

# XENA Products



XENA|2Ke

XENA|LHe

XENA|LSe



## WORKFLOW THAT WORKS

Running on Windows and supporting the Adobe® Production Studio, along with a wide variety of 3rd-party software, the new XENA line of video and audio I/O cards is designed for serious editing, graphics and design professionals. Record, review, and print SD/HD video with unmatched software capabilities.

# CAPTURE MADE PERFECT



Designed for Windows®, XENA™ allows you to capture perfect HD/SD data from a variety of sources (digital and analog SD and HD Decks, etc) into a format on disk that fits your post-production workflow. For example, if your whole post-production pipeline is based on a file-per-frame format such as DPX, then you can capture film/video data directly as sequential DPX files instead of having to write an AVI/QT file and then render to DPX files. File-per-frame workflows are no problem for XENA, with or without audio.

## FLEXIBILITY

With XENA, you can record data directly from SD and HD decks, telecines, and film scanners into any of the following file formats: DPX, Cineon, TGA, TIFF, BMP, AVI and QuickTime™. Got audio? Up to 16 audio tracks of embedded digital audio or multi-channel are supported. AES and Analog support is included as well on some XENA models. Audio files can be mono or stereo, QuickTime or WAV.

Choose the right XENA to playback HD/SD or SD-only video and audio data from disk—even 2K—in any format you choose, including DPX, Cineon, TGA, TIFF, BMP, AVI and QuickTime. Playback SD/HD material, at a variety of frame rates, on a high-resolution wide-screen monitor or digital projector. XENA allows you to play back files from disk in all supported formats. Full control over the playback parameters are clearly laid out, including provisions for choosing a user-specified LUT.

XENA provides its own stand-alone powerful capture/playback application, AJA Machina™, that includes full VTR machine control. Access to any and all XENA supported file formats, video standards and video conversions is all presented in a very cool

and easy-to-use interface. Captured files can then be imported into virtually any software package that supports these XENA file formats, such as compositing programs, 3D animation programs, audio editing programs and much more. With Machina, you can also output to tape the files exported from these same programs.

## MACHINA

Machina is AJA's powerful capture, playback, output, and control application. It is included with XENA 2K, LH, and LS cards, and provides users with great capture and output capabilities.. Machina provides users with a vast array of uncompressed capture options ranging from Quicktime to DPX. It provides users with the ability to choose from many capture options including bit depth, colorspace, and audio capture options. Machina can also output in all the same formats which it can capture. All these capture and output options are complimented with deck control.

Machina has great desktop preview features. Users can preview their files full screen on their desktop display at various zoom levels, creating an alternative for frame by frame viewing when no additional monitor is available. In addition it affords the user the power apply 1D LUT's on output, to output video+key for monitoring or mixing, and the ability to key in static graphics on selected XENA cards. Furthermore, Machina can be used to tap your XENA card's format conversion abilities during capture, output, or monitoring.

This huge feature set makes Machina an invaluable tool for film and video professionals, making it a useful addition to virtually any workflow.



AJA MACHINA™ APPLICATION

# XENA|2Ke

**XENA™ 2K IS AJA'S TOP-OF-THE-LINE CARD FOR WINDOWS, DELIVERING UNCOMPRESSED SD, HD, DUAL LINK HD AND 2K, ENABLING CUSTOMERS TO WORK IN NEARLY ANY RESOLUTION AND IN A FLEXIBLE AND FUTURE-SAFE ARCHITECTURE.**

XENA 2Ke's 4-lane PCI-Express bus interface plus our own integrated AJA drivers and plug-ins, team up perfectly with Windows and a wide variety of applications such as Adobe Premiere Pro, After Effects, Combustion, and Fusion, to give you unparalleled power and efficiency. XENA 2K captures and plays back uncompressed 10-bit and 8-bit digital video and 24-bit 48kHz digital audio in standard definition (SMPTE 259M), single-link and dual-link high definition (SMPTE 292M, 372M), D-Cinema, and full frame 2K via HSDL.

## FEATURES

- SDI, HD-SDI, Dual Link SD and HD-SDI 4:4:4, and 4:4:4:4, HSDL
- Plug-in support for Adobe Premiere Pro 2, Adobe After Effects 7, Photoshop CS/CS2, Autodesk Combustion 4 and Eyeon Fusion 5. Adobe Premiere Pro CS3, Adobe After Effects CS3 and Adobe Photoshop CS3 will be supported shortly after the release of Adobe CS3 Production Premium. Plugins for these applications will be available for Windows XP, Windows Vista, and Mac OS.
- AJA Machina software
- Native support for uncompressed DPX, Cineon, TGA, TIFF, BMP, YUV, AVI and QuickTime files
- 2K frame format support
- HSDL support
- Look Up Table support (LUT)
- 4-lane PCI-express bus interface (XENA 2Ke)
- PCI-X 133 interface (XENA 2K)
- Broadcast-quality hardware based 10-bit up-convert, down-convert and cross-convert
- 12-bit HD component and SD component/composite analog output
- 8-channel 48/96Khz AES, and 16-channel embedded SDI audio support
- RS-422 machine control
- Downstream Keying support for overlay of static graphics in Machina 12 bit SDI capture and output support in RGB (at 1920x1080 p 23.98 only)
- Video + Key output
- Cables standard, K3-Box breakout optional
- 3-year international warranty

## DUAL LINK

XENA 2K supports Dual Link 4:4:4 HD-SDI devices such as Sony HDCAM™ SR Decks, ARRI™ D-20 or Thompson Viper™ cameras. XENA 2K Dual Link supports full bandwidth 4:4:4 RGB at 10-bits for 1080i, 1080p, and 720p formats. XENA 2K can also convert between 4:4:4 and 4:2:2 formats for Single Link HD-SDI output.

## 2K WORKFLOW

XENA 2K can capture directly from a 2K telecine to disk, eliminating both the need for tape stock and the process of digitizing tapes for the nonlinear editor. The additional 2K support in XENA 2K will benefit large, full-service facilities as well as boutique facilities entering the 2K "film as digital" landscape.

2K telecine to XENA 2K saves time and steps in the process by directly creating 2K DPX, QuickTime, Cineon, AVI, TGA, TIFF or BMP files. XENA users can capture directly into the format they need and move files immediately into their editing/compositing environment. These same files can be played out at 2K via High Speed Data Link (HSDL) at 15 fps, offering further synergy with other 2K products already in use in the market.

Additionally, XENA 2K allows 2K files to be viewed on HD 1080 24P-supported video monitors, lowering the price barrier for recording to tape and viewing 2K material. This 1080 HD payout can also be down-converted to SD in realtime, giving the 2K DI pipeline a powerful solution for multi-format video payout of 2K material.

By generating 2K files during the digitize phase, filmmakers can skip tape altogether and begin editing from a digital master immediately after the telecine is complete. Tape capture becomes unnecessary. Offline editing can be done in Adobe Premiere Pro and because of the flexibility of Adobe Premiere Pro and Windows, even a 2K online is possible.



XENA 2K is the ultimate uncompressed capture card for seamless operation with a myriad of creative applications on a Windows PC. Supporting any uncompressed SD or HD format, including Dual Link and 2K, XENA 2K captures and plays back uncompressed 10-bit and 8-bit digital video and 24-bit digital audio, providing unparalleled power and workflow efficiency. XENA 2K also includes a variety of 10-bit broadcast-quality features, such as hardware-based up-, down- and cross-conversion to and from HD.

XENA 2K is available in two flavors: The XENA 2K is available for users needing a PCI-X solution and the XENA 2Ke is for those needing a 4-lane PCIe solution. Both cards are identical in features and in video and audio connections, and use the same optional K3-Box rack mountable breakout box. Choose the card that best suits your workstation!

## BROADCAST-QUALITY CONVERSION

XENA 2K features full 10-bit, broadcast-quality, motion-adaptive SD to HD up-conversion, HD to SD down-conversion, HD cross-conversion and automatic HD/SD 12-bit component analog output. In addition to all these conversion features, XENA 2K can also do SD to SD aspect ratio conversions from 4:3 to 16:9 and vice versa. This huge number of conversion features is equivalent to 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 XENA 2K 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. XENA 2K will address your needs with support for hardware-based 1080-to-720 or 720-to-1080 cross-conversion. This powerful feature further streamlines dailies and deliverables creation at true broadcast picture quality in realtime.

# XENA|2Ke



## AUDIO

XENA 2K's extensive audio support makes installation a breeze, working with 8-channel 24-bit AES audio at either 48 or 96KHz via XLR (balanced) connections, and 16-channel 24-bit 48KHz embedded SDI/HD-SDI audio. XENA 2K also features high-quality input sample-rate conversion on AES inputs, which eliminates the need for audio source synchronization.

## FLEXIBLE I/O

XENA 2K boasts two HD/SD SDI video inputs and outputs and one component analog output, each independently switchable between HD and SD (SD analog can be configured as composite). For example, if you are working in HD, you can have simultaneous HD SDI, SDI and HD or SD component analog output. Using XENA 2K's full-time format conversion features, monitoring can be as simple as a single composite monitor for both SD and HD projects. Dual Link can be

monitored via Dual Link HD-SDI outputs, Single Link HD-SDI, or HD component analog. Furthermore, the dual outputs can be used to output Video + Key with video on one output and key on the other.

When you plug in XENA 2K's breakout cables, they automatically configure. 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 for HD/SD component analog video out. Also included is a 9-pin D 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 K3-Box for XENA 2K simplifies interfacing by offering a 19-inch, 1RU rack-mountable breakout box that attaches to the XENA 2K with just two cables. This option offers all the

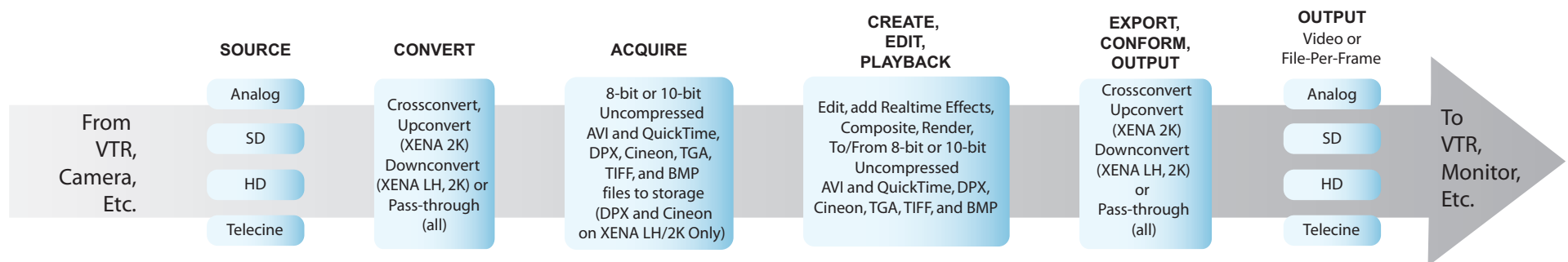
same inputs and outputs as the standard breakout cable, and can be easily rackmounted or placed on top of a broadcast monitor or editing desk. Additional functionality includes simultaneous XLR and BNC AES output, 2-channel RCA analog audio monitoring, and looping BNC Genlock reference connectors.

If you're using a digital Betacam™ deck, HDCAM™, DVCPRO HD®, D5, D9, or even an HDCAM SR, you'll have the proper connections.

## XENA 2K

All of this adds up to the most reliable, feature rich, and highest performance card available for Windows based PCs.

## XENA Workflow



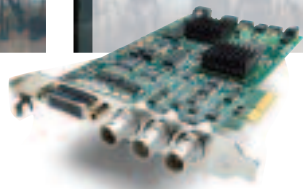
# XENA|LHe

**XENA LH: GIVING YOU BOTH ANALOG AND DIGITAL I/O OPTIONS IN BOTH HD AND SD RESOLUTIONS, ALLOWING CONNECTIVITY TO THE EQUIPMENT OF YESTERDAY, TODAY, AND TOMORROW – ALL WITH ONE CARD.**

XENA LH offers a full ride to HD with no-compromise 10-bit and 8-bit uncompressed video, 2-channel AES and 8-channel embedded audio, analog composite/component video I/O, 2-channel analog audio I/O, 10-bit broadcast-quality hardware HD to SD down-conversion and TBC on analog inputs. XENA LH bridges the analog and digital worlds by offering I/O for both.

XENA LH comes standard with a breakout cable and also works with the optional KL-Box for rackmounted I/O convenience. XENA LH provides optimum quality for SD and HD—the maximum allowed in SMPTE SDI standards. Using many user-selected formats—DPX, Cineon, TGA, TIFF, BMP, YUV, AVI or QuickTime™—XENA LH captures directly to disk. In addition to top quality video, XENA LH offers all the audio support you'd ever want: multi-channel audio and 16/24/32-bit AES/EBU digital audio at 48kHz for digital production. For ease of use, XENA LH also includes hardware sample-rate conversion on AES inputs—eliminating source synchronizing requirements.

XENA LH is perfect for many diverse workflows, including capture from analog component connections from HDV cameras that allow direct ingest of HDV-acquired material into uncompressed or any other supported file format. These 12-bit analog inputs and outputs, in addition to 10-bit digital I/O's, ensure that XENA LH can interface to almost any Single-Link SDI or analog HD or SD device you throw at it.



XENA LH also provides AJA's incredible 10-bit hardware HD to SD down-conversion, which can be applied to any or all inputs or outputs. Digitize HD into space-efficient SD for offline work. Monitor HD files on an SD monitor. Make analog or digital SD tape masters from an HD project. Awesome workflow capabilities are yours with XENA LH.

XENA LH is available in two flavors: for PCI/PCI-X compatibility as the XENA LH, and for 4-lane PCIe compatibility as the XENA LHe. Both cards are identical in features and in video and audio connections. Both use the same optional KL-Box breakout box. Choose the card that best suits your workstation!

## XENA LH FEATURES

- 10-bit uncompressed SD/HD capture card
- 12-bit HD analog component I/O
- 12-bit SD analog component or composite/YC I/O
- 10-bit hardware HD to SD down-conversion
- Native support for DPX, Cineon, TGA, TIFF, BMP, YUV, AVI and QuickTime files
- SDI or HD-SDI input
- 2 independent SDI/HD-SDI outputs
- 2-channel balanced XLR AES and 2-channel balanced XLR analog audio I/O
- 8-channel SDI embedded audio I/O
- HD/SD Genlock
- RS-422 machine control
- AJA Machina software
- Plug-in support for Adobe Premiere Pro 2.0, Adobe After Effects 7.0, Photoshop CS/CS2, Autodesk Combustion 4 and Eyeon Fusion 5. Adobe Premiere Pro CS3, Adobe After Effects CS3 and Adobe Photoshop CS3 will be supported shortly after the release of Adobe CS3 Production Premium. Plugins for these applications will be available for Windows XP, Windows Vista, and Mac OS. Additional application support provided by Sony in Vegas 7, and by Avid in Liquid Chrome Xe 7.2
- Cables standard, KL-Box breakout optional
- 3-year warranty
- Available in PCIe as XENA LHe
- Available in PCI/PCI-X compatible as XENA LH

# XENA|LSe

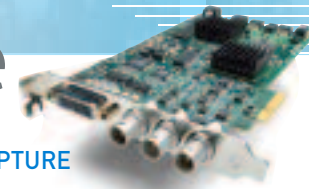
**THE BEST SOLUTION FOR SD CAPTURE AND PLAYBACK**

AJA-quality standard definition video capture and playback isn't just for the big guys. The affordably priced XENA LS is the perfect solution for capture, playback and printing video for non-linear editing and visual effects/motion graphics. Now, with XENA LS, everyone can enjoy the features, rock-solid video/audio, and factory support that exemplify all AJA products.

XENA LS supports 10-bit SMPTE SDI, using your choice of many formats (TGA, TIFF, BMP, AVI, YUV or QuickTime). XENA LS also has great audio I/O support: 2-channel balanced XLR analog, 2-channel balanced XLR AES, and multi-channel embedded SDI audio. XENA LS includes hardware sample-rate conversion on AES inputs, eliminating source synchronizing requirements. And the optional KL-Box for XENA LS provides all the standard features of a cable in an easy-to-use 1RU rackmount panel.

## XENA LS FEATURES

- 12-bit component/composite/S-video analog I/O
- SDI input, 2 independent SDI outputs
- AES I/O, sample-rate conversion on input (2 channel, XLR)
- Balanced analog audio I/O (2 channel, XLR)
- 8-channel SDI embedded audio support
- Broadcast-quality TBC with VHS support
- Support for TGA, TIFF, BMP, AVI, YUV and QuickTime files
- Support for all popular standard definition formats (NTSC and PAL)
- Genlock and RS-422 machine control
- AJA Machina Software
- Plug-in support for Adobe Premiere Pro 2.0, Adobe After Effects 7.0, Photoshop CS/CS2, Autodesk Combustion 4 and Eyeon Fusion 5. Adobe Premiere Pro CS3, Adobe After Effects CS3 and Adobe Photoshop CS3 will be supported shortly after the release of Adobe CS3 Production Premium. Plugins for these applications will be available for Windows XP, Windows Vista, and Mac OS. Additional application support provided by Sony in Vegas 7
- Cables Standard, KL-Box Breakout Optional
- 3-year warranty
- Available in PCIe as XENA LSe
- Available in PCI compatible as XENA LS



# XENA Family

XENA QUICK REFERENCE	XENA 2Ke	XENA LH <sub>e</sub>	XENA LS <sub>e</sub>
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
Video + Key	yes	-	-
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
Native support for DPX, Cineon	yes	yes	-
Native support for TGA, TIF, BMP, YUV, AVI, and QuickTime™	yes	yes	yes
AJA Plug-ins for Adobe CS3 and other 3rd-party Apps.	yes	yes	-
AJA Machina™ software application for powerful capture/preview output	yes	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

## CONNECTIVITY

Looking for unsurpassed analog and digital connectivity? Look no further. All XENA cards include cables to connect to almost any device. For additional flexibility, optional breakout boxes can further simplify connectivity in professional post-production environments. Each 19-inch 1RU rack-mountable breakout box attaches directly to its XENA card using supplied cables. 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 XENA 2K or LH—a DVCProHD, HDCAM, or D5—or any other professional device—you'll always have the proper connections. Note: XENA LS/LSe is standard definition-only. XENA 2K/2Ke use the K3-box model breakout box, and XENA LH<sub>e</sub>/LH and XENA LS<sub>e</sub>/LS use the KL-box model.

## POWERFUL PLUG-INS

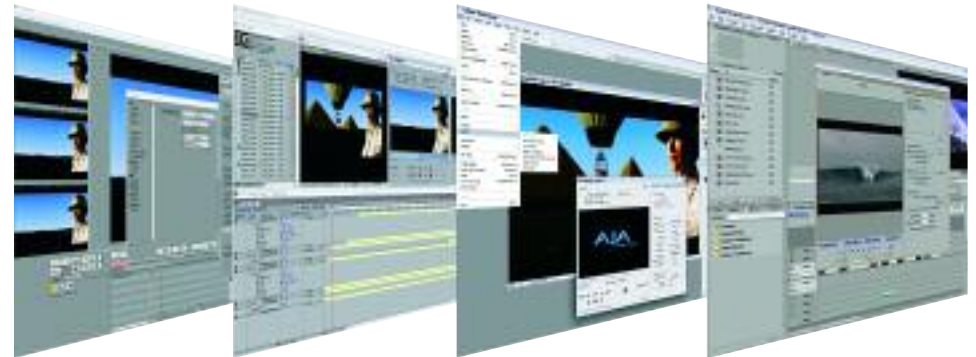
Not only does AJA's XENA provide powerful capture and playback features in Machina, but it integrates them into a variety of graphics/visual-effects software applications to make operations even easier. Using plug-ins, sophisticated XENA

features appear as if they were native to the software application user interfaces. Directly supported applications include:

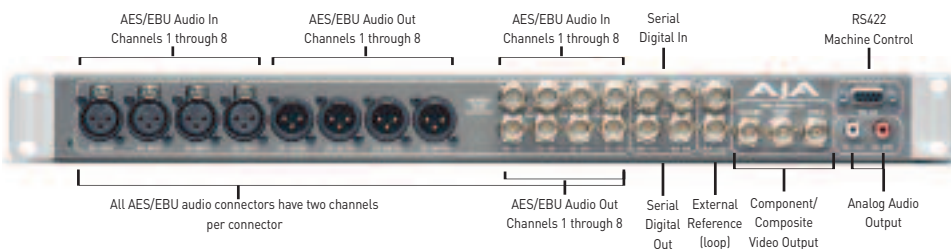
Adobe Premiere® Pro  
 Adobe After Effects®  
 Adobe PhotoShop®  
 Autodesk Combustion®  
 Eyeon Digital Fusion®

## XENA WORKFLOW

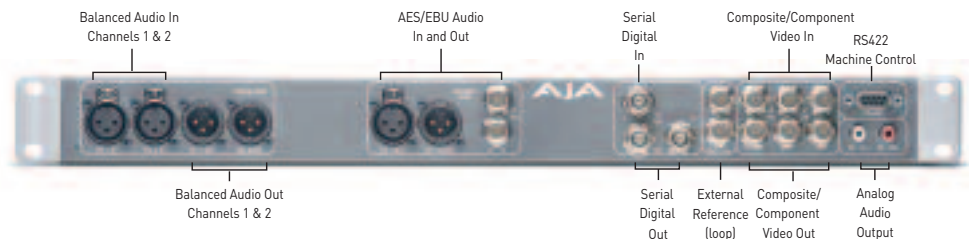
XENA cards support a wide variety of workflows, from analog to combined HD/SD, Dual Link, HSDL and 2K. All XENA products ship with AJA's Machina,™ our powerful stand-alone deck-control, playback and capture application, along with a host of powerful plug-ins for seamless integration with leading editing, graphics and effects applications, including Adobe Premiere® Pro, Adobe After Effects®, Adobe Photoshop®, Autodesk® Combustion® and Eyeon Fusion®. Optimal file format support is offered in QuickTime and AVI, as well as in file-per-frame formats such as DPX, Cineon, TIFF, TGA and BMP.



K3-BOX FOR XENA 2K (Optional)

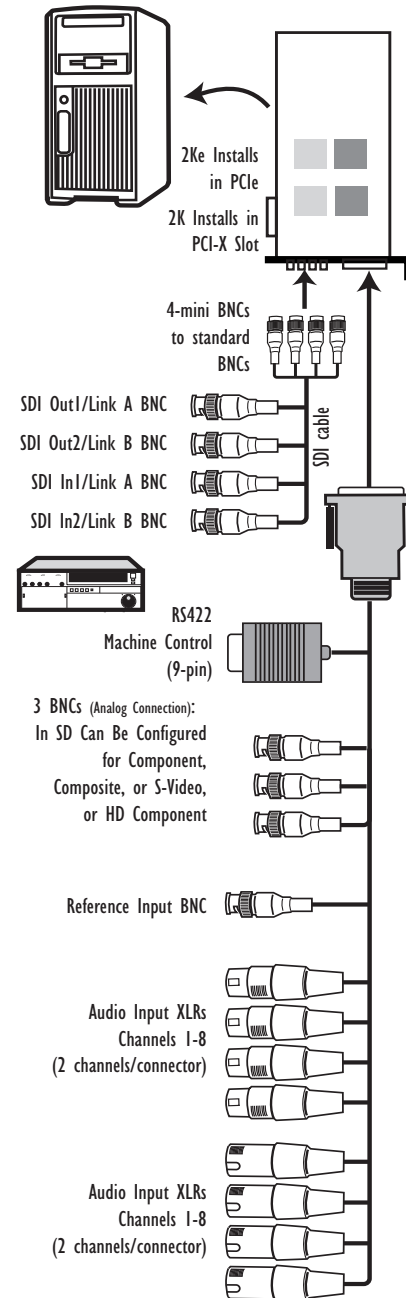


KL-BOX FOR XENA LS<sub>e</sub> & LS (Optional)



## XENA 2K Standard Breakout Cables

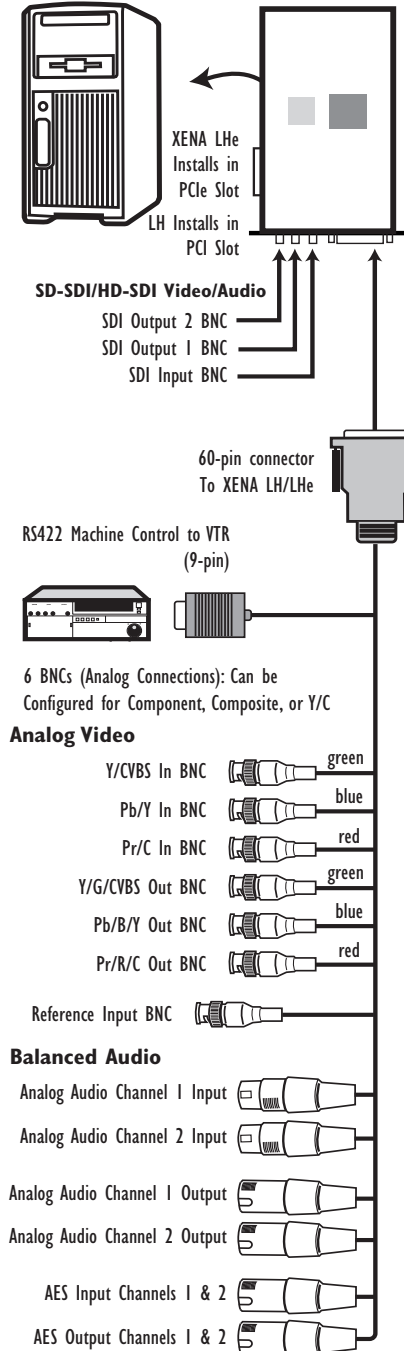
XENA 2K BREAKOUT CABLES (Supplied)



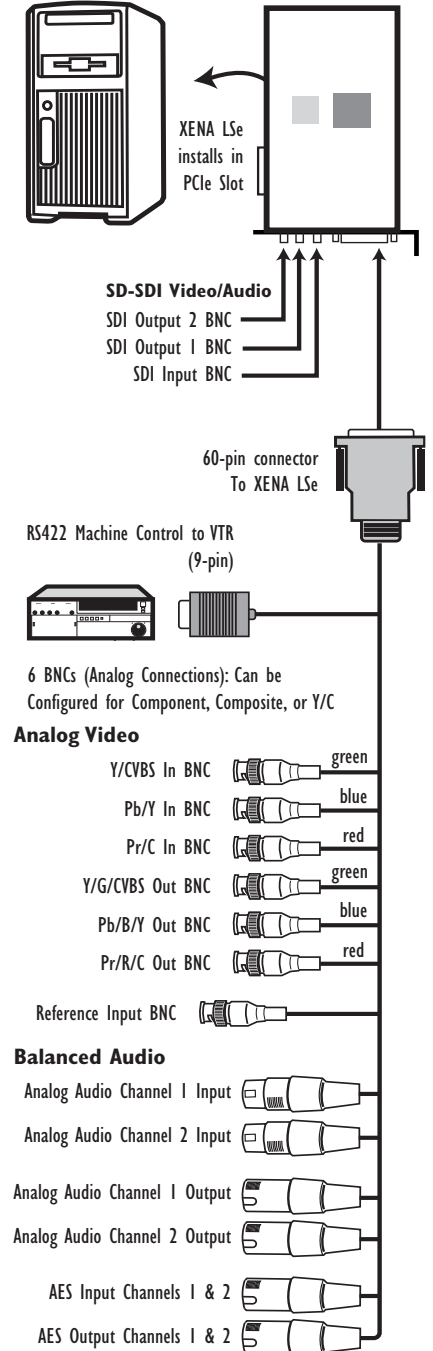
XENA LHe and LSe BREAKOUT CABLES (Supplied)



## XENA LHe/LH Standard Breakout Cable



## XENA LSe Standard Breakout Cable



## XENA 2Ke and 2K Specifications

### XENA 2Ke

PCIe 4-lane compatible

### XENA 2K

PCI and PCI-X compatible

### Video Formats

SD:  
525i 29.97  
525i 29.97 (WIDE)  
625i 25  
625i 25 (WIDE)  
480i 29.97  
480i 29.97 (WIDE)  
HD:  
720p 23.976  
720p 24  
720p 25  
720p 29.97  
720p 30  
720p 50  
720p 59.94  
720p 60  
1080i 25  
1080i 29.97  
1080i 30  
1080p 23.98  
1080psf 23.98  
1080p 24  
1080psf 24  
1080p 25  
1080psf 25  
1080p 29.97  
1080psf 29.97  
1080p 30  
1080psf 30  
1080p 50  
1080p 59.94  
1080p 60

### 2K:

2048 x 1080p 23.976  
2048 x 1080psf 23.976  
2048 x 1080p 24  
2048 x 1080psf 24  
2048 x 1556p 14.98  
2048 x 1556p 15

### Video Input

HD-SDI/SDI, SMPTE-259/292/296  
Dual-link HD 4:4:4  
2K HSDL

### Video Output

Digital:  
HD-SDI/SDI, SMPTE-259/292/296  
Dual-link HD 4:4:4  
2K HSDL  
Analog:  
SD and HD Output, 12-bits, BNC  
HD: YPbPr, RGB  
SD: YPbPr, RGB (component mode)  
Composite/YC (composite mode)  
12-bit D/A

### Audio

16/24/32-bit 48kHz synchronous  
16-channel SDI/HD-SDI embedded audio  
or 48/96kHz 8 channel AES audio  
With sample rate conversion on AES  
inputs  
(no source synchronization required)

### Up-Conversion

Hardware 10-bit  
Aspect Conversion modes:  
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 sidebars  
Zoom Letterbox: zooms a 16:9 Letterbox  
source to 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: 16:9 image with black top and  
bottom  
Crop: image is cropped for full screen  
image

### Cross-Conversion

Hardware 10-bit  
1080i to 720p  
720p to 1080i  
  
SD to SD Aspect Ratio Conversion  
16:9 to 4:3 Letterbox  
16:9 to 4:3 Horizontal Crop  
4:3 to 16:9 Pillarbox  
4:3 to 16:9 Vertical Crop

### Reference Input

Analog Color or HD Tri-level  
1 BNC on standard breakout cable  
(75 ohm terminating)

### Machine Control

RS-422, Sony 9-pin protocol.

## XENA LHe & LH Specifications

### XENA LHe

PCIe 4-lane compatible

### XENA LH

PCI and PCI-X compatible

### Look Up Tables

Real-time primary LUT  
Import/export text-based LUT files

### File Import/Export

Import (capture) and export (playback)  
standard file formats: DPX, Cineon, TGA,  
TIFF, BMP, and AVI, QuickTime,

### Video Formats

SD:  
525i 29.97  
625i 25  
  
HD:  
720p 23.976  
720p 24  
720p 25  
720p 29.97  
720p 30  
720p 50  
720p 59.94  
720p 60  
1080i 25  
1080i 29.97  
1080i 30  
1080p 23.976  
1080psf 23.976  
1080p 24  
1080psf 24  
1080p 25  
1080psf 25  
1080p 29.97  
1080psf 29.97  
1080p 30  
1080psf 30

### Video Input

Digital:  
HD-SDI/SDI, SMPTE-259/292/296  
Analog:  
SD and HD Input, BNC  
HD: YPbPr, RGB  
SD: YPbPr, RGB (component mode)  
Composite/YC (composite mode)  
12-bit A/D

### Video Output

SD and HD Output, BNC  
HD: YPbPr, RGB  
SD: YPbPr, RGB (component mode)  
Composite/YC (composite mode)  
12-bit D/A

### Audio Input

Digital:  
2-channel 16/24/32-bit AES/EBU, 48kHz  
sample-rate  
Synchronous or Non-synchronous  
(Internal sample-rate conversion)  
16/24/32-bit SMPTE-259 SDI embedded  
audio, 8-channel, 48kHz synchronous  
Analog:  
2-channel balanced input  
+24dbu Full Scale Digital  
16/24/32-bit A/D, 48kHz sample rate  
+/- 0.2db 20 to 20kHz Frequency Response

### Audio Output

Digital:  
2-channel 16/24/32-bit AES/EBU, 48kHz  
sample rate  
16/24/32-bit AES/EBU, 48kHz sample rate  
16/24/32-bit SMPTE-259 SDI embedded  
audio, 8-Ch, 48kHz synchronous

### Analog:

2-channel balanced output  
+24dbu Full Scale Digital  
16/24/32-bit D/A, 48kHz sample rate  
+/- 0.2db 20 to 20kHz Frequency Response

### Down-Conversion

Hardware 10-bit output, 16/24/32-bit internal  
processing  
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 horizontally

### Reference Input

Analog Color or HD Tri-level  
1 BNC on standard breakout cable (75 ohm  
terminating)  
KL-Box (optional): 2 BNCs, passive loop

### Machine Control

RS-422, Sony 9-pin protocol Connector pro-  
vided on XENA LH/LHe breakout cable and  
on optional KL-Box.

## XENA LSe & LS Specifications

### XENA LSe

PCIe compatible

### XENA LS

PCI compatible

### File Import/Export

Import (capture) and export  
(playback) standard file formats: TGA,  
TIFF, BMP, and AVI, QuickTime, WAV.

### Video Formats

SD:  
525i 29.97  
625i 25

### Video Input

Digital:  
8 or 10-bit SDI, SMPTE-259  
Analog:  
SD: YPbPr, RGB (component mode)  
Composite/YC (composite mode)  
12-bit A/D

### Video Output

Digital:  
8 or 10-bit SDI x2 BNC, SMPTE-259  
Analog:  
SD: YPbPr, RGB (component mode)  
Composite/YC (composite mode)  
12-bit A/D

### Audio Input

Digital:  
2-channel 16/24/32-bit AES/EBU, 48kHz  
sample rate  
Synchronous or Asynchronous  
(Internal sample rate conversion)  
16/24/32-bit SMPTE-259 SDI embedded  
audio, 6-channel, 48kHz synchronous

### Analog:

2-channel balanced input  
+24dbu Full Scale Digital  
16/24/32-bit A/D, 48kHz sample  
rate  
+/- 0.2db 20 to 20kHz Frequency  
Response

### Audio Output

Digital:  
2-channel 16/24/32-bit AES/EBU, 48kHz  
sample rate  
16/24/32-bit SMPTE-259 SDI embedded  
audio, 6-channel, 48kHz synchronous  
Analog:  
2-channel balanced output (XLR)  
+24dbu Full Scale Digital (0dbFS)  
16/24/32-bit D/A, 48kHz sample rate  
+/- 0.2db 20 to 20kHz Frequency  
Response  
2-channel unbalanced output  
(RCA-jack): requires KL-Box option

### Reference Input

Analog Color Black  
1 BNC on standard breakout cable (75 ohm  
terminating)  
KL-Box (optional): 2 BNCs, passive loop

### Machine Control

RS-422, Sony 9-pin protocol Connector pro-  
vided on XENA LS breakout cable and on  
optional  
KL-Box.

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## Incredible 3 Year Warranty

AJA Video warrants that XENA products will  
be free from defects in materials and work-  
manship 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 conver-  
sion solutions, bringing high-quality, cost-  
effective digital video products to the profes-  
sional broadcast and post-production mar-  
kets. AJA offers the Io, XENA 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 sys-  
tems integrators around the world. For fur-  
ther information, please see our website at  
www.aja.com



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