VENUS X3 EXPRESS

User Manual

- Manual #: RGB-RD-UM-VENUS X3 EXPRESS E001

- Revision: V1.0

RGBlink

VENUS X3 EXPRESS·User Manual

Thank you for choosing our products!
In order to allow you to learn how to use the video processor quickly, we bring you the detailed user Manual. You can read the introduction and directions before using the video processor, please read all the information we provide carefully to use our products correctly.

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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.

Terms in This Manual and Equipment Marking

WARNING

Highlight an operating procedure, practice, condition, statement, etc, which, if not strictly observed, could result in injury or death of personnel.

Note

Highlights an essential operating procedure, condition or statement.

CAUTION

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Amendment Records

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

Format	Time	ECO#	Description	Principal
V1.0	2015-11-25	0000#	Release	Vira

CONTENT

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1. Brief Introduction

This chapter is designed to introduce you to the VENUS X3 EXPRESS User Manual. Areas to be covered are:

- Chapter Structure

- How to Use the Manual

- Terms and Definitions

- System Overview

- Application Questions

1. Brief Introduction

Chapter Structure

The following chapters provide instructions for all aspects of VENUS X3 EXPRESS operations.

1. Brief Introduction

How to Use the Manual

Followings are important tips for streamlining your use of this User Manual in its electronic "PDF" form.

Navigation

Use Acrobat Reader's "bookmarks" to navigate to the desired location. All chapter files have the same bookmark structure for instant navigation to any section. Please note:

- Extensive hyperlinks are provided within the chapters.
- Use Acrobat's "**Go to Previous View**" and "**Return to next View**" buttons to trace your complete navigational path.
- Use the "**Previous Page**" and "**Next Page**" buttons to go to the previous or next page within a file.
- Use Acrobat's extensive search capabilities, such as the "**Find**" tool and "**Search Index**" tool to perform comprehensive searches as required.

Table of Contents and Index

Use the Table of Contents bookmarks to navigate a desired topic. Click any item to instantly jump to that section of the guide. You can also use the **Index** to jump to specific topics within a chapter. Each page number in the **Index** is a hyperlink.

General Operations

To ensure trouble-free operation, please follow all procedures as listed below:

- For detailed installation instructions, refer to chapter 3 "Hardware Installation" on page 31.
- For communication software control guide, refer to Chapter 5, "Communication Software Control Guide" on page 33.

Should you have any questions regarding the installation or operation of VENUS X3 EXPRESS, please consult with the factory. Refer to Appendix B "Contact information" on page 71.

1. Brief Introduction

Term and 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

1. Brief Introduction
Terms and Definitions

- 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 sub carrier 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 includes 5000°K, 6500°K, and 9000°K.
- **"Contrast ratio":** The radio of the high light output level divided by the low light output level. In theory, the contrast radio 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.

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Terms and Definitions

- **"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 exist including progressive 1280x720 and interlaced 1920x1080 resolutions. Up to 32 audio signals are carried in the ancillary data.
- **"JPEG" (Joint photographic Expects Group):** Commonly used method of loss 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 Expect Group. A standard committee under the auspices of the International Standards Organization working on algorithm standards that allows 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.
- **"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,

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Terms and Definitions

50-filed (25 fps) composite color transmission system.

- **"Operator":** Refers to the person who uses the 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

1. Brief Introduction

feature causes the switcher to wait until the vertical interval to switch. This avoids 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 base band 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

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Terms and Definitions

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.

1. Brief Introduction

System Overview

VENUS X3 EXPRESS is an HDCP-compliant, scalable, expandable videowall processor configurable to support a variety of input, output and windowing capabilities. It features high performance video scaling capable of producing very high quality images.

VENUS X3 EXPRESS offers six card cages that support various combinations of input and output cards for DVI, VGA, HDMI, CVBS, SDI and USB (for media files play) or video sources. Hundreds of additional video or graphic sources can be input to the VENUS X3 EXPRESS using the RGBlink AVDXP Matrix and Router. Multiple VENUS X3 EXPRESS can be cascaded to create very large display arrays.

A dedicated, high-speed video/graphic bus maintains real-time performance even under heavy loading of inputs. Compared with other videowall processors, VENUS X3 EXPRESS extends two main important performance for presentation application. One is seamless switching between the inputs, the other comes with local control panel option. These advantages make the VENUS X3 EXPRESS ideal for all types for all types of surveillance, presentation, and visualization applications, whether traffic, security, military, or process control.

1. Brief Introduction

Application Questions

RGBlink offers solutions to demand technical problems. Any application questions, or required further information, please contact with our Customer Support Engineers. Refer to Appendix B for contact details.
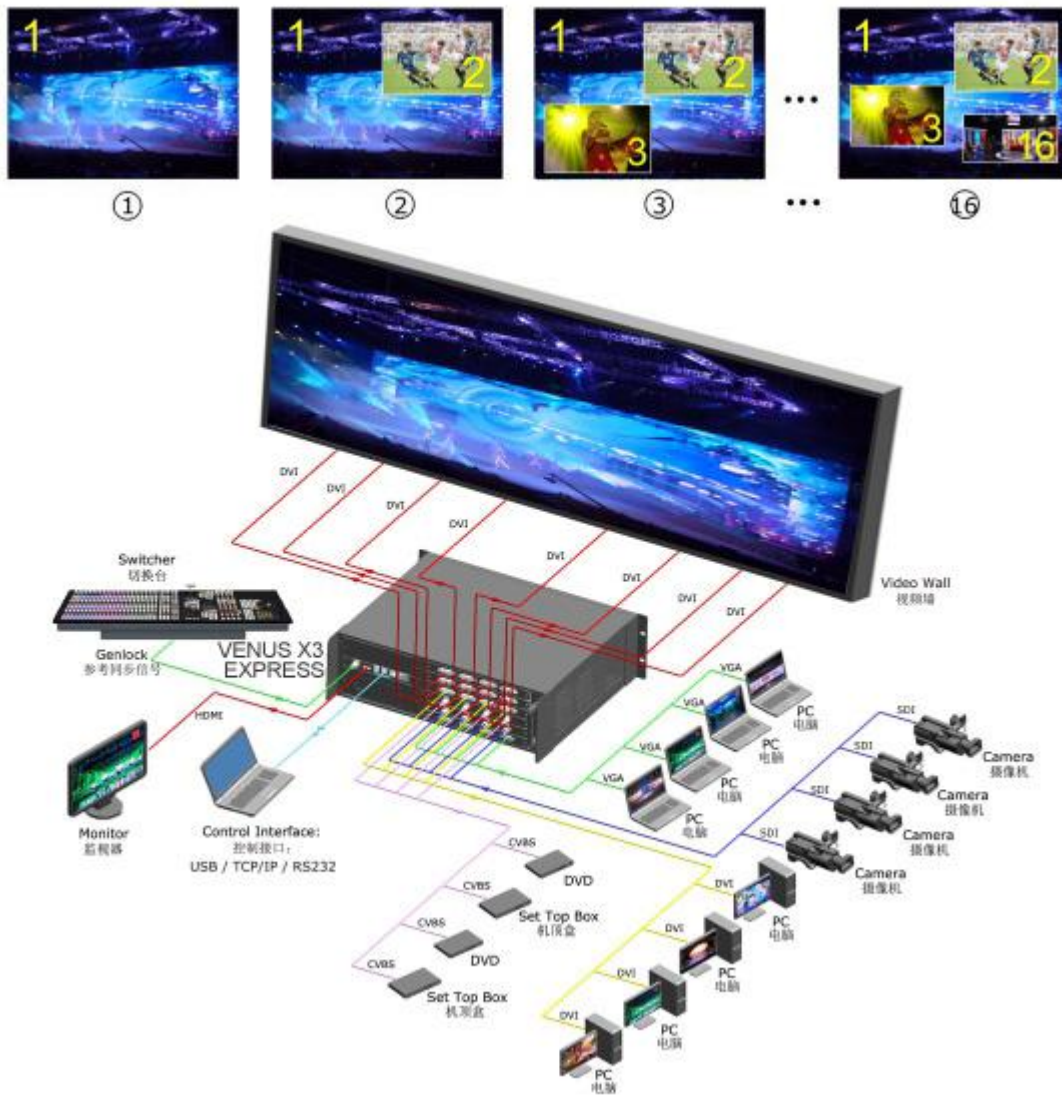
2. Hardware Orientation

In This Chapter

This chapter provides detailed information about the VENUS X3 EXPRESS hardware. The following topics are discussed:

- VENUS X3 EXPRESS Back Panel
- VENUS X3 EXPRESS Front Panel

2. Hardware Orientation

VENUS X3 EXPRESS Back Panel

The figure below illustrates the professional interface and control signals of VENUS X3 EXPRESS back panel.
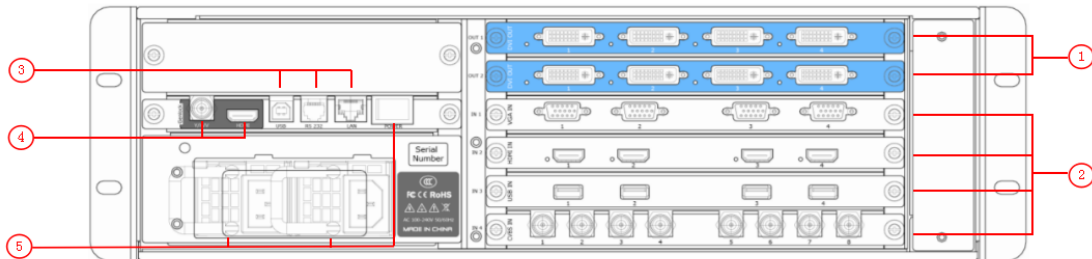
Chassis Module Structure			
1	2 output module slots	4	Genlock interface
2	4 input module slots	5	Power module and illuminated power switch
3	Control interface		

Input Module Slots

VENUS X3 EXPRESS offers 4 input module slots, supports input signals including DVI, VGA, HDMI, USB, CVBS, S-HDMI, S-SDI, Dual Link DVI and SDI. Each DVI optional module includes 4 DVI-I (compatible with HDMI) inputs, each VGA optional module includes 4 VGA inputs (DB15port), each HDMI optional module includes 4 HDMI inputs, each USB optional includes 4 USB inputs, each CVBS optional includes 8 CVBS inputs, each S-HDMI optional module includes 4 HDMI inputs, each S-SDI optional module includes 4 3G-SDI inputs and 4 SDI loop out, each Dual Link DVI optional module includes 2 DVI-I inputs, each SDI optional module includes 4 3G-SDI inputs and 4 SDI loop out.

DVI Input

DVI input, input the video signal from computer, DVI signal generator. If the EDID is HDMI, the DVI can be compatible with HDMI 1.3.

2. Hardware Orientation

VENUS X3 EXPRESS Back Panel

(This connector does not support hot-plugging).

VGA Input

VGA input, input the video signal from HD player and Computer, etc. compatible with YPbPr signal, input signal via the DB15 interface.

HDMI Input

HDMI input, input the image signal from computer.

USB Input

USB input, can access the USB device or mobile hard disk with USB storage function. Support general image and video formats.

CVBS Input

CVBS input, input standard video signal from players, cameras etc., supported resolution 480i and 576i via BNC. Supported standards include: PAL, NTSC and SECAM.

S-HDMI Input

S-HDMI input, input the image signal from computer. It supports signals merger and effects processing.

S-SDI Input

S-SDI input, input video signal from HD camera and radio processing equipment, connect SDI interface via 75 ohms impedance BNC port. It supports synchronization and effects processing.

S-SDI Loop Out

SDI loop out, connect to the SDI input of the next VENUS X3 EXPRESS or the device with DVI input.

Dual Link DVI Input

DVI input, input the video signal from computer, DVI signal generator. The DVI can be compatible with HDMI 1.3 if the EDID is HDMI.

2. Hardware Orientation

VENUS X3 EXPRESS Back Panel

3G-SDI Input

3G-SDI input, input video signal from HD camera and radio processing equipment, connect SDI interface via 75 ohms impedance BNC port.

SDI Loop Out

SDI loop out, connect to the SDI input of the next VENUS X3 EXPRESS or the device with DVI input.

Output Module Slots

VENUS X3 EXPRESS offers 2 output module slots, supports DVI, VGA, SDI and HDMI signal. Each DVI optional module includes 4 DVI-I outputs, each DVI+VGA optional module includes 4 DVI-I outputs, each SDI optional module includes 4 SDI outputs, each HDMI optional module includes 4 HDMI outputs.

DVI Output

Connect to the monitor or LED display which has DVI interface.

(This connector does not support hot-plugging).

DVI +VGA DVI Output

DVI +VGA output, connect to the monitor or LED display which has DVI interface via DVI connector.

(This connector can not support hot-plugging)

The VGA output signal can be connected to monitor or projector.

Via   adapter, can connect with DVI-based or VGA-based equipment, and via

      DVI to VGA adapter, can output VGA only.
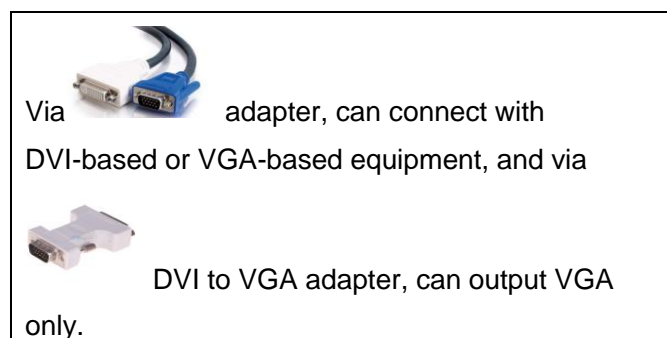
2. Hardware Orientation
VENUS X3 EXPRESS Back Panel

SDI Output

SDI output, can connect the next level device with SDI interface.

HDMI Output

HDMI output interface, used to connect to the display device, video processor or matrix.

Control Interface

Includes 1 USB, 1 RS-232 and 1 10/100M UDP interface.

USB Interface

Used to connect the windows control program or device upgrade.

RS-232 Interface

Used to connect the windows control program or device upgrade.

10/100M UDP Interface

Used to connect the windows control program or device upgrade.

Genlock Interface

Includes 1 genlock input and 1 HDMI output.

Genlock Input

Input signal from the controller or signal generator and other devices.

HDMI Input

HDMI input, input the image signal from computer.

Illuminated Power Switch and Power

Power Module and Illuminated Power Switch

AC 100-240V 50/60Hz IEC-3 Power Interface.

2. Hardware Orientation

VENUS X3 EXPRESS Front Panel

Insert power cord and push the switch to the ON position. The OLED module on the front

panel will show as follows after boot:

The system begins to work, and the OLED module shows the input slot and output slot

information, device status, COM. Version, IP address and serial number.

VENUS X3 EXPRESS
INPUT SLOT
    1: EMPTY
    2: EMPTY
    3: EMPTY
    4: EMPTY
OUTPUT SLOT
    1: EMPTY
    2: EMPTY
DEVICE STATUS OK
    COM. VER: 1.35
    IP: 192.168.0.100
    SN: 0045
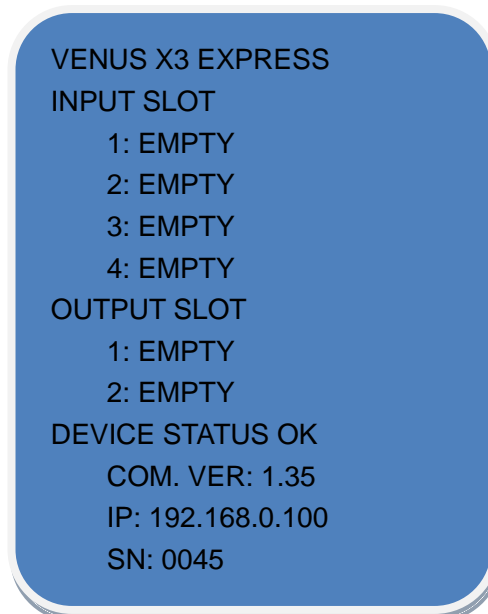
2. Hardware Orientation

VENUS X3 EXPRESS Front Panel

VENUS X3 EXPRESS front panel is as following:
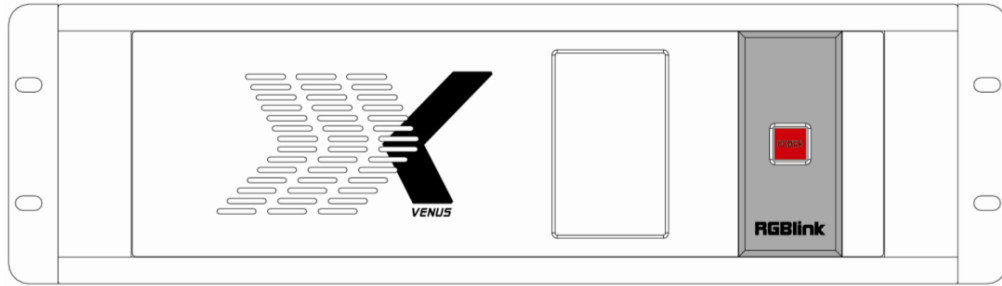
OLED Panel

Show the input slot and output slot information, device status, COM. Version,

IP address and serial number.

Function Button
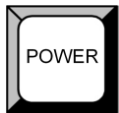
Power button, long push the button, the OLED module will pop up the confirm

box, release the power button, push the power again before the confirm box

disappears, and the power is turned off.

3. Hardware Installation

In This Chapter

This chapter provides comprehensive installation instruction for VENUS X3 EXPRESS hardware.

Following is the size of VENUS X3 EXPRESS for your reference.
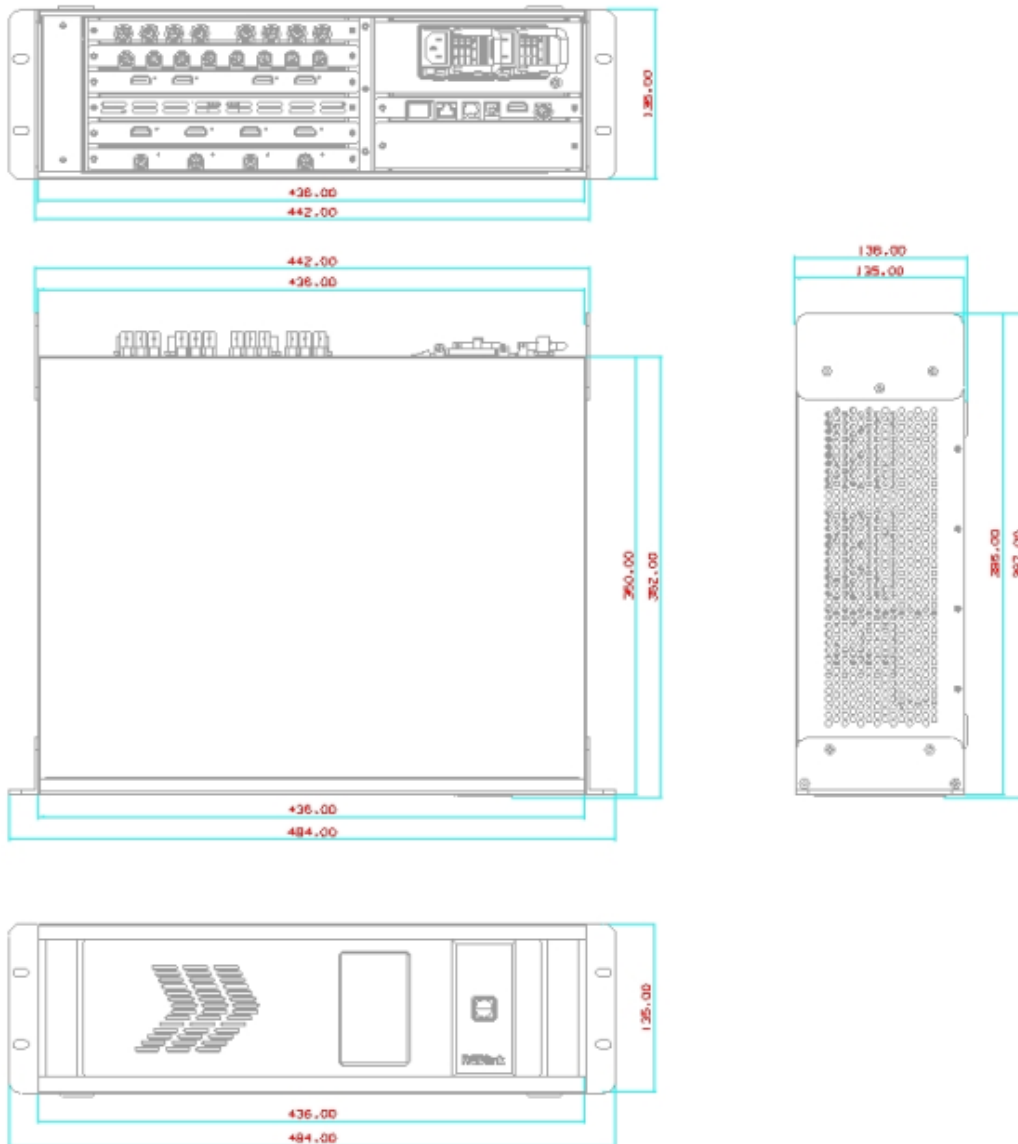
Safety Precautions

For all VENUS X3 EXPRESS 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 X3 EXPRESS process 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 X3 EXPRESS should be clean, properly lit, free from static, and have adequate power, ventilation, and space for all components.

4. Communication Software Guideline

In This Chapter

This chapter provides detailed information about the control

communication software. The following topics are discussed:
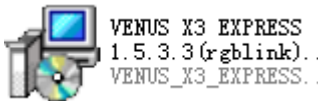
- Software Installation

- Software Operation

4. Communication Software Guideline

Software Installation

VENUS X3 EXPRESS video processor is very easy to configure with user

friendly communication software, support drag and drop operation for edit

and display.

Double click to install, system default English

version, click "Next" to next dialog:
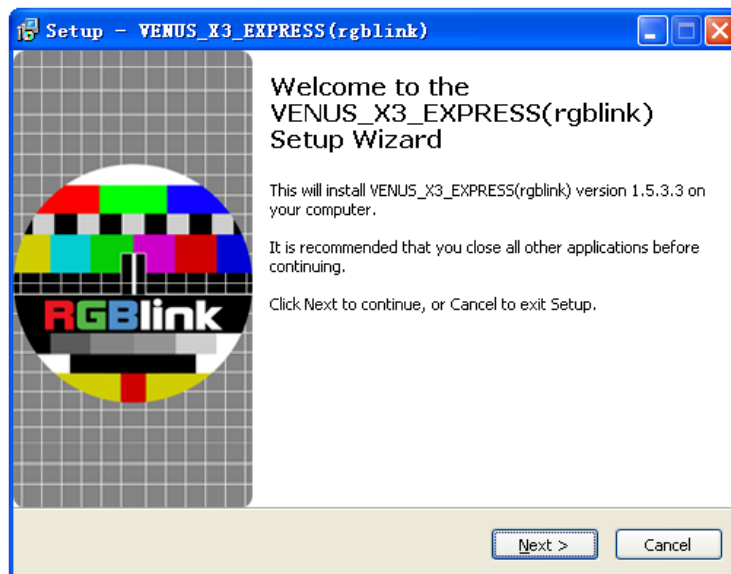
Select "Browse..." to choose the VENUS X3 EXPRESS software install

path:
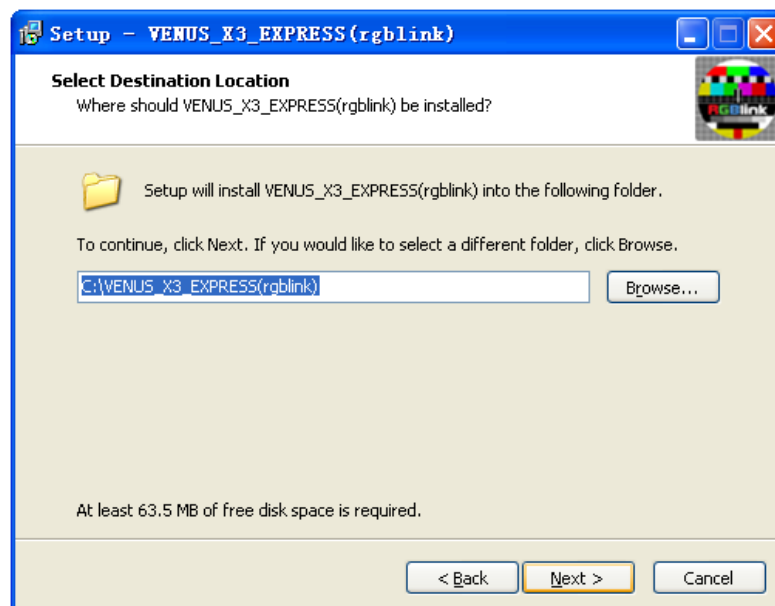
4. Communication Software Guideline

Software Installation

Click "Next" to go on:
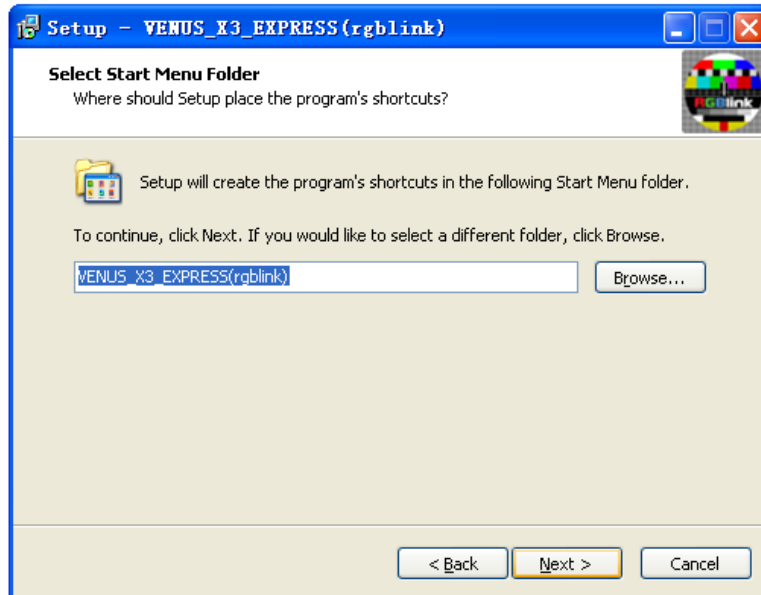
Click "Next" to go on:
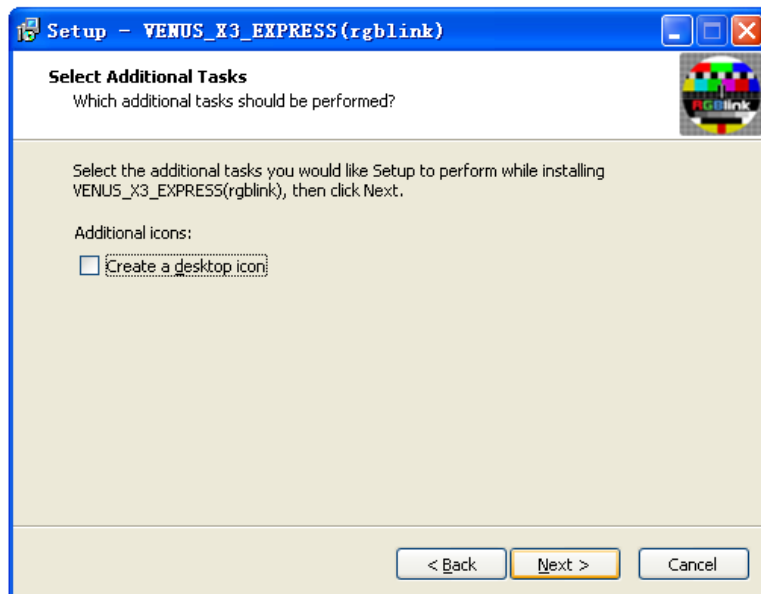
Click "Install" to go on:

4. Communication Software Guideline

Software Installation
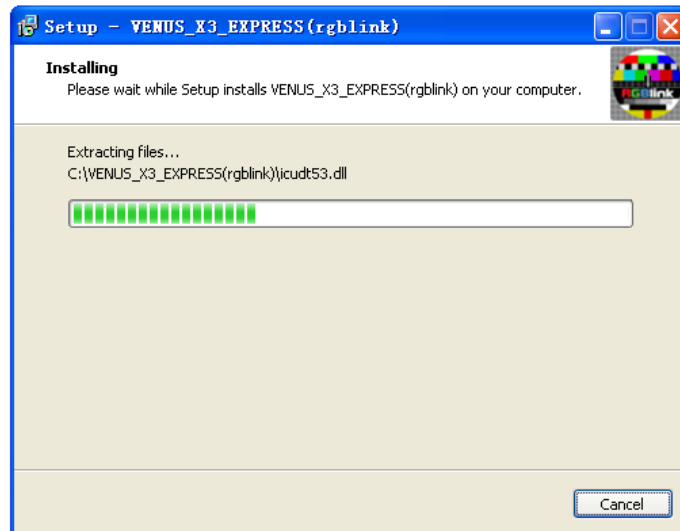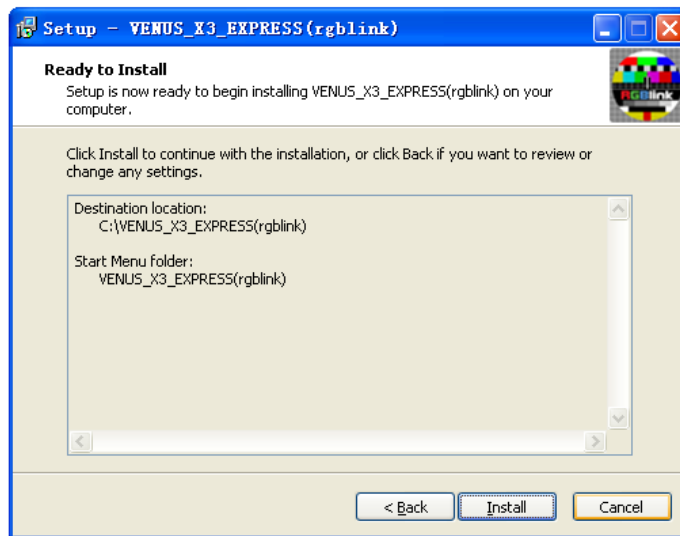
Click "Finish" and ready to run VENUS X3 EXPRESS windows control

program:
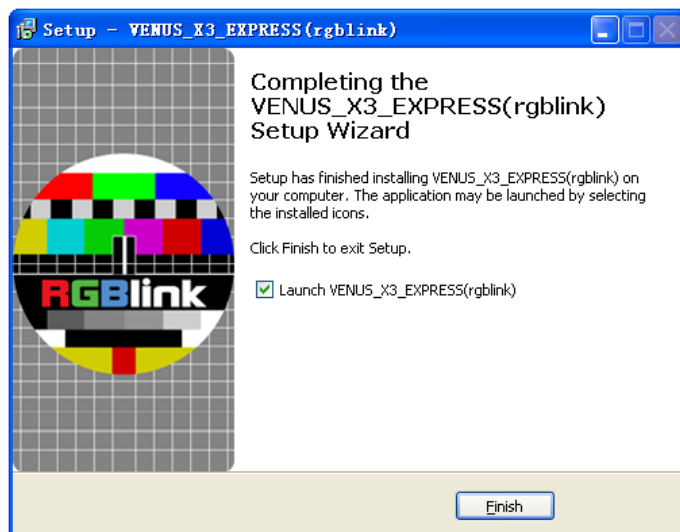
4. Communication Software Guideline

Software Operation

Software Operation

Connect
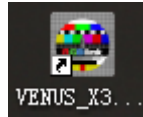
Double click the icon on the desktop. Log in interface will be enter after opening, the user's name is admin, and there is no pass word, enter into the software by clicking "confirm".
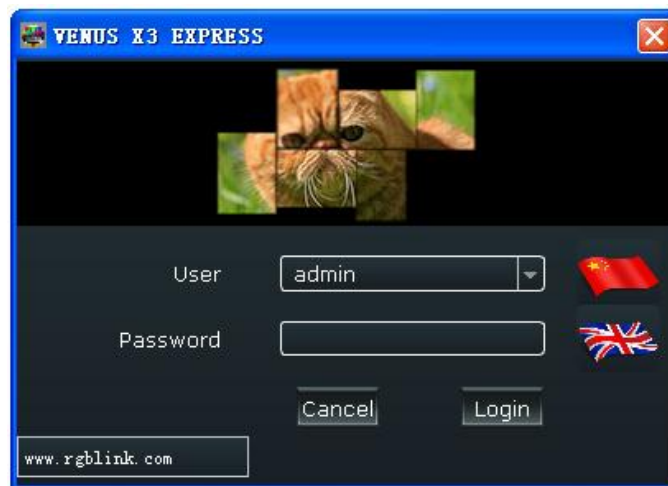
VENUS X3 EXPRESS communication software interface is shown as follows.
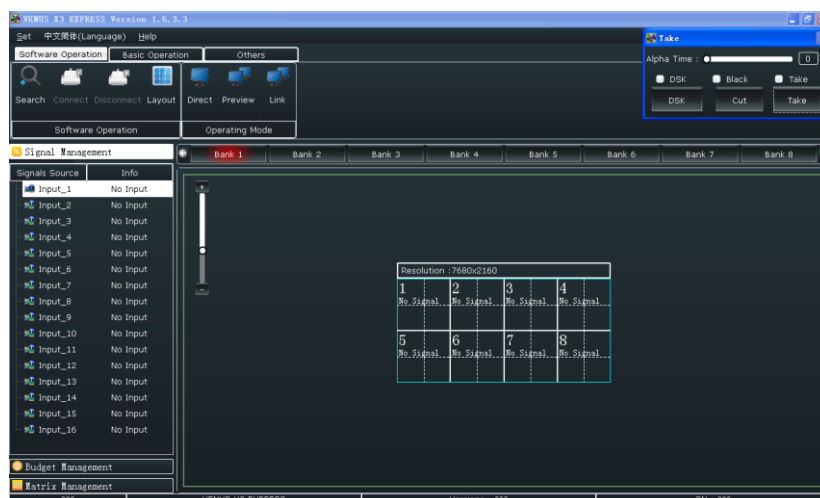
First, connect the VENUS X3 EXPRESS to the computer with the network cable, serial cable or USB cable, and open the device.

Then, choose "Search" below "Software Operation".

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4. Communication Software Guideline

Software Operation

Enter to the software interface as below:

Click "Search Device", and enter to the software interface as below:
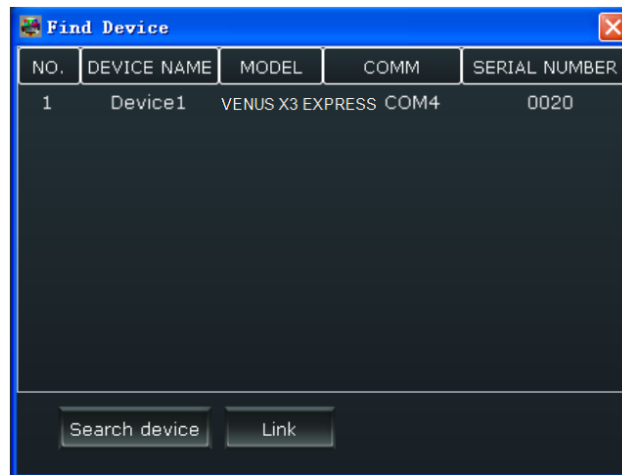
Finally, choose device name, as shown below, then click "Link", and finish

connecting.

4. Communication Software Guideline
Software Operation
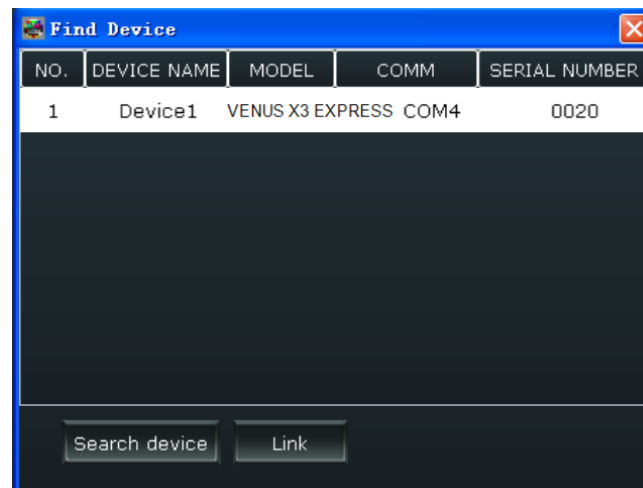
Disconnect

Click the shortcut key "Disconnect" below "Software Operation" to disconnect

the device.
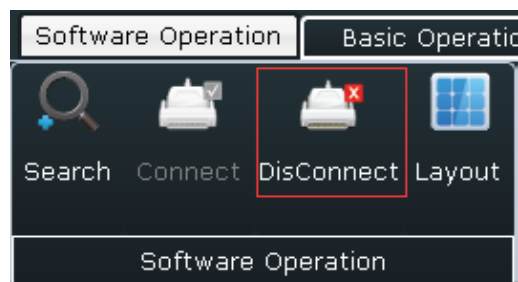
Layout

Click the shortcut key "Layout" below "Software Operation".
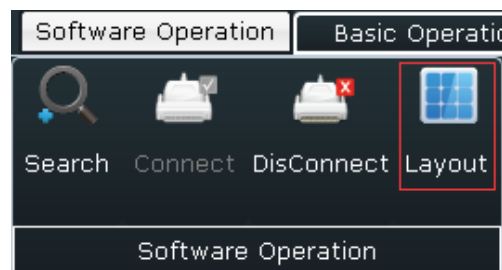
Enter to the software interface as below:

4. Communication Software Guideline
Software Operation
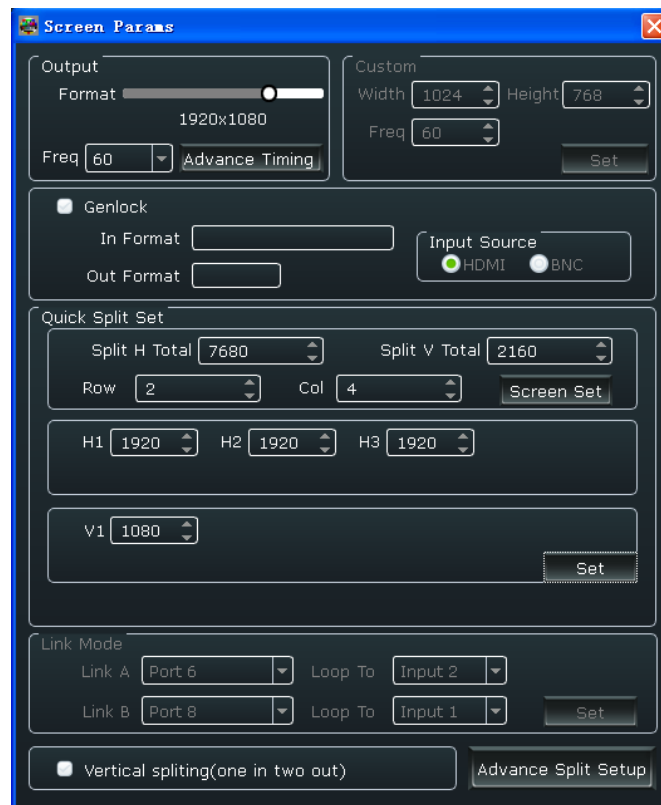
Output: Choose the output format according to actual need. "Advance Timing"

can change various parameter value of output screen, click "Set" after changing.

The software interface is shown as follows:
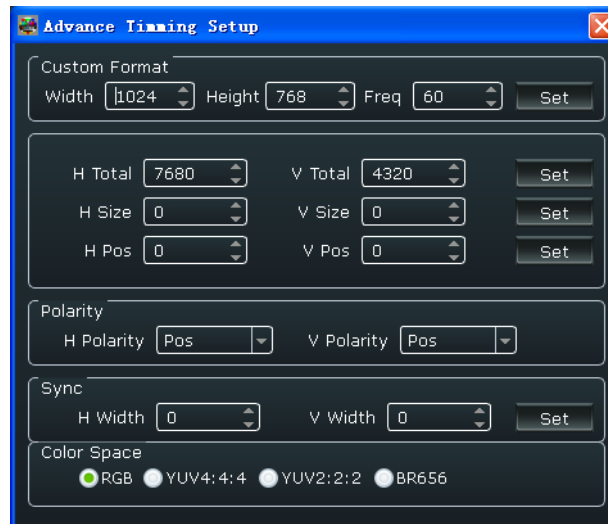
Custom: If choose "Custom" in Output, user can set custom resolution.

Genlock: Choose the genlock format.

Input Source: Choose input source as HDMI or BNC.

Quick Split Set: Set the split H total, split V total, row and column, the output

4. Communication Software Guideline
Software Operation

screen support max 2 rows and 4 columns, user can set the width and height of the output screen.

Link Mode: The link mode can achieve 5 pictures to 5 pictures seamless switching. It needs to connect output 6 and output 8 to the corresponding DVI inputs with two DVI cables, system default input 1 and input 2, then choose "port 6" Loop To "Input 1", "port 8" Loop To "Input 2" in the screen params window of the windows control program.

Vertical spliting (one in two out): It is mainly for doing vertical split with dual graphics cards computer.

Advance Split Setup: Choose the port, and set X, Y, Width, Height and Rotate.
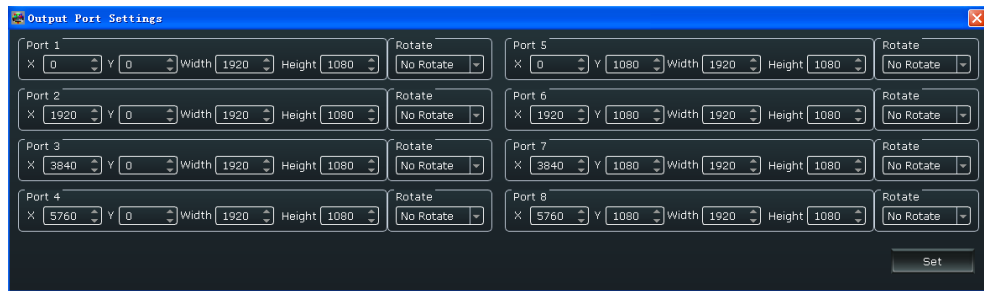
Operating Mode

 : Output the signal to LED display.

 : Output the signal to the monitor, click "Take" or "Cut" in "Take" box to seamless switch the signal to LED display. If select "Take Out" or "Black", the preview image will seamless switch or black to LED display instantaneously. System default outputs 2.4.6.8 as preview channel and outputs1.3.5.7 as program channel.
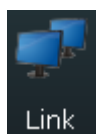
 : The link mode can achieve 5 pictures to 5 pictures seamless

4. Communication Software Guideline

switching. It needs to connect output 6 and output 8 to the corresponding DVI

inputs with two DVI cables, system default input 1 and input 2, then choose

"port 6" Loop To "Input 1", "port 8" Loop To "Input 2" in the screen params

window of the windows control program.

Basic Operation

Layer Settings

New Window: In output screen zone of controlling software, press the left

mouse key and drag on the intended output screen to cover the whole current

screen. And the below interface will be displayed. A window can be opened by

click the shortcut key of "New Window" , or double click the left signal

source to be shown on the window.
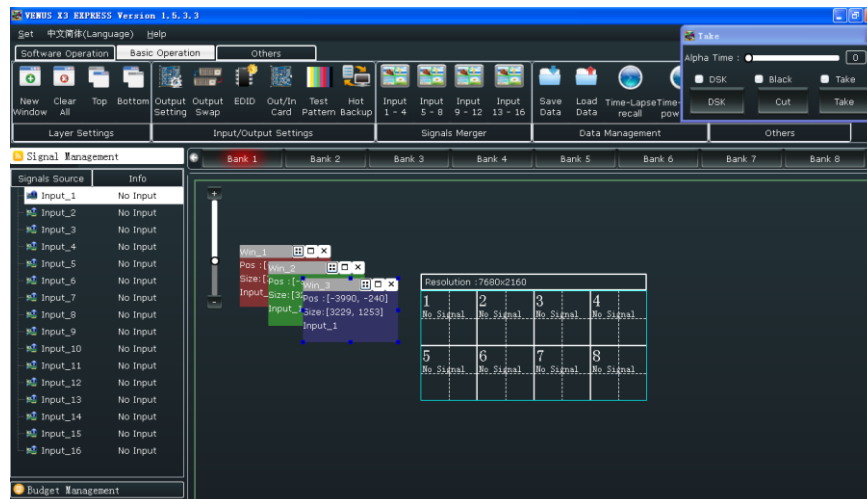
Paste Layer: Put the mouse on the window to be copied, right click the mouse,

select "Copy Layer", then right click in output screen zone of controlling

software, and select "paste Layer".

Adjust Window: Two ways can change the size and location of the opened

window:

a. Drag and drop the opened window by mouse. The details are: move the

4. Communication Software Guideline

mouse to the lower right brink of the opened window, when the mouse shows"<—>", press the left key of the mouse and drag the window to a suitable size and then release the mouse. Move the mouse to the opened window and press the left key of the mouse and move the mouse, then the window will be moved, release the mouse when moved to the suitable location. But this method can only adjust the size and location roughly; if an accurate adjustment is needed, the second method can be used.

b. Put the mouse on the window to be adjusted, right click the mouse. Select the "Property" and the exemplary interface will appear, adjust precisely by "X", "Y", Width" and "Height'.
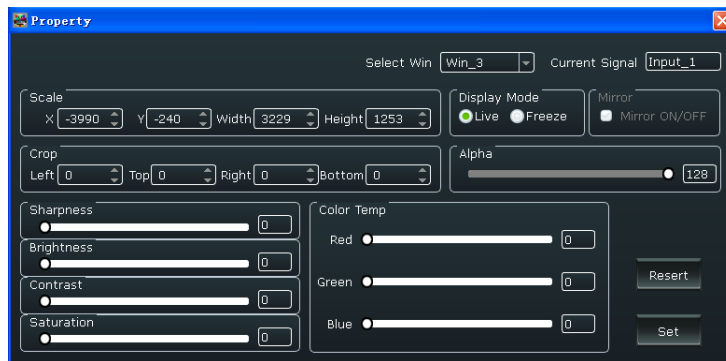
Full or Close Window: Click the icon " " at the upper right corner to full cell and click the icon " " at the upper right corner to full screen. Or put the mouse on the window to be adjusted, right click the mouse, select the "Full Cell" or "Full Screen".

When a window needs to be closed, click the icon " " at the upper right corner, or put the mouse on the window to be closed, right click the mouse, select the "Close". If all windows need to be closed, click the shortcut key " ", or put the mouse on any window, right click the mouse, select the "Close All".

Hierarchical relations between windows: After creating the windows, the

4. Communication Software Guideline
Software Operation

hierarchical relations can be changed by the following: click the shortcut key
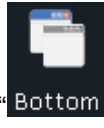
" Top " or " Bottom ". Or put the mouse on the window to be adjusted, right click

the mouse, select the "Bring layer to Front", "Send layer to Back", "Layer

Forward" or "Layer Backward", the window can also be set as BackGround.

Input/Output Settings
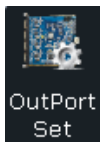
OutPort Set : Out Port Set, user can choose one port or choose all ports and set the

DE. X, Y, Width, Height, and choose output mode, output signal, data range and

polarity.

The "Preview output setting" is valid in preview mode. User can choose show or

hide the preview text, red, green, blue is the color of the text, and X, Y is the

position of the text.
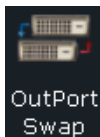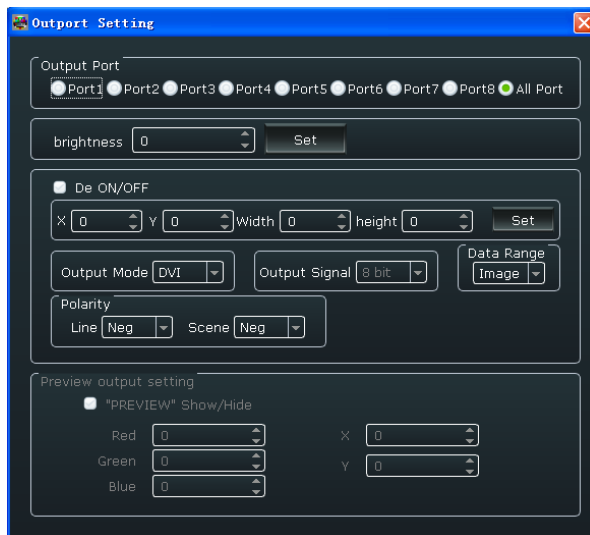
OutPort Swap : Click the Out Port Swap shortcut key, or put the mouse on the output

to be adjusted, right click the mouse, select "Out port Swap" to swap the out

ports.

4. Communication Software Guideline
Software Operation

EDID : The special display project or LED display application would like to

require special resolution settings to meet the requirement. The interface is as

follows:

Choose In_Card or Out Card, and click any input port to read or write EDID.

4. Communication Software Guideline
Software Operation

 : Show the information of input or output card.
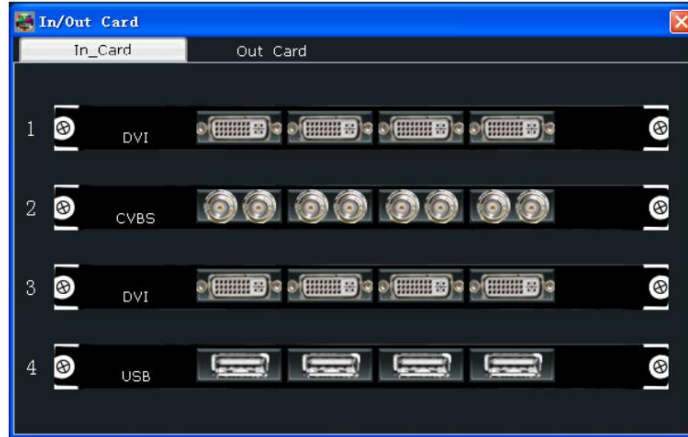
 : User can open or close the TP function, choose the output port, and choose color bar or pure color. User need to set the red, green and blue value if choose pure color.
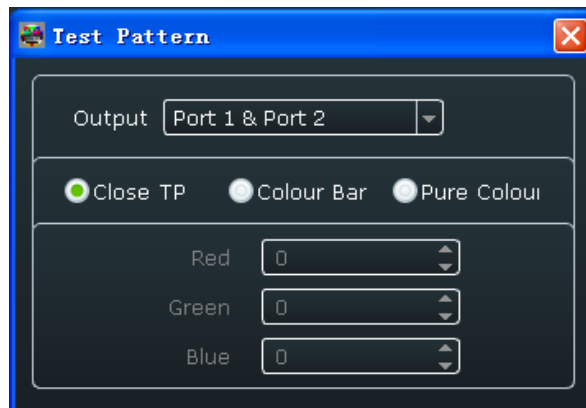
 : User can enable or disable the hot backup function. Choose "ON" to set the backup signal for Hot Backup 1 to Hot Backup 8. It will switch to the backup signal if interrupt signal.

4. Communication Software Guideline
Software Operation
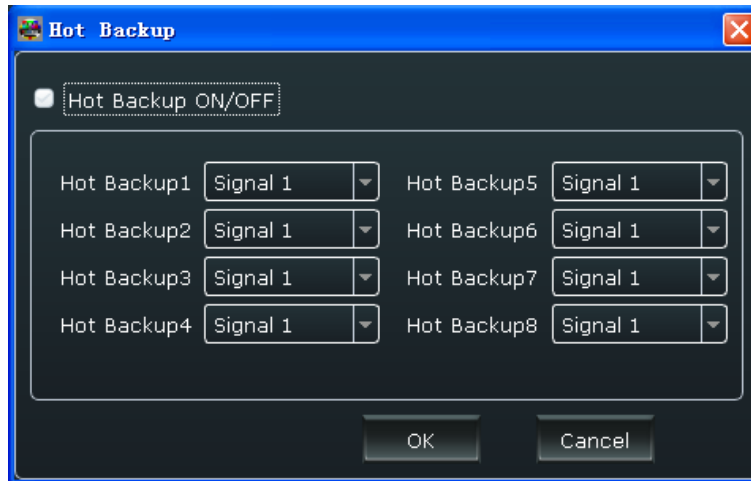
Signals Merger

The DVI and S-HDMI input optional module support signal merger. Click any
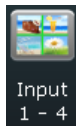
input port, for example, click , and the below interface will be displayed,

choose the merger mode and input port, and scale and crop the size. If image

quality distorts by improper operation, it can be recover by reset.
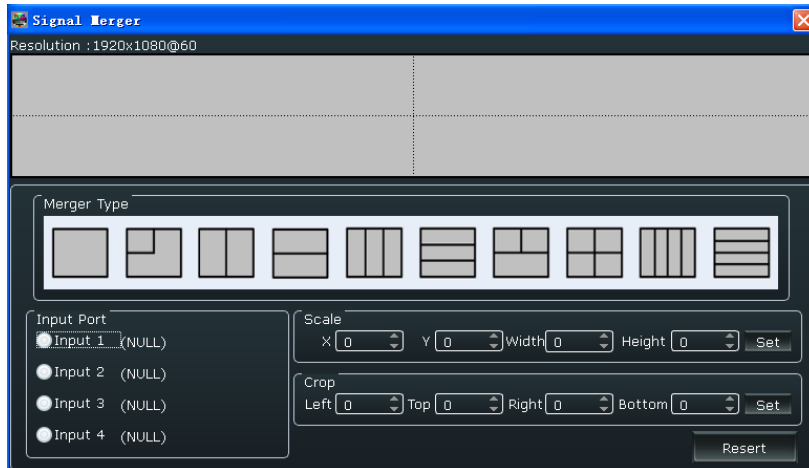
Data Management

: Save the data to the computer hard drive.

4. Communication Software Guideline
Software Operation
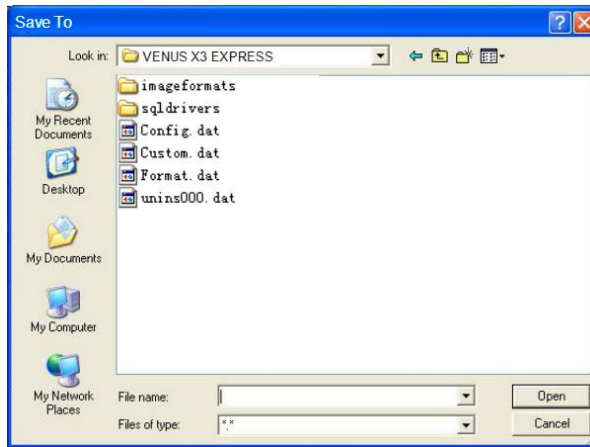
: Load the data from the computer.
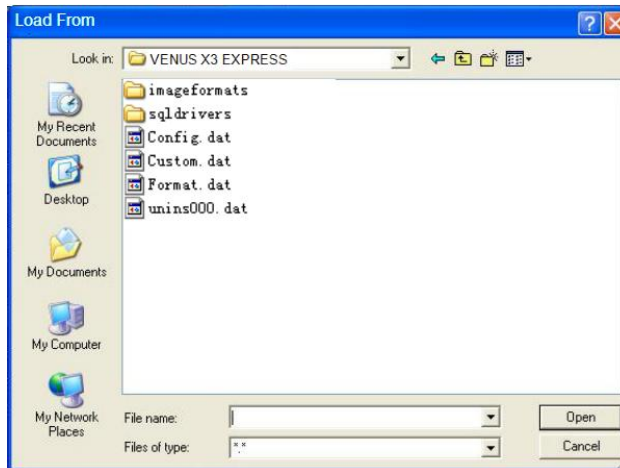
: Set the time-lapse recall time, and choose the bank that will load.
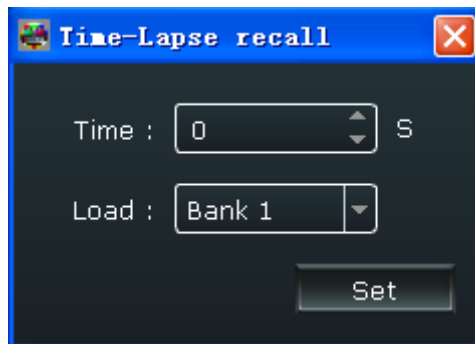
4. Communication Software Guideline
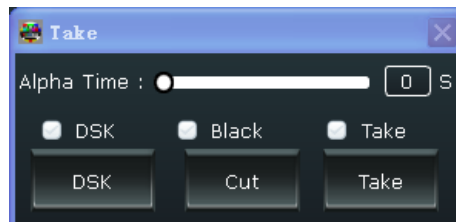Software Operation
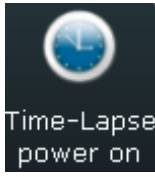
: Set the time-lapse power on time.
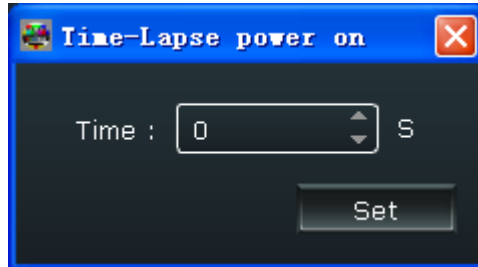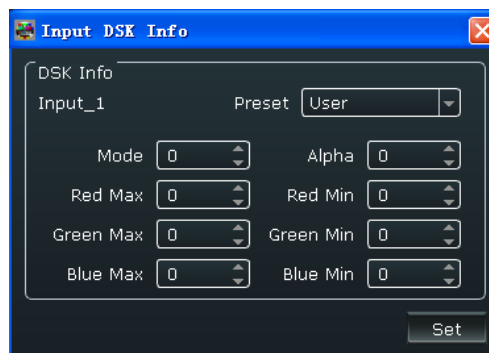

Other
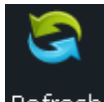
: Refresh the current page.
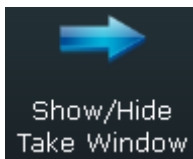
: Click the shortcut to show or hide the take window, the take

window shows as follows:

Set the alpha time, the adjustment range is 0~10S.

Click " Advance" in "Take" box, and set the DSK parameters in the dialog,

including preset, mode, alpha and color.

4. Communication Software Guideline

Software Operation

Click "Take" or "Cut" in "Take" box to seamless switch the preview signal to LED display. If select "Take ON" or "Black ON", the preview image will seamless switch or black to LED display instantaneously.

OSD: Put the mouse in output screen zone of controlling software, right the mouse, select "OSD", and the below interface will be displayed. Select One Output Mode or More Output Mode, and set the following items.
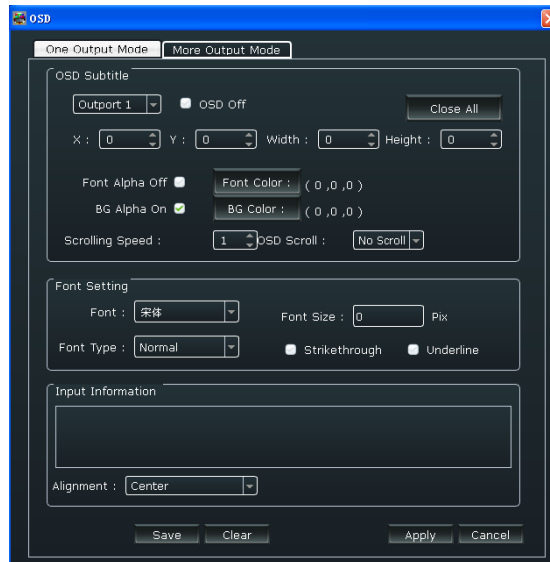
OSD Subtitle: Enable or disable the OSD function. When choose "ON", choose the output port, and set the size, position, font alpha, font color, scrolling speed and OSD scroll mode.

Font Setting: Set the font, font size, font type, user can also choose the strike through or underline. Input Information: Input the information and choose the alignment.   Click "Save" and "Apply" after setting.
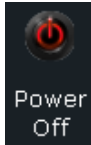
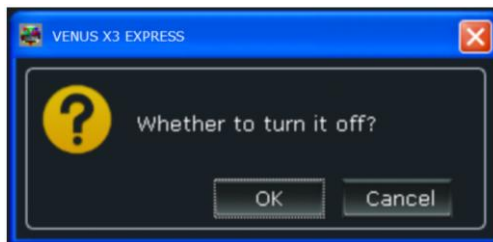: Repeal the last level operation.

4. Communication Software Guideline
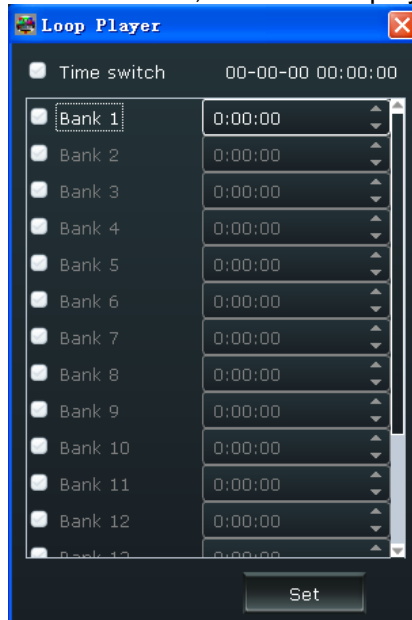Software Operation

Other

Power

: Click "Power Off" icon, the system will prompt "Whether to turn it off",

click "Yes" to close the device.

Bank

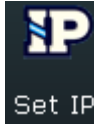: Loop function for the bank, set the bank play time.
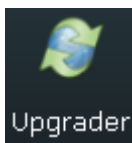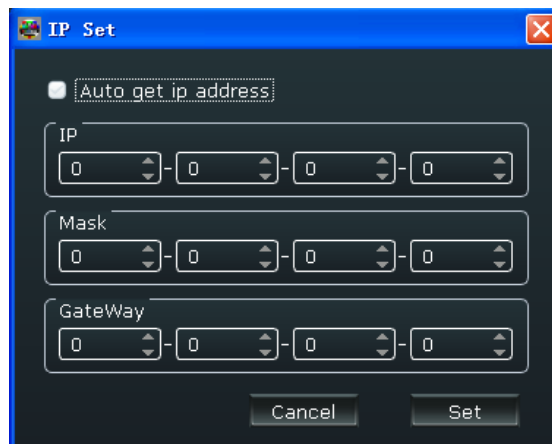
4. Communication Software Guideline
Software Operation

Factory Settings

: Reset to factory settings.

: Users can set equipment IP, mask and gateway, usually used when one computer control some devices or remote control. It takes effect immediately if users change IP through serial port, and if change IP through network, it takes effect after reopen the software. If choose "Auto get ip address", user need not set the IP.
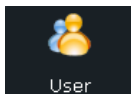

: Update the device, and user can clear the log.
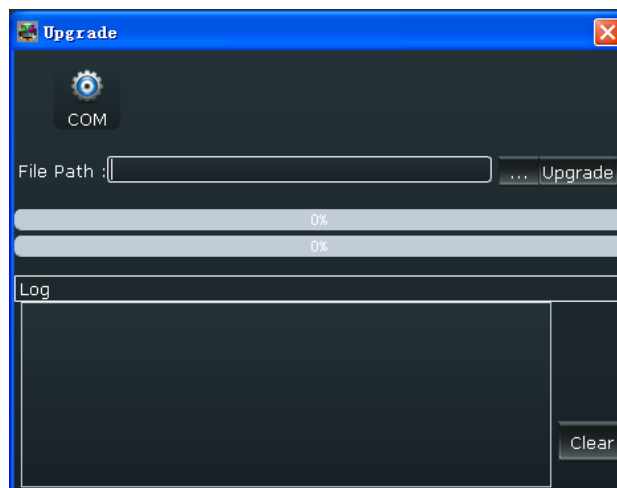
4. Communication Software Guideline
Software Operation

User Settings

: Operation permissions settings for manager, log in and set the log

password of windows control program.
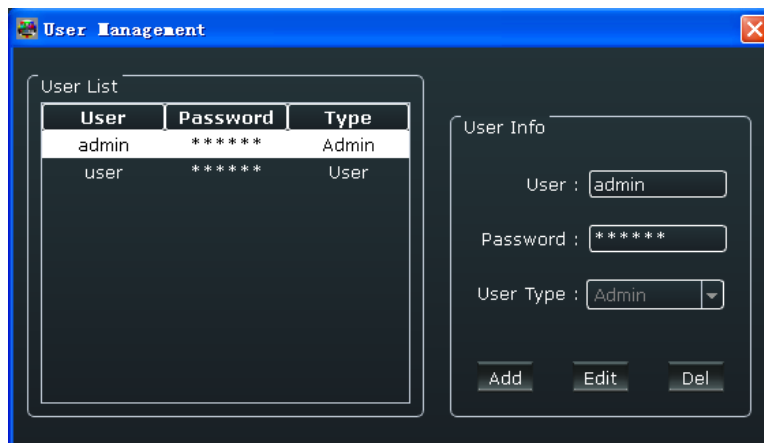
: Stage template select, VENUS X3 EXPRESS version 1.0 can not

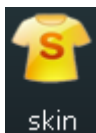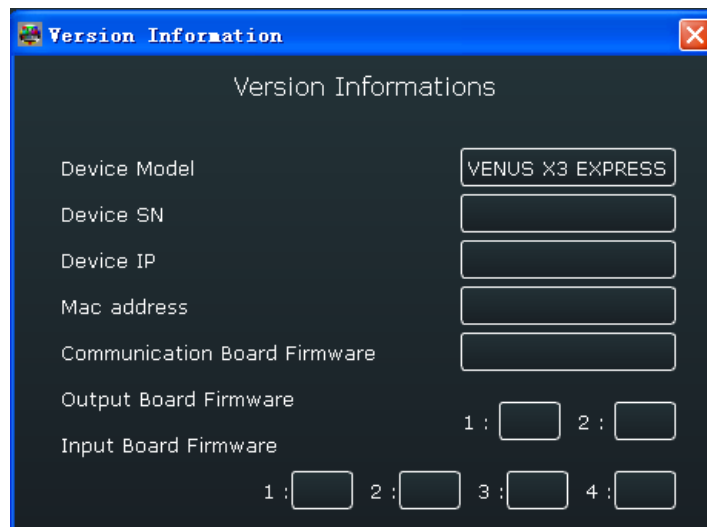support this function.

Others

: Use shortcut key to operate fast and easily.

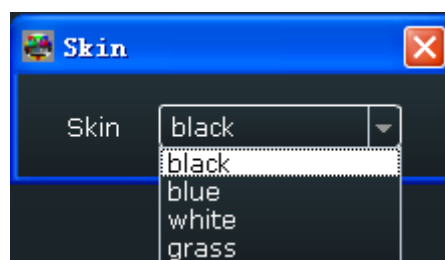# 4. Communication Software Guideline

Software Operation

Version: Show the device version information.

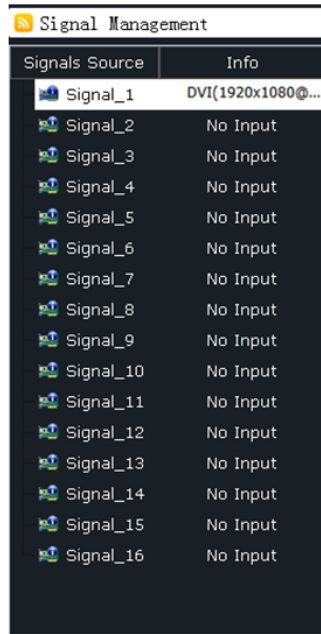skin: Can choose the skin as black, blue, white or grass.

4. Communication Software Guideline
Software Operation

Control Interface

Signal Management

Connect the device, and it will show the output format below "Info".

Signals Source	Info
Signal_1	DVI(1920x1080@...
Signal_2	No Input
Signal_3	No Input
Signal_4	No Input
Signal_5	No Input
Signal_6	No Input
Signal_7	No Input
Signal_8	No Input
Signal_9	No Input
Signal_10	No Input
Signal_11	No Input
Signal_12	No Input
Signal_13	No Input
Signal_14	No Input
Signal_15	No Input
Signal_16	No Input

Budget Management

Right click the page name, user can save the settings to page, or open the saved page. VENUS X3 EXPRESS supports 16 kinds of pages. User can also edit the page's name and clear one page or clear all pages.

ID	Budget Name
1	Page 1
2	Page 2
3	Page 3
4	Page 4
5	Page 5
6	Page 6
7	Page 7
8	Page 8
9	Page 9
10	Page 10
11	Page 11
12	Page 12
13	Page 13
14	Page 14
15	Page 15
16	Page 16

4. Communication Software Guideline
Software Operation

Matrix Management

In matrix mode, any operations are unavailable except signal selection and bank selection. Choose the signal, then click "Switch", the signal will be switched to the corresponding output. Connect the signal to the corresponding output after setting.
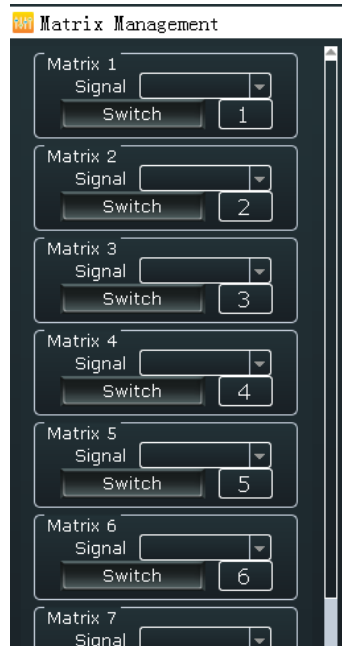
Output Channel

One bank support max 8 output screens, the output channel support 16 scenes.

4. Communication Software Guideline
Software Operation

Grab/Display Logo

Put the mouse on the signal, right click the mouse, select the "Grab/Display Logo", user can capture logo. VENUS X3 EXPRESS max supports 10 logos capture. Freeze the image when capture logo. User can choose display or hide the logo in the image.
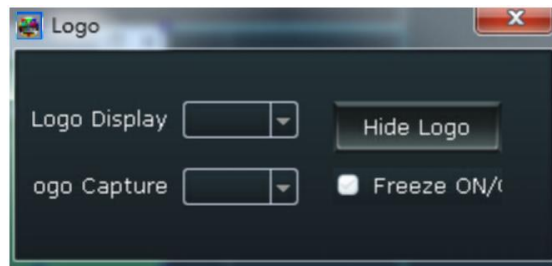
Modify the Name

The device can modify source and bank name, for easy identification and management.

Modify Source Name: Put the mouse on the signal, right click the mouse, select the "Modify the Name", input the new name in the dialog.
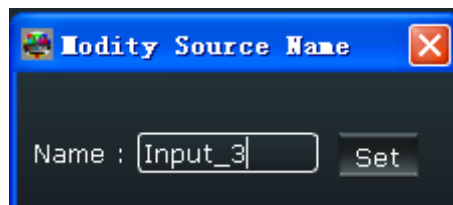
Modify Bank Name: Put the mouse on the bank, right click the mouse, select the "Modify Name", and input the new name in the dialog.
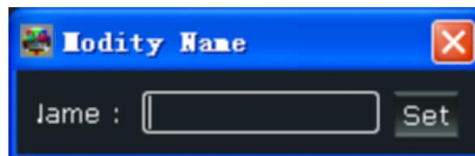
4. Communication Software Guideline
Software Operation

Set

IP Set

Users can set equipment IP, mask and gateway, usually used when one computer control some devices or remote control. It takes effect immediately if users change IP through serial port, and if change IP through network, it takes effect after reopen the software. If choose "Auto get ip address", user need not set the IP.
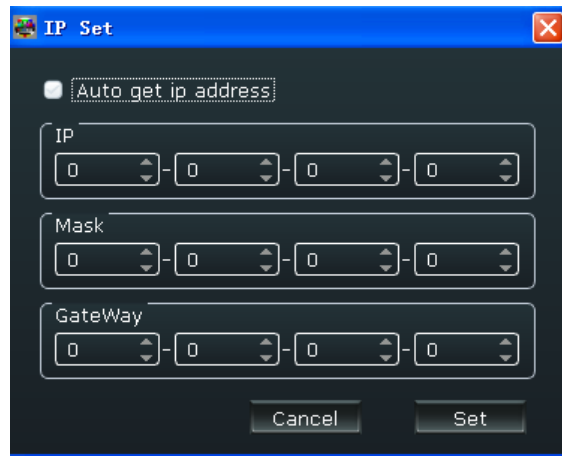
Hot Backup

User can enable or disable the hot backup function. Choose "ON" to set the backup signal for Hot Backup 1 to Hot Backup 8. It will switch to the backup signal if interrupt signal.
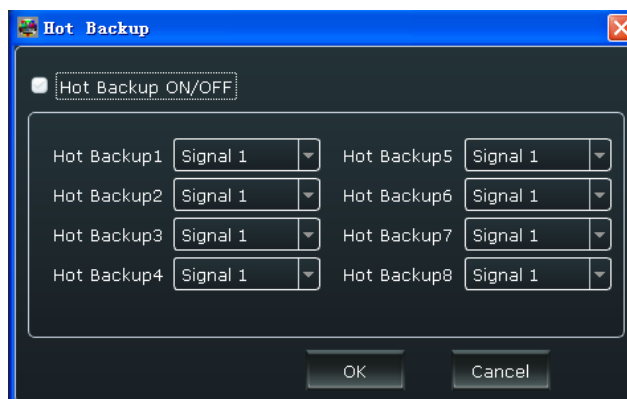
4. Communication Software Guideline

Time-lapse Recall

Set the time-lapse recall time and choose the bank that will load.
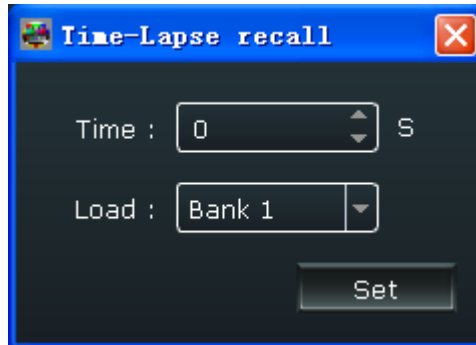
Language

The software supports both Chinese and English, user can switch the language

by "Language" option.

Help

About: The information of the software version and the company.
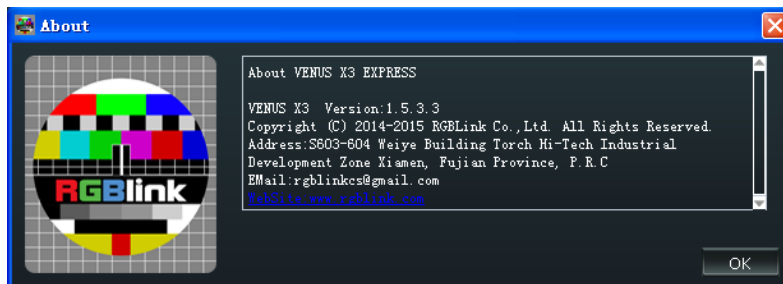
Information Toolbar

It shows the serial, device name, software version and serial number in the

bottom of the software interface.

5. Common Questions and Solutions

In This Chapter

This chapter provides the common questions and solution for the video processor. The following topics are provided:

- It Prompts "Eauipment is not found, please check the cable" When Search Device in Windows Control Program

- Some Inputs can Adjust the Quality While Some not

- How to Adjust the Brightness of All Ports

- The Operation on Windows Control Program is Inconsistent with Actual Output after Operate on Front Panel or Mixer

- Some Signals Merger Icons can be Operated While Some not

- There is no Output Image when Choose Link Mode

- Some Input Cards are Grey when Write EDID

5. Common Questions and Solutions

It Prompts "Eauipment is not found, please check the cable" When Search Device in Windows Control Program

The logic of the USB control port is missing, it may be caused by reboot the device without disconnect after connect the windows control program. User need to pull and plug the USB cable that connect the computer and VENUS X3 EXPRESS.

Some Inputs can Adjust the Quality While Some not

Currently, only asynchronous input cards, such as VGA, USB, CVBS, HDMI and SDI cards support the brightness, sharpness, contrast, saturation and color temperature adjustment. In order to ensure the synchronicity of multiple-input multiple-output split, the synchronous input cards, such as DVI, S-HDMI and S-SDI cards can not currently support.

How to Adjust the Brightness of All Ports

User can adjust the brightness of all ports by the windows control program, the operations are as follows: click the "Output Setting" in "Basic Operation" area, it will pop up the output setting window, choose "All Port", and set the brightness in the brightness box. The adjustment range is 0~128. Click "Set" after setting.

5. Common Questions and Solutions

The Operation on Windows Control Program is Inconsistent with Actual Output after Operate on Front Panel or Mixer

In order to ensure the diversity of device control and can multi-point simultaneous control, besides front panel, VENUS X3 EXPRESS can be operated on the mixer and windows control program at the same time, and achieve multipoint control. But in order to ensure the stability and rapid response when control the device, the mixer or windows control program that connected to VENUS X3 EXPRESS can not automatically synchronize the VENUS X3 EXPRESS operation without control. So user need to refresh the current control device or interface when change the control device. For windows control program, click the "Refresh" icon in "Basic Operation" area, and for mixer, touch the connected device serial number in communication area.

Some Signals Merger Icons can be Operated While Some not

Signals merger is the application that to solve the more pictures need for some customers. Signals merger only support the synchronous input cards, such as DVI, S-HDMI and S-SDI cards, other input cards are not currently supported.

5. Common Questions and Solutions
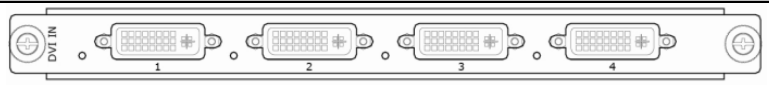
There is no Output Image when Choose Link Mode
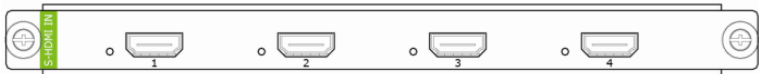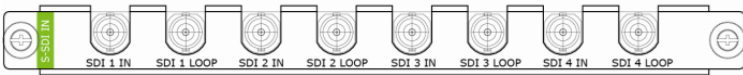
The link mode can achieve 5 pictures to 5 pictures seamless switching. It needs to connect output 6 and output 8 to the corresponding DVI inputs with two DVI cables, system default input 1 and input 2, then choose "port 6" Loop To "Input 1", "port 8" Loop To "Input 2" in the screen params window of the windows control program.

Some Input Cards are Grey when Write EDID
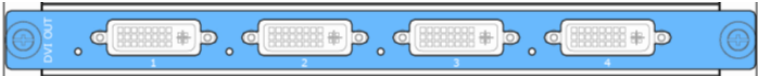
EDID only supports DVI, HDMI and VGA input cards as to its particularity, there is no EDID in other input cards, and can not read or write EDID, so they are grey.

A. Specification
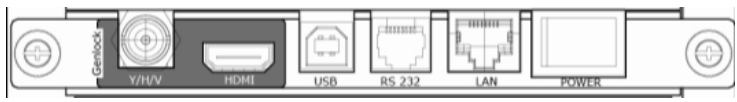
CVBS Input Module	
Interface Appearance	
Board Size	216(L)×20(W)（mm）
Number of Inputs	8
Connector	Standard BNC Socket
Supported Standards	PAL I NTSC I SECAM
Signal Level	1Vpp±3db (0.7V Video+0.3v Sync) 75 ohm
Multiplex	480i I 576i
VGA Input Module	
Interface Appearance	
Board Size	216(L)×20(W)（mm）
Number of Inputs	4
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 I 1024×768@60 I 1280×1024@60 I 1440×900@60 I 1600×1200@60)
DVI Input Module	
Interface Appearance	
Board Size	216(L)×20(W)（mm）
Number of Inputs	4
Connector	Standard DVI-I socket
Supported Resolution	SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 I 1080i50/59.94/60 I 720p50/59.94/60 VESA: 800×600@60 I 1024×768@60 I 1280×768@60 I 1280×1024@60 I 1600×1200@60 I 1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
USB Input Module	
Interface Appearance	
Board Size	216(L)×20(W)（mm）
Number of Inputs	4
Connector	Standard USB port

Supported Standard	Support general Image and video formats

HDMI Input Module

Interface Appearance	
Board Size	216(L)×20(W)（mm）
Number of Inputs	4
Connector	HDMI standard type A interface
Supported Resolution	SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 I 1080i50/59.94/60 I 720p50/59.94/60 VESA: 800×600@60 I 1024×768@60 I 1280×768@60 I 1280×1024@60 I 1600×1200@60 I 1920×1080@60
Embedded Audio Channels	Choose one from the two inputs
Format Standard	HDMI 1.3

S-HDMI Input Module

Interface Appearance	
Board Size	216(L)×20(W)（mm）
Number of Inputs	4
Connector	HDMI standard type A interface
Supported Resolution	SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 I 1080i50/59.94/60 I 720p50/59.94/60 VESA: 800×600@60 I 1024×768@60 I 1280×768@60 I 1280×1024@60 I 1600×1200@60 I 1920×1080@60
Embedded Audio Channels	Choose one from the two inputs
Format Standard	HDMI 1.3

S-SDI Input Module

Interface Appearance	
Board Size	216(L)×20(W)（mm）
3G-SDI Input	
Number of Inputs	4
Connector	BNC
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 Format
Supported Resolution	SMPTE 425M (3G Level A) 4:2:2: 1920×1080/60 (1:1), 1920×1080/50 (1:1). SMPTE 274M (HD): 1920×1080I/60 (2:1) or 1920×1080/30 (PsF) I 1920×1080I/50 (2:1) or 1920×1080/25 (PsF) I 1920×1080/30 (1:1), 1920×1080/25 (1:1) I 1920×1080/24 (1:1),

	1920×1080/24 (PsF) SMPTE 125M (SD): 1440×487/60 (2:1) SMPTE ITU-R BT.656 (SD): 1440×576/50 (2:1) Or dual link progressive, 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	4
Connector	BNC
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 Format
Supported Resolution	SMPTE 425M (3G Level A) 4:2:2: 1920×1080/60 (1:1), 1920×1080/50 (1:1). SMPTE 274M (HD): 1920×1080I/60 (2:1) or 1920×1080/30 (PsF) I 1920×1080I/50 (2:1) or 1920×1080/25 (PsF) I 1920×1080/30 (1:1), 1920×1080/25 (1:1) I 1920×1080/24 (1:1), 1920×1080/24 (PsF) SMPTE 125M (SD): 1440×487/60 (2:1) SMPTE ITU-R BT.656 (SD): 1440×576/50 (2:1) Or dual link progressive, 625-line generic.
Balance	Belden 1694A cable: 150m at 2.97Gb/s 250m at 1.485Gb/s 480m at 270Mb/s
Dual Link DVI Input Module	
Interface Appearance	
Board Size	216(L)×20(W)（mm）
Number of Inputs	2
Connector	Standard DVI-I socket
Max supported Resolution	4096×2160@30
Signal Level	T.M.D.S 2.9V~3.3V
Impedance	50Ω
3G-SDI Input Module	
Interface Appearance	
Board Size	216(L)×20(W)（mm）
SDI Input	
Number of Inputs	4

Connector	BNC
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 Format
Supported Resolution	SMPTE 425M (3G Level A) 4:2:2: 1920×1080/60 (1:1), 1920×1080/50 (1:1). SMPTE 274M (HD): 1920×1080I/60 (2:1) or 1920×1080/30 (PsF) I 1920×1080I/50 (2:1) or 1920×1080/25 (PsF) I 1920×1080/30 (1:1), 1920×1080/25 (1:1) I 1920×1080/24 (1:1), 1920×1080/24 (PsF) SMPTE 125M (SD): 1440×487/60 (2:1) SMPTE ITU-R BT.656 (SD): 1440×576/50 (2:1) Or dual link progressive, 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	4
Connector	BNC
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 Format
Supported Resolution	SMPTE 425M (3G Level A) 4:2:2: 1920×1080/60 (1:1), 1920×1080/50 (1:1). SMPTE 274M (HD): 1920×1080I/60 (2:1) or 1920×1080/30 (PsF) I 1920×1080I/50 (2:1) or 1920×1080/25 (PsF) I 1920×1080/30 (1:1), 1920×1080/25 (1:1) I 1920×1080/24 (1:1), 1920×1080/24 (PsF) SMPTE 125M (SD): 1440×487/60 (2:1) SMPTE ITU-R BT.656 (SD): 1440×576/50 (2:1) Or dual link progressive, 625-line generic.
Balance	Belden 1694A cable: 150m at 2.97Gb/s 250m at 1.485Gb/s 480m at 270Mb/s
DVI Output Module	
Interface Appearance	
Board Size	216(L)×20(W)（mm）
Number of Outputs	4
Connector	Standard DVI-I Socket

Signal Level	TMDS pw, 165MHz bandwidth
Supported Resolution	SMPTE: SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 I 1080i50/59.94/60 I 720p50/59.94/60 VESA: 720×480@50i I 720×480@60i I 1024×768@60 I 1024×768@75 I 1024×768@85 I 1280×720@50 I 1280×720@59.94 I 1280×720@60 I 1280×800@60 I 1280×1024@60 I 1280×1024@75 I 1280×1024@85 I 1360×768@60 I 1366×768@60 I 1400×1050@60 I 1440×900@60 I 1600×1200@60 I 1680×1050@60 I 1920×1080@50i I 1920×1080@59.94i I 1920×1080@60i I 1920×1080@50 I 1920×1080@59.94 I 1920×1080@60 I 1920×1200@60 I 2048×1152@60 I 2560×816@60
DVI+VGA Output Module	
Interface Appearance	
Board Size	216(L)×20(W)（mm）
DVI Output	
Number of Outputs	4
Connector	Standard DVI-I Socket
Signal Level	TMDS pw, 165MHz bandwidth
Supported Resolution	SMPTE: SMPTE: 625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50/59.94/60 I 1080i50/59.94/60 I 720p50/59.94/60 VESA: 720×480@50i I 720×480@60i I 1024×768@60 I 1024×768@75 I 1024×768@85 I 1280×720@50 I 1280×720@59.94 I 1280×720@60 I 1280×800@60 I 1280×1024@60 I 1280×1024@75 I 1280×1024@85 I 1360×768@60 I 1366×768@60 I 1400×1050@60 I 1440×900@60 I 1600×1200@60 I 1680×1050@60 I 1920×1080@50i I 1920×1080@59.94i I 1920×1080@60i I 1920×1080@50 I 1920×1080@59.94 I 1920×1080@60 I 1920×1200@60 I 2048×1152@60 I 2560×816@60
VGA Output	
Number of Outputs	4
Connector	Standard DB15 Socket
Supported Resolution	VESA: 800×600@60 I 1024×768@60 I 1024×768@75 I 1280×768@60 I 1280×1024@60 I 1440×900@60 I 1400×1200@60 I 1600×1200@60 I 1920×1080@60 I 1920×1200@60 I 2048×1152@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
SDI Output Module	

Interface Appearance	
Board Size	216(L)×20(W)（mm）
Number of outputs	4
Connector	BNC interface
Signal level	800mV±10%
Supported Standard	SMPTE 425M - 3G Level A Format
Supported Resolution	SMPTE: 480i I 576i, 720p/50/59.94/60 I 1080i/50/59.94/60 I 1080p/50/59.94/60
Equalization	Belden 1694A 100m HD 1.485G, 300m SD 270Mbps
HDMI Output Module	
Interface Appearance	
Board Size	216(L)×20(W)（mm）
Number of outputs	4
Connector	HDMI standard type A interface
Supported Resolution	SMPTE: 625/25 PAL, 525/29.97 NTSC, 625/50p PAL, 525/59.94p NTSC, 720p50/59.94/60 I 1080i50/59.94/60 I 1080P50/59.94/60 VESA: 800×600@60 I 1024×768@60 I 1280×768@60 I 1280×1024@60 I 1600×1200@60 I 1920×1080@60 I 1920×1080@50
Format Standard	HDMI 1.3
Genlock Interface	
Interface Appearance	
Board Size	165(L)×19(W)（mm）
Genlock Input	
Number of Inputs	1
Connector	BNC
Genlock Input	
Number of Inputs	4
Connector	HDMI standard type A interface
Supported Resolution	SMPTE: 625/25 PAL, 525/29.97 NTSC, 625/50p PAL, 525/59.94p NTSC, 720p50/59.94/60 I 1080i50/59.94/60 I 1080P50/59.94/60 VESA: 800×600@60 I 1024×768@60 I 1280×768@60 I 1280×1024@60 I 1600×1200@60 I 1920×1080@60 I 1920×1080@50
Function	
Switch	Support any two inputs fade in fade out

Extras	
Communication	RS232 USB TCP/IP
Power Supply	100-240V IEC-3
Working Environment	0°C~45°C
Stored Environment	10% to 90%
Product Warranty	3 years parts and labor warranty

B. Contact Information

Warranty:

All video products are designed and tested to the highest quality standard and backed by a full 3 years parts and labor warranty. Warranties are effective upon delivery date to customer and are non-transferable. RGBlink warranties are only valid to the original purchase/owner. Warranty related repairs include parts and labor, but do not include faults resulting from user negligence, special modification, lighting strikes, abuse(drop/crush), and/or other unusual damages.

The customer shall pay shipping charges when unit is returned for repair.

Headquarter: S603~604 Weiye Building Torch Hi-Tech Industrial Development Zone Xiamen, Fujian Province, P.R.C.

- **Tel:** +86-592-5771197
- **Fax:** +86-592-5771202
- **Customer Hotline:** 4008-592-315
- **Websites:**
    - ~ http://www.rgblink.com
    - ~ http://www.rgblink.cn
- **E-mail:** support@rgblink.com

C. Software Upgrade

1. Upgrade by RS-232 Interface

Upgrade by the software ![UpdateProgram] , the form of the file is ".bin".

1. Connect the RS-232 interface of VENUS X3 EXPRESS to the computer with a DB9 to
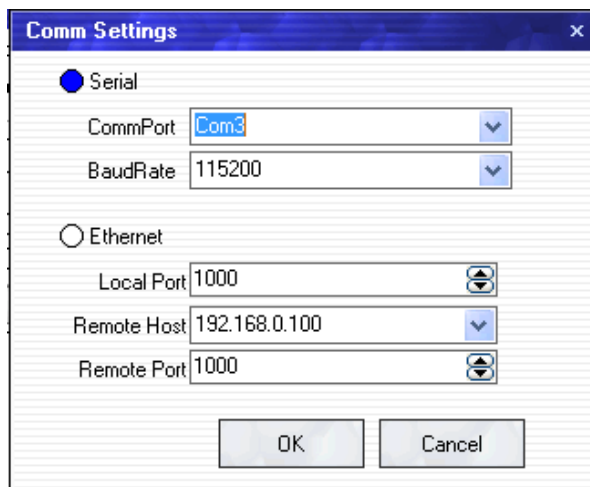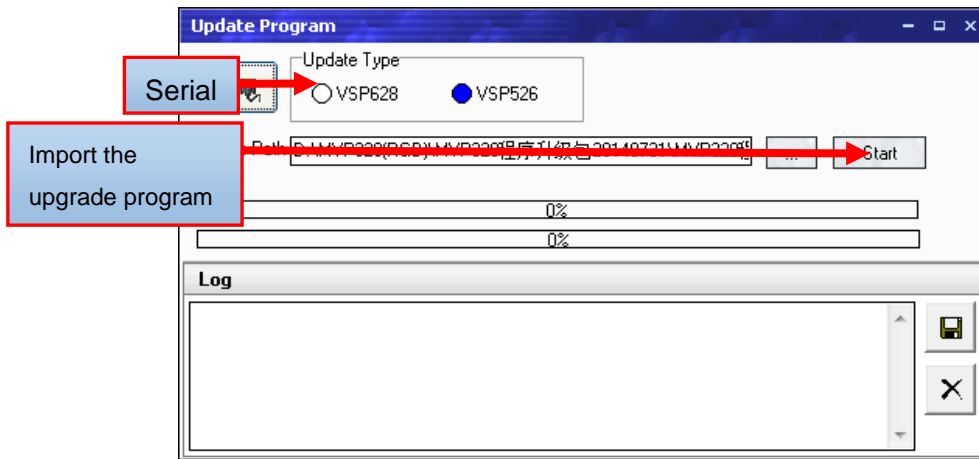
RJ11 cable.

RJ11

2. Plug in the power cord, search the COM (Right click: My computer - Property - View

ports within the device manager.)

3. Open the burning software ![UpdateProgram] , and enter to the program interface,

click the serial, and set the CommPort as the COM that searched in step 2, and set

BaudRate as 115200, then click "OK".

4. Click the ellipsis button (...) and   import the upgrade program, and then click "Start" to
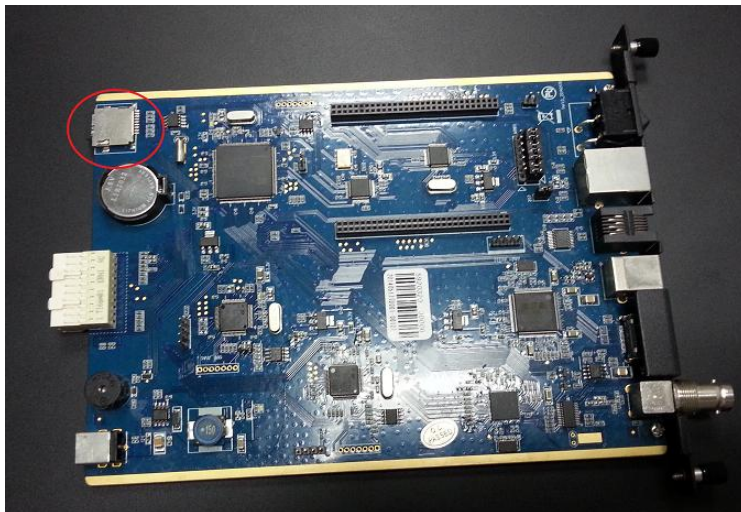
upgrade the software.
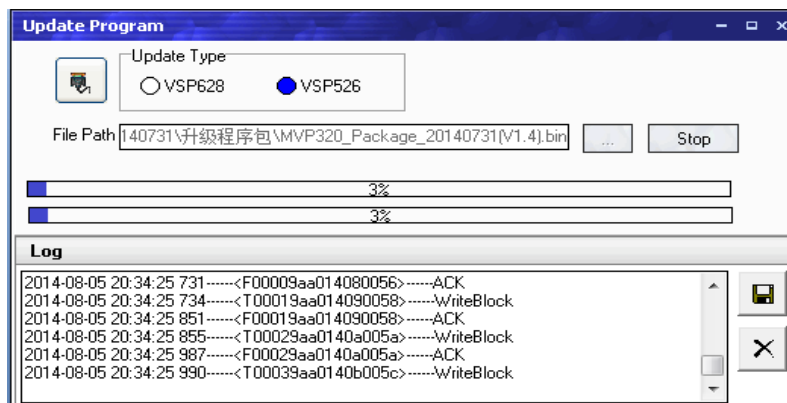
5. The buzzer sounds beeps, after the beeps stop, it means the upgrade is completed.
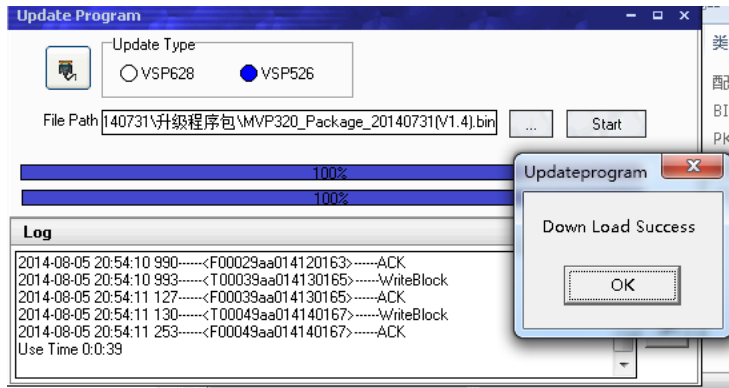
6. Pull the plug after completing the upgrade, and restart the device.

2. Upgrade by SD Card

1. Removed the SD card from the communication board in the device.
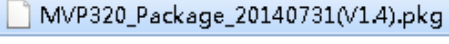

2. Place the SD card on the card reader.

3. Connect the card reader with the computer, then pop-up the USB.

4. Copy the program that with the suffix of ".pkg" MVP320_Package_20140731(V1.4).pkg

to the USB, then change the program name as "update.pkg".

5. Pull out the SD card after finish the copying, then install the SD card to the

communication board, and insert the communication board to the device.

6. Plug in the power cord, start the device, then the buzzer sounds beeps, after the beeps

stop, it means the upgrade is completed.

7. After finish the upgrade, remove the SD card from the communication board, and delete

the update.pkg in SD card with card reader, then install the SD card to the communication

board, plug in the power cord and restart the device.

D. Optional Module Installation and Replacement Instruction

VENUS X3 EXPRESS supports replaceable input and output optional modules, user can install or replace the optional module according to actual need. The specific installation steps are as follows:
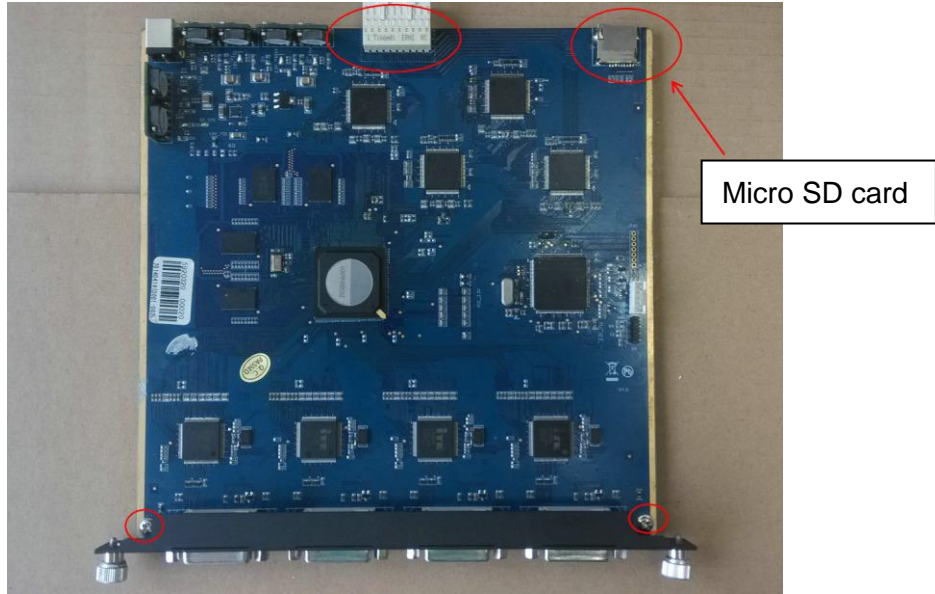
Install the Optional Module

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

   block, as shown in figure:

Captive Screw
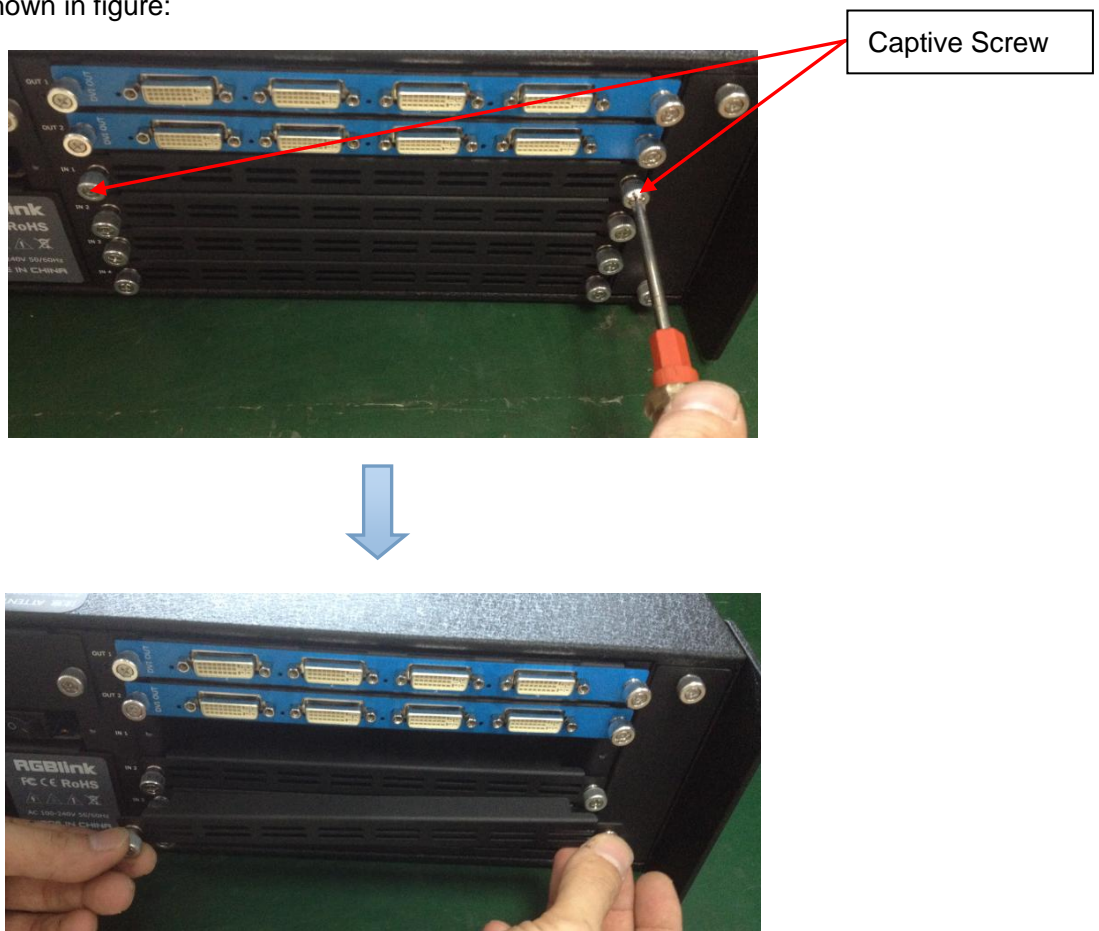
2. Install the input module:

① For the whole PCB input module with DVI or HDMI interface, fix the input module on

   the plate with 2 M3*4 flat screws, also need to install the 2G Micro SD card.

Micro SD card

DVI input module:

② For the joined PCB input module with CVBS, HDMI, VGA, USB or SDI interface, fix

the input module on the plate with 2 M3*4 flat screws and 2 M3*4 round head screws.

HDMI input module:

VGA input module:

CVBS input module:

USB input module:

3. Fix the input module block with fixed screws, as shown in figure:

4. Push the input modules into the device along the slide rail, and screw the captive

screws, as shown in figure:

Note: The install steps of output module installation and input/output module replacement

are the same as above.