

User's Manual



RH114

HD Video Wall Controller

Version : 1.3

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Thanks for purchasing RH114 HD Video Wall Controll. With our highly reliable and quality product, you can enjoy countless benefits by using this device.

Introduction

RH114, HD Video Wall Controller is the easiest video wall system using an HDMI source. It dynamically scales and outputs the HDMI source on to 4 HDTV displays with bezel adjustment. This system can also function as a four port video broadcast system, displaying the same audio - visual on 4 screens. Switching is seamless so it does not have delays or black screen. It is the ideal solution for Digital Signage/ Advertising, A/ V Splitting, or Broadcasting.

Features

- Single HDMI source to 2 x 2 Video Wall or 4-Port HDMI Splitter
- 2 x 2 Hardware bezel correction, support H and V Bezel
- Intuitive operation by front panel Push Buttons, keyboard hotkey and RS232 Extension
- Full HD Digital Video resolution can support up to 1080p to give a combine total of 4K x 2K video resolution
- Support Locking HDMI cables

Specification

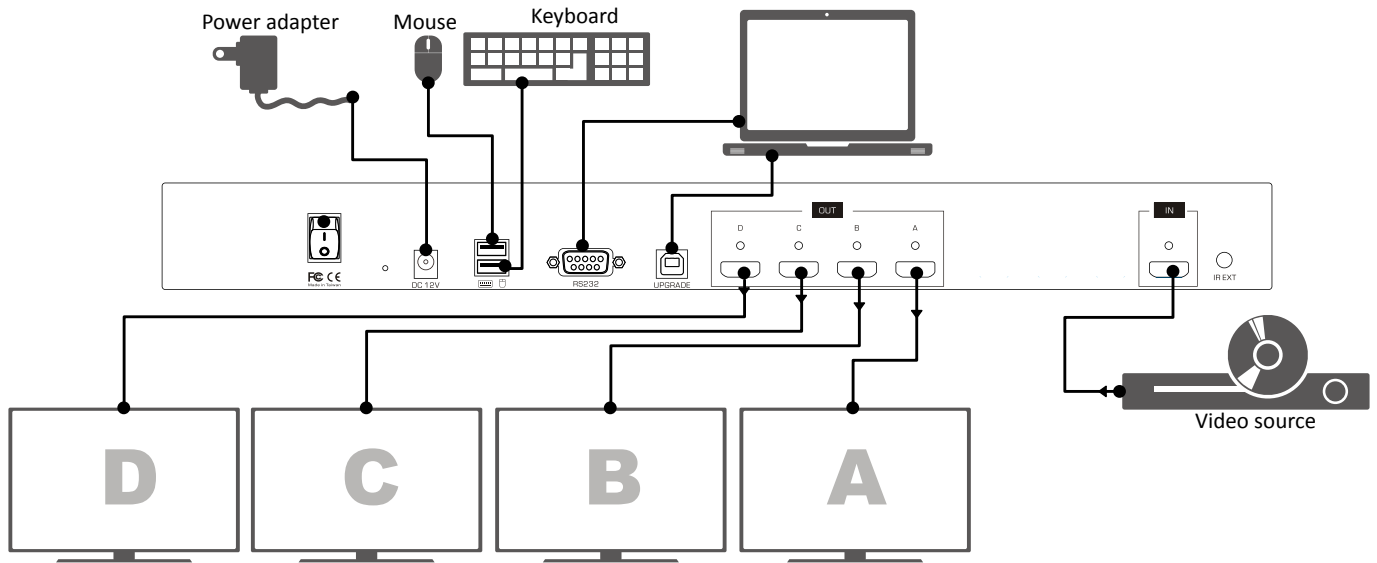
Model No.	RH114
Video In	1 x HDMI Type A Female (Lockable)
Video Out	4 x HDMI Type A Female (Lockable)
RS232	1 x DB9, Female
USB Port	2 x USB Type A
Switch/Button	10 x Tact Switch 1 x Power Switch
Video Resolution	Full HD or 1920 x 1200
Operation Temperature	0 ~ 40°C
Storage Temperature	-20 ~ 60°C
Humidity	0~90% RH, Non-condensing
Weight	2.1 Kg
Dimension(L x W x H)	438 x 200 x 44 mm
Housing	Metal enclosure
Power Adapter	DC 12V
Safety / Emission	FCC, CE

Package contents

- RH114 unit x1
- Power adapter x1
- User manual x1
- RS-232 cable x1

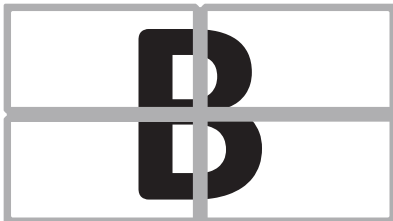
Connection diagram

The diagram illustrated here is an example, the actual application may vary. All illustrated computer, accessories and monitors are not included in the package, it is for reference only. Make sure all the devices and peripherals are connected appropriately before using this unit.



Display diagram

2 x 2



Splitter



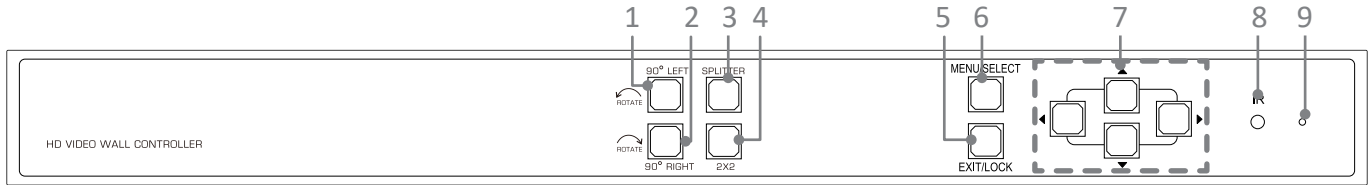
Operation

Various operations are available from this unit, select your preferred operation as follows:

1. Push buttons.
2. Keyboard.
3. RS-232 control.

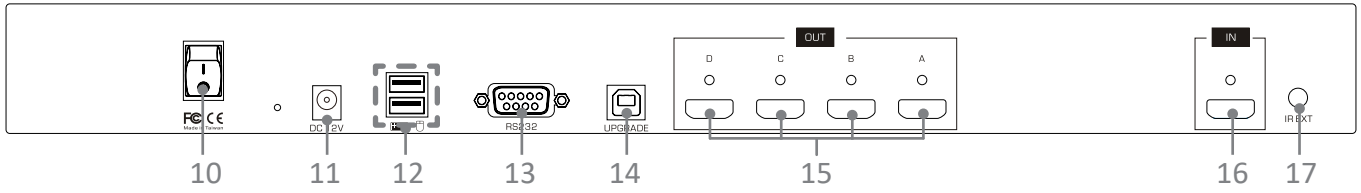
1. Parts and push buttons

Front panel



No.	Item	Description
1	90° LEFT	<ul style="list-style-type: none"> ■ Press to rotate the screen 90 degrees counterclockwise. ■ Update the firmware*.
2	90° RIGHT	Press to rotate the screen 90 degrees clockwise.
3	SPLITTER	Broadcast an image to 4 displays simultaneously.
4	2X2	View a large image in a video wall combined by 2x2 displays.
5	Exit/ Lock	<ul style="list-style-type: none"> ■ Press to exit the OSD menu. ■ Press to lock all the buttons on the unit, or press it again to unlock. ■ Press and hold this button, then turn on the power of switch to restore the default resolution (1024x768).
6	Menu/ Select	<ul style="list-style-type: none"> ■ Press to bring up the OSD menu. ■ Select a desired option on the menu. ■ Press and hold this button, then turn on the power of switch to restore the system to factory default settings.
7	▲ ▼ ◀ ▶ (Cursor buttons)	Press to navigate the OSD menu.
8	IR receiver (optional)	Receive the signals from bundled remote control.
9	Reset pin hole	Use a paperclip to reset this unit if necessary.

Rear panel



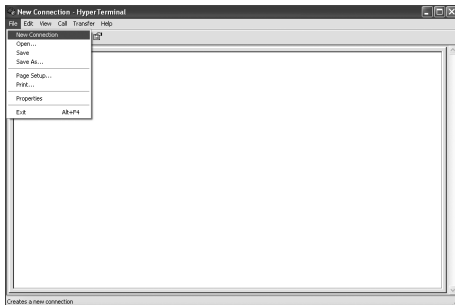
No.	Item	Description
10	Power switch	Press to power on/off the unit.
11	Power jack	Connect to the power adapter (DC 12V).
12	USB Type A receptacles	Connect to USB keyboard and mouse.
13	RS-232 connector	Connect to a computer or RS-232 device.
14	USB Type B receptacles	Connect to a computer for updating firmware*.
15	HDMI OUT A~D	Connect to HDMI displays.
16	HDMI IN	Connect to HDMI source device.
17	IR EXT (optional)	Extend ability of remote control using 3.5mm jack extension cable.

2. Keyboard hotkeys

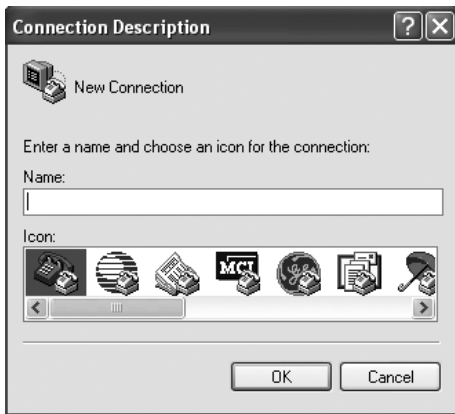
Command	Hotkeys	Description
Menu/Select	Enter	<ul style="list-style-type: none"> ■ Press to bring up the OSD menu. ■ Select a desired option on the menu.
Up/Down/Left/Right	↑ / ↓ / ← / → (Cursor buttons)	Press to move the cursor up, down, left and right on the menu.
Exit	Esc	Press to exit the OSD menu.
Mode selection	F1~F4	Press to switch a preferred mode. F1: Splitter F2: VIDEO WALL 2x2 F3: VIDEO WALL 1x3 90 LEFT F4: VIDEO WALL 1x3 90 RIGHT
Video wall	1~4	Select the desired source.

3. RS232 Control

1. Connect RH114 to a PC using RS232 cable.
2. Open **Hyper Terminal** and create a new connection.
Program > Accessories > Communications > Hyper Terminal > New Connection



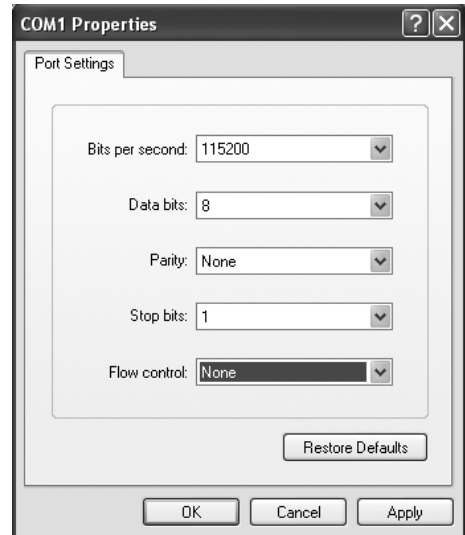
3. Enter a preferred name, and then click **OK**.



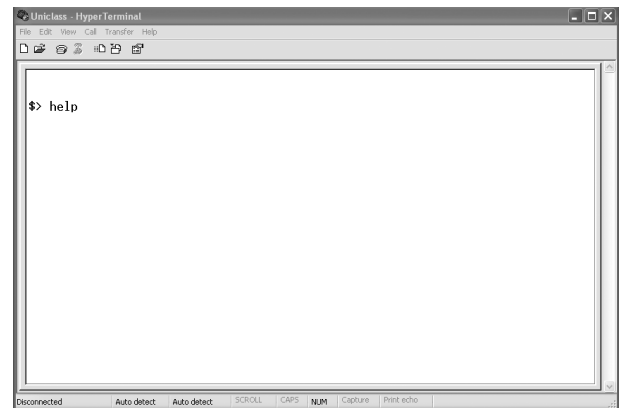
4. Select **Connect using** to COM+X (X is the port which connected to RH114).



5. Enter the following data to each option, then press **Apply > OK**.
Bits per second: 115200
Date bits: 8
Parity: None
Stop bits: 1
Flow control: None



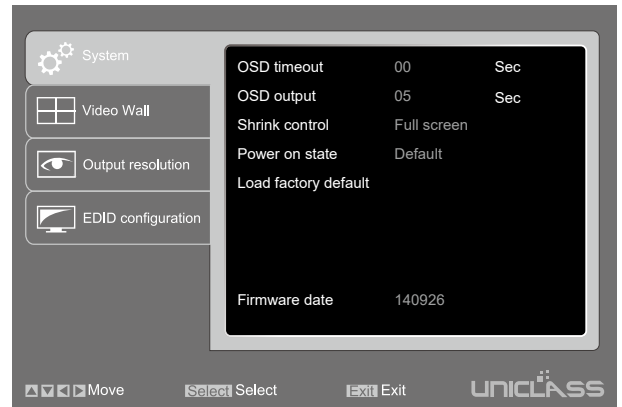
6. The window of Hyper Terminal will appear after completing the settings. To enter commands, press **Enter**. For more command details, refer to the list next page or enter **"help"** in Hyper Terminal for reference.



Command	Description	Parameter
mode [n]	Switch video display mode	n: (1) Splitter (2) Video Wall
as [n]	Change video aspect ratio	n: (1) Fill Screen (2) Keep Ratio
output [id] [n]	Set output resolution	id: display A~D n: (1)Auto (2) 1920x1080 (3) 1280x720
split	Switch to splitter mode	
vw [n]	Switch to video wall	
vwlayout [n]	Set layout of video wall	n:1~3 n: (1) 2x2 (2) 1x3 rottated left (3) 1x3 rottated right
vwhbz [n]	Set horizontal bezel correction of video wall	n: 0~40
vwvzb [n]	Set vertical bezel correction of video wall	n: 0~40
vwrhbz [n]	Set rotated horizontal bezel correction of video wall	n: 0~40
default	Restore to the factory default	
edid [n]	Config EDID of input source	n: 1~8, (1) Auto (2) Monitor A (3) Monitor B (4) Monitor C (5) Monitor D (6) 1920x1080 (7) 1280x720 (8) Custom
edidupload	Upload customized EDID	

Settings

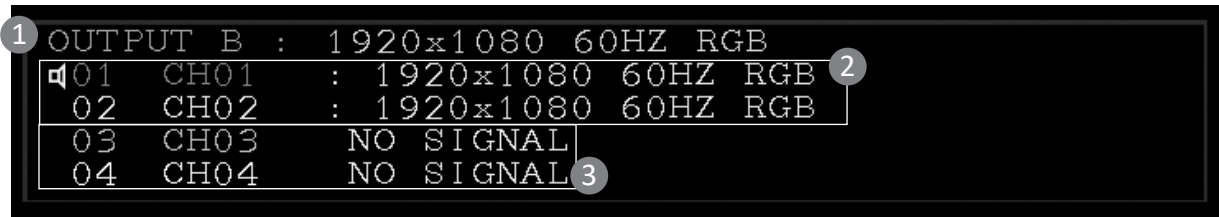
1. To bring up the setting menu, press **Enter** button on the keyboard or **MENU/SELECT** button on the front panel of unit or remote control.
2. Press **▲/▼** button to move the cursor, press **◀/▶** to select the desired option, and then press **MENU/SELECT** to confirm the selection.




Item	Options	Description
System	OSD timeout	Setup the timeout of OSD.
	OSD output	Output OSD to all displays or display A only.
	Shrink control	Select Full screen to fill the entire screen. The screen may be stretched. Select Keep ratio to remain the original aspect ratios. The black bars may appear on top-bottom or left-right sides of screen.
	Power on state	Select Last to remain the viewing mode before shutting down the switch. Select Default to restore the default setting (Quadview).
	Load factory default	Restore to the factory default.
	Firmware date	Display the version of firmware.
Video Wall	Layout	Select a preferred video wall layout.
	Bezel	Adjust the compensation for bezel between panels.
Output resolution	Output A/B/C/D	Specify a display and set the desired output resolution. By default, the resolution of all displays will be set to the best resolution of display A. Resolutions can be set individually for each display only in Matrix mode.
EDID Configuration		Select a preferred EDID of display for input source.

Title bar information

Once the display title bar function has been enabled (refer to **Setting** page), the related information will be listed on the upper left of screen. The image below is an example for explanation; the actual application is depending on your connection.



- 1 The monitor is showing the image from Output B, and the output resolution is 1920x1080 @60Hz.
- 2 Image sources have been connected to channel 1 and 2 respectively, and both inputted resolutions are 1920x1080 @60Hz. The icon of  indicates the audio is outputted from this channel.
- 3 There is no source connected to this input.

Resolution

The tables below show the input and output resolutions of RH114, if there is a problem of abnormal display or no video, suggest using a more standard display mode from the list.

Input Resolution	Refresh rates (HZ)
640x480	50/59/60/72/75
720x480 (720P)	56/59/60/72/75
720x576 (576P)	50/60/70/72/75
800X600	56/60/70/72/75
1024X768	60/70/72/75
1152X864	50/69/60/75
1280x600	50/59/60
1280X720 (720P)	50/59/60/75
1280X768	50/59/60/75
1280X800	50/59/60/75
1280X960	50/59/60
1280X1024	50/59/60/75
1360x768	50/59/60/75
1366x768	50/59/60/75
1440X1050	50/59/60
1440X900	50/59/60/70/75
1600x900	50/59/60
1600x1024	59/60
1600X1200	50/60
1680x1050	59/60
1920X1080i	25/29/30
1920X1080 (1080P)	50/59/60
1920X1200	50/60

Output Resolution	Refresh rates (HZ)
1024X768	60
1280X800	60
1280X1024	60
1360x768	60
1600X1200	60
1680x1050	60
1920X1200	60
720P	50/60
1080P	24/30/50/60

Technical support

Please contact with your local distributor for more information or technical support.

FCC / CE Statements

FCC Statement : This equipment has been tested and found to comply with the regulations for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this User Guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case, the user will be required to correct the interference at his/her own expense.

CE Statement : This is a Class B product in a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.



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