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Image blending and warping processor



Auto blending and stacking on curved and flat surfaces



Powerful and intuitive blending and warping



Black level adjustment



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Multi region color correction

Geometric correction for off-axis project and stacking



SD)

High resolution image blending (up to 1920x1200 per output)

Dual channel outpu

3D edge blending

## A Powerful Performer







#### GB-200+

Is a powerful and intuitive image blending and warping processor that provides the ability to merge overlapping edges of two or more projectors.

The GB-200+ has added auto stacking along with auto blending using a compatible (not included) camera and Auto Warp software (included with GB-200+).

The Auto Warp software provides the ability to auto blend on flat and curved surfaces up to six projectors with a maximum resolution of 1920x1200 pixels per projector, providing an horizontal display of around 10k pixels across the screen depending on the overlap area.

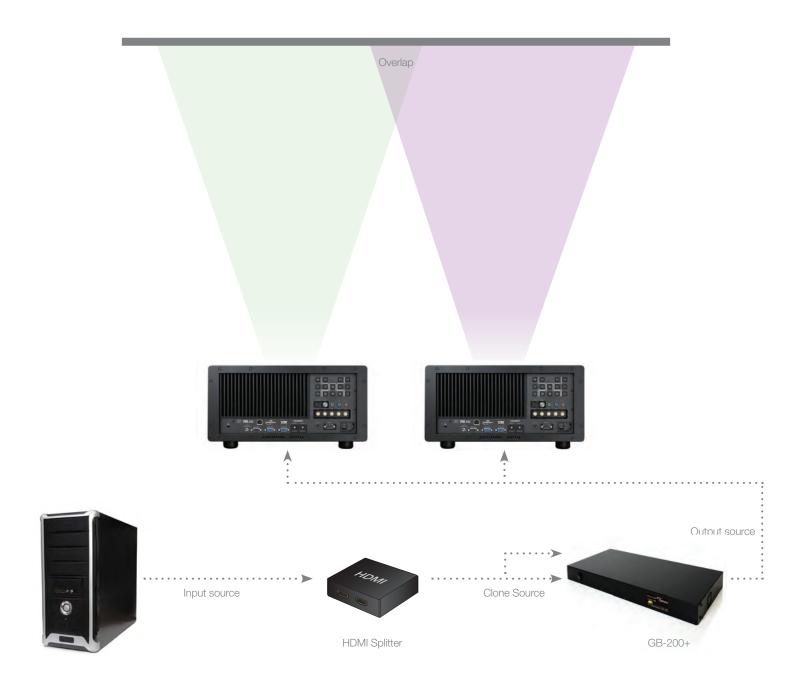
Optoma's GB-200+ provides the ability to pre-cut a single image to form a seamless picture of up to a 2x2 projection array, making your installation quicker and easier. More complex arrays are not a barrier for the GB-200+, they can be done with the help of a multi output graphic card.

Resolutions including XGA, WXGA, 1080p and WUXGA are supported via VGA, DVI and HDMI connections. Color, black level and gamma correction are engaged to compensate for the challenges faced when blending projectors.



#### **GB-200+ STRUCTURE**

Edge blending using GB-200+ to pre-cut the image

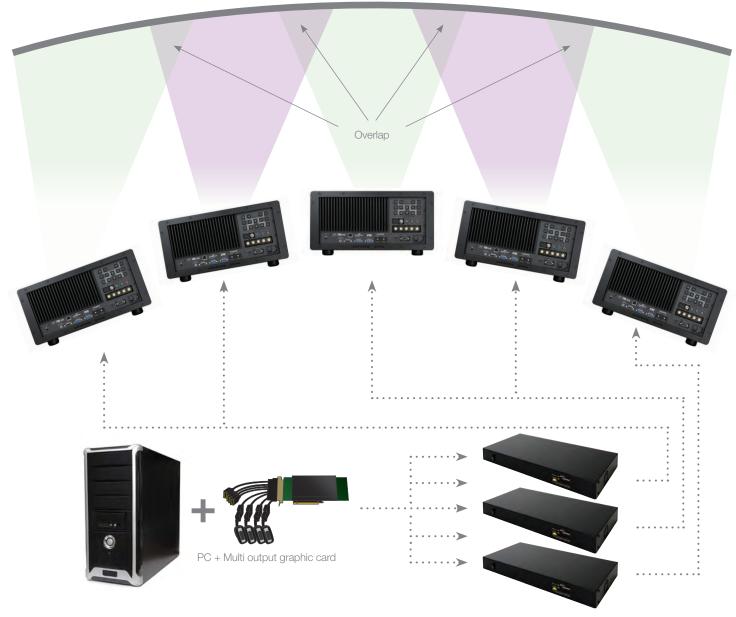






#### **GB-200+ STRUCTURE**

Edge blending using multi-output graphic card to pre-cut the image



GB-200+

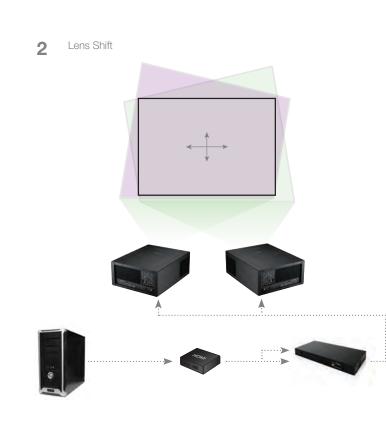


### GB-200+

#### **IMAGE STACKING**

Increase your image brightness at a low cost by using two or more projectors. With warp adjustment, you can achieve any brightness you want.

Image stacking permits flexible installations and easy maintenance, aiding an image to be displayed without interruption when swapping lamps. In addition, you can realign two images to be perfectly square when no lens shift is available.



4 Final Image



# Angled Projection 1 Warping 3



#### ADVANCED GRID WARP ADJUSTMENT FOR FLAT AND CURVED SURFACES.

🥑 GB-200 File Edit Overlap Tools Help Blending Werp Curve d Linear Pixel Pixel Duralia 256 ----darker Post 100 Marker Cel : 8 \* Reset 012 -011 Synchronize All

Software tool 17 x 17 grid warp



Curved screen

1



#### ADVANCED BLACK LEVEL UPLIFT

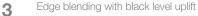
Black level uplift with RGB and HSL correction, allows you to make an accurate matching between the outside and overlapped areas in order to achieve a perfect seamless image when the lighting environment is very low.

Software tool black level uplift



2 Edge blending without black level uplift







This feature is not supported using the Auto Warp software for auto blending and stacking, but if this feature is needed on your installation, the GB-200 software also included on the memory stick support this feature by manual adjustment.





#### ADVANCED MULTI REGION COLOR CORRECTION

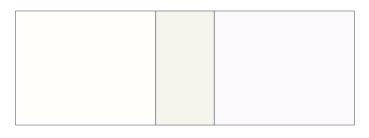
Multi region color correction allows you to adjust the white points of two projected images to make a full white seamless image.

1 Software tool multi region color correction

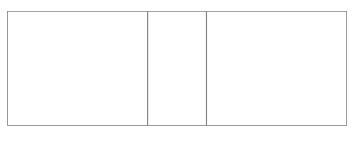


Edge blending without white balance correction

2



**3** Edge blending with white balance correction



4 Edge blending without color correction



This feature is not supported using the Auto Warp software for auto blending and stacking, but if this feature is needed on your installation, the GB-200 software also included on the memory stick support this feature by manual adjustment. 5 Edge blending with color correction







#### **GB-200+ with AUTO WARP SOFTWARE**

Auto blending is a simple and easy method to achieve a seamless image in just minutes, using a camera to capture two projected images the auto warp software calibrates and synchronize GB-200+ processor to perform a blend in less than 7 minutes.

**1** Use zoom and lens shift and focus to position the image of the projectors to cover the entire screen area



2 Place the camera in the middle of the screen to auto calibrate the overlap area and the corners of the screen.



**4** Save the file, remove camera and PC/Software.



**3** Edge blending set up is finished between 5 to 7 minutes



#### **GB-200+ SPECIFICATIONS**

Supported PC timing:	XGA 60Hz, WXGA 60Hz,1080P 30/50/60/120Hz*
	and WUXGA 60Hz
	AP: Support Win 7 OS
I/O Connectors:	Power Switch
	HDMI Input x 2, DVI-D x 2 (Supporting HDCP)
	HDMI Output x 2,VGA Output x 2
	Control Interface: LAN control x 2 ports, via LAN hub and
	static IP address
	RS-232 connection x 2 (For debugging only)
	Power supply interface: DC 19V power port x1
Operating Noise	26 dB (typical) / 28 dB (Max )
Power Consumption	AC 100 ~ 240V 50/60Hz / 32W -110VAC (Power Adapter)
Dimensions (W x D x H)	4300mm x 195mm x 44mm
Weight	4.3lbs
Auto blending camera	Logitech C920 Pro
USB Memory Stick	GB-200 user manual, GB-200 manual blending software,
*Accessories – Rack mount ears	Auto warp software

\*Accessories - Rack mount ears, Memory stick, Power supply.

 $^{*1080p}$  timing will vary depending on the set-up, when using GB-200+ to pre-cut the image it will only support 1080p 30Hz.

\*For active 3D edge blending using the GB-200+ processor the compatible resolutions are: XGA,720p and WXGA at 120hz, using a multi output graphics card.

GB-200+ I/O	
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- 1 Power Switch
- 2 RS232 1 (for service only)
- 3 HDMI Out 1
- 4 VGA Out 1
- 5 IP address adjustment 1
- 6 RJ45 connection 1
- 7 HDMI In 1
- 8 DVI In 1
- 9 RS232 2
- 10 HDMI Out 2
- 11 VGA Out 2
- 12 IP address adjustment 2
- 13 RJ45 connection 2
- 14 HDMI In 2
- 15 DVI In 2
- 16 Power Port



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Auto Warp software is included on the memory stick, found in the accessory box.

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