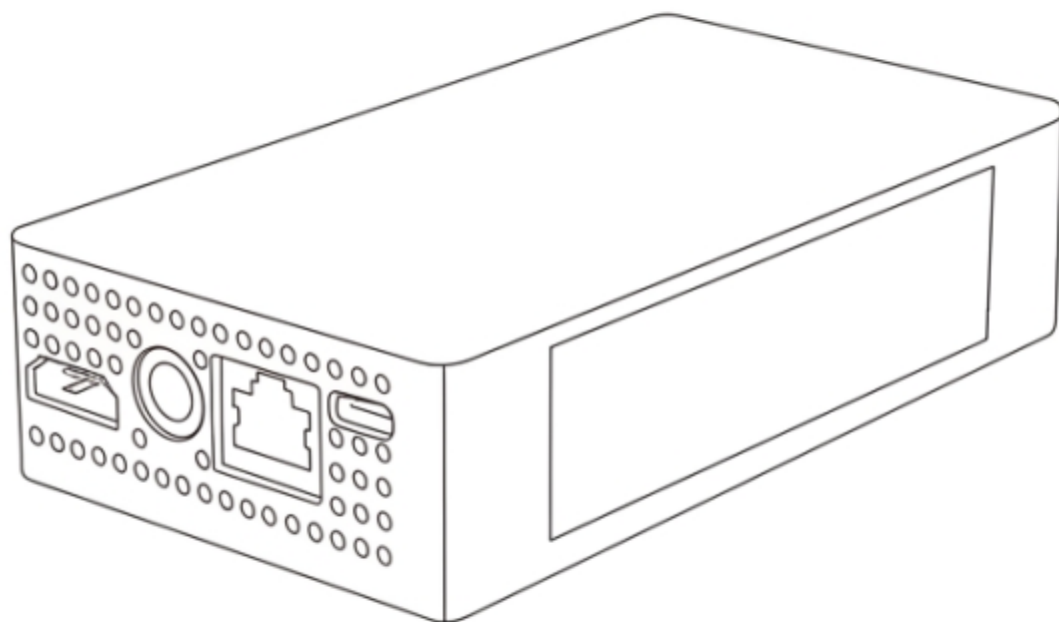




ZowieBox Pro 4K60 NDI® Streaming Encoder/Decoder User manual



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Attention

The purpose of this user manual is to ensure that users can use the product correctly and avoid danger and damage in operation. Before using this product, please read this user manual carefully and keep it properly for future reference.

Statement

The descriptions in this manual may differ from the version you are using. If you are having trouble using this manual, please contact our technical support for assistance. The contents of this manual will be updated, and our company reserves the right to leave it without notice.

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Warnings and Precautions



1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the Power Adapter before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet slides and bottom are provided for ventilation. To ensure this unit's safe and reliable operation and protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked.
7. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
8. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your ZowieBox dealer or your local power company.
9. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
10. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord does not exceed the extension cord rating.
11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
13. Unplug this product from the Power Adapter and refer to qualified service personnel under the following conditions:
 - a) When the liquid has spilled into the unit.
 - b) When the product has been exposed to rain or water.
 - c) When the product does not operate normally under normal operating conditions. Adjust only those controls covered by the operating instructions in this manual; improper adjustment of other controls may damage the unit and often require extensive work by a qualified technician to restore the unit to normal operation.
 - d) When the product has been dropped or the cabinet has been damaged.
 - e) When the product exhibits a distinct change in performance, indicating a need for service.

Disposal



For EU Customers only - WEEE Marking

This symbol on the product or its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service, or the shop where you purchased the product.

1. Overview

1.1 Product Introduction

ZowieBox Pro: Next-Generation AI-Driven 4K UHD Encoder & Decoder

Housed in a rugged, ultra-compact aluminum alloy chassis, the ZowieBox Pro is an innovative, AI-driven hardware encoder and decoder designed for critical streaming applications. Combining 4K Ultra HD resolution, NDI®|HX3 support, PoE, a prominent large tally light, and a vibrant touchscreen, this standalone device eliminates the need for a gaming PC or console.

Cost-effective, user-friendly, and highly versatile, ZowieBox Pro provides system integrators, streaming professionals, and OEM partners with a flexible, economical solution for high-quality IP video workflows.

Key Features & Highlights

AI-Driven Edge Computing

As the industry's first innovative AI-driven edge computing video converter, it transforms traditional PTZ cameras into smart assets.

- **Smart Tracking:** The built-in AI engine delivers precise single- or multi-target lock-on and dynamic framing.
- **Total Control:** Features adjustable follow speeds and real-time recognition overlays, giving you complete tactical control.

Standalone Gaming & Multi-CDN Streaming

Streamlined for modern content creators and gamers (Xbox, PS4/5, Nintendo Switch).

- **Zero-Latency Loop-Out:** Supports video pass-through up to 4K60 with zero-latency HDMI loop-out.
- **PC-Free Performance:** Stream independently and synchronously to multiple CDNs simultaneously without impacting your PC's gaming performance or relying on computer hardware.

Ultra-Low Latency NDI® | HX3

- **Surpassing USB Capture:** Delivers high-quality, ultra-low latency NDI®|HX3 performance that outperforms standard USB capture cards.
- **Versatile Decoding:** Easily distribute streaming video or NDI®|HX3 over the network, decode it, and route it to an HDMI output for screens, monitors, or projectors.

Tailored for Mobile & Field Production

- **3.42-Inch Touchscreen:** A prominent built-in display allows for instant operating status checks, quick control, and on-the-fly settings.
- **Universal Mounting:** Features standard 1/4-20 screw holes on the bottom, making it easy to mount atop any DSLR camera, rig, or monitor using a ball head.

- **Simultaneous Recording:** Seamlessly record locally via TF card, USB flash drive, or directly to a NAS while live streaming.

Connectivity & Specifications

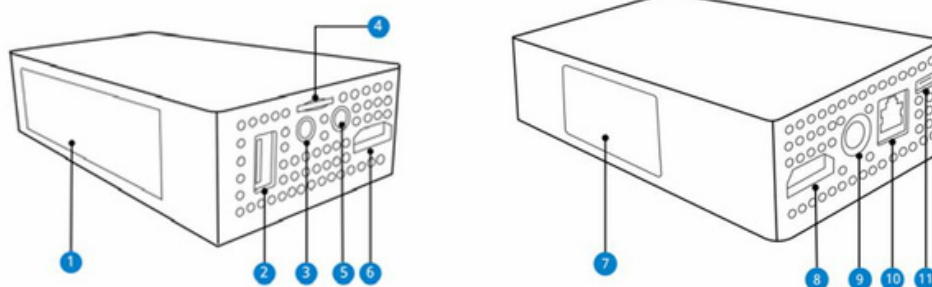
- **Flexible Power Solutions:** Power the device your way. It supports any voltage from 5V to 20V via mainstream USB Type-C chargers, Type-C to DC adapters, standard DC power, or PoE (Power over Ethernet).
- **Next-Gen Wireless:** Equipped with Wi-Fi 6 and Hotspot capabilities for seamless untethered connectivity.
- **Browser-Based ZowieGUI:** Easily configure, set up, and manage the encoder via Wi-Fi, hotspot, or LAN using any smartphone, tablet, or PC.

1.2 Packing List

Item	Unit	Quantity
ZowieBoxPro	PCS	1
USB-C Power Adapter	PCS	1
USB-C Cable	PCS	1
Cold Shoe	PCS	1
USB-C toUSB-A Adapter	PCS	1
QuickStart Guide	PCS	1

1.3 Interface

1.3.1 Hardware Interfaces

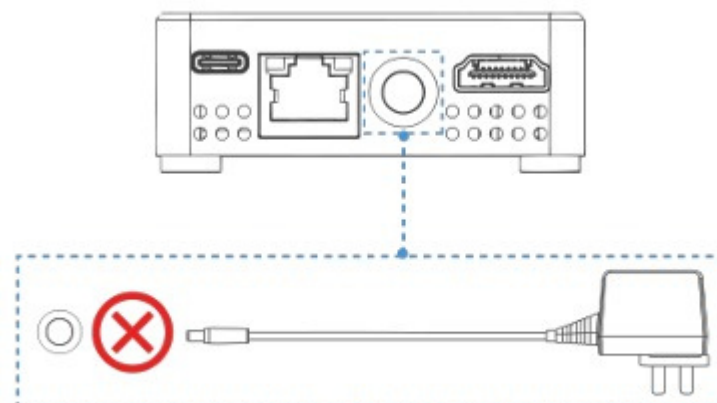


1	LCD Touch Screen	7	Tally Light
2	USB Port 3.0	8	HDMI Input
3	3.5mm Audio In	9	DC Output Port
4	TF card slot	10	LAN Port (PoE+ Supported)
5	3.5mm Audio Out	11	Type-C Power Input
6	HDMI output		

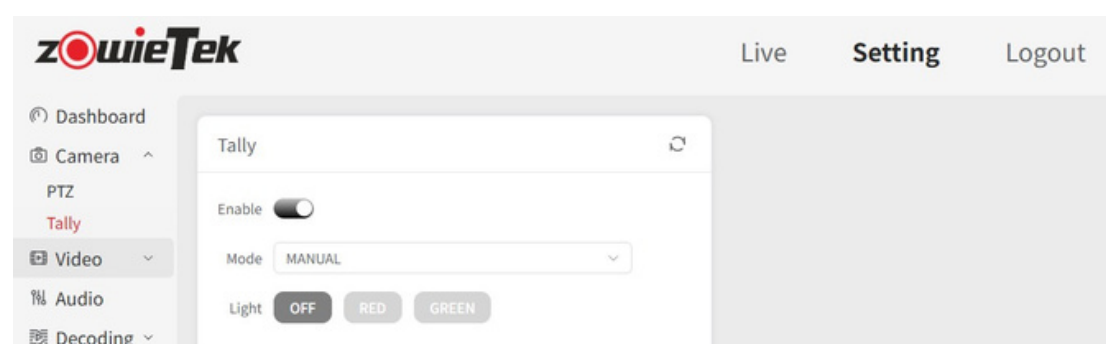
Tips:

DO NOT use the **DC Out port** as a power input to feed the **ZowieBox Pro**. Doing so may cause permanent damage to the device.

Keep the **dust cap** installed on the DC Out port until you have thoroughly read the **User Manual**.



1.3.2 Tally Indicator Status Description



The Tally indicator features four operational modes: **Manual**, **Automatic**, **Tally**, and **Gaming**.

Manual Mode:

Users can manually set the Tally light to Green, Red, or Off. Once configured, the indicator remains in the selected state.

Automatic Mode:

In automatic mode, the tally light will change according to the working status of the ZowieBox Pro .

The status mapping rules are defined below:

	NDI Mode	Encoding	Decoding
Green	PVW	/	/
Red	PGM	/	/
Blue	/	Streaming	Decoding
White	/	No Stream	No Stream

Tally Mode:

This mode is exclusively functional when the ZowieBox Pro operates within an NDI ecosystem. Green indicates the device is on PVW (Preview), and Red indicates it is on PGM (Program).

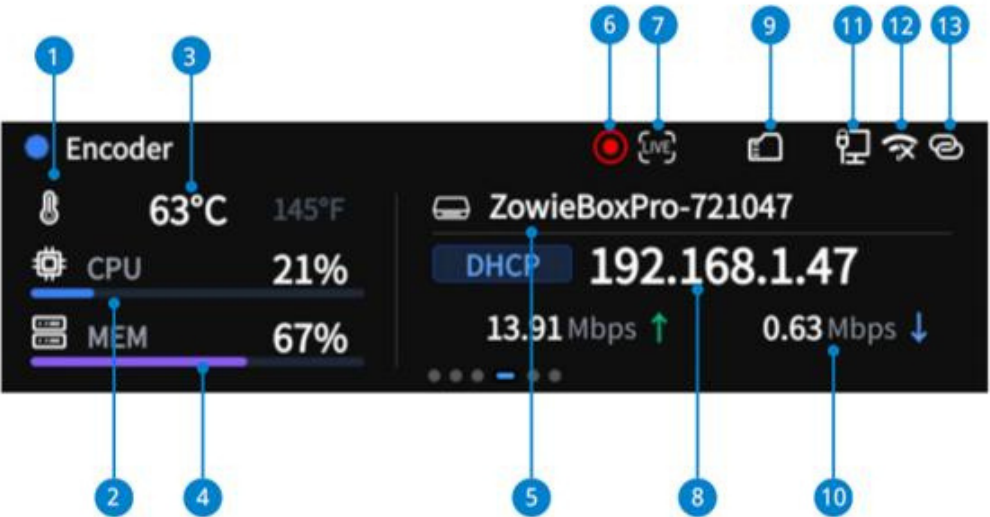
Gaming Mode:

The Tally indicator cycles through a multi-color RGB breathing effect.

1.4 LCD

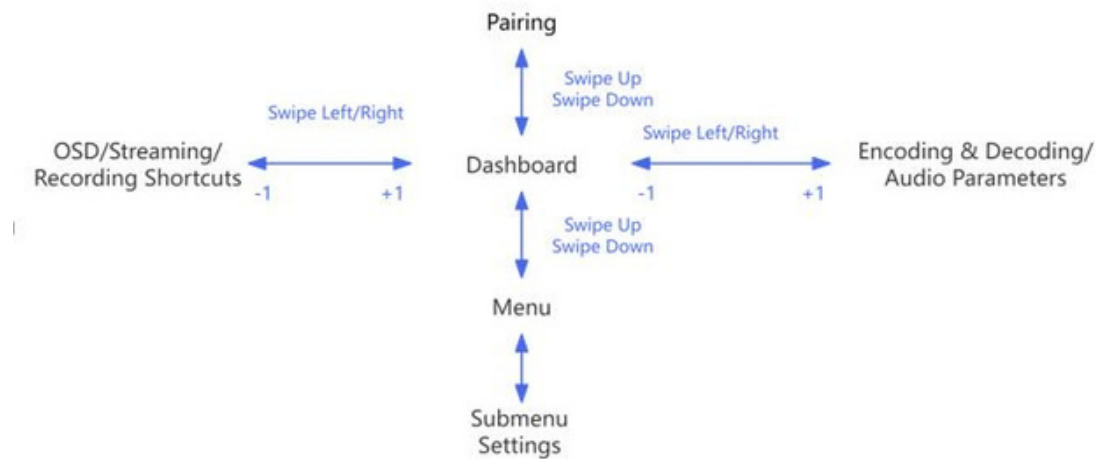
The ZowieBox Pro is equipped with an LCD touchscreen, allowing users to quickly view device status on the display and operate functions such as streaming, NDI, recording, and working modes via touch.

1.4.1 Dashboard Icon



1	Working Mode	8	Device IP
2	CPU Usage	9	Storage Status
3	CPU Temperature	10	Network Bitrate
4	Memory Usage	11	Wired Network
5	Device Name	12	Wi-Fi
6	Recording Status	13	Hotspot
7	Streaming Status		

1.4.2 Touchscreen Operations



1.4.3 Touchscreen Quick Operations



Long press to display the quick access menu to lock LCD, enter standby mode, or reboot the device.



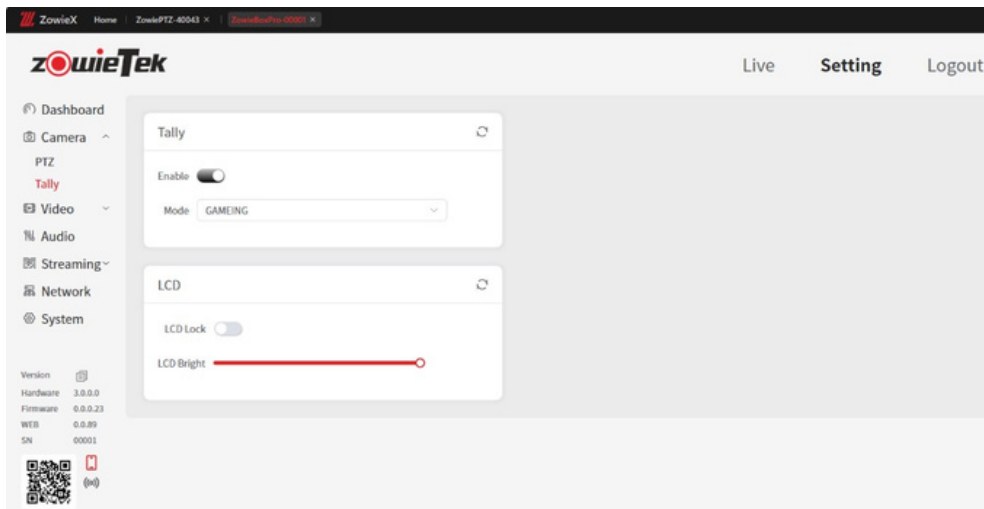
Swipe from left to right / swipe from right to left to return to the main Dashboard.

1.4.4 LCD Brightness and Sleep Mode

LCD Brightness: The brightness can be adjusted from 10 to 100 to suit different usage scenarios.

LCD Lock: When locked, the LCD is disabled to prevent accidental operations. To unlock the screen, press and hold anywhere on the display.

LCD Timeout: Configurable from **1 to 30 minutes**. If no touch operation is detected within the designated period, the LCD will automatically dim or turn off to conserve power.

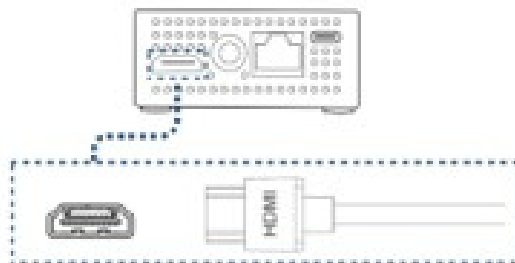


2. Quick Start

2.1 Access the WebUI

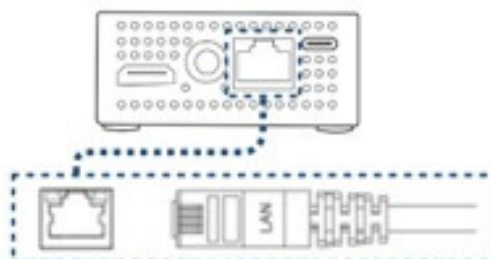
2.1.1 Connecting the signal source

Connect the signal from the signal source (such as a camera) to the HDMI input port of the device using an HDMI cable.



2.1.2 Connecting to the network

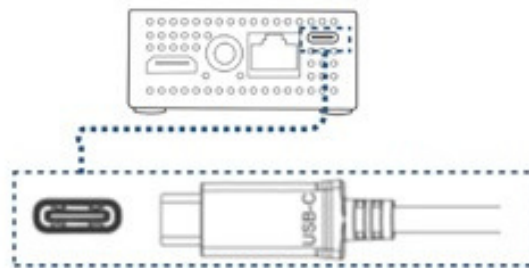
Connect the LAN port of the ZowieBox Proto to a local network (LAN) with an active DHCP server using a standard Ethernet cable.



2.1.3 Connect the power supply

Option 1: USB-C Power Input

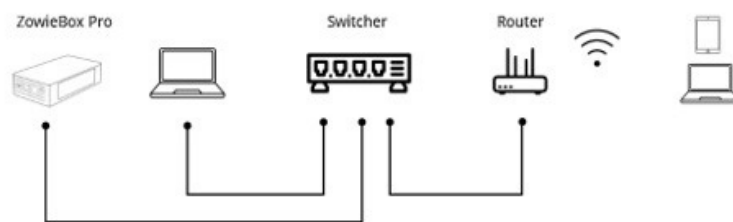
Connect a standard USB-C power adapter to the USB-C Power Port. The device will automatically boot up, and the LCD screen will initialize.



Option 2: PoE Power Supply

The ZowieBox Pro also supports Power over Ethernet (PoE / PoE+), eliminating the need for an external power adapter. To utilize PoE, connect the device's LAN port to a PoE-enabled network switch using a Cat5e or higher Ethernet cable.

2.1.4 Log in to the Web UI



ZowieBoxPro offers six convenient and quick ways to log in to the webUI.

(1) IP address

By default, the ZowieBox Pro is configured as a DHCP client to obtain an IP address automatically. After powering on the device, check the assigned IP address displayed on the LCD screen, then enter it into a web browser on a computer connected to the same LAN.



(2) Software pairing

This method does not require your mobile device to be on the same LAN. After downloading the corresponding mobile app, you can quickly pair with the device by scanning the QR code to access the Web UI remotely.



(3) Login to ZowieBox Pro via mDNS

Please enter <http://ZowieBoxPro-721047.local> into the address bar of a web browser on your computer or mobile device to access the Web UI. (mDNS URL is located at the bottom of ZowieBox Pro).

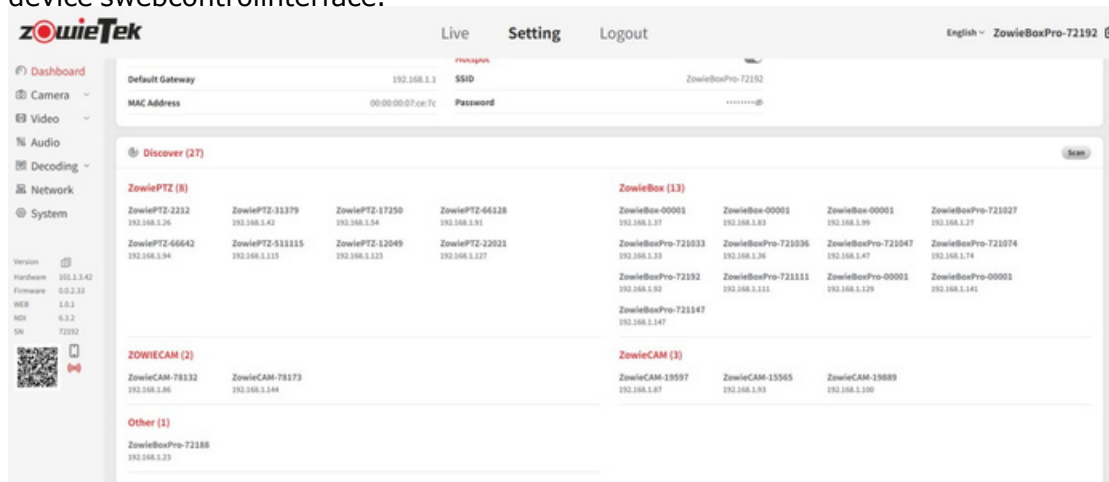


(4) Login to ZowieBox Pro via device scanning

If you already own a ZowieBox or ZowiePTZ product, you can also log in to the new ZowieBox Pro via device scanning.

Once logged into the web control interface, click "Setting > Configuration Preview" to use the discovery function.

After clicking the "Scan" button, find the device serial number that matches the label at the bottom of the new ZowieBox Pro and click it to quickly jump to the device's web control interface.

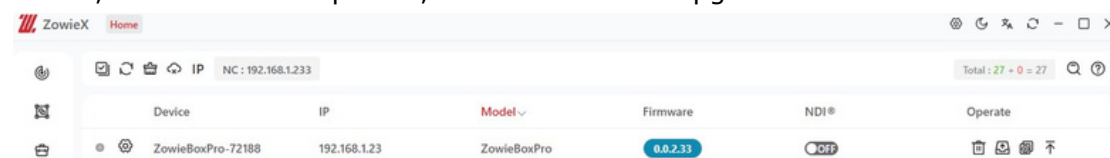


(5) Fail-safe IP

When the connected network lacks DHCP services, or when the ZowieBox Pro is directly connected to the computer via Ethernet cable, the ZowieBox Pro 's IP address will become a fail-safe IP (192.168.5.168). Please add the 192.168.5.x address to your computer to log in to the web control interface.

(6) ZowieX

ZowieX is software for managing ZowieTek series devices. It allows for convenient, quick, and automatic scanning of all ZowieTek series devices on the same LAN. It provides users with web login, Tally indicator light status, NDI status, network status queries, and batch device upgrades.

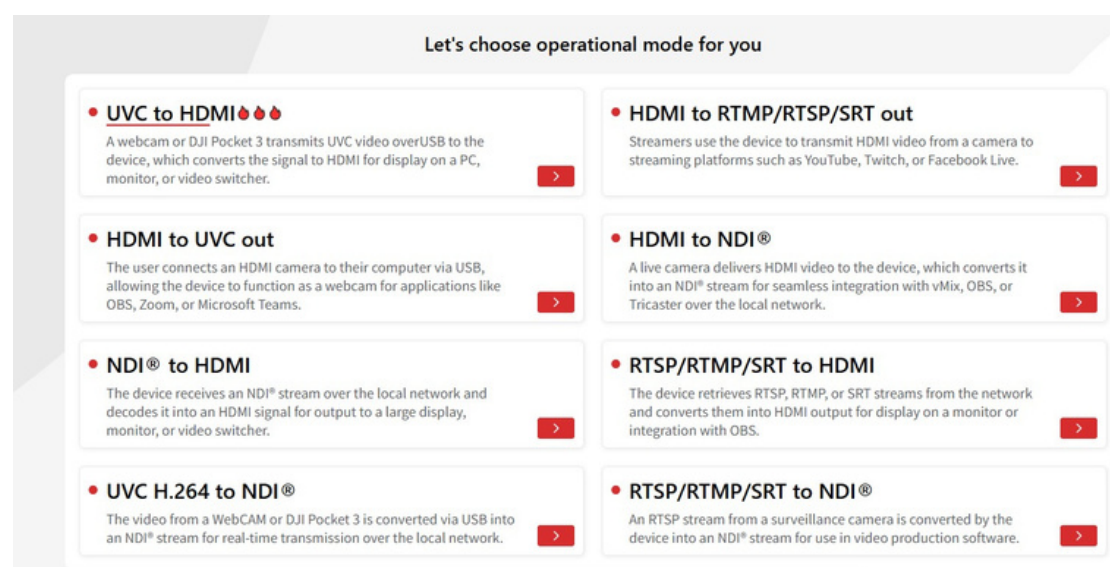


Tip:

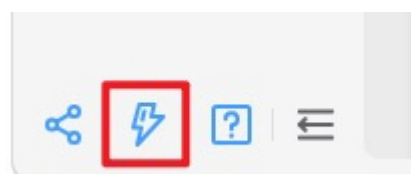
Username : admin; Password : admin

2.2 Web UI Quick Setup

When logging in to the **Web UI** for the first time, users will be prompted to select their preferred **operating mode** for an optimized initial configuration.



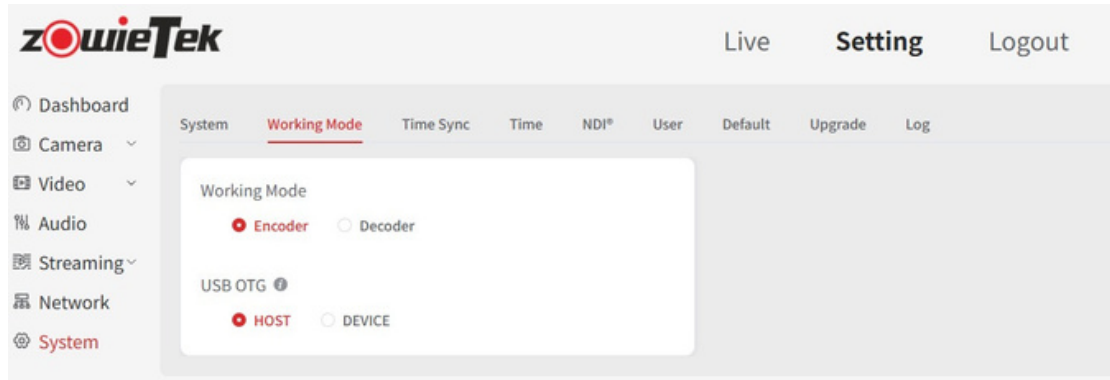
If users need to switch to other working modes later, please click the icon in the lower left corner to quickly access this interface.



2.3 Switching between working modes

2.3.1 Switching Operating Modes

The **ZowieBox Pro** does not support simultaneous encoding and decoding; these two operating modes are mutually exclusive. However, users can freely toggle between them depending on their workflow requirements.



2.3.2 USB OTG Switching

The ZowieBox Pro's USB 3.0 interface supports connecting a disk for recording or transferring video.

Different OTG modes need to be selected depending on the different work scenarios; the default is Host mode.

After logging into the web console, users should click Setting-> System-> Working Mode to switch to OTG mode.

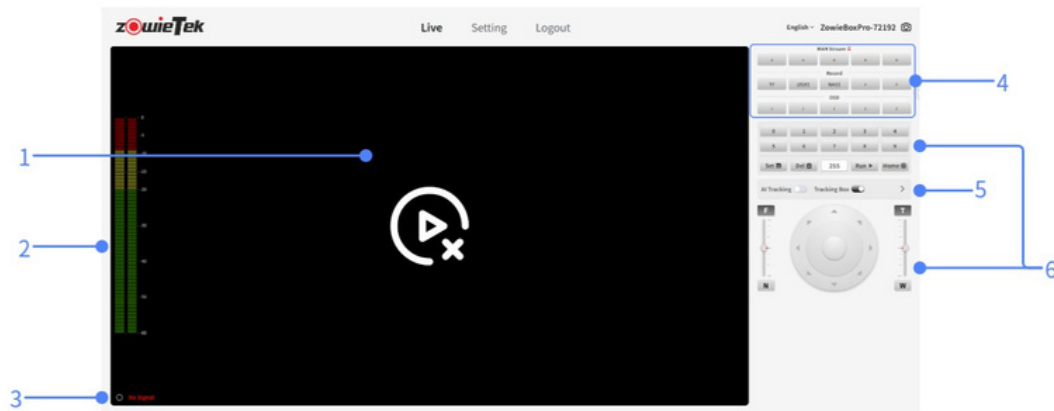
Tip:

Host mode: USB Recording, UVC Video Input, Serial control.

Devicemode: UVC Output.

3. Webpage Preview

3.1 WebpagePreview



Area 1(Main View Window): Displays the real-time live video feed or decoded video stream.

Area 2(Audio Level Meter): Provides real-time visual monitoring of input audio levels and volume dynamics.

Area 3 (Status Indicators): Offers quick confirmation of the current video status.

Area 4 (Quick Operation Panel): Provides rapid access to shortcuts such as streaming, recording, OSD layouts, and decoding source switches. Clicking the blank "+" sign redirects you instantly to the corresponding settings interface.

Area 5 (AI Tracking Configuration): Enables quick access to AI humanoid tracking parameters and displays the tracking bounding boxes around detected subjects.

Area 6 (PTZ Control): Features a virtual joystick and layout for quick management of camera PTZ movements and presets.

Tip:

The mainstream of the webpage preview supports 264/ MJPEG format, and the

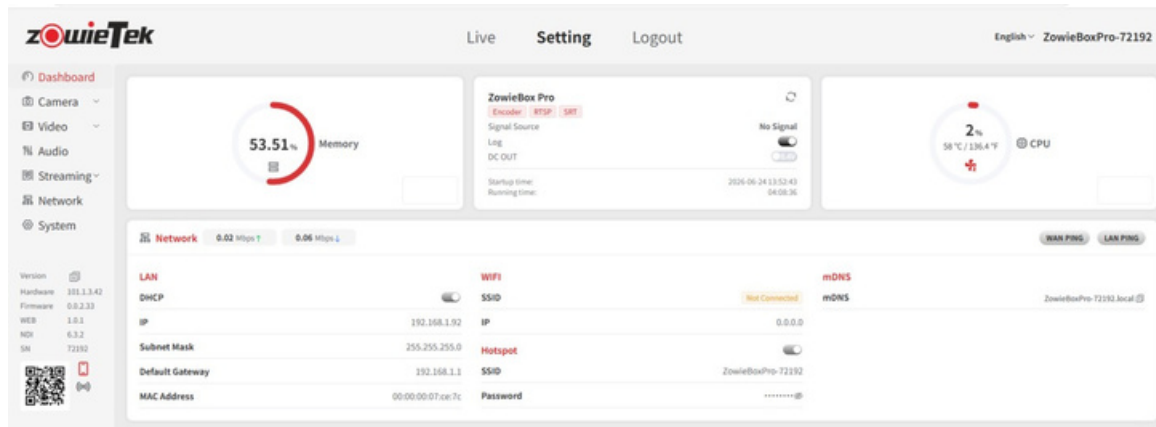
sub-streams supports 264/265/ MJPEG format.

3.2 Dashboard

users can click Setting->Configuration to view the device's basic information.

Device System Status: Displays critical hardware information, including the current Firmware Version, CPU usage, CPU Temperature, and available memory.

Quick tools: Fan speed adjustment, Network test, device scanning, DC Out switch.



Fan speed adjustment: The default mode is standard mode, which can be changed to silent mode /performance mode according to the environment.

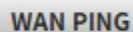


: Toggles the 8.4V DC power output interface on or off to manage power delivery to external auxiliary devices.

Click Setting->System to switch the output voltage.



: Scan all ZowieTek devices on the same LAN.



It can quickly check the connectivity of the Internet/LAN.

4. Encoding Settings

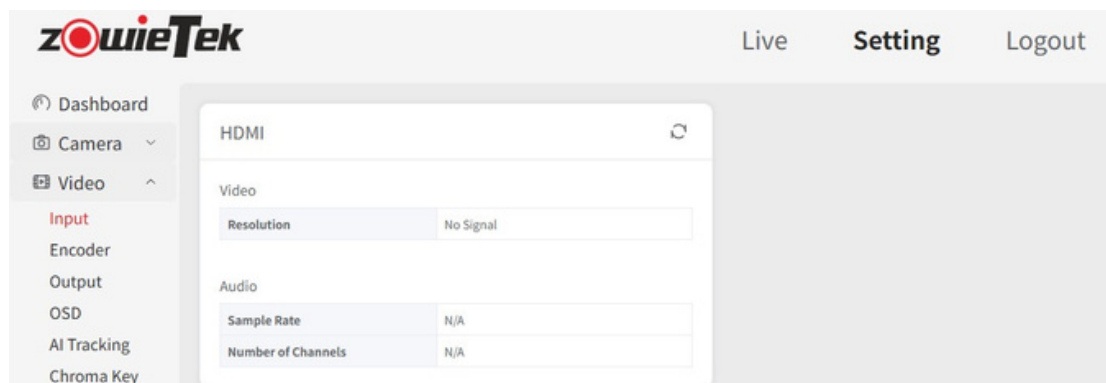
4.1 Video Parameter Settings

4.1.1 Input Status

Click Setting -> Video -> Input to view basic information about the current HDMI

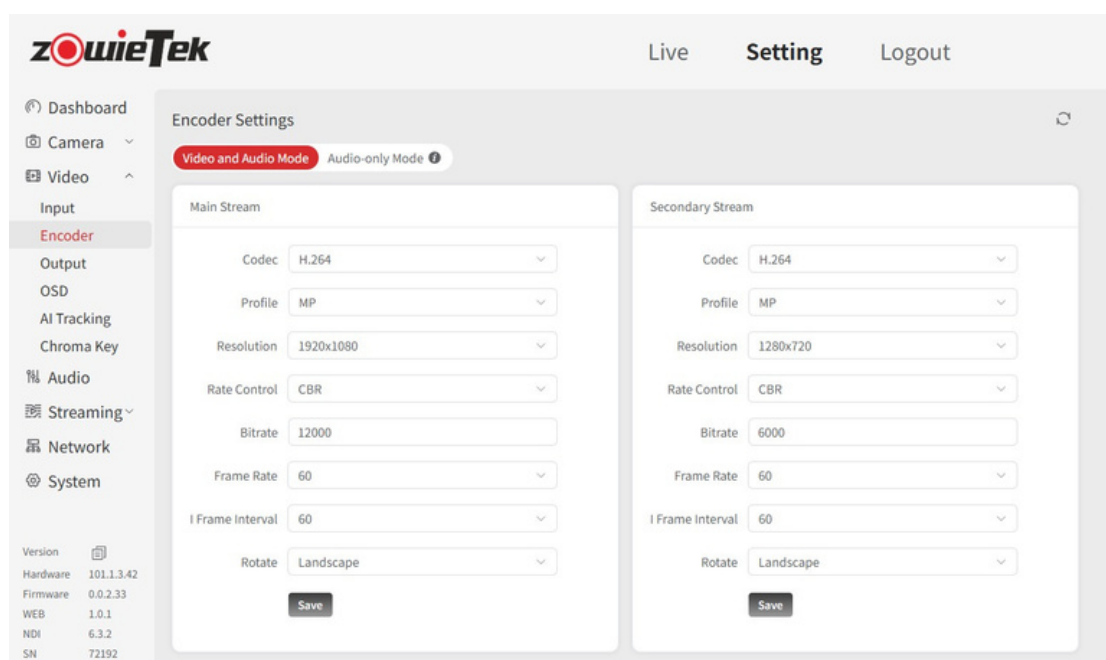
input source.

ZowieBox Pro supports up to 4K60/1080p120fps video input, 8-channel audio input, and a 96kHz sampling rate.



4.1.2 Encoding Parameter Settings

Click Setting -> Video -> Encoder to configure the encoding parameters.



Codec: H.264 is the default, H.265 and MJPEG are available.

Profile: MP is the default, BP and HP are available.

Resolution: Constrained by the input resolution, the main stream can be set to a maximum of 3840x2160, and the secondary stream can be set to a maximum of 1280x720.

Rate Control: The main and secondary stream default to CBR, VBR and AVBR are available.

Bitrate: When NDI is off, the main stream bitrate defaults to 12000kbps, with options from 64kbps to 51200kbps; the secondary stream bitrate defaults to 6000kbps, with options from 64kbps to 25600kbps. When NDI is on, the main

and secondary stream bitrates default to 100%, with options from 50% to 125%.

Frame rate: The frame rate changes with the frame rate of the input signal source. It is a multiple of the input frame rate but does not exceed the input frame rate.

I Frame Interval: The I Frame interval is set to match the frame rate by default, and will not exceed four times the frame rate. For NDI HX1 and HX2, the I frame interval is consistent with the frame rate; for NDI HX3, the I frame interval is fixed at 20.

Rotation: The default is standard landscape mode, with options for portrait (clockwise), portrait (counter-clockwise), and reverse landscape.

Tip:

- 1、In MJPEG format, UVC output, web page preview, and local streaming preview of MJPEG are supported.
- 2、The main webpage stream does not support .265 format preview, but recording, streaming, and other functions work normally.

4.1.3 HDMI Output

Click Setting -> Video -> Output to configure the output parameters.

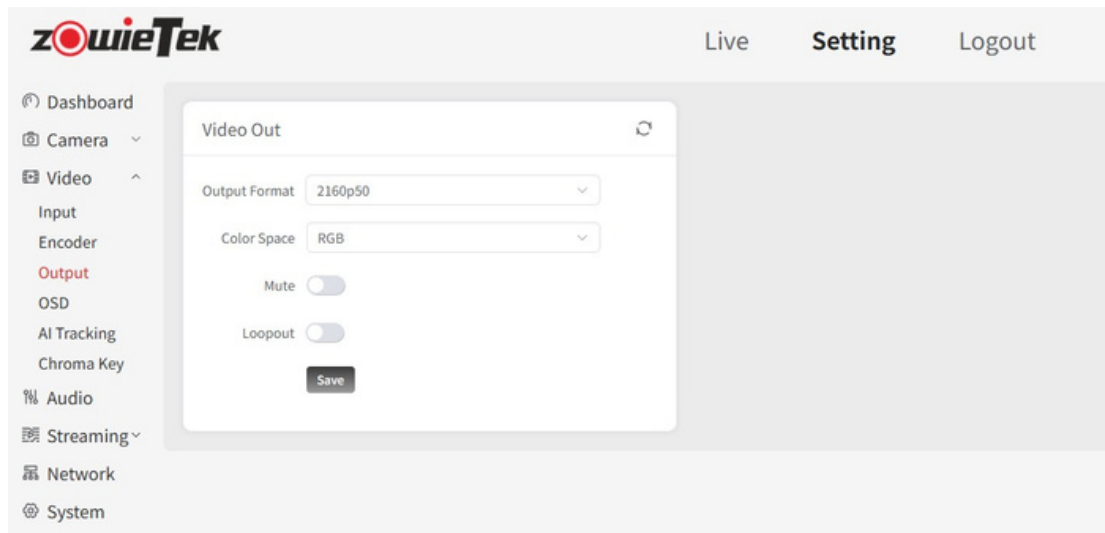
Output format: The output resolution can scale up to 4K@60fps. The output frame rate is constrained by the input frame rate and is always a multiple of the input frame rate. It fully supports standard broadcast fractional frame rates (including 59.94 / 29.97 / 23.976 fps).

Interlaced signal output (e.g., 1080i) is not supported.

Color space: RGB by default, YCbCr444 available.

Mute: When enabled, audio output will be disabled on the HDMI output, but audio will still be output normally by streaming.

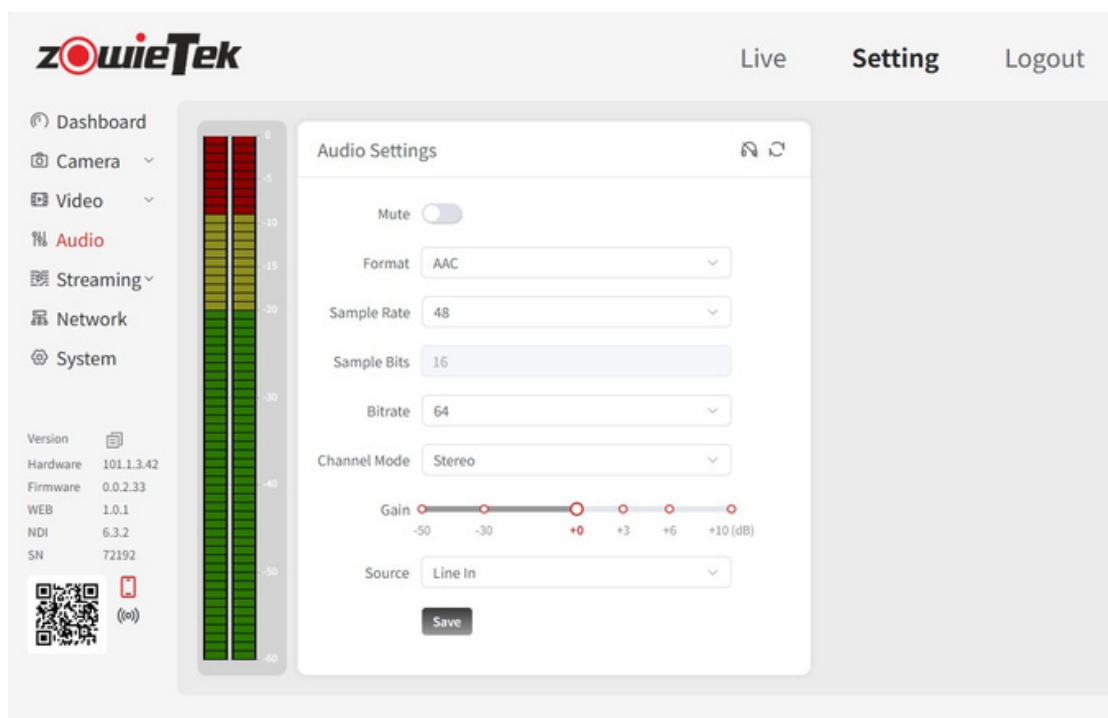
Loopout: When enabled, ZowieBox Pro will not process the input signal source and will loop out according to the received format, achieving zero-delay loopout.



4.2 Audio Settings

Click Setting-> Audio to adjust audio parameters.

Audio Source: Toggles between different physical audio inputs. Users can select HDMI, Line In (default), USB or Passive microphone input.



Mute: When the mute button is turned on, both encoded audio and output audio will be disabled.

Format: AAC by default, MP3 is available.

Sampling rate: 48 by default, 16, 32, 44.1, and 96 available.

Bitrate: Default is 64, 96/128/192/256 available

Channel mode: The default is stereo. When the input audio is 7.1/5.1 channel, stereo or multi-stereo is available.

When selecting dual-channel, you can choose between encoding and HDMI output from channels 1/2, 3/4, 5/6, and 7/8.

When multi-channel stereo is selected, only recording, RTSP, and SRT support multi-stereo. NDI, line out, HDMI output, and RTMP will capture 1/2 channel audio by default.

Gain: Gain can only be adjusted for line in and passive mic input; gain cannot be adjusted for HDMI and USB audio sources.

Tip: 1. RTSP, SRT, and NDI do not support MP3 audio format.

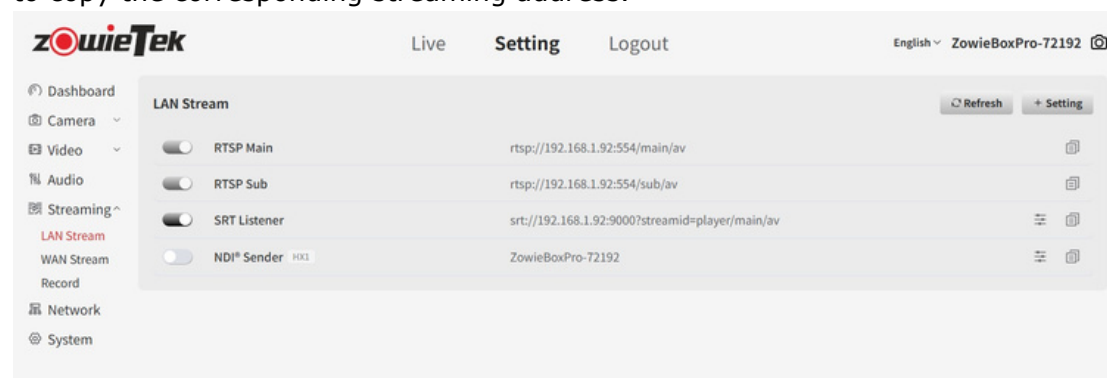
4.3 Streaming and Recording

4.3.1 LocalService(RTSP /SRT)

ZowieBox Pro supports built-in local RTSP and SRT services.

RTSP local stream:

RTSP supports local preview of the main stream and sub-streams. RTSP is enabled by default and cannot be disabled. You can access it through the web control interface by clicking Setting -> Streaming -> Local Stream, then clicking to copy the corresponding streaming address.



Click the settings button  in the upper right corner to enable and modify RTSP authentication. Restart is required for the changes to take effect.

[Click Setting -> Network-> Network -> Port to set the port for the RTSP local stream.](#)

SRT Local Stream (Listener):

The SRT local stream currently only supports previewing the main stream. The

SRT local stream operates in Listener mode; clicking  allows users to directly copy the corresponding URL, and clicking  allows users to configure SRT parameters. Please disable the SRT button before configuring; otherwise, you will not be able to make changes.

SRT Listener configuration interface showing fields for Port (9000), Passphrase, Stream ID (player/main/av), and Key Length (32). A Save button is present.

Currently, configuration of SRT port, stream ID, Passphrase and Key Length is supported. After configuration, click save to take effect.

SRT only supports one device at a time for streaming.

4.3.2 WLAN Streaming

ZowieBox Pro supports network streaming using RTMP(S), SRT Caller, and SRT Rendezvous.

Please click Setting -> Streaming-> WAN Stream and then click the "+" sign in the upper right corner to add a streaming task .

WAN Stream configuration interface showing fields for Alias, Description, Service (Custom), Protocol (RTMP(S)), Push URL, and Stream Key. A Save button is present.

Alias: Supports 1-32 characters for easy task management.

Service: Custom by default, YouTube is available

Protocols: RTMP(S), Enhanced RTMP(S) (compatible with YouTube 265 streaming), SRT Caller, and SRT Rendezvous are available.

RTMP(S)/Enhanced RTMP(S):

Push URL: Enter the desired streaming URL. It must match the streaming protocol you set. Please ensure it does not contain spaces.

Stream key: can be empty

SRT Caller/SRT Rendezvous:

The screenshot shows the configuration page for a custom SRT Caller stream. At the top, there is a toggle switch, the status 'Offline 0 kbps', and icons for settings and deletion. The form includes fields for 'Alias' and 'Description'. Below these are 'Service' (set to 'Custom') and 'Protocol' (set to 'SRT Caller'). The 'Hostname' field is empty, and the 'Port' is set to '5000'. There are also fields for 'Latency(ms)' (set to '200'), 'Passphrase' (empty), 'Stream ID' (empty), and 'Key Length' (set to '32'). A 'Save' button is located at the bottom.

Hostname: Please enter the IP address of the Listener device or the Rendezvous device.

Port number: Please keep it consistent with Listener and Rendezvous.

Delay: 200-1500ms available

Password: Can be empty

Stream ID: Please enter the corresponding Stream ID and omit the " *stream id* =" character.

Bond length: 32/16/24 available

e.g.:

This screenshot shows the same configuration page as above, but with the 'push.livebond.com' example filled in. The 'Hostname' is 'push.livebond.com' and the 'Port' is '1105'. The 'Stream ID' field contains the value '#!::h=push.livebond.com,r'. Below the form, a red box highlights the resulting SRT URL: 'srt://push.livebond.com:1105?streamid=#!::h=push.livebond.com,r=/zowieowietek?auth_key=174158879-0-0-eb9c3d669d31f96804d3a8f78f4cc353,m=publish'. Red arrows point from the 'Hostname' and 'Stream ID' fields to their respective parts in the URL.

YouTube server:

If users need to stream to YouTube, you can choose to log in to your YouTube account directly in ZowieBox Pro .

The screenshot shows the configuration page for a YouTube stream. The 'Service' is set to 'Youtube'. There is a button labeled '获取Youtube登录地址' (Get Youtube login address) and a '保存' (Save) button. The status at the top is '离线 0 kbps' (Offline 0 kbps).

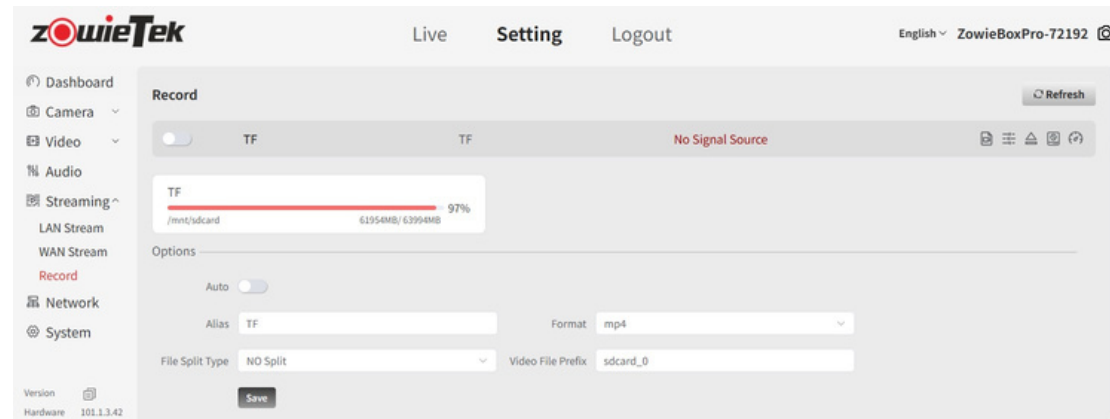
Tip:

- 1、 Due to bitrate limitations, streaming cannot be enabled simultaneously with NDI.
- 2、 ZowieBox Pro supports simultaneous streaming of two RTMP streams, one SRT Caller, and one SRT Rendezvous stream.

4.3.3 Recording

ZowieBox Pro supports recording to TF/USB/NAS. ZowieBox Pro only supports recording in encoding mode and can only record to one storage device at a time.

Click Setting -> Streaming-> Record to configure recording parameters.



Record/Pause: Click the left button  to start recording. During recording,

click  to pause/resume recording.

Disk speed test: Please click  to perform speed test. A disk speed greater than 20MB/s is recommended; otherwise, it may cause video file corruption or audio video desynchronization.

Disk formatting: ZowieBox Pro supports recording from disks formatted as exFAT /FAT32/EXT4. NTFS and other formats cannot be recorded. Click  to format the disk to exFAT /FAT32.

Video recording format: MP4 is the default file size; ts /mov is available.

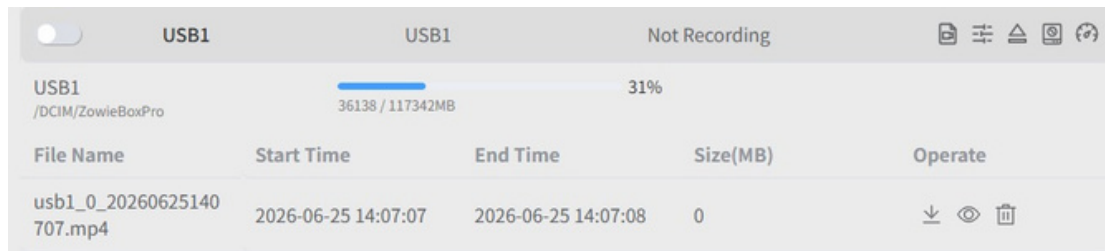
Alias: The recording task name can be customized and supports 1-16 characters.

File splitting: The splitting mode can be selected by time (15/30/45min) / size (1.5/3/4G) / no splitting.

Only the exFAT format supports unsplit files; FAT32 files are limited to a maximum size of 4GB.

File prefix: Supports 1-16 characters

View video files: Click  to view video files. Online preview (mp4/mov format only), download, and delete of video files are supported.



Unmount the disk: After recording is complete, please click  to unmount the disk. Directly plugging or unplugging the disk may damage it .

Tip:

To ensure file security, recording will be disabled when the remaining disk space falls below 2 GB.

4.4 NDI Settings

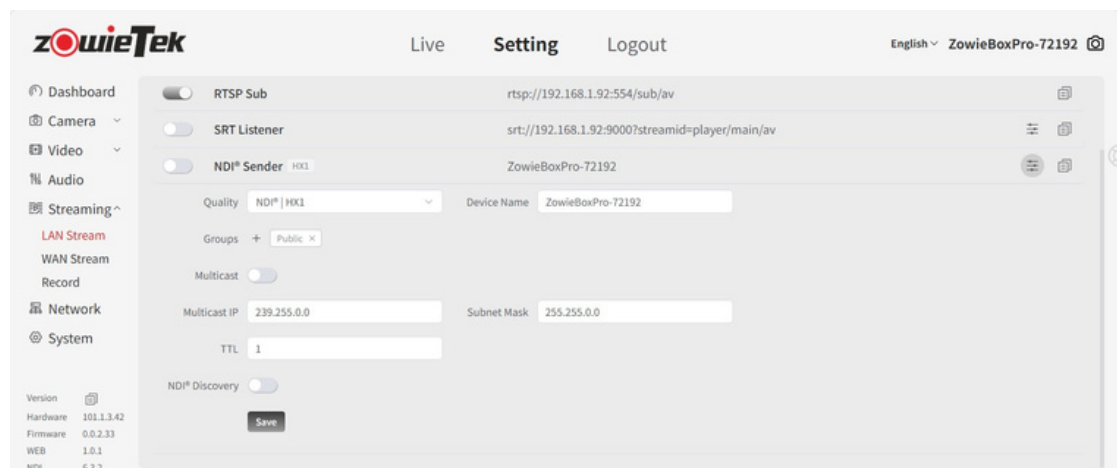
ZowieBox Pro supports the NDI® 6.3.2 protocol and has built-in NDI Bridge, enabling lower latency and higher image quality for streaming.

4.4.1 NDI Streaming

Click Setting -> System -> NDI to check if the device's NDI is activated.

NDI Local Stream: If NDI is activated, ZowieBox Pro will output an NDI local stream by default. The bitrate of the NDI local stream is consistent with the encoding settings. The NDI local stream is not a standard NDI stream.

NDI HX1/2/3: If the device needs to stream a standard NDI local stream, please click Setting -> Streaming-> LAN Stream. Please select the desired quality (NDI HX1/2/3), click Save and then click the Stream button. At this time, due to bitrate limitations, the device will not be able to stream RTMP / SRT .



NDI Group: The default NDI group is Public. If you need to add other NDI groups, please click the plus sign to add them and then click the save button below.

Multicast: If multiple NDI devices need to be enabled in a network, the NDI multicast function can be enabled. When enabling it, please ensure that the switch/router supports the multicast function, otherwise it may result in the inability to find NDI devices.

NDI Discovery: If mDNS is not supported in the network or NDI needs to be transmitted across network segments, please enable the NDI discovery service and enter the address of the NDI discovery server. After enabling NDI discovery, only the corresponding NDI discovery server can discover this NDI flow.

Tip:

The bitrate table for NDI set to 125% is as follows:

(mbps)	HX		HX2		HX3	
Format	H.264	H.265	H.264	H.265	H.264	H.265
2160p60	28	21	55	42	110	84
2160p50	23	18	46	35	92	70
2160p30	20	15	39	30	78	60
2160p25	17	14	34	27	68	54
2160p24	17	14	34	27	68	54
1440p30	16	13	31	25	62	50
1440p25	13	10	26	21	52	41
1440p24	13	10	26	21	52	41
1080p60	16	13	31	25	62	50
1080p50	13	10	26	21	52	41
1080p30/i60	8	6	16	13	31	25
1080p25/i50	7	5	13	10	26	20
1080p24	7	5	13	10	26	20
720p60	7	6	14	11	27	22
720p50	6	5	11	9	23	18
720p30	3	3	7	6	14	11
720p25	3	2	6	4	11	9
720p24	3	2	6	4	11	9

4.4.2 NDI Bridge (Join)

ZowieBox Pro has a built-in NDI Bridge (Join) function, which supports the transmission of NDI over the Internet.

Click Setting -> Streaming -> WLAN Stream to config NDI Bridge.

Group: Transmit NDI sources from a specified group within the local area

network to the host NDI Bridge. By default, it forwards all NDI sources in the Public group.

Bridge Name: Signal sources from this bridge will be grouped using this name . Bridge names cannot be duplicated.

Server IP: Please enter the public IP address of the NDI host bridge.

Server port: Points to the external port of the host. When performing NDI transmission over the Internet, port mapping needs to be performed on the host side.

Encryption key: Must be consistent with the settings on the host side.

NDI Discovery: Once enabled, the device will use unicast to directly retrieve and register NDI signals for public network transmission to the specified IP address (discovery server IP) entered below .

After completing the setup, please click Save and turn on the NDI Bridge button on the left.

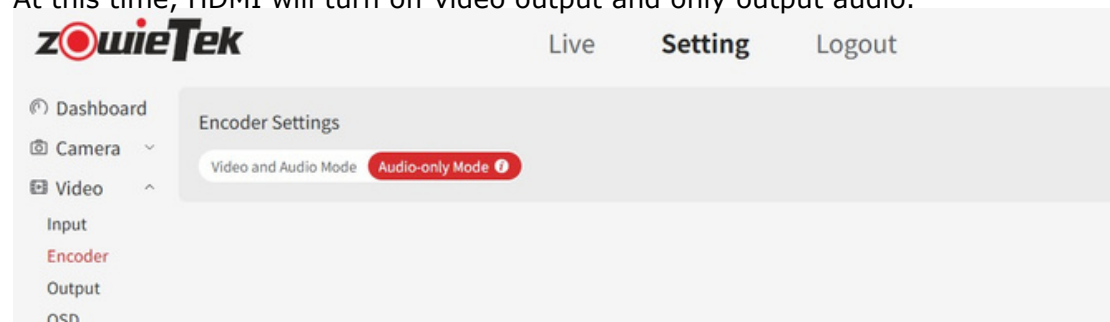
4.5 Audio Only

ZowieBox Pro supports ignoring video signals and transmitting only audio signals.

Audio only mode is off by default. To switch the transmission mode to Audio only mode, click Setting -> Video->Encoder.

Enabling Audio Only mode allows users to get audio signal from web preview, line out, RTSP local stream, and SRT local stream.
SRT/RTMP network streams may experience compatibility issues due to the streaming server.

At this time, HDMI will turn off video output and only output audio.



4.6 Advanced Settings

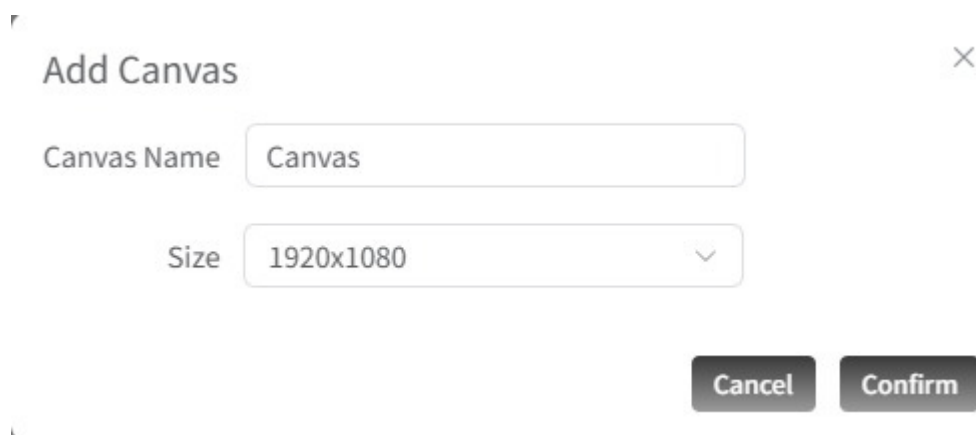
4.6.1 OSD Overlay

ZowieBox Pro supports adding images/timestamps/text/scoreboards to the main stream.

Click Setting-> Video -> OSD to add.

Add canvas:

Click on the right button **Add** to add a canvas. It is recommended that the canvas resolution be consistent with the resolution, otherwise the actual effect will be different.

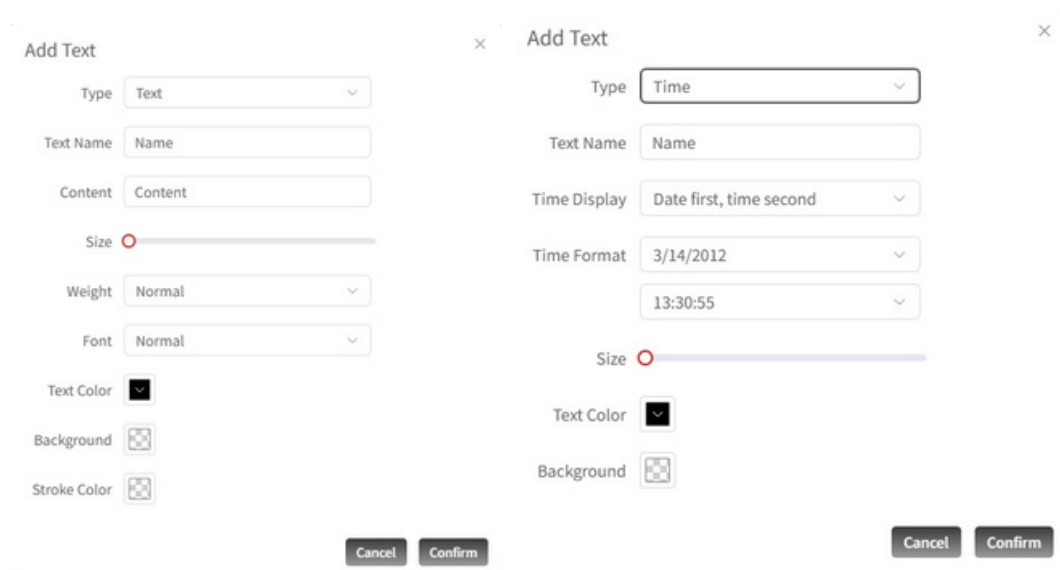


The 'Add Canvas' dialog box features a title bar with a close button (X). It contains two input fields: 'Canvas Name' with the text 'Canvas' and 'Size' with a dropdown menu showing '1920x1080'. At the bottom right, there are two buttons: 'Cancel' and 'Confirm'.

Add text/timestamp:

Click **+Text** to add a timestamp/text.

You can modify information such as text size, content, font, dimensions, color, and background color. Once a timestamp is added, it cannot be modified; you can only delete it and add it again.



Two 'Add Text' dialog boxes are shown side-by-side. The left dialog has 'Type' set to 'Text' and includes fields for 'Text Name' (Name), 'Content' (Content), 'Size' (a slider), 'Weight' (Normal), 'Font' (Normal), 'Text Color' (black), 'Background' (checkbox), and 'Stroke Color' (checkbox). The right dialog has 'Type' set to 'Time' and includes fields for 'Text Name' (Name), 'Time Display' (Date first, time second), 'Time Format' (3/14/2012 and 13:30:55), 'Size' (a slider), 'Text Color' (black), and 'Background' (checkbox). Both dialogs have 'Cancel' and 'Confirm' buttons at the bottom.

Add image :

Click **+Image** to add an image. The image resolution cannot exceed the canvas/encoding resolution, the image size cannot exceed 1.7MB, and only JPG/JPEG/PNG are supported.

Add scoreboard:

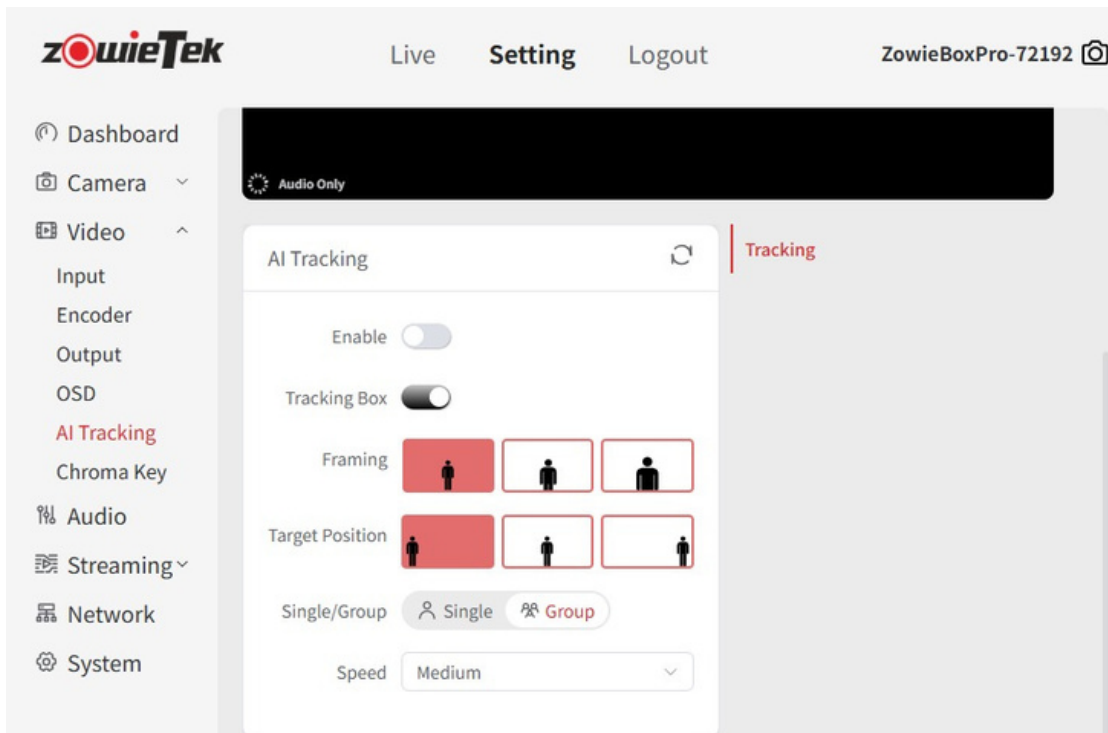
Click **+Scoreboard** to add scoreboard. Users can modify information such as font size, color, size, and dimensions.

Tip:

1. A maximum of eight elements and four canvases can be added to each canvas.
2. Due to performance limitations, multiple elements cannot currently be stacked. If elements overlap when moving, they will automatically return to their original positions.
3. It will only take effect on main stream.

4.6.2 AI Tracking

ZowieBox Pro supports real-time analysis of the person's position based on the HDMI input and controls the PTZ movement direction to keep the person in the center at all times.



SetPTZ control:

[Click to quickly jump to the PTZ control interface.](#)

SetAI tracking:

Click Setting -> Video -> AI Tracking to set.

Tracking box: The AI recognition box only appears in the webpage preview. You can click the button to turn off the tracking box display.

Framing: Choose the size of the character in the video.

Target Position: Select the position of the character in the frame.

Single/Group: Tracking modes can be set. In single mode, the selected target will always remain in the set position; in group mode, all identified people will always remain in the set position.

Speed: Allows users to adjust the speed at which the camera moves.

Tip:

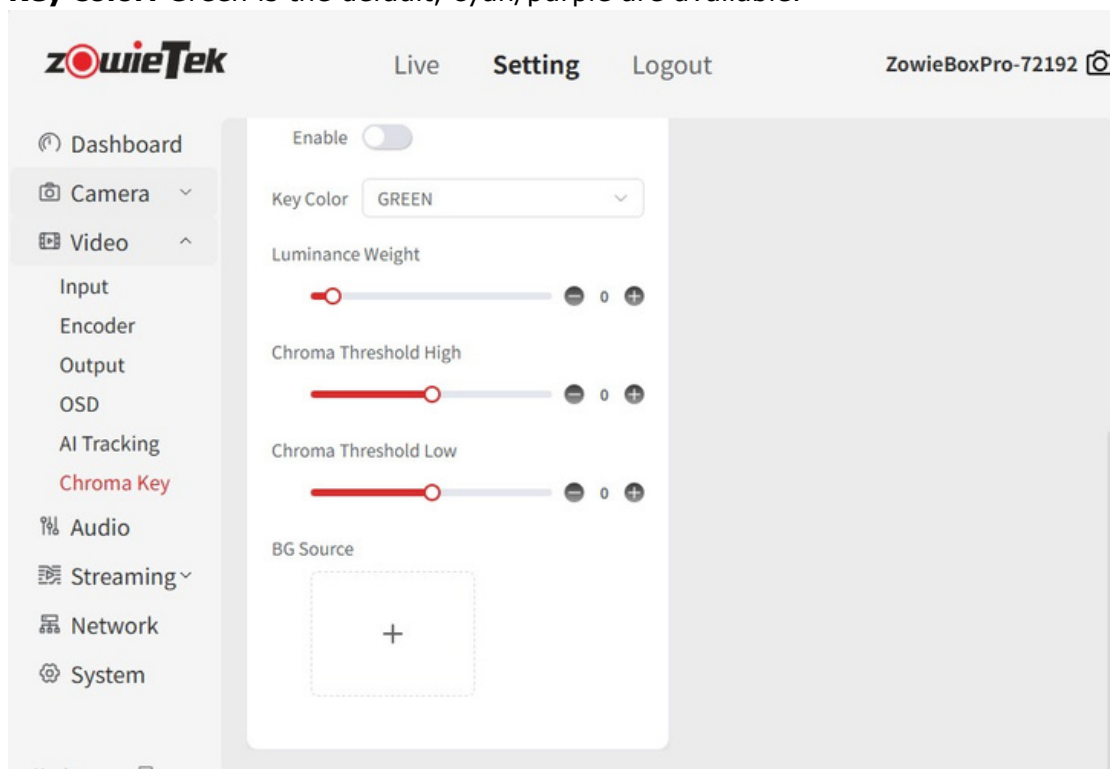
1. Due to performance limitations, a maximum of 8 targets can be recognized; targets exceeding this number will not be recognized.

4.6.3 Chroma Key

ZowieBox Pro supports real-time keying of input video sources with green /cyan/purple backgrounds, replacing the green background layer with a pre-defined image.

Configure the settings by clicking Setting -> Video -> Chroma Key.

Key color: Green is the default, cyan/purple are available.



Luminance Weight: 0 by default, -1 to 10 available, determines the weight ratio of brightness in the keying algorithm (suggesting used when the lighting is uneven) .

Chroma Threshold High: Default 0, available from -10 to 10, sets the "maximum boundary" for excluding green areas.

Chromaticity Threshold Low: Default 0, available from -10 to 10, sets the "minimum boundary" for removing the green area.

Background Source: Click to add a background replacement image. Up to three photos can be added. Images cannot be deleted when selected.

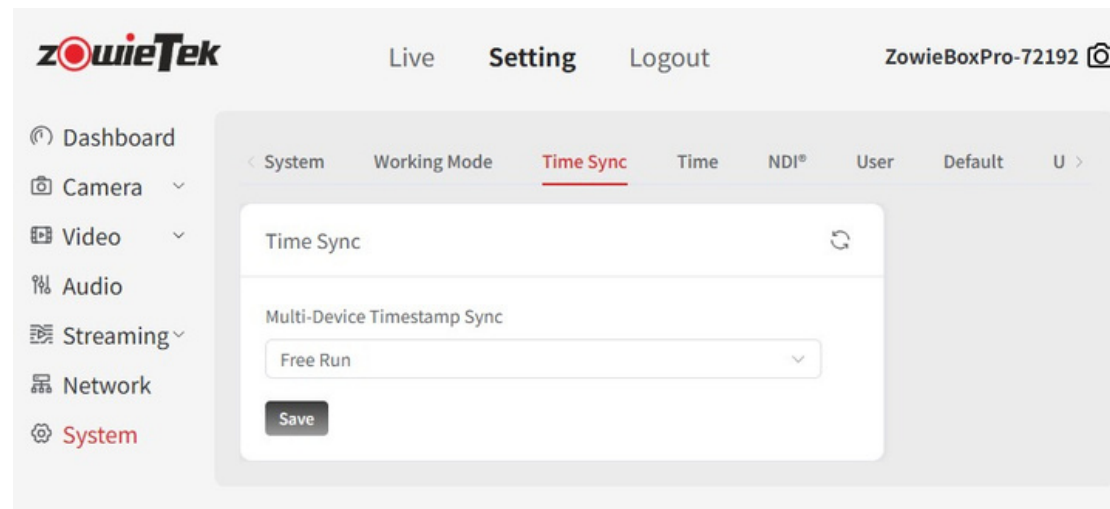
- Tip:**
1. Due to performance limitations, green screen keying is only supported when the resolution is 1080p or lower.
 2. It will only take effect on main stream. Not on sub stream or output.

4.6.4 Multi-device NTP synchronization

To meet the rigorous demands of multi-camera production, remote AV transmission, and joint mixing, strict timestamp synchronization across all hardware components is paramount. Proper synchronization effectively eliminates audio-video desynchronization, frame dropping, screen tearing, and alignment discrepancies between multiple sources.

ZowieBox Pro supports multiple synchronization modes.

Click Setting-> System -> Time Sync, select the device's synchronization mode. The default is Free Run, and Public NTP and Local NTP are available.



Free Run:

The device relies entirely on its internal crystal oscillator to independently generate timestamps, by passing any external reference clock. While ideal for standalone, slight clock drift may accumulate over extended operational periods across different units.

Public NTP:

The device connects to the public NTP network via the internet to obtain standard time and synchronize device timestamps. When using the device, it is essential to ensure that it has network access.

When setting Public NTP synchronization mode: the device's system time will default to NTP time synchronization and cannot be modified.

Local NTP:

The device connects to a designated private NTP server within the local area network for clock synchronization. Suitable for scenarios requiring extremely high precision.

After selecting this mode, please enter your local LAN NTP server and port number in the input box below and click Save .

Time Sync ↺

Multi-Device Timestamp Sync

Local NTP ▼

Host Url

pool.ntp.org

Host Port

123

Save

5. Decoding Setting

Before using the functions below, please switch your device to decoding mode first.

5.1 Decoding Source Setting

5.1.1 RTMP/SRT Server

In decoding mode, ZowieBox Pro has built-in RTMP and SRT local services, which support direct streaming of video signals to ZowieBox Pro for decoding within a local area network without relying on other servers.

Click Setting -> Decoding -> LAN Stream to configure.

RTMP Server

The name and URL of the RTMP server cannot be configured. If you need to push the signal to the RTMP server, please directly click the button below to copy the push URL.

After configuration, click the button on the left to start decoding.

[Live](#)
[Setting](#)
[Logout](#)

English ▼
ZowieBoxPro-72192

Dashboard
Camera ▼
Video ▼
Audio
Decoding ^
LAN Stream
WAN Stream

LAN Stream Refresh

☐
RTMP Server

rtmp://192.168.1.92:1935/1/live/rtmp
rtmp://192.168.1.92:1935/1/live/rtmp

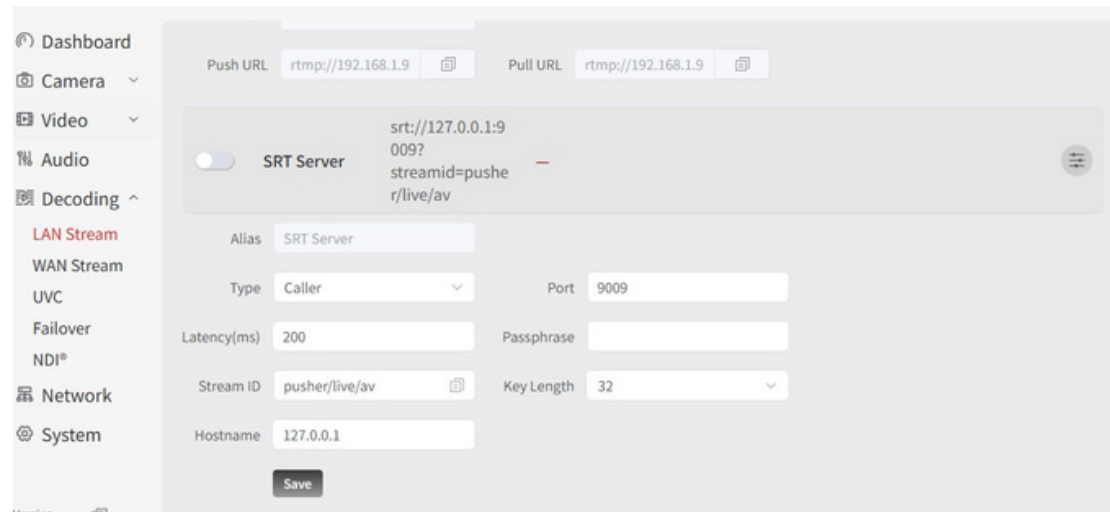
Alias
RTMP Server

Push URL
rtmp://192.168.1.9
Pull URL
rtmp://192.168.1.9

SRT server

In decoding mode, three modes are supported: SRT Caller, Listener, and Rendezvous.

Clicking on the type allows you to quickly switch modes. After configuration, please click "Save" and then click the streaming switch on the left.



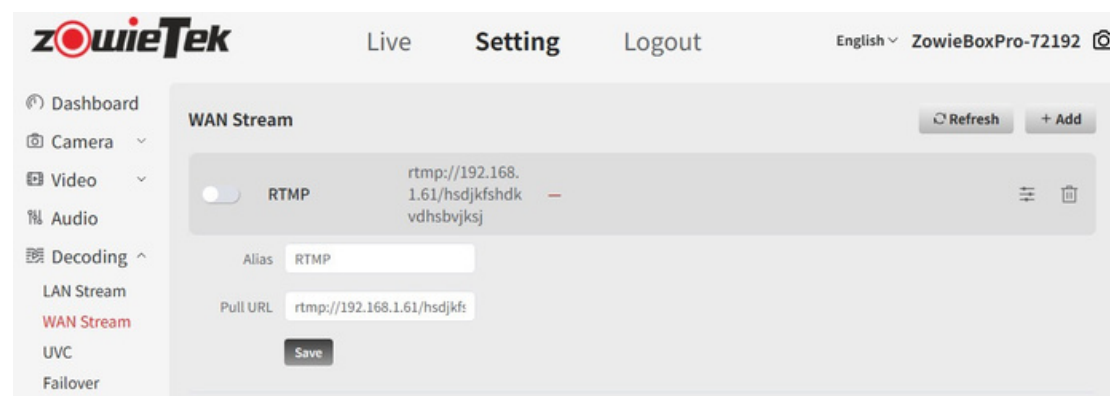
Tip:

1. For RTMP servers, the streaming address can also be directly copied and played using playback software such as VLC.

5.1.2 Network Decoding

ZowieBox Pro supports decoding via network streams, including RTSP, RTMP, and SRT.

Click Settings-> Decoding-> WAN Stream and decoding URL. Click click Save, and turn on the button on the left to start decoding the stream.



Tip:

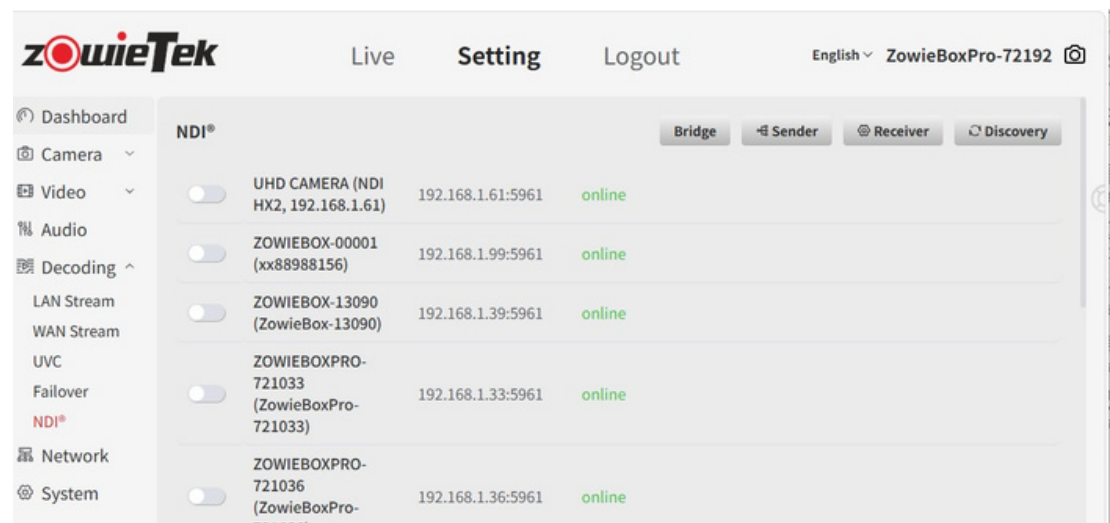
On this screen, SRT is only in Caller mode. Please ensure that the streaming client is in Listener mode.

5.1.3 NDI Decoding

Once NDI is activated on ZowieBox Pro, it will automatically detect all NDI signals on the same local area network.

Click Settings-> Decoding -> NDI to view all found NDI streams, and then turn

on the button on the left to start decoding.



Click **Discovery** to search for NDI sources on the network again.

Click **Receiver** to configure the received NDI source.

Groups: Set up searches for specific groups.

Multicast: NDI sources can be discovered via multicast. To use this function, please ensure that the switches in the network support multicast.

NDI Discovery: In decoding mode, ZowieBox Pro can be configured as an NDI discovery server itself, or join other discovery service.

NDI® Receiver

Groups + **Public** ×

Multicast ☐

Multicast IP

Subnet Mask

TTL

NDI® Discovery ☐

Cancel **Confirm**

Tip:

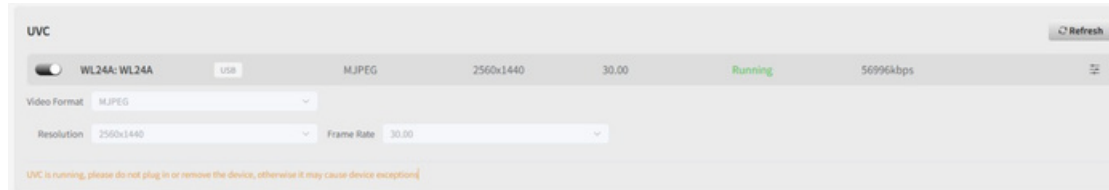
ZowieBox Pro does not support decoding Full NDI/NDI|HB.

5.1.4 UVC Decoding

ZowieBox Pro supports direct decoding of UVC cameras and converts them to HDMI/NDI output. It supports decoding of UVC cameras in YUY2, NV12, 264, 265, and MJPEG formats.

[Please first confirm that the ZowieBox Pro's USB port is running in HOST mode.](#)

Plug the UVC camera into the USB 3.0 port of the ZowieBox Pro. Do not plug it into the Type-C port, as the Type-C port is only for power supply .



ZowieBox Pro will automatically recognize the UVC camera. Please select the video format, resolution, and frame rate you need to decode, and then click the decode button on the left. 

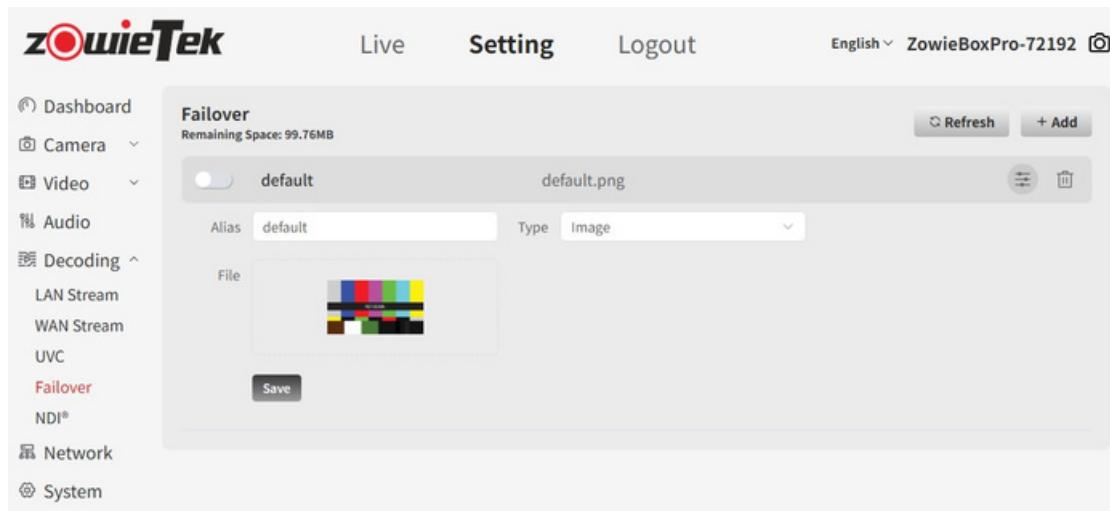
Tip:

1. Do not plug or unplug the UVC camera directly during the UVC decoding process, otherwise it may cause equipment malfunction.
2. If you need to connect multiple UVC cameras, you can connect them via a USB hub. Up to 4 UVC cameras can be connected. When connecting, please make sure that the USB hub can power the UVC cameras.
3. Since UVC audio is in PCM format, it only supports HDMI output monitoring and does not support web page/NDI monitoring.

5.1.5 Failover

When the device has failover enabled, the system can automatically or manually switch to a preset backup media resource when there is an abnormal interruption or no signal in the video source or decoding channel (such as network packet loss, disconnection, etc.) .

To configure failover, go to Setting-> Decoding -> Failover. The device has an initial failover image built-in by default.



Click **+ Add** to add a new failover. Enter the failover name, select the desired type (image, video, URL are available), select the corresponding file, and then click Add to save.

Add
×

Alias

Type

Pull URL

Cancel Add

After setting it up, you can enable the corresponding failover by clicking the button on the left.

Tip:

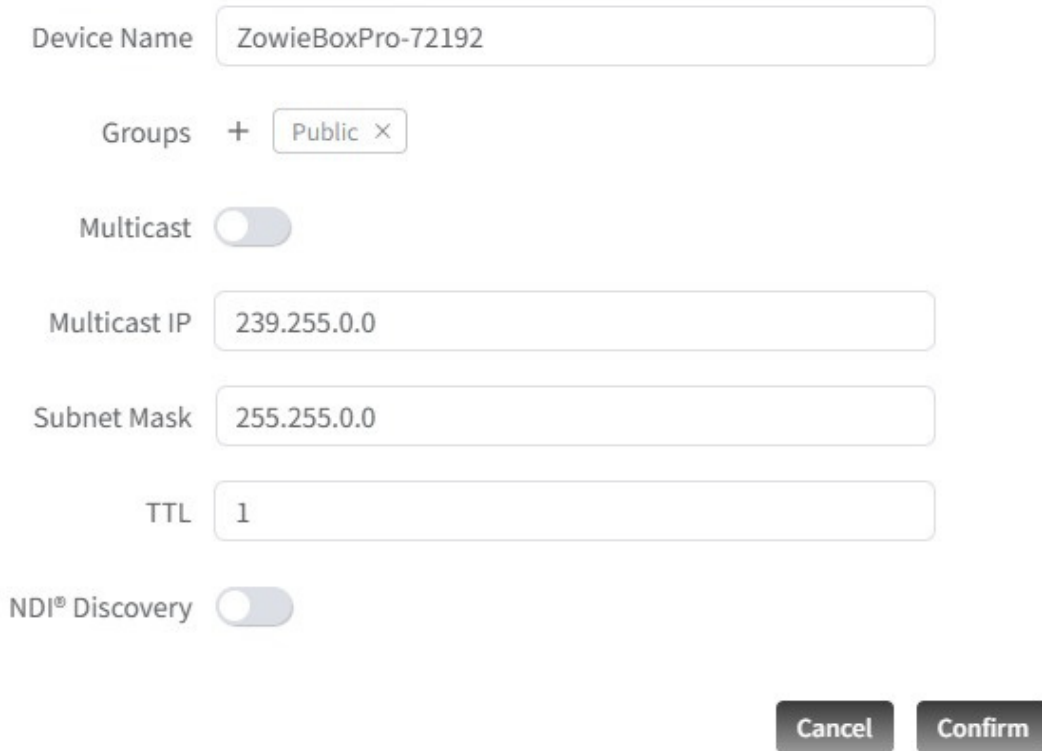
- 1、Videos only support uploading in MP4 format.
- 2、Only JPG/JPEG/ PNG format photos are supported.
- 3、The photo resolution must be 16:9/9:16/4:3/3:4, and the resolution must be divisible by 8.
- 4、All images/videos must be no larger than 100MB in total size; otherwise, they will not be able to be uploaded.

5.1.6 NDI Forwarding

ZowieBox Pro allows devices to receive video streams such as UVC/RTSP/RTMP and directly forward them as NDI signals for transmission.

NDI forwarding settings:

Click Setting-> Decoding -> NDI, and then click  to configure NDI forwarding parameters.



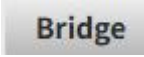
The screenshot shows the NDI forwarding settings interface. It includes a 'Device Name' field with the value 'ZowieBoxPro-72192'. Below it is a 'Groups' section with a plus sign and a 'Public' button with an 'x' icon. There is a 'Multicast' toggle switch that is currently turned off. Below the toggle are three input fields: 'Multicast IP' with the value '239.255.0.0', 'Subnet Mask' with the value '255.255.0.0', and 'TTL' with the value '1'. At the bottom left is an 'NDI® Discovery' toggle switch that is also turned off. At the bottom right are two buttons: 'Cancel' and 'Confirm'.

Groups: The default NDI group is Public. If you need to forward to other NDI groups, please click the plus sign to add them and then click the confirmation button below.

Multicast: If multiple NDI devices need to be enabled in the network, the NDI multicast function can be enabled. When enabling it, please ensure that the switch/router supports the NDI multicast function, otherwise it may result in the inability to find NDI devices.

NDI Discovery: If mDNS is not supported in the network or NDI needs to be transmitted across network segments, you can enable the NDI discovery service and enter the address of the NDI discovery server. After enabling NDI discovery, only the corresponding NDI discovery server can discover this NDI flow.

NDI Bridge:

After NDI forwarding, cross-network transmission can still be performed through NDI Bridge. Click Setting -> Decoding -> NDI, and then click  to configure NDI Bridge parameters.

~~NDI Bridge parameters are compatible with encoder and decoder. Click the link to view the NDI Bridge configuration.~~

5.2 Decoding Output

5.2.1 Output Format

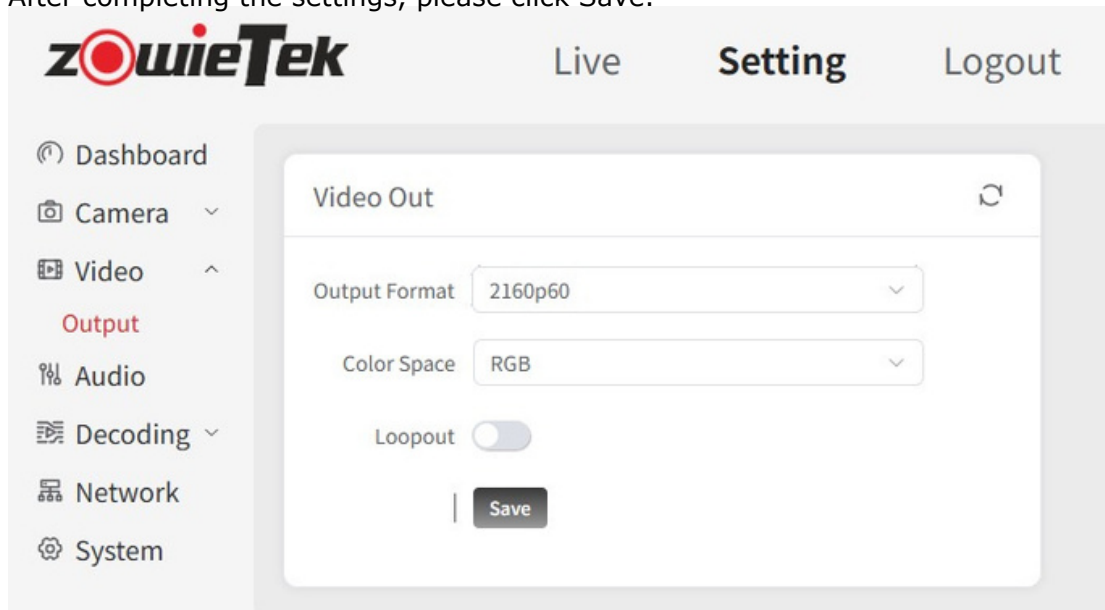
Click Setting -> Video -> Output to switch the video format.

Output format: HDMI defaults to 4K60 output, and supports a maximum output format of 4K60. It supports 59.94/29.97/23.976 decimal frame rate output, but does not support I-frame output.

Color space: RGB by default, YCbCr444 is available.

Loopout: When enabled, the ZowieBox Pro will no longer output the decoding source, but will instead output the signal received via HDMI in. This achieves zero-latency loopout.

After completing the settings, please click Save.

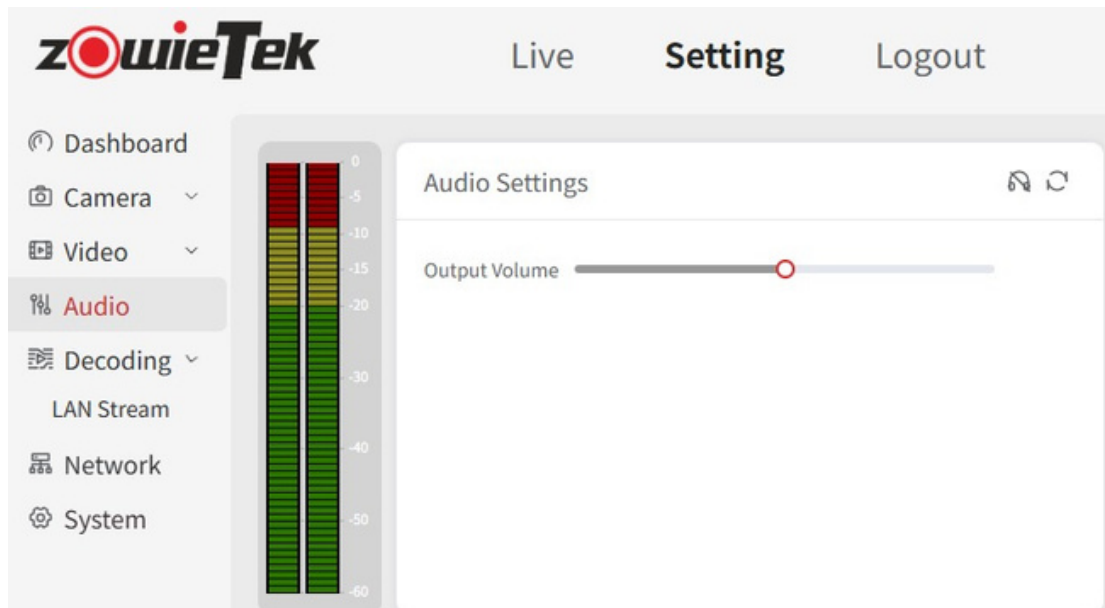


5.2.2 Volume Setting

Click Setting -> Audio to adjust the volume. The value is available from 0 to 100;

0: Completely mutes the audio output.

100: Sets the audio level to its maximum value, rendering the full unattenuated raw gain of the source signal.



6. General Settings

6.1 PTZ Control

ZowieBoxPro supports camera control via IP Visca, serial Visca, Pelco D, Pelco P, UVC, NDI, and other methods.



UVC and NDI control: These can only be controlled when decoding the corresponding signal source in decoding mode.

Pelco D, Pleco P, and Visca serial: Please plug in the serial cable before select the corresponding protocol for control.

Tip:

Zowietek series camera default parameters:

Baud rate: 9600; TCP port number: 5230; UDP port number: 1259

Visca Address: 1

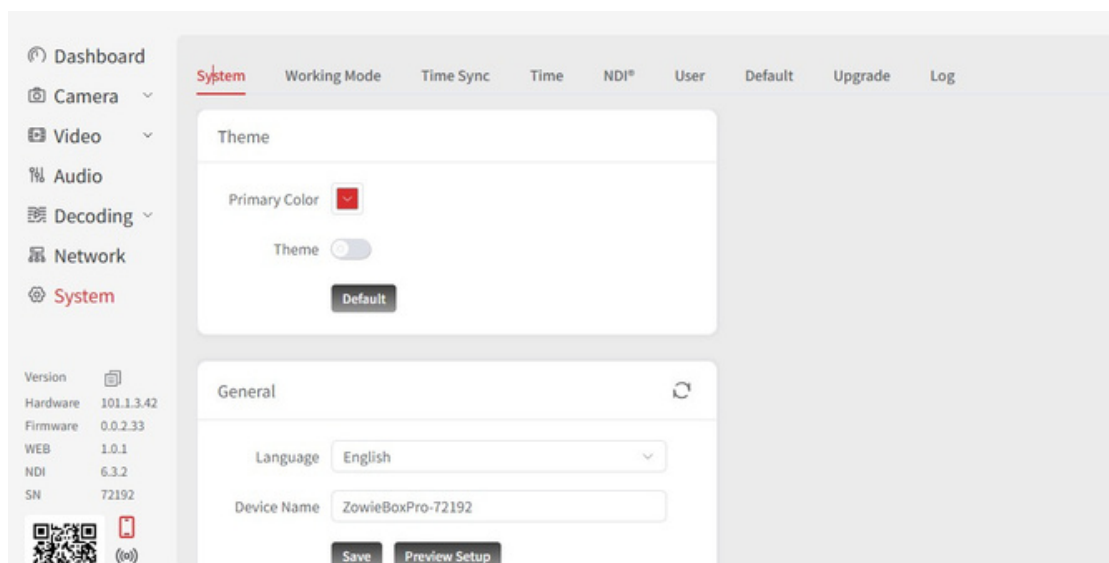
Pelco D Address: 1

Pelco P Address: 0

6.2 Language

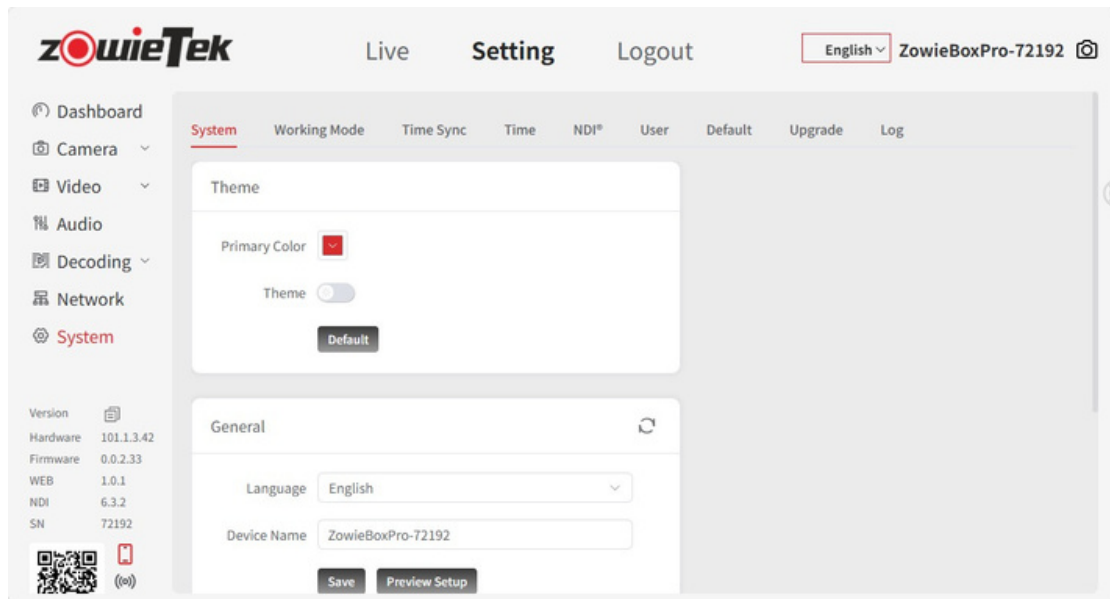
Method 1:

Log in to the web interface, click Setting -> System -> System to configure the system language.



Method 2:

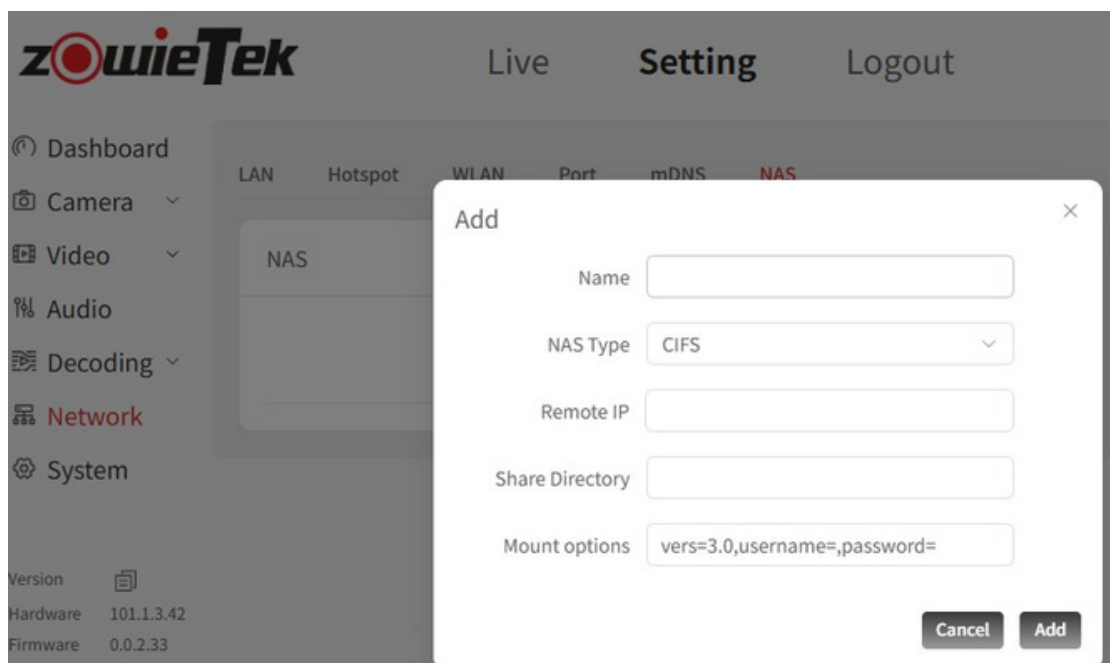
You can switch your device's system language by clicking the top right corner of the webpage.



6.3 NAS

ZowieBox Pro supports storing recorded data directly to high-capacity devices via LAN, such as shared folders on computers or NAS servers. After successfully mounting the NAS, the NAS will automatically appear in the device's recording management interface .

Click Setting-> Network -> NAS to enter the NAS configuration interface. Click the + button on the page and configure the parameters in the pop-up dialog box .



Name: Customize the name of this NAS mount task for easier management.

NAS type : Currently, the system only supports **CIFS** .

Remote IP: The IP address of the storage server or shared computer on the

same LAN.

Shared Directory: Enter the relative path of the shared folder on the remote server (the path after removing the IP address and forward slashes).

If the actual complete path is: \\192.168.1.7\home\test

Please only enter **home\test**

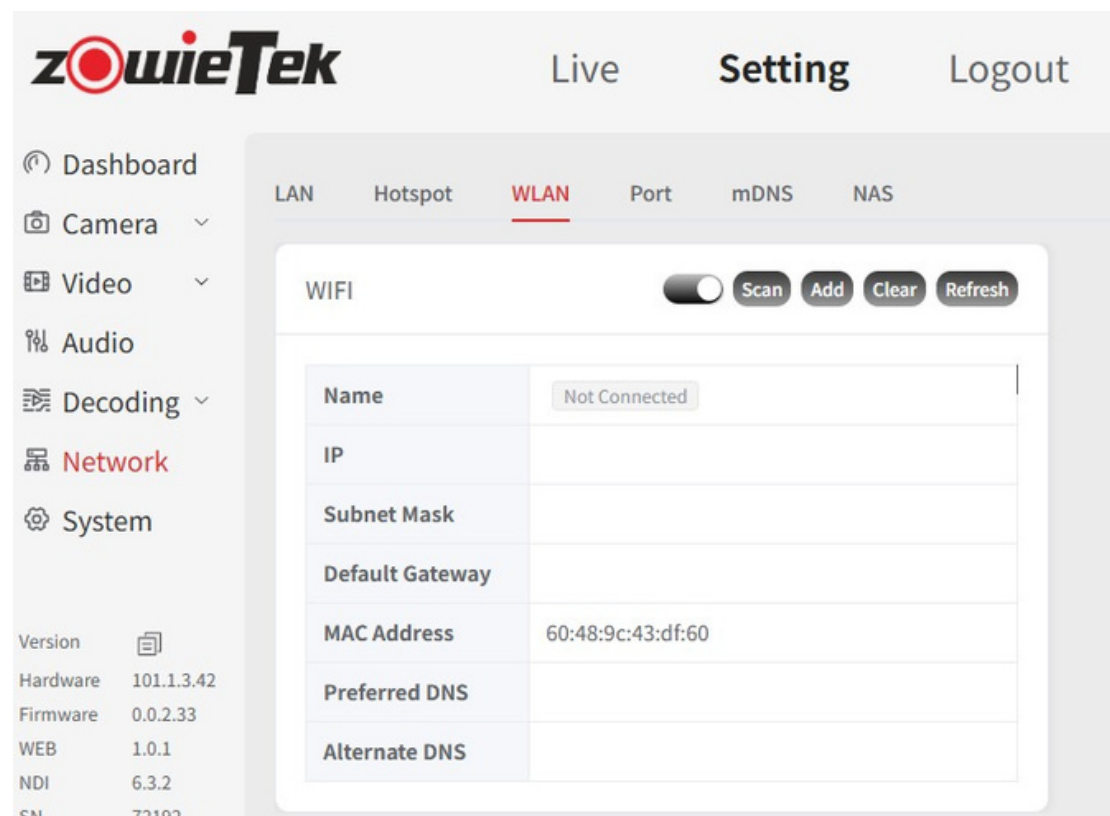
Mount option: Configure the protocol version, username, and password required to connect to this shared folder.

The default format is: *vers=3.0 ,username=,password =* Enter the corresponding account and password after the = sign.

6.4 WIFI

This device has a built-in wireless network module that supports the new **Wi-Fi 6** wireless transmission standard. In audio and video scenarios where cabling is inconvenient, outdoor live streaming is required, or mobile deployment is needed, users can access a WLAN to achieve wireless network communication, device management, and audio and video streaming transmission.

Click Setting-> Network -> WLAN to configure WIFI.



Scan: After clicking, the device will automatically search for available Wi-Fi and display a list.

Add : Used to manually add wireless networks with hidden SSIDs (hidden names) or manually configure static wireless network parameters.

Clear : Clicking this will clear the currently saved Wi-Fi connection configuration or history.

Refresh: Refreshes and loads the current wireless network adapter's status and network configuration information.

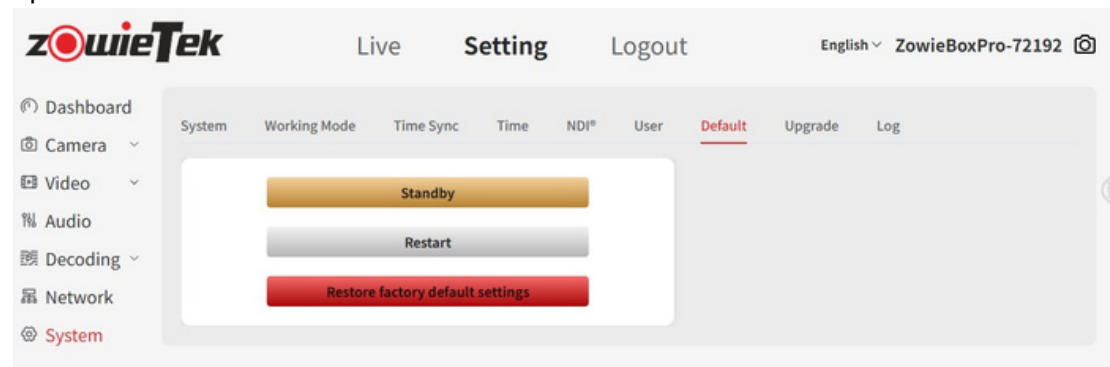
Tip:

1. Connecting to password-free Wi-Fi is currently not supported.

2. It is recommended to use WIFI within a 5m range.

6.5 Restore/Restart/Standby

Click Setting -> System -> Default to perform standby/restart/factory restore operations.

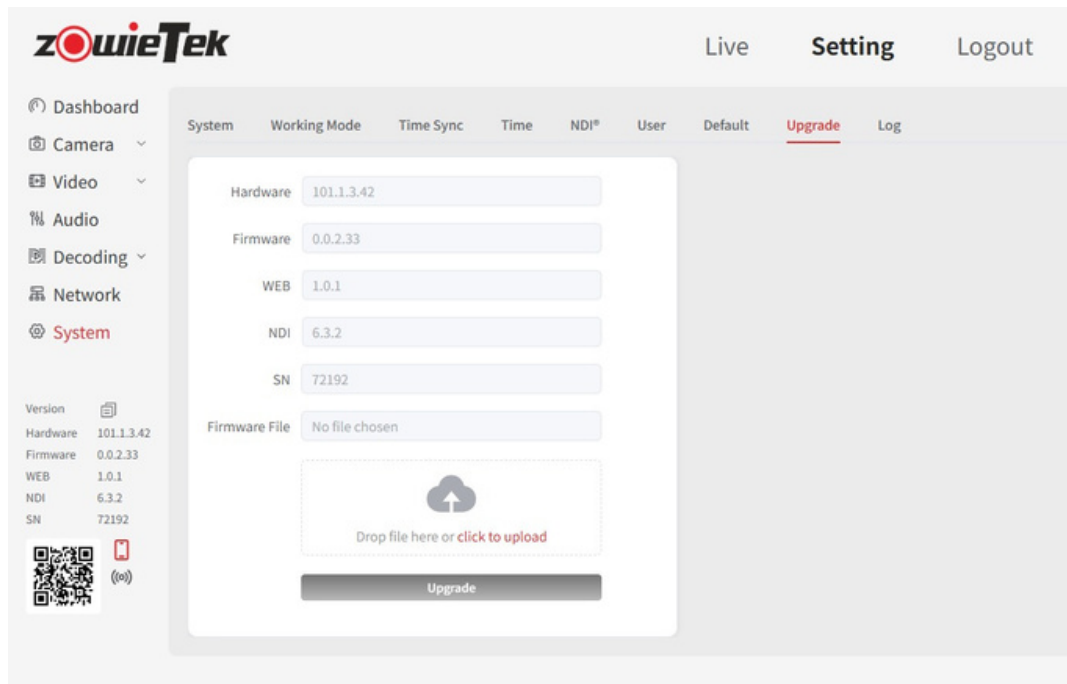


6.6 Firmware Upgrade

Please click <https://www.zowietek.com/documents/> to download the corresponding upgrade firmware.

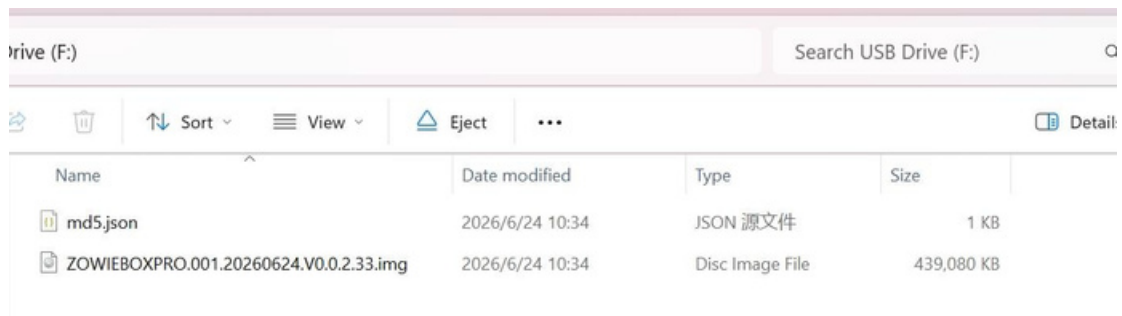
Method 1:

Click Setting -> System -> Upgrade, select the corresponding firmware to upgrade (after downloading the firmware from the official website, there is no need to unzip it; just upload it directly).



Method 2:

Please prepare an exFAT /FAT32 formatted USB/TF card, and extract the firmware to the root directory of the USB/TF card.

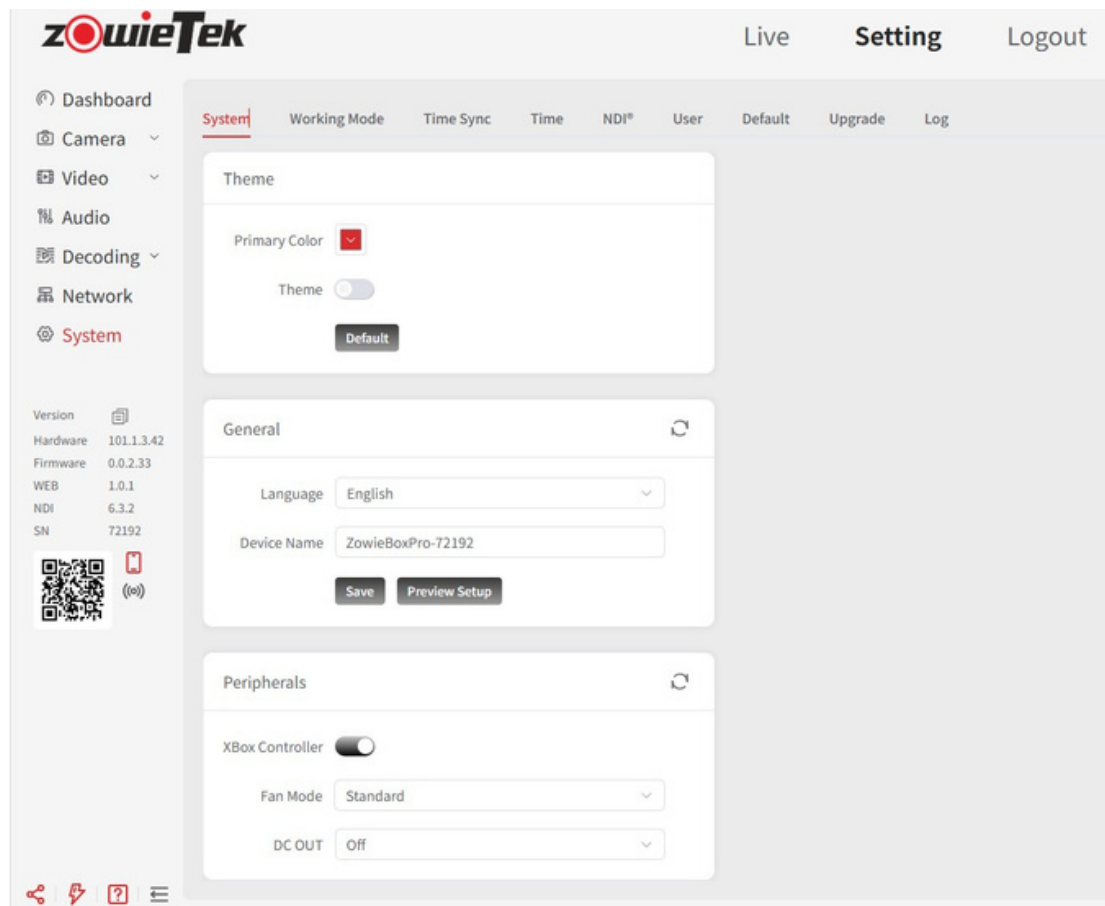


Insert the USB/TF card into the device and restart the device. The device will automatically begin the upgrade process.

6.7 Fan Speed Control

The ZowieBox Pro features a built-in cooling fan with three adjustable speeds to suit different working environments and cooling needs. Users can freely balance the device's temperature and fan noise based on their sensitivity to noise levels and the device's operating load.

Click Setting -> System to adjust the fan mode.



Or click the fan icon in the Dashboard to adjust the fan speed directly.



The system offers the following three fan operating modes:

Standard mode (default):

The heat dissipation performance and fan noise are well balanced, making it suitable for most working environments.

Performance Mode:

It has good heat dissipation performance but the fan noise is relatively loud, making it suitable for high-load scenarios such as high-temperature outdoor environments and high-bitrate long-term encoding.

Silent mode:

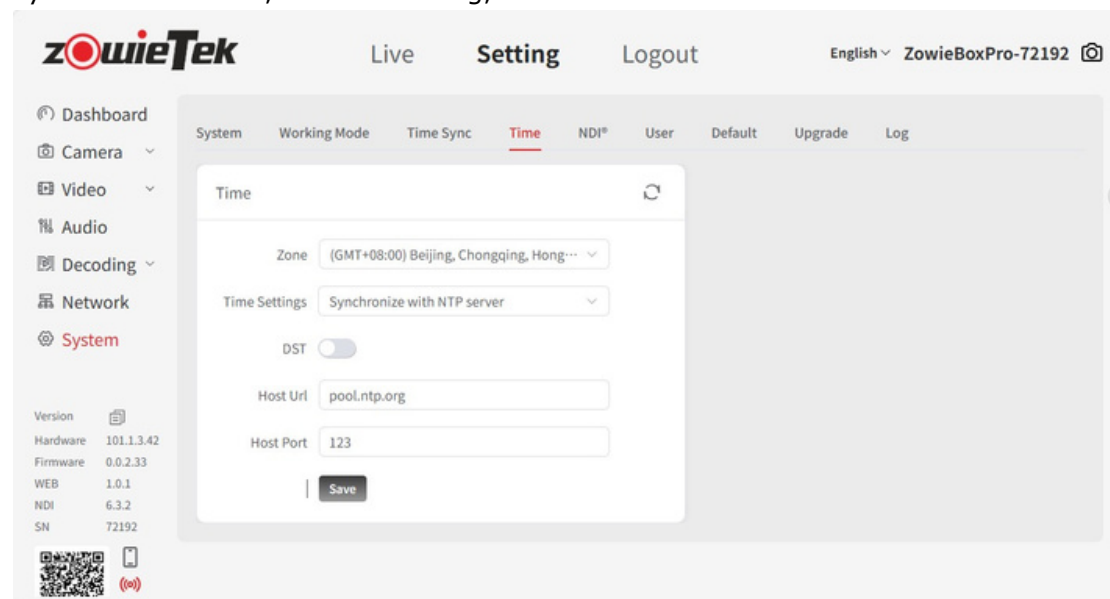
It has basic heat dissipation performance but minimal fan noise, making it suitable for scenarios with extremely high requirements for ambient noise levels, such as conference rooms and recording studios.

6.8 System Time

Click Setting> System > Time to configure the system time synchronization method.

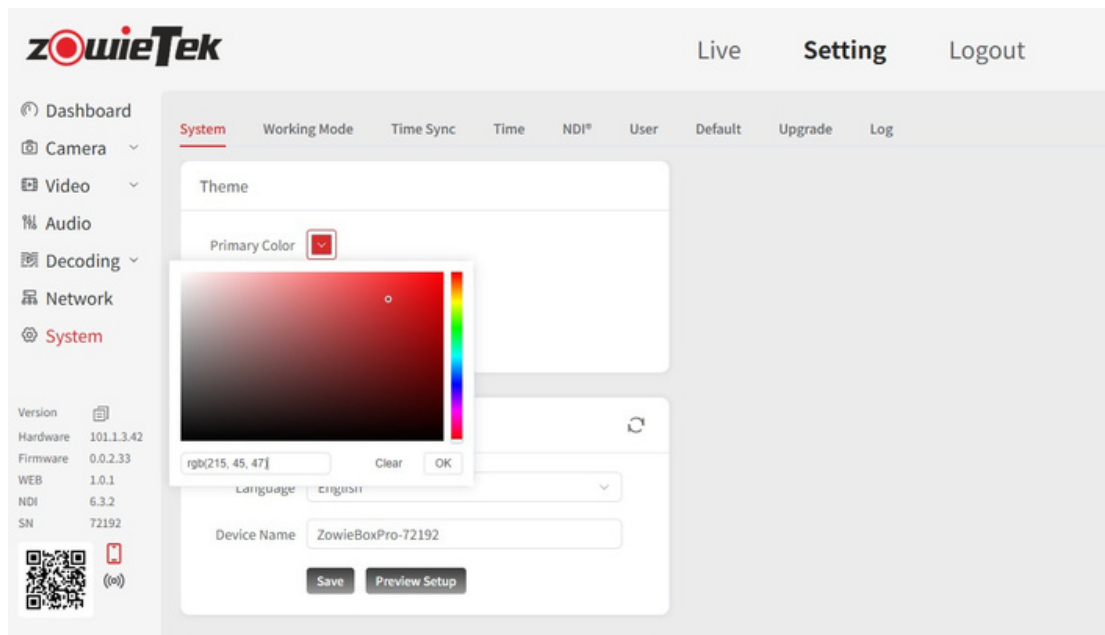
When multi-device synchronization is set to Public NTP or Local NTP, the device defaults to the NTP time, and manual modification is not permitted.

When multi-device synchronization is set to Free Run, users can choose to synchronize via PC, manual setting, or NTP time.



7. Advanced Settings

7.1 Interface Theme and Color Settings

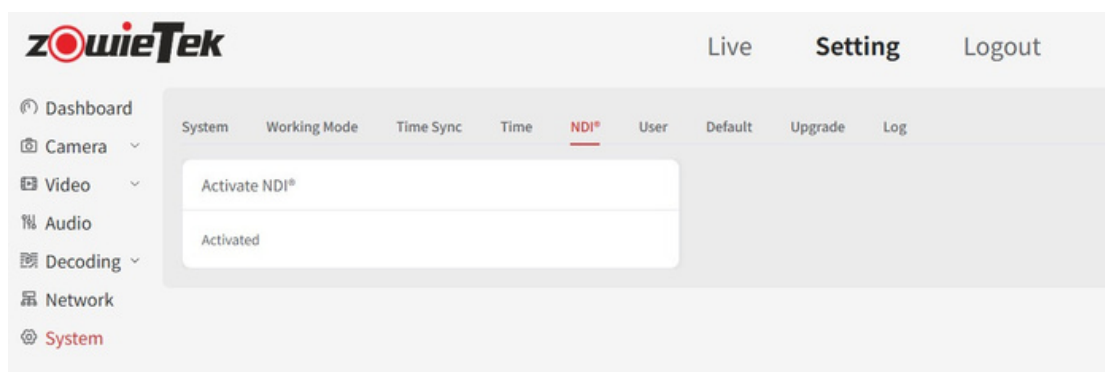


The website's default theme color is red, and it's in daytime mode.

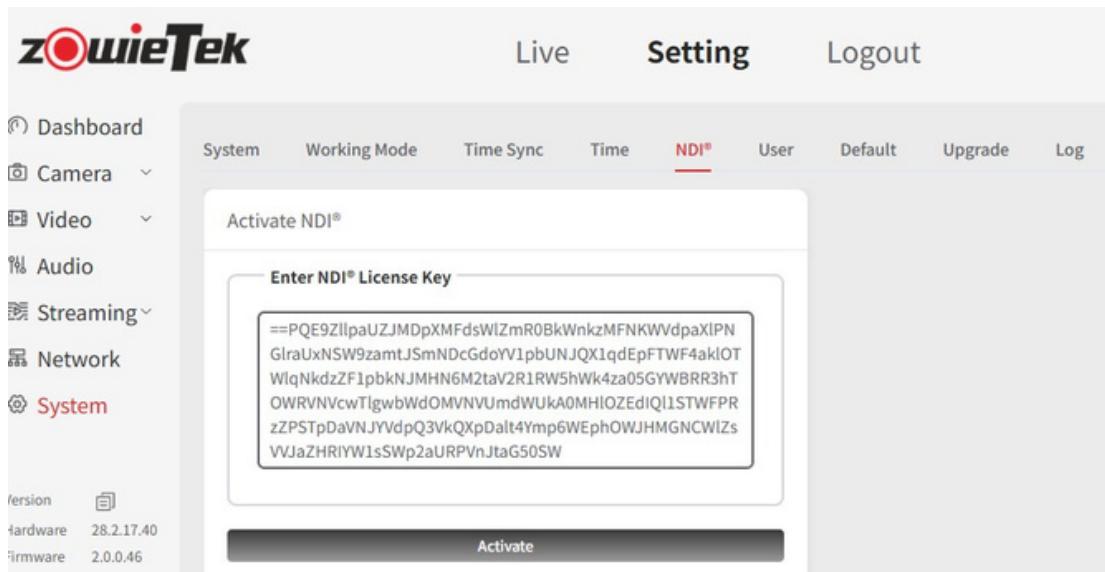
Click Setting -> System to switch the webpage's theme color or switch to night mode.

7.2 NDI® Activation

To check the NDI activation status of your device, click Setting -> System -> NDI.



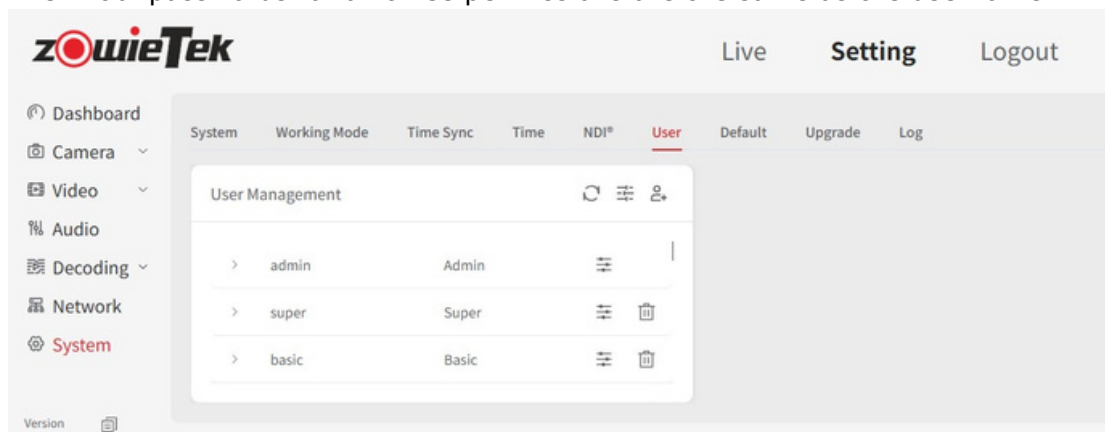
If you need to activate NDI later, please paste the complete NDI key into the input box after obtaining it and then restart the device.



7.3 User Account

ZowieBoxPro provides users with three types of permissions: administrator permissions, super permissions, and basic permissions.

The initial passwords for all three permissions are the same as the username.



Admin privileges

The default username and password are "admin". Users with administrator privileges can perform any operation on ZowieBox Pro. By logging into the webpage with administrator privileges, users can modify, add, and delete the usernames and passwords of all accounts. When adding or deleting an account, the user must verify their administrator privileges again. Administrator accounts are unique, and the old password must be verified when changing the administrator password.

Super privileges

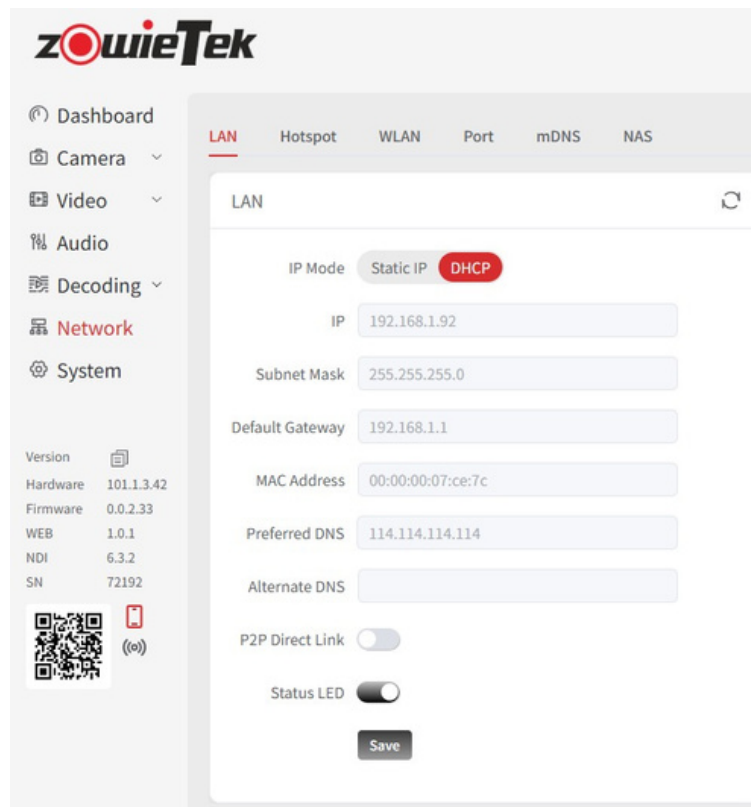
The default username and password is "super". Users with super privileges can perform operations on ZowieBox Pro other than activating NDI and upgrading.

Basic permissions

The default username and password are "basic". Users with basic privileges can only access the ZowieBox preview interface.

7.4 Network Setup

DHCP is enabled by default. Disabling DHCP allows users to modify the IP address, subnet mask, default gateway, and DNS. After making changes, please click save and restart.

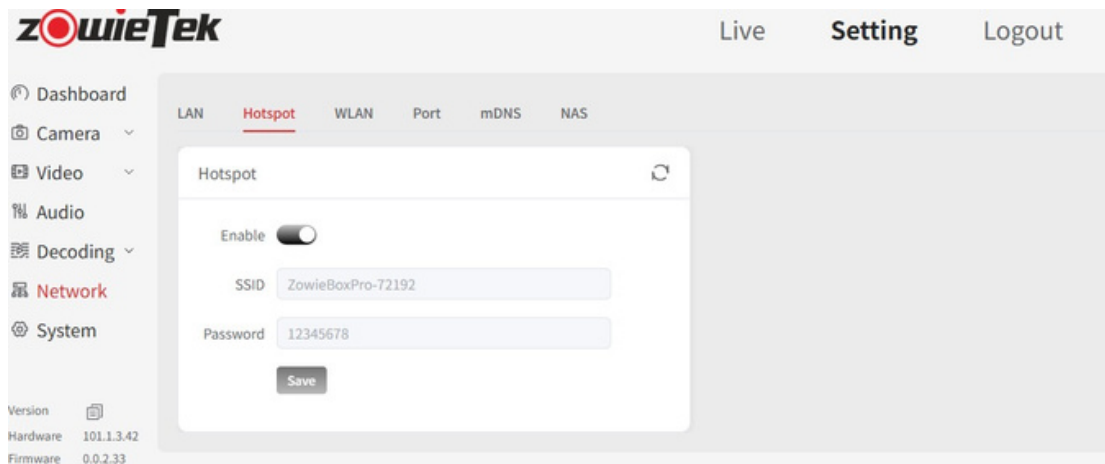


When DHCP is enabled, if connected to a network without DHCP functionality, the IP address will automatically change to 192.168.5.168.

When using two ZowieBox Pro devices connected directly, please set the network mode to static network and enable P2P direct connection mode. Do not enable P2P mode in other situations, otherwise the devices may fail to obtain IP addresses.

7.5 Hotspot

Click Setting -> Network -> Hotspot to configure the hotspot. The hotspot is enabled by default.



When the button is turned off, the user can change the hotspot's name and password.

When the button is turned on, users can use other mobile devices to search for and connect to this hotspot. Once connected, please enter 170.128.88.1 to enter the WEB UI.

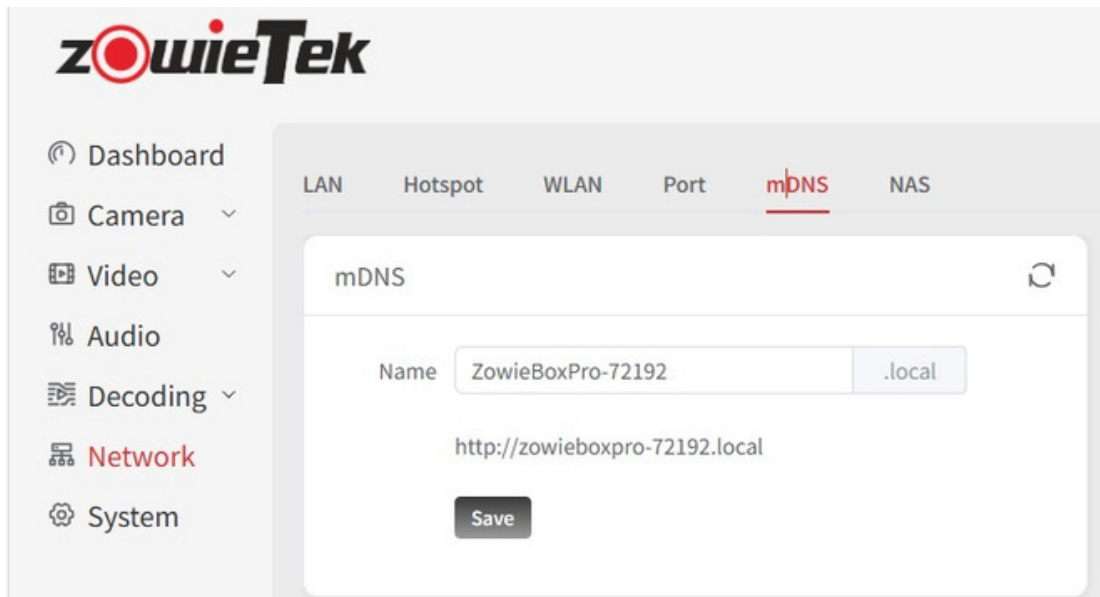
Scan QR code below the navigation bar to connect. When connecting to the hotspot, the mobile device may display a message indicating no internet connection; this is normal, please continue connecting.



7.6 mDNS

Users can log in to the ZowieBox Pro page via mDNS.

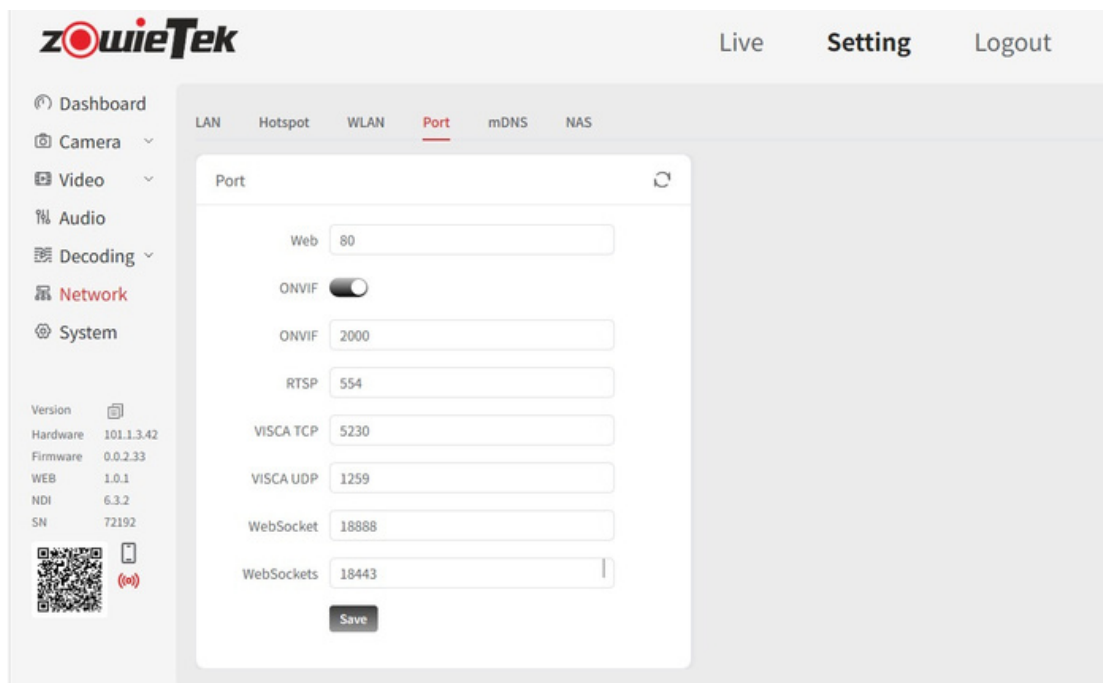
Configure mDNS by going to Setting -> Network -> mDNS. mDNS is enabled by default; please restart after modifying it . When using mDNS, ensure your phone or computer is on the same local network as your ZowieBox Pro. Click the address below to copy the mDNS address directly.



7.7 Port

Click setting ->Network ->Port to modify the ports for various parameters. All port numbers in picture are factory defaults. If you need to modify the port number, please enter the port number according to the valid range of the port. After clicking the save button at the bottom, restart the device for the port number to take effect. The port numbers of each port cannot be duplicated.

After changing the web port, please add the port number after the IP address; otherwise, you will not be able to access the web.



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