 7 LCD screen bonding connection configuration

Bonding Parameters:

- Server Address: Enter the IP address or domain name to connect to KiloLink Server Pro.

- Server Port: Enter the corresponding open port number on KiloLink Server Pro for connection.
- Authorization Code: Enter the authorization code specific to this device for connecting to KiloLink Server Pro.
- Encryption: Enable or disable data encryption for P3 aggregation transmission.
- Bonding Connections: Select the network links participating in the aggregation transmission.

6.4 Record and Stream

After configuring the bonding service, the device can start streaming operations. Clicking on the top right corner of the main interface will take you to the shortcut operations interface (as shown in Figure 8).

In the shortcut streaming interface, you can perform recording or aggregate streaming operations. During aggregate streaming, it's convenient to set the encoding bitrate and support dynamic bitrate adjustment. When users enable dynamic bitrate adjustment, the device's bitrate will adjust dynamically based on the network environment (the upper limit of bitrate fluctuation will not exceed the set bitrate value).

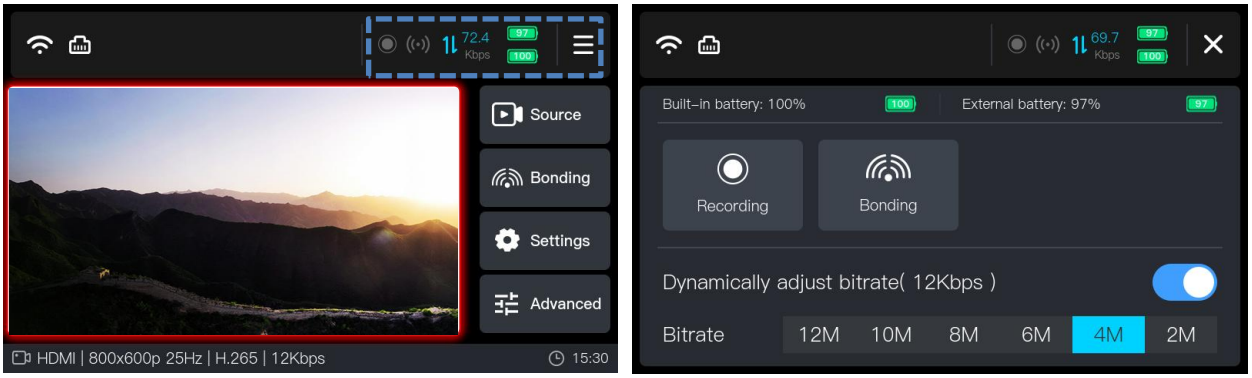


Figure 8 Main Interface and Shortcut Recording/Streaming Operation Interface

6.5 Advanced

Clicking the **'Advanced'** button on the main interface will take you to the operation screen, where you can find functions such as intercom, screen rotation, screen brightness adjustment, restart, and shutdown.

Explanation of Options:

- Intercom: Click **"Connect"** to connect to the KIS voice intercom server for two-way voice communication.
- Rotation: When enabled, the screen rotates 180 degrees to match scenarios where the device needs to be flipped.
- Screen Brightness: Adjust the screen brightness dynamically.
- Restart: Restart the P3 device.
- Shutdown: Power off the device.

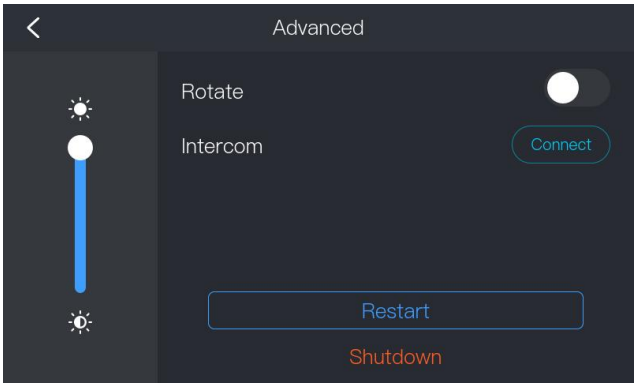


Figure 9 LCD advanced settings interface

6.6 Settings

Clicking the **"Settings"** button in the main interface operation menu allows access to the P3 settings interface. The settings interface includes four options: Status, System Settings, Network, and Recording. These options respectively allow viewing the device's operational status and configuring several system parameters.

6.6.1 Status

The **"Status"** tab displays the current operating data of the device, such as temperature, CPU usage, device working time, device name, communication data, etc.

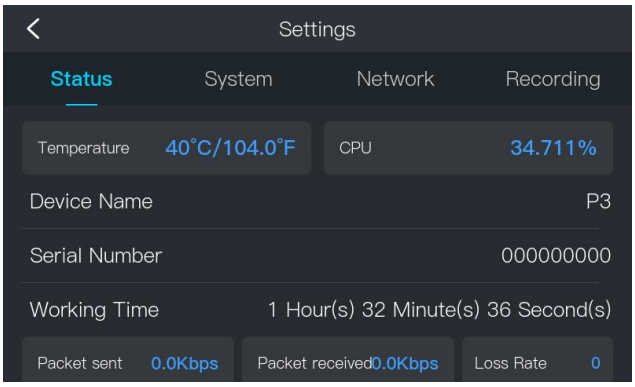


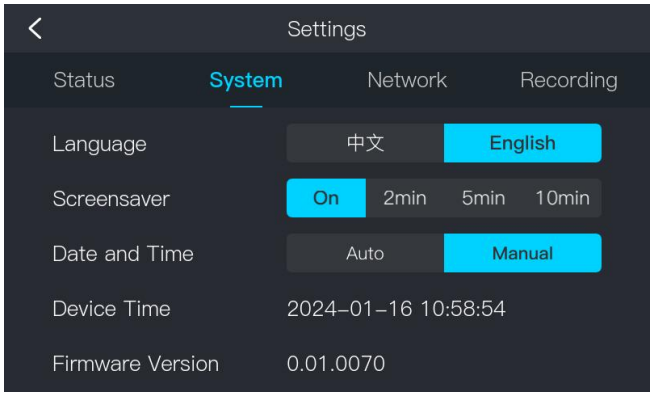
Figure 10 LCD Settings - Operation status interface

6.6.2 System Settings

The system settings tab allows configuration of the device's default language, screen saver (constant/2/5/10 minutes), device time (automatically obtain NTP time/manual setting), firmware upgrade, and factory reset.

6.6.2.1 System Settings Parameters Description

- **Language:** P3 supports switching between "**中文/English**".
- **Screensaver:** Supports **"On/2 minutes/5 minutes/10 minutes"** options, indicating when the screen will turn off after a period of inactivity. Note: Extended display of static content on the screen may cause image retention or even permanent damage. Proper screen saver settings can protect the screen and save power.
- **Date and Time**: Supports "Auto/Manual" time setting. Automatic refers to obtaining time via NTP servers, where NTP stands for Network Time Protocol. When using NTP synchronization, P3 obtains and periodically synchronizes time from specified NTP servers to maintain consistency with global standard time. See section 10.4 for configuring NTP servers. Manual time setting allows users to input date/time manually. Note: After manual time setting, the time will be maintained by P3's internal battery and RTC clock system. Due to RTC system accuracy errors, significant time discrepancies may occur over time.



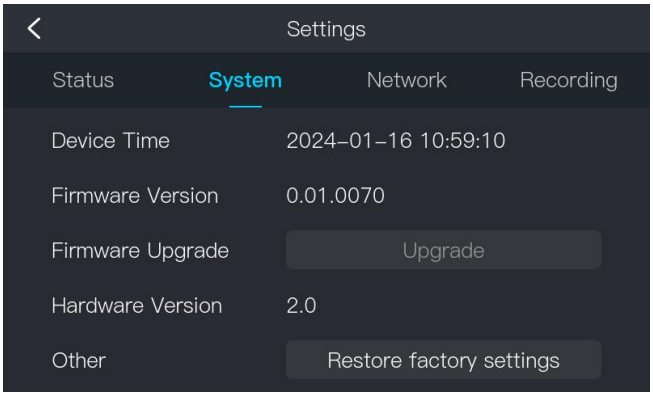


Figure 11 LCD Settings - System settings interface

6.6.2.2 Firmware Upgrade and Factory Reset

Firmware Upgrade: Clicking "**Upgrade**" updates the firmware (software) of the P3 device. New firmware releases provide enhancements in functionality, performance optimization, and bug fixes.

Insert a USB flash drive containing the P3 firmware update (firmware must be placed in the root directory of the USB flash drive), click **"Firmware Upgrade"**, and the system will automatically search for the latest valid firmware version in the root directory of the USB flash drive and proceed with the upgrade automatically.

Note: To prevent upgrade failures, insert the USB flash drive into a computer before upgrading, delete unnecessary upgrade packages, keep only the latest complete and correctly named upgrade package, and ensure it meets the device upgrade version requirements.

After firmware update, the system will prompt for restart. Click OK to restart the device for the upgrade. Please wait patiently for the device to restart.

Restore factory settings: Factory reset restores the device to its initial state when it left the factory. Factory reset clears all device configuration information, but successfully upgraded firmware will remain. To change firmware versions, use the firmware upgrade function to update earlier versions of firmware.

Simply click "**Restore factory settings**" on the system settings tab page to perform the factory reset operation on the device.

For more information on firmware upgrade and factory reset, refer to section 10.7.

Note:

- During the upgrade process, do not power off the device to avoid startup issues.
- When using a USB flash drive for firmware upgrade, ensure the file system format is FAT/FAT32/exFAT.
- The upgrade process takes approximately 3-5 minutes. If the upgrade prompt does not appear after 5 minutes, try restarting the device. If the device fails to start normally, contact technical support.

6.6.3 Network

The P3 main unit supports Ethernet, Wi-Fi, 4G/5G, and allows aggregation communication via Wi-Fi and 4G/5G modules. Navigate to **'System -> Network'** in the main menu to configure Ethernet, Wi-Fi, and 4G/5G network interface parameters.

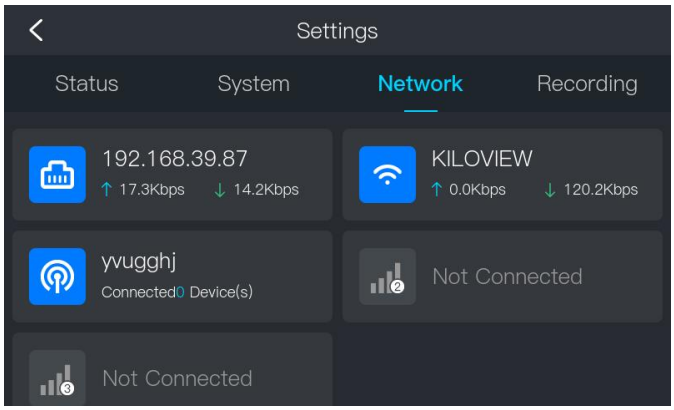


Figure 12 Settings - Network settings interface

6.6.3.1 Ethernet Settings

In network settings, select Ethernet to choose automatic or manual network configuration. **"Auto"** uses DHCP to configure the Ethernet interface; for manual configuration, set the IP address, Subnet Mask, Gateway, DNS, etc. Click **"Apply"** to activate settings.

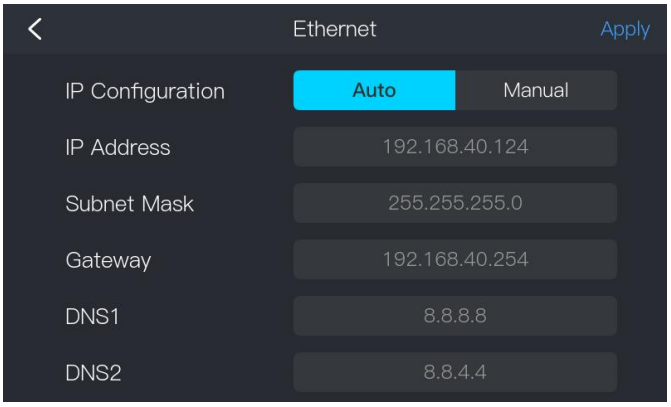


Figure 13 Network settings Ethernet settings interface

6.6.3.2 Wireless LAN Settings

To configure P3 to connect to a Wi-Fi hotspot, click **'Wi-Fi'** in the network interface to enter Wi-Fi settings (see Figure 14).

Figure 14 Wi-Fi settings interface

Select the desired Wi-Fi hotspot, input the Wi-Fi connection password in the popup window, and click "Apply" to connect. For more network configuration needs, settings such as automatic connection and IP address acquisition can be adjusted on this page (as shown in Figure 15).

Wi-Fi Settings Parameters:

- Auto Connect: Enables automatic connection to the Wi-Fi hotspot when detected.
- BSSID (Basic Service Set Identifier): The unique identifier of the connected hotspot, BSSID is a physical address composed of 6 bytes. This parameter cannot be configured and is used solely to distinguish different AP.
- Encryption Methods: The P3 supports connecting to Wi-Fi hotspots using encryption methods such as WPA, WPA-PSK, WPA2, and WPA2-PSK. Currently, most routers use WPA2 encryption. Explanation: WPA (Wi-Fi Protected Access) provides data encryption and authentication through TKIP (Temporal Key Integrity Protocol). WPA2 offers enhanced security with the more robust AES (Advanced Encryption Standard) encryption algorithm. WPA-PSK/WPA2-PSK are pre-shared key versions of these standards, commonly used in home or small office network environments.

  Note: Please select the appropriate encryption method to ensure effective Wi-Fi connectivity.
- Password: Wi-Fi hotspot password.
- IP Configuration: Supports automatic or manual IP settings.

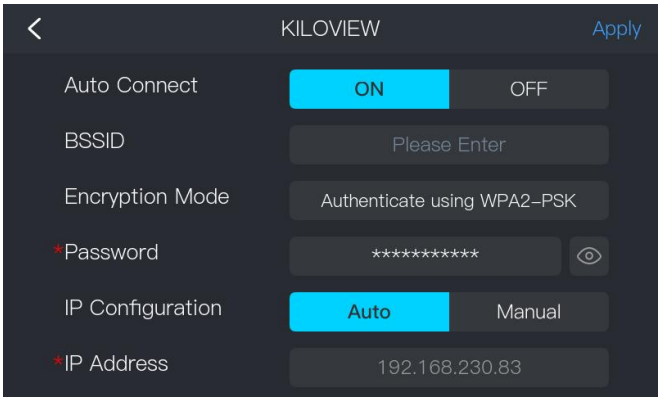


Figure 15 Wi-Fi connection settings interface

6.6.3.3 Wireless Hotspot Settings

If you need P3 to serve as a Wi-Fi hotspot to provide internet access to other devices, select Wi-Fi hotspot in the main network configuration interface for configuration (as shown in Figure 16). Wi-Fi hotspot settings can specify the shared Wi-Fi hotspot name, password, default IP network segment, and Wi-Fi channel. In wireless networks, select Wi-Fi channels to optimize performance and reduce interference. Ensure compliance with local regulations regarding channel usage.

Note: P3's Wi-Fi hotspot defaults to supporting only a 24-bit subnet mask, so the IP address network segment needs to be set with the first three IP address segments.Once connected, the device's DHCP service will allocate an IP address from the range (XXX.XXX.XXX.10-XXX.XXX.XXX.250) to the connecting terminal. Due to performance limitations of the P3 device, it is recommended not to connect more than three terminals to the hotspot simultaneously.

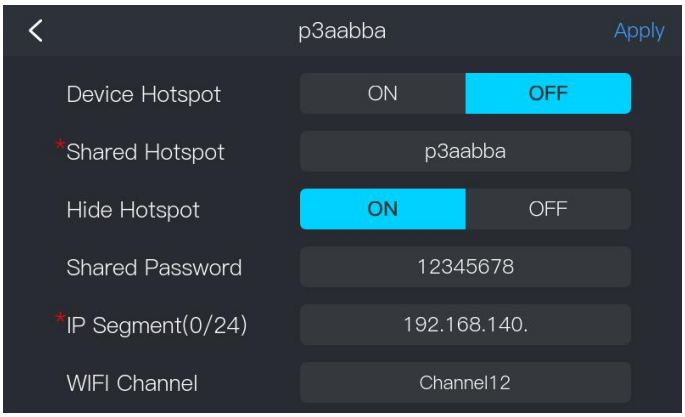


Figure 16 Wi-Fi shared hotspot configuration

6.6.3.4 4G/5G Settings

When the P3 inserts the 4G/5G module and SIM card, corresponding network connection options will automatically appear in the "**Network Settings**" interface. Once the module connects to the network, it will obtain IP address and other parameters from the carrier network and display as **"Connected**" On the "**Network Settings**" page, you can view the connection status and up/downlink speeds.

Clicking on the respective 4G/5G module option in the network settings interface allows for connection configuration. Configuration options include enabling mobile network for the module, enabling 5G (only for 5G modules), APN information, and SIM card identification/authentication information (see Figure 17)..

Key settings for the 4G/5G module include:

- Mobile Network: Controls the switch for mobile network; disabling it will deactivate the module.
- Enable 5G: For 5G modules, disabling this switch will deactivate the 5G mode (operating then in 4G or compatible modes).
- 5G Network Mode: Two choices include NSA (Non-Standalone Access) and NSA+SA (combined Non-Standalone and Standalone Access, requiring support from the carrier). In AUTO mode, the network will automatically select the 5G mode.
- Network Operator: Displays the current network service provider.

- IP Address: Shows the IP address obtained after SIM card connection. If the SIM card fails to connect, the IP address cannot be obtained; clicking "**Refresh**" updates IP address information to check SIM card connectivity.
- PIN of SIM Card: Input for the SIM card's PIN code, defaulting to unset. The PIN code is a security measure to protect the SIM card from unauthorized use; users must set the PIN for authentication when required.
- APN (Access Point Name): Automatically selects an appropriate APN based on the connected carrier network, but also supports manual configuration.
  To access 4G/5G networks from different operators, you need to provide the correct APN (Access Point Name). These APNs are defined and provided by the carriers. Entering an incorrect APN may result in inability to connect to the network or restricted bandwidth for network data transmission. Therefore, before configuring, please confirm the correct APN values with youroperators.
  If you need to manually set the APN, please input the APN provided by the operators directly or select from the device's preset APN list.
- Auth Methods: Supports PAP/CHAP/MsChapV2 for network connection authentication. Used to verify user identity for mobile network access. PAP is suitable for scenarios with low security requirements, such as prepaid SIM card internet access; CHAP is for environments needing higher security, like enterprise networks or long-term connections; MsChapV2 is for Windows-based systems or networks relying on Microsoft technologies, offering complex and robust authentication protection. Confirm the carrier's authentication method for practical usage.
  Note: Regardless of the authentication method chosen, corresponding account and password information must be provided for the authentication method to take effect.
- User name: Used to enter the account required for authentication.
- Password: Used to enter the password required for authentication.

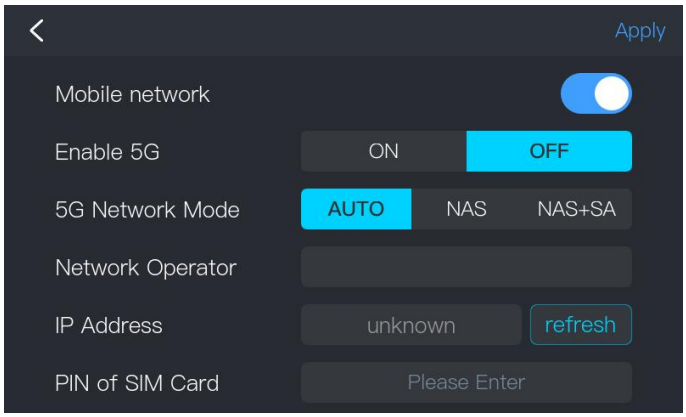


Figure 17 5G module configuration interface

Note:

If you enter the wrong PIN three times in a row,the SIM card will be locked. In this case, you will need to use the PUK code (PIN Unlock Key) to unlock it. If the PUK code is entered incorrectly more than 10 times, the SIM card will be permanently locked, requiring a replacement SIM card.

6.6.4 Record

The P3 supports local recording, allowing users to simply insert a SD card or USB storage drive for recording. For additional recording settings, users can configure them in the recording interface under system settings (refer to Figure 18).

Record Parameters:

- Video File Format: Supports two recording file formats, MP4 and MOV, with MP4 being the default option.

File Split: Supports three recording file splitting methods: no splitting, splitting by duration, and splitting by size.

- No Splitting: The recorded content is saved in a single file without any splitting.
- by Duration: The recorded content is divided into multiple files based on user-selected time intervals(1 minute to 1 day).
- by Size: Automatically divides the recorded content into multiple files based on user-defined file size limits (512MB to 4GB).

- Recording Strategies: Supports two recording strategies, Stop When Full and Automatically Overwrite Previously recorded Files.
  - Stop When Full : Automatically stops recording when the storage space of the recording device reaches its maximum allowable capacity. This strategy focuses on maintaining the integrity of stored data. It is recommended to reserve sufficient storage space when using this strategy.
  - Overwrite : When the storage space of the recording device is about to reach the preset limit, the system deletes the oldest recording files to make room for new recordings. This strategy emphasizes continuous recording. Users can choose flexibly according to their application scenarios.

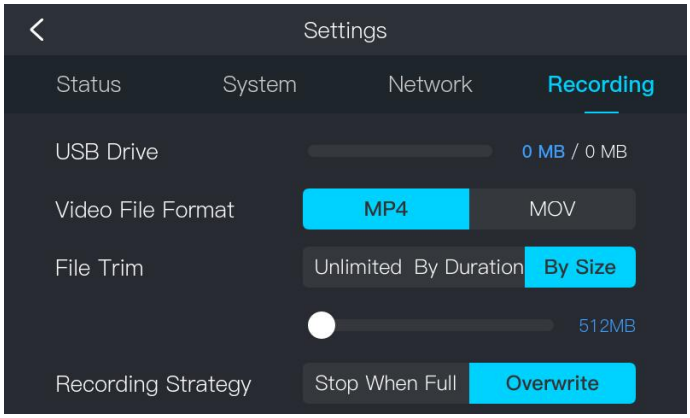


Figure 18: Settings - Recording Configuration Interface

7 WEB Management System

7.1 Accessing the Device Web Management System via Network

In addition to utilizing the LCD display screen for quick device settings and operations, this device also supports operation and management through the WEB management system. To access the device management page, simply open a Web browser and enter the following in the address bar: **http://device_IP_address/** to access the device management system. If HTTPS service is enabled, you can also enter: **https://device_IP_address/** to access the system management backend (for details on enabling HTTPS service, refer to section 7.3.5).

1） After normal login, on the encoder's Web management page, you can set encoding parameters and function parameters, etc. The encoder page is shown in Figure 19:

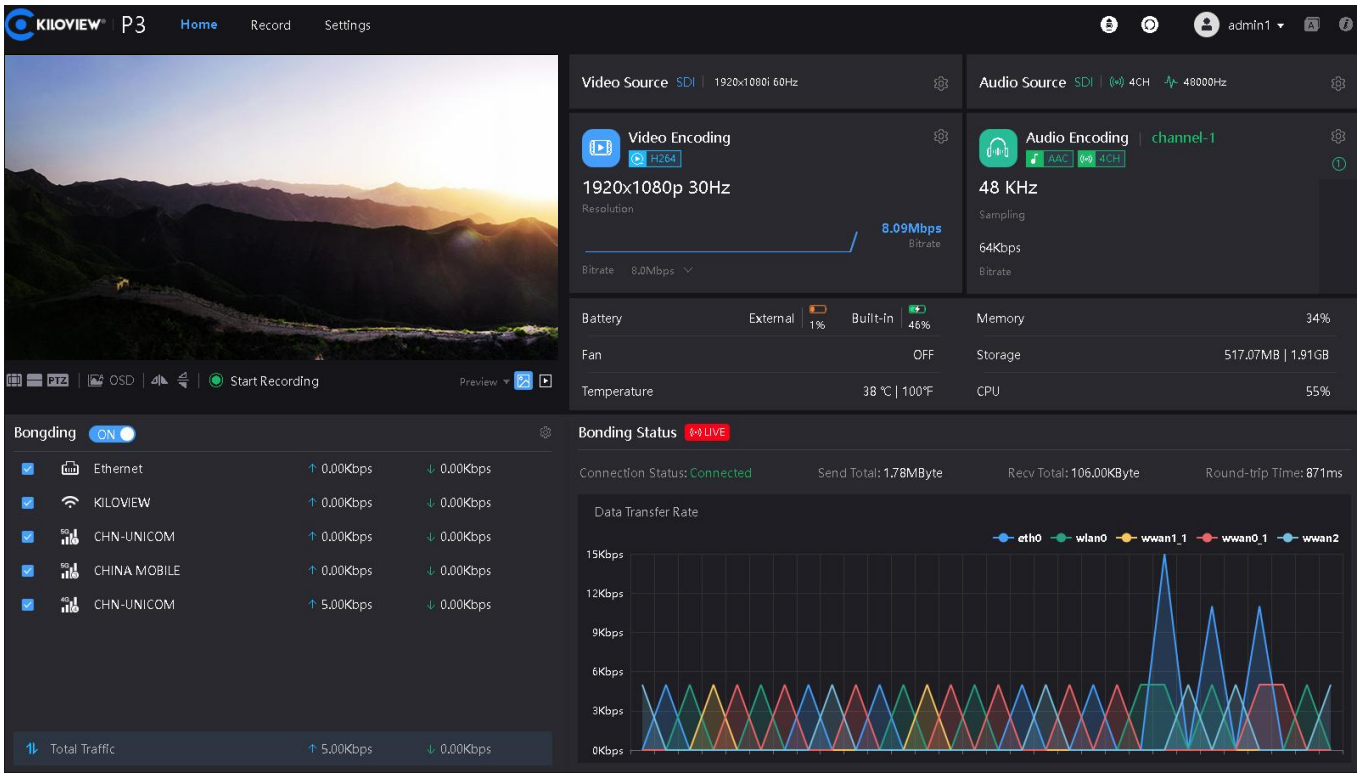


Figure 19: Main interface after logging into the Web UI

Note

- The default username for logging into the device is **admin**, and the password is **admin**.
- For information security, it is recommended to change the password immediately after the initial login!
- Considering browser compatibility issues, it is recommended to use Chrome or Edge.
- This device requires KiloLink Server Pro to provide aggregation service support for P3.

7.2 Accessing the Device via Wi-Fi Hotspot

For user convenience in management, users can also connect to the device via a Wi-Fi terminal for initial setup. After enabling the Wi-Fi hotspot on the device and setting the Wi-Fi hotspot name and password, you can use a smartphone or laptop as a Wi-Fi terminal to connect to and manage the encoder device. Once connected to the P3 hotspot, you can enter the device's IP address in the browser on your smartphone or laptop to access the encoder's WEB management interface. (Configuration of P3 hotspot can be done through the device's small screen or WEB UI configuration, refer to sections 6.6.3 or 7.3.3 respectively.)

Note:

P3 has only one Wi-Fi module, and when it acts as a hotspot while connecting to other Wi-Fi networks, it can affect both the Wi-Fi signal and device performance. Therefore, it is recommended to enable the Wi-Fi hotspot function only during device configuration. In scenarios where Wi-Fi is needed for aggregated streaming, it is advised to disable the Wi-Fi hotspot to avoid impacting streaming performance.

7.3 Network Setting

This device supports Ethernet, Wi-Fi, and 4G/5G networks. You can configure the parameters for the Ethernet, Wi-Fi, and 4G/5G network interfaces by navigating to "**Settings**" -> "**Network Settings**" in the main interface menu. Below is a detailed explanation of the network configuration.

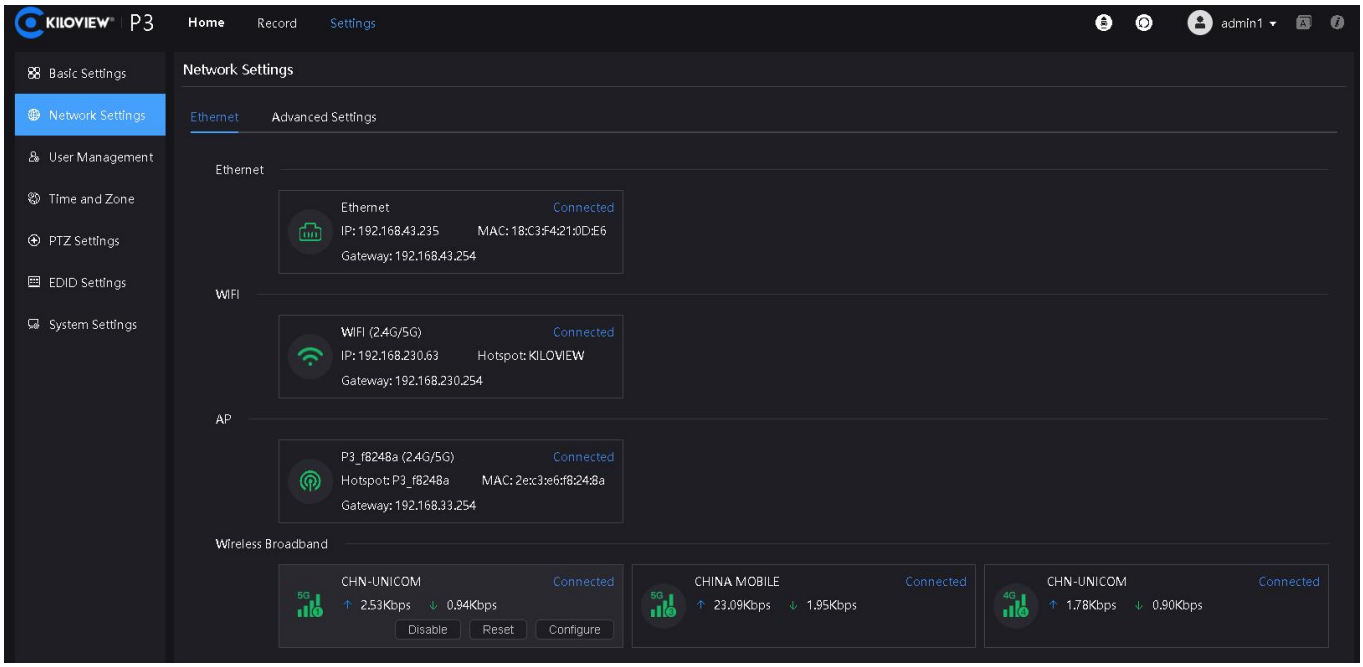


Figure 20 WEB UI Network Settings Interface

7.3.1 Ethernet

In the network settings, click on the **"Ethernet" -> "Configure"** button to set up automatic or manual network configuration. Selecting **"Automatic"** will allow P3's Ethernet interface to obtain and configure information using the DHCP protocol. If manual configuration is preferred, you can set parameters such as IP address, Net Mask, Gateway, DNS, etc. Once configured, click **"Apply"** to activate the settings.

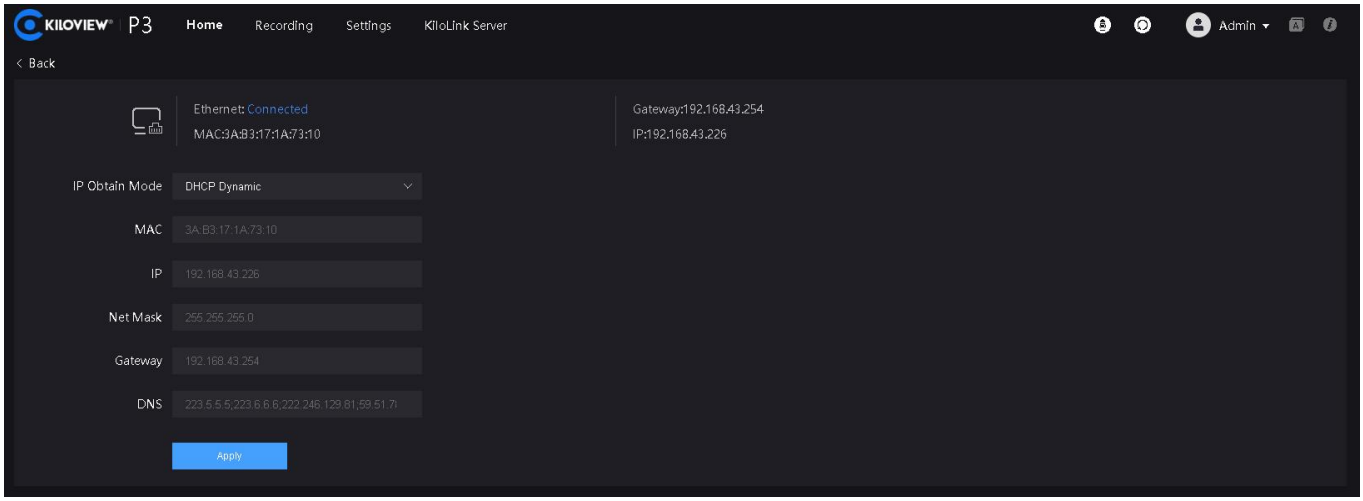


Figure 21 Ethernet Configuration in Network Settings

7.3.2 Wi-Fi Network

To connect to Wi-Fi, simply click on "**Wi-Fi**" -> "**Configure**" button to enter the Wi-Fi connection interface. Click on the

Wi-Fi hotspot listed under "**List of Currently Scanned Hotspots**" and then "**Connect**" to establish a connection. For Wi-Fi networks with hidden SSIDs, use "**Manually Add a Hidden Hotspot**" to connect. Once successfully connected, the encoder will store the connection details for future use. To forget a saved Wi-Fi connection, select the saved Wi-Fi hotspot and click "**Forget**."

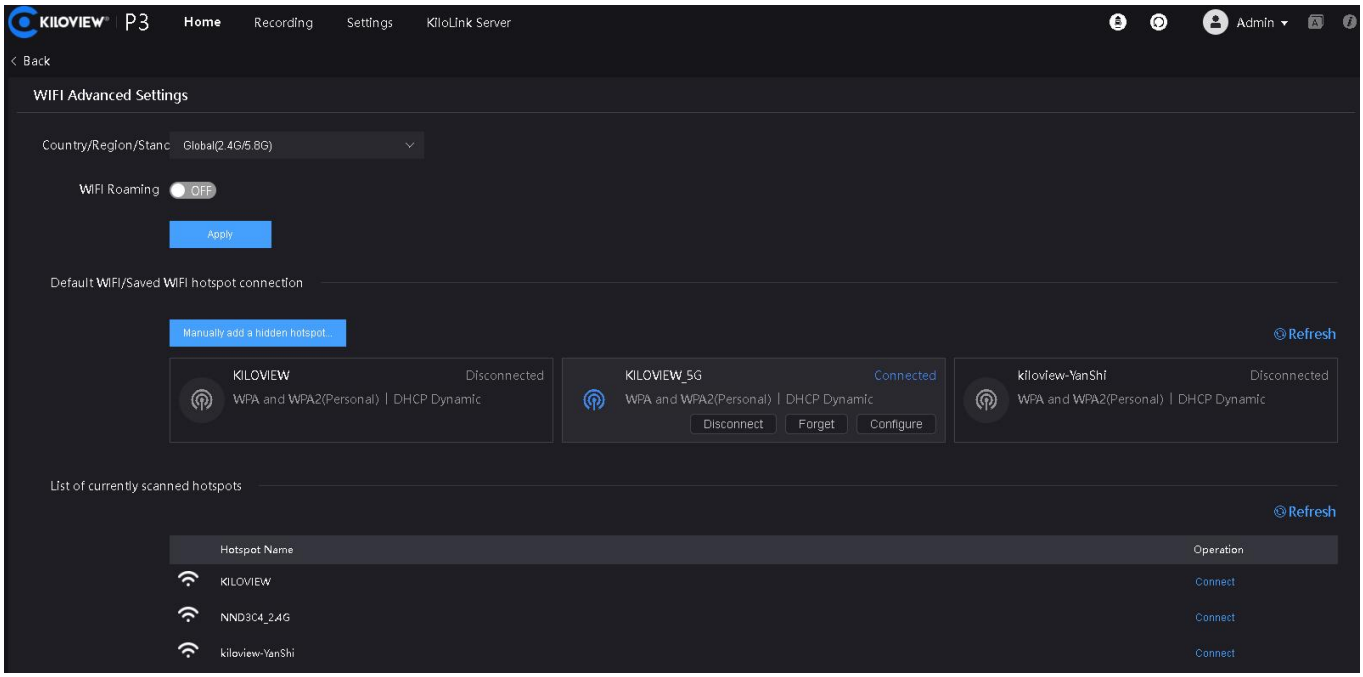


Figure 22 Wi-Fi Configuration Interface

Note:

To ensure reliable and efficient wireless transmission, maintain an optimal distance between the Wi-Fi router (AP) and the P3, avoiding obstacles and interference. Using the 5GHz frequency band (channels 36-165) can provide faster connection speeds and reduce wireless channel interference.

7.3.3 AP Settings

To configure an Access Point (AP), click on "AP" -> "Settings" button, and fill out the AP settings in the popup window (refer to Figure 23). Configure shared settings such as Wi-Fi hotspot name, password, default IP subnet to use, and Wi-Fi channel.

Regarding Wi-Fi channel selection:

1.To minimize interference and optimize network performance, choose less crowded channels when configuring wireless hotspots.

2.Different countries and regions have regulations and restrictions on spectrum usage. Ensure to select channels within permissible ranges when operating in restricted areas.

Note: P3's Wi-Fi shared hotspot defaults to supporting a 24-bit subnet mask, so the IP address subnet needs the first three IP address segments. Upon connection, the device's DHCP service will allocate an IP address from this subnet to the connected terminal. Due to P3's performance limitations, it is recommended not to connect more than three terminals simultaneously to the hotspot.

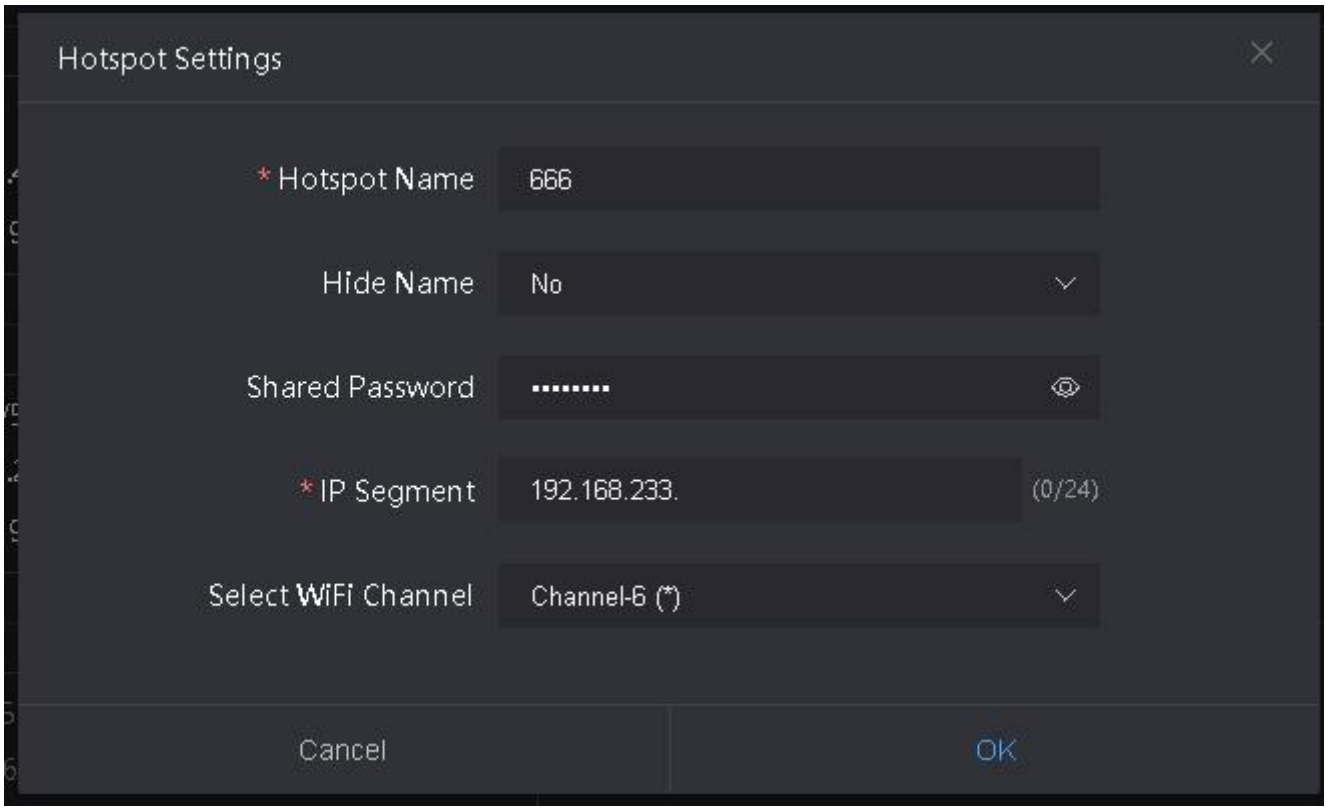


Figure 23 AP Settings Pop-up Interface

7.3.4 4G/5G Network

When the encoder is equipped with a 4G/5G module with a SIM card inserted, corresponding connection options will be added under "Wireless Broadband" in "Network Settings." If the 4G/5G network is active, the connection status will display as "Connected" with corresponding uplink and downlink speeds. Click "Configure" to adjust the network settings of the 4G/5G module, including enabling mobile network, enabling 5G (if applicable to the module), configuring APN information, and SIM card authentication.

Refer to section 6.6.3 of this manual for detailed explanations of each parameter.

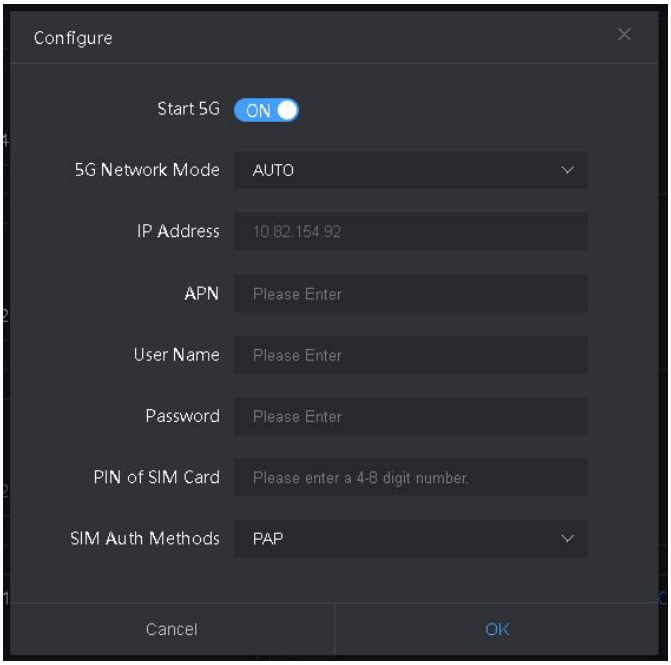


Figure 24 4G/5G Module Parameters Configuration

Note:

Before use, ensure the 4G/5G card is correctly connected and the SIM card has sufficient balance to prevent network unavailability.

7.3.5 Advanced Settings

- **HTTP/HTTPS Settings**

The standard web service port defaults to 80 (HTTPS port is 443) and supports modification within the range of 1-65535. After changing the web service port, to access the device configuration page, append the modified port to the access link. For example, if the IP address before modification was 192.168.1.168 and the web service port was changed from 80 to 90, and HTTPS port from 443 to 450, you would enter: http://192.168.1.168:90 or https://192.168.1.168:450 to access the Web management system. When accessing the device's web page via HTTPS and encountering certificate errors in the browser due to security validation, add the access link to the security exceptions.

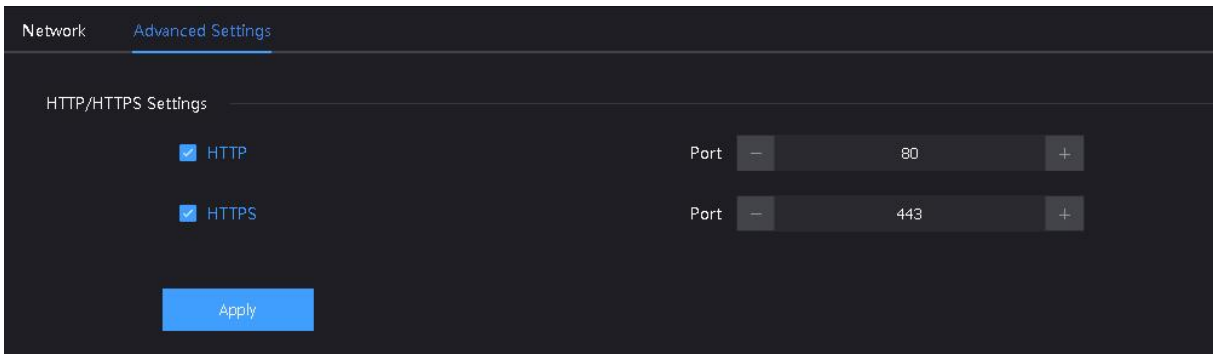


Figure 25 HTTP/HTTPS Configuration Interface

- **Routing Strategy**

Routing strategies define how network data is sent/received between different network interfaces when the device has

multiple interfaces.

Configure routing policies with parameters including:

- Interface: Specifies which network interface processes the data packets for this routing policy.
- Target: Specifies the target network address to which the datagram will be sent.
- Subnet Mask: Used in conjunction with the destination address to define the range of the target network.
- Gateway: (When the target network address is not in the same subnet as the current device's address) Specifies the gateway through which packets destined for the target address are forwarded.
- Metric: Sets the priority of the routing policy; lower values indicate higher priority.
- MTU: Maximum Transmission Unit, sets the maximum length of data packets sent. Packets longer than the MTU will be fragmented.

Note:
Incorrect configurations may lead to device issues. It is recommended that routing policies be configured by professional network administrators.

8 Web-Based Information Viewing and Encoding Settings

8.1 Dashboard

The "Dashboard" is the management homepage that provides an overview of the audio/video equipment's current operational status, audio/video stream status, and network status. Key information is located in the red area of Figure 26.

Below is a brief introduction to the relevant coding parameters and interfaces:

- Video Encoding: Displays the video encoding format.
- Video Source: Shows the interface of the input signal source.
- Encoding Format: Indicates the encoding method of the signal source.
- Resolution: Displays the encoding resolution of the signal source.
- Bitrate: Shows the encoding framerate of the signal source; this option allows quick switching of video encoding bitrate.
- Audio Source: Displays the interface, channels, and sampling rate of the input audio source.
- Audio Format: Shows the encoding audio format of the signal source.
- Audio Sampling Rate: Displays the audio sampling rate of the signal source.
- Number of Channels: Shows the encoding channels of the signal source.
- Network Traffic: Displays real-time upstream and downstream network speeds for each channel and total device traffic.
- Aggregation Status: Indicates whether current streaming is in progress.
- Total Traffic: Displays traffic fluctuations for each channel over a period.
- Memory Usage: Shows device memory status.

- CPU Load: Displays device CPU load status.
- Temperature: Current device temperature.
- Battery: Usage status of internal and external batteries of the device.

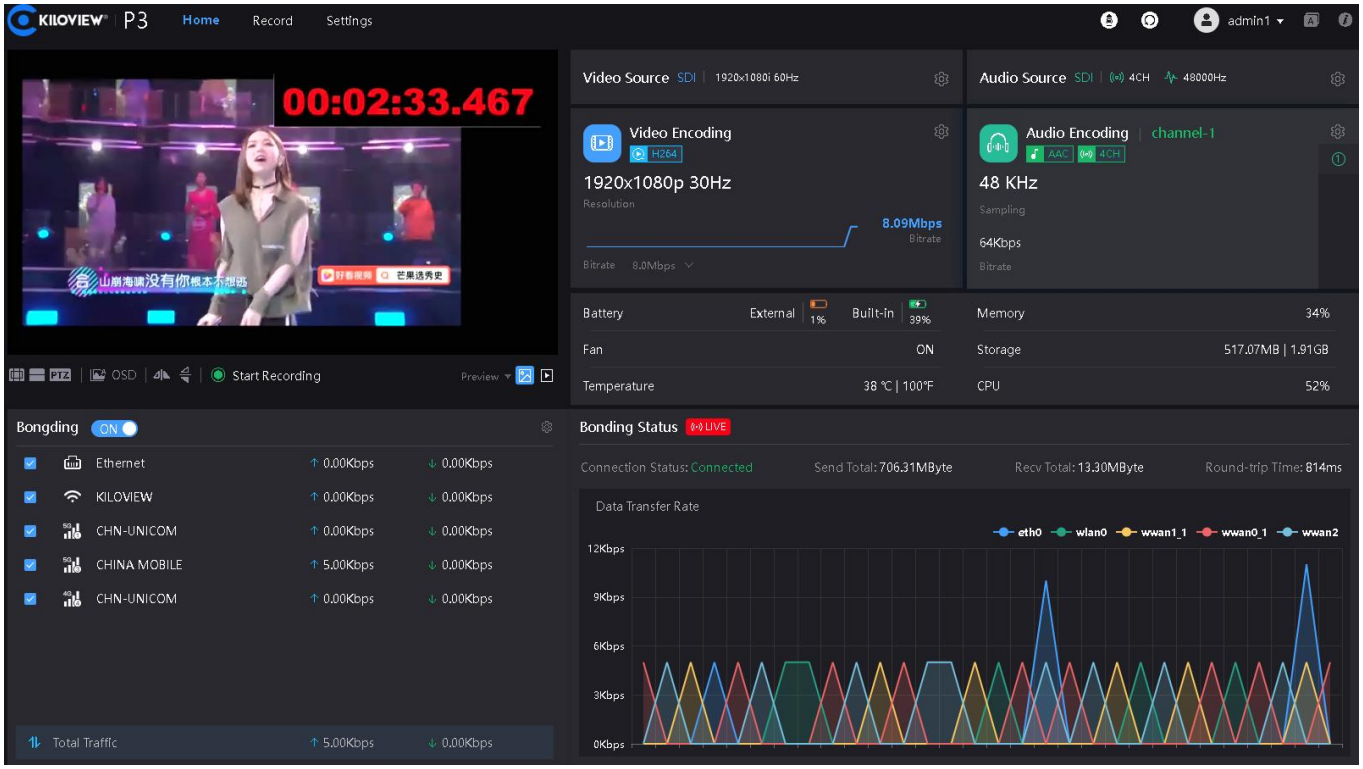


Figure 26: Web Management Backend Homepage

8.2 Top Navigation Bar

In the top navigation bar menu, the left functional area consists of menu items for configuring various functions of the encoder; the right functional area allows operations such as voice intercom, password setting, rebooting, language switching, device information, and other functions.

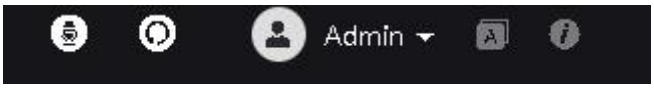


Figure 27: Right Functional Area in the Top Navigation Bar

8.2.1 Modify WEB Login Password

Clicking on the **"Modify Password"** in the dropdown menu under the username will pop up a password modification option box, allowing modification of the username and password for the WEB management terminal. The default username and password are both "**admin**". Usernames support Chinese, English, and numbers, while passwords must include uppercase and lowercase letters and numbers, with a length of 6-32 characters.

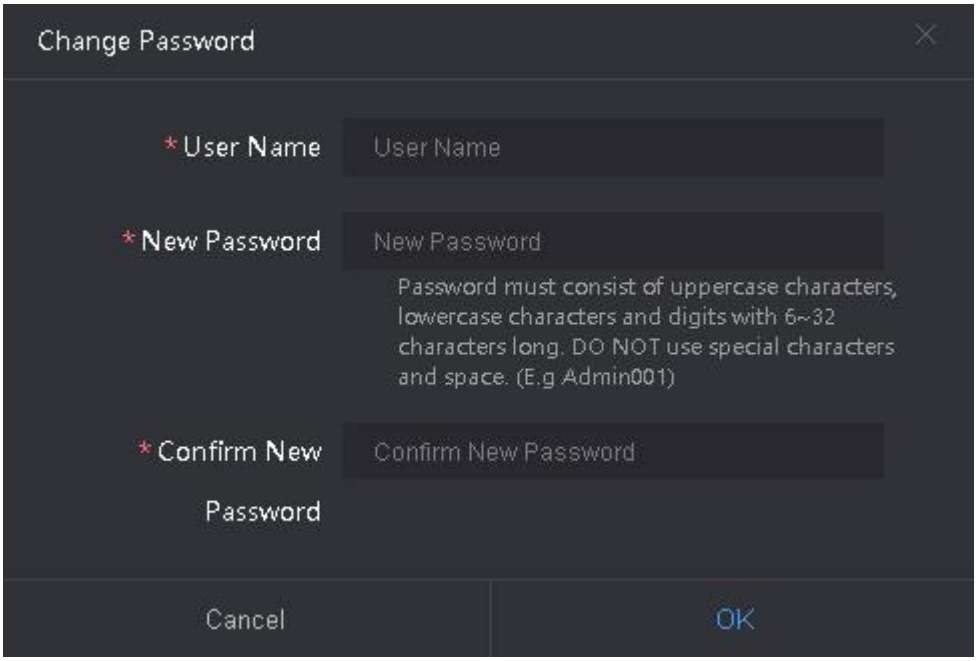


Figure 28: Dialog Box for Modifying WEB Login User Password

8.2.2 Restart Device

On the device management page, click the "  " icon in the upper right corner. After confirming in the popup window, the device will automatically shut down and then restart, which takes approximately 1 minute.

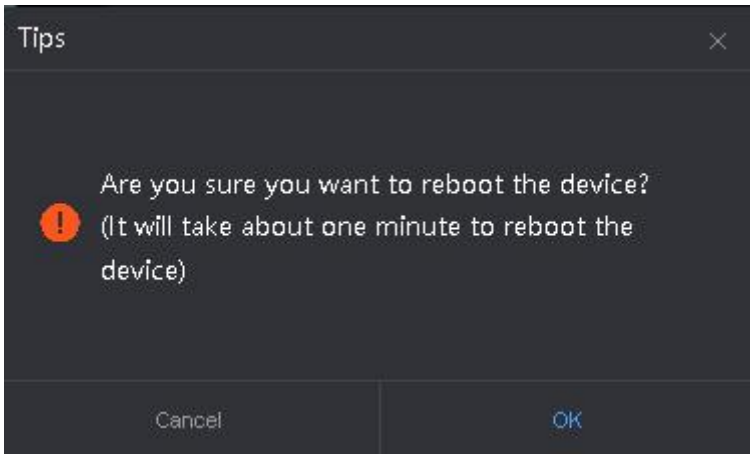


Figure 29: Confirmation Popup for Device Restart

8.2.3 Language Settings

Clicking "  " will pop up a drop-down menu, where you can select the corresponding language for switching.

8.2.4 Voice Intercom

KIS (Kiloview Intercom Server) is a straightforward and practical multi-party voice communication platform that supports login via various methods (Kiloview codec, Kiloview voice panel, mobile/PAD, web client, handheld terminal). It enables multi-party voice calls across the internet, allowing participation from multiple devices regardless of location.

P3 can support voice intercom functionality by connecting to KIS. The voice intercom feature on P3 operates over HTTPS protocol. Therefore, before enabling voice intercom, the network must be switched to HTTPS protocol (for

instructions on switching to HTTPS protocol, refer to section 7.3.5).

The voice intercom function of P3 allows users to log in to the webpage via HTTPS mode using web browsers (Chrome, Edge, Safari), or directly connect a headset to the device for voice intercom.

In HTTPS mode on the web browser, click "  " after the webpage loads. Enter the IP address and authorization code to configure the connection to the KIS intercom server. It supports:

1. Intercom between the management interface and the device.
2. The device Joins KIS (Kiloview Intercom Server) for intercom (For more detailed configuration on joining KIS intercom server, please refer to the "Kiloview Intercom Server Operation Manual").

After setup, use a web browser (Chrome, Edge, Safari) in HTTPS mode to log in to the webpage. Click the "  " button in the upper right corner of the page to select a KIS server for voice intercom operations (see Figure 30). Alternatively, connect a headset directly to the device and activate the voice intercom function on the device side.

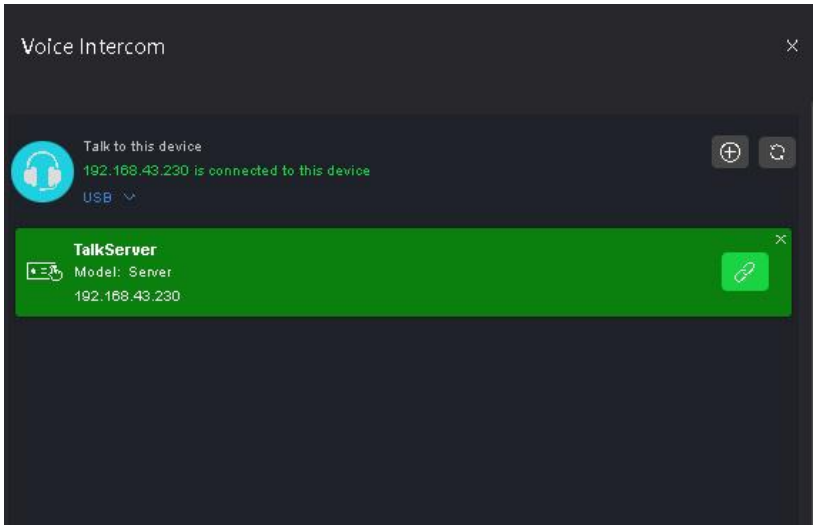


Figure 30: Voice Intercom Interface

8.2.5 Device Information

Clicking "  " to check device information such as: device name, serial number, hardware version, software version, etc.

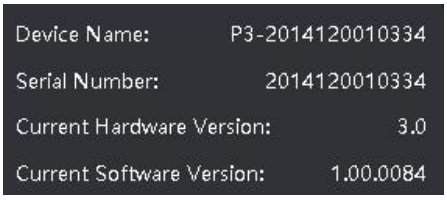


Figure 31: Device Information

8.3 Encoding Settings

8.3.1 Video Source

In the information bar interface, click on the "**gear**" icon in the "**Video Source**" area (as shown in Figure 32) to enter the video source settings interface. Here, you can select the video source:

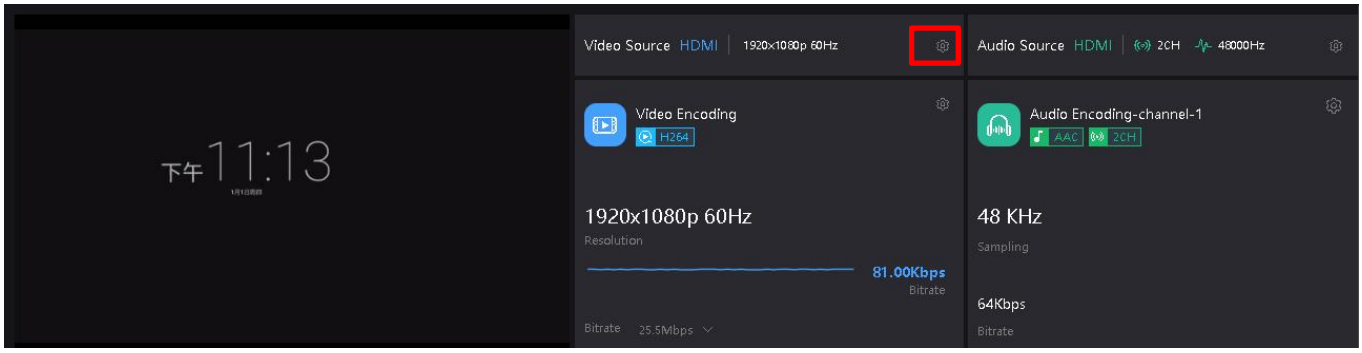


Figure 32 Example of Video Source Signal Selection

Switch between HDMI/SDI video sources.

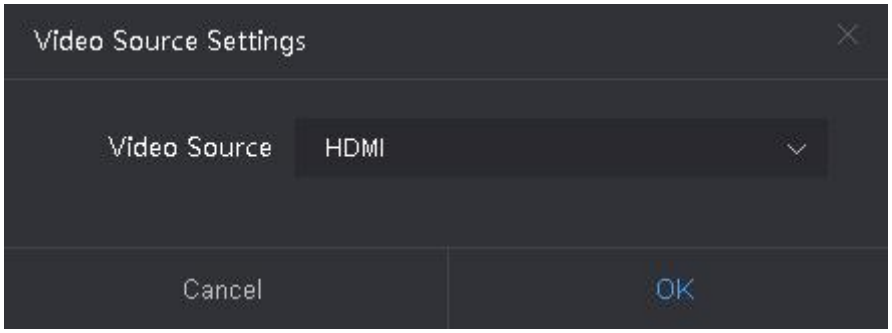


Figure 33: Pop-up window for selecting HDMI/SDI video source signals.

8.3.2 Video Encoding Parameters

The video encoding parameters are mainly used to configure the device's encoding format (CODEC), video scaling, encoding frame rate, bitrate control mode, encoding bitrate, GOP value, color, and other settings. Click on the "**gear**" icon in the "**Video Encoding**" section of the interface (refer to Figure 34, marked in red), dialog box as shown in Figure 35 will pop up.

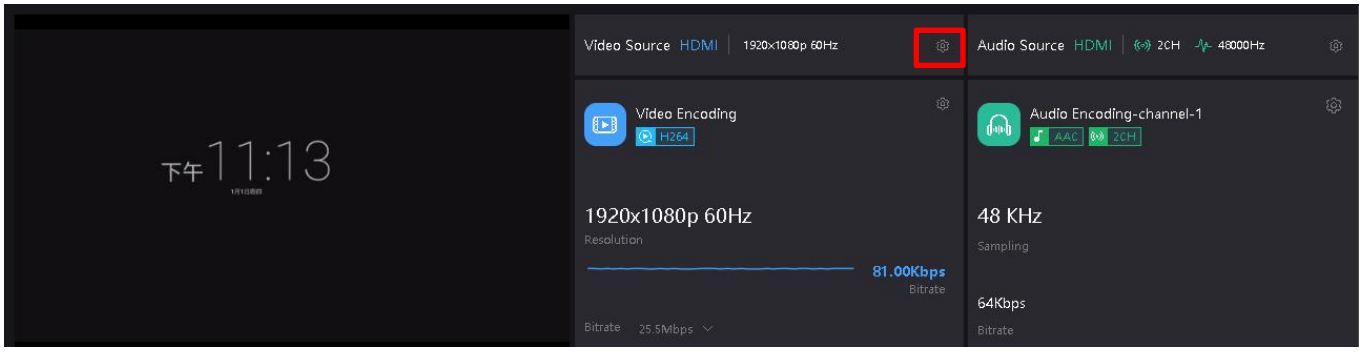


Figure 34: Entry for configuring video encoding parameters

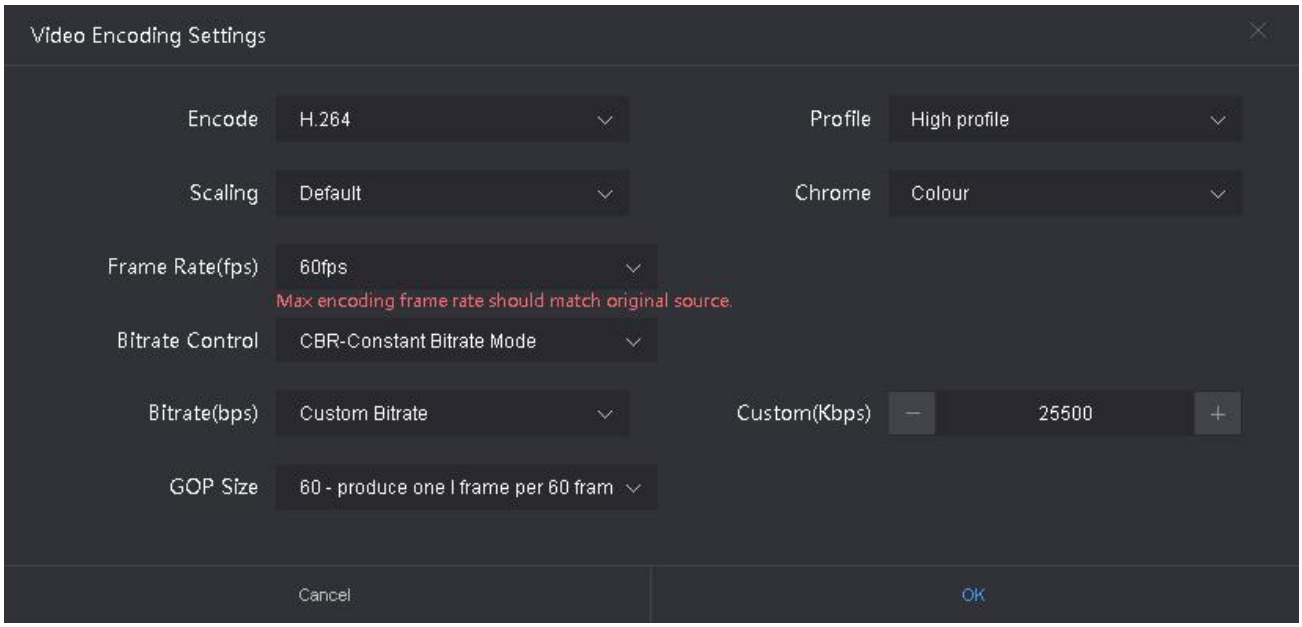


Figure 35: Pop-up window for configuring video encoding parameters.

You can set various parameters in this window:

- Encoding: H264/H265 optional.
- Profiles: Supports Baseline, Main profile and High profile for both H.264 and H.265. Choose the corresponding profile based on the encoding characteristics of H.264/H.265. When using H.264, options include Baseline, Main and High; for H.265, select Main. Higher profiles offer better video compression and advanced encoding features, potentially improving image quality at the same bitrate. Ensure your receiving/decoding system supports the chosen profile.
- Scaling: Default is AUTO, maintaining video resolution consistent with actual HDMI/SDI input resolution. Specific scaling to predefined resolutions is also available (select from list). Note: P3 currently does not support video upscaling; therefore, scaling above input resolution won't take effect.
- Color: Two options available: grayscale and color.
- Frame Rate: Default is "Full Frame Rate," matching the input source frame rate automatically. Alternatively, select "Automatically halve when original video frame rate >= 50," or specify another frame rate (choose from list). Note: P3 does not currently support frame interpolation, so the selected frame rate higher than actual input frame rate will automatically match the actual frame rate.
- Bitrate Control Mode: Choose between CBR (Constant Bitrate) and VBR (Variable Bitrate). CBR ensures a fixed bitrate output, maintaining stability regardless of image complexity, ideal for wireless network transmission. VBR adjusts bitrate dynamically based on video content complexity, prioritizing image quality while averaging below the target bitrate.
- Encoding Bitrate: Options range from 512Kbps to 40Mbps, defaulting to 6Mbps.
- GOP Size: GOP (Group of Pictures) represents a series of consecutive frames including one I-frame (keyframe), several P-frames (predictive frames), and B-frames (bi-directional predictive frames, which are not produced under P3's default settings). Shorter GOPs enhance video quality by more frequent I-frame insertion, aiding in error recovery, but increasing bitrate. Longer GOPs compress video more efficiently but may sacrifice quality in motion or complex scenes. The default GOP value is 60 (frames), adjustable based on video performance.

8.3.3 Audio Source

Click on the "**gear**" icon in the "**Audio Source**" area of the information bar interface (see Figure 36, highlighted in red) to enter the audio source settings interface, where you can switch between audio sources:

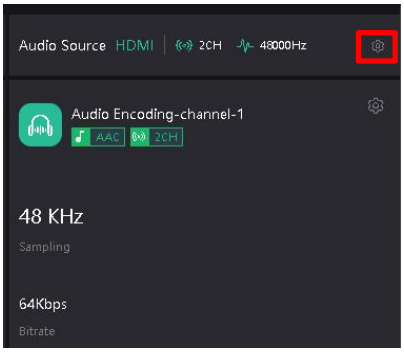


Figure 36: Entry for selecting audio sources.

The available audio sources for switching include: HDMI/SDI/Line-IN. If using Line IN for audio input, connect the audio source to the device's 3.5mm audio input port.

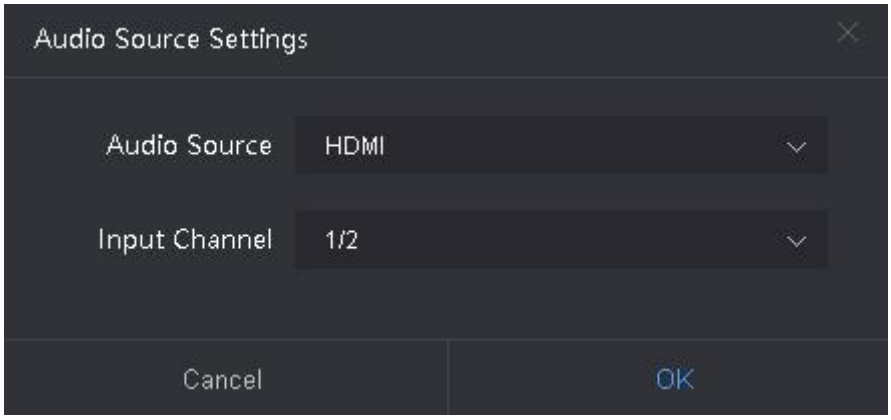


Figure 37: Audio Source Selection Popup

Note:
Unless the audio signal source is set to Line IN, switching the video source will automatically synchronize the audio source with the video source. Therefore, if you want to customize the combination of video and audio sources, set the video source first before switching the audio source.

8.3.4 Audio Encoding Settings

Click on the "**gear**" icon in the "**Audio Encoding**" area of the information bar interface (see Figure 38, highlighted in red) to enter the audio and video encoding settings interface, where you can configure audio source and audio encoding parameters:

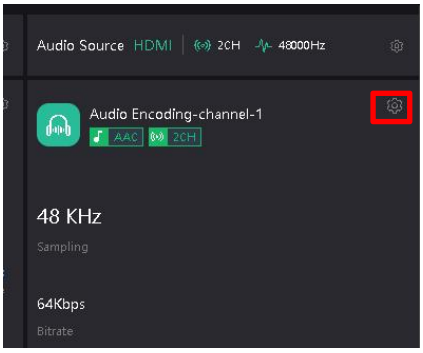


Figure 38: Audio Encoding Parameter Configuration Entry

Audio encoding supports two formats: AAC and G.711. The audio sampling rate can be selected according to actual needs, with stereo and mono audio channel options available. The encoding bitrate can be adjusted within the range of 16 Kbps to 512 Kbps, with a default setting of 64 Kbps.

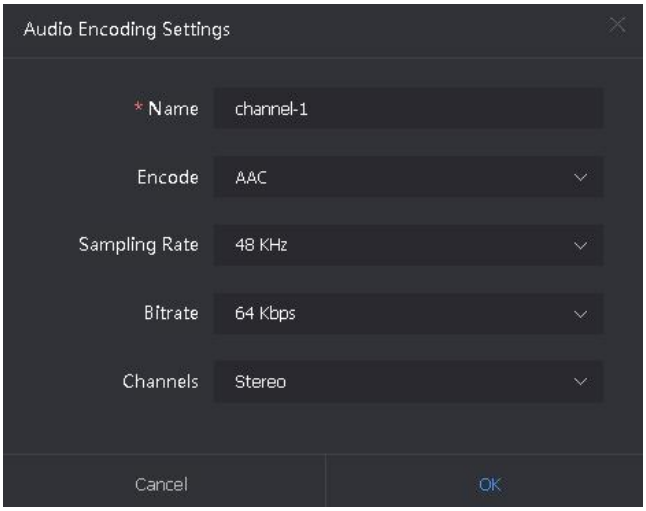


Figure 39: Audio Encoding Parameter Configuration Options

8.4 Video Preview and Video Processing

In the video preview and processing panel (refer to Figure 40), the left side is dedicated to video preview settings. Control is available via buttons at the bottom right corner of the preview window: "" for image preview and "" for video preview. After selecting a preview mode, click on the adjacent video status to refresh the preview. The preview window will then switch to the selected preview mode.

If the preview window displays a black screen, it indicates that the device has not detected a video input source; please check if the input cable is properly connected.

Description of Corresponding Buttons:

: Enable the safety frame for the video.

: Enable centerline for preview

: Flip the video horizontally (Mirror).

: Flip the video vertically (Flip).

: overlay function for video (supporting text, date, time, date/time, and image)

: PTZ control function (requires video source to support NDI standard PTZ control protocol)

: Start/Pause video recording function

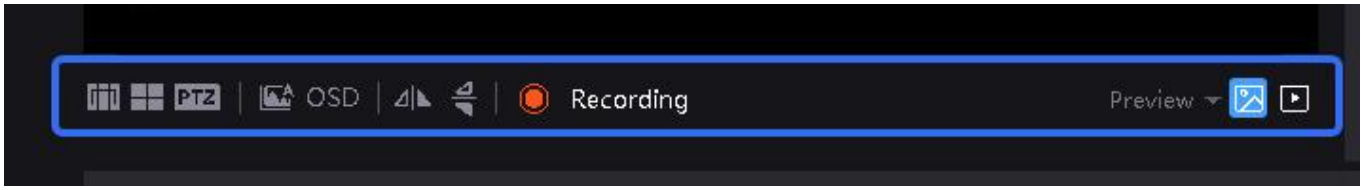


Figure 40 Video Processing Toolbar

8.5 Local Recording

P3 supports local recording by inserting an SD card or a USB flash drive into the encoder's USB port. Here are the specific recording operations:

1) Ensure that the P3 is equipped with a USB flash drive or SD card. In the WEB interface, navigate to "**Record**" -> "**Devices**" in the top navigation bar to verify that the storage device is recognized. Refer to the following figure:

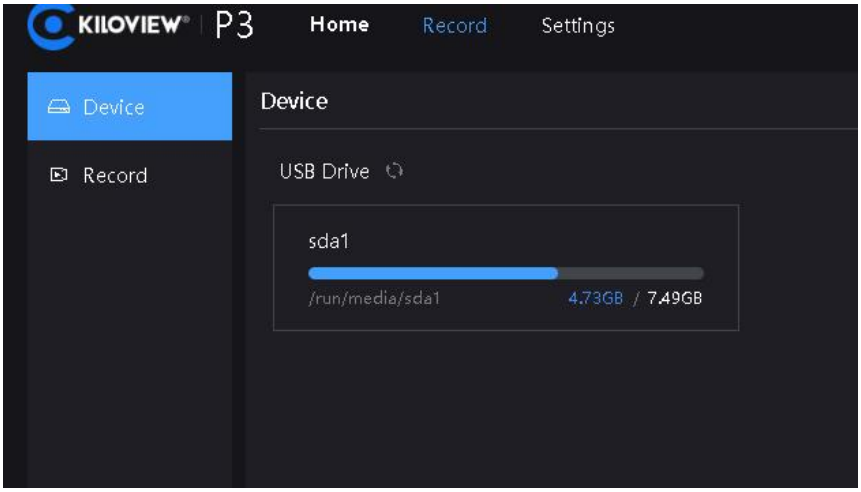


Figure 41 Storage Device Management

2) Recording settings allow you to configure recording formats such as MP4/MOV, file splitting methods (no splitting, by duration, by size), and recording strategies (stop recording when full or automatically overwrite old files). (For detailed parameter explanations, refer to Section 6.6.4.).

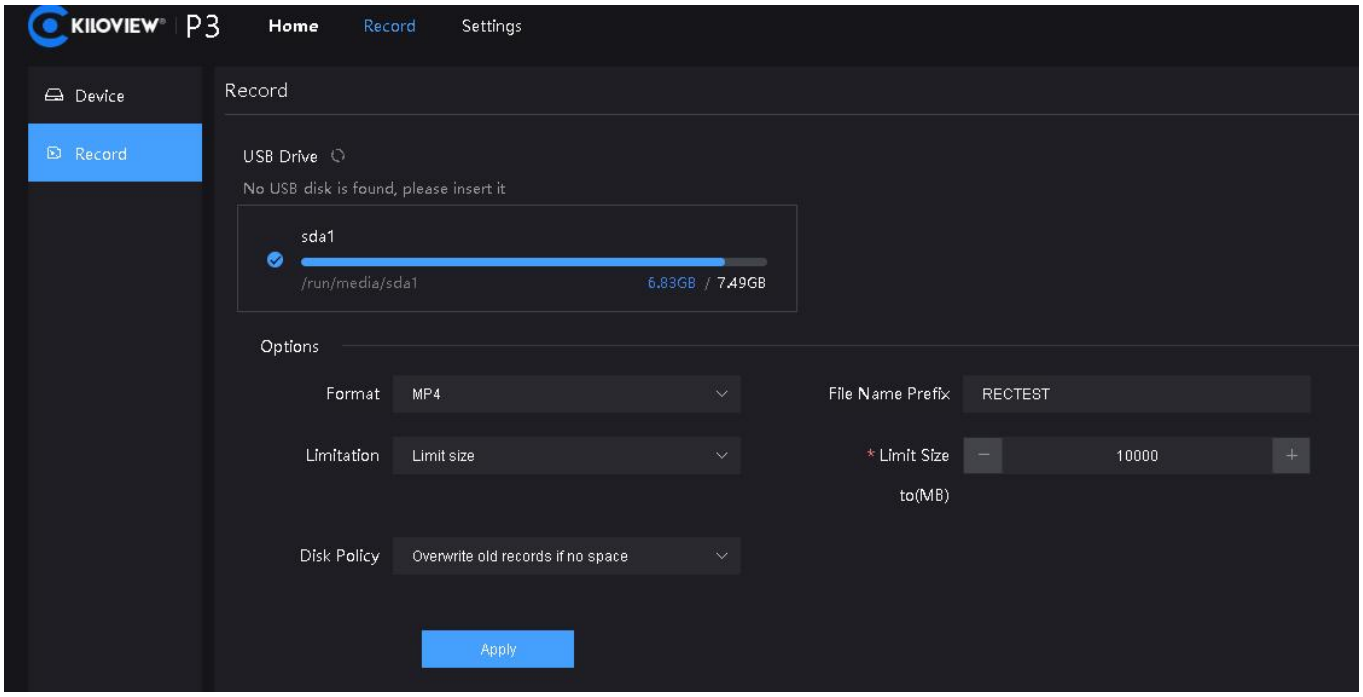


Figure 42 Recording Settings Parameters

3) Click “ ” to start recording. When recording starts successfully, the recording button turns red. To stop recording, click the recording button again.

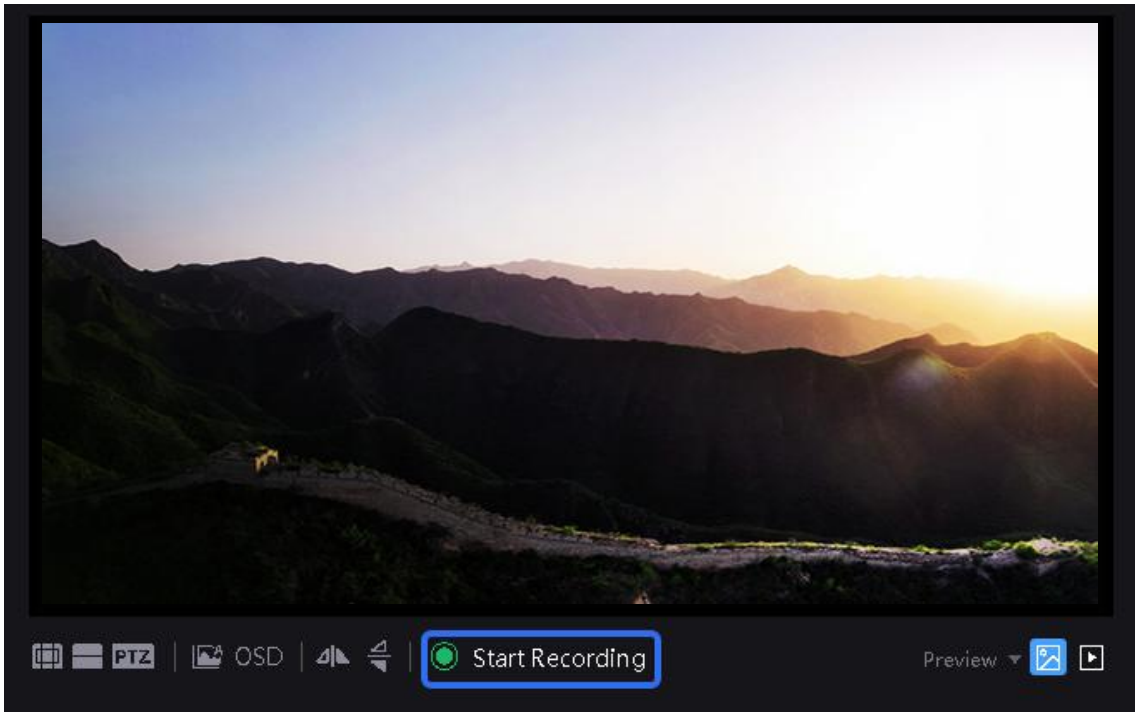


Figure 43 Start/Stop Recording

8.6 View and Download Record

To view recorded video files, navigate to **"Record" -> "Devices"** in the top navigation bar. On the storage management page, click the disk containing the recordings you wish to view/download, and use the popup menu to download or delete recording files (see Figure 44):

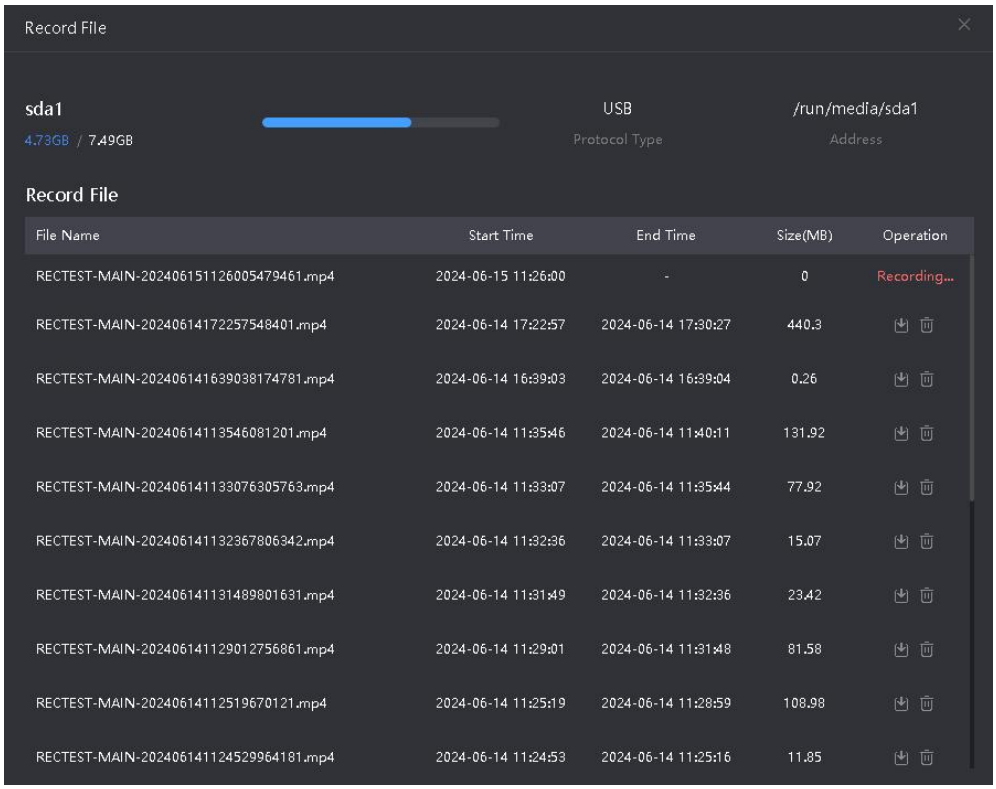


Figure 44 Recording File Management Popup Menu

Note

Removing the storage device while recording may permanently damage the recorded files, making them unplayable.

After recording is complete, ensure to stop recording before removing the storage device to ensure proper playback of the recordings.

9 Uses Bonding Function

To achieve bonding transmission with P3, you need a KiloLink Server Pro server. Here's how to configure it:

Install a KiloLink Server Pro server and configure the registration information for P3 devices on the server side (For detailed configuration and usage instructions, refer to the KiloLink Server Pro operation manual).

Before enabling bonding transmission on the P3 device side, configure the corresponding parameters to connect the P3 device with KiloLink Server Pro.

Steps to use the aggregation feature on the P3 device:

1.Click on the "**gear**" icon in the aggregation area of the main interface to enter the aggregation configuration page. Fill in the following information: server address, server port, authorization code, and choose whether to enable encryption. Select the network communication links that will participate in the aggregation communication.

2.Check the communication links that need to participate in the aggregation.

3.Turn on the "**Bonding**" switch to start aggregated streaming.

By following these steps, the device can aggregate transmit audio and video information simultaneously through multiple communication

links.

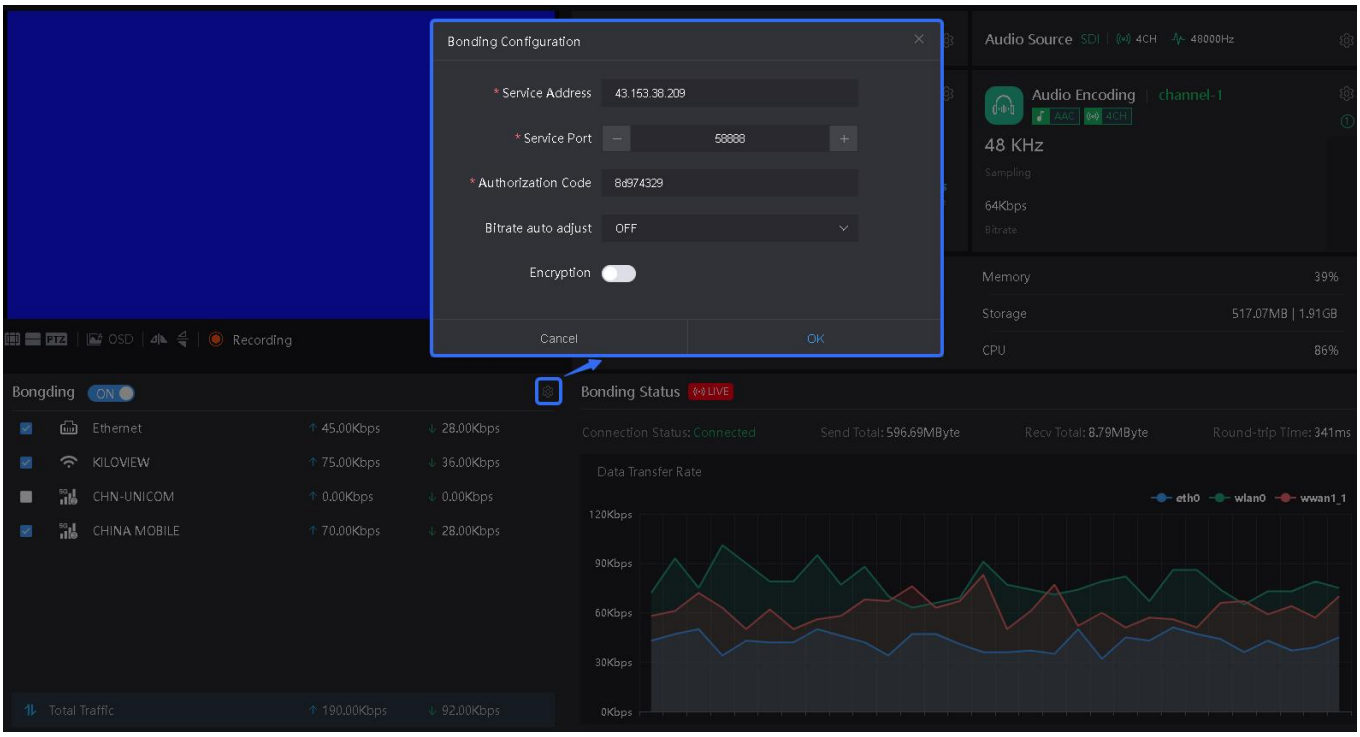


Figure 45 Bonding Service Configuration

9.1 Bonding Status Explanation

You can view the real-time status of devices in the bonding network through the management system, such as real-time rates of each channel, packet loss rates, data transmission and reception statistics, and latency, as shown below:

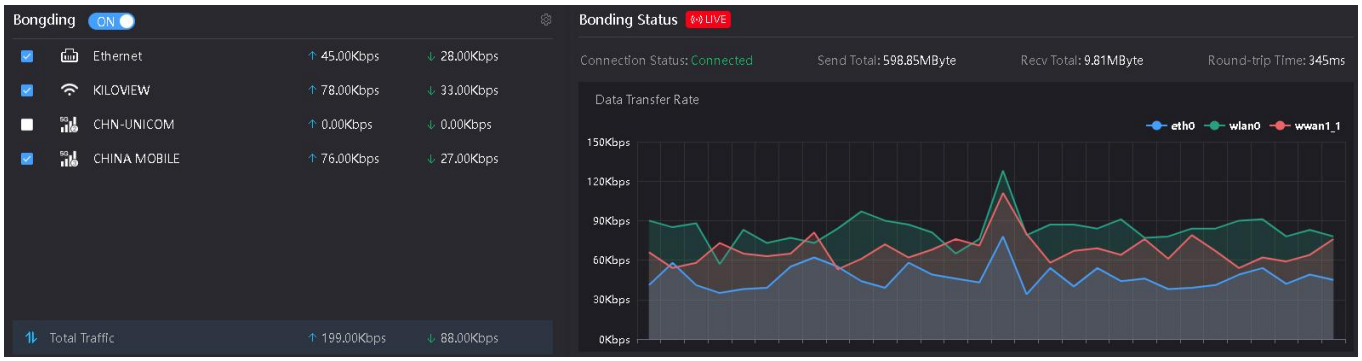


Figure 46 Bonding Status Information

9.2 Bonding Configuration Explanation

To use the bonding feature, you need to enable the bonding service switch and configure the IP address, port number, and authorization code for connecting to the bonding server. Depending on your requirements, you can also enable or disable dynamic bitrate adjustment and select the communication links for aggregation transmission. Finally, click the "**OK**" button to apply the configuration settings.

Parameter Description:

- Server Address: Enter the IP address or domain name for connecting to KiloLink Server Pro.
- Server Port: Enter the corresponding service port number open on KiloLink Server Pro.
- Authorization Code: Enter the authorization code specific to this device for connecting to KiloLink Server Pro.
- Bitrate auto Adjust: Enable or disable dynamic bitrate adjustment.
- Encryption: Enable or disable data encryption for P3 aggregation transmission.

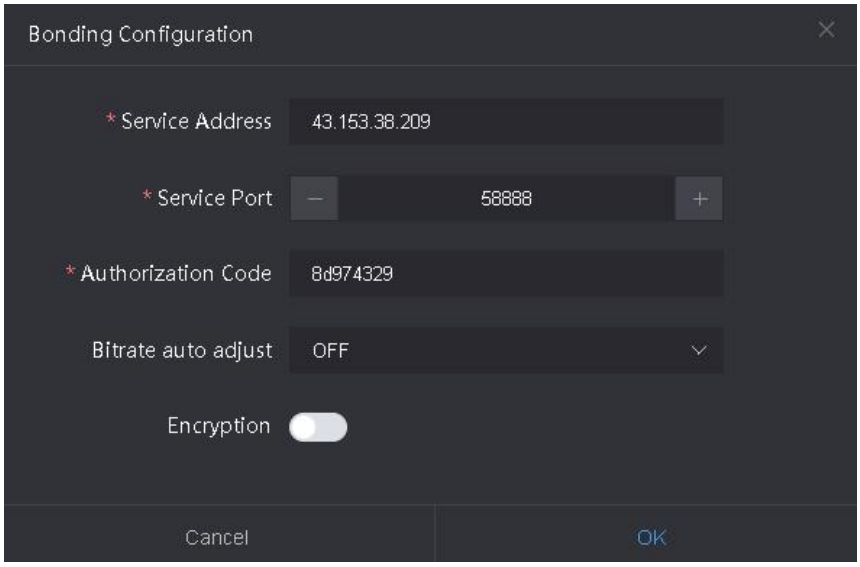


Figure 47 Bonding Status Configuration

Note

Configuring the parameters of the bonding connection does not mean that the bonding function is enabled immediately; to use the bonding function, you need to click the bongding switch on the web homepage.

In a stable network environment, there is no need to enable dynamic bitrate adjustment, and a stable bitrate can ensure the quality of audio and video; in an unstable and weak network environment, it is recommended to enable the dynamic bitrate adjustment option to prioritize the smoothness of audio and video transmission.

10 System Settings Menu

The settings menu of the WEB management system includes network settings, user management, recording management, region and time settings, PTZ, EDID, factory reset, and system upgrade functions.

10.1 Language and Device Name Settings

Click on the top navigation bar **"Settings" -> "et"** page, where you can set the device's name and language：

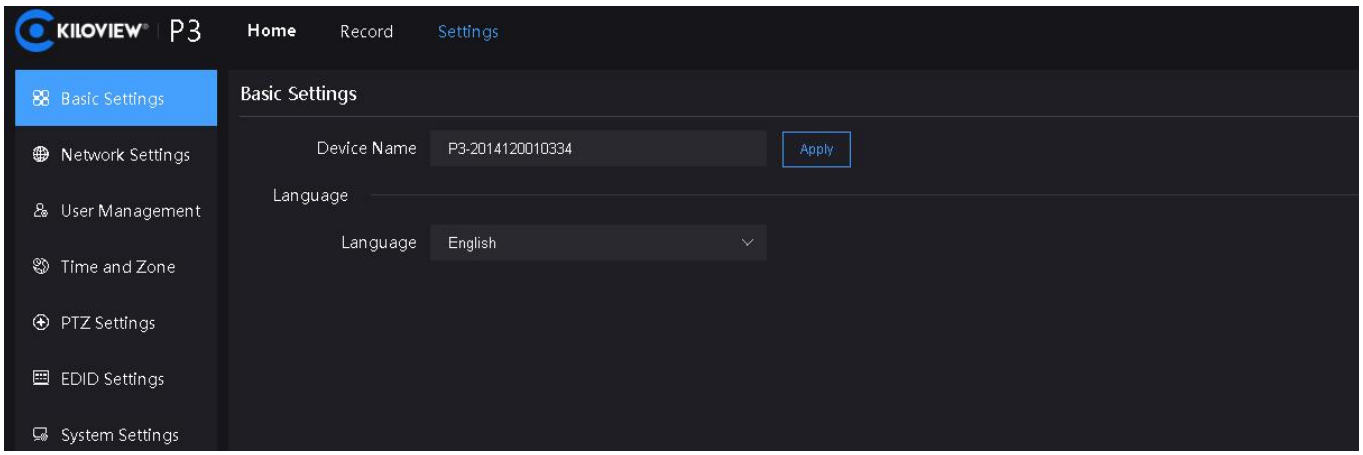


Figure 48 Settings - Basic Settings Section

10.2 Network Settings

Click on the top navigation bar **"Settings" -> "Network Settings"** page. For detailed network settings, refer to section 7.3.

10.3 User Management

To manage your account, click on the top navigation bar **"Settings"** -> **"User Management"** page for user management tasks such as adding and deleting users, and modifying user passwords etc.

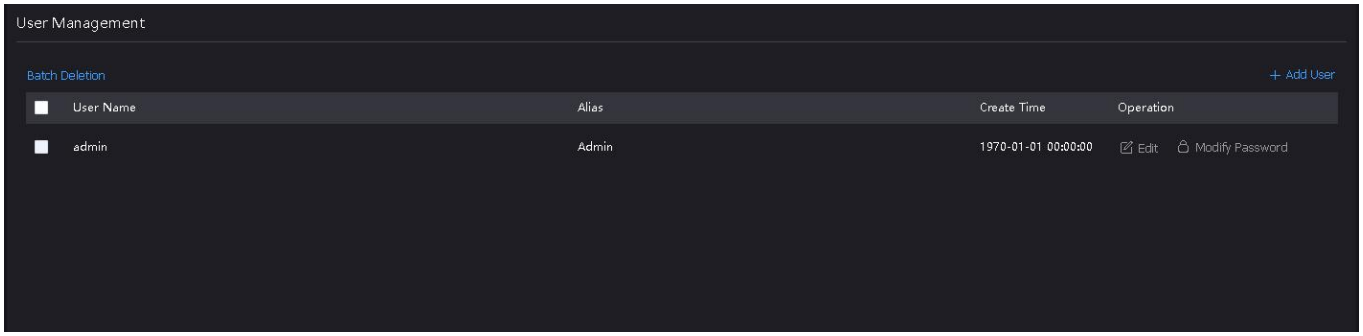


Figure 49 Settings - User Management Section

10.4 Time and Zone Settings

Navigate to the top navigation bar, click on "**Settings**" -> "**Time and Zone**" page to modify the system time and region of the encoder.

- "Follow current PC": Synchronize the time by fetching the current time from the PC configuring this device.
- "Manual": Manually set a specific time.
- "Synchronize with NTP server": Configure time synchronization with an NTP server.

After configuring, click "Settings" to finalize.

The "Location and Region" setting determines the current operating region of the device. You can directly click on the corresponding region on the map or select from the dropdown menu under "Location Region". Click "Change My Location" to apply the location and region settings..

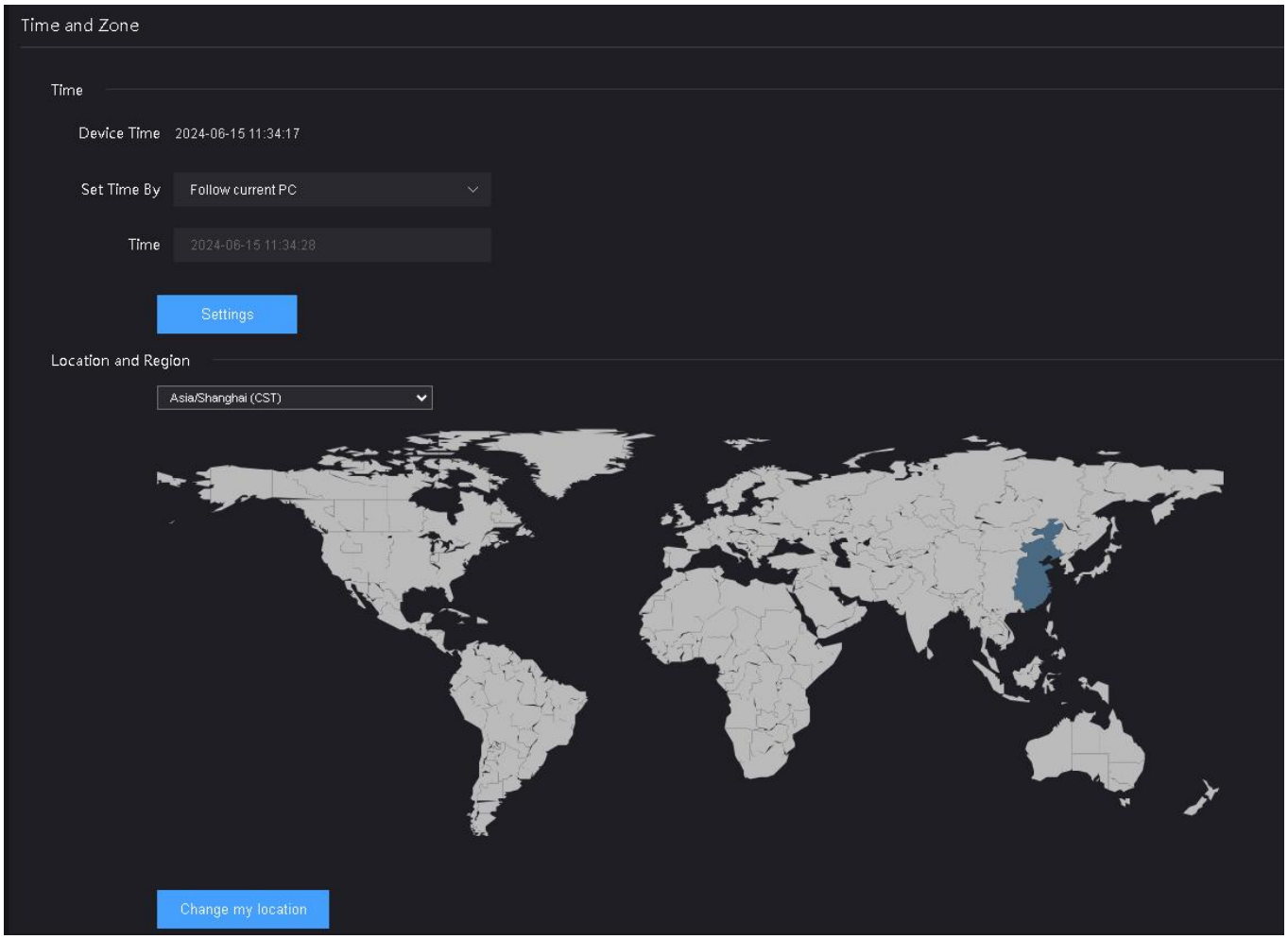


Figure 50 Settings - Time and Zone Section

Note

The selection of location and region is solely for time zone configuration convenience and does not imply any political stance.

10.5 PTZ Settings

10.5.1 Enable PTZ Control Function

Equipment supports PTZ camera control via serial port or IP network.

Before using PTZ control, you need to enable the PTZ control switch in "**Settings**" -> "**PTZ Settings** ".

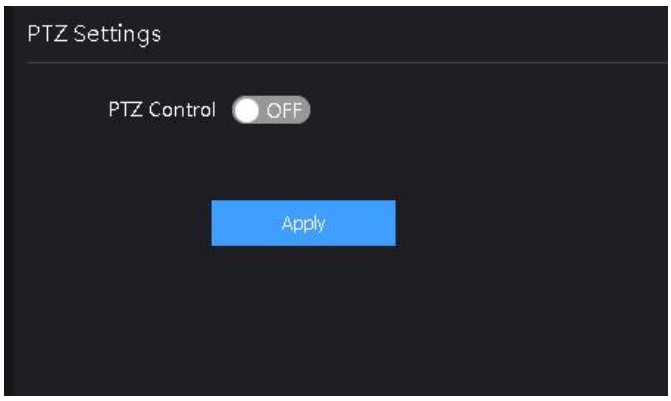


Figure 51 Settings - PTZ Settings Section

10.5.2 PTZ Function Settings

The device supports control of PTZ cameras using Sony Visca, Pelco-D, and Pelco-P protocols.

For serial-based PTZ control, connect the USB to RS232/RS422/RS485 converter (cable) to the encoder's USB port. After the device recognizes the serial port correctly, select "**Serial**" in PTZ type, and corresponding options for "Serial Device" will be added. After configuring the correct serial connection parameters and PTZ control protocol, operation is possible.

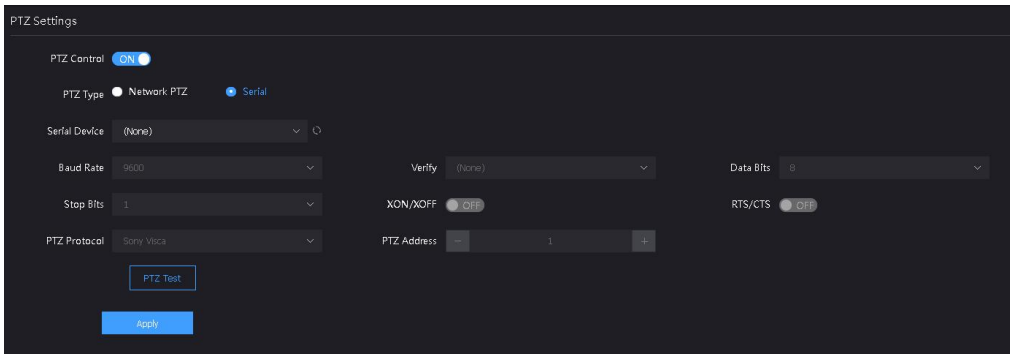


Figure 52 Settings - PTZ Serial Control Parameter Settings

For network protocol-based PTZ control, select "**Network PTZ**" in PTZ settings and configure the correct network connection parameters and PTZ control protocol.

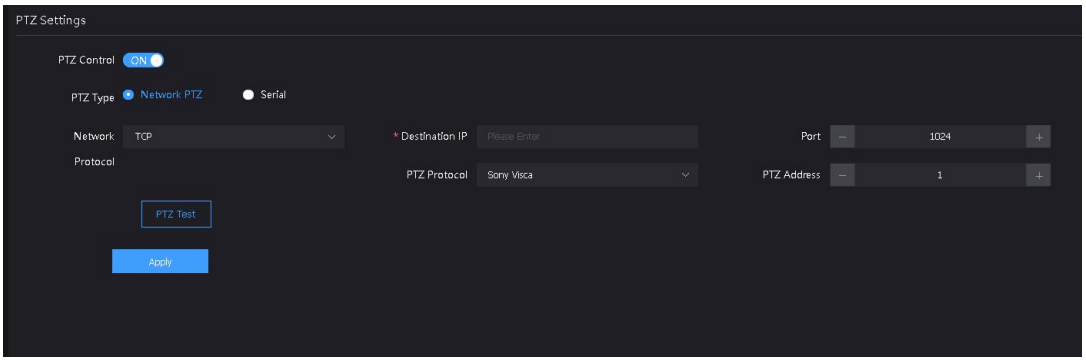


Figure 53 Settings - PTZ Network PTZ Control Parameter Settings

10.5.3 PTZ Testing and Usage

On the PTZ settings page, click the PTZ test button to test the PTZ function.

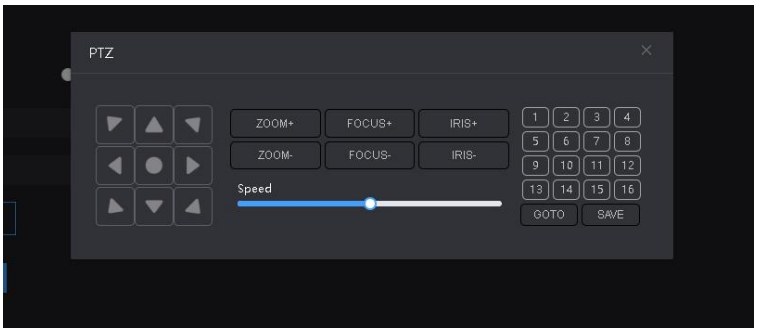


Figure 54 Settings - PTZ PTZ Control Test

After successful testing, you can use the PTZ function in real-time on the device's management system homepage.

10.6 EDID Settings

The encoder supports importing EDID (Extended Display Identification Data) configuration information to meet compatibility requirements between different display devices.You can click "Settings" -> "EDID Settings" in the management system to import, export, or reset device EDID information.

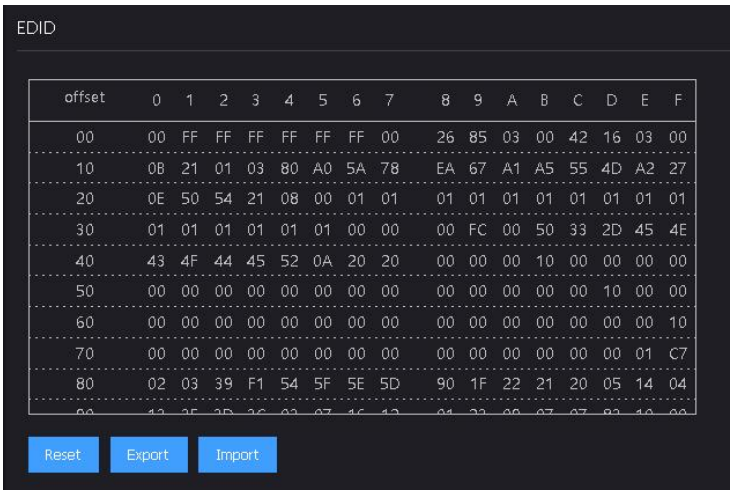


Figure 55 Settings - EDID Settings

Note

The imported EDID protocol document is a 256-byte data bin file.If you are not sure whether your EDID file format is correct, you can first export the EDID file of this device for reference and editing.

10.7 System Settings

The system settings menu mainly includes two functions: factory reset and firmware upgrade.

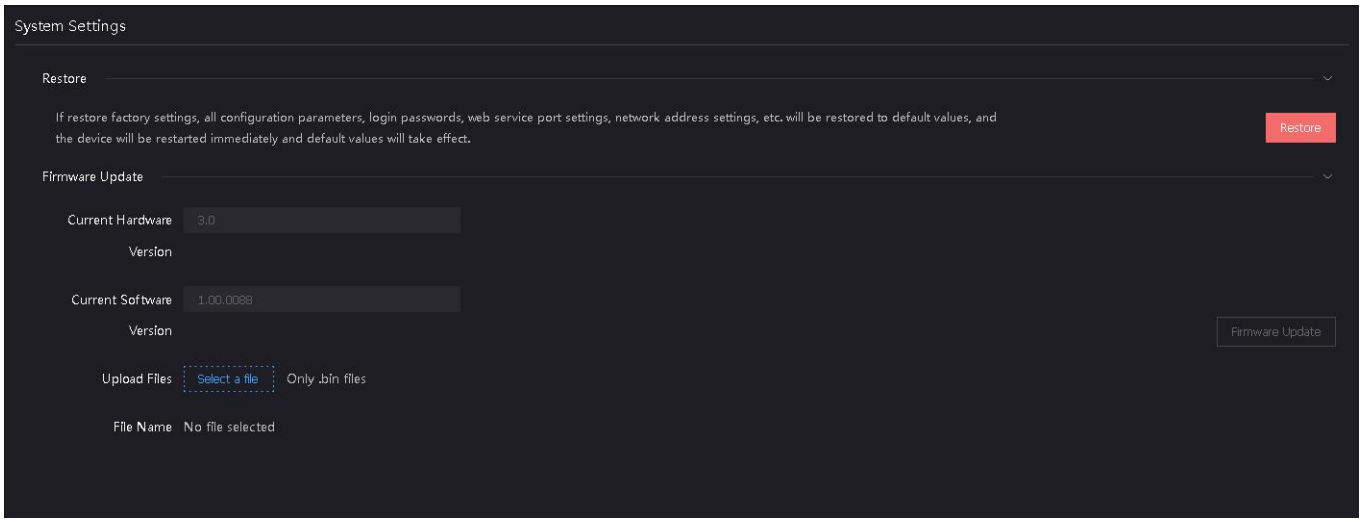


Figure 56 System Settings - Factory Reset and Firmware Upgrade

10.7.1 Factory Reset

Click the "**Restore**" button and confirm to reset the device to its initial state settings.

10.7.2 Firmware Upgrade

When there are new features, performance optimizations, or bug fixes for P3, new firmware will be released for updates. Before upgrading, please visit the company's official website download page to obtain the upgrade package.

Kiloview will continue to provide firmware updates for P3 devices. Visit:
https://www.kiloview.com/en/support/download/
Select "Video Encoder" > "P3" in the filter list, and find the latest firmware download in the "Firmware" tab

WEB Page Upgrade:

Click "System Settings" > "Firmware Upgrade," upload the downloaded upgrade package from the official website, and then click "Firmware Upgrade."

After successfully uploading the firmware, the system will prompt for a restart. Please wait patiently during the restart process. After the device restarts, the upgrade is successful.

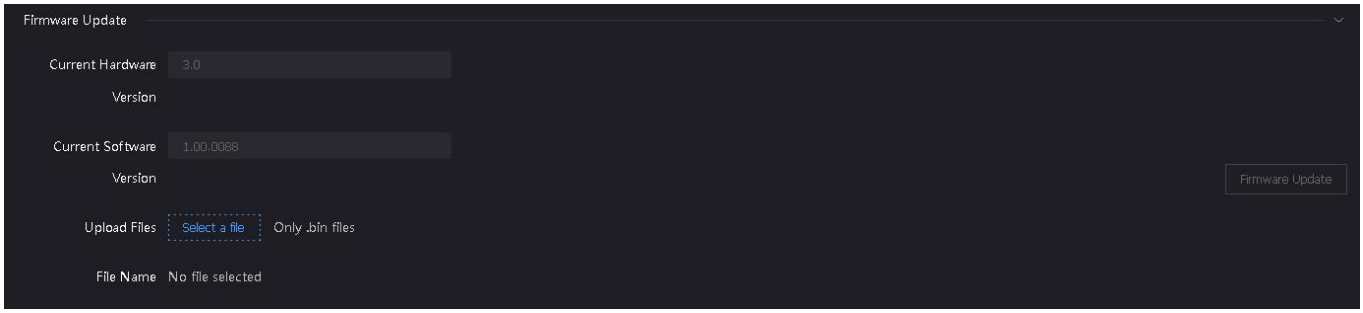


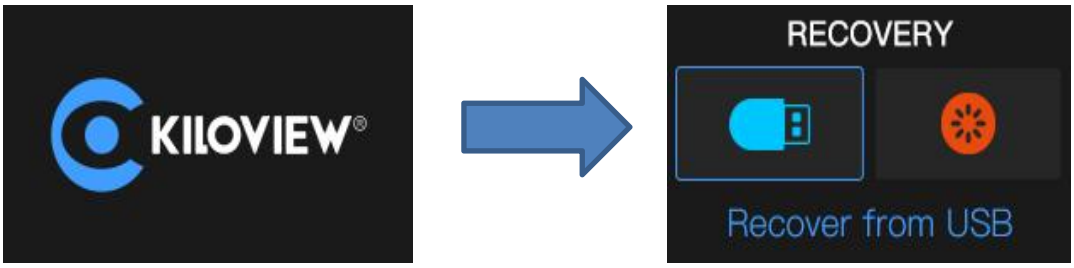
Figure 57 Firmware Upgrade

Recovery Mode Upgrade:

If the device fails to start normally or access the Web management system, you can use Recovery Mode to upgrade or update the system. During device startup, when the LCD screen displays "KILOVIEW," press and hold the P3 LCD screen continuously for 5 seconds or more to enter Recovery Mode.

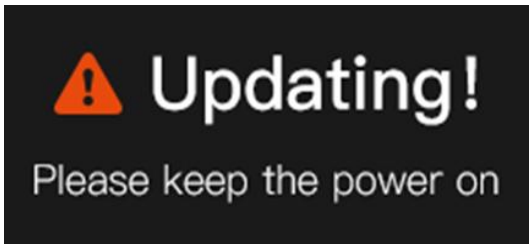
Step 1: Prepare a USB drive and copy the downloaded firmware file from the official website to the USB drive.

Step 2: Insert the USB drive into P3. After the device boots (approximately 2 seconds), hold the screen until the Kiloview logo appears, then hold it for another 5 seconds until the device enters Recovery Mode.



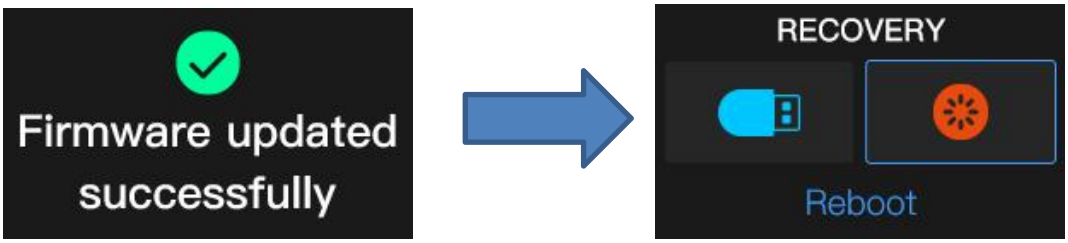
Step 3: Select "Recover from USB" (install firmware from USB) by clicking the touch button. After selection, the upgrade can begin.

Step 4: During the firmware upgrade, it will prompt "Updating! Please keep the power on."



Step 5: When the screen displays "Firmware updated successfully", it means the firmware upgrade is completed.

At this time, any operation of the touch button will help you return to the Recovery menu. Please select Reboot to restart the device.



Note

- During the upgrade process, do not power off the device, as it may prevent it from starting up.
- The upgrade process takes approximately 3-5 minutes. If the upgrade is not completed within 5 minutes, try refreshing the webpage. If access is still not restored, use Recovery upgrade or contact technical support.
- To use a USB drive for firmware upgrades, the file system format must be FAT/FAT32/exFAT.
- Factory reset and Recovery upgrade will erase all user data on the device, so use them cautiously.

11 Others

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference

(2) this device must accept any interference received, including interference that may cause undesired operation.

To prolong the device life, please unplug the power and keep it properly if you do not use it for a long time.

Thanks for your reading !

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