VSP 628S

User Manual

- Manual #：RGB-RD-UM-V628S E001
- Revision:V1.6
- This User Manual Applies to VSP 628 and VSP 628S!

VSP 628S·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's guide. 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

Highlights 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.

Change History

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

Format	Time	ECO#	Description	Principal
V1.0	2012-03-20	0000#	Release	BIN
V1.1	2012-05-11	0001#	Version upgrade	BIN
V1.2	2012-07-18	0002#	All-new version of guide style	BIN
V1.3	2012-09-10	0003#	Menu update, adding CS module	BIN
V1.4	2012-12-14	0004#	1.Add VSP 628 add SDI output Module part. 2.Add how to replace VSP 628 rear panel block to SDI output block part 3.Add WEB SERVER cross-platform control operation interface part.	BIN
V1.5	2013-03-23	0005#	1. Change the back panel; 2. Change the menu; 3. Change the software.	Vira
V1.6	2013-08-13	0006#	1. Change the front panel; 2. Change the menu; 3. Change the software.	Vira

CONTENT

1. Introduction

This chapter is designed to introduce you to the VSP 628S User Manual. Areas to be covered are:

- Chapter Structure
- How to Use This Manual
- Terms and Definitions
- System Overview
- Application Questions

Chapter Structure

The following chapters provide instructions for all aspects of VSP 628S operations.

How to Use This Manual

Following are important tips for streamlining your use of this User Manual in its electronic “PDF” form.

Navigating

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 c an also use the **Index** to jump to specific topics within a chapter. E ach 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 35.
- For communication software control guide, refer to Chapter 5, “Communication Software Control Guide” on page 44.
- For system setup and operations, refer to Chapter 6, “System Setup and Operations” on page 73.

Should you have any questions regarding the installation or operation of VSP 628S, please consult with the factory. Refer to Appendix B, “Contact information” on page 114.

Terms 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

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 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.

- **"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 Expect 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.
- **"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-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 Extron 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.

System Overview

The VSP 628S is a multiple outputs video processor that accepts a wide variety of video signals, including RGB computer DVI, VGA video, HDTV HDMI video, S-composite video, composite video, 3 G SDI video, and can finish all the video input loop output. It 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. It supports user defined image size and coordinate, dual image processing, multiple splicing modes, several user configurations and multiple ways of controlling, lots of advanced functions in high-end show are available.

Features:

Multiple inputs

• VSP 628S provides 3 x composite (CVBS), 1x Svideo input, 1x DVI (compatible with HDMI 1.3), 1xVGA, 2 x3G self-adaptive SDI input (3G SDI module), for the application in different signal input.

Multiple outputs:

• 1 x Preview VGA output

• 2 X DVI outputs are provided for splitting into two different pictures or distributing the same two pictures, the two DVI outputs can be connected with LED display or other display.

• 3 G SDI module output, CVBS module output, CVBS + 3 G SDI module output. VSP628S self bring test pattern, logo conversion, etc.

Loop-out Interface

• Designed to boost the signal strength

• The same video can be connected to a local monitor

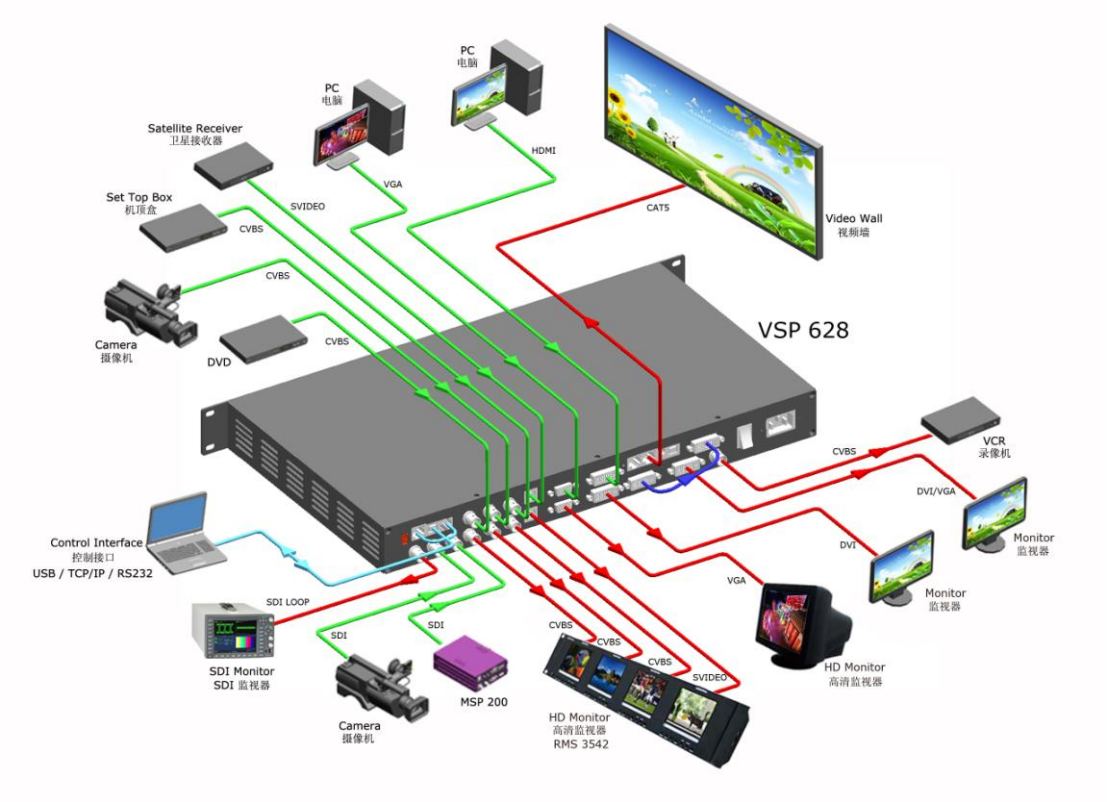
• The same video available for other equipments.

Multiple Control Methods

• Front Panel, RS232、USB, Ethernet.

Application Questions

RGBlink offers solutions to demanding 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

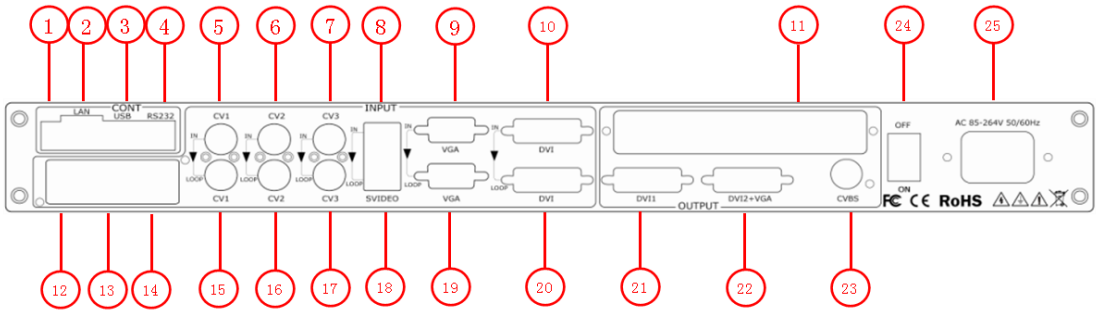
In This Chapter

This chapter provides detailed information about the VSP 628S hardware. The following topics are discussed:

- VSP 628S Back Panel
- VSP 628S Front Panel

VSP 628S Back Panel

The figure below illustrates the professional interface and control signals of VSP 628S back panel.



NO	INTERFACE	NO	INTERFACE
1	Dial the code switch	13.14	SDI Input
2	10/100M Interface	15.16.17	CVBS Loop Out
3	USB Interface	18	S-Video Loop Out
4	RS232 Interface	19	VGA Loop Out
5.6.7	CVBS Input	20	DVI Loop Out
8	S-Video DIN 4	21	DVI Output
9	VGA Input	22	DVI＋VGA DVI Output
10	DVI Input	23	CVBS Output
11	Sending card/SDI output module port	24.25	Switch and Power
12	SDI Loop Out		

CONT Interface

1. Dial Switch

2. 10/100M UDP Interface

3. USB Interface

Remote communication device control interface, used to connect the computer.

4. RS232 Interface

Used to connect the computer.

INPUT Interface

1) 3 CVBS inputs by BNC interfaces, 1 S video input;

2) 1 VGA input by DB15 interface. 1 DVI-I interface, can be compatible with HDMI inputs;

3) 2 3G SDI input (SDI module), can complete all video input loop output.

5~7：CVBS Input

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

8：S-Video DIN 4

S-Video DIN 4, used to input S-Video signal(PAL, NTSC, SECAM compatible）.

9：VGA Input

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

Note

DVI-I is compatible with HDMI.

10：DVI Input

DVI input interface。Input the video signal from computer, DVI signal generator. Connect to the same DVI interface on VSP 628S;

（This Connection does not support hot-plugging）.

12：SDI Loop Out

SDI loop output, can connect the next level VSP 628S or the device with SDI input.

13.14：SDI Input

Can receive video signal from HD player, and HD camera, connect interface 16 via 75 ohms BNC port. Connect LED screens via network cable.

15.16.17：CVBS Loop Out

Composite CVBS loop out, can connect the next level VSP 628S or the device with CVBS input.

18：S-Video Loop Out

S-Video loop out, can connect the next level VSP 628S or the device with S Terminal loop out.

19：VGA Loop Out

VGA loop out, can connect the next level VSP 628S or the device with VGA loop out.

20：DVI Loop Out

DVI loop out, can connect the next level VSP 628S or the device with DVI loop out.

OUTPUT Interface

11：Sending Card/SDI output module port

Sending card or SDI output module port. Can not be installed at the same time. Power has been already supplied by video processor itself, no external power supply needed for sending card.

21：DVI Output

Connect to the monitor or LED screen which has DVI interface（This DVI connector does not support hot-plugging）.

22：DVI +VGA DVI Output

DVI +VGA output via DVI connector, connect to the monitor or LED screen which has DVI interface.（This DVI connector does not support

hot-plugging）.

DVI +VGA, VGA output connector can be connected to monitor or projector which has VGA interface.

Note

Via  adapter, can connect with DVI-based or VGA-based equipment, and via  DVI to VGA adapter, can output VGA only.

23：CVBS Output

CVBS can output PAL and NTSC, output signal can access the TV or DVD, etc.

Switch and Power

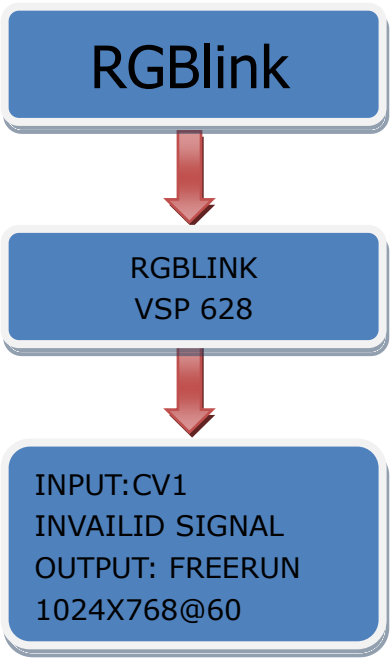
24.25：Power Interface and Switch

AC 85-264V 3.8A　50/60Hz　IEC-3 Power Interface

VSP 628S Front Panel

Insert power cord and push power to ON position. LCD module on the front panel will show RGBLINK and go into self verification before it load last setting config and send processed image to the target monitor. For the first setup, CV1 input is default source. With front panel keyboard, user can operate VSP 628S through the menus on LCD panel.

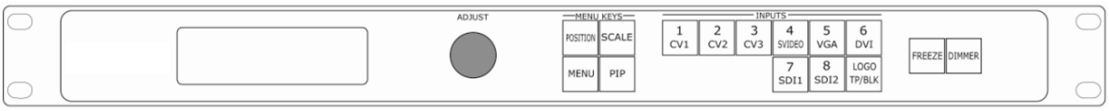
VSP 628S front panel as shown in figure:



2. Hardware Orientation

VSP 628S Front Panel

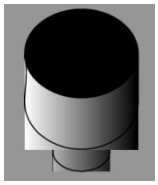
VSP 628S front panel as following:



LCD Panel

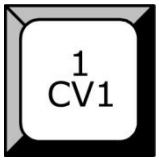
Used to show button menu and menus for interactive communication;

Menu Buttons



Used to adjust LCD menu and information interaction and with the same function with Enter to confirm current options.

Signal keys



CV1 input selection Button, its LED light turns on, output will be switched to this channel;

CV2 input selection Button, its LED light turns on, output will be switched to this channel;

CV3 input selection Button, its LED light turns on, output will be switched to this channel;

SVIDEO input selection Button, its LED light turns on, output will be switched to this channel;

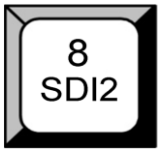
VGA input selection Button, its LED light turns on, output will be switched to this channel;

DVI input selection Button, its LED light turns on, output will be switched to this channel;

2. Hardware Orientation

VSP 628S Front Panel

SDI1 input selection Button, its LED light turns on, output will be switched to this channel;

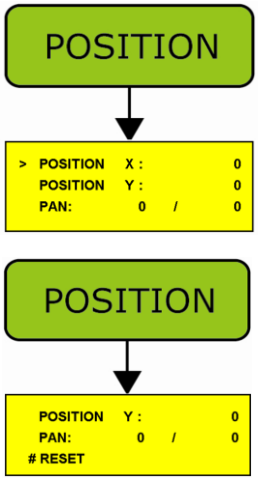


SDI2 input selection Button, its LED light turns on, output will be switched to this channel;

LOGO, test pattern, BLK button, its LED light turns on, factory set is default for the test pattern. Test pattern can be set and selected from LCD panel, press the button again, to disable pattern.

Function

Image position adjustment key, press the key, LED prompts activation:



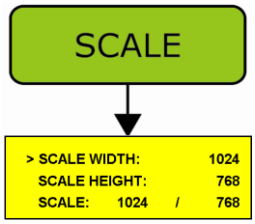
Default will active to set Position X, and push the key again, will active to set Position Y. Use left-right knob to adjust X and Y coordinates, and push SEL key to confirm.

Choose PAN to adjust X and Y coordinates synchronously, select RESET to reset the changed values.

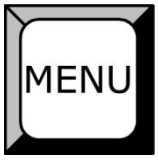
Image size adjustment key, press the key, LED prompts activation:

2. Hardware Orientation

VSP 628S Front Panel



Default will active to set Scale Width, and push the key again, will active to set Scale Height. Choose SCALE to set Width and Height synchronously. Rotate the knob to adjust values, and press the knob to confirm.



Advanced menu. Press the **MENU** to enter the main menu. Rotate the knob to select the relevant submenu. For details please refer to MENU in menu orientation.

Press the button to show picture in picture on the screen; press the button again to return single picture window. Its LED light turns on, change to PIP. LED prompts Select PIP Source, press 1/2/3/4/5/6/7/8/LOGO as PIP.

For example, press button 5, its LED light turns on.

Note

In PIP, the sub-image signal can only choose once, all the operations are home screen after select, adjust the menu if need to adjust the size and location of sub-image.

Note

In PIP, all signal can be chosen if select sub-image. The difference is, PIP can be 2 same signal.

Freeze key, its LED light turns on, output screen freezes; press it again, its LED light is out, freeze is cancelled;

Note

In PIP, both home screen and sub-image are freeze.

ALPHA transparency regulating switch, its LED light turns on, regulating function is open, adjust the transparency, the range is in 0-100, press it

again, LED light is out, regulating function is closed. Long press DIMMER button for 2 seconds, transparency will be quickly transferred to 0, again long press DIMMER button for 2 seconds long, and transparency will quickly adjusted from 0 to 100.

Note

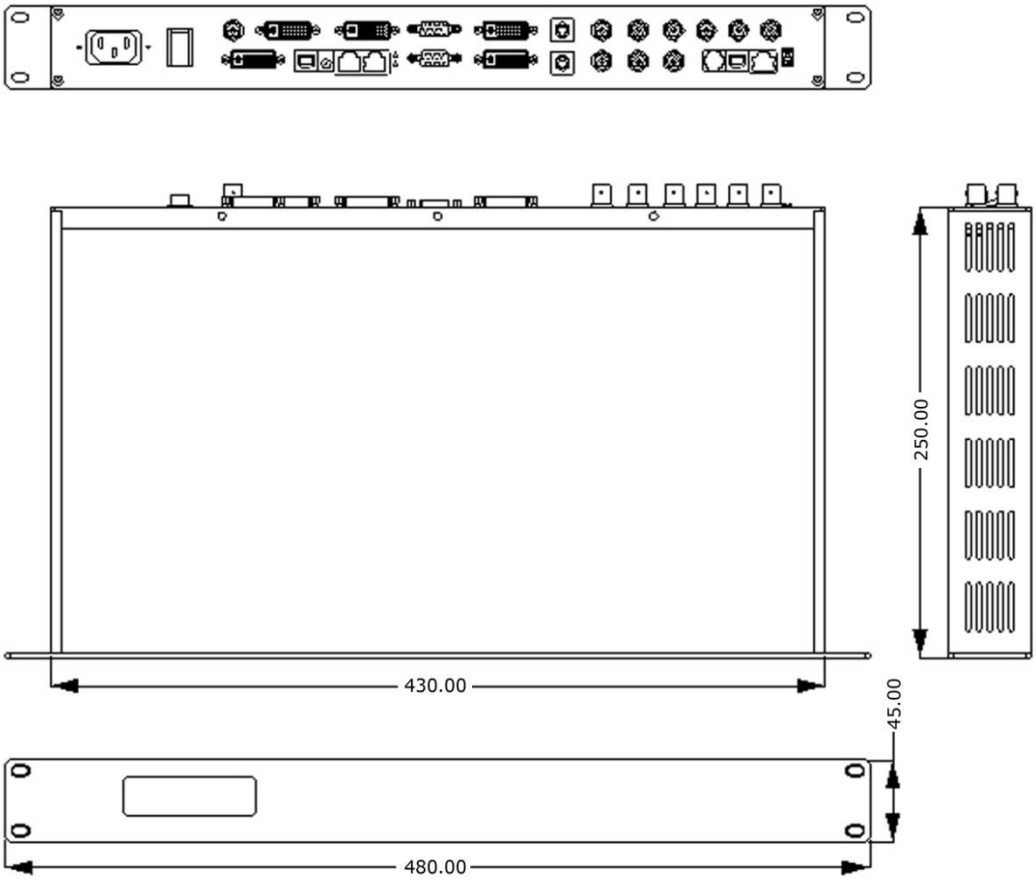
In PIP, operation is invalid.

3. Hardware Installation

In This Chapter

This chapter provides comprehensive installation instruction for VSP 628S hardware:

Following is the size of VSP 628S for your reference.



Safety Precautions

For all VSP 628S 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 VSP 628S 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 VSP 628S should be clean, properly lit, free from static, and have adequate power, ventilation, and space for all components.

4. Menu Orientation

In This Chapter

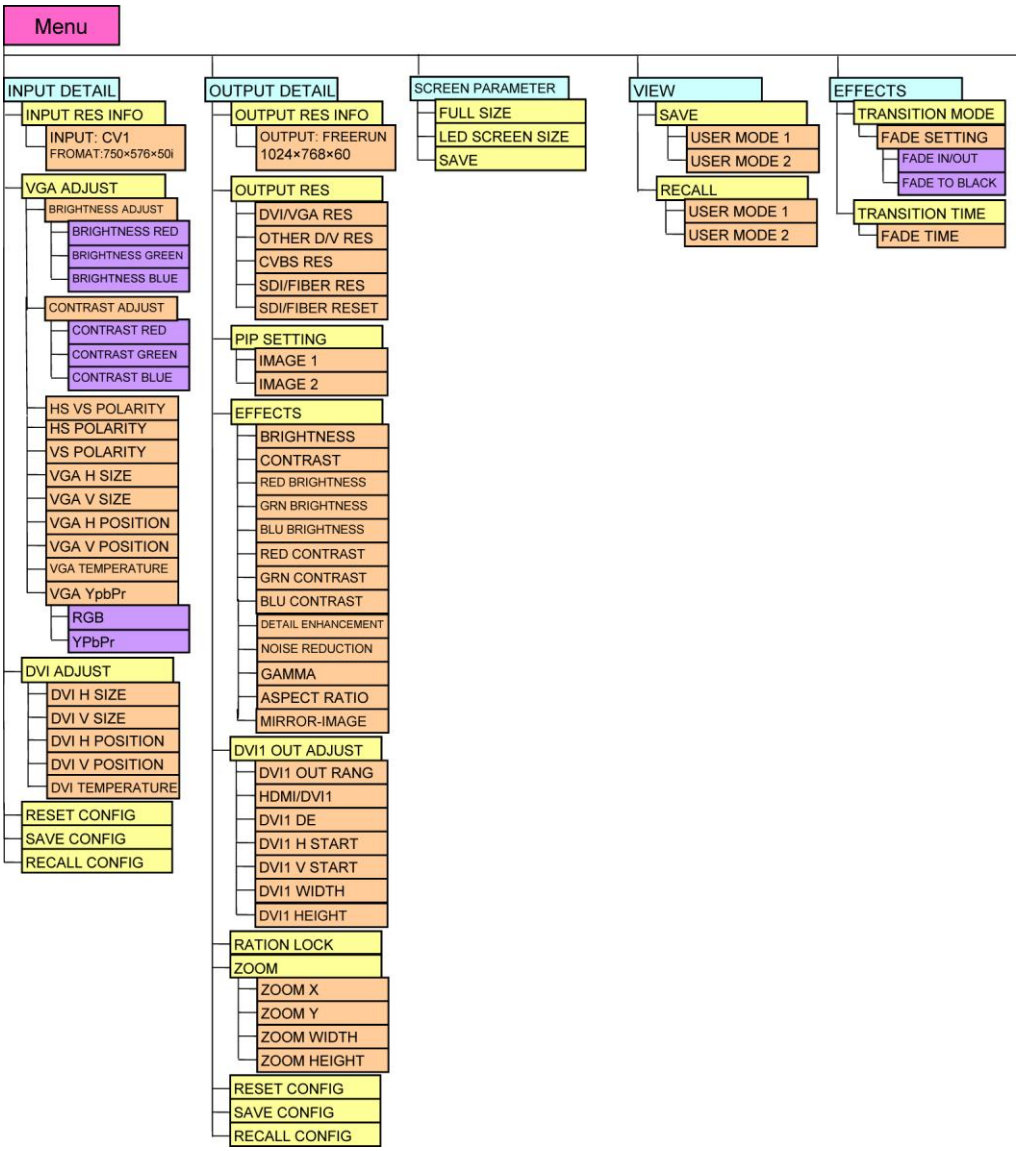
This chapter describes all VSP 628S processor menus, including how they are accessed, the functions that are available, and descriptions of each menu tree (in block diagram format).

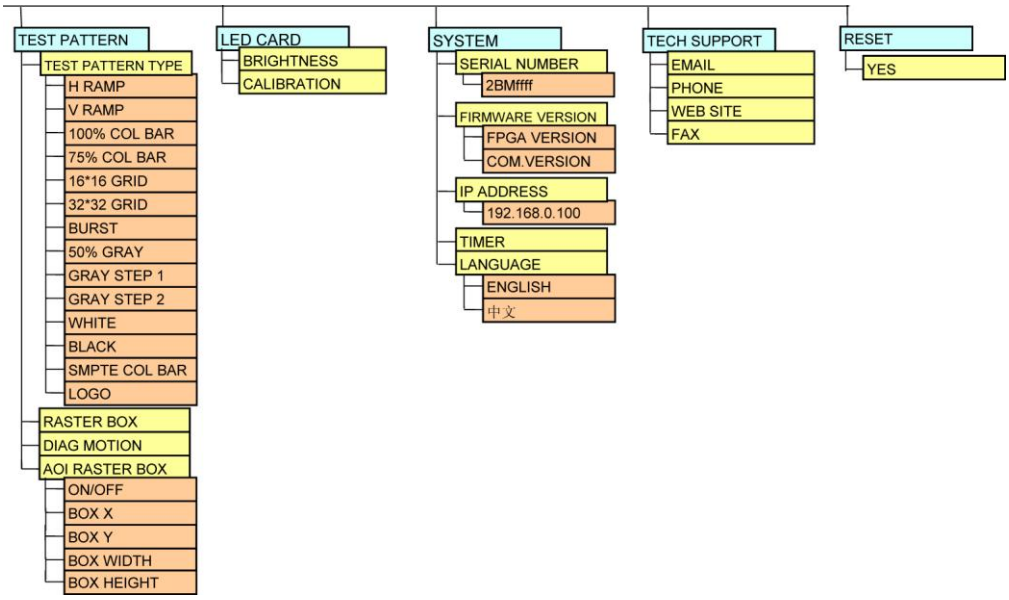
The following topics are discussed:

- **MENU**
  - INPUT DETAIL
  - OUTPUT DETAIL
  - SCREEN PARAMETER
  - VIEW
  - EFFECTS
  - TEST PATTERN
  - LED CARD
  - SYSTEM
  - TECH SUPPORT
  - RESET

MENU

Press the **MENU** to main menu, main menu as shown: Rotate knob buttons to select menu items. > before the menu means it's in selected state. Press the knob to enter corresponding setting or view the menu.





MENU---INPUT DETAIL

Select INPUT, press it to confirm, show level 2 menu as follows:

INPUT RES INFO: Mainly display the current input video signal (such as CV1) and the corresponding resolution (such as 720 x576x50i); press MENU to exit and return to higher level MENU.

VGA ADJUST: Mainly aimed at BRIGHTNESS of VGA input: can change the image BRIGHTNESS via setting BRIGHTNESS; CONTRAST: can change the image color CONTRAST; HS VS POLARITY, HS POLARITY, VS POLARITY.

Users can set according to their actual situation, this function mainly suitable for these very professional for image quality. Non-professionals are not suggest above operations. If quality image distortion by mistake in improper operation, it can be initialized operation to recover factory setting. Press MENU to exit and return to higher level MENU.

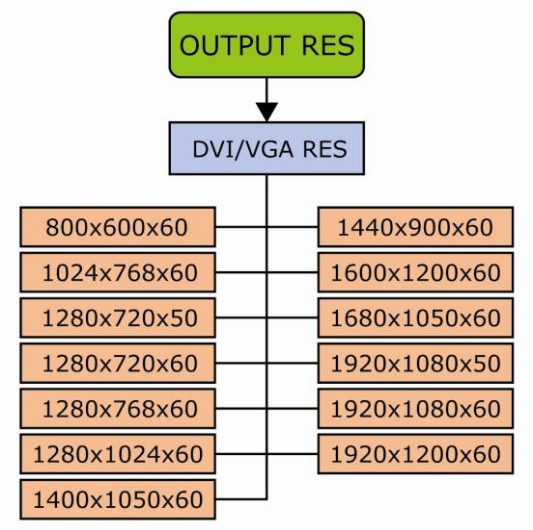
MENU---OUTPUT DETAIL

Select OUTPUT, press it to confirm, show level 2 menu as follows:

OUTPUT RES INFO: Mainly display the current output signal and output resolution;

OUTPUT RES: Mainly display the current signal output format;

If select DVI/VGA RES, users can choose different output formats through the knob, this option includes 13 common output resolutions, showed as follows;



And if select OTHER D/V RES, users can choose different output formats through the knob, this option includes 26 less-used output resolutions: 640X350@85，640X400@85，640X480@60，640X480@75，640X480@85，720X483@59.94，720X576@50，800X600@75，800X600@85，1024X768@75，1024X768@85，1152X864@75，1280X720@59.94，1280X960@60，1280X960@85，1280X1024@75，1280X1024@85，1360X768@60，1920X1080@23.98，1920X1080@24，1920X1080@25，1920X1080@29.97_P，1920X1080@30，1920X1080@50_P_295M，1920X1080@59.94，2048X1152@60.

Select CVBS RES, can choose PAL or NTSC;

SDI output module is optional module for users. When users buy it, detailed setting please refer to: SDI Output Module part. If not, SDI RES setting is not needed, press MENU to exit and return to higher level MENU.

PIP SETTING: PIP setting, press it, can set IMAGE 1 or IMAGE 2; press MENU to exit and return to higher level MENU

EFFECTS: Mainly for image output Settings.

BRIGHTNESS: Can change the image BRIGHTNESS.

CONTRAST: Can change the image color CONTRAST.

In addition, user can set RED BRIGHTNESS, GRN BRIGHTNESS, BLU BRIGHTNESS, RED CONTRAST, GRN CONTRAST, BLU CONTRAST, DETAIL ENHANCEMENT and NOISE REDUCTION.

GAMMA: Gamma setting, press it can adjust the image gamma value; Gamma value include as following: 1, -1.2，-1.4，-1.6，1，1.2，1.4，1.6，SRGB;

ASPECT RATIO: Proportional setting, press it, can realize the conversion between high and wide.

Normal: Original video proportion, 4:3 aspect ratio; 16:9 aspect ratio;

MIRROR-IMAGE: Image rotate setting, press it, user can DISABLE or ENABLE the image.

DVI1 OUT ADJUST：

DVI1 OUT RANG: DVI1 out range adjustment, can choose RGB or YCBCR;

HDMI/DVI1: Can select HDMI agreement or DVI1 agreement;

DVI1 DE: Can adjust DE for DVI1;

DVI1 H START: Can adjust horizontal start position for DVI1;

DVI1 V START: Can adjust vertical start position for DVI1;

DVI1 WIDTH: Can adjust width for DVI1;

DVI1 HEIGHT: Can adjust height for DVI1;

MENU--- SCREEN PARAMETER

Select **SCREEN PARAMETER,** rotate the knob, show level 2 menu as follows:

FULL SIZE：User can set full size.

LED SCREEN SIZE：User can set LED screen size by SCALE and POSITION button.

SAVE: Save the screen parameter.

MENU--- VIEW

Spin the knob to SAVE in the Menu and push the knob to confirm. Rotate

the knob to save the operation to User Mode 1 or User Mode 2 in the Save subordinate options, then the LCD screen displays it is in the saving state; Push Menu and exit Save. Rotate the knob to Recall and to load User Mode1 or User Mode 2, then the LCD screen displays it is in the loading state.

MENU--- EFFECTS

Rotate the knob and select EFFECTS in the Menu, then the LCD screen displays the level 2 menu as follows:

TRANSITION MODE： Select transition modes. FADE SETTING can setup （FADE IN/OUT）or （FADE TO BLACK）.

TRANSITION TIME： Setup transition time. Rotate the knob to select time and push the knob to confirm. Transition time ranges from 0 to 50.

MENU--- TEST PATTERN

Rotate the knob and select TEST PATTERN in the Menu, then the LCD screen displays the level 2 menu as follows:

TEST PATTERN TYPE: There are 14 kind s of test pattern: H RAMP, V RAMP, 100% COL BAR, 75% COL BAR, 16*16 GRID, 32*32 GRID, BURST, 50% GRAY, GRAY STEP 1, GRAY STEP 2, WHITE, BLACK, SMPTE COL BAR, LOGO.

RASTER BOX.

DIAG MOTION.

AOI RASTER BOX: User can choose ON/OFF this function, the settings including: BOX X, BOX Y, BOX WIDTH and BOX HEIGHT.

MENU--- LED CARD

BRIGHTNESS: Control the brightness of sending card.（Only available for DBstar sending card）;

CALINRATION: Calibrate sending card brightness.（Only available for DBstar sending card).

MENU--- SYSTEM

Spin the knob to SYSTEM in the Menu and push the knob to confirm, then the LCD screen displays the secondary menu as:

SERIAL NUMBER： It is the Factory serial number of VSP 628S which is used to search the information of VSP 628S.

FIRMWARE VERSION： It is the information of VSP 628S software which contains the following two versions:

FPAG VERSION: Information of FPGA version.

COM. VERSION: Information of COM. version.

IP ADDRESS： Information of IP.

TIMMER： Rotate the knob to TIMMER and push the knob to confirm; Rotate the knob for DISABLE or ENABLE setting.

MENU--- TECH SUPPORT

TECH SUPPORT: Information of technology support as:

EMAIL: Email of technology support.

PHONE: Phone of technology support.

WEB SITE: Company web site of technology support.

FAX: Fax of technology support.

MENU--- RESET

RESET: Enter RESET interface and press the knob to confirm; Rotate the knob to YES and push the knob to confirm; then VSP 628S is resetting to its factory settings. After 5 seconds, it completes factory settings and is ready for more operations.

5. Communication Software Guideline

In This Chapter

This chapter provides detailed information about the control communication software. The following topics are discussed:

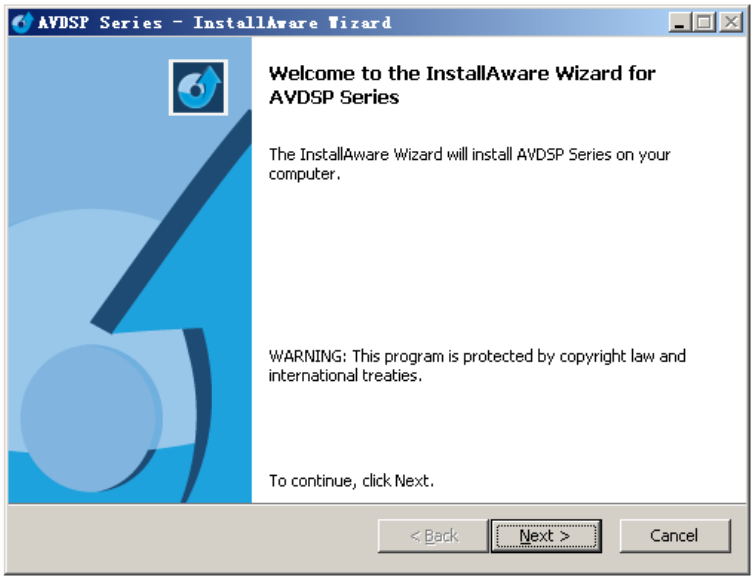
- Install Software
- Run Software
- How to control processor through RS232?
- How to control processor with console software by USB?

Install Software

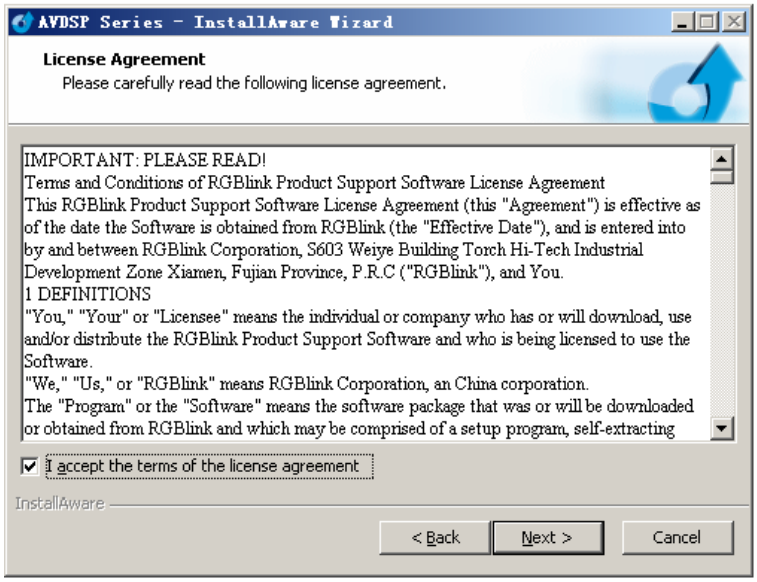
AVDSP video processor is very easy to be configured with user friendly communication software, support drag and drop operation for edit and display. Also it can be customized with schedule function.

Double click 

to install, English version default for use, click “select” to next dialog:

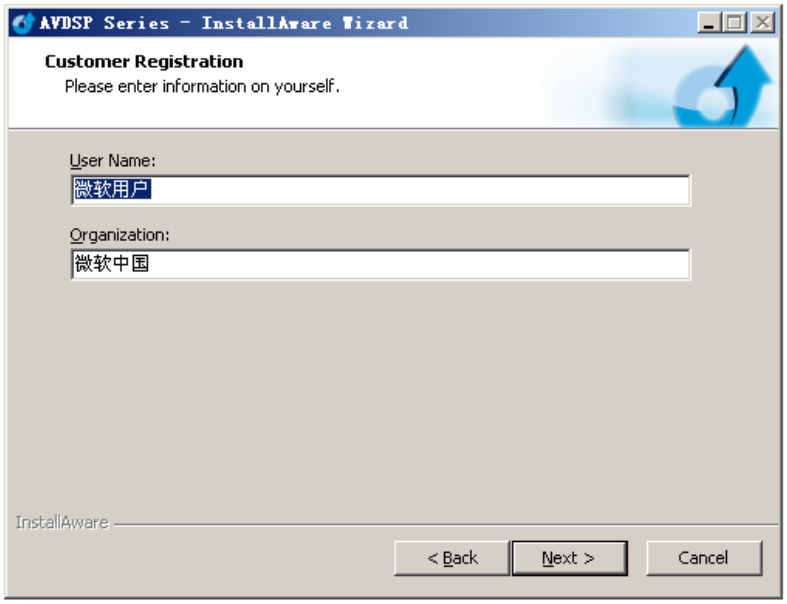


And in next dialog is the user agreement of the software, click Agree to go on:

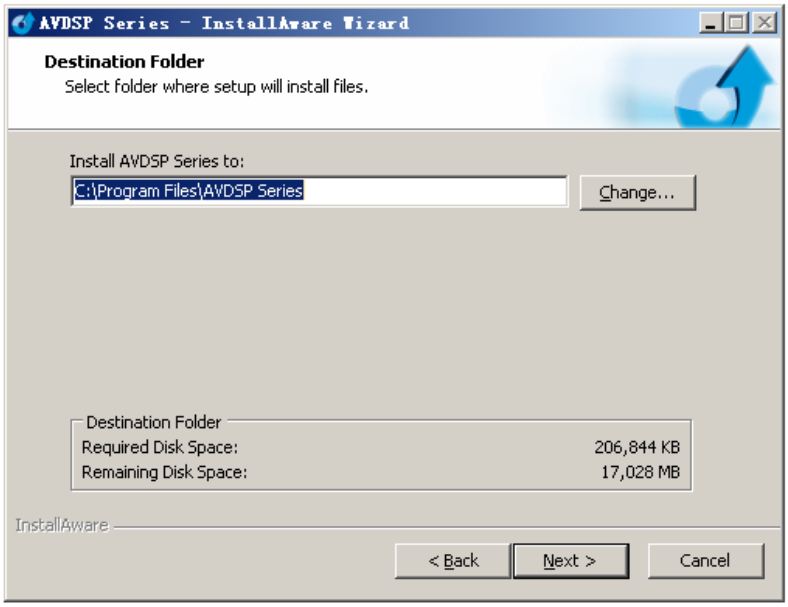


5. Communication Software Guideline

Install Software



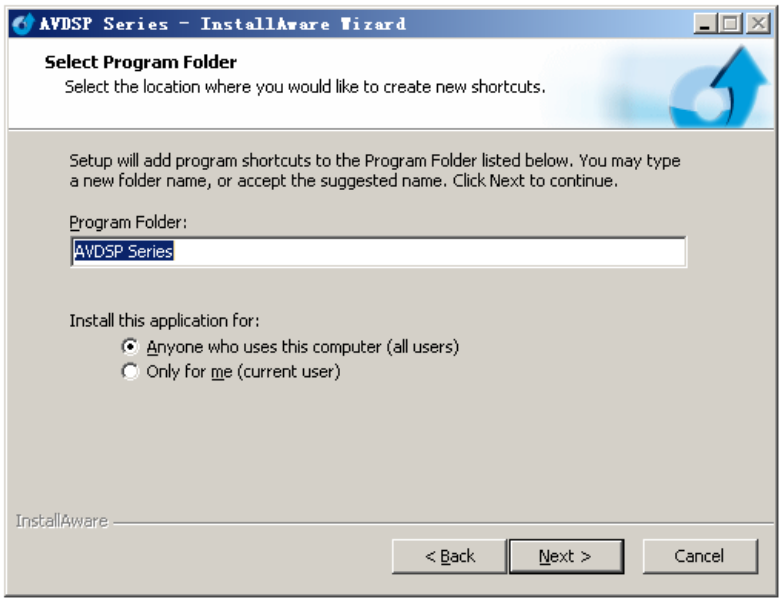
User can select “Change” to choose the VSP 628S install software:



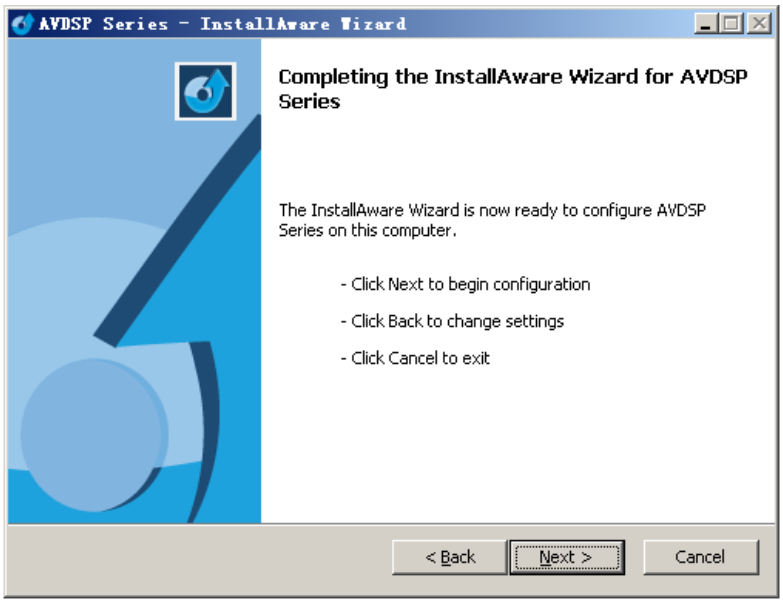
5. Communication Software Guideline

Install Software

Click “Next” to go on:



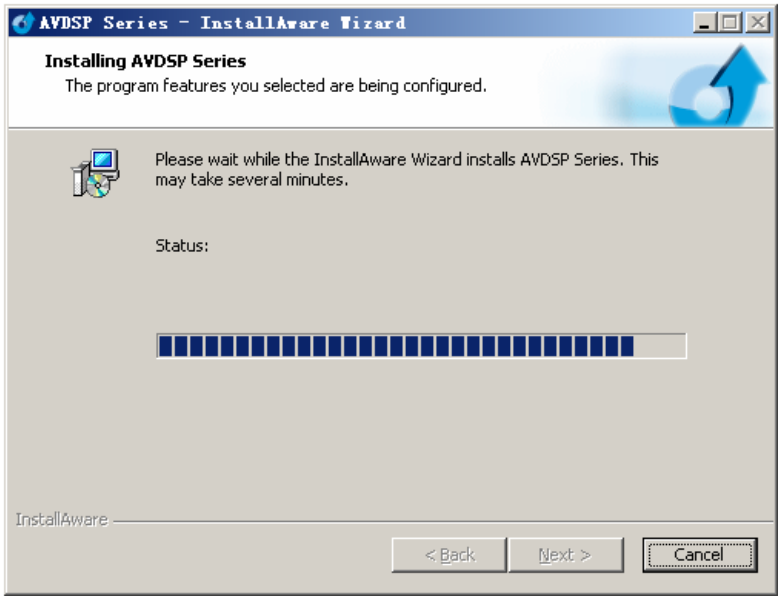
Click “Next” to go on:



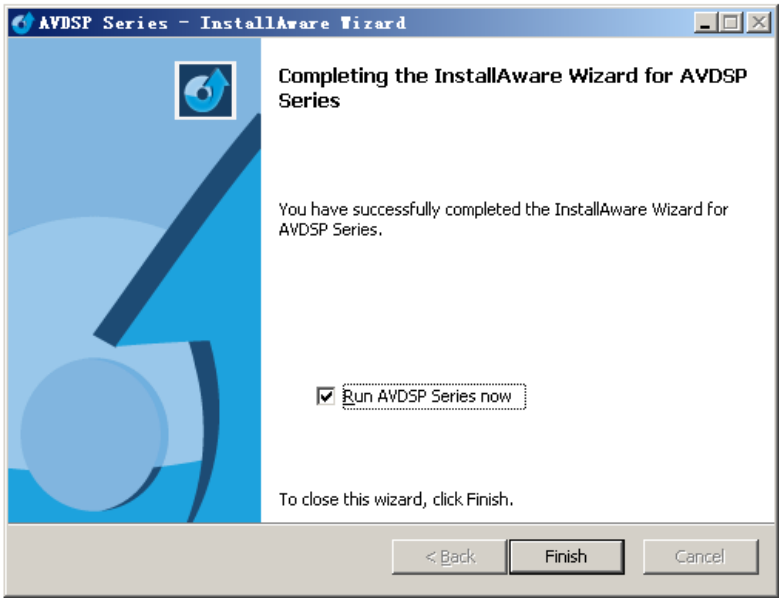
5. Communication Software Guideline

Install Software

Click “Next” to go on:



Click “Finish” and ready to run VSP 628S console:



Run Software

Install communication which comes with the package of VSP 628S device.

Double click 

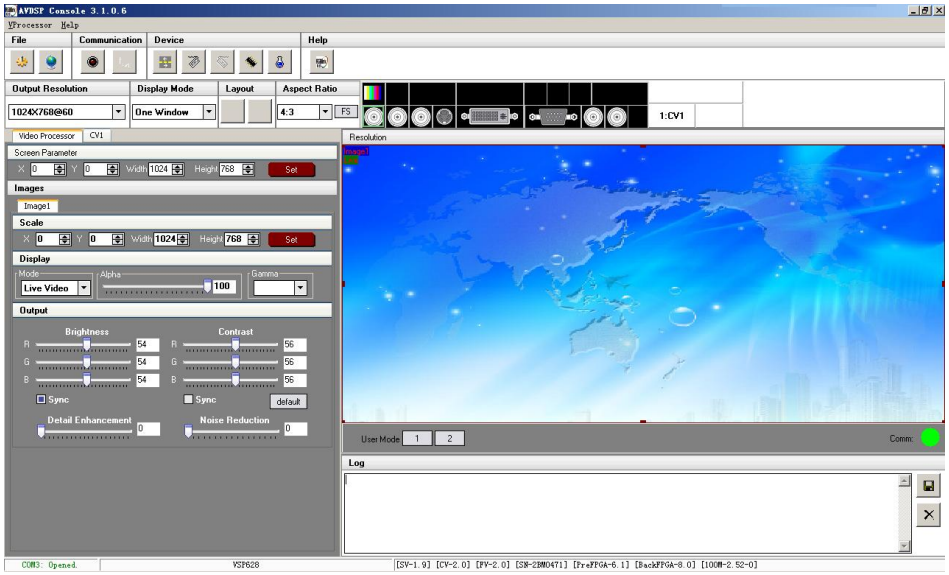
icon from home screen to run the software.

Double click 

icon from home screen, and choose and click 

to run the software.

VSP 628S communication software interface as shown:



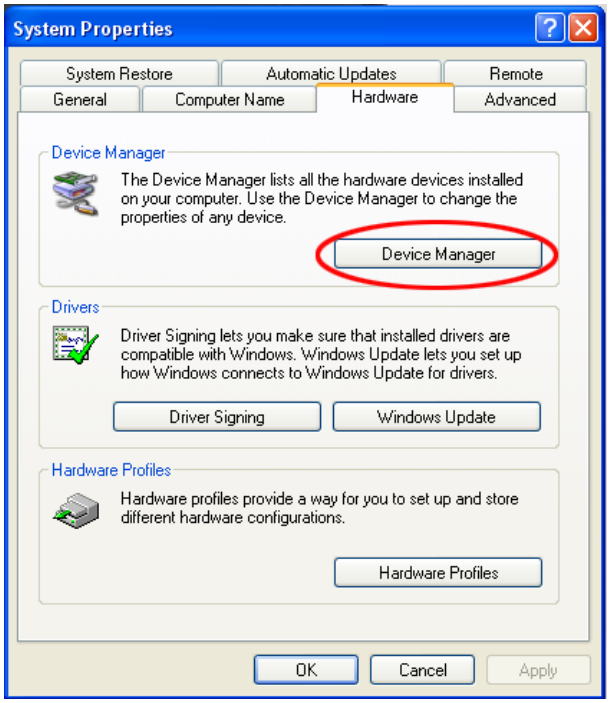
Set Up Communication

When control video processor through PC software, besides the power cord, the product default equip with a line that is COM (RS-232), 9-pin (DB9F), RJ11 COM crystal head (6 B4C). Below are the details about connection of steps:

First connect 9-pin (DB9F) to the computer on the corresponding port, and connect COM crystal to RS232 port on video processor. Open video processor; Next, operate the computer, back to computer desktop, right click【 My computer 】to【 Properties 】, find the【 Hardware 】option card, as follows, left click 【 Device manager 】:

5. Communication Software Guideline

Run Software

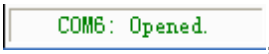


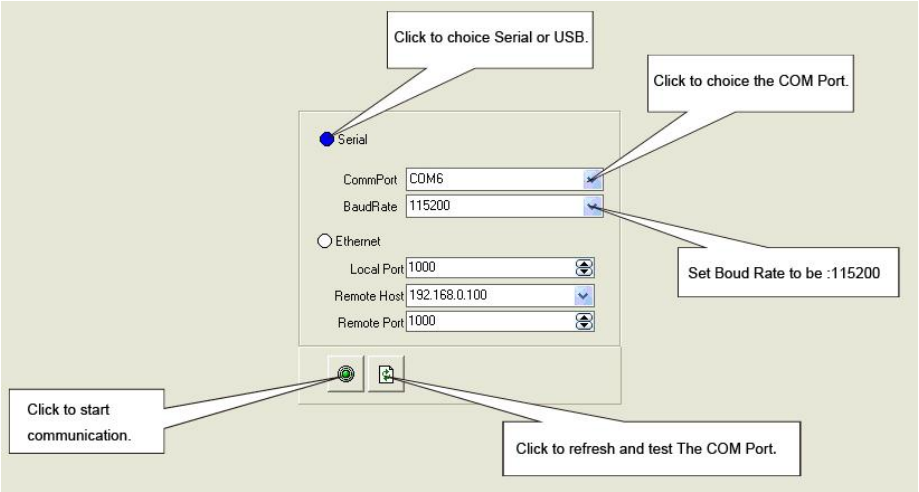
Find【 (COM and LPT) 】port in【 device manager 】, click the plus sign on the left, record serial interface name that computer provides, as following chart, the serial port is COM1.

Confirm used COM and open control software, click **【communication】** page，enter setup option, Serial is the default COM, click icon  to refresh COM number，choose available COM，default Baud rate is115200.

5. Communication Software Guideline

Run Software

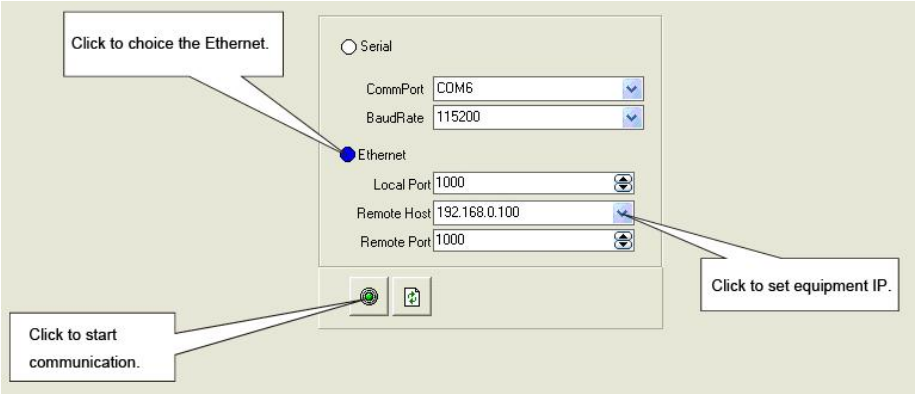
After serial setting, click  icon，the icon becomes  when successfully connected，on the left button showing  , meaning has connected video processor through COM, and can control video processor through the PC software.



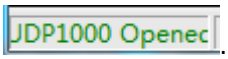
For more detailed information, please refer to: “**How to control processor through RS232？**”. In addition, we also equipped with USB line, you can also connect the computer and video processor with it to control PC software. Please refer to “How to control processor with console software by USB?” for more detailed information.

Note

RS 232 COM line can upgrade 100M program, while USB can’t.



Ethernet, user can fill any number less than1023 in local port, the remote port must be 192.168.0.100 and the remote port must be 1000. After

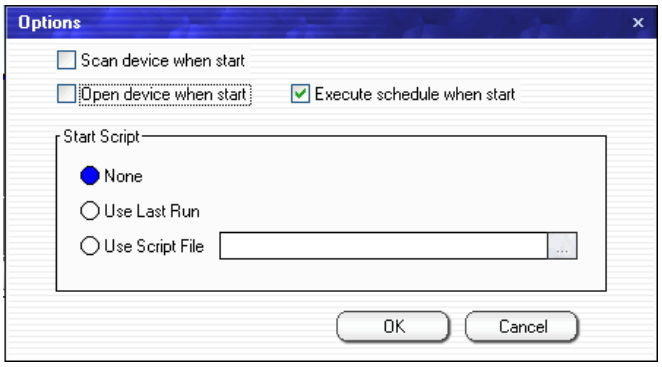
setting above, click the icon  to connect with the net work. If successful connect, the icon becomes  , status on the left button showing  .

How to use

File Toolbar

 : Option. User can choose open device when start and using script saved before or execute schedule edited before when start.

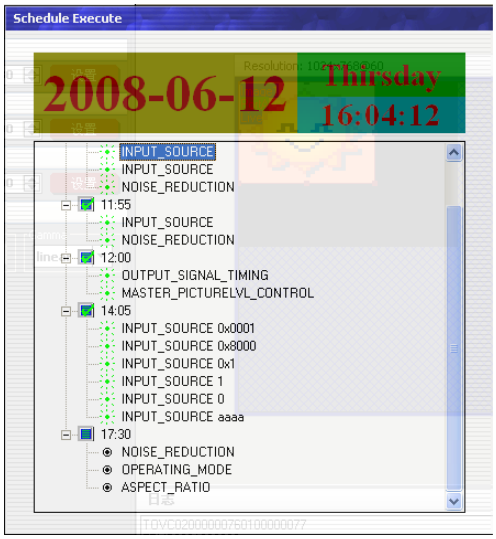
If user choose open device when start, user can use last run, use script file or none when user start. User can click  to choose which script user want to open.



If user choose execute schedule when start, the next dialogue will display when software run.

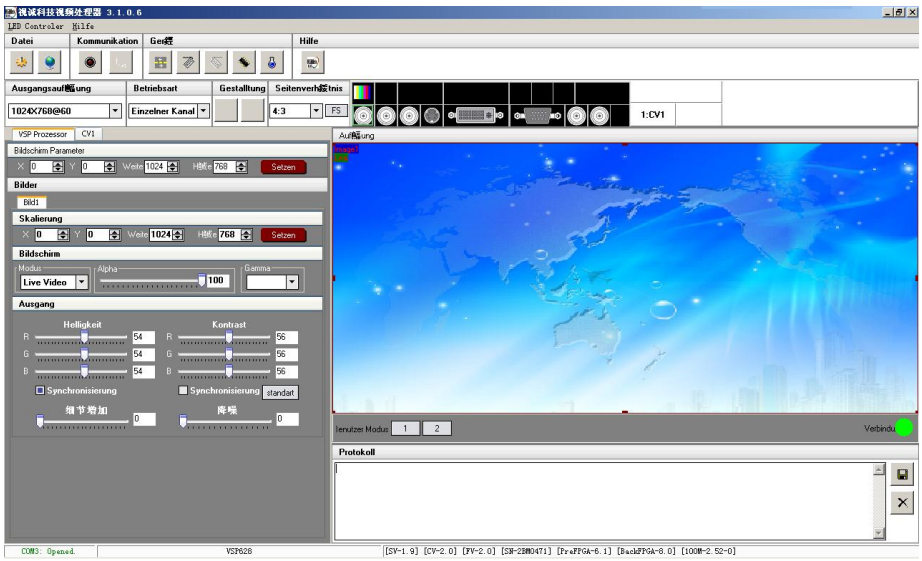
5. Communication Software Guideline

Run Software



 : Language. The software supports Chinese, English and German version.

The picture following is the German dialogue.



5. Communication Software Guideline

Run Software

Communication Toolbar

 : Open COM.

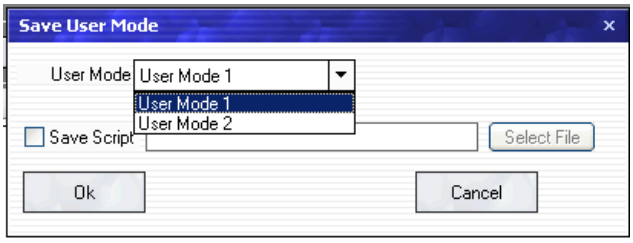
 : Close COM.

 : Set COM.

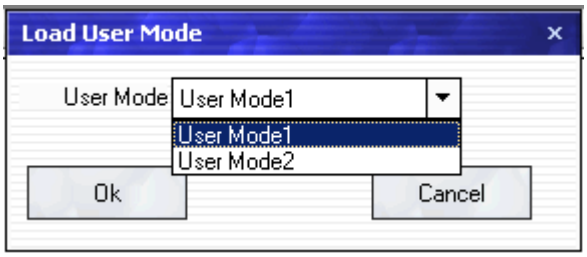
Device Toolbar

 : Synchronization.

 : Save to flash.

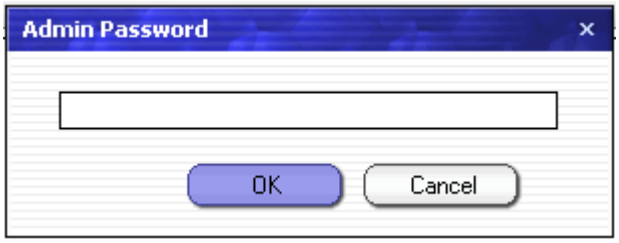


 : Load form Flash.



 : Factory setup

 : Advance, for adm. inistrator control.



Note

Advance is only done by engineer. Please connect us for password.

5. Communication Software Guideline

Run Software

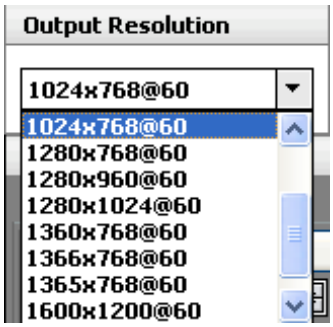
Help Toolbar

 : About. Display information of software.

Output resolution Toolbar

User can choose different output resolution by selecting from pull down list.

VSP 628S has 15 output resolutions for users selection.



Note

It is the same as :MENU → OUTPUT → OUTPUT RES → DVI/VGA RES.

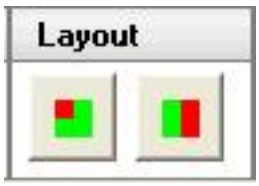
Display mode Toolbar

Choose to work in single channel or dual channel.

Layout Toolbar

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

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

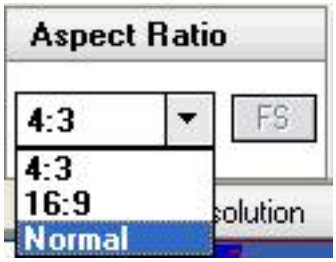


5. Communication Software Guideline

Run Software

Aspect Ratio Toolbar

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

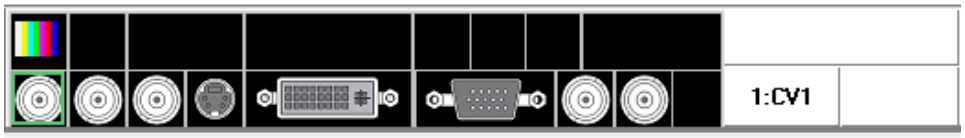


Note

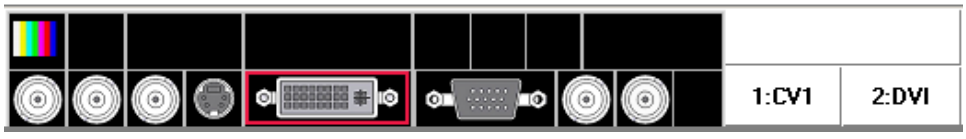
It is the same as : MENU ⟶ OUTPUT EFFECTS ⟶ Aspect Ratio.

Input Toolbar

The white area display the name of input interface when the mouse is over the interface picture on the left. The green pane means current selected interface.



If work in dual channel, channel 1 includes VOIP, CV1, CV2, CV3, SVideo, YCbCr, SDI 1 and SDI 2, and channel 2 includes DVI, YPbPr, VGA, HDMI1 and HDMI 2. The cross over interface picture means they can not access. The green pane means selected interface for channel 1. The red pane means selected interface for channel 2.



Screen parameter Toolbar

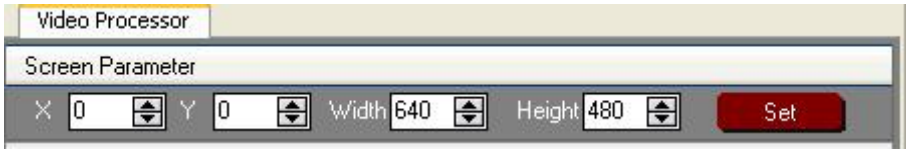
User can set size and position of the screen simply, Mainly applies to LED screens users. After setting screen parameter， the user choice PIP or PBP operation, display picture can directly shows on corresponding screen。

5. Communication Software Guideline

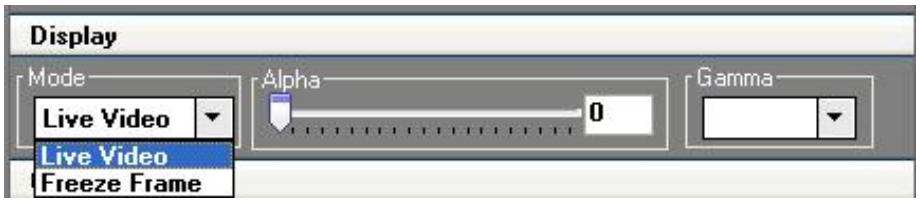
Run Software

Image Toolbar

User can scale the images. Image 2 can't choose in single channel mode.



Display Toolbar



Display toolbar Users can set Alpha value of "Live Video" and "Freeze Frame" through display toolbar. When it is in Live Video, the video plays properly; When it is in Freeze Frame, the video stop playing.

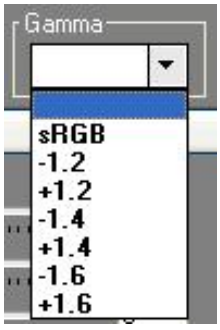
Note

Its display is the same as FREEZE.

Note

The accommodation of transparency is the same as DIMMER.

Setting Gamma is generally not recommended, since LED large screen itself has Gamma function. For further information, users can contact with our customer service team.



5. Communication Software Guideline

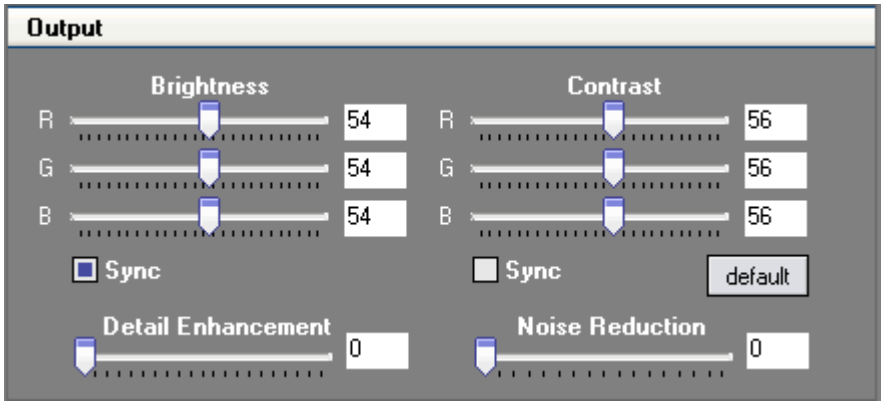
Run Software

Note

GAMMA is the same as→ MENU → OUTPUT → EFFECTS→ GAMMA.

Output Image Toolbar

User can customize the Brightness, Contrast, Detail Enhancement and Noise Reduction.



Note

OUTPUT is the same as→ MENU→ OUTPUT → EFFECTS.

Display Toolbar

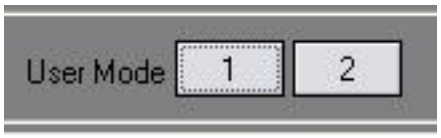
User can customize image or images position and size just by drag and drop image (images) in this area. This process is sync to the parameters in images toolbars.

5. Communication Software Guideline

Run Software

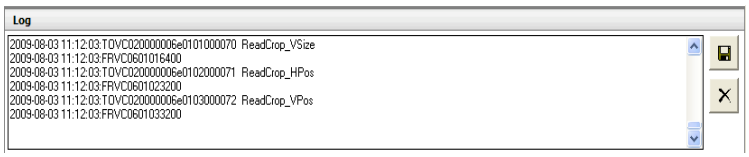
User Mode Toolbar

Users can recall the saved user-config mode1 or mode2.



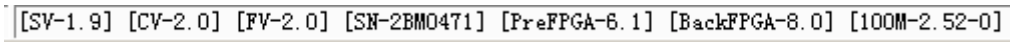
Log Toolbar

User can save or delete the operate log file.

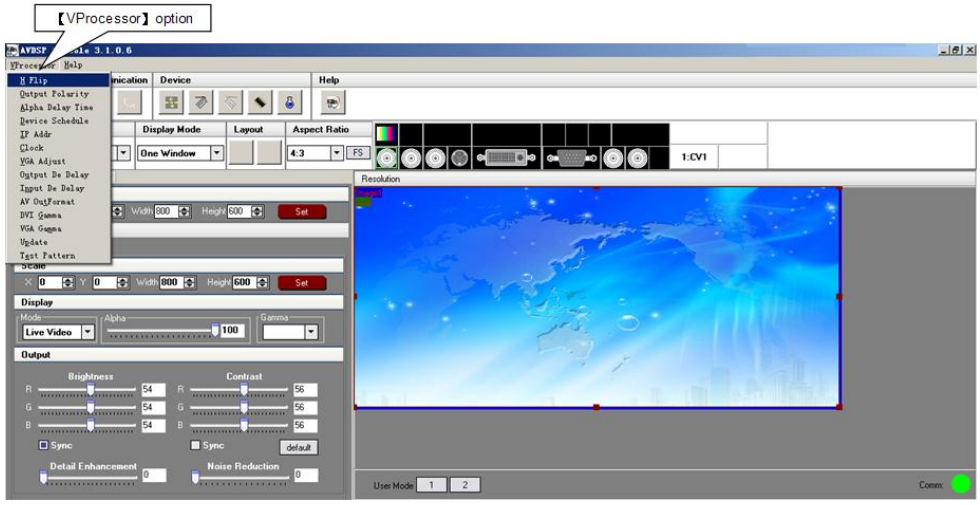


Information Toolbar

It is the VSP 628S software version, core board version, firmware version and the serial number in bottom of the software interface.



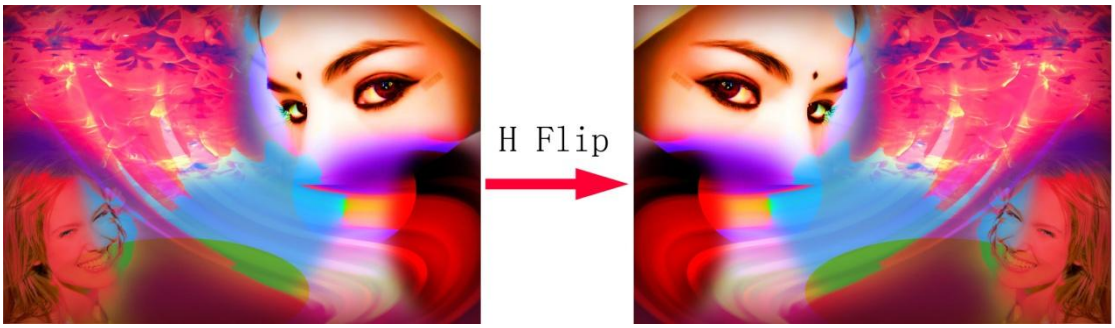
【VProcessor 】Options



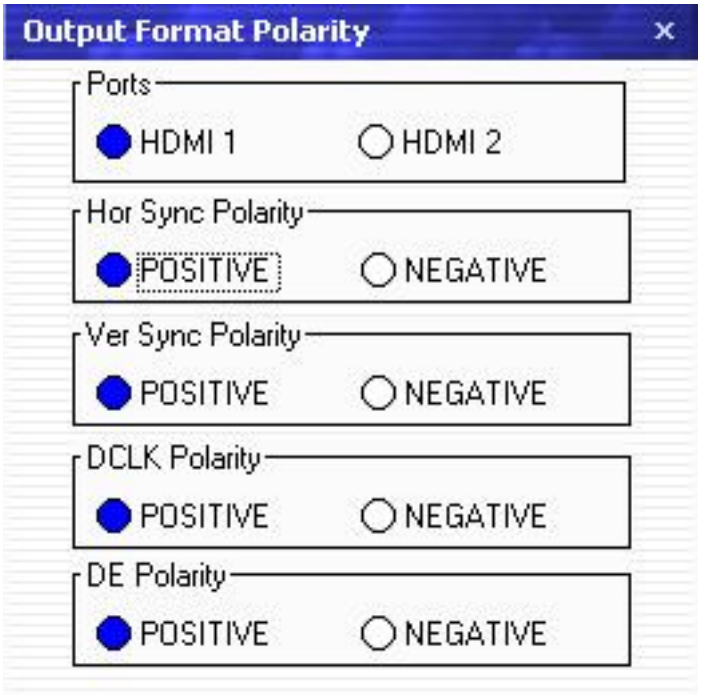
Horizontal mirror image：When it is in √, the video can rotate in Horizontal mirror image way. Like this:

5. Communication Software Guideline

Run Software



Output polarity :



Setup the plus-minus polarity of output CLK when some abnormal sending card can not identify the output.

Delay transparency:

Users can setup fade in out time.

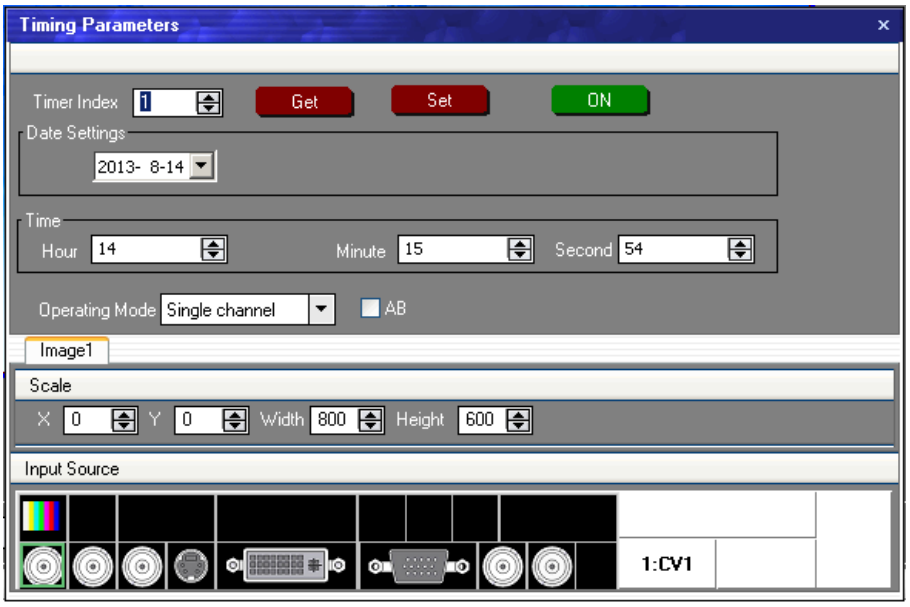
Schedule:

Users can setup VSP 628S to play the appointed input video automatically

in time and operation of single or dual channels, ratio place, fade in out

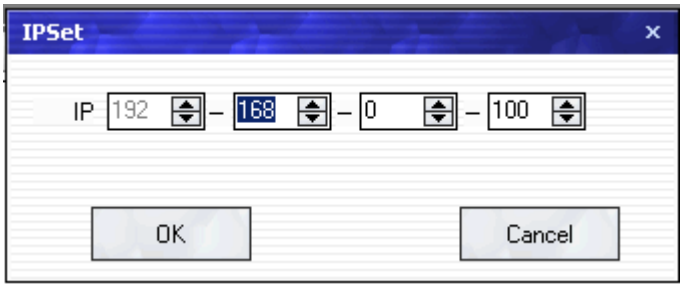
Users can setup up to 10 timing operation in the schedule

Please consult the "How to add tasks".



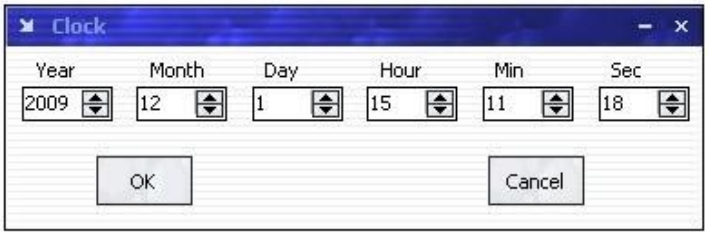
IP Addr：

Users can set equipment IP, Usually used under the condition of 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.



Clock：

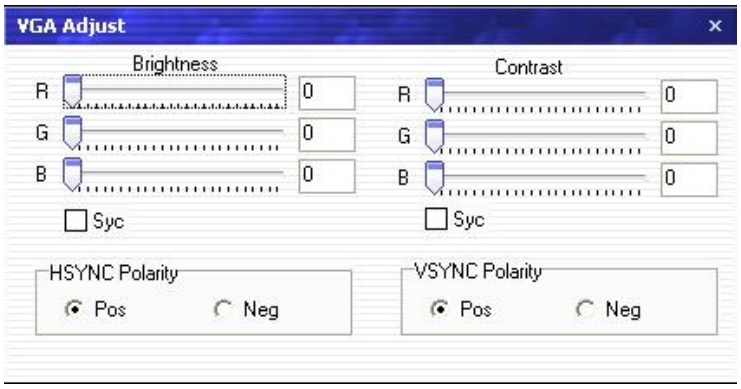
Users can set or adjust lower computer time through" clock"



5. Communication Software Guideline

Run Software

VGA Adjust：



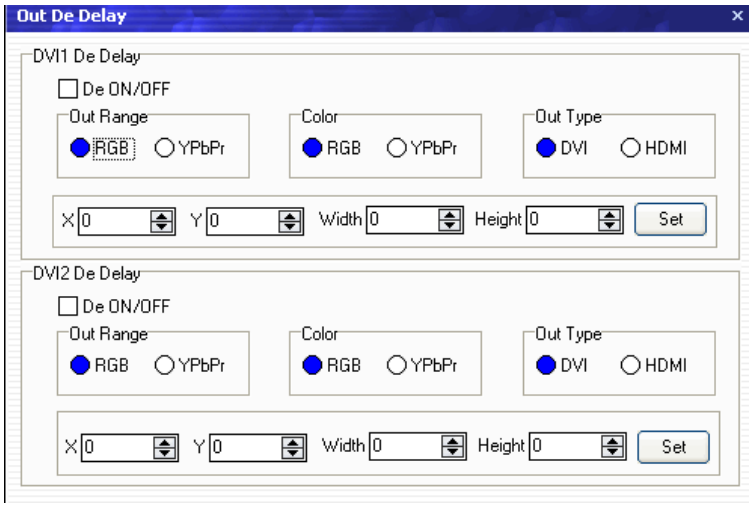
Setup the plus-minus polarity of HS and VS when some abnormal sending card can not identify the output.

Note

It is the same as MENU→ INTPUT→ VGA ADJUST.

Output De Delay：

Can adjust DE for DVI.



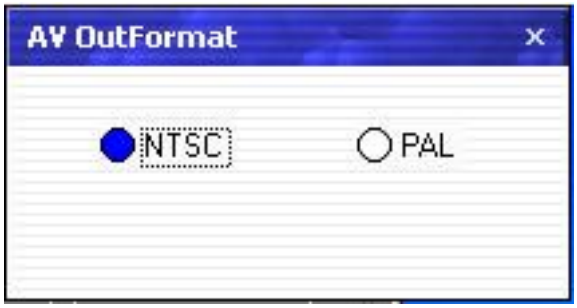
Note

It is the same as MENU→ OUTPUT→DVI OUT ADJUST→ DVI DE.

5. Communication Software Guideline

Run Software

AV OutpFormat：

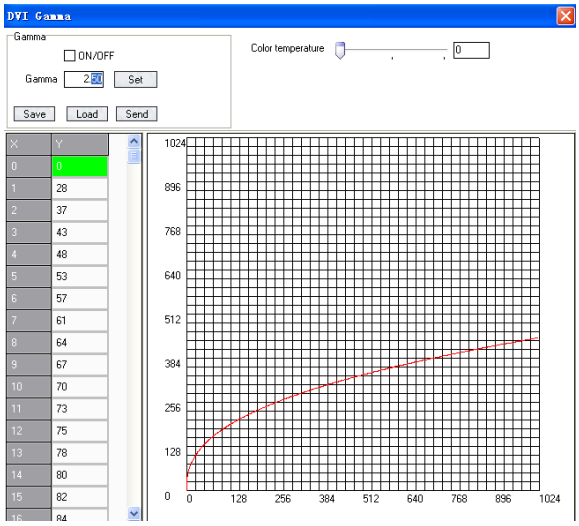


Note

It is the same as MENU → OUTPUT → → OUTPUT RES → CVBS RES.

DVI Gamma：

Compared to the Gamma in MENU, DVI Gamma has more optionals, user can set the value between 0-1023. This is only available for DVI signal.

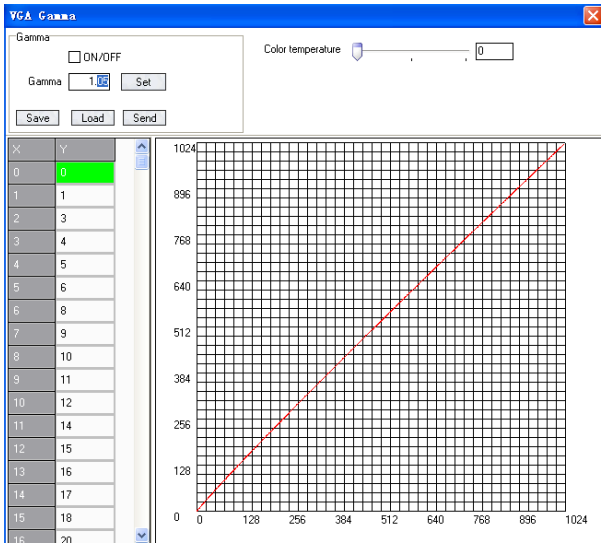


VGA Gamma：

Compared to the Gamma in MENU, VGA Gamma has more optionals, user can set the value between 0-1023. This is only available for VGA signal.

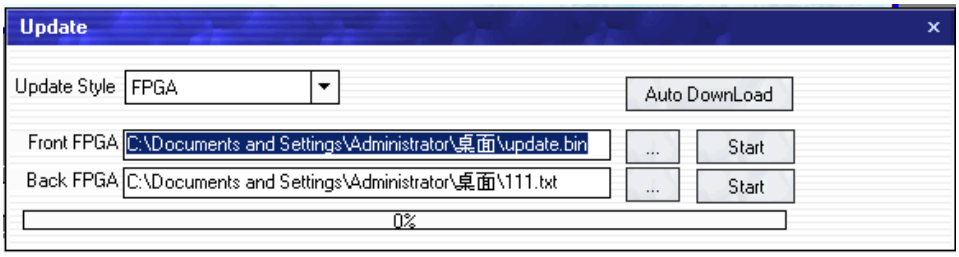
5. Communication Software Guideline

Run Software

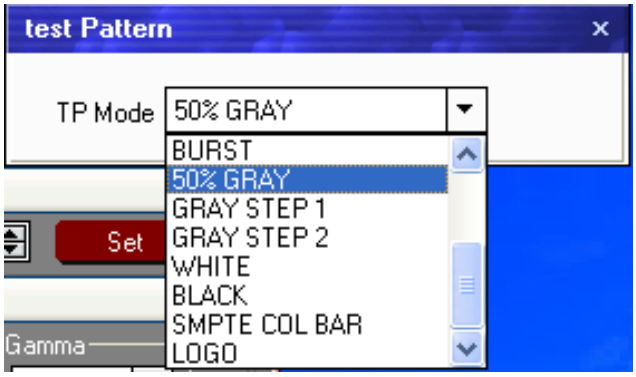


Update：

VSP 628S supports update operation. Users can click the updating in the control pull-down options and click  to select the saving path of the new FPGA software, then click start to update.



Test Pattern：



Note

It is the same as MENU⟶ TEST PATTERN

5. Communication Software Guideline

Run Software

【Help 】options

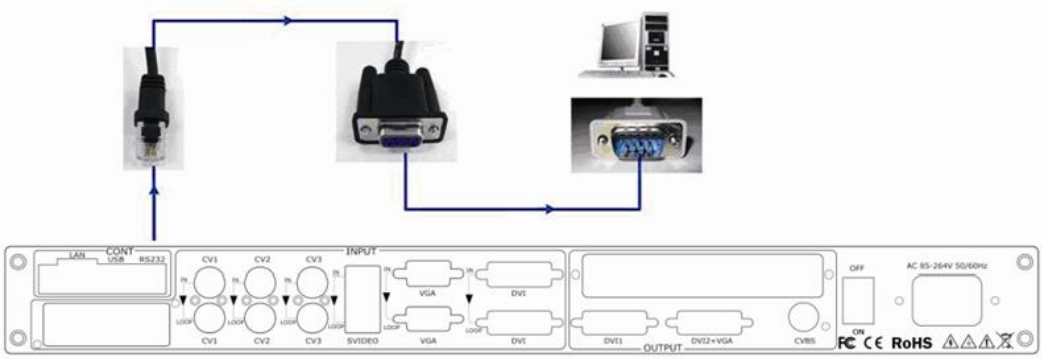
Version: The update of software

About: The information of the software version and the RGBlink company.

How to control processor through RS232?

Firstly，install the control software in your PC;

Take out the RS 232 cable as following（RS-232, with 9-pin on one end，RJ 11 on the other side.） Connect one side of the RJ11 download line to the RS232 on the video processor VSP628S, and the other side to be connected to the serial port on the PC.

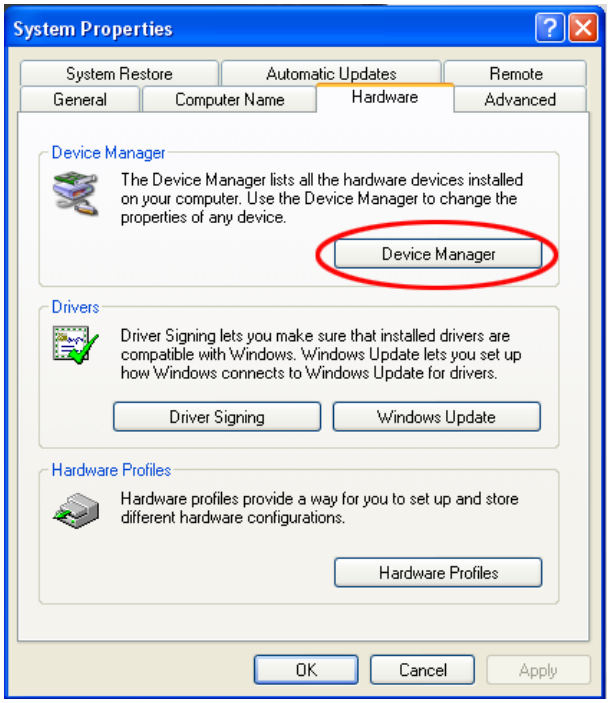


If there is no any Serial port on your PC, you will need another Serial to USB adapter. Connect one end of the RJ11 download line to the RS232 on the video processor. Connect the end of USB-side to the PC, Ensure the cable connection is good. Turn on the Video Processor VSP 628S.

Right click the【My Computer】on the home screen of control PC. Enter【Attribute】, Find【Hardware】Option, as following.

5. Communication Software Guideline

How to control processor through RS232?

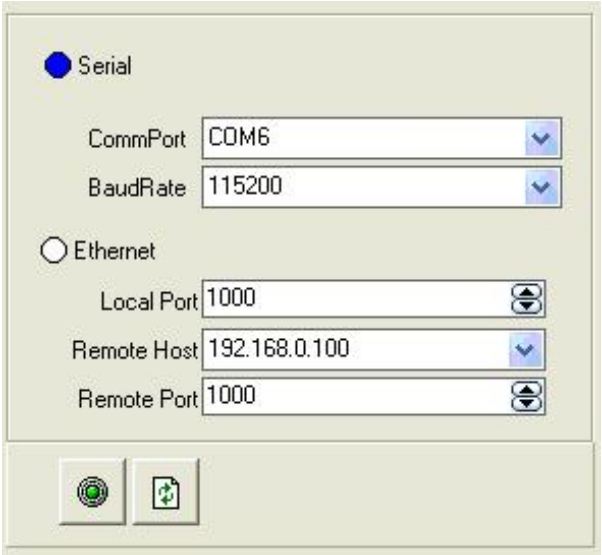


Click【Device Manager】"+" on the left，check the COM number, as following，**, COM1 is offered.**

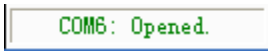
Remember the COM you are using and then run the control software, find 【Communication】 option. In default, first time user have to click  button, as following:

5. Communication Software Guideline

How to control processor through RS232?



Check and tap【Serial】, Serial Port , for example, is **COM6** which is checked from device manager. Set VSP 628S Baud Rate to be :115200, Click【Confirm】after setting.

Click  【 open serial】, check if【COM】icon on the bottom right corner, when there is the prompt green 

showing on the software, it means the communication is ok , and you can use the software to control the device now.

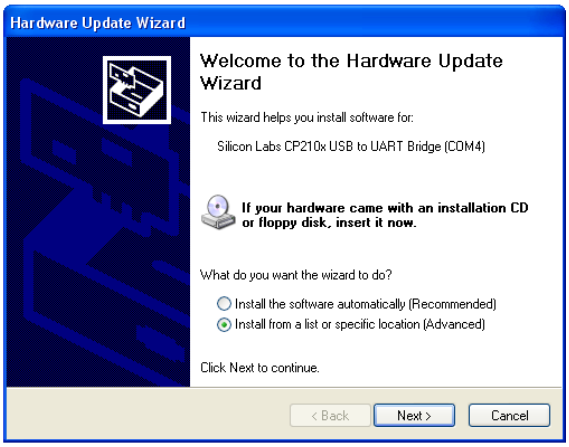
Note

If power off during communication, should close the port  , by first, and plug in out of the USB  and do communication.

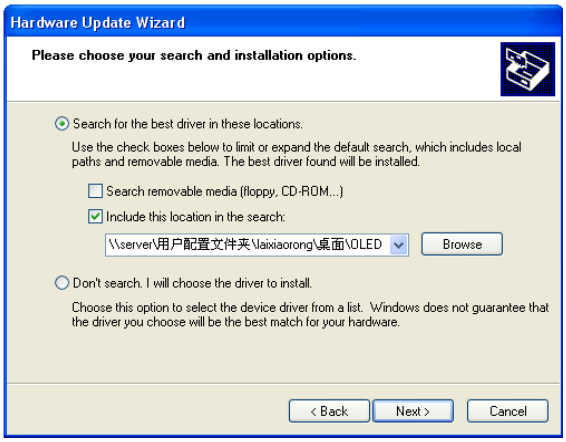
How to control processor with console software by USB?

Install the driver

Connect the USB cable to the PC and the video processor .turn on the VSP 628S, for the first time to use USB, the PC will remind finding the new hardware and ask to install the driver for this new driver:



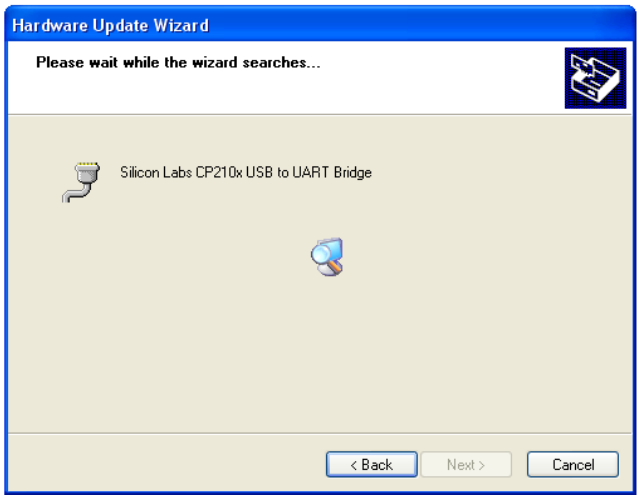
Install from the list or specified location, press “NEXT”:



Press “Browser” to find the driver, and press “NEXT”:

5. Communication Software Control Guide

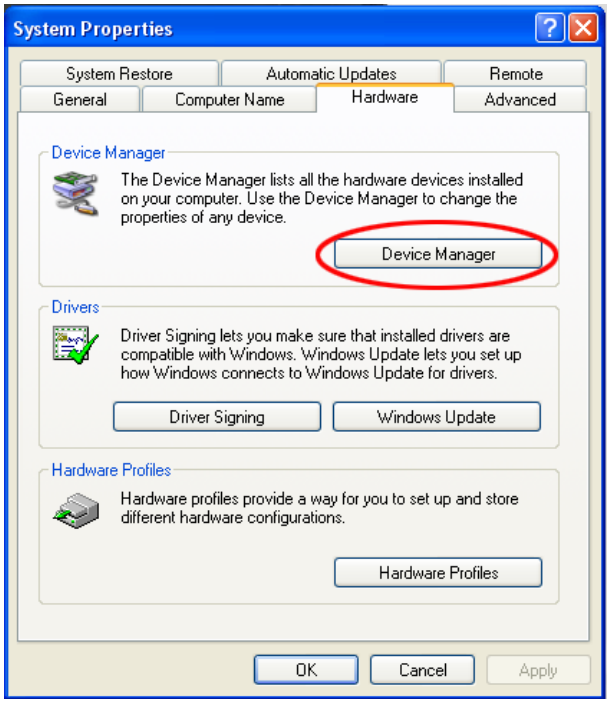
How to control processor with console software by USB?

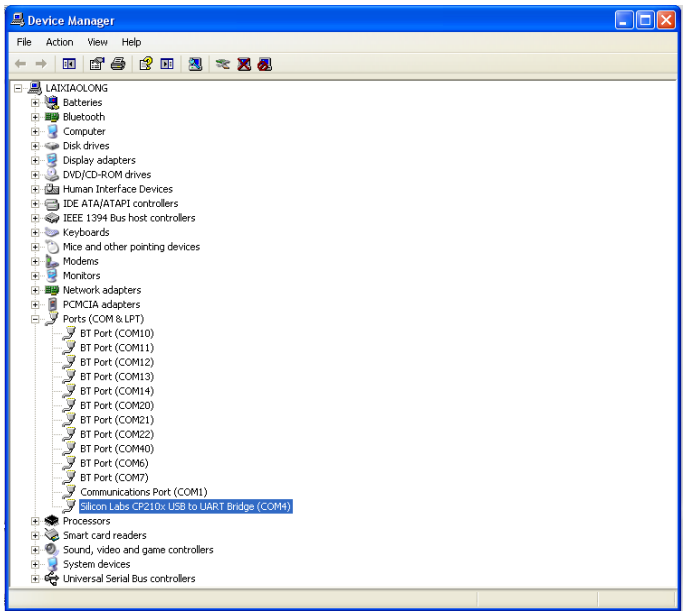


When the installation finish, can go to check the installed COM port inside the device management, as following picture shows:

5. Communication Software Control Guide

How to control processor with console software by USB?



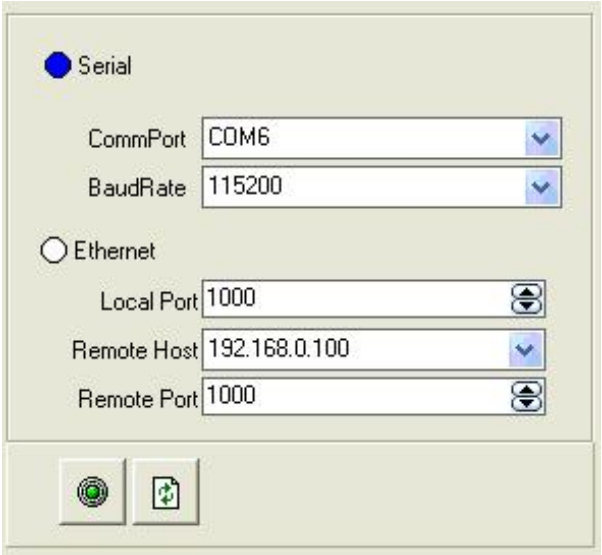


Install the console software, and run after install, shows the interface of the console as following:

Select the COM as installed just now, and set the VSP 628S Baud Rate to be: 115200.

5. Communication Software Control Guide

How to control processor with console software by USB?



Press  to start communication, when there is green point in the right down corner showing on the software, it means the communication is ok, and you can use the software to control the device now, the software operation is the same as VSP 628S.

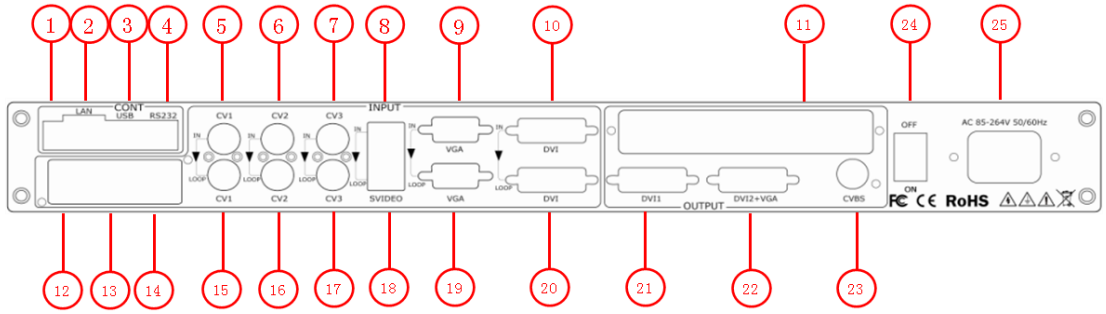
6. System Setup and Operations

In This Chapter

This chapter provides comprehensive instructions for system setup and operations. The following topics are discussed:

- Interface and Input Signal Option
- Single Picture Signal Switch
- PIP Setting
- How to add tasks

Interface and Input Single Option



NO	INTERFACE	NO	INTERFACE
1	Dial the code switch	13.14	SDI Input
2	10/100M Interface	15.16.17	CVBS Loop Out
3	USB Interface	18	S-Video Loop Out
4	RS232 Interface	19	VGA Loop Out
5.6.7	CVBS Input	20	DVI Loop Out
8	S-Video DIN 4	21	DVI Output
9	VGA Input	22	DVI＋VGA DVI Output
10	DVI Input	23	CVBS Output
11	Sending card/SDI output sending port	24.25	Switch and Power
12	SDI Loop Out		

21. DVI is main screen output which mainly connected with sending card of large screen, the VSP 628S support the follows:

SMPTE:1280x720P60，1280x720P50，1920x1080P50，1920x1080P60,，

VESA:800x600@60，1024x768@60，1024x768@75，1280x768@60，1280x1024@60，1400x1050@60，1440x900@60，1600x1200@60，1680x1050@60，1920x1200@60，2048x1152@60.

Please choice corresponding output and press button to confirm through 【OUTPUT RES】 of 【OUTPUT】 in 【MENU】, entering into and adjust knob by left and right.

22. DVI+VGA is preview output interface, mainly through the display to preview the signal which will be output, the output signal is the DVI video signal and VGA video signal, it can connected with the displayer of DVI interface and VGA interface display devices to monitor signal image. Output signal through the DVI-I interface (Preview uses the standard DVI-I interface, compatible VGA output, through the terminal switching VGA output.) The supported resolution When output: VESA: 1024×768×60Hz.

15-17. Loop output interface of the signal source, it can output the inputted signal without any treatment and change. This also is the big characteristic of the VSP 628S, i.e. any input signal can be realized without changing its format, the original image output.

23. CVBS is the composite signal interface, which can output PAL and NTSC formats, output signal can access the TV or DVD, etc.

In addition to CONT part and the sending cards and the power and the interface above-mentioned, other interface is video signal input interface, this interface can input including DVI, HDMI and VGA, YPbPr, CV, S terminal SDI, TP test signals.

Single Picture Signal Switch

If it is just simple seamless effects switch between stage pictures, the settings above are basic completed, just save the existing information and master switch skills in practice, as follows:

Button Save User Mode Operations

Press 【MENU】 button，choose【VIEW】 through the right knob，enter menu option to choose 【SAVE】 It will save parameters at present to user mode 1 or user mode 2, take mode 1 by default after device restart.

Single Image Switch

VSP628S designs can realize seamless special effects switching between two channels. It only need to choose the channel firstly which switches to the big screen, such as pressing button 【 CV1 】 now, it lights, it means that the signal screen outputted is No.1. If you need to take the second channel signal to switch to screen, you can press the【CV2 】 seamless switch directly or fade-in and fade-out to switch out. The switching speed can be adjust through the button 【DIMMER 】 or PC software transparency (ALPHA).

LOGO/test pattern/black field switch

VSP628S made a shortcut to enter into LOGO/ test images / black field, press the 【LOGO/TP/BLK 】button, the system is the 【TP】 test picture by default , select the【 LOGO 】 and 【 TP 】 or 【 BLK 】respectively through the knob, then cut directly or fade-in and fade-out switch slowly, also, the speed of the switch can be adjust through the【DIMMER】button or

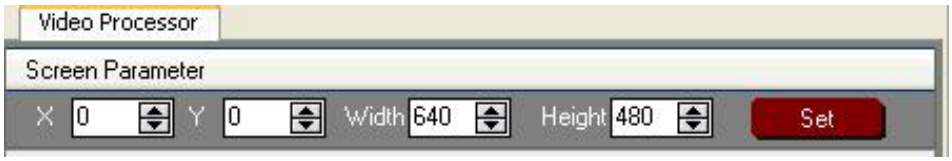
PC software transparency (ALPHA).

Scale

It may be different for different channel at the picture size and position output needed, but VSP628S can realized that the size and position of different channel can be adjust arbitrarily.

Choosing corresponding signal through pressing the corresponding signal button, like choosing 【 DVI 】, and then press the 【SCALE 】 button to enter scale function menu, there are two parameters in it, Width and Height respectively; Combined with the 【POSITION 】 key, there also is two parameters in it, Pos X and Pos Y, please through the knob choose corresponding parameters and modify parameter values according to the demand the pictures showed, pressing confirmation after modification, you can achieve the setting of different pictures size and position easily through this operation.

You can also set through PC software:



PIP Setting

The button【PIP】of VSP628S can realize to switch dual-screen and single screen to seamless switch.

VSP628S can output the arbitrary size and position signal of two different channel to the screen, it also can shows the same picture exactly of the same two channel, specific operation as follows:

Each Image Width, Height and Position Setting

The【PIP 】Button is multi-screen switching buttons, which IMAGE1 is main screen, IMAGE2 is sub-screen.

Press 1-7 any buttons directly to preview switching IMAGE1 channel.

Also, Press 1-7 any buttons directly to preview switching IMAGE2 channel.

Set the size and position of PIP:

Set the size and position of IMAGE2:

The first step, press the 【MENU 】 buttons, through the knob, choose 【 PIP SETTING 】 menu options of the 【OUTPUT 】, spin knob lightly , choose IMAGE2, press knob to sure.

The second step, press the 【SCALE 】or 【 PISITION 】 buttons.

The third step, according to LCD hint, select the corresponding sub-menu item to set corresponding image size and coordinate;【 SCALE 】buttons have two parameters internally, Width and Height respectively,

【 PISITION 】button also have two parameters internally, Pos X and Pos Y respectively , please through the knob choose corresponding parameters and modify parameter values according to the demand the pictures showed, remember to press confirmation after modification, press the【 MENU 】to quit after the completion of the setting, and enter into the 【VIEW 】 menu to select SAVE to save.

Also you can do the setting for main screen, select IMAGE1 in the 【PIP SETTING 】 options,.

If you want to preview to switch back signal picture, you can press PIP buttons once again. Then the light of the button turns out.

The【PIP】Button is multi-screen switching buttons, which IMAGE1 is main screen, IMAGE2 is sub-screen.

Press 1-7 any buttons directly to preview switching main screen channel.

Also, Press 1-7 any buttons directly to preview switching IMAGE2 channel.

Console Software Setting Each Image's Width, Height and Position.

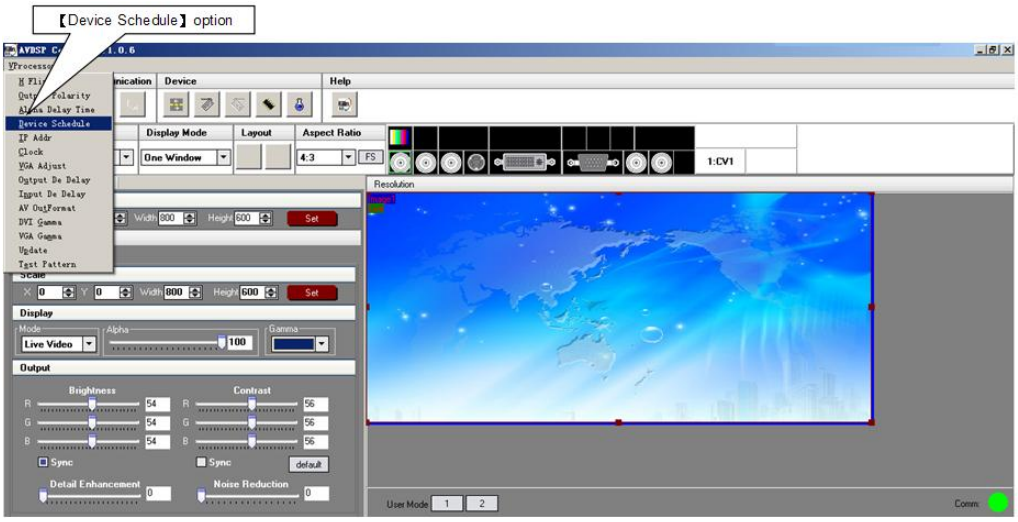
Step 1: In work mode, select the dual screen;

Step 2: Set the size and position of Image 1 and Image 2 in the image;

Step 3: After setting, click 【Settings】image output to complete the dual-screen setup.

How to add tasks

Use “Device Schedule” can add tasks，make device automatically run to the Schedule input source in specified time or schedule display modes such as fade in and out.



First of all, set lower computer current time through host computer “clock”.

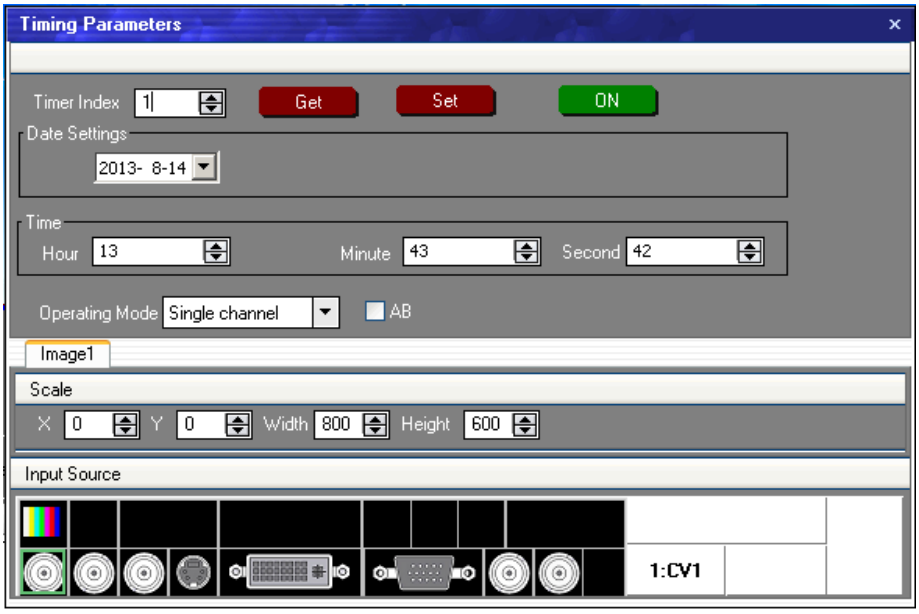
Note

Reset to factory settings after setting the clock will affect the time before.

After device clock set, add task plan through” Timing Parameters”.

6. System Setup and Operations

How to add tasks



1. Users need to start “ON” before using” Timer Index”. If you forget to start, the setting may fail.

Click “start” button 

, when the button changes to 

, it means time can start.

Note

It is also can do through:MENU → SYSTEM → TIMER → ENABLE.

2. When the timer count is set to 1, it indicates that the setting contents will be stored in the “Timer Index 1”. If you need to set more, you can set up one by one and saved in different “Timer index”. 

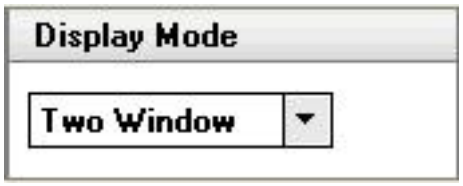
Note

Equipment currently supports 10 task scheduler.

3. Set “task schedule” playing time, can up to second.

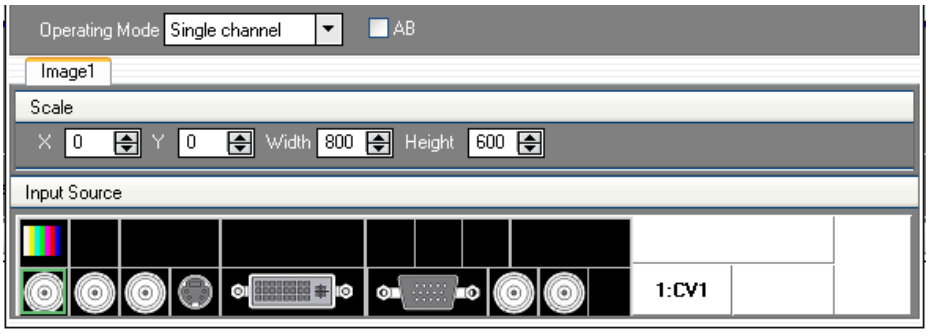
4. Select the signal source to play works in dual channel or single channel

mode, and check whether to use fade during dual channel mode.



5. Users can control the image position and size by change the data or click the drop-down arrow.

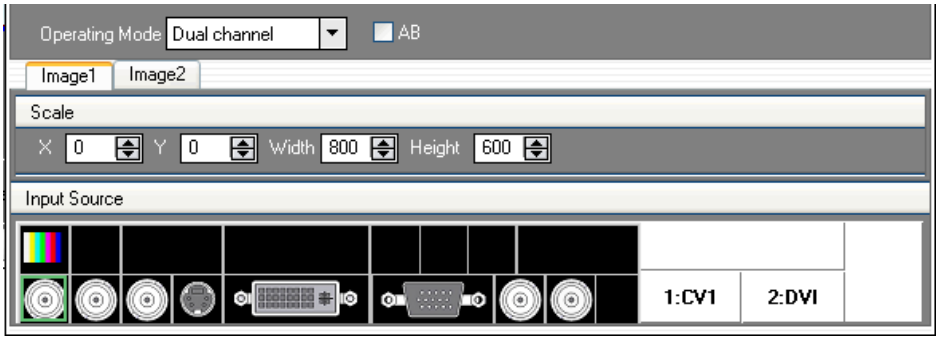
6. When device works under the single channel mode, click the interface Icon. Red box indicates current interface has been selected as the input interface;



When device works under the dual channel mode, need to switch image 1 and image 2 set input signal one by one.

Users can see the image 1 and image 2 input source information in the input source toolbar after setting. Shown as the picture:

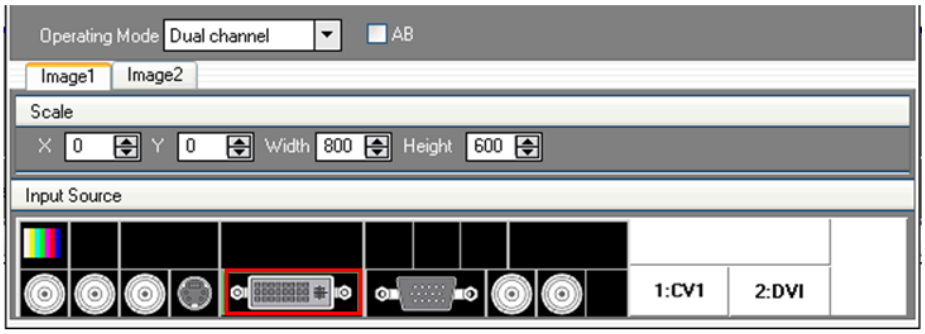
Select CV1 as the input source of image 1:



6. System Setup and Operations

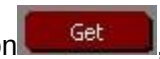
How to add tasks

Select DVI as the input source of image 2:



7. When you finished above step, click button 

to finish adding" tasks plan".

Click button 

, you can see the input source, playing time, image size, position etc. of the current "tasks plan"

Users can see all the "tasks plan" relevant content through "Timer index" switching 

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7. Common Questions and Solution

In This Chapter

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

No Output in Large Screen

Confirm if there are any input singles

Press【MENU】Button to find "INPUT" and knob into the "INPUT RES INFO" to see whether the input signal is normal, suggested the "INVALID INPUT" signal does not come in, check the front-end signal lines, and please note to do dual display or extended in computer ; you can enter other format signals to view in the same operating.

Confirm if signal output

Find a belt VGA input (best for DVI) display, connect to the corresponding output port of processor, check whether the signal is correct on the monitor. If not display properly, please check whether there is input signal, or if input wire interface is taken tight, output wire interface is picked up tightly. If display normally, check if sending card is normally working or need to replace sending card test.

Large Screen Output Flash Point

Confirm if monitor output is normal

Find a belt VGA input (best for DVI) display, connect to the corresponding output port of processor, check whether the signal is correct on the monitor. If display normally shows and no flash point, please check whether DVI outlets put tight or replace to DVI line of sending card. If display flash point, please judge if input signal, wire, and interface is normal.

Large Screen only Display Part of the Image

Signal need to scale

Press 【**SCALE**】button in the processor and knob to adjust the actual screen size of the screen, combined with button【**POSITION**】, including the "Width", "Height" and "Starting position", remember to touch the knob to confirm.

No Display in the Second Half Part of Large Screen

Resolution is inadequate

Please make sure the points of the screen width and heigh, choose the resolution to be bigger than screen width by button【**MENU**】 under OUTPUT RES, and touch knob to confirm.

Sending card can't take lower part

TS 802 can control the max horizontal resolution 2048, and vertical resolution 640. Each CAT5 output is 320 pixels.

Left of the Screen Appears Two Black Sides

Adjust DE deviation

This phenomenon needs to adjust the DVI output and DE migration of the processor, through the 【MENU】 to find "OUTPUT" and find the corresponding output name, such as "DVI1 OUT ADJUST", and find "DVI1

DE" again, make an adjustment for corresponding horizontal and vertical DE, please remember to save to the corresponding channel after setting up, save to SAVE1 by default.

All Key Lights Light Simultaneously

Check if dial switches are normal

Shut the power, check if two red dial switches near CV are upward. Reboot if they face down, and reboot. The function of the red dial switched is mainly upgrade.

A. Specification

CVBS Input	
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
S-Video Input	
Number of Inputs	1
Connector	DIN4 Socket
Supported Standard	PAL/NTSC
Signal Level	Y:1Vpp±3dB (0.7V Video+0.3v Sync) 75ohm U/V:0.7Vpp±3dB 75ohm
Multiplex	480i,576i
VGA Input	
Number of Inputs	1
Connector	Standard DB9 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	
Number of Inputs	1
Connector	Standard DVI-I socket
Supported Resolution	SMPTE：625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50,1080P59.94/60,1080i50,1080i59.94/60, 720p50,720p59.94/60 VESA：800×600×60Hz,1024×768×60Hz,1280×768×60Hz, 1280×1024×60Hz,1600×1200×60Hz,1920×1080×60Hz
Signal Level	TMDS pwl,single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
SDI Input(3G module)	
Number of Inputs	2
Connector	Standard BNC Socket
Transmission speed	19.4Mbps~3Gbps
Supported Standard	ITU-R BT.656,ITU-R BT.601,SMPTE 259M, SMPTE 292, SMPTE 297

Balance	Belden 1694A 100m self-adaptive 3G,200m self-adaptive 1.485G,350m self-adaptive 270Mbps
Signal Level	TMDS pwl , 165MHz bandwidth
SDI Loop-through (3G module)	
Number of Loop-through	1
Connector	Standard BNC Socket
Signal Level	800mV±10%
Supported Resolution	SMPTE：625/25 PAL, 525/29.97 NTSC,625/50p PAL,525/59.94p NTSC, 720p50,720p59.94/60,1080i50,1080i59.94/60,1080p50,1080p59.94/60,
Driver	Belden 1694A 150mself-adaptive 3G, 200m selt-adptive 1.485G,350m selt-adaptive SD 270Mbps
CVBS Loop-through	
Number of Outputs	3
Connector	Standard BNC Socket
Supported Standard	PAL/NTSC
Signal Level	1Vpp±3db (0.7V Video+0.3v Sync) 75 ohm
Supported Format	480i,576i
S-Video Loop-through	
Number of Outputs	1
Connector	Standard DIN4 Socket
Supported Standard	PAL/NTSC
Signal Level	Y:1Vpp±3dB (0.7V Video+0.3v Sync) 75ohm U/V:0.7Vpp±3dB 75ohm
Supported Format	480i,576i
VGA Loop-through	
Number of Outputs	1
Connector	Standard DB9 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 Loop-through	
Number of Outputs	1
Connector	Standard DVI-I Socket

Supported Resolution	SMPTE：625/25/50 PAL, 525/29.97/59.94 NTSC, 1080P50,1080P59.94/60,1080i50,1080i59.94/60, 720p50,720p59.94/60 VESA：800×600×60Hz,1024×768×60Hz,1280×768×60Hz, 1280×1024×60Hz,1600×1200×60Hz,1920×1080×60Hz
Signal Level	TMDS pwl,single pixel input,165MHz bandwidth
Standard	HDMI 1.3
CVBS Output (CVBS output Module)	
Number of Outputs	1
Standard	PAL/NTSC
Signal Level	1Vpp±3db (0.7V Video+0.3v Sync) 75ohm
SDI output (SDI output Module)	
Number of Outputs	1
Connector	Standard BNC Socket
Signal Level	800mV±10%
DC offset	0V±0.5V
Overshot	<10%
Timing Jitter	SD<0.2UI；HD SDI<1.0UI
Jitter Adjustment	<0.2UI
Supported Resolution	SMPTE：625/25 PAL, 525/29.97 NTSC,625/50p PAL,525/59.94p NTSC, 720p50,720p59.94/60,1080i50,1080i59.94/60,1080p50,1080p59.94/60,
Driver	Belden 1694A 150mself-adaptive 3G, 200m selt-adptive 1.485G,350m selt-adaptive SD 270Mbps
VGA Output	
Number of Outputs	1
Connector	Standard DB15 Socket
Supported Resolution	VESA ： 800×600×60Hz,1024×768×60Hz,1024×768×75Hz ,1280×768×60Hz, 1280×1024×60Hz,1440×900×60Hz,1400×1200×60Hz,1600×1200×60Hz,1920×1080×60Hz,1920×1200×60Hz,2048×1152×60Hz
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync) 75 ohm black level：300mV Sync-tip：0V
DVI Output	
Number of Outputs	2
Connector	Standard DVI-I Socket
Signal Level	TMDS pw, 165MHz bandwidth
Supported Resolution	VESA: 800×600×60Hz,1024×768×60Hz,1024×768×75Hz ,1280×768×60Hz, 1280×1024×60Hz,1440×900×60Hz,1400×1200×60Hz,1600×1200×6

	0Hz,1920×1080×60Hz,1920×1200×60Hz,2048×1152×60Hz
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-year parts and labor warranty

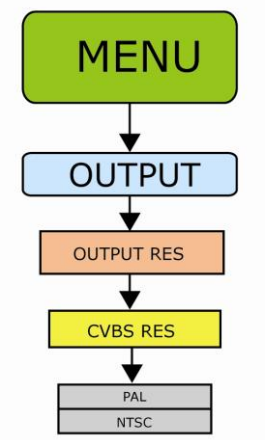
V1.3 VSP 628S With CS Module

a. CVBS Output Module

Output resolution: PAL and NTSC.

Circuit board picture as following:

Key operation menu as following:



b. SDI output module

Output resolution: 720P@60 and 1080P@60

Note

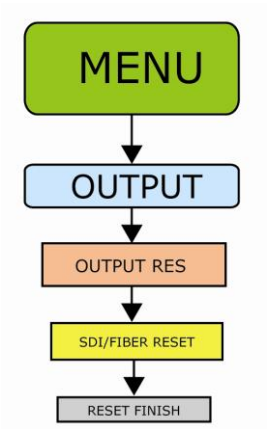
Factory acquiesce in 720P@60output，and need to upgrade program on line if want 1080P@60 output.

Circuit board picture as following:

Note

If SDI output abnormally after add module, can use module reset to restart module .

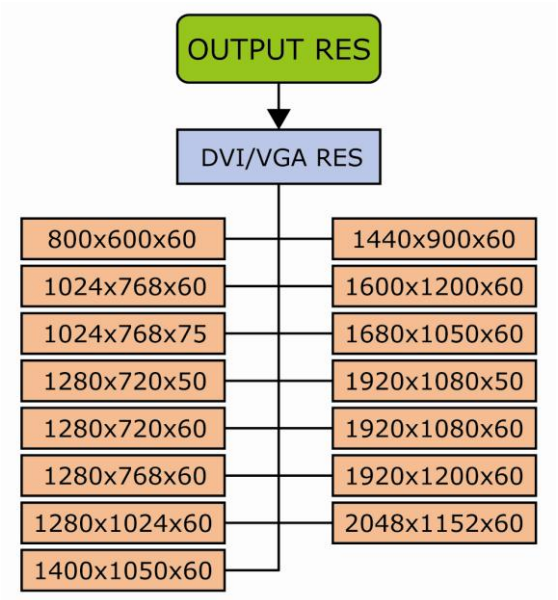
Key operation menu as following:



V1.4:

a.VSP 628S add SDI output Module

VSP 628S can support SDI output when output resolution is as follows:



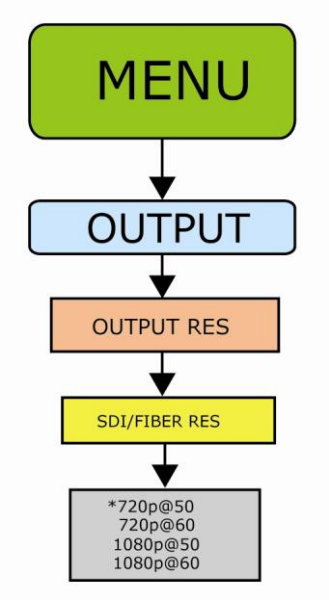
Note

At present , these three resolutions: 1600x1200x60,1920x1200x60,2048x1152x60 Can not support SDI output.

Users can set the following four SDI output resolutions according to their need:

1280x720x50，1280x720x60，1920x1080x50，1920x1080x60

Key operation menu as following:



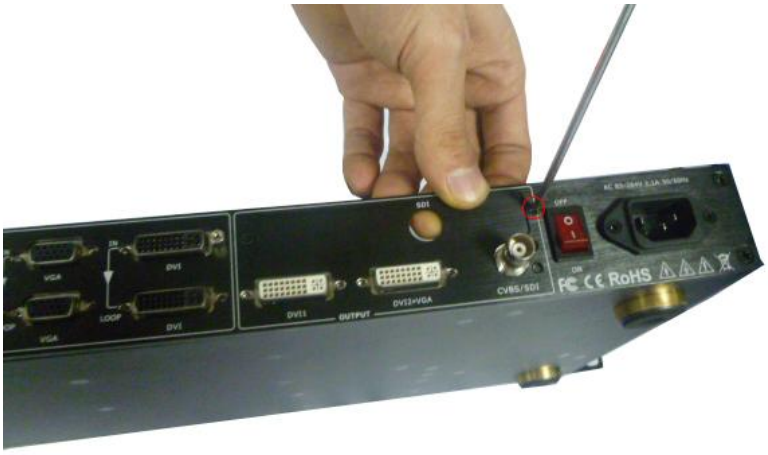
b. How to replace VSP 628S back panel block to SDI output block?

Step 1: Open the machine cover.

Step 2: Unscrew the screw both ends of the sending card block with screwdriver, then you can remove the block.

Step 3: Take out the SDI output block that need replace.

Step 4: Lock both ends of SDI output block with screw.



Step 5: Lock the cover, and complete the SDI output block replacement.

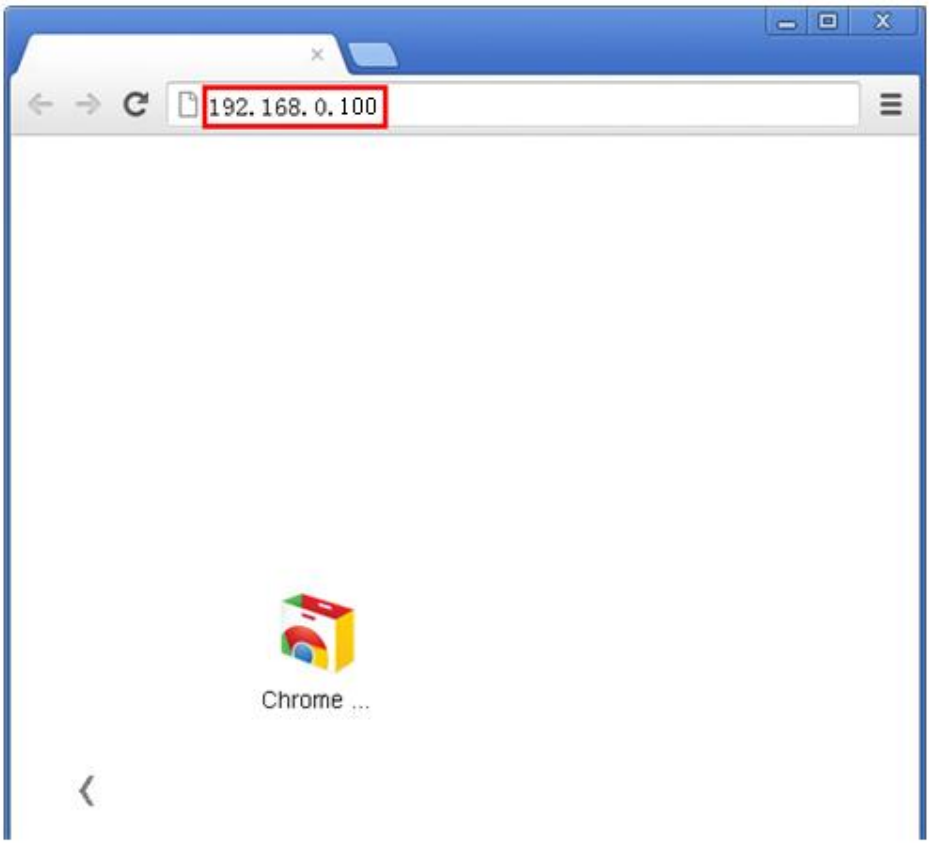
c. WEB SERVER cross-platform control operation interface

If users use ipad or iphone, they can input the website 192.168.0.100 (default) in Safari browsers to operate. If users need to modify VSP 628S IP address, they can input corresponding modified IP address.

If users use other device, they need to install webkit kernel browser, such as: apple Safari, Google Chrome or Maxthon. Installation package provides Google Chrome browser (Windows version). Now take Google Chrome browser for example, specific steps are as follows:

Step 1: click 

to run Google Chrome browser, open the webpage and input 192.168.0.100 (default) to operate:

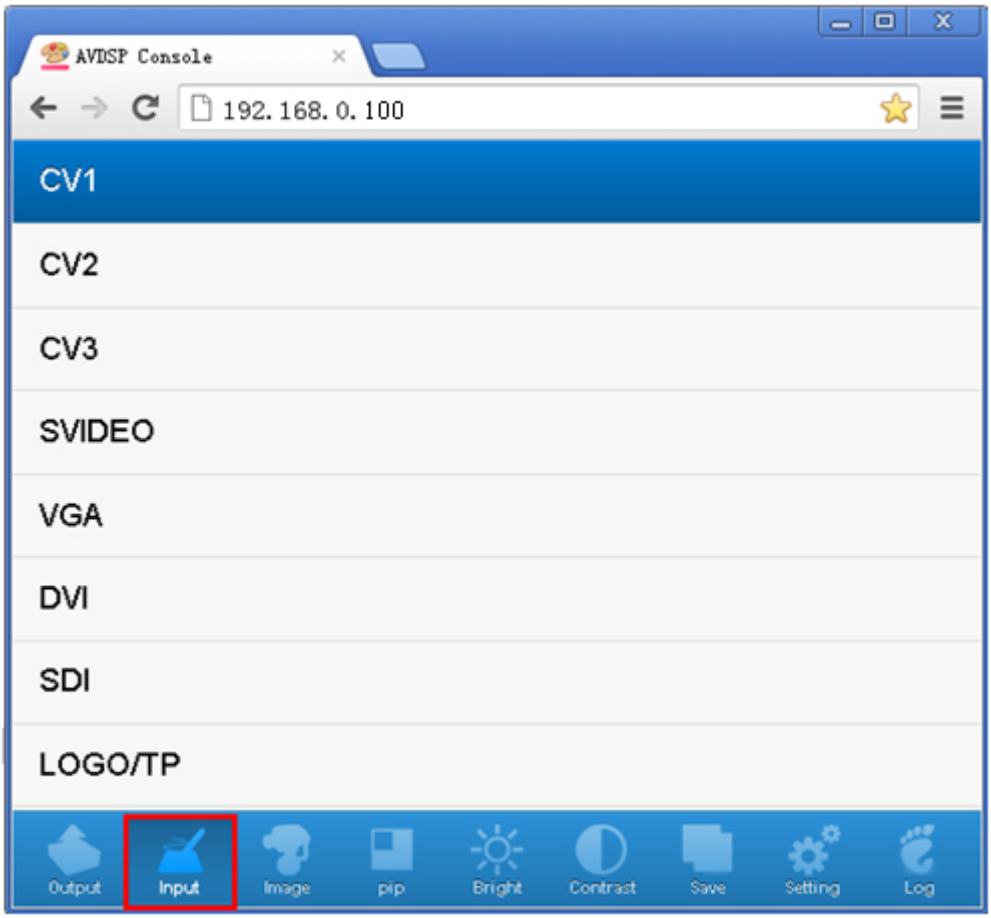


Step 2: Enter the default home page, the system provides 15 kinds of output resolutions for choose, blue stripe means current selected output resolution. Selected, then VSP 628S will automatically update the output resolution;

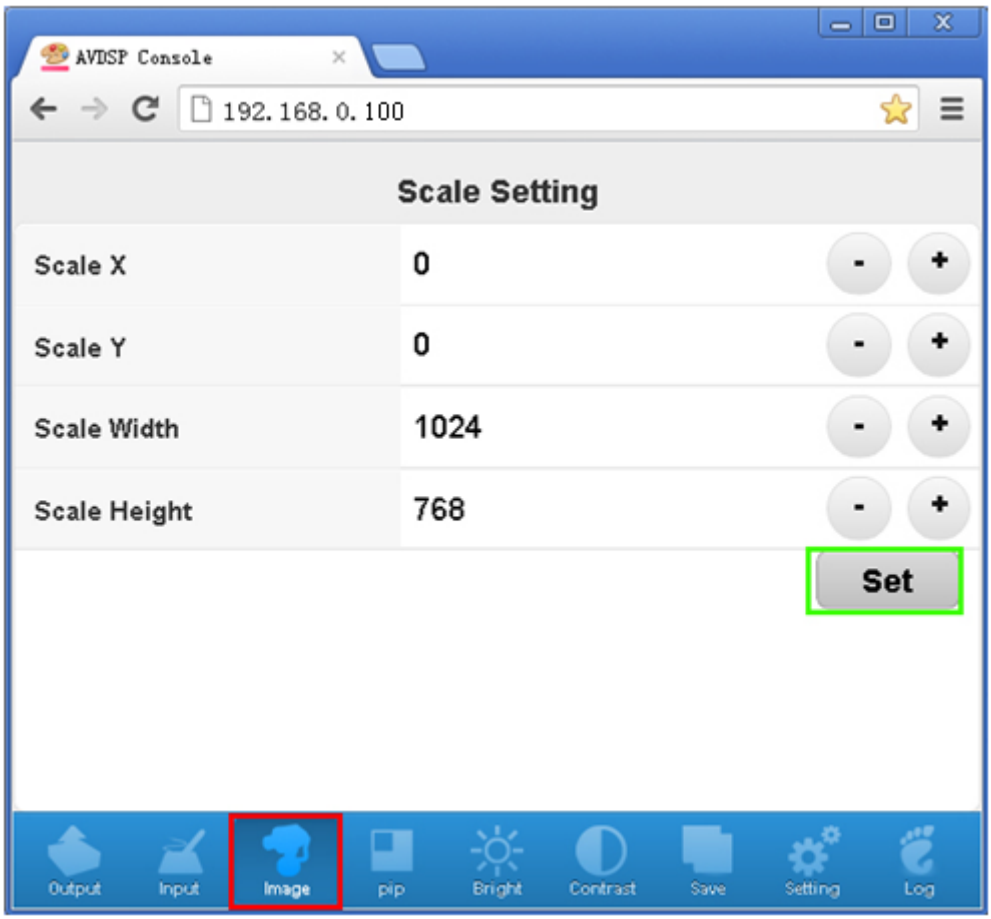
Note

Users can freely switch the icons in title bar to set relevant functions, following will introduce the relevant settings.

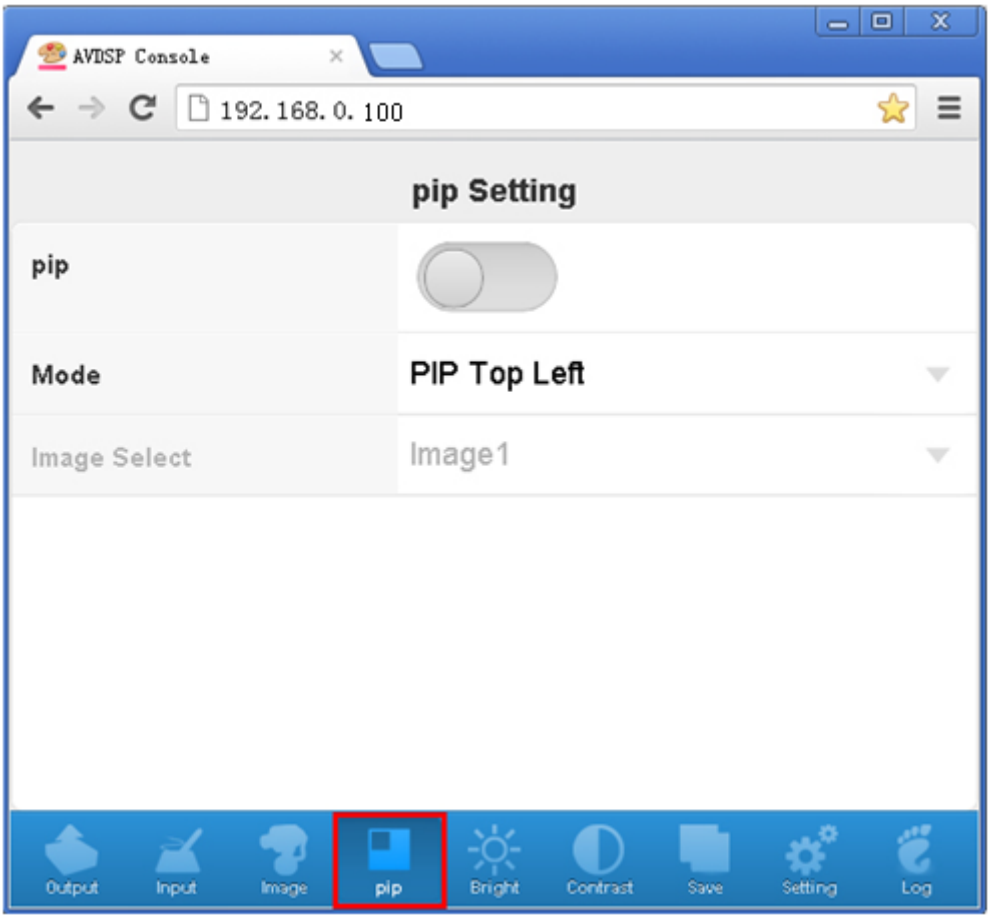
Step 3: Select "Input" icon in title bar, user can click the signal source that need, select, VSP 628S will automatically update input signal source;



Step 4: Select "Image" icon in title bar to scale the image, user can modify digital setting parameters and image size and position easily through "-+" icon. Click "Set" after modify the digital, VSP 628S image will display the latest Settings;



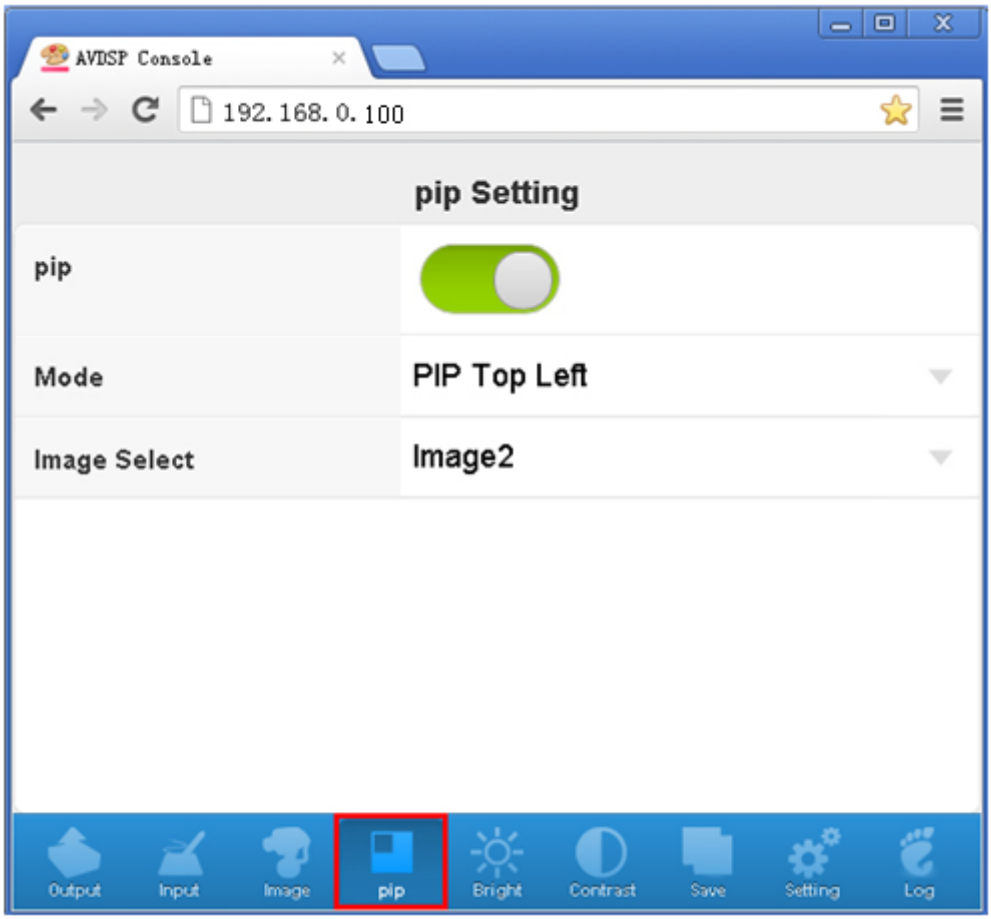
Step 5: Select "PIP" icon in title bar. When the PIP sliding block icon is grey, then it is single channel picture mode, and if image selection is gray, then image 1 is default for single image output image, and can't be chosen.



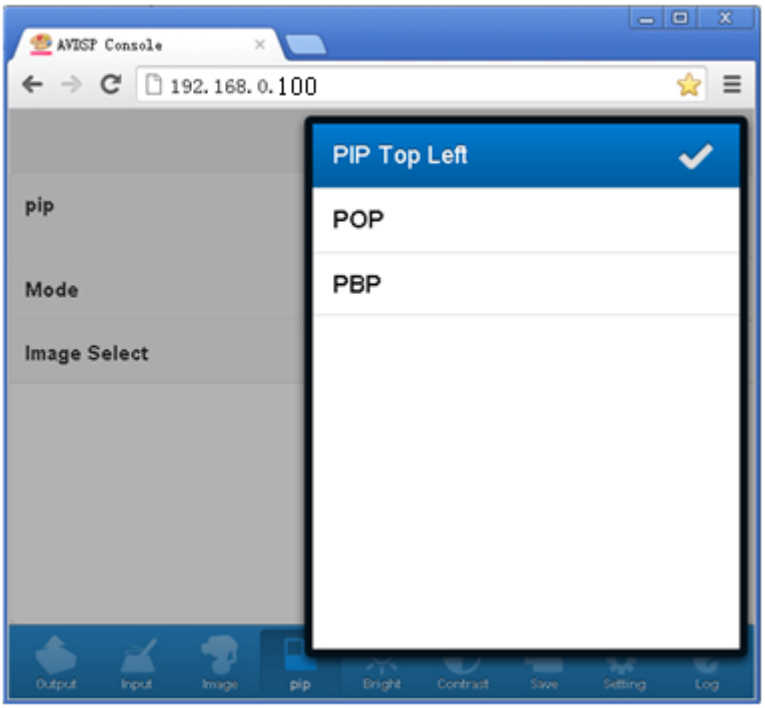
Note

You can preset the image mode that switch the current single picture mode to double-picture mode and the position of the two images in the mode.

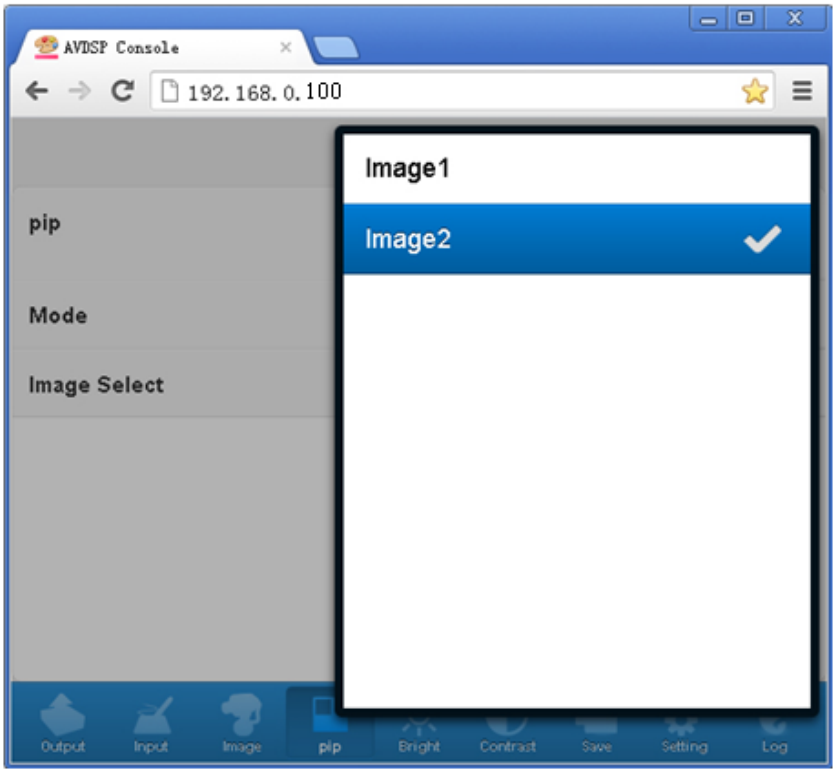
Drag the slider rolling ball, when the slide block is green, pip starts.



Then user can set PIP location, in addition to system default PIP upper left picture, also can choose picture above picture and picture edge picture.



In PIP mode, the default image1 is the main image, image2 for PIP sprite, click the corresponding image when need to edit image1 or image2 , the selected image with blue stripes, tick, as shown below: image2 is selected, all settings will for image 2. For example, you can switch "Input" icon in title bar to choose image 2 input source.



Note

If image1 and image2 with the same input source, then it will display the same picture in PIP.

Step 6: Image brightness setting, it is mainly for output image setting. If "Sync" is grey, you can adjust one color alone, when "Sync" is green, it means it starts, drag one color, and the other two color values will change accordingly to the same value.

Note

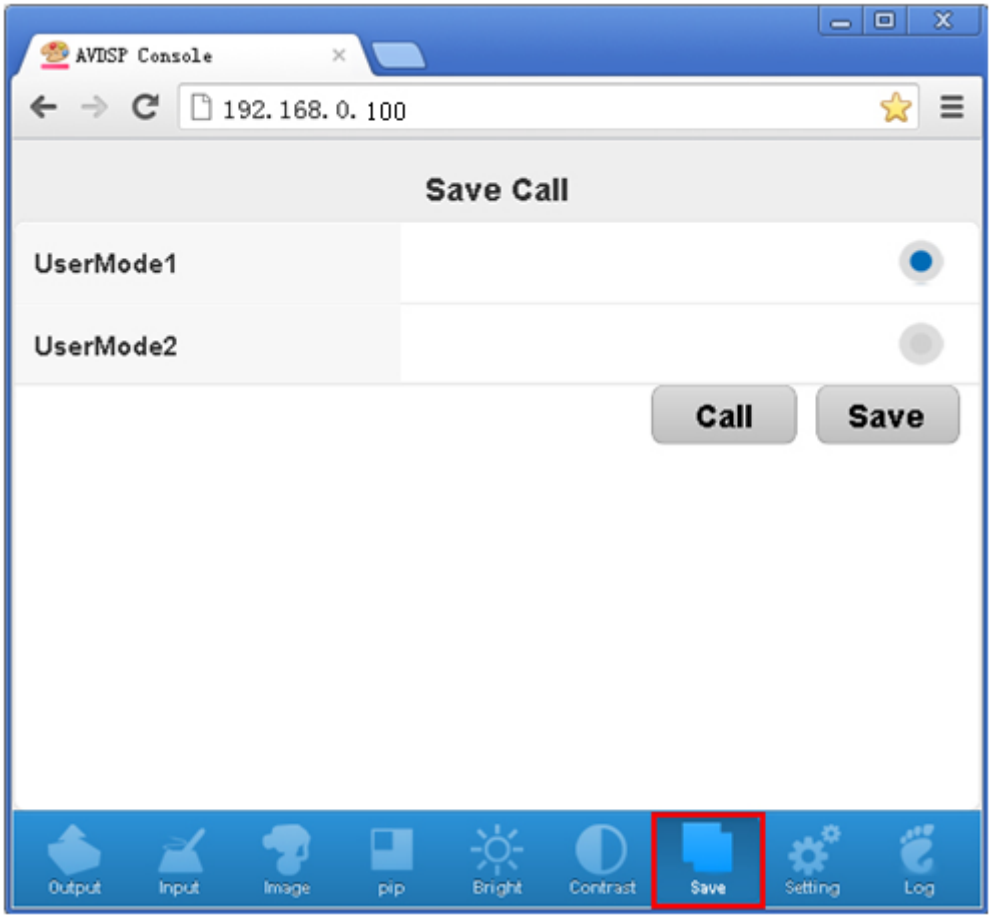
User can adjust setting according to actual condition, the function mainly suitable for the personage that is very processional in image quality. Nonprofessional isn't recommend to the above operations, if distortion of image quality as of improper operation errors, you can reset to the factory initialization.

Step 7: Image contrast setting, it is mainly for output image contrast. If "Sync" is grey, you can adjust one color alone, when "Sync" is green, it means it starts, drag one color, and the other two color values will change accordingly to the same value.

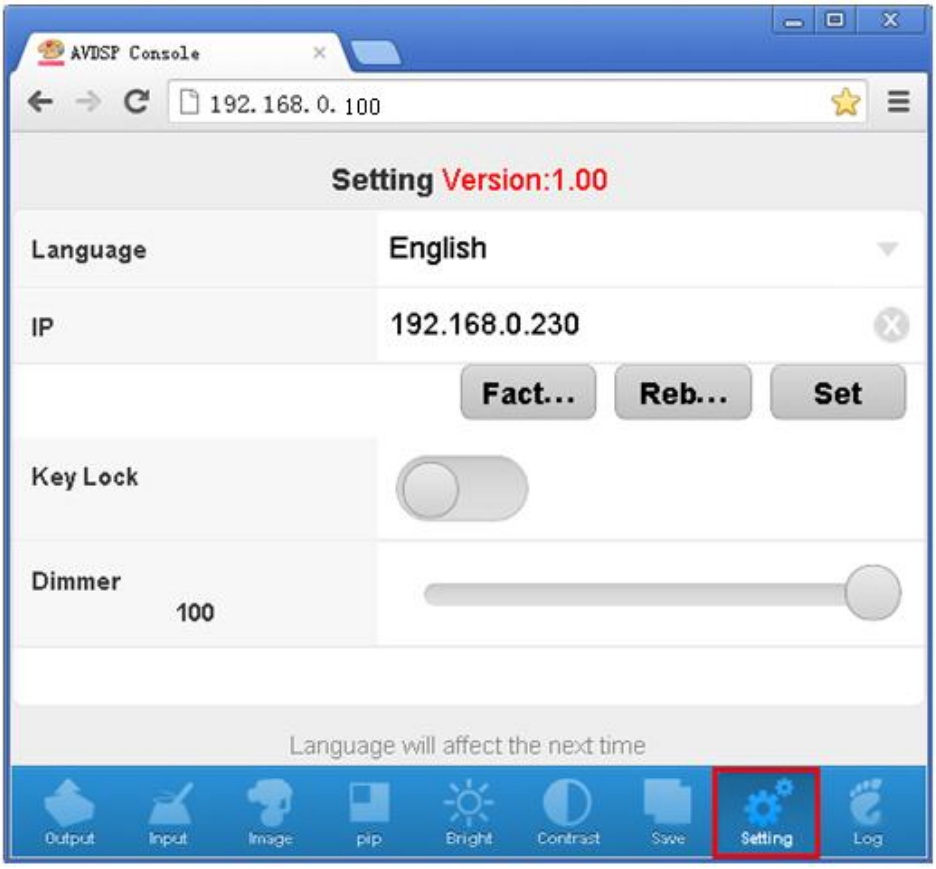
Note

User can adjust setting according to actual condition, the function mainly suitable for the personage that is very processional in image quality. Nonprofessional isn't recommend to the above operations, if distortion of image quality as of improper operation errors, you can reset to the factory initialization.

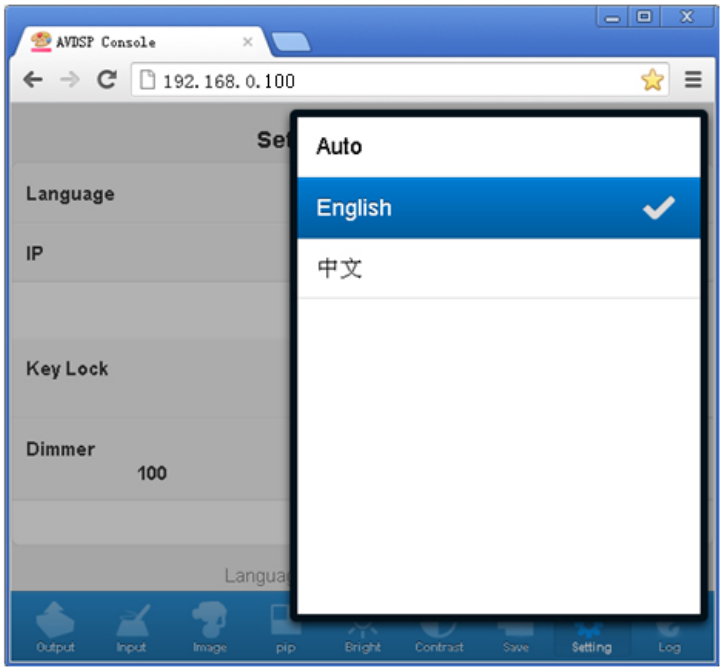
Step 8: Save and Call function. User can save the parameters to UserMode1 and UserMode2, and can also load UserMode1 and UserMode2 that saved before.



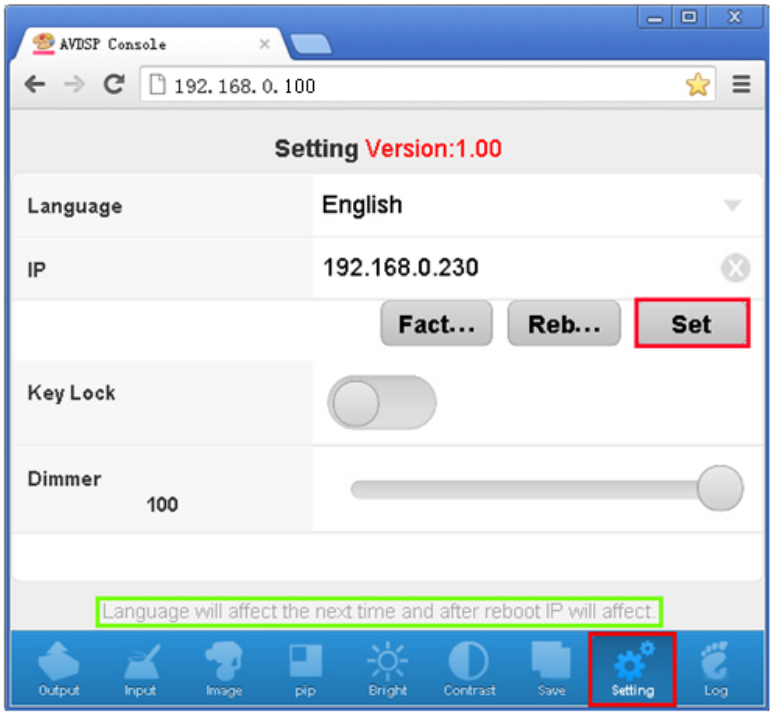
Step 9: Page setting.



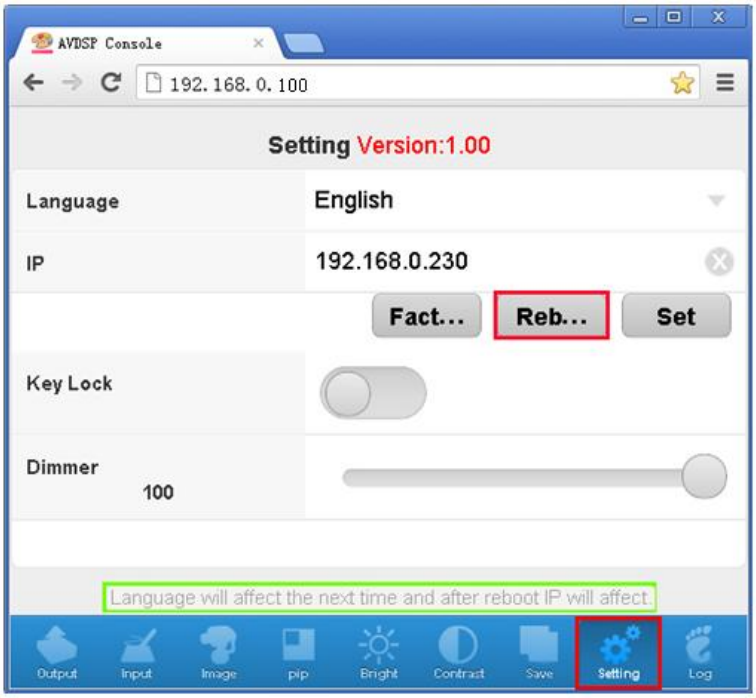
First, choose the language according to user's need. And the default is automatic identification;



Click "Set" after select the language (such as select Chinese), pay attention to system prompt "Language will effect after the next time and after reboot IP will affect" (at green box); Now you need to refresh the page to complete the setting.



If need to modify IP address, user can press MENU - > SYSTEM - > IP ADDRESS, it will take effect after restart the device.



Reset: If appear wrong operation, click "Reset" to factory default.

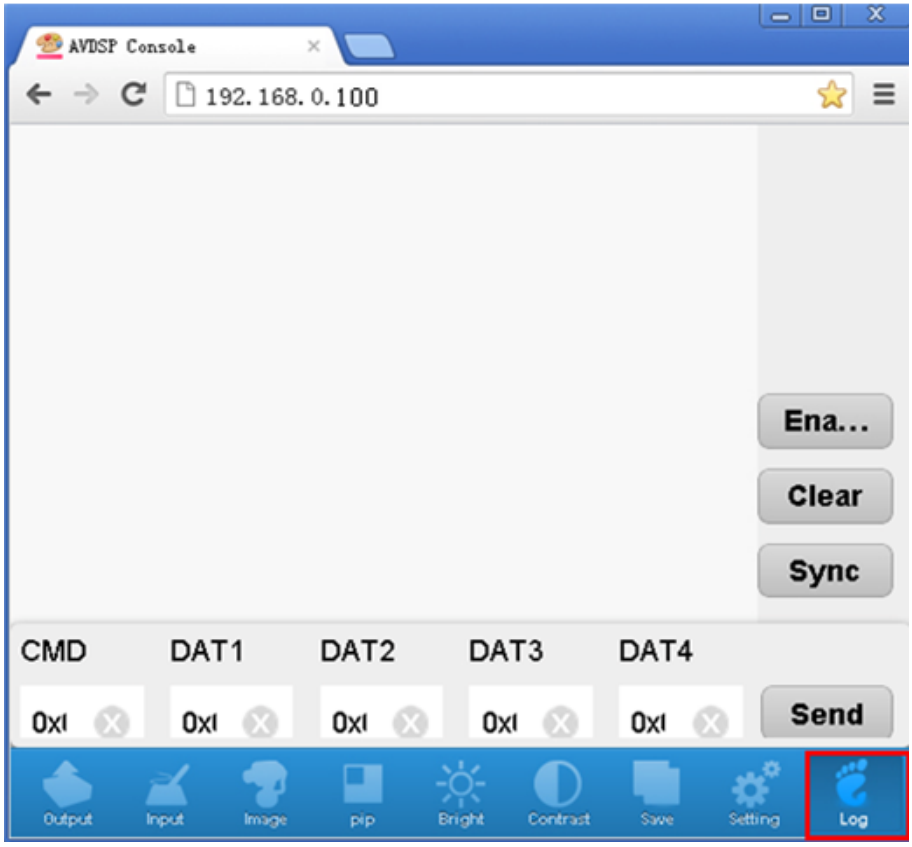
Key Lock: If slide block is gray, it is unlock, and VSP 628 keys can normally operate; And if slide block is green, the VSP 628 keys lock, and user can't operate any button.

Dimmer: ALPHA transparency regulation. Drag ball to change the transparency value, transparency value is between 0 ~ 100 levels.

Note

Operation is invalid in PIP mode.

Step 10: Log function is mainly for research and development personnel as debugging use.



B. Contact Information

Warranty:

All video products are designed and tested to the highest quality standard and backed by a full 3-year 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.

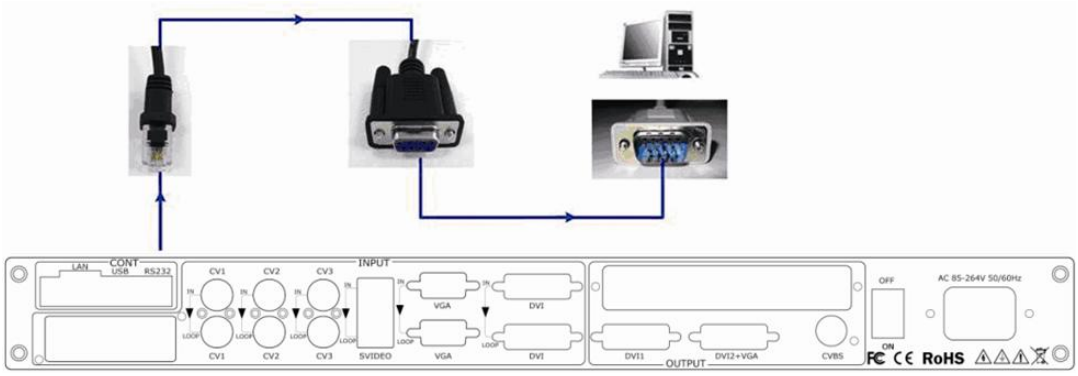
Headquarter: S603~604 Weiye Building Torch Hi-Tech Industrial Development Zone Xiamen, Fujian Province, P.R.C

C. Upgrading Software

Download the IP software

Turn off the power, take the two coding switch to “ON” state as below:

Connect one side of the RJ11 download line to the RS232 on the video processor, and the other side being connected to the serial port on the PC，switch on the power and wait for 2 minutes.



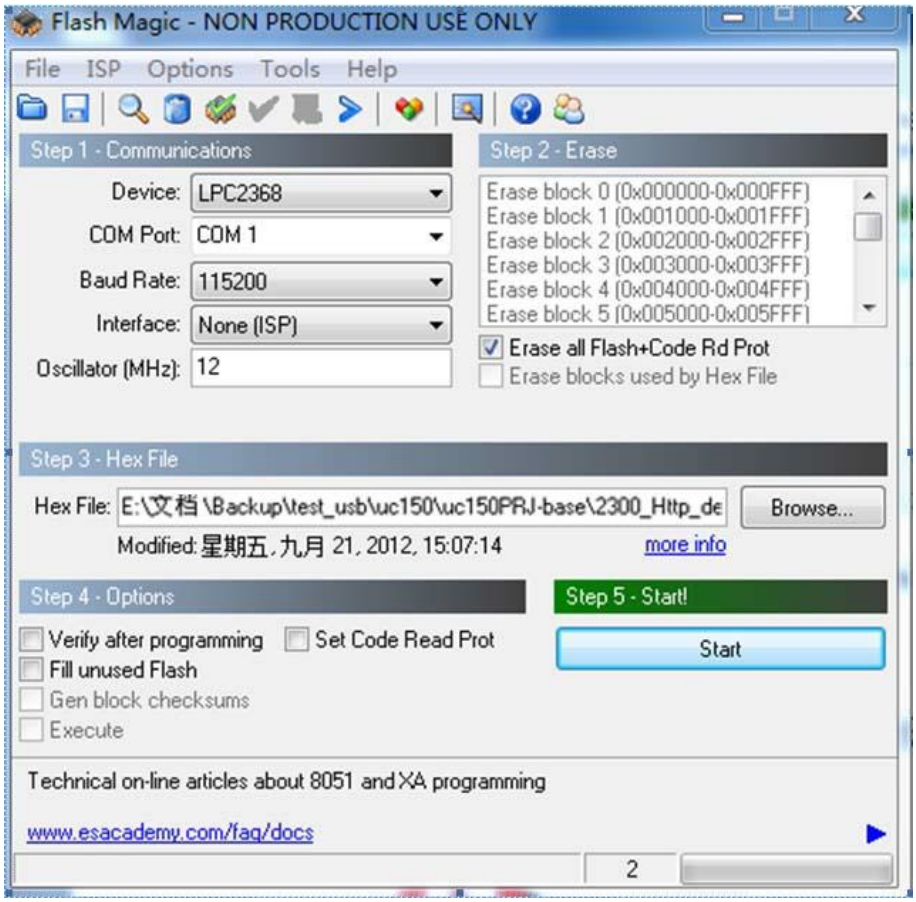
Double click 

to run flash magic, setting as below:

Firstly, users can choose the right serial port, set the Baud rate to 9600, choose LPC2368, and to load the aim document (hex file) for IP board upgrading;

Secondly, tick the item below to confirm.

Finally, click the “start” button.



After download, exit the program, turn off the power, tack the two coding switch back, as below restart the equipment power, check if the equipment work normally.

Note

Flash Magic download website: http://www.flashmagictool.com/download.html&d=FlashMagic.exe