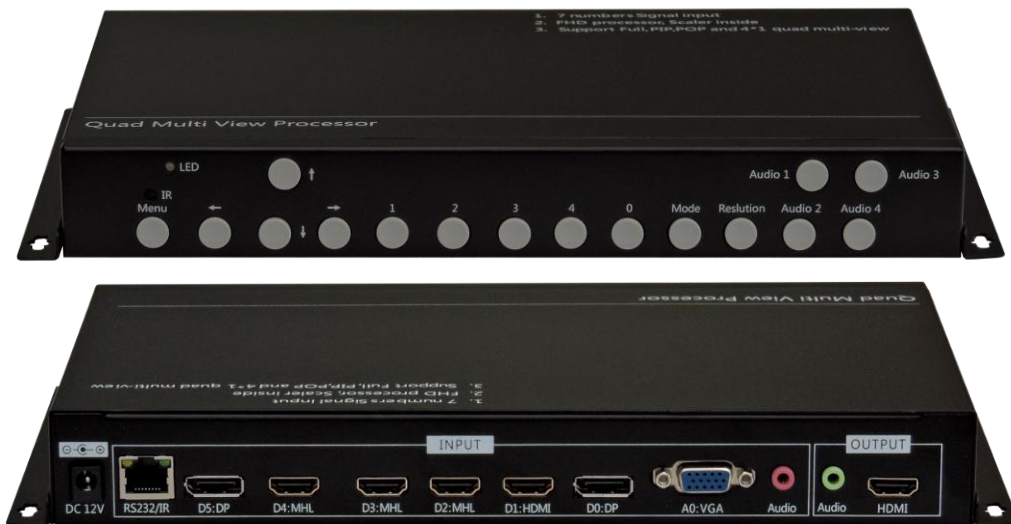


VISSONIC

7x1 Multiviewer & Scaler with Audio

V1.2 Version

VISSONIC ELECTRONICS LIMITED



Operating Instructions

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Chapter One Installation Notes

For your safety and equipment security, please be sure reading the safety instructions carefully before using the machine.

If you have doubts in the use, please read this manual first. Described in detail in the body of the device's operation. If you still have questions, please contact us, we will give you a satisfactory answer as soon as possible.

Specifications subject to release to change without notice, please understand.

When installing, please note the following:

1 power supply:

Please use with protection to single-phase three-wire AC 100-240V power supply, and ensure that the entire engineering system using the same protected. You can not use unprotected power, the power cord ground pin can not be destroyed.

2 Power:

When you need to move equipment or other work must outage, to shut off all power, including the power switch, unplug the power plug, so as to ensure the safety of your equipment.

3 Cable:

the goods can not put pressure on the power supply lines, signal lines, communication lines, cable should keep from trample or extrusion, to prevent the risk of leakage or short circuit.

4 Signal cable:

Inserting or pulling the signal line to the device, the device needs outage, so as not to damage the device. Hot plug caused damage not covered under warranty.

5 Vents:

The outer surface of the device may have openings for heat dissipation, do not block these openings, in order to avoid heat build-up, the risk of damage to the equipment or cause fire.

6 Equipment placement:

Should a reasonable settlement for devices such as standard rack mount, chassis, cabinets, or placed on a stable flat work surface to prevent the unit from dropping.

7 surroundings:

Equipment working environment should pay attention to dust, moisture, in particular, to prevent the liquid from soaking and splashing into the interior of the device.

8 service:

All repairs should be done by qualified service personnel , untrained Never attempt to repair equipment. To prevent the risk of electric shock, do not open the cabinet.

9 Safety Precautions:

1 the internal high-voltage equipment, non-professional maintenance personnel shall not open the case, to avoid danger;

2 non-dripping or splashing, prohibited place any container with liquid items on the device;

3 for the prevention of fire, Prohibited a device near the fire;

4 for adequate ventilation, equipment should be maintained at least 20CM void of the front and rear panels;

5 devices should be immediately unplug the power cord and handled by professional maintenance personnel such as eerie noise, smell or smoke;

6 In the case of lightning or unused for long periods, unplug the power cord;

7 not stuffed any object to ventilation holes of the device to avoid damage to the equipment or electric shock;

8 not to place the device near water or other damp places;

9 the device should not be placed near heat sink or other high temperature places;

10 properly organize the power cord to prevent breakage;

11 the following conditions should unplug the device power cord, handled by

qualified service personnel:

- 1) the power cord is damaged or frayed;
- 2) When the liquid has been spilled into the device;
- 3) The device is dropped or the cabinet damaged;
- 4) This device malfunction or significant performance changes.

This device is not suitable for non-professionals to operate the debugger, users are subject to professional training and guidance.

Please read carefully before using and this manual should be properly preserved for later use.

Chapter two Product Introduction

1 Product description

VIS-MV71 is a 7x1 Multiviewer for supporting multiple sources on single screen under Quad mode, PIP or POP mode.

The Multiviewer has seven inputs-4xHDMI,2xDisplayPort,1xVGA supporting resolutions up to 1920x1080@60. All digital audio from HDMI & Display and Analogue audio(binding with VGA) are switched to both the digital audio in HDMI and analogue audio out. Control is via OSD,RS232(software or commands),IR remote and front panel buttons.

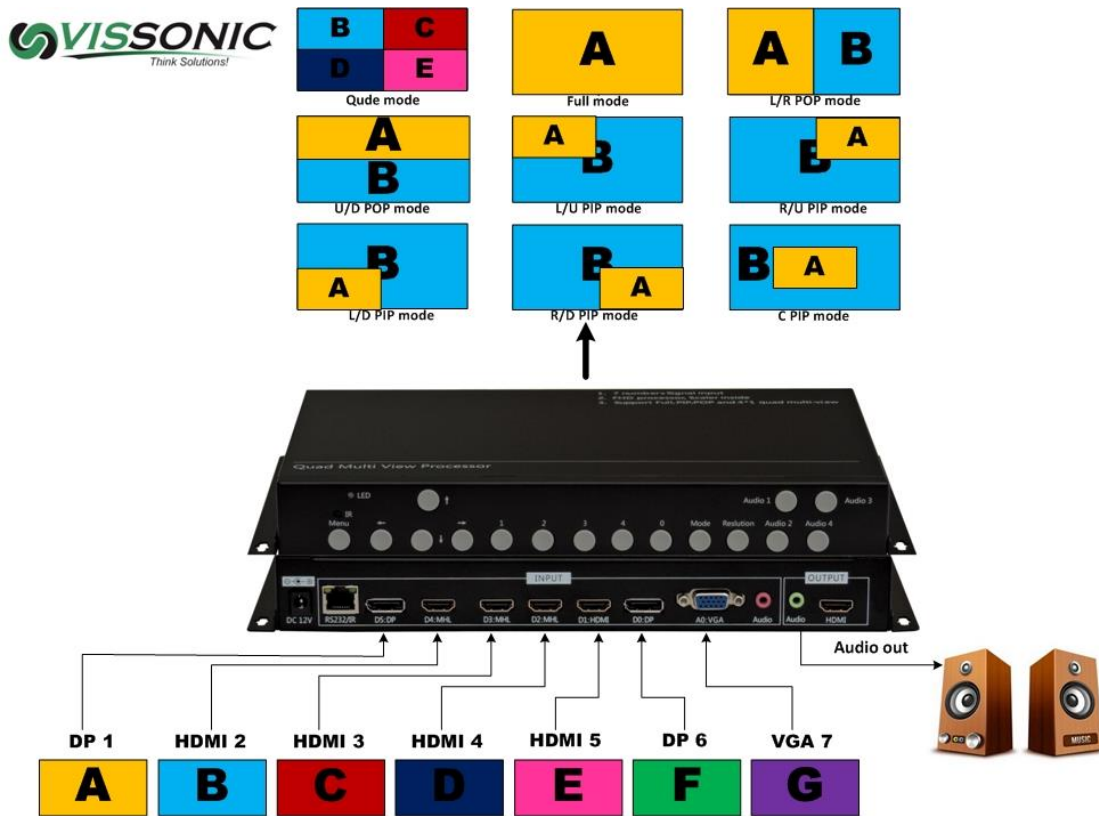
The VIS-MV71 an extremely flexible Multiviewer and a very capable Presentation Switcher making it a good fit for many different user applications.

HD Quad video Scaler&Multiviewer is currently use a relatively large number of standard products on the market, products are mainly used in where need to use a single display unit simultaneously display multiple HD signals workplace like video conferencing, teaching, exhibitions .

2 The main function

- Supports 1920x1080@60Hz input
- Supports 1920x1080@60Hz output
- On-screen display (OSD) makes setup and switching easy
- 9-window layouts
- Assignable front panel and remote buttons
- 7-video inputs - 4x HDMI(3x compatible to MHL) 2x DP 1xVGA
- HDCP Compliant
- supports up-scaling & down-scaling
- 24-bit Color depth
- Auto-scaling, auto-detect EDI
- Volume control
- IR remote, RS232,software and front panel

3 System Diagram



4 Product picture





5 HD video multi viewer Specifications

Model	VIS-MV71
Video Input Formats	HDMI, DisplayPort, RGBHV
Audio Input Formats	HDMI and DisplayPort embeded digital audio ,Analogue stereo audio:20kΩ
Video Output Formats	HDMI RGB 4:4:4
Audio Output Formats	HDMI:embedded digital audio, analogue audio:20kΩ impedance
Format Compliance	HDMI v.1.3, MHL /DisplayPort v.1.2 HDCP compliant,
Color Depth	24bit
Audio Bandwidth	20 Hz to 20 kHz
Input connectors	4xHDMI 19-pin female connectors; 2xDisplayPort 20-pin female connectors 1 x HD15(VGA) female connector 1x Analog Audio 3.5mm female connector 1x Power connector with fuse
Output Connectors	1xHDMI 19-pin female connector 1x Analog audio 3.5mm female connectors
Control	RS232,Software interface, panel buttons extend, IR front&extent IR receiver and OSD menu
Cotrol software	VIS-Quadsoft
Voltage	100~220VAC/50-60Hz
Dimension	275mm*33mm*163mm(LxHxD)
Power	15Watts(max.)

Third Chapter Installation

1 Unpacking

Check the host and accessories. Including the host, CD, power cable, remote control, warranty card, manual.

2 Install the machine

display unit setting: HD Quad video multi viewer Support 1 channel HDMI output, the display unit input signal is set to HDMI; if there are several HDMI input signals simultaneously, the signal source is set to HDMI input port.

output and display unit is connected: place the Quad video multi viewer, a signal output via HDMI cable docking with HDMI port of the corresponding display unit.

If you need an external audio, devices connect with external audio through the headphone jack at both ends 3.5mm of audio cable

Input Signal Connection: Connect the computer or other signal source output devices with input port of splitter via HDMI cable, VGA cable or DP line ;

If VGA require audio feature, use both ends with 3.5MM headphone jack cable to connect the computer and the input Audio ports of device ;

3. Power on

After finishing connecting the cables that we have talked above , insert the 12V DC power supply, turn on the power switch, power indicator lights is green for power-on , the light is red for standby mode;

Chapter Four Device Port Description

In the process of using the device, you need to first get to know each input and output video port so that operate the equipment more skilled. Device input and output ports consists of three parts, namely, an input section, output section, USB section.

1 input section

Input portion of the chassis rear panel INPUT box ,by A0: VGA, D0: DP, D1: HDMI, D2: MHL, D3: MHL, D4: MHL, D5: DP, RS232 / IR, Audio composed of nine input port, under function for each port:

A0:VGA: VGA signal input;

D0:DP:DP signal input,the maximum input resolution / refresh rate to 1920x1080 @ 60HZ, backward compatible;

D1:HDMI: HDMI input signal, the input resolution up to 1920x1080 @ 60HZ, backward compatible;

D2:MHL: HDMI input signal, the input resolution up to 1920x1080 @ 60HZ, backward compatible; compatible MHL mobile phone signal through the Micro USB to HDMI input;

D3:MHL: HDMI input signal, the input resolution up to 1920x1080 @ 60HZ, backward compatible; compatible MHL mobile phone signal through the Micro USB to HDMI input;

D4:MHL: HDMI input signal, the input resolution up to 1920x1080 @ 60HZ, backward compatible; compatible MHL mobile phone signal through the Micro USB to HDMI input;

D5: DP: DP signal input, the maximum input resolution / refresh rate to 1920x1080 @ 60HZ, backward compatible;

RS232/IR: using RJ45 to RS232 line, control through computer control software or in the control; IR signals can also be transferred via cable, the remote control receiver away from the device may also be implemented by infrared remote control;

Audio: Bind VGA video signal input, can be synchronized switching with the VGA signal;

2 Output section:

The input section of the chassis's rear panel **OUTPUT** frame, **HDMI** interface directly connected to the display unit; Audio can be directly connected to an external sound, high power audio playback.

chapter Five Remote control operation

Properly connect the output signal and display terminal , then you need to properly connect the input signal source and the device . via remote control, chassis button and control software to set different display modes, such as quad display, select a signal full-screen display, the PIP and other functions . This chapter describes

how to operate the equipment via infrared remote control, if you are use our devices for the first time, configure or settings as follows

1 the window position of signal definition:

Before using Quad video multi viewer, we must understand the definition of signal 1 signal 2 signal 3 and signal 4:

Signal 1 is also called window1in the top left corner of the screen;

Signal 2 is also known as window 2 in the lower left corner of the screen;

Signal 3 also known as window 3 in the upper right corner of the screen;

Signal 4 also known as window 4 in the lower right corner of the screen;

As the picture show:



2 Setting the resolution

If the output resolution of the device is higher than the physical resolution of the display unit, the display may not display images ; if the output resolution of the device is lower than the physical resolution of the display unit, the image display but not the best, so we must select identical or similar resolution output .

SWITCH button on the remote control switching the output resolution of the device in turn, so that the output resolution of device with physical resolution of the display unit fit that achieve optimal effect, when switching the resolution we must note the following:

☆, each time you press the **SWITCH** of remote control, need about 2 seconds before

you can switch to the next resolution;

☆, if the output resolution of device is higher than the physical resolution of the display unit, the display unit will not display images, or display does not support ,and press the **MENU** button of remote control does not pop up any menu;

☆, after switching resolution, if the display unit can support the resolution, will pop up enter resolution at side of the screen, you can selected the best resolution that support the display unit by switching.

☆, press the MENU key, pop up menu, shows that the resolution setting can be displayed properly.

3. Set the quad display mode:

First press buttons **0** of the remote control or cabinet , so display under Quad mode,but press the 0 key may not post an image, you need to operate the following steps.

4 enter the setup menu:

Press the **MENU** key of remote control, pop-up menu like Figure 1 the signal source menu in red press the **OK** key or the **→** key appears input signal selection menu as Figure 2 you can choose the signal, as shown below:



Figure 1,main menu

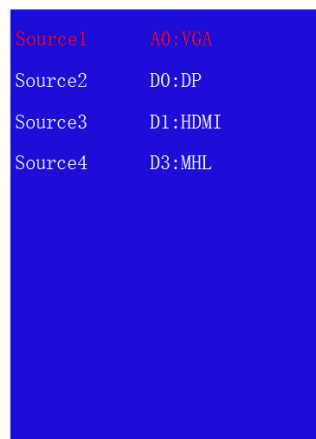


Figure 2, signal menu

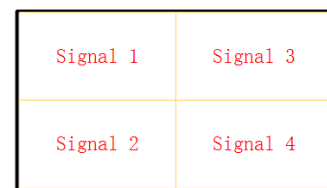


Figure3, signal path definitions

5 settings of the window displays signal

Signal 1 Signal 2 Signal 3 Signal 4 shows a fixed position, but four signal ports can

choose a different input source, as follows:

1 the upper left corner shows AO: VGA port input signal,so the signal 1 select AO: VGA

2 the lower left corner shows DO: DP port input signal, so the signal 2 select DO: DP

3the top right corner shows D1: HDMI port signal, so the signal 3 select D1: HDMI

4 the bottom right corner shows D3: MHL port signal, so the signal 4 select D3: MHL

6 the screen mode switching:

By clicking the shortcut keys on the remote control, you can achieve fast switching signal or mode, the following is the definitions of each key:

key¹: signal1 full screen display, audio, video sync switch;

Key²: signal2 full screen display, audio, video sync switch;

key³: signal3 full screen display, audio, video sync switch;

keys⁴: signal 4 full-screen display, audio, video sync switch;

Key⁰: 4 split screen display;

UA¹ key: sound switch to signal1 channel;

UA² key: sound switch to signal 1 channel;

UA³ key: sound switch to signal 1 channel;

UA⁴ key: sound switch to signal 1 channel;

7 brightness and contrast adjustment

7.1 while adjusting all signals window:

Press the MENU key to pop-up menu ,then the region is set to Full state, and respectively adjust brightness or contrast, all windows can change the brightness or contrast simultaneously;

7.2adjust one single channel:

Press the MENU key to pop-up menu, then the region is set to 1 and adjust the


brightness or contrast, that is you can only adjust the signal 1 window; other windows similar to that.

8 other keys functions

SOURCE key: 4 split screen, 2 split screen, POP and PIP various modes switch by turns;


 keys: Power on / off;

 key: Mute on / off;

 key: volume -, press sound reduction;

 key: volume + press to increase the sound

SWITCH: switch different resolutions, after each press, please interval 2-3 seconds

 :Return key;





AUTO: VGA signal correct, for the VGA input signal offset or not full screen situation, one-click calibration;

Chapter VI button operation

Through the chassis button, you can easily call in quick mode, call mode are correspond with the remote controller. the following only describes the purpose of each button:



Menu:

   : up, down, left and right navigation keys;

1: The first window full-screen ;

2: the 2nd window full-screen ;

3: the 3rd window full-screen ;

4: the 4th window full-screen;

0: Four split screen display;

Mode: split screen mode switch turns;

Resolution: resolution switching;

UA1: Audio switch to the first window;

UA2: Audio switch to the second window;

UA3: Audio switch to the third window;

UA4: Audio switch to the 4th window;

Chapter VII Software Operation

1 RS-232 serial cable connection

First, the RS-232 line connect with cable which supporting RS-232 port to RJ45 network, the other end of the RS-232 is connected with the equipment.

2 check the computer settings

View computer COM port if is normal to see these steps: Right-click the desktop "My Computer" - "Properties" - "Device Manager", as shown below COM port number:



USB-SERIAL CH340 (COM3)

3 run the software

The random distribution of the CD - ROM control software folder copy to control computer, and open Video Converter file, such as on the following screen:



4 the communication settings

Click on the right end of the list of serial port drop-down menu → select serial number → click open, you can control the device.

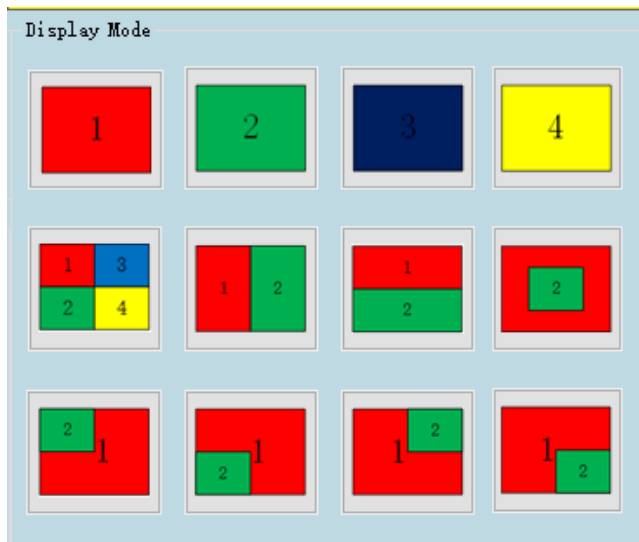


5 resolution settings

Click on the right side of the resolution ,Resolution drop-down menu, select the appropriate resolution and refresh rate depending on the physical resolution of the monitor. Such as the physical resolution of display unit is 1920*1080, so you should choose 1920*1080 @ 60HZ in this item.

6 switch the mode

By clicking the icon of display mode, shortcut control the mode, as shown below, respectively: 1234 window full screen, quad mode, the left and right split mode, down and up two split mode, PIP display mode.



7 the audio portion

As shown below, each menu definition of the audio portion:

Switch: Device on / off;

Volume -: volume down;

Volume +: volume increase;

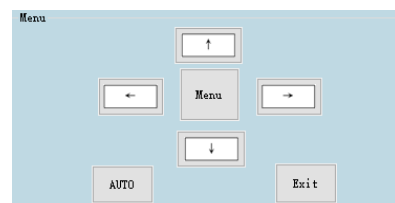
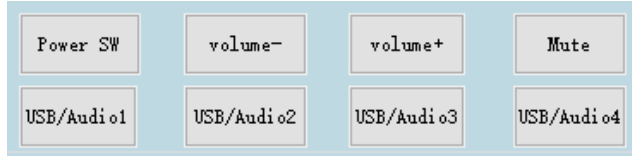
Mute: Mute on / off;

USB / Audio 1: audio switch to the first window;

USB / Audio 2: audio switch to the second window;

USB / Audio 3: audio switch to the third window;

USB / Audio 4: audio switch to the fourth window;



8 menu settings

Through the menu settings, it can be switched signals of each window, adjust the brightness, resolution adjustment, language setting, each keys definition of the setup menu (below):

↑: Up navigation key ;

↓: down navigation key;

←: Left navigation key;

→: Right navigation key;

Menu: The menu key;

AUTO: VGA signals automatically corrected;

Exit: Exit menu

Chapter VII Control Code

Baud Rate: 9600

Data Bits: 8

Stop bits: 1

Checksum: None

#define _RS232_MENU_MSG (menu)	0x22	0x10	0x10	0x20	0x33
#define _RS232_LEFT_MSG (left navigation)	0x22	0x10	0x11	0x21	0x33
#define _RS232_RIGHT_MSG (right navigation)	0x22	0x10	0x12	0x22	0x33
#define _RS232_EXIT_MSG (back/exit)	0x22	0x10	0x13	0x23	0x33
#define _RS232_POWER_MSG (on/off)	0x22	0x10	0x14	0x24	0x33
#define _RS232_UP_MSG (up navigation)	0x22	0x10	0x15	0x25	0x33
#define _RS232_DOWN_MSG (down navigation)	0x22	0x10	0x16	0x26	0x33
#define _RS232_4P (quad mode)	0x22	0x10	0x30	0x40	0x33
#define _RS232_1P_FULL (window1 full-screen)	0x22	0x10	0x31	0x41	0x33
#define _RS232_2P_FULL (window2 full-screen)	0x22	0x10	0x32	0x42	0x33
#define _RS232_3P_FULL (window3 full-screen)	0x22	0x10	0x33	0x43	0x33
#define _RS232_4P_FULL (window4 full-screen)	0x22	0x10	0x34	0x44	0x33
#define _RS232_POP_LR (left and right)	0x22	0x10	0x35	0x45	0x33
#define _RS232_POP_TB (up and down)	0x22	0x10	0x36	0x46	0x33
#define _RS232_PIP_LT (top left)	0x22	0x10	0x37	0x47	0x33
#define _RS232_PIP_LB (bottom left)	0x22	0x10	0x38	0x48	0x33
#define _RS232_PIP_RT (top right)	0x22	0x10	0x39	0x49	0x33
#define _RS232_PIP_RB (bottom right)	0x22	0x10	0x3A	0x4A	0x33
#define _RS232_PIP_MID (center)	0x22	0x10	0x3B	0x4B	0x33
#define _RS232_L_MODE (UA1)	0x22	0x10	0x3C	0x4C	0x33
#define _RS232_N_MODE (UA2)	0x22	0x10	0x3D	0x4D	0x33
#define _RS232_M_MODE (UA3)	0x22	0x10	0x3E	0x4E	0x33
#define _RS232_K_MODE (UA4)	0x22	0x10	0x3F	0x4F	0x33
#define _RS232_OUTPUT_1920*1080@60HZ	0x22	0x10	0x41	0x51	0x33
#define _RS232_MUTE(mute on/off)	0x22	0x10	0x45	0x55	0x33
#define _RS232_VOL_DEC (volume-)	0x22	0x10	0x46	0x56	0x33
#define _RS232_VOL_INC (volume+)	0x22	0x10	0x47	0x57	0x33
#define _RS232_Auto_MESSAGE (VGA correction)	0x22	0x10	0x56	0x66	0x33

