VIDEO PROCESSOR
TWV4

01 APPEARANCE

Model: **TWV4**

02 INTRODUCTION

➤ The TWV4 all-in-one controller is a pure hardware device that is easy to operate. It features different types of high-definition input connectors and integrates professional LED screen control technologies and video processing capabilities, making on-site installations effortless. Designed with an industrial-grade casing, the TWV4 is well-suited for complex operational environments and can be widely used in applications such as malls, hotels, exhibition sites and TV studios.

03 FEATURES

➢ **Five input connectors**

• 1x DVI

• 1x HDMI1.3

• 1x VGA

• 1x USB

• 1x CVBS

➢ **4x Gigabit Ethernet ports**

• Max loading capacity: 2.6 million pixels

• Max width: 3840 pixels

• Max height: 1920 pixels

➢ **Easy screen configuration**

• Quick configuration to easily configure the LED screen

• LED screen color adjustment, such as brightness and Gamma

➢ **Layer adjustment**

• Adjustable layer position and size, and input cropping supported

• Personalized image scaling: Full screen, pixel to pixel and custom

• Press input source buttons to easily switch between the input sources.
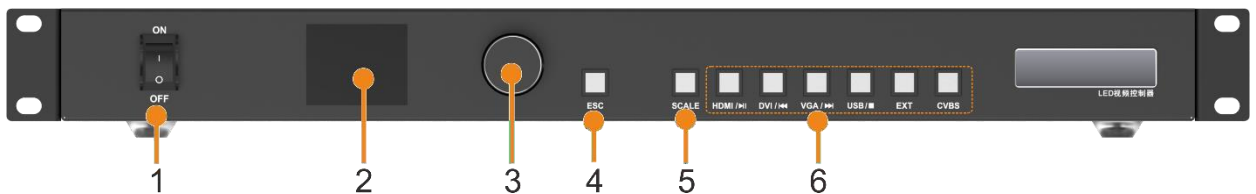
➢ **External independent audio**

➢ **Input resolution management supported**

➢ **Supports custom and standard input resolutions of the HDMI and DVI connectors.**
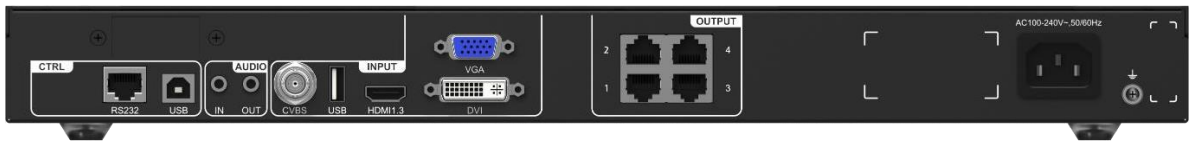
➢ **Easy preset saving and loading**

Up to 6 user-defined presets

➢ **Connect to the central control device via RS232 protocol.**

04 FRONT PANEL

NO.	Area	Function
1	Power button	Power on or power off the device.
2	LCD screen	Display the current device status and settings menu.
3	Knob	• Rotate the knob to select a menu item or adjust the parameter value. • Press the knob to confirm the setting or operation.
4	ESC button	Exit the current menu or cancel an operation.
5	SCALE	A shortcut button for the full screen function. Press the button to make the layer of the lowest priority fill the entire screen.
6	Input source buttons	• Description for input source buttons: – HDMI: HDMI input source button When you play the media files saved in the USB drive, this button is used to pause or play the files. – DVI: DVI input source button When you play the media files saved in the USB drive, this button is used to play the previous file. – VGA: VGA input source button When you play the media files saved in the USB drive, this button is used to play the next file. – USB: Reserved button When you play the media files saved in the USB drive, this button is used to stop the playback of the file. – EXT: Reserved button – CVBS: CVBS input source button • Status LEDs – On: An input signal is accessed and used. – Flashing: The input connector is used, but no input signal is accessed. – Off: The input signal is not used.

REAR PANEL

| Connector	Qty	Description
Input Connectors		
DVI-D	1	• VESA standard video inputs with the resolution of 1920×1080@60Hz • Custom resolutions supported • HDCP 1.4 and EDID 1.4 supported • Interlaced signal inputs supported
HDMI 1.3	1	• HDMI 1.3, VESA standard • Supports 1920×1080@60Hz video inputs. • Custom resolutions supported • HDCP 1.4 and EDID 1.4 supported • Interlaced signal inputs supported
VGA	1	Input resolution up to 1920x1080@60Hz, downward compatible
CVBS	1	PAL/NTSC standard video inputs
USB (Type A)	1	1x USB 2.0 • Connect to a USB drive. • 1080p@30fps video files supported • File system: NTFS, FAT32 and FAT16 (supported), exFAT (FAT64) (not supported) • Supported image formats: jpg, jpeg, png and bmp • Supported video coding: MPEG1/2, MPEG4, Sorenson H.263, H.263, H.264 (AVC1), H.265 (HEVC), RV30/40, Divx and Xvid • Supported audio coding: MPEG1/2 Layer I, MPEG1/2 Layer II, MPEG1/2 Layer III, AAC-LC, VORBIS, PCM and FLAC
AUDIO	2	Analog audio input and output

06 REAR RANEL

Connector	Qty	Description
Output Connectors		
RJ45 Ethernet ports	4	4x Ethernet output connectors ● Connect to the receiving cards. ● Max. loading capacity: 2.6 million pixels ● Max. width: 3840 pixels ● Max. height: 1920 pixels
Control Connectors		
ETHERNET (RS232)	1	Connect to the central control device.
USB (Type B)	1	Connect to the control PC for program updating or debugging.

07 HOME SCREEN

07 PRODUCT SPECIFICATIONS
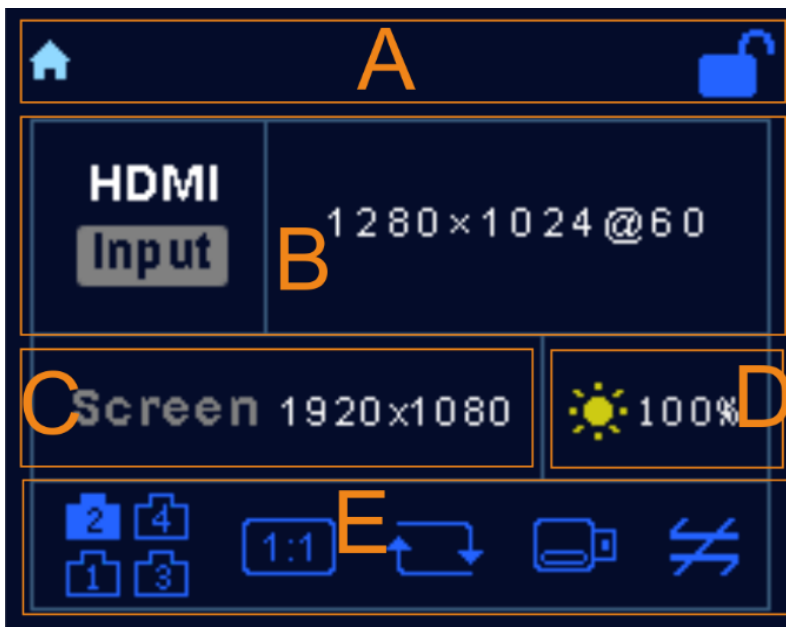
Area	Icon	Description
A	🏠	The device home screen
A	🔒	The front panel is locked.
B	Input	The input source and resolution
C	Screen	The loaded screen resolution
D	☀	The screen brightness, 0% (black) to 100% (brightest)
E	1	The Ethernet port is not connected.
E	1	The Ethernet port is connected.
E	1	The Ethernet port serves as the backup output port.
E	⛶	The function of full screen display is turned on.
E	1:1	The function of pixel-to-pixel display is turned on.
E	▭	The function of custom scaling is turned on.
E	1↱	Loop playback of a single file (USB playback).
E	↱↳	Play the files in order (USB playback).
E	▱	The USB drive is not inserted.
E	▰	The USB drive is inserted.
E	⦿	The device is connected to the control PC via a USB port.
E	⇄	The device is not connected to the control PC.

08 SUPPORT REMOTE CONTROL DEVICE

Remote control device for scheduling playback on LED screens	
CPU	Quad Core ARM Cortex A53
GPU	Mali G31 MP2
Flash	EMMC 4GB
Sdram	2GB
OS	Android 9
Support	H265 Main10@L5. 1 decoder up to 4K@60fps or 6K@30fps
USB	1 Type-A USB 3.1 Gen1 and 1 High speed USB 2.0
Displayport	HDMI port and Type-c port ,Support double screen
Card Reader	Micro SD cards, Maximum support 64G (Not included)
High Definition Video Output	4K (4096x2160 pixel)
Lan/Ethernet	10/100/1000M standard RJ-45
Wireless	2.4G /5G dual-band Wifi, IEEE 802.11 a/b/g/n/ac
Bluetooth	V4.1
Audio	MP3, AAC, WMA, FLAC, Ogg
Image	HD JPEG BMP GIF PNG TIF
Mouse/ Keyboard	Support mouse and keyboard via USB;Support 2.4GHz wireless mouse and keyboard via 2.4GHz USB dongle
HDMI	HDMI 2.0a for 4k @ 60Hz
4G Chip	ZXIC 7520V3
Wifi Chip	Realtek 8189
Lan Chip	IC+ IP101
Power Input	AC100V ~240 V 50/60Hz
Power Consumption	50W
Storage Environment Temperature	0°C~50°C

09 DIMENSIONS
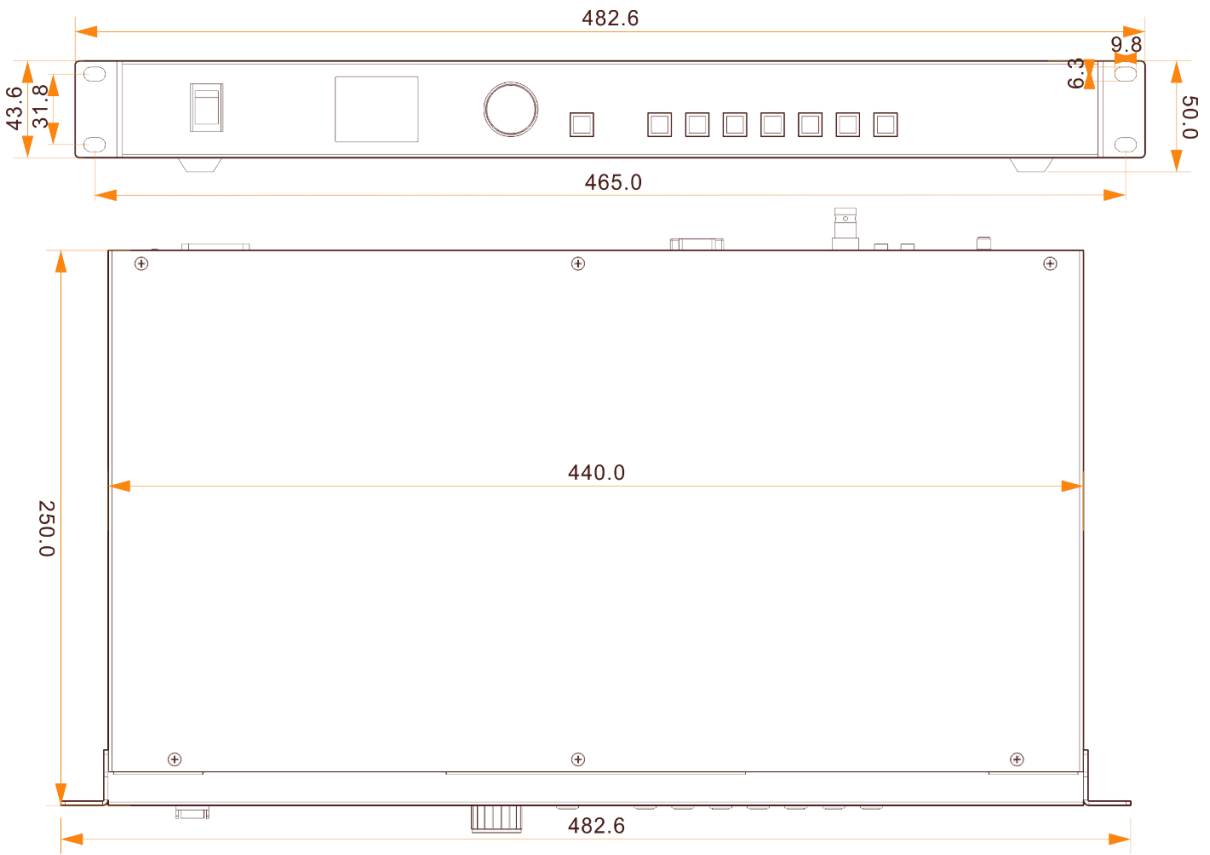
10 APPLICATION
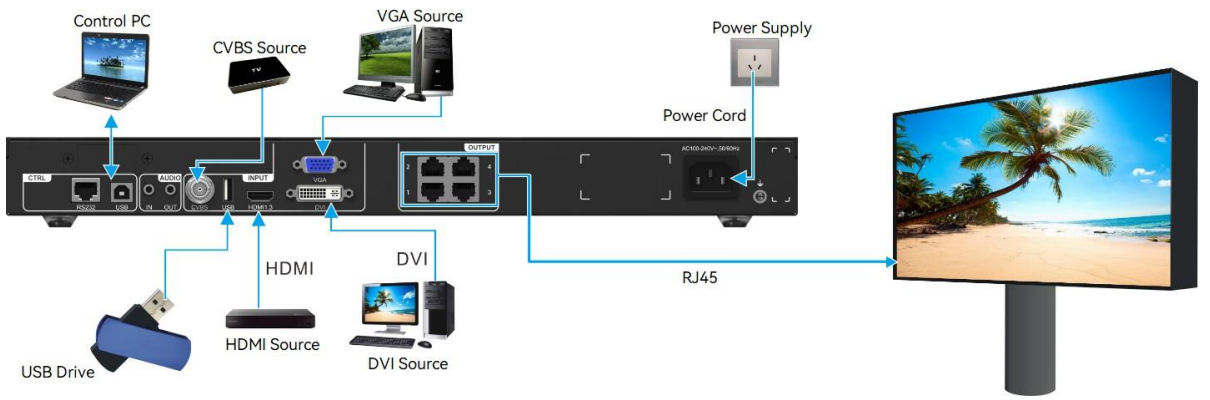
11 SPECIFICATIONS

Overall Specifications		
Electrical Parameters	Power connector	AC 100-240V, 50/60Hz
	Rated power consumption	25 W
Operating Environment	Temperature	−20°C to +60°C
	Humidity	20% RH to 90% RH, non-condensing
	Storage humidity	10% RH to 95% RH, non-condensing
Physical Specifications	Dimensions	482.6 mm × 250.0 mm × 50.0 mm
	Net weight	2.82 kg
	Total weight	5.1 kg
Packing Information	Packing box	565 mm× 328 mm × 88 mm
	Accessories	1x Power cable, 1x USB cable, 1x DVI cable, 1x HDMI cable, 1x Certificate of Approval
	Large Outer Case	586 mm × 353 mm × 113 mm
Noise Level (typical at 25°C/77°F)		38 dB (A)

12 SPECIFICATIONS

Input Connectors	Bit Depth		Max. Input Resolution
HDMI 1.3	8 bit	RGB4:4:4	1920×1080@60Hz
		YCbCr4:4:4	
		YCbCr4:2:2	
		YCbCr4:2:0	Not supported
	10 bit	RGB4:4:4	1920×1080@60Hz
		YCbCr4:4:4	
		YCbCr4:2:2	
		YCbCr4:2:0	Not supported
	12 bit	RGB4:4:4	Not supported
		YCbCr4:4:4	
		YCbCr4:2:2	
		YCbCr4:2:0	
DVI	8 bit	RGB4:4:4	1920×1080@60Hz

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