

Portta N14VW

PORTTA HDMI Video Wall Controller 2x2 4K User Manual

Model: N14VW

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and troubleshooting of your PORTTA HDMI Video Wall Controller 2x2 4K. This device is designed to distribute a single HDMI input to four HDMI outputs, creating a video wall display with various splicing modes. Please read this manual thoroughly before use to ensure proper functionality and to maximize your product experience.

2. SAFETY INFORMATION

- Ensure the device is placed in a well-ventilated area to prevent overheating.
- Do not expose the unit to water, moisture, or excessive humidity.
- Use only the provided power adapter. Using an unauthorized adapter may damage the device and void the warranty.
- Avoid disassembling the unit. Refer all servicing to qualified personnel.
- Keep the device away from strong magnetic fields.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- PORTTA HDMI 2x2 Video Wall Controller x1
- IR Remote Control x1
- Power Adapter x1
- Mounting Ears x2
- User Manual x1



Image: The PORTTA HDMI 2x2 Video Wall Controller, its remote control, power adapter, and mounting ears, alongside a user manual.

4. SETUP

4.1. Device Overview and Connections

Familiarize yourself with the ports and controls on the video wall controller:

Ports Description

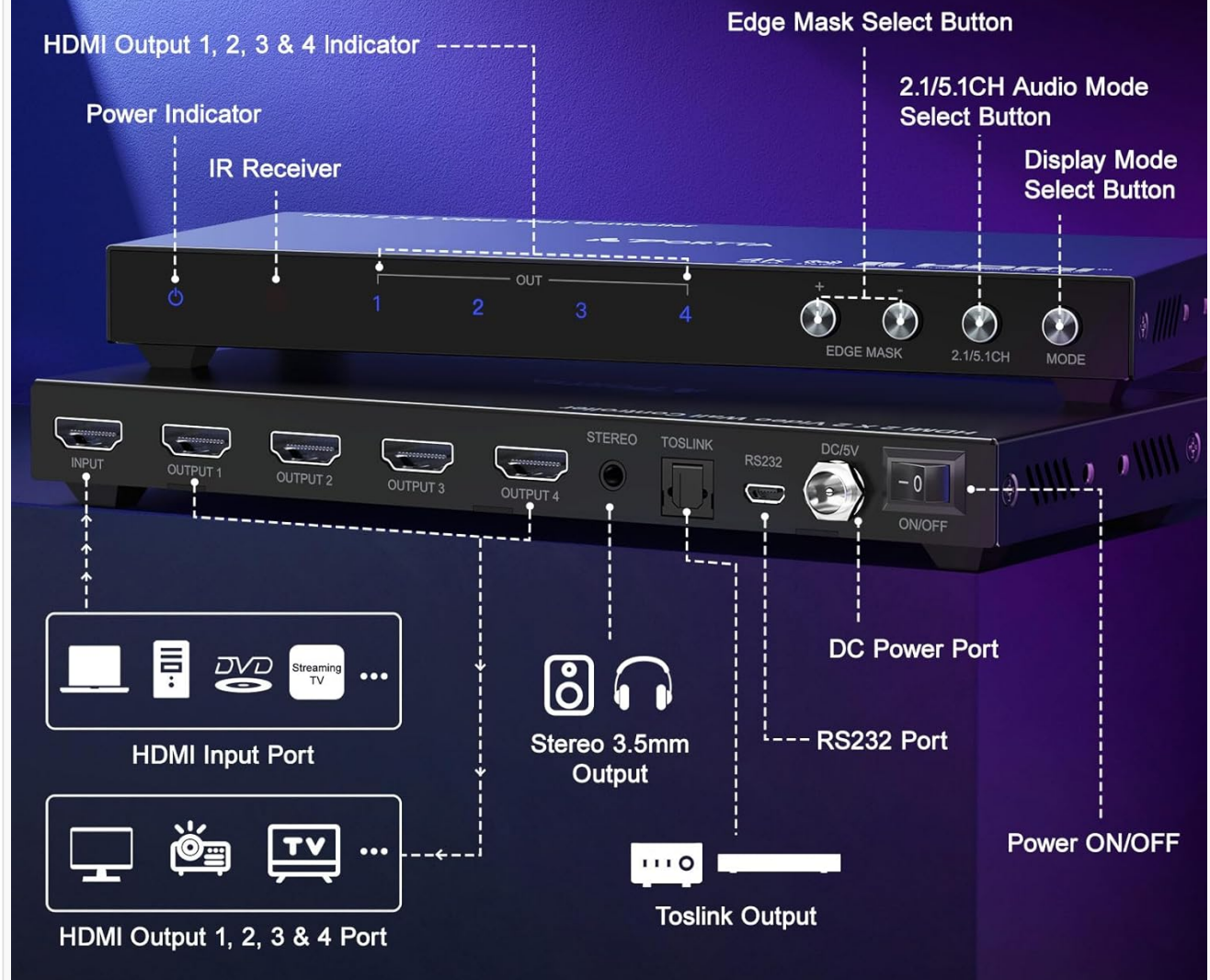


Image: A detailed diagram illustrating the HDMI input, four HDMI outputs, stereo 3.5mm output, Toslink output, RS232 port, DC 5V power port, power switch, and control buttons (Edge Mask, 2.1/5.1CH, Mode) on the PORTTA HDMI 2x2 Video Wall Controller.

- **HDMI Input Port:** Connect your source device (e.g., PC, PS4, Blu-Ray Player).
- **HDMI Output 1-4 Ports:** Connect to your display screens (TVs, monitors, projectors).
- **Stereo 3.5mm Output:** For 2.0 channel audio extraction.
- **Toslink Output:** For 5.1 channel audio extraction.
- **RS232 Port:** For external control via RS232 commands.
- **DC/5V Power Port:** Connect the included 5V power adapter.
- **ON/OFF Switch:** Power button for the device.
- **Control Buttons:** EDGE MASK, 2.1/5.1CH, MODE buttons for direct control.

4.2. Connection Steps

1. Connect your HDMI source device (e.g., PC, media player) to the **HDMI Input** port on the controller using an HDMI cable.
2. Connect your four display screens (TVs, monitors) to the **HDMI Output 1, 2, 3, and 4** ports on the controller using HDMI cables.

3. If audio extraction is desired, connect your audio receiver or speakers to the **Stereo 3.5mm Output** or **Toslink Output**.
4. Connect the included 5V power adapter to the **DC/5V Power Port** on the controller, then plug the adapter into a power outlet.
5. Turn on the power switch on the controller.
6. Power on all connected display screens and the source device.

5. OPERATING INSTRUCTIONS

5.1. Display Modes

The controller supports 8 primary display modes for various video wall configurations, plus additional portrait modes when using a PC with portrait display settings. These modes can be selected using the 'MODE' button on the device or the IR remote control.

Support up to 11 Display Modes

1 Composition Mode



2×2

3 Horizontal Modes



1×2



1×3



1×4

1 Splitter Mode



1×1


3 Vertical Modes



2×1



3×1




4×1

3 Portrait Modes

PC Portrait Display Setting Only



1×2



1×3



1×4

Image: A visual representation of the 11 supported display modes, including 2x2 composition, horizontal modes (1x2, 1x3, 1x4), vertical modes (2x1, 3x1, 4x1), 1x1 splitter mode, and portrait modes (1x2, 1x3, 1x4) for PC portrait display settings.

- **Video Wall Modes:** 2x2, 1x2, 2x1, 1x3, 3x1, 1x4, 4x1. These modes combine multiple screens to form a

single large display.

- **Splitter Mode:** 1x4. This mode duplicates the input signal across all four outputs.
- **Portrait Modes:** 1x2, 1x3, 1x4. These modes are available when the PC source is configured for portrait display, allowing for vertical video wall arrangements.

5.2. 180° Rotation Function

In 2x2 Video Wall Mode, each screen's image can be rotated by 180 degrees. This feature is useful for adjusting the border orientation, allowing you to use the thinnest bezels of your displays to minimize the splicing gap. Use the '180° Rotate' button on the IR remote.

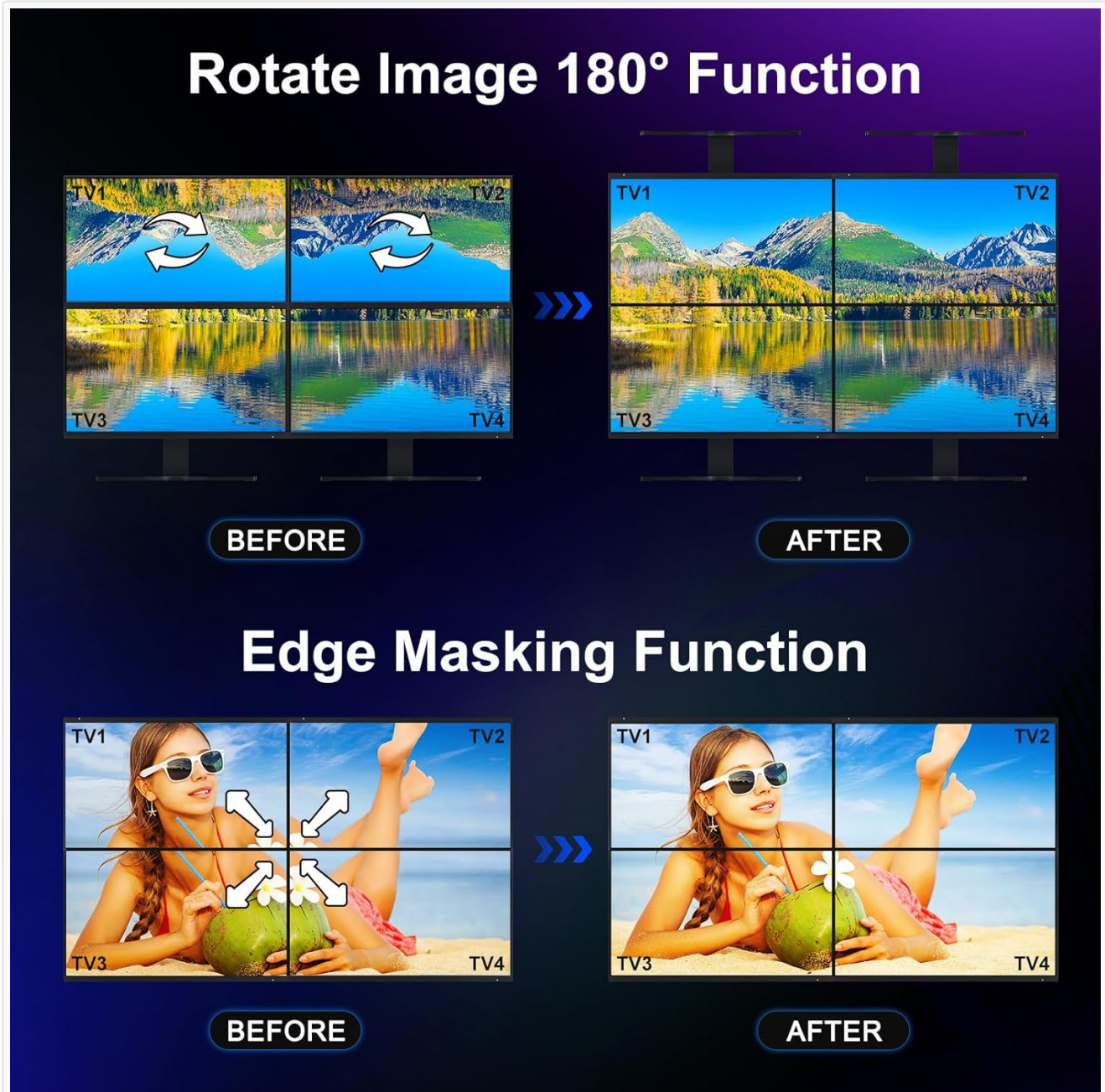


Image: A comparison showing a 2x2 video wall before and after applying 180-degree rotation to individual screens to align thin bezels. Below, a demonstration of the edge masking function, which adjusts the picture edge to prevent distortion.

5.3. Edge Masking Function

The Edge Masking function prevents image distortion and an unnatural appearance at the seams of your video wall. It works by adding or cutting the output picture edge by 8 pixels. This helps to create a more seamless visual experience across multiple displays. Use the 'EDGE MASK' button on the device or the IR remote.

5.4. Audio Extraction

The controller supports audio extraction from the HDMI input. You can extract 5.1 channel audio via the Toslink output or 2.0 channel audio via the 3.5mm stereo output. Use the '2.1/5.1CH' button on the device or remote to switch between audio modes.



Image: A close-up diagram highlighting the Stereo 3.5mm Output (up to 48KHz) and Toslink Output (up to 192KHz) for audio extraction on the video wall controller.

5.5. Control Options

- **IR Remote Control:** The included remote allows for convenient control of display modes, rotation, edge masking, and audio settings.
- **Front Panel Buttons:** The device features buttons for 'EDGE MASK', '2.1/5.1CH', and 'MODE' for direct control.
- **RS232 Control:** For advanced integration, the controller can be managed via RS232 commands. Refer to the RS232 protocol documentation (not included in this manual) for detailed commands.

6. FEATURES OVERVIEW

- Distributes 1 HDMI input to 4 HDMI outputs.
- Supports 8 standard display modes (2x2, 1x2, 2x1, 1x3, 3x1, 1x4, 4x1 Video Wall, 1x4 Splitter).
- Supports 3 portrait display modes (1x2, 1x3, 1x4) with PC portrait settings.
- Supports 4K@30Hz input resolution.
- Fixed 1080p@60Hz output resolution for all 4 HDMI outputs.
- 180° image rotation for each screen in 2x2 Video Wall Mode.
- Edge masking function to optimize display seams.
- Audio extraction via Toslink (5.1 CH) and 3.5mm (2.0 CH) outputs.
- Control via IR remote, front panel buttons, or RS232.

7. MAINTENANCE

- Clean the device with a soft, dry cloth. Do not use liquid or aerosol cleaners.
- Store the device in a cool, dry place when not in use.
- Ensure all cables are securely connected and free from damage.

8. TROUBLESHOOTING

If you encounter issues, please refer to the following common problems and solutions:

- **No Signal on Displays:**

- Check all HDMI cable connections between the source, controller, and displays.
- Ensure the power adapter is securely connected and the controller is powered on.
- Verify that the source device is powered on and outputting an HDMI signal.
- Try a different HDMI cable or source device to rule out cable or source issues.
- Confirm that your displays are set to the correct HDMI input.

- **Blurry or Pixelated Output:**

- Ensure the input resolution from your source is compatible (up to 4K@30Hz). The output resolution is fixed at 1080p@60Hz.
- Check HDMI cable quality. High-quality HDMI 2.0 cables are recommended for 4K signals.
- If using a long HDMI cable, consider using an active HDMI cable or an HDMI extender.

- **Remote Control Not Working:**

- Ensure the remote has fresh batteries and is pointed directly at the IR receiver on the controller.
- Remove any obstructions between the remote and the controller.

- **Audio Issues:**

- Verify audio cables are correctly connected to the 3.5mm or Toslink output.
- Check the audio settings on your connected audio device.
- Ensure the '2.1/5.1CH' button is set to the desired audio mode.

9. SPECIFICATIONS

Feature	Specification
Model Number	N14VW
Product Dimensions	7.78 x 3.35 x 0.73 inches
Item Weight	12.8 ounces
Input Resolution	Up to 4K@30Hz
Output Resolution	1080p@60Hz (fixed)
Audio Output	Toslink (5.1 CH), 3.5mm Stereo (2.0 CH)
Control Methods	IR Remote, Front Panel Buttons, RS232
Compatible Devices	PC, PS4, PS4 Pro, Blu-Ray Players, computers, laptops, HDTVs, projectors, monitors

10. WARRANTY AND SUPPORT

Your PORTTA HDMI Video Wall Controller comes with a hassle-free **2-year warranty** and **lifetime technical support**.

For any questions, technical assistance, or warranty claims, please contact our customer service team. You can typically find contact information on the official Portta website or through your purchase platform.

Please retain your proof of purchase for warranty purposes.

