8K Multi-media Server
Product Specifications

型号：RDBC-SW0404Y-1U

I. Product Overview

This professional 8K multi-media server, specifically designed for LCD/LED small-screen displays, integrates multimedia playout control, information publishing, cluster management functions, and an application platform, delivering powerful interactive and playback capabilities.

Supports multi-platform terminal control via Windows, Mac OS, iOS, and Android, enabling arbitrary multi-screen windowing and roaming display.It also supports integration with video conferencing systems, surveillance systems, live streaming, and local media playback to meet diverse application needs. 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 for commercial display scenarios in government, enterprises, hotel design, healthcare, education, and other industries.

II. Key Features

✦ Embedded pure hardware architecture design enables instant operation upon power-up, delivering exceptional system stability to reliably meet 24/7 continuous operation demands. The device utilizes a high-performance AIoT computing platform, fully leveraging hardware resources and core engines to support 8K@60 H.264/H.265/VP9 decoding and 8KP30 H.264/H.265 encoding.

✦ Supports video wall integration with various display devices including LED, LCD video walls, LCD TVs, and monitors.

✦ Features 3 HDMI 2.0 outputs with maximum resolution up to 3840*2160@60fps, backward compatible, and supports custom resolution settings to meet LED transmitter card requirements.

✦ Supports 4 HDMI 2.0 inputs for connecting 4K UHD HDMI sources like video conferencing systems, screen casters, media players, laptops, etc., with simultaneous audio/video transmission.

✦ Enables real-time rotation of images, videos, and other media signals at 0°, 90°, 180°, or 270°.

✦ Enables seamless roaming of images, videos, HDMI captures, and network signals, allowing overlay in various sizes, positions, and layers.

✦ Features 64GB local storage for images and videos, eliminating the

need for

additional servers. Supports storage expansion via TF cards, USB drives, and mSATA.

✦ Supports TCP/IP access to streaming media signals compliant with RTSP/ONVIF, RTMP, and live streaming protocols.

Enables playback of network streaming media, decoding of network cameras, and rapid access to live links. Facilitates network-based integration, sharing, and display of diverse graphic/text data and multi-format streaming media signals.

✦ Supports saving various signal window displays and layouts as scenes, with one-click recall as needed.

✦ Supports saving multiple scenes as presets that cycle through in a specified sequence and time interval.

Can also be configured as power-on presets or scheduled presets to execute at startup or scheduled times.

✦ Supports configuring one or more displayed signal windows for signal cycling, where the window at that position cycles through selected signals at set intervals while other windows remain unchanged.The window position cycles through selected signals at set intervals while other windows remain unchanged.

✦ Supports rapid, seamless switching between signals and scenes with smooth transitions and no background image loss.

✦ Enables control over currently playing video windows (e.g., mute, pause) and allows selection of video rotation playback windows for next/previous track playback.

✦ Supports central control integration, enabling management of lighting, curtains,video walls, audio matrices, LED power distribution boxes, etc., customizable based on project site conditions and client requirements.

✦ Supports multiple control methods: operation via PC, tablet, smartphone, remote control,

or physical buttons; also supports operation by inserting a USB keyboard/mouse into the device.

✦ Supports signal feedback, allowing users to monitor currentinput signals directly on the control terminal (PC or tablet)✦ Enables centralized cloud management of multiple devices, including remote media uploads, content publishing,and mode switching.
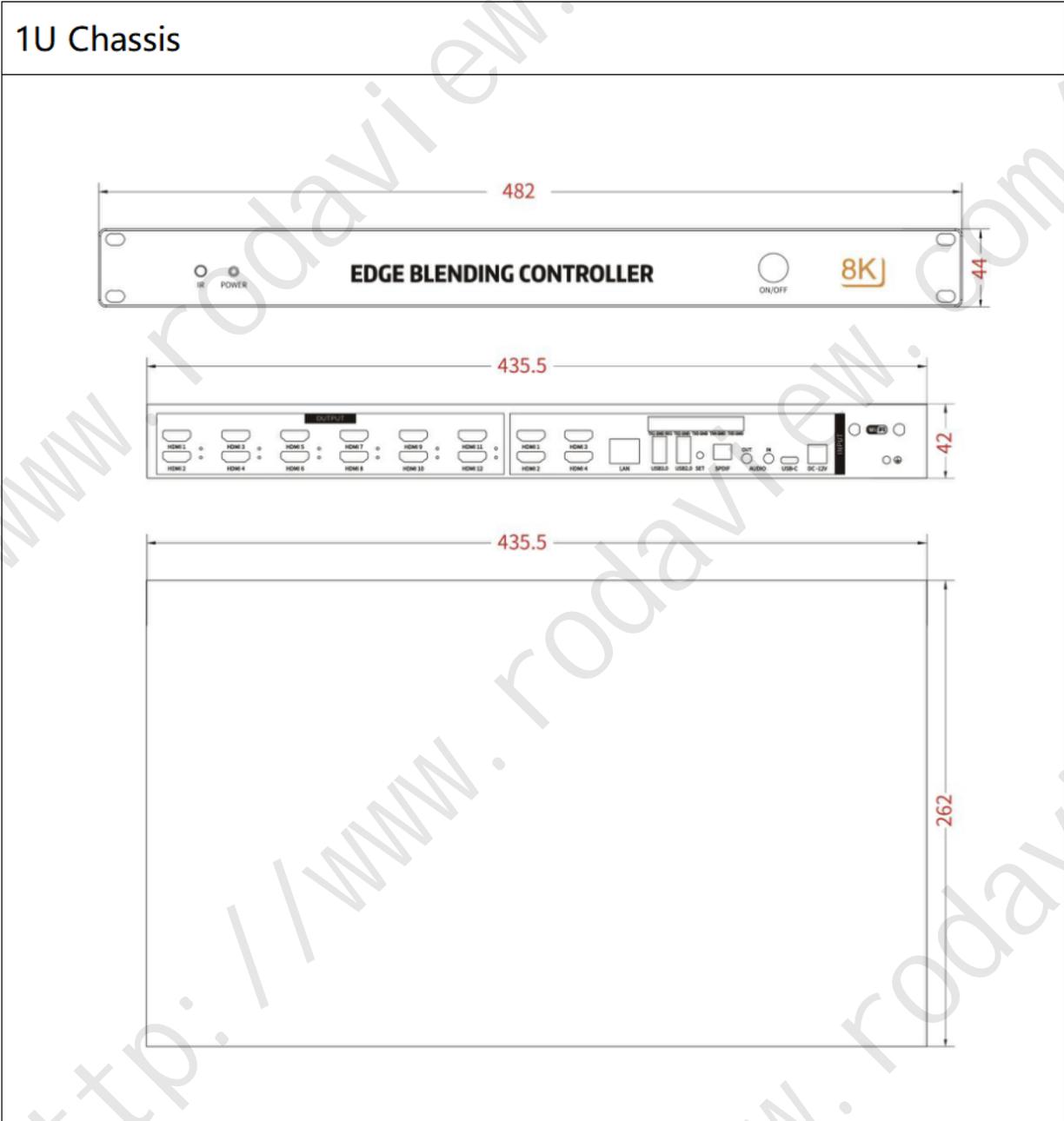
III. Technical Specifications

Category	Item	Specifications
Hardware Configuration	CPU	Octa-core 64-bit architecture, 8nm LP process, 2.4GHz 主频
	GPU	Mali-G610 MC4, supports AFBC, 8K codec
	NPU	AI accelerator, 6TOPs computing power
	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	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/disks
	SET	Function port selection

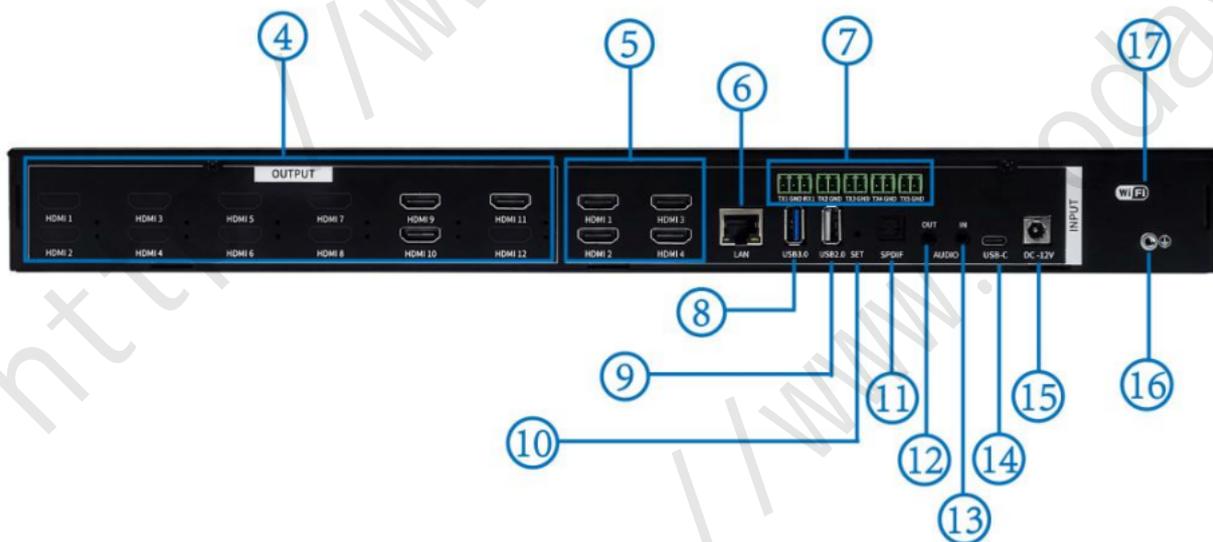|		
	SPDIF	S/PDIF audio signal interface
	AUDIO-OUT	3.5mm audio output port (1 channel)
	AUDIO-IN	3.5mm audio input port (1 channel)
	USB-C	For device firmware upgrade only
	WiFi	External WiFi module (optional)
	mSATA	Expanded storage capacity (optional, supports mSATA drive)
Environmenta l Parameters	Operating Temperature	0℃ ~ 50℃
	Operating Humidity	10% ~ 75% RH (non-condensing)
	Storage Temperature	-25℃ ~ +125℃
Physical Specifications	Net Weight	3.2kg
	Gross Weight	4.0kg (with packaging)
	Chassis Dimensions	482 × 262 × 44 mm
Packaging Specifications	Package Dimensions	550 × 380 × 130 mm
	Package List	1 x Host, 1 x Power Adapter, 1 x Certificate of Conformity, 1 x IR Remote Controller, 5 x Phoenix Terminal Plugs

IV. Product Dimensions

1U Chassis

482

EDGE BLENDING CONTROLLER

8KJ

ON/OFF

IR   POWER

44

435.5

OUTPUT

HDMI 1 HDMI 3 HDMI 5 HDMI 7 HDMI 9 HDMI 11
HDMI 2 HDMI 4 HDMI 6 HDMI 8 HDMI 10 HDMI 12

HDMI 1 HDMI 3
HDMI 2 HDMI 3

LAN   USB3.0 USB3.0 SET SPDIF AUDIO USB-C DC-12V

42

435.5

262

V. Panel Buttons and Ports

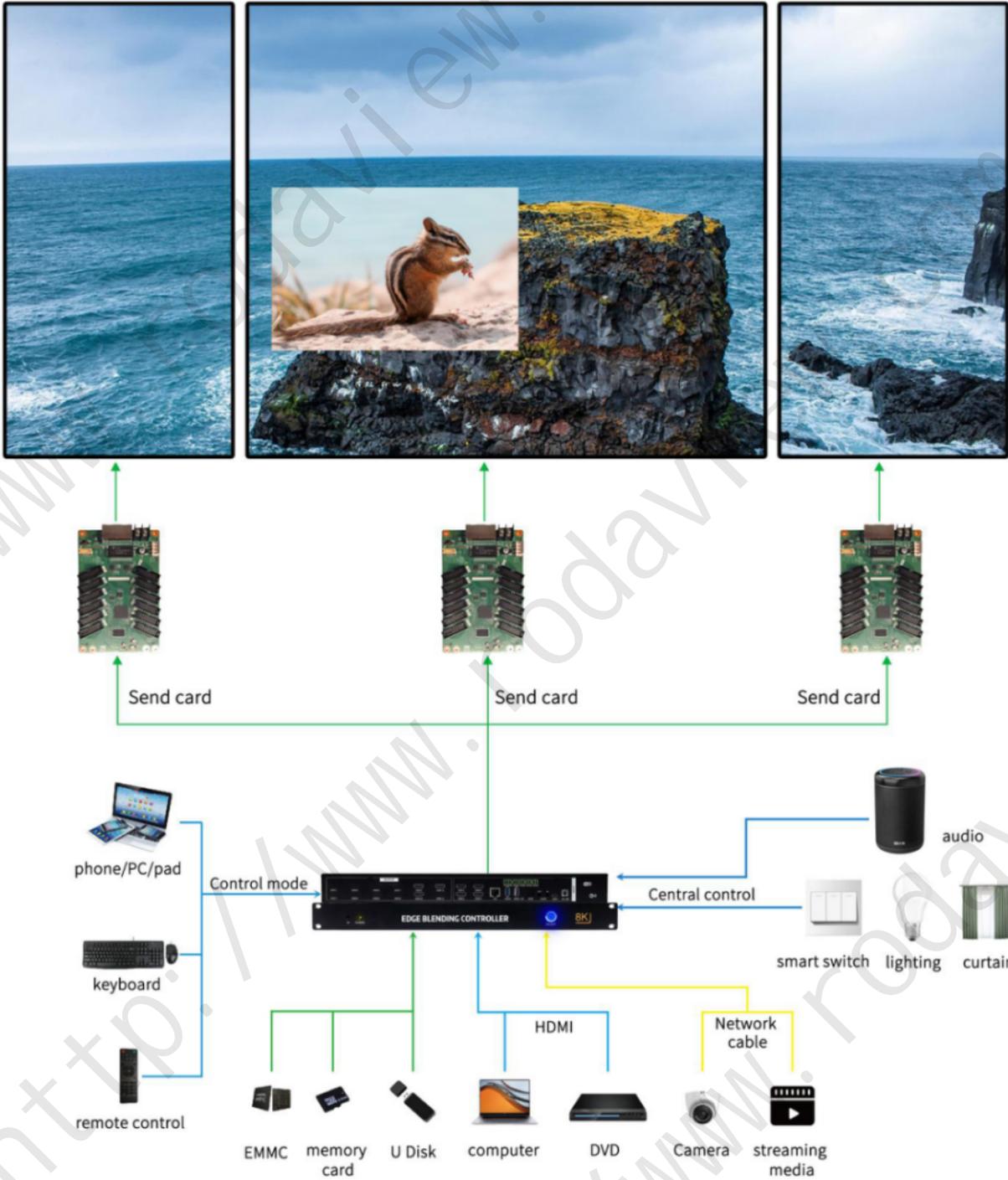| No.	Interface	Description
1	IR	Infrared, receives infrared signals
2	POWER	Power indicator, green light indicates normal operation
3	ON/OFF	Power ON/OFF switch button

No.	Interface	Description
4	HDMI-OUT	3 outputs, max. resolution 4K@60Hz
5	HDMI-IN	HDMI 1-4 input, supports up to 4K@60Hz resolution
6	LAN	1000M Ethernet port for network connection
7	RS232	Control serial port interface for input/output, controls this device or external equipment
8	USB 3.0	Connect USB drives, mouse, keyboard, etc.
9	USB 2.0	Connect USB drives, mouse, keyboard, etc.
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	For 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

Terminal 1   Terminal 2   Terminal 3   Terminal 4

router   switch

Local Area Network (Intranet)   4G/Wide Area Network (External Network)

Local Area Network   Cloud services

Multi terminal management

computer   pad