KONA Products

AJA VIDEO SYSTEMS

KONA^{3}

KONA^{LHe}

KONA^{LSe}

THE DIFFERENCE BETWEEN WORK AND WORK OF ART.

Award-winning functionality.
Solid performance.
Unparalleled reliability.

That sums up the power of AJA Video's KONA™ line of desktop video products for Mac OS X™. Built by video pros for video pros, these superior capture cards deliver top-of-the-line-quality for every type of video workflow.

Meet KONA

THE VERY FINEST CAPTURE CARDS FOR SD, HD, DUAL LINK HD AND 2K ON MAC OS X.

KONA cards are the finest uncompressed QuickTime input/output cards available anywhere. AJA KONA cards were the first capture cards available for Final Cut Pro™ on Mac OS X - and that innovation and quality continue today. A powerful Apple computer, whether a PCI-X or PCIe system, along with Apple's Final Cut Studio™ and a KONA card bring you the highest level of quality and functionality for non-linear editing, motion graphics creation, and more. Clarity in sight and sound with uncompromising performance and reliability—that's the promise of KONA.

IT'S IN THE HARDWARE...

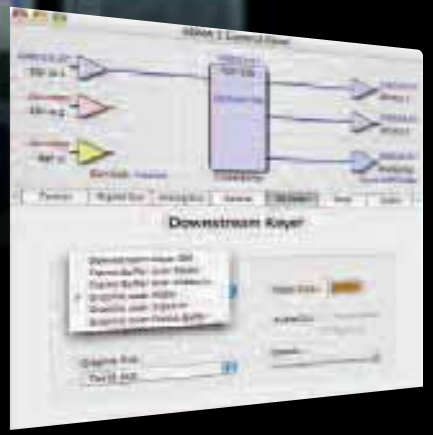
The KONA cards offer unprecedented hardware processing power, including the features you would expect to find only on the highest end video systems. Depending on which KONA you choose for your workflow, you will have superior hardware-based conversions that can include up-conversion, cross-conversion 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 can offer.

...AND IT'S IN THE SOFTWARE

The KONA family of capture cards also offers incredible software as well: QuickTime™ drivers optimized for the leading QuickTime applications, the intuitive KONA Control Panel application which simplifies control of the KONA's advanced hardware capabilities, and additional software applications that offer unprecedented features and ease of use.

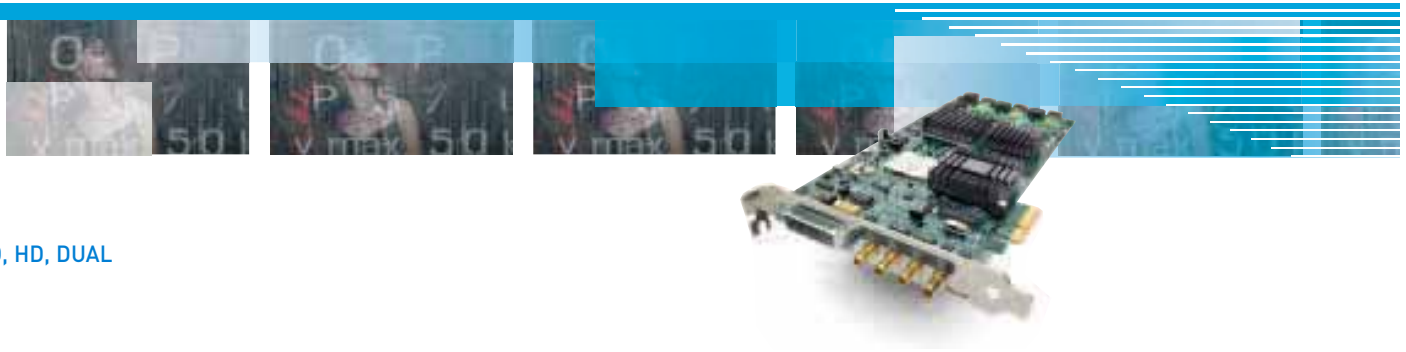
CHOOSE KONA.

APPLE FINAL CUT PRO™ AND KONA



KONA CONTROL PANEL

KONA3



THE BEST CHOICE FOR UNCOMPRESSED SD, HD, DUAL LINK HD, 2K AND MORE ON MAC OS X.

KONA™ 3 has the features you need: uncompressed video, 8-channel AES digital audio and 16-channel SDI embedded audio support, realtime hardware based up/down/cross-conversion for efficiently working with SD and HD formats, SD to SD aspect ratio conversion, hardware downstream keyer, plus HD/SD component analog output—and all of these features are your's on a state-of-the-art 4-lane PCI Express card or PCI-X 133Mhz card.

KONA 3 is designed to be the tool of choice for your post-production workflow. KONA 3 offers integrated and easy to use support for Apple's Final Cut Pro™ software plus hardware scalar acceleration for the DVCPRO HD® and HDV codecs as well as Dynamic RT Extreme™ effects within Final Cut Pro.

KONA 3—the standard bearer for quality, flexibility and future-safe architecture in a QuickTime™ I/O card.

KONA 3 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 applications like Adobe After Effects™, Apple Motion™ and more
- RS-422 machine control
- Cables for connectivity supplied standard
- Affordable breakout box option — K3-Box
- 3-year international warranty and outstanding technical support
- Available with a 4-lane PCIe interface as KONA 3
- Available with a PCI-X 133Mhz interface as KONA 3X

KONA 3 supports a wide variety of uncompressed SD and HD formats, including high bandwidth Dual Link and 2K formats. KONA 3 captures and plays back uncompressed 10-bit and 8-bit broadcast quality digital video and 24-bit digital audio, providing unparalleled power and workflow efficiency to meet today's broadcast standards. KONA 3 can also capture and playback many compressed SD and HD formats when disk space or realtime effects might be the biggest concern. Because KONA 3 is more than just an input/output card, it also includes a variety of 10-bit broadcast-quality features, such as hardware-based up-, down-, and cross-conversion to and from HD, and adds a hardware HD/SD keyer for compositing graphics like logos or bugs. With the hardware downstream keyer, waiting for a graphic or logo to render in software can become a mere memory.

DUAL LINK

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

As the most full featured 2K capable card on the Mac platform, 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. Material can be played out at 2K via HSDL, offering further synergy with other 2K products available such as digital disk recorders and 2K projectors. Additionally, KONA 3 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 playout can also be down-converted to SD in realtime, giving users a powerful solution for multi-format video playout 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, even a 2K conform on the Mac is possible using the KONA 3.

BROADCAST-QUALITY CONVERSION

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. That's the equivalent of rolling AJA's stand-alone HD D/A converter, HD to SD down-converter, and our SD to HD up-converter into one convenient, cost-efficient KONA 3 board — at half the price. The quality is identical to AJA's award-winning stand-alone products, and all functionality is hardware-based, making it available full time, all the time, on digitize or playback. KONA 3 will address your varied delivery needs with support for hardware-based 1080-to-720 or 720-to-1080 cross-conversion. Uniquely, the KONA 3 can even cross-convert 720P 23.98 to 1080PsF 23.98. Cross-conversion streamlines dailies and deliverables creation at true broadcast picture quality in realtime. KONA 3 also offers SD to SD aspect ratio conversions meaning that anamorphic SD can be converted to letterboxed SD or vice versa—yet another measure of the power and flexibility of AJA's hardware based conversions.

INTERNAL SD/HD HARDWARE DOWNSTREAM KEYER

Available for the first time on any QuickTime capture card is 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 (KONA 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 KONA TV application over live video coming into the card.

KONA3

"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

AUDIO

KONA 3's extensive audio support makes integration with professional audio gear a breeze; tie the KONA 3 to a digital audio mixer or DAW output with 8-channel 24-bit 48kHz or 96kHz AES audio via XLR (balanced) connections. For the highest level of 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.

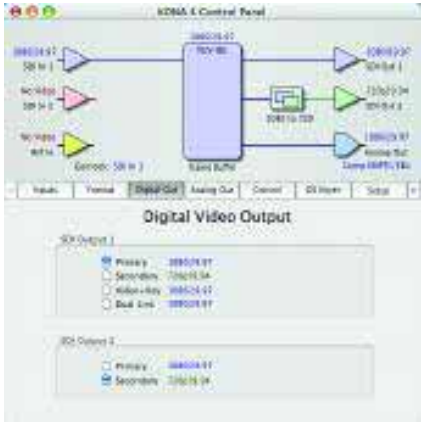
CONNECTIVITY

Looking for unsurpassed cable connectivity? Look no further. KONA 3 provides breakout cables to connect to standard broadcast devices. For SDI video, the card features two HD/SD inputs and two outputs for Single or Dual Link, 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 SDI inputs and outputs use a separate cable with special mini-BNC connectors on one end and full-sized BNCs on the other for ease of connection and superior reliability.

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—then you'll have the proper connections.

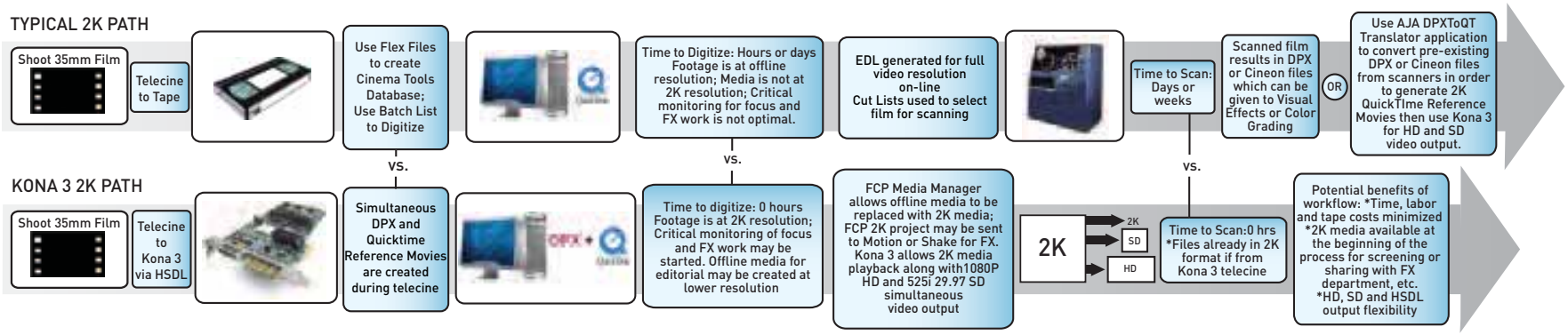
KONA DESKTOP

Most users run multiple applications to create their video projects. So in addition to Final Cut Pro or After Effects standard video output support, the KONA 3 allows broadcast design elements to be viewed with the proper aspect ratio and color depth on a broadcast monitor via the KONA card in Macintosh Desktop mode. KONA Desktop output supports Adobe Photoshop®, Apple Shake® or Autodesk Combustion®.

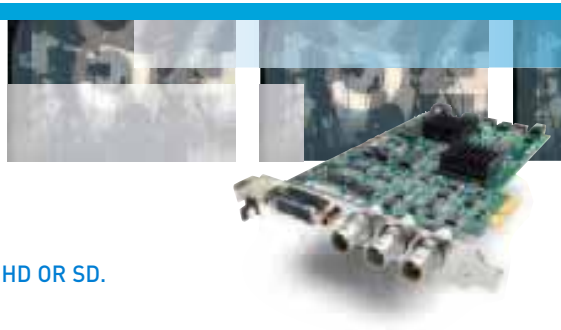


KONA 3 Control Panel

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 represents the next generation of technology and the right tool for the discerning postproduction professional.



KONA LHe



FLEXIBLE POST PRODUCTION DEFINED: ANALOG AND DIGITAL INPUT AND OUTPUT. HD OR SD.

Not an entry-level card, KONA LHe offers a full host of no-compromise features: 10-bit or 8-bit uncompressed video, 2-channel AES digital audio and 8-channel SDI embedded digital audio, analog composite or s-video or SD/HD component video I/O, 2-channel balanced analog audio I/O, and broadcast-quality hardware down-conversion from HD to SD. KONA LHe bridges the analog and digital worlds by offering I/O for both. Flexibility defined.

The KONA LHe comes standard with a breakout cable and also works with the optional KL-Box for rackmounted I/O convenience and added connectivity in the form of additional BNC digital AES/EBU connectors and RCA monitoring jacks. Use the KONA LHe hardware based flexible connectivity to capture to QuickTime™ at 10-bit and 8-bit uncompressed formats as well as DVCPRO HD, DV50, DV25, and more.

Don't just see the quality, hear it too. KONA LHe offers the professional audio support you want: native OS X multi-channel audio and 24-bit AES/EBU digital audio at 48kHz for digital production. For ease of use, KONA LHe also includes hardware sample-rate conversion on AES inputs—eliminating source synchronizing requirements.

KONA LHe FEATURES:

- SDI/HD-SDI single link 4:2:2 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 HD to SD down-conversion
- DVCPRO HD hardware acceleration
- HDV hardware acceleration
- Dynamic RT Extreme hardware acceleration
- 2 independent SDI/HD-SDI outputs—configure one for HD and the other for SD
- 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
- Final Cut Pro, Motion, After Effects, Combustion, and more
- Cables standard, KL-Box breakout optional
- 3-year warranty
- Available in PCIe as KONA LHe
- Available in PCI/PCI-X compatible form as KONA LH

CONNECTIVITY

Looking for unsurpassed analog and digital connectivity? Look no further. KONA LHe and LSe include cables to connect to almost any device. For SDI video, these cards feature one input and two outputs (the KONA LSe is SD-only; KONA LHe can be configured independently for HD or SD), one connection for Genlock input, and three BNCs which may be configured for analog video input and output (SD-only for LSe, HD or SD on LHe). Also included is a 9-pin connector for RS-422 machine control.

Because the KONA LHe supports analog component HD input and output, devices with analog HD output, such as HDV decks and even game consoles, can be connected to the KONA LHe for a variety of workflows.

The optional breakout box for KONA LHe and KONA LSe simplifies connectivity in professional post-production environments by offering a 19-inch, 1RU rack-mountable breakout box that attaches to the KONA 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 an analog BetacamSP, Digital Betacam, DVCPro50, or for the KONA LHe—a DVCPRO HD, HDCAM, or D5—or any other professional device—you'll have the proper connections.

KONA LSe

KONA LSe OFFERS SIMILAR CONNECTIVITY TO THE LHe, BUT FOR STANDARD DEFINITION DEVICES ONLY

The affordably priced KONA LSe is the perfect video capture and playback card for building your professional standard definition editing system. KONA LSe offers full featured SD connectivity: analog video input/output that can be configured as component, composite or S-Video, SDI input and output with multi-channel embedded audio support, analog balanced audio input/output, and AES balanced digital audio input/output. AJA offers direct integration with Final Cut Pro™, as well as support for software applications like Adobe After Effects™, 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 and 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 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)
- 8-channel SDI embedded audio support
- Broadcast-quality TBC with VHS support
- 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

KONA Family

"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

KONA QUICK REFERENCE	KONA 3	KONA LHe	KONA LSe
SD (NTSC and PAL)	yes	yes	yes
HD (720p, 1080i, 1080sf)	yes	yes	-
2K (2048x1556, 2048x1080) Dual-Link HD, 2K HSDL, 4:4:4 RGB	yes	-	-
HD to SD Down-conversion (10-bit, in hardware)	yes	yes	-
SD to HD Up-conversion (10-bit, in hardware)	yes	-	-
HD to HD Cross-conversion (1080 to/from 720, 10-bit, in hardware)	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 RTExtreme hardware scaling acceleration (in FCP)	yes	yes	-
1RU Breakout Box (optional, $299 US MSRP)	yes	yes	yes
PCIe and PCI-X available	yes	yes	yes
3-Year AJA Warranty with Advanced Exchange	yes, included	yes, included	yes, included

KONA DESKTOP

Most users run multiple applications to create their video projects. So in addition to Final Cut Pro or After Effects standard video output support, the KONA cards allow broadcast design elements to be viewed with the proper aspect ratio and color depth on a broadcast monitor via the KONA card in Macintosh Desktop mode. KONA Desktop output supports Adobe Photoshop®, Apple Shake®, Autodesk Combustion®.

AJA also includes additional software utility applications with the KONA software driver installation to make post-production tasks easier: the AJA Data Rate Calculator which can be used to calculate the amount of storage required for your selected format, frame rate, and compression and the AJA KONA System Test, which can be used to benchmark the performance of your drives and more. AJA's installer also includes KONATV, an application for playing back QuickTime movies directly out of the KONA video and audio outputs without having to launch an editorial application.

KONA 3 & KONA LHe HARDWARE SCALAR ACCELERATION

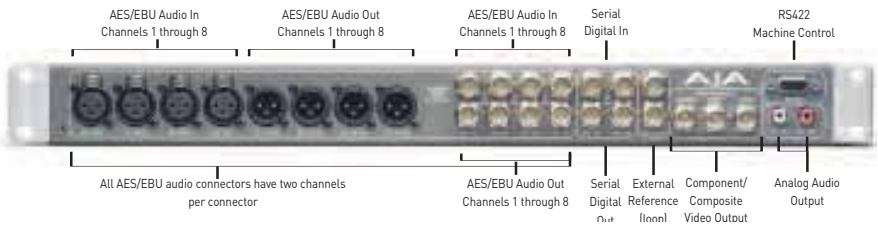
Final Cut Pro users will love our DVCPRO HD, HDV and Apple Dynamic RT Extreme hardware scalar acceleration, developed in close cooperation with Apple and available exclusively on high-end KONA cards. KONA hardware takes a portion of the codec processing load off the CPU, allowing more RealTime effects in Final Cut Pro when outputting. KONA 3/LHe also has hardware support when capturing. This brings amazing RealTime HD production power to the desktop. 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 fast SCSI or fibre channel 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 & KONA LHe 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. 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.

K3-BOX FOR KONA 3

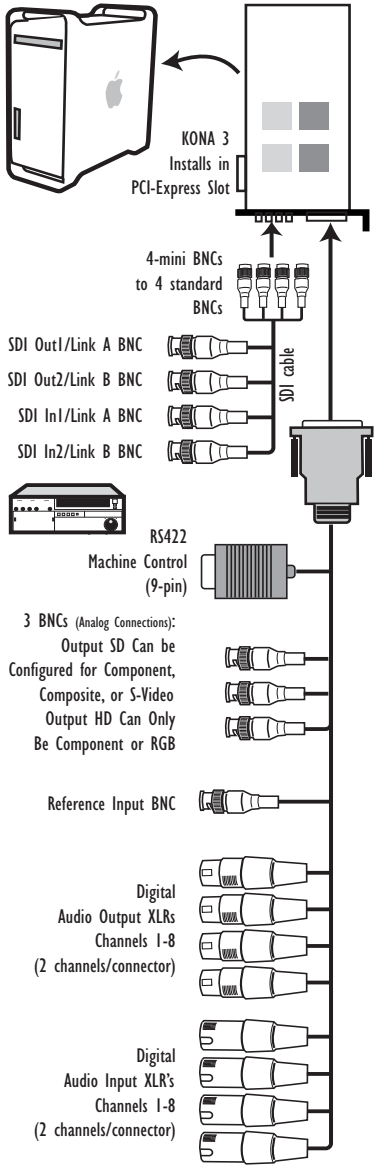


KL-BOX FOR KONA LHe & LSe (Optional)

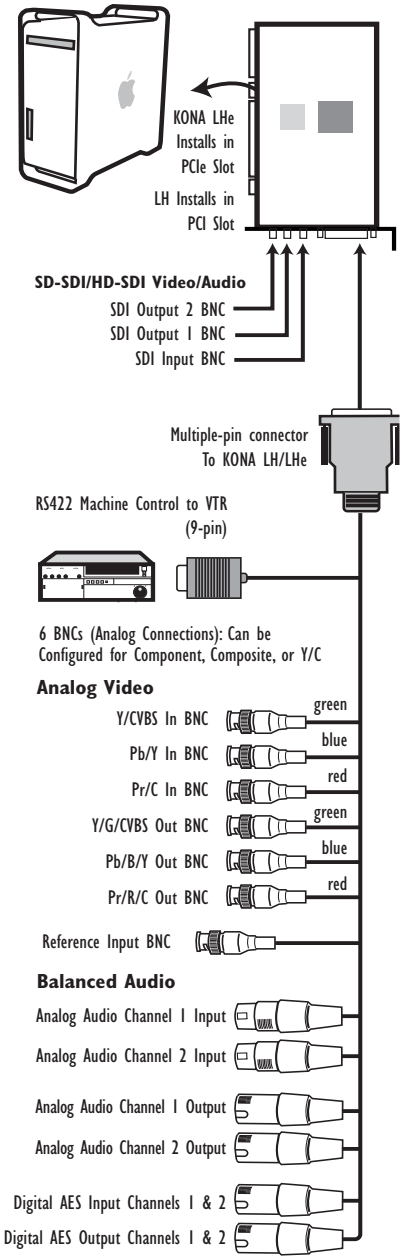
KONA 3 BREAKOUT CABLES (Supplied)

KONA LHe & LSe BREAKOUT CABLES (Supplied)

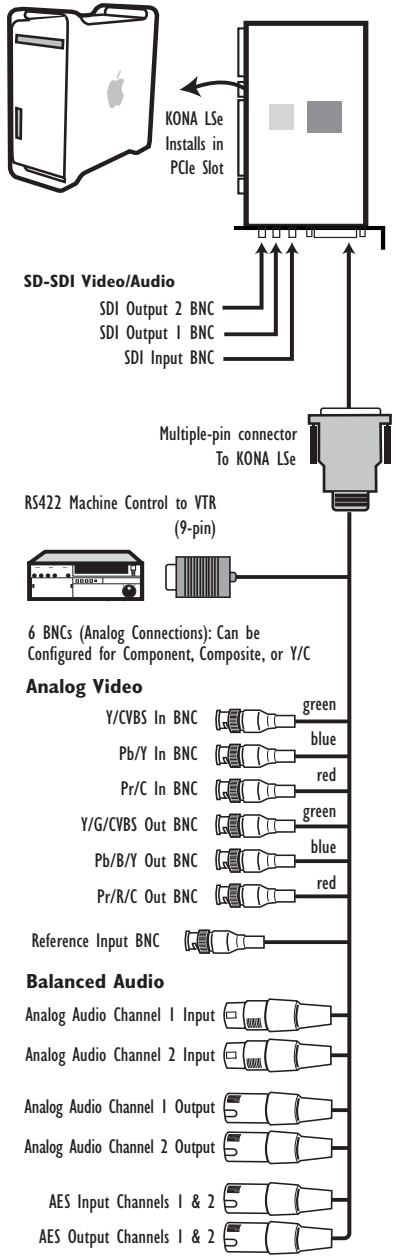
KONA 3 Standard Breakout Cables



KONA LHe Standard Breakout Cable



KONA LSe Standard Breakout Cable



KONA 3 Specifications

Video Input
Dual-rate (SD or HD)
SD and HD-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 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 horiztonally 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
Analog Color Black (1V) or Composite Sync (2 or 4V) Non terminating, Looping, 75 ohm on K3-Box, terminated on supplied breakout cable

Machine Control
RS-422, Sony 9-pin protocol

KONA LHe Specifications

Video Input
SD and HD-SDI, SMPTE-259/292/296
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 24
1080P 25
1080P 29.97
1080P 30

Video Output
Digital:
- SD-SDI, SMPTE, 259M, 10-bits, BNC
- HD-SDI SMPTE, 292/296, 10-bits, BNC

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

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

Reference Input
Analog Color Black (1V) or Composite Sync (2 or 4V) Non terminating, Looping, 75 ohm on K3-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
Analog Color Black (1V) or Composite Sync (2 or 4V) Non terminating, Looping, 75 ohm on K3-Box, terminated on supplied breakout cable

Machine Control
RS-422, Sony 9-pin protocol

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

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