

# AJA Io IP Ingest and Playback Device Professional Video and Audio over IP for Thunderbolt 3

Io IP is a portable Thunderbolt 3 ingest and playback device for professional HD video and audio over IP, bridging 10 GigE to the most popular creative software applications.

Io IP has all the portable benefits of the Io family line with two Thunderbolt 3 ports for flexibility. It works with AJA's Control Room, Control Panel software and SDK tools, providing support for leading content creation applications, such as Adobe Premiere® Pro, Apple FCP X, Avid Media Composer®, FilmLight products and more. Designed as a flexible platform with support for SMPTE 2022-6 and 2022-7 uncompressed IP video and audio, and SMPTE 2110 to come soon, Io IP offers you the flexibility to keep current as the IP transition proceeds.

## Thunderbolt 3 - Solutions from AJA

Bring more power, speed and simplicity to your workflows with Thunderbolt™ 3 solutions from AJA.

Learn how AJA's Io 4K Plus and Io IP I/O devices give you the bandwidth to easily move 4K/UltraHD, High Frame Rate and deep color content over a single cable in and out of your computer, including HDR support across HDMI 2.0.

## Transition Seamlessly

Broadcast IP is here. Transition seamlessly with Io IP.

Io IP is the latest member of the venerable Io portable I/O product line that professionals have come to know and rely on with tremendous Thunderbolt support for connecting to the latest Thunderbolt 3 over USB-C laptops and desktops available today.

Io IP is designed to provide you with the familiar Io experience you are used to for your current HD/SD workflows and seamlessly move you into the IP stream.

Io IP offers SMPTE 2022-6/7 uncompressed IP video standards with redundant signal reliability and SMPTE 2110 support coming soon.

## Universal Compatibility: Thunderbolt™ 3 via USB-C

Io IP provides two Thunderbolt 3 ports for true Thunderbolt flexibility.

Thunderbolt 3 doubles the speed of the previous Thunderbolt 2 standard with up to 40 Gps of throughput and utilizes the universal USB-C connection standard for true simplicity over a single cable and port for today's leading Mac and PC workstations and laptops, ideal for Video and Audio I/O as provided by the Io IP.

Thunderbolt™ 3 features:

- Thunderbolt™, USB, DisplayPort, and power on USB-C
- USB-C connector and cables (small, reversible)
- 40 Gb/s: Thunderbolt™ 3 – double the speed of Thunderbolt™ 2
  - Bi-directional, dual-protocol (PCI Express and DisplayPort)
  - 4x lanes of PCI Express Gen 3
  - DisplayPort 1.2 – supports two 4K displays (4096 x 2160 30bpp @ 60 Hz)
  - Lowest latency for PCI Express audio
- USB 3.1 (10 Gb/s) – compatible with existing USB devices and cables
- DisplayPort 1.2 – compatible with existing DisplayPort displays, devices, and cables
- Daisy chain up to six devices

## Throughput

Io IP has 2 x 10 GigE SFP cages for multi-channel input and or output enabling effective reception, delivery or both. Mix and match based upon your project's needs knowing you are working with the same high quality uncompressed 4:4:4 or 4:2:2 HD/SD video and up to 16-Channel embedded audio you are accustomed to today.

## Flexible Monitoring

IP makes distance a non-issue, now you can edit, playback and deliver from anywhere in the world that offers the bandwidth you need to tie into 10 GigE IP infrastructure. Ingesting, editing or playing out remotely is the new normal.

Monitor locally with Io IP's HDMI 2.0 output with support for frame rates up to 60p and up to 8-Channels of embedded audio on cost effective HDMI displays wherever you are. Simultaneous 3G-SDI monitoring with up to 16-Channels of embedded audio, is also available.

In addition Io IP supports 4-Channels of Analog Audio Monitoring.

## Compatible

Your transition to IP pipelines with Io IP is supported by leading NLE, Compositing and Streaming applications via our industry-best plug-ins, plus the AJA software tools you rely on including AJA Control Room and AJA Control Panel.

Io IP also includes a Downstream Keyer with support for graphics with alpha channel over video, matte or framebuffer, or framebuffer

content over incoming video or matte, perfect for the needs of live IP delivery.

## **HDR**

HDR or High Dynamic Range, provides the ability to display a wider and richer range of colors, much brighter whites, and much deeper, darker blacks than standard signals allow. This gives your imagery a more 'dynamic' look and allows for natural true to life colors to be communicated to your audience.

Starting with Desktop v14.1 Io IP provides this support for your HD HDR pipelines to HDMI compatible displays supporting HLG and HDR 10 with HDR Infoframe metadata, in accordance with HDMI 2.0a/CTA-861.3 and HD

## **Standards Matter, Move Forward Together**

Io IP supports SMPTE 2022-6/7 upon release and Io IP's extensible architecture ensures that as time moves on, you will be able to adapt and move safely ahead as Io IP offers firmware update capabilities common to all Io devices.

In a future firmware release Io IP will support SMPTE 2110 which provides the move to multiple essence streams, essential for smooth interoperability across vendor products and workflows. Broadcasters will be able to synchronize production of audio, video and ancillary data elements, eliminating the need for embedding/de-embedding to/from SDI while also reducing latency.