



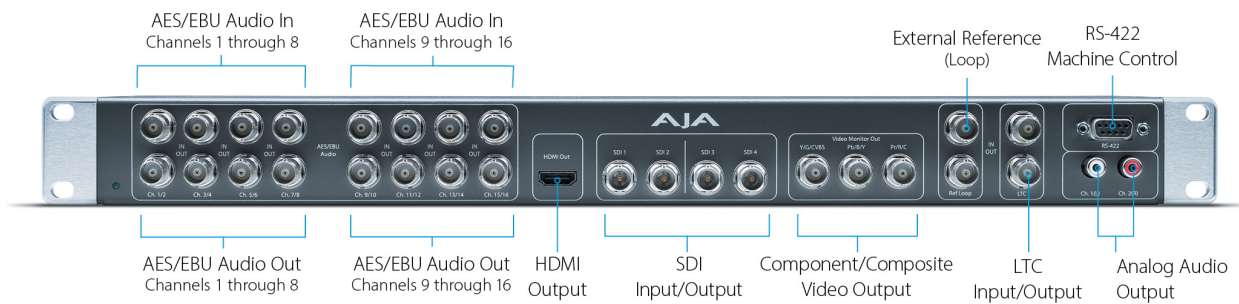
# KONA 3G

KONA 3G offers users a single, powerful card with support for 4:2:2 and 4:4:4 color spaces to provide the highest quality for your images. The futureproof architecture means you can easily work with HD and 2K now and switch to working at 4K resolution when the need arises without the requirement for new hardware.

\$ US MSRP

<https://www.aja.com/products/kona-3g>

K3G-BOX Breakout Box (Optional)



## Video Formats

- (4K) 4096 x 2160p 23.98, 24, 25, 29.97, 30
- (UltraHD) 3840 x 2160p 23.98, 24, 25, 29.97, 30
- (2K) 2048 x 1080p 23.98, 24, 25, 29.97, 30, 50 and 60
- (2K) 2048 x 1080PsF 23.98, 24, 25
- (2K) 2048 x 1556p 15, 14.98
- (2K) 2048 x 1556PsF 15, 23.98, 24
- (HD) 1080i 50, 59.94, 60
- (HD) 1080PsF 23.98, 24, 25, 29.97, 30
- (HD) 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (HD) 720p 23.98\*, 24\*, 25\*, 29.97\*, 30\*, 50, 59.94, 60
- (SD) 625i 50
- (SD) 525i 23.98\*, 59.94

\* These formats are dependent on specific software functionality and are not normal over the wire formats.

## Video Input Digital

- 4K/UltraHD 422 and 444 (4x BNC)
- 2K HSDL (High Speed Data Link) 4:4:4, (2x BNC)
- 3G/SD/HD SDI, SMPTE-259/292/296/424, 8 or 10-bits
- Dual Link HD 4:4:4 (2x BNC)
- Single Link 4:2:2 or 4:4:4 (1x BNC)
- 1D LUT Support

## Video Output Digital

- 4K/UltraHD 422 and 444 (4x BNC)
- 2K HSDL (High Speed Data Link) 4:4:4, (2x BNC)
- 3G/SD/HD SDI, SMPTE-259/292/296/424
- Dual Link HD 4:4:4, (2x BNC)
- Single Link 4:2:2 or 4:4:4 (1x BNC)
- HDMI v1.4, 30/36-bits/pixel, RGB or YUV, 2.25Gbps, SD, HD, 1080p-50/60 (1x mini-HDMI)

## Video Output Analog

- Composite/S-Video (Y/C) (1x BNC/2x BNC+Adapter)
- NTSC, NTSCJ, PAL
- Component (3x BNC)
- HD: YPbPr, RGB
- SD: YPbPr, RGB (component mode)
- SMPTE/EBU N10, Betacam 525 line, Betacam 525J, RGB
- 12-bit D/A, 8x oversampling
- +/- .2 dB to 5.0 MHz Y frequency response
- +/- .2 dB to 1 MHz C frequency response
- .5% 2T pulse response
- <1% Diff Phase
- <1% Diff Gain
- <1 ns Y/C delay inequity

## Audio Input Digital

- 16-Channel, 16 and 24-bit SMPTE-259 SDI embedded audio, 48 kHz sample rate, synchronous
- 16-Channel, 16 and 24-bit AES/EBU audio, 48 kHz sample rate, synchronous (via 8x BNC on optional K3G-Box)
- 8-Channel, 16 and 24-bit AES/EBU audio, 48 kHz sample rate, synchronous or nonsynchronous, internal sample rate conversion (via 4x BNC on breakout cable)

## Audio Output Digital

- 16-Channel, 16 and 24-bit SMPTE-259 SDI embedded audio, 48 kHz sample rate, synchronous
- 16-Channel, 16 and 24-bit AES/EBU audio, 48 kHz sample rate,

synchronous (via 8x BNC on optional K3G-Box)

- 8-Channel, 16 and 24-bit HDMI embedded audio, 48 kHz sample rate, synchronous
- 8-Channel, 16 and 24-bit AES/EBU audio, 48 kHz sample rate, synchronous or nonsynchronous, internal sample rate conversion (via 4x BNC on breakout cable)

## Audio Output Analog

- 2-Channel unbalanced output (via 2x RCA jacks on optional K3G-Box)

## Downstream Keyer

- Supports graphics with alpha channel over video, matte or framebuffer, or framebuffer content over incoming video or matte

## Up-Conversion

- Hardware 10-bit
- Anamorphic: fullscreen
- Pillarbox 4:3: results in a 4:3 image in center of screen with black sidebars
- Zoom 14:9: results in a 4:3 image zoomed slightly to fill a 14:9 image with black sidebars
- Zoom Letterbox: results in image zoomed to fill fullscreen
- Zoom Wide: results in a combination of zoom and horizontal stretch to fill a 16:9 screen; this setting can introduce a small aspect ratio change

## Down-Conversion

- Hardware 10-bit
- Anamorphic: fullscreen
- Letterbox: image is reduced with black top and bottom added to image area with the aspect ratio preserved
- Crop: image is cropped to fit new screen size

## Cross-Conversion

- Hardware 10-bit
- 1080i to 720p
- 720p to 1080i
- 720p to 1080PsF

## SD to SD Aspect Ratio Conversion

- Letterbox: This transforms SD anamorphic material to a letterboxed image
- H Crop: Will produce a horizontally stretched effect on the image; transforms anamorphic SD to full frame
- SD Pillarbox: Will produce an image in the center of the screen with black borders on the left and right sides and an anamorphized image in the center
- V Crop: Will transform SD letterbox material to an anamorphic image

## Timecode

- LTC timecode input and output (via 1x BNC each)

## Reference Input

- Analog Color Black (1V) or Composite Sync (2 or 4V)
- Looping
- 75 ohm on optional K3G-Box, terminated on supplied breakout cable

## Electrical Interface

- 4-lane PCIe 2.0

## Machine Control

---

- RS-422, Sony 9-pin protocol (via breakout cable or optional K3G-Box)
- 9-pin D-connector pinout is as follows:

1	GND
2	RX-
3	TX+
4	GND
5	No Connection
6	GND
7	RX+
8	TX-
9	GND
Shell	GND

## Size (w x d x h)

---

- 0.75" x 8.25" x 5.0" (19.05 x 209.55 x 127.00 mm)

## Weight

---

- 0.7 lb (0.4 kg)

## Power

---

- 19W typical, 21W maximum

## Environment

---

- Safe Operating Temperature: 0 to 40 C (32 to 104 F)
- Safe Storage Temperature (Power OFF): -40 to 60 C (-40 to 140 F)
- Operating Relative Humidity: 10-90% noncondensing
- Operating Altitude: <3,000 meters (<10,000 feet)