快速入门手册

RE-3 双接口视频编码卡板

3G-SDI + 4K HDMI H.265 视频编码卡板

(V1.4)

RE-3 作为基于 E3 编码器的性能调整设计，以卡板的形式呈现，专为与 Cradle 系列机框相匹配，旨在满足用户对于专业安装的需求。它提供了更便捷、灵活的安装方案，并通过性能优化提供了卓越的视频质量和稳定性。无论是在专业广播、视频会议还是其他领域，RE-3 都能为用户提供出色的视频编码体验。

通过本手册，您可以了解到

- ■ 装箱清单
- ■ 设备接口和功能
- ■ 设备连接、登录和基本应用
- ■ 设备升级和恢复出厂设置

在您正式使用本产品之前，建议您仔细阅读本产品使用说明书。为确保您的人身安全及避免设备受到物理或电气损伤，请严格遵照本说明书的指导或在专业人员指导下进行安装使用本产品。不正确的电气连接或物理安装方式或将有可能造成设备的永久损伤，甚至威胁人身安全。由于产品不断升级更新，您所购买的产品可能与本册的内容有所变更，请以包装箱内实际产品为准。

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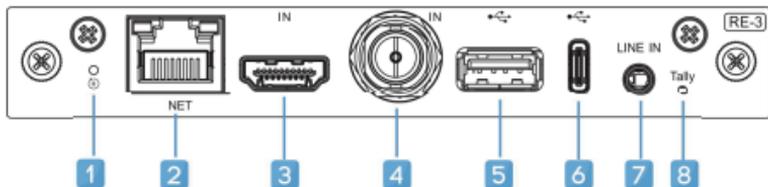
1 设备清单

(1) 主机×1

(2) 合格证/保修卡×1

(3) 《快速入门》手册×1

2 设备接口

(1) 复位按钮

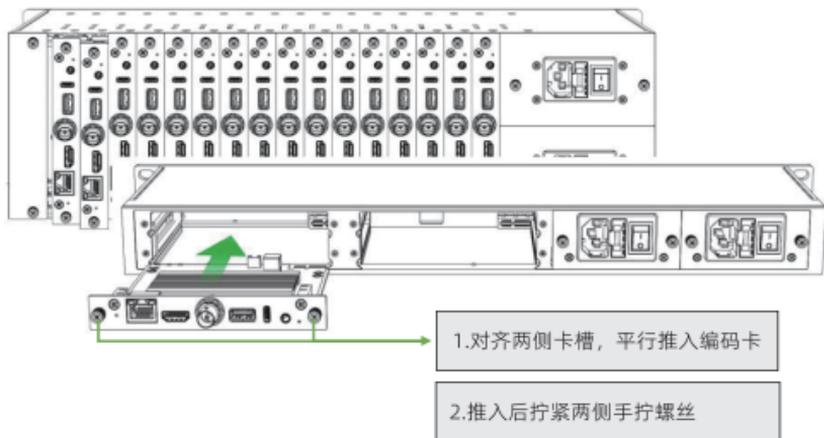(2) 1000M 自适应以太网口

(3) HDMI 输入

(4) 3G-SDI 输入

(5) USB TYPE-A 接口

(6) USB TYPE-C 接口

(7) 3.5mm LINE IN

(8) Tally 信号灯

3 RE-3 板卡安装

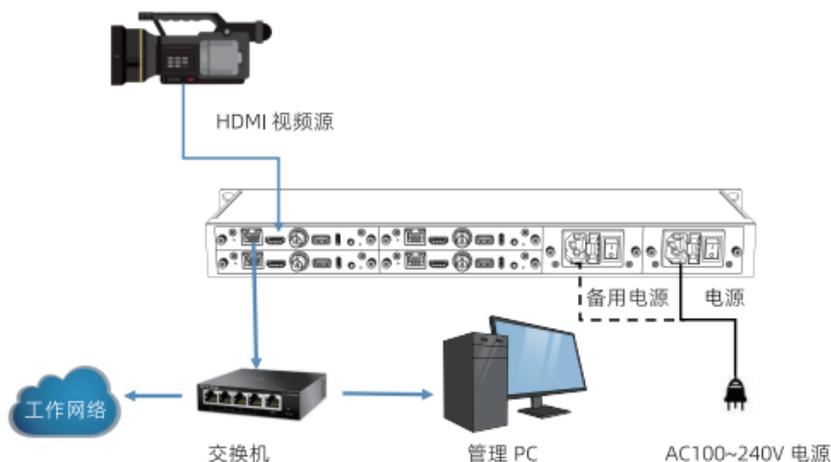将卡板组件对齐卡槽，平行推入后拧紧两侧 2 颗手拧螺丝，组件安装完成。
拆卸时，将 2 颗手拧螺丝松开，平行抽出卡板组件。

1.对齐两侧卡槽，平行推入编码卡

2.推入后拧紧两侧手拧螺丝

通过将 RE-3 设计成卡板形式，您可以轻松安装和调整它与 Cradle 系列机框的配合。这种设计考虑到了用户的专业需求，能够更加灵活地部署和管理设备。同时，这种一体化设计还可以减少设备之间的连接和布线，简化整体系统的配置和维护。

获取更多 1U 和 3U 机架式安装使用帮助，请访问 Kiloview 官方网站地址

https://www.kiloview.com/cn/support/docs/rack-mount/3u-frame/

4 应用场景

HDMI 视频源

备用电源 电源

工作网络

交换机　　　管理 PC　　AC100~240V 电源
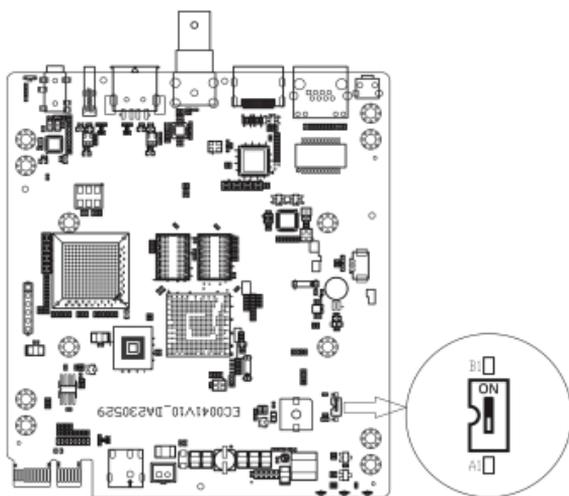

⚠️ **注意**

● 请使用设备标配电源适配器给设备供电，其它不合格电源可能会损坏设备；

● 设备支持 HDMI 和 SDI 同时输入进行单独或混合编码，此处以单独输入 HDMI 信号为例；

5 发现设备

5.1 使用默认地址

若您使用的网络不具备 DHCP 功能， 您可以通过手动打开卡板上的拨码开关来获取默认 IP 地址。

在卡板左上部分贴有黄色保护膜的拨码开关， 将黄色保护膜揭开之后会看到一个拨码开关，将开关拨动到 ON，可启用卡板的默认 IP 地址 192.168.1.168。

完成设置后，将设备插入机框通电。等设备正常启动后，在浏览器中打开 http://192.168.1.168/ 访问设备的 Web 管理界面。

> ⚠️ **注意**
> - 缺省登录设备的用户名是 admin，密码是 admin。
> - 为保证信息安全，建议您初次登录后、立即修改密码。
> - 考虑浏览器的兼容性问题，建议使用 Chrome 或 Edge。

6 使用设备进行工作

6.1 视频接入检查

视频源接入后，RE-3 您通过浏览器实时预览视频。视频预览窗口默认为"图片"模式，画面每 3 秒刷新一帧；如果维护电脑的 CPU 性能较强，可以点击按钮切换为"视频"模式，您将看到流畅的实时视频。

6.2 流服务

登录 RE-3 的 web 管理界面之后，可以看到设备功能主要分为三个模块：HDMI 编码、SDI 编码、Mix 混合编码，RE-3 还支持同时进行 SDI 编码和 HDMI 编码。点击 WEB 最左侧的导航栏 HDMI/SDI/Mix 即可实现不同视频源编码参数的设定。

HDMI 编码模块与 SDI 编码模块功能一致，默认选择 HDMI 输入进行编码，以 HDMI 进行编码为例：

连接 HDMI 输入之后可在 WEB 设置分辨率、帧率、码流、以及音频等参数，设置完成如下图所示打开右侧的开关输出编码信号。

如需要切换 HDMI/SDI 视频源，只需要点击 WEB 最左侧的导航栏。单击 SDI 选择 SDI 视频源编码，单击 Mix 进入混合编码模式。

在 RE-3 web 管理界面中，流服务栏的右侧点击"+添加"，添加一个流服务。这里以 RTSP 协议为例：

类型选"RTSP"，填写名称、服务端口和会话 ID，其他参数可保持默认配置，点击"确定"保存配置。

保存配置后，添加的 RTSP 服务将展示在流服务下方，默认为关闭状态，点击开关开启流服务，对应的地址栏将生成 RTSP 流地址。
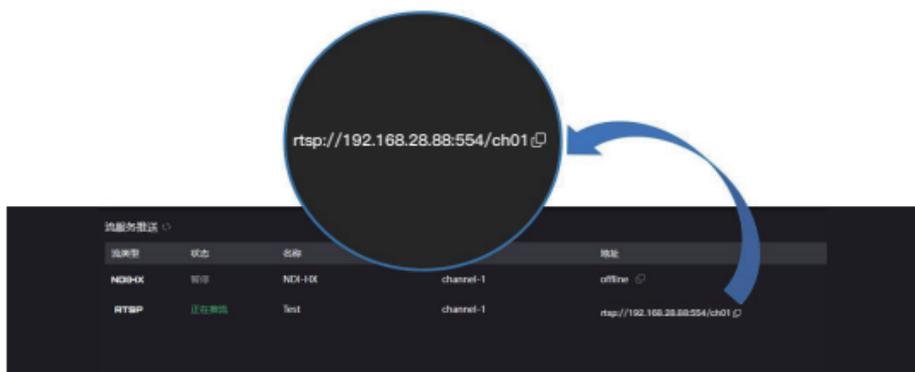
点击流地址后面的 图标，复制这个地址，可以通过 VLC 拉流检查编码后的视频流。
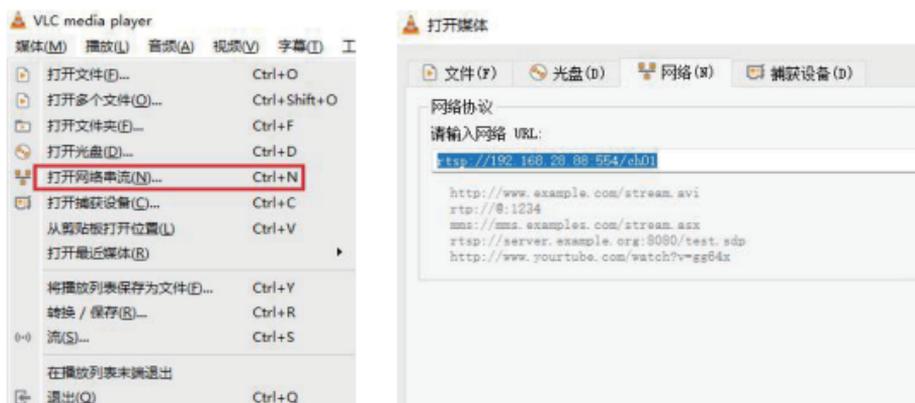
打开 VLC 的"媒体"—"打开网络串流"，在网络中输入 RTSP 的 URL 地址，按右下角的[播放]按钮开始拉流播放。

6.3 Mix 混合编码功能

RE-3 支持 3G-SDI 和 HDMI 双接口编码，也支持 Mix 混合编码功能。

进入 Web 页面后， 点击 Mix 进入混合编码模块，可将 HDMI 和 SDI 输入的视频进行画中画合成，然后进行编码输出，实现多画面显示的效果。点击 "视频源切换" 可以进行画面的主副切换。

说明
- 混合编码模式下， HDMI 最高分辨率只支持 1080P60， 只有在单接口模式下才能支持 4KP30。

7 固件升级

7.1 下载升级固件

Kiloview 将持续为 RE-3 设备提供更新功能、修复 Bug 的固件。访问：
https://www.kiloview.com/cn/support/download/
在筛选列表中，选择 **"机架式编解码器" > "RE-3"**，并在 **"程序"** 标签中找到最新的固件下载。

7.2 升级设备固件

登录 RE-3 管理后台，点击 "设置" > "系统设置" > "固件升级"，进入固件升级页面。检查下载的最新软件版本是否高于当前软件版本，如果版本一致或更低，则无需升级。若要升级，"选择文件"上传从官网下载的固件文件，然后点击 "固件升级"。
上传固件成功后，系统将提示重启，点击确认后设备将重新启动，请耐心等待，设备重启后，刷新 WEB 管理界面，可重新进入后台。

注意
- 升级过程中，请勿断电，否则可能导致设备无法启动。
- 一般来说，升级的过程大约需要 3-5 分钟。如果跟过 5 分钟升级仍未提示完成，请尝试刷新网页；如果仍然无法正常访问，请尝试联系技术支持。

8 恢复出厂设置

如因设备参数配置不当导致设备不能正常工作，或者当忘记网络 IP 配置并且无法搜索查找到设备时，可以尝试恢复设备的出厂设置。恢复出厂设置有两种方法：

方法一： 当设备能正常登录 Web 管理页面时，通过 Web 界面的"设置">"系统设置" > "恢复出厂设置"。

方法二： 当设备不能正常登录 Web 管理页面时，按住设备底部的复位按钮，持续 5 秒以上。

⚠️ **注意：恢复出厂设置后，以下参数将会改变至默认值**
- 登录用户 admin 的密码将恢复为 admin;
- 您的设备将恢复至默认使用的 DHCP 动态获取 IP 地址的模式；若拨码开关已调至 ON，则恢复至默认 IP 地址 192.168.1.168;
- 所有视频编码/解码参数、音频参数等将恢复到出厂的默认值。

9 其它

如设备长期不使用，为延长设备使用寿命，请拔掉电源，妥善保管设备。

Quick Start Guide

RE-3 Dual-Channel Video Encoding Card

3G-SDI + 4K HDMI H.265 video encoding card

（V1.4）

The RE-3, designed as a performance-tuned configuration based on the E3 encoder, takes on a card form factor and is specifically designed to match the Cradle series chassis. It aims to meet the demands of users seeking professional installations. The RE-3 provides a more convenient and flexible installation solution and offers outstanding video quality and stability through performance optimization. Whether in professional broadcasting, video conferencing, or other fields, the RE-3 delivers an exceptional video encoding experience to users.

Contents

- Packing List
- Device interfaces and functions
- Device connection, login and use guideDevice upgrade and restore to factory settings

Before using this product, it is recommended that you read the guide carefully. To ensure your personal safety and avoid physical or electrical damage to the device, please strictly follow the instructions of this guide to install and use it under the guidance of professionals. Incorrect electrical connections or physical installation may cause permanent damage to the device and even threaten personal safety.

Due to continuous product upgrades and updates, the product you purchased may have changes from the contents of this manual. Please refer to the actual product in the packaging box.
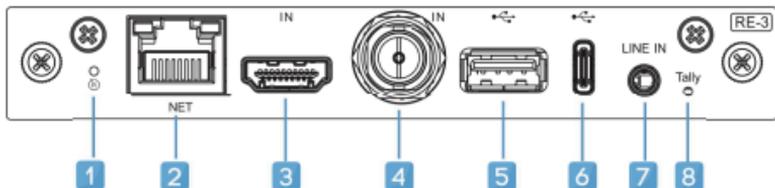
1 Packing List

(1) Device ×1	(2) Warranty Card ×1	(3) Quick Start Guide ×1

2 Device Interface

(1) Reset

(2) 1000M Ethernet

(3) HDMI input

(4) 3G-SDI input

(5) USB TYPE-A

(6) USB TYPE-C

(7) 3.5mm Line in

(8) Tally Singal Light

3 RE-3 Card Installation

To align the cardboard component with the left and right card slots, push it in parallel and then tighten the two hand-tightened screws on the left and right sides. The component is now installed. When disassembling, loosen the two hand-tightened screws on the left and right sides, and then pull out the cardboard component in parallel.

1. Align and push the encoding card in

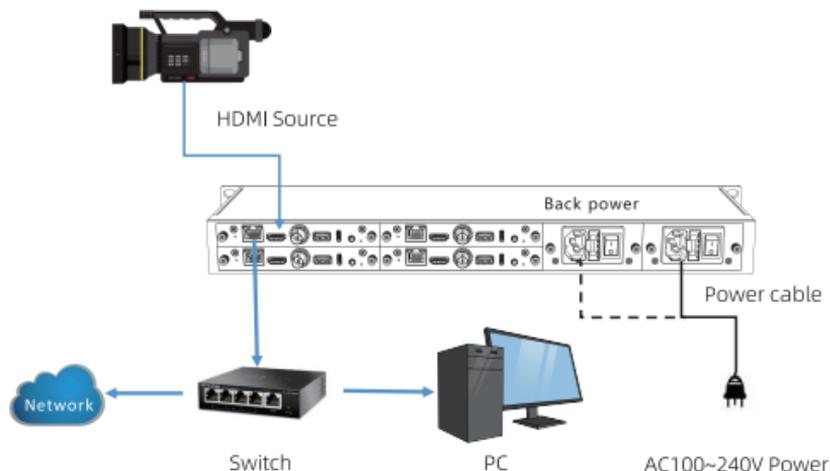2. Tighten the left and right screws
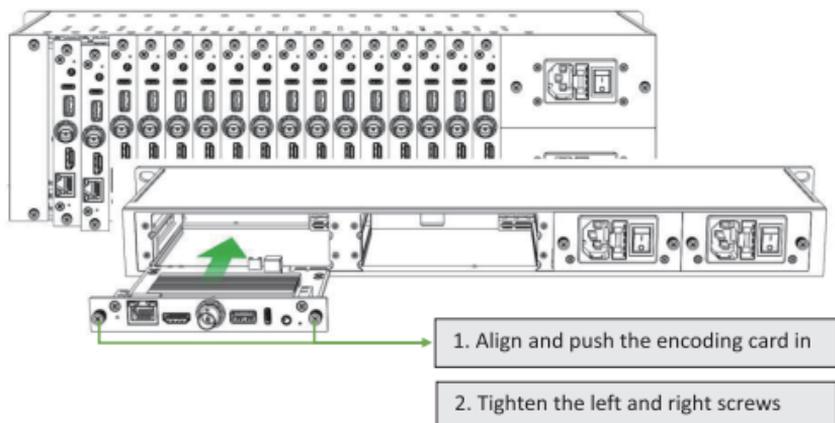
By designing the RE-3 in a card form factor, you can easily install and adjust its integration with the Cradle series chassis. This design takes into account users' professional needs, allowing for a more flexible deployment and management of the equipment. Moreover, this integrated design can reduce the need for extensive device connections and wiring, simplifying the overall system configuration and maintenance.

For more help on installation and use, please visit Kiloview official website:
https://www.kiloview.com/en/support/docs/3u/ru-01/

4 Application

HDMI Source

Back power

Power cable

Network

Switch   PC   AC100~240V Power

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Note

- Please use the device's included power adapter to provide power to the device. Other unqualified power sources may damage the equipment.
- The device supports simultaneous HDMI and SDI inputs for separate or mixed encoding. Here, we will take the example of inputting a single HDMI signal separately.

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5 Device Discovery

5.1 Use the default address

If your network doesn't support DHCP, you can manually obtain the default IP address by toggling the dip switch on the cardboard.

There is a dip switch located on the upper left part of the cardboard under a yellow protective film. Peel off the yellow protective film to reveal a white dip switch. Move the switch to the ON position to obtain the card board's default IP address, which is 192.168.1.168.
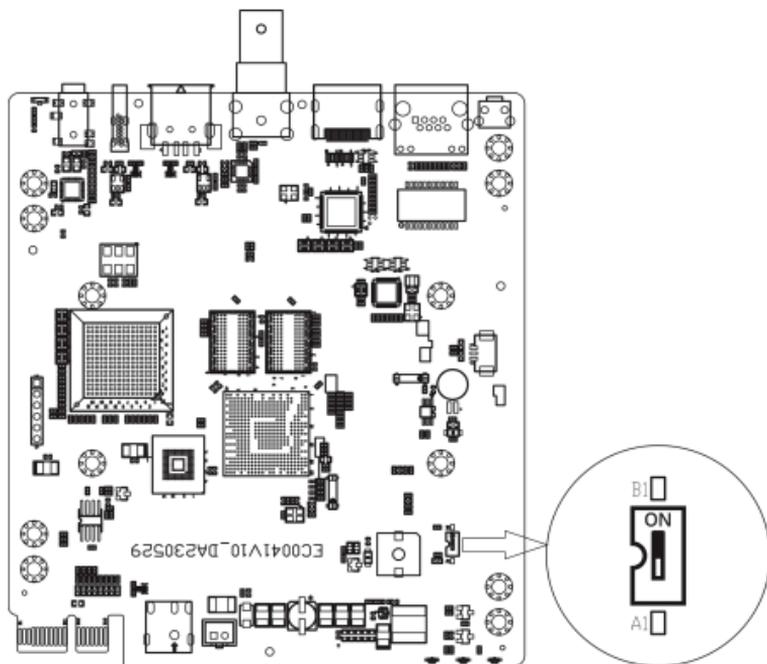
Open a web browser and enter in the address bar: http://192.168.1.168/ login to the web UI.

⚠️ **Note**
- The user's name and password are admin by default.
- To ensure information security, it is recommended to change your password immediately after logging in for the first time.
- Due to the browser compatibility issues, it is recommended to use Chrome or Edge.

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6 Start a live streaming

6.1 Video source checking

After connecting the video source, you can use a browser to preview the video in real-time on the RE-3. The video preview window is set to "Picture" mode by default, the screen refreshes one frame every 3 seconds. If your computer's CPU performance is high, you can click the button to switch to "Video" mode, and you will experience smooth real-time video.
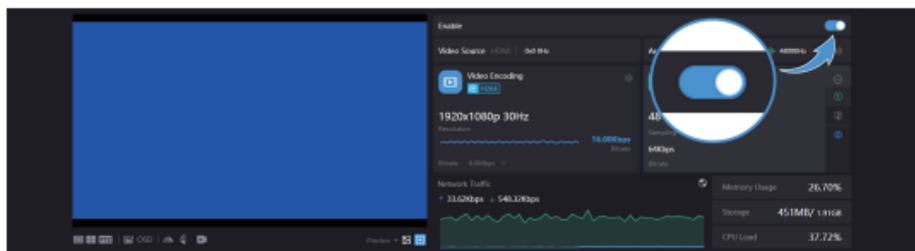

> ⚠️ **Note**
> If the video source connected, there is still a blue screen or video displayed abnormally. Please check the input video source, the video resolution format or cables, etc.

6.2 Stream service

After logging into the RE-3's web page, you can see that the device mainly includes three functions: HDMI Encoding, SDI Encoding, and Mix Encoding. RE-3 also supports simultaneous SDI and HDMI encoding. Clicking on the leftmost navigation bar "HDMI/SDI/Mix" allows you to configure different video source encoding parameters.

The HDMI Encoding module has the same functionality as the SDI Encoding module. By default, HDMI input is selected for encoding. Let's take HDMI encoding as an example: After connecting the HDMI input, you can set parameters such as resolution, frame rate, stream, and audio on

the web UI. Once the settings are complete, click on the encoding output on the right side of the web page, as shown in the image below:


If you need to switch between HDMI and SDI video sources, you just need to click on the leftmost navigation bar on the web page. Clicking on "SDI" selects SDI video source encoding and clicking on "Mix" enters the mixed encoding mode.

Note:
- The HDMI interface supports input resolutions of:
  3840x2160p30fps
  1920x1080p60fps
  1920x1080i50/59.94/60fps
  And downwards compatibility.
- The SDI interface supports input resolutions of:
  1920x1080p60fps
  1920x1080i50/59.94/60fps
  1280x720p25/29.97/30/50/59.94/60fps
  And downwards compatibility.

On the WEB UI, click"Add"at the right side to add stream service. Here let's take add RTSP as an example:
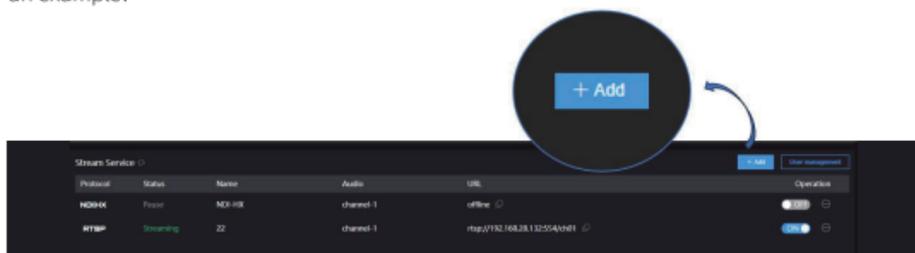
Select "RTSP" as the type, fill in the name, service port, and session ID. You can keep the other parameters at their default configurations. Click "OK" to save the settings.

After saving configurations, it will be displayed under the stream service, which is closed by default. Click on to start the stream service, it will come up a RTSP stream address in the corresponding address.
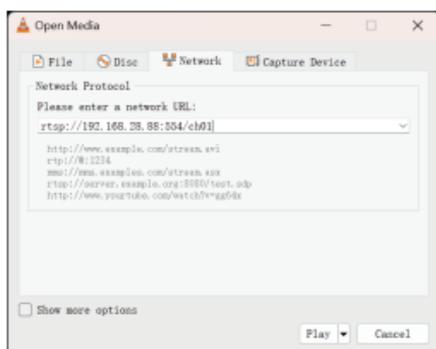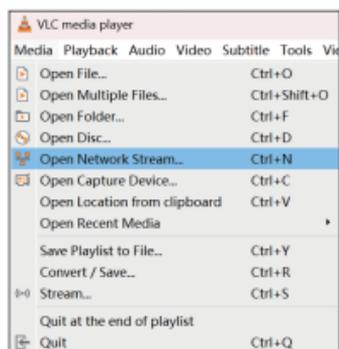

Click 🗗 to copy this address, you can check the encoded video stream by pulling the stream through VLC.

Click "Media " -> "Open Network Stream" Enter the RTSP URL address in the network field and click the [Play] button at the bottom right corner to start streaming playback.

6.3 Mix encoding

RE-3 supports both 3G-SDI and HDMI encoding, as well as mix encoding.
Enter the Web UI, click Mix to enter the mix encoding mode, which can combine HDMI and SDI input video into picture-in-picture, and then encode and output to achieve the effect of multi view display. Click "Video Sources Switching" to switch the images between the inputs. Click "Layout settings", you can adjust the layout of the mixed encoding.

Note
- In the Mixing Encoding mode, the HDMI interface supports a maximum resolution of 1080P60. The capability to support 4KP30 is available only when operating in the single-interface mode.

7 Firmware update

7.1 Download firmware

Kiloview will provide the firmware of updating functions for RE-3, please visit.

https://www.kiloview.com/en/support/download/

Select "Rackmount Codec" > "RE-3", find and download the latest firmware.

7.2 Upgrade device firmware

Login to the web page of RE-3, click "Settings">" System setting" >"Firmware Upgrade" to check if there is any latest firmware available to download. If yes, select the downloaded firmware and click "Firmware update".

After uploading the firmware successfully, you needs to reboot the device. After clicking "ok", the device will restart, please be patient. After rebooting the device, refresh the WEB management interface to access the backend again.
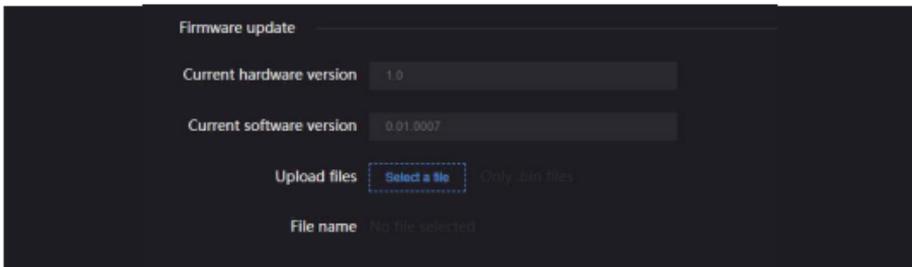
8 Restore to factory settings

If the device cannot work normally after changing the parameters or if you forget the internet IP configuration and couldn't search and find the device, please restore factory settings.

Two methods for restoring factory settings:

1) If you can login to web page, then via the web page, click "Settings>System settings>Restore factory settings".

2) If you can't login to web page, press the RESET button in the front for 5 seconds.

⚠ **Note: After restoring factory setting, below parameters will be turned to default value:**

- Login username and password will be "admin".
- Your device will be restored to obtain a DHCP-assigned IP address by default and the failover address 192.168.1.168 will be bound to the device.
- All encoding parameters of video and audio will be restored to default value.

9 Others

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