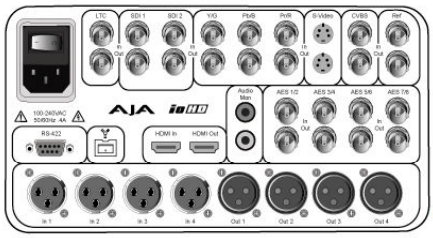
io HD
SPECIFICATIONS

Io Flexibility with KONA-level Power

Io HD is a versatile powerhouse, bringing features pioneered on AJA's industry-leading KONA lineup such as 10-bit hardware-based up-conversion, cross-conversion, and down-conversion—all performed in realtime. Just tap into its flexibility, and you can configure a Mac as a professional HD or SD editing suite, or high-powered field-editing system and just about anything in-between. Both analog and digital ports are offered, allowing connection to virtually every kind of video/audio peripheral — from the most current HD digital decks to analog legacy devices.

Io HD Software

Io HD runs on a new AJA-built driver, similar to the KONA driver, which brings features such as Core Audio and very low latency capture and playback. The Io HD driver also provides RGB support, allowing for the direct video output of applications such as Adobe After Effects,™ Autodesk Combustion™ and Apple Motion.™ Co-developed with Apple for use with Final Cut Studio 2, Io HD delivers powerful audio/video capture, editing and post-production capabilities — all in a single, integrated system.



Io HD Rear Panel Connections

Incredible 3-Year Warranty
AJA Video warrants that Io 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 Io (the "ultimate" capture box), KONA and XENA PCI capture cards, miniature edit-and-store converters, and a complete line of rack mount interface and conversion cards and frames.

VIDEO INPUT
Digital:
SD and HD-SDI, SMPTE 259/292/296 (2 input sl
HDMI

Analog:
Composite and S-Video (Y/C):
NTSC, NT SC), PAL
12-bit A/D, 2x oversampling
3-line adaptive comb filtering decoding
SD Component:
SMPTE 170M, NTSC, Betacam 525 line, Betacam 525, RGB
12-bit A/D, 2x oversampling
HD Component:
YPbPr
12-bit A/D

VIDEO OUTPUT (all simultaneously active)
Digital:
SD and HD-SDI, SMPTE 259/292/296 (2 outputs)
HDMI

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

SD Component:
SMPTE 170M, NTSC, Betacam 525 line,
Betacam 525, RGB
12-bit D/A, 8x oversampling
HD Component:
YPbPr, RGB
12-bit D/A, 2x oversampling

AUDIO INPUT
Digital:
24-bit SDI embedded audio, 8 channel, 48kHz
24-bit AES audio, 8 channel, 48kHz
HDMI embedded, 2 channel

Analog:
24-bit A/D, 4 channel balanced XLR, 48kHz
+15/18/24 dBu Full Scale Digital

AUDIO OUTPUT
Digital:
24-bit SDI embedded audio, 8 channel, 48kHz
24-bit AES audio, 8 channel, 48kHz
HDMI embedded, 2 channel

Analog:
24-bit D/A, 4 channel balanced XLR, 48kHz
+15/18/24 dBu Full Scale Digital
2 channel unbalanced RCA (for monitoring)

TIMECODE
LTC timecode input and output via BNC

REFERENCE INPUT
Analog Color Black, Composite Sync, or Tri-level Sync Term inated Input, buffered output

MACHINE CONTROL
RS-422, 9-pin protocol

FIREWIRE
IEEE-1394b, FireWire™ 800Mb/s

Apple ProRes 422 SUPPORT
Specially integrated into hardware

HARDWARE UP-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
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
Hardware 10-bit
1080i to 720P
720P to 1080i
720P to 1080PNF

SD-TO-SD ASPECT RATIO CONVERSION
Letterbox: transforms SD anamorphic to a letterboxed image.
H Crop: produces a horizontally stretched effect on the image; to restore a normal SD to full frame.
SQ: Mastodon produces image in screen center with black borders on left and right sides and an anamorphized image in the center.
V Crop: transforms SD letterbox material to an anamorphic image.

PHYSICAL
Width: 8.2" (208.3 mm)
Depth: 12" (304.8 mm)
Height: 1.61" with rubber feet (12 1.0 mm)
Power: 100-240 VAC, 50/60 Hz, 35 Watts

AJA VIDEO SYSTEMS

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Io HD is the only device in the world that supports Apple's ProRes 422 codec in hardware, enabling true 10-bit video editing on a Mac Pro desktop or a MacBook Pro laptop. With this high performance hardware and innovative codec from Apple, you can work anywhere in SD or HD —all in full-raster 10-bit 4:2:2 quality.

HD... anywhere you want it.

AJA's Io HD is the latest in the award-winning Io family of products—an effortless to use, transportable plug-in solution for working with HD and SD in Final Cut Studio 2. With a single FireWire 800 connection, Io HD uniquely supports the amazing new Apple ProRes 422 Codec natively, in hardware, to bring production-quality HD editing to the MacPro desktop and even the MacBook Pro laptop!

Like other members of the Io family, Io HD offers unparalleled video and audio connectivity. Within its portable and ruggedly cool form factor, Io HD offers SD/HD analog I/O, SD/HD digital I/O including HD-SDI and HDMI, Balanced analog and digital AES audio, as well as RS-422, Genlock, and even LTC timecode connections. Io HD also includes AJA's real time hardware 10-bit up/down/cross conversion.

Features

- Apple ProRes 422 and Apple ProRes 422 HQ Codec—SD, HD 720/1080, full-raster 10 bit 4:2:2, realtime, in hardware
- Up/down/cross-conversion, 10-bit, realtime, in hardware
- SD-SDI and HD-SDI I/O (2)
- Component I/O (SD and HD)
- Composite and S-video I/O
- HDMI video w/2-channel audio I/O
- Embedded SDI 8-channel audio I/O
- AES/EBU 8-channel unbalanced audio I/O
- Analog 4-channel balanced audio I/O (XLR)
- Analog 2-channel unbalanced audio output (RCA)
- Genlock with loopthrough
- RS-422 machine control
- LTC Timecode I/O
- Connects to Mac via a single FireWire 800 cable
- For Apple Final Cut Studio 2 on Mac OS X
- 3-year International Warranty

AJA VIDEO SYSTEMS