MVB4S

2IN1 Video Processor

Specification V4.0

CONTENT

1 Update Records

Document Version	Hardware Version	Release Time	Update Record
V4.0	MVB4S（V6.0）	July 23(th), 2025	First release

2 Product Introduction

MVB4S is an easy-to-operate and feature-rich device that specially developed for LED displays. The maximum load of a single device 2.50 million pixels, the regular version supports a maximum width of 3840 pixels, and a maximum height of 1920 pixels; It supports high-definition multi-type interface input, integrates professional display control technology and powerful video processing capabilities, and it simplifies the scene environment to build a video processor.Using high-performance image processing chip; with advanced interlaced image adaptive processing technology and ultra-clear noise reduction engine, eliminating video image motion smearing and jagged phenomenon, the video image enhancement technology makes the image clearer and more detailed, rich in details, and full of colors , Image quality is stable.

3 Product Characteristics

3.1 Improve the display effect

- Multiple input interfaces
  - 2 × HDMI1.4 video signal input
  - 1 x DVI input
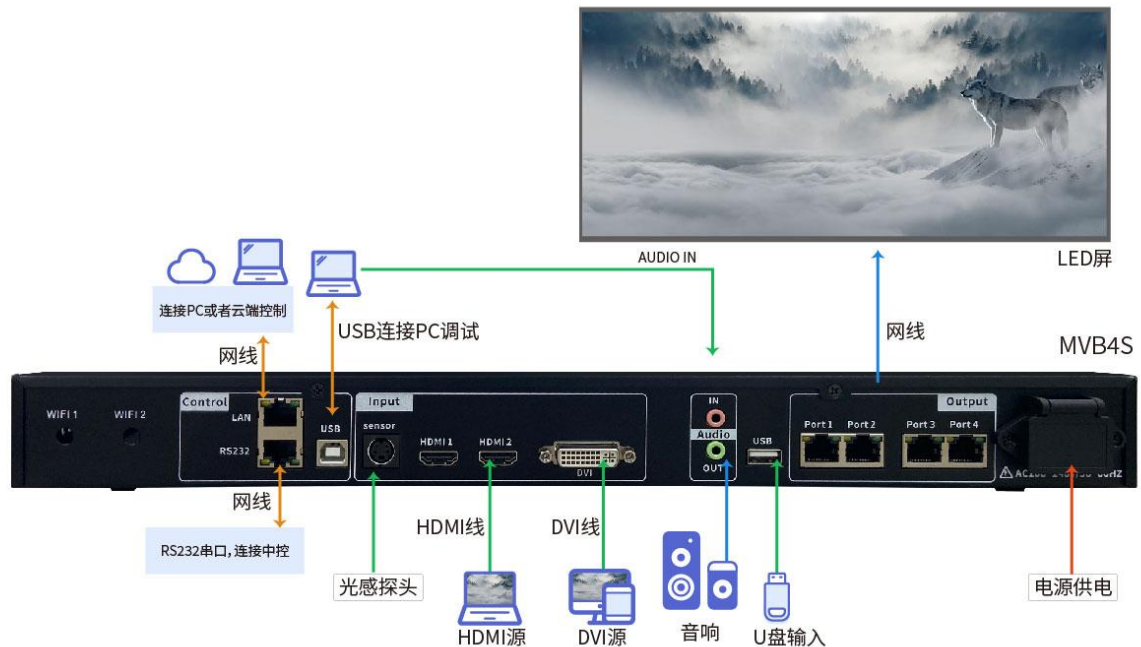 - 1 x USB 2.0 input
  - 1 x Sensor

- EDID, Support custom EDID management

- Output interface

  - 4 gigabit network ports

  - Maximum load 2.50 million pixels, custom output resolution, regular version maximum width 3840, maximum height 1920, FPGA scaled version supports maximum width/height 7680.

- Audio interface: Support audio input and output

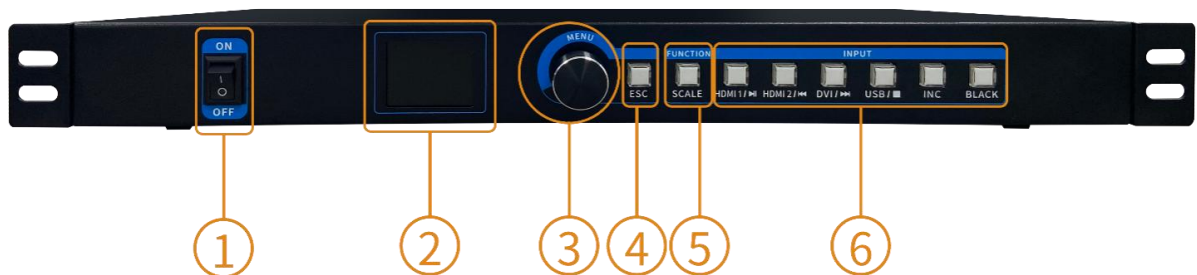## 3.2 Diversified Display Function

- Support U disk playback, plug and play

- It supports 3 zoom modes: Full Screen Zoom, Pixel-to-Pixel Display and Custom Zoom

- It supports seamless switching or fade-in and fade-out between multiple signal input channels to enhance and present professional-quality presentation pictures.

- It supports the quick screen connection, with very simple operation,the screen configuration could be completed.

- The intuitive LCD display interface on the front panel and clear button light prompts simplify the control operation of the system.

- It support to create 8 user scenes as templates, save them and call them directly, which is convenient to use.

- It supports to adjust the positions and sizes of the window and also the window capture function is supported.

- it supports external independent audio input and output.

- The output resolution could be user defined(custom the resolution)

- The Input EDID could be user defined (customized)

- It supports the synchronous switching of the video and audio.

- It supports the switching of the partial or Full Screen.

- It supports to have just one-click to get the black screen.

4 Application Scenarios

It is suitable for many application scenarios such as small and medium-sized LED displays

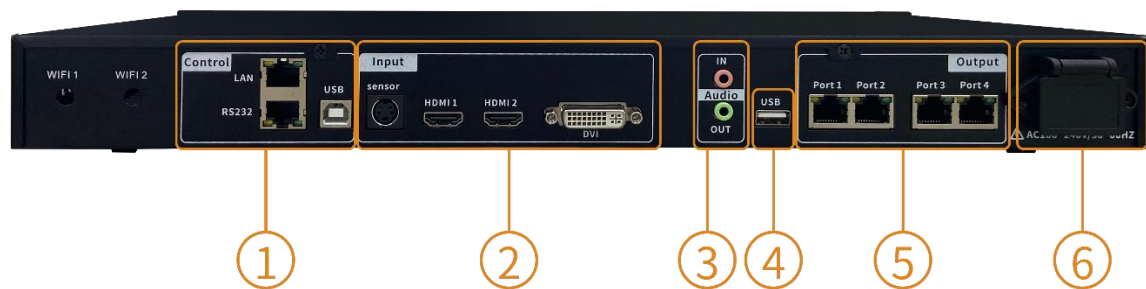in shopping malls, hotels, exhibitions, TV studios, etc.

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, and make sure to double press the knob to confirm.
4	Esc	Return(ESC)/Cancel the current menu or operation.
5	SCALE	Full Screen Scale Shortcut Key
6	Input Signal Source Key	Input Source Key Description： HDMI1/2：HDMI Source Input Key，when it is on U-Disk playing ,to press" " to pause or play the file. DVI：DVI Source Input Key, when it is on U-Disk Playing, to press the " ", to select to play the previous file. VGA：VGA Source Input key，when it is on the U-Disk playing to press the " "，to selcet to play the next file. USB：External Media Playing，U Drive Disk Playing Input -INC: 1, short press the key, INC indicator light fast flash, the sending card has been patrolling the receiving card offset; INC indicator light fast flash, press the key, INC indicator light extinguished immediately release the key, INC indicator light no longer fast flash, the patrol function is closed. 2, long press the key more than 3S and then release, INC indicator slow flash, the transmitter card to start inspection, inspection of the contents of the host computer configuration down all the inspection content (receiver card port offset, receiver card

parameters, transmitter card parameters). The inspection ends, and the INC indicator goes out.

3、 Press and hold the button for more than 10s and then release it, the INC indicator light will be always on, and the contents of the inspection will be cured (receiver card offset, receiver card parameter, receiver card gamma, transmitter card parameter), do not carry out any other operation in the process of curing. When curing is finished, the INC indicator goes out.

4、 The above operation is executed without connecting AutoLED.

5、 The above functions need the master control to take effect after the complex tuning screen curing data and then save the inspection parameters.

-BLACK: Black screen shortcut key

Rear Panel

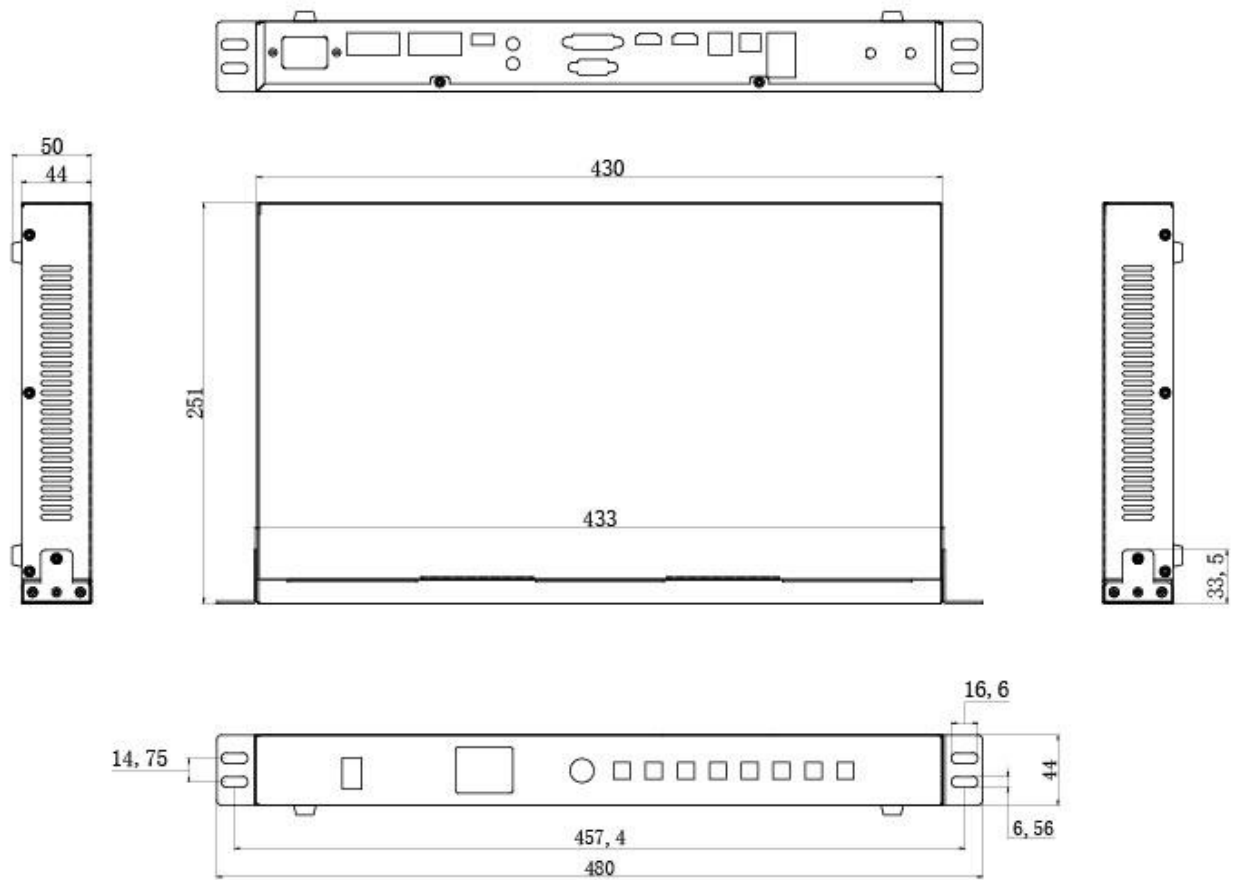*Product images are for reference only. The actual product shall prevail upon purchase.

Input Interface			
#	Interface Type	QTY	Illustration
2	HDMI	2	HDMI1.4 Standards ,maximum supports 3840×2160@30Hz resolution. Video Source Input ， Downwards Compatible.it supports HDCP1.4.
	DVI	1	VESA Standards.Maximum supports 1920×1200@60Hz resolution video source input ， downwards compatible.
	Sensor	1	Sensor Interface

| 4 | USB | 1 | 1×USB 2.0 Port，to connect to the U Disk，it supports 1080p@30fps Video File.
U Disk File Format Supported:NTFS 、 FAT32 and FAT16，exFAT （FAT64）is not supported.
Image Format：jpg、jpeg、png and bmp。
Video Code ： MPEG1/2 ， MPEG4 ， Sorenson H.263 ， H.263，H.264(AVC1)，H.265(HEVC)，RV30/40，Divx， Xvid
Video bit rate：4000 or less.
Audio Coding：MPEG1/2 Layer I ， MPEG1/2 LayerII ， MPEG1/2 Layer III，AAC-LC，VORBIS, PCM and FLAC |

AUDIO Interface

#	Interface	QTY	Illustration
3	Audio in	1	3.5mmAudio Interface Input
	Audio Out	1	3.5mmAudio Interface Output

Control Interface

#	Interface Type	QTY	Illustration
1	LAN	1	100M Ethernet Port, Reserved Port
	RS232	1	Serial Port
	USB	1	Configure Port to connect to the PC

Output Interface

#	Interface Type	QTY	Illustration
5	Network Port	4	4 Gigabit Ethernet port output connectors to the receiver 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.
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	2.50 million Pixels
Output Resolution	Pixels are controlled within 2.50 million points Widest: 3840 Highest: 1920 When the horizontal pixels exceed 1920, the vertical pixels must be within 1080 When the vertical pixels exceed 1080, the horizontal pixels are controlled within 1080, and the limit common resolution 1080 × 1920@60HZ	
Input Resolution	Maximum support 3840x2160@30Hz resolution video source input, backward compatible	

6.1.2 FPGA Scaled Version

Loading capacity	Single network port	The maximum load is 655360 pixels, and the network port load is 1280 × 512.
	Whole Unit	2.50 million Pixels
Scale window size (output resolution)	Pixels are controlled within 2.50 million pixels Widest: 7680 Highest: 7680	
Input Resolution	Maximum support 3840x2160@30Hz resolution video source input, backward compatible	

6.2 Specification

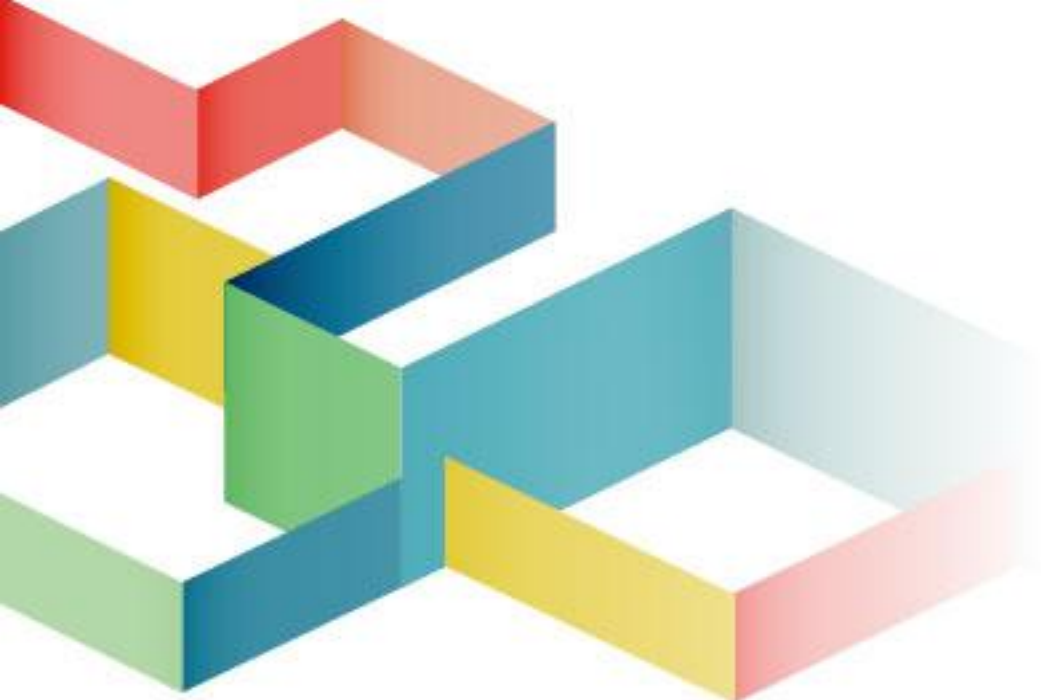|		
Electrical parameters	Input voltage	AC-100-240V-50/60HZ
	Rated current	11W
Working environment	Working temperature	0℃~50℃
	Working humidity	5%RH~85%RH has no condensation.
Storage environment	Temperature	-10℃~60℃
Board size	480mm×251×44mm	
Net weight	2.61kg	
Outer packing size	515×135×360mm	
Gross weight of product	3.8 Kg Description: Including wire, accessories	
Packing mode	3 PCS /box	
Accessory	1 × power cord, 1 × USB2.0 cable, 1 × HDMI 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	3840×2160@30Hz
		YCbCr4:4:4	
		YCbCr4:2:2	
DVI	8bit	RGB4:4:4	1920×1200@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.

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