GeoBox

G406s Video Wall Controller Datasheet

Dual Channel 4K/30 Video Wall Controller Support up to 7680*1200 30 fps input

*1 in / 2 out in one box, HDMI 2.0 / HDCP 2.2, input up to 4K/2k @60Hz, 7680*1200 @30Hz,*

10-bit processor, 4:4:4 Chroma sampling, independent rotation/ scaling/ cropping
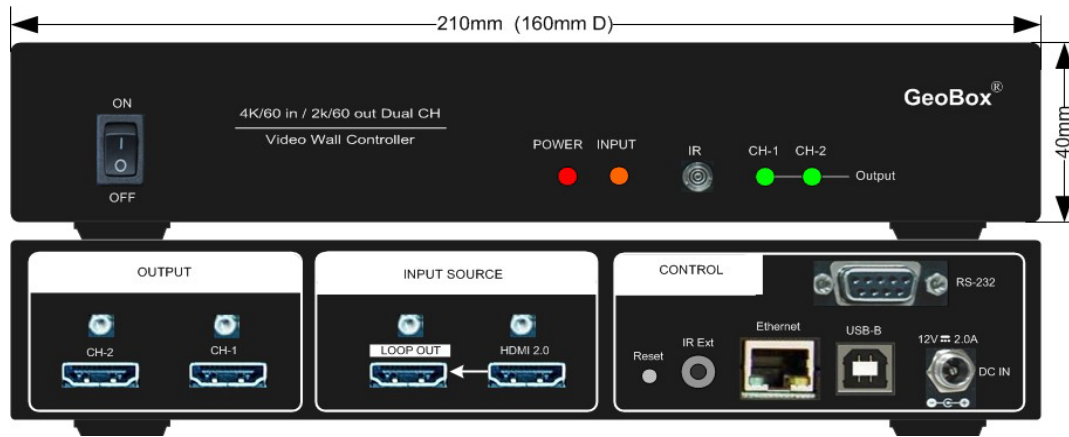
Sales & Technical support

Website : www.vigillink.com

E-mail: info@vigillink.com   Version: V1.01

Tel: +949-502-4484

G406s Dual channel controller

GeoBox G406s is simplified version of the G406L Video Wall controller. It incorporates 1x HDMI 2.0 input and 1x HDMI 2.0 loop-out port to support up to DCi/UHD 60 fps input signal and two synchronized Full HD outputs. Each output has independent image rotation/flip, scaling, cropping, and color adjustment to allow great freedom in creating overlap pixels for projector edge blending and any scale video wall.

It is pure hardware, an easy-to-use, standalone system. All operations can be implemented through IR remote control, USB, RS232, or Ethernet. **No additional PC or appropriate software tool is required.**

Infinite creative configuration

✧ 1x HDMI 2.0 input, 2x HDMI 1.4 output up to 2048x1080 @60Hz with flexible multi-unit cascade.

✧ Support up to 4096x2160@60Hz, 7680x1200 @30Hz input.

✧ Input supports HDCP 1.4/2.2, and output supports HDCP 1.4.

✧ One Loop-through port 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.

✧ Decode 3D signal for RH/LH eye frames for passive 3D display.

✧ 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.

✧ The selectable output resolution and programmable EDID 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 artifacts.

✧ Frame-Lock function to get perfect synchronization among output channels.

✧ Green product with low power consumption--only 6.6w.

✧ Easy setup via IR, USB, RS232 & Ethernet. No PC is required.

✧ Ready for a 24/7 working environment.

Specifications

- ✧ Input: 1x HDMI 2.0b
- ✧ Output: 2x HDMI 1.4
- ✧ 1x 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 2048x1080 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.
- ✧ Decode 3D signal for RH/LH eye frames for passive 3D display.
- ✧ Embedded HDMI audio in each output.
- ✧ Selectable and programmable EDID.
- ✧ ESD Protection: ±8kV (Air-gap discharge), ±4kV (Contact discharge).
- ✧ DC 12V/0.55A, max. 6.6w, (100-240 VAC PSU)
- ✧ Working environment: 45°C, 10-90% RH
- ✧ Control: IR, RS232, USB, Ethernet
- ✧ Dimensions (Body only): 220mm*161mm*41mm (without protruding parts). 220mm*168mm*46mm (including protruding part)
- ✧ Weight: 0.86kg (body only)
- ✧ CE/FCC/RoHS Certified
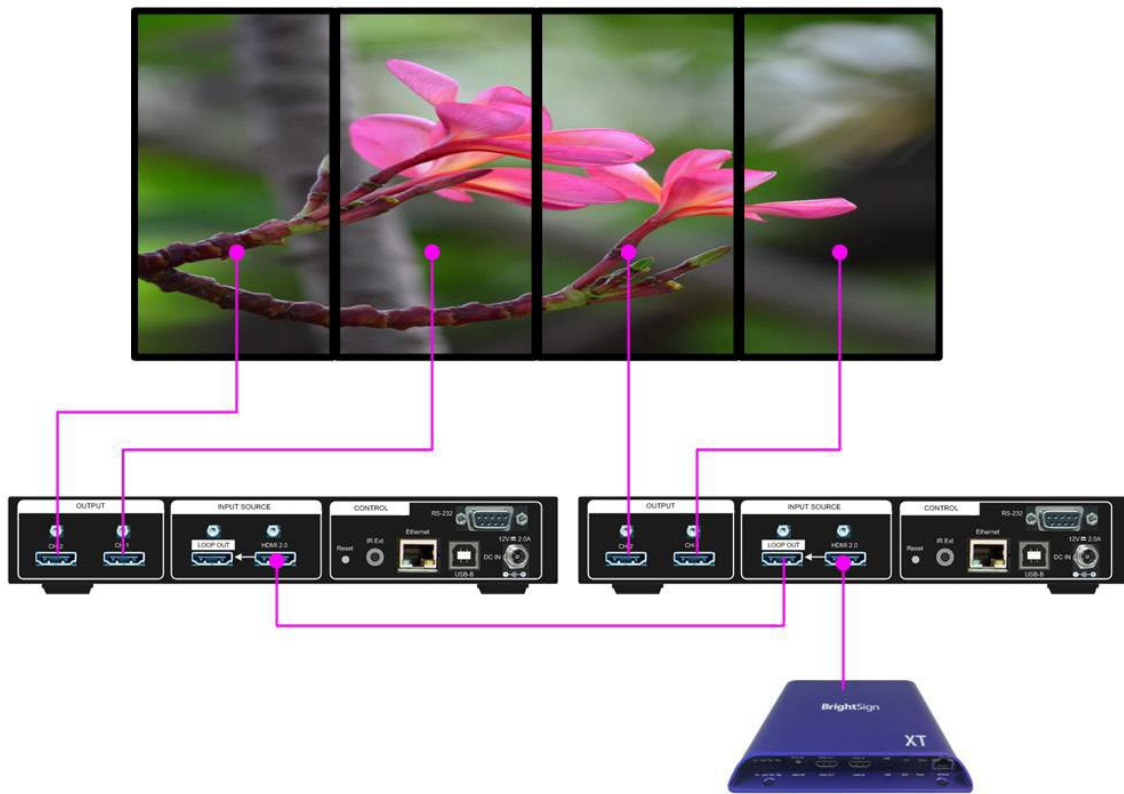- ✧ 30-Month Warranty

Application examples

A.   Video wall
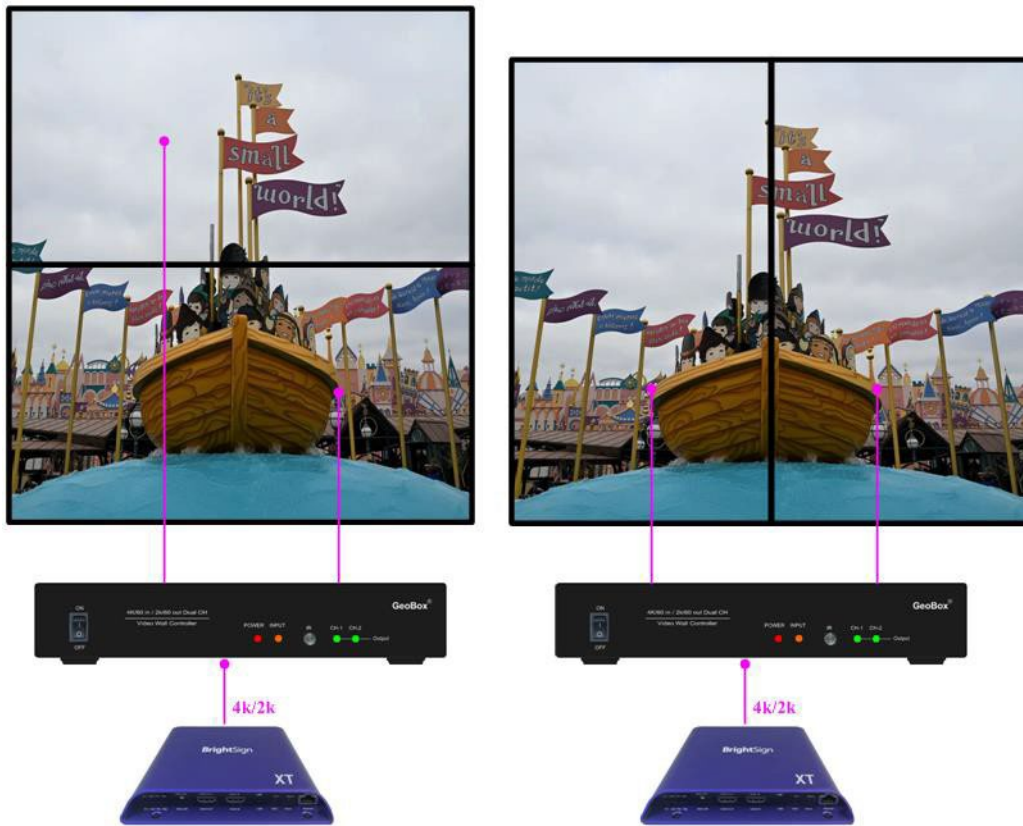
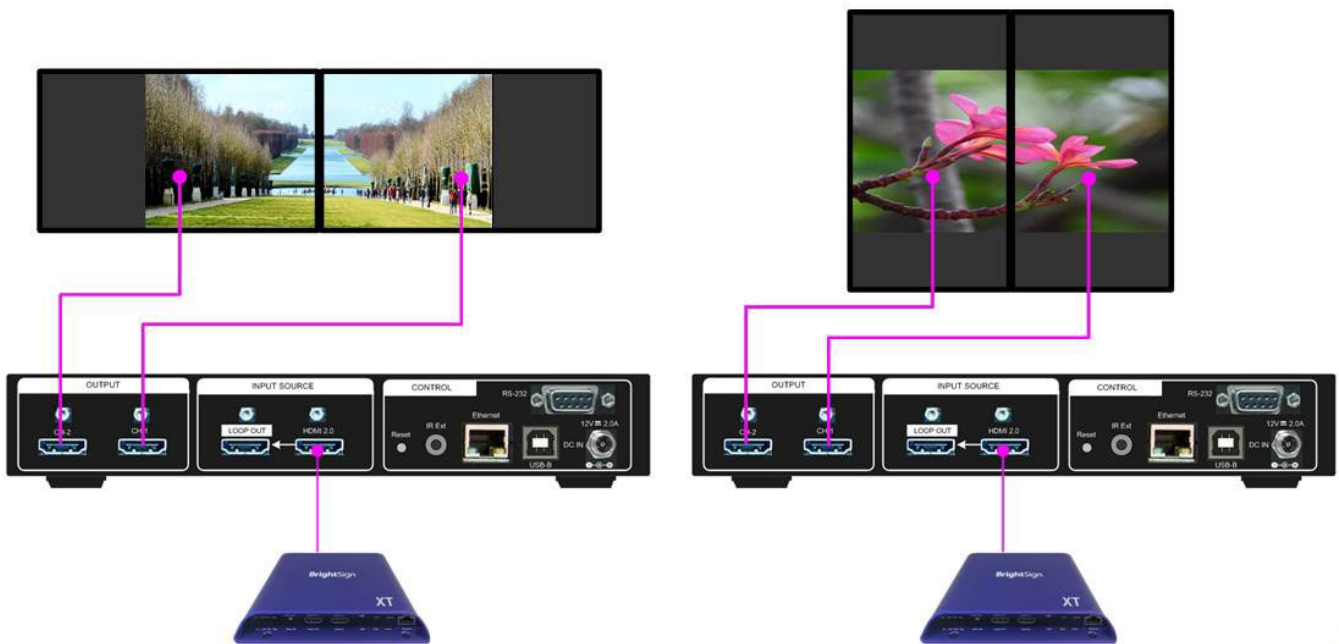## B. Irregular video wall

C.   <u>Multiple G406s daisy chain connection</u>
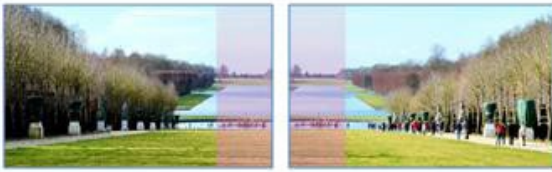

D.   <u>Flexible aspect ratio adjustment</u>

The background color can be either black or blue color.

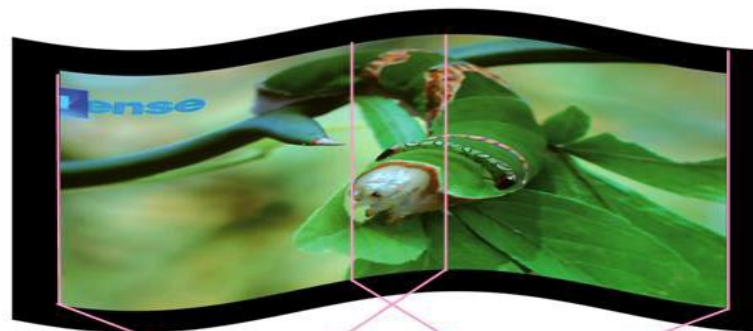## E.   Split source image and set overlap pixel for projector edge blending

Two outputs from G406s with redundant pixels in overlap area

Projected images are overlapped and blended by projectors

After projector edge blending, resulting seamless image

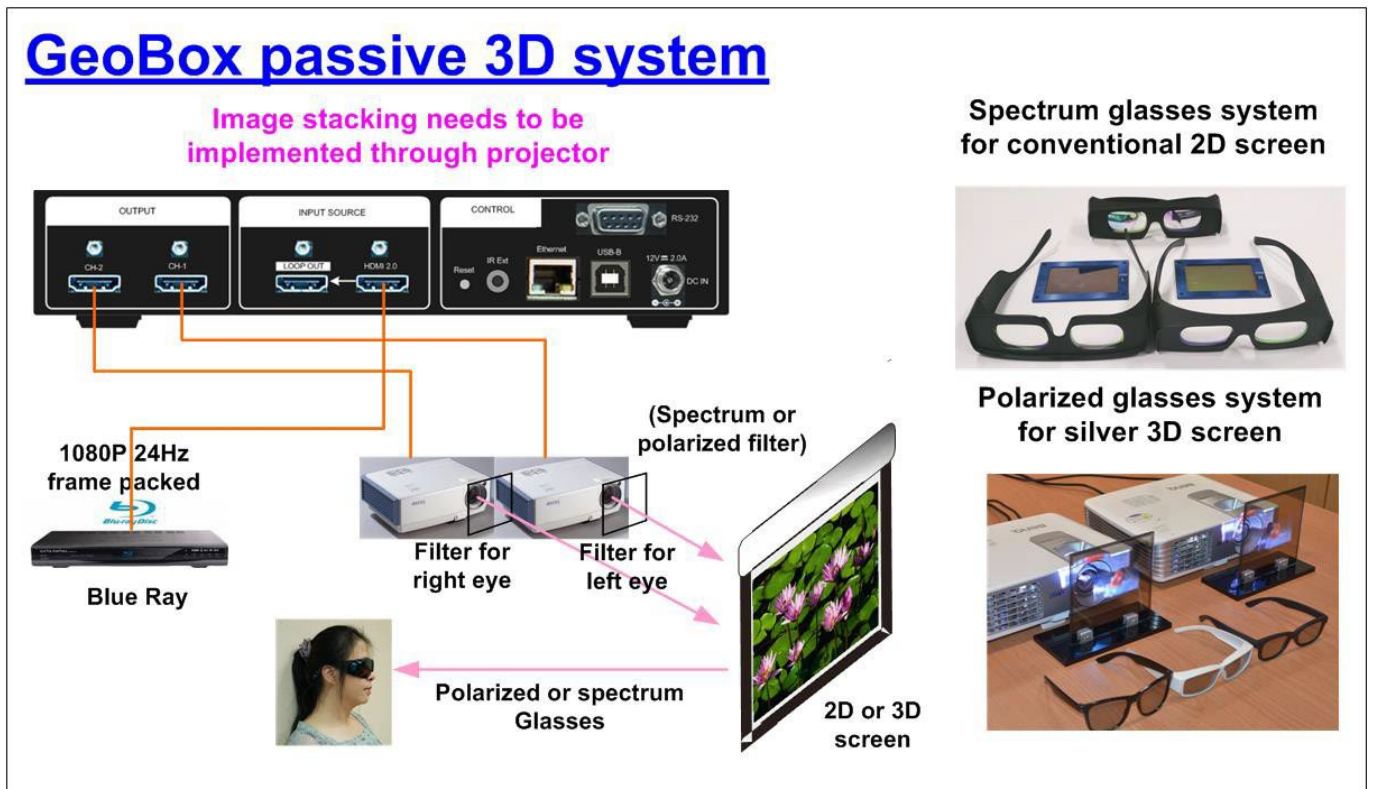G406s can split image and set overlap for projector edge blending

4k/2k or 4k/1k

F.   Passive 3D

G406s can decoded side by side, Top/Bottom and frame packed 3D from DVD player into RH/LH eye frames for passive 3D display. User needs to do image stacking through projector warp function.

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