

# GeoBox Edge Blending Processor

Version: 2014-10-01

**Professional pure hardware edge blending system for projection. No PC is required, low entry barrier, flexible and reliable. Support 4k x 2k input.**

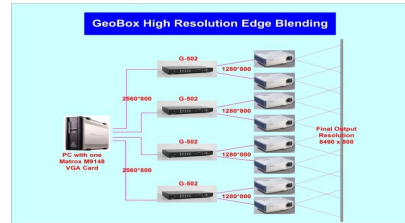
GeoBox is a professional high performance edge blending processor, designed with patented warp and edge blending technology similar to tier one projector makers with easy and friendly user interface. It is standalone system supporting up to 3840x2160 @30Hz and 2560\*1600 / 3840\*1080 @60Hz input without compression. No PC, OS or special tool is required. It is a system with low entry barrier and suitable for inexperienced users.

- True 10-bits processor and 3D motion adaptive de-interlace, low angle smooth algorithm, 3:2/2:2 film mode processing.
- Automatic incoming resolution detection. Support SOG and YPbPr from VGA input port.
- 10-bits 4:4:4 full bandwidth sampling with temporal & diagonal interpolation.
- High end image scaling up/down and format conversion.
- Image flip, rotation, warp and geometry alignment.
- Professional Edge blending for flat, curved 360 degrees and irregular curve screen with super high resolution content
- Edge blending with projector at portrait direction without rotating the content direction.
- PIP (including 3D PIP) and 16:9 / 2.35:1 aspect ratio conversion.
- Built-in video wall control function to split, crop, magnify, set overlap pixels and assign location for each projector. No need to add image splitter.
- Edge blending with the parameters for image fine tune through color, gamma, gain, offset and overlap position shift.
- Image stacking to increase the brightness on flat or curved screen.
- Support Blue Ray 1080p @24Hz frame packed for Active (shutter) 3D system.
- Enlarge 3D screen display through GeoBox multiple projector edge blending.
- Support HDMI 1.4 standard 3D formats from Blue Ray, Media Player and PC for passive 3D display.
- Support PC Stereoscopic Player and Nvidia 3D Vision 1080p @120Hz for full HD passive 3D display.
- Support 3840\*1080 @60Hz full HD side by side and Sony 1080i @60Hz frame packed 3D formats for passive 3D display.
- All settings are stored in non-volatile memory and are retained even when power is switched off.

Compared with PC edge blending system, GeoBox is a pure hardware system with easy, flexible and more reliable capability. Working with PC system, it doesn't occupy any PC CPU resource and let CPU with full power for other operations, such as interactive multimedia without lag.

Convenient Features for system integrator

- Able to use low cost projector, no lens shift or edge blend required
- Reliable and durable design for long term industrial and commercial applications.
- With internal grid pattern for quick and easy setup.
- Friendly user interface, low entry level. No PC is required, more reliable. Lower the cost for installation and after service.
- ID # for each GeoBox. Convenience for system installation and control.
- keypad Lock to avoid setting loss due to negligence.
- Multiple profile settings for flexible display modes preset and recall.
- Full functional keypads & IR control, IR extender up to 20 meters, RS-232 and optional Ethernet control.



## GeoBox Edge Blending products spec comparison sheet

Main items	Models	G-102	G-104D	G-104H	G-302	G-502
General description		Single channel flat screen edge blending	Curved screen edge blending with DVI interface	Curved screen edge blending with HDMI interface & HDMI loop out	Low cost dual projector flat screen edge blending for video image	Dual channel flat screen edge blending
Video processor (4:4:4 full bandwidth sampling)		10 bits	10 bits	10 bits	8 bits (4:2:2)	10 bits
Projector can be controlled		Single	Single	Single	Dual	Dual
Edge Blending		Flat & Portrait	Curve & Portrait	Curve & Portrait	Flat screen, dual projectors, for video image only	Flat screen
Max. projectors for edge blending		15x15	15x15	15x15	1x2	15x15
Video Loop Out (raw signal from HDMI in)		--	--	1x HDMI	1x HDMI	--
Image Stacking to amplify brightness		Yes	Yes	Yes	Yes	Yes
Passive 3D display		Yes	Yes	Yes	Yes	Yes
Active 3D display		Yes	Yes	Yes	--	Yes
Warp/geometry alignment		Yes	Yes	Yes	Yes	Yes
Video wall control for image split/overlap		Yes	Yes	Yes	--	Yes
PIP (Picture in Picture)		--	Yes	Yes	--	--
Image flip & portrait edge blending without content rotation		Yes	Yes	Yes	--	--
Video Input Ports		1x HDMI, 1xDVI, 1x VGA, 1x YPbPr, 1x DisplayPort	1x VGA, 1x DisplayPort, 1x DVI-H (Support DualLink DVI #HDMI/VGA)	1x HDMI, 1x DisplayPort, 1x DVI-H (Support DualLink DVI #HDMI/VGA/HDMI)	1x VGA, 1x HDMI, 1x DVI-D (DVI/HDMI)	2x VGA, 2x HDMI, 1x DualLink DVI, 1x DisplayPort
Video Output		1x VGA, 1x HDMI	1x VGA, 1x DVI (DVI/HDMI)	1x HDMI, 1x VGA	2x HDMI	2x HDMI
Video Loop Out (raw signal from HDMI in)		--	--	1x HDMI	1x HDMI	--
Audio Input		RCA analog R/L, PC audio Jack, HDMI audio	PC audio Jack, HDMI audio	HDMI audio	PC audio Jack, HDMI audio	PC audio Jack, HDMI audio
Audio Output		RCA analog R/L, RCA digital audio, HDMI audio	RCA digital audio, HDMI audio	RCA digital audio, HDMI audio	Analog (RH/LH), HDMI audio	S/PDIF RCA & Optic, HDMI
Support YPbPr video via VGA input port		Yes (discrete)	Yes	Yes	--	Yes
All inputs up to full HD & 1920x1200		Yes	Yes	Yes	Yes	Yes
Support 4k/2k @30Hz, 1080p @120Hz, 2560x1600 / 3840x1080 @60Hz input without compression via DualLink DVI		--	Yes	--	--	Yes
Support 4k/2k @30Hz, 1080p @120Hz, 2560x1600 / 3840x1080 @60Hz input without compression via DisplayPort		Yes	Yes	Yes	--	Yes
Support 4k/2k @30Hz, 1080p @120Hz, 2560x1600 / 3840x1080 @60Hz input without compression via HDMI		--	--	Yes	--	Yes
Output resolution up to 1080P and 1920x1200		Yes	Yes	Yes	Yes	Yes
Frame Lock and Smooth Switching mode to eliminate re-sync in projector while timing or input change		Yes	Yes	Yes	--	Yes
Programmable input EDID		Yes	Yes	Yes	--	Yes
HDCP key for DVI/HDMI/DisplayPort		Yes	Yes	Yes	Yes	Yes
High speed HDMI 1.4 receiver and output transmitter		Yes	Yes	Yes	--	Yes
Pixel base geometry and warp adjustment		Yes	Yes	Yes	Yes	Yes
Internal/external grid test pattern with different color		Yes	Yes	Yes	Yes	Yes
Simultaneous warp + edge blending		--	Yes	Yes	--	--
eWarp PC software tool for sophisticated curve display		--	Option	Option	--	--
Image rotation up to +, -128 degrees		Yes	Yes	Yes	Yes	Yes
Image flip right/left, front/rear, up/down and combination with native fidelity		Yes	Yes	Yes	--	--
Image slice, split, cropping, magnify and location assignment		Yes	Yes	Yes	--	Yes
Overlap region from 0-900 pixels in all directions		Yes	Yes	Yes	--	Yes
Pixel based overlap adjustment in all edges, up to 15x15 matrix displays		Yes	Yes	Yes	--	Yes
Edge Mask		Image edges masked with black background up to 250 pixels	Yes	Yes	--	Yes
Picture in Picture		Scalable PIP up to 1024x768 at any location with selectable aspect ratio and input source	Yes	Yes	Yes	--
Edge Blending		Edge blending in horizontal and vertical directions (MxN up to 15x15 matrix)	Yes	Yes	Yes	Dual projectors H only
		Edge blending region from 52- 800 pixels	Yes	Yes	Yes	Yes
		+Matrox M series display card for super high resolution edge blending (up to 16x Full HD from one PC)	Yes	Yes	Yes	Yes
		Video wall + Flat screen Edge Blending without PC	Yes	Yes	Yes	Yes
		Video Wall + Curved screen Edge Blending without PC	--	Yes	--	--
		Edge blending with projector located at portrait position. No signal source rotation is required	Yes	Yes	Yes	--
		Edge blending fine tune: color, gamma, gain, offset, position shift, black level	Yes	Yes	Yes	Yes
Video processing		Advanced full 10 bits 3D de-interlace, smooth edge algorithm and 3:2/2:2 film mode detecting and recovery	Yes	Yes	Yes	--
		High quality video and graphics scaling up and scaling down with 4:4:4 sample format	Yes	Yes	Yes	4:2:2 processing (Good for video only)
		Color adjustment (RGB color adjustment, Hue, saturation, sharpness, contrast, brightness, preset modes, discrete RGB)	Yes	Yes	Yes	--
System control for easy use		Full function Front Panel Keypads & IR Remote controller	Yes	Yes	Yes	Yes
		Cabled IR Receiver Extender (up to 20 meters)	Yes	Yes	Yes	Yes
		Box ID for easy independent control through IR, RS-232 or Ethernet	Yes	Yes	Yes	Yes
		Ethernet module for control and operation via LAN or WiFi (NB, iPad, Smart Mobile)	Option	Option	Option	Option
		ASCII control protocol over RS-232	Yes	Yes	Yes	Yes
		12V Trigger output	Yes	--	--	--
		3x programmable DC 5V/1mA trigger outputs with phoenix connector	--	--	--	--
		Firmware update via RS-232 connector	Yes	Yes	Yes	Yes
		5 Display Profiles preset and recall	Yes	Yes	Yes	Yes
		OSD lock to prevent wrong operation by negligence	Yes	Yes	Yes	Yes
		No PC, OS or special tool required	Yes	Yes	Yes	Yes
		Ear mount bracket in 1U rack	Option	Option	Option	Option
Dimension & weight		Only Box body, not including remote controller, power supply and packing	303x155x45mm, 1.6kg	440x190x45mm, 2.4kg	440x190x45mm, 2.4kg	303x155x36mm, 0.9kg
						440x200x45mm, 2.4kg

The specifications are subject to change without prior notice.