

USER MANUAL

OVP-M1X VIDEO CONTROLLER



VERSION : V1.0 RELEASE DATE : 2019.2.27

Statement

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Brief Introduction

Safety Note

There' s high pressure components in this products, please do not open the box and repair it by yourself.

Input voltage is 100-240V, 50/60Hz, please use correct power supply.

Power cable connect with GND. Please ensure that you will plug in the socket which is connecting with GND before you connect with input and output port

Please take off the power supply of LED video processor before you do any hardware operations, and ESD by touching the ground.

Please make sure that all the power supply cables and signal cables are plugged off before you want to connect with plug off any signal cable and controlling cable.

Please make sure the environment is clean, dry and ventilated when you use this product, also, do not put this product to a high temperature and wet environment.

This product is electronic products, please keep away from fire, water source and flammable&combustible products.

Turn off the power supply immediately when you find smoking, peculiar smell or something unusual. And contact with us soon.

About Software

Cannot do any modification, decompilation, disassembling, decoding or reverse engineering on our software, it' s illegal.

Function

Overview

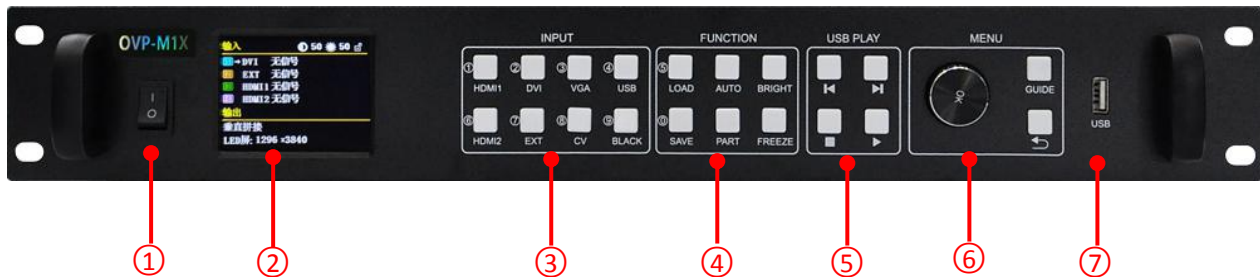
OVP-M1X video controller is used for big LED screen ,platform, rental, meeting room and so on. It supports pixel-pixel input and output for high resolution LED screen, the video effect will be more clear. There are two Gigabit port on OVP-L1X, it' s the integrated type with video processor and LED big screen. Also, it supports USB port.

Characteristics

- ◆ Support 1,300,000 pixels, maximum width 1920, maximum height 2500;
- ◆ Cluster with 2 channels of Gigabit network output, more stable and easy for remote maintenance;
- ◆ Seamless switch between all the input signal and output mode;
- ◆ Support 6 channels of HD digital and analog input interface;
- ◆ Support 3 channels of digital input DVI/HDMI ,custom input EDID setup;
- ◆ Support input signal source hot backup;
- ◆ Restore 8 kinds of user mode for fast using;
- ◆ Support "intelligent guiding",easy for fast setup;
- ◆ Support local USB2.0 multi media display;
- ◆ Control the device via PC software,buttons on board and USB .

Physical Instruction

Front board



Interface	
1	Turn on/off button for power supply
2	2.8" full color LCD screen(320*240)
3	LCD screen operation area, show status of system.
	INPUT area Buttons for inputting signals. There are 8 buttons from [DVI] ~ [USB]. Note: Output will be in black status if you press BLACK and LED indicator light is on.
4	FUNCTION area Part of functions and menu, 6 buttons: [LOAD] : Switch to user mode menu. [AUTO] : Automatic calibration for VGA input. [BRIGHT] : Switch to brightness adjustment menu. [SAVE] : Switch to user mode saving menu. [PART] : Display part or full. [FREEZE] : Freeze photo,as to display photo statically.
5	USB PLAY area U disk operation area, it includes four buttons: Last one, next one, stop, play.
6	MENU area Short press rotating[OK]button: enter into main menu or confirm inputting. [GUIDE] : Switch to "intelligent guiding" [↶] : Return.
7	USB port Display by U disk

Backside board



Video input signal	
DVI	DVI port
HDMI1	HDMI port 1
HDMI2	HDMI port 2
CV	PAL\NTSC compound video
VGA	VGA port

Video output signal	
LED1~LED2	Transfer by LAN cable

Audio input & output signal	
HDMI	Embedded in HDMI video input port
AUDIO_IN	Audio input
AUDIO_OUT	Audio output

Control port	
COM	Serial port

Power supply	
Input voltage	100-240V~50/60Hz

Steps

Click **【OK】** --enter into main menu, then follow the steps:

Step 1: Set LED screen parameters (width, height, LAN port width, height and start, end) according to LED screen size.

Step 2: Select correct signal source;

Step 3: Adjust "display window" ;

Step 4: Save present display mode by select "save mode" or press **【SAVE】** button.

Note: The detailed explanation of these 4 steps, please check "Main Menu" in the next.

Main Menu

Operations

Main menu includes one rotating button, one 【OK】 button, one 【↶】 button and one 【GUIDE】 button.

In initial status, short press 【OK】 as to enter into main menu.

In view status, if you rotate clockwise, it will move to upward or left; If you rotate anticlockwise, it will move to downward or right. Move it to the function you want, and press 【OK】 , it will enter into branch menu. Now, if you rotate anticlockwise, it will reduce present value; If you rotate clockwise, will enlarge present value. Short click 【OK】 as to save values. Click 【GUIDE】 as to get intelligent guide window.

Note: Rotate the button slowly and lightly.

Initial status of main window

When starting system, it will show starting window on LCD screen. After start, LCD screen will show present status of machine, as below:



There are 3 areas:

- **Input :**
It shows selection info of input source, including input signal source format which is detected by system;
- **Output :**
Shows real LED screen size which is set by users;
- **Top right corner :**
Shows present contrast, brightness values and button lock status.

Main menu

This equipment adopts 2.8" LCD screen (320*240), and adopts font 24*24 which can display 10 rows. There are 6 parts on menu. If you are not in menu status, please click 【OK】 ,

it will show:

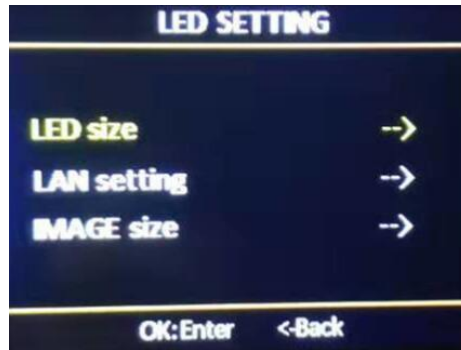


Main menu and branch menu:

Main menu	The second and third menu
LED	Size of LED screen (total width and total height) LAN port output setting (LAN port LED1-LED2): horizontal width, vertical height, horizontal start, vertical start. Adjust display window(horizontal width, vertical height, horizontal start, vertical start) Note:for value of LED1-LED2, system will count automatically, or set manually.
IMAGE	Brightness,contrast,saturation,sharpness,color temperature and dynamic contrast.
CROP	Switch, crop width, crop height, crop horizontal start, crop vertical start
SAVE	Mode 1-Mode 8
LOAD	Mode 1-Mode 8
OPTION	Input EDID (horizontal width,vertical width,refresh rate) Input hot spare (close, backup for input source) VGA setting (adjust automatically,horizontal start,vertical start) Planned tax(tax 1, tax 2...) Other setting(switch stunt, voice setting) Testing photo(close, photo 1 to photo 8) Button lock(open, close) Factory reset(ADC calibration,languages,factory reset,firmware version)

LED Setting

Click **【OK】** as to enter into main menu, then choose “LED setting” , as below:



1. LED Size

Click **【OK】** as to enter into main menu-- “LED setting” --” LED size” ,as below:



After finish settings of LED size, system will be in reset status, users need to wait for a while here.

Note: Size range

- LED screen width <= 1920
- LED screen height <= 2500

2. LAN Setting

Click **【OK】** as to enter into main menu-- “LED setting” --” LAN SETTING” , as below:



Value range or LED1~LED2:

Width : 128~1920

Height : 64~2500

Note: If width and height value is 0 in LED1~LED2, means there' s no output .

3. IMAGE SIZE

Click **[OK]** as to enter into main menu-- "LED setting" --" IMAGE SIZE" , as below:



- Width: adjust range 120~can set the maximum pixels in horizontal.
- Height: adjust range 68~can set the maximum pixels in vertical.
- X: minimum is 0, maximum value is maximum horizontal pixels-horizontal width.
- Y: minimum is 0, maximum value is maximum vertical pixels-vertical width.

Note:

- (1) Users can do trimming for image, as to match with LED display;
- (2) Default image size is LED screen size.

IMAGE QUALITY

Click **[OK]** as to enter into main menu--" IMAGE QUALITY" , as below:



- Brightness: adjust range 0-100, default is 50.
- Contrast: adjust range 0-100, default is 50.
- Saturation: adjust range 0-100, default is 50.
- Sharpness: adjust range 0-10, default is 5.
- Dynamic contrast: adjust range 0-4, default is 1. 0 means closed, it' s invalid for inputting VGA signal source.
- Color temperature: "warm" , "natural" , "cold" , "custom" .

- Customized color temperature :
adjusting range in RED 0-100
adjusting range in BLUE 0-100
adjusting range in GREEN 0-100

Note: You can also adjust brightness by "BRIGHT" button on board.

CROP

Click **[OK]** as to enter into main menu--" CROP" , as below:



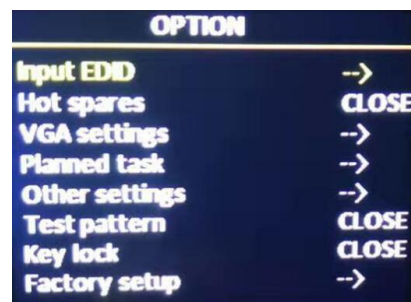
- Open or close CROP function, default is close.
- Minimum is 128, maximum is "width of input signal" .
- Minimum is 128, maximum is "height of input signal" .
- Minimum is 0, maximum is "width of input signal" - "height of input signal" .
- Minimum is 0, maximum is "height of input signal" - "width of input signal" .

Note:

- (1) Crop is for input source, so crop width and height cannot bigger than the resolution of present cropped signal source.
- (2) Users can select different input source by input source button on board.

OPTION

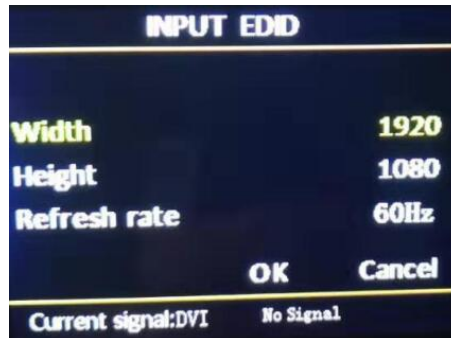
Click **[OK]** as to enter into main menu--" OPTION" , as below:



1. Input EDID

It offers EDID editing function of DVI/HDMI input signal source, means, the recommended resolution of input signal source. In WIN7 system, when the “input EDID (recommended)” is modified which is read by PC, the output resolution of PC will be modified too; But for WIN10 system, output resolution of PC won't be changed, users need to operate manually.

By “INPUT EDID” , users can get good resolution effect in the range of 4K*2K. As below:



- Width : adjust range 640-1920
- Height : adjust range 480-2500
- Refresh rate : adjust range 60 or 30

Note:

(1) The real adjust range is limited by port type and input bandwidth, for this equipment, it can reach to the highest input EDID, cause input source HDMI adopts HDMI 1.4. So, it can reach:1920*1080@60Hz.

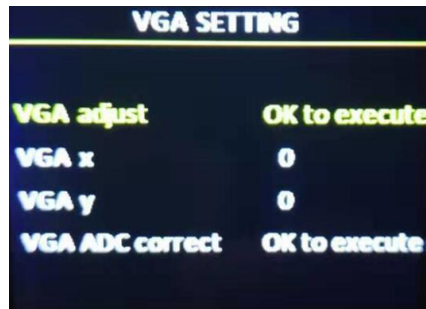
(2) In 1920*1080@60Hz, input refresh rate should be 30Hz.

2. Input hot spare

Select “input hot spare” in “OPTION” , users can choose different backup signal source. So, if some of image input signal is lost, system can switch to backup signal source immediately.

3. VGA setting

Select “VGA SETTING” ,as below:



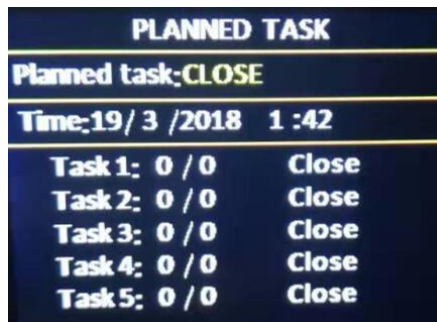
- VGA X : adjust range 0-300.
- VGA Y : adjust range 0-300.

Note:

- (1) Adjust range of VGA X and VGA Y is decided by system.
- (2) When there' s excursion of VGA input signal in display, users can click "Auto adjust" as to display correctly. And if "Auto adjust" is invalid, users can adjust "VGA horizontal start" and "VGA vertical start" manually.
- (3) If the screen of GA input signal source is a little darker, users can adjust by "VGA ADC" or "DV ADC" .

4. PLANNED TASK

Choose "PLANNED TASK" in "OPTION"



Note:

- (1) Users must do calibration for the clock in system, then, you can use PLANNED TASK function, calibration will be done by PC software.
- (2) Users can set many tasks, use different user mode in different time (users need to save user modes first), task setting will be done by PC software.
- (3)When users opened the function of PLANNED task and it' s valid, you can open or close at any time by LCD menu.

5. Other settings

There are two settings:

- **Switch stunt** : " switch seamless" and "fade over"
- **Voice setting** : Including switch button and volume setting.

6. Testing photo

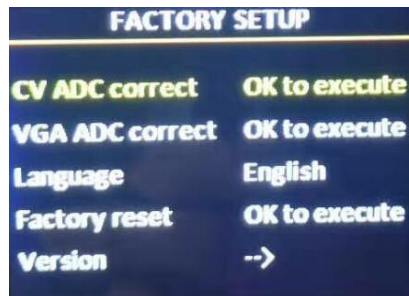
There are 8 testing photos, photo 1-photo 8, default is "close" .

7. Button lock

Default is "close" , when "button lock" is in open status, all the buttons will be useless except 【OK】 .

8. Factory setup

Choose "FACTORY SETUP" in "OPTION" , as below:

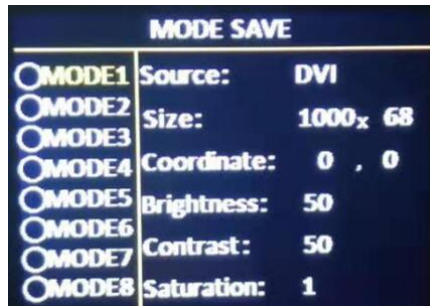


- **ADC correct** : Usually, "VGA\CV correct" was done before selling in our factory.
- **Language** : " Chinese" and "English" , default is Chinese.
- **Factory reset** : Reset to default value.
- **Firmware version** : Check present hardware version, factory date.

USER MODE SAVE AND SWITCH

Mode save

Press "SAVE" on board, as below:



MODE SAVE		
<input type="radio"/> MODE1	Source:	DVI
<input type="radio"/> MODE2	Size:	1000x 68
<input type="radio"/> MODE3	Coordinate:	0 , 0
<input type="radio"/> MODE4	Brightness:	50
<input type="radio"/> MODE5	Contrast:	50
<input type="radio"/> MODE6	Saturation:	1
<input type="radio"/> MODE7		
<input type="radio"/> MODE8		

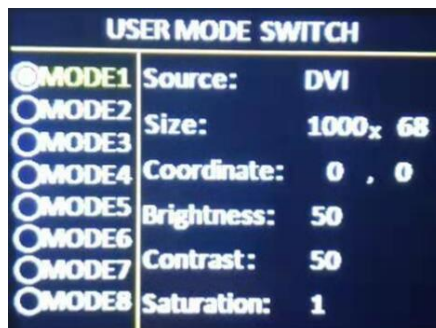
Select the save mode you want, then, click [OK] .

Note:

- (1) If the circle is solid, means the present mode data is already there; If the circle is hollow, means the present mode data is not there.
- (2) Maximum 8 user modes, it saves image size, position, status and brightness, contrast.
- (3) If users changed splicing mode, the saved user modes will be deleted.

User mode switch

Press "LOAD" on board, as below:



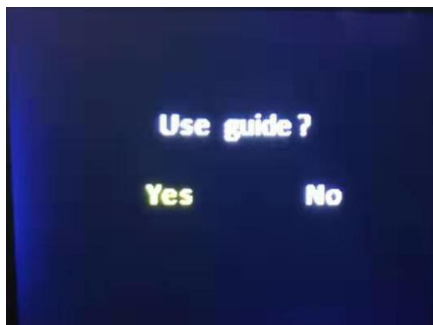
USER MODE SWITCH		
<input checked="" type="radio"/> MODE1	Source:	DVI
<input type="radio"/> MODE2	Size:	1000x 68
<input type="radio"/> MODE3	Coordinate:	0 , 0
<input type="radio"/> MODE4	Brightness:	50
<input type="radio"/> MODE5	Contrast:	50
<input type="radio"/> MODE6	Saturation:	1
<input type="radio"/> MODE7		
<input type="radio"/> MODE8		

Note:

- (1) Can be switch only if you saved before.
- (2) If you already save, you can use it by pressing 1-8 numbers.

Intelligent guiding



It's for the users who use it at the first time. And set for LED screen by 3 steps. It's very simple, convenient and useful. Press "【GUIDE】", as below:



Users only need to choose "Yes", and follow the steps.

FAQ

This is a professional equipment, users should be professional on it. When you meet some problems, please try to check with below info. And if you still cannot solve, please contact with local agent or contact with us directly.

Problems	Checking and adjusting solutions
There' s no display or image output in LCD screen.	<ul style="list-style-type: none"> ● Please check power supply cable. ● Please check ON/OFF button of power supply.
There' s display on LCD screen, but do not have image output.	<ul style="list-style-type: none"> ● Please check that it is connecting input signal and already switch to the relative signal source. ● Please check that the display terminal supports output resolution and refresh rate of this equipment. ● Please check the settings of brightness and contrast. ● Please try to reset this equipment, factory reset.
Image cannot show on full LED display.	<ul style="list-style-type: none"> ● Please check LED screen width and height value is the same with LED screen resolution or not. Users can set LED screen parameters on "IMAGE OUTPUT" in menu.
VGA input image is not in middle.	<ul style="list-style-type: none"> ● Continuously press "AUTO" button on board until it shows correctly.(When you do auto adjust, please use full screen without black frame signal)
Image is in middle, but there' s black frame.	<ul style="list-style-type: none"> ● This problem occurs because you use VGA, DVI, HDMI port which are outputted from PC video card.
There' s no response for buttons on board.	<ul style="list-style-type: none"> ● Please check the button lock is open or not (). Press rotate button as to enter into main menu, close  in "OPTION" .

Parameters

Image input port	
VGA×1	VESA: UXGA@75Hz downward compatible
HDMI×2	VESA , HDMI 1.4
DVI×1	VESA , compatible with HDMI 1.4
CV×1	Support PAL \ NTSC compound video
USB×1	USB2.0 , support 1080p@30fps or 720p@60fps content

Image output port	
NET×2	By LAN port Each port supports maximum 650,000pixels @60Hz Horizontal splicing: width≤1920, height≤2500, total pixels:≤1.3 million pixels Fixed outputting frame frequency 60Hz, support pixel-pixel splicing in the aboved range

Audio input/output port	
Audio input×1	3.5mm audio port
Audio output×1	3.5mm audio port

Details	
Input voltage	100-240V~50/60Hz
Maximum power	≤50W
Working temperature	-30°C~70°C
Environmental humidity	15%~85%
Operation	Panel buttons, LAN, USB, PC software, APP
Size	482.6mm×300mm×66.6mm
Box	1.5U box
Weigh	≤3Kg

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ONBON APP