Multi-screen Splicing Processor 5-9

Product Specifications

Model：RDMP1000-H05-H09

I. Product Overview

The Multi-screen Splicing Processor 5-9 is a newly launched, multifunctional video wall processor featuring an integrated design, new architecture, and UI design for ultra-high-definition video signal acquisition and transmission. It supports video image resolutions up to full 4:4:4 chroma sampling within the RGB color space. Utilizing a pure hardware FPGA + embedded architecture, it offers extensive customizable features tailored to client needs.

It supports diverse display modes including multi-source wall display, video wall stitching, roaming, cross-screen display, zoom in/out, picture-in-picture, picture-out-of-picture, and image overlay. Multiple control methods are supported, such as PC and tablet.

II. Features and Functions

▶ Device Architecture

1. FPGA + embedded architecture: The embedded system ensures stability for 7x24 continuous operation, while the FPGA delivers reliable image processing capabilities.

2. Compact, lightweight, and plug-and-play design with built-in power supply. Supports upgrades and maintenance. Aspect ratio

conforms to the golden ratio.

▶Basic Functions

1.Input channels 1-4 support single-port acquisition of 1920x1080@60Hz ultra-HD signals; input channel 5 supports single-port acquisition of 4K@60Hz ultra-HD signals.

2.Output channels 1-9 support single-port output of 1920x1080@60Hz ultra-HD signals.

3.Supports 9-screen point-to-point splicing modes (4×2, 2×4, 2×3, 3×2, 3×3, 1×7, etc.) or 4K resolution non-distorted aspect ratio splicing mode (optional);

4.Supports wall splicing, roaming, cross-screen display, scaling, picture-in-picture, picture-out-of-picture, and image overlay for any video signal;

5.Supports 9 windows per screen with 9 × N layer stacking (N = number of tiled screens). The entire processor handles 81 windows with real-time, frame-drop-free display. Window operations remain smooth without lag, flickering, or blackouts;

6.Preview function allows users to directly monitor active window signals on the control terminal (PC or tablet), ensuring real-time verification of signal integrity and enabling visual management of input channels;

7.Supports end-to-end low latency;

8.Built-in FPGA audio de-embedding and switching capability enables separation of any HDMI audio channel and routing to 3.5mm audio output;

9.Ultra-low power consumption of 35W, ensuring eco-friendly operation;

10. Supports Android tablet/mobile app control;

11.WEB control capability enables switching preset scenes via web browser on computers/phones/tablets;

12.Stores over 1000 preset scenes;

13.Pre-configure multiple scenes for effortless switching between various setups;

14.Scene switching latency <30ms, ensuring seamless, lag-free operation without blue screens or screen flickering;

15.Supports ultra-high-definition subtitles with flexible customization of font, color, size, background color, and background transparency, plus adjustable scrolling speed;

16.Supports ultra-high-definition static background images, enabling quick and simple replacement for vibrant and colorful large-screen backgrounds;

17. Proprietary adaptive deinterlacing, scaling, and OSD technology ensures smooth, clear visuals;

18. Supports LED displays with customizable output resolution;

19. Supports source and display device validity detection with status LED indicators;

20.Device output port synchronization time difference = 0ns (excluding screen-introduced variations);

21.Supports multi-user management;

22.Supports online device upgrades via upgrade tools.

▶ Other Features

1. Supports serial port control for large screen power on/off;

2. Supports secondary development, providing third-party user control protocols and interfaces.

▶ Qualification Certificates

1. ISO9001 certification with official seal;

2. Compulsory Product Certification (CCC) test report from National Product Quality Supervision Center with official seal;

3. Inspection report copy from Electronic Product Quality Inspection Center with official seal;

4. CCC, CE, RoHS, and computer software copyright certifications with official seal copies.

III. Technical Specifications

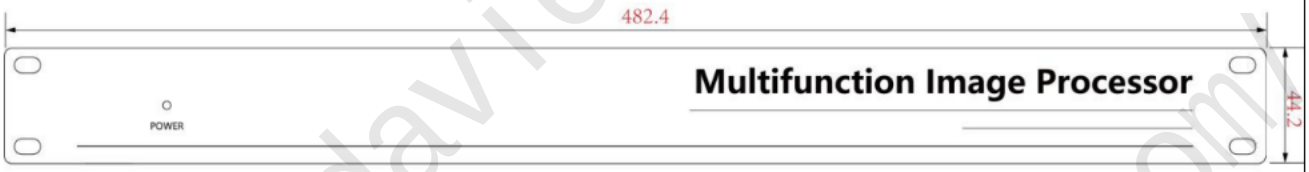
Category	Item	Specifications
Interface Parameters	HDMI-OUT	9 outputs, supports 1920×1080P@60 output Supports custom resolutions
	HDMI-IN	HDMI 1-4 input, supports 1920×1080P@60/50 HDMI 5 input, supports 3840×2160@60 (Optional: 9-screen constant point-to-point splicing mode)
	RJ45 LAN Port	10/100M auto-negotiation, supports remote control of the processor by other devices within the LAN
	RS232	Supports connection to large screens and central control systems
	USB 2.0	Firmware upgrade
	AUDIO-OUT	3.5mm audio output port (1 channel)

	AUDIO-IN	3.5mm audio input port (1 channel)
	Windows Client Software	MultiScreenCtrl
Function & Other	Function	(HD signal input/output, video wall display / multi-screen splicing / overlay roaming & scaling / independent audio output)
	Single Screen Window Count	9
	Power Consumption	Approx. 35W
	Power Supply	AC 110-240V
	Android Client Software	MultiScreenCtrl
Environmental Parameters	Operating Temperature	0℃ ~ 50℃
	Operating Humidity	10% ~ 75% RH (non-condensing)
	Storage Temperature	-25℃ ~ +125℃

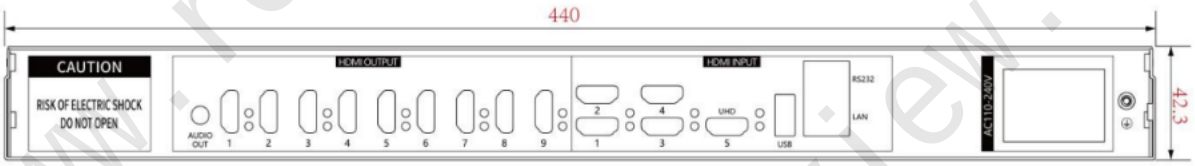
Physical Specifications	Net Weight	2.8kg
	Gross Weight (with packaging)	3.8kg
	Chassis Dimensions	482.4 × 225.6 × 42.3 mm
Packaging Specifications	Package Dimensions	550 × 380 × 130 mm
	Package List	1 × Main Unit, 1 × Warranty Card, 1 × Power Cord, 1 × Network Cable

IV. Product Dimensions

1U chassis **(supports up to 4 inputs and 9 outputs)**



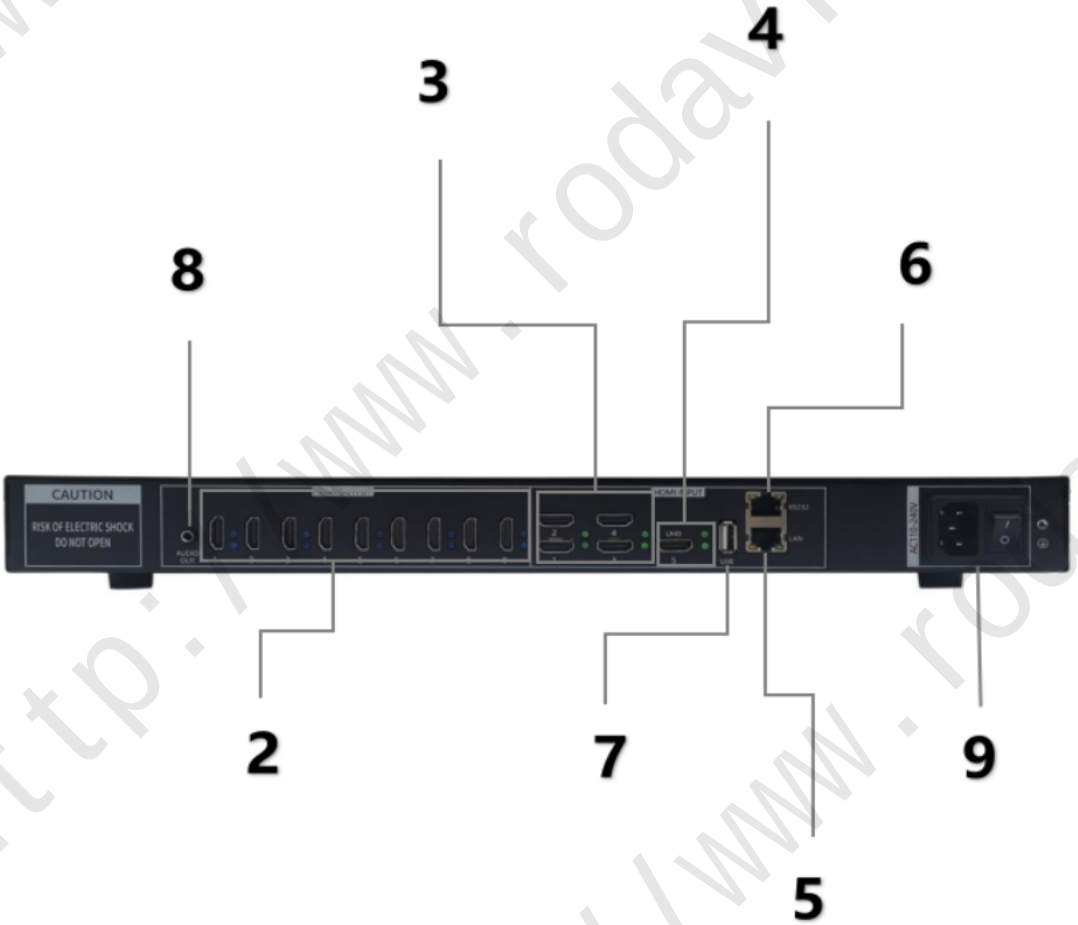
Front panel



Rear panel

Side panel

V. Panel Buttons and Ports



No.	Interface	Description
1	POWER	Power indicator, red light on indicates normal operation
2	HDMI-OUT	HDMI 1.4 digital interface, supports 1920×1080P@60 output, supports custom resolutions
3	HDMI-IN	HDMI 1.4 digital interface, supports 1920×1080P@60/50, 1920×1080P@30/25
4	HDMI-IN	HDMI 2.0 digital interface, supports 3840×2160@60
5	LAN	10/100M auto-negotiation, supports remote control of the processor by other devices within the LAN
6	RS232	Supports connection to large screens and central control systems
7	USB 2.0	Firmware upgrade
8	AUDIO-OUT	Supports one 3.5mm audio output channel
9	Power	AC 110-240V

VI. Connection Diagram