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

## Video Formats

- (HD) 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (HD) 1080PsF 23.98, 24, 25, 29.97, 30
- (HD) 1080i 25, 29.97
- (HD) 720P 50, 59.94, 60
- (SD) 625i 25
- (SD) 525i 29.97

Note: High Frame Rate capabilities are dependent on host system attributes. Not all systems and configurations will support all frame rates.

## Media Transport Interfaces

- SMPTE 2022-6, 2022-7
  - 2 x SFP+ Cages - SFPs not included
- Recommended SFP+ modules:
  - Finisar FTLX1471D3BCL (for single mode 1310nm)
  - Arista Networks SFP-10G-SR Compatible 10GBASE-SR
  - Generic 850nm 300m DOM Transceiver (for multi-mode 850nm)

## Video Input IP

- SMPTE 2022-6, 2022-7
  - Up to 4 channels input

## Video Output IP

- SMPTE 2022-6, 2022-7
  - Up to 4 channels output

## Video Output Digital

- HDMI v2.0
  - 30/36 bits/pixel, RGB or YUV, 6 Gbps per color component
  - HDR 10 Support - HDR Infoframe metadata, compatible with HDMI 2.0a/CTA-861.3
  - HLG Support - compatible with HDMI 2.0b/CTA-861-G*

*HLG support is application dependent. Check with your software manufacturer for compatibility.

Note: Bit depth support is application dependent. Check with your software manufacturer for compatibility.

## Audio Input IP

- Up to 16-Channel embedded audio, 24-bit per channel, 48 kHz synchronous

## Audio Inputs Analog

- 4-Channel, 24- and 16-bit A/D analog audio, 48 kHz sample rate, balanced, using industry standard 8 x XLR on DB-25 breakout cable (cable not included)
- +24 dBu full scale digital (0dBFS)
- +/- 0.2 dB 20 to 20 kHz frequency response
- Input is supported across Ch. 1-4

## Audio Output IP

- Up to 16-Channel embedded audio, 24-bit per channel, 48 kHz synchronous

## Audio Output Digital

- 8-Channel HDMI embedded audio, 48 kHz sample rate, synchronous

## Audio Outputs Analog

- 4-Channel, 24-bit D/A analog audio, 48 kHz sample rate, balanced, using industry standard 8 x XLR on DB-25 breakout cable (cable not included)
- +24 dBu full scale digital (0dBFS)
- +/- 0.2 dB 20 to 20 kHz frequency response
- Output is supported across Ch. 5-8

## Downstream Keyer

- Supports graphics with alpha channel over video, matte or framebuffer, or framebuffer content over incoming video or matte

**Reference and LTC I/O**

- 1 x BNC assignable to Reference video or LTC input

**Reference**

- Analog Color Black (1V) or Composite Sync (2 or 4V) or HD Tri-Level Sync (1V)
- Reference input is terminated into 75 ohms when Genlock is set to Ref In

**Electrical Interface**

- Thunderbolt 3 (2 x)

**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 |

**Size (w x d x h)**

- 8.74" x 8.11" x 1.65" (222mm x 206mm x 42mm)

**Weight**

- 3.3 lbs (1.5 kg)

**Power (Device Only)**

- 10-20V, 33W typical, 38W max, 72W max with USB-C power delivery to external devices

**Environment**

- Safe Operating Temperature Range: 0 to 40C (32xF to 104xF)
- Safe Storage Temperature (Power OFF): -40 to 60 degrees C (-40 to 140 degrees F)
- Operating Relative Humidity: 10-90% noncondensing
- Operating Altitude: <3,000 meters (<10,000 feet)