MVP 8043

User Manual

- Manual #: RGB-RD-UM-M8043 E001
- Revision: V1.2

MVP 8043·User Manual

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

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Safe Operation 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 panel will expose dangerous voltages. To avoid personal injury, do not remove the top panel. Do not operate the unit without the panel installed.

Use the Proper Properly

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.

Ground the Product Properly

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 Dangerous Atmospheres

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

Terms and Equipment Mark in This Manual

WARNING

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

Note

Highlights an essential operating procedure, condition or statement.

CAUTION

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

Amendment Record

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

Format	Time	ECO#	Description	Principal
1.0	2013-05-16	0000	Release	Vira
1.1	2014-04-23	0001	1. Change the front panel. 2. Change the menu. 3. Add “Communication Software Guideline”.	Vira
1.2	2015-09-06	0002	1. Update the back panel. 2. Update the dimension figure. 3. Add “Software Installation” in “Communication Software Guideline” part. 4. Update the specification. 5. Update the English logo.	Vira

CONTENT

1. Brief Introduction

This chapter is designed to introduce you to the MVP 8043 User Manual. It covers:

- Chapter Structure
- Manual Usage
- Terms and Definitions
- System Overview
- Application Questions

Chapter Structure

The following chapters provide instructions for all aspects of MVP 8043 operations:

Manual Usage

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

Navigation

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

- Extensive hyperlinks are provided within the chapters。

- Use Acrobat’s “**Go to Previous View**” and “**Return to next View**” buttons to trace your complete navigational path.

- Use the “**Previous Page**” and “**Next Page**” buttons to go to the previous or next page within a file.
- Use Acrobat’s extensive search capabilities, such as the “**Find**” tool and “**Search Index**” tool to perform comprehensive searches as required.

Catalogue and Index

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

General Operations

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

- For detailed installation instructions, refer to chapter 3 “Hardware Installation” on page 36.
- For communication software control guide, refer to Chapter 5, “Communication Software Control Guide” on page 43
- For system setup and operations, refer to Chapter 6, “System Setup and Operations” on page 64.

Should you have any questions regarding the installation or operation of MVP 8043, please consult with the factory. Refer to Appendix B on page 90 for contact information.

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-Concel man. 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 sub-carrier frequency located on the back porch of the composite video signal. This serves as a color synchronizing signal to establish a frequency and phase reference for the chrome signal. Color burst is 3.58 MHz for NTSC and 4.43 MHz for PAL.

- **"Color temperature":** The color quality, expressed in degrees Kelvin (K), of a light source. The higher the color temperature, the bluer the light. The lower the temperature, the redder the light. Benchmark color temperature for the A/V industry includes 5000°K, 6500°K, and 9000°K.

- **"Contrast ratio":** The radio of the high light output level divided by the low light output level. In theory, the contrast radio of the television system should be at least 100:1, if not 300:1. In reality, there are several limitations. In the CRT, light from adjacent elements contaminate the area of each element. Room ambient light will contaminate the light emitted from the CRT. Well-controlled viewing conditions should yield a practical contrast ratio of 30:1 to 50:1.

- **"DVI":** Digital Visual Interface. The digital video connectivity standard that was developed by DDWG (Digital Display Work Group). This connection standard offers two different connectors: one with 24 pins that handles digital video signals only, and one with 29 pins that handles both digital and analog video.

- **"EDID":** Extended Display Identification Data – EDID is a data structure used to communicate video display information, including native resolution and vertical interval refresh rate requirements, to a source device. The source device will then output the optimal video format for the display based on the provided EDID data, ensuring proper video image quality. This communication takes place over the DDC – Display Data Channel.

- **"Ethernet":** A Local Area Network (LAN) standard officially known as IEEE 802.3. Ethernet and other LAN technologies are used for interconnecting computers, printers, workstations, terminals, servers, etc. within the same building or campus. Ethernet operates over twisted pair and over coaxial cable at speeds starting at 10Mbps. For LAN interconnectivity, Ethernet is physical link and data link protocol reflecting the two lowest layers of the OSI Reference Model.

- **"Frame":** In interlaced video, a frame is one complete picture. A video frame is made up of two fields, or two sets of interlaced lines. In a film, a frame is one still picture of a series that makes up a motion picture.

- **"Gamma":** The light output of a CRT is not linear with respect to the voltage input. The difference between what you should have and what is actually output is known as gamma.

- **"HDMI" - High – Definition Multimedia Interface:** An interface used primarily in consumer electronics for the transmission of

uncompressed high definition video, up to 8 channels of audio, and control signals, over a single cable. HDMI is the de facto standard for HDTV displays, Blu-ray Disc players, and other HDTV electronics. Introduced in 2003, the HDMI specification has gone through several revisions.

- **"HDSDI":** The high-definition version of SDI specified in SMPTE-292M. This signal standard transmits audio and video with 10 bit depth and 4:2:2 color quantization over a single coaxial cable with a data rate of 1.485 Gbit/second. Multiple video resolutions exist including progressive 1280x720 and interlaced 1920x1080 resolutions. Up to 32 audio signals are carried in the ancillary data.

- **"JPEG" (Joint photographic Expects Group):** Commonly used method of lost 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.

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

- **"PAL":** Phase Alternate Line. A television standard in which the phase of the color carrier is alternated from line to line. It takes four full pictures (8 fields) for the color-to-horizontal phase relationship to return to the reference point. This alternation helps cancel out phase errors. For this reason, the hue control is not needed on a PAL TV set. PAL, in many transmission forms, is widely used in Western Europe, Australia, Africa, the Middle East, and Micronesia. PAL uses 625-line, 50-filed (25 fps) composite color transmission system.

- **"PIP":** Picture-in-Picture. A small picture within a larger picture created by scaling down one of the images to make it smaller. Each picture requires a separate video source such as a camera, VCR, or computer. Other forms of PIP displays include Picture-by-Picture (PBP) and Picture-with-Picture (PWP), which are commonly used with 16:9 aspect display devices. PBP and PWP image formats require a

separate scaler for each video window.

- **“Polarity”:** The positive and negative orientation of a signal. Polarity usually refers to the direction or a level with respect to a reference (e.g. positive sync polarity means that sync occurs when the signal is going in the positive direction).

- **“RJ-45”:** Registered Jack-45. A connector similar to a telephone connector that holds up to eight wires used for connecting Ethernet devices.

- “**RS-232”:** An Electronic Industries Association (EIA) serial digital interface standard specifying the characteristics of the communication path between two devices using either DB-9 or DB-25 connectors. This standard is used for relatively short-range communication and does not specify balanced control lines. RS-232 is a serial control standard with a set number of conductors, data rate, word length, and type of connector to be used. The standard specifies component connection standards with regard to the computer interface. It is also called RS-232-C, which is the third version of the RS-232 standard, and is functionally identical to the CCITT V.24 standard.

- **“Saturation”:** Chroma, chroma gain. The intensity of the color, or the extent to which a given color in any image is free from white. The less white in a color, the truer the color or the greater its saturation. On a display device, the color control adjusts the saturation. Not to be confused with the brightness, saturation is the amount of pigment in a color, and not the intensity. Low saturation is like adding white to the color. For example, a low-saturated red looks pink.

- **“Scaling”:** A conversion of a video or computer graphic signal from a starting resolution to a new resolution. Scaling from one resolution to another is typically done to optimize the signal for input to an image processor, transmission path or to improve its quality when presented on a particular display.

- **“SDI”:** Serial Digital Interface. The standard based on a 270 Mbps transfer rate. This is a 10-bit, scrambled, polarity independent interface with common scrambling for both component ITU-R 601 and composite digital video and four channels of (embedded) digital audio.

- **“Seamless Switching”:** A feature found on many video switchers. This feature causes the switcher to wait until the vertical interval to switch.

This avoids a glitch (temporary scrambling) which normally is seen when switching between sources.

- **"SMPTE":** Society of Motion Picture and Television Engineers. A global organization, based in the United States that sets standards for base band visual communications. This includes film as well as video and television standards.

- **"S-video":** A composite video signal separated into the luma ("Y" is for luma, or black and white information; brightness) and the chroma ("C" is an abbreviation for chroma, or color information).

- **"Sync":** Synchronization. In video, sync is a means of controlling the timing of an event with respect to other events. This is accomplished with timing pulses to insure that each step in a process occurs at the correct time. For example, horizontal sync determines exactly when to begin each horizontal scan line. Vertical sync determines when the image is to be refreshed to start a new field or frame. There are many other types of sync in video system.(Also known as "sync signal" or "sync pulse.")

- **"TCP/IP":** Transmission Control Protocol/Internet Protocol. The communication protocol of the Internet. Computers and devices with direct access to the Internet are provided with a copy of the TCP/IP program to allow them to send and receive information in an understandable form.

- **"USB":** Universal Serial Bus. USB was developed by seven PC and telecom industry leaders (Compaq, DEC, IBM, Intel, Microsoft, NEC, and Northern Telecom). The goal was easy plug-and-play expansion outside the box, requiring no additional circuit cards. Up to 127 external computer devices may be added through a USB hub, which may be conveniently located in a keyboard or monitor. USB devices can be attached or detached without removing computer power. The number of devices being designed for USB continues to grow, from keyboards, mice, and printers to scanners, digital cameras, and ZIP drives.

- **"VESA":** Video Electronics Standards Association. A nonprofit number organization dedicated to facilitating and promoting personal computer graphics through improved standards for the benefit of the end-user. www.vesa.org.

1. Brief Introduction

Terms and Definitions

- **“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.

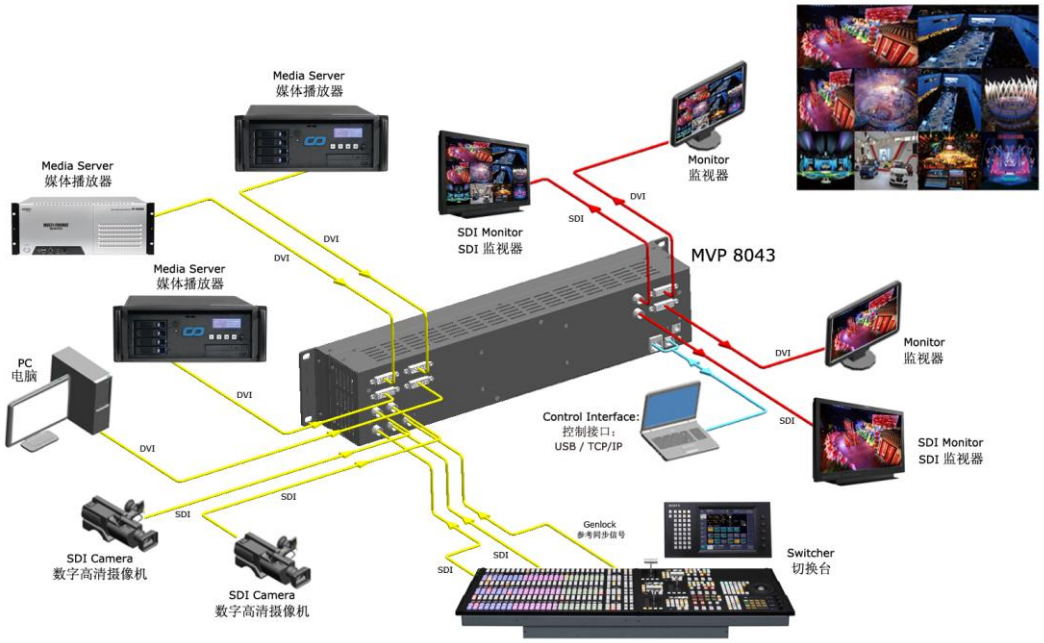
- **“YPbPr”:** Used to describe the color space for progressive-scan (non-interlaced) component video.

System Overview

MVP 8043 is a pure-hardware professional multi-screen video wall controller, which is capable of showing and displaying multi-dynamic pictures on multi-screens to realize the function of splicing multi-windows. It supports signal input, including SDI (SD/HD-SDI, 3G-SDI), high-definition digital signal (HDMI or high resolution DVI signal). Single output channel supports maximum resolution 2560×816@60Hz. It is specially designed for the needs for displaying multi-pictures with high quality, especially suitable for flexibly controlling various types of screens and resolutions. MVP 8043 is ideal for the application in command centers, video conference, and multi-media hall.

Application Questions

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



2. Hardware Orientation

In This Chapter

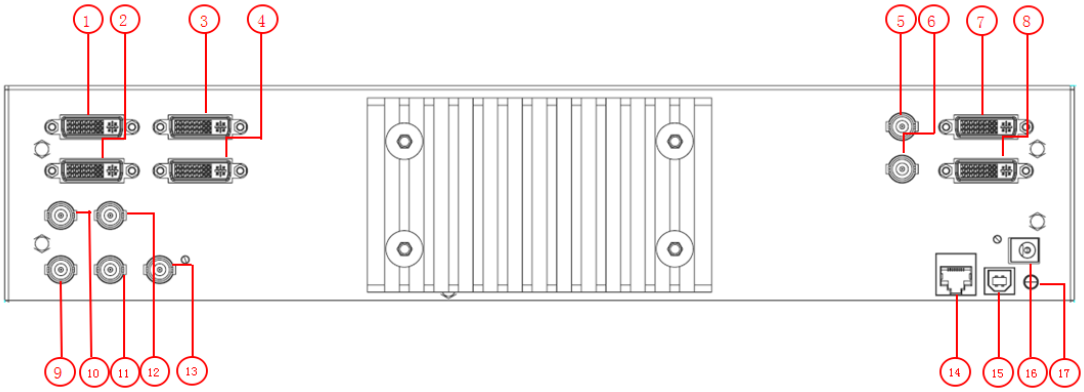
This chapter provides detailed information about the MVP 8043 hardware.

The following topics are discussed:

- MVP 8043 Back Panel
- MVP 8043 Front Panel

MVP 8043 Back Panel

The figure below illustrates the professional interface and control signals of MVP 8043 back panel.



NO.	INTERFACE	NO.	INTERFACE
1~4	DVI Input	13	Genlock Input
5	Preview SDI Output	14	10/100M Interface RJ45
6	Program SDI Output	15	USB Interface
7	Preview DVI Output	16	Power
8	Program DVI Output	17	Upgrade Button
9~12	SDI Input		

CONT Interface

14: 10/100M Interface

15: USB Interface

Used for connect to the computer for remote communication or use for device upgrade.

17: Upgrade Button

Connect USB cable and power, push the button to upgrade the program.

INPUT Interface

It includes 4 DVI inputs (DVI-I interface compatible with the HDMI input),

4 SDI inputs, and 1 Genlock Input.

1~4: DVI Input

DVI 1/2/3/4 input., input the video signal from HD player, DVD, and computer. Connect to the DVI interface on MVP 8043.

(This connector does not support hot-plugging).

Note

DVI-I is compatible with HDMI.

9~12: SDI Input

SDI input, can receive video signal from HD player, and HD camera. Connect interface 9~12 via 75 ohms BNC port., and connect LED screens via network cable.

13: Genlock Input

Genlock input, can receive video signal from controller or signal generator, etc.

OUTPUT Interface

5: Preview SDI Output

Preview SDI output, connect to the display with SDI interface.

Support resolution: 1280x720@50, 1280x720@60.

6: Program SDI Output

Program SDI output, can connect to the next display or send signal to LED through sending card. Output signal through SDI interface.

Support resolution:

720x480@60i, 720x576@50i, 800x600@60, 1024x768@60, 1280x720@23.98, 1280x720@24, 1280x720@25, 1280x720@29.97, 1280x720@30, 1280x720@50, 1280x720@59.94, 1280x720@60,

1280x768@60, 1280x800@60, 1280x1024@60, 1360x768@60, 1366x768@60, 1440x900@60, 1400x1050@60, 1600x1200@60, 1680x1050@60, 1920x1080@50i, 1920x1080@59.94i, 1920x1080@60i, 1920x1080@23.98, 1920x1080@24, 1920x1080@25, 1920x1080@29.97, 1920x1080@30, 1920x1080@50, 1920x1080@59.94, 1920x1080@60, 1920x1200@60, 2048x1152@60, 2560x816@60.

7: Preview DVI Output

Preview DVI output, connect to the display with DVI-I interface.

Note

DVI-I is compatible with HDMI.

Support resolution: 1280x720@50, 1280x720@60.

8: Program DVI Output

Program DVI output, can connect to the next display or send signal to LED through sending card. Output signal through DVI-I interface.

Note

DVI-I is compatible with HDMI.

Support resolution:

720x480@60i, 720x576@50i, 800x600@60, 1024x768@60, 1280x720@23.98, 1280x720@24, 1280x720@25, 1280x720@29.97, 1280x720@30, 1280x720@50, 1280x720@59.94, 1280x720@60, 1280x768@60, 1280x800@60, 1280x1024@60, 1360x768@60, 1366x768@60, 1440x900@60, 1400x1050@60, 1600x1200@60, 1680x1050@60, 1920x1080@50i, 1920x1080@59.94i, 1920x1080@60i, 1920x1080@23.98, 1920x1080@24, 1920x1080@25, 1920x1080@29.97, 1920x1080@30, 1920x1080@50, 1920x1080@59.94, 1920x1080@60, 1920x1200@60, 2048x1152@60, 2560x816@60.

Power

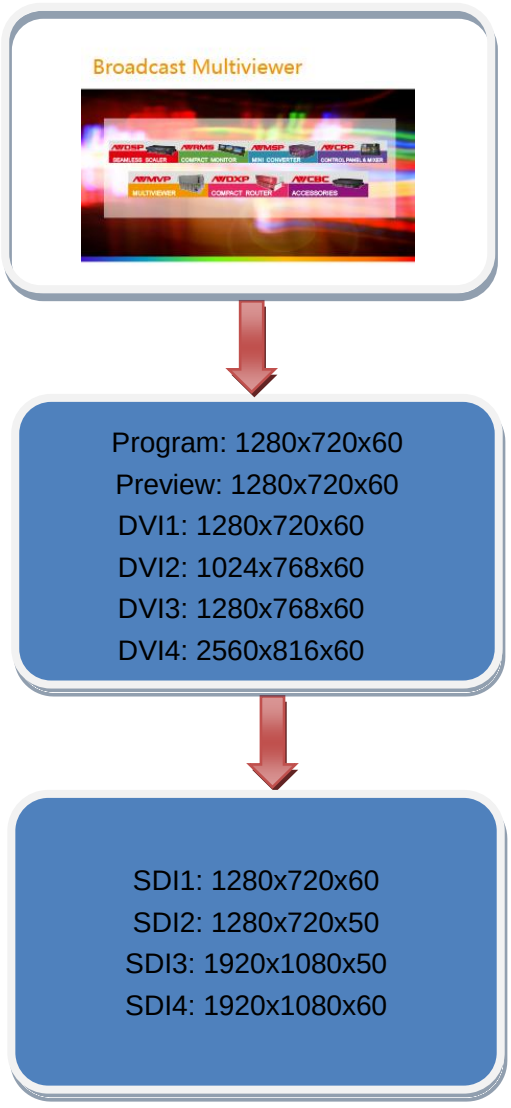
16: Power

This device use the standard 12V/3A power supply.

MVP 8043 Front Panel

Insert power cord. LCD module on the front panel will show product information and go into self verification before it load last setting and send processed image to the target monitor. User can monitor the working status of the equipment with the LCD on front panel.

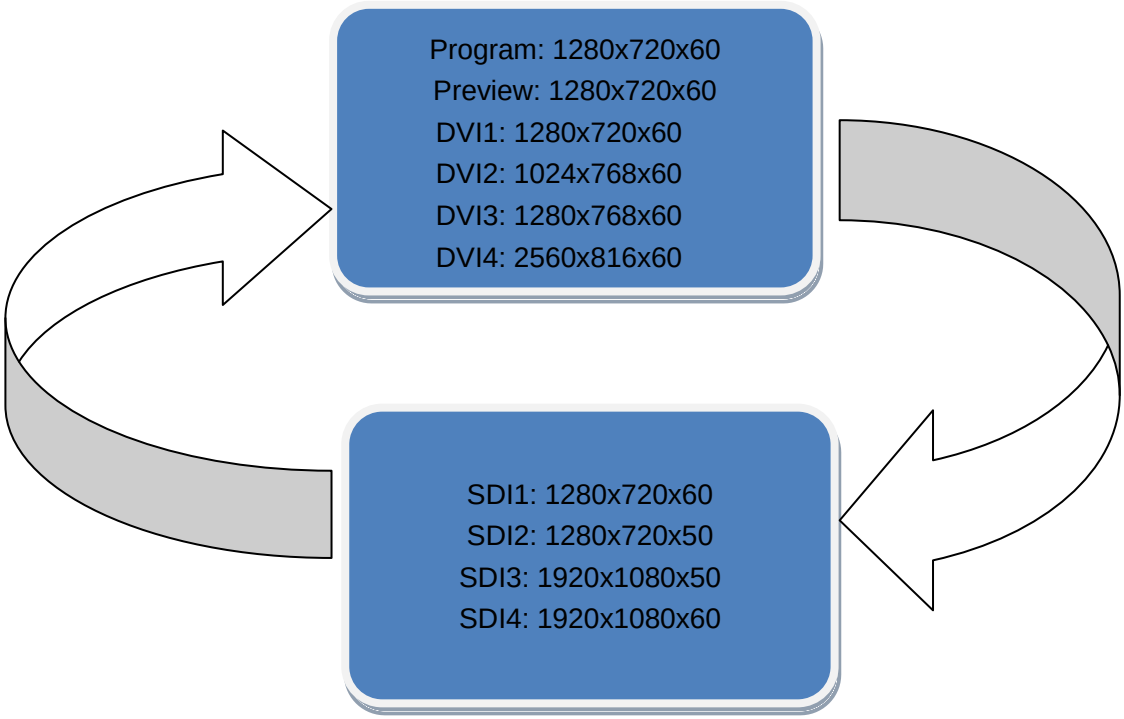
MVP 8043 front panel shown as in figure:



2. Hardware Orientation

MVP 8043 Front Panel

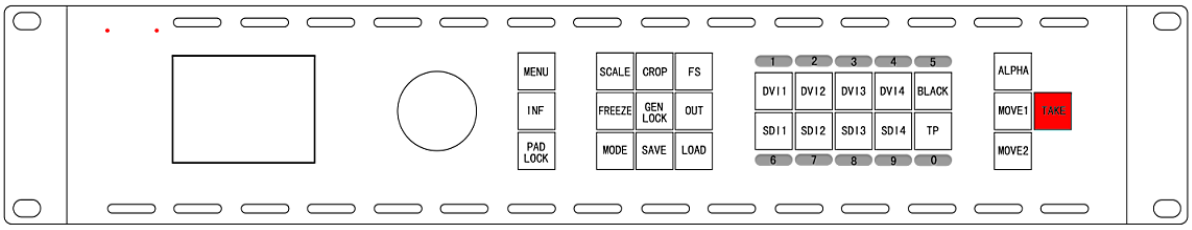
Then system goes into the circulation statement. Cycle process displays the current input signal source and the current output format.



2. Hardware Orientation

MVP 8043 Front Panel

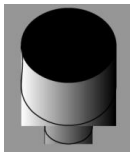
MVP 8043 front panel is as following:



LCD Panel

Used to show button menu and menus for interactive communication.

Menu Button



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

Signal Buttons

DVI1 input selection button, push it, its LED light flashes, then push TAKE button, program will be switched to this channel.

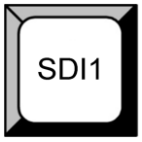
DVI2 input selection button, push it, its LED light flashes, then push TAKE button, program will be switched to this channel.

DVI3 input selection button, push it, its LED light flashes, then push TAKE button, program will be switched to this channel.

DVI4 input selection button, push it, its LED light flashes, then push TAKE button, program will be switched to this channel.

2. Hardware Orientation

MVP 8043 Front Panel



SDI1 input selection button, push it, its LED light flashes, then push TAKE button, program will be switched to this channel.

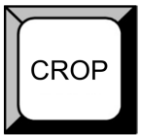
SDI2 input selection button, push it, its LED light flashes, then push TAKE button, program will be switched to this channel.

SDI3 input selection button, push it, its LED light flashes, then push TAKE button, program will be switched to this channel.

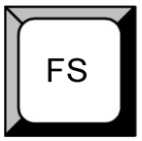
SDI4 input selection button, push it, its LED light flashes, then push TAKE button, program will be switched to this channel.

Function Buttons

Scale setting. Push the button, its LED light is on. User can set H size, V size, H pos, V pos for the image.



Crop setting, push the button, its LED light is on, turn the knob to crop the current layer image, including position and size.



Screen setting. Push the button, its LED light is on, user can enable or disable the FS function, and set screen width, height, PosX and PosY.

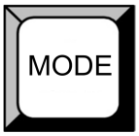
Freeze key, push the button, its LED light is on, output screen freezes, push it again, its LED light is off, and cancel the freeze function.

Push the button to input reference from external switcher or device, output will be sync to the reference input timing.

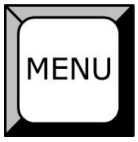
2. Hardware Orientation

MVP 8043 Front Panel

Output format select button. Push the button, its LED light is on, and enter to the current output format. User can turn the knob to choose the different output formats.



Preview image full display button. Choose the preview image, and push the button, the image will be full displayed.



Advanced menu: push the button to enter the menu items. Turn the knob to select the relevant submenu, push the knob to confirm.

For details please refer to MENU in menu orientation.

Information display button. Push the button, its LED light is on. The LED displays the current output formats and version information.

Key lock button, push the button, its LED light is on, all buttons are locked, and any operations are unavailable. Push it again to cancel this function.

Push the button, its LED light flashes, then push TAKE button, Program or Preview will be switched to black. Push BLACK button again to cancel this function.

Test pattern, push the button, its LED light flashes, then push TAKE button, Program or Preview will be switched to test pattern. Push TP again will cancel this function.

Effect switch button, push the button, its LED light flashes, then push TAKE button, Program and Preview will be effect switched.

2. Hardware Orientation

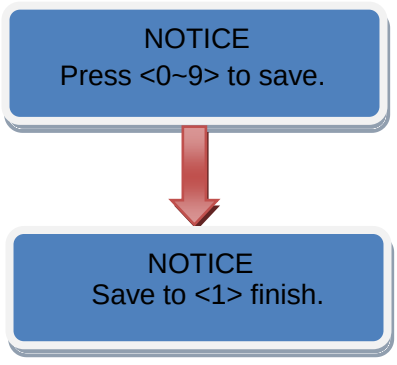
MVP 8043 Front Panel

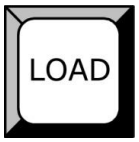
Move effect shortcut key 1, user can set the move effect in MENU, then push the button, its LED light flashes, choose the signal to be switched, and push TAKE button to achieve move effect switching.

Move effect shortcut key 2, user can set the move effect in MENU, then push the button, its LED light flashes, choose the signal to be switched, and push TAKE button to achieve move effect switching.

Signal, Black and Effect switch button, choose the signal and effect, and push TAKE button to get the switch effect.

Push the button to save user data. The key light is on, and the keys of DVI1, DVI2, DVI3, DVI4, SDI1, SDI2, SDI3, SDI4, BLACK, TP are on at the same time. The numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 0 are corresponding save mode1~10, select the number to save the current user data, LCD screen will display the saving state. After saving, the chosen key keeps on, and the other key lights are off. For example, choose SAVE1:



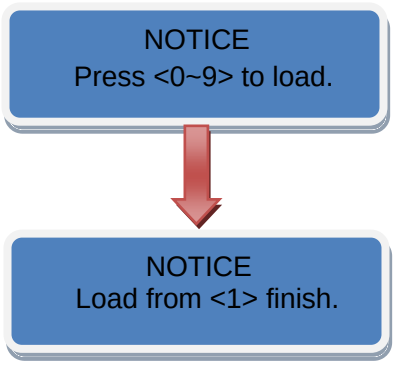


Push the button to load the saved user data. The key light is on, and the keys of DVI1, DVI2, DVI3, DVI4, SDI1, SDI2, SDI3, SDI4, BLACK, TP are on at the same time, the numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 0 are corresponding save mode 1~10, select the number to load the saved data. After loading, the chosen key keeps on, and the other key lights are off. For

2. Hardware Orientation

MVP 8043 Front Panel

example, choose button 1:

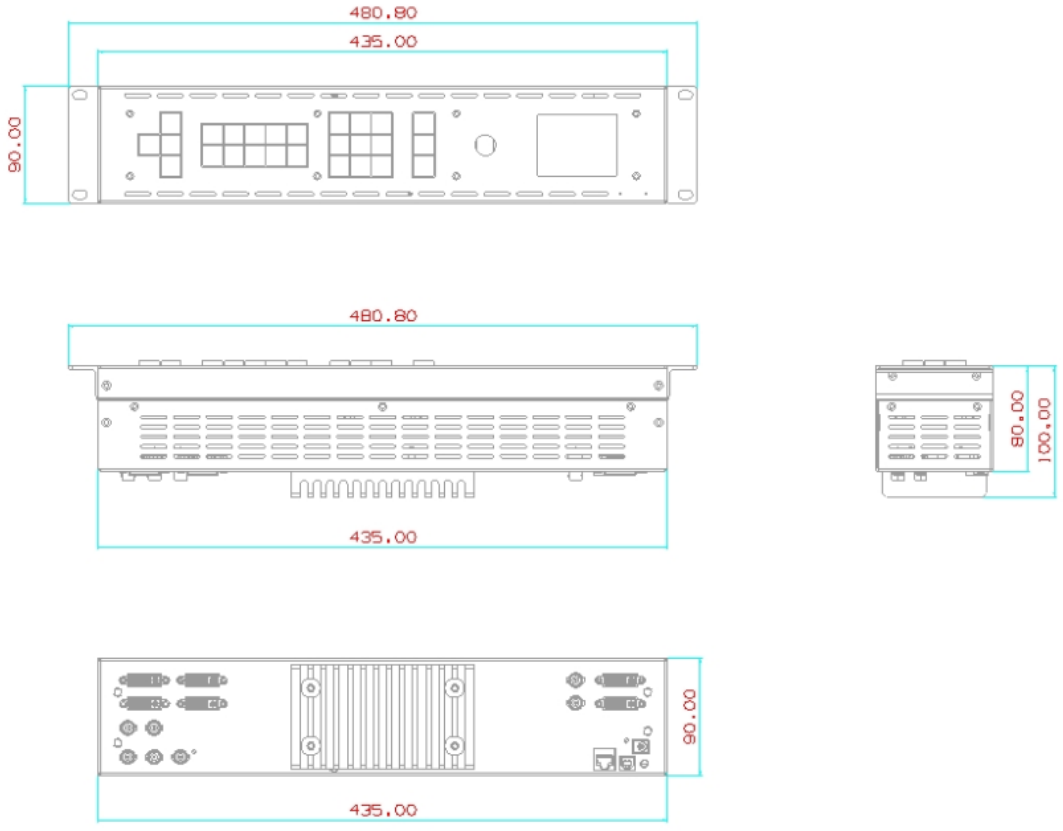


3. Hardware Installation

In This Chapter

This chapter provides comprehensive installation instruction for MVP 8043 hardware.

Following is the size of MVP 8043 for your reference:



Safety Precautions

For all MVP 8043 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 MVP 8043 process shipping box, inspect it for damage. If you find any damage, notify the shipping carrier immediately for all claims adjustments. As you open the box, compare its contents against the packing slip. If you find any shortages, contact your sales representative.

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

Site Preparation

The environment in which you install your MVP 8043 should be clean, properly lit, free from static, and have adequate power, ventilation, and space for all components.

4. Menu Orientation

In This Chapter

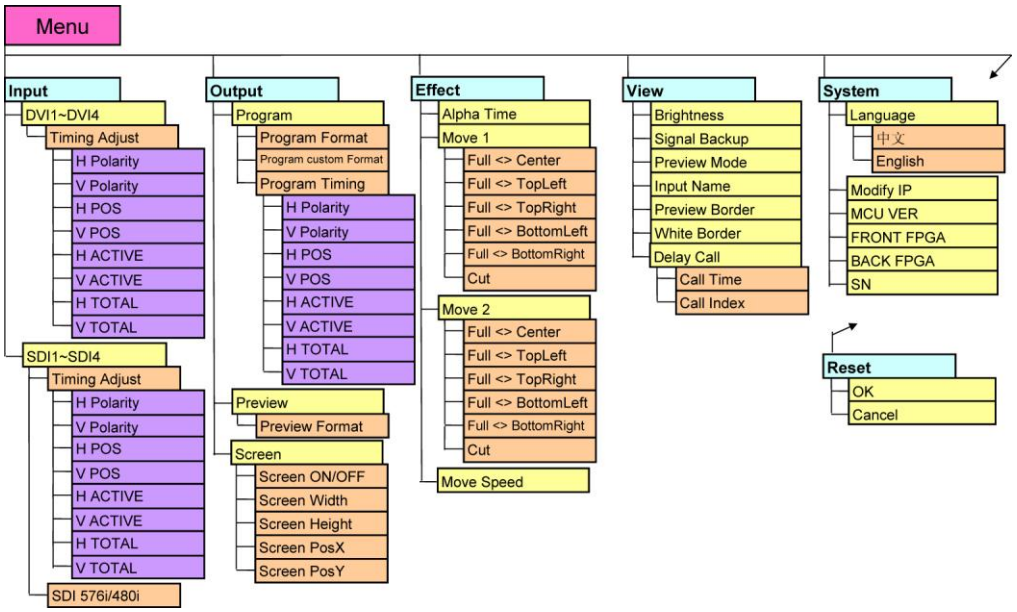
This chapter describes all MVP 8043 processor menus, including how they are accessed, the functions that are available, and descriptions of each menu tree (in block diagram format).

The following topics are discussed:

- **MENU**
  - Input
  - Output
  - Effect
  - View
  - System
  - Reset

MENU

Push the **MENU** to the menu items, which shown as follows. Turn the knob to select menu item and push the knob to enter corresponding setting or view the menu.



Input

Select <Input>, push the knob to confirm, show level 2 menus as follows:

DVI1: Push DVI1 for timing adjust, including:

H Polarity: Horizontal polarity, can choose positive and negative.

V Polarity: Vertical polarity, can choose positive and negative.

H POS: Horizontal position setting.

V POS: Vertical position setting.

H ACTIVE: Line points in video signal timing sequence.

V ACTIVE: Field rows in video signal timing sequence.

H TOTAL: Total line points in video signal timing sequence, including blank.

V TOTAL: Total field rows in video signal timing sequence, including blank.

DVI2, **DVI3**, **DVI4** are same with DVI1.

SDI1: Including timing and SDI 576i/480i. The setting of timing adjust is

same with DVI1, and user can choose SDI 576i or 480i.

SDI2, **SDI3**, **SDI4** are same with SDI1.

Output

Select <Output>, push the knob to confirm, show level 2 menus as follows:

Program: Including Program Format, Program Custom Format and Program Timing.

Program Format: Display the current output signal and output resolution. User can choose different output formats by rotating the knob, this option includes 35 common output resolutions:

720x480@60i, 720x576@50i, 800x600@60, 1024x768@60, 1280x720@23.98, 1280x720@24, 1280x720@25, 1280x720@29.97, 1280x720@30, 1280x720@50, 1280x720@59.94, 1280x720@60, 1280x768@60, 1280x800@60, 1280x1024@60, 1360x768@60, 1366x768@60, 1440x900@60, 1400x1050@60, 1600x1200@60, 1680x1050@60, 1920x1080@50i, 1920x1080@59.94i, 1920x1080@60i, 1920x1080@23.98, 1920x1080@24, 1920x1080@25, 1920x1080@29.97, 1920x1080@30, 1920x1080@50, 1920x1080@59.94, 1920x1080@60, 1920x1200@60, 2048x1152@60, 2560x816@60.

Program Custom Format: User can custom the current program format.

Program Format: Timing Adjust, including:

H Polarity: Horizontal polarity, can choose positive and negative.

V Polarity: Vertical polarity, can choose positive and negative.

H POS: Horizontal position setting.

V POS: Vertical position setting.

H ACTIVE: Line points in video signal timing sequence.

V ACTIVE: Field rows in video signal timing sequence.

H TOTAL: Total line points in video signal timing sequence, including blank.

V TOTAL: Total field rows in video signal timing sequence, including blank.

Preview: Including Preview Format, total 2 common output resolutions: 1280x720@50, 1280x720@60.

Screen: Screen setting, user can change the screen through the digital setting parameters to easily change the screen size and position. Mainly used in the LED large screen users. Settings as follow:

Screen ON/OFF: Choose screen on or off.

Screen Width: Width setting.

Screen Height:: Height setting.

Screen PosX: Horizontal position setting.

Screen PosY: Vertical position setting.

Effect

Select <Effect>, push the knob to confirm, show level 2 menus as follows:

Alpha Time: Effect switch time setting, turn the knob, choose the switch time user need, push the knob to confirm.

Move 1: Move mode 1, including:

Full <> Center.

Full <> TopLeft.

Full <> TopRight.

Full <> BottomLeft.

Full <> BottomRight.

Cut.

Move 2: Move mode 2, modes are same with Move 1.

Move Speed: Move speed setting, rotate the knob, choose the switch time user need, push the knob to confirm.

4. Menu Orientation

MENU

View

Select <View>, push the knob to confirm, show the level 2 menu as follows:

Brightness: User can adjust the brightness within 0~128.

Signal Backup: User can choose open or close this function.

Preview Mode: User can choose mode 1 (Eight Preview) or mode 2 (Ten Preview).

Input Name: User can choose open or close this function.

Preview Border: User can choose open or close this function.

White Border: User can choose open or close this function.

Delay Call: Including call time and call index:

Call Time: Call time setting.

Call Index: Call index, can choose among 1 to 10.

System

Select <System>, push the knob to confirm, show level 2 menus as follows:

Language: Turn the knob, can choose the language English or Chinese.

Modify IP: Modify IP address.

MCU VER: Show the MCU version.

FRONT FPGA: Show the FRONT FPGA version.

BACK FPGA: Show the BACK FPGA version.

SN: Show the serial number.

Reset

Enter Reset to reset the IP, and push the knob to confirm, and MVP 8043 is reset to its factory settings. After 5 seconds, it completes factory settings and is ready for more operations.

5. Communication Software Guideline

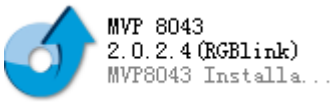
In This Chapter

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

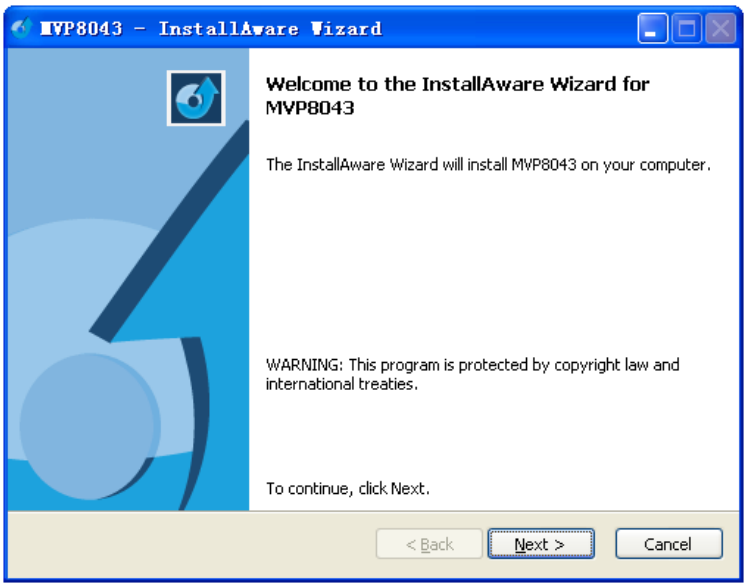
- Software Installation
- Software Operation
- How to Connect Windows Control Program by LAN Interface
- How to Connect Windows Control Program by USB Interface

Software Installation

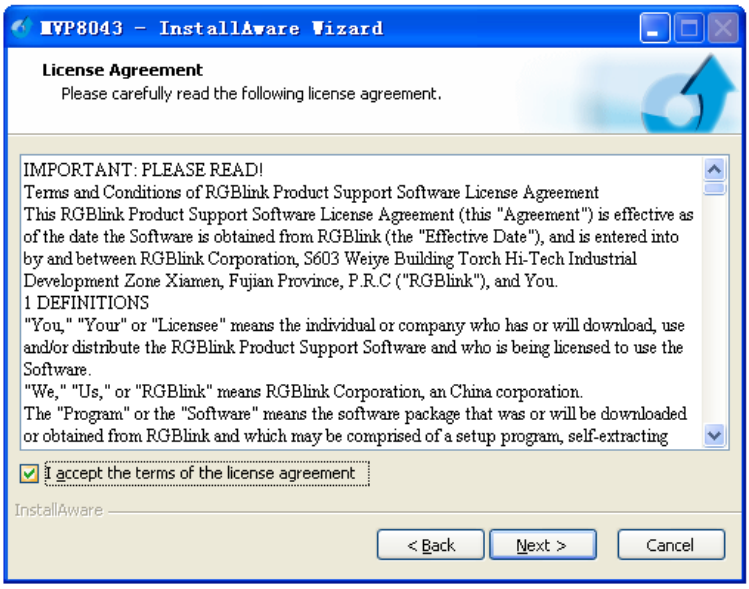
MVP 8043 video processor is very easy to be configured with user friendly communication software, support drag and drop operation for edit and display. Also it can be customized with schedule function.

Double click 

to install, system default English version, click “Next” to next dialog:

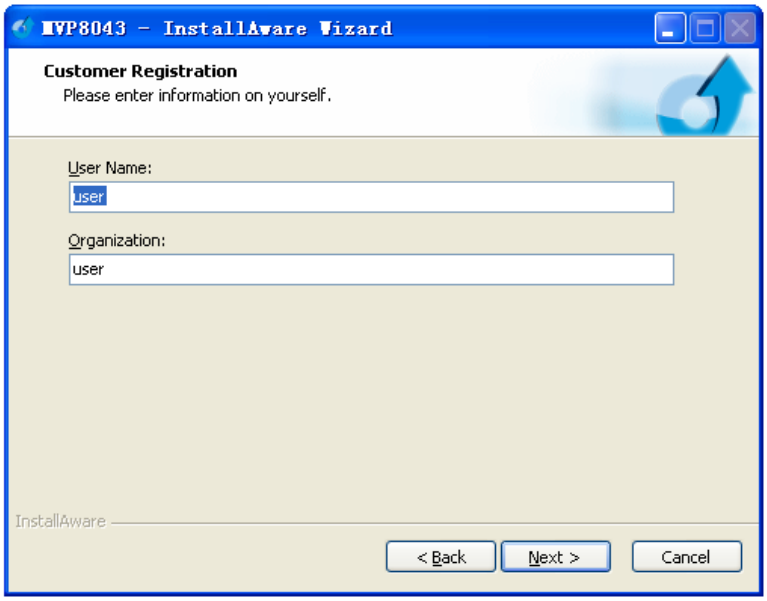


And in next dialog is the user agreement of the software, click Agree to go on:

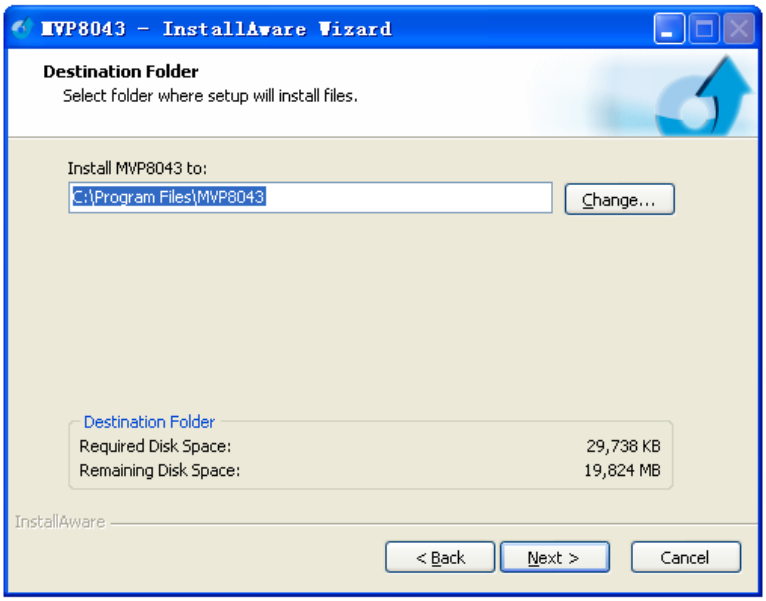


5. Communication Software Guideline

Software Installation



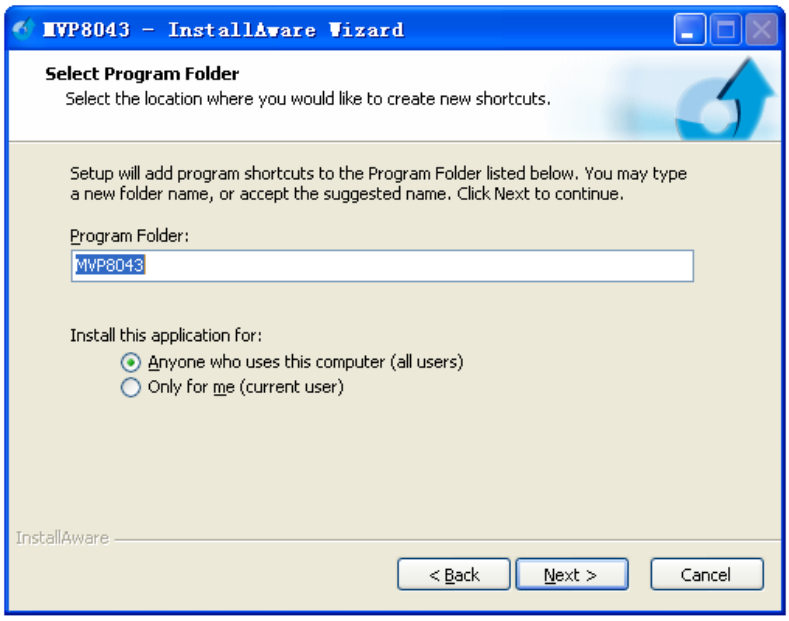
User can select “Change” to choose the MVP 8043 install software:



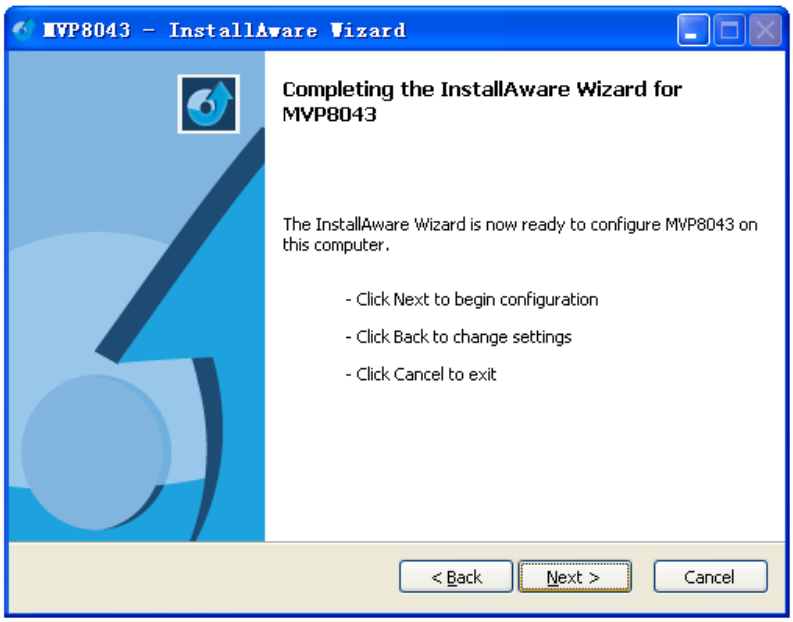
5. Communication Software Guideline

Software Installation

Click “Next” to go on:



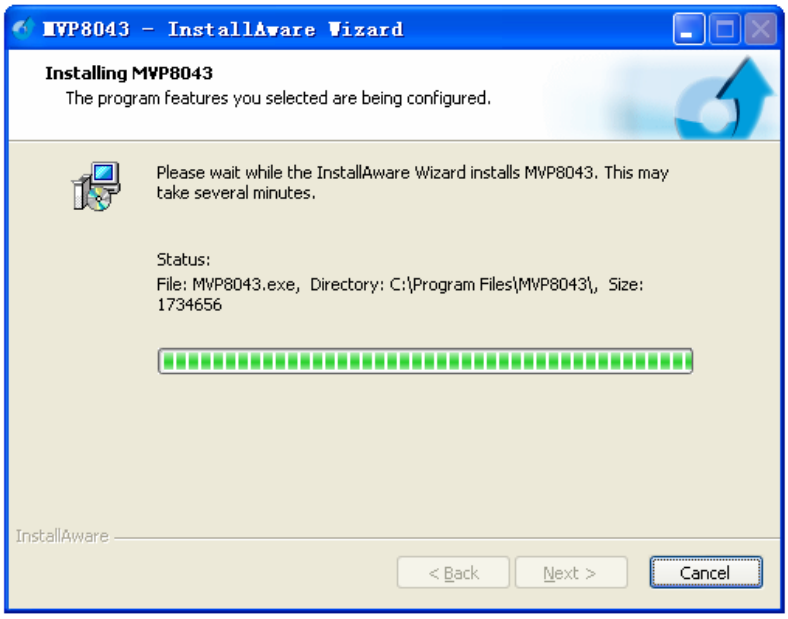
Click “Next” to go on:



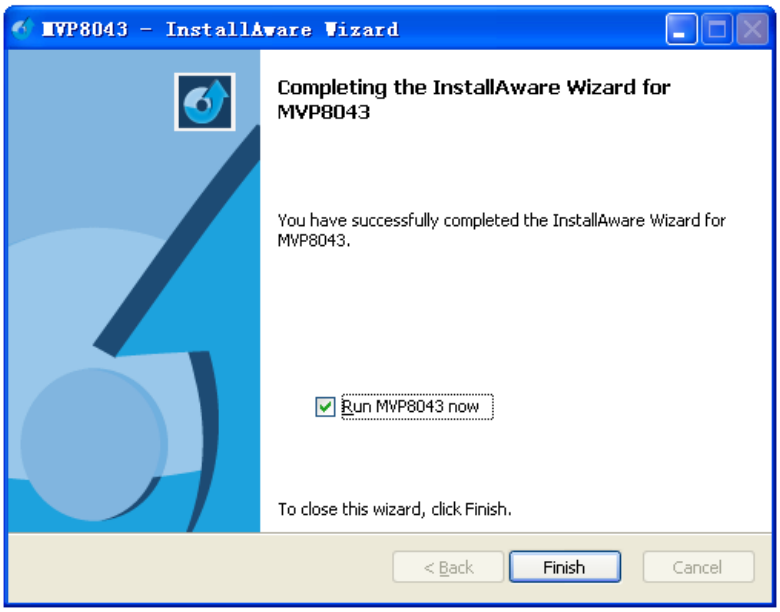
5. Communication Software Guideline

Software Installation

Click “Next” to go on:



Click “Finish” and ready to run MVP 8043 console:



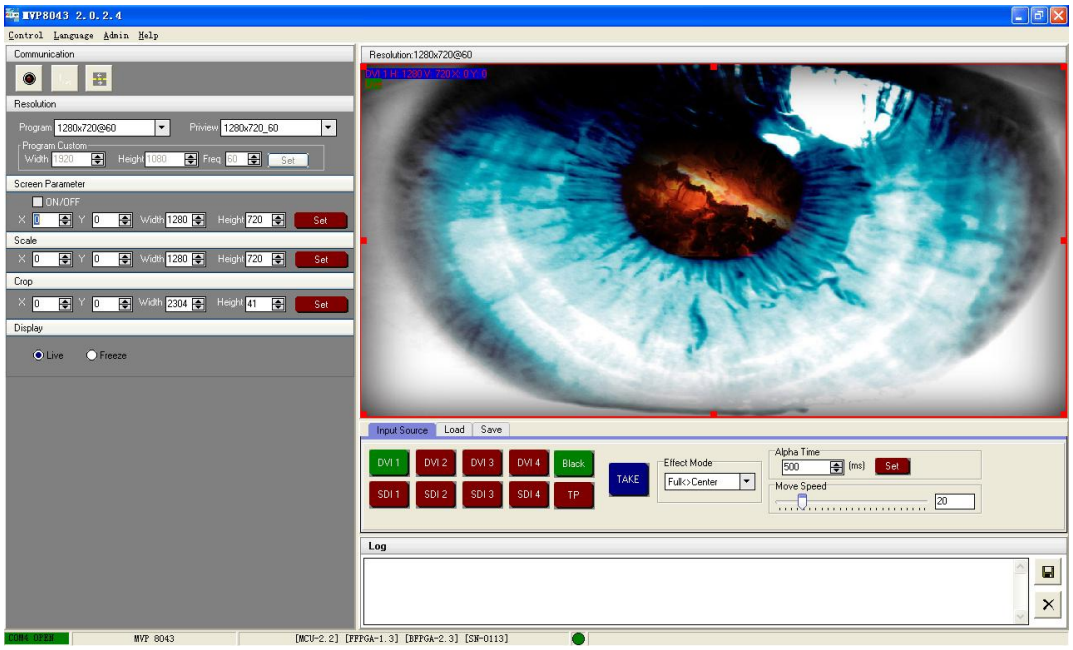
Software Operation

Install communication which comes with the package of MVP 8043 device.

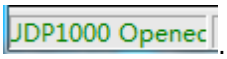
Double click 

icon from home screen to run the software.

MVP 8043 communication software interface are shown as follows:



Connection

Ethernet connection. User can fill any number less than 1023 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 

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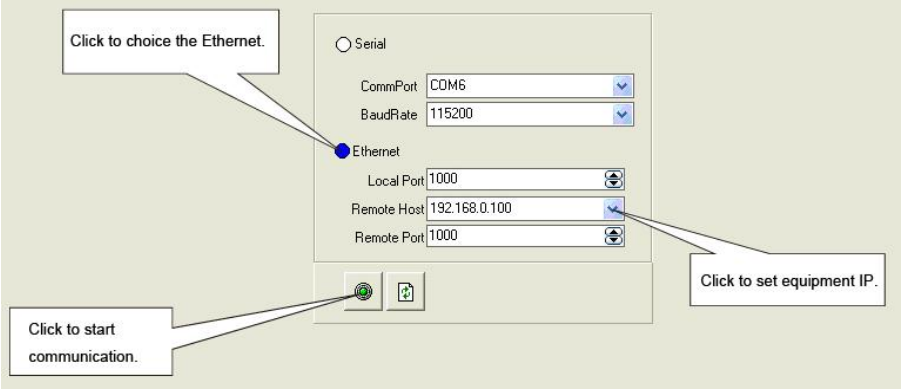
5. Communication Software Guideline

Software Operation

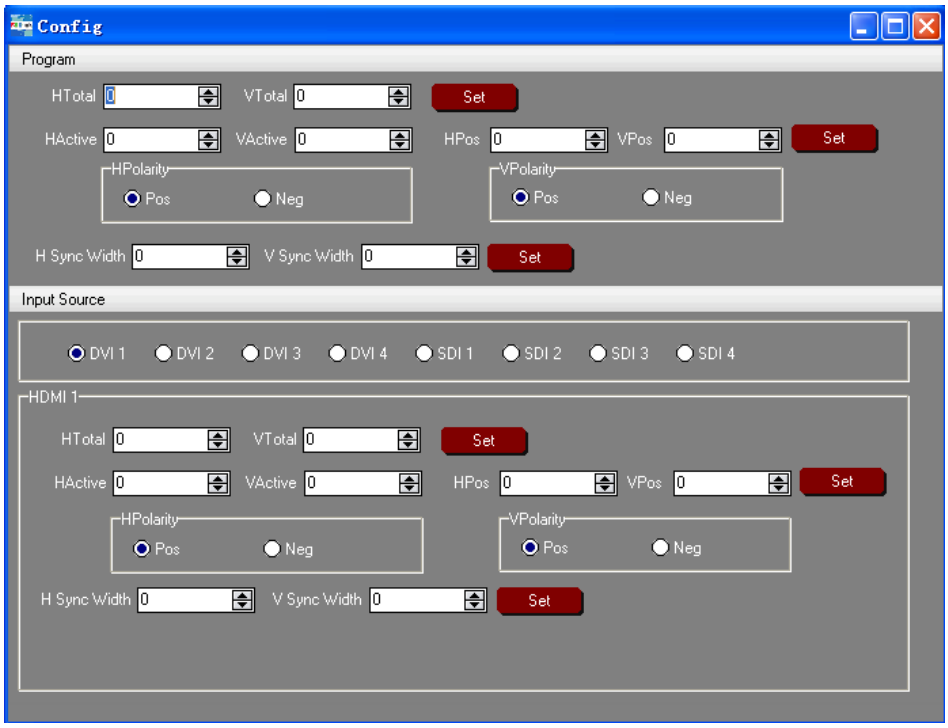


For more detailed information, please refer to: "**How to Connect Windows Control Program by LAN Interface**".

In addition, user can also connect the computer and video processor with USB interface to control PC software. Please refer to "**How to Connect Windows Control Program by USB Interface**" for more detailed information.

Control

Cofig



In Program area, user can set the program timing, and click 

after setting.

Note

Same as MENU→ Output→ Program Timing.

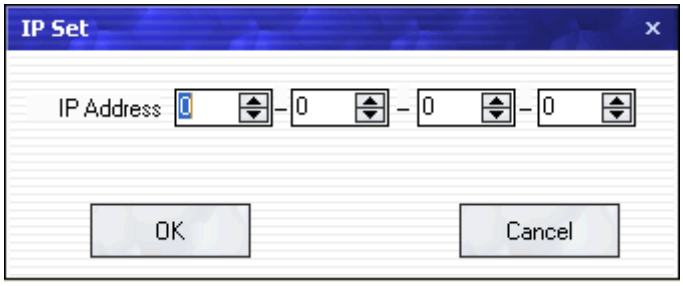
In Input area, choose the input source firstly, then adjust timing. and click Set after setting.

Note

Same as MENU→ Input→ Input source →Timing Adjust.

Device IP

Users can set the device IP, and 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.



Note

Same as MENU→ System→ Modify IP.

Factory Setup

Click factory setup, and all settings will reset to factory defaults.

Note

Same as MENU→ Reset.

5. Communication Software Guideline

Software Operation

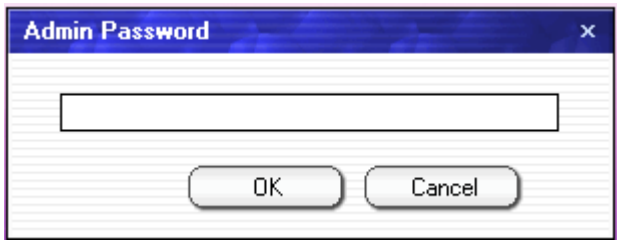
Language

The software supports Chinese and English version.

Admin

Advance Debug

User should input the password in the “Admin Password” dialog for advance debug.



Note

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

Help

Version Explain

Display the content of software update.

About

Display the information of the software version and the company.

5. Communication Software Guideline

Software Operation

Communication

 : Open COM.

 : Close COM.

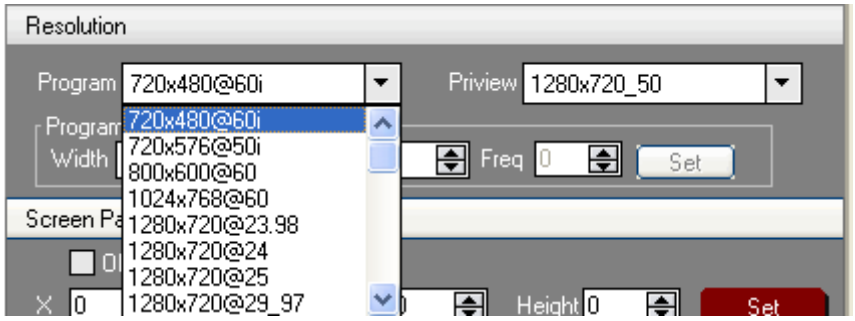
 : Set COM.

 : Synchronization.

Resolution

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

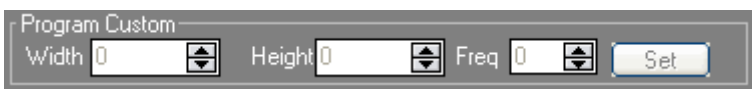
MVP 8043 has 35 output resolutions in Program and 2 output resolutions in Preview for user selection.



Note

Same as MENU→ Output→ Program→ Program Format.

User can also custom the program resolution in Program Custom area according to their actual need, and click  after setting.

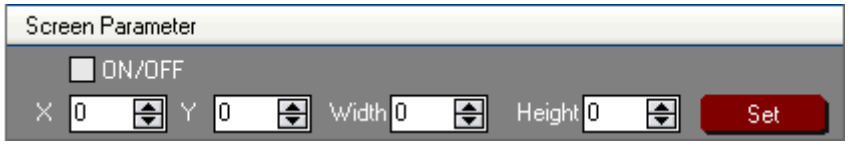


Note

Same as MENU→ Output→ Program→ Program Custom Format.

Screen Parameter

Choose ON, user set size and position of the screen, it mainly applies to LED screens users. After setting, the image will display on corresponding screen directly.



Note

Same as MENU→ Output→ Screen.

Scale

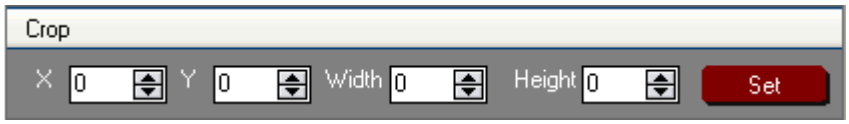
User can adjust image X and Y coordinate values, the width and height value by changing the number or click the pull down arrow or drag the edge of image to scale the image.

Note

The setting can also be realized through the SCALE button.

Crop

User can change the number or click the pull down arrow, or drag the edge of image to crop the image.

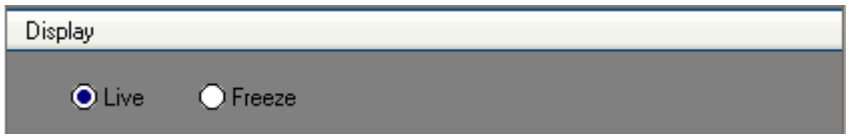


Note

The setting can also be realized through the CROP button.

Display

There are two different display modes, Live is normally broadcast video, while Freeze ceases to play video but only shows a frame of picture.

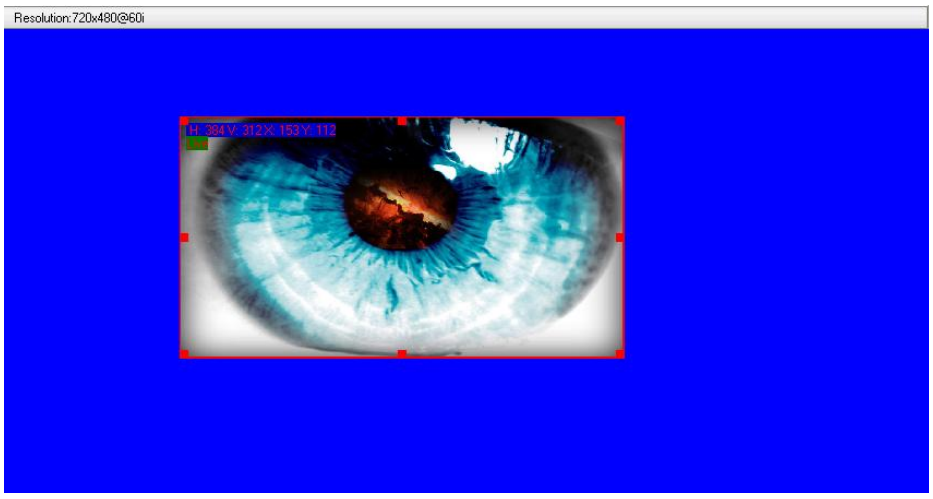


Note

The setting can also be realized through the FREEZE button.

Images Display Toolbar

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

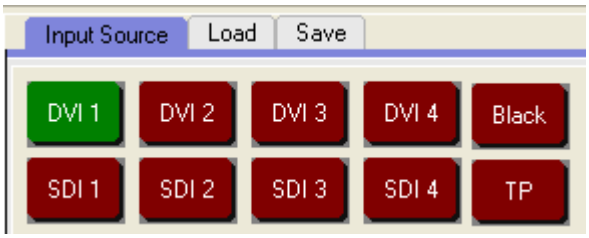


Input Source

5. Communication Software Guideline

Software Operation

User can choose the input signal by clicking the following input sources, which include: DVI1, DVI2, DVI3, DVI4, SDI1, SDI2, SDI3, SDI4 and Black.



Load

Click the load modes option to load the saved parameter, the system provides 10 kinds of save modes for customer choose.

Note

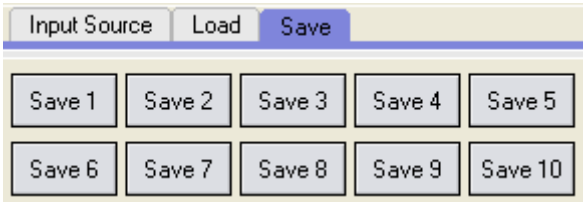
This setting also can be realized through the Load button.

Note

When reboot, equipment loads user mode 1 automatically.

Save

Click save modes to confirm after finishing the parameter adjustment. The system provides 10 kinds of save modes, and user can load the saved parameters in load area after save successfully.



Note

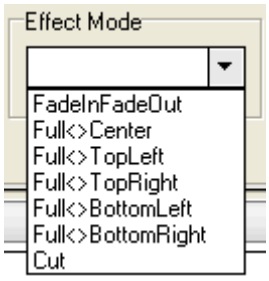
This setting also can be realized through the Save button.

TAKE

: Signal, black and special effects switch button. Choose the signal or effect switch, and push TAKE button to get the effect switch.

Effect Mode

Click the pull down arrow to choose the different effect modes.

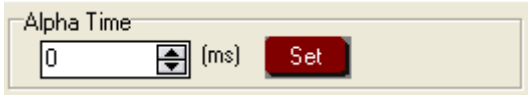


Note

Same as MENU⟶Effect⟶ Move 1/Move 2.

Alpha Time

Click the pull down arrow to set the alpha time.



Note

Same as MENU⟶ Effect⟶ Alpha Time.

Move Speed

Click the pull down arrow to set the move speed.

5. Communication Software Guideline

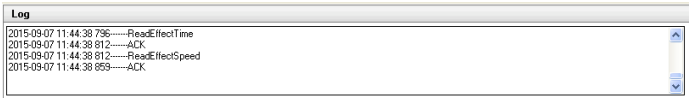
Software Operation

Note

Same as MENU → Effect → Move Speed.

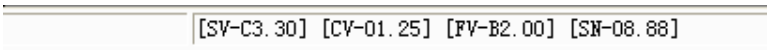
Log

User can save or delete the operate log file.



Information Toolbar

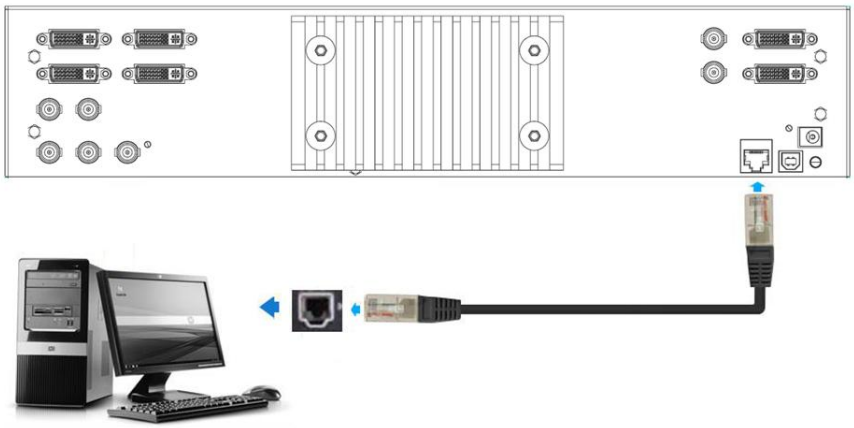
Display the software version, core board version, firmware version and the serial number in bottom of the software interface.



How to Connect Windows Control Program by LAN Interface

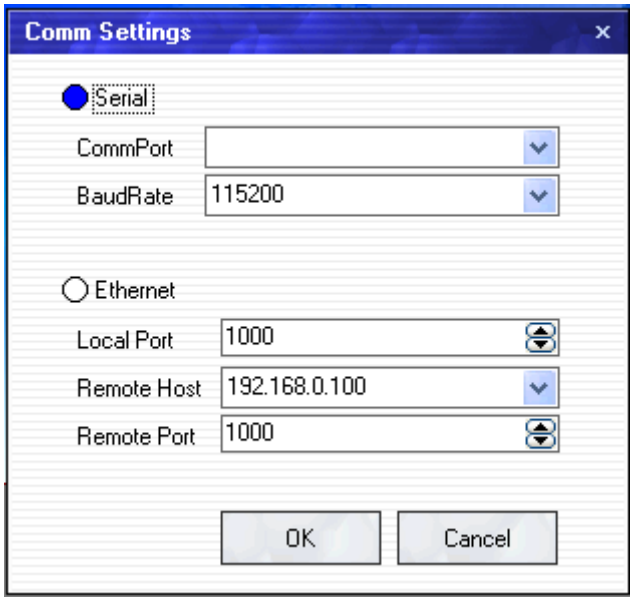
First, install the upper computer software in the computer.

Connect MVP 8043 and computer with cable, the connection diagram is as follows:



Power on MVP 8043, start the network function, specific steps are as follows: MENU--SYSTEM -- Modify IP, select ON, and check the IP address of the equipment, confirm if it is consistent with the computer, such as 192.168.0.***, take 192.168.0.100 for example.

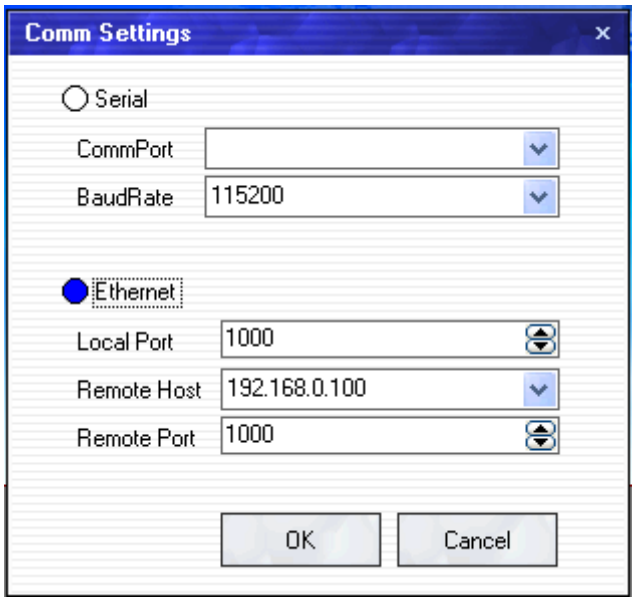
Open the upper computer software, click  , interface is shown as follows:



5. Communication Software Guideline

How to Connect Windows Control Program by LAN Interface

Choose [Ethernet].



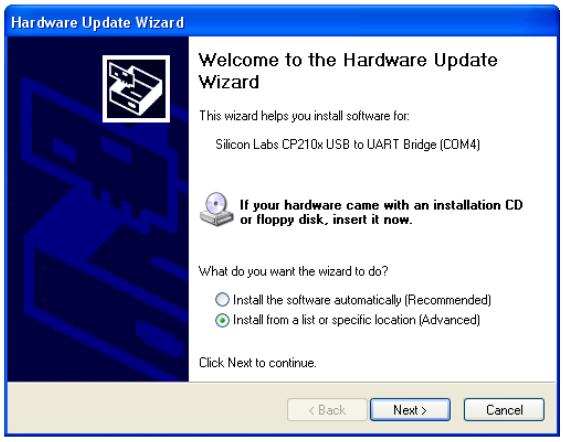
Input IP address, click [OK].

Click  to open the serial port, check the if the [Comm] icon in the lower-right corner of the control software interface is green, and log outputs information smoothly, then it can control the device through PC software.

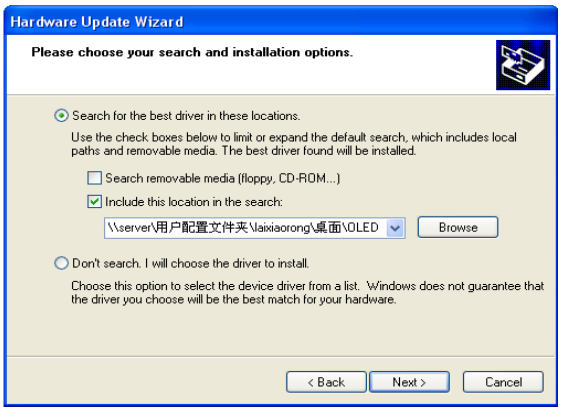
How to Connect Windows Control Program by USB Interface

Install the driver.

Connect the USB cable to the PC and the video processor. Turn on the MVP 8043, 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:



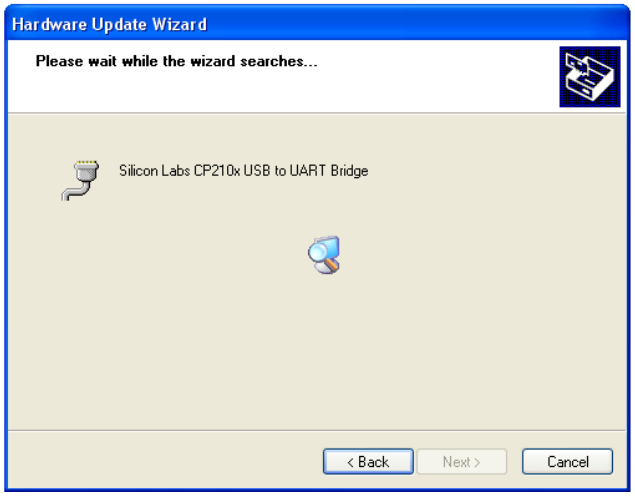
Install from the list or specified location, push “NEXT”.



Push “browser” to find the driver, and push “NEXT”:

5. Communication Software Guideline

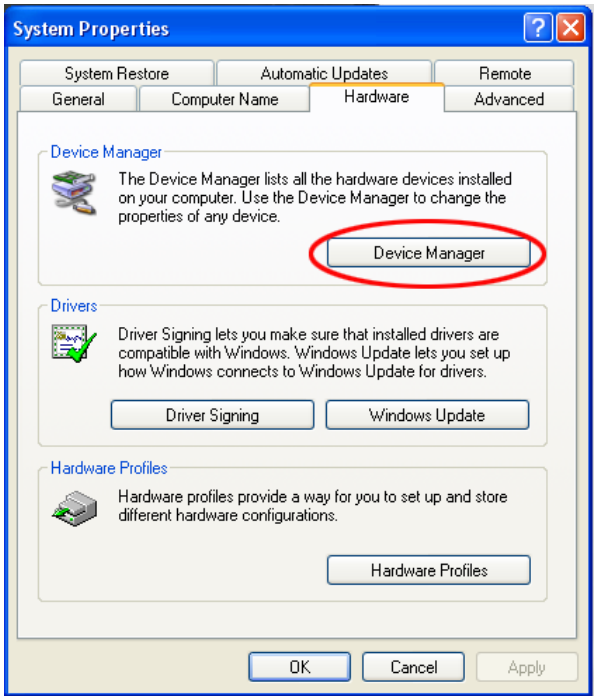
How to Connect Windows Control Program by USB Interface

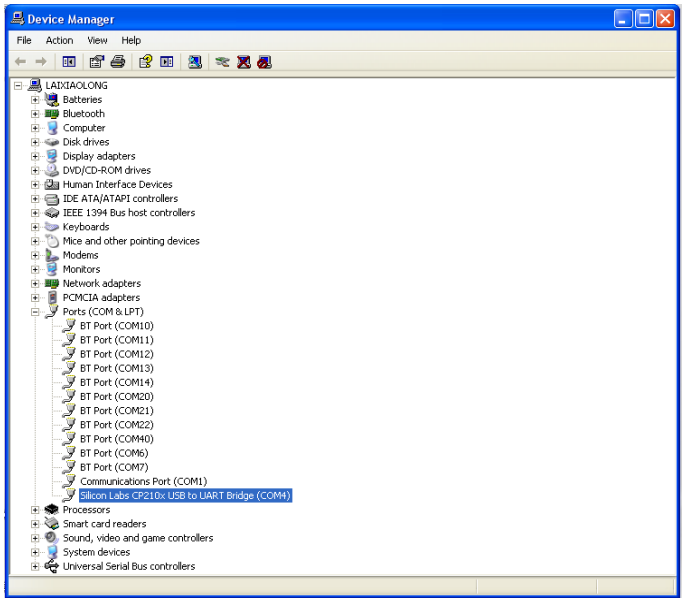


When the installation finish, can go to check the installed COM port inside the device management, as following picture shows:

5. Communication Software Guideline

How to Connect Windows Control Program by USB Interface



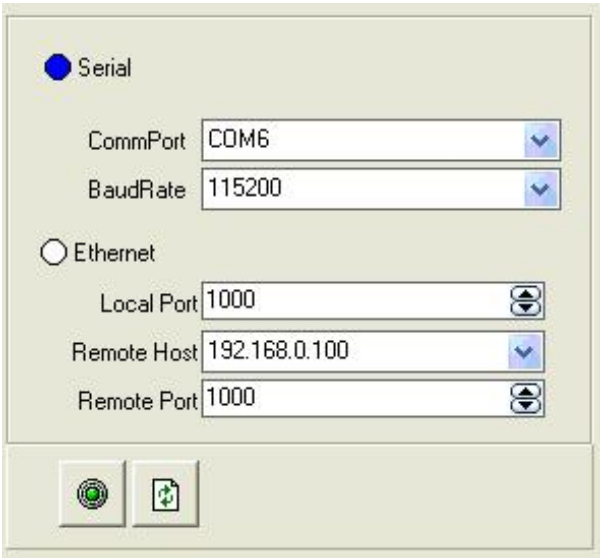


Install the console software, and run after install, shows the interface of the console as following:

Select the COM as installed just now, and set the MVP 8043 Boud Rate to be: 115200.

5. Communication Software Guideline

How to Connect Windows Control Program by USB Interface



Push  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 MVP 8043.

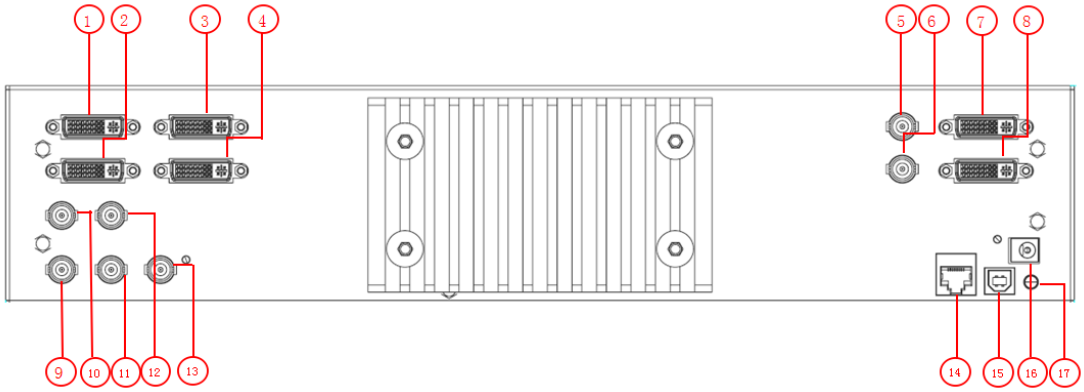
6. System Setup and Operations

In This Chapter

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

- Interface and Signal Option
- How to Confirm the Device is in Normal Operation
- How to Choose the Language on the LCD
- How to Adjust the Output Resolution
- How to Realize Signal Switching
- How to Set up the Size and Position of Single Image
- How to Crop Input Image
- How to Use Black Out
- How to Realize GENLOCK
- How to Switch Between Preview and Program
- How to Realize Preview Image Full Display
- How to Select Move Effects Switching
- How to Save the Parameter
- How to Load the Saved Parameter

Interface and Signal Option



NO.	INTERFACE	NO.	INTERFACE
1~4	DVI Input	13	Genlock Input
5	Preview SDI Output	14	10/100M Interface RJ45
6	Program SDI Output	15	USB Interface
7	Preview DVI Output	16	Power
8	Program DVI Output	17	Upgrade Button
9~12	SDI Input		

5. Preview SDI Output, output can be programmed as preview output, connect to the display with SDI interface.

Support resolution: 1280x720@50, 1280x720@60.

6. Program SDI Output, can connect with next displayer or send signal to LED through sending card. Output signal through SDI interface.

Support resolution:

720x480@60i, 720x576@50i, 800x600@60, 1024x768@60, 1280x720@23.98, 1280x720@24, 1280x720@25, 1280x720@29.97, 1280x720@30, 1280x720@50, 1280x720@59.94, 1280x720@60, 1280x768@60, 1280x800@60, 1280x1024@60, 1360x768@60, 1366x768@60, 1440x900@60, 1400x1050@60, 1600x1200@60, 1680x1050@60, 1920x1080@50i, 1920x1080@59.94i, 1920x1080@60i, 1920x1080@23.98, 1920x1080@24, 1920x1080@25,

1920x1080@29.97, 1920x1080@30, 1920x1080@50,

1920x1080@59.94, 1920x1080@60, 1920x1200@60, 2048x1152@60,

2560x816@60.

7. Preview DVI Output, output can be programmed as preview output, output DVI signal, connect to the display with DVI-I interface.

Note

DVI-I is compatible with HDMI.

Support resolution: 1280x720@50, 1280x720@60.

8. Program DVI Output, can connect with next displayer or send signal to LED through sending card. Output signal through DVI-I interface.

Note

DVI-I is compatible with HDMI.

Support resolution:

720x480@60i, 720x576@50i, 800x600@60, 1024x768@60,

1280x720@23.98, 1280x720@24, 1280x720@25, 1280x720@29.97,

1280x720@30, 1280x720@50, 1280x720@59.94, 1280x720@60,

1280x768@60, 1280x800@60, 1280x1024@60, 1360x768@60,

1366x768@60, 1440x900@60, 1400x1050@60, 1600x1200@60,

1680x1050@60, 1920x1080@50i, 1920x1080@59.94i, 1920x1080@60i,

1920x1080@23.98, 1920x1080@24, 1920x1080@25,

1920x1080@29.97, 1920x1080@30, 1920x1080@50,

1920x1080@59.94, 1920x1080@60, 1920x1200@60, 2048x1152@60,

2560x816@60.

1~4. DVI 1/2/3/4 Input: Input the video signal from HD player, DVD, and computer. Connect to the same DVI interface on MVP 8043.

(This connector does not support hot-plugging).

Note

DVI-I is compatible with HDMI.

9~12. SDI Input: Can receive video signal from HD player, and HD camera. Connect interface 16 via 75 ohms BNC port., and connect LED screens via network cable.

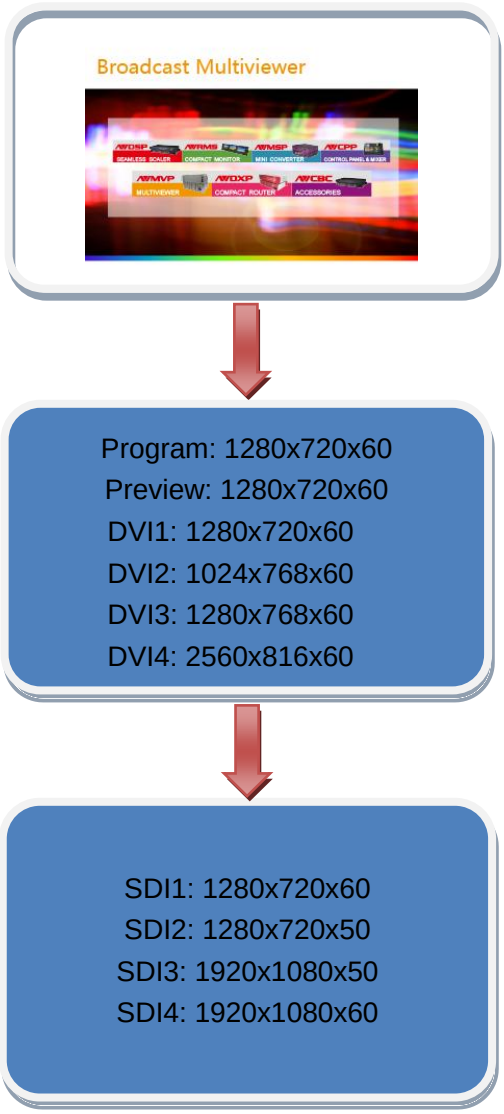
13. Genlock Input: Can receive video signal from controller or signal generator, etc.

15. USB Interface: For device upgrade.

16. Power: Use the standard 12V/3A power supply.

How to Confirm the Device is in Normal Operation

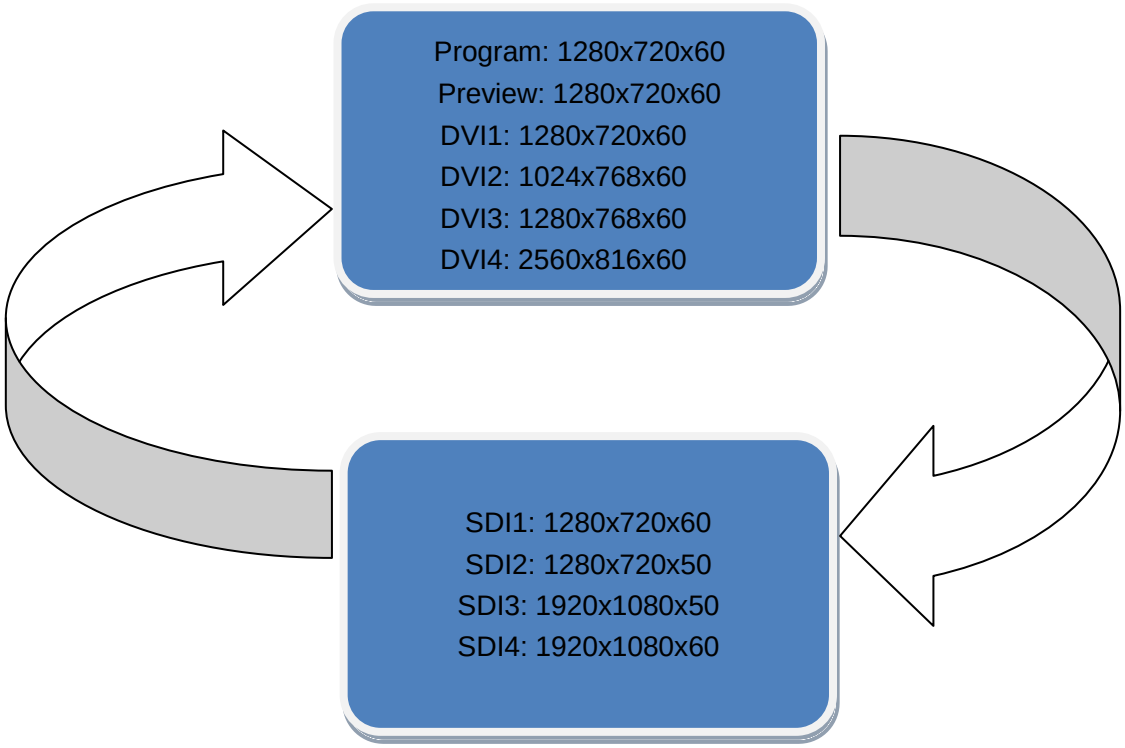
1. Make sure device is powered on and in normal operation.
2. LCD module shows company information and go into self verification.
3. Device starts system, LCD screen shows as below:



4. Then, system goes into the circulation statement. Cycle process displays the current input signal source and the current output format.

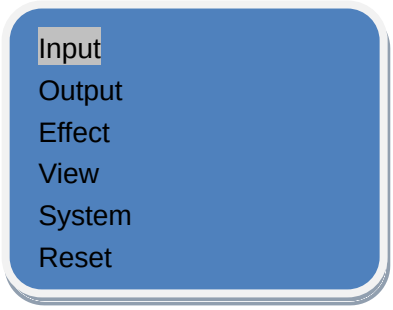
6. System Setup and Operations

How to Confirm the Device is in Normal Operation

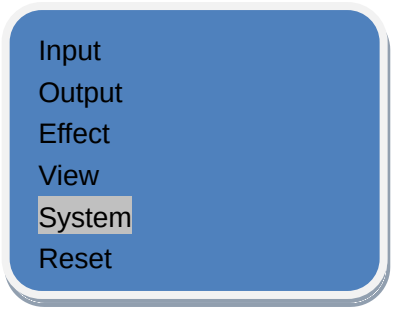


How to Choose the Language on the LCD

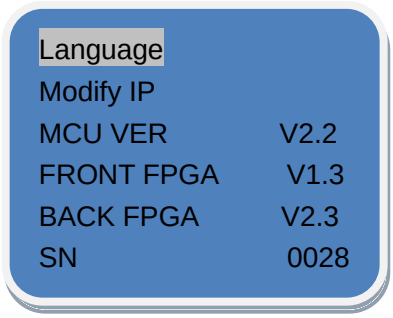
1. Push the [MENU] button to enter menu items.



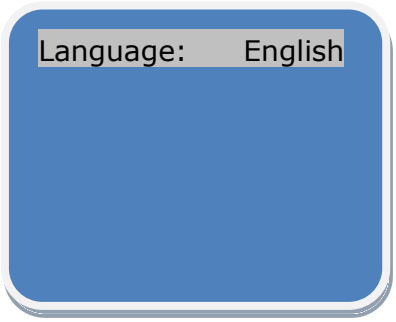
2. Turn the knob and choose <System> option:



3. Push the knob to confirm, LCD displays as follows:

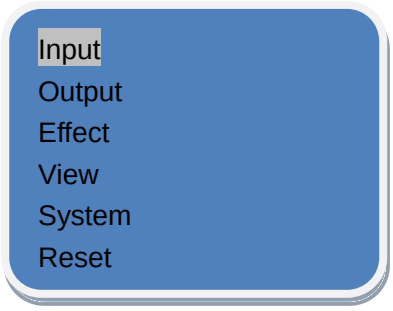


4. Push the knob to confirm, turn the knob and choose <English>, push the knob to confirm, and change “Chinese” to “English”.

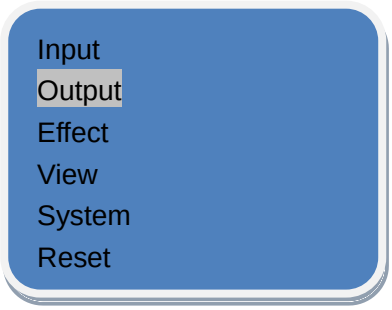


How to Adjust the Output Resolution

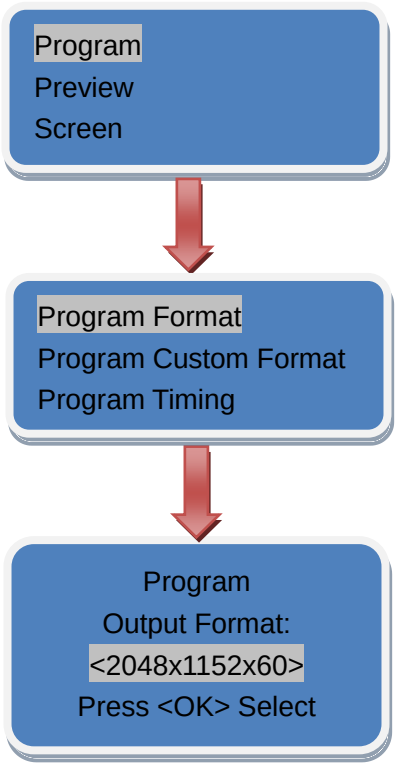
1. Push the [MENU] button to enter menu option:



2. Turn the knob and choose <Output>, push the knob to confirm, and enter to the next level menu.



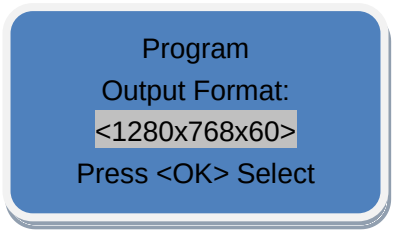
3. Choose <Program>, and enter <Program Format>, push the knob to confirm:



6. System Setup and Operations

How to Adjust the Output Resolution

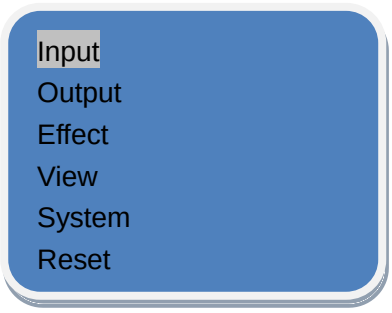
4. Choose the output resolution, for example, choose 1280x768x60.



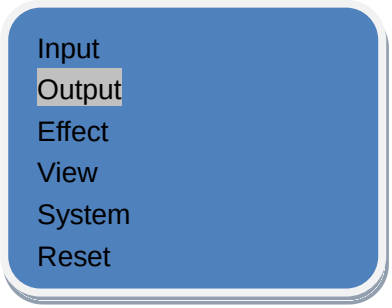
5. Push the knob to confirm, and finish the choice of resolution.

User can also custom the resolutions according to actual need. And the operations are as follows:

1. Push the [MENU] button to enter menu option:



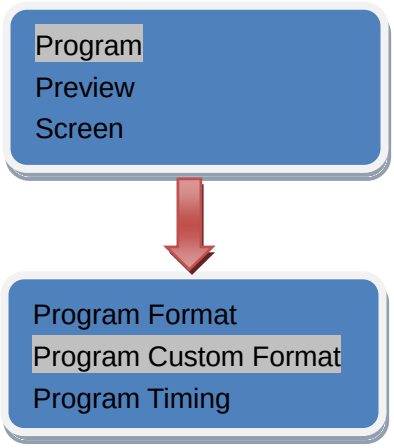
2. Turn the knob and choose <Output>, push the knob to confirm, and enter to the next level menu:



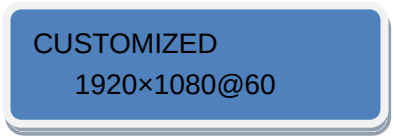
3. Choose <Program>, and enter <Program Custom Format>, push the knob to confirm.

6. System Setup and Operations

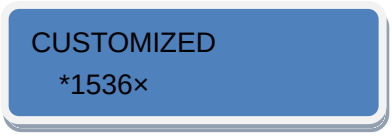
How to Adjust the Output Resolution



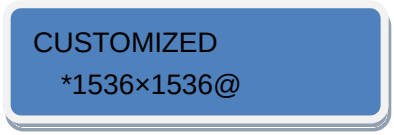
4. Push the knob to confirm.



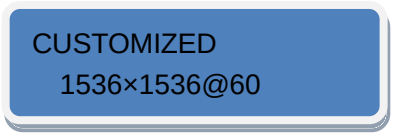
5. Turn knob on each bit position, and change the value of the bit by the digital buttons on the front panel. For example, input 1536 as following:



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



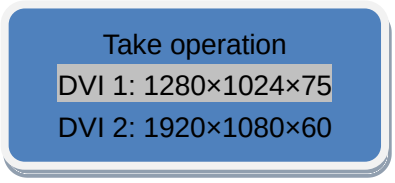
7. After the digital push knob will add @, means before @ is the vertical size. Same operation by push digital buttons to set the refresh rate. For example to input refresh rate 60:



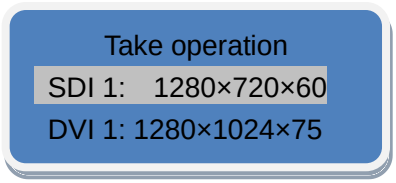
8. After input all the values, push knob to enable MVP 8043 to output this resolution. MVP 8043 will take 5 to 10 seconds to enable this output resolution.

How to Realize Signal Switching

System default DVI1 to the current input source (key lights) when boot, LCD displays as follows:



If need switch to other source such as SDI1, push the SDI1 button, key flashes, again push the [TAKE] button, SDI1 key lights, and switch SDI1 to Program output, LCD displays as follows:

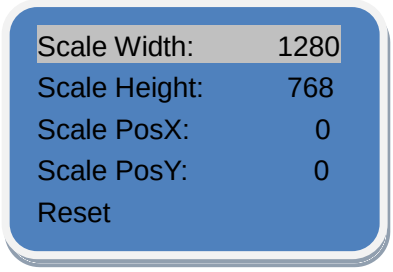


After choose SDI1 signal, the former button DVI1 flashes, and SDI1 key lights, it realize the input signal switching (Switch input signal DVI1 to SDI1).

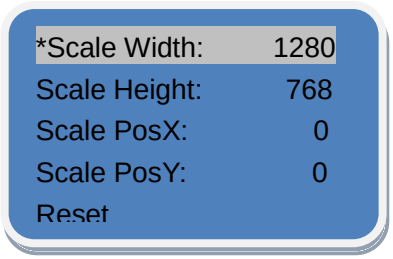
Same with above, switch DVI2, DVI3, DVI4, SDI2, SDI3 and SDI4.

How to Set up the Size and Position of Signal Image

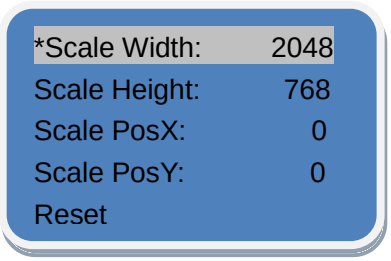
1. Push the [SCALE] button to enter menu option.



2. Choose the item to set, push the knob to confirm, it is selected when appear “*” before the item need to set, for example, choose <Scale Width>:



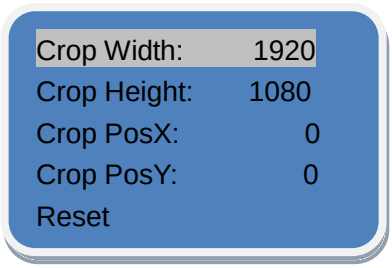
3. Turn the knob and set the value, for example: 2048:



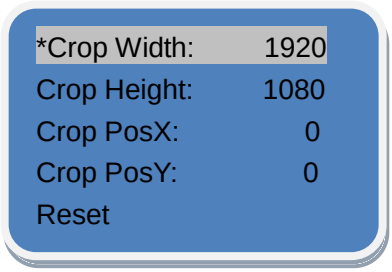
4. Push the knob to confirm, and finish the setting.

How to Crop Input Image

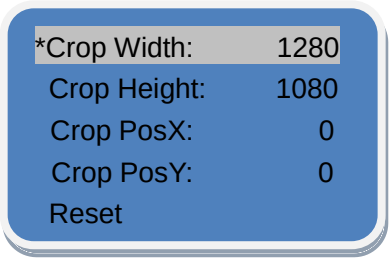
1. Push the [CROP] to enter menu option:



2. Choose the item and push the knob to confirm, it is selected when appear “*” before the item need to set, for example, choose <Crop Width>:



3. Turn the knob and set the value, for example: 1280:



4. Push the knob to confirm, and finish the crop setting.

How to Use Black Out

Black out description:

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

MVP 8043 BLACK provides effect processing on Program output and Preview output, BLACK by fade in fade out effect. Operations are as follows:

1. Choose output signal.
2. Push the [BLACK] button, key light flashes.
3. Then push the [TAKE] button, BLACK key light, then output switch to black with fade in fade out effect, as shown below:




4. Again push the [TAKE] button, BLACK key flashes, and return to output image.

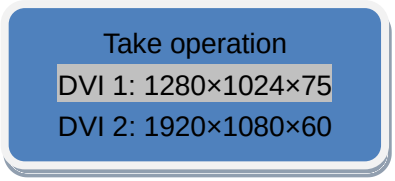
How to Realize GENLOCK

1. Input sync signal from controller or signal generator.
2. Push the [GENLOCK] button, key lights, the output will be sync to the reference input timing. Each time the button push, will sync to the reference input once.

   When push the [GENLOCK] button again, the function is cancel, and the sync signal has no effect on the device.

How to Switch Between Preview and Program

1. System default DVI1 to the current input source (key lights) when boot, LCD displays as follows:



2. Choose any other signal, for example, DVI2, DVI2 button flashes, red frame of DVI2 corresponding image flashes, and the image is in Preview state.
3. Push the [TAKE] button, DVI2 key light is on, and it is switched to Program output and the former DVI1 key flashes. red frame of DVI1 corresponding image flashes, the image is in Preview state.
   Same with above, it can realize the preview and program switching among DVI3, DVI4, SDI1, SDI2, SDI3, SDI4.

How to Realize Preview Image Full Display

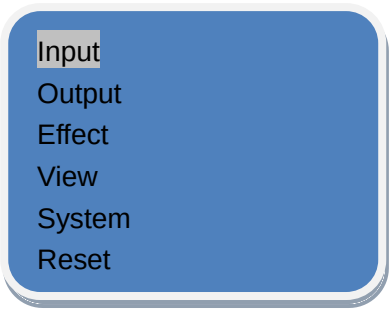
1. Choose Preview signal, for example: DVI2, DVI2 key flashes, red frame of DVI2 corresponding image flashes, and the image is in Preview state.

2. Push the [MODE] button, MODE key light is on, and the Preview image Is full displayed:

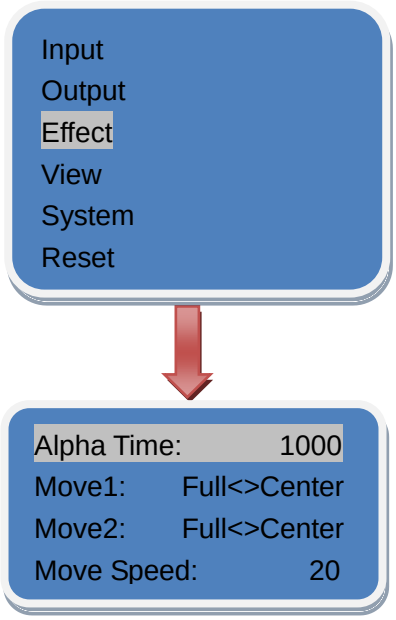
3. Push the [MODE] button again, MODE key light is off, and exit the full display.

How to Select Move Effects Switching

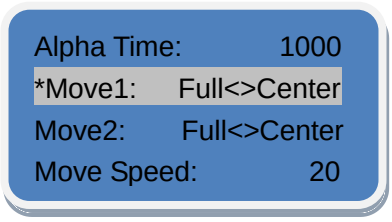
1. Push the [MENU] button to enter to the menu option.



2. Turn the knob and choose <Effect>, push the knob to confirm, and enter to next level menu:



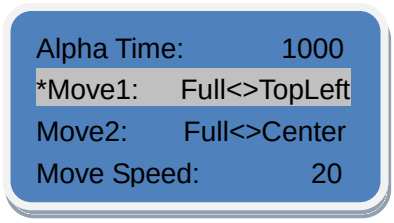
3. Turn the knob and choose Move1 or Move2, for example, choose Move1:



4. Push the knob to confirm, turn the knob and choose move effect, for example, choose <TopLeft:>:

6. System Setup and Operations

How to Select Move Effects Switching

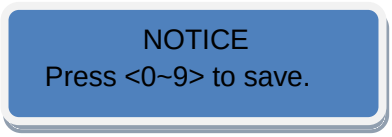


5. Push the knob to confirm and finish MOVE1 effect shortcut setting, push the [MOVE1] button, and then push the [TAKE] button, it can achieve MOVE1 effect switching.
6. Same with above, set the MOVE2 effect switching.

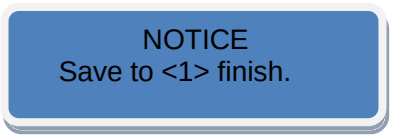
How to Save the Parameter

MVP 8043 provides ten save modes.

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



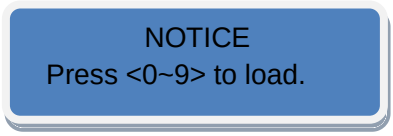
2. DVI1, DVI2, DVI3, DVI4, SDI1, SDI2, SDI3, SDI4, BLACK, TP lights are on at the same time.
3. The numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 0 are corresponding save mode 1~10, select the number to save the current user data. For example, push button [1], and save the parameter to SAVE 1.



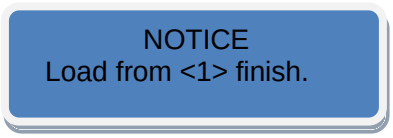
How to Load the Saved Parameter

MVP 8043 provides ten load modes.

1. Push the [LOAD] button, the key light is on, and enable the LOAD function.



2. DVI1, DVI2, DVI3, DVI4, SDI1, SDI2, SDI3, SDI4, BLACK, TP lights are on at the same time.
3. The numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 0 are corresponding load mode 1~10, select the number to load the saved parameter. For example, push button [1] to load from SAVE 1.



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:

The Output Image Cannot be Displayed

Cause:

1. No input of signal.
2. Output cable is damaged or beyond the transmission distance.
3. Problem with the LED display.
4. The output resolution is wrong.

Solution:

1. Check the input signal source, confirm if the input signal channel is normal.
2. Check the OUT connecting output equipment, and IN connecting the input equipment.
3. Use high-quality cable to make sure stable and high quality image.
4. Check if the LED display is in standby mode or damaged.
5. Check if the output solution is beyond LED display's max resolution, if so, please change it in the menu.

Color Shading in Image

Cause:

1. The port is not well connected, which results in the poor touch.
2. Broken signal wire.
3. Wrong color adjustment of the equipment.

Solution:

1. After the connecting the port, please tighten the screw and prevent the movement caused by pulling.
2. Please replace with a good quality cable.
3. Adjust the color balance of the display equipment by referring to the manuals of the display equipment.

Shaking and Spotted Image

Cause:

1. The cable is too long to make the despairing of the signal.
2. Unstable input signal or the damaged wire.

Solution:

1. Suggest use the signal extension to make sure the minimum wire damage.
2. Adjust the input signal function definition and use the good wire line.

Dark Edge Appears in LED Display

Cause:

1. The display equipment has down the back cutting to signal.
2. Too much adjustment to the images.

Solution:

1. Adjust to the default setting in the software according to the equipment instructions.
2. Re-adjust the picture location to get the expected effects.

A. Specification

DVI Input	
Number of Inputs	4
Connector	Standard DVI-I socket
Supported Resolution	SMPTE: 25@25/50 PAL | 25@29.97/59.94 NTSC 720p@50/59.94/60 | 1080p@50/59.94/60 | 1080i@50/59.94/60 VESA: 800x600@60 | 1024x768@60 | 1280x768@60 1280x1024@60 | 1600x1200@60 | 1920×1080@60
Signal Level	TMDS pwl, single pixel input,165MHz bandwidth
Format Standard	HDMI 1.3
SDI Input	
Number of Inputs	4
Connector	BNC
Supported Resolution	25@25/50 PAL | 25@29.97/59.94 NTSC 1080p@50/59.94/60 | 1080@i50/59.94/60 | 720p@50/60 | 1080i@59.94/60 1080p@23.98/24/25/29.97/30/59/59.94/60 | 1080psf@23.98/24/25/29.9730
Transmission speed	19.4Mbps~1.5Gbps
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
Preview SDI Output	
Number of Outputs	1
Connector	BNC
Supported Resolution	1280x720@50 | 1280x720@60
Supported Standard	ITU-R BT.656,ITU-R BT.601,SMPTE 259M, SMPTE 292, SMPTE 297
Program SDI Output	
Number of Outputs	1
Connector	BNC
Supported Resolution	SMPTE: 25@25/50 PAL | 25@29.97/59.94 NTSC 1080p@50/59.94/60 | 1080@i50/59.94/60 | 720p@50/59.94/60 | 1280x720@23.98/24/25/29.97/30 | 1920x1080@23.98/24/25/29.97/30 VESA: 800x600@60 | 1024x768@60/75/85 | 1280x720@50/60 | 1280x800@60 | 1280×1024@60 1360x768@60 | 1366×768@60 | 1400×1050@60 |

	1440×900@60 | 1600×1200@60 | 1680×1050@60, 1920×1080@60 | 1920×1200@60 | 2048×1152@60 | 2560×816@60
Supported Resolution	ITU-R BT.656,ITU-R BT.601,SMPTE 259M, SMPTE 292, SMPTE 297
Preview DVI Output	
Number of Outputs	1
Connector	Standard DVI-I socket
Signal Level	TMDS pwl, 165MHz bandwidth
Supported Resolution	1280x720@50 | 1280x720@60
Program DVI Output	
Number of Outputs	1
Connector	Standard DVI-I socket
Signal Level	TMDS pwl, 165MHz bandwidth
Supported Resolution	SMPTE: 25@25/50 PAL | 25@29.97/59.94 NTSC 1080p@50/59.94/60 | 1080@i50/59.94/60 | 720p@50/59.94/60 | 1280x720@23.98/24/25/29.97/30 | 1920x1080@23.98/24/25/29.97/30 VESA: 800x600@60 | 1024x768@60/75/85 | 1280x720@50/60 | 1280x800@60 | 1280×1024@60 1360x768@60 | 1366×768@60 | 1400×1050@60 | 1440×900@60 | 1600×1200@60 | 1680×1050@60, 1920×1080@60 | 1920×1200@60 | 2048×1152@60 | 2560×816@60
Extras	
Communication	USB,TCP/IP
Power Supply	DC 12V
Working Environment	0°C~45°C
Stored Environment	10% to 90%
Product Warranty	3 years parts and labor warranty

B. Contact Information

Warranty:

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

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

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

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