

ICUIXIAN XTA-0606-ZMHD

ICUIXIAN 6x6 Seamless HDMI Matrix Video Wall Controller User Manual

Model: XTA-0606-ZMHD

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the ICUIXIAN 6x6 Seamless HDMI Matrix Video Wall Controller. This device functions as both an HDMI matrix and a video wall controller, supporting various display configurations and control methods. Please read this manual thoroughly before operating the device to ensure proper usage and optimal performance.

2. KEY FEATURES

- **Multi-Viewer 6x6 HDMI Matrix & Video Wall Processor:** Functions as both an HDMI matrix and a video wall controller. Supports rapid switching between 6 input devices and 6 output displays in matrix mode. All 6 output ports can display the same or different content. Video wall mode is suitable for displaying content across 6 connected TVs.
- **Flexible Display Modes:** Supports various video wall modes including 2x3, 1x6, 6x1, 3x2, 2x2, 1x2, 2x1, 1x3, 3x1, 1x4, 4x1. Includes Picture-In-Picture (PiP) function and supports up to 4 windows on a single screen. Also functions as a 1x6 HDMI splitter or a 6x6 seamless HDMI matrix.
- **HDMI Multi-Function Multi-Viewer Video Processor:** Supports 1/4/6/8/9/16/25-view split-screen display, allowing input signals to be displayed on a single monitor. Offers flexible video splitting and merging capabilities, including 16-window display, arbitrary multi-window tiling, roaming overlay, zooming, and stretching functions.
- **Multiple Control Methods:** Can be controlled via a web interface or RS485 from computers, tablets, or smartphones. Supports scene cycling, input source video preview, scrolling subtitles, OSD character overlay on input channels, scene rotation, and power-off memory functions.
- **Modular Card Design:** Features a modular card design for flexible expansion and maintenance. Supports various input/output card sets including HDMI, SDI, and VGA. Users can customize card combinations (e.g., HDMI input with SDI output).

3. SETUP AND CONNECTION

Proper connection of input sources and output displays is crucial for optimal performance. Refer to the connection diagram below for guidance.

HDMI MATRIX SWITCH

VIDEO WALL CONTROLLER

MULTI-VIEW SEAMLESS VIDEO PROCESSOR

HDMI MATRIX VIDEO WALL CONTROLLER

VIDEO WALL CONTROLLER 90-180-270°VERTICAL

HDMI AUDIO-VIDEO IMAGE PROCESSOR

Figure 3.1: System Connection Diagram. This diagram illustrates how to connect various input devices (Blu-ray DVD, TV box, screen projector, notebook, PC) to the matrix host via HDMI input ports, and how the matrix host connects to multiple output displays (large screens) via HDMI output ports. Control devices like cell phones, tablets, notebooks, keyboards, and mice can connect via network or USB ports. The matrix RS232 output connects to the large screen RS232 serial port.



Figure 3.2: ICUIXIAN 6x6 HDMI Matrix Switch. This image shows the front and rear panels of the device, highlighting the input and output ports, power connection, and control interfaces.

3.1. Physical Connections

- Power Connection:** Connect the provided power cord to the device and a suitable power outlet.
- Input Devices:** Connect your HDMI source devices (e.g., laptops, PCs, Blu-ray players, set-top boxes) to the HDMI input ports (IN1-IN6) on the matrix using high-quality HDMI cables.
- Output Displays:** Connect your HDMI display devices (e.g., TVs, monitors, projectors) to the HDMI output ports (OUT1-OUT6) on the matrix using high-quality HDMI cables.

4. **Network Connection:** For web-based control, connect an Ethernet cable from the device's LAN port to your network router or switch.
5. **RS485/RS232 Connection:** For serial control, connect the RS485/RS232 port to your control system.
6. **USB Ports:** USB ports are available for connecting peripherals like keyboards and mice for direct control or firmware updates.

4. OPERATING MODES

The ICUIXIAN 6x6 HDMI Matrix Video Wall Controller supports multiple operating modes to suit various display requirements.

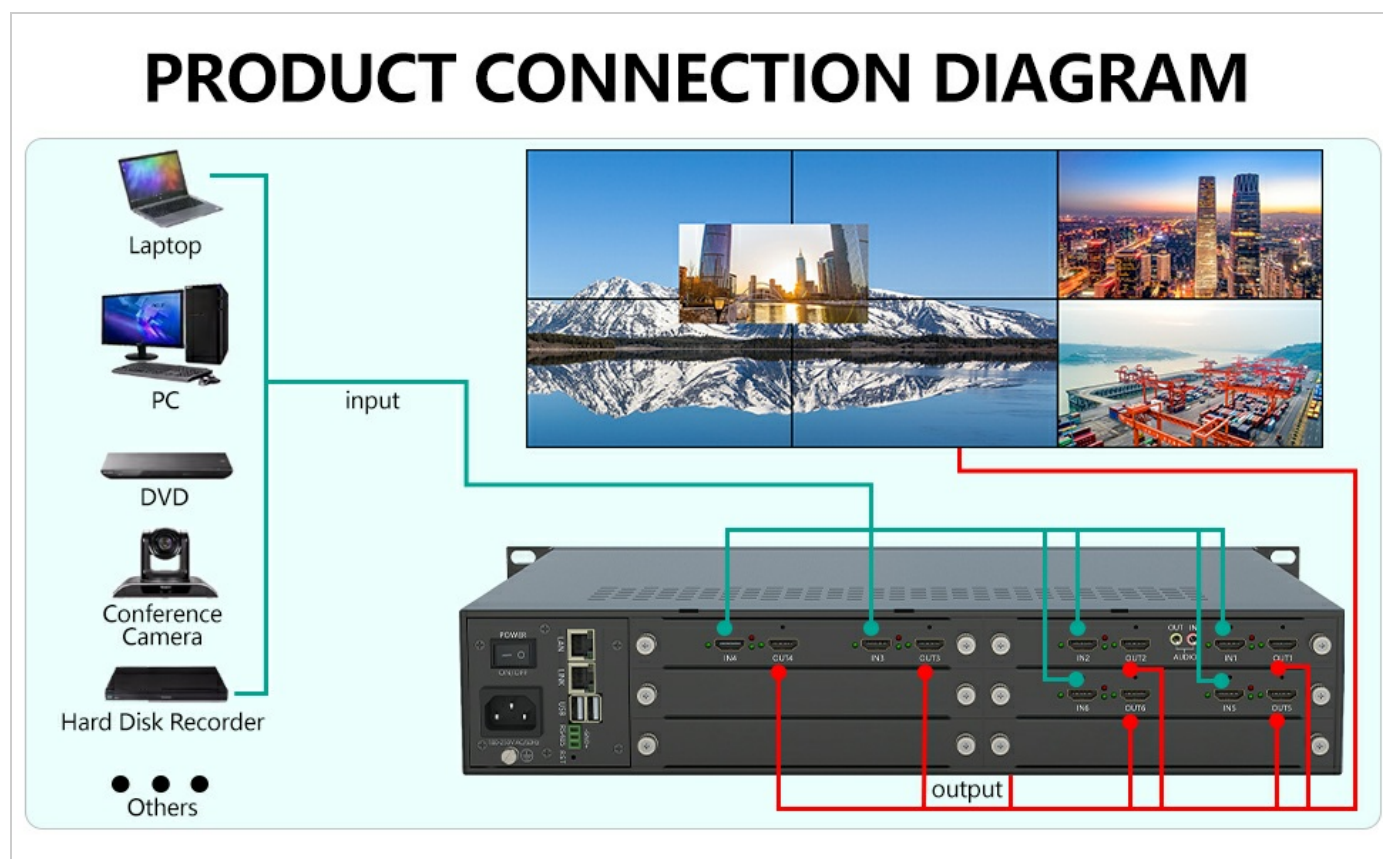


Figure 4.1: Multifunctional Multi-Viewer Video Switcher Processor. This image displays various modes including Matrix mode, Splitter mode, Matrix splitter mode, 2x3 Video Wall mode, Window overlay mode, Multi-view overlay mode, and Video Wall Matrix mode, along with HDMI Multi-Viewer functions like 8-Split Mode.

4.1. Matrix Mode

In Matrix mode, any of the 6 input sources can be routed to any of the 6 output displays independently. This allows for flexible switching and distribution of content. For example, Input 1 can be shown on Output 1, while Input 2 is shown on Output 2, or Input 1 can be shown on all outputs simultaneously (splitter function).

4.2. Video Wall Mode

In Video Wall mode, multiple output displays combine to form a single large screen, displaying a portion of a single input source. The device supports various video wall configurations such as 2x3, 1x6, 6x1, 3x2, 2x2, 1x2, 2x1, 1x3, 3x1, 1x4, and 4x1. This mode is ideal for large-scale presentations or digital signage.

VARIOUS SCREEN CONFIGURATION



1.Splicing Mode

Large screen splicing, 4K display



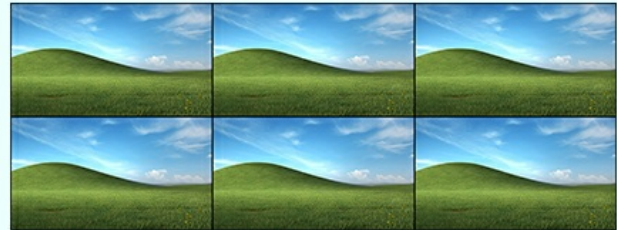
3.Matrix Mode

Independently direct individual input signals to each display



2.Customized Splicing Mode

Supports flexible splicing and can display different signal sources



4.Splitter Display Mode

Copy mode and display the same screen

Figure 4.2: Various Screen Configurations. This image illustrates different display configurations including Splicing Mode (large screen 4K display), Customized Splicing Mode (flexible splicing with different signal sources), Matrix Mode (independent input to each display), and Splitter Display Mode (copy mode, displaying the same screen).

4.3. Multi-Viewer Mode (PiP/PoP)

The Multi-Viewer mode allows multiple input sources to be displayed simultaneously on a single screen in various layouts (e.g., Picture-in-Picture, Picture-outside-Picture, split-screen). The device supports 1/4/6/8/9/16/25-view split-screen displays, with capabilities for arbitrary multi-window tiling, roaming overlay, zooming, and stretching.

WEB CONTROL



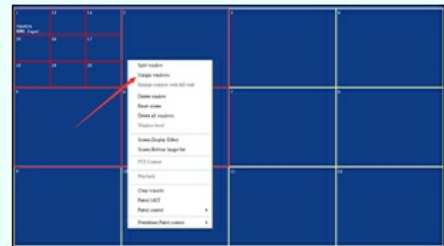
Click the "Echo Function" to enable the echo function. All windows will then activate echo mode. Click the echo button in the upper-right corner of the window again.



Reset Window Based on the actual number of HDMI outputs from the device, select the left window template or set the number of rows and columns in the custom add checkbox on the right.



Choose how many small windows to split into, as shown in the following figure



Screen merging, hold down the left mouse button, drag from top to bottom, select the window that needs to be merged, right-click to merge, as shown in the following figure

Figure 4.3: HDMI Multi-Viewer Function. This image demonstrates various 6-split screen layouts, showing how multiple input sources can be displayed simultaneously on a single monitor, with windows freely merged or split.

5. CONTROL METHODS

The device offers flexible control options for managing inputs, outputs, and display modes.

5.1. Web Interface Control

The primary control method is through a web-based graphical user interface (GUI). Connect the device to your network and access its IP address from a web browser on a computer, tablet, or smartphone. The web interface allows for comprehensive control over matrix switching, video wall configurations, multi-viewer layouts, and other advanced settings.

Packing List

- 1 x HDMI Matrix Switching Processor 4x4
- 1 x Network Cable
- 1 x Power Cord
- 1 x User Manual



Network Cable



Power Cord



User Manual

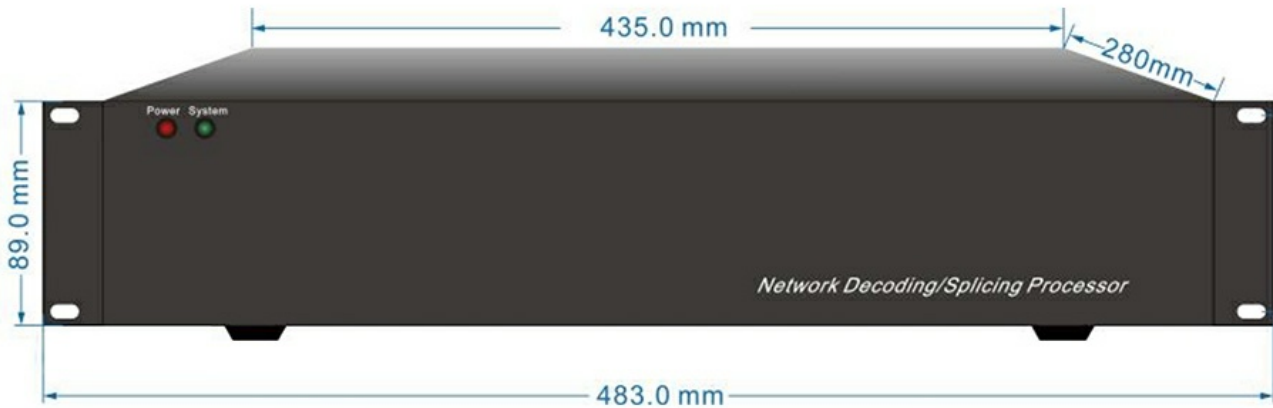


Figure 5.1: Web Control Interface. This image shows screenshots of the web-based control interface, demonstrating options for enabling echo function, resetting windows, choosing split-screen layouts, and merging screens by dragging and right-clicking.

5.2. RS485/RS232 Control

For integration with professional control systems, the device supports RS485/RS232 serial control. Refer to the technical specifications and programming guide for detailed commands and protocols.

5.3. OSD and Subtitle Overlay

The device supports On-Screen Display (OSD) character overlay on input channels and scrolling subtitles. This feature allows for custom text display, with configurable font, size, color, transparency, and position.

Audio Embedding and De-Embedding

Audio and video can be controlled independently without interference; HDMI carries embedded audio; supports one channel of audio input/output by default, with custom multi-channel audio input/output available upon request. For more details, please contact the supplier.



Figure 5.2: Scrolling Subtitles and OSD Character Overlay. This image demonstrates the capability of the device to display scrolling subtitles and custom OSD characters over video inputs, as shown with text overlays on a multi-screen display.

6. MODULAR DESIGN

The ICUIXIAN 6x6 HDMI Matrix Video Wall Controller features a modular card-insertion design, which simplifies expansion and maintenance. This design allows for flexible configuration of input and output ports.



Figure 6.1: Modular Card-Insertion Design. This image shows a circuit board being inserted into the device, illustrating the modular design that supports various input card sets including HDMI, DVI, SDI, and VGA. This allows for mixing and matching input and output port types.

Commonly used card sets include HDMI, SDI, and VGA. You can combine different card sets, for example, using an HDMI card set for input and an SDI card set for output, to meet specific project requirements.

7. AUDIO FEATURES

The device supports independent control of audio and video signals. HDMI carries embedded audio, and the unit supports one channel of audio input/output by default. Custom multi-channel audio input/output options may be available upon request.



Figure 7.1: Audio Embedding and De-Embedding. This image shows the device connected to an external speaker, illustrating its capability for independent audio and video control, including HDMI embedded audio and dedicated audio input/output ports.

8. SPECIFICATIONS

Feature	Detail
Model Number	XTA-0606-ZMHD
Brand	ICUIXIAN
Color	Black
Connector Type	HDMI
Number of Ports	6 Input, 6 Output
Compatible Devices	Laptop, Projector, Television, Blu-ray DVD, TV Box, PC
Resolution Support	Up to 4K@30Hz (3840x2160@30Hz), backward compatible with 2K and 1080p
Control Methods	Web GUI, RS485/RS232
Material	Metal
Weight	5 KG / 10 lbs
Dimensions (L x W x H)	482.1mm x 250mm x 44mm (18.98" x 9.84" x 2.67")
Modular Design	Supports HDMI, DVI, SDI, VGA port cards



Figure 8.1: Technical Specifications and Dimensions. This image provides a visual overview of the device, highlighting its compact and lightweight design, material (metal), weight (5KG/10lb), and precise dimensions (L:482.1mm/18.98", W:250mm/9.84", H:44mm/2.67"). It also mentions the modular plug-in card design and available port card formats.

9. PACKING LIST

Verify that all items are included in the package upon unboxing:

- 1 x HDMI Matrix Switching Processor (Model XTA-0606-ZMHD)
- 1 x Network Cable
- 1 x Power Cord
- 1 x User Manual



Figure 9.1: Packing List. This image visually confirms the contents of the package: one HDMI Matrix Switching Processor, one Network Cable, one Power Cord, and one User Manual.

10. MAINTENANCE

To ensure the longevity and optimal performance of your ICUIXIAN HDMI Matrix Video Wall Controller, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Do not use liquid cleaners or aerosols, as they may damage the components.
- **Ventilation:** Ensure that the device has adequate ventilation. Do not block any ventilation openings. Avoid placing the device in enclosed spaces that can lead to overheating.
- **Environment:** Operate the device in a cool, dry environment, away from direct sunlight, heat sources, and excessive humidity.
- **Cable Management:** Keep all cables neatly organized and securely connected to prevent accidental disconnections or damage.
- **Firmware Updates:** Periodically check the manufacturer's website for firmware updates. Applying updates can improve performance, add new features, and resolve potential issues.

11. TROUBLESHOOTING

If you encounter issues with your ICUIXIAN HDMI Matrix Video Wall Controller, refer to the following common troubleshooting steps:

- **No Video Output:**
 - Ensure all HDMI cables are securely connected to both input sources and output displays.
 - Verify that the input source is powered on and outputting a signal.
 - Check the selected input on the matrix controller via the web interface or front panel.
 - Try a different HDMI cable or display to rule out cable/display issues.
 - Restart the matrix controller and all connected devices.
- **No Audio:**
 - Confirm that the audio is enabled on both the source device and the display.
 - Check audio settings within the matrix controller's web interface.
 - Ensure HDMI cables support audio transmission.

- **Web Interface Not Accessible:**

- Verify the network cable is properly connected to the LAN port.
- Ensure the device is powered on.
- Check the IP address of the device and ensure your computer is on the same network segment.
- Try restarting the device and your network router/switch.

- **Video Wall Display Issues (Incorrect Layout/Scaling):**

- Ensure the correct video wall mode and layout are selected in the web interface.
- Verify that all displays are of the same resolution and orientation for optimal results.
- Adjust scaling and bezel compensation settings in the web interface if available.

If issues persist after following these steps, please contact ICUIXIAN customer support for further assistance.

12. WARRANTY AND SUPPORT

The ICUIXIAN 6x6 Seamless HDMI Matrix Video Wall Controller comes with a **1-year manufacturer's warranty**. This warranty covers defects in materials and workmanship under normal use.

For technical support, warranty claims, or any product-related inquiries, please contact ICUIXIAN customer service.

Professional technical staff are available to assist with product issues and provide a satisfying experience.

Additional protection plans may be available for purchase:

- **3-Year Protection Plan:** One-time payment of \$89.99.
- **Complete Protect:** Monthly billing at \$16.99, covering all eligible past and future purchases.

13. PRODUCT VIDEOS

The following videos provide visual demonstrations of the product's features and capabilities.

13.1. Matrix: No Black Screen, No Blue Screen, Seamless Switching

Your browser does not support the video tag.

This video demonstrates the seamless switching capabilities of the ICUIXIAN HDMI Matrix, highlighting the absence of black or blue screens during transitions between video sources. (Duration: 0:13)

13.2. HDMI Matrix Video Wall Controller with Web-Based Control

Your browser does not support the video tag.

This video showcases the web-based control interface of the HDMI Matrix Video Wall Controller, demonstrating how users can manage and configure video wall layouts and matrix switching through a browser. (Duration: 1:05)

13.3. HDMI Matrix Video Wall Controller Processor WEB Control

Your browser does not support the video tag.

This video provides another demonstration of the web control features for the HDMI Matrix Video Wall Controller Processor, illustrating its ease of use for managing complex display setups. (Duration: 0:15)

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question