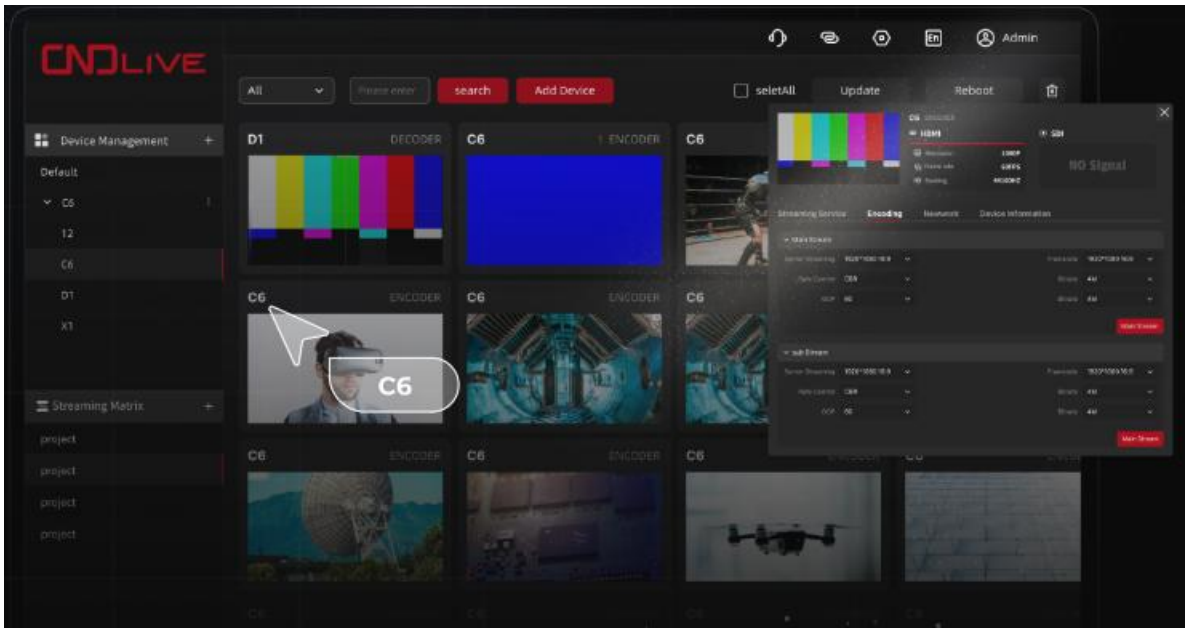
CNDLive Manager

User Manual V1.0



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1.Overview

Welcome to use CNDLive Manager! CNDLive is a subsidiary of CND Electronics Technology Co., Ltd, which was found in 2006, Shenzhen. We have been dedicated to innovation and development of hardware and software in Smart Information Interactive Industry. We are excellent at information display, intelligent dual-touch, biometric special processing and HD remote real-time transmission.

With this extensive experience, CNDLive specializes in IP-based video and audio delivery. We have developed a wide range of solutions for the professional video and audio market, including but not limited to video encoding, decoding and conversion, support for Ethernet, WiFi and 4G/5G bonding, and full support for a wide range of protocols, including NDI high bandwidth, NDI|HX 2/3, SRT, RTMP and more.

CNDLive is committed to providing you with the highest quality and most reliable equipment in the field. We hope this manual will help you get started quickly and take full advantage of the powerful features of CNDLive Manager. If you have any questions or need assistance while reading and using this manual, please feel free to contact our technical support team.

Thank you for choosing CNDLive and we look forward to making your work more convenient and efficient.

2.Getting Ready

2.1 Introduction

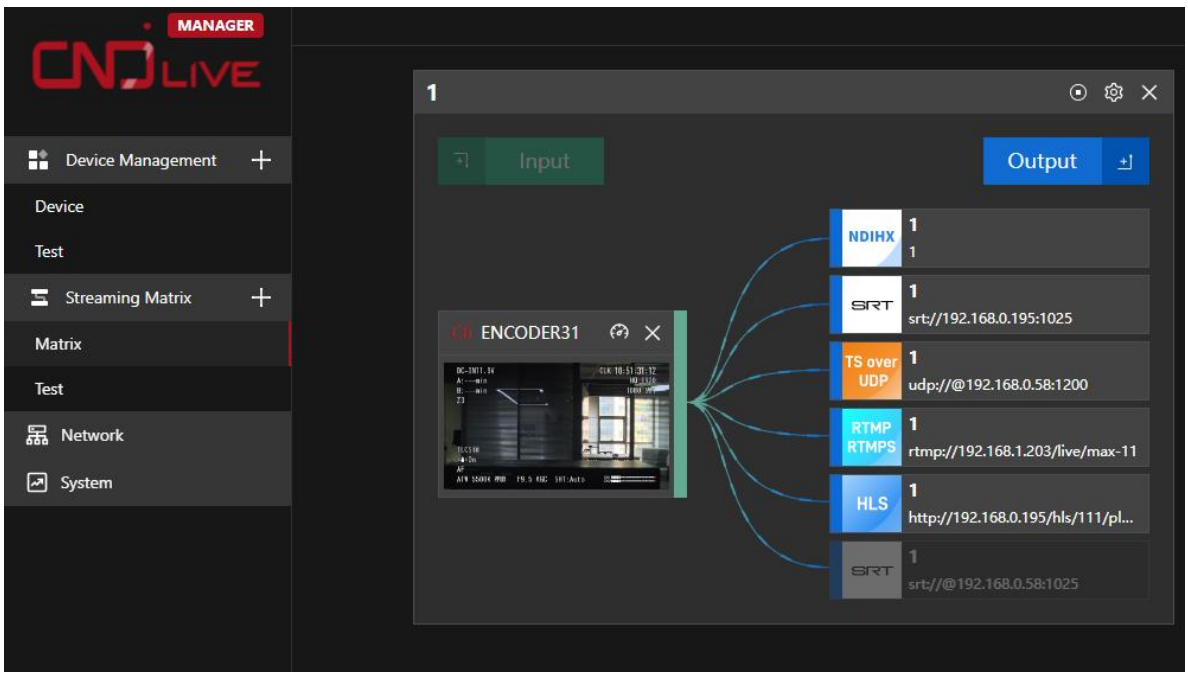
The CNDLive Manager is a centralized management platform for all CNDLive IP devices. It allows for remote configuration and management of device settings, checking bonding connectivity, server streaming and the unique feature of Stream Matrix.

Key Features:

- **Server Streaming:** CNDLive Manager supports connectivity to all our encoding devices. It is capable of generating an unlimited number of streams (***It depends on your bandwidth and server performance), and support the most popular protocols including SRT, RTMP, RTMPS, HLS, TS-UDP and RTSP.
- **Stream Matrix:** Users can connect the streams pushed by the server to any destination (e.g. decoder, YouTube, vMix, etc.) through an intuitive graphical interface.The server will convert the source streams to your desired protocols before streaming them to the final location.
- **Centralized Management:** CNDLive Manager provides a centralized management platform that allows users to remotely configure device parameters,execute operational functions, perform batch firmware upgrades and realtime preview of the current encoding or decoding video across all CNDLive products.
- **Bonding Connections:** For devices with two or more network connections connected to the CNDLive Manager, the system will automatically adjust the proportion of data transferred through each connection based on proprietary algorithms developed by CNDLive, and to optimize the efficiency of data transfer.

CNDLive Manager is quite supportive when you need an efficient and stable live streaming solution, widely applied in professional broadcasting, live event broadcasting or internal corporate communications.

2.2 Technical Parameters



Minimum requirements	CPU: 2.0GHz+ Memory: 2GB+ Storage: 40GB+ System: Ubuntu 18.04+ Public IP: 1
Accessible Devices	C6, D1, X1
Server Streaming	SRT, TS-UDP, HLS, RTMP, RTMPS
Centralized Management	Access source preview, enabling stream service, encoding settings, network status, system information, decode output preview, bulk firmware update

Number of devices	Unlimited
Number of server streaming	Unlimited
Number of stream matrices	Unlimited

3.Web Management and Configuration

Web Management is the central platform for you to interact with your devices, allowing you to remotely access and manage your CNDLive devices. You can monitor device status, adjust settings, manage streaming services, and perform other advanced configuration jobs through this interface.

3.1. Web Login

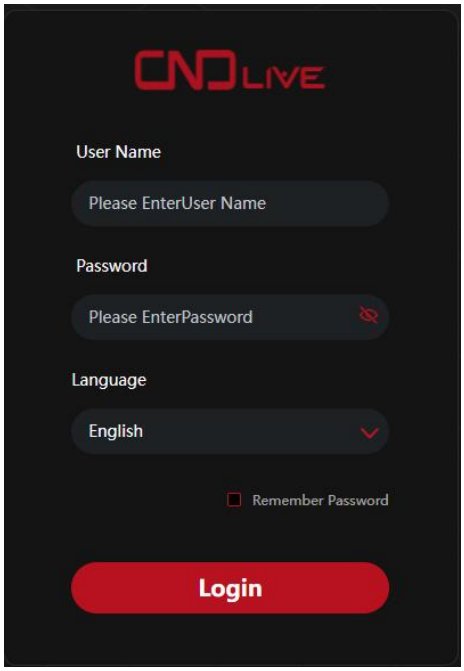
After ensuring that CNDLive Manager has been properly deployed, you can follow the steps below to perform a web login:

① **Open Browser:** Launch your web browser, such as Google Chrome, Firefox or Safari.

② **Enter the URL:** Enter http://Server IP:8080 in the browser address bar, where Server IP is the IP address of your CNDLive Manager server. The default port is 8080.
For example, if your server IP address is 192.168.1.100, you should enter http://192.168.1.100:8080

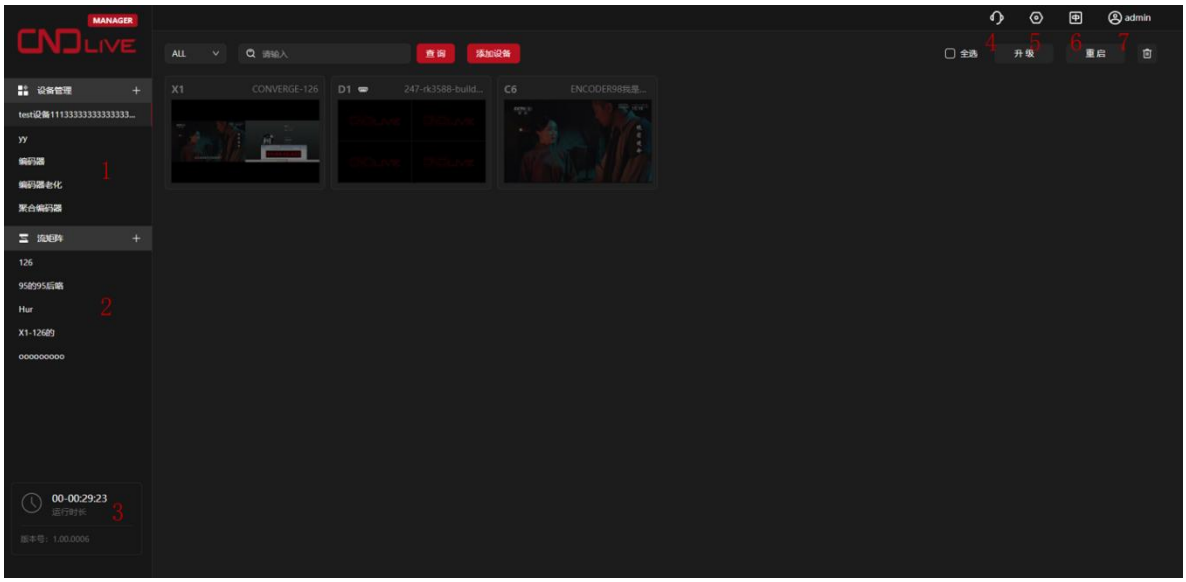
③ **Accessing the login page**: Press the Enter key or click the "Go" button on the right side, and the browser will load and display the login page of CNDLive Manager.

④ **Login authentication:** The username and password are *admin* by default.
⑤ **Login:** After entering your username and password, click the Login button or press the Enter key, you will be authenticated and logged in.



3.2. Web Management Home

The web management home page is the central platform for you to interact with your device. It provides you with access to device status monitoring, network information, streaming service management, recording function control, and system settings. Through the home page, you can quickly understand device performance, network status, and easily manage your streaming services, recording tasks, and system configurations.



Main functions as follows:

1) Device Management: Under this function, you can perform device addition, deletion, and modification operations, firmware upgrade and settings. You can also create new device folders and add different devices to different folders if you want

2) Streaming Matrix: You can create different streaming tasks and set up different streaming services for different devices.

3) System Status: Displays the running hours and version of CNDLive Manager to help you monitor the running status of your system.

4) Contact information: Provides business and support contact information to make it easier to ask for help when you need it.

5) Settings: Provides functions such as firmware management and server port settings, allowing you to manage firmware updates and port configurations for your device.

6) Language Choice: Click to switch the interface language, Chinese and English are available at the moment.

7) Login Avatar: Displays the current login username. You can perform operations such as "Modify Nickname", "Change Password", "User Management" or "Logout".

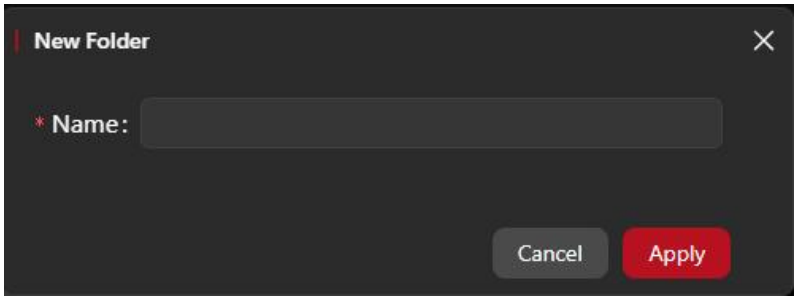
The rational layout and clear identification make CNDLive Manager not only powerful, but also easy to use, and meet the various needs of professional live management.

3.3. Device Management

The Device Management feature allows users to easily add, delete or modify devices, perform firmware upgrades, adjust device settings, create device folders to organize devices, monitor device status, and provide quick access to specific device details.

3.3.1.Device Folder

In the "Device Management" interface, click the plus button, a dialog box will pop up, allowing you to enter the name of the new folder. Fill in the folder name you want, and then click Apply to be done.



You can add different devices to the newly created folder as needed.

Move your mouse over the newly created device folder ⋮ and you will see a three-dot icon appear. Click on this icon and four options will pop up for you to work with:

New Folder: Allows you to create a new subfolder within the current folder.

Access Control: You can set the access rights of the folder and restrict which users or user groups can access it.

Rename: If you want to change the name of the folder, you can select this option and enter a new name.

⚠ **Delete:** If you no longer need a folder, you can choose to delete it. Please note that deleting a folder will also delete all devices within it, but will not affect the actual device hardware.

Note

- Please note that each device can only belong to one folder.

3.3.2. Equipment Organization

Device organization is a core feature that allows users to efficiently manage encoded devices in a live environment by easily adding, deleting and moving devices. With Device Organization, users can quickly add new devices to the system, assign devices to different folders as needed, and easily remove devices no longer in use from the system.

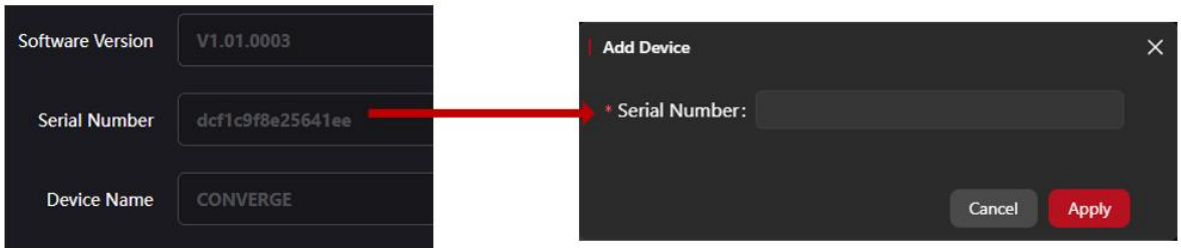
3.3.2.1. Add Device

Add Device allows users to quickly integrate new CNDLive devices into the system. New

devices can be easily added to your streaming environment.

Method: Go to the device folder and click the "Add Device" button at the top. Fill the serial number. You can find the serial number in "System" under "Settings" on the device management page or you can find it on the back of the device

- On the device side, you also need to enter the corresponding server IP and port number in "CNDLive Manager" under "Settings" on the device management page to complete the addition.

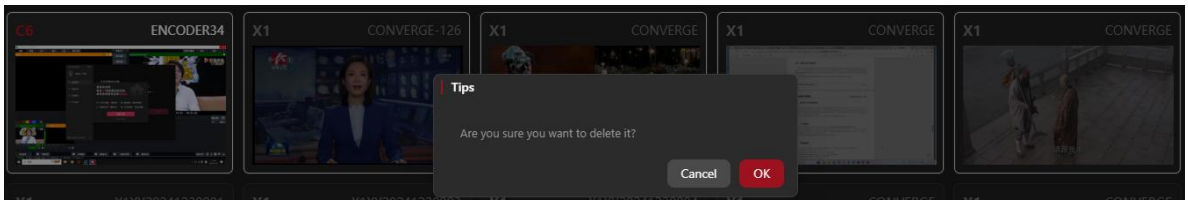


3.3.2.2. Delete Device

It is allowed to remove devices that are no longer in use from the system to keep the device list tidy and efficient. By removing devices, you can optimize device management, reduce unnecessary operational steps, and ensure proper allocation of system resources. In addition, deleting devices that are no longer in use also helps improve system performance and security.

① **Individual device deletion:** Move the mouse to the window of the added device and it will show some options, click " " to delete the current device.

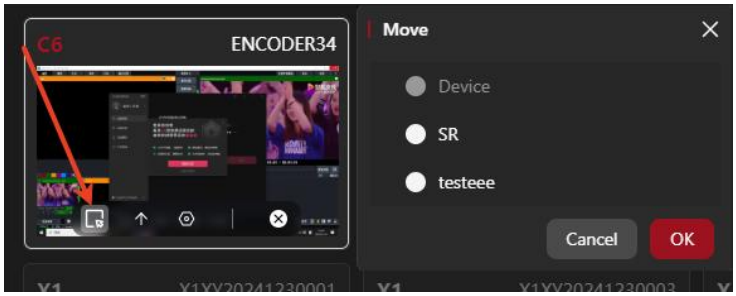
②**Batch Device Deletion:** In the device folder, click a device, the edge of the device will show a white box to indicate it has been selected. Then, click other devices that need to be upgraded together, or click "Select All" button to select all devices in batch. After selecting all the devices that need to be deleted, click the Delete icon.



3.3.2.3. Device Movement

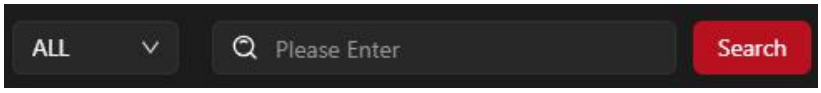
Device Move allows users to move devices from one folder to another. With this feature, you can organize and manage devices as you want, such as grouping devices based on device type, usage, or live scenarios.

Method: Move your mouse to the added device window and it will show some options. Click " " to select the destination folder in the pop-up folder of other devices, and then confirm to move the device.



3.3.2.4. Search

Device searching feature is a useful tool that helps users quickly find specific devices or groups in the system.



① **Device Model Research:** At the top of the device list, you will see the model

selection box. Click this selection box, it will list all the device models in the current device folder. After selecting a model, the system will automatically show out all devices with the same model.

② **Keyword Search:** In the keyword input field, you can manually enter device's name or serial number. Then the system will perform a fuzzy search and list all the possible devices.

3.3.2.5. Batch Reboot

Batch Reboot allows users to perform reboot operations on multiple devices at the same time remotely. This feature is especially useful in situations where you need to update device settings or resolve common issues across multiple devices at the same time.

How to do it: In the device folder, click a device, the edge of the device will show a white box, indicating that it has been selected. Then, select other devices that need to be rebooted together, or click the "Select All" button to batch select all devices. After selecting all the devices that need to be rebooted, click the Reboot button on the page. A confirmation dialog box will pop up, click OK and the system will start to reboot the selected devices in batch.

Note

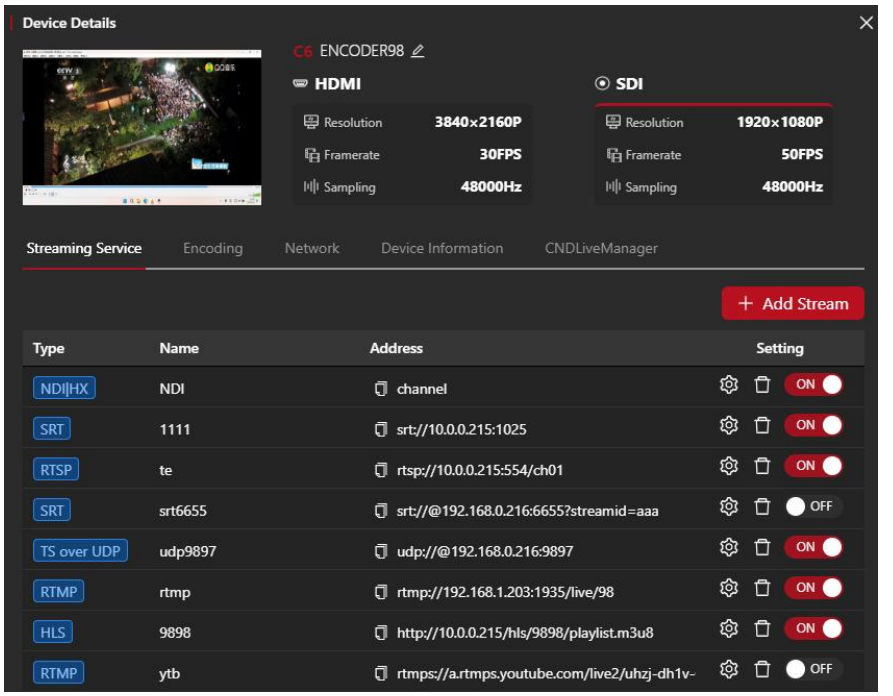
- Please note that before performing a batch reboot, make sure that all important tasks for the device have been completed, to avoid data loss or task interruption. During the reboot process, the devices will shut down and reboot sequentially.

3.3.3.Device Monitoring and Configuration

Device monitoring and configuration, which allows users to monitor device status in real time, adjust configuration settings, and view device details. These features ensure efficient operation and precise control.

Click the device window and then right click, select the Device Details option and you will be taken to a device-specific configuration screen with different features and options:

3.3.3.1. C6 Encoder



Source Preview: The interface will show the video preview of the current access source.

Video Details: You can see the video details of HDMI/SDI sources, including resolution, frame rate and sample rate.

Streaming Services: You can view and manage all currently created streaming services, enable or disable streaming.

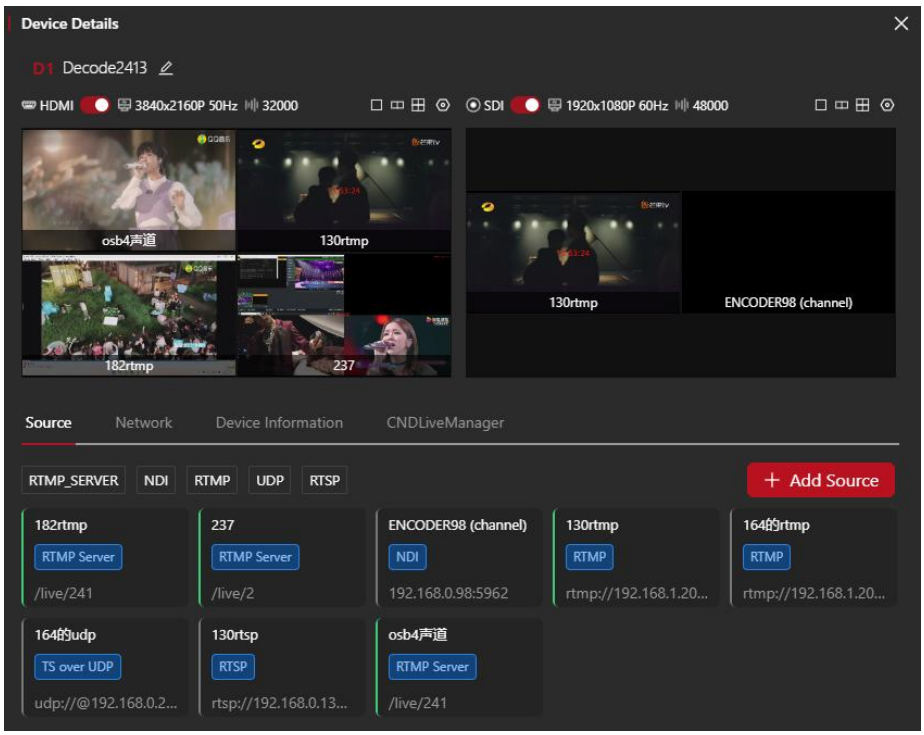
Encoding Settings: You can view the encoding settings of the main stream, sub-

streams, and modify parameters such as resolution, frame rate, bitrate control, bitrate and GOP (Group of Pictures).

Network Configuration: The network section is divided into two subsections, LAN and Wi-Fi. Under wired network, full network information will be displayed. Under Wi-Fi connection, the connected hotspot and assigned IP address will be displayed.

Device Information: It will display detailed information such as the model number, hardware version, firmware version and serial number of the device.

3.3.3.2. D1 decoder



Decode Preview: The D1 decoder will display a video preview of the currently decoded source.

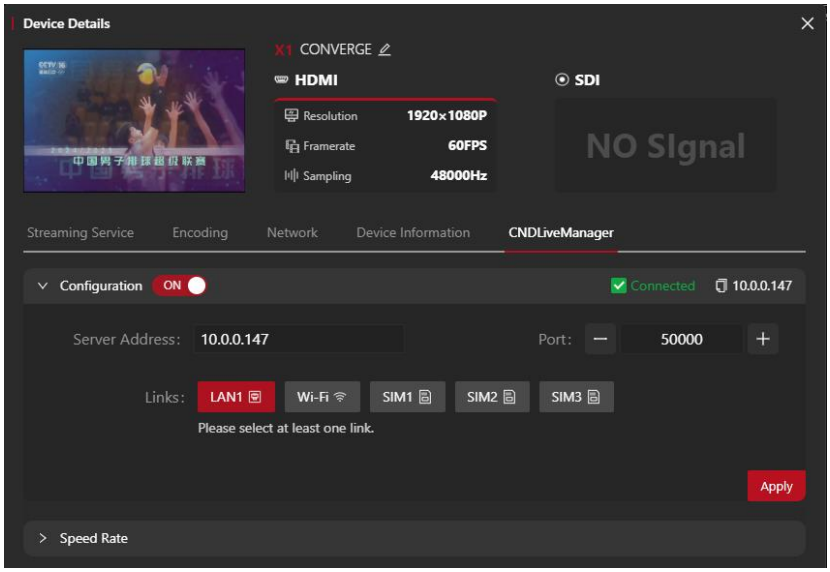
Output Format: Displays the current format information of HDMI and SDI output, including resolution, frame rate and sample rate.

Network Configuration: The network section is divided into LAN1 and LAN2 corresponding to two network ports respectively. If there is network access, all network information will be displayed, including IP address, subnet mask, default gateway and

so on.

Device Information: It will provide detailed information about the device such as model number, hardware version, firmware version and serial number.

3.3.3.3. X1 Bonding Encoder



Source Preview: The interface will show the video preview of the current access source.

Video Specification: You can see the video specification of HDMI/SDI sources, including resolution, frame rate and sample rate.

Streaming Services: You can view and manage all currently created streaming services, enable or disable streaming..

Encoding Settings: You can view the encoding settings of the main stream, sub-streams, and modify parameters such as resolution, frame rate, bitrate control, bitrate and GOP (Group of Pictures).

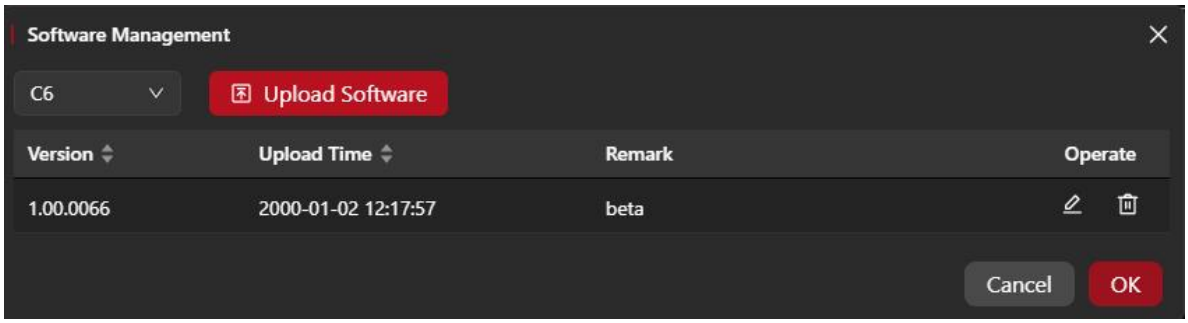
Network Configuration: The network section is divided into LAN, Wi-Fi and 3 SIM card slots. If there is wired network access, full network information will be displayed; if there is a Wi-Fi connection, the connected hotspot and assigned IP address will be displayed. If the SIM slots have access to a 4G network, the corresponding network information will also be displayed.

Device Information: It will display detailed information such as the model number, hardware version, firmware version and serial number of the device.

3.3.4.Device Update

The device update feature is an important tool that allows users to easily update the device's firmware to ensure that the device is working at its best.

How to do it: First you need to upload the required firmware file. Click the "Settings" icon at the top right corner of the page. After selecting the corresponding model, click the "Upload Firmware" button and upload the file. Once the upload is complete, the firmware will appear in the list below "Upload Firmware", which will display the firmware version number, upload time, remarks, and provide options to modify and delete the operation.



① **Individual Device Update:** Move the mouse to the window of the added device and right click. In the pop-up options, select "Device Update". In the pop-up interface, select the firmware version you just uploaded. Click OK and the device will start the update process.

Note

- Please note that during the update process, make sure the device remains connected and running stably to avoid interrupting the upgrade process. After the upgrade is complete, the device will automatically reboot to apply the new firmware version.

② **Batch Device Update:** In the device folder, click a device, the edge of the device will show a white box to indicate that it has been selected. Select other devices that need to be upgraded together, or click the "Select All" to select all devices in batch. After selecting all the devices, click the Update button on the page. The version selection screen will pop up, select the firmware version you need to upgrade. After completing the selection, click the "OK" button, the batch upgrade process will start.

Note

- The selected devices must be of the same model.
- During the batch upgrade process, the system will update the firmware of the selected devices one by one. Please make sure all devices remain connected and running stably to avoid interruption during the upgrade process. After the upgrade is complete, the devices will automatically reboot to apply the new firmware version.

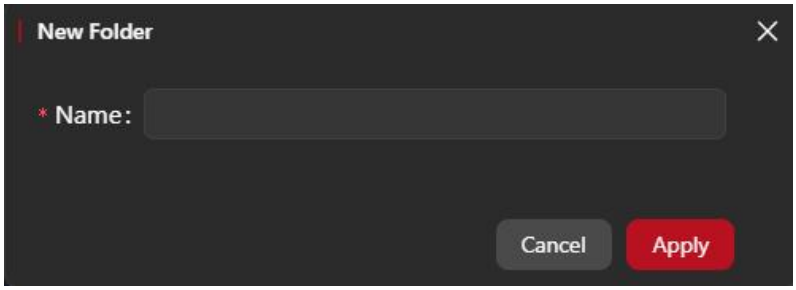
3.4. Streaming Matrix

Streaming Matrix allows users to create and manage complex stream routing and transitions. With Streaming Matrix, you can flexibly route multiple input streams to multiple output destinations for live stream switching, mixing and transitions. This feature is critical for professional live streaming environments that need to handle multiple live streaming sources and distribution channels. It not only increases the flexibility and diversity of live streaming, but also ensures efficient and stable streaming delivery.

3.4.1.Project Folder

Users can create and manage different stream matrix tasks within different folders to better organize and manage complex live streaming routing and conversion.

How: Click the plus button next to the project folder. In the pop-up input box, enter the name of the new project folder. After finishing the input, click Confirm or Enter to finish creating the new project folder.



Move your mouse over the newly created device folder and you will see a three-dot icon appear. Click on this icon and three options will pop up for your choice:

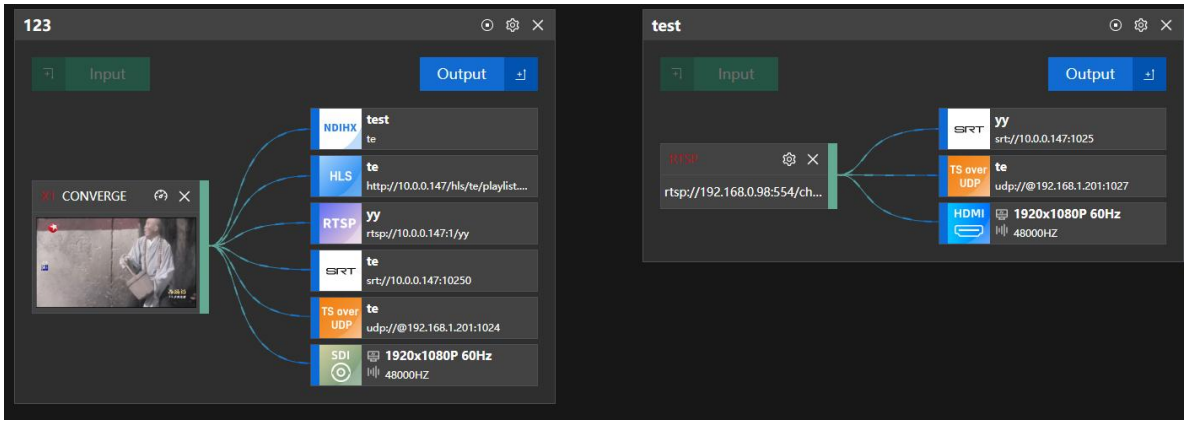
Access Control: You can set the access rights of these folders, which users or user group are allowed to access it.

Rename: If you want to change the name of the folder, you can select this option and enter a new name.

Delete: If you no longer need one folder, you can choose to delete it. Please note that deleting a folder will also delete all streaming matrix within it.

3.4.2.Streaming Matrix Management

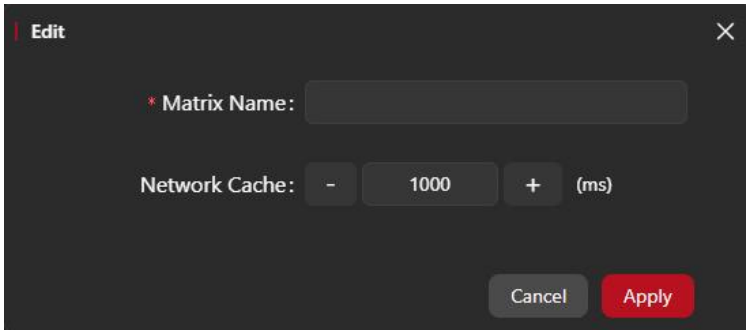
The "Streaming Matrix Management" feature plays a critical role in CNDLive Manager, providing users with a powerful and flexible tool to create, configure and manage complex streaming routes and transitions.



3.4.2.1. Stream Matrix Node Addition

The following are the details of how to create a stream matrix node:

Open the target project folder. In the lower left corner of the Webpage, click to start the server node creation process. In the pop-up window, fill in the server node name in detail.



Server name: Used to identify and differentiate between different node streaming tasks, ensuring easy identification and management within a server node.

Server Streaming Delay: Default value is 1000ms. This parameter determines the delay for the server to process the streaming data. A higher value can improve network jitter resistance and ensure the stability of the live stream. While a lower value can reduce the delay and improve the real-time performance of the live stream. You can reasonably adjust this value to optimize the streaming experience according to your actual network conditions and streaming requirements.

Note

- After the server node is added, the node window displays two icons: and .

Settings: By clicking on , the user can modify the name and delay of the node.

Delete: Clicking on allows the user to delete the current server node.

Note

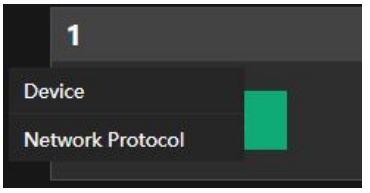
- When a server node is deleted, the input and output sources associated with that node are also deleted together.
- CNDLive Manager does not limit the number of server nodes.

3.4.2.2. To Add Node Input Source

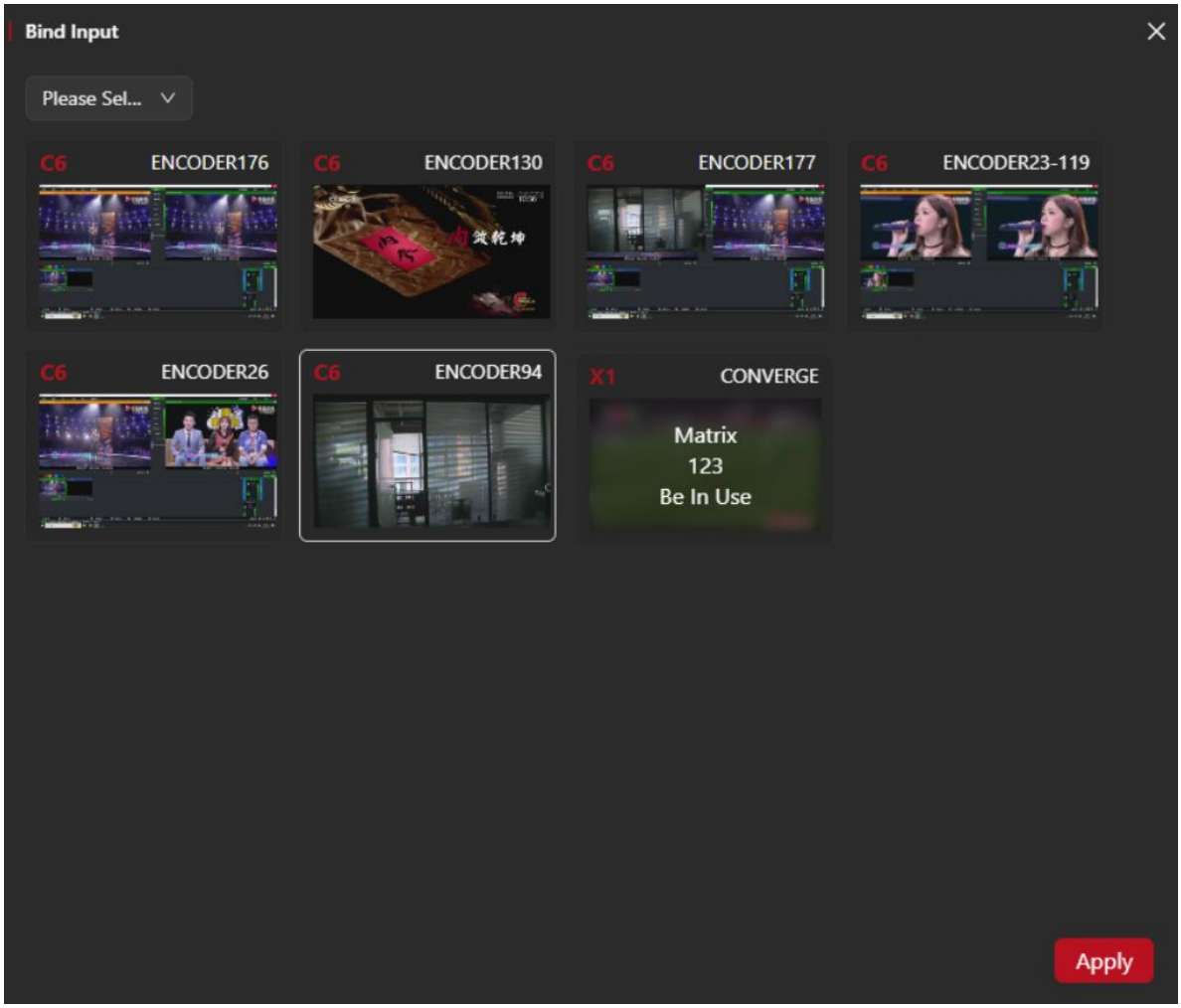
The following are detailed steps to add a server node input source:

1) Click the + sign on the left of the server node.

2) Select "Device" or "Network Protocol".



① **Device:** On the top left corner is the device folder option where you can switch between different device folders to select the desired device. When the target device is selected, a white border will appear on the edge of the device to indicate that it is selected. Click OK to finish it.



When the server node input source is successfully added, the input source window will display a network speed icon . By clicking, users can dynamically view the traffic details of the bonding connection between the input source and the server, including real-time traffic, bandwidth usage of each network bandwidth of the input source, and network connection status, which are helpful for users to monitor the network performance.

Note

- A server node can only correspond to one device input, and similarly, a device input can only correspond to one server node. This one-to-one correspondence ensures the accuracy and stability of streaming media transmission and avoids resource conflicts

and confusion.

② **IP Streams:** CNDLive Manager currently supports IP streams such as SRT, TS over UDP, HLS, RTMP/RTMPS and RTSP. After necessary configuration, click “Apply”.

Note

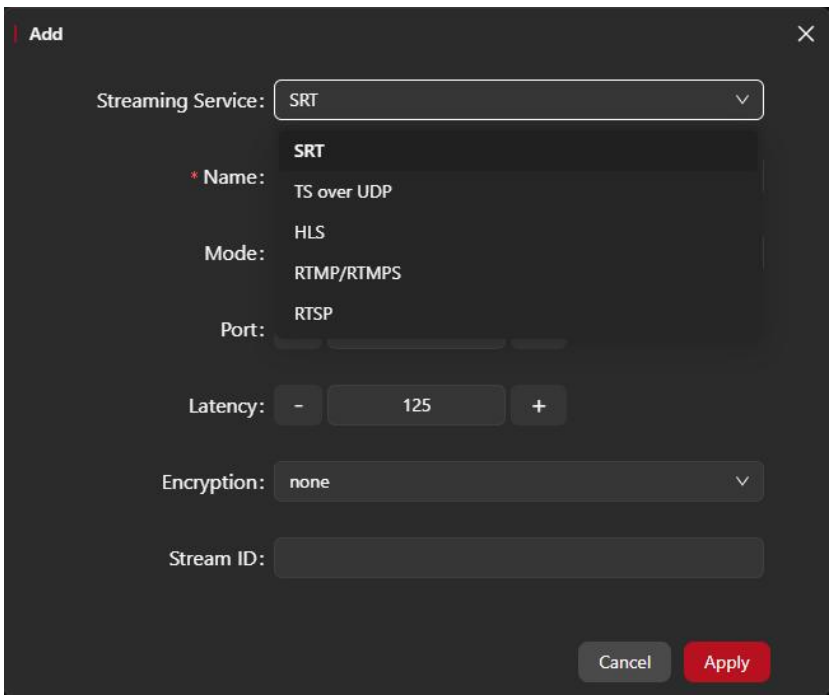
Each server node will be with only one IP stream input.

3.4.2.3. To Add Node Output Source

The following are the steps to add a server node output source:

1) Click + on the right of the server node.

2) In the pop-up page of Output Stream Adding, you can select the protocols such as SRT, TS over UDP, HLS, RTMP/RTMPS and RTSP. Select your desired protocol and fill in the necessary information. After confirming, click Apply to complete the addition.



Note

- After completing the addition of the server node output sources, the Output Sources window will display copy, enable/disable, setup, and delete icon.

Copy: Click the first icon to copy the URL of the current stream. Then you can paste it to other application or file for your using or sharing.

Enable/Disable: By clicking the Enable/Disable icon, users can stop or start this output source. This feature allows users to quickly control the distribution of live streams and ensure that live content is delivered as planned.

Settings: By clicking the settings icon, users can modify the parameters of the output source, such as server address, stream name and port. The adjustment of these parameters helps to optimize the transmission of live streams and meet the needs of different live streaming scenarios.

Delete: By clicking the delete icon, users can delete the current output source. After deleting the output source, the live stream associated with it will stop transmitting.

Note

- CNDLive Manager does not limit the number of server node output sources that can be created.

3.5. System Status

In the lower left corner of the Webpage is the System Status area, which provides important information of the system:

3.5.1.Runtime

The System Status area displays the duration the current system has been running since it was turned on in the form of --days:hours:minutes:seconds. This information is useful for monitoring the system's operational status and for planning maintenance activities.

3.5.2.Version Number

Below the runtime length, the System Status area displays the current system version number. Knowing the system version number is critical for determining software updates and for troubleshooting.

With this critical information, users can quickly understand the operational status and software version of the CNDLive Manager system, thus ensuring proper operation and timely updates.

3.6. Contact Information

In the upper right corner of the Wegpage, there is the headset icon it represents the contact information. When the mouse hovers over this icon, the following contact information pops up:

3.6.1.Online Customer Service

By clicking on the "Live Chat" link, users will be directed to the "Live Chat" page on the official website, where they can communicate with the customer service team in real time to get help and answer questions.

3.6.2. For Sales

Users can get get in touch with sales team via info@cndlive.com.

3.6.3.For Support

Users can get get in touch with support team via support@cndlive.com.

These are easy and quick ways for customers to get in touch with CNDLive team for help and support.

3.7. System Settings

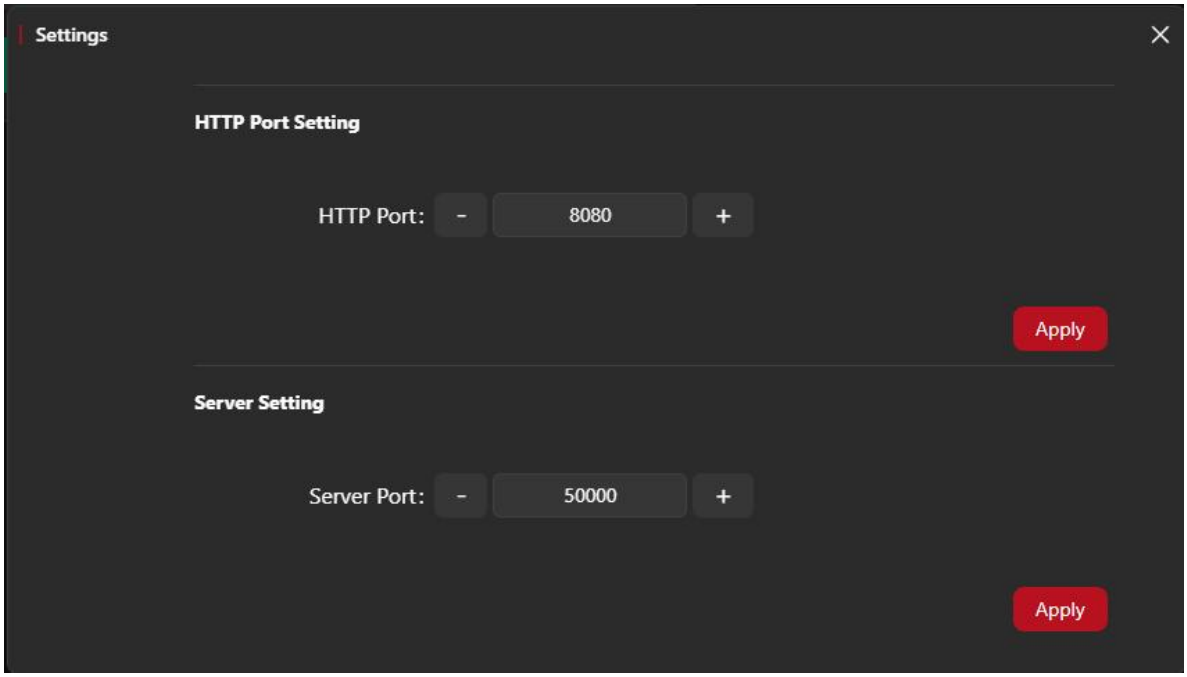
In the upper right corner of the CNDLive Manager page, there is the Settings icon , which provides an entry point to the system settings. When the mouse hovers over this icon, the following two options pop up:

3.7.1.Firmware Management

This option is responsible for uploading, commenting and deleting the device firmware. Users can upload new firmware versions, make notes on the firmware for identification purposes, or delete firmware that are no longer needed. For details on how to use this option, please refer to 3.3.4 "Device Update " for details on how to operate.

3.7.2.Platform Setup

By clicking this option, users can modify CNDLive Manager's HTTP port (web service port) and Server port (port that connect to the device). These settings allow users to adjust the communication ports between CNDLive Manager and the devices and servers according to their own network environment, and needs to ensure the system can run smoothly.



These system setup options give users the flexibility to manage and optimize CNDLive Manager's operating environment.

3.7.3 Server Update

Click "Server Update", you will go to the page of uploading the file. Please be sure you already download the latest software and it is .bin file.

3.8. Language

In the upper right corner of the Webpage, there is the language icon, which allows the user to select the language. When the mouse hovers over this icon, the following language selection pops up.

3.8.1.Simplified Chinese:

After selecting Simplified Chinese, it will be displayed in Simplified Chinese. At this time, the language icon will be displayed as a Chinese character for users to recognize the current language setting.

3.8.2.English

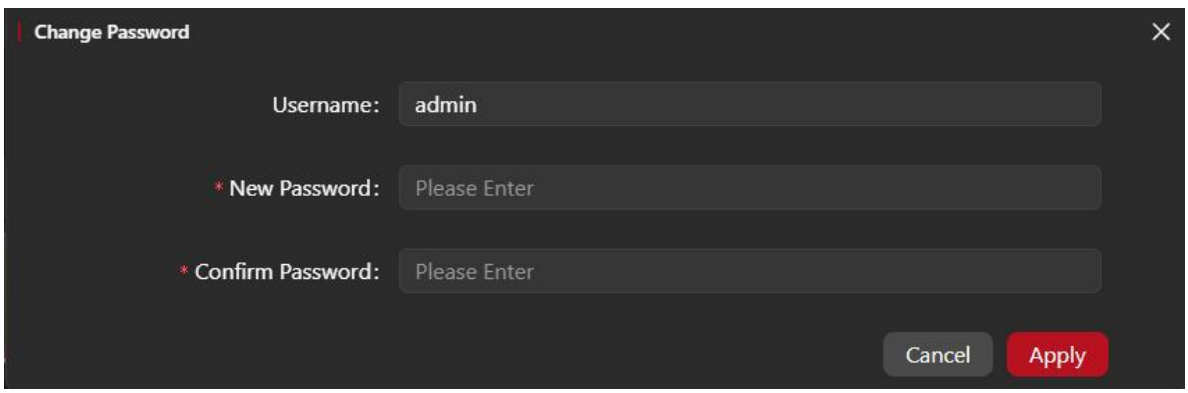
After selecting English, it will be displayed in English . At this time, the language icon will be displayed with two letters En, clearly indicating that the current language is English.

3.9. Registered User

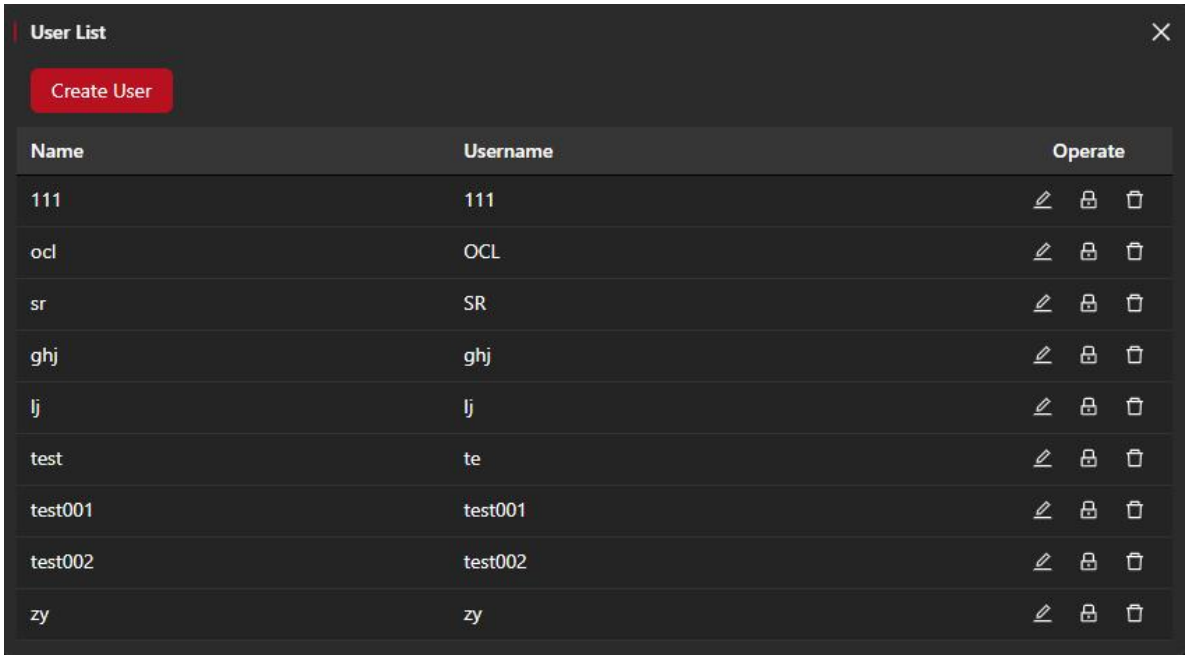
Click the icon

in the upper right corner to do some modifications.

Change Password: By clicking Change Password, users can change their login password. Regularly updating your password is important to maintain the security of your account.



User Management: Click on User Management and only the administrator (admin) can perform this operation. The administrator can add, delete, and edit other users' information, as well as reset other users' passwords. This is a key feature for managing CNDLive Manager user accounts and permissions.



Log Out: Clicking Log Out will log the user out of the current CNDLive Manager session. Ensure that you log out securely after completing an operation to protect account information from unauthorized access.

With these operation options, users can easily manage their account information, while administrators can effectively control user access rights to ensure the security and reliability of CNDLive Manager.

4.Support

If you need more support, please contact the manufacture.

Website: www.cndlive.com

Telephone: 86-0755-26888895

Email: support@cndlive.com