



Shenzhen Mooncell Electronics Co., Ltd

2IN1 Led Video Processor Series

MVB4SV Product Specifications

1 Product Overview

Product Introduction

MVB4SV is a synchronous and asynchronous video processor launched by Mooncell, which integrates asynchronous network player, video processor and sending card. Support real-time signal input, synchronous processing and transmission. At the same time, it also supports 1 × VGA, 1 × DVI, 1 × HDMI, 1 × USB3.0, 1 × USB-OTG, 2 × USB2.0 synchronous signal input, and also supports full high definition signal input; the asynchronous network player supports LAN control and cloud platform control, and users of Windows/iOS/Android systems can use wired, WIFI or device hotspots to connect; the device supports plug-and-play of U disk video and pictures.

And it supports hardware quick debugging screen, which greatly simplifies on-site debugging steps. The output supports 4 Gigabit Ethernet ports, 1 × DVI LOOP ring out, and a single machine carries 2.60 million pixels. The widest resolution of the whole machine can reach 3840 horizontally and 1920 vertically.

Product Features:

MVB4SV supports synchronous and asynchronous video playback control, which can be switched with one click. Synchronization adopts the industry's top image processing chip, and the internal C adopts 12-bit digital processing, which makes the image clearer and richer. Advanced interlaced moving image adaptive processing technology can effectively eliminate video image motion trailing and jaggling. Compared with ordinary PAL/NTSC video, the output image is clearer and more delicate, rich in detail, and the image quality is at the industry's leading level.

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



2 Function Introduction

✧ **Input and output:**

- ✧ 4 Ethernet Ports for Outputs, 2.6 Million pixels could be uploaded, the single Ethernet Port could upload 650 thousand pixels; widest horizontal resolution :3840/ vertical:1920.
- ✧ It features multiple video input interfaces: 1×VGA, 1×DVI, 1×DVI LOOP, 1×HDMI, 1×USB3.0, 1×USB-OTG, 2×USB2.0.
- ✧ It has the independent audio input, audio separation output.
- ✧ It supports instant switching between multiple signal input channels or fade in & fade out.
- ✧ It supports user-defined EDID and management.

✧ **Image processing**

- ✧ Support dual-screen display function (HDMI, DVI can display dual-screen at the same time), which can realize picture-in-picture, and the size can be adjusted;
- ✧ It has the functions of graphic overlay, cutout synthesis, etc., and can realize the effect of subtitle overlay and image synthesis;
- ✧ It can support point-by-point scaling of the input image according to the display resolution;

✧ **Asynchronous playback and control:**

- ✧ Support video, pictures, text, weather, clock and other programs;
- ✧ Support multi-window playback, freely set the window size and position and support window overlay;
- ✧ Support point-by-point scaling of input images according to display resolution;
- ✧ Support mobile phone, PAD, PC program editing and control, user end point support Android & IOS system
- ✧ Support Ethernet, WIFI, hotspot or 4G mobile network connection;
- ✧ Cloud platform cluster management, and program release;
- ✧ Support U disk program import and playback and U disk plug and play;
- ✧ Support planning tasks, timing program playback, timing brightness adjustment;
- ✧ Use quad-core 64-bit processor with 22nm advanced process, up to 1.8GHz main frequency
- ✧ Integrated ARM Mali G52 2EE graphics processor
- ✧ OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1 support
- ✧ Integrated NPU with performance up to 0.8 TOPS, supporting popular AI frameworks such as TensorFlow, PyTorch, ONNX, Keras and Caffé
- ✧ Achieve 4K@60fps H.265/H.264/VP9 video decoding and 1080P@100fps H.265 video encoding, 1080P@60fps H.264 video encoding, support 8M ISP and HDR
- ✧ Android 11.0, Wi-Fi5, BT5.0, with BLE support
- ✧ 2GB RAM, supports 16GB/32GB/64GB/128GB/256GB eMMC module, 16MB/32MB SPI Flash

✧ **Other Functions**

- ✧ Support timing signal switching, timing brightness adjustment;
- ✧ Support multi-machine cascade splicing;
- ✧ Support device voltage and temperature self-detection, support engineering time lock, and support cloud platform management;
- ✧ Support True Color OSD display
- ✧ Any Position Display
- ✧ Mixing Content Support
- ✧ Various display effects
- ✧ Fully transparent: display OSD without affecting the background.
- ✧ Opaque: The OSD covers the entire underlying background.
- ✧ Translucent: the OSD is still clearly visible but the background is still blurred.
- ✧ Has the functions of graphic overlay, cut synthesis, etc., and can perform subtitle overlay effects and image synthesis
- ✧ Using advanced technology T6 processing chip, independent Gamma adjustment and interactive audio-video synchronization
- ✧ Uses 12-bit digital processing for clearer images and richer colors

3 Product Parameters

Basic Parameters

Loading Capacity	1 Network Port	650 thousand pixels
	1 unit (entire unit)	2.6 million pixels
The Widest Loading Pixel	Entire Unit: 3840	
The highest Loading Pixel	Entire Unit: 1920	

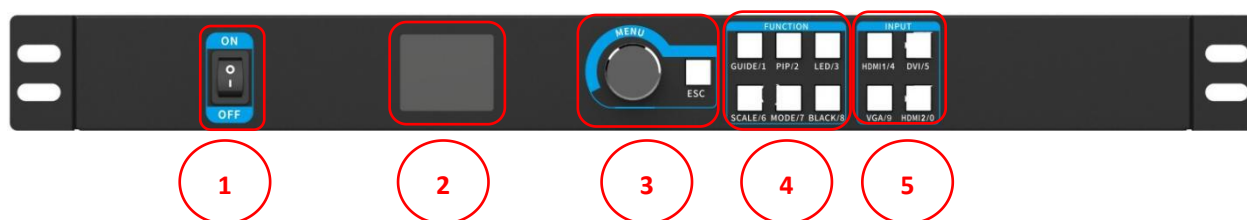
Asynchronous pager parameters

Video Format	MP4, MPG, MKV, 3GP, WEMB and other common video formats
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Audio	MPEG-1 Layer III, AAC etc
Image Format	Support jpg, png, gif, etc
Text Display	Single-line text, static text, multi-line text, etc
Multi-Window	Support any partition of the program window, support any stacking of windows, support video, picture, scrolling subtitles, LOGO, date and time; the screen can be freely divided and arranged
OSD Support	Support true color OSD, can be displayed in any position, in addition to support video, pictures, text mixing, and support for completely transparent, opaque, translucent and other effects.
RTC Clock	Support digital clock and analog clock display
Network Communication	LAN/WiFi/4G
Program Update method	U disk can import programs; U disk is plug and play; programs can be updated through end point network or cloud platform
User End Point Management Device	PC, Android, iOS and other intelligent end point devices, cloud platform remote management
Timed Playback	Support playback according to the program plan

Hardware Introduction

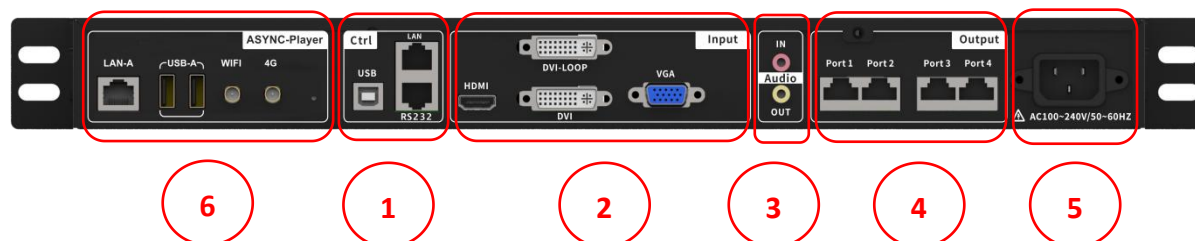
Front Panel



Front Panel Illustration		
#	Buttons	Illustration
1	Power ON/OFF	Device Power ON/OFF
2	LCD	It displays the operation menu.

3	Operation Button(Rotate Knob)	Rotate to choose the menu operation ESC Key.
5	Inputs Source Switching Buttons	Input Source and Test Signal
4	Function Buttons	Dual Pictures Quick Switch Button Partial and Full Display Switching Button Picture Capture Quick Switch Button Brightness LED Settings

Rear Panel



Asynchronous Player Interface

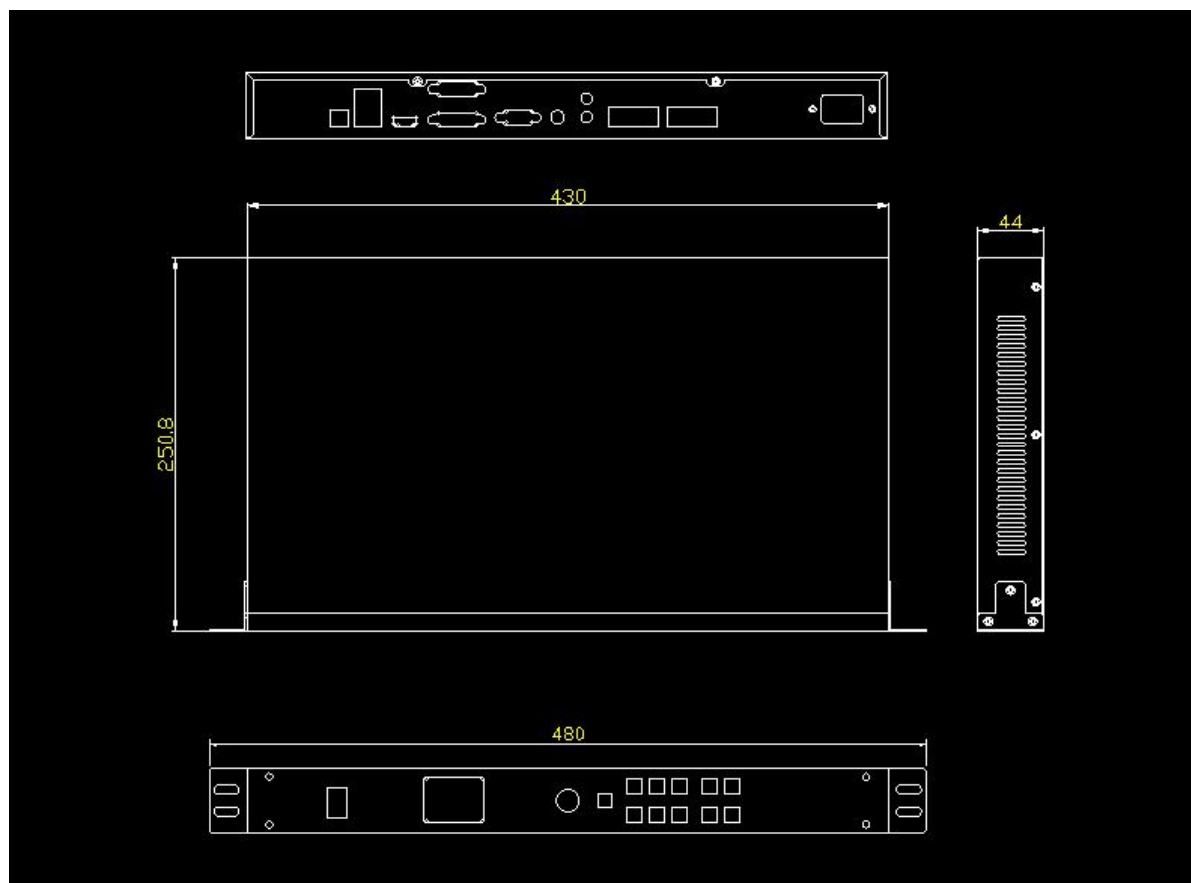
#	Interface Type	QTY	Illustration
2	LAN-A	1	Asynchronous player network cable interface
	USB-A	2	USB interface of Asynchronous player, which can be connected to a U disk to play videos or pictures of the U disk root directory
	WIFI	1	2.4G WIFI antenna interface for asynchronous player
	4G	1	Mobile 4G network antenna interface for asynchronous player (optional 4G module is required)

Power Interface

#	Interface Type	QTY	Illustration
2	HDMI	1	Signal Standards : DVII.0HDMI1.3 Downwards Compatible ; Resolution Supported : VESA Standards 1920x1200
	DVI	1	Signal Standards : DVII.0HDMI1.3 Downward Compatible; Resolution Supported : VESA Standards 1920x1200
	VGA	1	Signal Standards: Analog RGB; Resolution Supported : VESA Standards

			1920x1200
	HDMI(built in)	1	Signal Standards : DVI1.0HDMI1.3 Downward Compatible; Resolution Supported : VESA Standards 1920x1200
Output Interface			
#	Interface Type	QTY	Illustration
4	Gigabyte Ethernet Port	4	Interface Type: RJ45 Transferring Speed: 1000BaseTX Output Resolution: Widest 3840, Highest 1920; Entire 2.6 Million Pixels Supported Receiving Card: Mooncell All Series Receiving card and multifunctional card
AUDIO Interface			
#	Interface Type	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	2	100M Ethernet Port, Reserved Port
	RS232	1	Serial Port, Reserved Port
	USB	1	Configure Port to connect to the PC
	Wifi	2	
Power Interface			
#	Interface Type	QTY	Illustration
5	Power Interface	1	AC 100V~240V

Dimensions:



4Product Specifications

Specifications

<i>Electric Parameters</i>	<i>Input Voltage</i>	<i>AC-100-240V-50/60HZ</i>
	<i>Rated Power</i>	<i>20W</i>
<i>Operating Environment</i>	<i>Operating Temperature</i>	<i>-20°C - 70°C</i>
	<i>Operating Humidity</i>	<i>10%RH-90%RH No Solidification</i>
<i>Dimensions</i>	<i>480 x 250.8 x 44 mm(Length x Width x Height)</i>	
<i>Net Weight</i>	<i>3.6KG</i>	
<i>Contour Dimension of Pac</i>	<i>515×130×355mm</i>	
<i>Gross weight (including packaging)</i>	<i>4KG</i>	

Precautions

1. *High voltage danger: The working voltage of this product is AC -100V~240V.*
2. *It is forbidden to immerse conductive objects such as liquids and metal fragments into the equipment to avoid safety accidents.*
3. *Please use the equipment in a dry and clean environment.*