CNDLive Manager Max

User Manual

Catalogs

1.Product Preparation

1.1. Overview

Thanks for purchasing CNDLive Manager Max! 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 technology.

With these full experiences, CNDLive will focus on IP based video and audio transmission. We develop an extensive range of solutions for the professional video and audio market, from video encoding, decoding to conversion, either by Ethernet, Wi-Fi and 4G/5G bonding, with full protocols including Full NDI, NDI|HX, SRT, RTMP and more.

CNDLive is committed to bringing professionals high quality and most reliable gear in the field.

We hope that this manual will help you get started quickly and take full advantage of the powerful features of CNDLive Manager Max. If you have any questions or need assistance while reading and using this manual, please feel free to contact our technical support team via support@cndlive.com

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

1.2. Equipment Introduction

CNDLive Manager Max is a powerful device and streaming management solution designed to provide users with efficient and stable decode direct out, device management and streaming services.

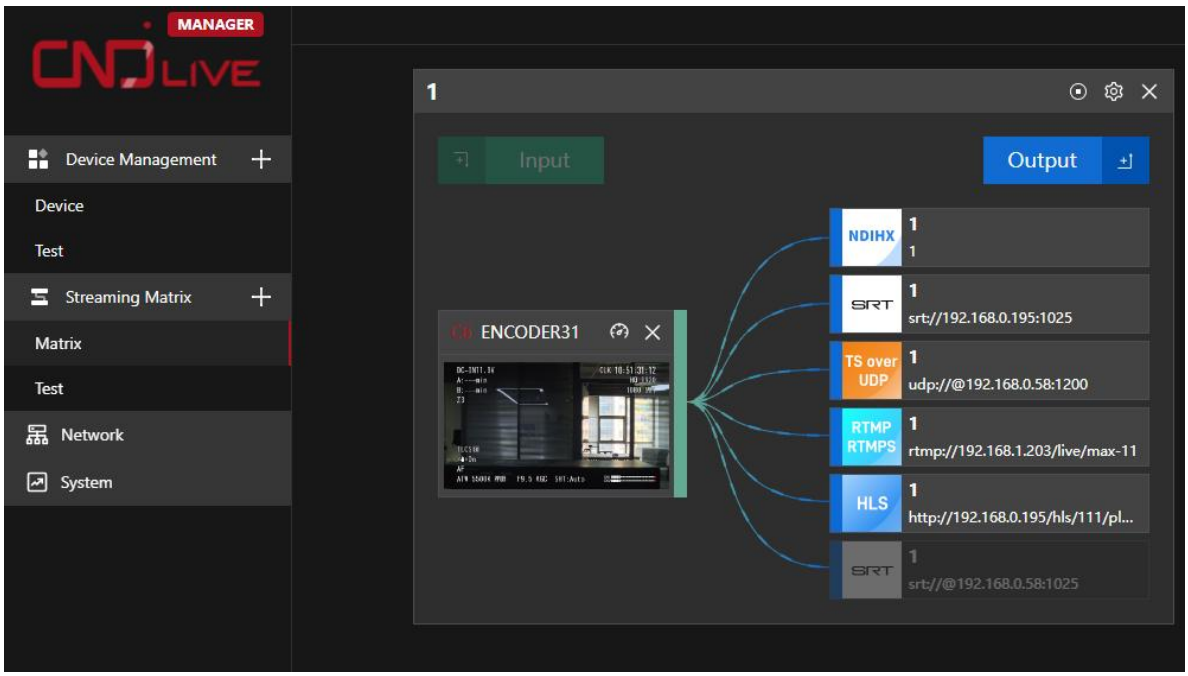
Key Features:

- **Decoding Output:** Max supports outputting the add devices or streaming media directly from HDMI and SDI ports to monitors or other devices without additional decoding devices, simplifying the process of live or video transmission and reducing streaming latency.
- **LCD screen:** The LCD screen equipped on the front of the device provides a convenient way of interaction. Users can view key information such as device status, streaming information, system settings and perform routine maintenance operations through the LCD screen, which improves the user experience.
- **Stream Matrix:** In addition to CNDLive encoding devices, it also supports adding custom streams as inputs, generating an unlimited number of streams and support multiple protocols including SRT, RTMP, RTMPS, HLS, NDI | HX, UDP, and RTSP, streaming to any destination (e.g., decoders, YouTube, VMix, etc.) via CNDLive Manager Max.
- **Centralized Management:** CNDLive Manager Max provides a centralized management platform that supports remote configuration of device settings, execution of device functions, batch firmware upgrades, and even previews of currently encoded or decoded video from all CNDLive products.
- **Aggregate Connections:** When a device has two or more network interfaces and is connected to CNDLive Manager Max, the system is able to intelligently allocate data traffic to each network connection based on CNDLive's unique

algorithm. This automatically adjusts the load on each connection, ensuring that data transmission is both efficient and optimized.

CNDLive Manager Max is for users who need an efficient and stable live streaming management solution. It provides excellent support whether it is for professional broadcasting, live event broadcasting or internal corporate communications.

1.3. Parameters



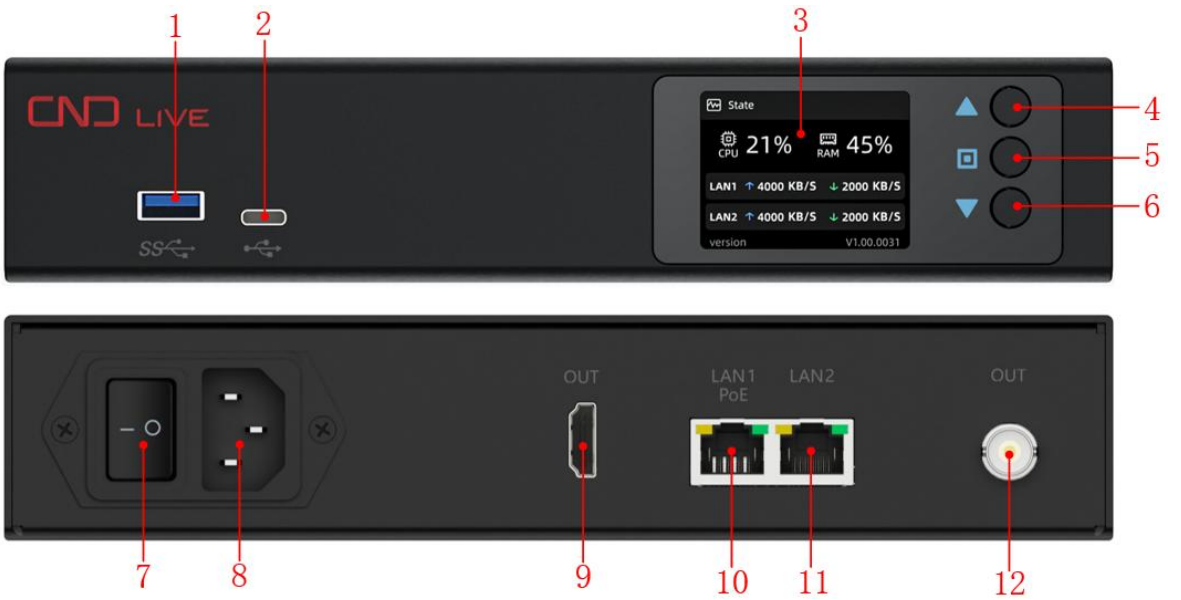
Decoding output	**SDI** 1080P:1920x1080P60/P59.94/P50/P30/P29.97/P25/P24/P23.98 SDI 1080i: 1920x1080i60/i59.94/i50 SDI 720p: 1280x720P60/P59.94/P50 **HDMI** 4k: 3840x2160P60/P50/P30/P25/P24 HDMI 1080P: 1920x1080P60/P59.94/P50/P30/P29.97/P25/P24/P23.98 HDMI 1080i: 1920x1080i60/i59.94/i50 HDMI 720P and below: 1280x720P60/P59.94/P50 720x576p50, 720x480p60

Input Streams and Devices	CNDLive devices: C6, X1, D1 Protocols: NDI|HX 2/3, SRT, RTMP/RTMPS, HLS, TS over UDP, RTSP
Output Streams	NDI|HX 2/3, SRT, RTMP/RTMPS, HLS, TS over UDP, RTSP
Centralized management	Access source preview, Streaming service start, Encoding settings, Network view, System information, Decode preview
maximum connected devices	40
Total number of stream matrices	Recommended device/stream input bandwidth within 300M and output stream bandwidth within 300M

1.4. Packing List

Item	**Unit**	**QTY**
Device	PCS	1
Power Adapter	PCS	1
Warranty Card/Certificate	PCS	1
Quick Start Guide	PCS	1

1.5. Interface Description



1. USB-A 3.0 2. Type-C 3. 2-inch LCD Display

4. Up 5. OK 6. Down

7. Power Switch 8. C14 power connector 9. HDMI output

10. 1000M Ethernet&POE 11. 1000M Ethernet port 12. SDI output

2.Installation and Connection

2.1. Unpacking and inspection

Before starting the installation, make sure that the equipment packaging is intact.

Open the package and check that the unit and its accessories are complete.

2.2. Preparing the connection

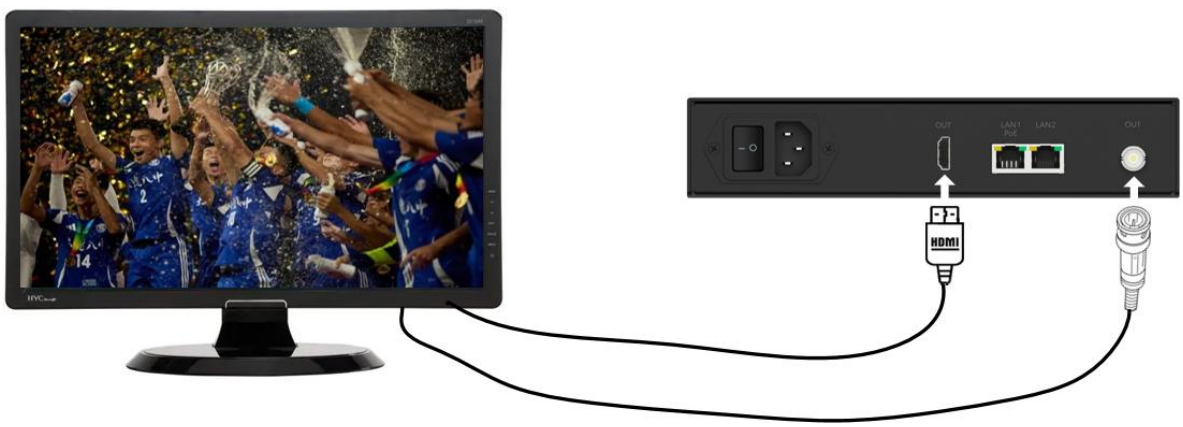
Make sure you have all the necessary connection cables, including Ethernet cables, HDMI or SDI cables, etc.

2.3. Connecting the power supply

Connect the device to a suitable power outlet. Make sure that the voltage and frequency of the power adapter correspond to local standards.

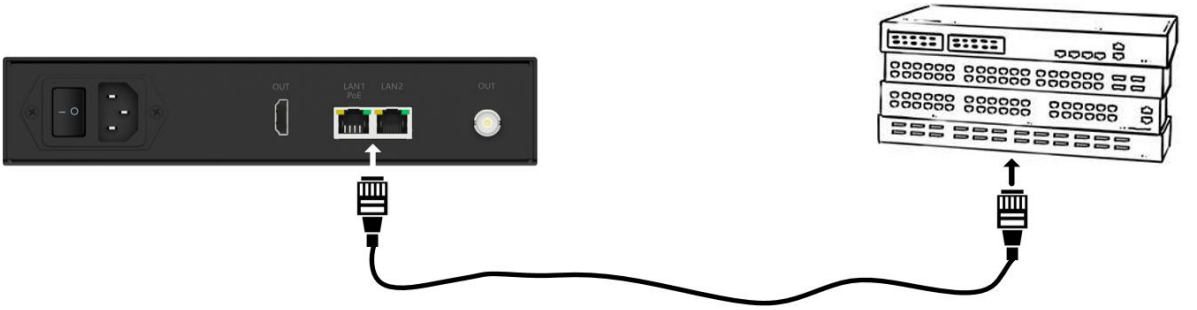
2.4. Connecting a video source

Use an HDMI or SDI cable to connect your display device (e.g., monitor) to the HDMI or SDI output connector of your device. Make sure that the connectors on both ends of the cable match and are securely connected.



2.5. Connecting to a network

Connect the 1000M RJ45 Ethernet port of the device to your LAN or the Internet using an Ethernet cable. Ensure that the network supports DHCP so that it can be assigned an IP address automatically.



The first time you use the device, your network need to include a DHCP server in order to obtain an IP address from a DHCP server. If you need a fixed IP address, you can manually assign a static IP address to the device by logging into the device's webpage with the address assigned by DHCP.

Note

- When configuring your network, make sure that your network configuration does not conflict with the IP addresses of other devices.
- If you need POE power supply, please plug into the Ethernet port with PoE.

2.6. Checking Connections

After all connections have been done, check each cable and connector is securely connected to ensure that there are no loose or damaged connections.

3.Indication and operation of the LCD screen

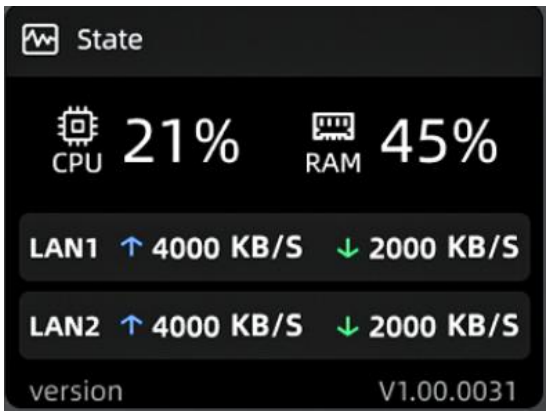
3.1. Turn on the device

Turn on the unit via the on/off button on the rear panel.

Observe the LCD display on the front panel of the unit to ensure that the unit boots up properly and acquires an IP address.

3.2. System status

When you turn on the device, the first page of the LCD panel is the current operational status of the device, which includes the following key information:



CPU and Memory Consumption: Displays the current CPU and memory usage in percentage. This data helps you monitor the performance and resource allocation of your device.

LAN1: It shows the total uplink and downlink rate of the current network port, which is used to monitor the network condition in real time.

LAN2: It shows the total uplink and downlink rate of the current network port, which is used to monitor the network condition in real time.

Version Number: Displays the current software version. It is important for technical

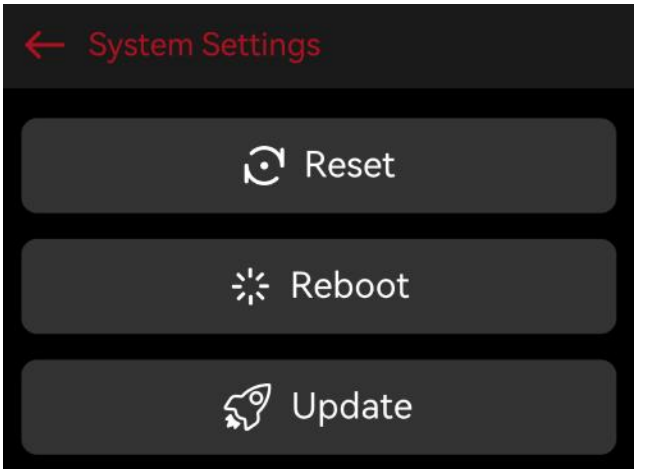
support and software upgrades.

Note

- **Up button:** This key allows the user to scroll up through the device's settings menu or information display.
- **Confirmation button:** Used to confirm the user's selection or to enter the selected setup menu.
- **Down button:** This button allows the user to scroll down in the device's setup menu or information display.

3.2.1.Home Status Setting

Pressing OK⊡ at System Status menu will take you to the System Setup page.



System Setup: Pressing the OK button in this area will return you to the previous menu.

Reset: Selecting this option will perform a restore to factory settings. This will erase all user configurations and restore the device to its initial state. Please proceed with caution as this will be irreversible.

Alternate reset method: The device has been turned on, the LCD screen is displayed normally, press and hold the up and down buttons at the same time for 8 seconds, the device can enter reset.

Note

- **Before performing the reset operation, please make sure you have backed up all important configuration information to prevent data loss. If you need further help or guidance, please refer to the user manual or contact technical support.**

Reboot: Selecting this option will reboot the device. This will turn the device off and then turn it back on and is typically used to apply changes or resolve temporary issues.

Update: First, make sure you have inserted the USB memory containing the device firmware file into the USB port of the device. The firmware file should be placed in the root directory of the USB memory.

On the LCD screen of the device, press the "Update" option. The device will automatically check if the firmware file for the device exists in the root directory of the USB memory.

1). If the device detects the correct firmware file, the screen will display a confirmation message asking if you want to continue with the update process. Otherwise, the update will be aborted with the message "No matching firmware found".

2). If the device detects multiple versions of firmware for the same model, the latest firmware will be used automatically.

Confirm Update: Select the continue option to begin the firmware update.

Update Progress: The LCD screen will show the progress of the firmware update. When the update is complete, the device will automatically reboot.

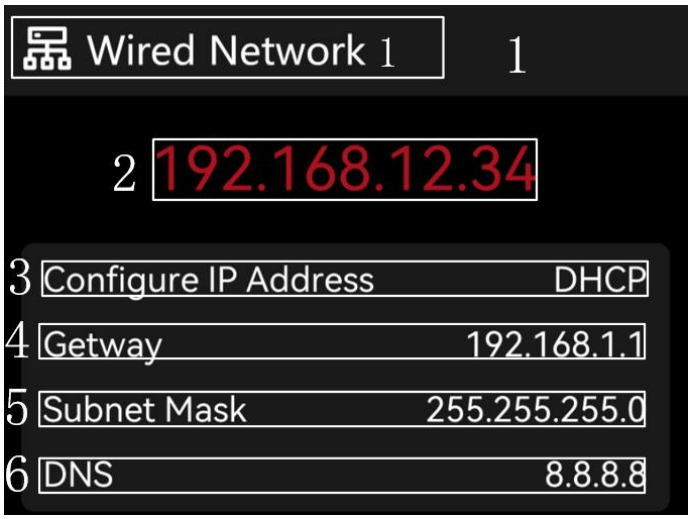
Note

Do not disconnect the power or turn off the device during the update process as this may cause the update to fail.

Be sure to update the firmware for the correct device model.

3.3. Wired Network 1

Pressing the down▽ key from the home menu will take you to the wired Network1 menu.



1). Network type indication: Shows the type of network the device is currently connected to, wired connection 1 or wired connection 2.

2). IP address display: This area displays the IP address of the device in the current network, which is used to identify and access the device on the network.

3). Network Configuration Mode: This area indicates whether the device uses Dynamic Host Configuration Protocol (DHCP) to obtain network parameters automatically, or whether it uses manual setting of network parameters.

4). Gateway Information: Displays the default gateway address of the current network, which is the exit point for the device to communicate with other devices in the network or external networks.

5). Subnet Mask Information: Displays the subnet mask of the current network, which helps the device to determine the local communication and external communication in the network.

6). DNS Server Information: Displays the IP address of the Domain Name System (DNS) server being used by the device to resolve domain names to IP addresses.

3.3.1. Wired network 1 setup

Pressing OK⊡ from the Wired Network 1 menu will take you to the wired network 1 setup page.

1). DHCP: Displays the title of the current network DHCP mode. Pressing the OK button in this area will return you to the previous menu level.

2). Enable: This option is used to enable Dynamic Host Configuration Protocol (DHCP) mode for the current network so that the device can obtain an IP address automatically. If the mode is already enabled, there will be no effect selecting this option.

- **3). Disable:** This option is used to disable the Dynamic Host Configuration Protocol (DHCP) mode for the current network and switch to static IP settings. Selecting this option will have no effect if the mode is already disabled.

Note

- Set specific static IP address, subnet mask, gateway and DNS server values, which you need to set manually in the Webpage.

3.4. Wired network 2

When you press the down button in the wired network 1 menu, you enter the wired network 2 menu, which has the same functions and options as wired network 1.

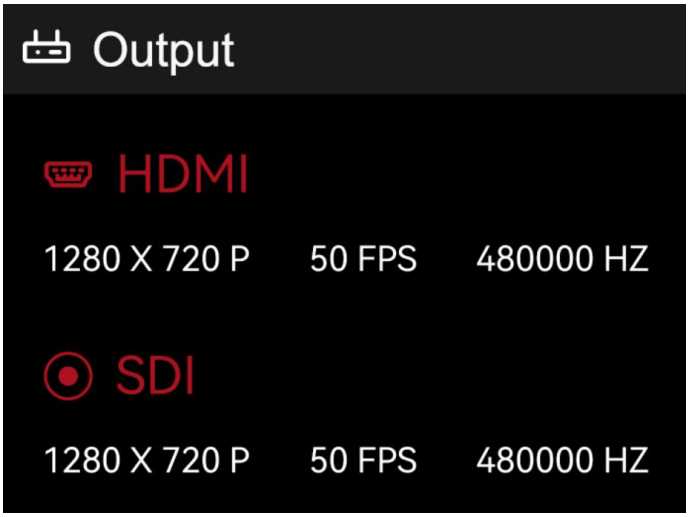
3.4.1. Wired Network 2 Setup

Pressing OK from the wired network 2 menu will take you to the wired network 2 settings page.

This page has the same features and options as the wired network 1 setup page.

3.5. Output

Pressing the down▽ key in the wired network 2 menu will take you to the output display.



HDMI: Displays information about the currently HDMI signal, including resolution, frame rate, and audio sampling rate. This data is essential to confirm that the HDMI source is configured and operating correctly. It will display "No Signal" if no HDMI signal output.

SDI: Displays information about the currently output SDI signal, including resolution, frame rate, and sampling rate. This data is essential to confirm that the SDI signal source is configured and operating correctly. It will display "No Signal" if no HDMI signal output.

4.Webpage and Configuration

Webpage is the central platform for you to interact with your device, allowing you to remotely access and manage your CNDLive devices. You can monitor device status,

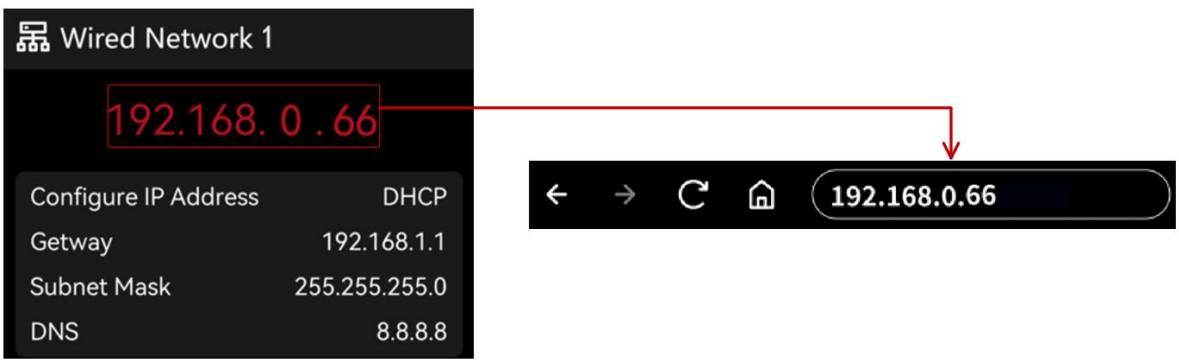
adjust settings, manage streaming services, and perform other advanced configuration tasks.

4.1. Login into Webpage

After ensuring that CNDLive Manager Max has been properly connected, you can follow the steps as below to login the webpage:

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

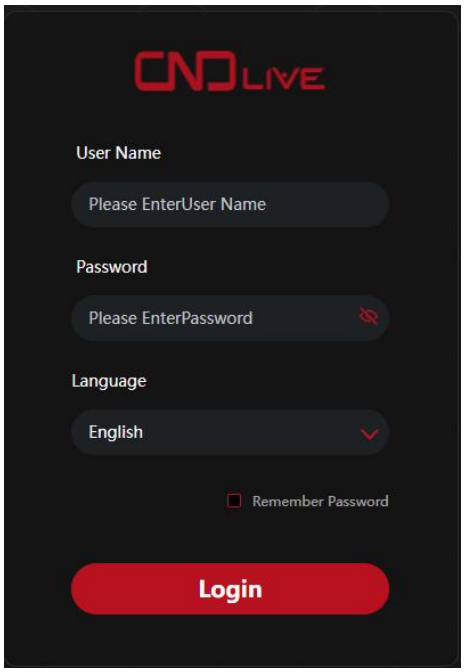
② **Enter the URL:** Enter device IP in the address bar of the browser, where the device IP is the wired network port IP address of CNDLive Manager Max, which can be any LAN 1 or LAN 2 interface, you can get it from the wired network page of the LCD screen, for example, if the IP address of your server is 192.168.0.66, you should enter http://192.168.0.66



③ **Accessing the login page**: Press the enter key or click on the right side of the browser's address bar, and the browser will load and display the device's login page.

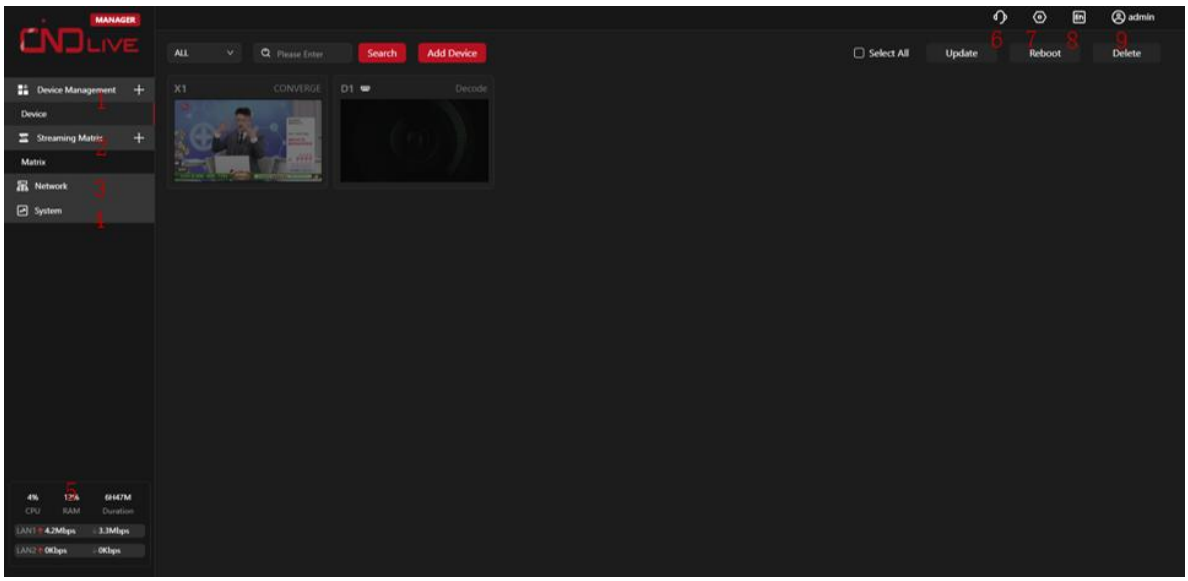
④ **Login authentication:** On the login page, you will see the user name and password input boxes. By default, the user name and password are ***admin***. Please enter these default credentials in the corresponding input boxes.

⑤ **Login:** After entering your user name and password, click the login button or press the enter key, you will be authenticated and logged into the Webpage.



4.2. Webpage Home

The Webpage is the central interface for CNDLive Manager Max users to interact with the device. This home page is designed to provide an efficient and intuitive operating platform that enables users to easily monitor device status, view network information, manage the streaming matrix, and access system settings. Quickly understand the performance metrics of the device, network connectivity status, and manage streaming services conveniently.



In the CNDLive Manager Max Webpage, the functions are distributed as follows:

1). Device management: You can perform device addition, deletion, and modification operations, firmware upgrades, and device settings. You can also create new device folders and add different devices to different folders as needed.

2). Streaming matrix: It allows users to create and manage complex streaming routing and transitions. Users can use multiple types of sources (X1, C6, custom IP streams, etc.) as inputs and create up to 16 IP stream outputs for each source.

3). Network: Users can configure the network information of the two wired ports and make SNMP (Simple Network Management Protocol) settings. These settings are essential to ensure a stable connection to the network and effective network management.

4). System: A variety of operations can be performed to manage and maintain the device, including viewing device information, upgrading firmware, restoring factory settings, rebooting the device, and setting the time. These functions are essential to ensure stable operation and timely updates of the device.

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

6). Contact information: Provides sales and support contact information to make it easier for you to contact support when you need it.

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

8). Language icon: Click to switch the interface language, Chinese or English. More languages will be supported in the future.

9). Login avatar: Displays the current login user name. You can operate such as "change password", "user management" (admin only) or "log out".

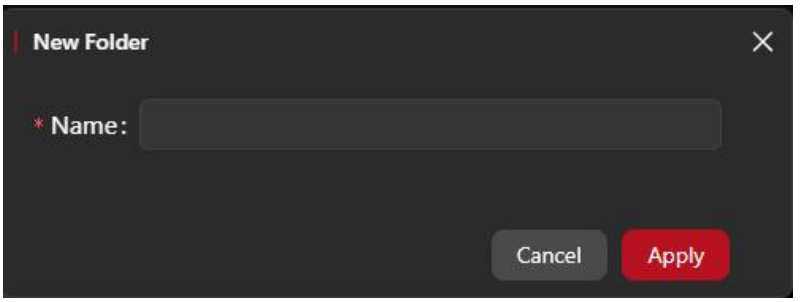
These system setup functions enable comprehensive management and maintenance of CNDLive Manager Max devices, ensuring stable operation and timely updates, thus improving the reliability and efficiency of live broadcasting and video transmission.

4.3. Equipment 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.

4.3.1.Device folder

In the "Device Management" interface, click the plus button, a box will pop up, allowing you to enter the name of the new folder. Fill in the folder name you want, and then click OK or apply button to finish creating the new device folder.



You can add different devices to the new folder as needed.

Move your mouse over the new device folder and you will see ⋮ icon. Click it 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, which users are allowed to have access.

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 exist in one folder.

4.3.2. Equipment organization

Device organization is a core feature in CNDLive Manager Max that allows users to efficiently manage 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 from the system.

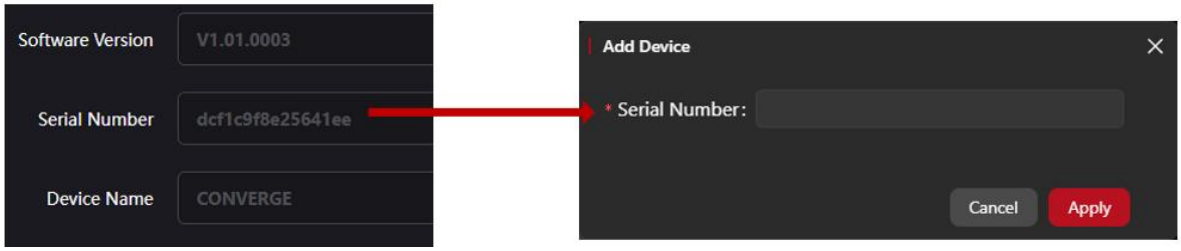
4.3.2.1. Add device

It 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 “device button” at the top. Fill in the serial number of the device when a input box appears. You can find the serial number of the device in "System" under “Settings” on the Webpage or you can find it on the back of the unit.

Note

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

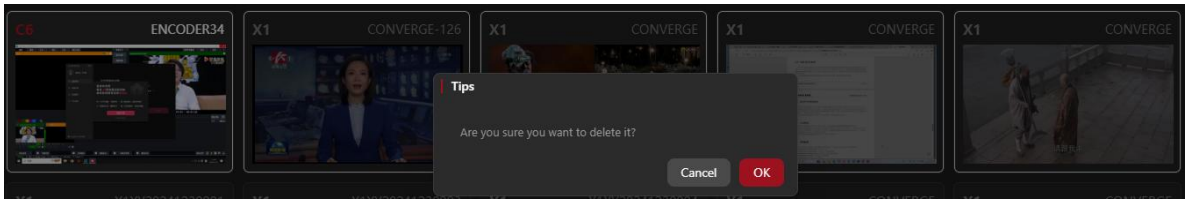


4.3.2.2. Delete device

It allows removing devices that are no longer in use from the system. 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 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.

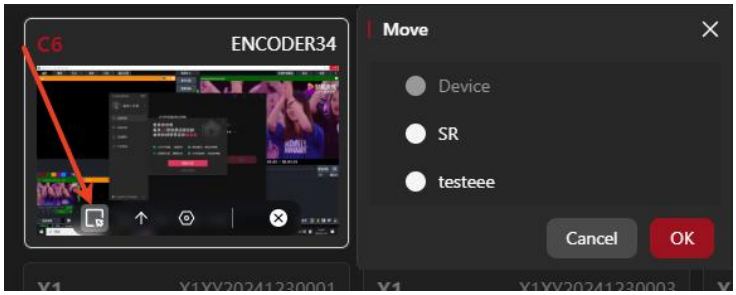
②**Batch device deletion:** In the device folder, click a device, the edge of the device will show a white box to indicate it has been selected. Then, click other devices that need to be upgraded together, or click "Select All" button to select all devices in batch. After selecting all the devices that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



4.3.2.3. Device movement

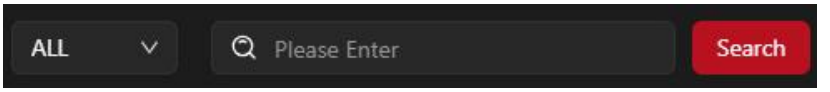
Device move allows users to move devices from one folder to another. With this feature, you can organize and manage devices as you want, such as grouping devices based on device type, usage, or live scenarios.

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.



4.3.2.4. 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.

4.3.2.5. Batch Reboot

Batch Reboot allows users to perform reboot operations on multiple devices at the same time. 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 "Select All" button to select all devices in batch. 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", the system will start to reboot the selected devices in batch.

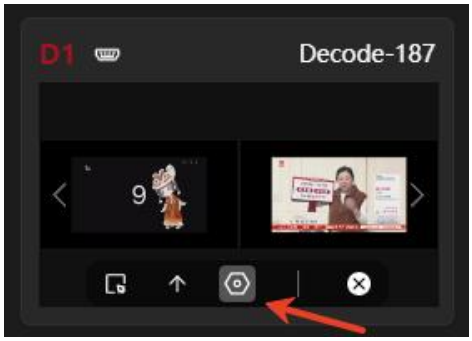
Note

- 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.

4.3.3.Device monitoring and configuration

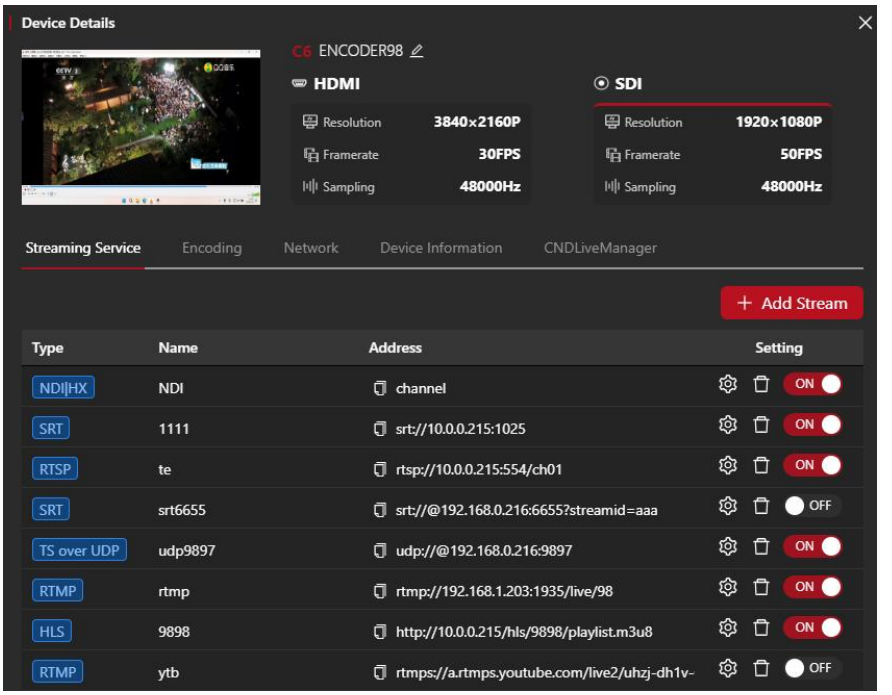
Device monitoring and configuration, which allows users to monitor device status in

real time, adjust configuration settings, and view device details. These features ensure efficient operation and precise control.



When you mouse over the window of the added device, click on the "Settings" option on the page that appears, and you will be taken to a device-specific configuration screen, where different devices will have different features and options:

4.3.3.1. C6 Encoder



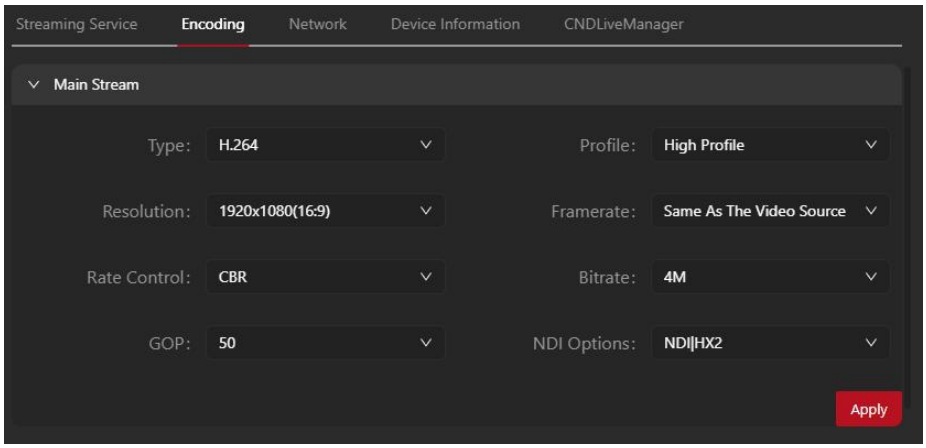
Source preview: The interface will show the video preview of the current access source.

Device name: Helps the user to quickly identify and select the desired device, and will also be used as the name of the NDI stream emitted by the device.

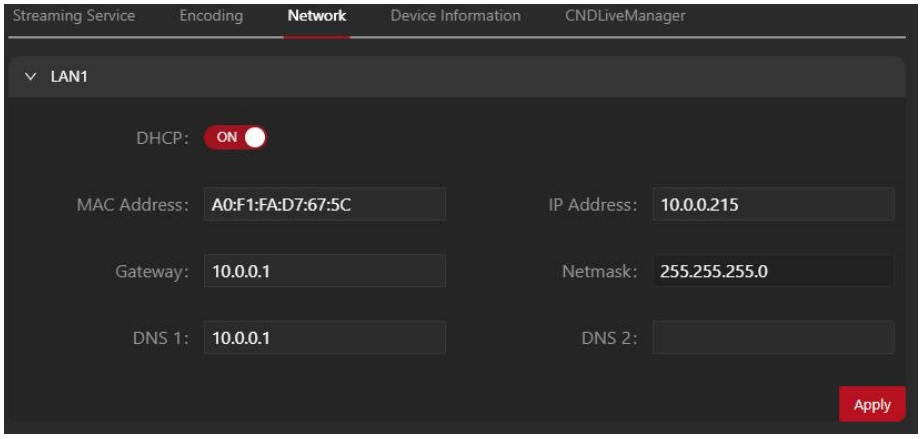
Video specification: You can see the video specification of HDMI and SDI sources, including resolution, frame rate and sample rate.

Streaming services: You can add and maintain all currently created streaming services, perform start/stop, deletion and streaming settings.

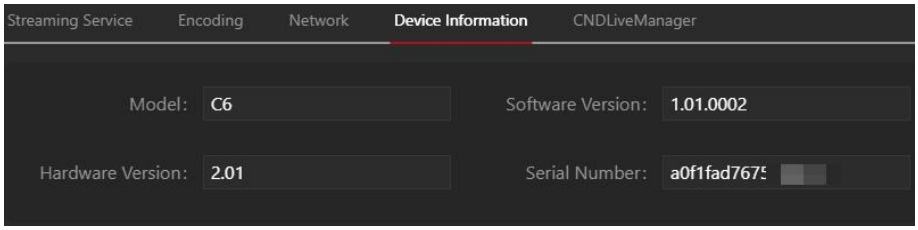
Encoding settings: You can view the encoding settings of the main-stream, sub-stream, and modify parameters such as resolution, frame rate, bitrate control, bitrate, and GOP (Group of Pictures). Also you can adjust the audio and MJPEG settings.



Network configuration: The network section is divided into two subsections, LAN and Wi-Fi. In case of wired network access, wired network information is displayed. When it is under Wi-Fi connection, the connected hotspot and the assigned IP address are displayed.

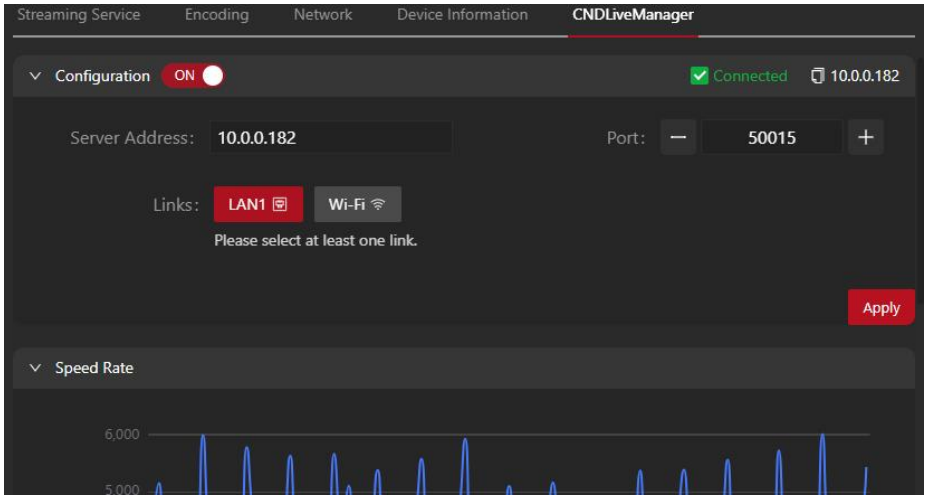


Device information: It will display detailed information such as the model number, hardware version, firmware version and serial number of the device.

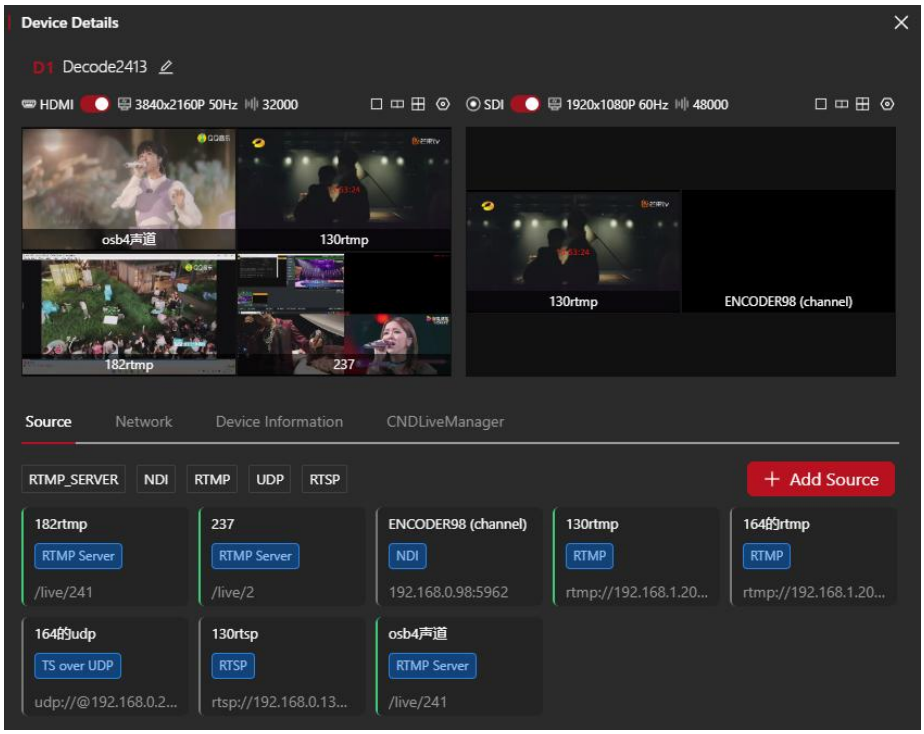


Management platform: Set the management platform start/stop, address and port number, the device can freely use multiple network connections to improve the efficiency and stability of data transmission. And display the current network utilization

rate to monitor the network bandwidth usage.



4.3.3.2. D1 decoder



Device name: Helps users quickly identify and select the desired device.

HDMI: HDMI decoding interface switch, displaying the current interface resolution, frame rate and audio sampling rate. In addition, you can set the format of multi-window and HDMI output, including resolution, frame rate, color space, etc.

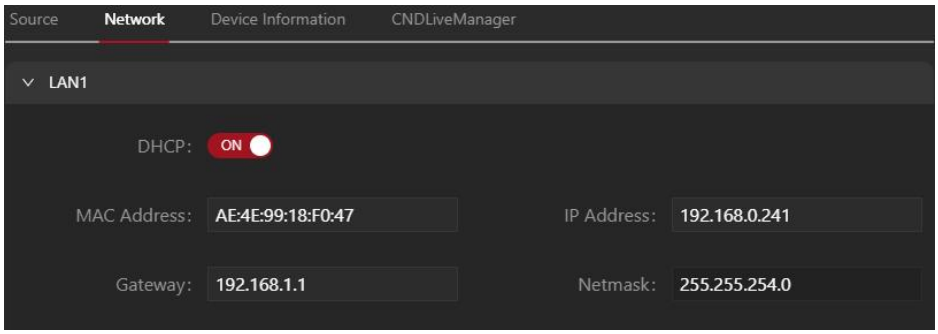
SDI: SDI decoding interface switch, displaying the resolution, frame rate and audio

sampling rate of the current interface. In addition, you can set the format of multi-window and SDI output, including resolution, frame rate, color space, etc.

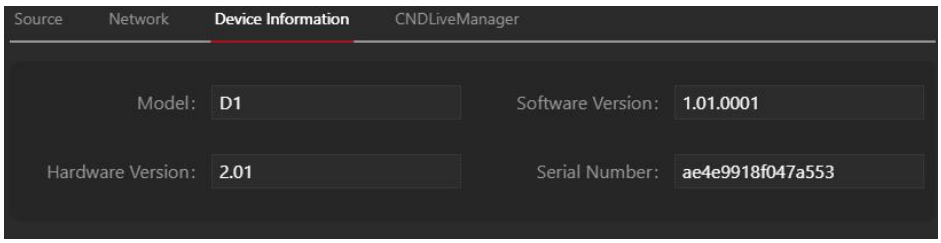
Source window preview: View the video content of the current decoded output source at a rate of one frame update every 5 seconds. Enables users to effectively monitor and manage output sources without consuming excessive bandwidth and page resources.

Source list: Displays all added source protocols with type, name and address information, you can add or delete source protocols.

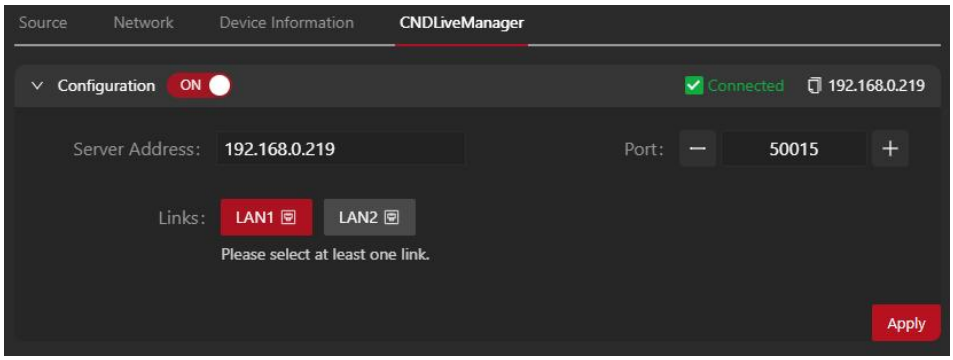
Network configuration: The network section is divided into LAN1 and LAN2 corresponding to two network ports respectively. If there is network access, all network information will be displayed, including IP address, subnet mask, default gateway and so on.



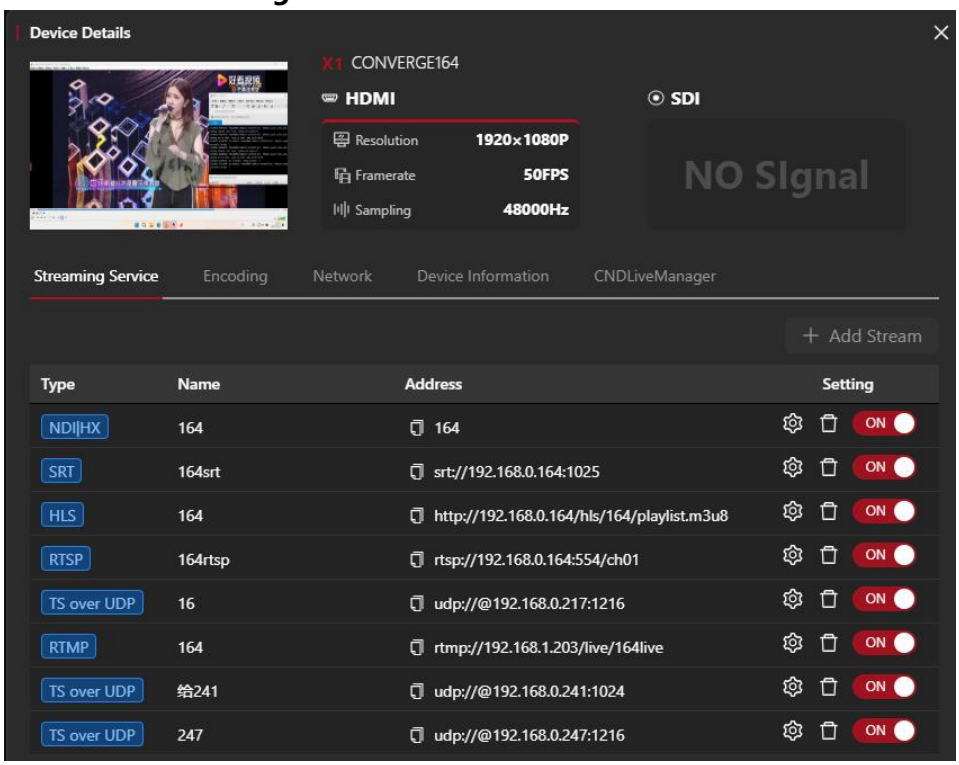
Device Information: It will provide detailed information about the device such as model number, hardware version, software version and serial number.



Management platform: Set the management platform start/stop, address and port number, the device can freely use a single or two wired network connections to improve the efficiency and stability of data transmission.



4.3.3.3. X1 Bonding Encoder



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

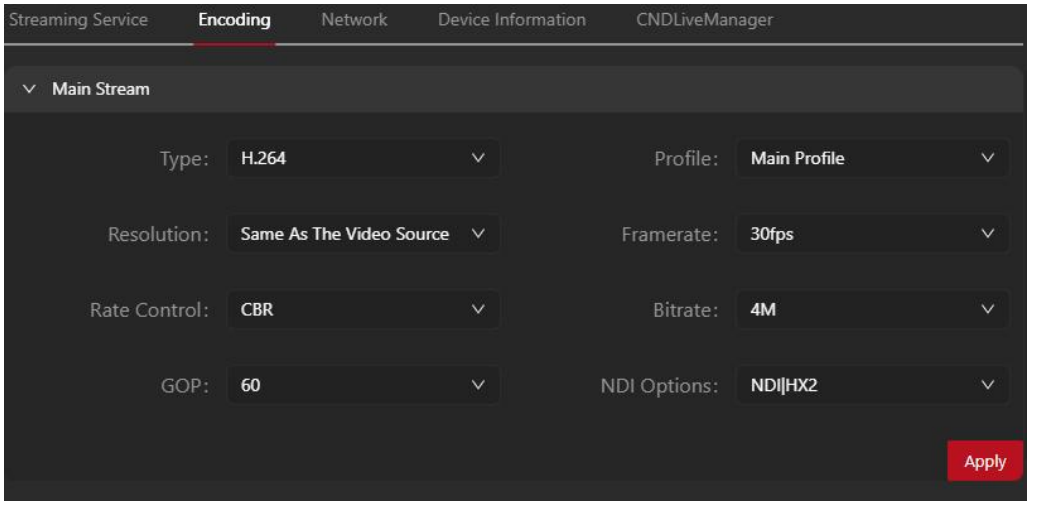
Device name: Helps the user to quickly identify and select the desired device, and will also be used as the name of the NDI stream emitted by the device.

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

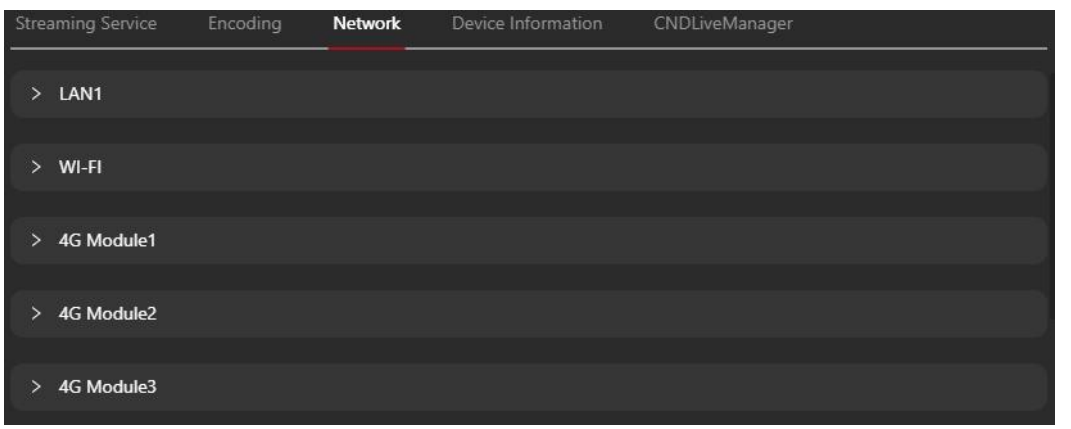
Streaming services: You can view and manage all currently created streaming services, start or stop operations.

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

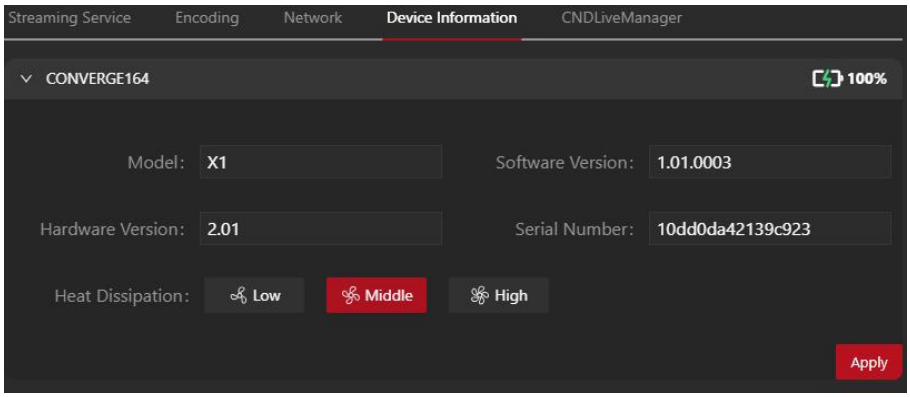
streams, and modify parameters such as resolution, frame rate, bitrate control, bitrate and GOP (Group of Pictures).



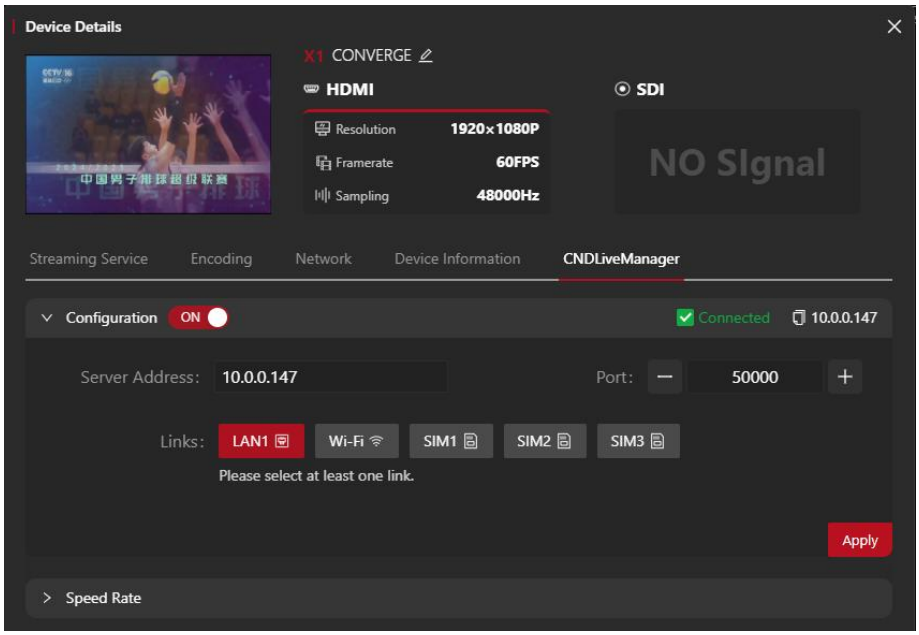
Network configuration: The network section is divided into LAN, Wi-Fi and 3 SIM card slots. If there is wired network access, full network information will be displayed. If there is a Wi-Fi connection, the connected hotspot and assigned IP address will be displayed. If the SIM slots have access to a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



Device information: It will display detailed information such as the battery information, model number, hardware version, firmware version, and serial number, as well as the ability to control the device's cooling fan rate.



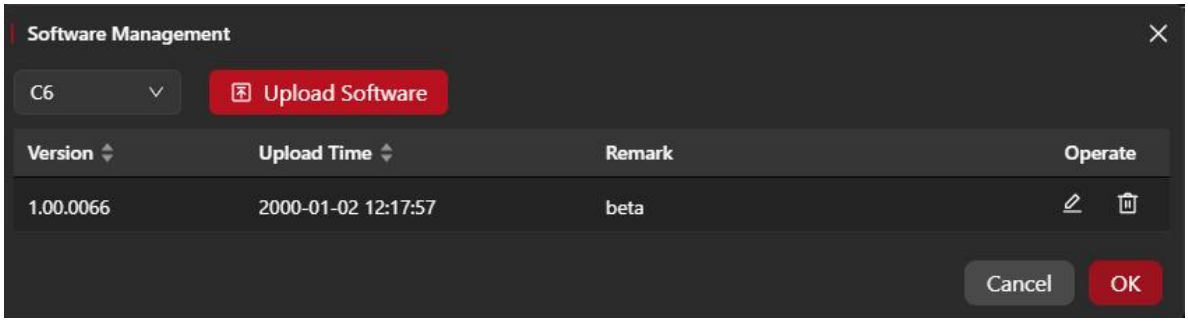
Management platform: Set the management platform start/stop, address and port number, the device can freely use multiple network connections to improve the efficiency and stability of data transmission. And display the current network usage rate to monitor the network bandwidth usage.



4.3.4.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 **Single device update:** Move the mouse to the window of the added device, and select "Device Upgrade" from the options that appear. In the pop-up interface of device upgrade, select the firmware version you just uploaded. After clicking OK, the device will start the upgrade process.

Note

- Please note that during the upgrade 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 Upgrade:** In the device folder, click a device, the edge of the device will show a popup box to indicate that it has been selected. Then, select other devices

that need to be upgraded together, or click the "Select All" button to select all devices in batch. After selecting all the devices that need to be upgraded, click the Upgrade 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

- Due to the limitation of device capacity, only one version of firmware can be uploaded for each model at a time. If a user uploads the same model firmware multiple times, the later uploaded firmware will automatically overwrite the previously uploaded version.
- The selected equipment 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.

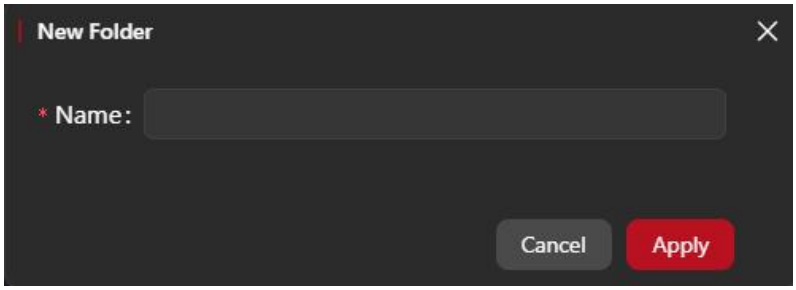
4.4. Streaming matrix

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

4.4.1.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 Apply 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 two options will pop up for your choice:

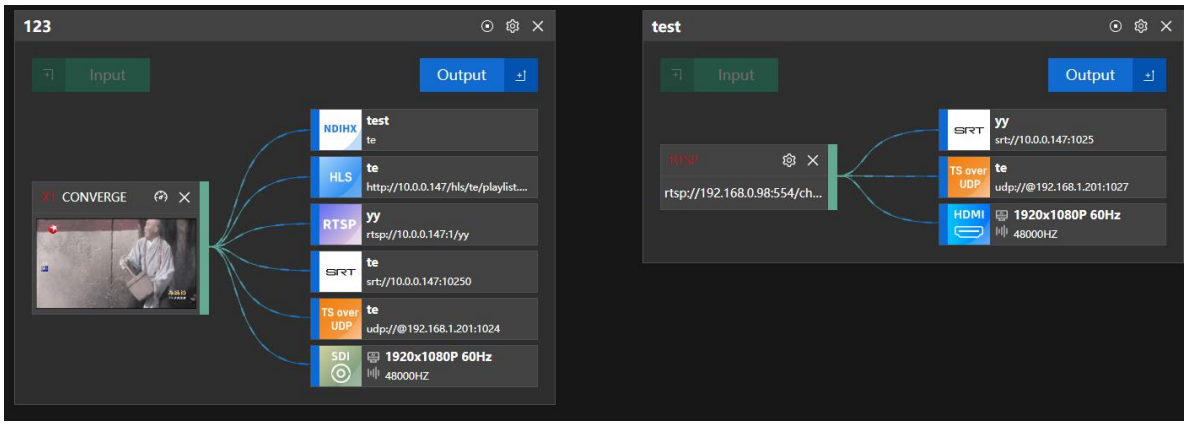
Access Control: You can set the access rights of the folder, which users or user groups are allowed to access.

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 streaming matrices within it.

4.4.2.Streaming matrix management

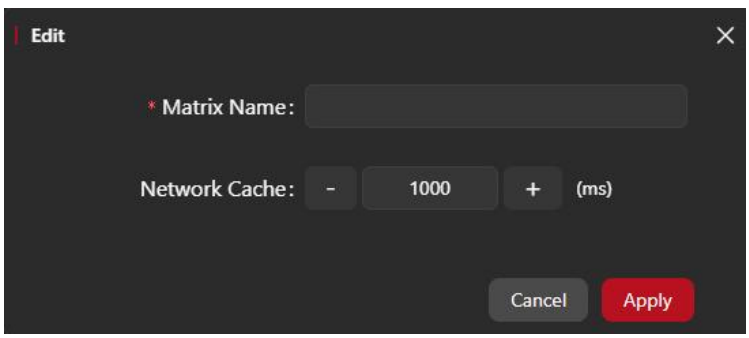
The "Streaming Matrix Management" feature plays a critical role in CNDLive Manager Max, providing users with a powerful and flexible tool to create, configure and manage complex streaming routes and transitions.



4.4.2.1. Stream matrix node additions

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. In the pop-up window, fill in the server node name in detail.



Matrix name: Used to identify and differentiate between different node flow tasks, ensuring easy identification and management within the server node.

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

- After the server node is added, the node window displays three icons: setup, delete, and start/stop.

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

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

Start/Stop: By clicking the start/stop icon, users can turn on or off the current server node.

Note

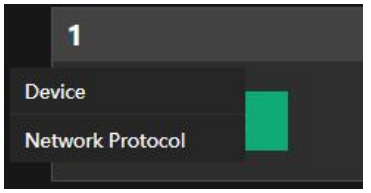
- When a server node is deleted, the input and output sources associated with that node are also deleted together.

4.4.2.2. To Add Node Input Source

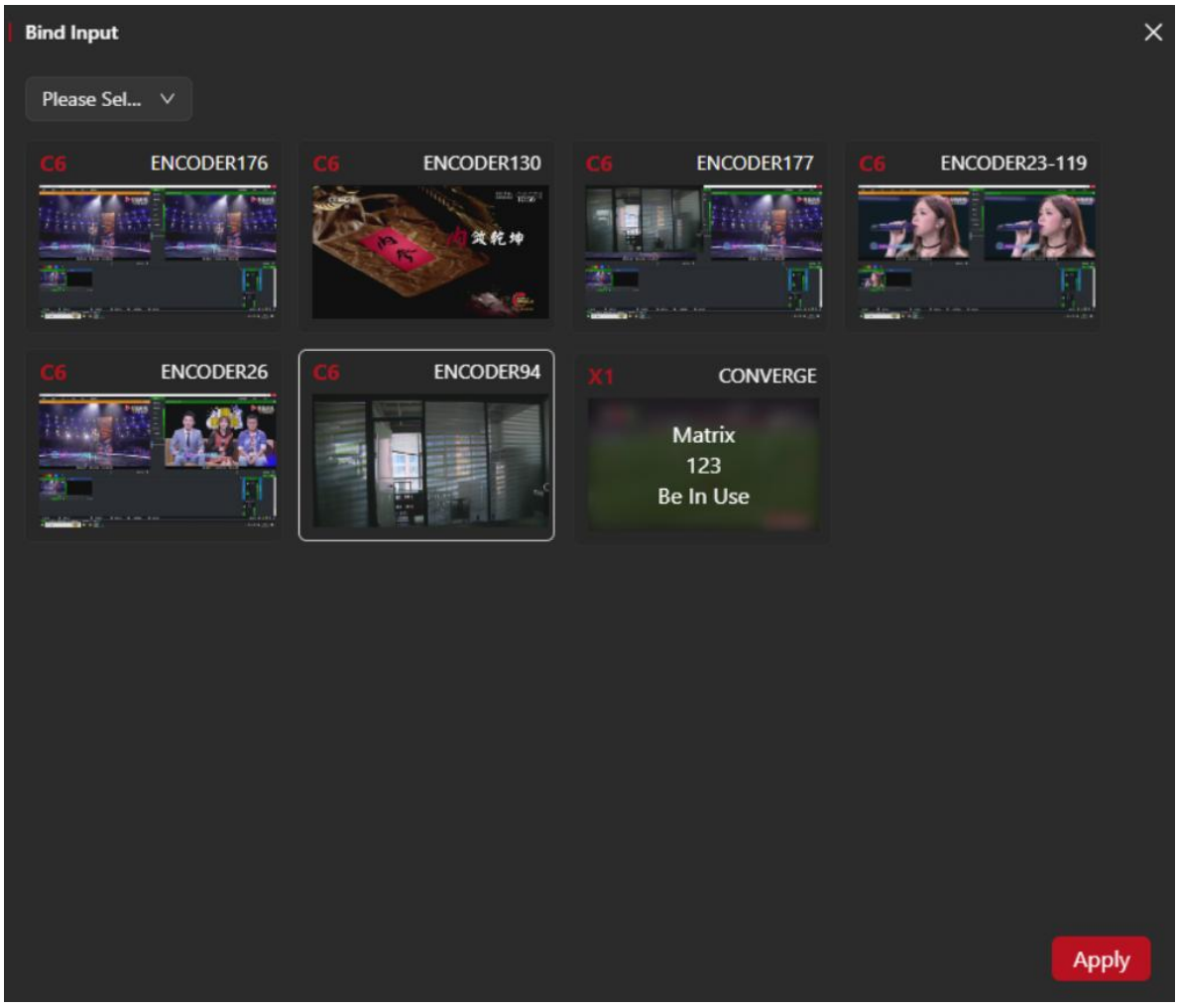
Detailed steps to add a server node input source:

1). Click the input logo on the left side of the server node.

2). Select "Devices" or "IP Protocols".



① **Device:** On the top left corner is the device folder option, you can switch 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.

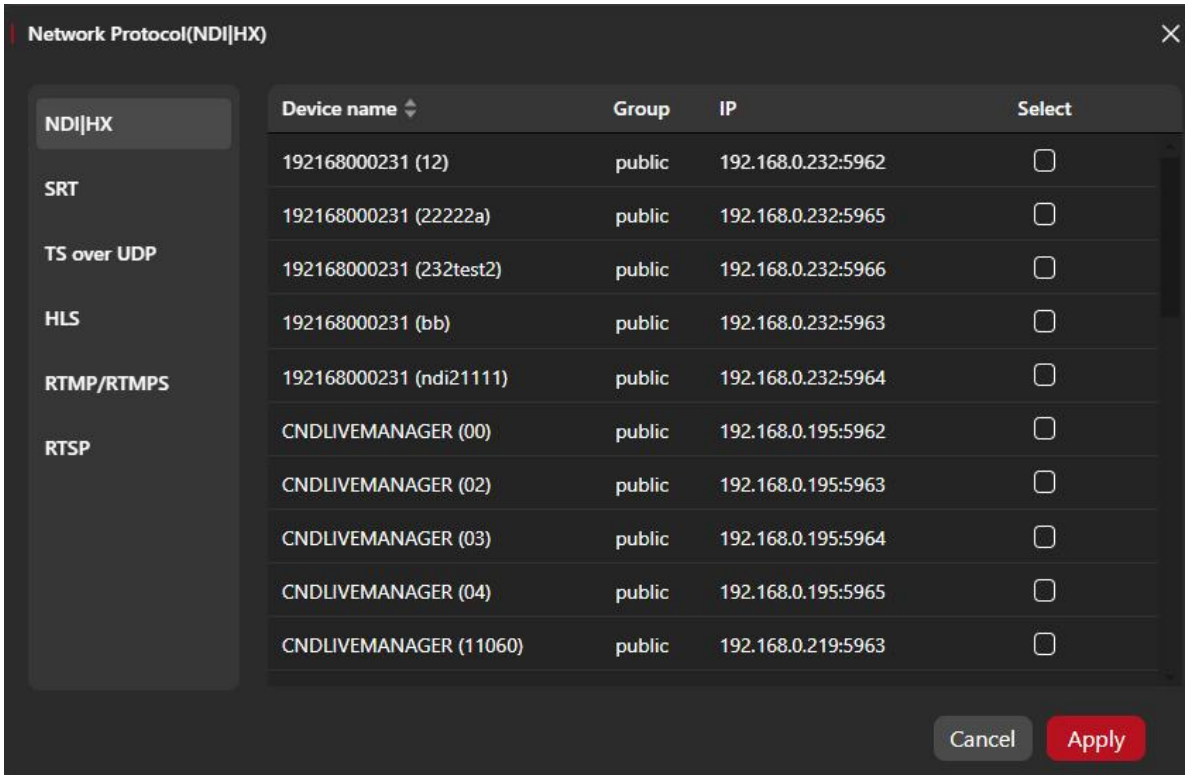


- When the server node input source is successfully added, the input source window will display a network speed icon . By clicking it, users can dynamically view the traffic details of the bonding connection between the input source and the server, including real-time traffic, bandwidth usage of each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

Note

- The same device can only correspond to one server node input, and similarly, a server node can only have one device input. This one-to-one correspondence ensures the accuracy and stability of streaming media transmission and avoids resource conflicts and confusion.
- Devices that are already in use by other server nodes cannot be added as inputs.

② **IP Protocols:** Support NDI|HX, SRT, TS over UDP, HLS, RTMP/RTMPS, and RTSP. Enter the necessary information and click OK to complete the addition of input sources.



Note

- The same server node can only have one network protocol as input

4.4.2.3. To Add Node Output Source

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

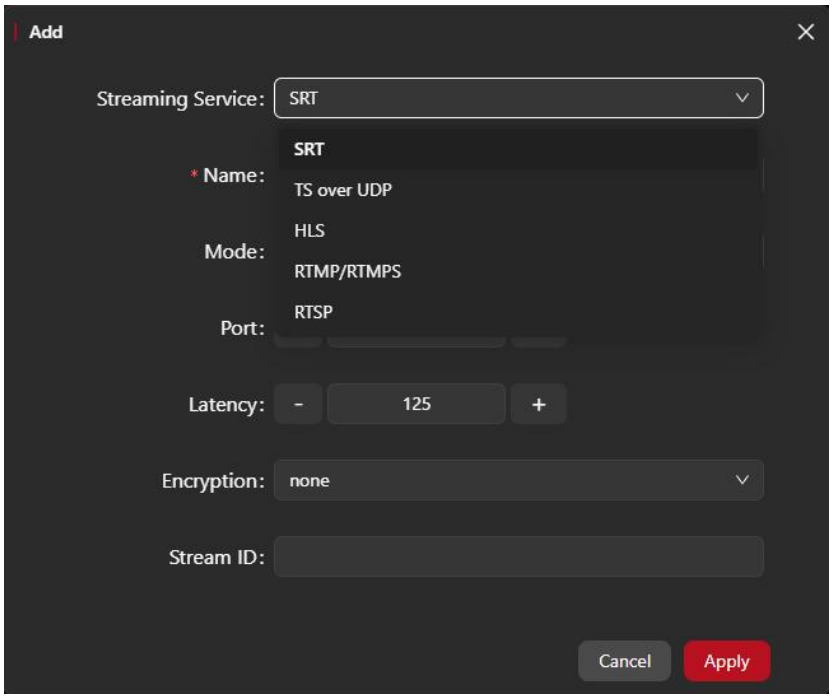
1). Click the Output logo on the right side of the server node.

2). In the pop-up page, select "IP Protocols" or "HDMI/SDI".

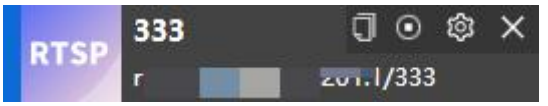
① **IP Protocol:** You can select the supported output stream protocols, including NDIHX, SRT, TS over UDP, HLS, RTMP/RTMPS, RTSP. Select the appropriate output stream protocol as needed, and fill in the necessary information about the output stream, such as the server address, stream name, and port. This information can usually be found in the settings of your encoding device or streaming server.

② **HDMI/SDI:** Output directly from the HDMI or SDI interface. You can set the output format, including resolution, frame rate, color space, number of sound channels, and so on.

After confirming that the information is correct, click "OK". After completing these steps, the device will add a new output source and start receiving and processing streaming data from that source. You can see the newly added input and output sources in the Streaming Matrix and manage them, such as changing settings or deleting them.



- After completing the addition of a server node output source, the Output Source window displays the copy, start, stop, set, and delete icons, which provide convenient management features.



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.

Start/Stop: By clicking the start/stop 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 deletion, the streaming will stop transmitting.

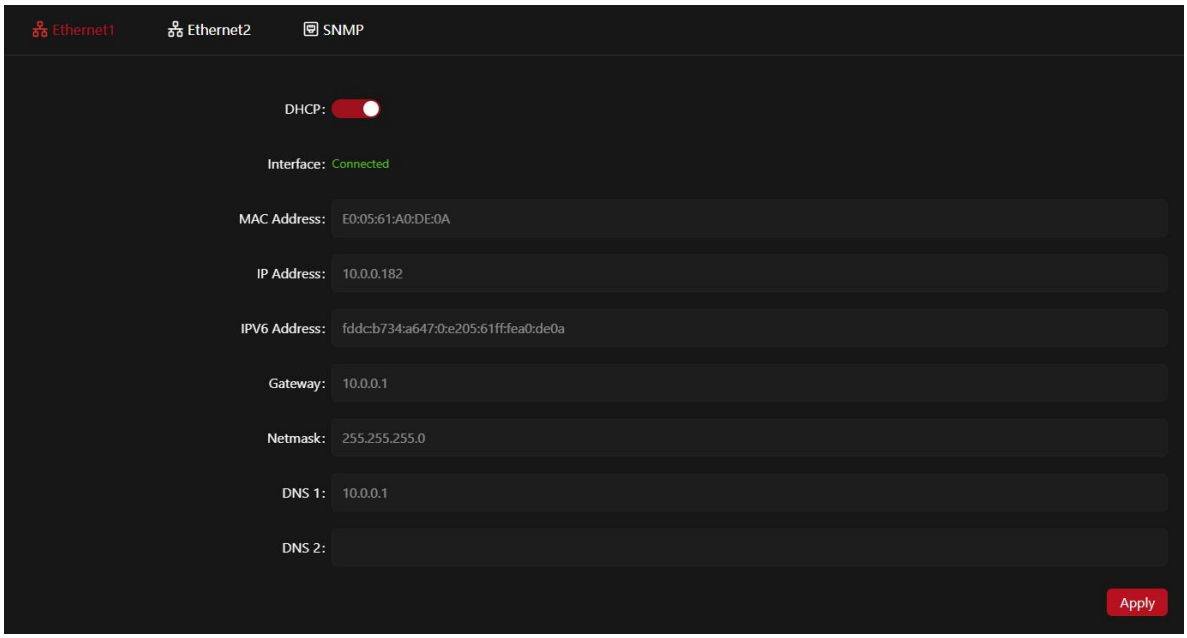
Note

- CNDLive Manager Max does not limit the number of output sources.

4.5. Network

The network function of the device provides 2 wired network connections, and SNMP management.

4.5.1.Wired Networks



Auto Obtain: This option allows the network device to automatically obtain network information such as IP address from a DHCP server on the network. When this feature is enabled, users cannot manually set the IP address, default gateway, subnet mask, DNS, etc. because these options will be disabled (grayed out).

MAC Address: Displays the fixed MAC address of the current device, which is necessary information in some network management scenarios, such as when you need to restrict specific devices from accessing the network.

IP Address: Manually set the IP address of the device, usually used when there is no DHCP service in the network or when a static IP address is required.

Default Gateway: Set the default gateway address for network egress, packets sent by the device to other networks will be sent to this gateway first.

Subnet Mask: Defines IP address is the network address and which is the host address. Subnet masks are used in conjunction with IP addresses to identify a specific network.

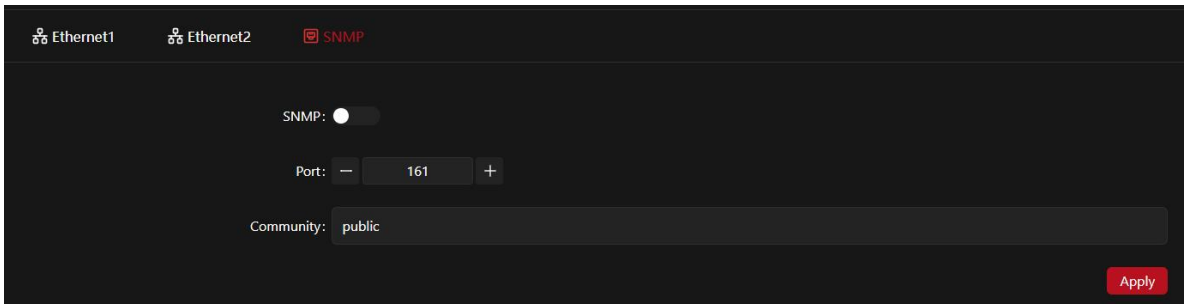
DNS1 and DNS2: Setting up Domain Name System (DNS) server addresses for resolving domain names to IP addresses. Usually, one DNS server is required, but in some cases, multiple DNS servers are set up for reliability and speed.

Note

When performing wired network setup, make sure the device is properly connected to the network.

4.5.2. SNMP

The device provides SNMP (Simple Network Management Protocol) support, which allows network administrators to monitor and manage the device over the network. Enabling and configuring the SNMP function can be performed through the Webpage.



Enable SNMP: Click the Enable button to activate the SNMP function.

Configure the SNMP port:

1). After enabled, you will see port configuration options.

2). The desired SNMP port value can be entered manually or the port number can be adjusted using the "-" or "+ "signs.

3). Ensure that the port number you enter matches your network plan and does not conflict with SNMP ports on other devices in your network.

Set the team name:

1). Security mechanisms used to control access to the device.

2). The default team name is "public". For security reasons, it is recommended to change this default setting.

3). Enter a new, secure team name to restrict access to the device.

Save the configuration:

1). After completing the settings, click the Apply button.

2). The device saves your configuration and may need to restart the SNMP service to take effect.

Note

- Ensure that network firewall rules allow SNMP traffic to pass.

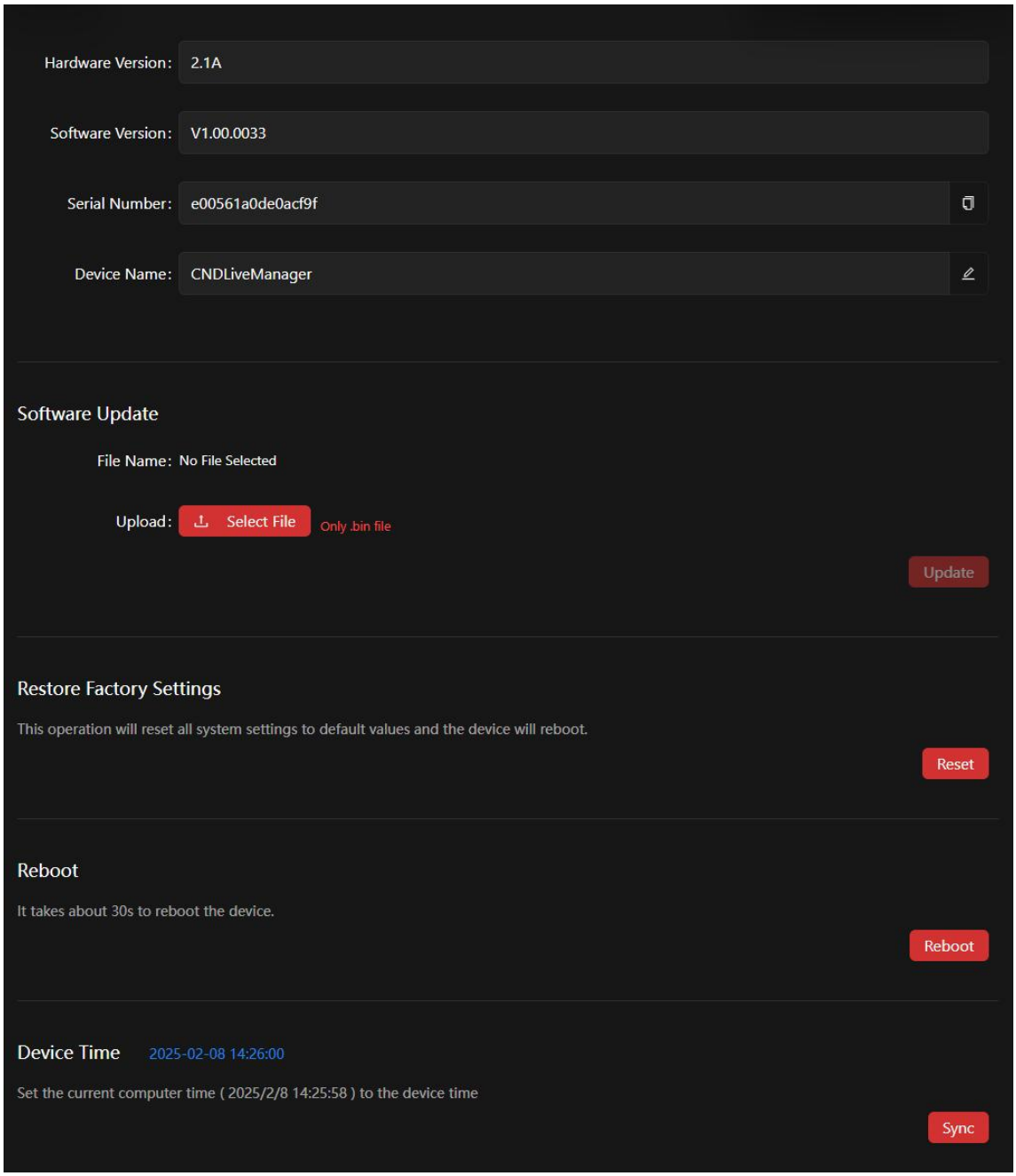
- Consider restricting which IP addresses can access the SNMP port for added security.

- Update your SNMP password or team name regularly to keep your network secure.

- If you are using SNMP on a public network, it is recommended that you use a VPN or other encryption method to protect data transmission.

4.6. systems

The latest firmware updates can be installed to improve device performance and fix known issues. A reboot function is also available to reboot the device and restore factory settings to fix faults, as well as device time synchronization.



Current Firmware Version: Used to display the current firmware version. It is crucial for you to know the software status and update it if necessary.

Upgrade Process:

1). Upload Firmware: Users can upload new firmware by clicking the "Select File". After clicking this button, a file manager interface will pop up, allowing users to select a firmware file from the local file system. Note that the uploaded file format should be **".bin"** , which is the firmware file format supported by the device.

2). File Name: After selecting a firmware file, the file name will be displayed in the corresponding input field. If the user did not select any file in step 2, the field will display "No file selected", reminding the user that a firmware file needs to be selected before the upgrade can proceed.

3). Update: After selecting the firmware file and confirming the file name, the Update button will light up to indicate that the firmware upgrade operation can be performed. If no file is selected, the Update button will remain grayed out and unclickable to prevent users from attempting an incomplete upgrade operation.

Restore Factory Settings Function: When this option is selected and executed, all configurations, passwords, network settings, etc. on the device will be reset to factory defaults and the device will reboot automatically. Usually used to resolve configuration errors or system failures.

Operational Steps:

1). Access the device's setup menu or configuration page.

2). Select the "Restore Factory Settings" option.

3). The system will prompt a warning message to note that by restoring the factory settings, all configurations, passwords, networks, etc. of the device will be restored to their default values and the device will reboot.

4). Click OK to confirm the factory reset.

Note

- Before performing a factory reset, make sure that this is the action you want to take, as all personalized settings and data will be erased.

- Restoring factory settings may affect any calibrations or special configurations on the unit, so it should be done when necessary.

- In some cases, administrator rights or specific privileges may be required to do this operation.

Reboot: When this option is selected and executed, the device will perform its normal shutdown process and then automatically reboot. The entire reboot process takes approximately 30 seconds. This feature ensures that the device is able to quickly return to normal operation in the event of a glitch or need, which helps to maintain the stability and performance of the device.

Operational Steps

1). Access the device's setup menu or configuration page.

2). Select the "Reboot" option.

3). The system will system will prompt a warning message.

4). Click "Reboot" to confirm.

Note

- Before performing a reboot operation, make sure that this is the operation you want, as the device will shut down and reboot.

- A reboot may interrupt ongoing work or data transfer, so please do so at the appropriate time.

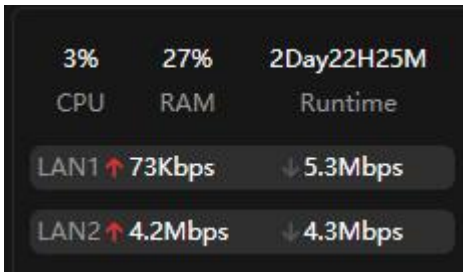
- If the device is performing a critical task or update, it is recommended to wait for the task to complete before rebooting.

- The reboot operation may take some time to complete, please wait patiently for the device to reboot and enter normal operation.

Device Time: Users simply click the "Synchronize" button and the device will automatically adjust its internal clock to match the time of the connected computer system. In this way, users can easily maintain the time of the device and avoid recording errors or synchronization problems due to time deviation.

4.7. System status

In the lower left corner of the CNDLive Manager Max page is the System Status area, which provides important information of the system.



4.7.1.Resource occupancy

Displays the current CPU and memory usage in percentage. Used to monitor device resource allocation.

4.7.2.Runtime

It displays the current system operation time since it was turned and in the format of --days:hours:minutes:seconds. This information is useful for monitoring the system's operational status and planning maintenance activities.

4.7.3.Real-time network port traffic

Displays the current total uplink and downlink rates of LAN1 and LAN2 respectively for real-time monitoring of network conditions.

4.8. Contact details

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

4.8.1.Online customer service

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

4.8.2. Sales

Provide sales contact information. Users can contact the sales team via email info@cndlive.com

To learn more products information or make business inquiries.

4.8.3.Technical Support

Provide technical support contact information. Users can contact technical team via email at support@cndlive.com to obtain technical assistance and solutions.

These are easy and quick ways for customers to get help and support about CNDLive Manager Max.

4.9. System settings

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

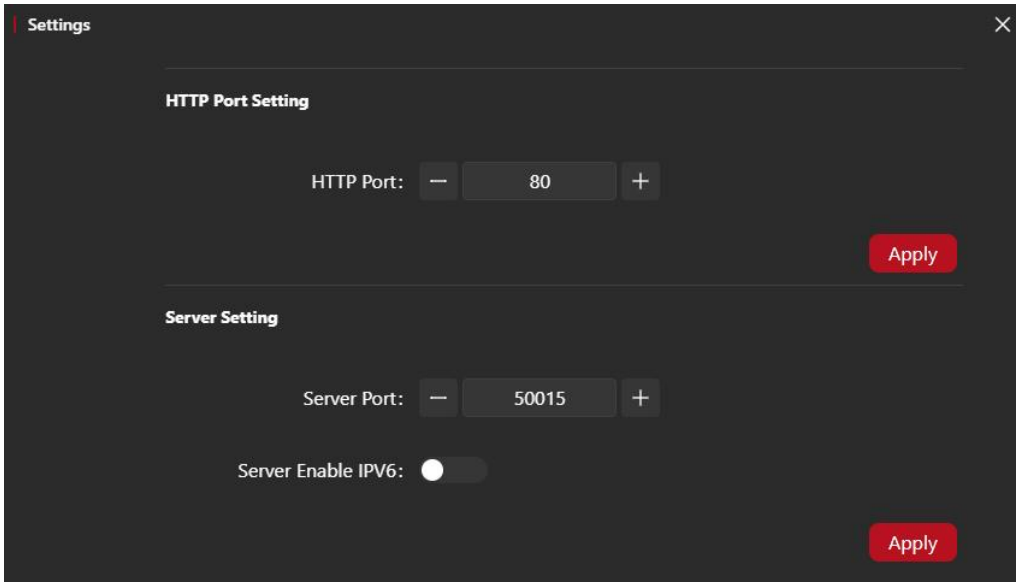
4.9.1.Firmware management

This option is used for uploading, commenting and deleting the device firmware. Users can use this function to upload new firmware versions, make notes on the firmware for identification, or delete firmware versions that are no longer needed. For details on how to use it, please refer to the previous description about "Device Upgrade ".

4.9.2.Platform setup

By clicking this option, users can modify the device's HTTP port (web service port) and Server port (port connected to the device) to enable IPV6 support. These settings allow users to adjust the communication ports between CNDLive Manager Max and the codec 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 the CNDLive Manager Max' s operating environment.

4.10. 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:

4.10.1. 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.

4.10.2.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.

With this feature, CNDLive Manager Max is able to meet the needs of users of different languages, adding a more user-friendly and convenient experience.

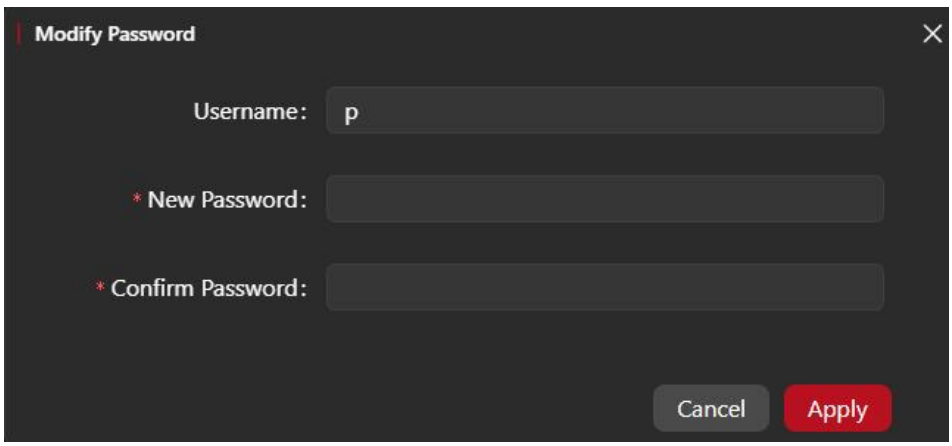
4.11. Registered User

Click the icon 

in the upper right corner to do some modifications.

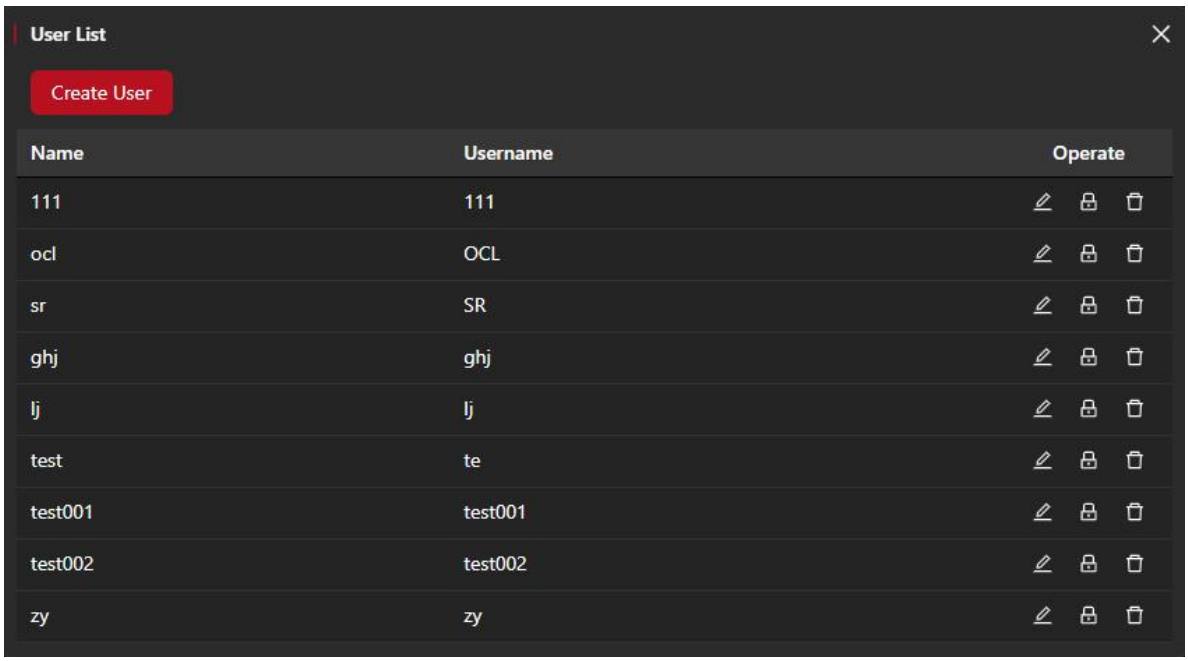
Modify nickname: By clicking modify nickname, users can change their nickname. Nicknames are used when granting access in device folders for easy identification and authorization.

Change password: By clicking change password, users can change their login password. Regularly updating your password is an important measure 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 Max user accounts and permissions.



User Permissions: The user accounts created by administrator have certain permissions. These user accounts need to be assigned devices and stream matrix folders that can be viewed and managed by the administrator. Created users cannot create new devices or stream matrix folders on their own, or access network and system functions directly.

This permission management mechanism ensures the security and controllability of device management. Administrators can assign appropriate access rights to users based on their rules and responsibilities. At the same time, this also helps prevent unauthorized operations and ensures that only authorized users can access the specific devices and stream matrix folders.

Log out: Ensure that you log out securely after completing the 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 Max.

5.Support

If you need more support, please contact the manufacture.

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Telephone: 86-0755-26888895

Email: support@cndlive.com