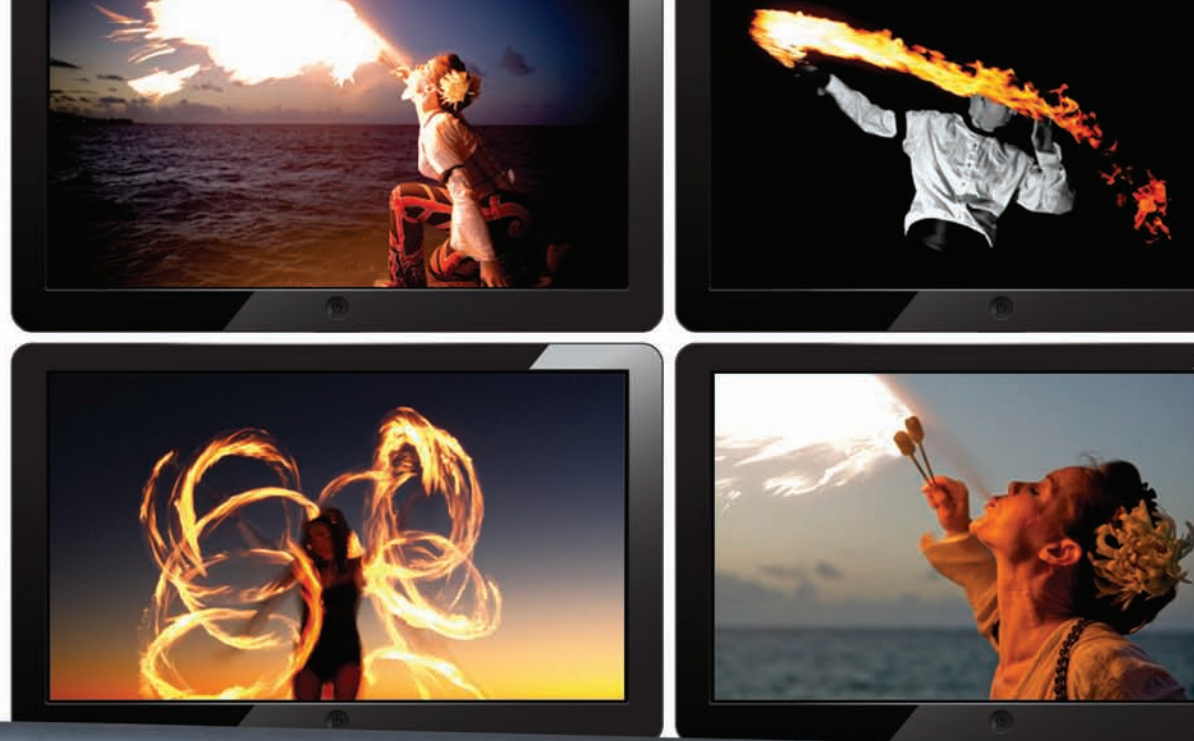# KiPROrack

File-based 1RU Recorder/Player

AJA
VIDEO SYSTEMS®

Because it matters.™

KiPROrack

Only **$3,995** US MSRP*

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AJA's Ki Pro Rack simplifies the transition from traditional tape to file-based workflows. Professional video and audio connections and a straightforward interface ensure it's fast to adopt and easy to integrate into your existing infrastructure.

File-based 1RU Recorder/Player

The power of Ki Pro in a 1RU format, the perfect fit for broadcasters transitioning away from tape.

For video facilities transitioning from tape to file-based workflows for recording and playback, Ki Pro Rack offers high-quality, 'ready-to-edit' file capture, designed to get material from source to editorial as quickly as possible.

With a wealth of professional connections, Ki Pro Rack will fit right into your existing cabling and routing system without the requirement for special converters. Ki Pro Rack records Apple ProRes and Avid DNxHD files at your choice of quality level direct to removable hard disk or SSD KiStor Storage Modules, eliminating the need for time-consuming logging and capturing.

Like Ki Pro, Ki Pro Rack features AJA's industry leading conversion technology, enabling you to perform broadcast-quality up/down/ cross conversion during recording or playback without the need for additional conversion hardware.

Anyone familiar with the operation of a tape deck will feel immediately at home with Ki Pro Rack's tactile controls, while the flat onscreen menu structure ensures quick setup and a rapid learning curve.

The twin media drive bays on the Ki Pro Rack allow extremely fast media changes - you can switch drives and start recording straight away, without having to swap out the drive modules.

Ki Pro Rack's network connectivity opens up new methods for integrating into your facility. Mounted KiStor drives can be accessed via the remote web interface built into Ki Pro Rack from a web browser on any computer on the network. This allows files to be transferred to and from Ki Pro Rack without having to remove the storage media.

10-bit, full raster recording

Big on quality - but not on file size.

Compared to 8-bit recording devices, 10-bit 4:2:2 recording (when supported by the codec) provides better quantization, giving a superior representation of the original scene and allowing for more flexibility in post production when adjusting color and balance.

By utilizing efficient ProRes and DNxHD codecs, file sizes are kept in check so you won't need to blow your production budget on extra storage.

RS-422 Control

RS-422 control allows Ki Pro Rack to integrate easily with supported editing systems and external controllers allowing it to fulfill several of the functions of a traditional VTR. Supported NLEs can even perform assemble edits directly to the Ki Pro Rack.

Familiar controls and operation

Anyone familiar with the operation of a tape deck will feel immediately comfortable when working with Ki Pro Rack.

Just like a traditional tape deck, Ki Pro Rack features straightforward and dedicated transport buttons - record, play, stop, rewind, fast forward - making the device easy to operate with minimal training time.
The current status of the system and key configuration information is clearly displayed on the built-in screen. Additional operational information can be found in the STATUS menu which can be accessed even when recording or playing back.

The Ki Pro Rack operating system offers users a flat menu structure that is easy to navigate with menu parameters presented in clear and understandable language.

Reliable storage media

Ki Pro Rack captures directly to reliable AJA KiStor modules. KiStor modules are available as HDDs or SSDs in a variety of capacities to best suit the demands of your production environment. KiStor modules also feature either a built-in FireWire 800 or USB 3.0 connector for direct connection to your editing system. Alternately, KiStor modules may also be used with the optional KiStor Dock which features USB3 and Thunderbolt™ connectors for lightning-fast data transfers.

The twin media drive bays on the Ki Pro Rack allow extremely fast media changes - you can switch drives and start recording right away, without having to wait to eject the first drive.

Ethernet connectivity

Once established on a local network, Ki Pro Rack's parameter settings, clip selection and transport controls can be accessed from any computer and web browser; no additional or special software installation is required on the host computer. Multiple Ki Pro Rack units may even be networked together and controlled from a single interface making them ideal recorders for multi-camera projects or to allow centralized control and configuration within a facility.

Professional connections

The video and audio connections on the rear panel of the Ki Pro Rack offer the same standard connectors found on traditional tape decks, allowing Ki Pro Rack to integrate easily with your current cabling and routing. The rear connections include SDI, HDMI, component analog, AES and analog XLR balanced audio, LTC, RS-422 and LAN.
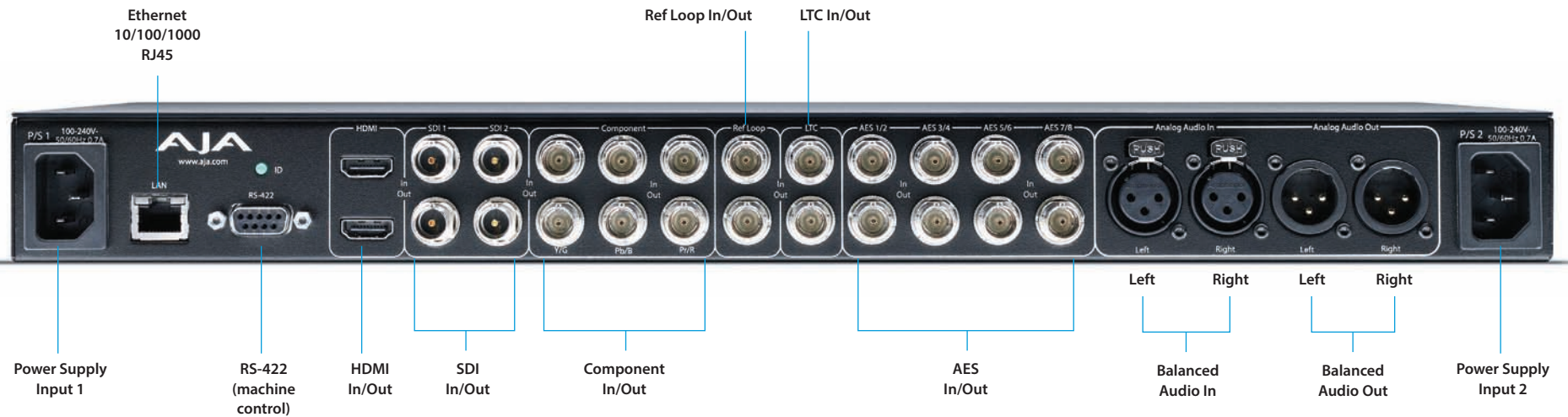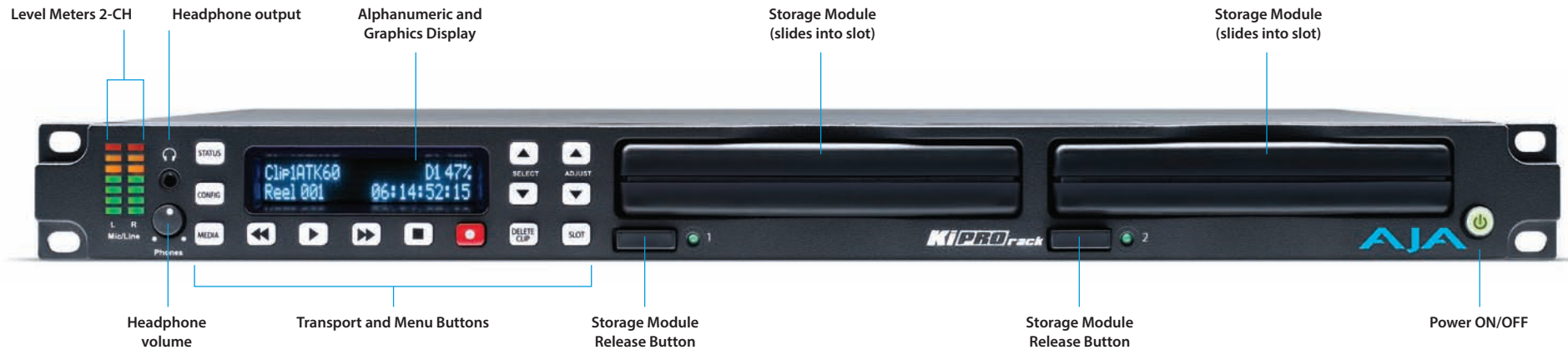
Integrated AJA hardware conversion

Ki Pro Rack has AJA's industry-leading conversion technology built in so you can perform high-quality up/down/cross conversion during recording or playback without having to use a second device.

Connections

Level Meters 2-CH | Headphone output | Alphanumeric and Graphics Display | Storage Module (slides into slot) | Storage Module (slides into slot)

Clip1ATK60   D1 47%
Reel 001   06:14:52:15

Headphone volume | Transport and Menu Buttons | Storage Module Release Button | Storage Module Release Button | Power ON/OFF

Ethernet 10/100/1000 RJ45 | Ref Loop In/Out | LTC In/Out

Left   Right   Left   Right

Power Supply Input 1 | RS-422 (machine control) | HDMI In/Out | SDI In/Out | Component In/Out | AES In/Out | Balanced Audio In | Balanced Audio Out | Power Supply Input 2

Click here ▶ For full product specifications visit www.aja.com/ki-pro-rack/techspecs

AJA Ki Pro Rack and Hi5-3D Power Broadcast Production for Hong Kong-Based Video Channel

"AJA products are very robust and they've always delivered reliable performance."

Hong Kong-based production company Video Channel has been facilitating live broadcasts and providing post production services for sports, music and entertainment programming along with blu-ray disc releases, corporate video and event-based productions across Hong Kong, Macau, China and Asia for over 11 years. Recent notable productions include the Beijing Olympic Torch Relay, The Hong Kong Anniversary Celebration, East Asian Games Opening Ceremony and Closing Ceremony, The New Year Countdown, The Hong Kong Marathon and more. They specialize in HD/SD multi-camera outside broadcasts (OB) covering concerts, live events and sports.

Video Channel provides flexible and scalable HD production solutions, with equipment that includes AJA's KONA cards, Io products, Mini-Converters and Ki Pro recorders. "We chose to integrate AJA gear because they provide the best stability for our production workflows," explained by Eric Yeung, the Operations Manager.
"We heard about AJA online and through our local system integrators, Viewcon. AJA has been so supportive for our Asia-based projects. Working with AJA equipment, Video Channel has also been able to provide an extraordinary, reliable video assist solution for many different productions."

Video Channel has also recently started using AJA Ki Pro Rack for tapeless recording. Footage is recorded onto Ki Pro Racks as Apple ProRes 422 HQ files for a seamless and immediate transition into Apple Final Cut Pro to edit broadcast promotional content. This workflow has proven to be a huge timesaver for the Video Channel team.

In addition to traditional broadcast production, Video Channel also produces 3D stereo content for broadcast. "In the past when we recorded our 3D projects, the pipeline was very complex and time consuming. With the AJA Hi5-3D Mini-Converter and KONA cards, it's become a much simpler process. We also use three Hi5-3Ds to have the ability to view projects side by side and for 3D monitoring."

Yeung concluded, "We've been very satisfied with the overall performance of our AJA gear. The Ki Pro Rack, Io products, KONA cards and Mini-Converters have supported our local projects with incredible stability and optimized performance."

View Online ▶

Tech Specs

Video Formats

- 525i 29.97
- 625i 25
- 720p 23.98*, 25*, 29.97*, 50, 59.94, 60
  * Note: These formats require a valid camera source and the use of the Record Type>VFR selection
- 1080i 25, 29.97, 30
- 1080PsF 23.98, 24, 25*, 29.97*
  * Note: These formats require a valid camera source and the use of the Record Type>PsF selection
- 1080p 23.98, 24, 25, 29.97

Codec Support

- Apple ProRes 422
- Apple ProRes 422 (HQ)
- Apple ProRes 422 (LT)
- Apple ProRes 422 (Proxy)
- Avid DNxHD 220x
- Avid DNxHD 145
- Avid DNxHD 36
  Note: Avid DNxHD 36 only provides support for the 1080p format

Removable Storage

- AJA KiStor modules – 2 slots

Video Input Digital

- SD/HD SDI, SMPTE-259/292/296, 10-bit
- Single Link 4:2:2 (2 x BNC, input selection in software)
- HDMI v1.3

Video Input Analog

- SD/HD Component (3 x BNC)
- SMPTE/EBU N10, Betacam 525 line, Betacam 525J
- 12-bit A/D, 2x oversampling
- +/- .25 dB to 5.5 MHz Y Frequency Response
- +/- .25 dB to 2.5 MHz C Frequency Response
- .5% 2T pulse response
- <2 ns Y/C delay inequity
  or
- Composite (1 x BNC – CVBS on Y)

Video Output Digital

- SD/HD SDI, SMPTE-259/292/296, 10-bit
- Single Link 4:2:2 (2 x BNC)
- HDMI v1.3
  Note: HDMI requires 1080i, 720p or 1080p to be active; HDMI does not provide support for PsF

Video Output Analog

- Component (3 x BNC)
- HD: YPbPr, RGB
- SD: YPbPr, RGB (component mode)
- SMPTE/EBU N10, Betacam 525 line, Betacam 525J, RGB
- 12-bit D/A, 8x oversampling
- +/- .2 dB to 5.5 MHz Y Frequency Response
- +/- .2 dB to 2.5 MHz C Frequency Response
- .5% 2T pulse response
- <1 ns Y/C delay inequity
  or
- Composite (1 x BNC – CVBS on Y)
- NTSC, NTSCJ, PAL
- 12-bit D/A, 8x oversampling
- +/- .2 dB to 5.0 MHz Y Frequency Response
- +/- .2 dB to 1 MHz C Frequency Response
- .5% 2T pulse response
- <1% Diff Phase
- <1% Diff Gain

Audio Input Digital

- 2-channel or 8-channel user selectable
- 8-channel, 24-bit SDI embedded audio, 48kHz sample rate, Synchronous
- 2-channel, 24-bit HDMI embedded audio, 48kHz sample rate, Synchronous
- 8-channel, 24-bit AES/EBU audio, 48KHz sample rate, Synchronous or Non-synchronous, Internal sample rate conversion (4 x BNC)

Audio Input Analog

- 2-channel, 24-bit A/D analog audio, 48kHz sample rate, balanced (2 x XLR)
- +24 dBu Full Scale Digital
- +/- 0.2 dB 20Hz to 20kHz Frequency Response
  Note: Line or Mic selection via CONFIG menu parameters

Audio Output Digital

- 8-channel, 24-bit SDI embedded audio, 48kHz sample rate, Synchronous
- 8-channel, 24-bit HDMI embedded audio, 48kHz sample rate, Synchronous
- 8-channel, 24-bit AES/EBU audio, Synchronous or Non-synchronous, Internal sample rate conversion (4 x BNC)

Audio Output Analog

- 2-channel, 24-bit D/A analog audio, 48kHz sample rate, balanced (2 x XLR)
- +24 dBu Full Scale Digital
- +/- 0.2 dB 20Hz to 20kHz Frequency Response
- Stereo unbalanced headphone (1 x 3.5mm mini jack)

Tech Specs *(Continued)*

Up Conversion

- Hardware 10-bit
- Anamorphic: full-screen
- Pillar box 4:3: results in a 4:3 image in the center of the 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 bars added to the 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

Timecode

- SDI RP188/SMPTE 12M via SDI BNC
- HDMI (when used with compatible cameras)
- LTC input (1 x BNC)
- LTC output (1x BNC) (Note: active during playback not during record or EE)

Reference Input

- Analog Color Black (1V) or Composite Sync (2 or 4V)
- Looping, non-terminating.

Network Interface

- 10/100/1000 Ethernet (RJ-45)
- Embedded web server for remote control

User Interface

- 2 x 20 character display, with dedicated buttons

Physical

- Width: 19" (48.26cm)
- Depth: 12.5" (37.74cm) from front panel to back of deepest connector
- Height: 1.75" (4.45cm)
- Power: 100-240 VAC 50/60Hz (Dual, redundant power supplies), 40W typical; 10A Max

Machine Control

- RS-422, Sony 9-pin protocol
- 9-pin D-connector pinout is as follows:

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

Incredible 3-year warranty

AJA Video warrants that Ki Pro products, except for Storage Modules, will be free from defects in materials and workmanship for a period of three years from the date of purchase. Storage Modules are warranted for one year.

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 and KONA desktop video products, Ki Pro family of recorders, miniature standalone 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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