iWall 8K106

HDMI 8K 1x6 Video Wall Controller

User Manual V2.0

1. INTRODUCTION

The **iWall 8K106** ultra-high resolution videowall controller is a newly launched ultra-high-definition video signal processor. The video image resolution can reach up to full 4:4:4 chromaticity sampling in the RGB color space. It adopts a pure hardware FPGA embedded architecture.

The **iWall 8K106** can combine multiple videowall modes; multiple ultra-clear point-to-point wall modes such as landscape /portrait screen/mosaic layouts; It is proportionally expanded according to the screen resolution, and the picture is not compressed, stretched, deformed, or distorted.

It can be cascaded to expand the number of splicing of more display devices to achieve large-scale videowall layouts, and is widely used in exhibition halls,

supermarkets, shopping malls, meeting rooms, restaurants, sports bars, digital signage, and other applications.

2. FEATURES

- FPGA and embedded architecture, the embedded system is stable and can support 7*24 hours long-term operation, and the FPGA provides users with stable image processing capabilities.
- Supports point-to-point low latency: from the input to the output latency <30ms.
- The power consumption is as low as 40W, and the noise is <40dB.
- Supports custom output resolutions, with more than 8 million pixels.
- Supports input 4K@60Hz or 8K@30Hz ultra -high-definition signals.
- Supports output 2K ultra-high-definition signal.
- Built-in FPGA audio de-embedding and switching function, which can extract the audio and switch to the 3.5mm audio output port.
- The device output ports synchronized automatically without any latency.
- A single unit can output up to 6 HDMI HD signals.
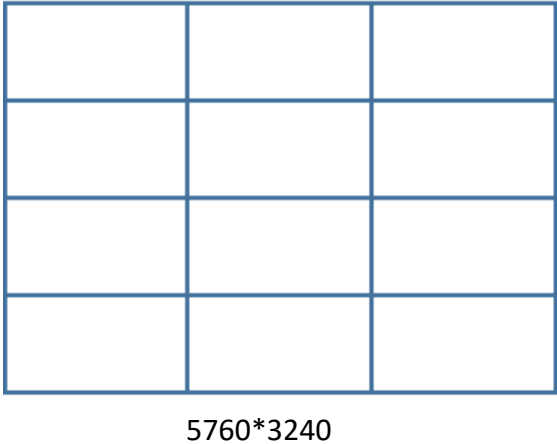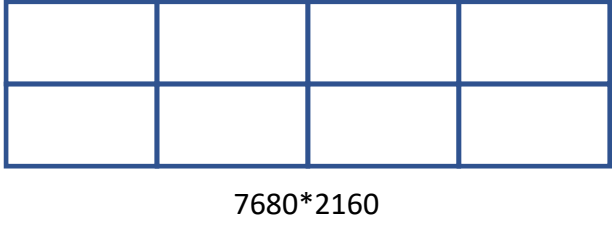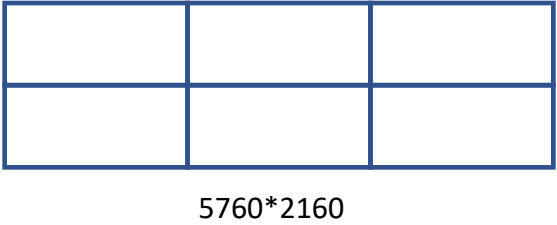- A single unit can input up to 1 HDMI UHD signal.

3. VIDEOWALL MODES

Supports landscape and portrait 1*N, M*1, M*N free combination and equal proportion point-to-point UHD video walls. (The following are some modes)

3.1 PORTRAIT VIDEOWALLS

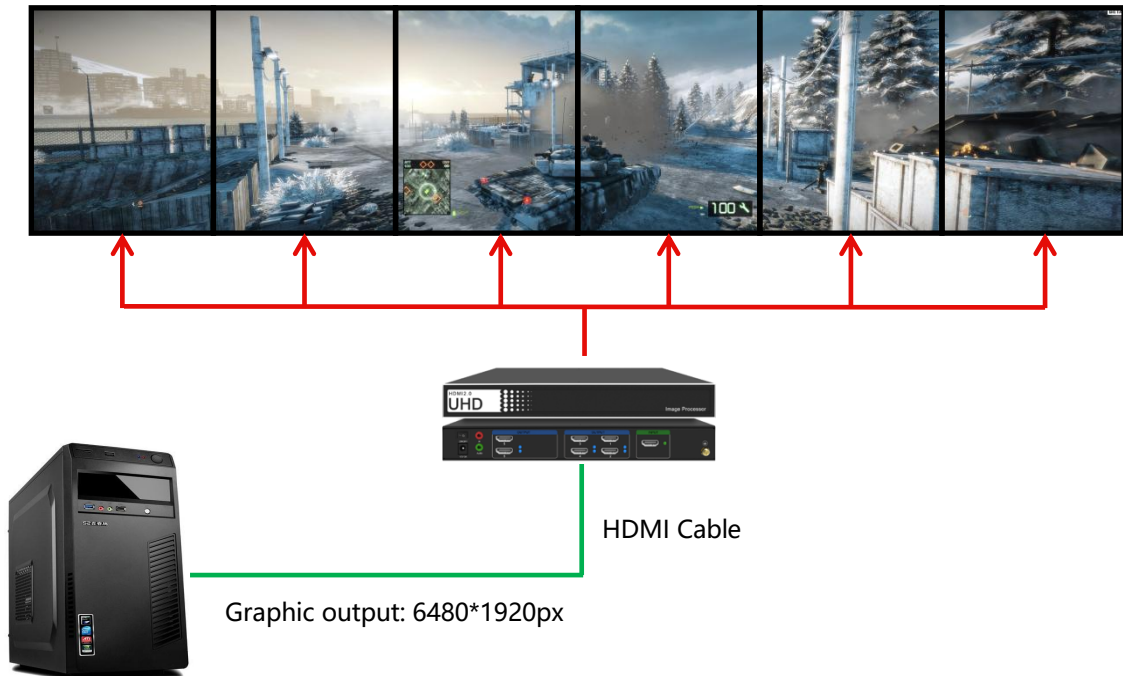3240*1920

5400*1920

2160*5760   2160*7680

7560*1920
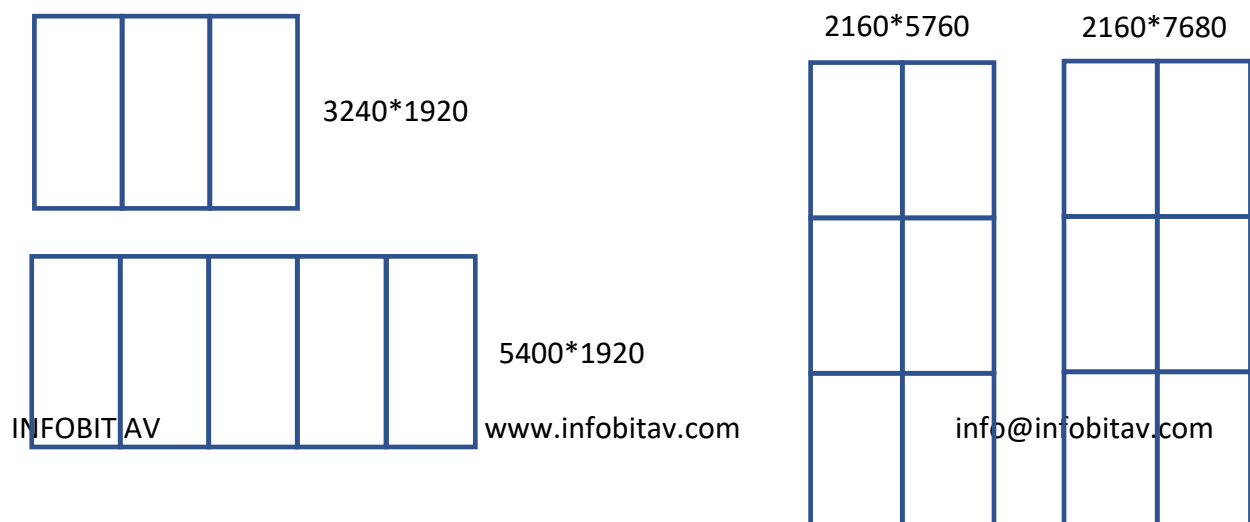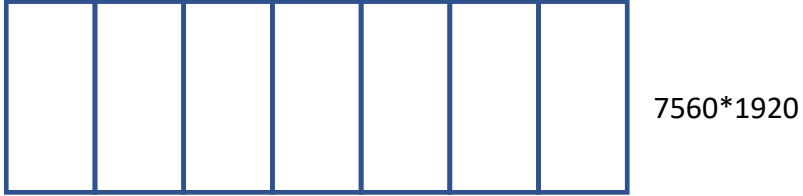
3.2 LANDSCAPE VIDEOWALLS

7680*1080

5760*2160

7680*2160

5760*3240

DIAGRAM (SINGLE UNIT)

Rotated 90° by the computer graphic card.

HDMI Cable

Graphic output: 6480*1920px

DIAGRAM (MULTIPLE UNITS)
Example of landscape screens.
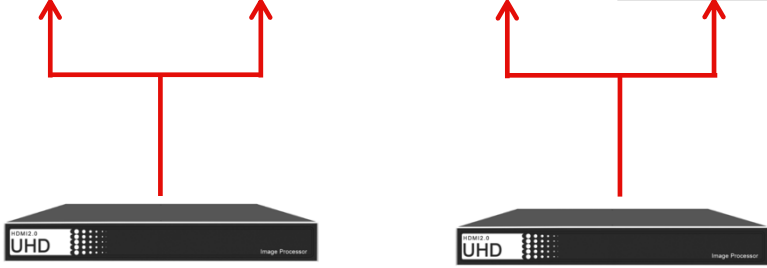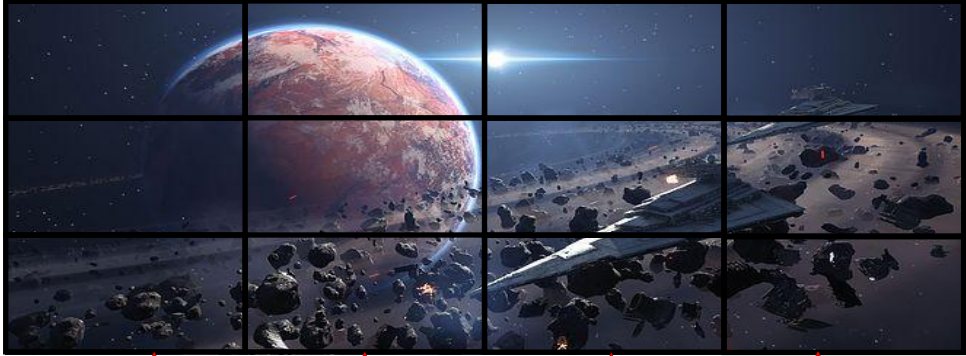
PC graphic output: 7680*3240px

SPEC

Model: iWall 8K106		
Function	UHD signal input and 2K outputs, videowall, audio extract.	
UHD IN	1	
HD OUT	6	
Dimensions	277*185*35mm	
Cascade	Supports	
Weight	3KG	
Consumption	40W	
Single unit resolutions		
Landscape mode		**Portrait mode**
1*1 1920*1080@60Hz 1*2 3840*1080@ 60Hz 1*3 5760*1080@60Hz 1*4 7680*1080@ 60Hz 2*1 1920*2160@60Hz 2*2 3840*2160@ 60Hz 2*3 5760*2160@30Hz 3*1 1920*3240@ 30Hz 3*2 3840*3240@30Hz 4*1 1920*4320@30Hz 5*1 1920*5400@30Hz 6*1 1920*6480@25Hz		1*1 1920*1080@60Hz 1*2 3840*1080@60Hz 1*3 5760*1080@60Hz 1*4 7680*1080@60Hz 2*1 1920*2160@60Hz 2*2 3840*2160@60Hz 2*3 5760*2160@30Hz 3*1 1920*3240@30Hz 3*2 3840*3240@ 30Hz 4*1 1920*4320@ 30Hz 5*1 1920*5400@30Hz 6*1 1920*6480@ 25Hz
INPUT		
Type	**Numbers**	**Parameters**
HDMI IN	1	HDMI 2.0, supports 7680*4320P@30Hz, 3840*2160P@60Hz, backward compatible.
OUTPUT		
Type	**Numbers**	**Parameters**
HDMI OUT	6	HDMI 1.3, maximum support 1920*1080P@60Hz, customizable resolution.
Environmental		
Power supply	DC 12V / 3A	
Operating temp.	Working temperature: 0℃~50℃	
Working humidity	Relative humidity: 10% to 90% without condensation	