

# iWall 206

4K60 HDMI 2x6 Video Wall Controller

*Datasheet V1.0*

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# INTRODUCTION

## 1.1 OVERVIEW

The **iWall 206** is an expandable video wall controller. It is mainly suitable for application scenarios such as advertising display, digital signage, digital menus, etc., aiming to provide customers with better video enjoyment.

It is equipped with 2 HDMI IN ports, with the highest input resolution up to 4K@60Hz 4:4:4, and supports HDCP 2.3, EDID selection and other functions. 6 HDMI OUT ports allow users to create video wall layout modes including quick video wall mode, standard video wall mode and mosaic mode, which are convenient for users to plug and play, and each HDMI OUT port supports independent auto scaler function to enable best quality output. At the same time, the device is also equipped with 1 Loop port for video wall cascading.

Multiple control options including front panel buttons, RS232 and LAN (telnet & web UI) control enable the unit can meet different requirements.

## 1.2 FEATURES

- Supports quick video wall mode, including 1x4, 2x2, 3x2, 2x3, 4x1, 1x4 (90°), and 1x3 (60°) (all video wall layout modes are row x column), and select source between two HDMI inputs.
- Supports standard video wall mode, in which users can set M (row:  $M \leq 6$ ) x N (column:  $N \leq 6$ )  $\leq 6$  x cascade number (up to 6) video wall layout mode, and set bezel of each display.
- Supports mosaic video wall mode, in which users can set any rotation angle and any shape for the video wall.



- Supports HDMI 2.0 with 4K@60Hz 4:4:4 8bit, especially 3840 x 600, 5400x1920 wide-screen resolution.
- Supports 5K EDID, including 5120x2160@30Hz, 5120x1440@60Hz/30Hz.
- HDCP 2.3 and backwards compatible.
- EDID management including EDID presets, EDID copy and customized EDID.
- Each of the six HDMI OUT port supports an independent auto scaler for outputting the best quality video.
- One HDMI loop out for video-wall cascading connection.
- Supports auto switching between two HDMI inputs.
- Supports OSD function to display IP address, HDMI output, and cascading information (in cascading connection mode only).
- An analog audio output port outputs de-embedded audio from selected input and can set audio output delay time.
- Supports power on/off the displays automatically via CEC function.
- Supports multiple control options, including front panel buttons, RS232 and LAN (telnet & web UI).

## 1.3 PACKAGE CONTENTS

- 1 x iWall 206 Video Wall Controller
- 1 x DC 20V Power Adapter
- 1 x AC Power Cord with EU Pins
- 1 x Phoenix Male Connector (3.5mm, 3 Pins)
- 1 x Phoenix Male Connector (3.5mm, 5 Pins)
- 2 x Mounting Brackets (with Screws)

## 1.4 SPECIFICATIONS

Technical	
Input/Output Ports	2 x HDMI IN, 7 x HDMI OUT (including 1 HDMI loop out port), 1 x AUDIO OUT (3.5mm phoenix connector, 5 Pins),

Technical	
	1 x RS232, 1 x LAN, 1 x DC 20V
Input/Output Video Type	Max: 4K@60Hz 4:4:4 8bit, HDCP 2.3
Input/Output Resolution Supported	<p>Input Resolution:</p> <p>Wide-screen resolution: 3840 x 600<sup>8</sup>, 800 x 600<sup>8</sup>, 1024 x 768<sup>8</sup>, 1280x720P<sup>6,7,8</sup>, 1280 x 768<sup>8</sup>, 1280 x 800<sup>8</sup>, 1280 x 960<sup>8</sup>, 1280 x 1024<sup>8</sup>, 1360 x 768<sup>8</sup>, 1366 x 768<sup>8</sup>, 1440 x 900<sup>8</sup>, 1600 x 900<sup>8</sup>, 1600 x 1200<sup>8</sup>, 1680 x 1050<sup>8</sup>, 1920x1080P<sup>6,7,8</sup>, 1920 x 1200<sup>8</sup>, 3840x2160P<sup>2,3,5,8</sup>, 4096 x 2160P<sup>2,3,5,8</sup>, 5400 x 1920P<sup>5</sup>, 5120x2160p@30_2D_2CH, 5120 x 1440p@60_2D_2CH, 5120 x 1440p@30_2D_2CH</p> <p>Output Resolution:</p> <p>Auto Scaler: According to the EDID of the display to output the recommended resolution.</p> <p>Manual: 800 x 600<sup>8</sup>, 1024 x 768<sup>8</sup>, 1080 x 7680<sup>5,8</sup>, 1280 x 720<sup>6,8</sup>, 1280 x 768<sup>8</sup>, 1280 x 800<sup>8</sup>, 1280 x 960<sup>8</sup>, 1280 x 1024<sup>8</sup>, 1360 x 768<sup>8</sup>, 1366 x 768<sup>8</sup>, 1440 x 900<sup>6</sup>, 1600 x 900<sup>8</sup>, 1600 x 1200<sup>8</sup>, 1680 x 1050<sup>8</sup>, 1920 x 1080<sup>6,8</sup>, 1920 x 1200<sup>8</sup>, 1920 x 2160<sup>8</sup>, 2048 x 1200<sup>8</sup>, 2548 x 1536<sup>8</sup>, 2560 x 1080<sup>8</sup>, 2560 x 1440<sup>2,3,5,6,8</sup>, 2560 x 1536<sup>8</sup>, 2560 x 1600<sup>8</sup>, 3440 x 1440<sup>8</sup>, 3840 x 1080<sup>8</sup>, 3840 x 2160<sup>2,3,5,6,8</sup>, 4096 x 2160<sup>2,3,5,6,8</sup>, 5120 x 1440<sup>5,8</sup>, 5120 x 2160<sup>5</sup>, 7680 x 1080<sup>5,8</sup></p> <p>2 = at 24 Hz, 3 = at 25 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = 60 Hz</p>
Audio Format	HDMI IN/OUT: PCM 2.0 AUDIO OUT: Stereo
Maximum Data Rate	18Gbps
Control Method	Front panel buttons, RS232, LAN (Telnet API & Web UI)

General	
Operating Temperature	0°C to 45°C (32°F to 113°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Humidity	10% to 90%, non-condensing
ESD Protection	Human-body Model: ±8kV (Air-gap discharge)/ ±4kV (Contact discharge)
Power Supply	DC 20V, 3A
Power Consumption (Max)	35.98W
Device Dimension (W x H x D)	320mm x 27mm x 180mm/12.60" x 1.06" x 7.09" (Without mounting brackets)
Product Weight	1.65kg/3.64lbs

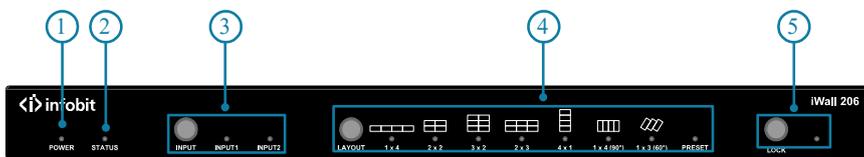
## Transmission Distance

Cable Type	Range	Supported Video
HDMI	Input: 15m/50ft	1080P@60Hz 24bpp

Cable Type	Range	Supported Video
	Output: 10m/33ft	
	Input/Output: 10m/33ft	4K@30Hz 4:4:4 24bpp 4K@60Hz 4:2:0 24bpp
	Input/Output: 5m/16ft	4K@60Hz 4:4:4 24bpp

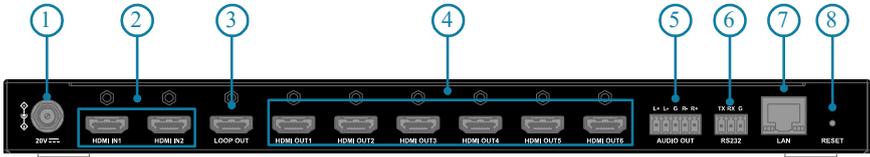
## 2. PANEL OVERVIEW

### 2.1 FRONT PANEL



#	Name	Description
1	POWER LED	<ul style="list-style-type: none"> <li>On: The device is powered on.</li> <li>Off: The device is powered off.</li> </ul>
2	STATUS LED	<ul style="list-style-type: none"> <li>Blinking: The device is working properly.</li> <li>Off: The device is not working properly.</li> </ul>
3	INPUT Selection Button and LEDs	<p>INPUT Selection Button: Press to select HDMI IN 1 or HDMI IN 2 as input source cyclically.</p> <p>INPUT 1 &amp; INPUT 2 LEDs:</p> <ul style="list-style-type: none"> <li>On: The corresponding HDMI input 1/2 is selected as input source.</li> <li>Off: The corresponding HDMI input 1/2 is not selected as input source.</li> </ul>
4	LAYOUT Selection Button and Layout LEDs	<p>LAYOUT Selection Button: Press to switch layout mode among 1x4, 2x2, 3x2, 2x3, 4x1, 1x4 (90°), 1x3 (60°) (Row x column), and PRESET.</p> <p>Layout LEDs:</p> <ul style="list-style-type: none"> <li>On: The corresponding layout mode is selected.</li> <li>Off: The corresponding layout mode is not selected.</li> </ul>
5	LOCK Button and LED	<ul style="list-style-type: none"> <li>Press to lock front panel buttons to prevent accidental pressing.</li> <li>Hold the button for about 3s to exit lock mode.</li> </ul>

## 2.2 REAR PANEL



#	Name	Description
1	DC 20V	Connect to the provided DC 20V power adapter.
2	HDMI IN 1 & 2	Connect to HDMI sources.
3	LOOP OUT	Connect to an HDMI display or connect to HDMI IN port of the next device for cascading connection.
4	HDMI OUT 1~6	Connect to HDMI displays for video wall connection.
5	AUDIO OUT	Connect to an audio receiver for outputting de-embedded audio.
6	RS232	Connect to a RS232 enabled control device for API control.
7	LAN	Connect to a network device (e.g., network switch, router, computer, etc.) for LAN control (Web UI & Telnet).
8	RESET	Use a needle to insert into the hole: <ul style="list-style-type: none"> <li>Hold it for about 5s: reset the IP mode to default settings (DHCP).</li> <li>Hold it for about for about 15s: reset the device to factory defaults.</li> </ul>

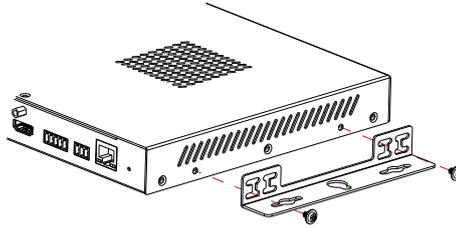
## 3. INSTALLATION AND WIRING

### Warnings:

- Before wiring, disconnect the power from all devices.
- During wiring, connect and disconnect the cables gently.

### 3.1 INSTALLATION

1. Attach the bracket to one side of the enclosure using the screws provided.  
The bracket is attached to the enclosure as shown.



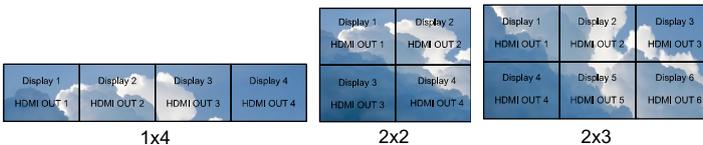
2. Repeat step 1 for the other side of the enclosure.
3. Attach the brackets to the surface or location desired using screws (not included in the package).

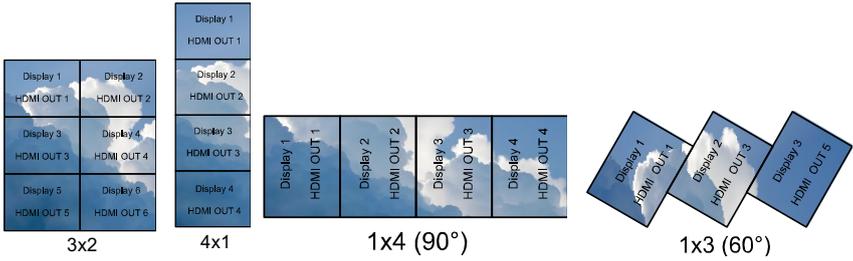
## 3.2 WIRING

The video wall processor provides quick video wall mode, including 1x4, 2x2, 3x2, 2x3, 4x1, 1x4 (90°), and 1x3 (60°) (Row x column), standard video wall mode, in which users can set M (row:  $M \leq 6$ ) x N (column:  $N \leq 6$ )  $\leq 6$  x cascade number video wall layout mode, and set bezel of each display, and mosaic video wall mode, in which users can set any rotation angle and any shape for the video wall.

Video Wall diagrams in Quick video wall mode:

**Note:** In quick video wall mode, displays must be connected to the corresponding HDMI output ports as the following preset and can't be adjusted.



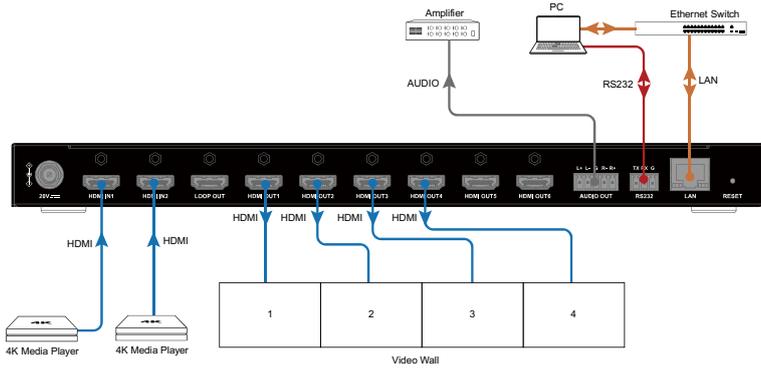


The device supports video wall expansion through LOOP port in standard video wall mode. Connect the LOOP OUT port of the first device to HDMI IN 1/2 port of the second device, the second device selects the input the LOOP port connected, the first device and the second device can form a larger video wall as requirement. It supports cascading up to 6 devices for creating video wall. In quick video wall mode, the device doesn't support cascading mode. In standard video wall mode, the device supports cascading connection.

In cascading connection, LAN control and RS232 control are available for the device the control devices connected only. Users can set output distribution for the video wall from all the outputs in the cascading connection via web UI.

**Note:** Please refer to the “Web UI Control” section or the separate document “API Command Set\_iWall 206” to get detail mode and configuration information.

### 1. 1 x 4 (row x column) video wall mode in non-cascading mode



## 2. 2 x 4 Video Wall in Cascading Mode

