

EDIT

KONA

The difference between
work and work of art



Because it matters.

AJA®
VIDEO SYSTEMS

KONA

Solid performance and useful features. Unparalleled reliability.
Built for video professionals by video professionals.

KONA: Superior capture cards that deliver top-of-the-line-quality for every type of video workflow.

The very finest capture cards for SD, HD, Dual Link HD and 2K on Mac OSX

AJA KONA cards were the first capture cards available for Final Cut Pro on Mac OS X - and that innovation and quality continues today. A powerful Apple computer, along with Apple's Final Cut Studio and an AJA KONA card, bring you the highest level of quality and functionality for non-linear editing, motion graphics creation, and more.

It's in the hardware. . .

KONA cards feature superior hardware-based conversions that can include up-conversion, cross-conversion and down-conversion along with maximum connectivity and creative flexibility. Work in SD, HD—even 2K—there is no limit to what the KONA family of hardware capture cards offer.

. . . and it's in the software

The KONA family of capture cards feature useful software applications at no additional charge. AJA QuickTime drivers are optimized for the leading QuickTime applications, and the intuitive to use AJA Control Panel application simplifies control of the advanced hardware capabilities. Additional software applications, like the AJA Data Rate Calculator and the AJA System Test, provide useful information on storage capacity and disk performance needs.



KONA Family

KONA 3 and KONA LHi Hardware Scalar Acceleration

Final Cut Pro users will love our DVCPRO HD, HDV and Apple Dynamic RT Extreme hardware scalar acceleration, developed in close cooperation with Apple and available exclusively on high-end KONA cards. KONA hardware takes a portion of the codec processing load off the CPU, allowing more RealTime effects in Final Cut Pro when outputting.

With KONA, any HD-SDI source (or SD-SDI up-converted source) can be captured using the DVCPRO HD codec—giving you HD quality at remarkably low data rates, allowing even the internal Mac SATA storage to be used for HD capture, playback, and RT effects.

Of course, you'll obtain still better performance and more RT when using a disk array, but this feature allows HD to be used where only SD would have been considered due to drive bandwidth or budget constraints.

How does KONA 3 and KONA LHi accelerate DVCPRO HD, HDV and Apple's Dynamic RT?

Because KONA's precision hardware does part of the work, the Mac has more time available to process RT effects. This means more RT-effects power, and more RT streams. Most broadcast codecs, including DVCPRO HD and HDV, use a two-step process:

With KONA 3 we had the speed and ability to work much faster than ever before. When you're cutting live bumpers everything is happening very quickly and the reliability of your gear is paramount. The KONA 3 worked flawlessly and provided seamless workflow transitions as our tape moved from Final Cut Pro into Motion and Sound Track Pro then back into Final Cut Pro and back to air. Needless to say, the production team was ecstatic with the performance output quality and volume."

Ryan Leimbach — ABC sports editor, Superbowl XL

First the video is scaled to a lower horizontal pixel count, and then the video is compressed. This is done because the slightly scaled video results in a favorable trade-off between resolution and codec efficiency. KONA hardware not only dramatically speeds up the scaling part of the job, but it's also done with full 10-bit broadcast quality. When using the Final Cut Pro HDV codec, the KONA hardware acceleration allows instantaneous realtime playback for both monitoring and recording. Even KONA's down-converter works in realtime with HDV, allowing SD monitoring, dubs, or mastering. This KONA functionality allows HDV to be used with professional equipment. The Panasonic DVCPRO HD format takes advantage of KONA hardware as well. KONA precision hardware allows capture and playback of HD-SDI video to and from the DVCPRO HD codec at a quality level virtually indistinguishable from native FireWire, while freeing up valuable RT processing power. For Final Cut Pro's Dynamic RT feature, KONA hardware is used to offload the video scaling as the "Playback Video Quality" dynamically adjusts. This allows more playback power—and because KONA handles it seamlessly, the Dynamic RT you see on the Mac monitor is the same as that shown on your professional broadcast monitor output from the KONA card.



KONA quick reference guide

	KONA 3	KONA LHi	KONA LSe
SD (NTSC and PAL)	yes	yes	yes
HD (720p, 1080i, 1080p, 1080sf)	yes	yes	-
2K (2048 x 1556, 2048 x 1080) Dual-Link HD, 2K HSDL, 4:4:4 RGB	yes	-	-
3G SDI single-link 4:2:2	-	yes	-
HDMI v1.3a Input/Output	-	yes	-
HD to SD Down-conversion (10-bit, in hardware)	yes	yes	-
SD to HD Up-conversion (10-bit, in hardware)	yes	yes	-
HD to HD Cross-conversion (1080 to/from 720, 10-bit, in hardware)	yes	yes	-
12-bit Analog Video (component, Composite, and Y/C)	output SD/HD	input/output SD/HD	input/output SD
10-bit SDI Digital Video (BNC)	input/output SD/HD	input/output SD/HD	input/output SD
Analog Audio (balanced XLR)	-	input/output 2-channel	input/output 2-channel
AES Digital Audio (balanced XLR)	input/output 8-channel	input/output 2-channel	input/output 2-channel
Embedded SDI Audio (via BNC)	input/output 16-channel	input/output 8-channel	input/output 8-channel
Professional Genlock	yes	yes	yes
RS-422 Machine Control	yes	yes	yes
DVCPRO HD hardware scaling acceleration (in FCP)	yes	yes	-
HDV hardware scaling acceleration (in FCP)	yes	yes	-
Dynamic RT hardware scaling acceleration (in FCP)	yes	yes	-
1RU Breakout Box	yes	yes	yes
3-year AJA Warranty with Advanced Exchange	yes, included	yes, included	yes, included

KONA³

The only choice for uncompressed SD, HD, Dual Link HD, 2K and more on Mac OSX

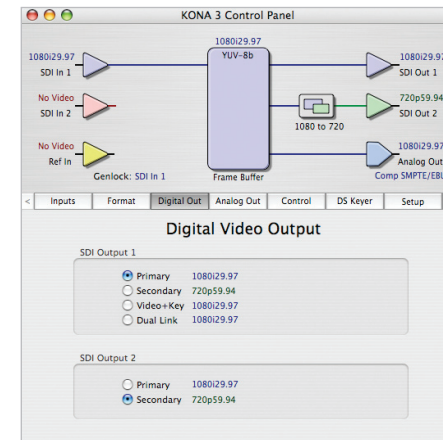
KONA3 Features

- SDI/HD-SDI single link 4:2:2, Dual Link HD-SDI 4:4:4, and 2K input/output support via HSDL
- DVCPRO HD hardware scalar acceleration
- HDV hardware scalar acceleration
- Dynamic RT Extreme hardware scalar acceleration
- Broadcast quality hardware based 10-bit up-conversion, cross-conversion, and down-conversion
- SD to SD hardware based aspect ratio conversion (anamorphic to letterbox and vice versa)
- 12-bit SD and HD component output or SD composite plus Y/C analog outputs
- 10-bit HD/SD video + key output
- Internal HD/SD hardware based Downstream Keyer
- 8-channel 24-bit digital AES at either 48kHz or 96kHz via XLR or 16-channel of 48kHz SDI embedded audio
- AJA QuickTime driver and additional useful applications included with the software installer
- Apple Final Cut Pro support including a variety of Easy Setups
- Support for motion graphics applications like Adobe After Effects, Apple Motion and more
- RS-422 machine control
- Cables for connectivity are supplied standard
- Affordable breakout box is optional — K3-Box
- 3-year international warranty and outstanding free-of-charge technical support



KONA 3 has the features video professionals expect: uncompressed video I/O, 8-channel AES digital audio I/O and 16-channel SDI embedded audio I/O, realtime hardware-based up/down/crossconversion for efficiently working with a wide variety of SD and HD formats, a hardware downstream keyer for compositing graphics without rendering, and more. All the features you want and expect from a state-of-the-art x4 lane PCI Express card.

KONA 3 offers integrated and easy to use support for Apple's Final Cut Studio applications. In addition to working with uncompressed SD and HD, HDV and DVCPRO HD, AJA also offers Easy Setups for working with Apple's high-quality Apple ProRes 422 and Apple ProRes 422 (HQ) codecs.



KONA 3 Control Panel

AJA Control Panel application

The AJA Control Panel is an easy-to-use application that allows you to control the various features that the KONA hardware provides. Unlike other user interfaces for capture cards, the AJA Control Panel can be accessed without leaving your application by simply holding down the command key and clicking into the UI. For example, play back HD media from Final Cut Pro and evaluate what an SD downconversion would look like as an anamorphic, cropped or letterboxed output - all in realtime without every stopping playback. The AJA Control Panel application also features useful "at-a-glance" indications, such as the auto-detection of signal, allowing you to determine what format and frame rate is being sent to the KONA card easily. Many other parameters can be configured via this intuitive and powerful user interface.

Broadcast-quality conversions

KONA 3 features full 10-bit, broadcast-quality, motion-adaptive SD to HD up-conversion, HD to HD cross-conversion, HD to SD down-conversion, and automatic HD/SD 12-bit component analog output. This is the equivalent of combining AJA's stand-alone HD D/A converter, HD to SD down-converter, and SD to HD up-converter into one convenient, cost-efficient desktop video product. The quality of the KONA 3 conversions is identical to the award-winning AJA stand-alone conversion products. Since all conversion functionality on the KONA 3 is hardware-based, it is available full time, all the time, on ingest or playback. Uniquely, the KONA 3 can even cross-convert 720p 23.98 to 1080PsF 23.98. Cross-conversion is particularly valuable in today's HD post environment where being able to produce 720p or 1080i signals helps streamline dailies and deliverables creation.

Internal SD/HD hardware downstream keyer

The AJA KONA 3 features a powerful hardware downstream keyer that can place graphic files with an alpha channel over the video being input to the board—or a selectable color matte, or the contents of the card's framebuffer (AJA TV/Final Cut Pro). The downstream keyer can also key a QuickTime clip that has an alpha channel— a flying logo perhaps— by playing it in the AJA TV application over live video coming into the card.

Audio

KONA 3's extensive audio I/O support allows for easy integration with professional audio equipment; tie the KONA 3 to a digital audio mixer or DAW output with 8-channel 24-bit 48kHz or 96kHz AES audio via

balanced XLR connections. For multi-channel audio mastering, 16-channel SDI embedded 24-bit 48kHz audio is provided. KONA 3 also features high-quality input sample-rate conversion on AES inputs, which eliminates the need for audio source synchronization.

Connectivity

KONA 3 provides breakout cables to connect to standard broadcast devices. For SDI video, the card features two HD/SD inputs and two outputs, one connection for Genlock input, and three BNCs which may be configured for HD/SD analog video output. Also included is a 9-pin connector for RS-422 machine control.

The optional K3-Box for KONA 3 simplifies connectivity in professional post-production environments by offering a 19-inch, 1RU rack-mountable breakout box that attaches to the KONA 3 card. This option offers all the same inputs and outputs as the standard breakout cable, and can be easily rack-mounted or placed on top of a broadcast monitor or editing console. Additional functionality over the standard breakout cable comes in the form of BNC AES input/output connectors, 2-channel RCA analog audio monitoring jacks, and looping BNC Genlock reference connectors. If you're using a Digital Betacam, DVCPRO50, HDCAM, DVCPRO HD, D5, or HDCAM SR VTR—or any other professional device—you'll have the proper connections.

Dual link HD support

KONA 3 supports Dual Link 4:4:4 HD-SDI, with full bandwidth 4:4:4 RGB at 10-bits for 1080i, 1080p, 1080PsF and 720p formats. KONA 3 can also convert between 4:4:4 and 4:2:2 formats for single link HD-SDI monitoring and output.

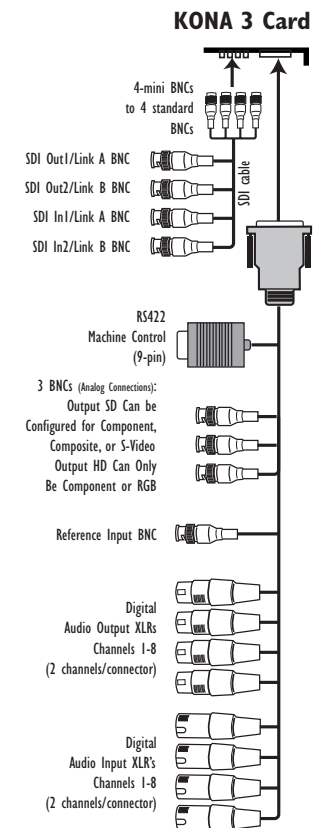
2K support

As the most capable 2K card available for the Mac, you can use KONA 3 to ingest from HSDL (high speed data link) equipped sources and record simultaneous 2K DPX files and 2K QuickTime reference movies using the AJA VTR Xchange application. You can also work with existing 2K material, like sequential DPX or Cineon files, by using AJA's DPXToQT Translator application to create QuickTime files that can be used by a wide variety of QuickTime based applications. RED digital media—proxy files or transcoded material—is also supported at 2K resolutions.

Use KONA 3 to output at 2K, interfacing with other available 2K products such as digital disk recorders and 2K projectors. KONA 3 also allows 2K files to be viewed with a user selected crop function on HD 1080PsF supported video monitors. This functionality helps lower the price barrier for viewing 2K material. The 1080 HD layout can additionally be down-converted to SD in realtime, giving users a powerful solution for multi-format video layout of 2K material and flexible tape mastering options. Offline editing can be done in Final Cut Pro, and because of the flexibility of Final Cut Pro and QuickTime, a 2K conform on the Mac is possible using the KONA 3.

All of the KONA 3 capabilities add up to the most reliable, feature rich, and highest-performance card available for OSX and Final Cut Pro. KONA 3 is the right tool for the discerning post-production professional.

KONA 3 standard connections



Workflow examples

RED 2K REDCODE Editing with Final Cut Pro and AJA KONA 3

- Shoot 4K with RED Camera
- Copy .r3d files onto local storage
- Import REDCODE "h" resolution QuickTime proxy files into Final Cut Pro.
- Edit REDCODE media at 2K resolution (typically 2048x1024).
- AJA provides an Easy Setup for working with RED material at this frame size. Note: the default video output for the AJA Final Cut Pro Easy Setup is 1920x1080 so that typically available HD monitors can be used. Alternately, the KONA 3 video output can be configured for 2K and output to 2K projectors is also possible.

For more information on working with RED, consult www.aja.com

Apple ProRes 422 editing

- Ingest media via SDI or HD-SDI to the Apple ProRes 422 or Apple ProRes 422 (HQ) format and framerate that is appropriate for your workflow.
- Use the AJA KONA 3 to convert your source video if needed: SD sources may be upconverted to HD and captured as Apple ProRes 422 or Apple ProRes 422 (HQ). 720p to 1080i and 1080i to 720p crossconversions can also be performed on ingest when encoding to Apple ProRes 422 and Apple ProRes 422 (HQ).
- Edit in the appropriate Apple ProRes 422 or Apple ProRes 422 (HQ) format and framerate; AJA provides a variety of Easy Setups for specifically working with Apple ProRes 422 and Apple ProRes 422 (HQ) content.
- With the AJA Easy Setup selected, video preview to professional monitors is enabled.
- Master to a variety of tape formats with RS-422 device control. Note: The AJA KONA 3 may be used to convert to the appropriate format/framerate for output.

Cross platform workflows

A variety of compressions can be selected for cross-platform editorial.

Typically, QuickTime files tend to be a good choice for cross-platform workflows. Some codecs are available to users on either a Mac or PC as part of any QuickTime installation. AJA also provides the ability to work with certain QuickTime codes on either Mac or Windows operating systems such as: '2vuy' (aka "Uncompressed 8-bit 4:2:2"), '2Vuy' (aka "AJA Kona 2Vuy Codec"), 'v210' (aka "Uncompressed 10-bit 4:2:2"), 'R10k' (aka "AJA Kona 10-bit RGB Codec") and 'R10g' (aka "AJA Kona 10-bit Log RGB Codec"). Beginning with version 3.5 of the XENA software, DVCPRO HD QuickTime media can also be shared between Mac and Windows .

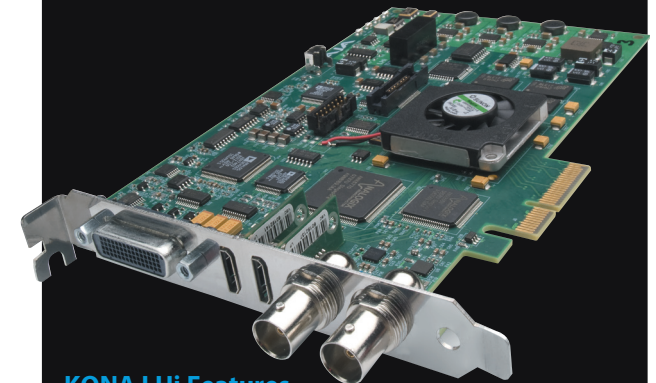
Apple also provides an Apple ProRes QuickTime Decoder for QuickTime on Windows so this high-quality media can also be shared across platforms. For high-end finishing such as visual effects and color correction, DPX files are a good cross-platform file type. Both the Mac and Windows software for AJA hardware can work with DPX files.

The AJA KONA 3 card offers shooter-producers total confidence in its ability to move to and from virtually any HD or SD format or resolution."

Barry Braverman — Digital Content Producer

KONA^{LHi} NEW

Flexible connectivity at an affordable price



KONA LHi Features

- 3G/HD/SD SDI input/output
- HDMI v1.3a w/Deep Color at 30/36 bits per pixel input/output
- 12-bit HD analog component input/output
- 12-bit SD analog component, composite, or S-Video input/output
- 10-bit Hardware-based realtime up/down/cross-conversions
- DVCPRO HD hardware acceleration
- HDV hardware acceleration
- Dynamic RT hardware acceleration
- 2-ch balanced XLR AES digital audio and 2-ch balanced XLR analog audio input/output
- 8-ch SDI embedded audio input/output
- HD/SD Genlock and RS-422 machine control
- LTC Input (on Reference input)
- Support for Final Cut Studio applications, Adobe applications and more
- Breakout cables standard, affordable breakout box optional
- 3-year warranty

The AJA KONA LHi bridges the gap between legacy analog devices and the latest 3G SDI and HDMI v1.3a enabled products. KONA LHi interfaces with the latest PCIe Apple Mac OSX hardware and QuickTime software applications. AJA drivers offer integrated support for Apple Final Cut Studio. KONA LHi allows editing, monitoring and mastering of professional quality video in an affordable, easy to use product.

KONA LHi offers a full host of no-compromise features: 10 or 8-bit uncompressed video, 3G/HD/SD SDI I/O including support for 1080p50/60, analog composite/S-Video/SD-HD component video I/O, 2-channel AES/8-channel SDI embedded audio I/O, 2-channel balanced audio I/O, and broadcast-quality hardware-based up/down/cross-conversion for flexible SD and HD post production. Also, HDMI v1.3a capability at 30 bits per pixel allows full support of the latest 10-bit monitors.

The KONA LHi comes standard with a breakout cable and can also be connected to an optional breakout box for rack mounted I/O convenience and added connectivity in the form of additional BNC digital AES/EBU connectors and RCA monitoring jacks.

Use the KONA LHi hardware-based flexible connectivity to capture to QuickTime™ at 10-bit and 8-bit uncompressed formats as well as Apple ProRes 422, DVCPRO HD and more.

AJA Control Panel application

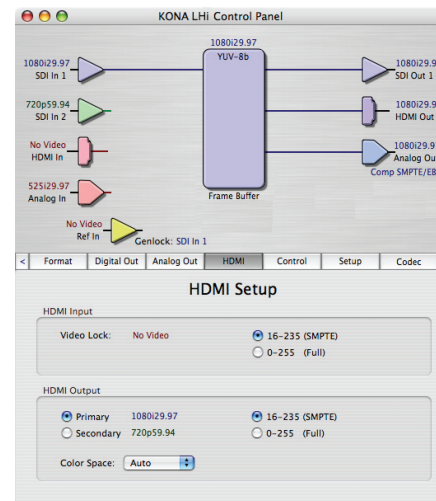
As a member of the AJA KONA family of products, the KONA LHi uses the AJA Control Panel application to configure various hardware parameters. The AJA Control Panel application can auto detect input format and frame rate, configure hardware-based up/down/cross-conversions, and more.

Connectivity

If your post production facility works with a wide variety of formats, frame rates and audio/video sources, the AJA KONA LHi provides the connectivity you need. Connect everything from an HDMI enabled camera to an HD-SDI VTR to KONA LHi. Connection to any of your legacy analog video signals is also possible. Via an Input PassThrough mode, you can even configure the card to act as a converter within your computer, allowing you to embed or disembed audio or convert a signal like HDMI to HD-SDI.

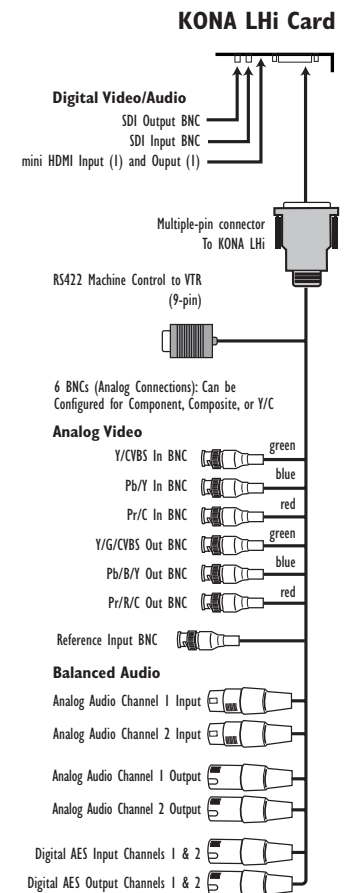
Broadcast-quality conversions

Like the AJA KONA 3 product, the KONA LHi features full 10-bit, broadcast-quality, motion-adaptive SD to HD up-conversion, HD to HD crossconversion, HD to SD down-conversion, and automatic HD/SD 12-bit component analog output. Since all of KONA LHi's conversions are hardware-based, they are available all the time - during ingest or playback. Outputs can be configured independently allowing you to have simultaneous HD and SD output - or two different types of HD - 720 or 1080 - output at the same time via cross-conversion.



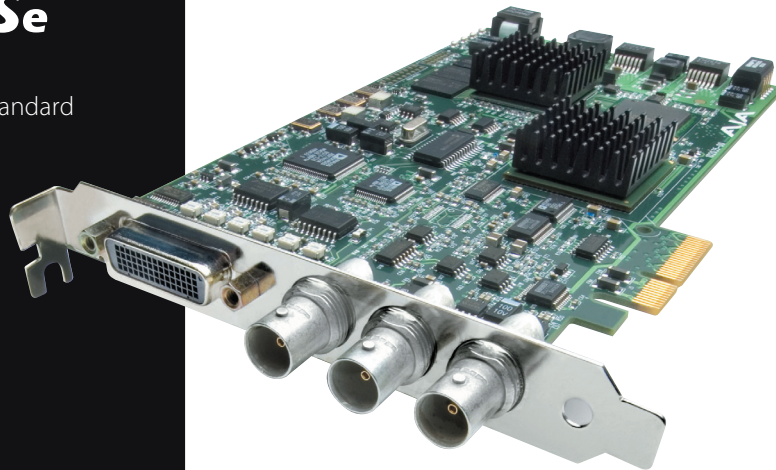
KONA LHi Control Panel

KONA LHi standard connections



KONA LSe

Analog and Digital capture card for standard definition workflows

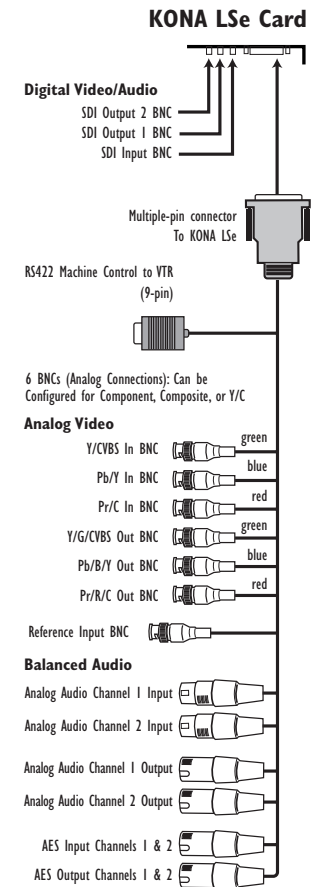


KONA LSe Features

- 12-bit SD component, composite or S-video analog input/output
- SDI input and 2 SDI outputs
- AES digital audio input/output; sample rate conversion on input (2 channel, balanced XLR)
- Balanced analog audio I/O (2 channel, balanced XLR)
- Genlock and RS-422 machine control
- AJA QuickTime drivers
- Apple Final Cut Pro support
- Support for After Effects, Combustion, Motion, and more
- Supports all popular standard definition formats: 8 and 10-bit uncompressed, JPEG, DV25, DV50 and more
- Cables standard, KL-Box breakout optional
- 3-year warranty
- Available in PCIe as KONA LSe
- Available in PCI/PCI-X compatible form as KONA LS

The affordably priced KONA LSe is the perfect video capture and playback card for a standard definition editing system. KONA LSe offers full featured SD connectivity and integration with Final Cut Pro, as well as support for software applications like Adobe After Effects, Apple Motion and more. KONA LSe can capture to QuickTime™ at uncompressed 10 bit 4:2:2 or 8 bit 4:2:2 and allows ingest from—and mastering to— BetacamSP, Digital Betacam, DVCPRO50 as well as other standard definition VTRs. KONA LSe also supports capture and playback from compressed SD formats like DV and DVCPRO50, to provide the most flexibility for your SD workflows.

KONA LSe standard connections



Specifications

KONA3 Specifications

Video Input

Dual-rate (SD or HD)
 HD/SD "SDI", SMPTE-259/292/296
 Single Link 4:2:2
 Dual-Link HD 4:4:4

2K HSDL (High Speed Data Link) 4:4:4

Video Formats

525i 23.98 (intermediate format only)
 525i 29.97
 625i 25
 720P 23.98 (intermediate format only)
 720P 50
 720P 59.94
 720P 60
 1080i 25
 1080i 29.97
 1080i 30
 1080PsF 23.98
 1080PsF 24
 1080P 23.98
 1080P 24
 1080P 25
 1080P 29.97
 1080P 30
 1080P 50
 1080P 59.94
 1080P 60
 2048 x 1080P 23.98
 2048 x 1080P 24
 2048 x 1080PsF 23.98
 2048 x 1080PsF 24
 2048 x 1556PsF 14.98 (HSDL data rate)
 2048 x 1556PsF 15 (HSDL data rate)
 2048 x 1556psf 23.98 (playback rate)
 2048 x 1556PsF 24 (playback rate)

Video Output

Digital:
 SD-SDI, SMPTE, 259M, 10-bits, BNC
 HD-SDI SMPTE, 292/296, 10-bits, BNC
 Dual-Link HD 4:4:4 and 2K HSDL 4:4:4

Analog:

SD and HD Output, 12-bits, BNC
 HD: YPbPr, RGB
 SD: YPbPr, RGB (component mode) or Composite +
 Y/C (composite mode with simultaneous Y/C)

Downstream Keyer:

Will output graphics with alpha channel over video,
 matte or framebuffer, or framebuffer content over
 incoming video or matte

Audio

24-bit SDI embedded audio,
 16 channel, 48kHz
 24-bit AES audio, 8 channel, 96kHz or 48kHz
 16-bit capable

Up-Conversion

Hardware 10-bit
 Anamorphic: full-screen
 Pillar box 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 side bars
 Zoom Letterbox: results in image zoomed to fill full
 screen
 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: full-screen
 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.

Reference Input

Color Black or Tri-Level sync
 (Ref input is looping/non-terminating on the K3-Box;
 terminated on supplied breakout cable)

Machine Control

RS-422, Sony 9-pin protocol

KONA LHi Specifications

Video Input

Digital:
 3G/HD/SD SDI, SMPTE-259/292/296/424
 HDMI v1.3, 30/36 bits/pixel,
 RGB or YUV, 2.25Gbps, SD,
 HD, 1080p50/60

Analog:

Composite/S-Video (Y/C):
 NTSC, NTSCJ, PAL 12-bit A/D, 2x oversampling
 3 line adaptive comb filter decoding
SD Component:
 SMPTE/EBU N10, Betacam 525 line,
 Betacam 525J, RGB
 12-bit A/D, 2x oversampling
HD Component:
 YPbPr
 12-bit A/D

Video Formats

525i 29.97
 625i 25
 720p 50
 720p 59.94
 720p 60
 1080i 25
 1080i 29.97
 1080i 30
 1080PsF 23.98
 1080PsF 24
 1080P 23.98
 1080P 24
 1080P 25
 1080P 29.97
 1080P 30
 1080P 50
 1080P 59.94
 1080P 60

Video Output

Digital:
 3Gb SD and HD-SDI, SMPTE-259/292/296/424
 HDMI v1.3, 30/36 bits/pixel,
 RGB or YUV, 2.25Gbps, SD,
 HD, 1080p50/60

Analog:

Composite/S-Video (Y/C):
 NTSC, NTSCJ, PAL
 12-bit D/A, 8x oversampling
SD Component:
 SMPTE/EBU N10, Betacam 525 line,
 Betacam 525J, RGB
 12-bit D/A, 8x oversampling
HD Component:
 YPbPr, RGB
 12-bit D/A, 2x oversampling

Audio

Digital:
 24-bit SDI embedded audio,
 8 channel, 48kHz
 24-bit AES audio, 2 channel, 48kHz
 16-bit capable

Analog:

24-bit A/D and D/A, 2 channel balanced
 XLR, 48kHz
 +24dbu Full Scale Digital
 +/- 0.2db 20 to 20kHz frequency response

Up-Conversion

Hardware 10-bit
 Anamorphic: full-screen
 Pillar box 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
 side bars
 Zoom Letterbox: results in image zoomed to
 fill full screen
 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: full-screen
 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.

Reference Input

Color Black or Tri-Level sync
 (Ref input is looping/non-terminating on the KLHi-Box;
 terminated on supplied breakout cable)

Machine Control

RS-422, Sony 9-pin protocol

KONA LSe Specifications

Video Input

SD-SDI SMPTE-259

Composite/S-Video (Y/C):

NTSC, NTSCJ, PAL
 12-bit A/D, 2x oversampling
 3 line adaptive comb filter decoding

Component:

SMPTE/EBU N10,
 Betacam 525 line, Betacam 525J, RGB
 12-bit A/D, 2x oversampling

Formats

525i 29.97, 625i 25

Video Output

Digital:

SD-SDI, SMPTE, 259M, 10-bits, BNC

Analog:

Composite/S-Video (Y/C):
 NTSC, NTSCJ, PAL 12-bit D/A, 8x oversampling

Component:

SMPTE/EBU N10, Betacam 525 line,
 Betacam 525J, RGB
 12-bit D/A, 8x oversampling

Audio

Digital:

24-bit SDI embedded audio, 8 channel, 48kHz
 24-bit AES audio, 2 channel, 48kHz
 16-bit capable

Analog:

24-bit A/D and D/A, 2 channel balanced XLR, 48kHz
 +24dbu Full Scale Digital
 +/- 0.2db 20 to 20kHz frequency response

Reference Input

Color Black

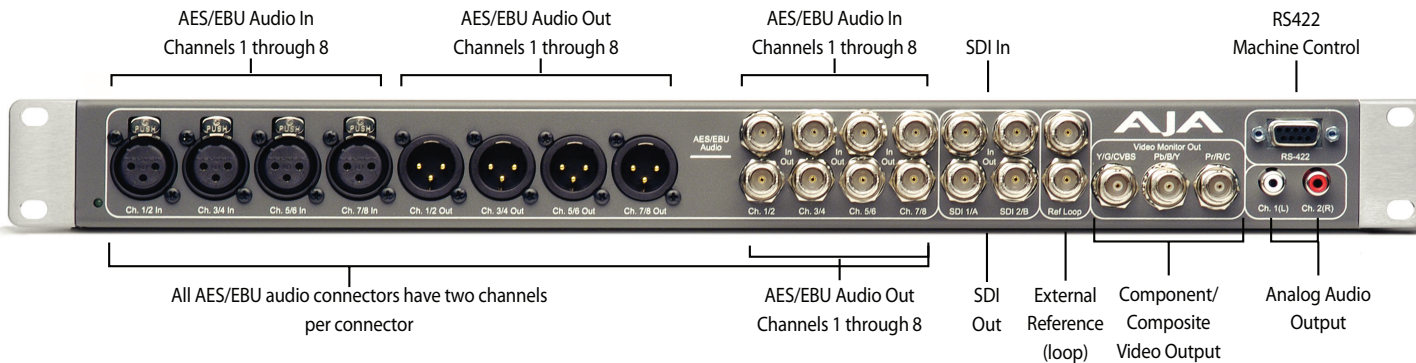
(Ref input is looping, non-terminating on the Breakout Box;
 terminated on supplied breakout cable)

Machine Control

RS-422, Sony 9-pin protocol

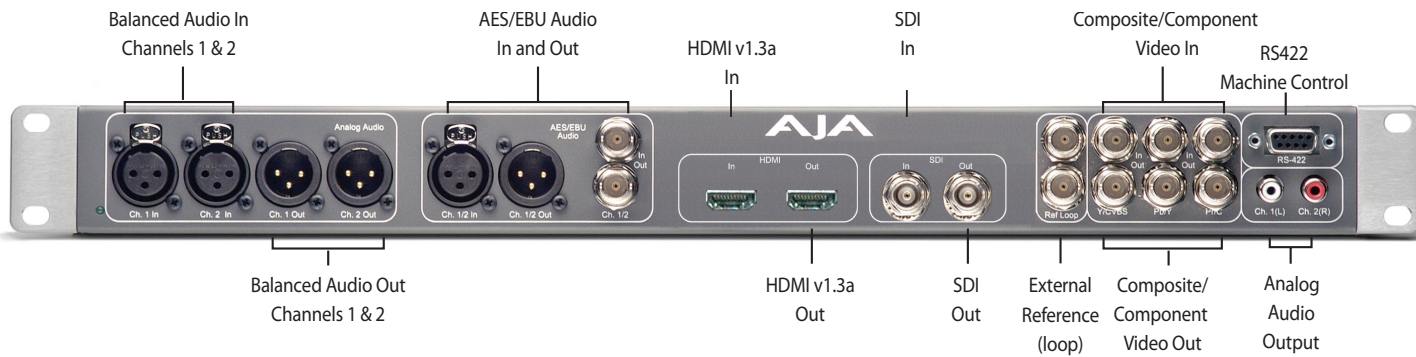
Connections

K3-Box for KONA 3 (Optional)



KONA 3 breakout cables (supplied)

KLHi-Box for KONA LHi (Optional)



KONA LHi & LSe breakout cables (supplied)

Notes

For more information please visit:
www.aja.com



Incredible 3 Year Warranty

AJA Video warrants that KONA products will be free from defects in materials and workmanship for a period of three years from the date of purchase.

About AJA Video Systems, Inc.

Since 1993, AJA Video has been a leading manufacturer of video interface and conversion solutions, bringing high-quality, cost-effective digital video products to the professional broadcast and post-production markets. AJA offers the Io, KONA and XENA desktop video products, miniature stand-alone converters, and a complete line of rack mount interface and conversion cards and frames. With a headquarters and design center located in Grass Valley, California, AJA Video offers its products through an extensive sales channel of dealers and systems integrators around the world. For further information, please see our website at www.aja.com

B e c a u s e i t m a t t e r s .



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