

8K Projection Fusion Processors

Product Specifications



型号: RDRH-SW0404Y-1U

I. Product Overview

This professional 8K desktop image fusion hardware, specifically designed for projectors, achieves multi-channel projection image blending through image geometric correction and edge blending technology, supporting both flat and curved surface projections. It integrates multimedia playback control, information publishing, cluster management functions, and an application platform, delivering powerful interactive and playback capabilities.

It supports multi-platform terminal control via Windows, Mac OS, iOS, and Android, enabling arbitrary multi-window display and roaming. Additionally, tailored for diverse application scenarios, it integrates with video conferencing systems, surveillance systems, live streaming, and local media playback. Two scene modes (Desktop Mode and Window Mode) ensure optimal display for document presentations, video playback, and remote meetings.

The product supports control via infrared remote, mouse, tablet, smartphone, or computer, making it widely applicable in commercial display scenarios across government, enterprises, conference rooms, hotel design, healthcare, education, and other industries.

II. Key Features

- ◆ Supports video post-processing: deinterlacing, noise reduction, edge/detail/color optimization.
- ◆ Supports MSATA expansion, USB drive expansion, and direct plug-in live streaming.
- ◆ Supports online/local playback of video, audio, images, PPT, webpages, etc.
- ◆ Supports multiple communication methods including Wi-Fi, Gigabit Ethernet, and direct USB cable connection.
- ◆ Supports 1x 3.5mm audio output with synchronized audio-video output.
- ◆ Supports cluster management within LAN/WAN and remote information publishing.
- ◆ Supports multi-window playback with up to 23 1080P video windows for flexible windowing, roaming, layering, and tiling display.
- ◆ Customized desktop UI system based on Linux, allowing optional addition of Linux applications.
- ◆ Supports personalized subtitle management including single-line text, static text, and scrolling text, plus clock and weather forecast display.
- ◆ Supports keyboard/mouse control, infrared remote control, and mobile/tablet control.

- ◆ Supports keyboard/mouse control, infrared remote control, and mobile/tablet control.
- ◆ Supports network streaming media playback, network camera decoding, and rapid access to live stream links.
- ◆ Supports 64GB local storage for preserving customer video content.
- ◆ Supports centralized control functions for remote operation of curtains, air conditioners, audio systems, LED power distribution boxes, etc.
- ◆ Centralized control functionality enables remote operation of curtains, air conditioning, audio systems, LED power distribution boxes, and more.
- ◆ Centralized multi-device management allows unified control of multiple units via PC or tablet software, eliminating the need to switch between separate control interfaces.
- ◆ Real-time window signal feedback: Users can directly display current window signals on the control interface (PC or tablet), ensuring each signal operates normally. This resolves the limitation of existing fusion systems where window feedback isn't achievable on the control end, delivering true centralized monitoring.
- ◆ Display feedback feature: Users can directly view current window signals on the control terminal (computer or tablet), monitoring real-time signal integrity for each channel. This resolves the limitation

of existing fusion processors that cannot display window feedback on the control terminal, enabling true visual management of input channels.

- ◆ Single device supports up to 3 4K60Hz projectors for seamless point-to-point display fusion.

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

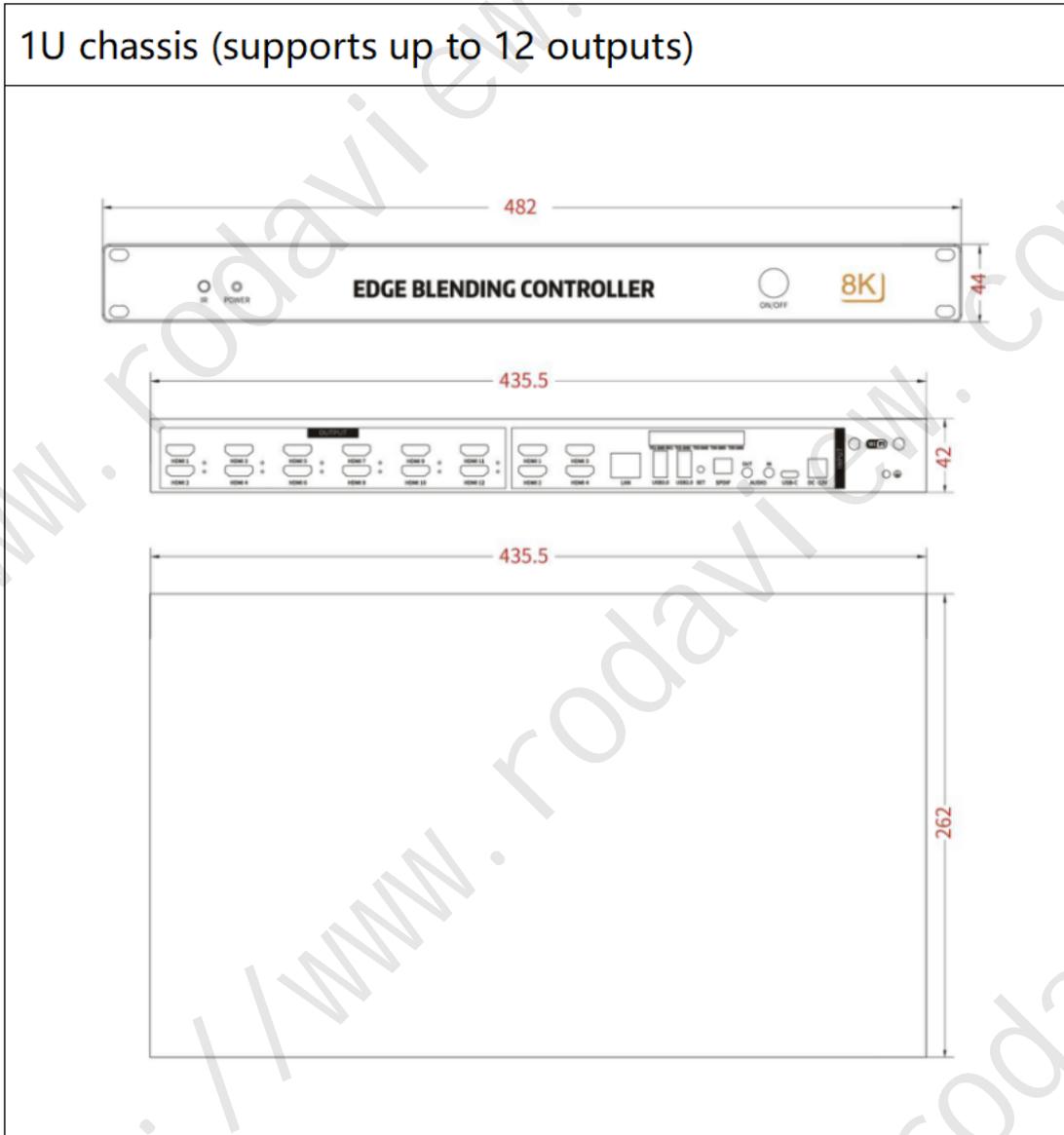
Projection Fusion Processor

Interface Parameters	HDMI-OUT	3 outputs, max. resolution 4K@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/storage devices
	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 burning/upgrade only
	WiFi	External WiFi module (Optional)
	mSATA	Expanded storage capacity (Optional, supports mSATA drive)
Environmental Parameters	Operating Temperature	0°C ~ 50°C

Projection Fusion Processor

	Operating Humidity	10% ~ 75% RH (non-condensing)
	Storage Temperature	-25°C ~ +125°C
Physical Specifications	Net Weight	3.2kg
	Gross Weight	4.2kg (with packaging)
	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

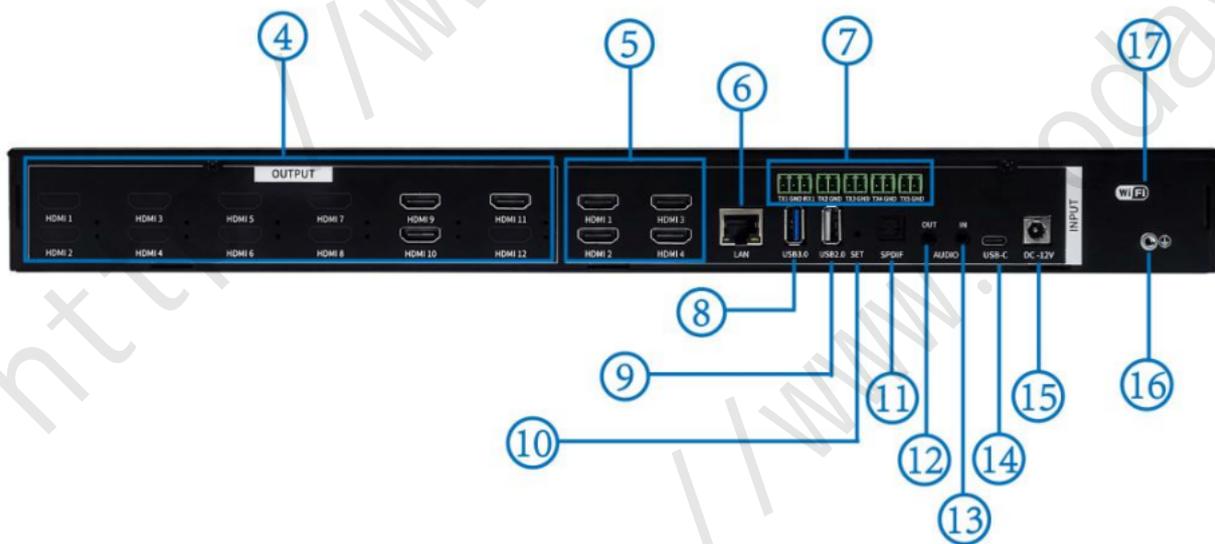
IV. Product Dimensions



V. Panel Buttons and Ports



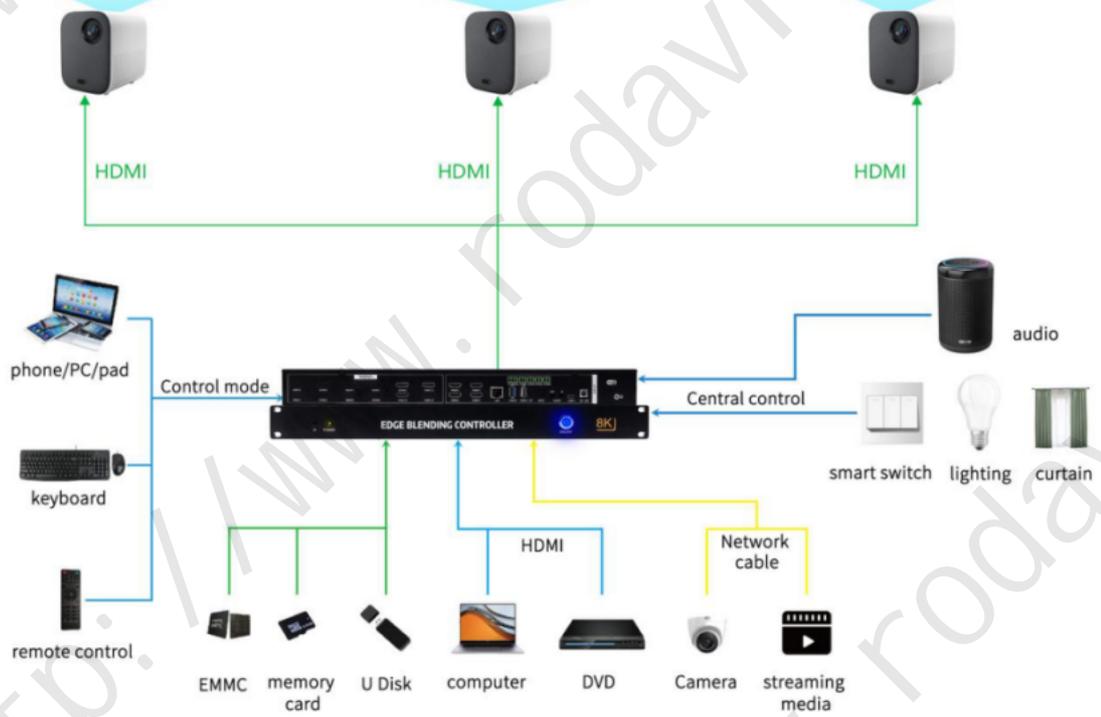
No.	Interface	Description
1	IR	Infrared, receives infrared signals
2	POWER	Power indicator, green light on indicates normal operation
3	ON/OFF	Power ON/OFF switch button



Projection Fusion Processor

4	HDMI-OUT	3 outputs: max. resolution 4K@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 burning/upgrade
15	DC-12V	DC-12V power input
16	WiFi	For connecting to external WiFi (Optional)
17	MSATA	Connect mSATA drive to expand storage capacity (Optional)

VI. Connection Diagram



VII. Cloud Management System Framework

