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MVB8S

2IN1 Video Processor

Specification V4.0

CONTENT

1 Update Records

Document Version	Hardware Version	Release Time	Update Record
V4.0	MVB8S（V2.1.2）	July 26(th), 2025	First release

2 Product Introduction

The MVB8S is a powerful LED video control device featuring robust video signal acquisition and processing capabilities. It supports high-definition video signal input up to 3840×2160@60Hz with RGB444 color depth, delivering efficient audio-visual processing for computers and other devices. It supports 5 video inputs, including HDMI×2, DVI, DP, VGA, etc., with flexible switching between multiple signals. It enables arbitrary scaling and cropping of video sources, featuring robust video signal reception capabilities, ultra-high-definition image processing, and transmission capabilities.

The MVB8S single unit supports LED displays with a maximum width of 8192 pixels or a maximum height of 3840 pixels. It also incorporates a comprehensive suite of practical features, delivering flexible screen control and high-quality image display, making it ideal for large and medium-sized LED displays.

The MVB8S features 8 Ethernet ports with data transfer rates up to 8Gbps, capable of driving LED screens with up to 5.2 million pixels per unit. Powered by a Linux operating system and utilizing the MST91A4Q1 chip as its CPU for signal processing, it enables statistical analysis of operational data, control of audio/video processing services, automated execution of scheduled commands, and management of LCD display content.

The MVB8S employs proprietary data transmission and synchronization processing technology for video wall systems, significantly enhancing display quality. Utilizing a fully digital pathway and pure digital signal processing without compression, it supports functions including cropping, scaling, stitching, brightness adjustment, color temperature adjustment, image alignment, and low-brightness high-gray-scale modes.

It delivers high-performance audio decoding and video image processing services to terminal computers. Computers and control devices can not only monitor the MVB8S's operational status, video signal resolution, screen brightness values, color temperature, receiving card temperature, and receiving card type information via the network; they can also transmit environmental data monitored by sensors—such as temperature, humidity, brightness, and smoke levels—enabling environmental alerts and signal connection monitoring. Additionally, they can retrieve internally processed video stream data from the device and display the video-processed image content on the computer desktop.

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3 Product Characteristics

3.1 Improve the display effect

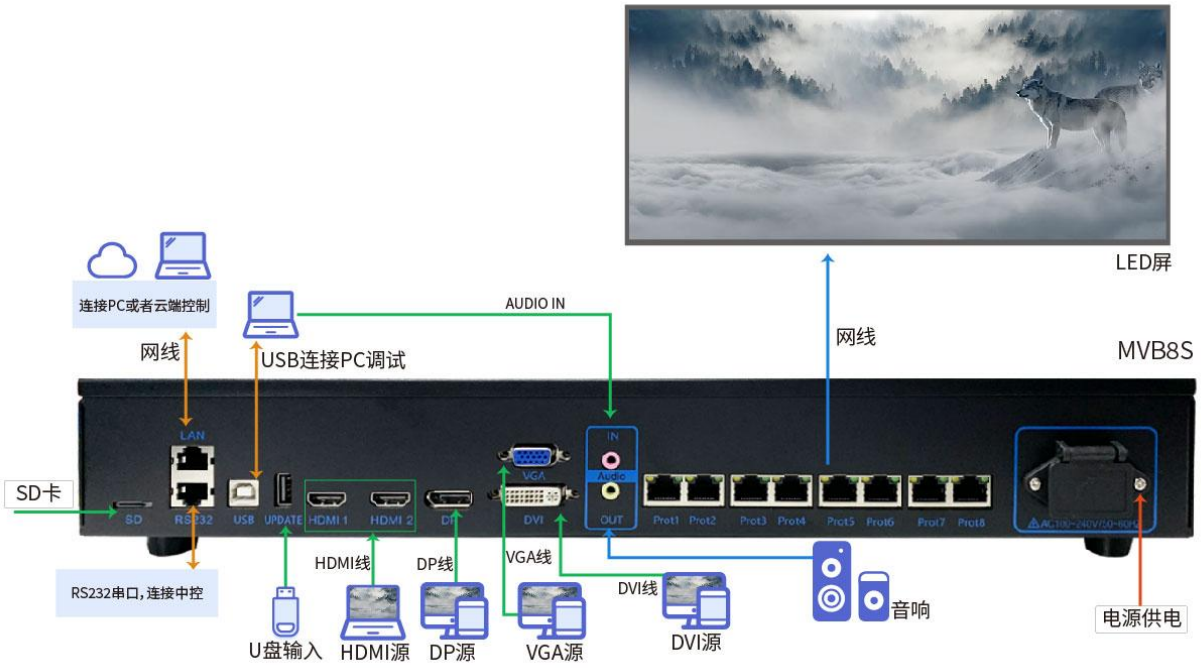
- Multiple input interfaces
  - 1×HDMI2.0、1×HDMI1.4、
  - 1×DVI
  - 1×VGA
  - 1×DP
- EDID, Support custom EDID management
- Output interface
  - 8 gigabit network ports
  - Maximum load 5.20 million pixels, custom output resolution, regular version maximum width 8192, maximum height 3840.
- Audio interface: Support audio input and output

3.2 Diversified Display Function

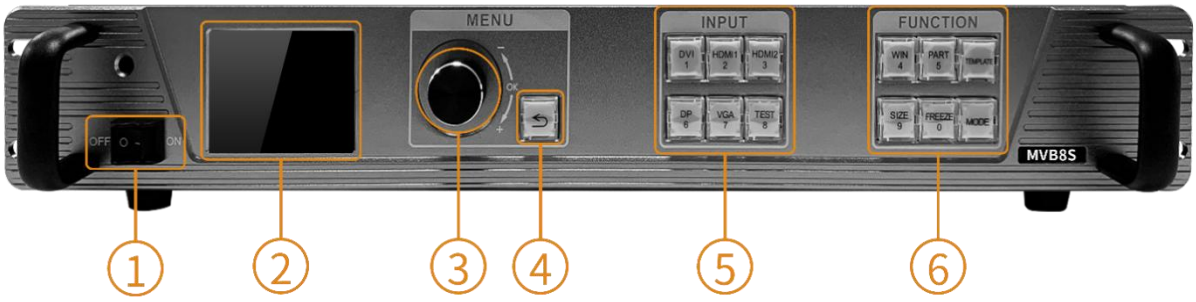
- Supports simultaneous display of 4 screens: Output resolution width exceeding 4096 requires single-screen display
- Supports 100Mbps Ethernet, USB, and RS232 serial port debugging control
- Supports creation of 8 user scenes as templates for direct recall, enhancing usability
- Intuitive front-panel LCD display with clear key indicator lights simplifies system control operations
- Supports one-touch entry into user scenes for template saving and recall interface
- Supports picture scaling modes:Full-screen scaling, Pixel-to-pixel scaling, Custom scaling
- Supports seamless multi-screen switching and single-layer seamless switching
- Supports quick multi-screen configuration with simple operations
- Supports window position/size adjustment and window cropping functions
- Supports external independent audio input and output
- Supports custom output resolution, supports custom input EDID
- Supports audio-video synchronized switching
- Supports partial or full-screen switching
- Supports scheduled tasks
- Supports one-touch screen blackout
- Supports built-in test pattern card

4 Application Scenarios

It is suitable for many application scenarios such as small and medium-sized LED displays in shopping malls, hotels, exhibitions, TV studios, etc.



5 Product Appearance



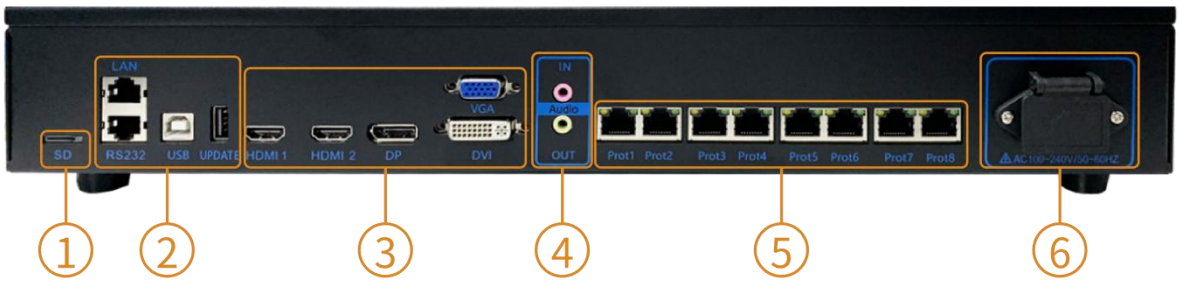
*Product images are for reference only. The actual product shall prevail upon purchase.

5.1 Data Interface Illustration

#	Keys	Illustrations	
1	ON/OFF	Power ON/OFF	
2	LCD Display	To display the current status of the device and to have the menu settings.	
3	Knob	1 、In the main interface,press the knob to enter the menu operation interface； 2、In the menu operation interface,rotate the knob to choose the menu, press the knob to select the current menu or enter its sub-menu. 3 、Once the menu that is with parameters selected, you could rotate the knob to adjust the parameters. 4. Long press to unlock the menu.	
4	Esc	Return(ESC)/Cancel the current menu or operation.	
5	Input Signal	DVI	DVI Source/Digital Key 1: Off: This signal source is not selected Flashing: This signal source is selected but no signal is present On: This signal source is selected and a signal is present
		HDMI1	HDMI1 Source/Digital Key 2: Off: This source is not selected Flashing: This source is selected but no signal is present Solid: This source is selected and a signal is present
		HDMI2	HDMI2 Source Digital Indicator 3: Off: This source is not selected Flashing: This source is selected but no signal is present On: This source is selected and a signal is present

		DP	DP Source/Num 6: Off: This source is not selected Flashing: This source is selected but no signal is present On: This source is selected and a signal is present
		VGA	VGA Source/Digital Key 7: Off: This source is not selected Flashing: This source is selected but no signal is present On: This source is selected and a signal is present
		TEST	TEST/Number 8 Key: Test Pattern Card Shortcut Key Key indicator remains off; press to enter the test pattern menu.
6	Function Button	WIN	WIN/Num 4: Layer Selection
		PART	PART/Num 5: Partial/Fullscreen Shortcut Button
		TEMPLATE	Open multiple windows; use this key to switch between them
		SIZE	SIZE/Num 9: Zoom Settings， Adjust screen size
		FREEZE	FREEZE/Num 0: Custom Black Screen or Freeze
		MODE	Load scene shortcut key

Rear Panel



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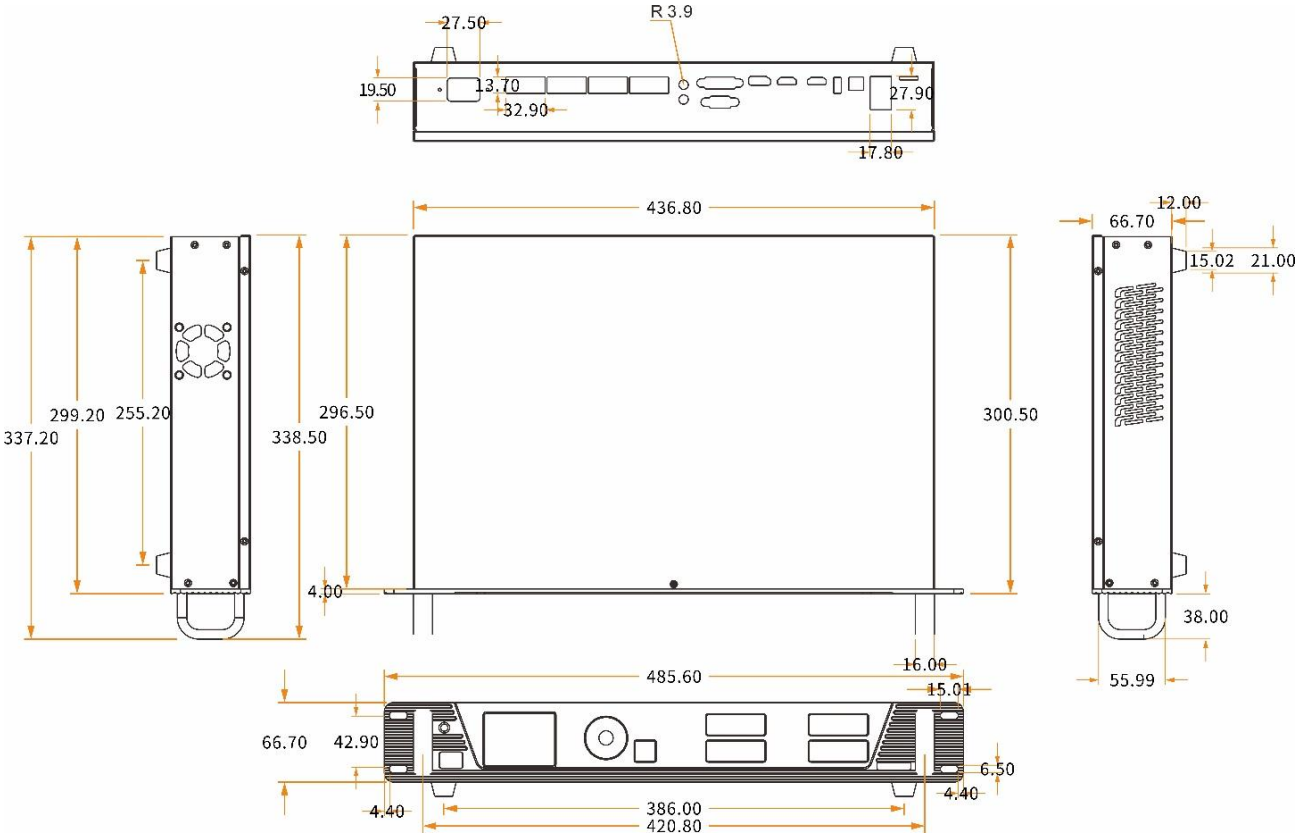
Input Interface			
#	Interface Type	QTY	Illustration
3	HDMI1	1	1×HDMI 1.4, Supports up to 3840×2160@30Hz and 3840×1080@60Hz resolution video source input Backward compatible Supports custom resolutions Supports 8-bit video input
	HDMI2	1	1×HDMI 2.0, Supports up to 3840×2160@60Hz resolution video source input Backward compatible Supports custom resolutions Supports 8-bit video input
	DP	1	1×DP1.2 Supports up to 3840×2160@60Hz resolution video source input Backward compatible
	DVI	1	VESA Standards.Maximum supports 1920×1200@60Hz resolution video source input ， downwards compatible.
	VGA	1	1×VGA Supports video source input up to 1920×1080@60Hz resolution Backward compatible

Output Interface			
#	Interface Type	QTY	Illustration
5	Network Port	8	8 Gigabit Ethernet port output connectors to the receiving card. Network port indicator light description: - Dual lights are always on: the power is turned on, but the receiving card is not detected. - Dual lights are not on: the power supply is not connected. - The yellow light is always on, the green light is flashing: the signal is normal and communication is in progress.
AUDIO Interface			
#	Interface	QTY	Illustration
4	Audio in	1	3.5mmAudio Interface Input
	Audio Out	1	3.5mmAudio Interface Output
Control Interface			
#	Interface Type	QTY	Illustration
2	LAN	1	100M Ethernet Port, Reserved Port
	RS232	1	Serial Port
	USB-B	1	Configure Port to connect to the PC
	Update	1	1×USB2.0, USB Drive Upgrade
Extended Function Interface			
#	Interface Type	QTY	Illustration
1	SD	1	SD Card: Stores large-screen configuration parameters for data inspection.
Output Interface			
#	Interface Type	QTY	Illustration
6	Power Supply	1	AC-100-240V-50/60HZ AC power interface

5.2 Dimensions



Tolerance：±0.3　　Unit：mm

6 Product Specification

6.1 Basic Parameters

6.1.1 Conventional Version

Loading capacity	Single network port	The maximum load is 655360 pixels, and the network port load is 1280 × 512.
	Whole Unit	5.20 million Pixels
Maximum width/height of whole machine	Pixels are controlled within 5.20 million points Widest: 8192 Highest: 3840	

When the load height exceeds 8,192 pixels, the overall load capacity gradually decreases with increasing height, but remains no less than 11.98 million pixels.

6.2 Specification

Electrical parameters	Rated voltage	AC-100-240V-50/60HZ
	Rated Power	25W
Working environment	Working temperature	0℃~50℃
	Working humidity	5%RH~85%RH has no condensation.
Storage environment	Temperature	-10℃~60℃
Board size	485.6mm×338.5mm×78.7	
Net weight	3.7kg	
Outer packing size	515×130×380mm	
Gross weight of product	5.2 Kg Description: Including wire, accessories	
Packing mode	3 PCS /box	
Accessory	1 × power cord, 1 × USB2.0 cable, 1 × HDMI cable, 1*DVI cable, 1*DP Cable, 1 × certificate	

*Current and power consumption may vary depending on factors such as product usage, environment, and settings.

6.3 Video source Characteristics

Input Interface	Color Depth		Maximum input resolution
HDMI1.4	8bit	RGB4:4:4	3840x2160@30Hz
		YCbCr4:4:4	
		YCbCr4:2:2	
HDMI2.0/DP1.2	8bit	RGB4:4:4	3840x2160@60Hz
		YCbCr4:4:4	
		YCbCr4:2:2	
DVI	8bit	RGB4:4:4	1920*1200@60Hz
		YCbCr4:4:4	
		YCbCr4:2:2	
VGA	8bit	RGB4:4:4	1920*1080@60HZ

7 Precautions

- High voltage hazard: This product operates at AC 100V~240V.
- Do not allow liquids or metal fragments and other conductive materials to enter the device, to prevent safety accidents.
- Please use the device in a dry and clean environment.

National after-sales services hotline: 400-881-3531

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