

Hirender S3 Introduction



Media Server Software for Big Events
With Timeline and Window Dual Control Mode

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Introduction



Hirender S3 is a professional media server for the exhibition and staging industry.

With " timeline " and " window " modes.

Hirender S3 can easily manage the program's playback process and achieve gorgeous visual effects and flexible creative display with light control.

A single server can support up to 6 channels of 4Kx2K ultra HD display. At the same time, infinite cascade and synchronous output between servers can meet the diverse needs of super-high-resolution LED splicing, projection fusion, creative display and so on.

Hirender S3 is widely used for conferences, performances, and major events.

Application Scenarios



Major Events



Stage Performance



Night Tour



The Exhibition Hall



Projection Fusion



Urban Illumination

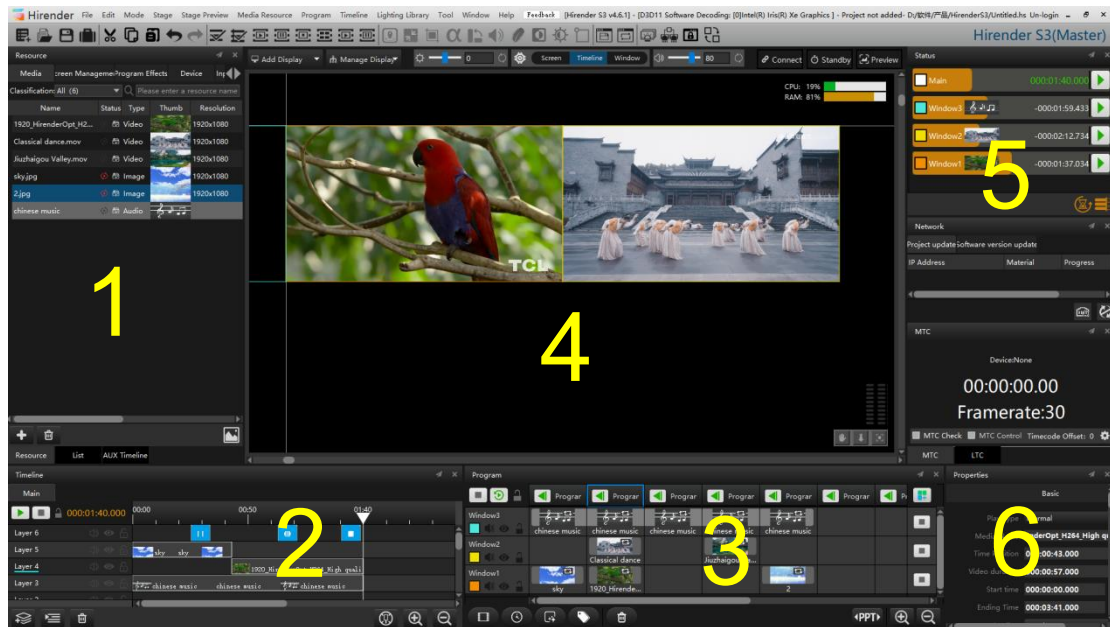


Studio and Television



Conference

Software Interface



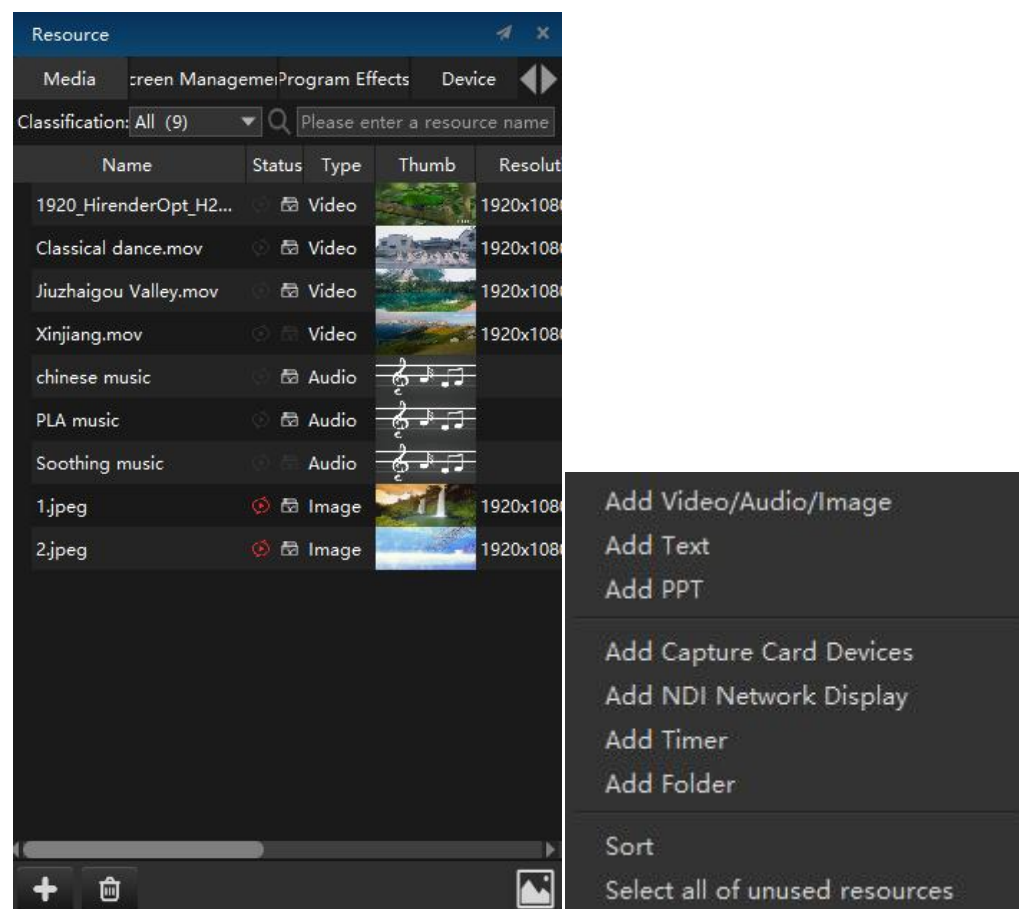
1. Resource Management
2. Timeline
3. Program Window
4. Stage Display
5. Playback Status
6. Property Editor

Resource Management

Resource management of Hirender S3 includes a material library, screen management, program special effects, equipment management, input control, output control, and one-click optimization of pictures and other functions. You can add videos, pictures, PPT, capture cards, NDI network screen, subtitles, etc. in the material library, and realize the operation of deleting, adding, sorting, and so on.

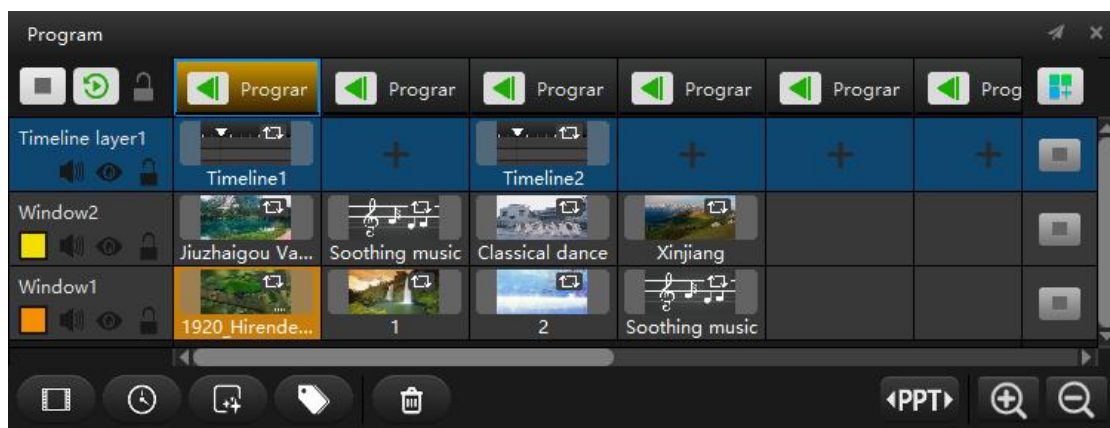
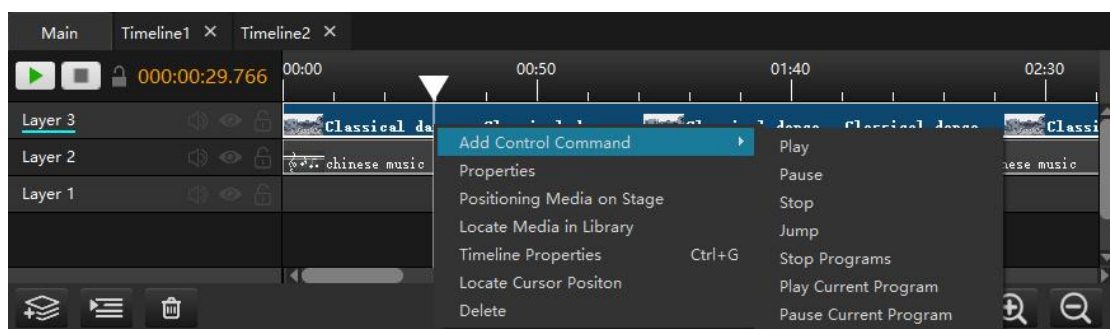
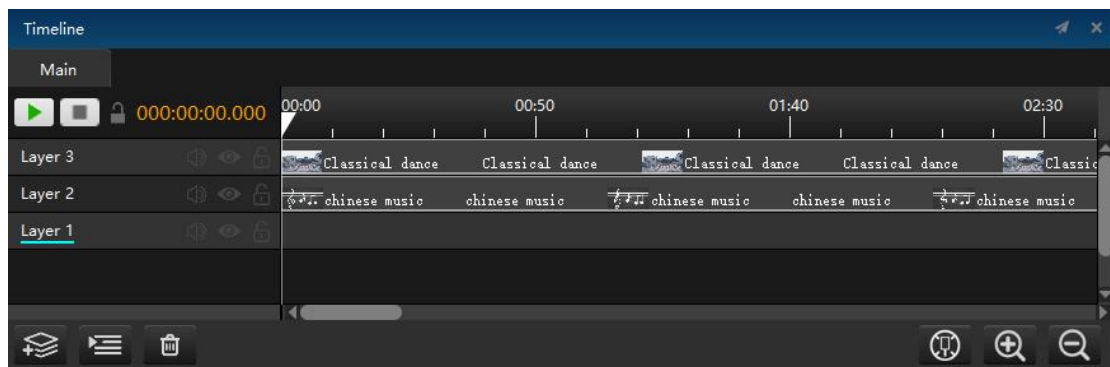
Screen Management You can view screen information and status. **Special effects** can increase the flexibility of the material. **Device management** You can view device status and CPU usage. **Input control** can edit general control and MIDI control, DMX512, and so on. The program list function makes it easy to browse programs quickly.

The optimization button in the lower right corner can realize the optimization of the picture. Program interludes can assist the use of timelines, facilitate the modification of on-the-spot programs, and also realize the signal switching of on-site shooting.



Timeline

Timeline is a nonlinear editing playback and control mode that can be accurate to a frame, which can insert media materials, control commands at precise time points, and can arrange complex and fine program flow.

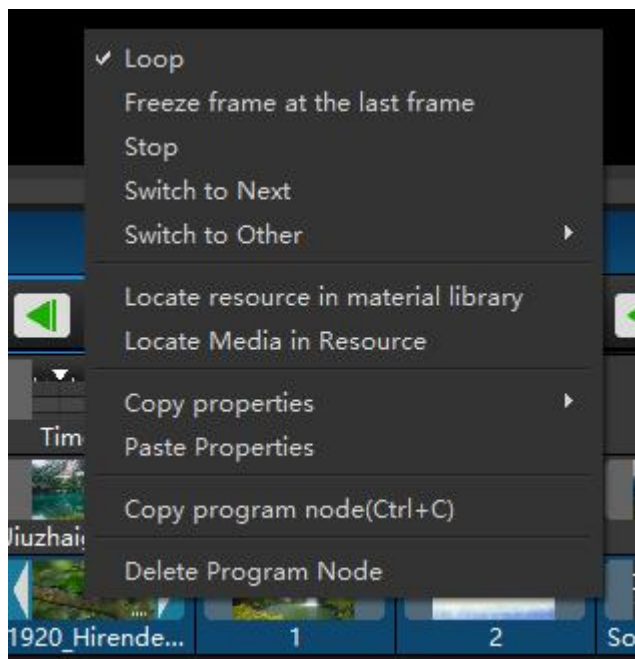
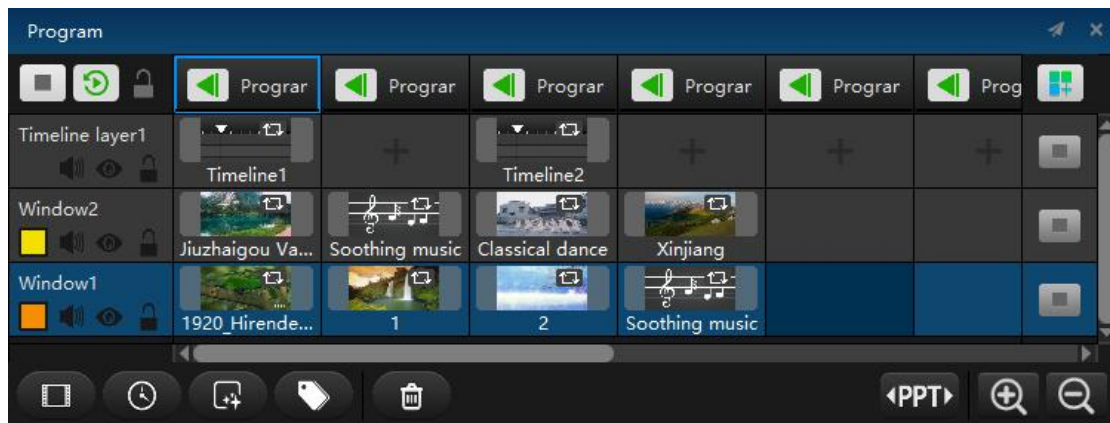


Program Window

By editing the program management window, corresponding programs can be generated, and then the program process can be switched so that the LED large screen displays different effects.

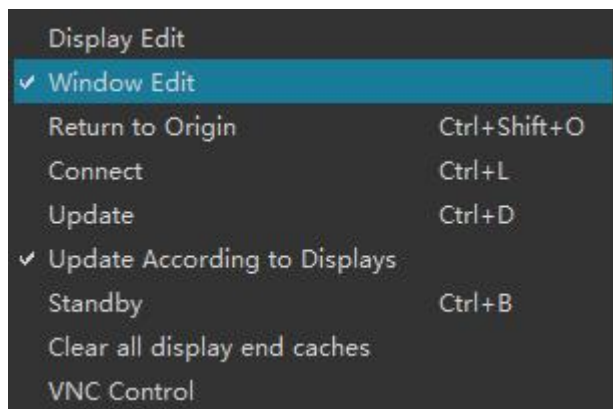
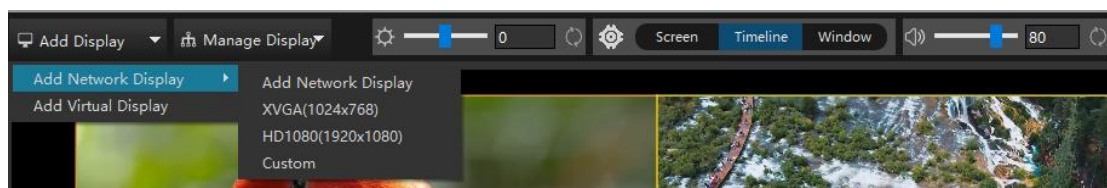
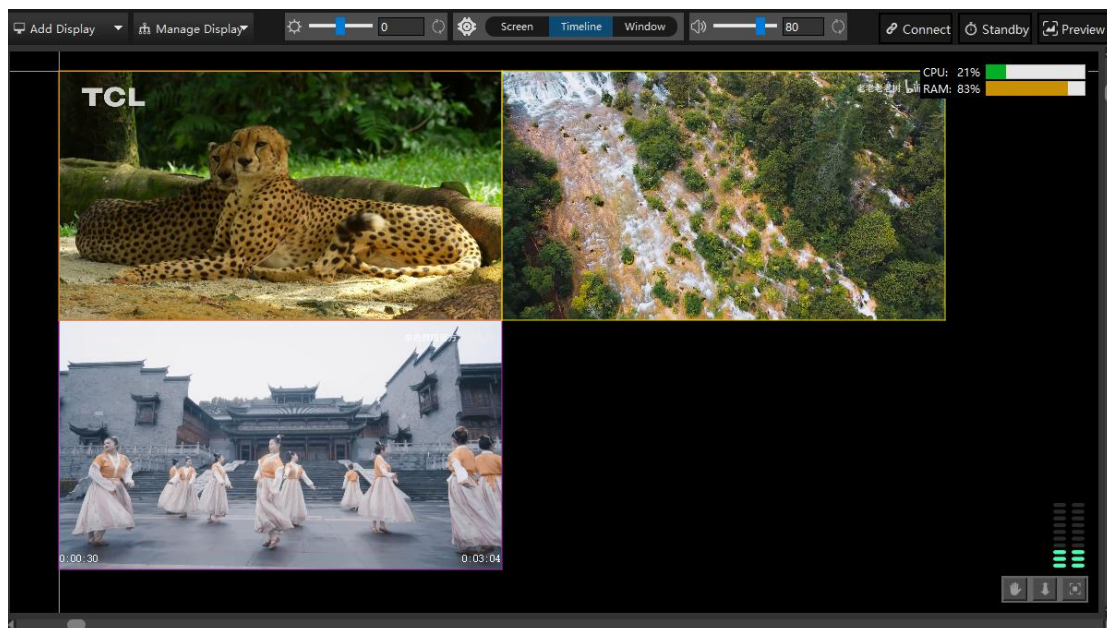
Program list and program layer can be added indefinitely: contents including video, pictures, subtitles, and audio can be played in the window, the special effects layer can add various special effects, and the process label layer can mark more processes to make the program more specific and detailed.

PPT page turning in the lower right corner can control PPT playing in any interface of the software, convenient and fast.



Stage Display

The stage edit area is the area where “screens” “Timeline” and “windows” are edited. You can add screens and turn the screen on or off. By operating in this area, the software can control the LED screen. The shape of the output screen can be changed by editing the position, cropping, and rotation of the windows. The standby button in the area can achieve a one-button black screen. The preview mode can edit and view other programs at any time without affecting the output program.

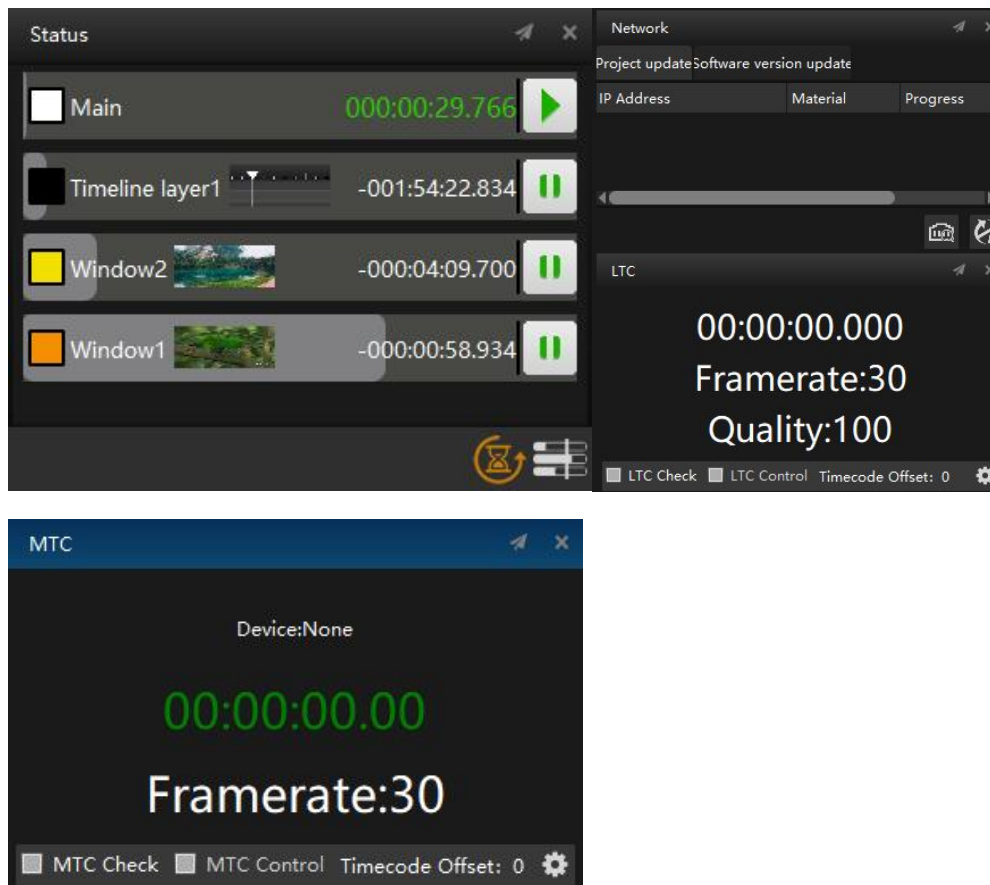


Playback Status

Playback status is to monitor the duration and status of the media, which can be divided into positive timing, countdown, and positive timing and countdown display at the same time. It can fast-forward the current playing media in the status bar, either individually or as a whole.

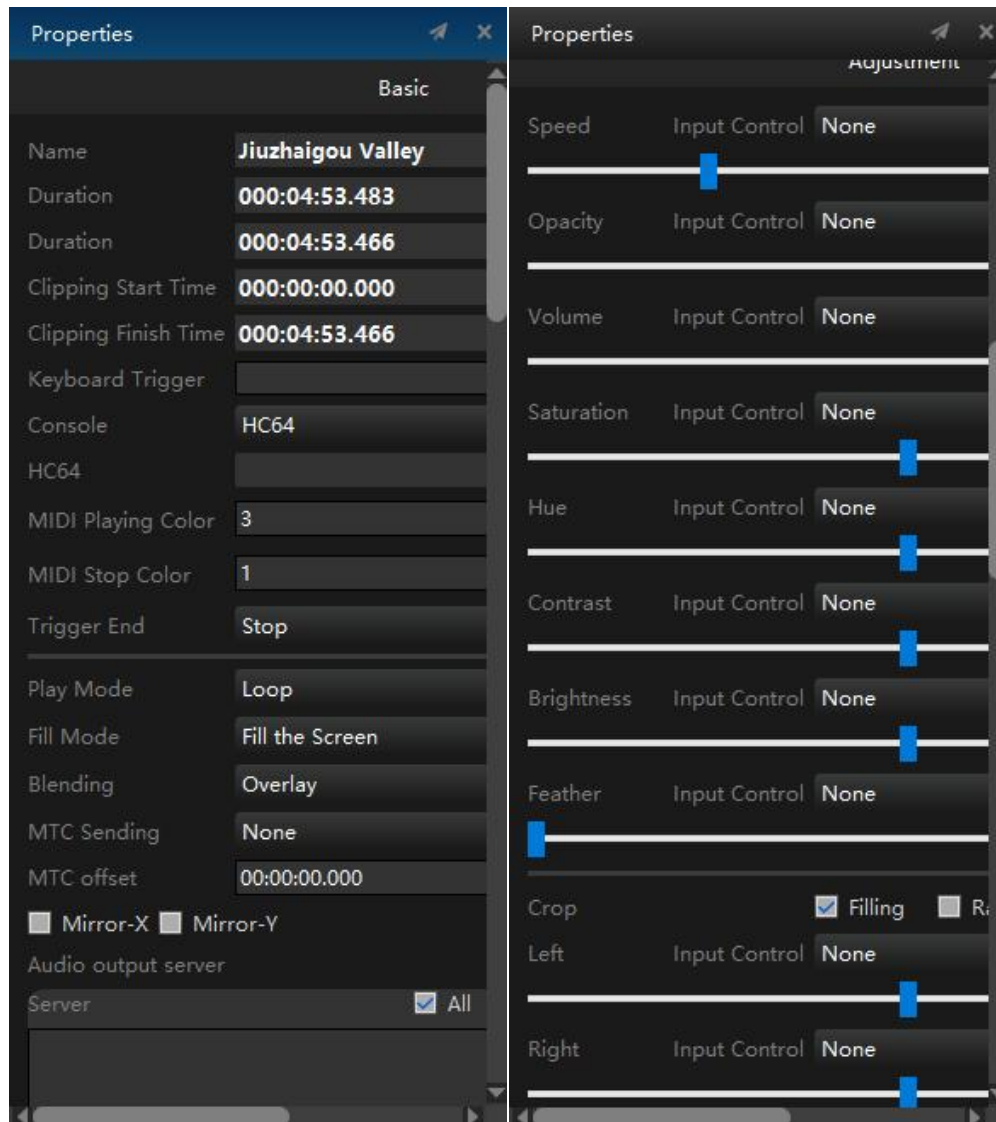
Network update: active-backup mode and online mode, which can display the update status and completion of medias between the active and standby end, control end, and display end.

Timecode management includes the LTC MTC receiving switch to view the progress of the current timecode and realize the synchronous all-signal playback.



Property Editor

The property area is the property display of media, window, screen and program. In addition, you can select the corresponding target and edit its attribute parameters.



Function Feature

1. Active-backup mode

The output of the backup server can be synchronized with that of the primary server. When the primary server is disconnected, the output screen can be automatically switched to the secondary server to ensure smooth project progress.

Supports one master, one standby, one controller, multiple display infinite cascade, strictly achieves frame synchronization (automatic synchronization of material/time code).

2. Frame synchronization

The synchronization card is used to realize the cascade frame synchronization between multiple servers and achieve the effect of point-to-point seamless stitching with super-large resolution.

3. All-signal control

Software with input, output control, command protocol, and other functional modules, through the network, serial port, DMX, MIDI, and other protocols to send and receive instructions, control projector, mechanical equipment, lamps, console, processor, and other equipment, to achieve synchronization control of sound, mechanical equipment, and visual effect.

To achieve human-machine interaction, immersive effects, real-time console editing programs, and other effects.

4. Supports HVC format

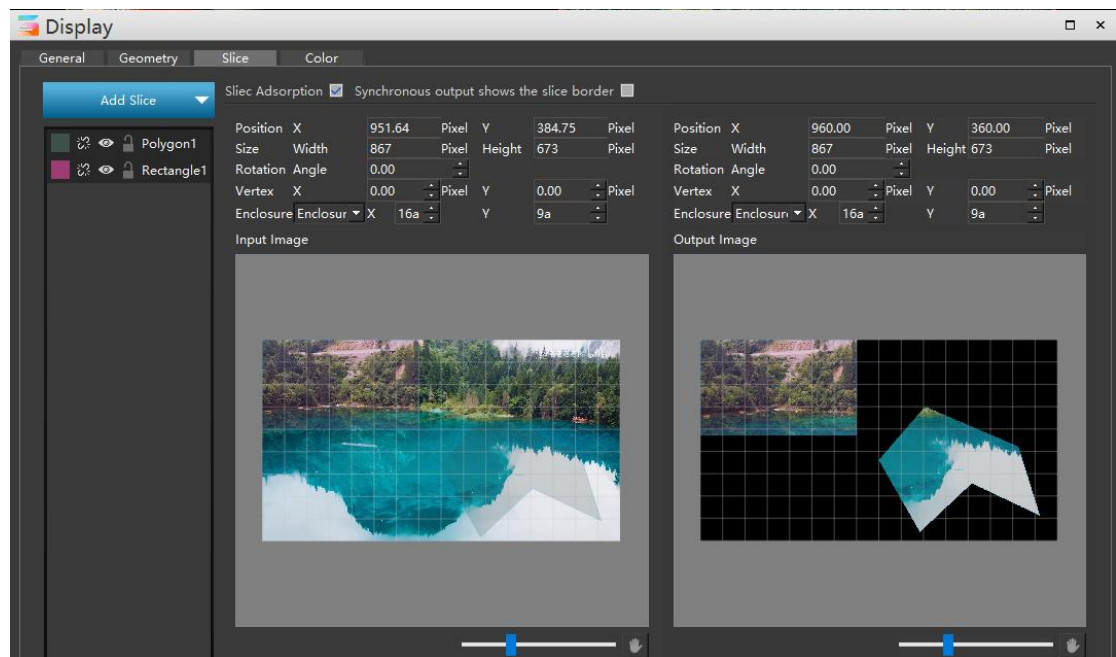
Supports HVC format video, the maximum resolution of a single video up to 16384*16384 supports lossless compressed videos.

5. Virtual screen

Virtual screens can be added for arbitrary interception of the picture, and the interception content can be edited for various zooming, rotating and deformation effects, and used as media to achieve a variety of requirements such as camera splicing, close-up, live interception, and special-shaped screen playback.

6. Slice function

We can intercept and edit the picture of the screen by slice function. The slice can be created according to the actual cabinet size of the screen so that the effect editing of the special-shaped screen becomes simple and convenient.



7. Global brightness adjustment

The screen brightness can be adjusted to improve the program effect when the scene environment brightness is low.

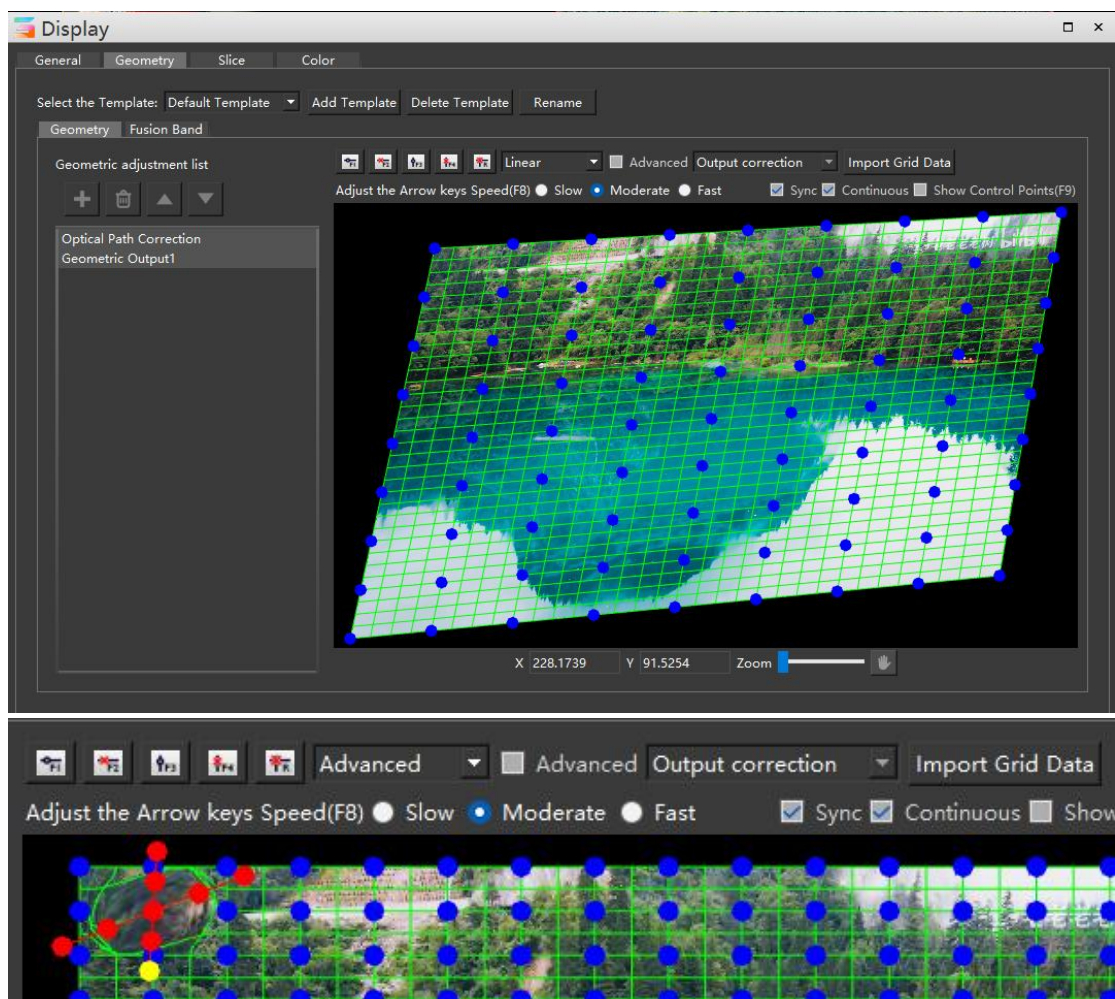
8. Supports external network control

Support network protocol: TCP/IP, UDP/IP, Artnet network protocol, realize the remote control, or control program switch and effect by the other console.

9. Projection fusion / 3D mapping

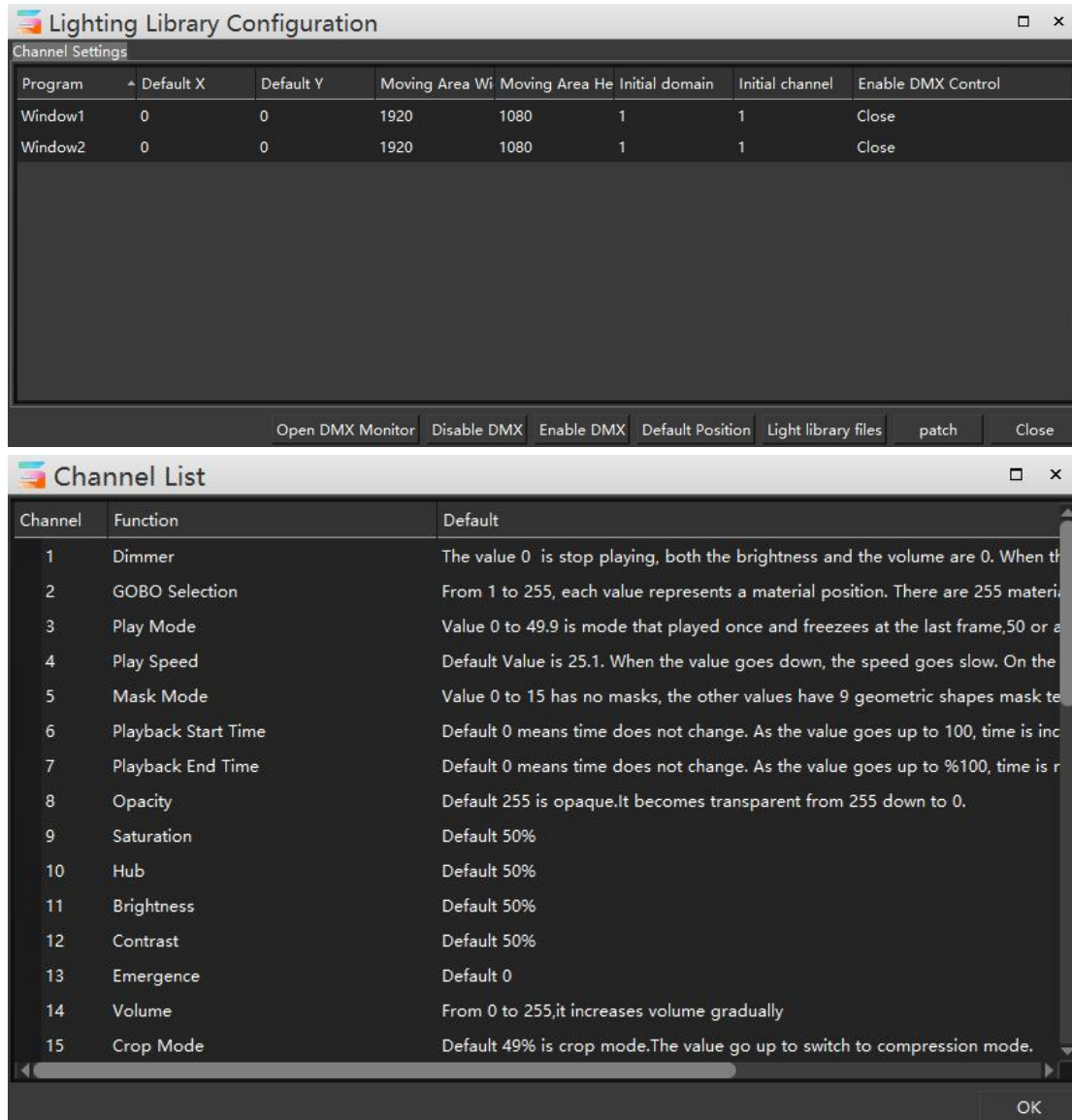
Software with projection fusion function, to achieve multiple projection creative displays and giant screen displays.

Hirender S3 has an accurate projection mesh adjustment function, which can make the projection picture fit the projection surface and achieve an exquisite 3D Mapping effect. The software can quickly add the fusion belt, one key to add the direction of the fusion belt, polygon fusion belt, and ball screen angle fusion belt, which can achieve multiple projector fusion, overlay.



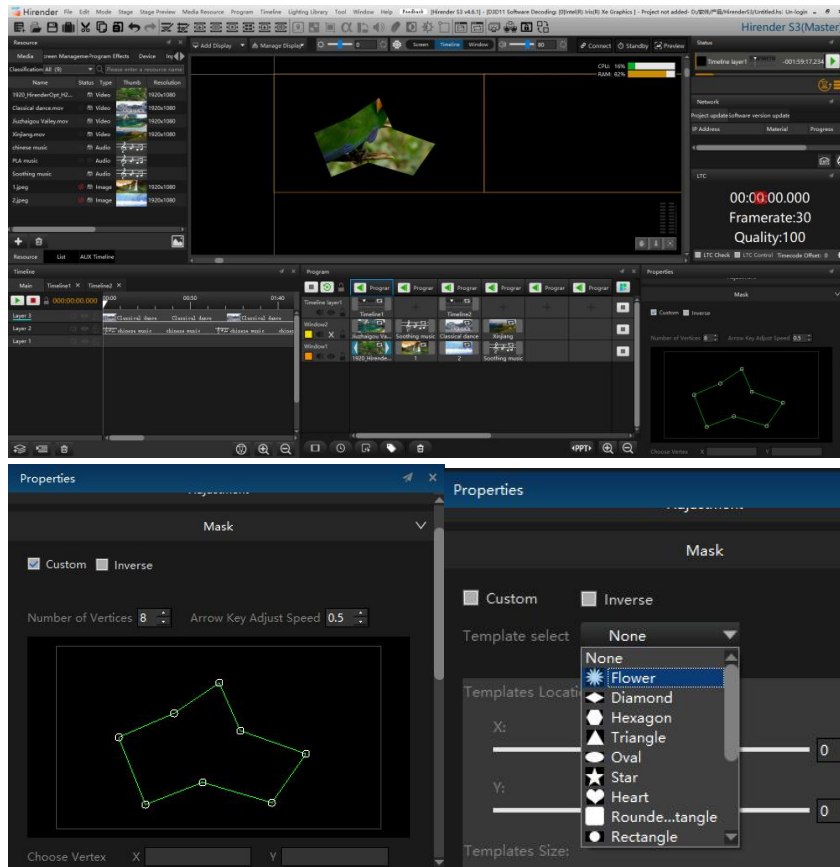
10. Light warehouse

Through the light warehouse, Hirender S3 can connect to the light control console, through which the position, size, volume, light, and shade of the program window and other 42 channel properties can be adjusted in real-time.



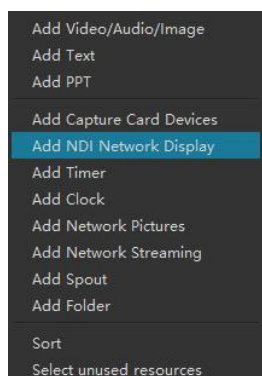
11. Mask template

Mask can be added, so that the picture presents special shapes, such as round, star, etc., while supporting custom mask template, can realize arbitrary hollow out, irregular display.



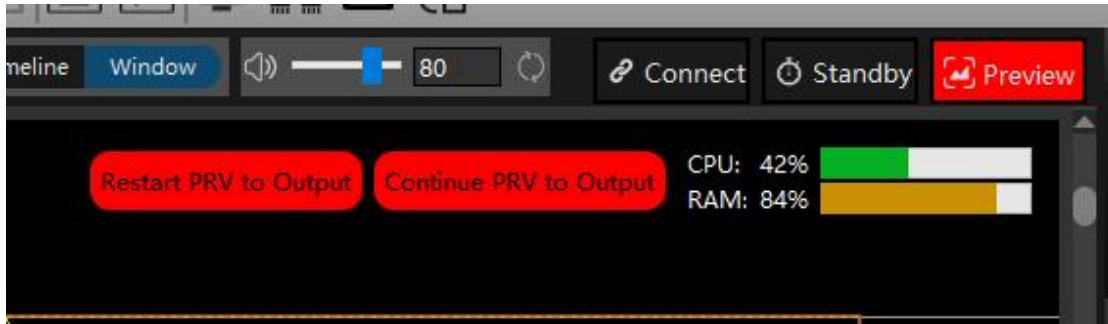
12. NDI acquisition

Support more flexible NDI network acquisition mode can achieve up to 10 channels of 1920x1080 network screen acquisition, extremely low latency, high-definition picture quality, and cross-Windows /macOS platform features make the screen capture more flexible.



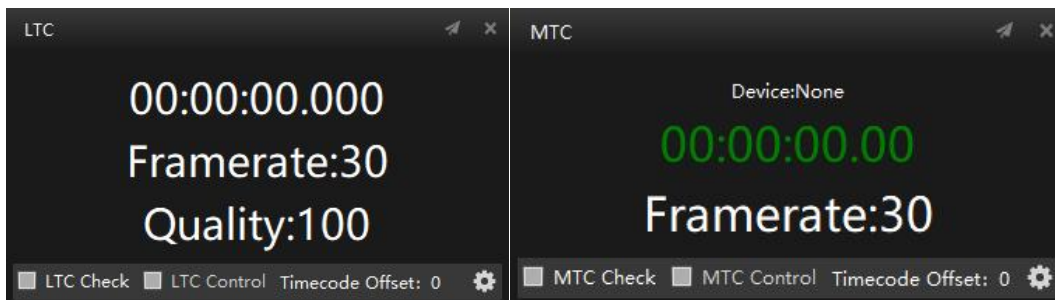
13. Preview mode

The preview mode can preview and edit other programs at any time without affecting the main output program, without affecting the current playback content.



14. Time-code synchronization

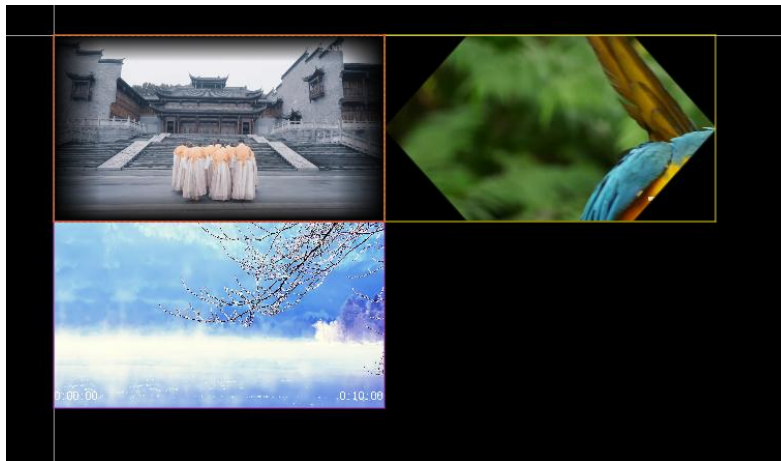
The software can generate, receive and send MTC time-code.
Can receive LTC time-code, and send LTC time-code by playing LTC files.
Can realize the synchronization between multiple devices.



15. Special effects

Hirender S3 supports program special effects such as running lights, color wheel, Gaussian blur, flash screen, and frame. Support chroma keying function; support a variety of preset shapes, and custom shape mask templates; support adjusting the RGB, brightness, contrast, saturation, hue, and other properties of the material; support adjusting material clipping, rotation, and other deformation effects.

On the timeline, you can also edit various effects over time. Rich and colorful special effects add interest to the playback control project and provide a good platform for creative display.



Resource		
Name	Thumb	Description
Frame		Frame Effect Type: Static Width:60; Color:#ffffff
Flicker		Flicker: Frequency10 Gradation:5 Color:#ffffff
Gaussian ...		Gaussian Blur:1
Color Wheel		Color Wheel Cycle:1
Marquee		Marquee: Width10 Speed:1 Length:1500 Direction:Clock...

Properties

Saturation Input Control None 0.00%

Hue Input Control None 0.00%

Contrast Input Control None 0.00%

Brightness Input Control None 0.00%

Feather Input Control None 0.00%

Crop Filling Ratio

Left Input Control None 0Pixel

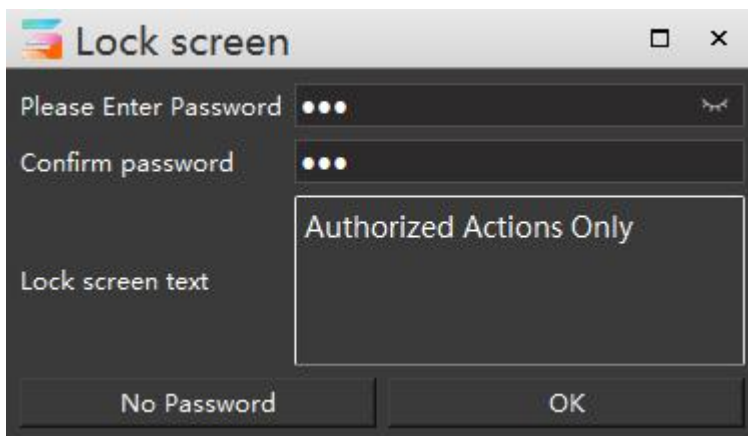
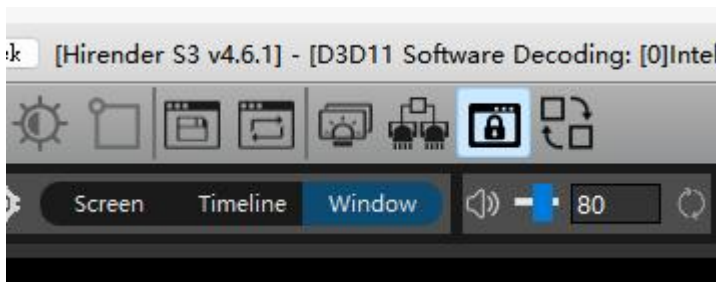
Right Input Control None 0Pixel

Top Input Control None 0Pixel

Bottom Input Control None 0Pixel

16. Lock screen function

Prevent the misoperation of non-relevant personnel, to ensure the normal progress of the project.



Remote Control



Hirender Touch

Hirender Touch is a control software designed by enlightV, especially for Hirender S3 based on the use of mobile devices. The operation of Hirender Touch is simple. S3 only needs to be connected under the same LAN through IP, and the program list can be obtained in real-time after the connection. You can remote control and monitoring of S3 program management with it.



Functional Features

After entering the IP connection, the program list is automatically obtained

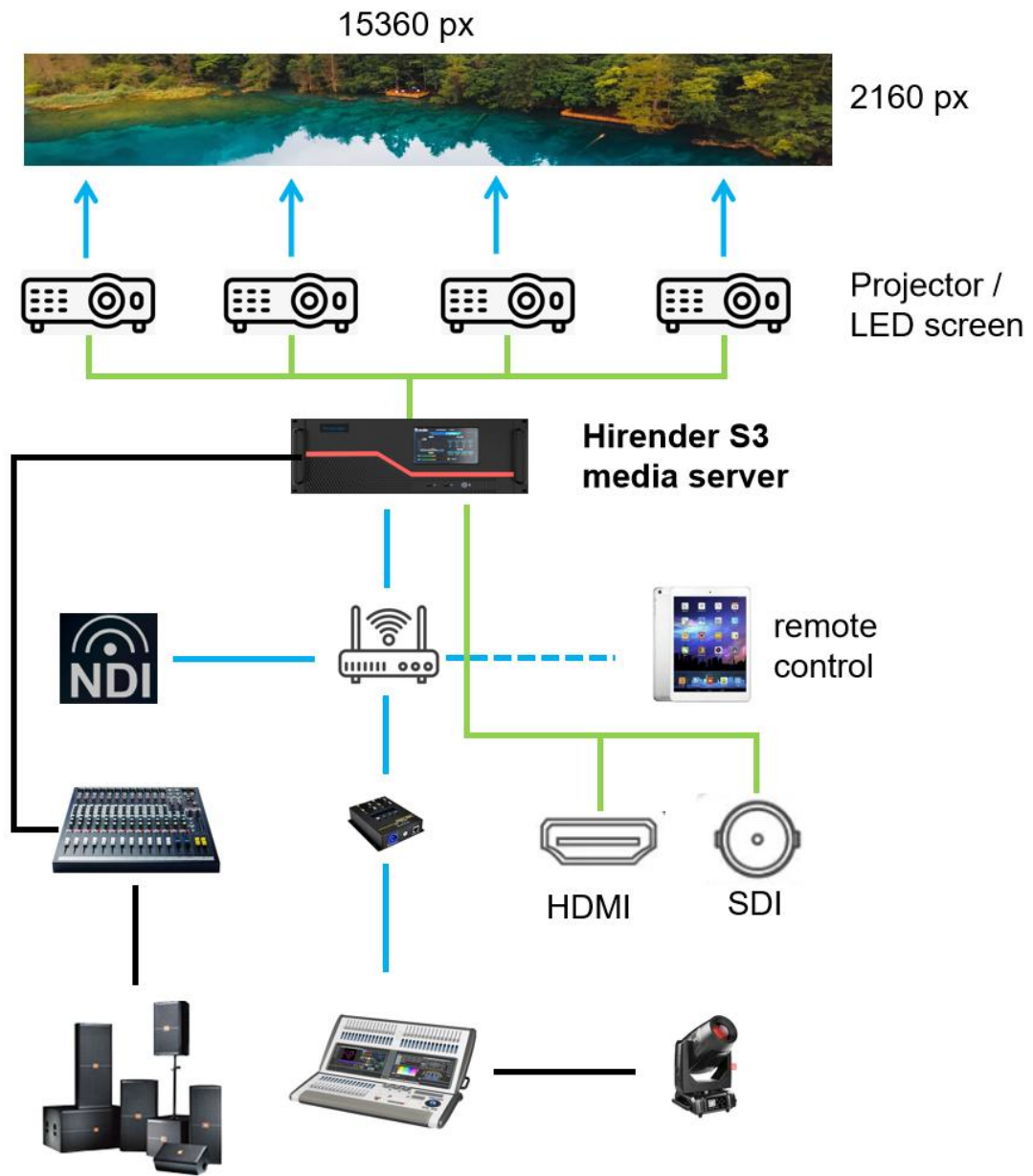
Display the stage picture of the current program in real time

Real-time feedback program playback status, playback progress

Common functions control global sound, global brightness, open display, connection, and standby.

Control program play, pause, switch

Topology



Digital Rights Management

Digital Rights Management(DRM) is used to protect, control, and authorize the production, dissemination, sale, and use of digital content such as audio and video.

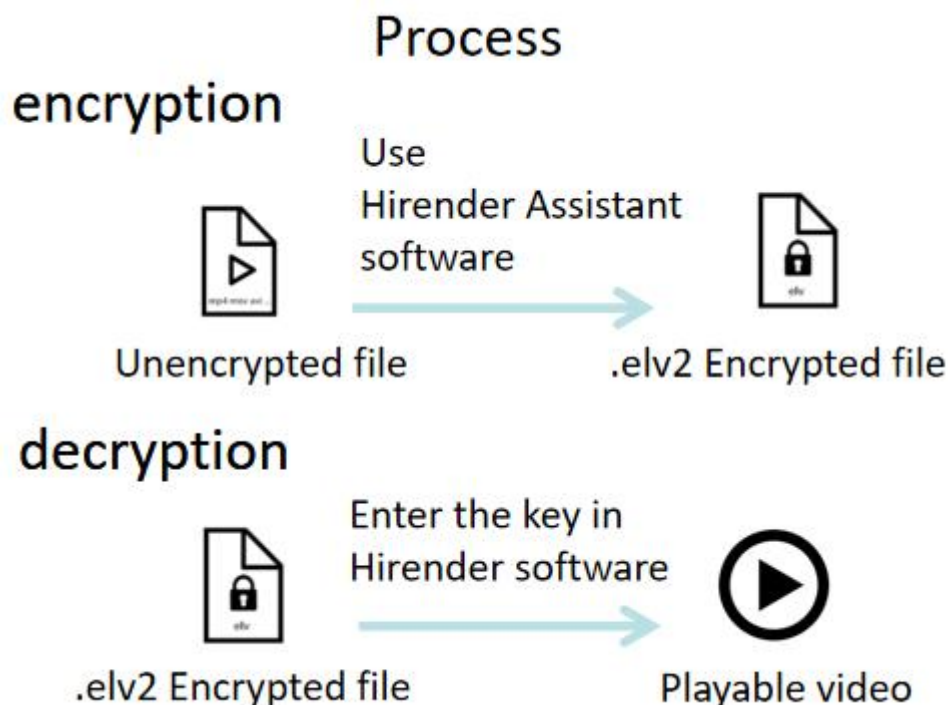
Digital Rights Management supports key setting and time authorization for digital media, preventing unauthorized copying of digital media, and requiring users to obtain authorization before using digital media, thus protecting the copyright of digital media.

ELV2 offline encryption

ELV2 offline encryption needs to use the Hirender Assistant software to encrypt materials and generate encrypted files in .elv2 format. You can also set the decryption key and authorization time.

Before using the media that by ELV2 offline encrypted, need to enter the correct key in the Hirender software and verify that the media is within the authorization period.

The key used for decryption is stored in the local server, so the server does not need to be networked all the time.



Media Server

enlightV creates a comprehensive media server suitable for Hirender software. The server is easy to carry, stable, and affordable, bringing you a more convenient and fluent playback and control experience. The server has four 4K outputs and multiple video capture channels. Just do whatever you want.

Hirender Stand Media Server



Processor	Intel Core 8-core hf processor	Graphics card	Quadro 5GB professional graphics card
Main board	High performance PRIME motherboard	Acquisition card	Custom acquisition card
Memory	16 GB DDR4 2666Mhz high-frequency memory	Audio	3.5mm ports 7.1 Channels
Hard disk	500 GB M.2 High speed solid State drive (expandable)	Power supply	600W high quality

Technical specifications		
System connection	Video Output	4xDisplayPort 1.4 1xDVI/HDMI/DP (monitor)
	Video Input	1*SDI+1*DVI / 2*SDI / 2*DVI (standard) 4*HDMI (Optional)
Physical specifications	Fixed installation	4U" rack
	Size	w :483mm H :178mm D :450mm
	Weight	14kg
	Environmental tolerance	Temperature: 5-35C (40°-95°F) humidity: 5%-95% Altitude: 0-8850 feet (0-2700m)

Hirender Pro Media Server



Processor	Intel Core 8-core hf processor	Graphics card	Quadro 5GB professional graphics card
Main board	High performance PRIME motherboard	Acquisition card	Custom acquisition card
Memory	16 GB DDR4 2666Mhz high - frequency memory	Audio	3.5mm ports 7.1 Channels Canon interface, built-in audio isolation
Hard disk	500 GB M.2 High speed solid State drive (expandable)	Power supply	600W high quality

Technical specifications		
System connection	Video Output	4xDisplayPort1.4 1xDVI/HDMI/DP (monitor)
	Video Input	1*SDI+1*DVI/2*SDI/2*DVI(standard) 4*HDMI (Optional)
Physical specifications	Fixed installation	4U" rack
	Size	w:483mm H:178mm D:633mm
	Weight	14kg
	Environmental tolerance	Temperature: 5-35C(40°-95°F) humidity: 5%-95% Altitude:0-8850 feet (0-2700m)

Panel Interface

- Check usage in real time of CPU / memory
- Monitors the temperature in real-time of the CPU/ graphics card
- Real-time detection of graphics card output status
- Real-time detection of running time information
- Real-time detection of acquisition card input status
- Touch to open the software display
- One-click to change the IP address of the PC
- One-click to clear the server cache
- One-click to change the license key mode
- One-click to lock the touchscreen
- Power off the server periodically

Hirender Video Coding

The birth background of HVC

On October 29, 2021, enlightV Pte. Ltd officially released the self-developed Video Coding format -- HVC(Hirender Video Coding).

After being installed as a plug-in, you can perform codec operations in Adobe Premiere, After Effects, and Media Encoder.

You can also transcode the video into HVC format in “Hirender Assistant” software and use it in “Hirender” software.

Video playback in the industry has the following requirements:

- High resolution (8K+), low decoding cost
- High image quality (YUV444, 10/12bit)
- Meet the above requirements as high as possible compression ratio
- Fast random positioning and playback

Comparison between HVC and other video codes

In the playback industry, because of the resolution, picture quality, transparent channel, video volume, coding time, and other factors, more people will choose H.264, H.265, and HAP these three coding methods.

	H. 264	H. 265	HAP	HVC
Highest resolution	4096*4096	8192*8192	16384*16384	16384*16384
Support YUV420, 422, 444 Support 10bit, 12bit color depth	supports part of	supports	not supports	supports
Support for transparent channels	not supports	not supports	supports	supports
Coding speed (as fast as possible)	fast	fast	slow	fast
Coding cost (lower is better)	big	huge	small	small
Compression ratio	high	super high	low	medium
Supports random positioning and vedio reverse	not supports	not supports	supports	supports

Hirender is widely used in stage performance, fixed installation, activities, and conferences. The birth of the HVC plug-in makes Hirender and hecoos can meet more use scenarios, and fill the gap of the exhibition industry in the existing coding format that can not meet the needs.

Website download address:

<https://www.hirender.com/en/#/adobeHVC>

Contact Us



Enlightv Technology

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 enlightv.com



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A technology-based company focusing on industrial software and Internet product development. Brands: @hirender2016 @hecoos2018

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