LED SCREEN SOLUTIONS VP1000 LED Video Processor User Manual

Contents

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Safety Notes
There are important operation and maintenance instructions in this manual. Be aware of electric shock from dangerous voltage.

Attention

- Read Manual·User must read and understand all safety and operation instructions before using.
- Save Manual·User should keep the safety instructions for future reference.
- Obey Manual· User should comply with all safety and operation instructions on the manual.

Warning

- **Power supply:** The device can only use the power cable packed with the product. The device must be powered with ground wire power supply system. The third wire (ground wire) is a security facility that should not be ignored.
- **Remove power:** Pull out the power from the device safely.
  Power cable protection · Wiring properly to avoid trampling or heavy-weight extrusion.
- **Maintenance:** All maintenance must be carried out by certified maintenance personnel. There are no parts that are allowed being replaced by the user. In order to avoid electric shock, do not try to open the device cover to repair it personally.
- **Ventilation:** The ventilation holes are used to prevent overheating of the sensitive elements. Do not block the hole with anything.
- **Statement:** The product specifications and information mentioned in this manual are for reference only, if there is any update, we would not give a special notice unless there is a special agreement. The manual is only used as operation instruction. All statements and information in this manual do not constitute any form of guarantee.

Trademark

VGA and XGA are registered trademarks of IBM company.

- VESA is the trademark of the Video Electronics Standards Association.
- HDMI and High-Definition Multimedia Interface are trademarks of HDMI Licensing LLC.

Chapter One Product Brief

Model	Input Interface	Output Interface
VP1000	DVI*1,HDMI*1,VGA*1,CVBS*2, SDI*2(Optional),USB*2(Optional)	DVI*2, VGA*1
VP1000PLUS	DVI*1,HDMI*2,DP*1,VGA*1,SDI*2(Optional),USB*2(Optional)	DVI*2, DVI*1 (Backup)
VP6000PRO	DVI*2,HDMI*1,VGA*2,CVBS*2, SDI*2(Optional),DVI LOOP*1	DVI*2, VGA*1
VP9000	DVI*2,HDMI*4,VGA*2,CVBS*2, DVI LOOP*1	DVI*2, DVI*2 Backup
VP9000PLUS	DVI*2,HDMI*2,VGA*2,CVBS*2	DVI*4, DVI*4 Backup
VS2000	DVI*1,HDMI*1,VGA*1,CVBS*2, SDI*2(Optional),USB*2(Optional)	DVI*1, LED OUT*2
VS4000	DVI*1,HDMI*1,VGA*1,CVBS*2, DVI LOOP*1 SDI*2(Optional),USB*2(Optional)	DVI*1, LED OUT*4
VXP1000	DVI*1,HDMI*2,DP*1,VGA*1,SDI*2(Optional),USB*2(Optional)	DVI*2, DVI*1 (Backup)
VXP9000	DVI*1,HDMI*2,DP*1,VGA*1,SDI*2(Optional),USB*2(Optional)	DVI*2, DVI*2 Backup
VXP4K	DVI*1,HDMI*2,DP*1,VGA*1,SDI*1(Optional)	DVI*4, DVI*4 Backup

Tips Interfaces are not the same among these models, but their functions are very similar. The manual here take VXP1000 and VXP9000 as example to illustrate. Products may be updated in the future,so all pictures in this

manual is for reference only. If you have any questions,feel free to contact our sales team.

Product Features

- VP series are basic models, that focus on cost-effectiveness, and support regular 1080P input.
- VS series are 2 in 1 model, that focuses on convenience, and build in sending cards already.
- VXP series are 4K series, focus on high performance, support RGBCMY color calibration and to rotate images at 90°, 180°,270° or mirror horizontally/ vertically, and support sRGB/AdobeRGB/BT709/DCI_P3/BT2020/DI-COM color space etc.

1. **KNOB** Press the knob to enter the menu or confirm. Rotate the knob to select or adjust the parameter.
2. **OK** Press OK to enter the menu or confirm.
3. **Return** Press RETURN to return back to the upper menu.

FUNCTION AREA

- **TEMPLATE**: There are 10 templates available,to rotate knob or press shotcuts number 0-9 to switch templates.Different template contains different window numbers and splicing types.
- **PIP** : Press to open another window as PIP(picture in picture).
- **LOAD**: Load scene preset.
- **SAVE**: Save processor settings as scene preset.
- **PART/FULL**: Need set input crop area in front. Then press to switch between part and full input picture. Light on means part picture mode and light off means full picture mode.
- **SWITCH**: Press to select among windows, input area light will blink(means available) ,then press the blink key of input area to switch to certain input source.
- **GUIDE**: Press to enter guide mode, then step by step to set splicing mode and size parameters according to the distribution of the sending card and pixels being controlled by each sending card.
- **SIZE/POS**: Press to enter window setting,then select a window to adjust size and position.
- **CROP**: Press to enter crop setting, then select a window to adjust size and postition of crop area. Crop acts just like screenshot but dynamic.
- **FREEZE**: Press to freeze the output, and press again will back to normal.
- **BLACK**: Press to black the output,press again will back to normal.

1. **INPUT SIGNAL/ WiFi / TEST:** INPUT : DVI*1, HDMI*2,DP*1, VGA*1, USB/SDI*2 (Optional).
2. **WiFi:** Quickly enable wireless projection access.
3. **TEST:** Press to enter the test mode. Rotate the knob to select multiple patterns to test screen quality.
4. **USB Update:** Upgrade the software by U disk, then do a factory reset and restart.
5. **AC Power Switch:** Switch power on and off.
6. **LCD Screen:** Display menu and working status information.

Back Panel Diagram

1. 220V Power Socket
2. **Square USB:** PC control interface.

3. **RS232:** Central control interface.

Input Interface	Description	Remark
DP	1 DP input	
DVI	1 DVI input	
HDMI	2 HDMI input	
VGA	1 VGA input	
SDI	2 SDI input	Optional
USB	2 USB input	Optional

Audio input and output interface

Output Interface	Description	Remark
DVI1-A DVI1-B DVI2	3 DVI output	VXP1000
DVI1-A DVI1-B DVI2-A DVI2-B	4 DVI output	VXP9000

Sending Card Slot	Remark
3 sending card slot	VXP1000
4 sending card slot	VXP9000

Electrical Parameters

DVI Video input

- **Interface:** DVI-I interface
- Standard signal DVI1.0, compatible with HDMI1.4
- Support resolution VESA standard, PC to 3840×2160
- SHD to 2160p30

HDMI Video input

- **Interface:** HDMI-A
- Standard signal DVI1.0, compatible with HDMI1.4
- Support resolution VESA standard, PC to 3840×2160
- SHD to 2160p30

VGA Video input

- Connector DB15
- Signal standard R,G,B,Hsync
- **Vsync:** 0 to1Vpp±3dB (0.7V Video+0.3v Sync)
- **75 ohm black level:** 300mV Sync-tip:0V
- Support resolution VESA standard,PC to 2560×1600

SDI input(Optional)

- Connector BNC
- Signal standard SD/HD/3G-SDI
- Support resolution 1080p 60/50/30/25/24/25(PsF)/24(PsF)
- 720p 60/50/25/24 1080i 1035i 625/525 line

Audio input

- Connector 3.5mm audio interface
- Signal standard audio interface

DP Video input

- Connector Displayport
- Signal standard PAL/NTSC 1Vpp±3db (0.7V Video+0.3v Sync)
- 75 ohmSupport resolution VESA standard, PC to 3840×2160
- SHD to 2160p30

USB input (Optional)

- Connector USB Type A
- Signal standard USBdifferential
- Support resolution 720p/1080p /2160p

Audio output

- Connector3.5mmaudio interface
- Signal standard audio interface

Dimensions

Chapter Two System Connection Diagram

Tips Please switch off the power while plugging in cables.

Chapter Three Menu

Main Interface

The LCD displays as below when power on

Operation interface works as below:

Status Switch	Trigger Condition
Main Interface> Main Menu	Press OK or KNOB
Main Menu-> Main Interface	Press RETURN or keep no action more than 60S
Main Menu-> Lower Menu	Press OK or KNOB
Lower Menu-> Adjust Value	Press OK or KNOB,rotate the KNOB to adjust value
Apply the Value	Press OK or KNOB

Tips

- Menus are similar,but may not be exactly the same.
- Menus may be updated in the future,so all menus here is for reference only. If you have any questions,
- feel free to contact our sales team.
- For example,you cannot enter USB,WiFi,WAN without U series extension.

Output Setting

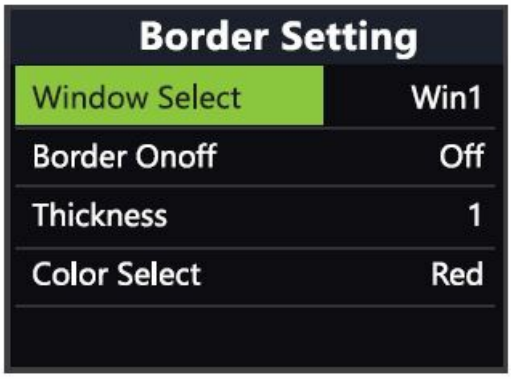
Output Resolution: Main Menu -> Output Setting -> Output Resolution -> Set Resolution (Customized or Standard Resolution)

Tips:

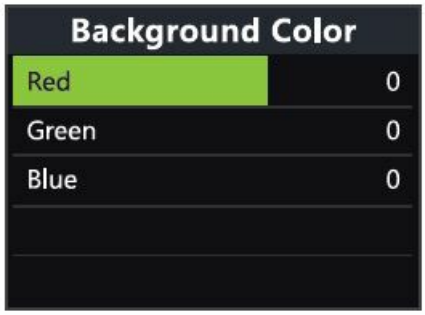
1. The output ports DVI1A and DVI1B are duplicated,so actually DVI1= DVI1A+DVI1B.
2. Need to set coordinates for DVIB sending card on sending card software to splice DVI1.
3. Some models only support set DVI1 & DVI2 as same output,so better arrange DVI1 area bigger than DVI2 area. Use template to splice DVI1 & DVI2 together,then adjust the size of the window according to the actual pixels of the LED screen.
4. Some models support set DVI1 & DVI2 separately,then select template to splice.

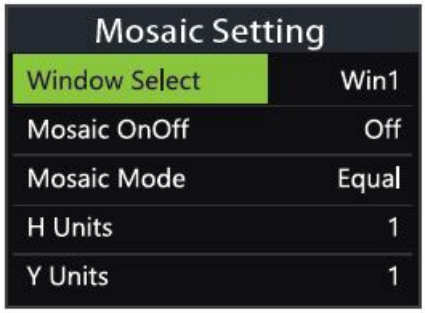
For Example
The processor output resolution setting to: 1792*960. In the window settings, change the horizontal width to 2560 and the vertical height to 960.

Border Setting : You can set border color and thickness for each window.

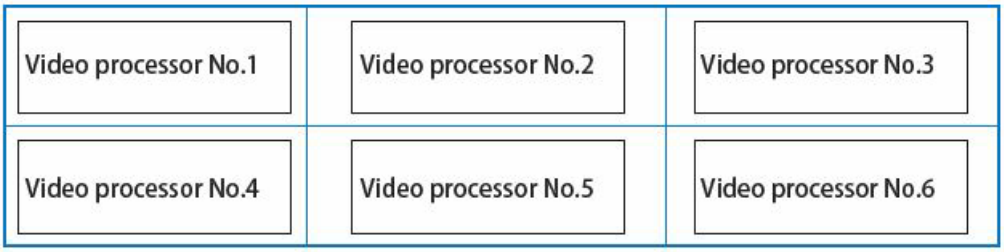


Background Color: If there is no signal input, the screen will display the background color, and the user can freely adjust the background color RGB parameters.
Mosaic Setting: For large LED screens when a single device is unable to control, may need to use a multi-machine mosaic as a splicing solution. Support both equal splicing and unequal splicing modes.

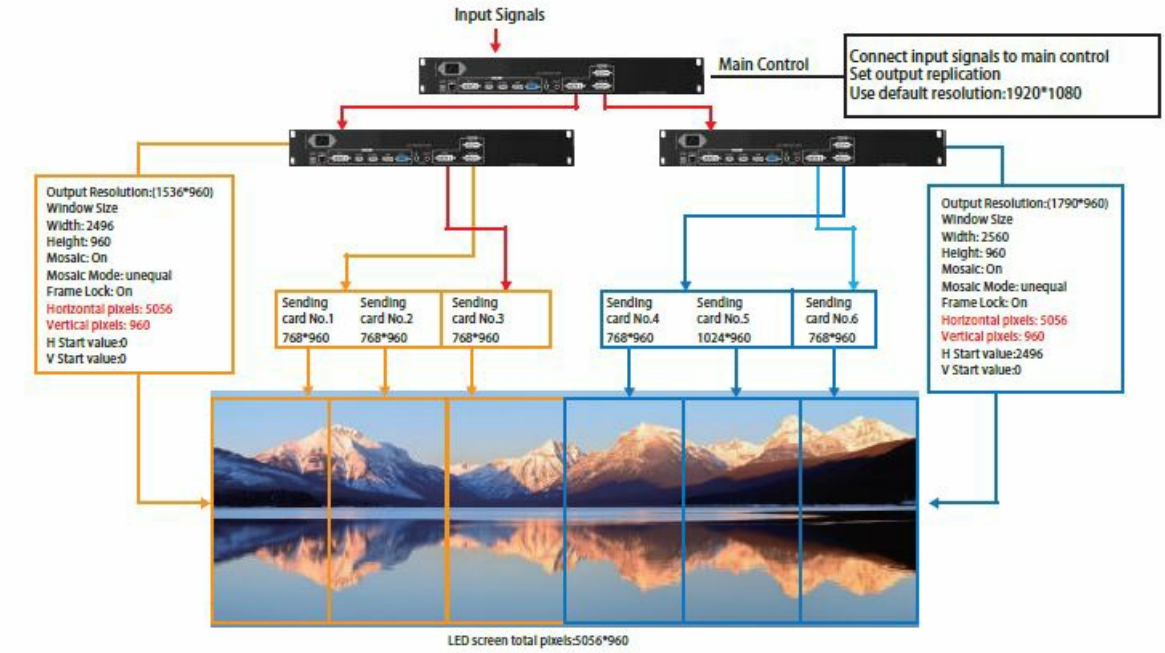




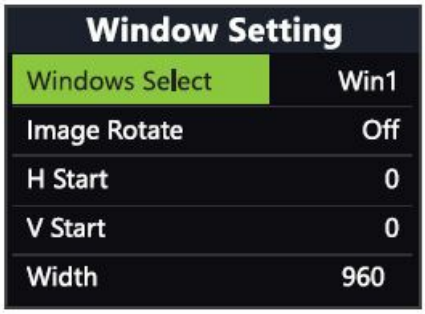
Equal Splicing: If multiple processors control the same pixels in width & height. Then you can use equal splicing mode, only need to set units and position accordingly.



Unequal Splicing: If multiple processors control different pixels in width & height. Then you can use unequal splicing mode. Set the total pixels in width and height (that is pixels of the whole screen) , then set the H Start and V Start, Width, and Height of each processor to complete the splicing.

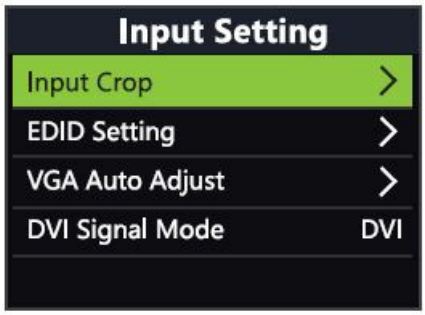


Window Setting



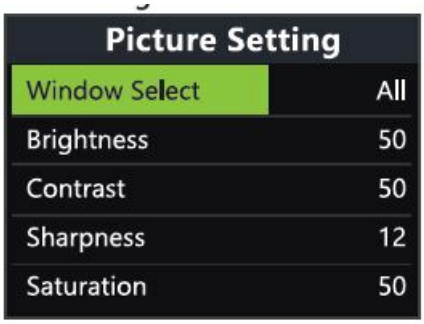
Window Setting: According to actual pixels, set the size and position of each window.
Tips: Some models do not support image rotate

Input Settings



Input Crop: Select window to adjust size and postition of crop area. Crop acts just like screenshot but dynamic.
EDID Setting: The resolution of the input source can be modified to achieve the dot to dot effect.
VGA Auto Adjust : VGA is analog signal. Sometimes the picture displayed maybe slightly offset.Press the VGA button and hold for 1 seconds to perform auto adjustment to make the screen display in full picture normally.

Picture Setting

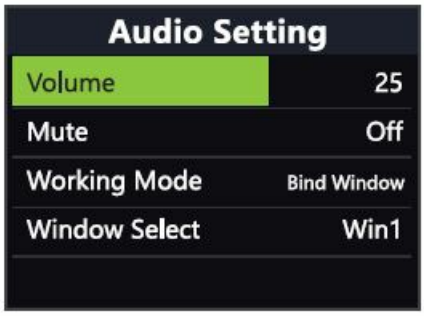


Picture Setting: Main menu ->Picture Setting-> Window Select (certain window or all windows) to adjust the brightness, contrast, sharpness, saturation, hue etc. (Hue and saturation only work for YUV signals)

Template & Scene

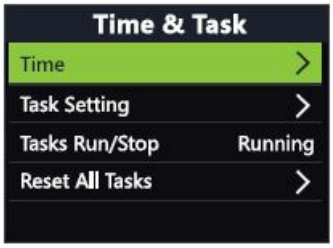
Load Template: There are 10 templates available,to rotate knob or press shotcuts number 0-9 to switch templates. Different template contains different window numbers and splcing types.
Load Preset: Load scene preset.
Save Preset: Save processor settings as scene preset.

Audio Setting



Volume: Adjust volume level.
Mute Close the audio output channel.
Working Mode: Sound can bind to window or follow input switch.

Time & Task

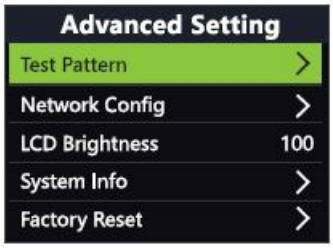


System Time : Main Menu-> Time & Task->Time
Task Setting : Main Menu-> Time & Task-> Task Setting
Tips: Make sure there is battery inside video processor,or the data will miss when power off.

USB.WiFi.WAN

Very powerful function inside, but only works with USB extension models.

Advanced setting



- **Test Pattern:** Test screen picture quality.
- **Network Config:** You can set the IP address of the processor, which can be used for central control.
- **LCD Brightness:** Adjust LCD brightness.
- **System Info:** Check software and firmware version.
- **Factory Reset:** Recover to factory default settings.
- **Keypad Lock:** Lock the keypad to prevent miss touch.
- **Brightness Lock:** Lock brightness to prevent miss touch.

Switch Input Source

Press to switch select among windows,input area light will blink(means available), then press the blinking key of the input area to switch to the certain input source. Some inputs may conflict with each other, and cannot be used at the same time.

VGA Auto Adjustment

Press the VGA button and hold for 1 second to perform auto adjustment.

Lock Keypad: Press  key for 2 seconds to lock or unlock keypad.

Freeze & Black

- Press  key, light on means output frozen, light off means normal output.
- Press  key, light on means to black the screen output , light off means normal output.

USB Pause/Play Back/Play Next

- **Pause** Under USB play mode, press  a key to pause.
- **Play Back:** Under USB play mode, press  the key to playback.
- **Play Next:** Under USB play mode, press  a key to play next.

Factory Reset

Main Menu->Advanced Setting->Factory Reset

U/S Extension illustration

USB Extension Include USB3.0*1,USB2.0*1,WiFi Antenna*1,WAN Port*1 Support

1. USB Play
2. APP Control
3. Wireless Projection
4. Cloud Platform Remote Control

SDI Extension Include SDI*2, SDI LOOP*1

Chapter Four Model Selection

Model	Input									Output						Function			
	Picture Input	HDMI	DP	DVI	VGA	CVBS	SDI Ex-	USB Ex-	Audio	DVI	VGA	LED OUT	DVI LOOP	Audio	Max Pixels	Max Width	Max Height	Max Layers	Picture Rotate	Time Task	Sending Card Slot
VS2000	1080P	1		1	1	2	2	2	√	1		2		√	1.3 Million	3960	2000	2		√	
VS4000	1080P	1		1	1	2	2	2	√	1		4	1	√	2.65 Million	3960	2000	2		√	
VP1000	1080P	1		1	1	2	2	2	√	2	1			√	2.65 Million	3960	2000	2		√	2
VP1000Plus	1080P	2	1	1	1		2	2	√	3				√	4 Million	3840	2048	2	√	√	3
VP6000Pro	1080P	1		2	2	2	2	2	√	2	1		1	√	2.65 Million	3960	2000	2		√	2
VP9000	1080P	4		2	2	2			√	4			1	√	5.3 Million	7920	4000	4		√	4
VP9000Plus	1080P	2		2	2	2			√	8				√	10 Million	15360	8000	4		√	4
VXP1000	4Kx2K	2	1	1	1		2	2	√	3				√	4 Million	3840	2048	4	√	√	3
VXP9000	4Kx2K	2	1	1	1		2	2	√	4				√	5.3 Million	5000	4000	4	√	√	4
VXP4K	4Kx2K	2	1	1	1		1			8					10 Million	15360	4000	4			
VM1	1080P			8						8					16 Million	30720	15360	8			

Documents / Resources

	LED SCREEN SOLUTIONS VP1000 LED Video Processor [pdf] User Manual VP1000 LED Video Processor, VP1000, LED Video Processor, Video Processor, Processor