HDMI-PIP-2P

HDMI 2x1 Multi-Viewer with PIP

INSTRUCTION MANUAL

SAFETY INFORMATION

1. To ensure the best results from this product, please read this manual and all other documentation before operating your equipment. Retain all documentation for future reference.

2. Follow all instructions printed on unit chassis for proper operation.

3. To reduce the risk of fire, do not spill water or other liquids into or on the unit, or operate the unit while standing in liquid.

4. Make sure power outlets conform to the power requirements listed on the back of the unit. Keep unit protected from rain, water and excessive moisture.

5. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Dust with a clean dry cloth.

6. Do not use the unit if the electrical power cord is frayed or broken. The power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.

7. Do not force switched or external connections in any way. They should all connect easily, without needing to be forced.

8. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defeated.

9. AC voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.

10. Turn power off and disconnect unit from AC current before making connections.

11. Never hold a power switch in the "ON" position.

12. This unit should be installed in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold. Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.

13. Do not block fan intake or exhaust ports. Do not operate equipment on a surface or in an environment which may impede the normal flow of air around the unit, such as a bed, rug, carpet, or completely enclosed rack. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically "blown free" of foreign dust and matter.

14. To reduce the risk of electric shock, do not remove the cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel. There are no user serviceable parts inside.

15. When moving the unit, disconnect input ports first, then remove the power cable; finally, disconnect the interconnecting cables to other devices.

16. Do not drive the inputs with a signal level greater than that required to drive equipment to full output.

17. The equipment power cord should be unplugged from the outlet when left unused for a long period of time.

18. Save the carton and packing material even if the equipment has arrived in good condition. Should you ever need to ship the unit, use only the original factory packing.

19. Service Information Equipment should be serviced by qualified service personnel when:
    A. The power supply cord or the plug has been damaged.
    B. Objects have fallen, or liquid has been spilled into the equipment.
    C. The equipment has been exposed to rain.
    D. The equipment does not appear to operate normally, or exhibits a marked change in performance.
    E. The equipment has been dropped, or the enclosure damaged.

CONTENTS

DEAR CUSTOMER

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

INTRODUCTION

The HDMI-PIP-2P is a high performance (2) by (1) Multi-Viewer. It supports (2) High definition input source displays on (1) screen. As a Multi-Viewer, it can display on one screen in (4) different modes. This product has a 3 year warranty.

PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make sure the following items are contained in the shipping carton:

- HDMI-PIP-2P HDMI 2x1 Multi-Viewer
- Remote Control
- RS-232 Serial Cable
- (2) Mounting Ears
- 5V 1A DC Power Adapter
- Users Guide

SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply. Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

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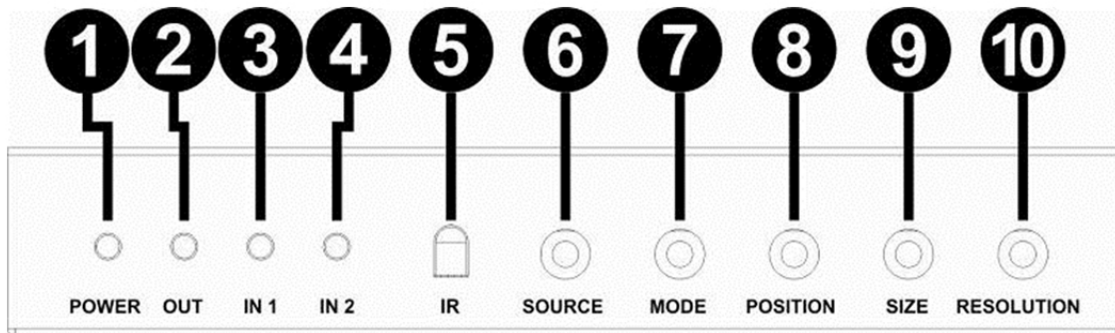
FEATURES

- HDMI 1.3a and HDCP 1.2 Compliant
- Supports multiplexed HDMI (2) Inputs and (1) Output with (4) display modes
- Supports up to 1080p High Definition resolution
- Supports scaler up and down functions
- Supports multi output resolutions
- Supports digital audio formats LPCM/AC3/DTS

SPECIFICATIONS

- **Video Bandwidth:** 225MHz/6.75Gbps
- **Input Ports:** (2) HDMI (Female type)
- **Output Ports:** (1) HDMI (Female type)
- **Audio Output:** PCM2, 5.1, 7.1CH, Dolby 5.1, DTS5.1
- **Input Resolutions:** 480i60Hz, 480p60Hz, 576i50Hz, 576p50Hz, 720p50/60Hz, 1080i50/60Hz, 1080p24/30/50/60Hz, 800x600@60, 1024x768@60, 1280x720@60, 1920x1080@60
- **Output Resolutions:** 1080p, 720p, 1080i, 1024x768, 1360x768
- **ESD Protection:** Human Body Model: ±8kV (air-gap discharge) / ±4kV (contact discharge)
- **Dimensions (WxDxH):** 2.6 x 5.5 x 1 in (70x140x25mm)
- **Weight:** .7 lb (300g)
- **Chassis Material:** Metal
- **Operating Temperature:** 0°C~40°C/ 32°F~104°F
- **Storage Temperature:** −20°C ~ 60°C/−4°F ~140°F
- **Relative Humidity:** 20~90% RH (non-condensing)
- **Power Consumption (Max):** 10W
- **Power Supply:** 5V/1A DC (US/EU standards, CE/FCC/UL certified)
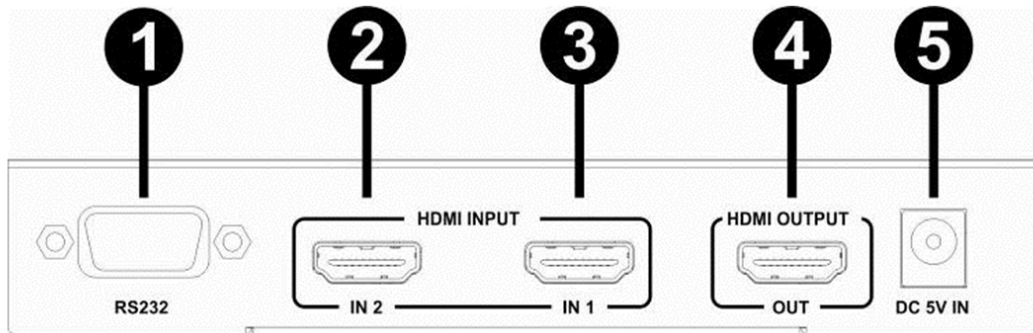
As product improvements are continuous, specifications are subject to change without notice.

FRONT PANEL

❶ POWER LED: This red LED illuminates when the device is connected with the power supply.

❷ OUTPUT LED: This red LED illuminates when the TV plug is in the corresponding HDMI output port.

❸ IN1 LED: This red LED illuminates when the HDMI IN1 is selected as the main image.

❹ IN2 LED: This red LED illuminates when the HDMI IN2 is selected as the main image.

❺ IR: Receives the remote control signal.

❻ SOURCE: Press the button to select the input source as the main image and the LED will indicate the corresponding input source.

❼ MODE: Press the button to select the display mode.

❽ POSITION: Press the button to select the position of the sub image when in PiP mode. *(Currently Not Supported.)*

❾ SIZE: Press the button to select the size of the sub image when in PiP mode. *(Currently Not Supported.)*

❿ RESOLUTION: Press the button to select the output resolution.

NO.	RESOLUTION
1	1080p, Main image audio
2	720p, Main image audio
3	1080i, Main image audio
4	1024x768, Main image audio
5	1360x768, Main image audio

BACK PANEL

❶ RS-232: Connected to computer via RS-232 tool and controlled via host-computer software.

❷ HDMI IN2: This slot is where you connect the HDMI source output from DVD, PS3, etc.

❸ HDMI IN1: This slot is where you connect the HDMI source output from DVD, PS3, etc.

❹ HDMI OUTPUT: This slots is where you connect the HDTV or monitor with a HDMI cable.

❺ DC 5V IN: Plug the 5V DC power supply into the unit.

OUTPUT RESOLUTIONS

❶ **POWER:** Press this button to power on the matrix or set it to standby mode.

❷ **IN1:** Press this button to select Input 1 as the main image.

❸ **IN2:** Press this button to select Input 2 as the main image.

❹ **SIZE:** Press the button to select the size of the sub image when in PiP mode. *(Currently Not Supported.)*

❺ **POSITION:** Press these buttons to select the position of the sub image when in PiP mode. *(Currently Not Supported.)*

❻ **MODE:** Press the button to select the display mode.

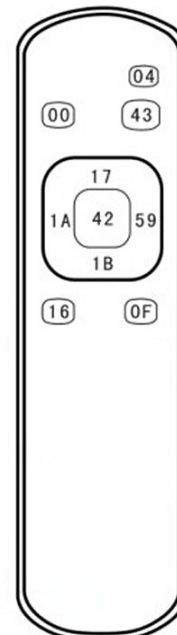❼ **RESO:** Press the button to select the output resolution.
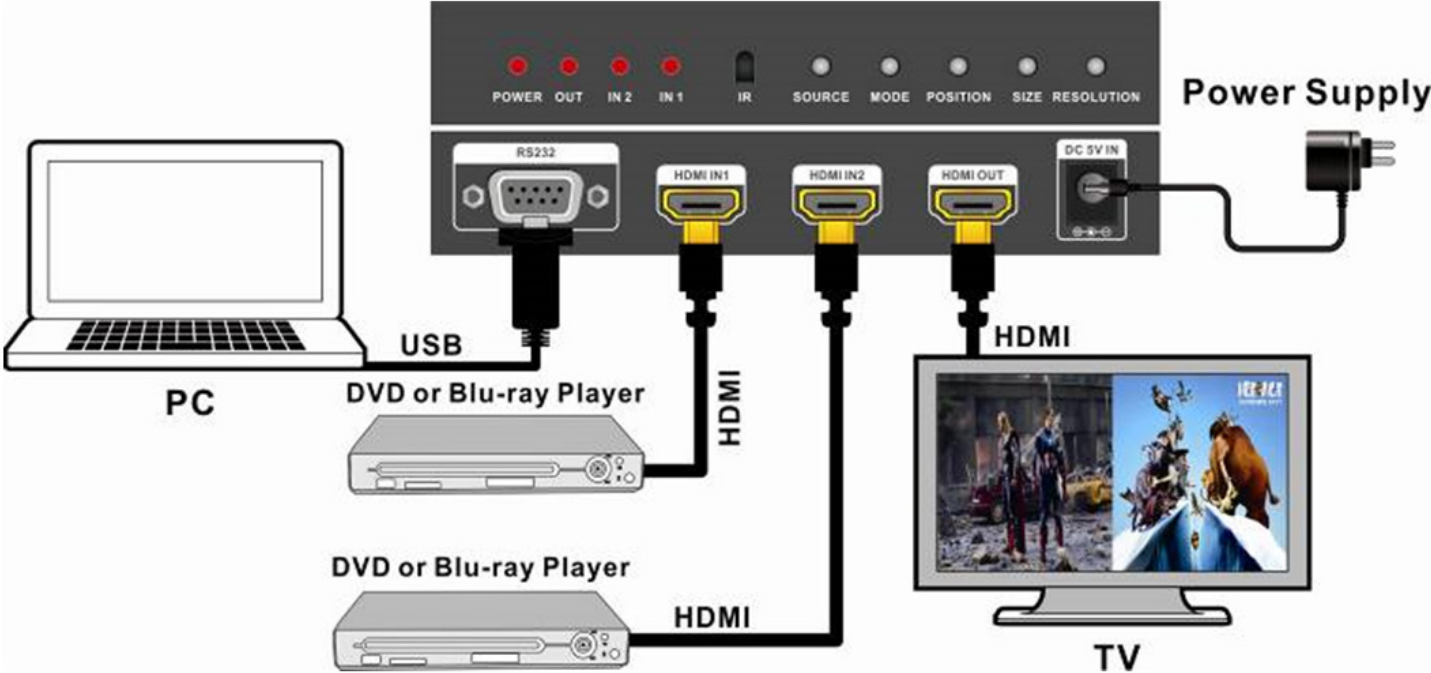
IR REMOTE CUSTOM AND DATA CODES (NEC STANDARD)

CUSTOM CODE: 86E7
DATA CODES:

POWER:	86E7	04	POSITION:			
IN1:	86E7	00	UP:	86E7	17	
IN2:	86E7	43	DOWN:	86E7	1B	
SIZE:	86E7	42	LEFT:	86E7	1A	
MODE:	86E7	16	RIGHT:	86E7	59	
RESO:	86E7	0F				

APPLICATION EXAMPLE

(4) MODE OPTIONS

❶ **MODE 1:** ONE-VIEW MODE
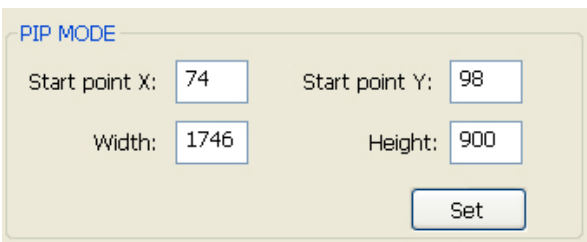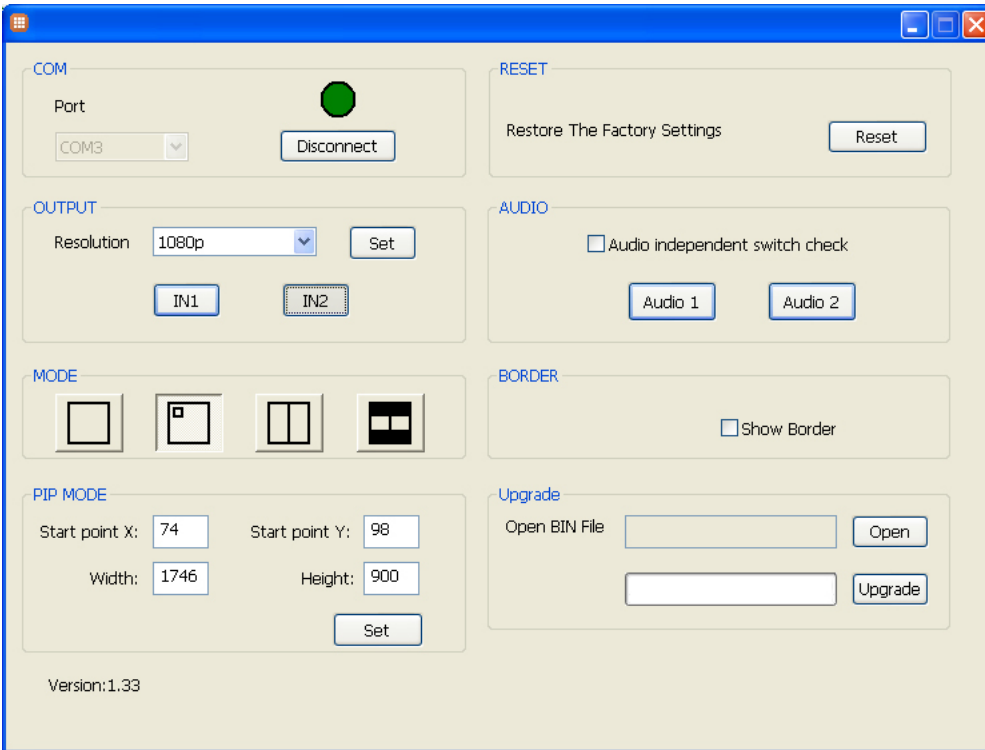

❷ **MODE 2:** PIP MODE

❸ **MODE 3:** POP MODE A

❹ **MODE 4:** POP MODE B

Includes Windows GUI Software. Works on WIN XP, WIN7 and WIN10.

Start Point X: Is the starting position of the horizontal axis. *"0" will be the top left corner.*
Width: (W) is the width of the image. *Max value is dependent on the Output resolution.*
Start Point Y: Is the starting position of the vertical axis. *"0" will be the top left corner.*
Height: (H) is the height of the image.

Example 1: If the Output resolution is 1920x1080p.

X	0	Y	0
Width	1920	Height	1080

That means, X+W=1920.
The resulting image will be full screen. (Not practical)

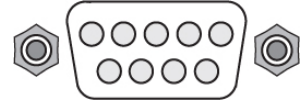*Example 2:* If the Output resolution is 1920x1080p.

X	960	Y	540
Width	960	Height	540

That means, X+W=1920.
The resulting image will be PiP in the lower right corner.

RS-232 SERIAL INTERFACE FOR CONNECTION TO A PC OR 3RD PARTY CONTROLLER

1. Transmission rate: 115200bps
2. Data format: 8 data bits, No parity, 1 start bit and 1 stop bit
3. Flowing control: None
Also know as 115200,8,n,1

RS-232 CONFIGURATION

RS-232 cable is a straight thru cable and not null-modem

Device

Definition	Pin		Pin	Definition
	1		1	DCD
TX	2		2	RX
RX	3		3	TX
	4		4	DTR
GND	5		5	GND
	6		6	DSR
	7		7	RTS
	8		8	CTS
	9		9	RI

PC

Data String Format

The data string must conclude with an explanation point **"!"** (without the quotes).
All text is full ASCII Code and is **NOT** case sensitive.

COMMANDS

COMMAND	ACTION	ANI-QUAD-MINI RETURNS
T1!	Change resolution to 1080p	Resolution: 1080p/60
T2!	Change resolution to 720p	Resolution: 720p/60
T3!	Change resolution to 1080i	Resolution: 1080i/60
T4!	Change resolution to 1360x768	Resolution: 1024x768/60
T5!	Change resolution to 1024x768	Resolution: 1360x768/60
IN1!	Select input 1	Input 1 select
IN2!	Select input 2	Input 2 select
ONEINPUT!	Select mode QUAD	Mode: QUAD
PIP!	Select mode PIP	Mode: PIP
SIDEBYSIDE1!	Select mode POP1	Mode: POP1
SIDEBYSIDE2!	Select mode POP2	Mode: POP2
?VERSION!	Check software version	V 1.7
RESET!	Factory Reset	Factory Reset
POWERON!	System power on	PowerON
POWEROFF!	System power off	PowerOFF
AM0!	Audio switch follow Video	Audio switch follows Video
AM1!	Audio independent switch	Audio independent switch
IA1!	Select audio Input 1	Audio select 1
IA2!	Select audio Input 2	Audio select 2

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