

# USER MANUAL

## OVP-L1X VIDEO CONTROLLER



**VERSION : V1.0    RELEASE DATE : 2019.2.27**

## **Statement**

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# CATALOG

Statement.....	2
禾彛.....	3
Brief Introduction.....	2
Safety Note.....	3
About Software.....	3
Function.....	4
Overview.....	4
Characteristics.....	4
Physical Instruction.....	5
Front board.....	5
Backside board.....	6
Introduction of PC software.....	7
Connect Video Processor.....	7
Send Device Configuration.....	7
Signal Source.....	10
Receiving card configuration.....	10
Crop setting.....	13
Effect setting.....	14
Mode setting.....	15
Input source setting.....	16

Other Settings..... 17

Firmware update..... 18

FAQ..... 19

## **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

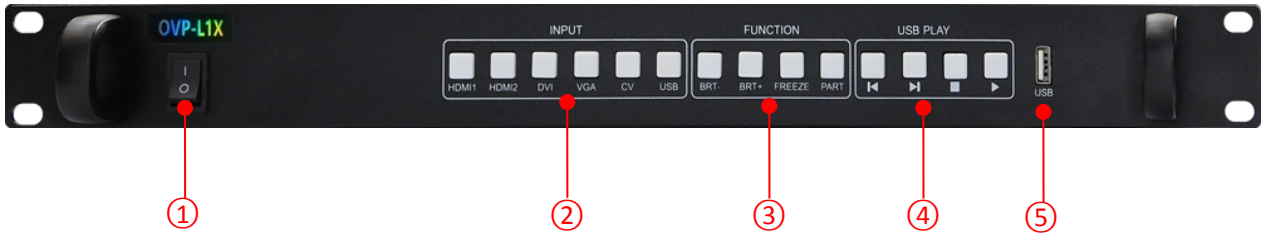
OVP-L1X video controller is used for big LED screen ,platform, rental, meeting room and so on. It supports pixel-pixel input and output for high resolution LED screen, the video effect will be more clear. There are two Gigabit port on OVP-L1X, it" s the integrated type with video processor and LED big 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 digitals and analog input interface;
- ◆ Support 3 channels of digitals input DVI/HDMI ,custom input EDID setup;
- ◆ Support input signal source hot backup;
- ◆ Restore 8 kinds of user mode for fast using;
- ◆ Support local USB2.0 multi media display;
- ◆ Control the device via PC software and USB .

# Physical Instruction

## Front board



Interface	
1	Turn on/off button for power supply
2	<b>INPUT AREA</b> Buttons for inputting signals. There are 6 buttons from [HDMI1] ~ [USB].
3	<b>FUNCTION AREA</b> Part of functions and menu, 4 buttons: [BRT-] > Adjust brightness - . [BRT+] > Adjust brightness + . [FREEZE] > Freeze photo,as to display photo statically. [PART] > Display part or full.
4	<b>USB PLAY AREA</b> U disk operation area, it includes four buttons: Last one, next one, stop, play.
5	<b>USB port</b> 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

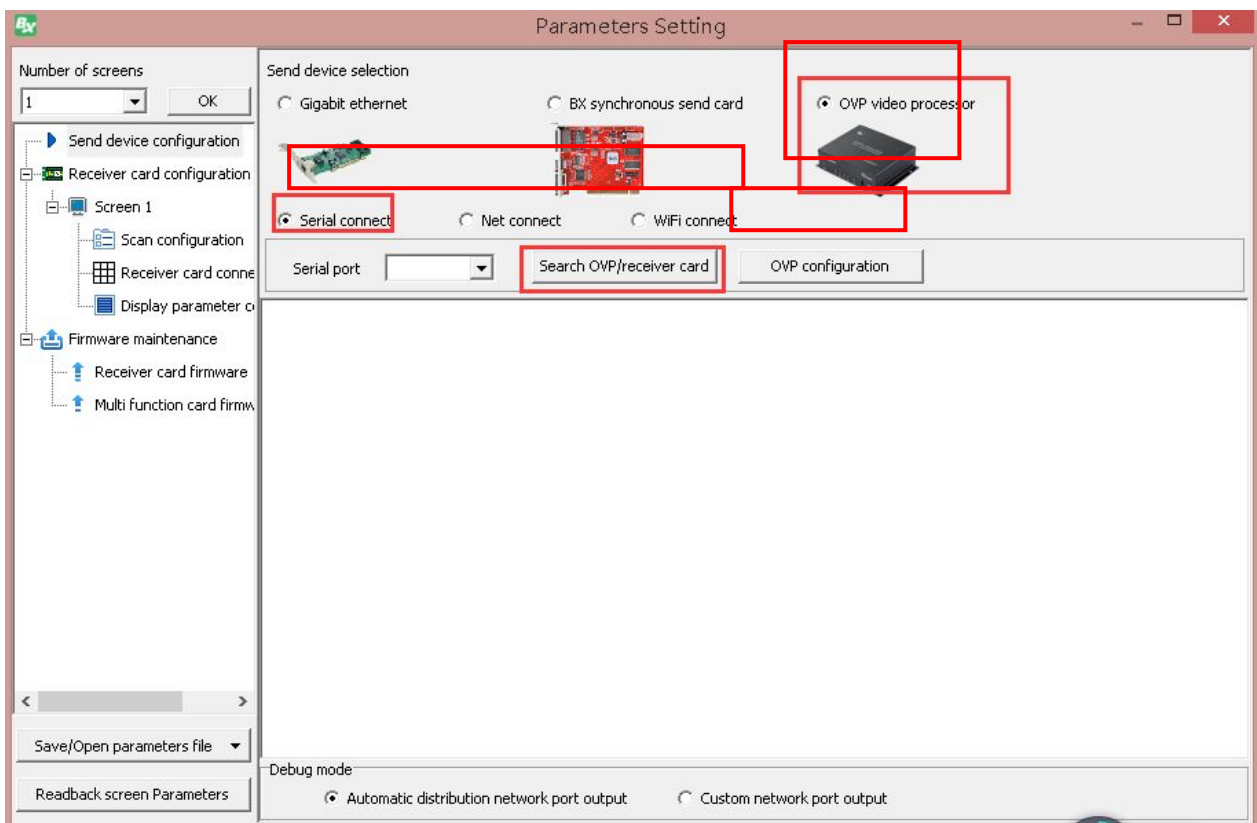


## Introduction of PC software

Use LedshowTV 2017 software, it support all of our video processor, like OVP-L1,OVP-M2,OVP-M3,OVP-L1X and OVP-M1X. We integrated VS or VSM sending card inside the video processor, customers will get a good video effect.

### Connect Video Processor

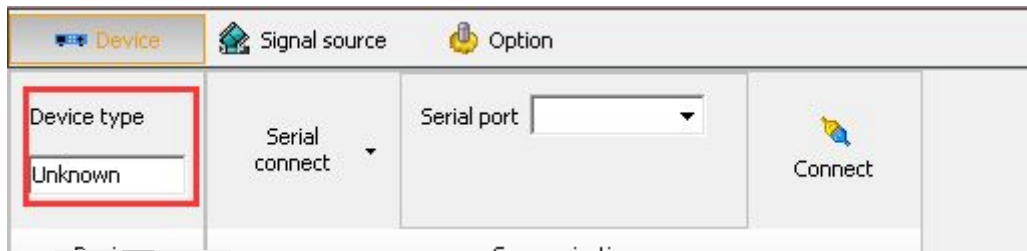
1. Open LedshowTV 2017 , select screen options under setup menu.
2. screen options -- send device configuration -- OVP video processor , there are several communication method Serial connect , Net connect , WIFI connect , here please select Serial connect -- Search OVP/receiver card , it will search and connect your present equipment directly.



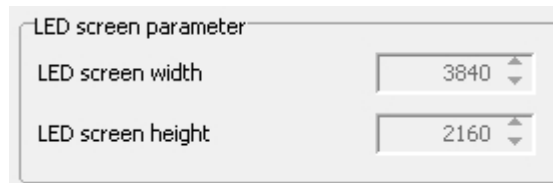
### Send Device Configuration

#### 1. LED screen parameters

Then, click OVP configuration , it will show the corresponding type, like below. Also, it will read the parameters in present video processor.



Click **LED screen parameter**, set the width and height of LED screen. Then, click “send” as to finish the configuration to video controller. Check below:



**OVP-L1X connects LED screen by LAN cable.**

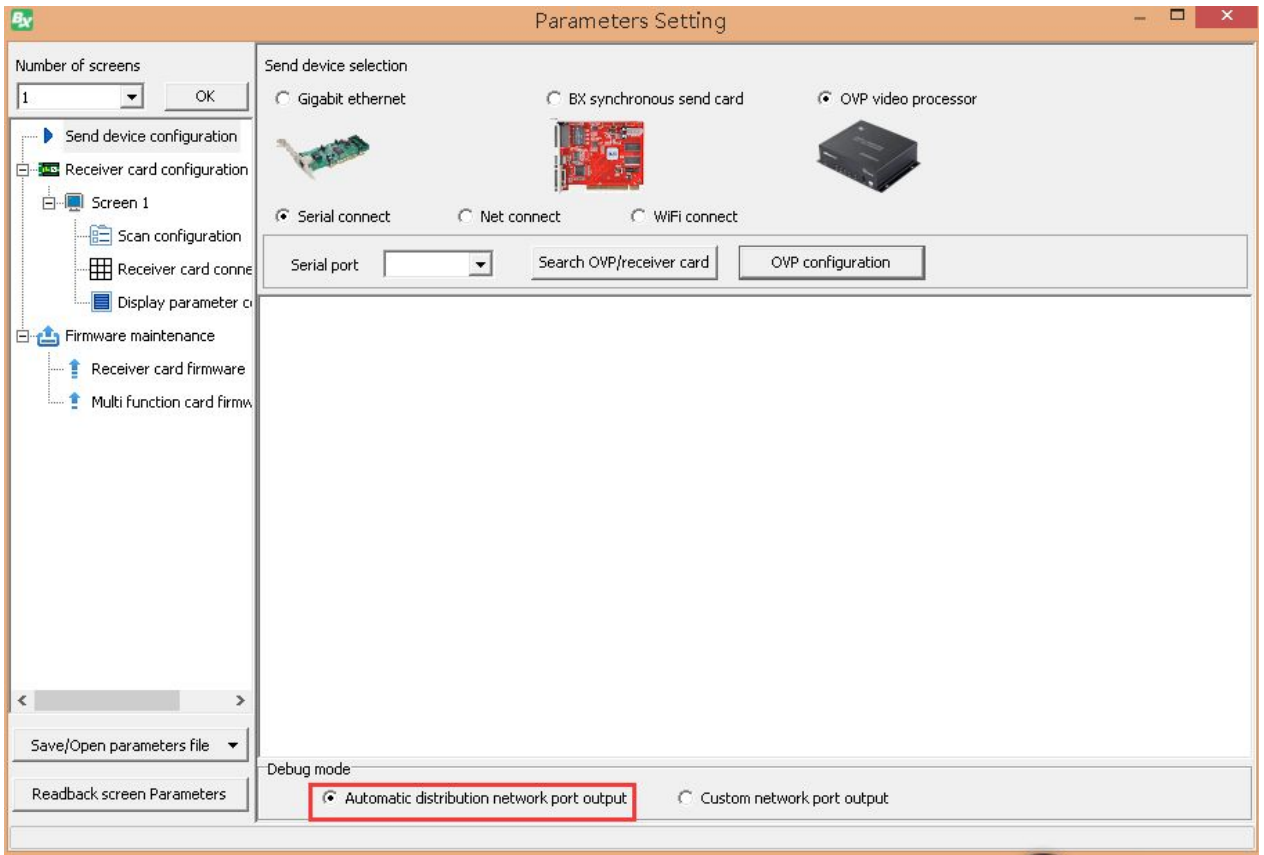
**Each port supports maximum 650,000pixels @60Hz**

**Horizontal splicing: width $\geq$  3840, height $\geq$  2500, total pixels $\geq$  1.3 million pixels**

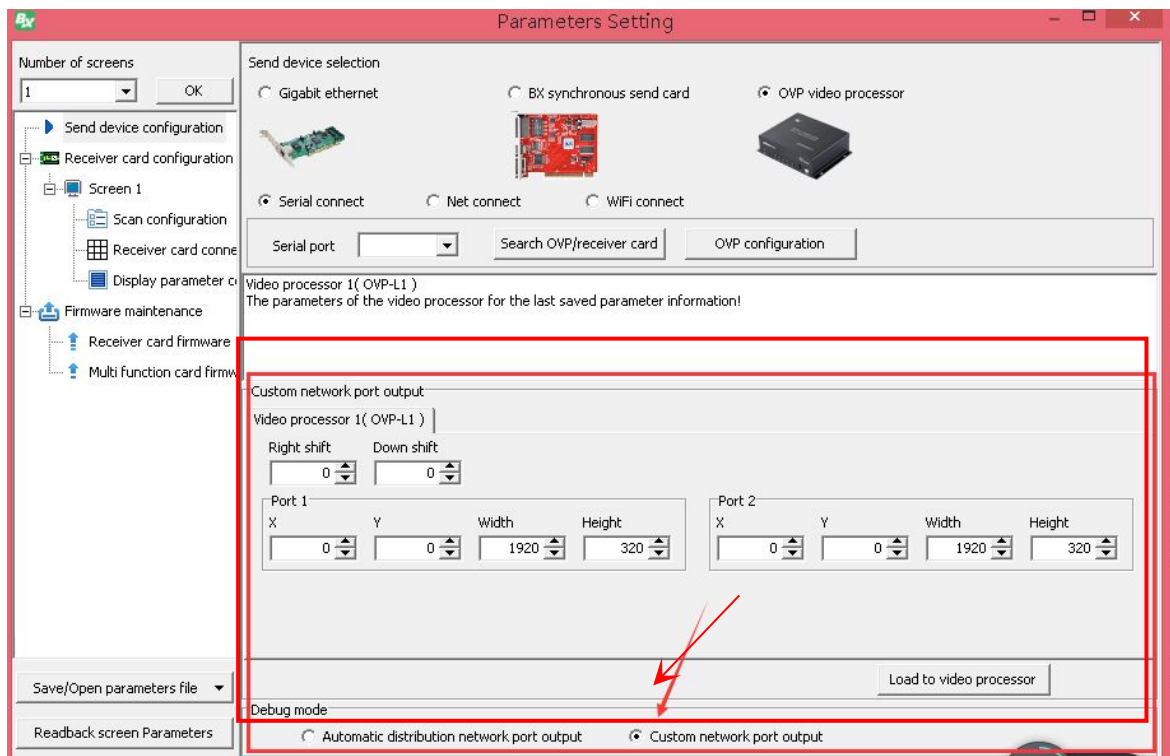
## **2. LAN Port Parameters**

**Support two modes: Automatic distribution network port output and Custom network pot output**

- 1. Automatic distribution network port output: Click Automatic distribution network port output in Debug mode, software will distribute the output parameters according to the connection of receiver. Check below:**



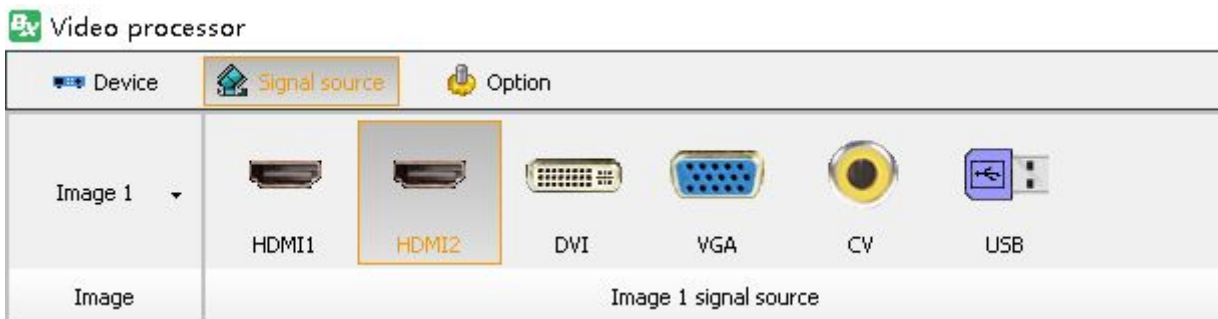
**2. Custom network port output: Users can set output parameters of each Ethernet manually according to the connection between LED screen and receiving cards. As below:**



## Signal Source

### 1. Signal Source

Set the signal source according to your requirements, below is the input signal sources which are supported by OVP-L1X.



**HDMI1** > Can transfer both video and audio of PC to display at the same time, support digital video & audio.

**HDMI2** > Can transfer both video and audio of PC to display at the same time, and support digital video & video.

**DVI** > Can connect computer and display, but support only video output.

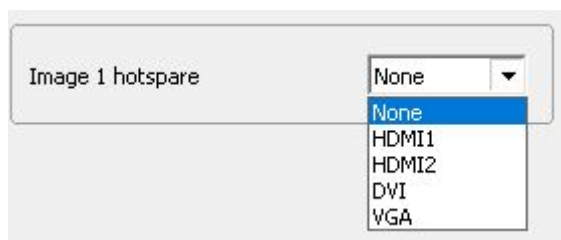
**VGA** > Used for old version output of PC, support only video output.

**CV** : Support PAL \ NTSC compound video.

**USB** : Support 1080p@30fps or 720p@60fps content

### 2. Hot Spare

Support two input signal sources as hot spare mode, as below:

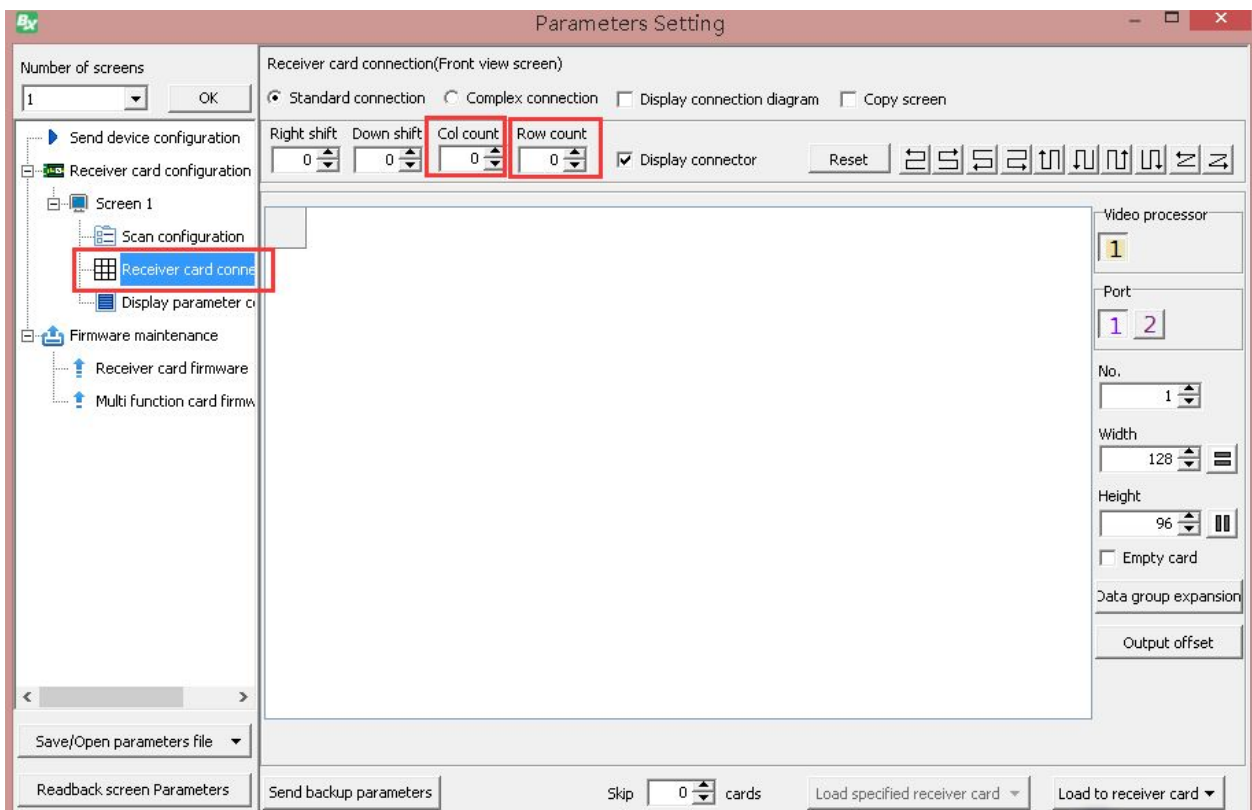


Choose Image in Image Layout--select one signal source as hot spare in the list of Image hot spare. If you choose ≠ None, this function will be closed.

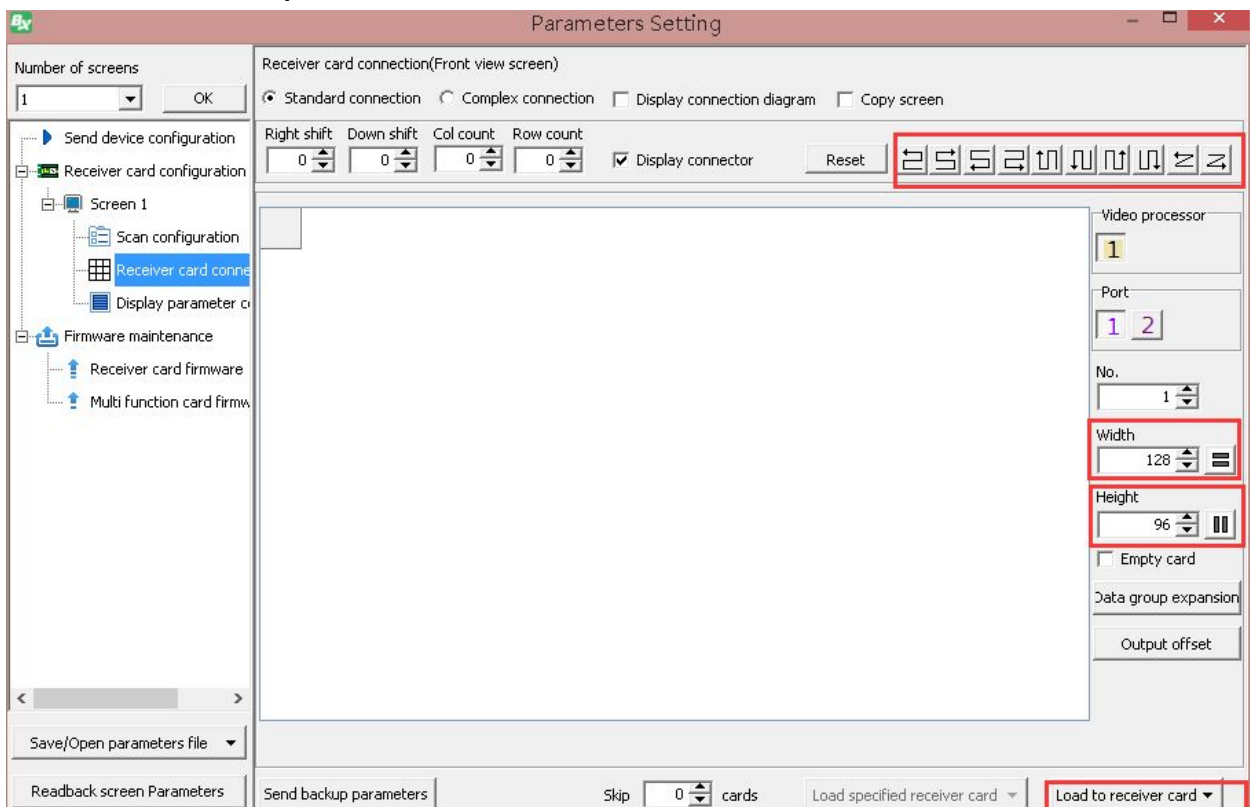
## Receiving card configuration

**Before setting receiving cards, please ensure that there is signal input in signal source of video controller.**

1. Parameter setting--Receiver card connection, set col count and row count according to your receiving cards, as below:



2. Set width and height of receiving card according to the screen it is connecting, and select connection method of receiving card after finish settings of width and height. Then, click **Load to receiver card**, as below:



## **Image layout**

Users can adjust parameters for each image, as below:

Image 1 Image 2 Image 3 Image 4

Image 1 status

Image 1 parameter

Image 1 width

Image 1 height

Image 1 horizontal start

Image 1 vertical start

Image 1 output control

Image 1 output status

Image 1 rotation type

Normal H Mirror V Mirror H+V Mirror

Image 1 static frame

Image 1 hotspare

### **1. Image status:**

Default of image status is  $\neq$  open .

### **2. Image parameters:**

When the image status is open, user can set width,height,horizontal start and vertical start.

Or users can adjust by dragging image.

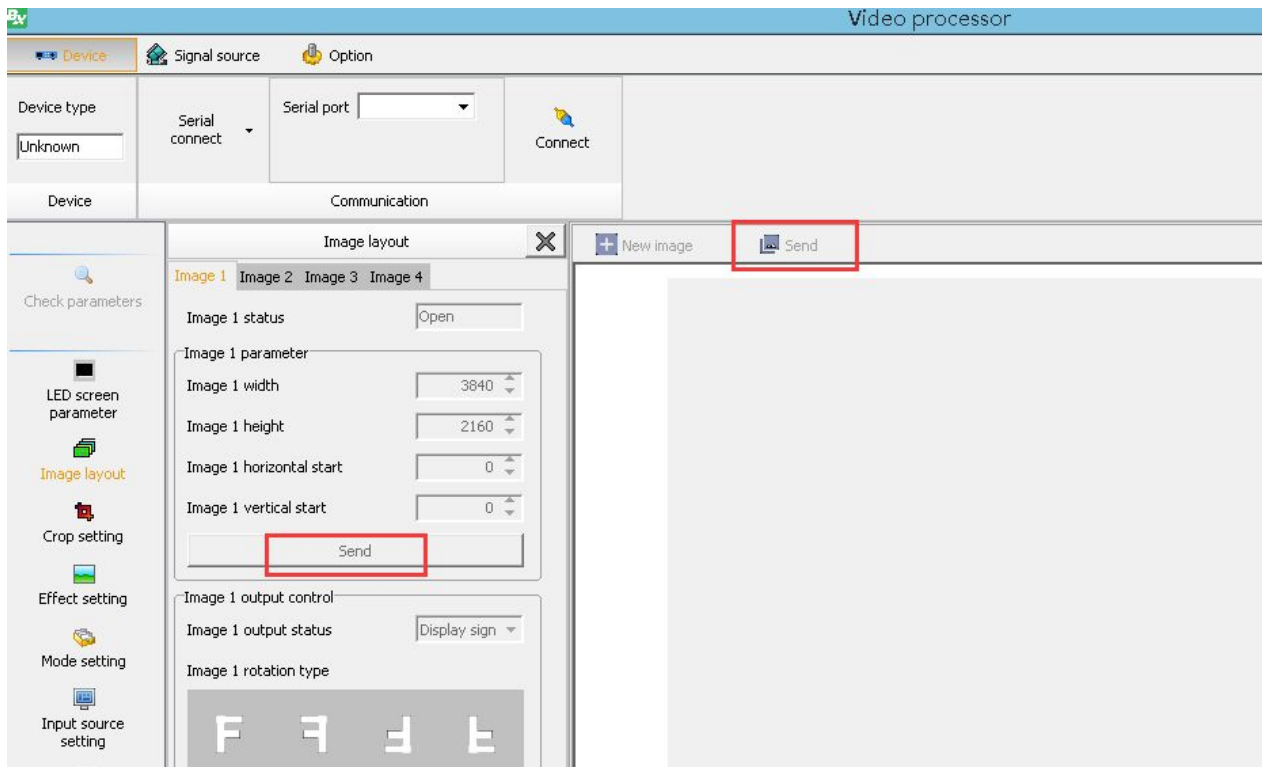
Image width: adjust range 128~can set maximum pixels on horizontal side

Image height: adjust range 64~can set maximum pixels on vertical side

Image horizontal start: minimum is 0, maximum value is : maximum horizontal pixels - horizontal width

Image vertical start: minimum is 0, maximum value is : maximum vertical pixels - vertical width

Click send, it will be sent to video controller. As below, both are OK:



### 3. Image output control

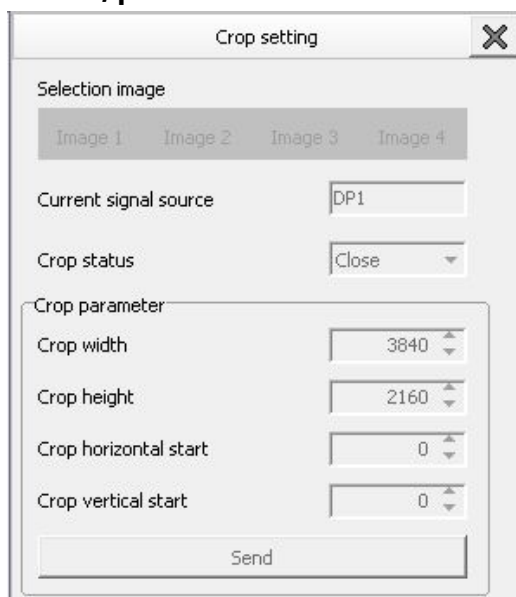
Users can set output effect for each image:

Select  $\neq$  open  $\bullet$  or  $\neq$  close  $\bullet$  .

## Crop setting

Crop setting is to crop part of inputting signal source area as to do zoom in and out.

Parameters, please check below:

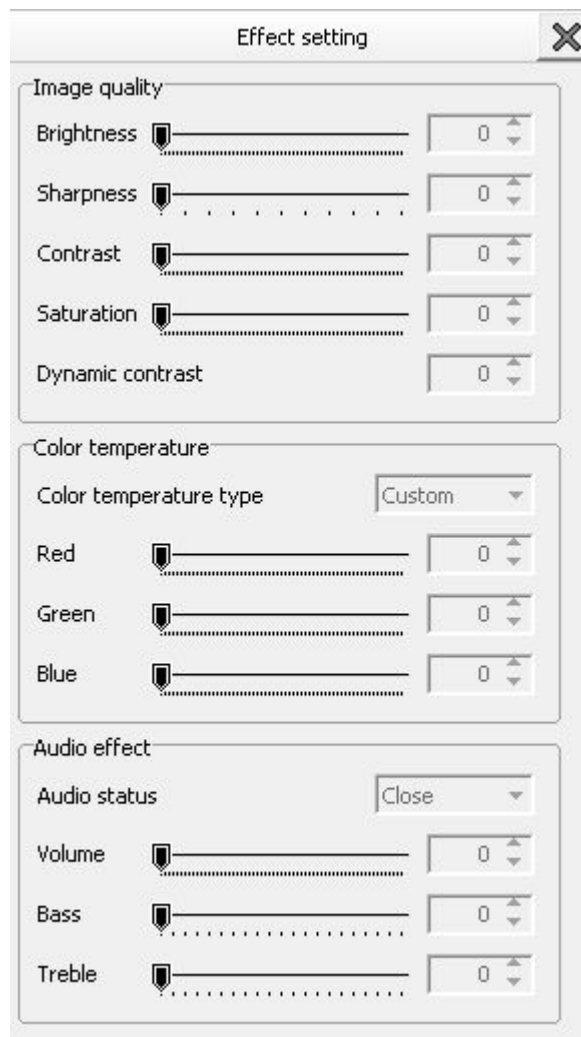


- Firstly, click present inputting signal source, example: select † HDMI1• .
- Select † open• or † close• .
- • Crop width• , † Crop height• , † Crop horizontal start• , † Crop vertical start•

After finish crop settings, click † send• .

## Effect setting

It" s divided into three parts: image quality, color temperature and audio effect, as below.



### 1. Image quality :

Click † image quality• , modify † brightness• , † sharpness• , † contrast• , † saturation• , † dynamic contrast• .

- **Brightness** : adjusting range 0~100.
- **Sharpness** : adjusting range 0~10.
- **Contrast** : adjust range 0~100.



- **Saturation** : adjust range 0~100.
- **Dynamic contrast** : adjust range 0~4.

## 2. Color temperature

Click **color temperature** , users can modify the color temperature of image. There are 4 styles: warm, cold, natural,custom. For specific color temperature data, user can adjust by dragging **RED** , **GREEN** , and **BLUE** .

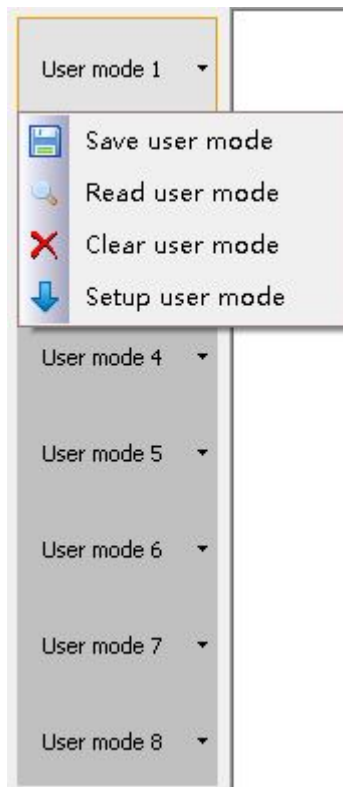
## 3. Audio effect

Click **audio effect** , select **open** or **close** audio effect, and adjust the volume.

## Mode setting

Users can save their own modes according to their requirements, it support maximum 8 groups modes. Image layout, signal source, cropping, effect can be saved into user mode.

After you set all the parameters, you can click **user mode 1** --- **save user mode** as to save user mode 1, like below.



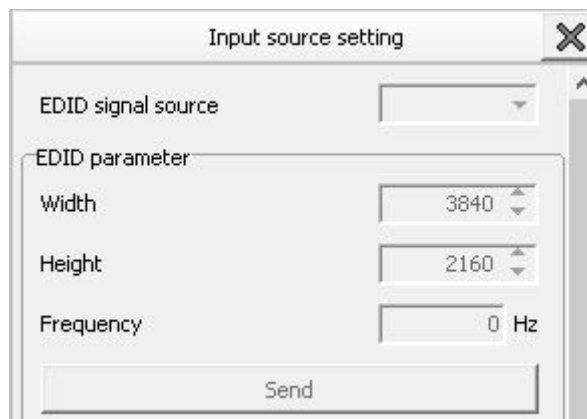
- **Save user mode** : Save present parameters into user mode.
- **Read user mode** : User can find out all parameters which is saved to this user mode by read user mode.
- **Clear user mode** : User can delete all parameters which is saved to this user mode by clear user mode.
- **Setup user mode** : User can switch selected user mode as present image mode by setup user mode.

## **Input source setting**

Users can edit EDID of HDMI1, HDMI2 and DVI, as to give a recommended input EDID or adjust VGA 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.

### **1. EDID Signal Source**

Select EDID under Input signal source, then, input EDID signal source and EDID parameters.



HDMI and DVI signal source:

- **Width:** 1920 adjust the width of input signal source, maximum width is 1920
- **Height:** 1080 adjust the height of input signal source, maximum height is 1080
- **Frequency:** 60Hz default is 60Hz

After finish EDID parameters, click send .

### **2. VGA signal source**

Adjust VGA parameters, calibration of VGA ADC and CV ADC.



- When there's excursion of VGA input signal in display, users can click  as to display correctly. And if  is invalid, users can adjust  and  manually.
- Adjust horizontal station of VGA input signal, adjust range 0-300.
- Adjust vertical station of VGA input signal, adjust range 0-300.
- If the screen of GA input signal source is a little darker, users can adjust by  or .


## **Other Settings**

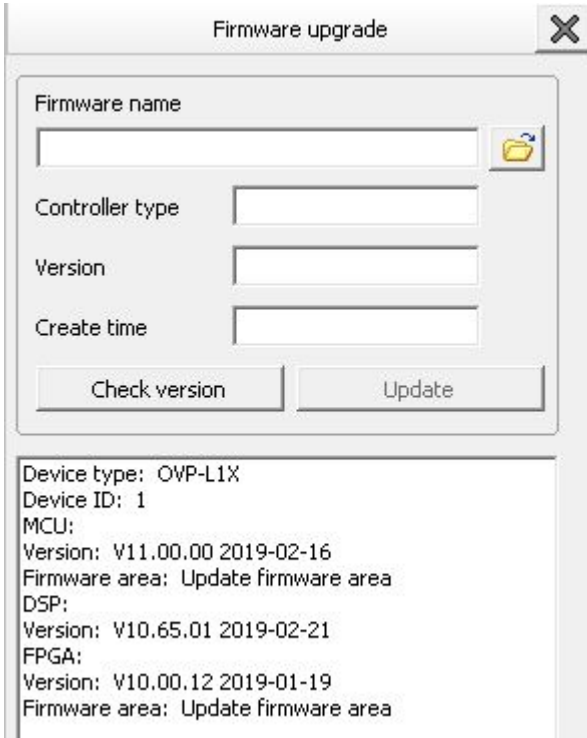
Users can set "output status" and "factory reset", as below.



- **Output status:** Select **+** **open** , it will show on LED display; If select **+** **close** , it will not show.
- **Factory reset:** Click **+** **reset** if you need to do factory reset.

## Firmware update

Click **+** **firmware update** --> check version , as below. Click  in **+** **firmware name** -- choose the correct firmware-- click **+** **update** .



Firmware upgrade

Firmware name

Controller type

Version

Create time

Check version Update

Device type: OVP-L1X  
Device ID: 1  
MCU:  
Version: V11.00.00 2019-02-16  
Firmware area: Update firmware area  
DSP:  
Version: V10.65.01 2019-02-21  
FPGA:  
Version: V10.00.12 2019-01-19  
Firmware area: Update firmware area

## 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.

<b>Problems</b>	<b>Checking and adjusting solutions</b>
There" s no light or light flashing of signal button on board, no picture output.	<ul style="list-style-type: none"><li>● Please check power supply cable.</li><li>● Please check ON/OFF button of power supply.</li></ul>
There" s light of signal button on board, but without picture output.	<ul style="list-style-type: none"><li>● Please check that it is connecting input signal and already switch to the relative signal source.</li><li>● Please check that the display terminal supports output resolution and refresh rate of this equipment.</li><li>● Please check the settings of brightness and contrast.</li><li>● Please try to reset this equipment by PC software.</li></ul>
Image cannot show on full LED display.	<ul style="list-style-type: none"><li>● Please check LED screen width and height value in software , should be the same with LED screen resolution. Users can set LED screen parameters according to PC software.</li></ul>
VGA input image is not in middle.	<ul style="list-style-type: none"><li>● Please set by † VGA automatic adjustment• of † input signal source setting• in PC software.</li></ul>
Image is in middle, but there" s black frame.	<ul style="list-style-type: none"><li>● This problem occurs because you use VGA, DVI, HDMI port which are outputted from PC video card.</li></ul>

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