8K Heterogeneous Splicing Processor

Product Specifications

Model：RDYX-SW0404-1U

I. Product Overview

Irregular Video Wall utilize conventional LCD panels — such as 46-inch, 49-inch, and 55-inch models — to achieve irregular display configurations through specialized design.

Our company has developed an 8K non-standard video wall processor specifically for these installations. This device performs specialized image processing to display irregular signal layouts.The device integrates multimedia playback control, information publishing, cluster management functions, and an application platform, offering robust interactive and playback capabilities.

It supports multi-platform terminal control via Windows, Mac OS, iOS, and Android, enabling arbitrary multi-screen window roaming displays. The product supports infrared remote control, mouse, tablet, mobile phone, and computer control, making it widely applicable for exhibition displays, conference events, shopping malls, restaurants, entertainment venues, and similar scenarios.

II. Key Features

✦ Embedded pure hardware architecture enables instant operation upon power-up, ensuring 24/7 stable performance.

✦ Supports irregular tiling of displays of varying sizes, with full image rotation, cross-screen tiling, scaling, and overlay capabilities.

✦ Features 64GB local storage for client video content, expandable via USB drives or mSATA cards.

✦ Supports 4K HDMI capture from external 4K HD HDMI sources like screen casters, media players, or laptops, with simultaneous audio-video transmission.

✦ Plays network streaming media, decodes webcam feeds, and enables quick integration of live stream links. Facilitates network-based access, sharing, and display of diverse graphic/text data and multi-format streaming media signals.

✦ Supports personalized subtitle management including single-line text, static text, and scrolling text, along with clock and weather forecast display functions.

✦ Supports saving various signal window displays and layouts as scenes, enabling one-click recall as needed for convenience and efficiency.

✦ Supports saving multiple scenes as playlists with custom sequences and time intervals. Can be configured as startup or scheduled playlists to execute at power-on or preset times.

✦ Supports setting one or more signal windows to cycle through selected signals at timed intervals, while other windows display unchanged content.

✦ Supports controlling currently playing video windows (e.g., mute,

pause); also enables selecting windows for video rotation playback to advance to the next or previous track.

✦ Supports central control integration, enabling management of lighting, curtains, video walls, audio matrices, etc., with customization based on project site conditions and client requirements.

✦ Supports keyboard/mouse control, infrared remote control, and mobile/tablet control for functions like signal switching, roaming, zooming, scene recall, and uploading/displaying videos or images.

✦ Features a preview function allowing users to directly preview the currently displayed signal on the control device (computer or tablet) for real-time monitoring of signal integrity.

✦ Supports centralized cloud-based management of multiple devices, including remote media uploads, content publishing, and mode switching from different locations.

III. Technical Specifications

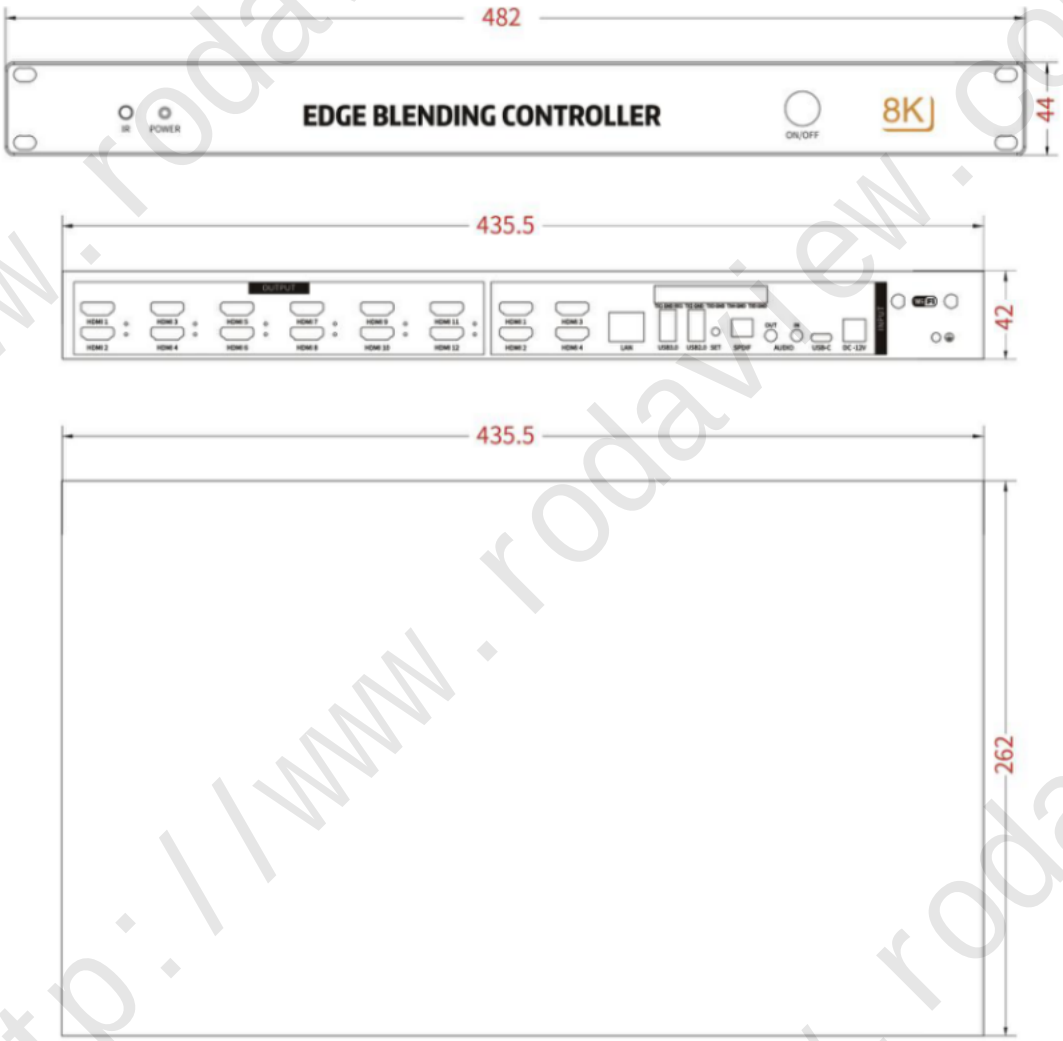
Category	Item	Specifications
Hardware Configuration	CPU	Octa-core 64-bit architecture, 8nm LP process, frequency 2.4GHz
	GPU	Mali-G610 MC4, supports AFBC (Arm Frame Buffer Compression), 8K codec
	NPU	AI accelerator, computing power 6 TOPS

	RAM	Default 4GB, supports up to 32GB LPDDR4x (64-bit)
	Storage	Default 64GB, supports eMMC 5.1
	Power	DC 12V input
Interface Parameters	HDMI-OUT	1-12 outputs, max. resolution 1920×1080@60Hz
	HDMI-IN	HDMI 1-4 input, supports up to 4K@60Hz
	LAN	1000M Ethernet port
	RS232	Control serial port (Supports controlling this device and external equipment)
	USB 3.0 / USB 2.0	Supports connecting USB drives/mouse/keyboard
	SET	Function port selection
	SPDIF	S/PDIF audio signal interface
	AUDIO-OUT	3.5mm audio output port (1 channel)
	AUDIO-IN	3.5mm audio input port (1 channel)
	USB-C	For device firmware upgrade only
	WiFi	External WiFi module (Optional)

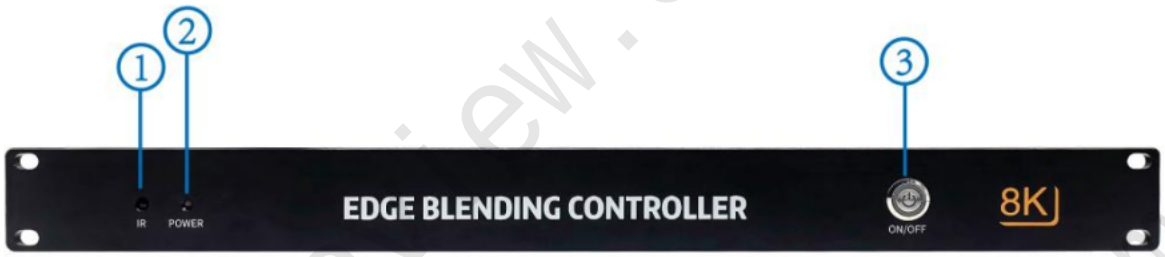
	mSATA	Expanded storage capacity (Optional, supports mSATA drive)
Environmental Parameters	Operating Temperature	0℃ ~ 50℃
	Operating Humidity	10% ~ 75% RH (non-condensing)
	Storage Temperature	-25℃ ~ +125℃
Physical Specifications	Net Weight	3.2kg
	Gross Weight (with packaging)	4.0kg
	Chassis Dimensions	482 × 262 × 44 mm
Packaging Specifications	Package Dimensions	550 × 380 × 130 mm
	Package List	1 × Main Unit, 1 × Power Adapter, 1 × Certificate of Conformity, 1 × IR Remote Controller, 5 × Phoenix Terminal Plugs

IV. Product Dimensions

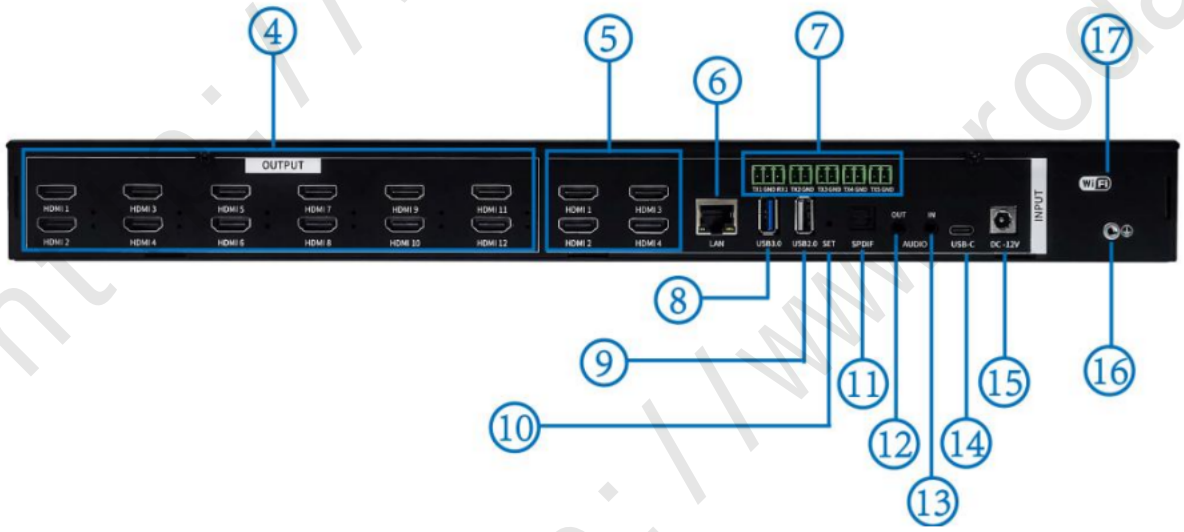
1U chassis (supports up to 12 outputs)



V. Panel Buttons and Ports

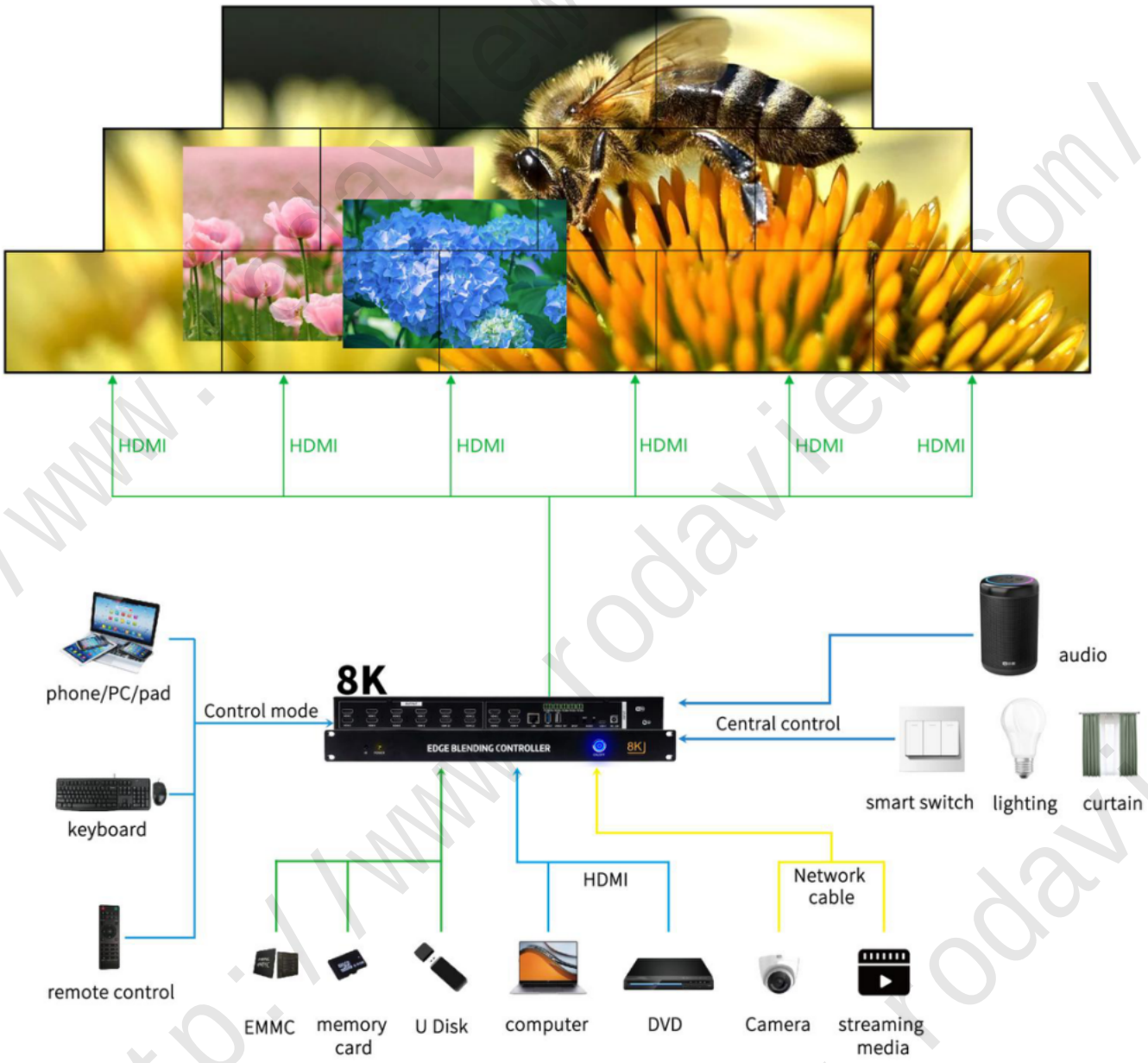


No.	Interface	Description
1	IR	Infrared (IR), receives infrared signals
2	POWER	Power indicator, green light on indicates normal operation
3	ON/OFF	Power ON/OFF switch button



4	HDMI-OUT	1-12 outputs: max. resolution 1920x1080@60Hz
5	HDMI-IN	HDMI 1-4 input: max. resolution 4K@60Hz
6	LAN	1000M Ethernet port for network connection
7	RS232	Control serial port input/output interface, controls this device or external equipment
8	USB 3.0	Connect USB drives, mouse, keyboard
9	USB 2.0	Connect USB drives, mouse, keyboard
10	SET	Function port selection
11	SPDIF	Supports S/PDIF audio signal
12	AUDIO-OUT	Supports one 3.5mm audio output channel
13	AUDIO-IN	Supports one 3.5mm audio input channel
14	USB-C	Device firmware upgrade
15	DC-12V	DC-12V power input
16	WiFi	For connecting to external WiFi (Optional)

VI. Connection Diagram



VII. Cloud Management System Framework