

PANIO HW12

12-Port Output Video Wall Splicing Processor

Seamless Large-Format Visuals with Ultra 5K Resolution & 12-Screen Flexibility

1. Product Overview

The PANIO HW12 is a professional-grade video wall splicing processor designed to unlock immersive, high-definition multi-screen displays—supporting up to 12 monitors in versatile configurations. Engineered for reliability and ease of use, it delivers crisp, undistorted visuals and seamless integration, making it ideal for control rooms, retail showcases, corporate lobbies, event venues, and digital signage. With dual high-speed inputs, ultra 5K resolution support, and hardware-driven simplicity, the HW12 turns complex video wall setups into plug-and-play solutions.

2. Key Features

Flexible 12-Screen Splicing

- Supports a wide range of layouts: **4x3, 3x4, 2x6, 6x2**, plus **2x1–6, 3x1–4, 4x1–3, 6x1–2** configurations.
- Compatible with both **vertical and horizontal screen placement** to adapt to any installation space.
- Max capacity: Up to 12 screens for large-scale, eye-catching visual experiences.

Dual High-Resolution Inputs

- Equipped with 1x **DisplayPort (DP)** and 1x **HDMI 1.4b** for flexible signal switching.
 - DP input: Supports up to **5760x3240 30Hz** (ideal for 4x3/3x4 setups) and **5760x1080 60Hz**.
 - HDMI input: Supports up to **3840x3240 30Hz** and **1920x3240 30Hz** (backward compatible for legacy sources).

Ultra 5K Lossless Display

- Delivers **pixel-perfect, distortion-free visuals** with point-to-point precision.

- Maintains original aspect ratio across all screens—no stretching, blurring, or quality loss, even in large splicing setups.

180° Independent Screen Rotation

- Each display can be rotated 180° independently, enabling creative installation options (e.g., vertical signage, unconventional wall layouts).

Edge Processing & Dedicated Audio

- **Intelligent edge correction:** Minimizes visual gaps (bezels) between spliced screens for a seamless, natural viewing experience.
- **3.5mm audio jack:** Separates audio output from video, allowing easy connection to external speakers or amplifiers.

Hardware-Driven Simplicity & Advanced Image Enhancement

- **Plug-and-play design:** No extra software required—set up and operate directly via hardware.
- Premium image processing:
 - 3D deinterlacing, 3D noise reduction, and motion compensation.
 - Gamma correction, skin tone optimization, and chroma enhancement.
 - Dynamic contrast adjustment and six-axis color control for vibrant, accurate visuals.

Multiple Control Options

- Choose the most convenient way to operate:
 - a. Remote control (for quick adjustments).
 - b. Front-panel buttons (for direct access).
 - c. RS-232 serial interface (for integration with control systems).

3. Technical Specifications

Parameter	Details
Model Name	HW12
Input Interfaces	1 x HDMI 1.4b, 1 x DisplayPort (DP)

Output Interfaces	12 x HDMI (video), 1 x 3.5mm (audio)
Input Resolution	DP: 5760x3240 30Hz, 5760x1080 60HzHDMI: 3840x3240 30Hz, 1920x3240 30Hz (backward compatible)
Output Resolution	Switchable @ 60Hz: 1024x768, 1280x800, 1280x720, 1920x1080, 1920x1200
Splicing Modes	2x1–6, 3x1–4, 4x1–3, 6x1–2; vertical/horizontal placement supported
Cable Requirement	Certified HDMI 2.0 (4K 60Hz); total length (input + output) ≤ 10m; optical HDMI recommended for longer runs
Control Method	Remote control, front-panel buttons, RS-232
Power Supply	AC 100~240V 50/60Hz (universal voltage)
Dimensions (LxWxH)	440 x 243 x 45 mm
Compatibility	LCD monitors, projectors

4. Important Installation Notes

1. Use **certified 4K HDMI cables** to ensure stable signal transmission and avoid visual artifacts.
 2. Do not connect uncertified switchers, splitters, or converters—these may cause compatibility issues or quality loss.
 3. Always use the **original power cord** provided with the unit to maintain performance and safety.
 4. Remote control batteries are **not included** (due to international shipping safety regulations).
 5. For integration with third-party devices (e.g., control systems, media players), contact PANIO technical support in advance to confirm compatibility.
 6. Total HDMI cable length (input + output) must not exceed 10 meters. For longer distances, use **optical HDMI cables** to preserve signal quality.
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5. Package Contents

- 1 x HW12 Video Wall Splicing Processor
 - 1 x Universal AC Power Cord (100~240V)
 - 1 x Remote Control (Battery Not Included)
 - 1 x User Manual (English)
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6. Ideal Applications

- **Control Rooms:** For security, industrial, or broadcast monitoring (e.g., 4x3 layouts for multi-camera feeds).
- **Retail Displays:** To showcase products or promotions in high-traffic areas (e.g., 2x6 vertical signage).
- **Corporate Lobbies:** For brand storytelling or dynamic content (e.g., 3x4 horizontal video walls).
- **Event Venues:** For stage backdrops, live feeds, or event branding (flexible 12-screen configurations).
- **Digital Signage:** For airports, malls, or transit hubs (180° rotation for vertical/horizontal placement).