

# AJA Io 4K Plus 12-bit 4K/UltraHD/HD I/O Capture Device/Converter via Thunderbolt 3 with 12G-SDI/AC adapter/HDMI 2.0

## Video Formats

- (4K) 4096 x 2160P 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
- (UltraHD) 3840 x 2160P 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
- (2K) 2048 x 1080p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
- (2K) 2048 x 1080PsF 23.98, 24, 25, 29.97, 30
- (HD) 1080p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
- (HD) 1080PsF 23.98, 24, 25, 29.97, 30
- (HD) 1080i 50, 59.94, 60
- (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.

## Video Inputs

- 12G-SDI, SMPTE-2082, 12-bit\*, 10-bit and 8-bit
- 6G-SDI, SMPTE-2081, 10-bit and 8-bit
- 3G-SDI, SMPTE-259/292/296/424/425, 12-bit\*, 10-bit and 8-bit
  - 4K/UltraHD 4:4:4 (4 x BNC)
- 1.5G-SDI, SMPTE 372M, Dual Link HD 4:4:4 (2 x BNC), 12-bit\*, 10-bit and 8-bit
- 1.5G-SDI, SMPTE 292M, Single Link 4:2:2 (1 x BNC), 10-bit and 8-bit
- HDMI v2.0
  - 30/36 bits/pixel, RGB or YUV, 6 Gbps per color component
  - 4K, UltraHD, 2K, HD and SD with HFR support up to 60p (4:2:2), 10-bit and 8-bit

\*Bit depth support is application dependent. Check with your software manufacturer for compatibility.

Note: 12G-SDI, 6G-SDI configured outputs support UltraHD / 4K only

## Video Outputs

- 12G-SDI, SMPTE-2082, 12-bit\*, 10-bit and 8-bit
- 6G-SDI, SMPTE-2081, 10-bit and 8-bit
- 3G-SDI, SMPTE-259/292/296/424, 12-bit\*, 10-bit and 8-bit
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- HDMI v2.0
  - 30/36 bits/pixel, RGB or YUV, 6 Gbps per color component
  - 4K, UltraHD, 2K, HD and SD with HFR support up to 60p (4:2:2), 10-bit and 8-bit
  - HDR 10 Support - HDR Infoframe metadata, compatible with HDMI 2.0a/CTA-861.3
  - HLG Support - compatible with HDMI 2.0b/CTA-861-G\*\*

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

Note: 12G-SDI, 6G-SDI configured outputs support UltraHD / 4K only

## Audio Inputs Digital

- 16-Channel, 24- and 16-bit SDI embedded audio, 48 kHz sample rate, synchronous
- 8-Channel, 24- and 16-bit HDMI embedded audio, 48 kHz sample rate, synchronous

## Audio Inputs Analog

- 4-Channel, 24 and 16-bit D/A analog audio, 48 kHz sample rate, balanced, using industry standard 8x 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 Outputs Digital

- 16-Channel, 24-bit SDI embedded audio, 48 kHz sample rate, synchronous
- 8-Channel, 24-bit 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

## Down-Conversion 4K/UltraHD

- Real time, dedicated 4K down-conversion output (1 x BNC)
- 4K to 2K down-conversion
- UltraHD to HD down-conversion

## Reference and LTC I/O

- 1 x BNC LTC output
- 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:

Shell	GND
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

- 3.4 lbs (1.5 kg)

## Power (device only)

- 10-20V, 30W typical, 36W max, 70W max with USB-C power delivery to external devices

## **Environment**

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