

4K video processor

User manual V1.1

Before using this video processor, please read this manual carefully and keep it for reference in the future.

MAGNIMAGE

Statements

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Briefs

Thanks for your purchasing our LED video processor. Do hope you can enjoy the experience of the product performance. The design of the LED video processor conforms to international and industry standards. But if with improper operation, there will be a personal injury and property damage. In order to avoid the danger, please obey the relevant instructions when you install and operate the product.

Trademark credit

- VGA and XGA is a registered trademark of IBM.
- VESA is a Video Electronics Standards Association's trademark.
- HDMI, HDMI mark and High-Definition Multimedia Interface are all from HDMI.
- Even if not specified company or product trademarks, trademark has been fully recognized VESA is a Video Electronics Standards Association's trademark.

About the software

Do not change, decompile, disassemble, decrypt or reverse engineer the software installed in the product, these acts are illegal.

Features

- 4 groups of DVI outputs to mosaic
- Multiple input ports: DVI, DP1.1, HDMI1.4, SDI (3G-SDI)
- Two expanded input ports: DP1.2 (4K×2K/60Hz or 8K×1K/60Hz) and HDMI 2.0
- Different working modes are available: Mosaic mode, Backup mode
- Mosaic mode: 4K×2K/60Hz input and output pixel-to-pixel display
- Backup mode: input signal hot backup or manual backup and seamless switching between input signal or tile input
- Multi-layer output: Mosaic mode support 4 layers display and layer roaming (support layer quick setup in mosaic)
- Multi-machine cascading mosaic synchronously, and Take seamless switching
- Support image freeze image crop image zoom image rotation and so on.
- Support Customized output resolution and EDID management.
- Support Tile function and can combine any 4 (or below) 2K×1K input or any 2 4K×2K input to one input source, easy for quick use.
- HDCP1.4 & 2.2 compliant
- Touched screen operation
- Supports saving & loading of maximum 20 presets, and time tasks
- Supports setting of brightness, Gamma, contrast, saturation, color temperature etc., low light level and high gray level
- Built-in test pattern
- Supports pixel point acquisition, real-time display of RGB values of pixels at any position in the output window
- Supports PC software control, network port and RS232 connection
- Supports LOGO, chroma key function
- Supports USB upgrade

Expanded ports

The LED-W2000 is the basic model. Based on this model, it can be expanded with two 4K/60Hz inputs (DP1.2+HDMI2.0).

The expanded models are shown in the following table:

Available ex	rpanded module	Corresponding model	Description
Input	Expand one 4K/60Hz input modules	LED-W2000-DH	The 4K/60Hz input module includes one DP1.2 input and one HDMI 2.0 input+one HDMI loop out. Either DP or HDMI port is used at one time.
module	Expand two 4K/60Hz input modules	LED-W2000-2DH	The 4K/60Hz input module includes one DP1.2 input+one HDMI 2.0 input+one HDMI loop out. Either DP or HDMI port is used at one time.

Safety instructions

- Please use the correct power supply according that the power input voltage for this product range is 100 ~ 240V AC, 50/60Hz.
- When you need connect or pull out any signal or bound guideline. Please confirm that all the power supply cords have been pulled out ahead.
- When you need to add hardware device for the LED video processor, make sure all of the signals and power cables have been pulled out ahead.
- Before you operate any hardware, please turn off the LED video processor's power, and to set you on the electrostatic by touching the ground surfaces.
- Please use the processor in clean, dry and ventilated environment, not use it in the high temperature, humidity environment.
- The product is the electronic product; please stay away from the fire, water and of which is inflammable and blast, dangerous.
- This product is with high pressure components, please don't open the case or maintain it by your own.
- As there is exceptional condition with smoke, ill-smelling, please turn off the switch at once and contact with the dealers.

Function Introduction

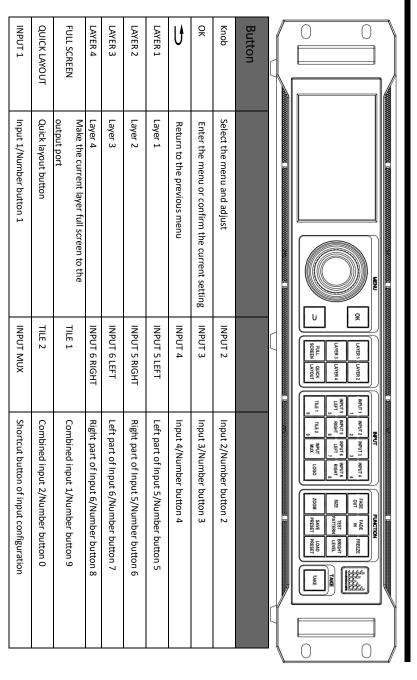
Brief

LED-W2000 series is a4K video processor which integrates multiple functions such as mosaic, switcher and multi-window display. This processor integrates various professional input ports, single input support maximum 4Kx2K/60Hz or 8Kx1K/60Hz. Because of the high-quality images, pixel display of giant resolution and flexible operation ways, it's widely used in exhibitions, business conferences, stage performances, theaters and TV stations etc.

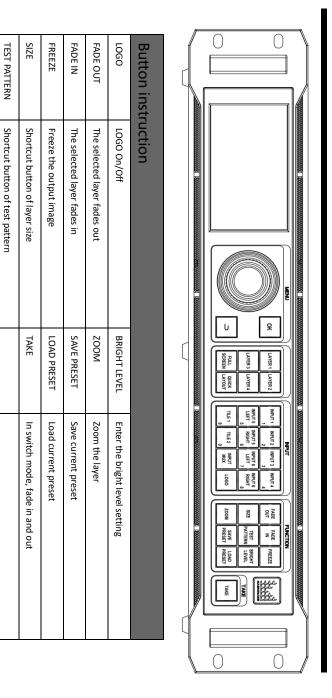
The load capacity of LED-W2000 series is several times of normal video processor, support EDID management and customized output resolution, single processor output can be maximum 8192 pixel width, refresh rate up to 120Hz, greatly improved the utilization of load capability. It also provides various regular output resolution options for scaling according to real size of LED screen.

Perfect video inputs ports, including DVIx4, HDMI1.4x3, DP1.1x4 (support 4K),SDI (3G SDI)×1, and it also allows you to expand 2 more DP1.2/HDMI2.0 inputs. It supports internet and RS232 control to link with various video equipment.

The front panel

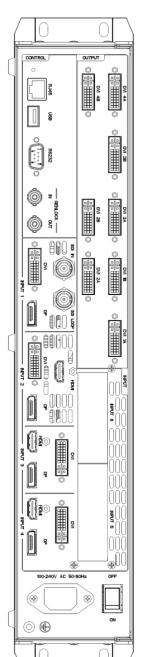


The front panel

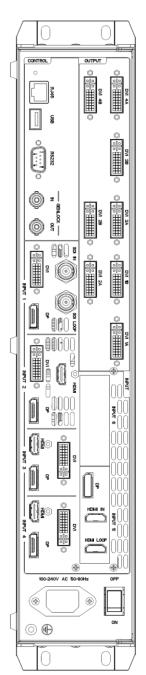


The rear panel

LED-W2000

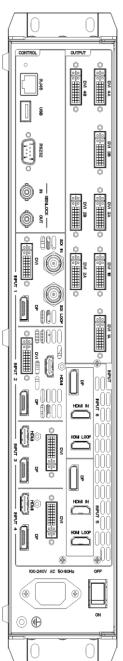


LED-W2000-DH



The rear panel

LED-W2000-2DH



Input ports		
INPUT 1	DVI×1, DP×1, SDI IN×1, SDI LOOP×1, choose one of the	
	three to use at one time	
INPUT 2	DVI×1, DP×1, HDMI×1, choose one of the three to use	
	at one time	
INPUT 3	DVI×1, DP×1, HDMI×1, choose one of the three to use	
	at one time	
INPUT 4	DVI×1, DP×1, HDMI×1, choose one of the three to use	
	at one time	
INPUT 5	DP×1, HDMI×1, HDMI LOOP×1, choose one of the two	
(expanded)	to use at one time	
INPUT 6	DP×1, HDMI×1, HDMI LOOP×1, choose one of the two	
(expanded)	to use at one time	
Output ports		
DVI 1A-DVI 1B	DVI 1 output, DVI 1A= DVI 1B	
DVI 2A-DVI 2B	DVI 2 output, DVI 2A= DVI 2B	
DVI 3A-DVI 3B	DVI 3 output, DVI 3A= DVI 3B	
DVI 4A-DVI 4B	DVI 4 output, DVI 4A= DVI 4B	

Eight outputs, divided into 2 groups. First group includes: DVI 1A/1B and DVI 2A/2B.Second group includes: DVI 3A/3B and DVI 4A/4B.

Control interface	
RJ45×1	Network cable port, control the machine by LAN
USB×1	USB upgrade port, upgrade the machine by a USB
	flash drive
RS232×1	RS232 port
GENLOCK IN×1 OUT×1	Genlock port

Technical specifications

Standard input indication		
Ports	Qty	Resolution specification
DVI	4	3840×1080/60Hz and other VESA compliant resolutions, supports EDID management
DP1.1	4	Supports 3840×1080/60Hz, 3840×2160/30Hz and EDID management
HDMI1.4	3	Supports 3840×1080/60Hz and EDID management
SDI	SDI IN×1 SDI LOOP ×1	480i/60Hz, 576i/50Hz, 720p/60HZ, 1080i/50Hz, 1080i/60Hz, 1080P/60Hz (3G SDI)

Expanded input indication			
Ports	Qty	Resolution specification	
DP1.2	DP×1	Supports 3840×2160/60Hz, 7680×1080/60Hz and customized resolution	
HDMI 2.0	HDMI×1,HDMI LOOP×1	Supports 3840×2160/60Hz and customized resolution	

One single 4K expanded module includes DP×1, HDMI×1 and HDMI LOOP×1. DP and HDMI ports are either-or used.

Output indic	ation				
Ports	Qty	Resolution specification	Resolution specification (single output port).		
DVI	4×2	1024×768/60Hz 1920×1200/60Hz 1600×1200/60Hz Rdc 1024×768/120Hz 2048×1152/60Hz 1920×1080/59.94Hz 1280×720/60Hz 1536×1536/60Hz 1920×1080/50Hz Customized output reso optimization). Horizontal resolution up to	o to 2048 pixels.		

Machine specification		
Input power	100-240V AC~50/60Hz 0.6A	
Operating temperature	0-45°C	
Dimensions	482.6×446.3×92.5mm (L × W × H)	
Net weight	6.7KG	
Power	90w	

User Menu

With the user manual, the machine can be easily set to meet the user's requirements.

The LED-W2000 series processor has a full-color single-touch LCD display to show the entire user menu. The default status will be displayed on the LCD screen when the user has no operation or the operation has timed out. If operating with the buttons on the front panel, the corresponding menu will be displayed on the LCD screen according to feedback to the user for operation better, faster and more intuitively.

In the following we will introduce the menu system of the LED-W2000 series processor with its buttons, function and the LCD display.

How to use the buttons

The front panel buttons are divided into 5 areas: MENU, LAYER, INPUT, FUNCTION and TAKE.

MENU area:

This area includes 2 buttons and 1 knob that can be pressed: OK, \Longrightarrow and knob. Short press "**knob**", its function is the same as the confirmation button (OK); Press the return button (\Longrightarrow), the system will return to the previous menu until it returns to the default state, or long press to return to the main menu.

In the main menu, the confirmation button is also used to switch between the browsing mode and the setting mode, for example:

Browsing mode		Setting mode	
Layer 1 image Brightness	50	Layer 1 image Brightness 50	1
Contrast	50	Contrast 50	
Saturation	50	Saturation 50	
Press OK button or tape the knob to switch these two modes			

In the browse mode, turn the knob counterclockwise to move the cursor to the top or left; turn the knob clockwise to move the cursor down or to the right.

Move the cursor to the item to be adjusted, press the knob or confirm button to enter the setting mode. At this time, turn the knob counterclockwise to decrease the current parameters value; turn the knob clockwise to increase the current parameters value. To continue setting up other items on this page, please switch back to browsing mode. To return to the previous menu, use the back button; If the adjustment is complete, press the return button to return to the previous menu until the default state, or wait for the system to time out, automatically return to the default state. In some special interface, the system will not automatically return to the default state, such as user mode shortcut interface, test pattern interface, etc.

LAYER area:

This area includes 6 buttons, LAYER 1, LAYER 2, LAYER 3, LAYER 4, FULL SCREEN and QUICK LAYOUT.

LAYER 1-4 corresponds to the 4 layers of the machine. Short press the button to select the screen. Press and hold the button to open or close the corresponding layer. The used one is on white, and the current selection is on red.

FULL SCREEN: Allows the currently selected layer to be full-screen with one button in the corresponding output port;

QUICK LAYOUT: Long press for 3 seconds to directly change to matrix output mode.

INPUT area:

This area includes 11 buttons: INPUT 1, INPUT 2, INPUT 3, INPUT 4, INPUT 5 LEFT, INPUT 5 RIGHT, INPUT 6 LEFT, INPUT 6 RIGHT, TILE 1, TILE 2, LOGO. Among them, INPUT 5 LEFT, INPUT 5 RIGHT, INPUT 6 LEFT, INPUT 6 RIGHT correspond to the processor's two expanded inputs. DP1.2 and HDMI2.0 will be divided into left and right parts when using inputting 4K×2K/60Hz input, which corresponding to the LEFT and RIGHT of the button.

TILE 1 and TILE 2: Quick use Tile signal, specific operating please see Tile Key configuration menu.

INPUT MUX: Shortcut button to INPUT MUX menu, configure input 1-6 separately (each group use which input port).

LOGO button: Open and close logo function.

When there is a input signal, the corresponding input key turn white. The currently selected input signal is red.

Select layer first, and then select the input signal.

FUNCTION area:

FUNCTION area includes 9 buttons: FADE OUT, FADE IN, FREEZE, SIZE, TEST PATTERN, BRIGHT LEVEL, ZOOM, SAVE PRESET and LOAD PRESET.

Buttons	Default operation
FADE OUT	Fade out the selected layer
FADE IN	Fade in the selected layer
FREEZE	Freeze current image
SIZE	Enter resize menu interface
TEST PATTERN	Open the test pattern interface
BRIGHT LEVEL	Open the brightness level adjustment interface
ZOOM	Open the layer zoom interface
SAVE PRESET	Enter the preset interface to save presets
LOAD PRESET	Enter the preset interface to load presets

Default status introduction

After power on the LED-W2000 series processor, the boot interface will be displayed on the LCD screen of the front panel during system start up. After the start-up is completed, the main interface of the current machine will be displayed as the default state, as shown below.

Figure 1 default status interface after power on.

MAGNIMAGE			
Input 1 1920×1080 DVI		DP	SDI
Input 2 1920×1080 DVI		DP	HDMI
Input 3 No Signal HDMI		DP	DVI
Input 4 No Signal HDMI		DP	DVI
Input 5 4096×2160 HDM		DP	
Input 6			
Output mode: DVI mode	Res	olution: 192	20×1080 60.00Hz
Layer1 Input1 SDI	Lay	er2 Input2 DV	
Layer3 Input3 DP	Lay	er4 Input4 HD	MI
Working Mode: Mosaic			_

Here is the instruction of the above:

	Instruction	
Input 1 1920×1080	Input 1 and current input signal resolution, the right side is the 3 input sources corresponding to input 1. For the vertical bar on the left side of each signal source, green indicates have signal, red indicates no signal. The font color of each source is divided into yellow and white: yellow means that the signal is set as the input, and white means that this signal is not set as the input (this also applies to Input 2, Input 3, Input 4, Input 5, Input 6 right side display content).	
Input 2 1920×1080	Input 2 and current input signal resolution, and the right side is the 3 input sources of Input 2.	
Input 3 No Signal	Input 3 and current input signal resolution, and the right side is the 3 input sources of Input 3.	
Input 4 No Signal	Input 4 and current input signal resolution, and the right side is the 3 input sources of Input 4.	

Input 5 4096×2160	Input 5 and current input signal resolution, the right side is the 2 input sources of Input 5. If this expansion board is not added, it will not be displayed here.		
Input 6 No Signal	Input 6 and current input signal resolution, the right side is the 2 input sources of Input 6. If this expansion board is not added, it will not be displayed here.		
Output mode	Display the current output mode of the processor: DVI mode or HDMI mode.		
Output resolution	Display the output resolution of a single DVI or HDMI output.		
Layer 1-4	Display the input signal of current layer Turns green: layer is open and used. Turns red: layer is closed or unused.		
Working mode	Display the work mode of the processor, including mosaic modeand backup mode.		
Synchronization label: W2000's inputs & o synchronized			

Main menu introduction

The sub-symbols listed in the table below will appear in the main menu. For the specific meanings, please see the following table:

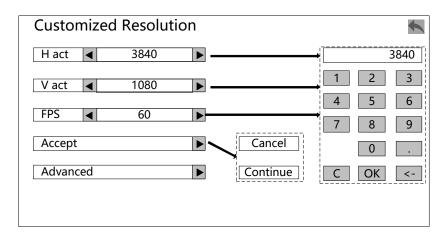
Symbol	Introduction
_	Press the back button or touch this symbol to return to
	the main interface or return to the previous menu

In the main menu, you can use " \mathbf{OK} ", " \Longrightarrow " and the knob or touch the corresponding menu to make adjustment setting. The operation mode is as follows:

Operation	Buttons		
Open the	Press the "OK" button or press the knob in default		
main menu	status.		
Select each	Rotate the knob to select each menu or touch on the		
menu	corresponding menu.		
Adjust parameters	When the right end of the item is a number or option parameters, press the knob to select the parameters whirling knob, or touch the parameters to be smaller or bigger, or touch the parameters in the pop-up numeric buttons input area for parameters adjustment.		
Go to the next menu	When the right end of the item is the " symbol, press the "OK" button or press the knob or touch the menu.		
Execute a	Use the knob to select the item to be executed, press		
function	the "OK" button or touch the function.		
Return to the previous menu	Press the "⇒" button or touch the button to return.		
Confirmation	In order to avoid misuse during resetting, you need to confirm the operation or touch click with the " OK " button.		
Menu button appears white frame	Indicates that the menu has been selected by the knob to proceed to the next step.		
Function menu font yellow	Indicates that the function menu is being used.		
Function menu font white	Indicates that the function menu is not in used.		

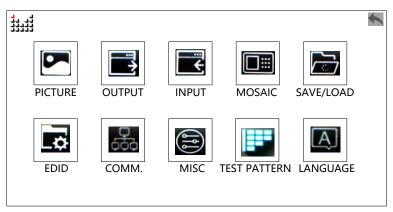
Description of the numeric keypad: for any parameters that need to be modified, in addition to pressing the knob, rotating and touching the left and right direction keys, you can also click the corresponding

parameters to pop up the numeric keypad on the screen to setup.0 to 9 indicate a number, indicates a decimal point, indicates that exiting the numeric keypad mode, indicates that the modified parameters is confirmed, indicates that backspace to delete the entered number. Thenumeric keypad is shown below.



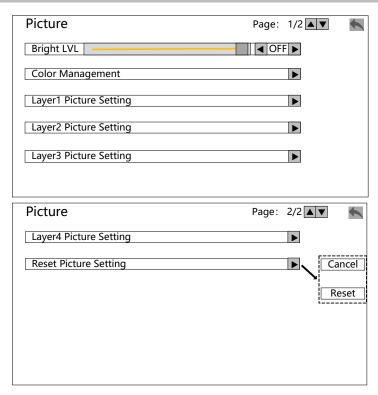
Main menu

Press "**OK**" or rotary the knob, you will enter the main menu, and the LCD screen will show as below:

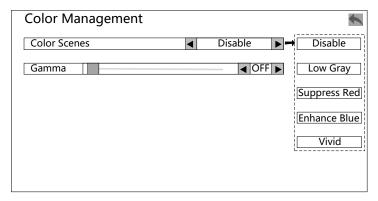


Totally 10 items, selected by rotate the knob; The color of selected item is yellow, otherwise is white; Then press "OK" enter the item, press " \Longrightarrow " to return. We can also touch the LCD screen to select the item.

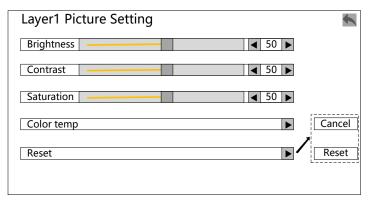
Picture setting menu



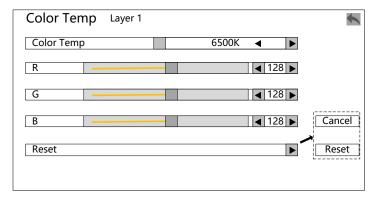
Color management:



Layer 1~4 picture setting:



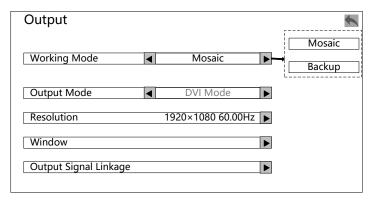
Layer 1~4 color temperature setting:



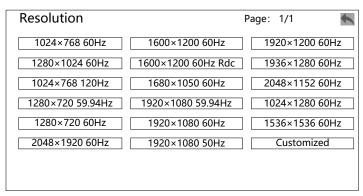
Bright LVL	Turn on/off the function, level 0~16.			
Color Management	Color Low gray, red attenuation, blue enhancement Scenes and bright, disabled by default.			
	Gamma Turn on/off,Gamma range 0.0~5.0.			
	Brightness: range 0~100, 50 by default.			
	Contrast: range 0~100, 50 by default.			
Layer 1~4 Picture Setting	Saturation: range 0~100, 50 by default.			
	"4000K", "5000K", "6500K", "7500K", "8200K" , "9300K", "1000K", "11500K", "user"9			
	Layer 1~4 options. Color Temp Red range 0~255,128 by default.			
	Green range 0~255,128 by default.			
	Blue range 0~255, 128 by default			
Reset	Reset the picture parameters to the default setting.			

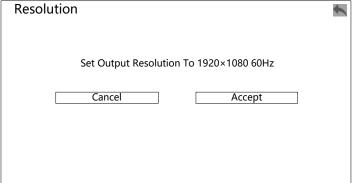
Note: The arrow point to the submenu that pops up for this option.

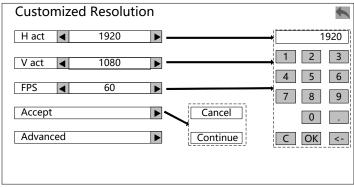
Output setting menu

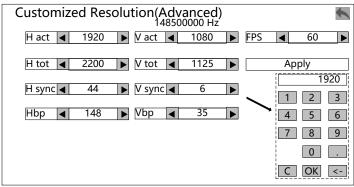


DVI mode resolution:

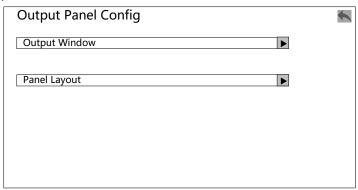


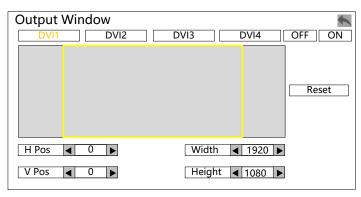


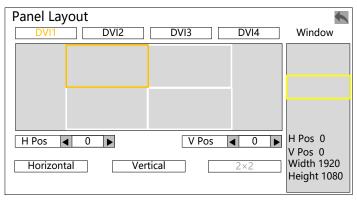




Window







	Mosaic modeand Backup mode.			
Working Mode	Mosaic mode: Support maximum 4 layers mosaic output.			
	Take DVI for example, it supports 2 inputs			
	mosaic to 3 outputs, 3 inputs mosaic to 4			
	outputs, 4 inputs mosaic to 4 outputs.			
	Backup mode: Support automatic hot backup and			
	manually backup, and multi-machine			
	backup synchronously. Support main and			
	aux output switching fade in/out.			
Output	DVI mode			
Mode	DVI mode			
	DVI mode: 17 fixed resolution and 1 customize resolution			
	(the 18 th item). When user-customize, the widest			
Resolution	resolution is 2048, the highest is 1536, maximum			
	frequency is 120 Hz, see "output indicators" for details. 2			
	group of outputs's resolution is the same.			
Window	1. Including output window and output layout two parts.			
	2. Output layout support automatic layout.			
Output	Mindow input loss the output will be out off in annivetion			
linkage	Window input loss, the output will be cut off in conjuction			

screen. If no proper output resolution, please select a bigger resolution option than the real LED screen resolution. Or we can use customize resolution, pixel to pixel with the LED screen.

For example, a LED screen resolution is 1152*960, then we can choose the option " $1280\times1024/60$ Hz". Then set the width to "1152", height is "960". If use customized resolution, just set the width and height to 1152 and 960, then the machine will offer" 1152×960 " output resolution.

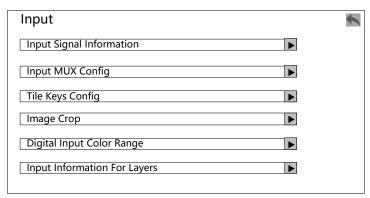
Notice 1: Arrow points to the submenu of the selected item.

Notice 2: The resolution of LED-2000's 4 groups of DVI outputs are always the same, so does 2 groups of HDMI outputs, but the size of output window can be different.

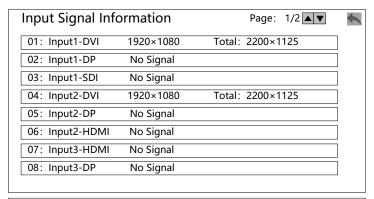
Notice 3: Please use with caution of the resolution with over 60 Hz, or super wide/high pixels, the backend device may not support this resolution.

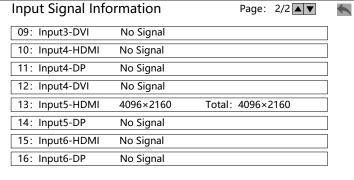
Notice 4: User-customize output resolution is not standard signal, some of the monitors may not recognize, but this does no influence to LED big screen

Input setting menu

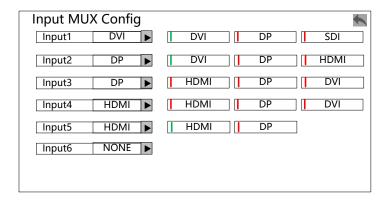


Input Signal Information:





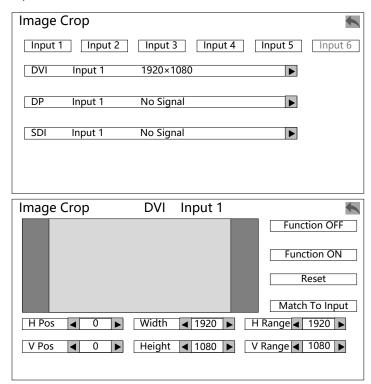
Input MUX Config: Configure each group input from which input port.



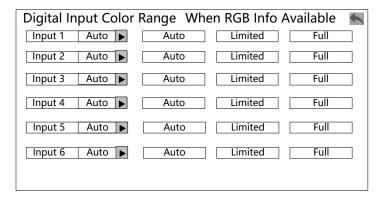
TILE Keys Config: Combine multiple input signals to a Tile.

TILE Keys C	Config				*
TILE 1	Input 1 + Input2	<u></u>			Edit
TILE 2	Undefined!				Edit
Input 1 DVI	1920×1080		Input 2 DP	No S	ignal
Input 3 DP	No Signal		Input 4 HDMI	No S	ignal
Input 5 HDM	I 4096×2160		Input 6 None		
Clear		Canc	el		Apply

Image crop:



Digital Input Color Range:



Input Information For Layers:

Input Information For Layers			
Input1-DVI	1920×1080	60.00Hz	
Input2-DP	No Signal		
Input3-SDI	No Signal		
Input4-DVI	1920×1080	60.00Hz	
	Input1-DVI Input2-DP Input3-SDI	Input1-DVI 1920×1080 Input2-DP No Signal Input3-SDI No Signal	Input1-DVI 1920×1080 60.00Hz Input2-DP No Signal Input3-SDI No Signal

	Display all the input signals' information of each input				
Input Signal	port, the content sequence — signal type — input				
Information	resolution or no signal — the bandwidth of current				
	input port.				
	By rotating knob or touching the screen to choose the				
	main signal of each input MUX. Select main input				
	signals of input 1 to input 6, corresponding to 3 or 2				
Input MUX Config	input sources on the right side. The left side of each				
	input source, green strip means valid signal, red strip				
	means no signal. White and yellow text: yellow means				
	this source is the input MUX of corresponding input,				
	white means not yet used.				
	Through Tile, multiple signal combine to one signal,				
	support 2 groups tile, Tile 1 and Tile 2. By press "EDIT"				
TILE Keys	key,there shows a choice box, we can add several				
Configuration	input signals into combination. The signal not in Tile				
J	will be showed as "Undefined",click "EDIT" to change				
	if needed.				
	All sources of input 1-6 can be cropped freely. By knob				
Image crop	or screen touching, select the input 1-6, then select				
	the source, then enter the menu of image crop to crop				
0 1	the image.				
	DVI Input 1 It means the sequence and input signal				

		under cropping.		
	Function off	Turn off the image crop function. Turn on the image crop function Reset the parameters of image crop. Match the image parameters between		
	Function on			
	reset			
	Match input			
	signal	input signal and below image crop.		
			Alter the horizontal	
		H position	position of image crop.	
		H width	Alter the horizontal width	
	Image crop parameter setting		of image crop.	
		nage crop H datum	Alter the horizontal	
		n uatum	datum of image crop.	
		V position	Alter the vertical position	
	setting	v position	of image crop.	
		V height	Alter the vertical height of	
			image crop.	
		V datum	Alter the vertical datum	
		v uatuiii	of image crop.	
Digital Input Color Range	Default to automatic, limited and full is alternative.			
Input Information For Layers	See all layers input information, including: current layer's port number, resolution, refresh information (accurately to 0.01).			
	<u> </u>	•		

Note 1: In the "Input Signal Information", after expanded the module then there shows 13-16 item; If not, no 13-16 item.

Note 2: When using Tile, all the selected input sources should have the same resolution. Tile support up to 4 sources to combine.

Note 3: When using image crop, please select input 1 to 6, then select the signal need to be cropped, in the below area.

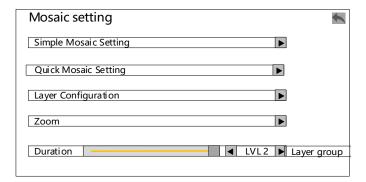
Note 4: Image crop function is selected a part of input signal, then according to the layer size output to the LED screen. So the image crop window size and position are always limited in the input signal resolution. All the setting in the table above are mutually restrictive.

About Tile key configuration:

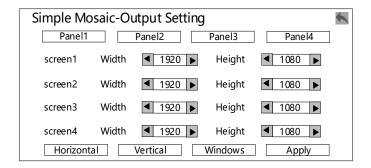
- 1. On mosaic mode and backup mode, support 4*2K×1K,2*2K×1K or 2*2K×2K range input signal combine to a Tile.
- 2. Only same resolution signals could be combined to a Tile.
- 3. Tile function only support right and left horizontal tile.

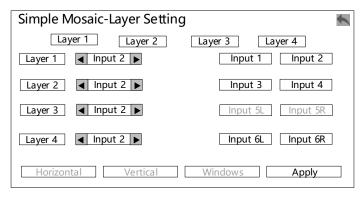
Mosaicsetting menu

Mosaic Setting menu: It has a slightly differences on mosaic mode, switcher mode, and backup mode, specific introduce as below, On mosaic mode:

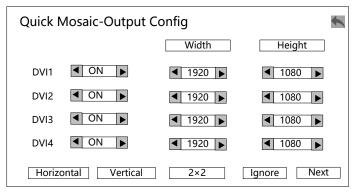


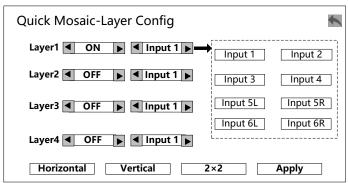
Simple Mosaic



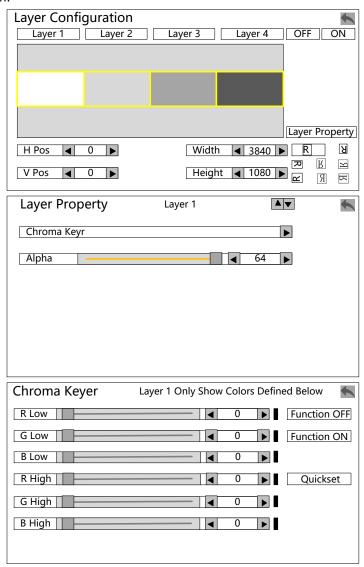


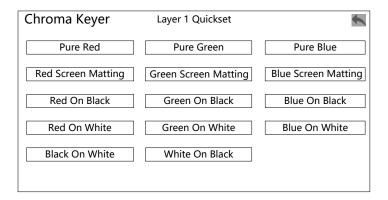
Quick Mosaic Setting (Auto layout):



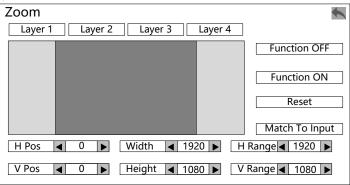


Layer configuration:manually open/close layer, modify layer's size, position, rotation.

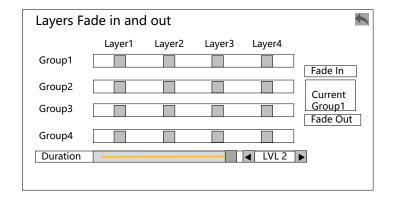




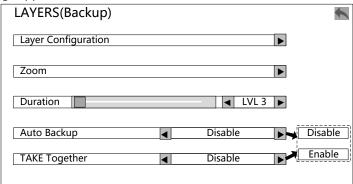
Zoom: layer zoom function.



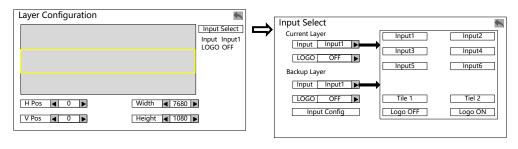
Layer Group: Layer group function



Backup mode: support automatic and manually backup, multi-machine backup synchronously, main and aux output switching support fade in/out.



Layer configuration-select input: use to main layer and backup layer select input signals.



Mosaic mode/Backup mode		Mosaic mode/Backup mode 2 types working mode should switch on: output setting-worki mode, different working mode has a slight different menu on "Layers Setting".	ng
Mosaic mode	Layer configur ation	Operating open or close any layer1 to 4 and a the layer's size, position, rotation directions. Layer Chroma Turn on/off chroma	

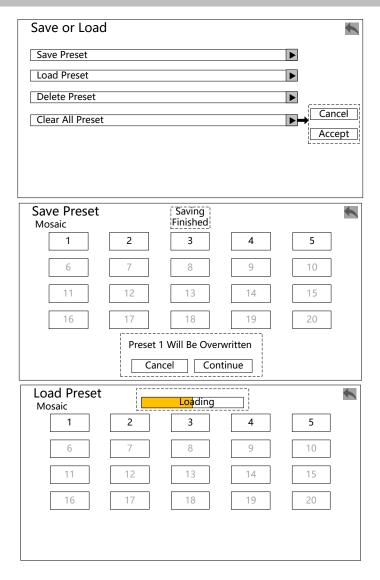
		paramet ers	key	function, and choose layer to operate buckle color, setting the range by progress bar and number key. That is, control the upper and lower limits of the Red, green, blue color, right side will display current setting, quick setting up to 14 buckle preset.
			Opaquene ss	Setting layer's opaqueness,range:0~64, whenchroma key function open, opaqueness could not adjust, and after opaqueness adjusted, open chroma key function, layer would not display.
		Layer 1~4	Select the la	ayer to operate zoom
		Function off/on	Turn off/on	the layer zoom function
		Reset	Reset the zo	oom parameters
	Zoom	Matchin	According to	o the resolution, match
	200111	g input signal	correspond datum.	ing vertical/horizontal
		Layer zooming paramet ers	Adjust zoon datum.	ning the layer's size and
	Duration	mode, def	ault LVL2, adj	uration of layers in splicing ustable LVL1 and Cut me of single layer.
Backup	Layer	Adjust laye	er size, positio	on, backup and main layers
·	·	· · · · · · · · · · · · · · · · · · ·		

Co	onfigur	size, position are al	size, position are always the same.	
ati	ion	Input coloct	Select the input signal to	
		Input select	main layer and backup layer.	
		Display/backup	Select the layer to operate	
			zooming.	
		Function off/on	Turn on or turn off the layer	
			zoom function.	
		Reset	Reset layers' zooming	
70	om		parameters	
20	,0111		According to input signal	
		Match input	resolution, matching	
		signal	corresponding horizontal and	
			vertical datum.	
		Layer zooming	Adjust layer zooming size,	
		parameters	position, datum.	
		Select the main/backup input duration on the		
Dι	uration	backup mode, default Cut, could choose LVL		
		1,LVL 2,LVL 3.		
	ıto	Function is enabled/disabled.		
Ba	ckup		·	
		The function is enabled/disabled, and mutually		
TA	ΚE	•	with automatic backup.	
То	gether	When this function is enabled. in the same		
	0	LAN, multiple W2000 support synchronous		
manually TAKE backup.			kup.	

Note 1: The factory default is the mosaic mode, DVI output; If other modes are required, switch in the output setting - working mode/output mode.

Note 2:In the mosaic mode, the layer supports 90° times rotation, but only rotates the display content inside the layer, the size of the layer does not change. On DVI output, the layer can only support rotation in a single output p, not across the output. For example, layer 1 spans the output DVI 1-DVI 2, and the rotation function is not available

Save & Load



Delete Prese	t			*	
1	2	3	4	5	
6	7	8	9	10	
11	12	13	14	15	
16	17	18	19	20	

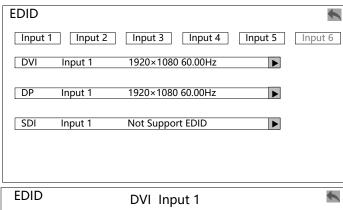
Save Preset Mosaic Shows which curre		Shows which currently saved preset is saved in	
	mode	which operating mode in this processor.	
1~20 It can save 20 presets. Selecting a sa		It can save 20 presets. Selecting a saved preset	
		will prompt whether to overwrite the preset.	
	Mosaic	Shows which currently loaded preset is loaded	
	mode	in which operating mode of this processor.	
Load Preset	1~20	It can load 20 presets. After selecting the	
Load Preset		loading preset, a progress bar will appear	
		above, indicating that the preset is loading	
		until the loading is completed.	
Delete	Delate selection the seved succet		
Preset	Delete selecting the saved preset.		
Clear All	Clear all the saved preset.		
Preset			

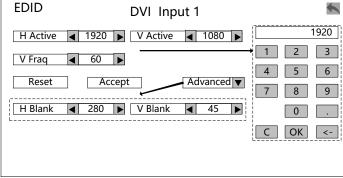
Note 1: The font of the saved preset, number key is highlighted, while, the unsaved preset, number key is gray.

Note 2: If you want to save or load the preset, pay attention to the processor's working mode. It will only save or load the preset in the current working mode.

Note 3: Clearing the preset will clear all presets of this machine, so please use this function with caution.

EDID setting





All input signals of input 1 to Input 6 can be set, except SDI. You can enter the EDID configuration detailed operation menu to set the EDID by knob selecting or input the number on touch screen.

EDID setting

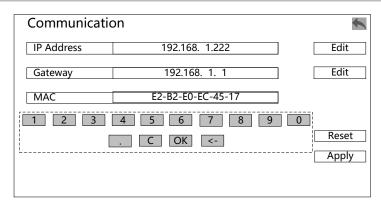
DVI Input 1	mulcates the input serial number and input		
DVI IIIput 1	signal on currently EDID setting.		
H resolution	Modify the horizontal resolution of the EDID.		
V resolution	Modify the vertical resolution of the EDID.		
Reset	Reset EDID all parameters.		
A t	Write EDID parameters to the computer		
Accept	graphics card.		
A duamas	Advanced submenu do not adjust any		
Advance	parameters in the menu without the support of		

our techn	nicians. If you accidentally modify the
_ menu, clic	ck the reset button.
H Blank	Modify EDID's horizontal blank.
V Blank	Modify EDID's vertical blank.

Note 1: When performing EDID configuration, the computer display mode needs to be set to the expanded mode.

Note 2: After setting the EDID, due to different computers and different graphics cards, it may need to restart the computer or plug in the signal cable. In the resolution output of the computer, select the corresponding resolution.

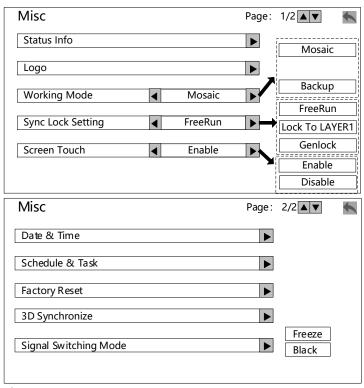
COM. setting menu



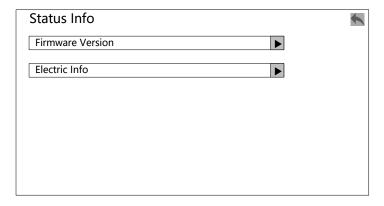
	By modifying the IP address and gateway of the
Communication	processor, it is convenient for the computer to
setting	connect to the processor through the network using
	the host computer.
	To display or modify the IP address of this machine,
IP Address	use the "knob" or "OK" button to select a number for
ir Address	editing, or click the edit button on the right to enter it
	at the lower number key.
	Display or modify the local gateway, use the knob or
Gateway	OK button to select the number to edit, or click the
	edit button on the right to enter the number below.
MAC	Shows the physical address of the machine.
Reset	Reset local IP address and gateway.
Apply	Apply modified IP address and gateway.

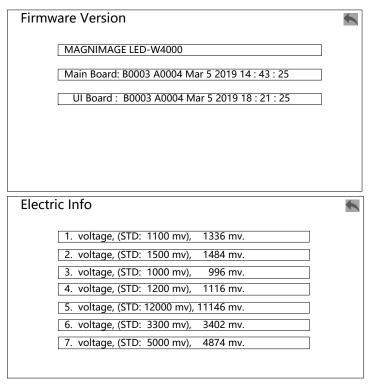
Note: If you want to use the computer to control the processor, you need to install the PC software to connect to the processor through the network. You can modify the IP address and gateway of the PC or the processor of the host computer so that the two devices are on the same network. The segment is the first three digits of the IP address and the last one is the same as the gateway, then the connection is successful.

MISC. menu



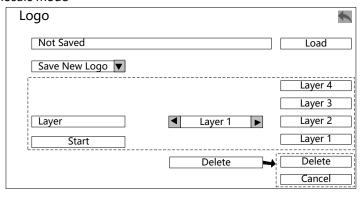
Status Info

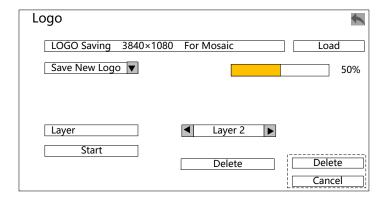




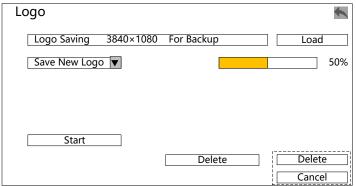
Logo: This menu is slightly different in different working modes, introduce separately as below:

1. On mosaic mode

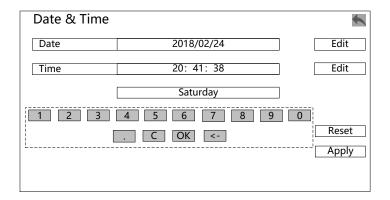




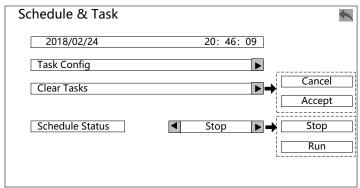
Backup mode



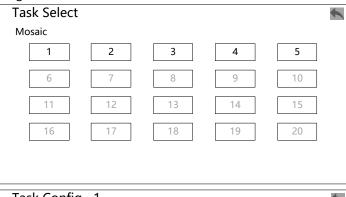
Date & Time:

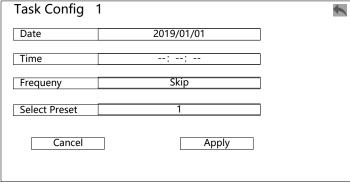


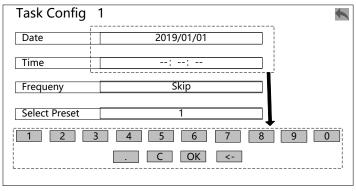
Schedule & Task:

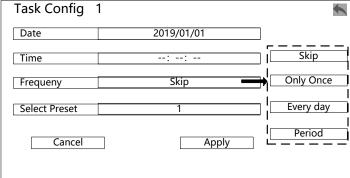


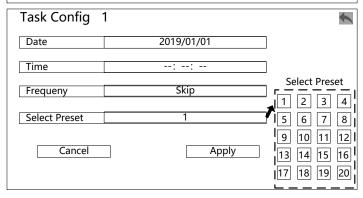
Task Config:



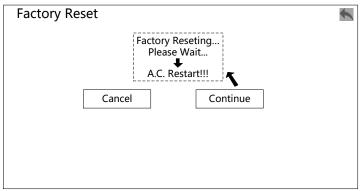








Factory Reset:



Misc. setting	Set the functions of this unit.			
Status Info	Firmwar	Displays the machine name and firmware		
	e Version	version.		
Status IIIIO	Electrical	Displays the electrical status of each part of		
	Info	the unit.		
	Save and load the Logo menu, save the output image on			
	this proces	ssor as Logo and load.		
		When the logo is not saved, it turn to logo menu, and it indicate logo not saved. The logo is being saved, the logo is displayed in the prompt box, also the resolution of the		
Logo	Not Saved	currently saved logo and the applicable working mode. After the logo is successfully saved, the prompt box displays that the logo has been loaded and displays the resolution of the currently saved logo and the applicable working mode.		
		Click Save New Logo and save the new logo		
	Save new	by following the pop-up menu.		
	logo	Start Click "start" to start saving logo.		
		Delete Click " Delete " to delete logo.		
	Modify an	d show the date and time of this machine.		
Date & Time	Edit	Click "Edit " button to edit the date and time of this machine.		
	Restore	Restore the factory default time.		
	Apply	Apply modified time.		

	Date display box	Displays the	current date of the unit.	
		Select task	Display 20 tasks in the current working mode of the machine, click the number 1~20 task that needs to be operated to enter the task setting menu.	
		Date	Select the date on which the current task performs the action.	
Schedule	Task Config	Time	Select the time on which the current task performs the action.	
& Task		Frequency	Select the frequency at the current task performs the operation: invalid, single, daily, and periodic.	
		Select Preset	Select the preset of the current task execution operation, and display the 1~20 preset saved in the current working mode. The preset font bright color indicates the saved preset, and the preset font gray indicates that the preset is not saved.	
		Cancel and Apply	Cancel or apply current task setting.	
Factory	Restore t			
Reset	A.C. Resta	the unit to the factory setting, and confirm that		

Note 1: The test chart will be rebuilt after each factory reset, just click to continue.

Note 2: Save Logo is the logo save in the current working mode of the processor, so please confirm whether the current working mode of the machine is correct before saving the logo.

Note 3: When you choose to save the logo, the mosaic mode saves the selected screen ,backup mode saves the current output. In the Layer1 screen, selecting Save Logo will overwrite the previously saved Logo.

Note 4: After clicking to start saving the logo, the machine will not be able to operate. Please wait for the logo progress bar to complete and continue with other operations.

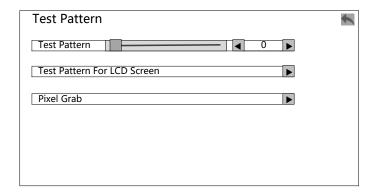
Note 5: The choice to change the date and time is mainly for subsequent schedules and task operations.

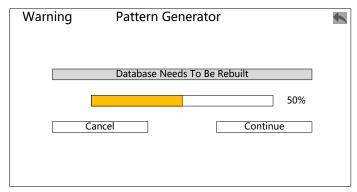
Note 6: Schedule and task When setting tasks, the date and time setting of each task should be after the local time.

Note 7: Save the preset before setting the task.

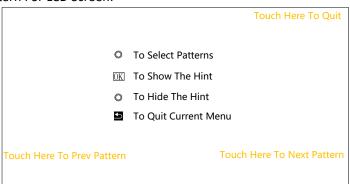
Note 8: Restoring the factory setting will erase all setting on this processor, please use with caution.

TEST PATTERN

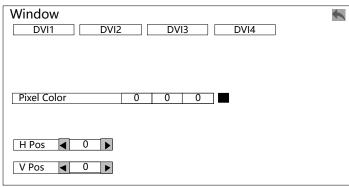




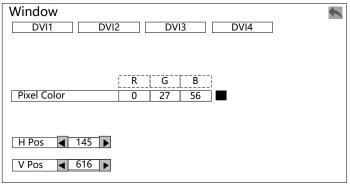
Test Pattern For LCD Screen:



Pixel Grab:



Capture selected pixel colors:



	Test Pattern	Output test image, easy to test all output ports and LED screen of this unit without input signal, range 0~111.				
TEST PATTERN		Figure card generator	The database needs to be rebuilt.	When after the processor factory reset, the submenu will pop up. Click Continue to use the card.		
	Test	Test whether the LCD panel of this unit is				
	Pattern For	displayed normally, and operate it through the				
	LCD Screen	knob or the prompt menu on the LCD screen.				
	Pixel Grab	Collect color parameters anywhere in the selected output window.				

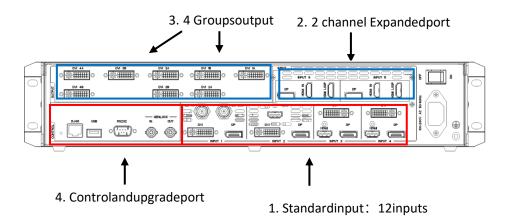
Language submenu



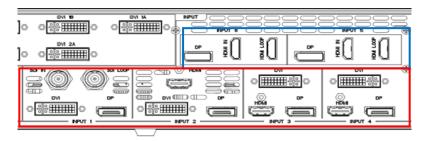
English	Set the display language of the menu system to English.
简体中文 Simplified Chinese	Set the display language of the menu system to simplified Chinese.
繁體中文 Traditional Chinese	Set the display language of the menu system to traditional Chinese.

Quick Use Instructions

The rear panel introduction



Input area port:



Standard input port (red line part): 12 channels, divided into 4groups, each group of 3 signals, choose one of three to use eachtime; Total SDI ×1, HDMI×3, DVI×4, DP×4.

Resolution specifications: SDI (3G SDI: 1080P/i and below). HDMI,DVI, DP support 4K×1K/60Hz range EDID. Expanded input (redbox): maximum supports 2 4K×2K/60Hz input boards, supports

EDID. DP supports 8K×1K/60Hz; single module includes DP×1, HDMI×1 (including 1 LOOP), Single input boards, choose one of two port to use.

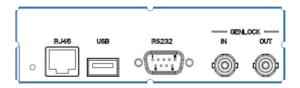
Output area port:



Output port: 8 channel, divide into 2 groups

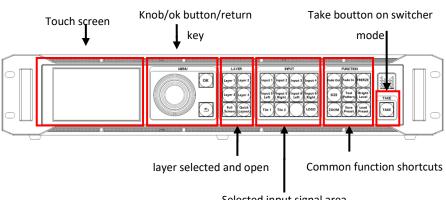
First group: DVI1A/1B、 DVI2A/2B Second group: DVI1A/1B、 DVI2A/2B

Control area:



Interface: RJ45 network \times 1, USB upgrade \times 1, RS232 interface \times 1, Genlock IN/ OUT each. Supports front panel buttons and knobs, touch screen, PC software control.

The front panel introduction



Selected input signal area

Touch screen: To prevent parameter confusion caused by accidental touch, the outermost standby interface is unavailable on. Entering any menu to continue use.

MENU area: The knob is used to select individual menu options and to enter menus, select or confirm an option. The "**OK**" button is used to enter the menu and select an option. Below "**OK**" is the return button, short press to return to the previous interface, long press for 3 seconds to return to the standby interface.

LAYER area: Layer 1/Layer 2/Layer 3/Layer 4: Corresponding to the four layers of the device, short press to select the layer, long press for about 3 seconds to open or close the layer.

FULL SCREEN: Allows the currently selected layer to be full-screen in one button in the corresponding output area.

QUICK LAYOUT: No function defined yet.

INPUT area: Input 1/Input 2/Input 3/Input 4 is equipped with four groups of signal selection buttons. INPUT 5 and INPUT 6 are two groups of expanded input selection. When these two groups of

inputs are 4K×2K@60Hz, the signal input It is divided into left and right processing, corresponding to Input 5 Left/Input 5 Right/Input 6 Left/Input 6 Right; (Input 1-4 does not divide left and right).

TILE: Combination signal selection button, up to two signal combination keys, corresponding to Tile 1 and Tile 2. INPUT MUX: Quickly enter the "Input Signal Information →"Input MUX Config" menu interface.

LOGO: Call out logo button.

Signal selection method: First select a layer (layer1-4), then select an input signal.

FUNCTION area: Fade Out & Fade In: fade-out and fade-in.

buttons of the currently selected layer. It can be used with the Tile button to set the fade-in and fade-out setting for multiple signals.

FREEZE: The button to freeze overall output image.

SIZE: Layer size and position adjustment interface shortcuts.

TEST PATTERN: Test chart shortcut.

BRIGHT LEVEL: Output brightness level shortcuts.

ZOOM: Output layer zoom shortcut. SAVE PRESET: Save template shortcut. LOAD PRESET: Load template shortcut.

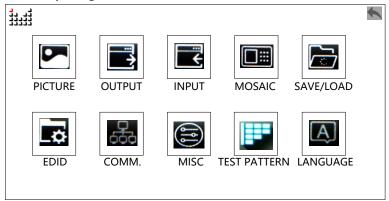
TAKE: A switch key on switcher mode/backup mode.

Input signal information, TILE function introduction

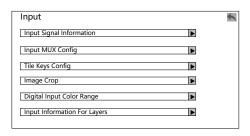
1. Input Signal Information

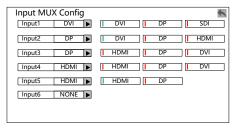
Set one of the signals in each group of inputs to be used as input (three inputs per group, choose three for one to use).

Select the "Input Signal Information" menu:



Enter the "Input MUX Config" menu option to configure the input signal.

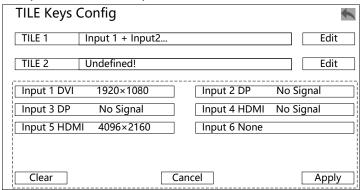




Set one of the signals in each groupas input, or press the "INPUT MUX" button on the front panel to enter the menu.

2. TILE function introduction

Multiple input sources can be spliced into one unit at the input port as a combined signal source. For example, the graphics card 3 DVI horizontal splicing output to the W2000, through Tile function, it can make a 3 DVI signal into a tile, which is convenient for unified calling and zooming. Like 3 input signals, 4 output, more convenient to use, no need to consider output aliquot/unequal load relationship.



Note:

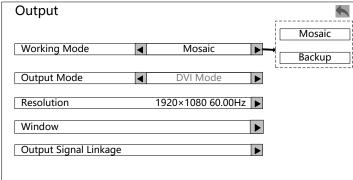
- 1. In the mosaic mode and backup mode, support 4 channels of 2K×1K, 2 channels of 4K×1K input signals are combined into a tile.
- 2. In switch mode, support 2 channels of 2K×1K range input signals to be combined into one tile.
- 3. Only sources with the same resolution specifications can be combined into a Tile.
- 4. TILE only supports horizontal tiling.

Working mode introduction

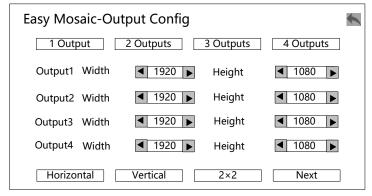
This processor has three working modes: Mosaic mode, and Backup mode.

Mosaic mode function

1. Enter "Output setting" in the main menu, select the working mode Mosaic

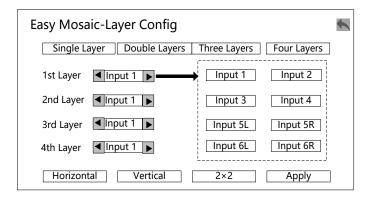


2. Enter"Mosaic" menu: select "Easy MosaicConfig".



- Choose how many outputs to be used for mosaic, for example 3 outputs mosaic, then select "3 outputs"
- Adjust each output actual pixel
- Select the arrangement of all the outputs, for example Horizontal

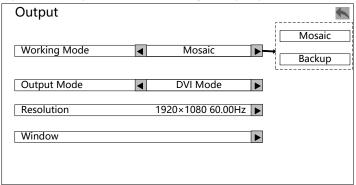
- arrangement, then select "Horizontal"
- Select "Next" to proceed next steps.



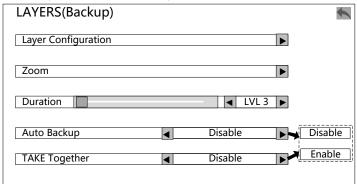
- Choose how many inputs to be used for mosaic, for example 2 layers, then select "Double Layers"
- Select the input signal of the corresponding layer
- Select input source arrangement
- Apply
- 3. LED screens can be achieved quick mosaic through this process, to realize "2 inputs, 3 outputs mosaic", "3 inputs, 4 outputs mosaic" and so on, this is a relatively flexible way comparing with traditional processors.

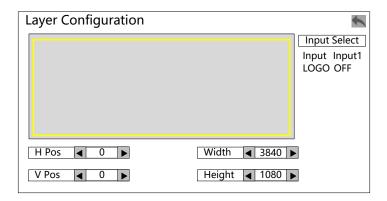
Backup mode function introduction

1. Enter "OUTPUT Setting" in the main menu, select Backup mode, use DVI or HDMI output, and output resolution of single output port.



- 2. Adjust the "Window" menu: set the actual pixel loaded on each output port and the mosaic mode of the output port (refer to the setting method in the mosaic mode).
- 3. Enter"Layers Setting" "Layer Configuration" in the main menu, or directly press the "SIZE" button to enter this operation interface and adjust the size of the layer.





Note:

- 1. On Backup mode, only layer1 and layer 2 can be used, and the layer size/position is always the same.
- 2. Pay attention to the processor LCD panel prompt, the default layer1 is the main display, layer2 is the backup, when TAKE is switched, layer2 is the main display, layer1 is the backup, the main display layer is always at the top, backup is at the bottom.
- 3. Automatic backup is disabled by default. When this function is enabled, if W2000 detects that the input signal of the main display layer is lost, it will automatically switch to backup.
- 4. Support backup switching between single input source or tile input.
- 5. Multi-machine TAKE and automatic backup function are mutually exclusive items, can only be used one by two; After the multi-machine TAKE function is turned on, press one of the TAKE keys, and multiple W2000 in the same LAN can be switched synchronously.

Warranty Description

Machine warranty

- 24 months from the date of purchase of the user's invoice.
- If the user purchase invoice is lost, the 60 days after the production date will be the warranty start date for the product.

Non-warranty

- The machine soaking and collisions produced besmirch or surface scratches and other abnormal using causes of malfunction or damage.
- Demolition machine or modification, which is not to be agreed by our company.
- Using in the not specified used working conditions, resulting in fault or damage(such as high temperature, low voltage or unstable etc.).
- Force majeure (such as fire, earthquake, etc.), or natural disasters (like lightning, etc.) caused the fault or damage.
- The product is out of warranty.