

KiPRO

A revolution. From production to post.



Because it matters.

AJA[®]
VIDEO SYSTEMS



A revolution. From production to post.

The Ki Pro Family established an entirely new way to get footage from source to editorial as quickly as possible. Record 10-bit, full raster 'ready-to-edit' footage on removable storage media. No need to log, capture or convert in post-production.

Everyone from broadcasters to indie filmmakers can probably agree on one thing: the possible choices for image acquisition are daunting. Different cameras, different formats, different recording media and different compression schemes. Wouldn't it be nice if there was a way to simplify acquisition so that virtually any camera, digital or analog, could record the same format and resolution? Enter the Ki Pro family.

AJA Ki Pro models are tapeless video recording devices that record high-quality files onto computer-friendly media. With SD/HD-SDI, HDMI, and analog inputs, you can interface with virtually any type of camera you might own or rent, or connect seamlessly with your post production hardware. All Ki Pro models are easy to operate, with familiar VTR-like buttons and intuitive interfaces.

Ki Pro models are available now in three formats to suit your workflow requirements, from onset capture and playback through to replacing traditional tape units within a broadcast environment.

Built to the exacting standards of all AJA hardware, Ki Pro is backed by our world-class support network, 3-year international warranty and advanced exchange service.



Ki Pro



Ki Pro Rack



Ki Pro Mini

Family features

Record 'ready-to-edit' footage

Eliminating the cost and inconvenience of logging and capturing footage, Ki Pro models produce files that are ready to use right away in most popular NLEs.

Designed to integrate with your system, whatever the workflow, Ki Pro models feature powerful connectivity and capture full quality footage to reliable storage media.

When it's time to edit, just remove the media, connect to your computer, transfer the files, and the footage is ready to use straight away in your editing software, without the need for additional import or transcoding steps.



10-bit, full raster files

Big on quality - but not on file size. Recording 10-bit, full raster files, all Ki Pro units record high quality images that easily stand up to post production processing requirements - and client scrutiny.

Compared to 8-bit recording devices, 10-bit 4:2:2 recording provides greater dynamic range, giving a superior representation of the original scene and allowing for more flexibility in post production when adjusting color and balance. Utilizing efficient codec families such as ProRes (all models) and DNxHD (Ki Pro Mini and Ki Pro Rack only), Ki Pro hardware allows you to achieve the perfect balance of image quality and storage capacity for your production.



Unify formats - speed workflows

Because productions often have to use different formats this can lead to inefficiencies in the editing process when converting files to a working format. Connected to a camera or housed in a machine room, Ki Pro units unify source material to a single file format that can be used by most major editing systems without additional transcoding, streamlining the edit process and facilitating savings in time and resources.

Ki Pro and Ki Pro Rack also feature AJA industry-leading conversion, allowing source inputs be converted to a common format and frame size.



Family features

Simple controls and setup

With simple controls and an intuitive operating system, all Ki Pro models are easy to incorporate in your existing setup without having to worry about the learning curve.

Just like a traditional tape deck, each Ki Pro features straightforward dedicated Record, Play, Rewind and FastForward buttons - making the transition easy with minimal training time. The current status of the system and all configuration information is clearly displayed on the built-in screen. The embedded OS uses a fast, flat menu structure that allows full configuration to be done directly on the device with no need to connect to a laptop to access operational parameters.



Remote configuration and operation

On set or in a machine room, Ki Pro models are equipped for advanced remote control and configuration.

On the set, Ki Pro requires minimal direct user interaction. Record start/stop operation can be triggered automatically by detecting information in the SDI signal or by using a separate LANC control on properly equipped cameras.

In a networked environment, Ethernet connectivity of Ki Pro hardware allows control and configuration to be performed via standard web browser. Multiple Ki Pro units can all be controlled from a single interface for group operation.



Reliable storage media

All Ki Pro models capture 10-bit footage direct to reliable storage media. Ki Pro and Ki Pro Rack use AJA Storage Modules, available in spinning disk or SSD variants that connect directly to your editing system via a built-in FireWire 800 connection. Backed by a 1-year warranty, AJA Storage Modules are engineered with reinforced connections and thoroughly tested, ready for intensive use. Record times are longer than standard tapes as well, minimizing the number of media changes needed.

Ki Pro Mini captures footage direct to CompactFlash media, which is reusable, highly reliable and easily read by any CF card reader to transfer the footage to the editing system.





Highly portable tape replacement.

Ki Pro combines the power of a file-based recorder with the familiar controls of a tape deck that you can carry with you, anywhere.



The Ki Pro established a new paradigm in tapeless recording. Revolutionizing how footage tracks from production to editorial, Ki Pro captures Apple ProRes 422 files direct from the source, which can then be used in most editing systems without the need for additional import or transcoding steps. Just remove the Storage Module from the Ki Pro, connect direct to the editing computer and once the files are transferred they are immediately ready for use in the NLE software.

Ki Pro's comprehensive array of analog and digital connections let's you effortlessly bridge formats and sources within your workflow, ingesting footage to a common format and outputting to numerous simultaneous monitor outputs. Offering AJA's high-quality up/down/cross conversion and a multitude of connections, integration with your other production gear is seamless.

Ki Pro's RS-422 control allows it to be connected to editing systems, external controllers and even other tape decks, allowing it to fulfil the functions of a traditional VTR. Editing systems can perform assemble edits direct to the Ki Pro's Storage Module, often faster than rendering to ProRes files within an editing system. Ki Pro's RS422 connection can also be used to directly capture tape-based media into Ki Pro as ProRes footage ready for editing or archiving.

For control and configuration, Ki Pro can connect to your data network by Ethernet cable or wireless 802.11 and accessed via web browser on any networked computer, or even with an iPhone. Multiple Ki Pro units can be linked together and controlled from a single interface for gang recording, status monitoring and playback.

Front panel



Rear panel



KiPROmini

Lens to Post...in a Flash.

Compact, lightweight and designed to fast track your footage from camera to editorial.

Ki Pro Mini speeds your footage from camera to editorial, connecting to virtually any SD or HD camera and capturing files in Apple ProRes 422 and Avid DNxHD formats, direct to removable CompactFlash media.

Lightweight and rugged, Ki Pro Mini is designed for a life in the field. The Mini Mounting Plate attaches to the sides of the Ki Pro Mini and provides almost endless mounting possibilities when used in combination with battery plates, hot shoe mounts, articulated arms and more.

Ki Pro Mini works equally well whether your gear uses SDI or HDMI or a combination of both. The SDI and HDMI outputs are always both active, making the Ki Pro Mini not just a recorder but a useful converter as well. Two XLR analog audio inputs allows on set analog audio to be recorded directly into the ProRes or DNxHD files, meaning less work in the edit to synchronize audio and video from separate sources.

Ki Pro Mini vastly extends on set capabilities for smaller productions and fast-moving shoots. For rapid playback, recorded shots can now be viewed immediately without the need for separate video assist equipment. If you're using a mobile editing system, footage from Ki Pro Mini can be edited while you're still on the set, letting you make sure you have the right shots before moving on.

Once connected to a camera, Ki Pro Mini requires minimal direct user interaction. Record start/stop operation can be triggered automatically by detecting information in the SDI signal or by using a separate LANC control on properly equipped cameras. Ethernet connectivity of Ki Pro Mini allows control and configuration to be performed via web browser at distances up to 100 feet. Networking multiple Ki Pro Mini units together, means they can all be controlled from a single interface and locked together for gang recording, status monitoring and playback.

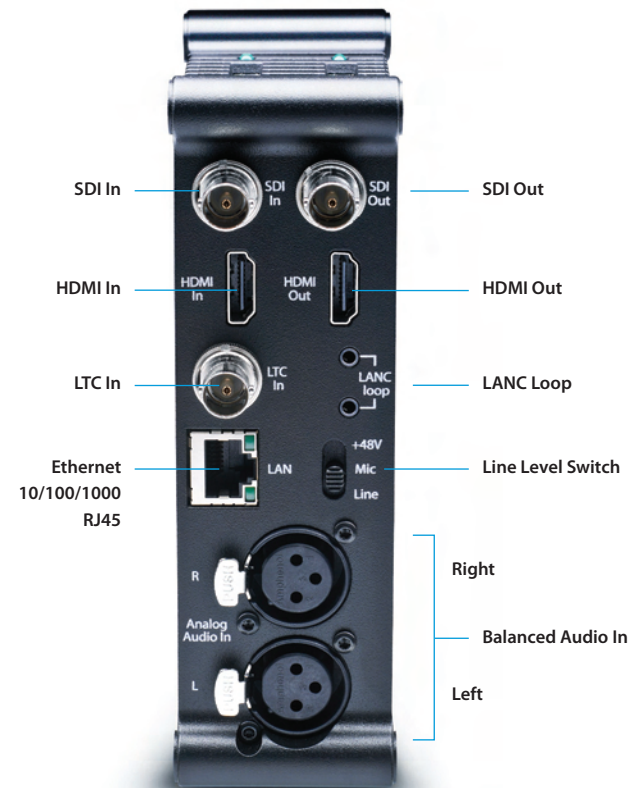


Ki Pro Mini

Front panel



Rear panel



Ki Pro & Ki Pro Mini case study

“Die Huberbuam” Takes Filmmaking to New Heights with AJA Ki Pro and Ki Pro Mini

On October 3, 2011 “Die Huberbuam” made broadcast history as the first stereoscopic 3D documentary to air in Germany. The 42-minute production follows brothers Alexander and Thomas Huber, the world’s foremost extreme speed mountain climbers, as they ascend the “Karma route” of Loferer Alm in Germany. The documentary is also earning kudos on the international festival circuit as a 3D digital cinema production.

To capture the spectacular imagery of the brothers in motion, 3D film production company Virtual Experience created a unique stereo rig comprising a sinaCAM 3D camera from Anadicon and Solectrix and AJA Ki Pro digital recorders, along with additional stereo gear from P+S Technik. Virtual Experience also equipped a remote-controlled helicopter with the sinaCAM and two Ki Pro Mini digital recorders to capture close-up stereo footage of the climbers at extreme heights.

“It delivers 10-bit media - better quality than some equipment that is much more expensive, and it’s flexible so that we were able to control it remotely with software that we built very quickly. The way Ki Pro works enables users to get the most out of the equipment.”

“For this movie we were shooting outside in the sun, so we had bright light on one side and shadows on the other. With such a large amplitude of exposure, it was absolutely required that we record in 10-bit,” said Alaric Hamacher, Virtual Experience’s stereographic guru. “We had to record two streams at the same time and synch playback for 3D. We wanted to use a high-quality codec, and Apple Pro Res 422 HQ met our needs perfectly. Finally, because of the economics of broadcast production, we had to keep costs down. AJA Ki Pro was the best solution. It gave us the capability, quality and cost that we needed.”

For 75% of the production, footage was captured with the sinaCAM onto two AJA Ki Pro recorders. Hamacher built a recording system that he operated remotely via laptop and programmed a simple software application to start both Ki Pros in synch and synch playback. “I love the functions that let you control Ki Pro over a network. Remote control via the free AJA Ki Pro Automation software is a very important feature because it allows you to customize how you use Ki Pro. It’s also well documented on

the AJA Ki Pro support page. Within a day or so we were able to program the software we needed for 3D just with that resource,” he said.

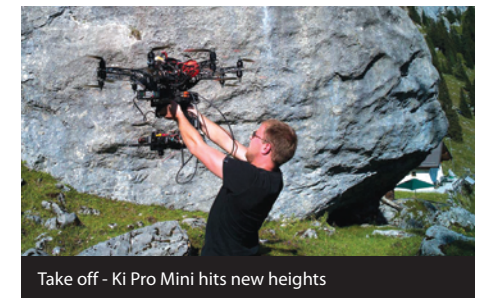
The recording solution comprised a low-cost PC running Hamacher’s software, two Ki Pros (for right-eye and left-eye cameras), a large battery to power three to four hours of on-set shooting and a cooling fan.

Virtual Experience also worked with Anadicon, one of the developers of the sinaCAM, to mount the camera and two AJA Ki Pro Mini recorders on a small remote-controlled helicopter. “Ki Pro Minis were ideal for this rig because of their size and weight – the whole thing weighed less than 2 kilograms,” said Hamacher. He constructed a special set of batteries and system power to meet the helicopter’s weight requirements and mounted the Ki Pro Minis on the far sides of the helicopter with the battery in the middle. The mini helicopter made a series of 7-minute flights in one day of shooting, recording approximately 40 minutes of footage (20 minutes each left-eye/right-eye).

Hamacher and Virtual Experience have been doing 3D productions for ten years, and have built expertise in adapting existing 2D production solutions to the needs of stereographics. “Specialized 3D gear tends to be expensive, closed technology. We find that we have a better experience and realize better economics if we use solid 2D tools and make good use of them,” he said. “That was definitely the case with AJA Ki Pro. It delivers 10-bit media – better quality than some equipment that is much more expensive, and it’s flexible so that we were able to control it remotely with software that we built very quickly. The way Ki Pro works enables users to get the most out of the equipment.”



Preparing the Octocopter



Take off - Ki Pro Mini hits new heights

KiPROrack

The ultimate in tape replacement.

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) and record 10-bit Apple ProRes and Avid DNxHD files direct to removable hard disk or SSD Storage Modules, eliminating the need for time-consuming logging and capturing. The files can be used in most editing systems without the need for additional transcoding or importing processes.

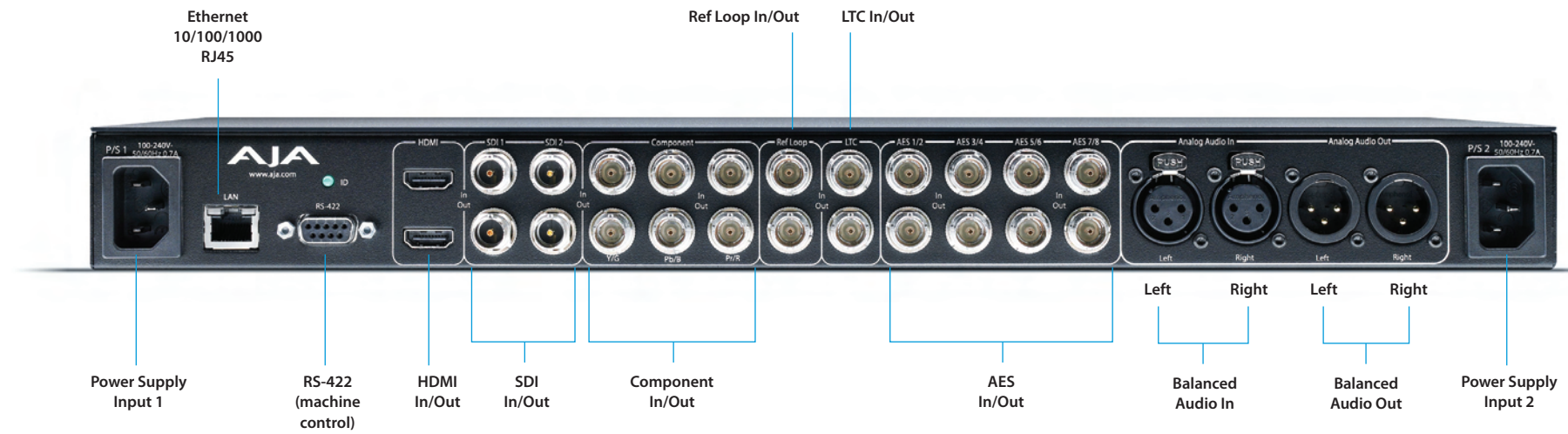
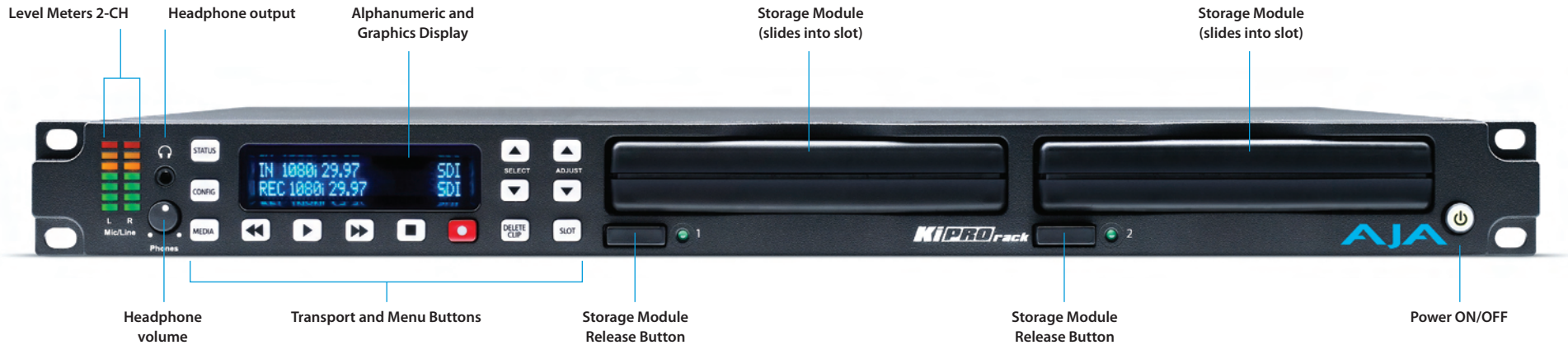
Like Ki Pro, Ki Pro Rack features AJA's industry leading conversion technology, enabling you to perform broadcast-quality up/down/cross conversion during recording or playback without the need for additional conversion hardware.

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 wait to eject the first one.

Because of its network connectivity, media can be copied to and from Ki Pro rack over an Ethernet connection, allowing fast file transfers without the need to physically remove the storage media. In larger facilities this cuts down dramatically on the number of people that have to enter the machine room and minimizes the risk of unintentional interference with equipment. Like all other Ki Pro's, multiple Ki Pro Racks can be networked together for control via a single interface.

Front and rear panels



Accessories

Ki Pro Product includes:

- Ki Pro
- Ki Pro HDD Storage Module
- AC Adapter 110/220 with 4-pin XLR connector

Ki Pro Options

Exo-skeleton – provides a surrounding chassis for the Ki Pro that can both mount to a tripod and provide a mount for camera on top; this combination allows convenient access to controls.

Ki Pro SSD Storage Module – although the Ki Pro comes standard with a removable HDD Storage Module, an optional SSD Storage Module is also available. The Ki Pro Solid State Storage Module (SSD) is recommended for mobile environments where shock-proof sturdiness may be needed. The Ki Pro SSD Storage Module offers the ultimate in media reliability.

Ki Pro Hard Drive Storage Module – although Ki Pro comes with one removable HDD Storage Module standard, you can buy extras and simply swap them as needed.

Ki Pro Rod Accessory Kit – this kit adds endplates to the Exo-skeleton so you can attach two user-supplied 15mm camera accessory rods. The endplates have knobs for adjusting the height of the rod brackets relative to the camera, as well as a set of knobs for securing the rods in the brackets.

AJA Lens Tap Cable Accessory – allows Ki Pro to connect between the lens tap control connector on a lens and camera body, thereby intercepting the lens control signals for use in simple start/stop Ki Pro recording operations (not yet available).

Ki Pro Mini includes:

- Ki Pro Mini
- AC Adapter 110/220 with 4-pin XLR connector

Ki Pro Mini Options

Mini Mounting Plate – This option plate allows you to mount Ki Pro Mini to 3rd-party devices. The plate can be attached to the Ki Pro mini via 4 supplied screws; plates can be attached to either or both sides of Ki Pro Mini. A large number of screw holes in the plate allows you to mate Ki Pro Mini to 3rd-Party battery plates, hot-shoe adapters and other mounting applications.

Mini Stand and Adapter Cable – This stand securely holds the Ki Pro Mini upright on a desk, shelf, or any flat surface. A right angle power cable is provided for easy connection between the power supply and the Ki Pro Mini.

Ki Pro Mini Rod Accessory Plate – this option provides an accessory plate that can attach to a Ki Pro Mini Mounting Plate (sold separately) so you can attach Ki Pro Mini to user-supplied 15mm camera accessory rods. The accessory plate has knobs for adjusting the height of the rods relative to the Ki Pro Mini Mounting Plate.

Exo-skeleton
for Ki Pro



Storage Module
(HDD or SSD)



Rod Accessory kit
installed on Ki Pro
Exo-skeleton



Two Mounting Plates
shown attached to a
Ki Pro Mini



Ki Pro Mini mounted
in optional Mini
Stand with power
adapter cable



Rod Accessory
Plate installed on
Mini Mount (sold
separately)





Tech specs

Ki Pro tech specs

Video Input

Digital:

SD and HD-SDI (1xBNC), SMPTE-259/292/296
HDMI

Analog:

SD/HD Component (3xBNCs):
SMPTE/EBU N10, Betacam 525 line,
Betacam 525J, YPbPr
12-bit A/D, 2x oversampling

Video Output (all simultaneously active)

Digital:

SD and HD-SDI, SMPTE-259/292/296 (1xBNC)
HDMI

Analog:

Composite (1xBNC):
NTSC, NTSCJ, PAL
12-bit D/A, 8x oversampling
SD/HD Component (3xBNCs):
SD: SMPTE/EBU N10, Betacam 525 line,
Betacam 525J, RGB
12-bit D/A, 8x oversampling
HD: YPbPr, RGB
12-bit D/A, 2x oversampling

Audio Input

Digital:

24-bit SDI embedded audio 2 channel or 8 channel
48kHz (2 or 8 channel via menu selection)

Analog:

24-bit A/D, 2 channel balanced (2 XLR), 48kHz
Input level: Line, Mic, Mic + phantom 48Vdc
2 channel unbalanced (2 RCA)

Audio Output

Digital:

24-bit SDI embedded audio, 8 channel, 48kHz
HDMI embedded, 8 channel
Mini TRS headphone jack

Analog:

24-bit D/A, 2 channel balanced XLR, 48kHz
2 channel unbalanced (2 RCA)

Network

10/100/1000 Ethernet (RJ45)
802.11 Wireless
Embedded webserver for remote control

Panel User Interface

2 x 20 character display, with dedicated buttons

Timecode

SDI RP188 via SDI BNC connection, LTC input and output via
BNCs (non-looping)

Control

LANC Loop (2 LANC connectors)
Lens Tap: connects to optional AJA Lens Tap intercept
cable placed between camera body and lens for start/
stop control (future feature)
IEEE-1394a/FireWire 400 for control and timecode data

Machine Control

RS-422, 9-pin

FireWire

IEEE-1394b, FireWire™ 800Mb/s connects to Mac Pro or
MacBook Pro (future feature)

Hardware up conversion - 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: image zoomed to fill screen
Zoom Wide: combination of zoom and horizontal stretch to
fill 16:9 screen; this setting can introduce a small aspect
ratio change

Hardware down conversion - 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

Hardware cross conversion - 10-bit

1080i to 720P
720P to 1080i

Physical

Height: 3.25" (8.25cm)
Width: 9.00" (22.86cm)
Depth: 6.12" front panel antenna cover to back handles
(15.56cm)

Temperature

Operating Temperature Range: 5C to 40C
Safe Storage Temperature Range (power OFF):
-20C to 60C

Power

100-240 VAC (to supplied AC Adapter)
12Vdc to power connector input on side of chassis



Tech specs

Ki Pro Rack tech specs

Video Input

Digital:

1 Channel, selectable input
SD and HD-SDI (2xBNC), SMPTE-259/292/296
HDMI

Analog:

SD/HD Component (3xBNCs):
SMPTE/EBU N10, Betacam 525 line,
Betacam 525J, YPbPr
12-bit A/D, 2x oversampling

Video Output (all simultaneously active)

Digital:

SD and HD-SDI, SMPTE-259/292/296 (1xBNC)
HDMI

Analog:

Composite (1xBNC):
NTSC, NTSCJ, PAL
12-bit D/A, 8x oversampling
SD/HD Component (3xBNCs):
SD: SMPTE/EBU N10, Betacam 525 line,
Betacam 525J, RGB
12-bit D/A, 8x oversampling
HD: YPbPr, RGB
12-bit D/A, 2x oversampling

Audio Input

Digital:

AES 24-bit, 8 channel, 48kHz (4xBNC)
24-bit SDI embedded audio, 8 channel, 48kHz
HDMI embedded, 2 channel

Analog:

24-bit A/D, 2 channel balanced (2 XLR), 48kHz
Input level: Line

Audio Output

Digital:

AES 24-bit, 8 channel, 48kHz (4xBNC)
24-bit SDI embedded audio, 8 channel, 48kHz
HDMI embedded, 2 channel

Analog:

24-bit D/A, 2 channel balanced XLR, 48kHz

Network

10/100/1000 Ethernet (RJ45)
Embedded webserver for remote control

Panel User Interface

2 x 20 character display, with dedicated buttons

Timecode

LTC timecode input and output via BNC
SDI embedded RP188 timecode
On-screen timecode display on SDI 2 output

Serial Port

RS-422 (slave pinout), 9-pin (available beginning
with version 2.0 firmware),
Connector pinout is as follows:

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

Hardware up conversion - 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: image zoomed to fill screen
Zoom Wide: combination of zoom and horizontal
stretch to fill 16:9 screen; this setting can
introduce a small aspect ratio change

Hardware down conversion - 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

Hardware cross conversion - 10-bit

1080i to 720P
720P to 1080i

Storage Module drive bays

2 (each with eject button and select LED)

Physical

Height: 1.75" (4.45cm)
Width: 19" (48.26cm)
Depth: 12.5" front panel to the back of the deepest
connector (37.75cm)

Temperature

Operating Temperature Range: 5C to 40C
Safe Storage Temperature Range (power OFF):
-20C to 60C

Power

Voltage: 100-240 VAC
Typical operating power: 40W

Ki Pro Mini tech specs

Video Input and Output

Digital:

SD and HD-SDI (1xBNC), SMPTE-259/292/296
HDMI

Audio Input

Digital:

24-bit SDI embedded audio, 8 channel, 48kHz
HDMI embedded, 2 channel

Analog:

24-bit A/D, 2 channel balanced (2 XLR), 48kHz
Input level: Line, Mic, Mic + phantom 48Vdc

Audio Output

Digital:

24-bit SDI embedded audio, 8 channel, 48kHz
HDMI embedded, 8 channel

Network

10/100/1000 Ethernet (RJ45)
Embedded webserver for remote control

Panel User Interface

3-line character display with dedicated buttons

Timecode

SDI RP188 via SDI BNC connection, LTC input via BNC
and HDMI (when used with select Sony cameras)

Control

LANC Loop (2 LANC connectors)

Physical

Height: 5.9" (14.9cm)
Width: 1.82" (4.62cm)
Depth: 3.46" (8.8cm)

Temperature

Operating Temperature Range: 5C to 40C
Safe Storage Temperature Range (power OFF):
-20C to 60C

Power

100-240 VAC (to supplied AC Adapter)
12Vdc to power connector input on bottom of chassis

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

AJA Video Systems Inc.
Grass Valley, California
www.aja.com • sales@aja.com • support@aja.com

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

