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AJA VIDEO SYSTEMS

KONA 5
8-Lane PCIe 3.0 I/O Card

Ultimate Performance.

Take command of the most challenging projects using the raw power of the newest member of the KONA product line. KONA 5 is AJA's blazingly fast, 8-lane PCIe 3.0 I/O card, designed for today's most demanding video and audio workflows. Whether you are working with HFR 4K/UltraHD, 2K/HD, SD, Deep Color and/or HDR, experience the quality and peace of mind that KONA 5 brings to your world. Supporting 10-bit 4:2:2 and 4:4:4, or even 12-bit color spaces for pristine imagery, KONA 5 allows the flexibility to ingest and output with 12G-/6G-/3G-SDI and monitor with a full-size HDMI 2.0 port.

Next-Generation Connections

12G-SDI for 4K/UltraHD/2K/HD/SD

KONA 5 offers 12G-SDI for input and output as well as HDMI 2.0 for output, bringing single cable simplicity to the most complex projects, with all the bandwidth and power you need for large raster, deep color creativity.

Based on powerful 8-lane PCIe 3.0 hardware, you can choose between 1x 12G-SDI or 4x 3G-SDI and utilize 8-Ch AES, RS-422 and LTC/Ref In on the supplied break out cable.

Application Support and SDK

Extensive Software Compatibility

AJA I/O hardware like KONA 5 is supported by an extensive list of professional software for editing, visual effects, graphics, streaming and more, allowing the same AJA device to be used by many different applications on the same system.

In addition, AJA provides several free applications to tap the power of your AJA hardware. Robust AJA SDK support allows Developers to easily integrate cutting-edge KONA 5 hardware into a broad range of systems and applications.

HDMI 2.0 and HDR

High Performance HDMI for HDR

HDMI 2.0 offers high bandwidth and elegant HDR support for HDR10 and HLG.

KONA 5's massive bandwidth allows rich color support up to 4K RGB 12-bit 4:4:4 and up to 60p YUV 10-bit 4:2:2 at all resolutions.

Drive your rich HDR HDMI monitoring displays at up to 4K 60p with KONA 5 and get the most from the monitor with powerful and configurable HDR controls in the AJA Control Panel.

KONA 5 Features Include:

- Supports 4K and UltraHD ingest and output at frame rates up to 50/60 fps
- 10-bit 4K/UltraHD and 2K/Dual Link/HD/SD input and output
- 12-bit** color support (supported by some software vendors)
- HDMI 2.0 output (4K/UltraHD HFR 4:2:2 10-bit)
- HDR 10 Support - HDR Infoframe metadata, in accordance with HDMI 2.0a/CTA-861.3

- HLG (Hybrid Log Gamma) support***
- 8-Ch AES/EBU, 8-Ch embedded HDMI, and 16-Ch embedded SDI digital audio I/O Supports 444 and 422 workflows
- Extend external connectivity with break-out-cable (included)
- macOS, Windows and Linux support

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

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

Tech Specs

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, 47.95, 48, 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, 29.97, 30
- (HD) 1080p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
- (HD) 1080PsF 23.98, 24, 25, 29.97, 30
- (HD) 1080i 50, 59.94, 60
- (HD) 720p 50, 59.94, 60
- (SD) 625i 50
- (SD) 525i 59.94

Note: High Frame Rate capabilities are dependent on host system attributes. Not all systems and configurations will support all frame rates.

Video Inputs Digital

- 12G-SDI*, SMPTE-2082, 12-bit**, 10-bit and 8-bit
- 6G-SDI*, SMPTE-2081, 10-bit and 8-bit
- 3G-SDI, SMPTE-259/292/296/424/425, 12-bit*, 10-bit and 8-bit
- 4K/UltraHD 4:4:4 (4x BNC)
- 1.5G-SDI, SMPTE 372M, Dual Link HD 4:4:4 (2x BNC), 12-bit**, 10-bit and 8-bit
- 1.5G-SDI, SMPTE 292M, Single Link 4:2:2 (1x BNC), 10-bit and 8-bit

*SDI connections are bidirectional. For 2K/HD, capture and monitoring can be simultaneous. For 4K/UltraHD with 12G-SDI, capture and monitoring can also be simultaneous. For 4K/UltraHD with 3G-SDI, all four connections must be used for either Input or Output. Additionally, 12G-SDI, 6G-SDI configured inputs support UltraHD / 4K only.
**Bit depth support is application dependent. Check with your software manufacturer for compatibility.

Audio Inputs Digital

- 16-Channel, 24 and 16-bit SDI embedded audio, 48 kHz sample rate, synchronous
- 8-Channel, 24 and 16-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)

Video Outputs Digital

- 12G-SDI*, SMPTE-2082, 12-bit**, 10-bit and 8-bit
- 6G-SDI*, SMPTE-2081, 10-bit and 8-bit
- 3G-SDI, SMPTE-259/292/296/424, 12-bit*, 10-bit and 8-bit
- 4K/UltraHD 4:4:4 (4x BNC)
- 1.5G-SDI, SMPTE 372M, Dual Link HD 4:4:4 (2x BNC), 12-bit**, 10-bit and 8-bit
- 1.5G-SDI, SMPTE 292M, Single Link 4:2:2 (1x BNC), 10-bit and 8-bit
- HDMI v2.0
- 30/36 bits/pixel, RGB or YUV, 6 Gbps per color component
- 4K, UltraHD, 2K, HD and SD with HFR support up to 60p (4:2:2), 10-bit and 8-bit
- HDR10 Support - HDR Infoframe metadata, compatible with HDMI 2.0a/CTA-861.3
- HLG Support - compatible with HDMI 2.0b/CTA-861-G***

*SDI connections are bidirectional. For 2K/HD, capture and monitoring can be simultaneous. For 4K/UltraHD with 12G-SDI, capture and monitoring can also be simultaneous. For 4K/UltraHD with 3G-SDI, all four connections must be used for either Input or Output. Additionally, 12G-SDI, 6G-SDI configured outputs support UltraHD / 4K only.
**Bit depth support is application dependent. Check with your software manufacturer for compatibility.
***HLG support is application dependent. Check with your software manufacturer for compatibility.

Audio Outputs Digital

- 16-Channel, 24-bit SDI embedded audio, 48 kHz sample rate, synchronous
- 8-Channel, 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 with alpha channel over video, matte or framebuffer, or framebuffer content over incoming video or matte

Reference

- Analog Color Black (1V) or Composite Sync (2 or 4V) or HD Tri-Level Sync (1V) (via 1x HD-BNC at PCIe bracket)
- Reference input is terminated into 75 ohms when Genlock is set to Ref In

Timecode

- LTC timecode input and output (via 2x BNC on breakout cable)
- LTC timecode input (via 2-pin header on PCIe card)
- LTC timecode input (via HD-BNC at PCIe bracket)

Electrical Interface

- 8-lane PCIe 3.0

Machine Control

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

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

Noise

- <50dBA (A-weighted at 1m in free air)

Size (w x d x h)

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

Weight

- PCIe Card: 0.6 lbs (0.3 kg)
- Cables (all combined): 1.3 lbs (0.6 kg)

Power

- 28W typical, 35W maximum

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