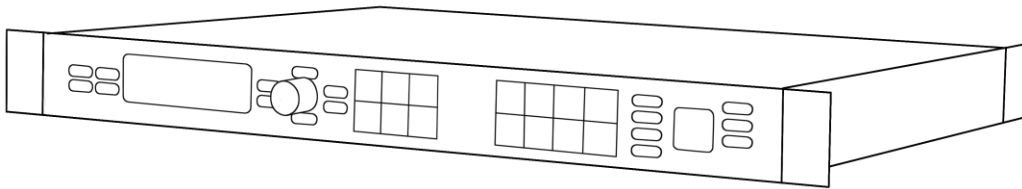


VENUS X1



USER MANUAL

RGBlink

Article No: RGB-RD-UM-X1 E001
Revision No: V1.5

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Thank you for choosing our product!

This User Manual is designed to show you how to use this video processor quickly and make use of all the features. Please read all directions and instructions carefully before using this product.

Declarations

FCC/Warranty

Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference, in which case the user will be responsible for correcting any interference.

Guarantee and Compensation

RGBlink provides a guarantee relating to perfect manufacturing as part of the legally stipulated terms of guarantee. On receipt, the purchaser must immediately inspect all delivered goods for damage incurred during transport, as well as for material and manufacturing faults. RGBlink must be informed immediately in writing of any complains.

The period of guarantee begins on the date of transfer of risks, in the case of special systems and software on the date of commissioning, at latest 30 days after the transfer of risks. In the event of justified notice of compliant, RGBlink can repair the fault or provide a replacement at its own discretion within an appropriate period. If this measure proves to be impossible or unsuccessful, the purchaser can demand a reduction in the purchase price or cancellation of the contract. All other claims, in particular those relating to compensation for direct or indirect damage, and also damage attributed to the operation of software as well as to other service provided by RGBlink, being a component of the system or independent service, will be deemed invalid provided the damage is not proven to be attributed to the absence of properties guaranteed in writing or due to the intent or gross negligence or part of RGBlink. If the purchaser or a third party carries out modifications or repairs on goods delivered by RGBlink, or if the goods are handled incorrectly, in particular if the systems are commissioned operated incorrectly or if, after the transfer of risks, the goods are subject to influences not agreed upon in the contract, all guarantee claims of the purchaser will be rendered invalid. Not included in the guarantee coverage are system failures which are attributed to programs or special electronic circuitry provided by the purchaser, e.g. interfaces. Normal wear as well as normal maintenance are not subject to the guarantee provided by RGBlink either.

The environmental conditions as well as the servicing and maintenance regulations specified in this manual must be complied with by the customer.

Operators Safety Summary

The general safety information in this summary is for operating personnel.

Do Not Remove Covers or Panels

There are no user-serviceable parts within the unit. Removal of the top cover will expose dangerous voltages. To avoid personal injury, do not remove the top cover. Do not operate the unit without the cover installed.

Power Source

This product is intended to operate from a power source that will not apply more than 230 volts rms between the supply conductors or between both supply conductor and ground. A protective ground connection by way of grounding conductor in the power cord is essential for safe operation.

Grounding the Product

This product is grounded through the grounding conductor of the power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the product input or output terminals. A protective-ground connection by way of the grounding conductor in the power cord is essential for safe operation.

Use the Proper Power Cord

Use only the power cord and connector specified for your product. Use only a power cord that is in good condition. Refer cord and connector changes to qualified service personnel.

Use the Proper Fuse

To avoid fire hazard, use only the fuse having identical type, voltage rating, and current rating characteristics. Refer fuse replacement to qualified service personnel.

Do Not Operate in Explosive Atmospheres

To avoid explosion, do not operate this product in an explosive atmosphere.

Installation Safety Summary

Safety Precautions

For all VENUS X1 processor installation procedures, please observe the following important safety and handling rules to avoid damage to yourself and the equipment.

To protect users from electric shock, ensure that the chassis connects to earth via the ground wire provided in the AC power Cord.

The AC Socket-outlet should be installed near the equipment and be easily accessible.

Unpacking and Inspection

Before opening VENUS X1 processor shipping box, inspect it for damage. If you find any damage, notify the shipping carrier immediately for all claims adjustments. As you open the box, compare its contents against the packing slip. If you find any shortages, contact your sales representative.

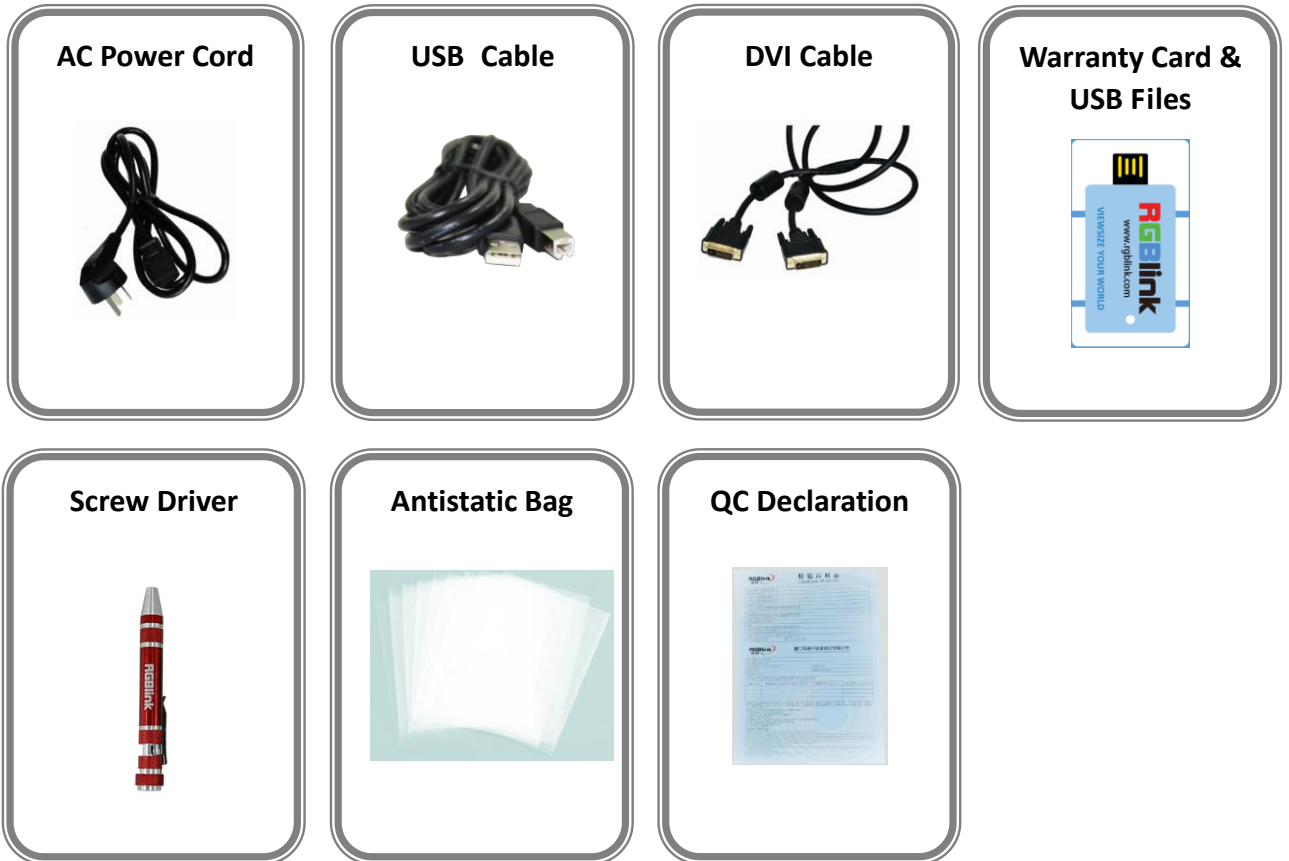
Once you have removed all the components from their packaging and checked that all the listed components are present, visually inspect the system to ensure there was no damage during shipping. If there is damage, notify the shipping carrier immediately for all claims adjustments.

Site Preparation

The environment in which you install your VENUS X1 should be clean, properly lit, free from static, and have adequate power, ventilation, and space for all components.

Chapter 1 Your Product

1.1 In the Box



Note:

AC Power Cable supplied as standard according to destination market.

USB is contained on the Warranty/Registration Card. Please keep.

1.2 Product Overview

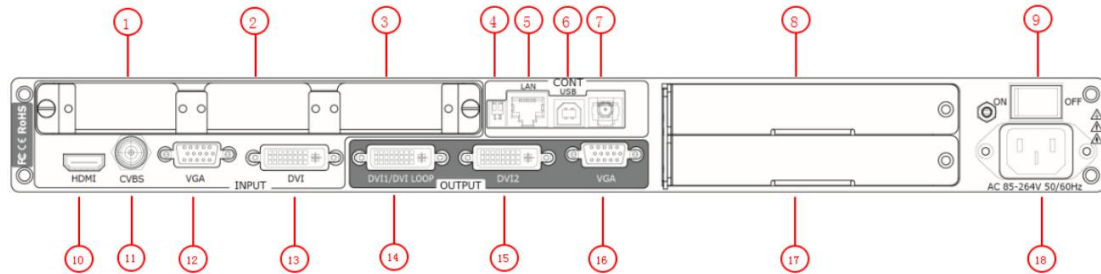
VENUS X1 is a multiple outputs video processor that accepts a wide variety of video signals, including DVI, VGA, HDMI, CVBS, DP, SDI (SD/HD/3G compatible) and USB. VENUS X1 combines truly seamless, fade in fade out, glitch-free switching with advanced scaling technologies to meet the requirements of high quality, high resolution video presentations.

VENUS X1 also launches the latest, user defined image size and coordinate, dual image processing, multiple cascade mapping, different user configurations and controlling, key in and out and other advanced functions for high-end show.

VENUS X1 supports EDID editing for VGA, DVI, HDMI input ports and read EDID for output ports, support EDID modify by windows control program. PC modified EDID, users can edit the EDID of input port according to the resolution of outputs to achieve the optimal input resolution.

VENUS X1 also supports local front panel operation, remote widows based software control by RS232, USB, Ethernet, and WIFI control. In addition, VENUS X1 is based on replaceable input optional modules structure, with different modules, you can reach more possibility and application range.

1.2.1 Back Panel



Input Connectors

10	<u>HDMI-A – HDMI</u> Standard HDMI signals can input.
11	<u>BNC - CVBS</u> Standard CVBS signals can input.
12	<u>DB15 – VGA</u> Standard VGA signals can input. Additionally this VGA port supports Component (YPbPr) with the use of a VGA to Component adapter.
13	<u>DVI-I – DVI</u> Standard DVI signals can input. Additionally this DVI port supports VGA with the use of a DVI to VGA adapter. The DVI port supports up to HDMI 1.3 if the port format is set to HDMI.

Output Connectors

14. 15	<u>DVI-I – DVI</u> Connect to the monitor or LED display which has DVI interface. (This connector does not support hotplug).
14	<u>DVI-I – DVI LOOP</u> Connect to the DVI input of the next VENUS X1 or the device with DVI input.
16	<u>DB15 – VGA</u> Connect to the monitor or LED display which has VGA interface. (This connector does not support hotplug).

Control Connectors

4	<u>DIP Switch</u> If the two DIP switches are upwards, the device is in normal work, and if they are downwards, the device is in upgrade state. OLED module light is off when the device is in upgrade state. Some of the button lights turn on, and the device will not work.
5	<u>RJ45 – Ethernet</u> Connect to Ethernet work for remote control by windows software.
6	<u>USB-B – USB</u>

	Connect to Ethernet work for remote control by Windows software and for product firmware upgrades.
7	<u>WIFI</u> Connect to Ethernet work for remote control by WIFI.

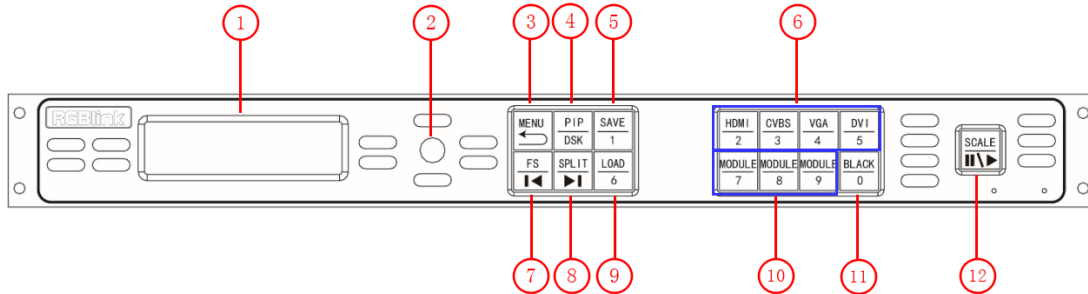
Power Connection

9	<u>Power Switch</u> Illuminated power switch.
18	<u>IEC – Power Input</u> Main power input AC 85-264V Max 65W.

Option Slots

1.2.3	<u>Input Option Slots</u> Range of inputs are available for user fitting. Refer to Product Input Options .
8.17	<u>Sender Card Slots</u> A Sender Card can be installed in this slot. Support sender Card types including Linsn, Nova and Colorlight (sold separately) Refer to Product Sender Cards .

1.2.2 Front Panel



Display

1	<p><u>OLED Display</u></p> <p>Displays current status of the product, and for feature selections provides interactive choices in conjunction with buttons on the front panel.</p>
---	--

Multi-Function Buttons

2	<p><u>Rotary Button</u></p> <p>This button used for menu selections and confirmation. The button is both rotary (turn to left and right), and push-button (confirm selection)</p>
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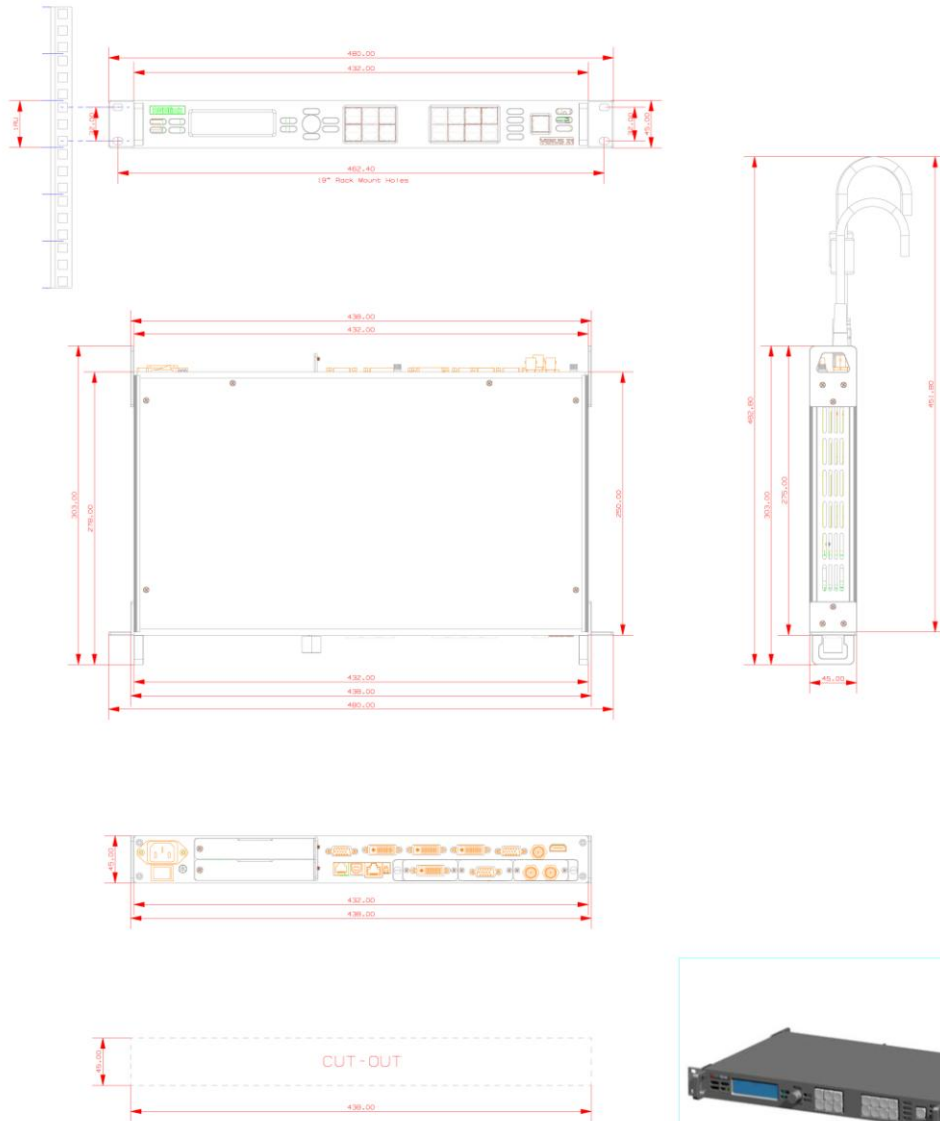
Illuminated Buttons

3	<p><u>MENU Button</u></p> <p>This button used for menu selections – refer to Understanding the MENU Structure. Push the button again will return to the last level menu or exit the menu. Push the button two times to enter the effect switch function menu. Push the button for 3 seconds will lock the front panel, and push the button for 5 seconds to unlock. Push the MENU and TAKE button for 3 seconds will switch the language.</p>
4	<p><u>PIP/DSK Button</u></p> <p>PIP and DSK function reuse button. Push the button to enter to the PIP menu items – refer to PIP Setting. VENUS X1 V1.5 can not support DSK function button.</p>
5	<p><u>SAVE Button</u></p> <p>Save all current settings with the VENUS X1 to 1 of the 36 available slots. For details, please refer to Saving Views. Additionally this button is used for direct numeric entry for numbers 1.</p>
6	<p><u>Dedicated Signal Buttons</u></p> <p>For each of inputs on the back panel a dedicated backlit buttons are provided. When lit, the signal is selected for use, when red light is flashing, signal is in preview or the signal is not available.</p>

	Additionally, each button is numbered and can be used as direct number entry when values such as resolution and size.
7	<p><u>FS Button</u></p> <p>Screen parameters setting button. Push the button, its LED light turns on, user can choose full size or screen size, and set the size and position of the screen.</p> <p>When input USB signal, it reused the move previous button, push the button to play the previous USB video file.</p>
8	<p><u>SPLIT Button</u></p> <p>Split function button.</p> <p>When connect USB signal, it reused the move next button, push the button to play the next USB video file.</p>
9	<p><u>LOAD Button</u></p> <p>Restores/Loads all current settings with the VENUS X1 from 1 of the 36 available slots.</p> <p>For details, please refer to Recall Saved Settings.</p> <p>Additionally this button is used for direct numeric entry for numbers 6.</p>
10	<p><u>Optional Signal Buttons</u></p> <p>If optional input module is fitted, then these two buttons operate as per Dedicated Signal Buttons above.</p> <p>Additionally these buttons are used for direct numeric entry for numbers 7 / 8 / 9.</p>
11	<p><u>BLACK Button</u></p> <p>Black button, push the button, its LED light turns on, the output will be switched to black, push the button again, its LED light is off, and output the video image.</p> <p>For details, please refer to Using Black out.</p> <p>Additionally this button is used for direct numeric entry for numbers 0.</p>
12	<p><u>SCALE Button</u></p> <p>This button used for size and position adjusting.</p> <p>When input USB signal, it reused the stop and play button, push the button to stop or play the USB video file.</p>

1.2.3 Dimension

Following is the dimension of VENUS X1 for your reference:



Weight:
Net Weight 2.7 Kg

Chapter 2 Installing Your Product

2.1 Plugging in Signals

Connect signals to the product (ensure all devices are powered off first). Tighten connector screws/locks where provided.



For connector protection and for additional cable support this product is fitted with protection frames on either side of the device. For cable support use cable ties to attached to the protection frames to avoid stress on signal connectors.



2.2 Plugging in Main Power

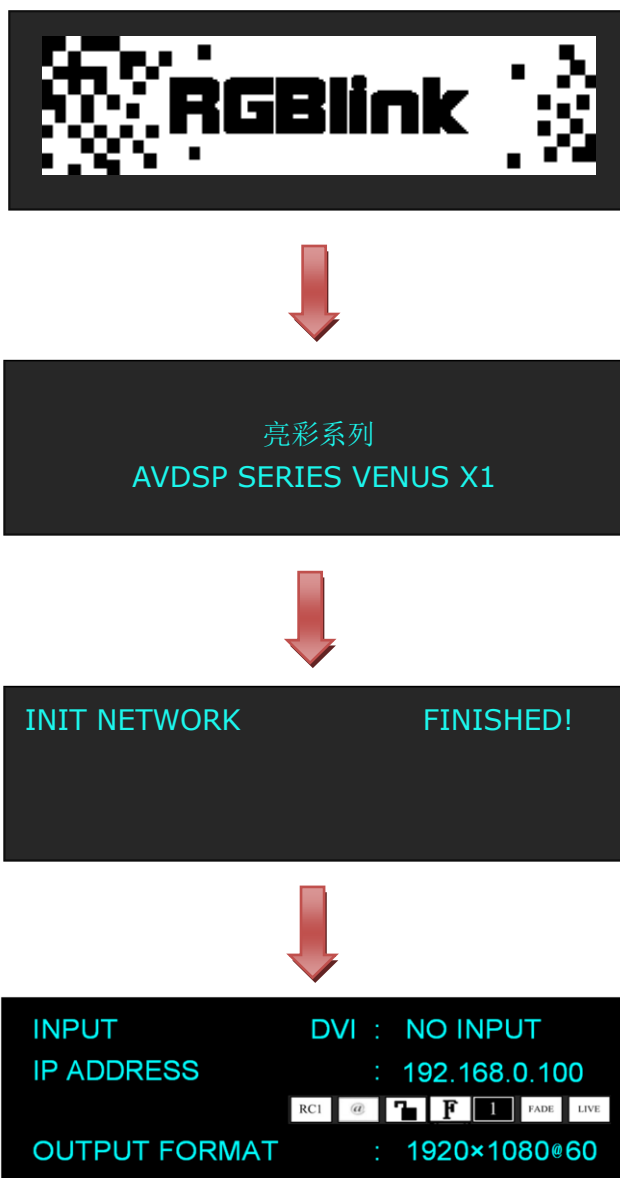
Connect IEC cable to device and plug into wall socket. Turn on power at wall socket.

2.3 Turning on Your Product

Turn the power switch on the rear of the product to the ON position.

OLED display will show as below, completing initialization before loading last settings and input/output configuration.

On delivery, DVI will be the default input signal at 1920x1080@60, and the output format is defaulted to 1920x1080@60.



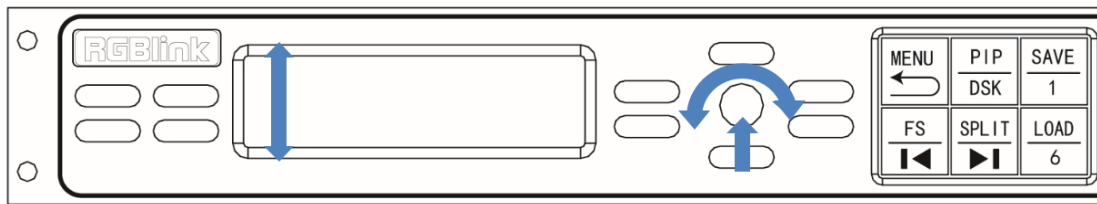
Chapter 3 Using Your Product

3.1 Using the MENU Button

Push the [MENU] button to enter the menu display.

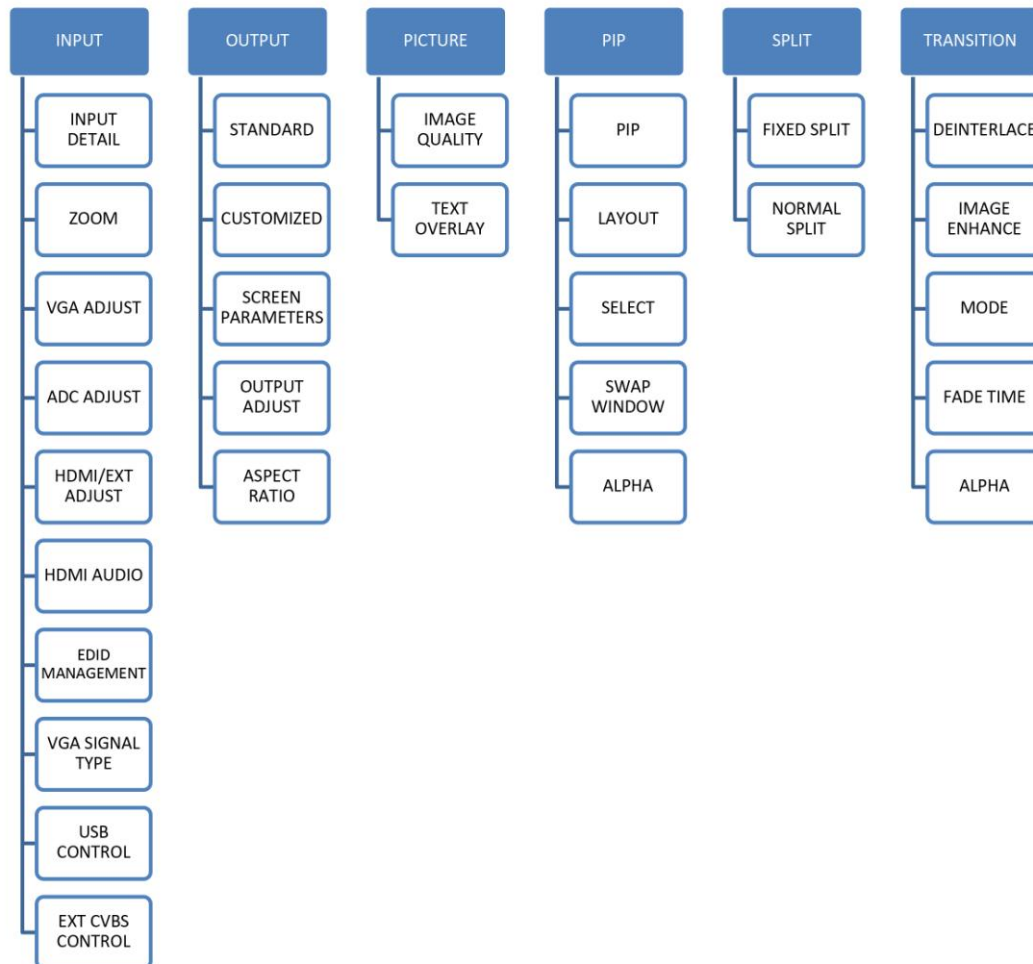
Turn the rotary knob to navigate to the menu item required. The → symbol shows the current item. Push the knob to select and enter into the menu item.

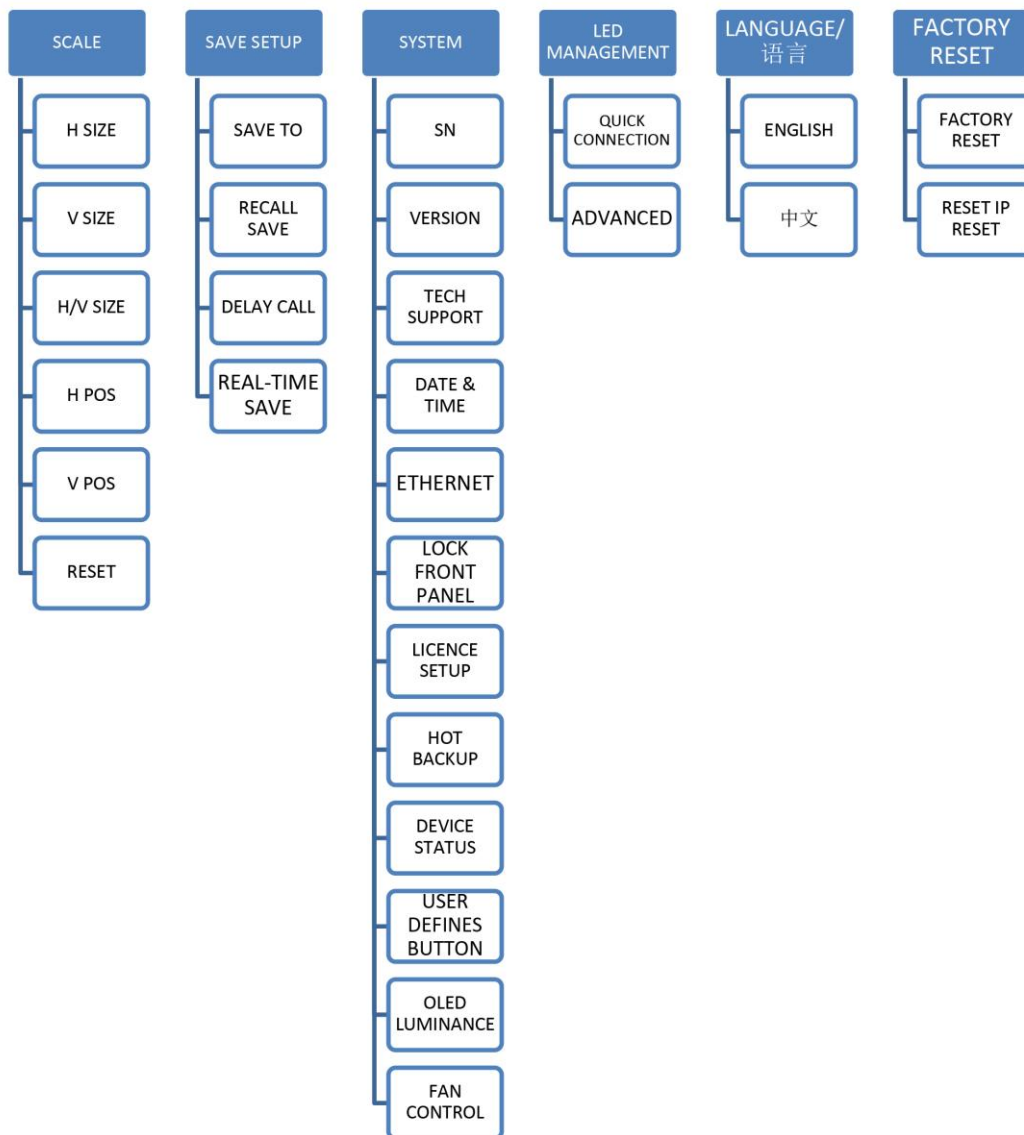
As shown in the figure below:



3.2 Understanding the MENU Structure

The MENU structure is shown in the figure below:



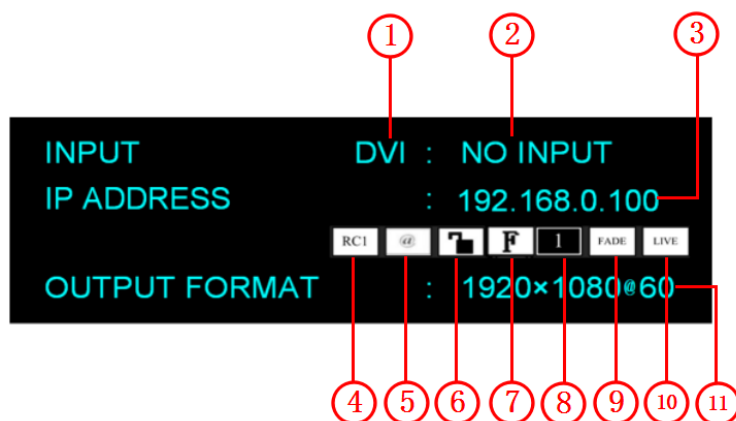


3.3 Using the Menu

Use the menu system for convenient and intuitive operation. VENUS X1 OLED display shows the menu items. The OLED display will show the default state when the menu is not in use, or the operation has timed out. Using the MENU button and rotary knob in the front panel, the OLED display will show the corresponding menus according to user selections.

3.3.1 Understanding the Display

Turn the power switch to the ON position, the OLED display will show the start-up interface and show the default menu after completing initialization as below:



Introduce for the above information:

1	<p><u>Input Signal</u></p> <p>Shows the current Input signal that is selected. The related dedicated signal button will be lit red.</p>
2	<p><u>Input Resolution</u></p> <p>Show the current input resolution from the selected Input source. To configure input resolutions, use the EDID Management features. A wide range of input resolutions are supported depending the input – refer to Specification.</p> <p>If a # symbol is show after the resolution, then a custom resolution is being used.</p>
3	<p><u>IP address</u></p> <p>Shows the IP address of the product.</p> <p>When not displayed here, the serial number can be found via the SYSTEM menu.</p>
4	<p><u>Recall</u></p> <p>Show the current recall position.</p>
5	<p><u>Ethernet</u></p> <p>Displays whether Ethernet connection is active or inactive. Ethernet settings are available in the Ethernet menu.</p>
6	<p><u>Lock</u></p> <p>Indicates if the front panel is locked.</p>

7	Full Indicates whether the screen size is full size or screen size.
8	1 Indicates the current is single image, image settings are available in the PIP menu.
9	Fade Indicates whether transitions are CUT or FADE. Configure from the Transition menu.
10	Live Indicates whether output video Live or whether FREEZE is active.
11	Output Resolution Show the current output resolution. To configure output resolutions, use the OUTPUT menu. A wide range of resolutions are supported – refer to Specification . If a # symbol is show after the resolution, then a custom resolution is being used.

3.3.2 Understanding the Main Menu

Push the MENU button in the default state and turn the rotary knob, the OLED display will show the main menus as below:

->INPUT	>>
OUTPUT	>>
PICTURE	>>
PIP	>>
->SPLIT	>>
TRANSITION	>>
SCALE	>>
SAVE SETUP	>>
->SYSTEM	>>
LED MANAGEMENT	>>
LANGUAGE/语言	ENG
FACTORY RESET	>>

There are 12 menu items in the main menu, and display in 3 pages. Turn the rotary knob, and select any menu above, push the rotary knob to confirm, the OLED display will show the submenu. If push the MENU button, the OLED display will return to the last level menu.

3.3.3 Input Menu

->INPUT DETAIL	>>
ZOOM	>>
VGA ADJUST	>>
ADC ADJUST	>>

```

->HDMI/EXT ADJUST      >>
  HDMI AUDIO           >>
  EDID MANAGEMENT     >>
  VGA SIGNAL TYPE      >>

```

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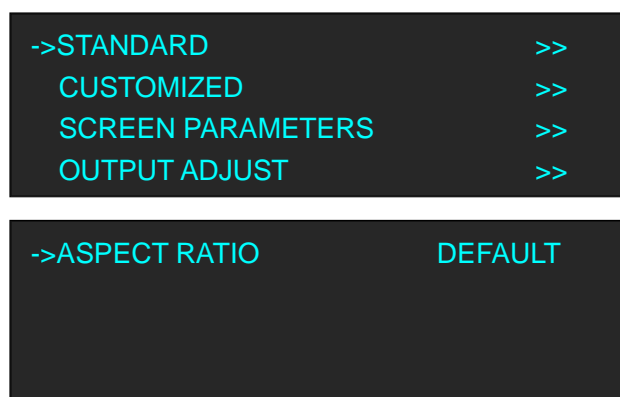
->USB CONTROL          >>
  EXT CVBS CONTROL     >>

```

INPUT DETAIL	Display the input source and input format.
ZOOM	<u>V UP</u> Image to up zoom.
	<u>V DOWN</u> Image to down zoom.
	<u>V UP/DOWN</u> Image to up and down zoom.
	<u>H LEFT</u> Image to left zoom.
	<u>H RIGHT</u> Image to right zoom.
	<u>H LEFT/RIGHT</u> Image to left and right zoom.
	<u>CENTER</u> Image from center to the edges zoom.
	<u>RESET</u> If image quality distorts by improper operation, it can be recover by reset.
VGA ADJUST	H POS, V POS, CLOCK and PHASE setting, or select auto adjust.
ADC ADJUST	Select ADC auto adjust or ADC reset all.
HDMI/EXT ADJUST	H POS and V POS setting. If image quality distorts by improper operation, it can be recover by reset.
HDMI AUDIO	Enable or disable the HDMI audio function.
EDID MANAGEMENT	<u>DESTINATION PORT</u> Select the destination port, DVI, HDMI or VGA.
	<u>EDID SOURCE</u> Select the EDID source.
VGA SIGNAL TYPE	Select VGA or YPbPr.
USB CONTROL	<u>USB PORT</u> Select PORT A or PORT B.
	<u>PLAY MODE</u> Select video or photo, default video.

	<p><u>PLAY FILE</u> Select the file to play.</p> <p><u>PLAY ORDER</u> Select REPEAT ALL, RANDOM, ORDER, SINGLE CYCLE, SINGLE TRACK or PLAY LIST.</p> <p><u>PLAY STATE</u> Select play or pause.</p>
EXT CVBS CONTROL	<p><u>CVBS PORT</u> Select PORT A or PORT B.</p>
	<p><u>INPUT FORMAT</u> Display the input format of CVBS.</p>

3.3.4 Output Menu



STANDARD	Include 22 kinds of standard standard resolution.
CUSTOMIZED	The special display project or LED display application would like to require special resolution settings to meet the requirement--refer to Set the Output Resolution .
SCREEN PARAMETERS	<p><u>H SIZE</u> Width setting.</p>
	<p><u>V SIZE</u> Height setting.</p>
	<p><u>H POS</u> Horizontal phase setting.</p>
	<p><u>V POS</u> Vertical phase setting.</p>
	<p><u>MODE</u> Select SCREEN SIZE or FULL SIZE.</p>
	<p><u>SCREEN FOLLOW SCALE</u> Enable or disable screen follow scale function.</p>
	<p><u>RESET</u> If image quality distorts by improper operation, it can be recover by reset.</p>

OUTPUT ADJUST	<u>DVI1</u> Select DVI1 OUTPUT or DVI LOOP, and select DVI mode, bit depth and data range, or set DE. If image quality distorts by improper operation, it can be recover by reset.
	<u>DVI2</u> Select DVI mode, bit depth and data range, and set DE. If image quality distorts by improper operation, it can be recover by reset.
ASPECT RATIO	Select 4:3, 16:9 or default.

3.3.5 Picture Menu

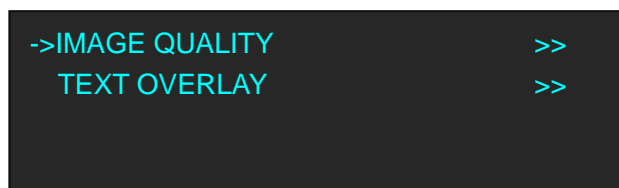
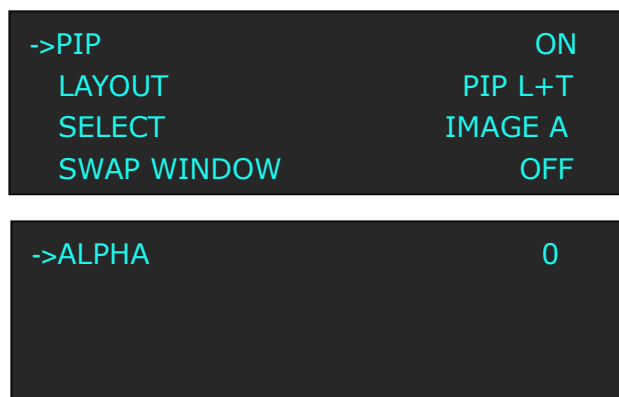


IMAGE QUALITY	<u>BRIGHTNESS</u> Brightness adjust, the adjustment range is 0~100.
	<u>CONTRAST</u> Contrast adjust, the adjustment range is 0~100.
	<u>SATURATION</u> Saturation adjust, the adjustment range is 0~100.
	<u>SHARPNESS</u> Sharpness adjust, the adjustment range is 0~100.
	<u>COLOR RED</u> Color red adjust, the adjustment range is 0~100.
	<u>COLOR GREEN</u> Color green adjust, the adjustment range is 0~100.
	<u>COLOR BLUE</u> Color blue adjust, the adjustment range is 0~100.
	<u>GAMMA</u> Gamma setting, can select LINEAR, sRGB, -1.2, 1.2, -1.4, 1.4, -1.6 or 1.6.
	<u>RESET</u> If image quality distorts by improper operation, it can be recover by reset.
TEXT OVERLAY	<u>TEXT OVERLAY</u> Enable or disable the text overlay function.
	<u>PRESET</u> Include 13 kinds of presets.
	<u>BLEND MODE</u> Include "MODE 1" and "MODE 2". MODE 1: Graphic content locate at the top and is non-transparent, background transparency is controlled by double-image transparency;

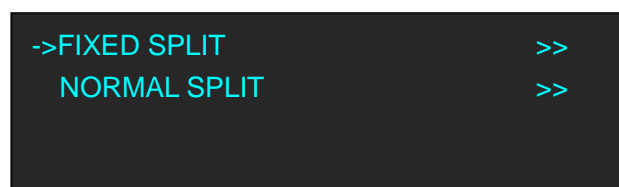
	MODE 2: Graphic content is controlled by double-image transparency, the background is completely transparent.
	<u>BLEND LEVEL</u> Blend level setting, the adjustment range is 0~15.
	<u>ABOVE/BELOW</u> Select "ABOVE" or "BELOW".
	<u>KEY IN/OUT</u> KEY IN: Delete the background, and remain the text title. KEY OUT: Delete the text title, and remain the background.
	<u>RED</u> Red limit, cut-off point condition of ABOVE and BELOW condition in red channel, the adjustment range is 0 ~ 248.
	<u>GREEN</u> Green limit, cut-off point condition of ABOVE and BELOW condition in green channel, the adjustment range is 0 ~ 248.
	<u>BLUE</u> Blue limit, cut-off point condition of ABOVE and BELOW condition in blue channel, the adjustment range is 0 ~ 248.

3.3.6 PIP Menu



PIP	Enable or disable the PIP function.
LAYOUT	Select PIP L+T, PIP R+T, PIP L+B, PIP R+B, PIP CENTER, PBP L+R or PBP T+B.
SELECT	Select IMAGE A or IMAGE B.
SWAP WINDOW	Enable or disable swap window function.
ALPHA	The adjustment range is 0~16.

3.3.7 Split Menu



FIXED SPLIT	<u>SPLIT</u> Enable or disable the split function.
	<u>HORIZONTAL SPLIT</u> Horizontal fixed split, select it and push the number button to set the total horizontal screen number.
	<u>VERTICAL SPLIT</u> Vertical fixed split, select it and push the number button to set the total vertical screen number.
	<u>SPLIT INDEX</u> Select the split index.
	<u>H SIZE</u> Width setting.
	<u>V SIZE</u> Height setting.
	<u>ADVANCE</u> H SIZE, V SIZE, H POS and V POS setting. If image quality distorts by improper operation, it can be recover by reset.
NORMAL SPLIT	<u>SPLIT</u> Enable or disable the split function.
	<u>H TOTAL</u> The total width points setting.
	<u>V TOTAL</u> The total height points setting.
	<u>H POS</u> Horizontal position setting.
	<u>V POS</u> Vertical position setting.
	<u>H SIZE</u> Width setting.
	<u>V SIZE</u> Height setting.
	<u>ADVANCE</u> H SIZE, V SIZE, H POS and V POS setting. If image quality distorts by improper operation, it can be recover by reset.
	<u>RESET</u> If image quality distorts by improper operation, it can be recover by reset.

3.3.8 Transition Menu

->DEINTERLACE	ON
IMAGE ENHANCE	OFF
MODE	DISSOLVE
FADE TIME	0.5s

->ALPHA 16

DEINTERLACE	Enable or disable deinterlace function.
IMAGE ENHANCE	Enable or disable image enhance function.
MODE	Transition mode selection, including Dissolve, Cut, Wipe Square In, Wipe Square Out, Wipe Top Left In, Wipe Top Left Out, Wipe Top Right In, Wipe Top Right Out, Wipe Bottom Left In, Wipe Bottom Left Out, Wipe Bottom Right In, Wipe Bottom Right Out, Wipe Left In, Wipe Left Out, Wipe Right In, Wipe Right Out, Wipe Top In, Wipe Top Out, Wipe Bottom In and Wipe Bottom Out.
FADE TIME	Transition time setting, the adjustment range is from 0.1 to 3S.
ALPHA	Alpha setting, the adjustment range is from 0 to 16S.

3.3.9 Scale Menu

->H SIZE >>
 V SIZE >>
 H/V SIZE >>
 H POS >>

->V POS >>
 RESET

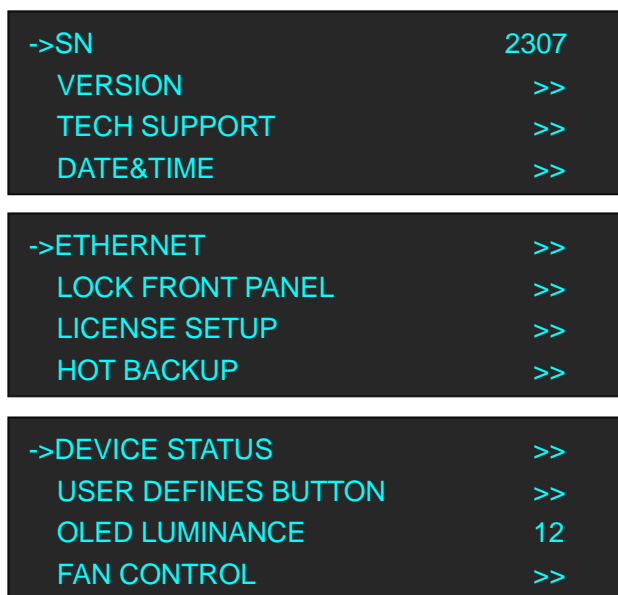
H SIZE	Width setting.
V SIZE	Height setting.
H/V SIZE	Width and height equal proportion scale setting.
H POS	Horizontal phase setting.
V POS	Vertical phase setting.
RESET	If image quality distorts by improper operation, it can be recover by reset.

3.3.10 Save Setup Menu

->SAVE TO >>
 LOAD FROM >>
 DELAY CALL 0s
 REAL-TIME SAVE OFF

SAVE TO	Save all current settings with the VENUS X1 to 1 of the 36 available slots.
LOAD FROM	Restores/Loads all current settings with the VENUS X1 from 1 of the 36 available slots.
DELAY CALL	Delay output time setting.
REAL-TIME SAVE	Enable or disable the real-time save function.

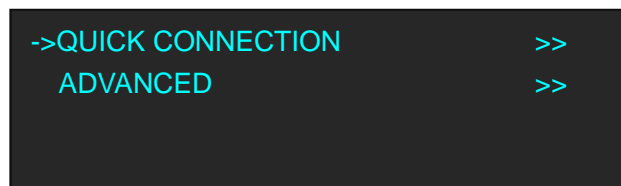
3.3.11 System Menu



SN	Display the serial number of the device.
VERSION	Display the software and hardware version of the device.
TECH SUPPORT	Display sales, after-sale service, email, website and telephone.
DATE&TIME	Display the date, time, current time, last time, total time and boot times. User can also change the date and time.
ETHERNET	Enable or disable the network function. If select “ON”, user can set the IP address, subnet mask and gateway.
LOCK FRONT PANEL	Lock front panel function. If the key is locked, the equipment will remind: "Buttons are locked! Press MENU button for 5s unlock button!"
LICENSE SETUP	The device will not work if excess the prescribed time, there are no signal output, it needs to input password and modify the using time to continue to work.
HOT BACKUP	User can enable or disable the hot backup function. Select “ON” to set the backup signal for BACKUP_1 to BACKUP_5. It will switch to the backup signal if interrupt signal.
DEVICE STATUS	Display the video status, MB status and EXT status.
USER DEFINES BUTTON	User defines BLACK and SCALE button. BLACK: Default black function, can define this button as FREEZE, TEST

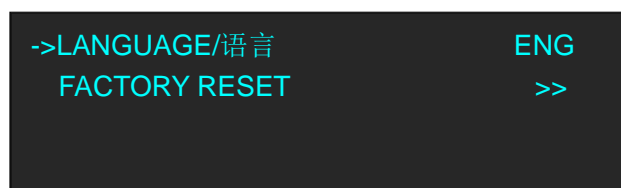
	PATTERN and BRIGHT. SCALE: Default scale function, can defines this button as TAKE.
OLED LUMINANCE	OLED luminance adjust, the adjustment range is 1~15.
FAN CONTROL	Enable or disable the auto speed function, set the current speed and view the current temperature.

3.3.12 LED MANAGEMENT Menu



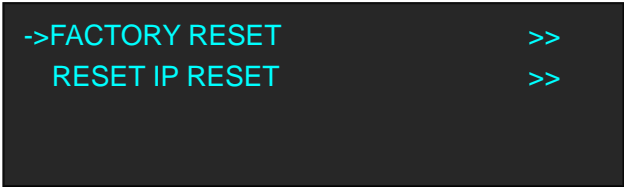
QUICK CONNECTION	<u>SENDING CARD TYPE</u> Support 3 kinds of sender card, LINSN TS 802, NOVA STAR MSD 300 and COLORLIGHT T7.
	<u>SENDING CARD NO.</u> Select No.1 or No.2 sender card.
	<u>OUTPUT FORMAT</u> Select the output format according to actual need.
	<u>QUICK CONNECTION</u> Include sending card set and receiving card set. For details, please refer to Set LED Display Connection .
	<u>BRIGHTNESS</u> Brightness setting, the adjustment range is 1%~100%.
ADVANCED	<u>RECEIVING CARD SEPARATE</u> Select cable, receiving card No., and set X and Y.
	<u>COLOR TEMP</u> Set color red, color green, color blue, and save to sender card.
	<u>GAMMA</u> GAMMA setting.
	<u>SYSTEM INFO</u> Display the version of sending card and receiving card.

3.3.13 Language Menu



Language	Select Chinese or English.
----------	----------------------------

3.3.14 Factory Reset Menu



```
->FACTORY RESET >>
RESET IP RESET >>
```

FACTORY RESET	Select "YES" or "NO". Select "YES" to restore default settings.
RESET IP RESET	Select "YES" or "NO". Select "YES" to restore IP to default settings.

3.4 Single Image Switching

Default DVI for the current input source, if need switch other signal, for example, VGA, push the VGA button.

DVI button light will be off after pushing the VGA button, and VGA button light will be on if the VGA signal is effective and stable. If the VGA signal is invalid or no input, VGA button light will flash.

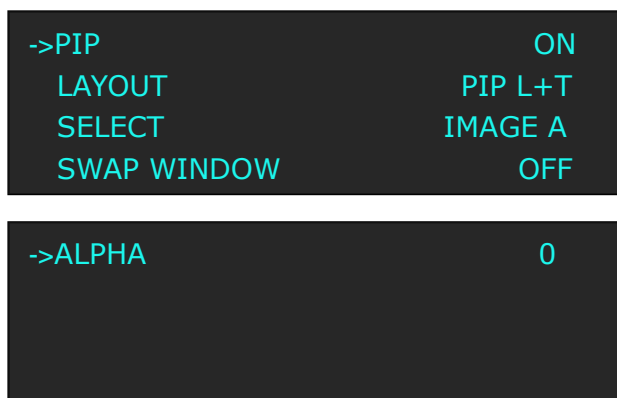
same with above, switch the signals among CVBS, HDMI and input option signal.

3.5 PIP Setting

Enable the PIP function

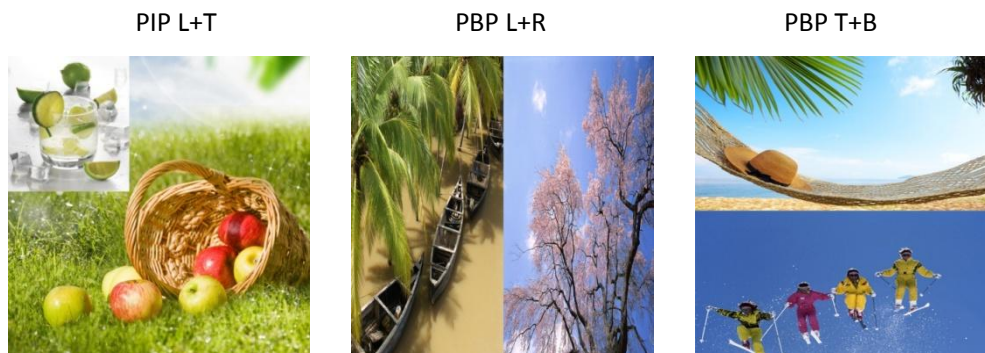
VENUS X1 supports seamless switching for single image and double images.

Push the [PIP/DSK] button, the LED light is on, and enter to the PIP menu items. OLED module show as follows:



Layout :

Select any one from PIP L+T, PIP R+T, PIP L+B, PIP R+B, PIP CENTER, PBP L+R and PBP T+B, take 3 layouts for example, shown as follows:



Select:

Select image A or image B. For example, select image B, the settings will be available for image B.

Swap Window:

Enable or disable the swap window function.

Alpha:

Image transparency setting, the adjustment range is 0 to 16.

3.6 Set LED Display Connection

VENUS X1 can realize three connection as follows connecting the Port D or Port U of one sending card to LED screen, connecting the both Port D and Port U of one sending card to LED screen, connecting the Port D and Port U of two sending cards to LED screen (PORT A or PORT B is for Colorlight, and PORT D or PORT U is for Linsn). The following are the detailed operation steps of the three connection.

1. Connect the Port D or Port U of One Sending Card to LED Screen

Here we take No.1 sending card, port U1 for example. (Note: No.1 sending card corresponding to port D1 and port U1, No.2 sending card corresponding to port D2 and port U2).

- (1) First, make sure that the device is in normal operation.
- (2) Select the input source, for example, DVI.
- (3) Connect the cable to Port U1.
- (4) Turn the knob, and select <LED MANAGEMENT>:

```

SYSTEM >>
->LED MANAGEMENT >>
LANGUAGE/语言 ENG
FACTORY RESET >>

```

- (5) Push the knob to confirm, turn the knob, select <SENDING CARD TYPE> in <QUICK CONNECTION> option, push the knob to confirm, turn the knob, select the sending card type, for example, select Linsn (VENUS X1 supports Linsn and Colorlight sender card, for Nova sender card, it only support brightness and Gamma adjustment). Shown as follows:

```

->QUICK CONNECTION >>
ADVANCED >>

```



```

*SENDING CARD TYPE LINSN
SENDING CARD NO. No.2
OUTPUT FORMAT >>
QUICK CONNECTION >>

```

- (6) Turn the knob, select <SENDING CARD NO.>, push the knob to confirm. Turn the knob and select "No.1", push the knob to confirm. Shown as follows:

```

SENDING CARD TYPE LINSN
->SENDING CARD NO. No.1
OUTPUT FORMAT >>
QUICK CONNECTION >>

```


- (7) After setting, turn the knob, select <QUICK CONNECTION>, push the knob to confirm for next setting, shown as follows:

SENDING CARD TYPE	LINSN
SENDING CARD NO.	No.1
OUTPUT FORMAT	>>
->QUICK CONNECTION	>>



->SENDING CARD SET	>>
RECEIVING CARD SET	>>

- (8) Turn the knob, select <RECEIVING CARD SET>, push the knob to confirm. Turn the knob again, and select <CHOOSE CABLE>, push the knob to confirm. Turn the knob, select PORT U1 and push the knob to confirm.

SENDING CARD SET	>>
->RECEIVING CARD SET	>>

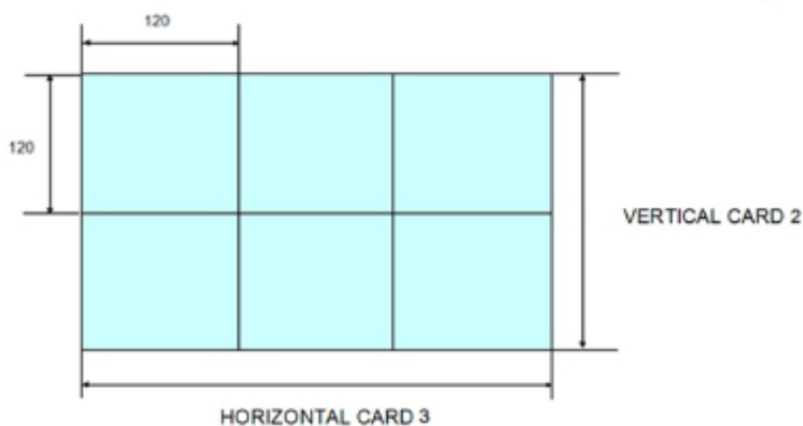










->CHOOSE CABLE	PORT U
HORIZONTAL CARD	1
VERTICAL CARD	1
WIDTH	64

- (9) Set the horizontal card, vertical card, width and height. For example, set horizontal card as 3, vertical card as 2, width and height as 120, shown as follows:

CHOOSE CABLE	PORT U
->HORIZONTAL CARD	3
VERTICAL CARD	2
WIDTH	120

->HEIGHT	120
Offset (A/B) X	0
Offset (A/B) Y	0
CONNECT CARD TYPE	>>



After setting, turn the knob and choose <CONNECT CARD TYPE> according to actual connection mode. VENUS X1 support 8 kinds of connection modes, they are , , , , , ,  and  respectively.

HEIGHT	120
Offset (A/B) X	0
Offset (A/B) Y	0
->CONNECT CARD TYPE	>>

Send to receiver after choose the connection mode, observe the display screen and make sure if display image is correct. If wrong, change the connection types. Then connect the Port D or Port U of One Sending Card to LED Screen is finished.

The setting for port D1 is same as the above setting.

Rendering is as follows:



2. Connect the Port D and Port U of One Sending Card to LED Screen

- (1) First, make sure the device is in normal operation.
- (2) Select the input source, for example, DVI.
- (3) Connect one cable to Port D1, the other one to U1.
- (4) Connect Port U1 of No.1 Sending Card to LED screen, the settings are same as Step 4 to Step 9 of “Connect the Port D or Port U of One Sending Card to LED Screen”.

(5) Connect Port D1 of No.1 Sending Card to LED screen, setting steps are as follows:

a. Turn the knob, and select <LED MANAGEMENT>:

SYSTEM	>>
->LED MANAGEMENT	>>
LANGUAGE/语言	ENG
FACTORY RESET	>>

b. Push the knob to confirm, turn the knob, select <SENDING CARD TYPE> in <QUICK CONNECTION> option, push the knob to confirm, turn the knob, select the sending card type, for example, select Linsn (VENUS X1 supports Linsn and Colorlight sender card, for Nova sender card, it only support brightness and Gamma adjustment). Shown as follows:

->QUICK CONNECTION	>>
ADVANCED	>>



*SENDING CARD TYPE	LINSN
SENDING CARD NO.	No.2
OUTPUT FORMAT	>>
QUICK CONNECTION	>>

c. Turn the knob, select <SENDING CARD NO.>, push the knob to confirm. Turn the knob and select "No.1", push the knob to confirm. Shown as follows:

SENDING CARD TYPE	LINSN
->SENDING CARD NO.	No.1
OUTPUT FORMAT	>>
QUICK CONNECTION	>>

d. After setting, turn the knob, select <QUICK CONNECTION>, push the knob to confirm for next setting, shown as follows:

SENDING CARD TYPE	LINSN
SENDING CARD NO.	No.1
OUTPUT FORMAT	>>
->QUICK CONNECTION	>>



```

->SENDING CARD SET      >>
  RECEIVING CARD SET    >>

```

- e. Turn the knob, select <RECEIVING CARD SET>, push the knob to confirm. Turn the knob again, and select <CHOOSE CABLE>, push the knob to confirm. Turn the knob, select PORT D1 and push the knob to confirm.

```

SENDING CARD SET      >>
->RECEIVING CARD SET >>

```



```

->CHOOSE CABLE      PORT D
  HORIZONTAL CARD    3
  VERTICAL CARD      2
  WIDTH              120

```

- f. Turn the knob, and select <Offset (A/B) Y>, push the knob to confirm. Turn the knob, set Offset (A/B) Y as 240 (Note: Offset (A/B) Y=VERTICAL CARD×HEIGHT, in the previous part, we set vertical card as 2 and height as 120). Shown as follows:

```

HEIGHT              120
Offset (A/B) X      0
->Offset (A/B) Y    240
CONNECT CARD TYPE   >>

```

- g. Turn the knob, and select <CONNECT CARD TYPE>, shown as follows:

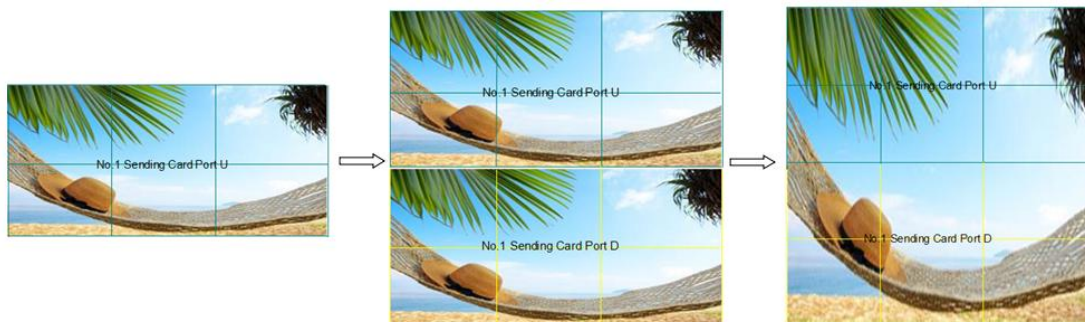
```

HEIGHT              120
Offset (A/B) X      0
Offset (A/B) Y      240
->CONNECT CARD TYPE >>

```

Select the connection mode, the setting is same as Port U1. Then connection of both the Port D and Port U of One Sending Card to LED Screen is finished.

Rendering is as follows:

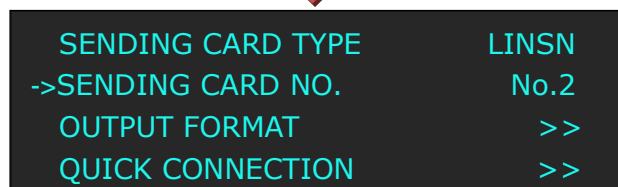
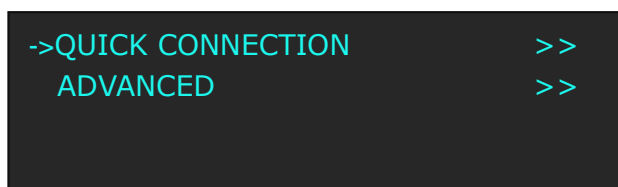


3. Connect the Port D and Port U of Two Sending Cards to LED Screen

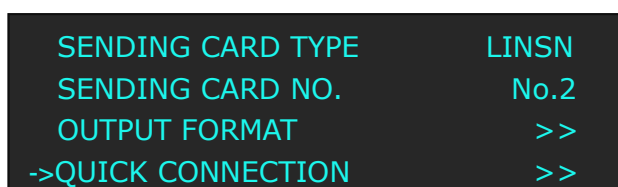
- (1) First, make sure the device is in normal operation.
- (2) Select the input source, for example, DVI.
- (3) Connect four cables to Port U1, Port D1, Port U2 and Port D2 respectively.
- (4) Connect Port D1 and Port U1 of No.1 Sending Card to LED screen, the settings are same as **“Connect the Port D and Port U of One Sending Card to LED Screen”**.
- (5) Same as above, connect Port D2 and Port U2 of No.2 Sending Card to LED screen.
- (6) Turn the knob, and select <LED MANAGEMENT>:



- (7) Turn the knob, select <SENDING CARD NO.> in <QUICK CONNECTION> option, push the knob to confirm. Turn the knob, select No.2, push the knob to confirm. Shown as follows:



- (8) After setting, turn the knob, select <QUICK CONNECTION>, push the knob to confirm for next setting, shown as follows:





```

->SENDING CARD SET      >>
  RECEIVING CARD SET    >>

```

- (9) Turn the knob, select <RECEIVING CARD SET>, push the knob to confirm. Turn the knob again, and select <CHOOSE CABLE>, push the knob to confirm. Turn the knob, select PORT U2 and push the knob to confirm.

```

  SENDING CARD SET      >>
->RECEIVING CARD SET    >>

```



```

->CHOOSE CABLE          PORT U
  HORIZONTAL CARD        3
  VERTICAL CARD          2
  WIDTH                  120

```

- (10) Push the [MENU] to return the previous menu, select <SENDING CARD SET>, push the knob to confirm, and enter to the next level menu, shown as follows:

```

->SENDING CARD SET      >>
  RECEIVING CARD SET    >>

```

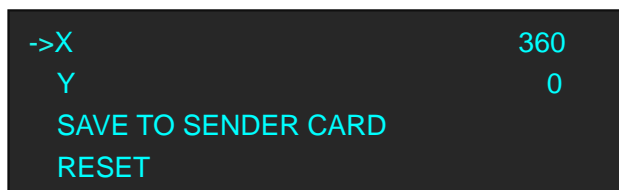


```

->X                      0
  Y                      0
  SAVE TO SENDER CARD
  RESET

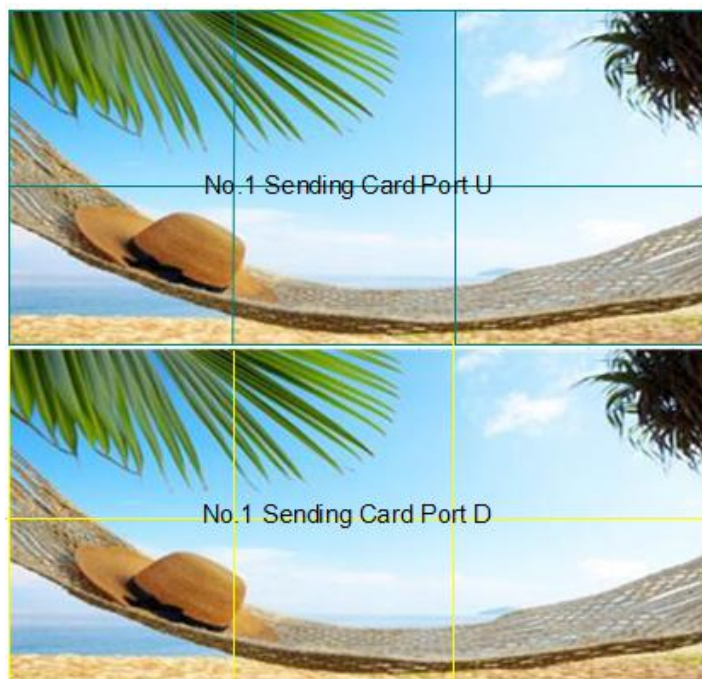
```

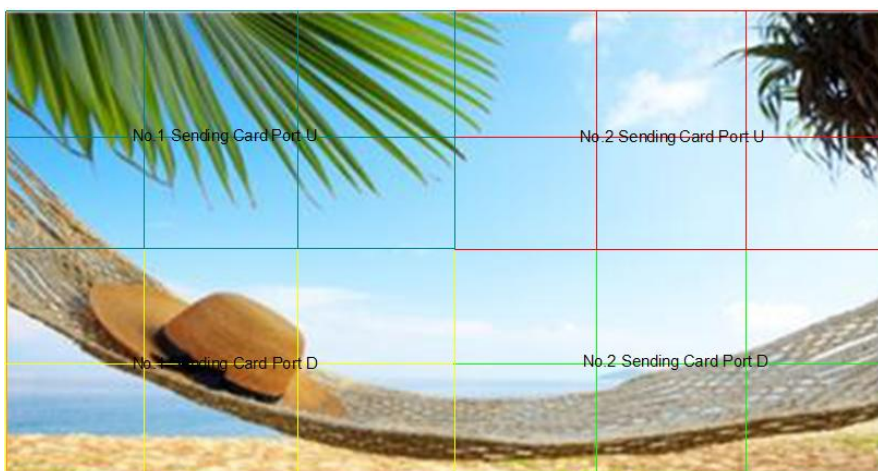
- (11) Turn the knob, and select <X>, set X as 360 (Note: $X = \text{HORIZONTAL CARD} \times \text{WIDTH}$, in the previous part, we set horizontal card as 3 and width as 120). Shown as follows:



(12) Same as above, set X of Port D of No.2 sending card as 360. Then connect the Port D and Port U of Two Sending Cards to LED Screen is finished.

Rendering is as follows:





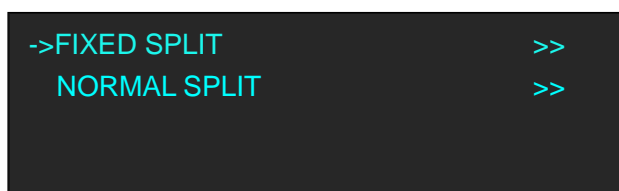
3.7 Split Setting

SPLIT is used when multiple VENUS X1 are used in cascade mode. When do cascade, connect the signals to the signal distributor first, then connect from the outputs of the signal distributor to each input of VENUS X1. User can also do cascade via DVI LOOP port, and it needs to select “DVI LOOP” for <DVI1 OUTPUT> in menus.

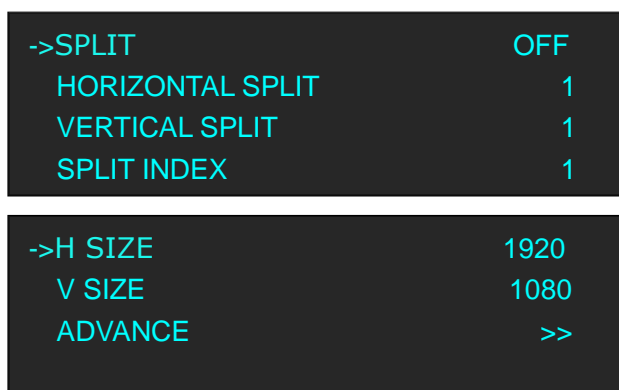
The operations are as follows:

Push the [SPLIT] button, the button LED light will turn on, and enter the split function menus.

Turn the knob to select the split mode, there are two split modes, fixed split and normal split, the OLED module show as follows:



FIXED SPLIT: Menus are as follows:



SPLIT: Split function, can select “ON” or “OFF”, default “OFF”.

HORIZONTAL SPLIT: Horizontal fixed split, select it and push the number button to set the total horizontal screen number.

VERTICAL SPLIT: Vertical fixed split, select it and push the number button to set the total vertical screen number.

SPLIT INDEX: User can select the split index, and the LED screen will show the corresponding image.

H SIZE: The width of the device when do split.

V SIZE: The height of the device when do split.

ADVANCE: H SIZE, V SIZE, H POS and V POS setting. If image quality distorts by improper operation, it can be recover by reset.

NORMAL SPLIT: For normal split, user should enable the split function, that is, turn the knob, and set the <SPLIT> as “ON”, push the knob to confirm. System default “OFF”. User can set the normal split in the sub menus:

```
->SPLIT          ON
  H TOTAL        1920
  V TOTAL        1080
  H POS          0
```

```
->V POS          0
  H SIZE         1920
  V SIZE         1080
  ADVANCE        >>
```

```
->RESET
```

SPLIT: Split function, can select "ON" or "OFF".

H TOTAL: LED screen Horizontal total size.

V TOTAL: LED screen Vertical total size.

H POS: This device display image Horizontal size.

V POS: This device display image Vertical size.

H SIZE: This device display image Width setting.

V SIZE: This device display image Height setting.

ADVANCE: H SIZE, V SIZE, H POS and V POS setting. If image quality distorts by improper operation, it can be recover by reset.

RESET: If image quality distorts by improper operation, it can be recover by reset.

3.8 Scale the Image

Push the [SCALE] button, and enter to the scale menus as follows.

->H SIZE	1920
V SIZE	1080
H/V SIZE	0
H POS	0

->V POS	0
RESET	

User can adjust the following items by the rotary knob or number buttons.

H SIZE: Width setting.

V SIZE: Height setting.

H/V SIZE: Width and height equal proportion scale setting.

H POS: Horizontal phase setting.

V POS: Vertical phase setting.

RESET: If image quality distorts by improper operation, it can be recover by reset.

3.9 Zoom the Image

The image can be zoom in horizontal or vertical separately, to meet the special effects required. Push the [MENU] button to go into the menu items, turn the rotary knob and select <INPUT>, push the knob to confirm. Turn the rotary knob again, select <ZOOM>, and enter to the zoom menus as follows:

->V UP	0
V DOWN	0
V UP/DOWN	0
H LEFT	0

->H RIGHT	0
H LEFT/RIGHT	0
CENTER	0
RESET	

V UP: Zoom in vertical and the image will be zoom in to the top direction from its bottom.

V DOWN: Zoom in vertical and the image will be zoom in to the down direction from its top.

V UP/DOWN: Zoom in vertical but in both top and down direction from its middle.

H LEFT: Zoom in horizontal and the image will be zoom in to the left direction from its right.

H RIGHT: Zoom in horizontal and the image will be zoom in to the right direction from its left.

H LEFT/RIGHT: Zoom in horizontal but in both left and right direction from its middle.

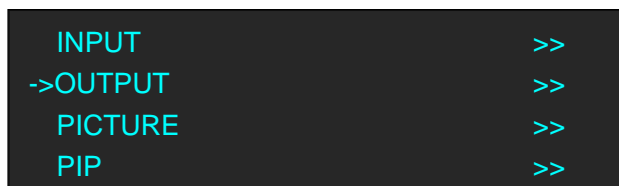
CENTER: Zoom in 4 corner direction from center.

RESET: If image quality distorts by improper operation, it can be recover by reset.

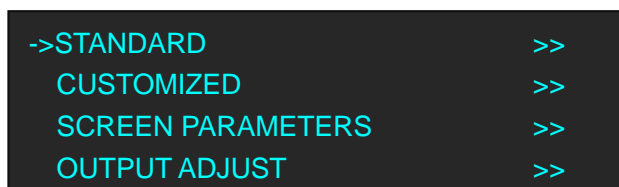
3.10 Set the Output Resolution

3.10.1 Select the Output Resolution

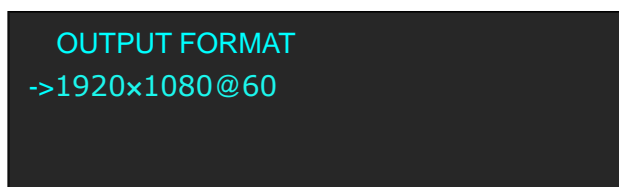
1. Push the [MENU] button, and enter to the menu items, turn the rotary knob, and select <OUTPUT>:



2. Push the knob to confirm, and enter to the menu items as follows:



3. Default <STANDARD> option, push the knob to confirm. Turn the rotary knob, and select the output format according to actual need.

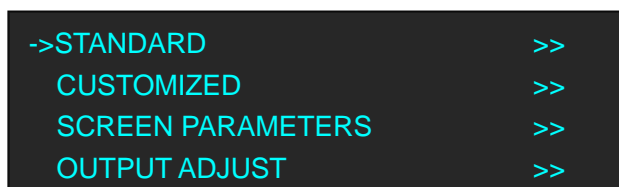


3.10.2 Custom the Output Resolution

1. Push the [MENU] button, and enter to the menu items, turn the rotary knob, and select <OUTPUT>:



2. Push the knob to confirm, and enter to the menu items as follows:



3. Turn the rotary knob, and select <CUSTOMIZED>, push the knob to confirm, and enter to the menu items as follows:

```

STANDARD                >>
->CUSTOMIZED            >>
SCREEN PARAMETERS       >>
OUTPUT ADJUST           >>

```



```

CUSTOMIZED:
->1920x1080@60

```

4. Turn the knob on each digital position, and change the value of the digital by the digital buttons on the front panel. For example, input 1536 as following:

```

CUSTOMIZED:
*1536x

```

5. After the digital, push the knob will add *, means before the * is the horizontal size. Same operation for vertical size, for example input 1536 as following:

```

CUSTOMIZED:
*1536x1536@

```

6. After the digital, push the knob will add @, means before the @ is the vertical size, and after the @ is the refresh rate. Only digital 50 or digital 60 supports for the refresh rate. Use the digital buttons to finish the settings, For example, input refresh rate 60:

```

CUSTOMIZED:
->1536x1536@60

```

7. After input all the values, push knob to enable VENUS X1 to output this resolution. VENUS X1 will take 5~10 seconds to enable this output resolution.

3.11 Screen Size Setting

VENUS X1 supports the screen parameters to meet the requirement where user want to switch between scale screen size and full display size (like monitor). This is only enable for a single display window. Following is an example of a screen size is 1408 x 832.

Operator can defined the VENUS X1 output resolution from standard output resolution list or customized the output resolution which is higher than 1408 x 832. For this application 1440x900 is an example:

Push the [MENU] button to go into the main menu, turn the knob and select <OUTPUT>, push the knob to confirm, turn the knob to select <SCREEN PARAMETERS>, push the knob and goes into the SCREEN PARAMETERS menus as following:

H SIZE--Horizontal pixels, turn the knob or use the digital button to input 1408.

V SIZE--Vertical pixels, turn the knob or use the digital button to input 832.

H POS--Horizontal position, default 0, set the value as the way of H SIZE and V SIZE.

V POS--Vertical position, default 0, set the value as the way of H SIZE and V SIZE.

MODE-- Mode option, select SCREEN SIZE.

SCREEN FOLLOW SCALE--User can enable or disable this function. When choose "ON", the size of the screen will change according to scale setting

RESET: If image quality distorts by improper operation, it can be recover by reset.



3.12 Text Overlay Setting

Before setting the text overlay, please make sure the input channel of the text. For example, set VGA input as the text channel. Then make sure the channel that the text will overlay, for example, overlay the text on DVI channel. The operations are as follows:

1. Push the VGA button to make sure there is VGA input.
2. Push the DVI button to make sure there is DVI input.
3. Push the [MENU] button, turn the rotary knob, select <PICTURE>, push the knob to confirm, turn the knob, and select <TEXT OVERLAY>, push the knob to confirm.

```

IMAGE QUALITY          >>
->TEXT OVERLAY        >>
  
```

Then enter into TEXT OVERLAY menu items, turn the knob, and select <TEXT OVERLAY>, push the knob to confirm, turn the knob again, and select "ON" to enable the text overlay function.

```

*TEXT OVERLAY          ON
PRESET                 USER MODE
BLEND MODE             MODE1
BLEND LEVEL           0
  
```

4. Make sure VGA input is IMAGE B, and DVI input is IMAGE A, if not, select <SWAP WINDOW> option by push [PIP/DSK] button, and select "ON" for <SWAP WINDOW>.

```

PIP                    ON
LAYOUT                 PIP L+T
SELECT                 IMAGE A
->SWAP WINDOW          ON
  
```

5. Select the VGA image in "IMAGE B" in <SELECT> option by pushing <PIP/DSK> button, and push [SCALE] button to adjust the size and position of VGA image, then set the VGA image to the required position.

```

->H SIZE               1920
V SIZE                 1080
H/V SIZE              0
H POS                  0
  
```

```

->V POS                0
RESET
  
```


The standard position and size is: ensure the VGA image overlay on the DVI image, display normally and without black edges. If there are black edges around VGA image, select <ZOOM> option in <INPUT> to adjust.

6. Set the text overlay mode: select <PRESET> option in <TEXT OVERLAY>, push the knob to enter into the <PRESET> menu items.

Turn the knob to select the preset mode, for example, set the VGA text as WhOnBk, select WhOnBk1 or WhOnBk2 (Note: Text Overlay only support monochrome subtitles), user can also adjust the <BLEND MODE> or <BLEND LEVEL> to get a better effect.

TEXT OVERLAY	ON
->PRESET	WhOnBk2
BLEND MODE	MODE1
BLEND LEVEL	0

7. Push the [SAVE/1] button to save the above parameters.

3.13 User Define BLACK Key

Default the [BLACK] button as black function. Push the button, its LED light is on, the output will be switched to black, push the button again, its LED light is off, and output the video image.

For more details, please refer to: [Using Black Out](#).

Besides BLACK, user can define this button as FREEZE, TP and BRIGHTNESS, the operations are as follows:

1. Push the [MENU] button, and enter to the menu items, turn the rotary knob, select <SYSTEM>:

```

->SYSTEM                >>
  LED MANAGEMENT        >>
  LANGUAGE/语言          ENG
  FACTORY RESET         >>
  
```

2. Push the knob to confirm, turn the rotary knob, and select <USER DEFINES BUTTON>:

```

  DEVICE STATUS         >>
->USER DEFINED BUTTON  >>
  OLED LUMINANCE       13
  FAN CONTROL          >>
  
```

3. Push the knob to confirm, turn the knob, and select <BLACK KEY>:

```

->BLACK KEY             BLACK
  SCALE KEY             SCALE
  
```

4. Push the knob to confirm, turn the knob, and select <FREEZE>, <TP> or <BRIGHTNESS>, push the rotary knob to confirm.

```

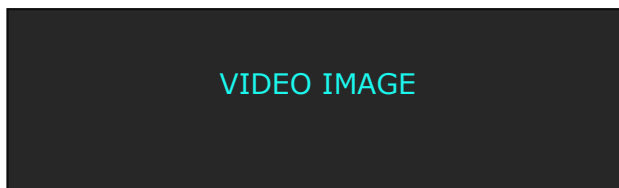
->BLACK KEY             FREEZE
  SCALE KEY             SCALE
  
```

- (1) If select <FREEZE>, push the button, its LED light is on, and freeze the image.

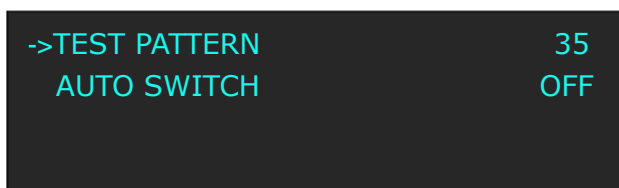
```

  FREEZE IMAGE
  
```

Push the button again, its LED light is off, and output the video image.

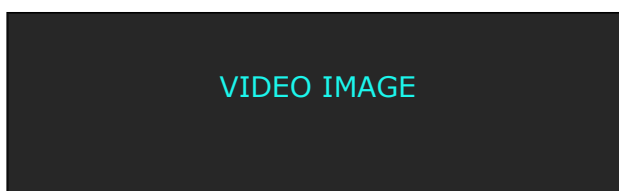


(2) If select <TP>, push the button, its LED light is on, the output will be switched to test pattern.

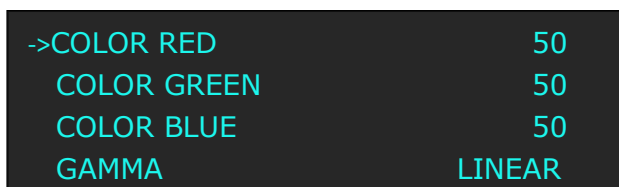
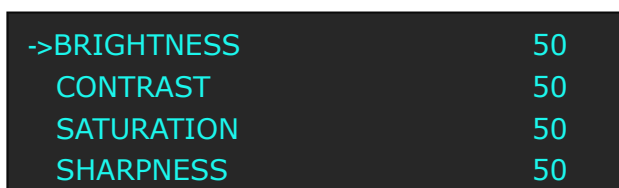


There are 66 kinds of test patterns. If select <AUTO SWITCH>, VENUS X1 will output all the test patterns one by one, and the interval between is 1 to10S.

Push the button again, its LED light is off, and output the video image.



(3) If select <BRIGHTNESS>, push the button, its LED light is on, user can adjust the brightness, contrast, saturation, sharpness, color red, color green, color blue and gamma. If image quality distorts by improper operation, it can be recover by reset.



3.14 User Define SCALE Key

Default the [SCALE] button as scale function. Push the button to enter the scale menu. Turn the knob to select the relevant sub menus.

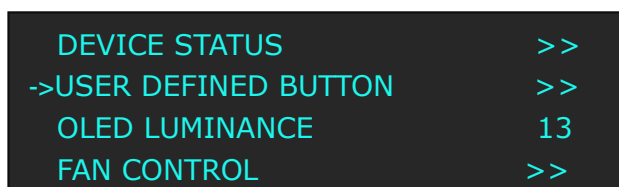
For more details, please refer to: [Scale the Image](#).

Besides SCALE, user can define this button as TAKE, the operations are as follows:

1. Push the [MENU] button to enter to the menu items, turn the knob, and select <SYSTEM>:



2. Push the knob to confirm, turn the knob, and select <USER DEFINED BUTTON>:



3. Push the knob to confirm, turn the knob, and select <SCALE KEY>:



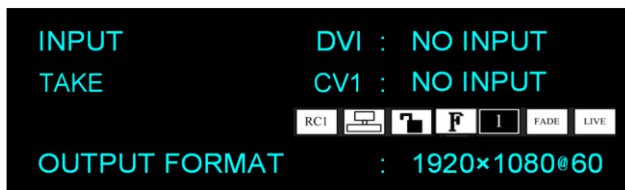
4. Push the knob to confirm, turn the knob, and select <TAKE>, push the knob to confirm.



5. After define SCALE KEY as TAKE, the SCALE button will light up.

3.15 Using TAKE Mode

1. First, define the [SCALE] key as TAKE. For more details, please refer to: [User Define SCALE Key](#).
2. After define SCALE key as TAKE, the SCALE button will light up.
3. Select the signal that need to take, for example, push [DVI/5], the signal button you have selected will flash and the main menu will show the TAKE source you have selected.
4. After select the signal, push the [SCALE] ([TAKE]) button, and the signal will be taken to the output.



3.16 Transition Setting

Push the [MENU] button for two times, and enter to the transition function menus, transition menu shown as follows:

->DEINTERLACE	ON
IMAGE ENHANCE	OFF
MODE	DISSOLVE
FADE TIME	0.5s
->ALPHA	16

DEINTERLACE: Force Deinterlace function, select “ON” or “OFF”.

ON: Force deinterlace.

OFF: No deinterlace.

IMAGE ENHANCE: Image enhancement function, for image edge sharpening, color reduction and image scaling.

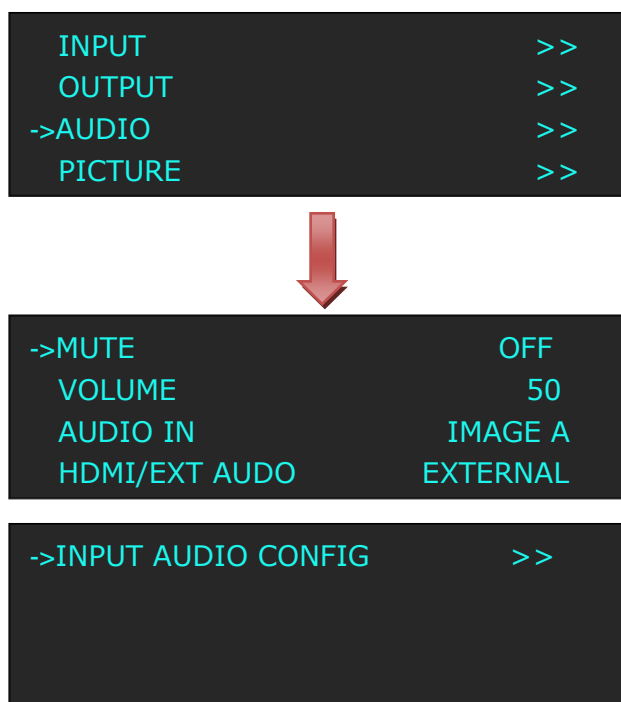
MODE: Special effects switching modes, including DISSOLVE, CUT, WIPE SQUARE IN, WIPE SQUARE OUT, WIPE TOP LEFT IN, WIPE TOP LEFT OUT, WIPE TOP RIGHT IN, WIPE TOP RIGHT OUT, WIPE BOTTOM LEFT IN, WIPE BOTTOM LEFT OUT, WIPE BOTTOM RIGHT IN, WIPE BOTTOM LEFT OUT, WIPE LEFT IN, WIPE LEFT OUT, WIPE RIGHT IN, WIPE RIGHT OUT, WIPE TOP IN, WIPE TOP OUT, WIPE BOTTOM IN and WIPE BOTTOM OUT.

FADE TIME: Switch time setting. Turn the rotary knob to select the fade time and push the knob to confirm. The switching time ranges from 0 to 3S.

ALPHA: Set the image transparency, the adjustment range is 0 to 16.

3.17 Set the Audio

Push the [MENU] button, the OLED module show the menu items, turn the knob, and select <AUDIO>, push the knob to confirm.



MUTE: Enable or disable the mute function.

VOLUME: Volume adjustment, the adjust range is 0~100.

AUDIO IN: Select audio input source for IMAGE A or IMAGE B.

HDMI/EXT AUDIO: Select internal or external audio for HMDI/EXT.

INPUT AUDIO COFIG: The input audio includes: CV1, VGA, DVI, HDMI and M_8_SDI. Input audio 1 can select any input except the inputs of input audio 2 and input audio 3. Input audio 2 can select any input except the inputs of input audio 1 and input audio 3. Input audio 3 can select any input except the inputs of input audio 1 and input audio 2.

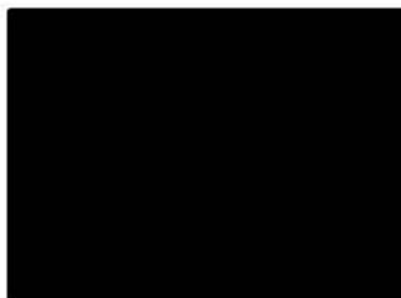
3.18 Using Black Out

Black out descriptions:

Black signal realizes one-key-touch to a black screen.

VENUS X1 provides black effect processing for output with cut black effect. Operation is as below:

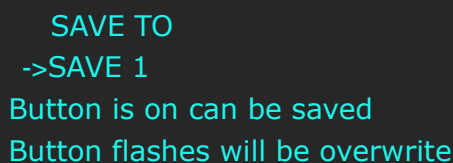
Push the [BLACK/0] button, then output will cut to BLACK, shown as below:



3.19 Saving Views

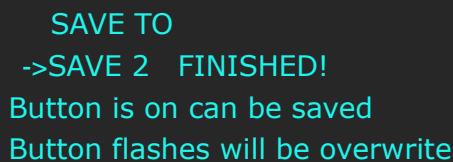
VENUS X1 provides 36 positions for saving or recording parameters. To save current parameters and settings:

1. Push the [SAVE/1] button, the button light is on, and enable the SAVE function.



SAVE TO
->SAVE 1
Button is on can be saved
Button flashes will be overwrite

2. Turn the rotary knob, and select the position that will save, push the knob to confirm.
3. The number button 1, 2, 3, 4, 5, 6, 7, 8, 9, 0 means SAVE1~10, push any button on to save. For example, push number button 2 and save to SAVE 2, the OLED panel will show as follows after saving.



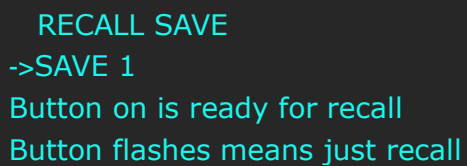
SAVE TO
->SAVE 2 FINISHED!
Button is on can be saved
Button flashes will be overwrite

4. Push the [SAVE/1] button again, the button light is off, and disable the SAVE function.

3.20 Recall Saved Settings

VENUS X1 provides 36 positions for saving or recording parameters. To recall saved settings:

1. Push the [LOAD/6] button, the button light is on, and enable the LOAD function:

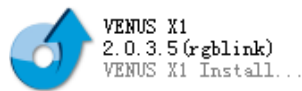


RECALL SAVE
->SAVE 1
Button on is ready for recall
Button flashes means just recall

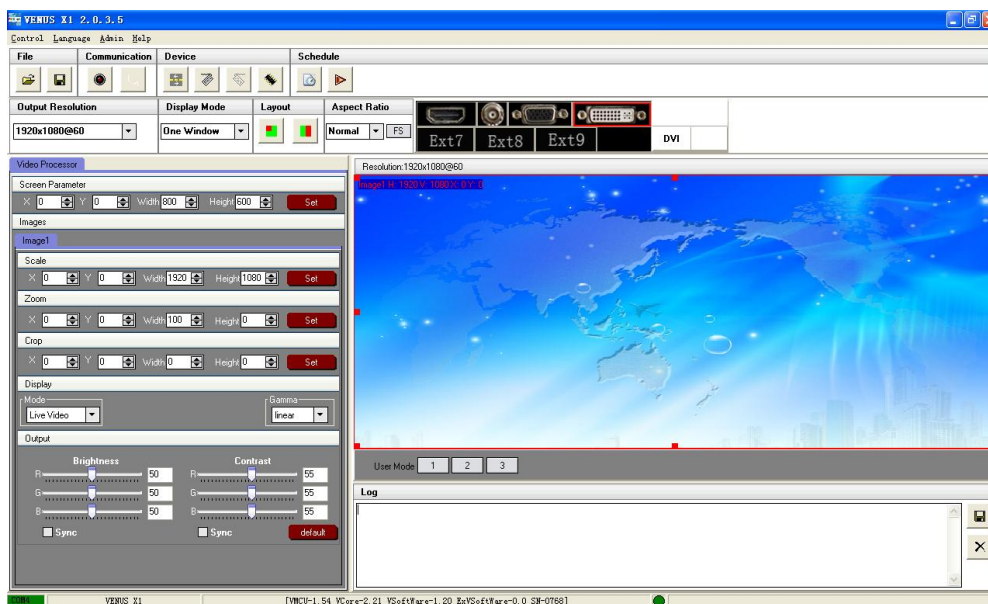
2. Turn the rotary knob, and select the position that will load, push the knob to confirm.
3. Push the [LOAD/6] button again, the button light is off, and disable the LOAD function.

Chapter 4 Controlling Your Processor Remotely

4.1 Using the Windows Control Program





Install the software on a Windows computer, launch the application.



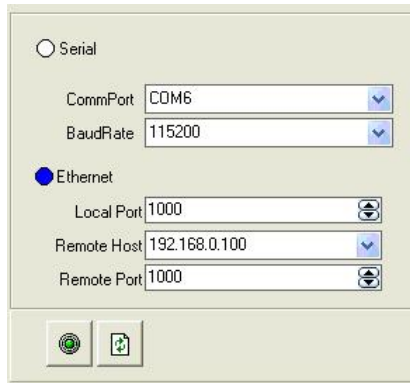
Connection

Besides the power cord, VENUS X1 equip with the RS-232 cable, DB9F cable, and RJ11 (6 B4C) cable to connect to the windows control program.

If connect VENUS X1 to the windows control program with RJ11 cable, fill any number less than 1023 in local port, the remote host must be 192.168.0.100 and the remote port must be 1000.

After setting, click the icon . If connect successfully, the icon will turn to , and show

JDP1000 Openec

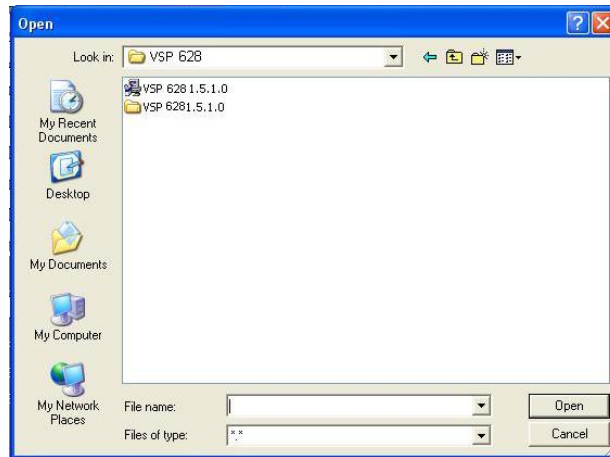


Use

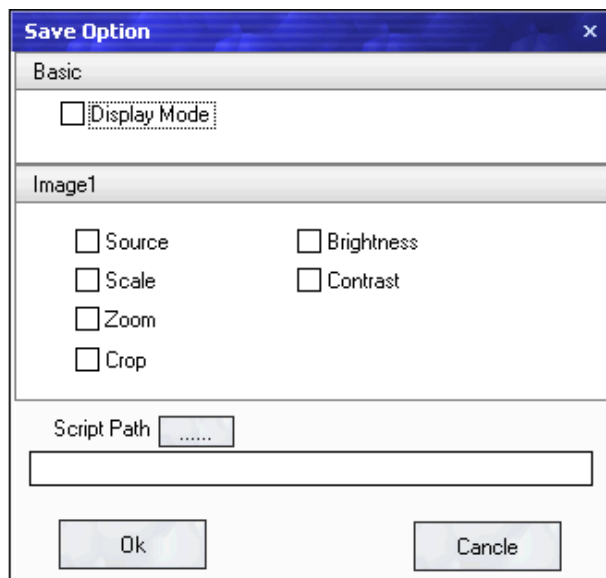
File Toolbar



: Open script. User can open saved script and alter its parameters.



: Save script. Save current user parameters as script to the prescribed path.



Communication Toolbar



: Open COM.



: Close COM.



: Set COM.

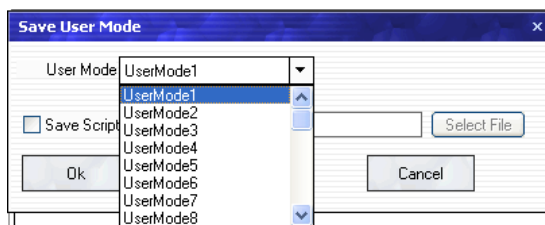
Device Toolbar



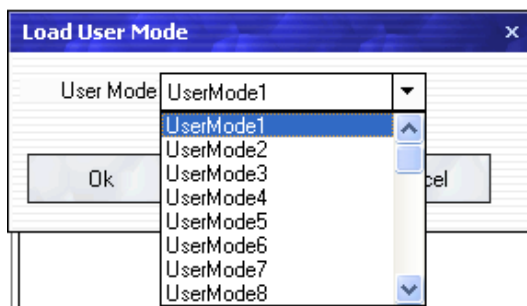
: Synchronization.



: Save to flash.



: Load from flash.

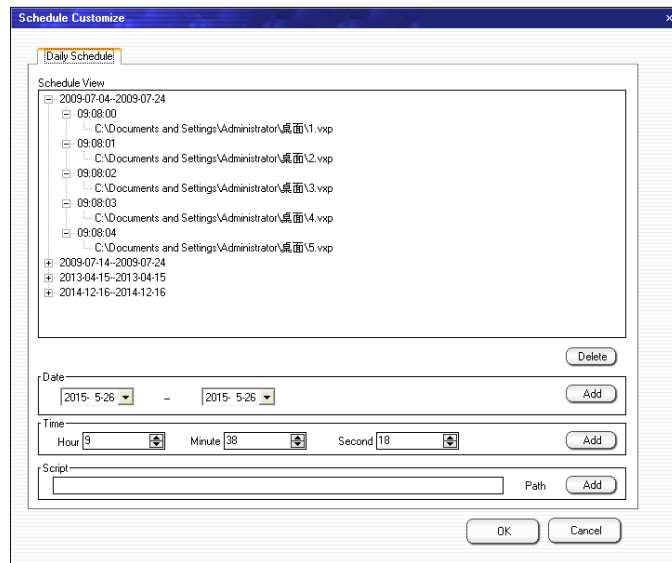


: Factory setup.

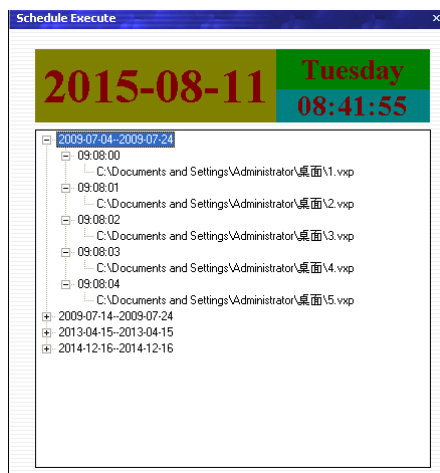
Schedule Toolbar



: Customize schedule.

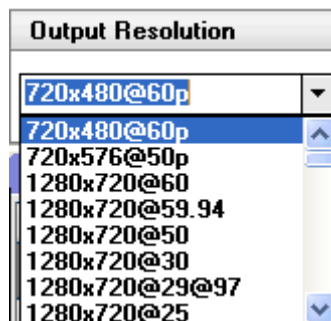


: Execute schedule. Execute tasks according to schedule.



Output Resolution Toolbar

User can select different output resolution by selecting from pull down list. VENUS X1 has 22 output resolutions for users selection.



Note

Same as MENU → OUTPUT → STANDARD

Display Mode Toolbar

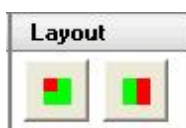
Select one window or two window.



Layout Toolbar

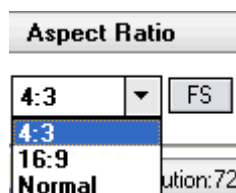
In single channel mode, the dialog is in grey and it is in limited use.

And in dual channel mode, user can set the device to work in PIP or PBP mode directly with quick preset layout button as following.



Aspect Ratio Toolbar

Users can select 4:3, 16:9 or Normal in the pull-down options.



Note

Same as MENU → OUTPUT → ASPECT RATIO.

Signal Input Toolbar

The white area displays the name of input signal when click the input interface on the left. The red box means current selected interface.

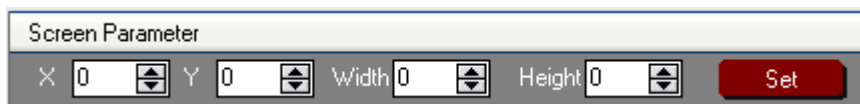


When user select two window mode, click the input interface on the left to choose the channel signal. The green box means current select channel 2.



Screen Parameter Toolbar

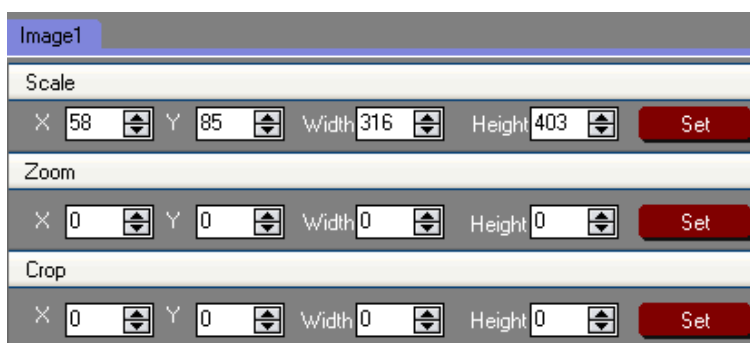
User can set size and position of the screen, mainly applies to LED screens users. After setting screen parameter, in PIP or PBP mode, the image will display on corresponding screen.

**Note**

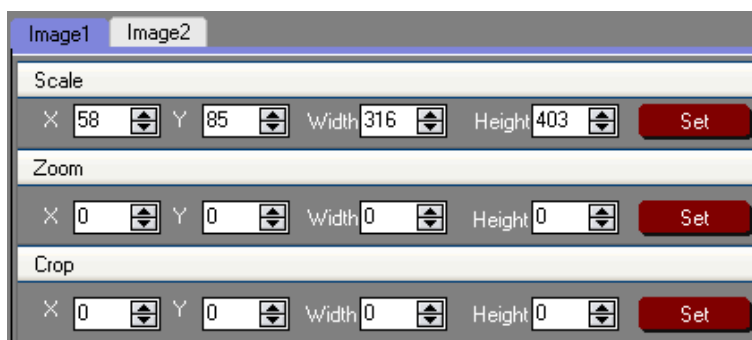
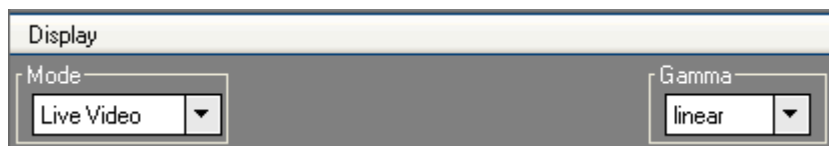
Same as MENU → OUTPUT → SCREEN PARAMETERS

Image Toolbar

Scale, zoom or crop the image. In one window mode, image 2 is unavailable.



Same operation in two window mode.

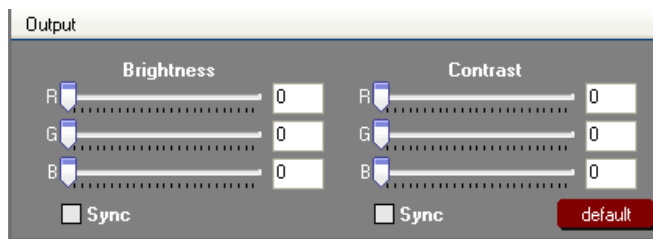
**Display Toolbar**

Users can set the display mode and gamma. There are three modes, black, live video and freeze frame. It outputs black signal when choose black, and the video plays in live mode and stop playing in freeze mode.

Generally, it is not recommend to set the gamma, since LED screen itself has Gamma function. For further information, users can contact with our customer service.

Output Toolbar

User can customize the brightness and the contrast.

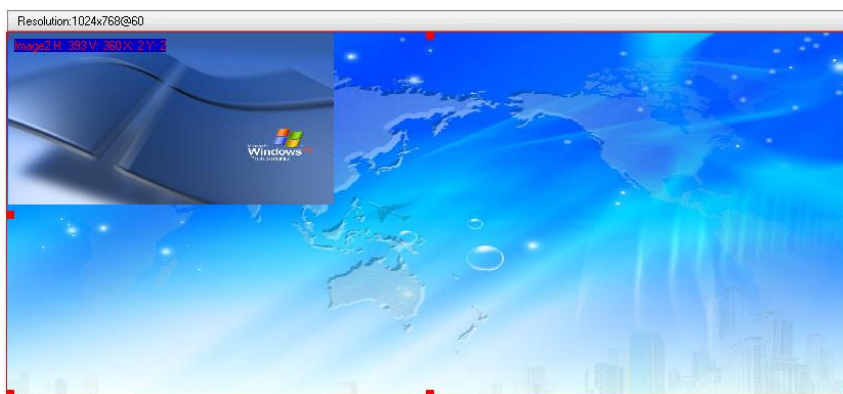


Note

Same as MENU → PICTURE → IMAGE QUALITY

Images Display Toolbar

User can customize the image position and size by dragging the image in this area. This process is sync to the parameters in image toolbars.



User Mode Toolbar

Users can recall the saved user mode1, mode2 or mode3.



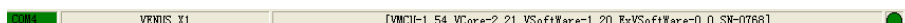
Log Toolbar

User can save or delete the operate log file.

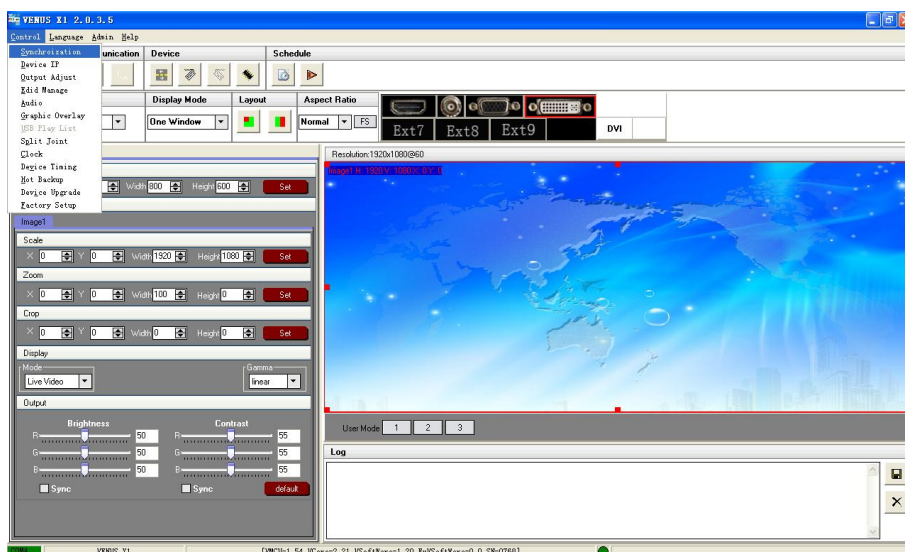


Information Toolbar

It is the VENUS X1 connect state, device name, software version and serial number.



Control

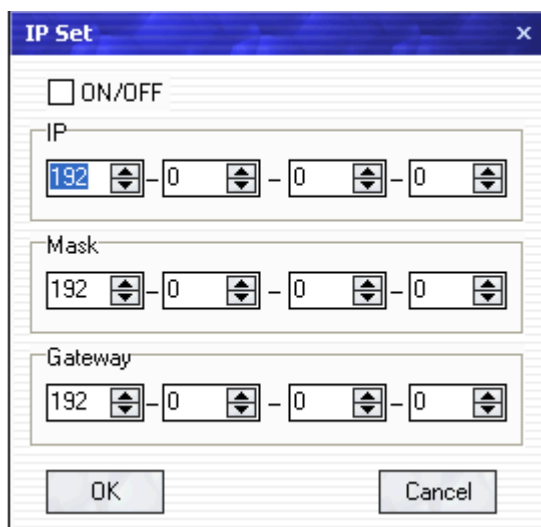


Synchronization:

Read the current parameters of VENUS X1.

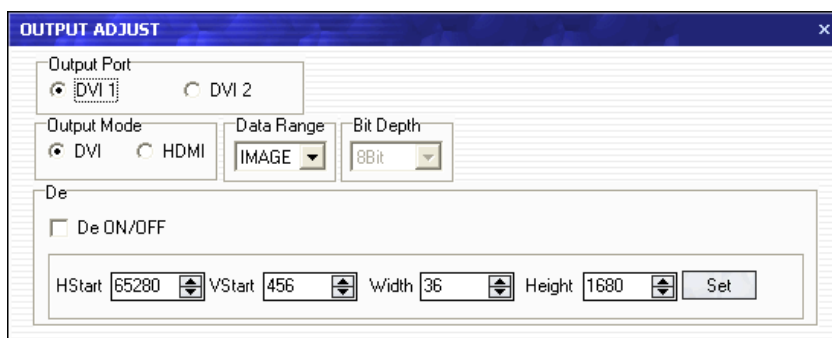
Device IP:

Users can set equipment IP, mask and gateway, usually used in one computer control or remote control several computers. It takes effect immediately after users change IP through serial port; and when users change IP through network, it takes effect after reopen the software.



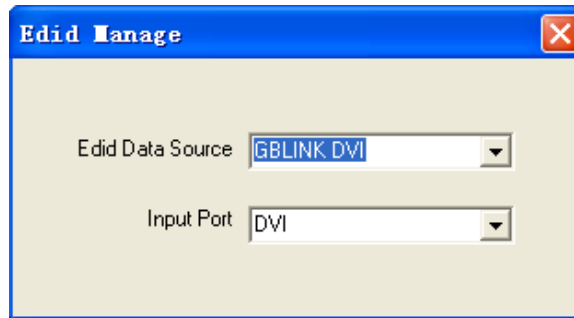
Output Adjust:

Choose the output port and set the output mode, data range, bit depth and DE.



EDID Manage:

Select the EDID date source and input port.

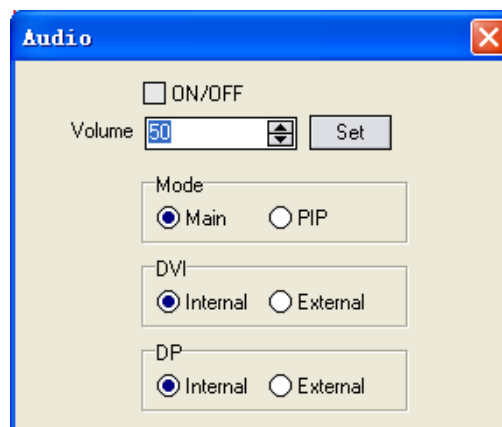


VENUS X1 supports the EDID manage ports and types are as follows:

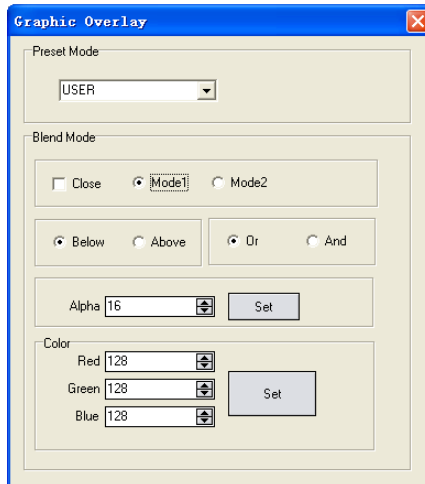
Supported EDID Manage Port	Supported EDID Manage Type
VGA	RGBVGA, OUT_VGA, FOLLOW, CUSTOM
DVI	RGBDVI, RGBHDMI, OUT_DVI1, OUT_DVI2, FOLLOW, CUSTOM
EXT_HDMI	RGBDVI, RGBHDMI, OUT_DVI1, OUT_DVI2, FOLLOW, CUSTOM
EXT_VGA	RGBVGA, OUT_VGA, FOLLOW, CUSTOM
EXT_DVI	RGBDVI, RGBHDMI, OUT_DVI1, OUT_DVI2, FOLLOW, CUSTOM

Audio:

User can enable or disable the audio function. If select "ON", user can set the volume, mode, DVI and DP.

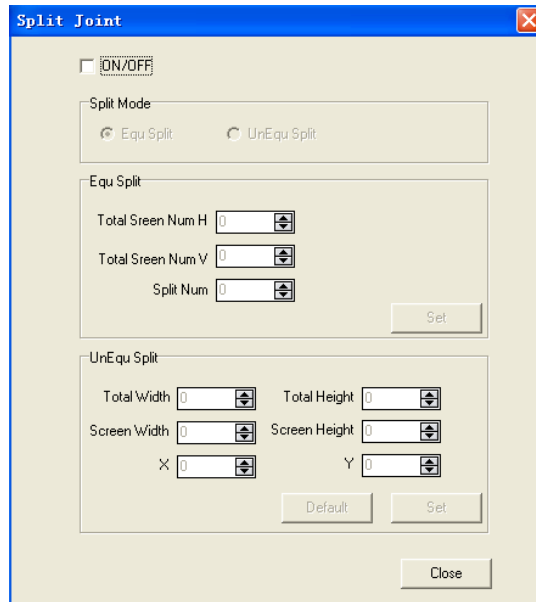
**Graphic Overlay:**

Select the preset mode, blend mode, and set the alpha and color.



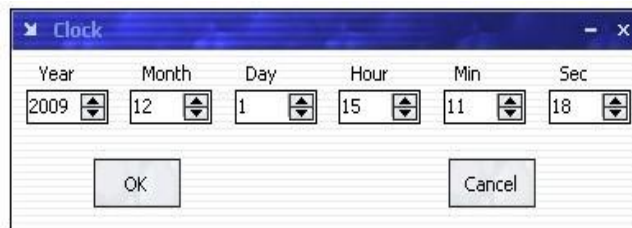
Split Joint:

User can enable or disable the split joint function. When select “ON”, select the split mode, and set Equ Split or UnEqu Split according to actual need.



Clock:

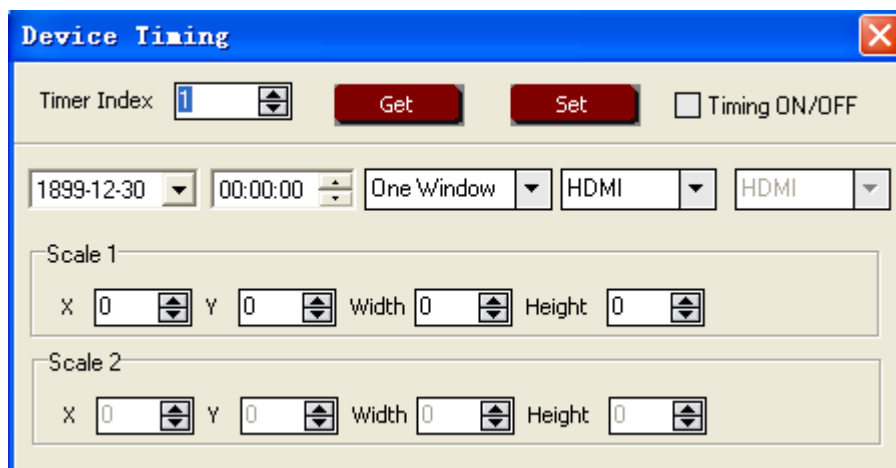
Users can set or adjust lower computer time through “Clock”.



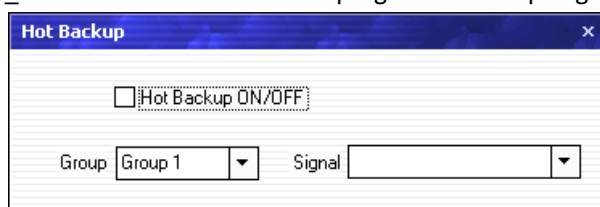
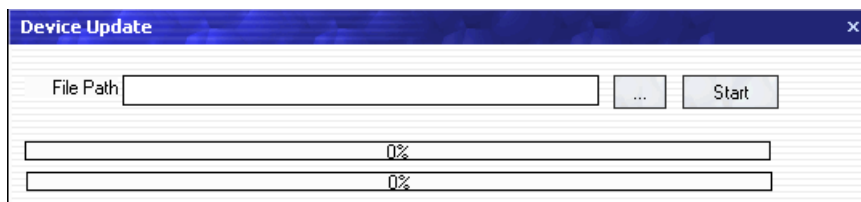
Device Schedule:

Users can set up VENUS X1 to play the appointed input video automatically in time and operation of one window or two windows, and scale the size and position.

Users can setup up to 10 timing operation in the schedule.

**Hot Backup:**

User can enable or disable the hot backup function. Select “ON” to set the backup signal for BACKUP_1 to BACKUP_5. It will switch to the backup signal if interrupt signal.

**Device Update:****Factory Setup:**

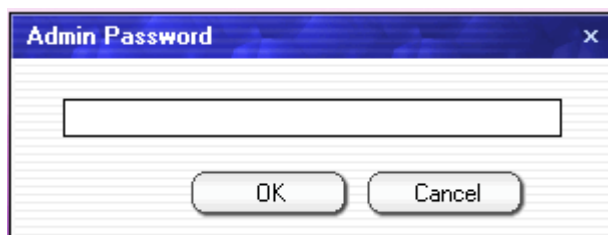
Click “Factory Setup”, previously saved user mode will be cleared.

Language

This software supports both Chinese and English, user can switch the language by “Language” option.

Admin

Advance Debug: User should input the password in the “Admin Password” dialog for advance debug:



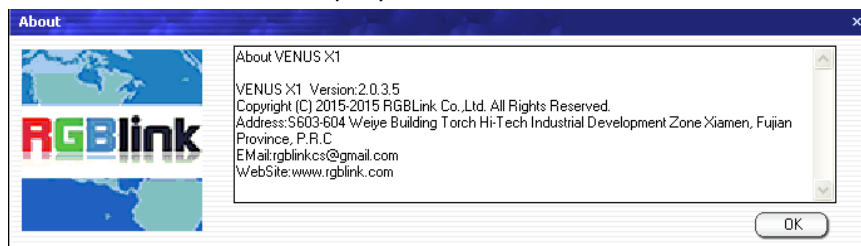
Note

Advance is only done by engineer. If need, please connect us for password.

Help

Version Explain: Show the content of software update history.

About: Show software version and company information.



4.2 Using the VENUS X1 App for Android & iOS

1. Connection

Connect the VENUS X1 to any LAN port of the wireless router via a network cable. **The LAN port are marked with the red box.**



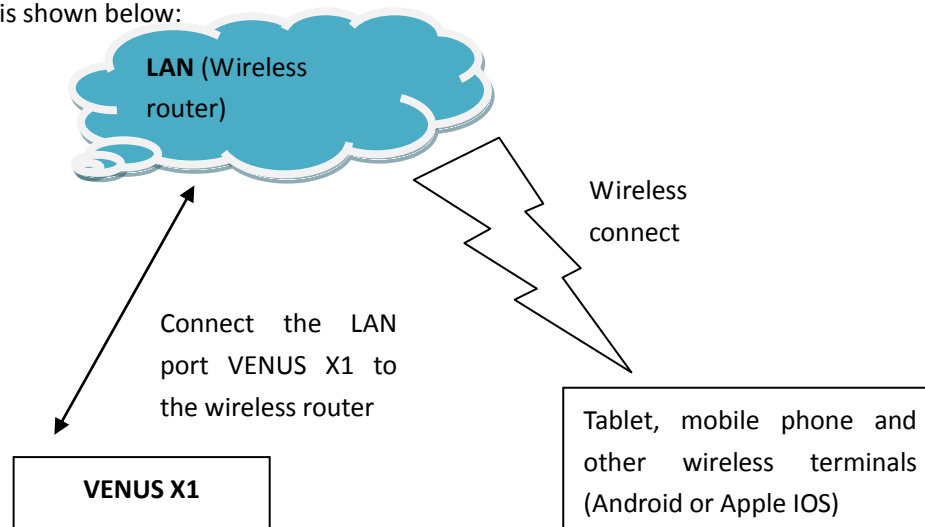
Shown in the figure below (connect from the left to right).



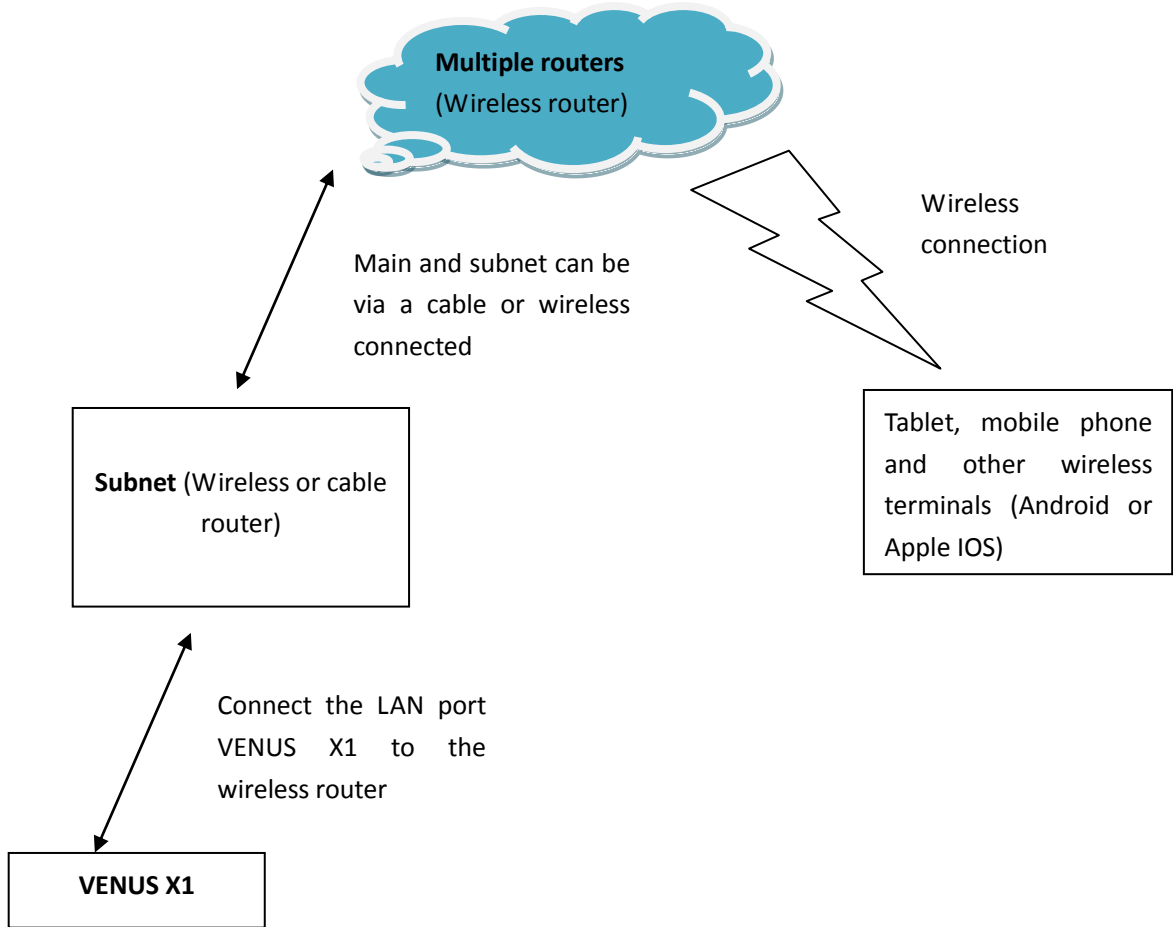
2. Choose the system work mode

(1) The LAN environment of one router

Network topology is shown below:



(2) The LAN environment of multiple routers



(3) System Setting

Push the [MENU] button, and enter to the menu items, turn the knob and select <SYSTEM>.

```

->SYSTEM >>
LED MANAGEMENT >>
LANGUAGE/语言 ENG
FACTORY RESET >>
    
```

Push the knob to confirm, turn the knob, and select <ETHERNET>:

```

->ETHERNET >>
LOCK FRONT PANEL >>
LICENCE SETUP >>
HOT BACKUP >>
    
```

Push the knob to confirm, turn the knob, and select <NETWORK> and set "ON".

```

->NETWORK ON
DHCP >>
IP ADDRESS >>
SUBNET MASK >>
    
```


(4) Ethernet setting

When select “ON”, it will show IP address, subnet mask and gateway.

```

->NETWORK                ON
  DHCP                    >>
  IP ADDRESS              >>
  SUBNET MASK             >>

->GATEWAY                >>

```

① One LAN environment

Set the <IP ADDRESS>, be sure set the same IP address for VENUS X1 and router.

System default the IP address is 192.168.0.100.

```

IP ADDRESS
->192.168.000.100

```

② Multiple routers

Be sure the router that connect to VENUS X1 is connected to the other routers.

Set the <IP ADDRESS> and <SUBNET MASK>, check the IP address of the wireless router, and make sure it is same with the other four IP address that it connect.

The VENUS X1 will automatically save all the network parameters, it will not be cleared even factory reset.

3. APP connection**(1) Download and install the APP**

VENUS X1 APP supports IOS and Android system.

IOS: Open the APP STORE and search “VENUS X1” or “RGBlink”, select “VENUS X1” and download it.

Android: Open the official Android market and search “VENUS X1” or “RGBlink”, select “VENUS X1” and download it.



After download, it will show the shortcut icon

(2) Open the APP for operation (Take IOS for example, and same with Android)

Make sure the mobile terminal equipped with APP is connected to the LAN wireless router. Open the APP “VENUS X1” and click “Search Device”, choose “VENUS X1”.



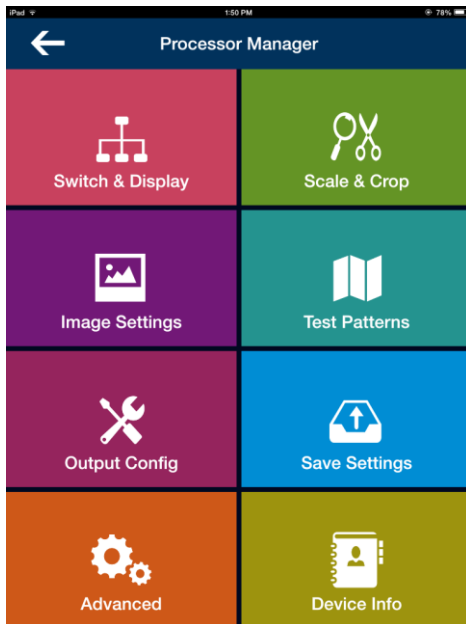
Open APP



Search Device



Connect the Device



Operate the Device

(3) APP functions

① Switch & Display



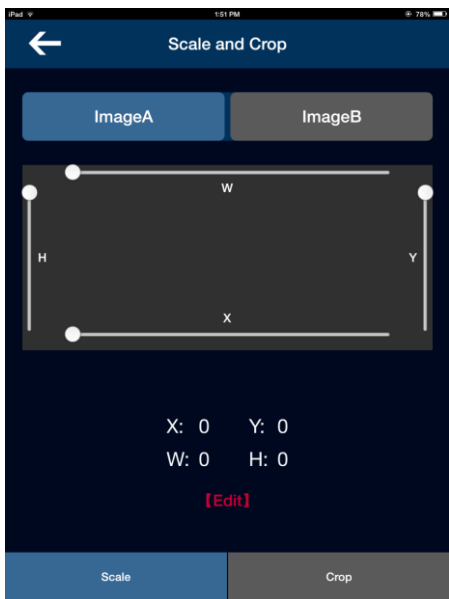
Single Image



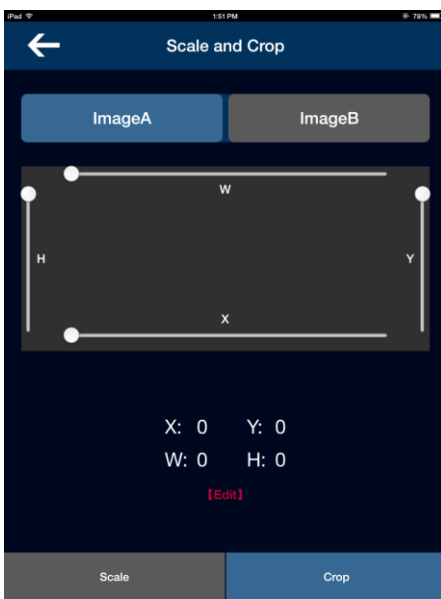
PIP Mode

② Scale & Crop

Scale and crop setting. Including Image A and Image B. Drag the scroll bar in activity area to adjust the width, height, X and Y.

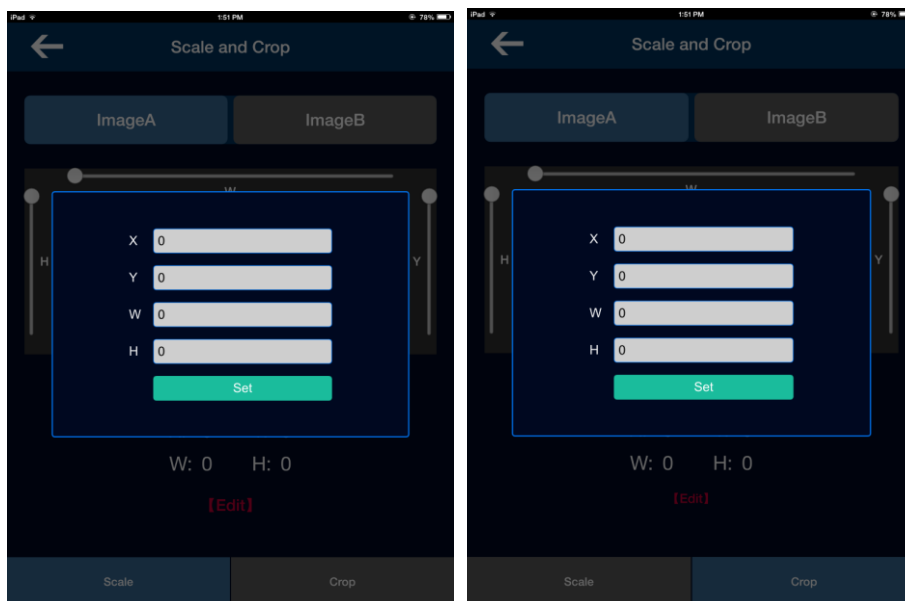


Scale



Crop

User can also click “Edit” and precise adjust the width, height, X and Y in the pop-up window.

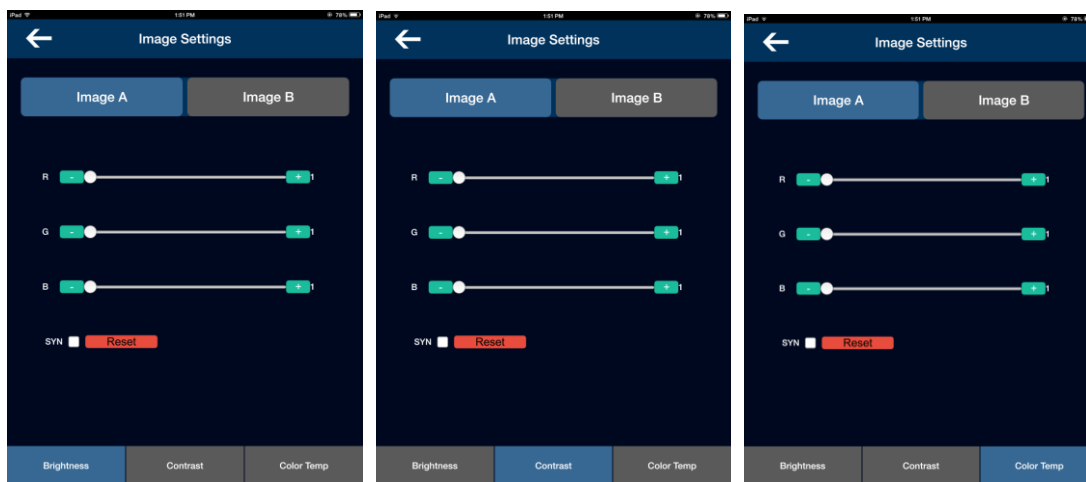


Scale

Crop

③ Image Settings

Brightness, contrast and color temp setting. Drag the scroll bar in activity area to adjust the R, G, B. If click “SYN”, the R, G, B will be adjusted synchronously. “Reset” will factory reset all the parameters.



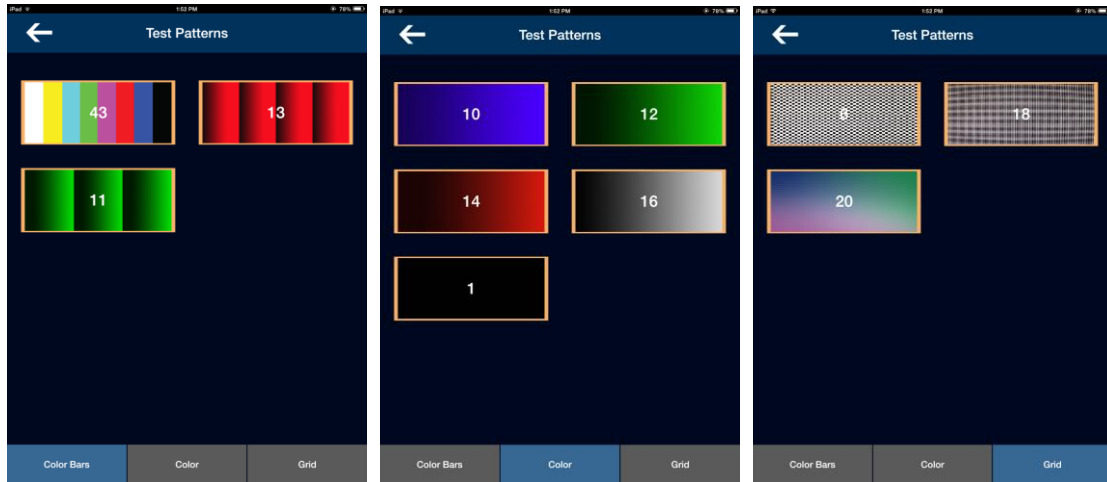
Brightness

Contrast

Color Temp

④ Test Patterns

Including color bars, color and grid, and include all the common test patterns.



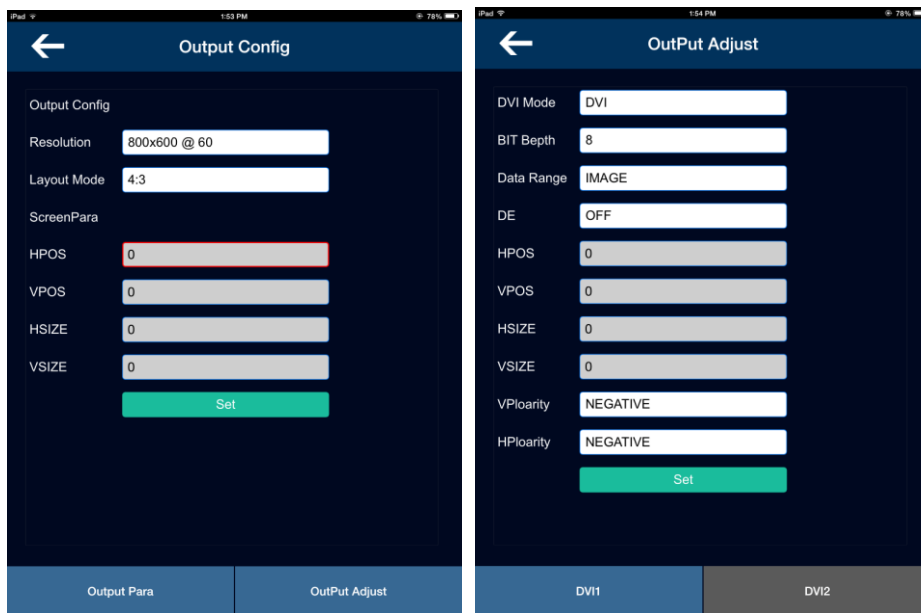
Color Bars

Color

Grid

⑤ **Output Config**

Including output config and output adjust. In output config, user can set the resolution, layout mode and screen para. And in output adjust, user can set DVI mode, bit depth, data range, DE, etc.

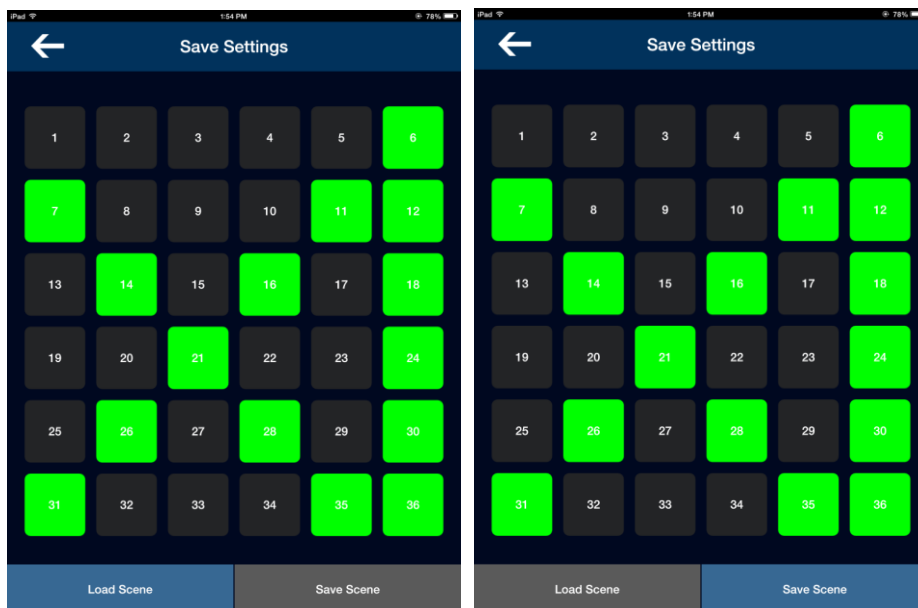


Output Config

Output Adjust

⑥ **Save Settings**

Load scene is load the saved scenes. Save scene is save the adjusted parameters. VENUS X1 supports 36 groups of “Load Scene” and “Save Scene”.

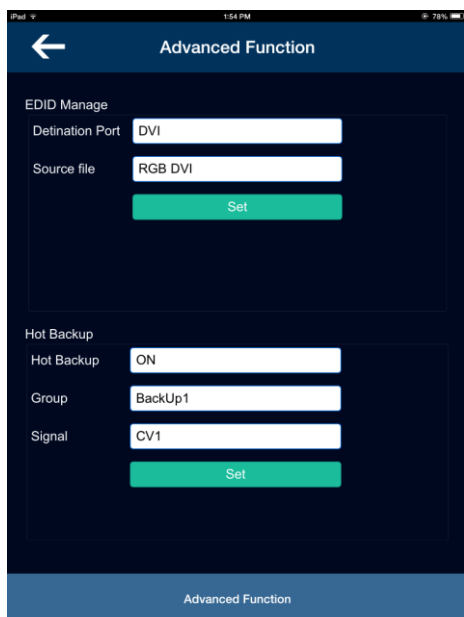


Load scene

Save Scene

⑦ Advanced

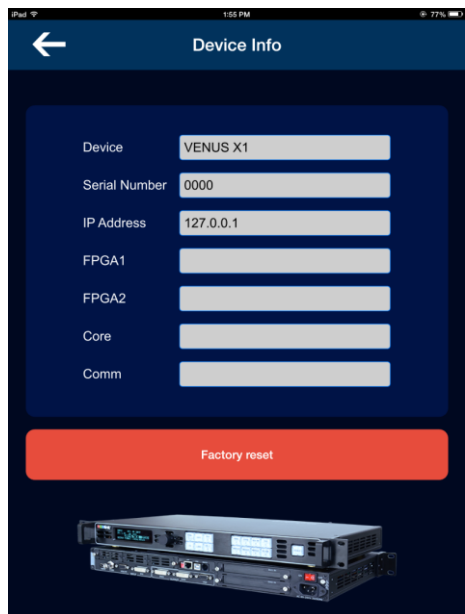
Advanced function includes EDID manage and hot backup. In EDID manage, select the destination port and source file. VENUX X1 supports DVI, HDMI and VGA EDID manage. Hot backup includes 5 groups of backup inputs.



Advanced Function

⑧ Device Info

The device info includes device name, serial number, IP address, FPGA1, FPGA2, Core and Comm. If image quality distorts by improper operation, it can be recover by “Factory Reset”.



Factory Reset

Chapter 5 Ordering Codes

5.1 Product

110-0001-01-2	X1
110-0001-02-2	X1 with EXT module fitted
110-0001-03-2	X1 with Wi-Fi
110-0001-04-2	X1 with EXT & Wi-Fi

5.2 Options

5.2.1 Input Options

190-0001-02-1	VGA Input 1 × VGA
190-0001-03-1	Display Port Input (DP1.2) 1 × Display Port
190-0001-04-1	DVI Input 1 × DVI
190-0001-05-1	DVI Input /Loop Out 1 × DVI (with loop)
190-0001-06-1	HDMI Input /Loop Out 1 × HDMI (with loop)
190-0001-07-1	3G-SDI Input /Loop Out 1 × SDI (with loop)
190-0001-09-1	CVBS In/Backup 1 × CVBS + CVBS BACKUP
190-0001-10-1	USB In/Backup 1 × USB + USB BACKUP
190-0001-11-1	Audio Management 3 × AUDIO IN + 1 × AUDIO OUT
190-0001-12-0	Wi-Fi Plug In Module 1 × WIFI
190-0001-13-0	RS232 Comm. Module (Standard) 1 × RS232

5.3 Sender Cards

RCRCPJ00090	Linsn TS801
RCRCPJ00091	Linsn TS802
RCRCPJ00110	Nova MSD300
RCRCPJ00112	Nova MSD600
RCRCFJ00133	Colorlight iT7

Chapter 6 Support

6.1 Questions and Troubleshooting

6.1.1 Input Jitter for I System of HDMI

Frequently Asked Question	Input jitter for I system of HDMI
Troubleshooting	<u>Change the input as P system</u> Some HDMI input of VENUS X1 will jitter for the I system of HDMI, please change the input as P system.
	<u>Connect the HDMI signal to the EXT HDMI input</u> If user can't change the input format as P system, please connect the I system signal to the EXT_HDMI input.

6.1.2 DVI Quick Split Operation

Frequently Asked Question	DVI quick split operation
Troubleshooting	The split function of VENUS X1 is only available for DVI port (standard) and HDMI loop out port of EXT_9. <u>It needs signal distributor if split by DVI port</u> If split by the standard DVI port, it needs the signal distributor to achieve the synchronization cascade, as there is no DVI loop.
	<u>Split by the HDMI Loop Out Port of EXT 9</u> User can split by the HDMI loop of EXT_9, as there is loop out port on this module.
	<u>Quick Split</u> Connect all the inputs and outputs, then push the [SPLIT] buttons on all the video processors. Select fixed split or normal split, and open the split function. 1. FIXED SPLIT: Set the horizontal split and vertical split according to actual need. 2. NORMAL SPLIT: Set the H TOTAL, V TOTAL, H POS, V POS, H SIZE and V SIZE according to actual need. User can do the quick split only need setting three groups of the parameters.

6.1.3 There is Flash Point when Output to the LED Screen

Frequently Asked Question	There is flash point when output to the LED screen
Troubleshooting	<p><u>Change the DVI Cable</u></p> <p>There is flash point on LED display when input sending card. This is because the DVI cable quality of good and bad are intermingled. Please change the DVI cable and test again.</p>
	<p><u>Change the DVI Output Port</u></p> <p>The DVI output port is loose or oxidation due to plug and pull frequently or long time no use, which may cause the signal attenuation. There are two DVI output ports on VENUS X1, please change to the other DVI output port and test again.</p>

6.1.4 APP Software cannot Properly Connected in Mobile Phone or Tablet Computer

Frequently Asked Question	APP software cannot properly connected in mobile phone or tablet computer
Troubleshooting	<p><u>Confirm if Open the Ethernet Function</u></p> <p>Confirm if the second icon on the OLED module is @, if not, the ethernet function of device is not open. Push the [MENU] button, then select <SYSTEM>, turn the knob and select <ETHERNET>, set the <NETWORK> as "ON" in the submenus.</p>
	<p><u>Confirm if IP Conflict for Mobile Phone, Wireless Router and Device</u></p> <p>System default the device IP is 192.168.0.100, please check if the IP of wireless router is inconsistent with this IP, the IP will conflict if consistent, and unable to search the device and normal connection. Please change the device IP address, and make sure it is in the same network segment.</p>

6.1.5 VGA Input Offset or cannot be Full Size Shown

Frequently Asked Question	VGA input offset or cannot be full size shown
Troubleshooting	<p><u>Set Auto Adjust for VGA Input</u></p> <p>Long push the [VGA] button and enter to the <VGA ADJUST>, the auto adjust time is about 10 seconds. Or push the [MENU] button, then choose <INPUT>, turn the knob and select <VGA ADJUST>, push the knob to confirm. Turn the knob and select <AUTO ADJUST>, the auto adjust time is about 10 seconds. If auto adjust cannot solve the problem, please manually adjust in <VGA ADJUST>.</p>

6.1.6 HDMI, DVI Input Offset or cannot be Full Size Shown

Frequently Asked Question	HDMI, DVI input offset or cannot be full size shown
Troubleshooting	<u>Manual Adjust the HDMI, DVI and EXT HDMI, EXT DVI</u> Push the [MENU] button, then choose <INPUT>, turn the knob and select <DVI/EXT ADJUST>, push the knob to confirm. Turn the knob to adjust the H POS and V POS.

6.1.7 Software Upgrade Failed

Frequently Asked Question	Software upgrade failed
Troubleshooting	<u>Can't Open the Device</u> Check if connect to the USB port, and then check if recognize to the port, if so, please restart the PC and try to update again.
	<u>Failed when Upgrade Less than 100%</u> Write the 100M BOOT program in the program folder, after write successfully, write the 100M MCU program, and upgrade the complete program package finally.

6.2 Contact Us



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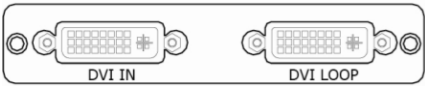
rgblink

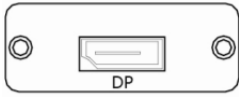

Chapter 7 Appendix

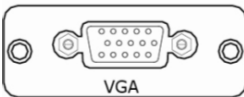
7.1 Specification

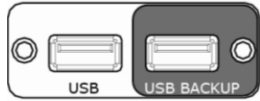

CVBS Input (Standard)	
Number of Inputs	1
Connector	Standard BNC Socket
Supported Standards	PAL/NTSC
Signal Level	1Vpp±3db (0.7V Video+0.3v Sync) 75 ohm
Multiplex	480i,576i
VGA Input (Standard)	
Number of Inputs	1
Connector	Standard DB15 Socket
Supported Standard	VGA-UXGA
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync) 75 ohm black level: 300mV Sync-tip: 0V
Supported Resolution	VGA-UXGA (800×600@60 1024×768@60 1280×1024@60 1440×900@60 1600×1200@60)
DVI Input (Standard)	
Number of Inputs	1
Connector	Standard DVI-I socket
Supported Resolution	SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 1080i50/59.94/60, 720p50/59.94/60 VESA: 800×600@60 1024×768@60 1280×768@60 1280×1024@60 1600×1200@60 1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
HDMI Input (Standard)	
Number of Inputs	1
Connector	Standard HDMI-A socket
Supported Resolution	SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 1080i50/59.94/60 720p50/59.94/60 VESA: 800×600@60 1024×768@60 1280×768@60 1280×1024@60 1600×1200@60 1920×1080@60
Signal Level	TMDS pwl,single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
DVI Loop Out (Standard)	
Number of Loop Out	1

Connector	Standard DVI-I socket
Supported Resolution	SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60,1080i50/59.94/60, 720p50/59.94/60 VESA: 800×600@60 1024×768@60 1280×768@60 1280×1024@60 1600×1200@60 1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
DVI Output (Standard)	
Number of Outputs	2
Connector	Standard DVI-I Socket
Signal Level	TMDS pw, 165MHz bandwidth
Supported Resolution	SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 1080i50/59.94/60, 720p50/59.94/60 1280×720@23.98 1280×720@24 1280×720@25 1280×720@29.97 1280×720@30 1920×1080@23.98 1920×1080@24 1920×1080@25 1920×1080@29.97 1920×1080@30 VESA: 800×600@60 1024×768@60 1024×768@75 1280×720@60 1280×720@50 1280×768@60 1280×800@60 1280×1024@60 1360×768@60 1366×768@60 1400×1050@60 1440×900@60 1600×1200@60 1680×1050@60 1920×1080@60 1920×1080@50 1920×1200@60 2048×1152@60 2560×812@60 2560×816@60 1536×1536@60
VGA Output (Standard)	
Number of Outputs	1
Connector	Standard DB15 Socket
Supported Resolution	VESA: 800×600@60 1024×768@60 1024×768@75 1280×720@60 1280×720@50 1280×768@60 1280×800@60 1280×1024@60 1360×768@60 1366×768@60 1400×1050@60 1440×900@60 1600×1200@60 1680×1050@60 1920×1080@60 1920×1080@50 1920×1200@60 2048×1152@60 2560×812@60 2560×816@60 1536×1536@60
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync) 75 ohm black level: 300mV Sync-tip: 0V
3G-SDI Input (SDI optional module)	
Interface Appearance	
Board Size	52(L)×19.5(W) (mm)
3G-SDI Input	

Number of Inputs	3
Connector	Standard BNC Socket
Data Rate	2.97Gb/s, 2.97/1.001Gb/s, 1.485Gb/s, 1.485/1.001Gb/s and 270Mb/s
Supported Standard	SMPTE 425M - 3G Level A and Level B Formats
Supported Resolution	SMPTE 425M (3G Level A) 4:2:2: 1920×1080/60 (1:1) 1920×1080/50 (1:1). SMPTE 425M (3G Level B DS1 and DS2) 4:2:2: 1920×1080/60 (2:1) 1920×1080/50 (2:1) SMPTE 296M (HD): 1280×720/50 (1:1) 1280×720/50 (1:1) SMPTE 125M (SD): 1440×487/60 (2:1) 525-line 487 generic SMPTE ITU-R BT.656 (SD): 1440×576/50 (2:1), 625-line generic.
Balance	Belden 1694A cable: 150m at 2.97Gb/s 250m at 1.485Gb/s 480m at 270Mb/s
SDI Loop Out	
Number of Loop Out	3
Connector	Standard BNC Socket
Data Rate	2.97Gb/s, 2.97/1.001Gb/s, 1.485Gb/s, 1.485/1.001Gb/s and 270Mb/s
Supported Standard	SMPTE 425M - 3G Level A and Level B Formats
Supported Resolution	SMPTE 425M (3G Level A) 4:2:2: 1920×1080/60 (1:1) 1920×1080/50 (1:1). SMPTE 425M (3G Level B DS1 and DS2) 4:2:2: 1920×1080/60 (2:1) 1920×1080/50 (2:1) SMPTE 296M (HD): 1280×720/50 (1:1) 1280×720/50 (1:1) SMPTE 125M (SD): 1440×487/60 (2:1), 525-line 487 generic SMPTE ITU-R BT.656 (SD): 1440×576/50 (2:1), 625-line generic.
Balance	Belden 1694A cable: 150m at 2.97Gb/s 250m at 1.485Gb/s 480m at 270Mb/s
DVI IN+DVI LOOP (DL optional module)	
Interface Appearance	
Board Size	104.5(L)×19.5(W) (mm)
DVI Input	
Number of Inputs	1
Connector	Standard DVI-I socket
Supported Resolution	SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC,

	1080P50/59.94/60 1080i50/59.94/60, 720p50/59.94/60 VESA: 800×600@60 1024×768@60 1280×768@60 1280×1024@60 1600×1200@60 1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
DVI Loop out	
Number of Loop Out	1
Connector	Standard DVI-I socket
Supported Resolution	SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60,1080i50/59.94/60, 720p50/59.94/60 VESA: 800×600@60 1024×768@60 1280×768@60 1280×1024@60 1600×1200@60 1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
DP Input (DP optional module)	
Interface Appearance	
Board Size	52(L)×19.5(W) (mm)
Number of Inputs	1
Connector	Standard
Supported Resolution	Support resolution: WQXGA + (1920 x 1200), and color depth: 30/36 bit (each primary 10/12 bit)
Supported Bandwidth	10.8Gb/s
Format Standard	DP1.0
HDMI IN+HDMI LOOP (HL optional module)	
Interface Appearance	
Board Size	52(L)×19.5(W) (mm)
HDMI Input	
Number of Inputs	3
Connector	Standard HDMI-A socket
Supported Resolution	SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 1080i50/59.94/60, 720p50/59.94/60 VESA: 800×600@60 1024×768@60 1280×768@60 1280×1024@60 1600×1200@60 1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3

HDMI Loop Out	
Number of Loop Out	3
Connector	HDMI standard type A interface
Supported Resolution	SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 1080i50/59.94/60, 720p50/59.94/60 VESA: 800×600@60 1024×768@60 1280×768@60 1280×1024@60 1600×1200@60 1920×1080@60
Format Standard	HDMI 1.3
DVI Input (DVI optional module)	
Interface Appearance	 A DVI-I connector with a grid of pins and two circular ports on either side. The label "DVI" is centered below the connector.
Board Size	52(L)×19.5(W) (mm)
Number of Inputs	3
Connector	Standard DVI-I socket
Supported Resolution	SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 1080i50/59.94/60, 720p50/59.94/60 VESA: 800×600@60 1024×768@60 1280×768@60 1280×1024@60 1600×1200@60 1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
CVBS Input (CVBS optional module)	
Interface Appearance	 Two BNC connectors. The left one is labeled "CVBS" and the right one is labeled "CVBS BACKUP".
Board Size	52(L)×19.5(W) (mm)
Number of Inputs	3
Connector	Standard BNC Socket
Supported Standards	PAL/NTSC
Signal Level	1Vpp±3db (0.7V Video+0.3v Sync) 75 ohm
Multiplex	480i,576i
VGA Input (VGA optional module)	
Interface Appearance	 A standard 15-pin D-sub connector with a central ground pin and two side pins. The label "VGA" is centered below the connector.
Board Size	52(L)×19.5(W) (mm)
Number of Inputs	3
Connector	Standard DB15 Socket
Supported Standard	VGA-UXGA
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync) 75 ohm

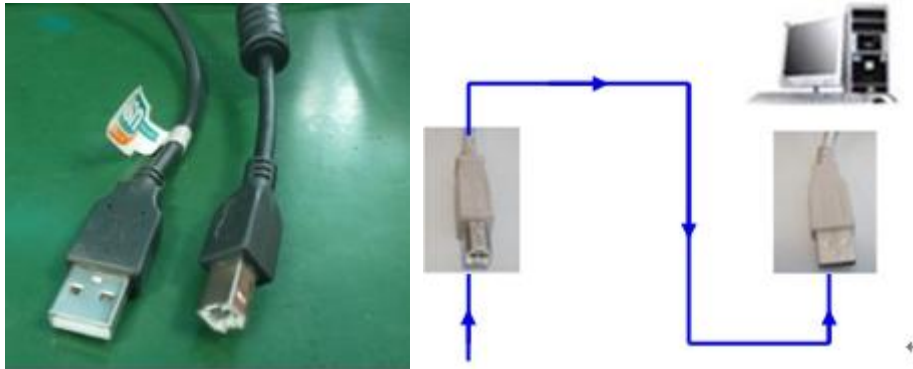
	black level: 300mV Sync-tip: 0V
Supported Resolution	VGA-UXGA (800×600@60 1024×768@60 1280×1024@60 1440×900@60 1600×1200@60)
USB Input (USB optional module)	
Interface Appearance	
Board Size	52(L)×19.5(W) (mm)
Number of Inputs	3
Connector	Standard USB port
Supported Standard	Support general Image and video formats
Audio Input (Audio optional module)	
Interface Appearance	
Board Size	52(L)×19.5(W) (mm)
Audio Input	
Number of Inputs	3
Connector	Standard RCA Socket
Audio Standard	48Kbps 24bit
Audio Output	
Number of Outputs	1
Connector	Card faucet , Standard 1/4 Socket
Audio standard	48Kbps 24bit
WIFI Hotspot Module	
Certification	FCC/CE
Wireless Standard	802.11 b/g/n
Frequency range	2.412GHz-2.484GHz
Transmit Power	802.11b: +20dBm (Max.)
	802.11g: +18dBm (Max.)
	802.11n: +15dBm (Max.)
	Configurable
Receiver Sensitivity	802.11b: -89dBm
	802.11g: -81dBm
	802.11n: -71dBm
Antenna Option	External: I-PEX Connector
Function	
Input channel configuration	Support each input channel signal programming configuration
PIP	Support PIP、 PBP for any two inputs
Transition effects	Fade in and fade out switching between any two inputs

Extras	
Communication	RS232 USB TCP/IP
Power Supply	85-264V IEC-3
Working Environment	0°C~45°C
Stored Environment	10% to 90%
Product Warranty	3 years parts and labor warranty


7.2 Software Upgrade


The upgrade steps are as follows:

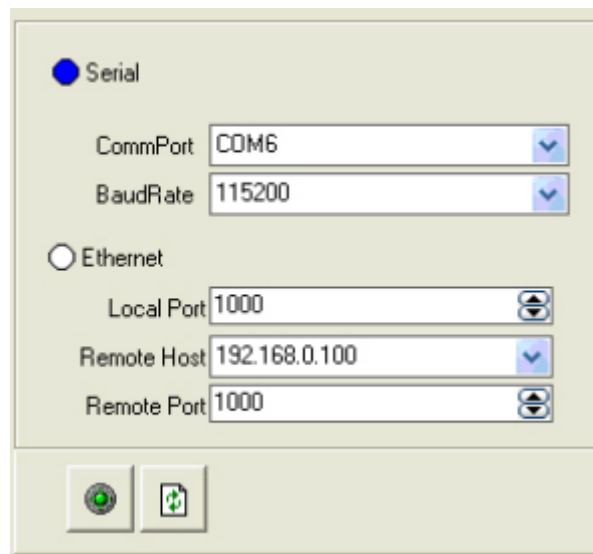
(1) Connect the USB interface of VENUS X1 to the computer with a USB cable.



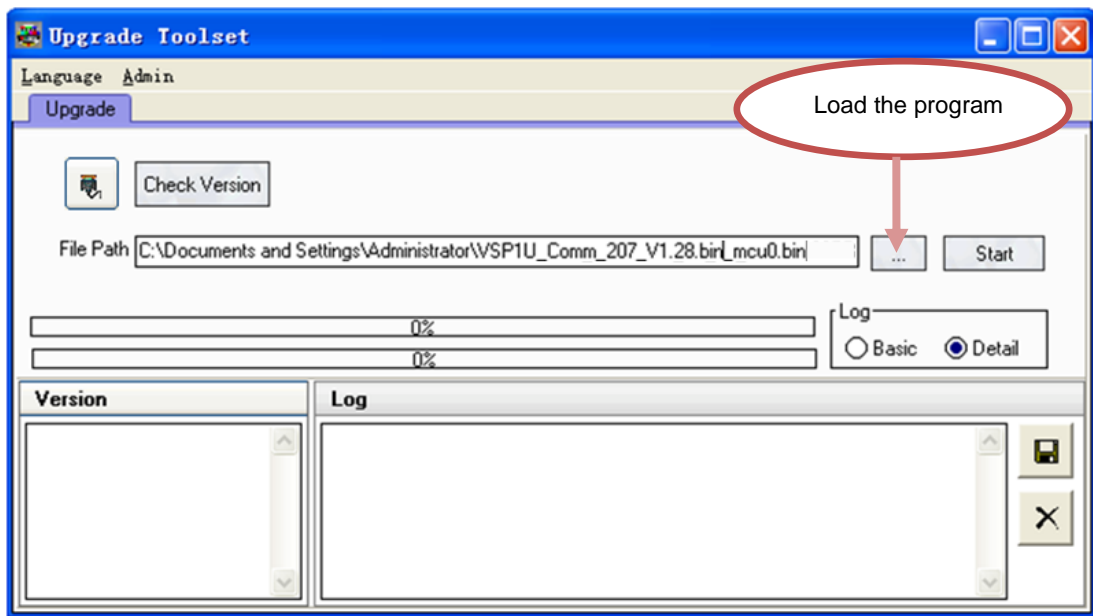
(2) Plug in the power cord, and make sure the device is in normal operation.

(3) Open the windows control program  RgbLinkUpgrade.

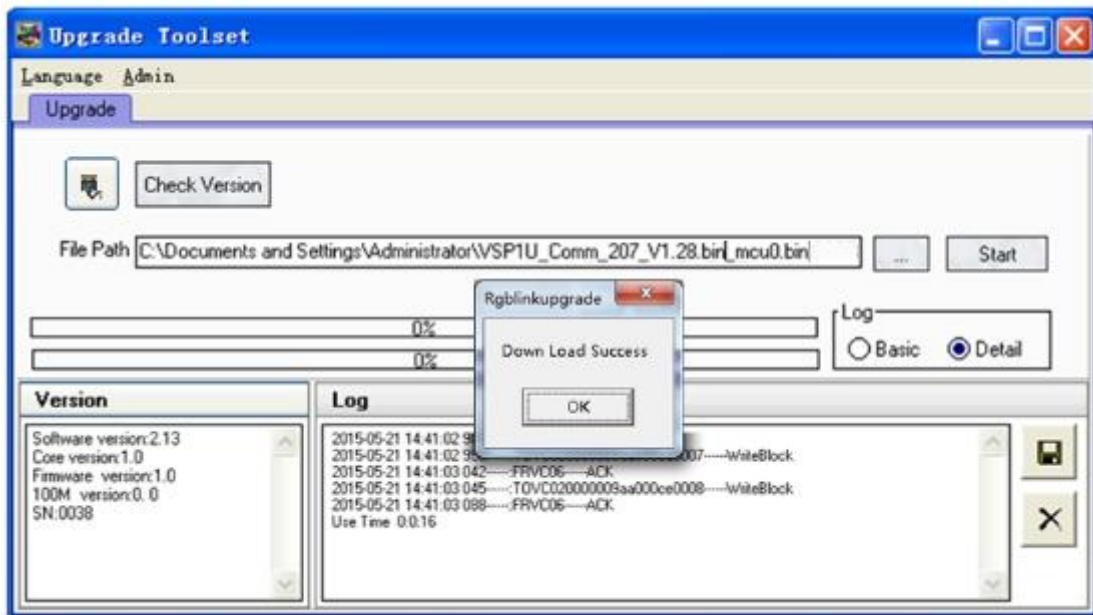
(4) Click the icon  to set the serial port, shown as follow:



(5) Load the program in the file path, then click "Start".



(6) It will pop up the following box if load successfully, or user need to re-download.



(7) Reboot the device, and check the run state and version information.

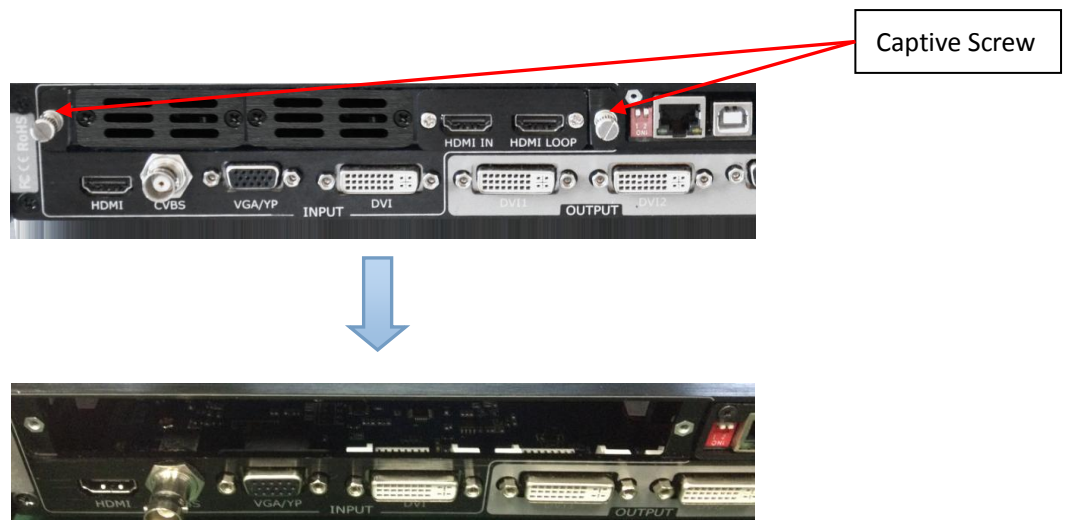
7.3 Installing Options

7.3.1 Installing Input Module

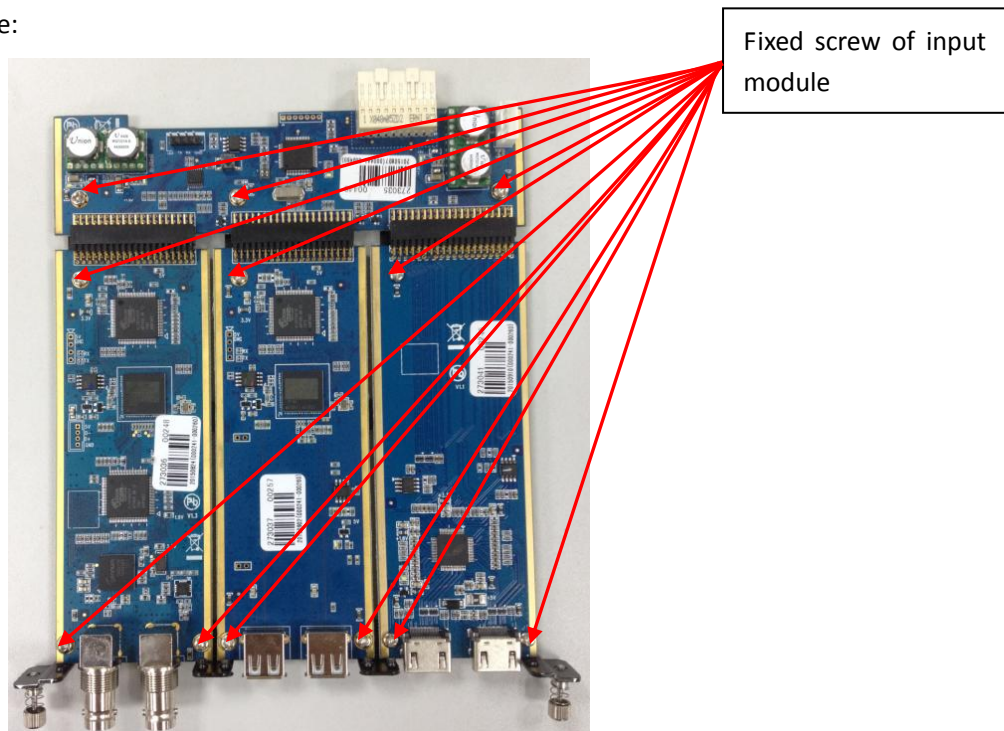
VENUS X1 is based on replaceable input optional modules structure, user can install or replace the optional module according to actual need, the specific installation steps are as follows:

Install the Optional Module

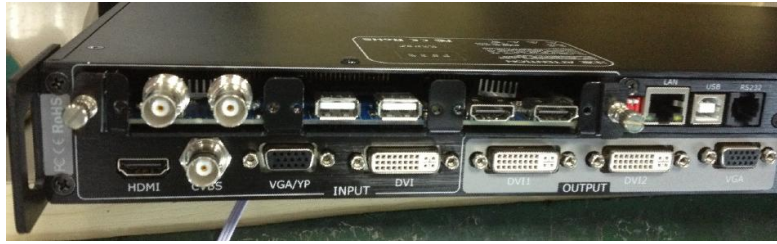
1. Unscrew the 2 captive screws in input modules block, and pull out the input module block, as shown in figure:



2. Fix the input EXT board and input modules on the plate with the fixed screws, as shown in figure:



3. Push the input modules into the device along the slide rail, and screw the captive screws, then install the input blocks, as shown in figure:



4. If install the SDI input module, please screw the SDI interface, as shown in figure:

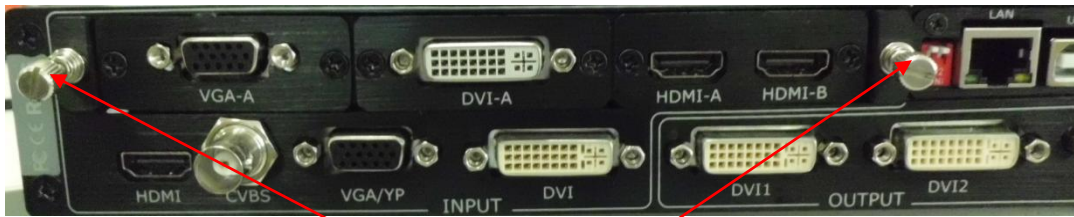


5. Lock the input blocks, as shown in figure:



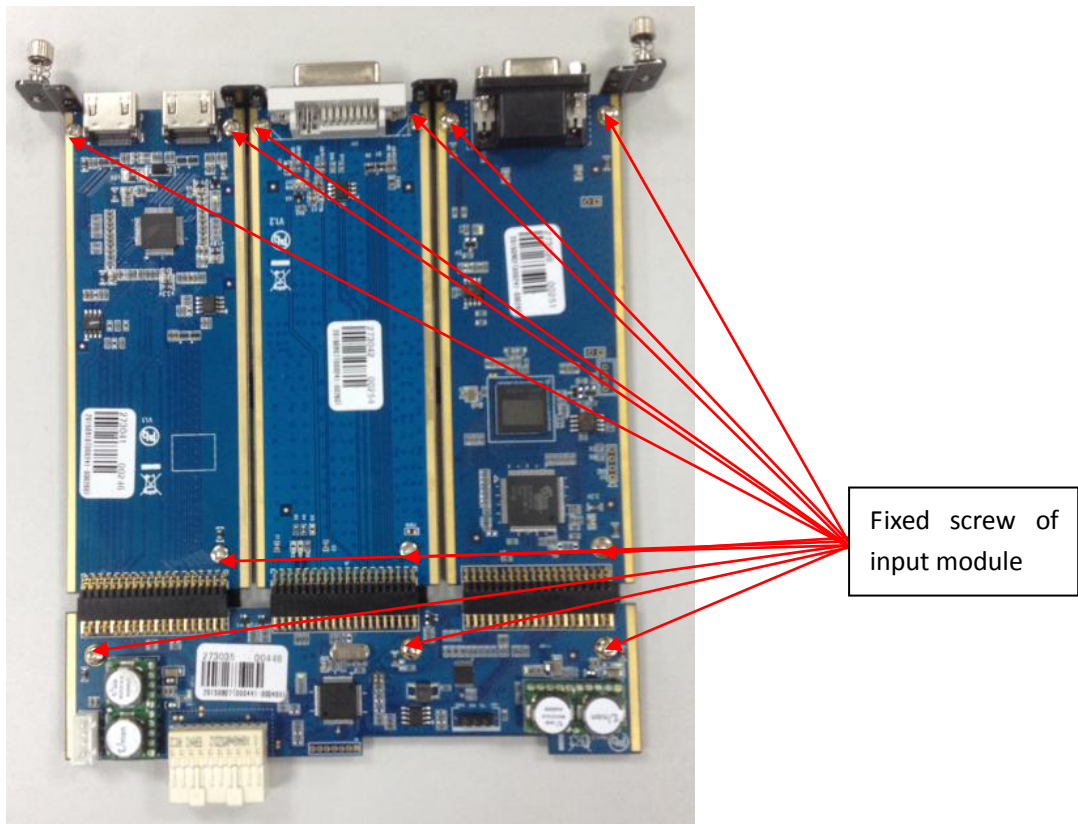
Replace the Optional Module

1. Unscrew the captive screws, and pull out the input modules that will replace, as shown in figure:



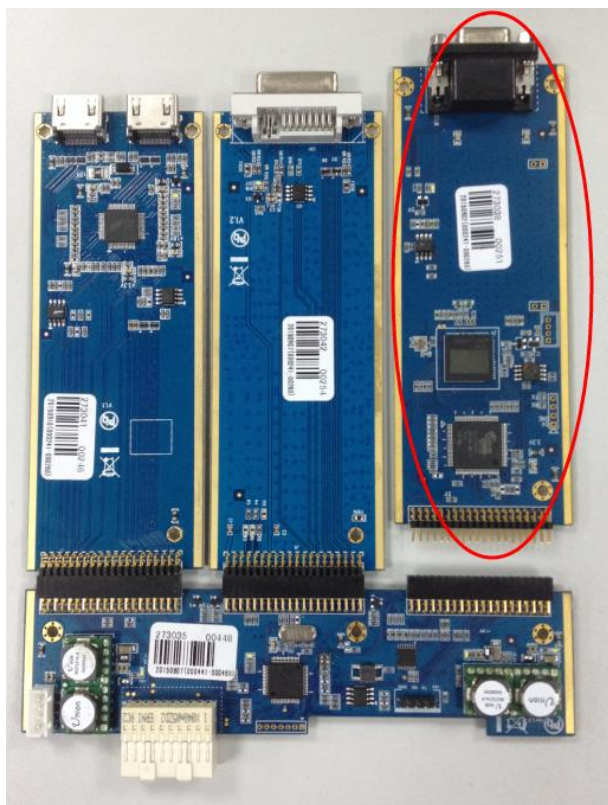
Captive Screw

2. Unscrew the fixed screws of input module, as shown in figure:

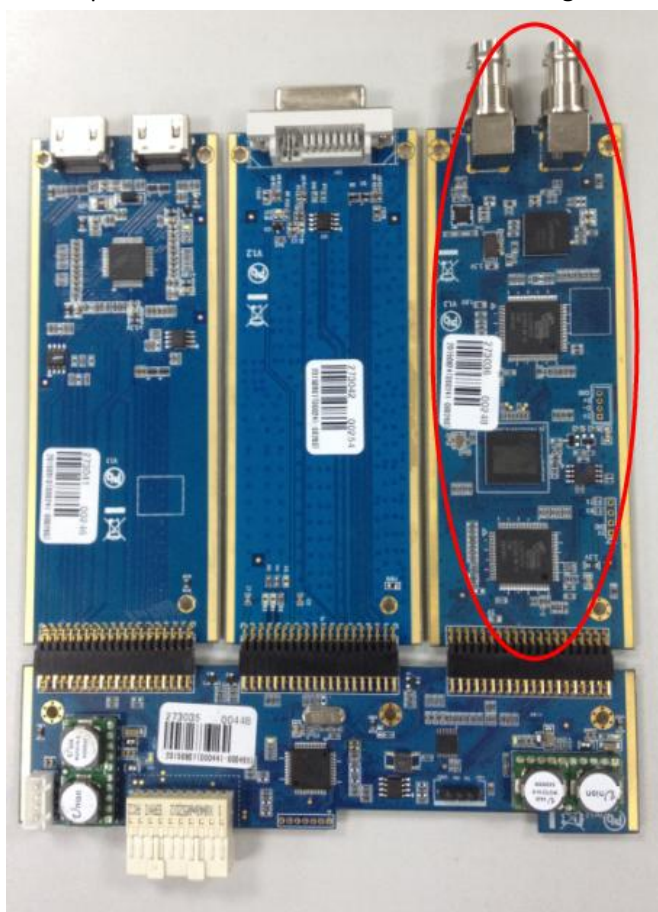


Fixed screw of input module

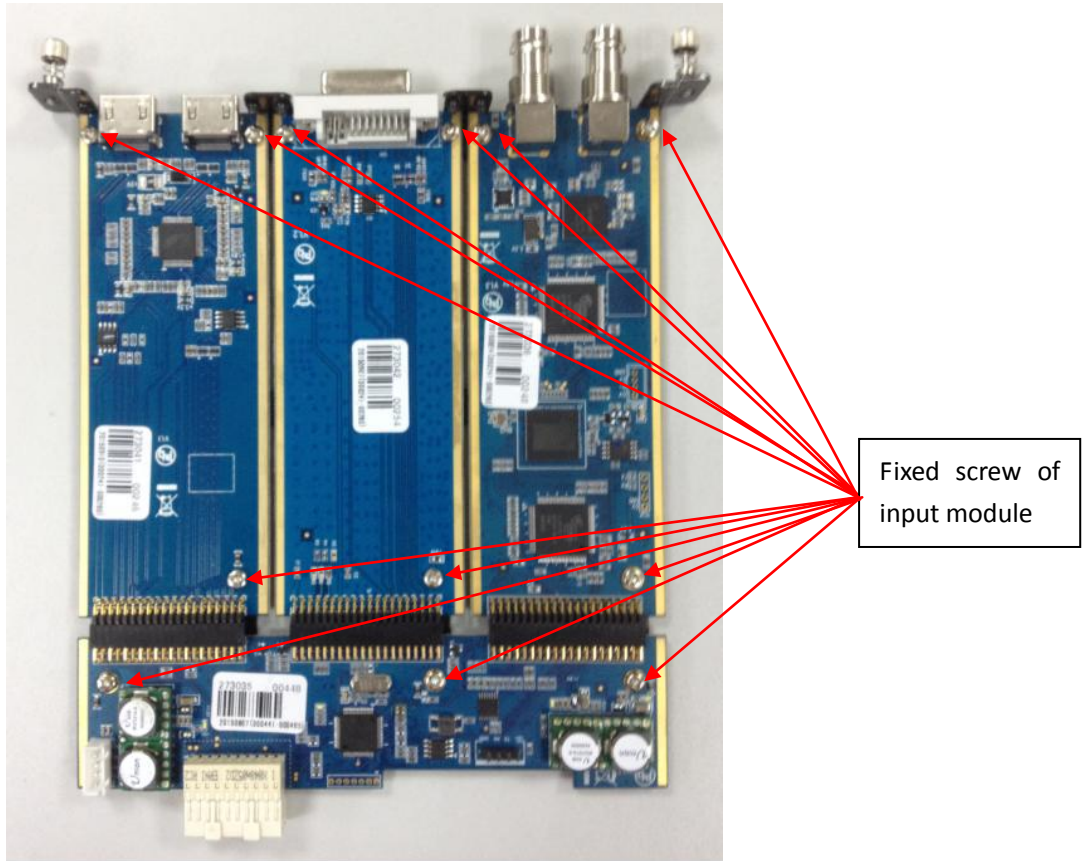
3. Take out the input modules that will replace, as shown in figure:



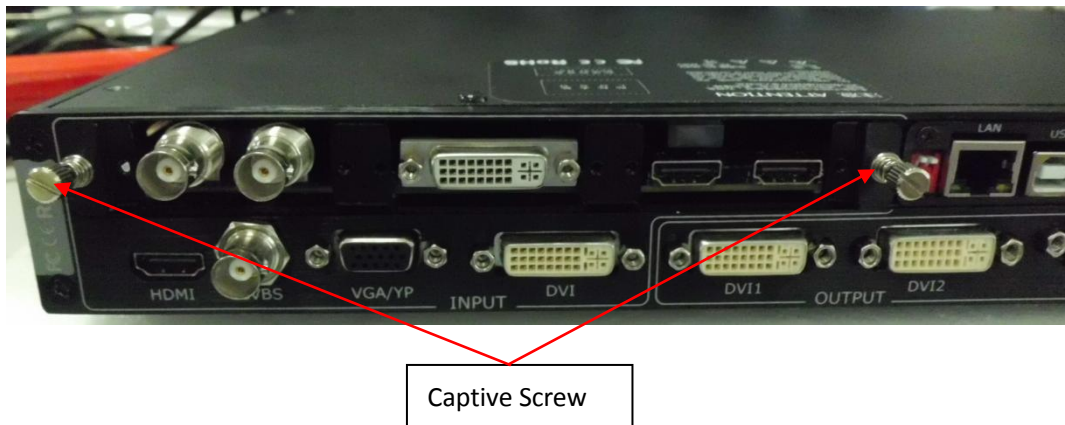
4. Install the input module that user need, as shown in figure:



5. Fix the input modules on the plate with screws, as shown in figure:



6. Push the input modules into the device along the slide rail, and screw the captive screws, as shown in figure:



7. Lock the input block, as shown in figure:

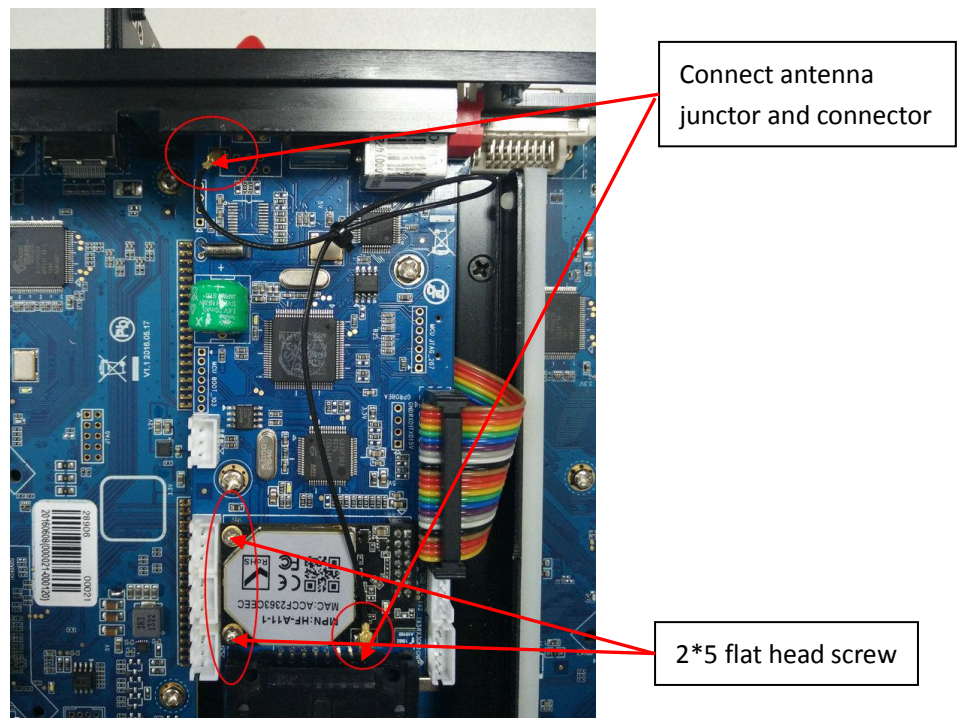


7.3.2 Installing WIFI Module

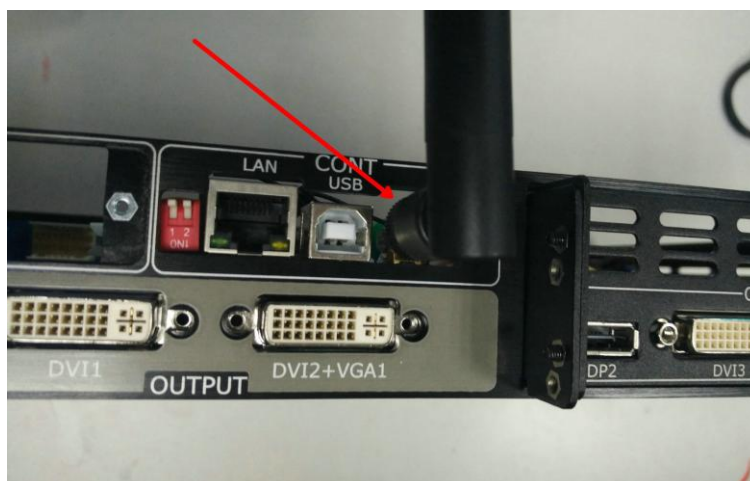
1. Remove the 5 screws on the top cover, and move the top cover, as shown in the figure below:



2. Install the WIFI module as shown in the figure below: lock the WIFI module with 2 pieces of 2*5 flat head screws, then connect the antenna junctor and the connector with the WIFI antenna cable.



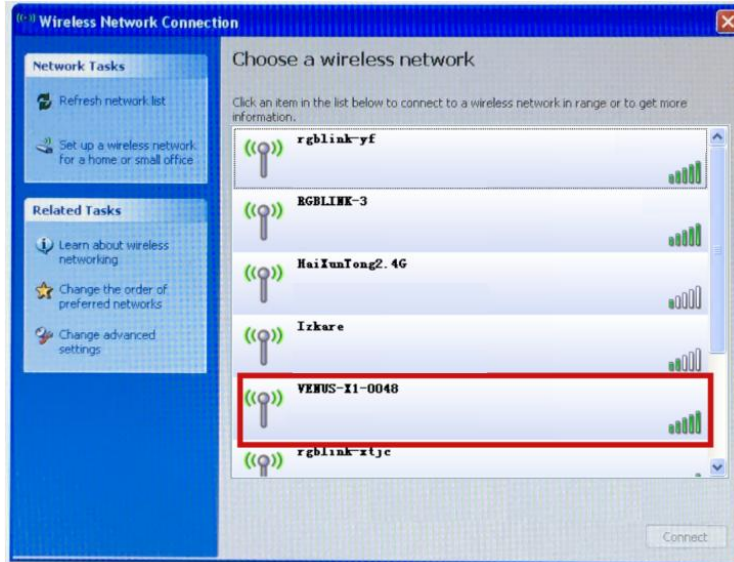
3. Install the external WIFI antenna, as shown in the figure below:



4. Lock the top cover with 5 screws, and installing WIFI module is finished.

7.4 Connect WIFI

1. Plug VENUS X1 into the power cord, and turn the power switch on the rear of the product to the ON position.
2. Right click the wireless icon on the lower right corner, and select “Wireless Network Connection”, then select “VENUS-X1-0048”, and click “Connect”.

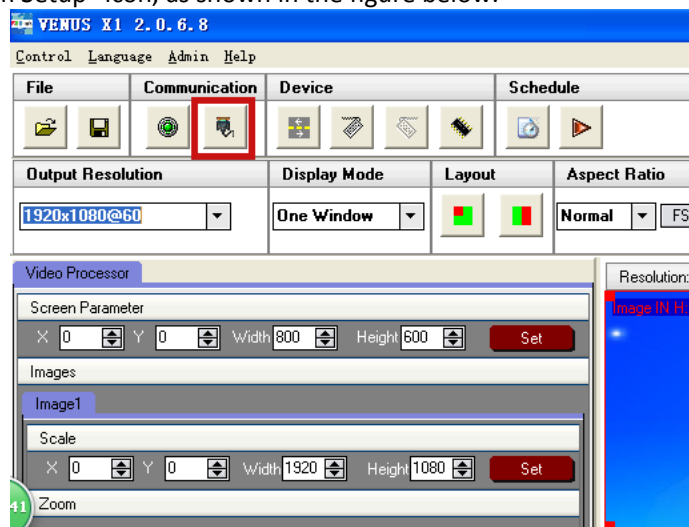


3. Install VENUS X1 windows control program, there will be a new shortcut icon on

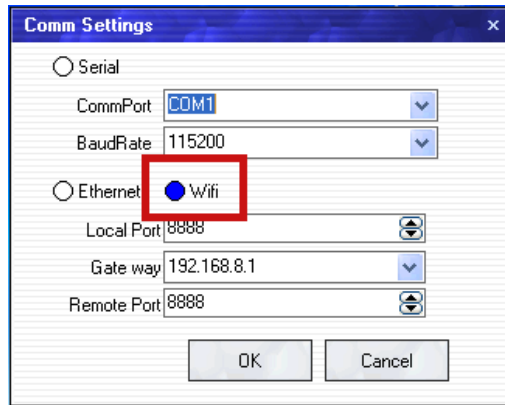


the desk after installation, double click the shortcut icon, and enter to the software interface.

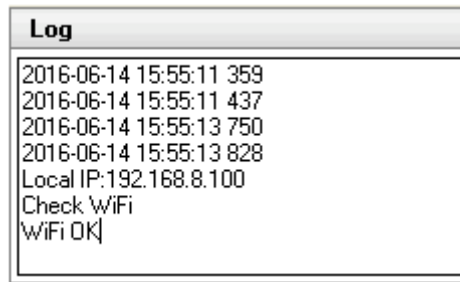
4. Click the “Comm Setup” icon, as shown in the figure below:



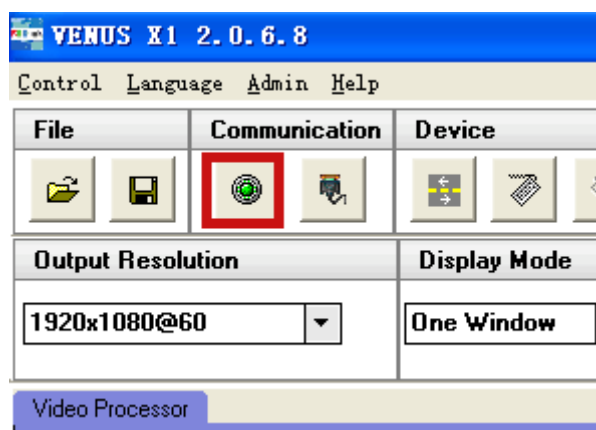
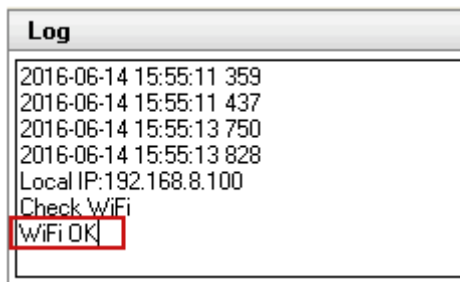
5. It will pop up the comm settings widow, select “Wifi” and click “OK”, as shown in the figure below:



6. The log area will synchronization data, as shown in the figure below:



7. If it shown "WiFi OK", click the "Open Comm" icon, as shown in the figure below, and Wifi is connected.



7.5 Shortcuts

Lots of shortcuts are provided in VENUS X1, shown as follows:

Function	Shortcuts
Change to TAKE mode	<u>SCALE Button</u> Push the TAKE button for 5 seconds will change to TAKE mode.
Change the language	<u>MENU+SCALE Button</u> Push the MENU and TAKE button for 3 seconds will change the language.
Change to Transition	<u>MENU Button</u> Push the button two times will enter to the transition menus.
Lock the panel	<u>MENU Button</u> Push the button for 3 seconds will lock the front panel, and push the button for 5 seconds to unlock.
Use the number button	<u>Number Reuse Button</u> Each button is numbered and can be used as direct number entry when values such as resolution and size.

7.6 Terms & Definitions

The following terms and definitions are used throughout this guide.

- **“ASCII”**: American Standard for Information Interchange. The standard code consisting of 7-bit coded characters (8 bits including parity check) used to exchange information between data processing systems, data communication systems, and associated equipment. The ASCII set contains control characters and graphic characters.
- **“Aspect ratio”**: The relationship of the horizontal dimension to the vertical dimension of an image. In viewing screens, standard TV is 4:3, or 1.33:1; HDTV is 16:9, or 1.78:1. Sometimes the “:1” is implicit, making TV = 1.33 and HDTV = 1.78.
- **“AV”**: Audio visual, or audio video.
- A **“Background”** is an unscaled source, typically originating from a computer. A background source appears at the system’s lowest priority — visually in back of all other sources.
- **“Baudrate”**: Named of J.M.E. Baudot, the inventor of the Baudot telegraph code. The number of the electrical oscillations per second, called baud rate. Related to, but not the same as, transfer rate in bits per second (bps).
- **“Blackburst”**: The video waveform without the video elements. It includes the vertical sync, horizontal sync, and the chroma burst information. Blackburst is used to synchronize video equipment to align the video output. One signal is normally used to set up an entire video system or facility. Sometimes it is called House sync.
- **“BNC”**: Bayonet Neill-Concelman. A cable connector used extensively in television and named for its inventors. A cylindrical bayonet connector that operates with a twist-locking motion. To make the connection, align the two curved grooves in the collar of the male connector with the two projections on the outside of the female collar, push, and twist. This allows the connector to lock into place without tools.
- **“Brightness”**: Usually refers to the amount or intensity of video light produced on a screen without regard to color. Sometimes called “black level.
- **“CAT 5”**: Category 5. Describes the network cabling standard that consists of four unshielded twisted pairs of copper wire terminated by RJ-45 connectors. CAT 5 cabling supports data rates up to 100 Mbps. CAT 5 is based on the EIA/TIA 568 Commercial Building Telecommunications Wiring Standard.
- **“Color bars”**: A standard test pattern of several basic colors (white, yellow, cyan, green, magenta, red, blue, and black) as a reference for system alignment and testing. In NTSC video, the most commonly used color bars are the SMPTE standard color bars. In PAL video, the most commonly used color bars are eight full field bars. In the computer, the most commonly used color bars are two rows of reversed color bars.
- **“Color burst”**: In color TV systems, a burst of subcarrier frequency located on the back porch of the composite video signal. This serves as a color synchronizing signal to establish a frequency and phase reference for the chroma signal. Color burst is 3.58 MHz for NTSC and 4.43 MHz for PAL.
- **“Color temperature”**: The color quality, expressed in degrees Kelvin(K), of a light source. The higher the color temperature, the bluer the light. The lower the temperature, the

redder the light. Benchmark color temperature for the A/V industry include 5000°K, 6500°K, and 9000°K.

- **“Contrast ratio”**: The ratio of the high light output level divided by the low light output level. In theory, the contrast ratio of the television system should be at least 100:1, if not 300:1. In reality, there are several limitations. In the CRT, light from adjacent elements contaminate the area of each element. Room ambient light will contaminate the light emitted from the CRT. Well-controlled viewing conditions should yield a practical contrast ratio of 30:1 to 50:1.
- **“DVI”**: Digital Visual Interface. The digital video connectivity standard that was developed by DDWG (Digital Display Work Group). This connection standard offers two different connectors: one with 24 pins that handles digital video signals only, and one with 29 pins that handles both digital and analog video.
- **“EDID”**: Extended Display Identification Data – EDID is a data structure used to communicate video display information, including native resolution and vertical interval refresh rate requirements, to a source device. The source device will then output the optimal video format for the display based on the provided EDID data, ensuring proper video image quality. This communication takes place over the DDC – Display Data Channel.
- **“Ethernet”**: A Local Area Network (LAN) standard officially known as IEEE 802.3. Ethernet and other LAN technologies are used for interconnecting computers, printers, workstations, terminals, servers, etc. within the same building or campus. Ethernet operates over twisted pair and over coaxial cable at speeds starting at 10Mbps. For LAN interconnectivity, Ethernet is physical link and data link protocol reflecting the two lowest layers of the OSI Reference Model.
- **“Frame”**: In interlaced video, a frame is one complete picture. A video frame is made up of two fields, or two sets of interlaced lines. In a film, a frame is one still picture of a series that makes up a motion picture.
- **“Gamma”**: The light output of a CRT is not linear with respect to the voltage input. The difference between what you should have and what is actually output is known as gamma.
- **“HDMI” - High – Definition Multimedia Interface**: An interface used primarily in consumer electronics for the transmission of uncompressed high definition video, up to 8 channels of audio, and control signals, over a single cable. HDMI is the de facto standard for HDTV displays, Blu-ray Disc players, and other HDTV electronics. Introduced in 2003, the HDMI specification has gone through several revisions.
- **“HDSDI”**: The high-definition version of SDI specified in SMPTE-292M. This signal standard transmits audio and video with 10 bit depth and 4:2:2 color quantization over a single coaxial cable with a data rate of 1.485 Gbit/second. Multiple video resolutions exists including progressive 1280x720 and interlaced 1920x1080 resolution. Up to 32 audio signals are carried in the ancillary data.
- **“JPEG” (Joint photographic Expects Group)**: Commonly used method of lossy compression for photographic images using a discreet cosine transfer function. The degree of compression can be adjusted, allowing a selectable tradeoff between storage size and image quality. JPEG typically achieves 10:1 compression with little perceptible loss in image quality. Produces blocking artifacts.
- **“MPEG”**: Motion Picture Expects Group. A standard committee under the auspices of the

International Standards Organization working on algorithm standards that allow digital compression, storage and transmission of moving image information such as motion video, CD-quality audio, and control data at CD-ROM bandwidth. The MPEG algorithm provides inter-frame compression of video images and can have an effective compression rate of 100:1 to 200:1.

- **“NTSC”**: The color video standard used in North America and some other parts of the world created by the National Television Standards Committee in the 1950s. A color signal must be compatible with black-and-white TV sets. NTSC utilizes an interlaced video signals, 525 lines of resolution with a refresh rate of 60 fields per second (60 Hz). Each frame is comprised of two fields of 262.5 lines each, running at an effective rate of 30 frames per second.
- **“Operator”**: Refers to the person who uses the system.
- **“PAL”**: Phase Alternate Line. A television standard in which the phase of the color carrier is alternated from line to line. It takes four full pictures (8 fields) for the color-to-horizontal phase relationship to return to the reference point. This alternation helps cancel out phase errors. For this reason, the hue control is not needed on a PAL TV set. PAL, in many transmission forms, is widely used in Western Europe, Australia, Africa, the Middle East, and Micronesia. PAL uses 625-line, 50-field (25 fps) composite color transmission system.
- **“PIP”**: Picture-in-Picture. A small picture within a larger picture created by scaling down one of the images to make it smaller. Each picture requires a separate video source such as a camera, VCR, or computer. Other forms of PIP displays include Picture-by-Picture (PBP) and Picture-with-Picture (PWP), which are commonly used with 16:9 aspect display devices. PBP and PWP image formats require a separate scaler for each video window.
- **“Polarity”**: The positive and negative orientation of a signal. Polarity usually refers to the direction or a level with respect to a reference (e.g. positive sync polarity means that sync occurs when the signal is going in the positive direction).
- **“RJ-45”**: Registered Jack-45. A connector similar to a telephone connector that holds up to eight wires, used for connecting Ethernet devices.
- **“RS-232”**: An Electronic Industries Association (EIA) serial digital interface standard specifying the characteristics of the communication path between two devices using either DB-9 or DB-25 connectors. This standard is used for relatively short-range communication and does not specify balanced control lines. RS-232 is a serial control standard with a set number of conductors, data rate, word length, and type of connector to be used. The standard specifies component connection standards with regard to the computer interface. It is also called RS-232-C, which is the third version of the RS-232 standard, and is functionally identical to the CCITT V.24 standard.
- **“Saturation”**: Chroma, chroma gain. The intensity of the color, or the extent to which a given color in any image is free from white. The less white in a color, the truer the color or the greater its saturation. On a display device, the color control adjusts the saturation. Not to be confused with the brightness, saturation is the amount of pigment in a color, and not the intensity. Low saturation is like adding white to the color. For example, a low-saturated red looks pink.
- **“Scaling”**: A conversion of a video or computer graphic signal from a starting resolution to a new resolution. Scaling from one resolution to another is typically done to optimize the

- signal for input to an image processor, transmission path or to improve its quality when presented on a particular display.
- **“SDI”**: Serial Digital Interface. The standard based on a 270 Mbps transfer rate. This is a 10-bit, scrambled, polarity independent interface with common scrambling for both component ITU-R 601 and composite digital video and four channels of (embedded) digital audio.
 - **“Seamless Switching”**: A feature found on many video switchers. This feature causes the switcher to wait until the vertical interval to switch. This avoid a glitch (temporary scrambling) which normally is seen when switching between sources.
 - **“SMPTE”**: Society of Motion Picture and Television Engineers. A global organization, based in the United States, that sets standards for baseband visual communications. This includes film as well as video and television standards.
 - **“S-Video”**: A composite video signal separated into the luma (“Y” is for luma, or black and white information; brightness) and the chroma (“C” is an abbreviation for chroma, or color information).
 - **“Sync”**: Synchronization. In video, sync is a means of controlling the timing of an event with respect to other events. This is accomplished with timing pulses to insure that each step in a process occurs at the correct time. For example, horizontal sync determines exactly when to begin each horizontal scan line. Vertical sync determines when the image is to be refreshed to start a new field or frame. There are many other types of sync in video system.(Also known as “sync signal” or “sync pulse.”)
 - **“TCP/IP”**: Transmission Control Protocol/Internet Protocol. The communication protocol of the Internet. Computers and devices with direct access to the Internet are provided with a copy of the TCP/IP program to allow them to send and receive information in an understandable form.
 - **“USB”**: Universal Serial Bus. USB was developed by seven PC and telecom industry leaders (Compaq, DEC, IBM, Intel, Microsoft, NEC, and Northern Telecom). The goal was easy plug-and-play expansion outside the box, requiring no additional circuit cards. Up to 127 external computer devices may be added through a USB hub, which may be conveniently located in a keyboard or monitor. USB devices can be attached or detached without removing computer power. The number of devices being designed for USB continues to grow, from keyboards, mice, and printers to scanners, digital cameras, and ZIP drives.
 - **“VESA”**: Video Electronics Standards Association. A nonprofit number organization dedicated to facilitating and promoting personal computer graphics through improved standards for the benefit of the end-user. www.vesa.org
 - **“VGA”**: Video Graphics Array. Introduced by IBM in 1987, VGA is an analog signal with TTL level separate horizontal and vertical sync. The video outputs to a 15-pin HD connector and has a horizontal scan frequency of 31.5 kHz and vertical frequency of 70 Hz (Mode 1, 2) and 60 Hz (Mode 3). The signal is non-interlaced in modes 1, 2, and 3 and interlaced when using the 8514/A card (35.5 kHz, 86 Hz) in mode 4. It has a pixel by line resolution of 640×480 with a color palette of 16 bits and 256,000 colors.
 - **“YCrCb”**: Used to describe the color space for interlaced component video.
 - **“YPbPr”**: Used to describe the color space for progressive-scan (non-interlaced) component video.

7.7 Revision History

The table below lists the changes to the Video Processor User Manual.

Format	Time	ECO#	Description	Principal
V1.0	2015-05-18	0000#	Release	Vira
V1.1	2015-08-06	0001#	<ol style="list-style-type: none"> 1. Update the front and back panel. 2. Update the menu tree. 3. Update the windows control program. 4. Update the common questions and solutions. 	Vira
V1.2	2015-10-29	0002#	<ol style="list-style-type: none"> 1. Update the front and back panel. 2. Update the menu tree. 3. Update the product picture. 4. Update the dimensions drawing 5. Update the specification. 6. Update "Optional Module Installation and Replacement Instruction". 7. Add "VENUS X1 Connect APP Control Operation". 	Vira
V1.3	2016-05-05	0003#	<ol style="list-style-type: none"> 1. Update the product picture. 2. Update the back panel. 3. Update the menu tree. 4. Add "Set the LED Display Connection" in "System Setup and Operation". 5. Update the fax number. 	Vira
V1.4	2016-07-01	0004#	<ol style="list-style-type: none"> 1. Update the style and structure of the user manual. 2. Add WIFI specification. 3. Add "Installing WIFI Module". 4. Add "Connect WIFI". 5. Add the "Shortcuts". 	Vira
V1.5	2016-08-11	0005#	Update and add the product codes.	Vira