VNS GeoBox

The absolute opposite of ordinary

G408 Video Wall Controller Datasheet

8 channel 4k/60 Video Wall controller
Support up to 7680x1200 30 fps input

2x HDMI 2.0b in, 8x HDMI 1.4 out, 10-bit processor

4:4:4 Chroma sampling

Independent rotation/ scaling/ cropping

Act as two Quad channel Processors
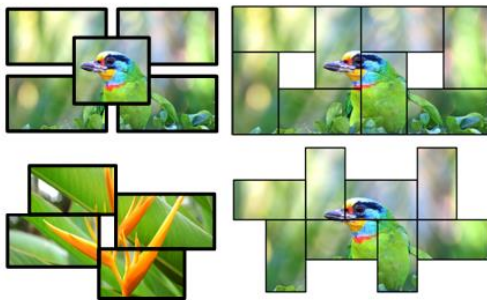
Application examples

Irregular video wall

Image rotation and multi—unit cascade

Image flip

DCi/UHD 4k/60/4:4:4	HDMI 2.0	HDCP 2.2/1.4	10-bit High-end scaler	Cadence Film 3:2 / 2:2	3D Motion De-interlace	Deep Color xvYCC/12-bit

Mosaic Irregular wall	Multi-Unit Cacade	Flexible Aspect Ratio Bezel Correction	Rotation Landscape Protrait	Loop Out Daisy chain	Control IR/USB/RS232 /Ethernet	Projector Output overlap	RoHS CE FCC
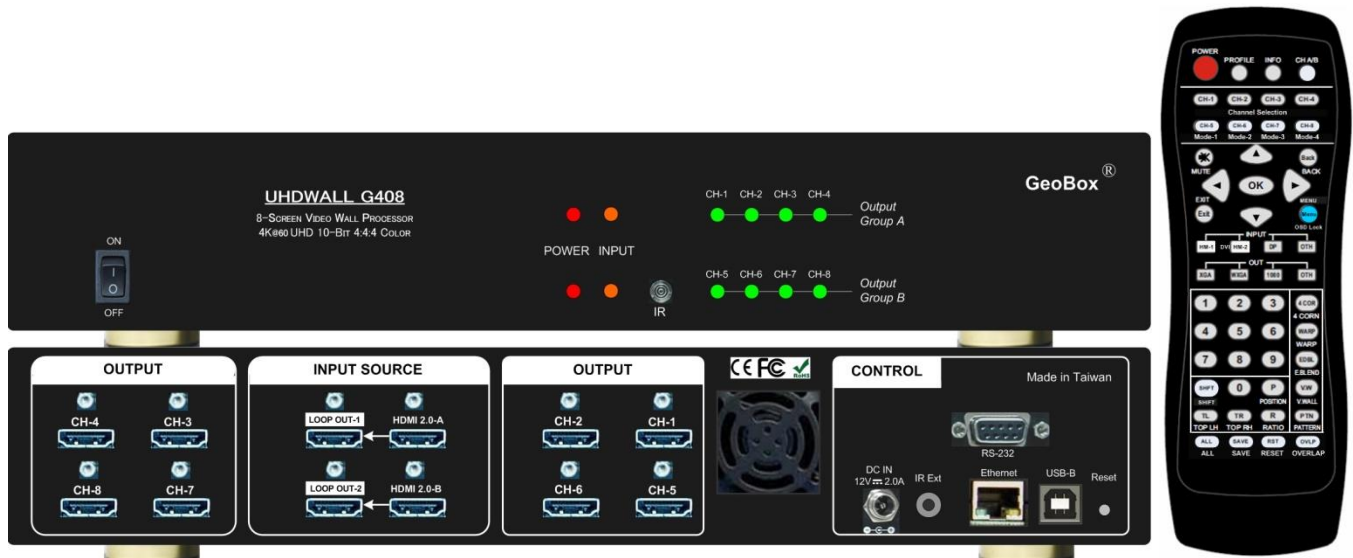
G408 eight channel controller

GeoBox G408 is 8 channel 4k/60 fps Video Wall controller. It is designed with two processing modules. Each processing module consists of 1x HDMI 2.0b input, 1x HDMI 2.0b loop-out port for daisy chain connection and 4 synchronized HDMI 1.4 outputs. It can serve as one eight channel video wall controller or two quad channel video wall controllers. Each output has independent image rotation/flip, scaling, cropping and color adjustment to allow great freedom in creating video wall with variable display scales and styles. Support pixel to pixel true 8k/4k video wall through 4x 4k input sources and two units of G408.

It is pure hardware, standalone system and easy-of-use. All operations can be executed through IR remote controller, USB, RS232 or Ethernet. No additional PC or appropriate software is required in the setup.

Infinite creative configuration

✧ Two processing modules, each module consists of below I/O ports.
   1x HDMI 2.0 input, 4x HDMI 1.4 output up to 2048x1200 @60Hz with flexible multi-unit cascade.
✧ It can serve as two Quad channel processors or one 8 channel processor while user connects two processing modules through loop out port.
✧ Support up to 4096x2160@60Hz, 7680x1200 @30Hz input.
✧ Input supports HDCP 1.4/2.2 and output supports HDCP 1.4.
✧ Two Loop-through ports for multiple unit cascade in any scale display.
✧ Pixel base position alignment up to +_ 1800 pixels in H&V for flexible image capture, cropping, position alignment, bezel compensation & irregular video wall.
✧ Set overlap output up to 1800 pixels for projector edge blending application.
✧ Independent Image color adjustment in each channel.
✧ Independent image rotation and flip/mirror in each channel for variable landscape, portrait and irregular video wall display.
✧ Selectable output resolution and programmable EDID to optimize video quality.
✧ Flexible aspect ratio adjustment in each edge up t0 +_ 1800 pixels.
✧ Frame rate conversion and 50Hz in / 50Hz out to keep video quality without artifact.
✧ Frame-Lock function to get perfect synchronization among output channels.
✧ Easy setup via IR, USB, RS232 & Ethernet. No PC is required.
✧ Ready for 24/7 working environment.

Specifications

- Input: 2x HDMI 2.0b
- Output: 8x HDMI 1.4
- 2x HDMI 2.0b loop out port for multiple unit cascade & daisy chain connection.
- HDCP compliance: Input: HDCP V2.2/V1.4. output: HDCP V1.4
- Max. input resolution: 4096x2160 @60Hz, 7680x1200 @30Hz. 4:4:4 Chroma sampling, 30 Color bits.
- Support non-VESA STD input timings.
- 18 selectable output modes up to 2048x1200 60Hz in each independent output port.
- Selectable 8/10-bit output color depth.
- One frame latency: 16.7ms (V=60Hz)
- Support xvYCC color processing & 8/10-bit deep color output.
- Video Wall overlap setting in each edge up to +_ 1800 Pixels.
- 3:2/2:2 cadence, low angle smooth algorithm, high quality scaling engine.
- 3D motion adaptive de-interlace.
- 10-bit processor, frame rate conversion.

- 50Hz in/out in FHD to avoid video artifact.
- Frame lock for synchronized outputs.
- Support HDR input signal but no HDR effect in the output.
- Individual 90/180/270 rotation, flip, cropping, scaling & color adjustment in each channel.
- When image rotation at 90/270 degrees, the maximum input is 4k/2k 30 fps.
- Embedded HDMI audio in each output.
- Selectable and programmable EDID.
- ESD Protection: ±8kV (Air-gap discharge), ±4kV (Contact discharge).
- DC 12V/1.9A, max. 22.8w, (100-240 VAC PSU)
- Working environment: 45° C, 10-90% RH
- Control: IR, RS232, USB, Ethernet
- Dimensions (Body only): 330mm*162mm*58mm (without protruding parts). 330mm*173mm*69mm (including protruding part)
- Weight: 1.90 kg (body only)
- CE/FCC/RoHS Certified
- 2 Year Warranty, extension package is available up to 5 years.
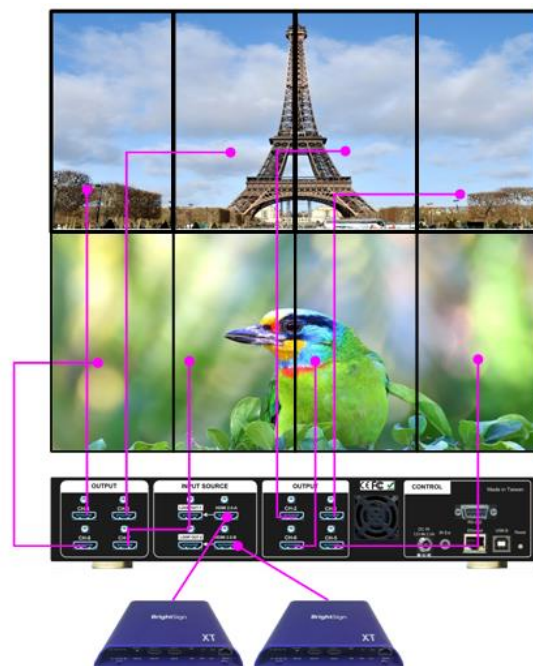

A. *Single G408 applications*
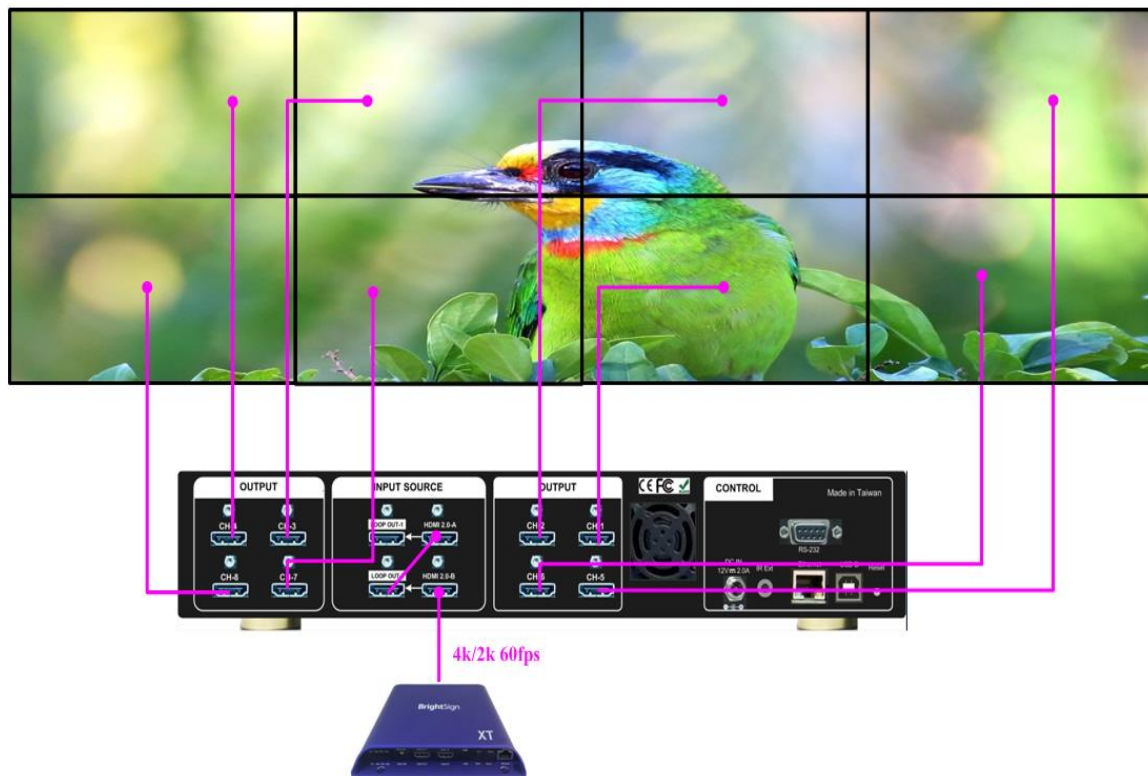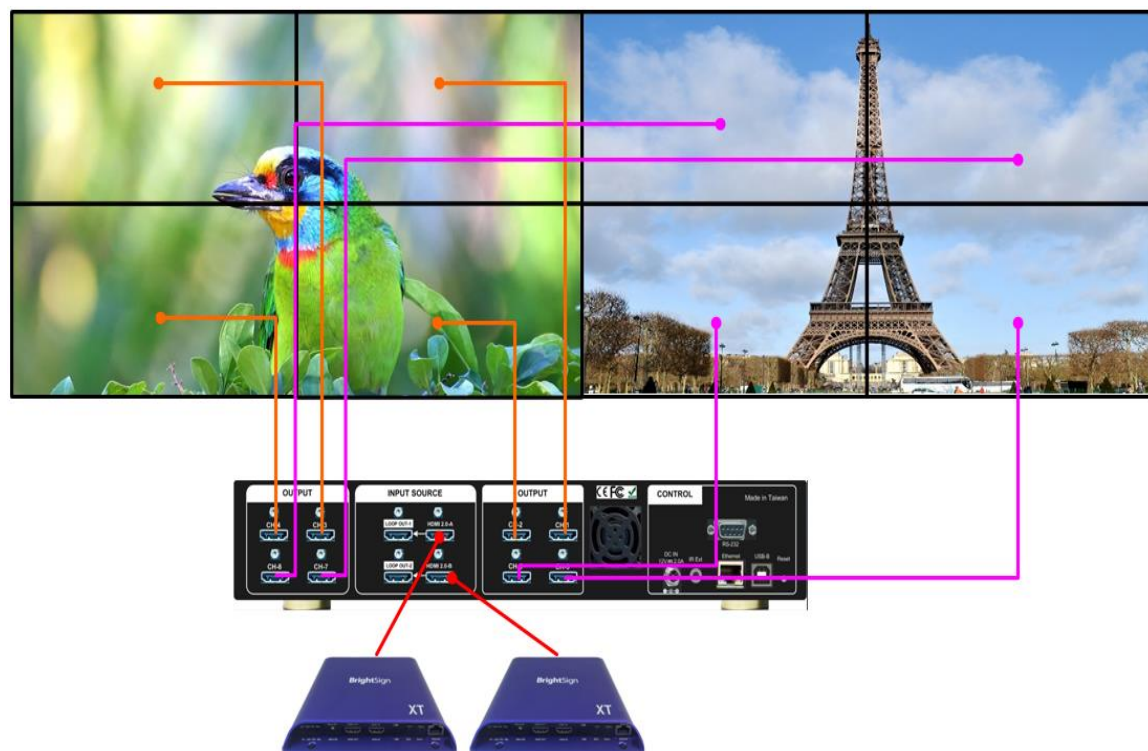
Configuration for 3x2, 4x2 video wall with one G-408
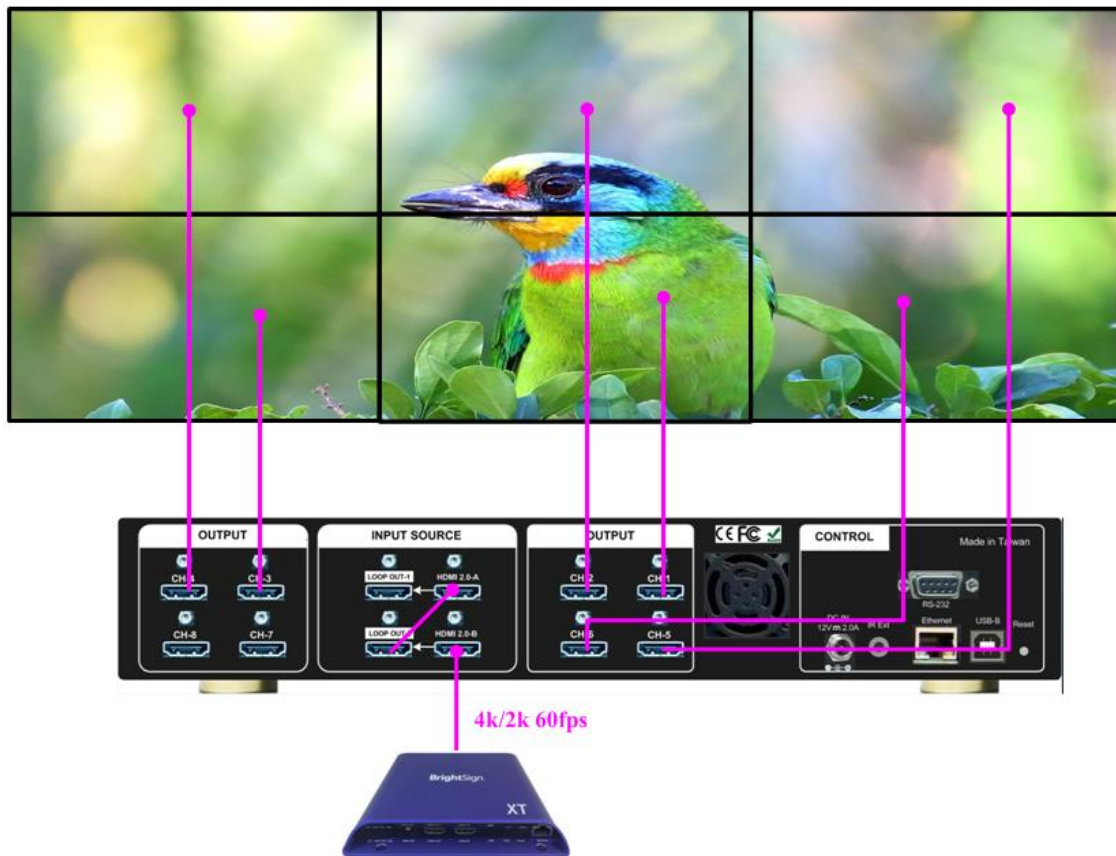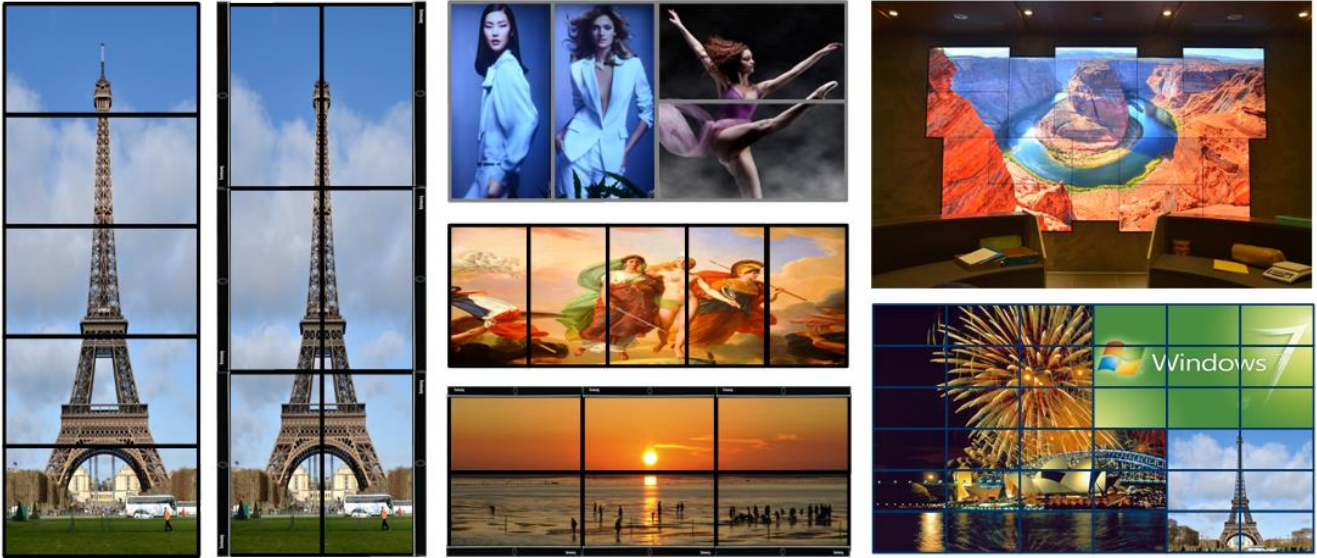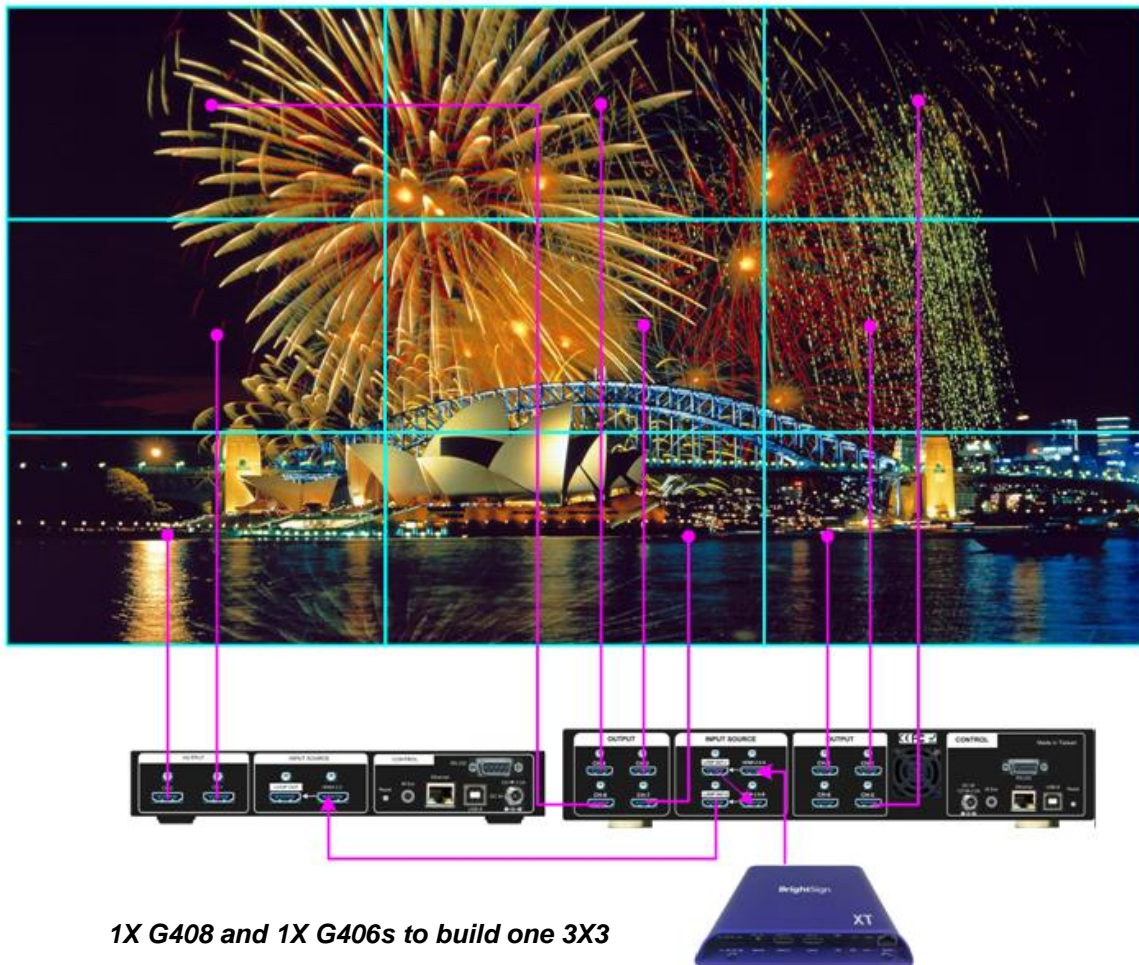

Portrait Display
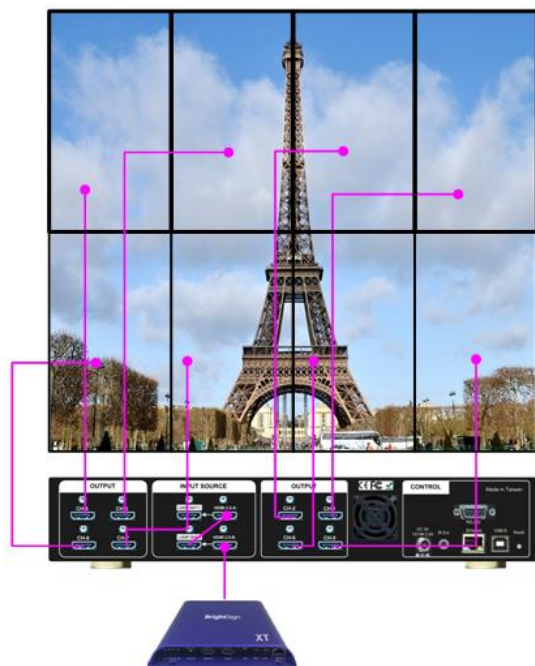
Dual Contents display

4x2 display

4x2 display with dual contents

B. *Multiple unit cascade and various applications*

G408 can build all kinds of video wall with LCD at landscape & portrait position. The connection can be flexible without specific sequence. G408 can assign image location for each monitor.
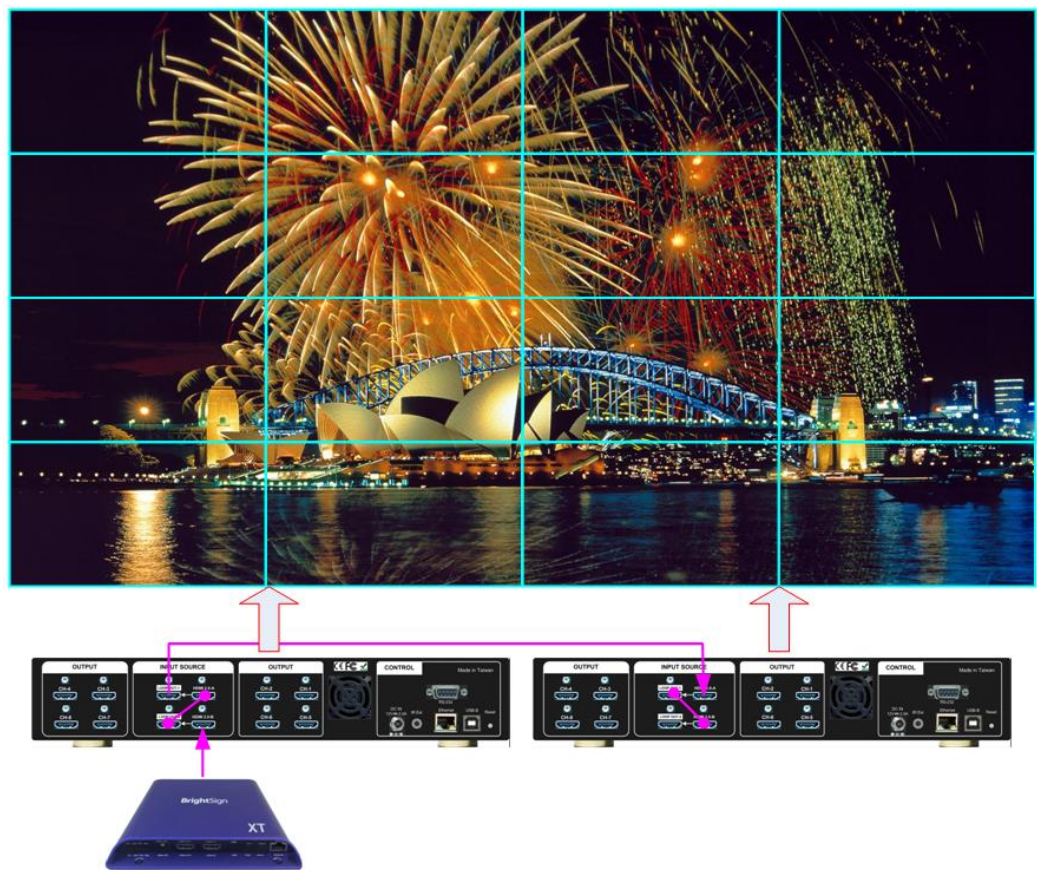

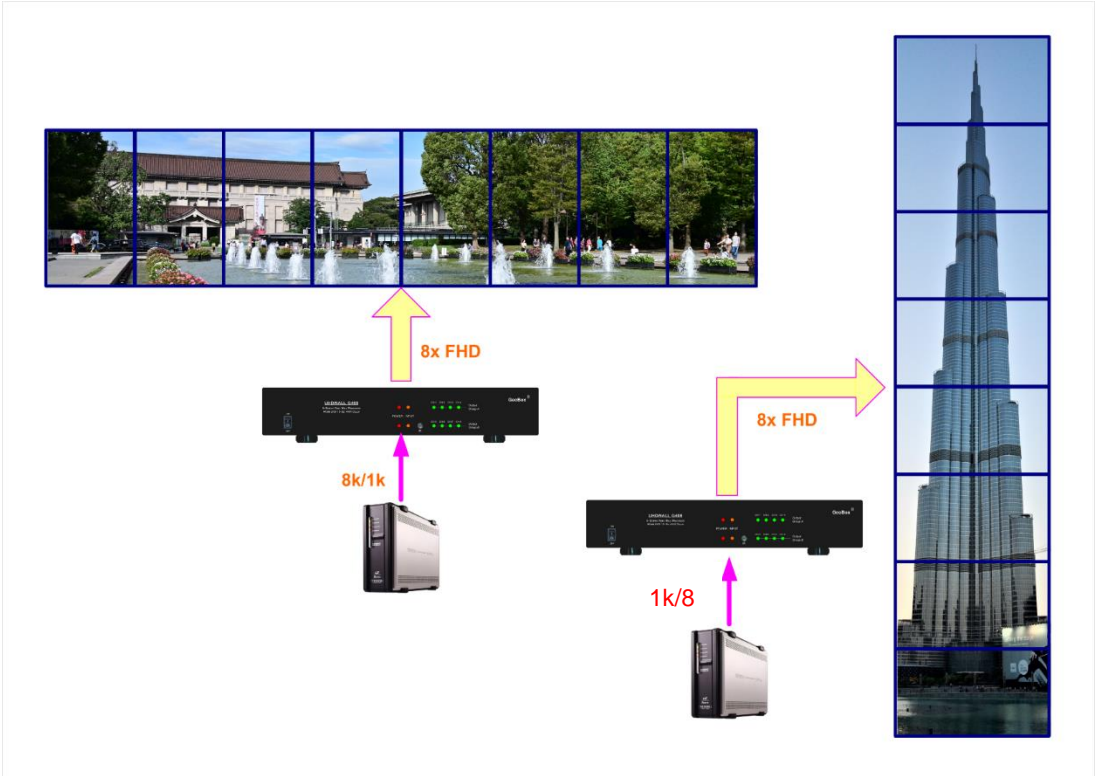**3X3 video wall can be achieved by one G408 plus any other 1-4 channels GeoBox.**

1X G408 and 1X G406s to build one 3X3 video wall


4X4 video wall built by two G408

Any monitor can be independently at portrait or landscape position for irregular video wall.

C. *8k/1k or 1k 8k high resolution display*

D. *Flexible Aspect Ratio Adjustment*

User can shrink the image with black borders or to stretch the image in specific direction to compensate the aspect ratio difference between video wall and the content. The Maximum adjustment range is +_ 1800 pixels in each edge.
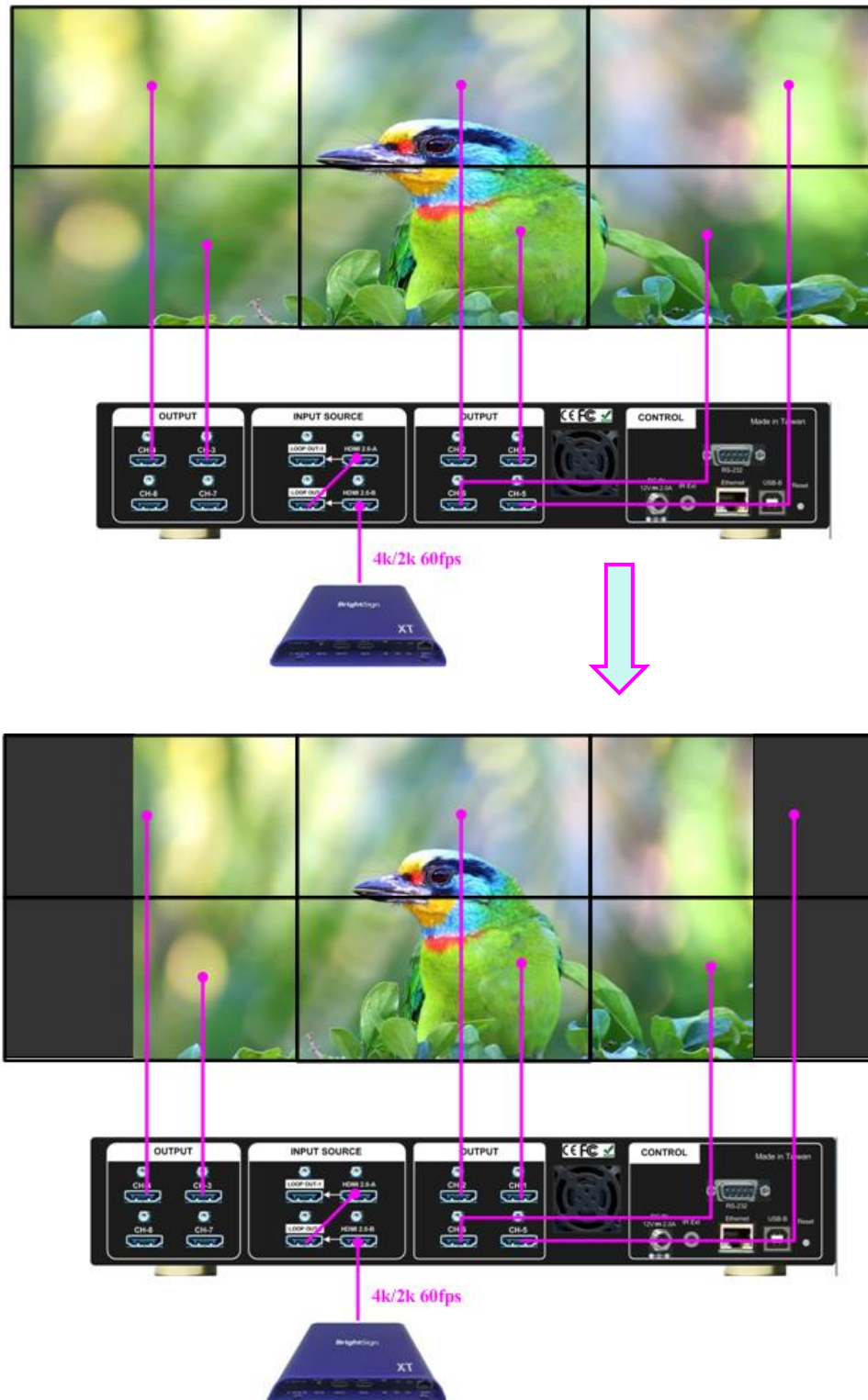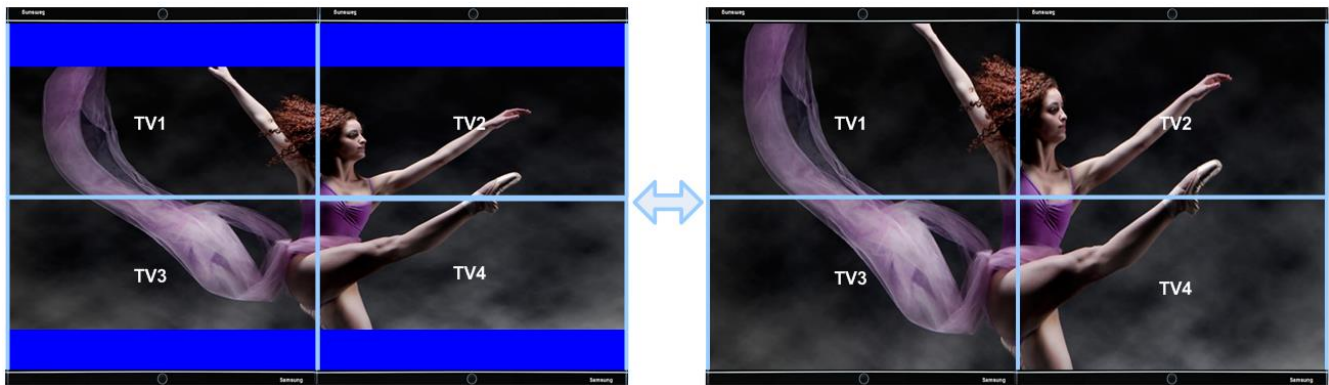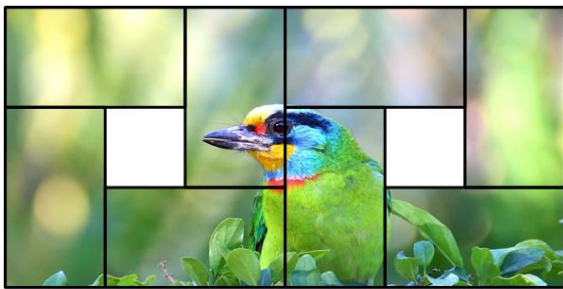
E. _Irregular Video wall_

Each output channel can be set with different output resolution and rotated separately. User can use Video wall function to split the image and adjust Overlap value to align all images together to become seamless creative video wall. G408 can accurately compensate video wall with different monitor sizes and bezel dimensions.

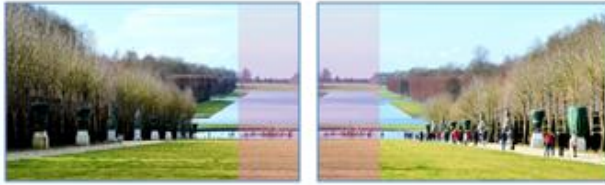### _Two contents creative video wall with single G408_

---

8 monitor creative Video wall

Irregular video wall in fashion shop

with one G408
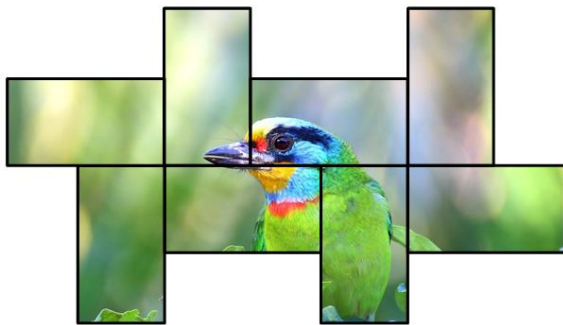
16 monitor asymmetric video wall

F. *Split image for projector in edge blending application*

Two GeoBox outputs with redundant data in overlap region

Projected image are overlapped and blended by projectors

After projector edge blending, resulting seamless image

One G408 can splitter one or two 4k image for up to 8 projectors

Any Signal Source

G. *Limitation in image rotation / flip mode*

Image rotation at 90/180/270 degrees and RH/LH or Top/Bottom flip is only available for input resolution not larger than 3840x2400 @30Hz.

Sales & Technical support

Web site: www.vnstw.com   E-mail: sales@vnstw.com

Skype: vns-inc   Tel: +886-2-2792-2819

Version: 2.01

Designed and manufactured in Taiwan