io EXPRESS
Portable Video Audio I/O Interface.
For Mac/PC.
Introduction

Io Express is the perfect Mac or PC interface for anyone who needs a quality portable monitoring and mastering solution when working with Apple ProRes 422 and Apple ProRes 422 (HQ), XDCAM HD, DVCPRO HD, DNxHD on Avid Media Composer, and more. Built small and robust, Io Express is ideal for use with a laptop for onset and in-the-field editing and playout.

Featuring full 10-bit, broadcast-quality HD to SD hardware down-conversion and automatic HD/SD 12-bit component analog output, Io Express offers conversion flexibility all the time—during ingest or playback.

Features

Io Express

- HD/SD-SDI input/output
- HDMI v1.3a input/output with Deep Color support at 30 bits per pixel
- 10-bit HD/SD Component Video Output
- 10-bit HD to SD Hardware Downconvert
- 2-Channel RCA audio output
- LTC input/output (selectable LTC Input/Reference Video Input)
- RS422
- Available with either ExpressCard interface for laptops or x1-lane PCIe interface for towers
- For Mac OSX and Windows 7/XP/Vista
- Support for Final Cut Studio, Avid Media Composer 5.5, Adobe Creative Suite, and more
- Small, portable case design
- 1-meter PCIe tether cable
- 12v DC power supply
- Rackmount kit optional
- AJA 3-year warranty

Quality in a Box. For Mac/PC.
Pick a Workflow. Pick a Platform. See the Quality.

Note: Encoding of the Apple ProRes family of codecs is available only on Apple computers; however, playback is possible on a PC with the appropriate QuickTime Windows decoder.

Freedom

Looking for a portable, rugged, broadcast-quality interface for Mac or PC? Regardless of your software of choice; from Apple Final Cut Pro, Avid Media Composer or Newscutter to Adobe CS5, Io Express is the ideal any-platform solution for uncompressed capture and file-based support. Give yourself the freedom to use applications on different platforms with a single interface, or collaborate with users on opposite platforms, passing assets without having to render each time.

If you work with a wide variety of formats, frame rates and audio/video sources, Io Express provides the connectivity you need. With its small footprint it offers big features, like 10 or 8-bit uncompressed video, HDMI I/O, HD/SD-SDI I/O with 8 channels of embedded audio, analog component video (SD/HD) or composite output, 2-channel unbalanced audio output, and broadcast quality hardware-based down-conversion for flexible post production. The HDMI I/O is v1.3a at 30 bits per pixel, providing ideal support for the very latest 10-bit monitors.
On a Mac

Io Express and its quality AJA OS X QuickTime driver offer support for Final Cut Studio and most professional video applications (including those needing Core Audio support). Some of the applications you can use with Io Express include:

- Apple Final Cut Pro
- Adobe Premiere Pro (via AJA plug-in)
- Adobe Photoshop (via AJA plug-in)
- AJA VTR Xchange

In addition to working with 3rd-party OS X applications, Io Express ships with the AJA Control Panel, an application used to select the input audio/video source, configure down-conversions and much more. Other useful utilities are also provided, such as the AJA DataCalc (Data Rate Calculator), useful for calculating storage and bandwidth requirements, and AJA System Test, useful for benchmarking storage.

On a PC

Io Express and its Windows 7, XP and Vista drivers, support a wide array of applications both natively and via supplied plug-ins. Applications supported include:

- Adobe Premiere Pro (via AJA plug-in)
- Adobe After Effects (via AJA plug-in)
- Adobe Photoshop (via AJA plug-in)
- Drastic Media NXS
- Sony Vegas
- Autodesk Combustion
- Avid Media Composer 5.5
- CineForm New 3D
- CineForm Neo HD
- CineForm Neo 4K
- Eyeon Fusion 64 bit

For Windows utilities, AJA provides PC versions of the AJA DataCalc (Data Rate Calculator) and AJA System Test utilities mentioned earlier.

Connectivity

**Video Connectivity**

Io Express provides exactly what you need for portable I/O, without superfluous extras you don’t need. Connectors on the rear panel support professional broadcast cameras and devices. For digital video, the box features HDMI 1.3 I/O plus 3G/HD-SDI I/O. In addition there are connections for Genlock or LTC input and a loop-through output, and three BNCs for component SD/HD analog video output. The high quality deep color HDMI input and output allows interfacing with low-cost camcorders and HD monitors. A 9-pin connector for RS-422 machine control gives you professional deck control.

With all these connections you can connect to just about anything—whether you’re using Digital Betacam, HDCAM, DVCPro50, DVCPro HD, DS—or any other professional video device.

**Audio Connectivity**

Io Express offers support for both 8-channel HDMI and SDI embedded digital audio or 2 channels of unbalanced analog audio via two RCA connectors. For multi-channel audio mastering, the 8-channel SDI embedded 24-bit 48kHz audio provides pristine quality.
Ideal for all workflows

Io Express can go where you go with a laptop or tower and editing software of your choice. A rear panel PCIe connector connects to laptops via an ExpressCard, or to a Mac Pro or Windows workstation via a PCIe card (either configuration can be ordered with Io Express).

INGEST FROM ANY DIGITAL SOURCE
Connect your digital sources via SD/HD SDI or HDMI to Io Express for capture to a variety of formats.

EDIT AND MONITOR
Edit and playback your file-based sources with full 10-bit quality.

MASTER YOUR CREATIVITY
Master to any Digital or Analog deck through high-quality professional SDI or Component outputs.
## Specifications

### Io Express

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<th>Video Input</th>
<th>Audio Input</th>
<th>Options</th>
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<tr>
<td>525i 29.97</td>
<td>Digital: 8- or 10-bit HD/SD SDI, SMPTE-259/292/296/424, 1 BNC, HDMI v1.3, 30 bits/pixel, RGB or YUV, 2.25 Gbps, SD, HD</td>
<td>Digital: 24-bit SMPTE-259 SDI embedded audio, 8-ch, 48 KHz synchronous</td>
<td>5 Meter PCIe Tether Cable (IOX-CBL-5M): longer cable for use when placing Io Express farther away from the host computer.</td>
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<tr>
<td>625i 25</td>
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<td>720P 23.98*</td>
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<td>720P 24 *</td>
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<td>720P 59.94</td>
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<td>720P 60</td>
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<tr>
<td>1080i 25</td>
<td>Analog: Component: SMPTE/EBU N10, Betacam 525 line, Betacam 525J, RGB</td>
<td>Audio Output Digital: 24-bit SMPTE-259 SDI embedded audio, 8-ch, 48 KHz synchronous</td>
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<tr>
<td>1080i 29.97</td>
<td>12-bit D/A, 8x oversampling</td>
<td>8-channel HDMI embedded audio</td>
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<tr>
<td>1080i 30</td>
<td>Analog SD and HD Output, 12 bits, BNC: HD: YPbPr, RGB SD: YPbPr, RGB (component mode)</td>
<td>8-channel HDMI embedded audio</td>
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<tr>
<td>1080P 23.98</td>
<td>Hardware Down-conversion, 10-Bit</td>
<td>Analog: 2-channel unbalanced output (RCA-jack)</td>
<td>Rackmount Kit (IOX-RM): Contains 19” rack 1RU insert that will hold one or two Io Express units. Kit includes screws for fastening Io Express units.</td>
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<tr>
<td>1080P 24</td>
<td>Anamorphic: full-screen</td>
<td>Reference Input</td>
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<td>1080P 25</td>
<td>Letterbox: image reduced with black top &amp; bottom added</td>
<td>Color Black or Tri-level sync</td>
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<tr>
<td>1080P 29.97</td>
<td>to image area with the aspect ratio preserved</td>
<td>LTC Input (on Reference input)</td>
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<tr>
<td>1080P 30</td>
<td>Crop: image is cropped to fit new screen size</td>
<td>Machine Control</td>
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<tr>
<td>* Note: Formats marked with an asterisk are non “over-the-wire” VFR formats</td>
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<td>RS-422 9-pin connector</td>
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</tbody>
</table>

### Formats

- 525i 29.97
- 625i 25
- 720P 23.98*
- 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
- 1080P 24
- 1080P 25
- 1080P 29.97
- 1080P 30

### Audio Input
- Digital: 24-bit SMPTE-259 SDI embedded audio, 8-ch, 48 KHz synchronous
- 8-channel HDMI embedded audio

### Audio Output
- Digital: 24-bit SMPTE-259 SDI embedded audio, 8-ch, 48 KHz synchronous
- 8-channel HDMI embedded audio

### Options
- 5 Meter PCIe Tether Cable (IOX-CBL-5M): longer cable for use when placing Io Express farther away from the host computer.
- Rackmount Kit (IOX-RM): Contains 19” rack 1RU insert that will hold one or two Io Express units. Kit includes screws for fastening Io Express units.

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**Incredible 3 Year Warranty**
AJA Video warrants that Io Express 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 and KONA desktop video products, Ki Pro family of recorders, 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

**Because it matters.**