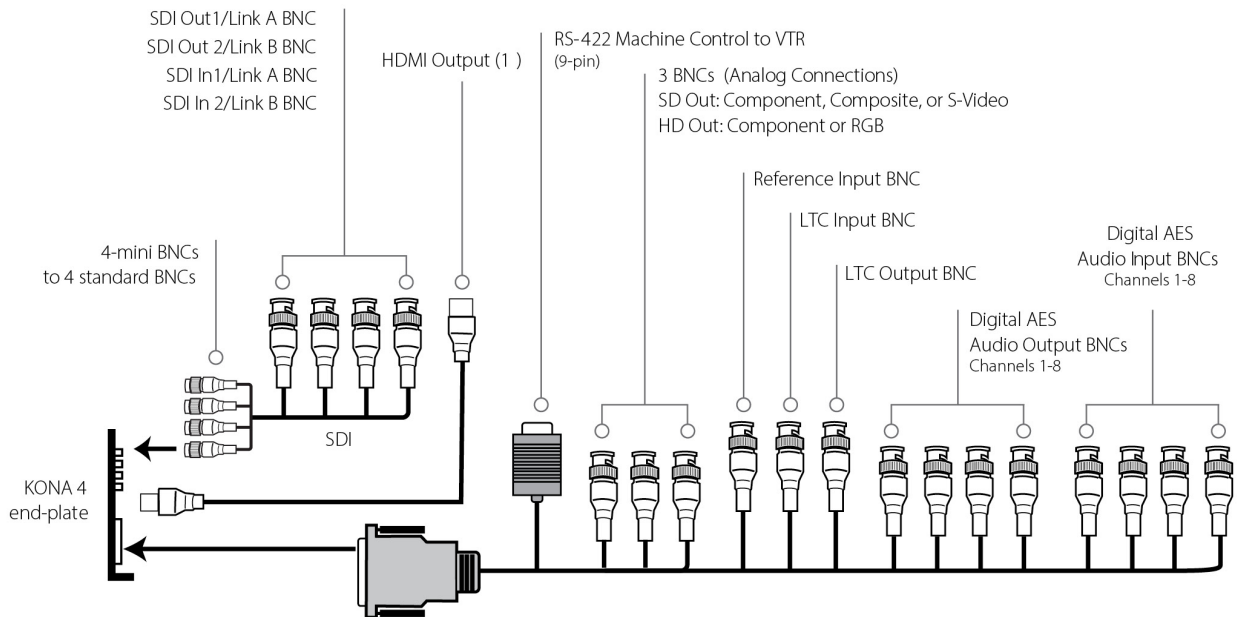# KONA 4

KONA 4 is a powerful 8-lane PCIe 2.0 video and audio desktop I/O card with unparalleled features for handling everything from SD to HD, 2K and 4K with full 10-bit 4:2:2 and 4:4:4 sampling for fantastic image clarity and 12-bit support*. For HDR workflows, KONA 4 supports HDR10+, HLG, PQ, and Dolby Vision for rich color delivery over SDI and/or HDMI.
*Application Dependent.

https://www.aja.com./products/kona-4

$2495 US MSRP

Video Formats

- (4K) 4096 x 2160p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
- (UltraHD) 3840 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (2K) 2048 x 1080p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
- (2K) 2048 x 1080PsF 23.98, 24, 25
- (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

- 3G-SDI, SMPTE 425
  - RGB 4:4:4 12-bit*, YCbCr 4:2:2 10-bit
- 1.5G-SDI, SMPTE 292M
  - Single Link HD-SDI YCbCr 4:2:2 10-bit
  - Dual Link RGB 4:4:4 12-bit*, Dual Link YCbCr 4:2:2 10-bit
- 270 Mbps SDI, SMPTE 259M-C
  - YCbCr 4:2:2 10-bit, 8-bit

*Bit depth support is application dependent. Check with your software manufacturer for compatibility.

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  - YCbCr 4:2:2 10-bit, 8-bit
- HDMI v1.4b
  - 30/36-bits/pixel, RGB or YUV, 2.25 Gbps
  - 2K, HD, and SD with HFR support up to 60p 4:2:2 10-bit
  - 4K/UltraHD with LFR support up to 60p 4:2:2 10-bit and HFR support up to 60p 4:2:0 8-bit

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HDR

- SDI: VPID signaling for SDR/HDR Transfer Characteristics, Colorimetry and Luminance
- HDMI: HDR10 Support - HDR Inforframe metadata, compatible with HDMI 2.0a/CTA-861.3
- HDMI: HLG Support - compatible with HDMI 2.0b/CTA-861-G

Note: HDR support is application dependent. Check with your software manufacturer for compatibility.

Video Output Analog

- Composite/S-Video (Y/C) (1x BNC/2 x 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 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 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)

Downstream Keyer

- Supports graphics up to 2K/HD with alpha channel over video, matte or framebuffer, or framebuffer content over incoming video or matte

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) or HD Tri-Level Sync (1V) (via breakout cable or optional K3G-Box)
- Reference input is terminated into 75 ohms when Genlock is set to Ref In on optional K3G-Box, also terminated on supplied breakout cable.

Electrical Interface

- 8-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 6.9" x 5.0" (19.05 x 175.26 x 127.00 mm)

Weight

- 0.7 lb (0.4 kg)

Power

- 22W typical, 24W 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)