

# CION

## 4K/UltraHD & 2K/HD Production Camera



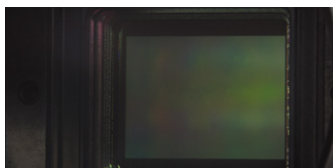
CION is the lightweight and ergonomic 4K/UltraHD and 2K/HD production camera from AJA. The image recorded by CION can be defined as film-like; technically modern yet classic in look. A wealth of in-camera settings can be applied to create beautiful and distinct creative image styles on-set, or provide the widest postproduction control later.

Maximize production and minimize post by shooting Apple ProRes<sup>®</sup> 4444 at up to 4K 30fps, ProRes 422 at up to 4K 60p or output

AJA Raw at up to 4K 120fps. Record 59.94p directly as 23.98fps for cinematic slow motion effects in camera with on-set replay.

On-camera control is fast and intuitive, and LAN remote control functionality brings every feature plus live video feedback to any web browser.

CION is a union of great design and functionality, an engineered aesthetic that we are proud to describe as the Science of the Beautiful.



Sensor

CION features a 4K APS-C sized CMOS sensor with an electronic global shutter and 12 stops of dynamic range. Lenses designed for Super 35mm cover the sensor imaging area and the global shutter eliminates the undesirable qualities associated with rolling shutter-based sensors.



Recording Formats

CION can record at 4K (4096 x 2160), UltraHD (3840 x 2160), 2K (2048x1080) and HD (1920 x 1080). 2K and HD are hardware scaled from the full 4K sensor, resulting in beautiful oversampled images, which also retain the focal length of your lens at any desired resolution. Frame rates up to 50 and 60fps are supported - even at full 4K resolution. CION can also output up to 4K 120fps as AJA Raw.



Pak Media

Pak Media uses AJA's proven SSD based Pak storage which neatly mounts directly in-camera. Pak256, Pak512 or Pak 1000 allow recording of ProRes 4444, ProRes 422 (HQ), ProRes 422, ProRes 422 (LT) and ProRes (Proxy). Utilize the AJA Pak Dock (sold separately) and you can transfer your footage over high speed Thunderbolt™ or USB 3.0.



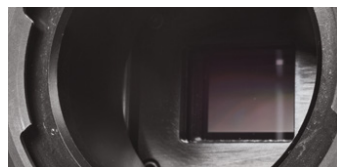
Pak-Adapt-CFast

Pak-Adapt-CFast allows you to use CFast media with CION. Simply insert the CFAST card and once the green LED is lit, your media is mounted and can be formatted. You're then able to record direct to your media. Pak-Adapt-CFast requires qualified media to ensure you get the best results.



PL Lens Mount

PL mount lenses are the industry standard for cinema and professional production cameras and are widely available the world over. In addition, CION's lens mount is removable; third parties presently offer Canon<sup>®</sup> EF/FD, Nikon<sup>®</sup> F/G-Mount, Panavision<sup>®</sup> and ARRI<sup>®</sup> Bayonet, allowing even more creative choices and flexibility.



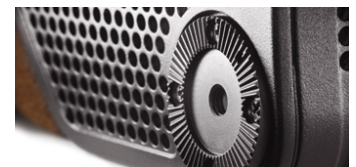
Optical Low Pass Filter and IR Cut Filter

An integrated OLPF (Optical Low Pass Filter) reduces unwanted moiré effects while still retaining vital image detail. The Infrared cut filter heightens color quality within the image by blocking unwanted light wavelengths.



Back Focus Adjustment

The inclusion of a mechanical back focus adjustment allows the proper calibration of the distance between lens and sensor. By making finely tuned adjustments, the sharpest image quality is assured.



Chassis

CION's sleek chassis is formed of gravity molded magnesium which is lightweight but extremely strong. Integrated steel rosettes allow you to mount industry standard accessories including hand grips and handle extensions directly to the camera body. Aluminum cheese plates are fitted to both the top and the bottom of the chassis to provide easy mounting of accessories from both AJA and third party manufacturers.

## 4K/UltraHD & 2K/HD Production Camera

### Tech Specs

#### User Interface

- 6 x Dedicated menu buttons (STATUS, CONFIG, MEDIA, FPS, EI and WB)
- 4 x Transport buttons (Play, Fast Forward, Reverse Playback, Stop)
- 1 x Media unmount button
- 1 x Record button
- 1 x User Interface control knob
- 1 x User Interface screen, 320x240 LCD

#### Sensor Type

- CMOS, electronic global shutter, 12 stops of dynamic range

#### Sensor Size

- 4K APS-C sized, 22.5mm x 11.9mm

#### Shutter Angles Available (by Format)

23.98 & 24	25	29.97 & 30	50	59.94 & 60	119.88 & 120
360	360	360	360	360	360
180 (def)	300	216	300	216	216
172.8 (def)	180 (def)	180 (def)	180 (def)	180 (def)	180 (def)
144	150	120	120	120	120
120	90	90	90	90	90
90	45	45	45	45	45
45	30	30	30	30	30
30	15	15	15	15	15

#### Shutter Speeds Available (by Format)

23.98 & 24	25	29.97 & 30	50	59.94 & 60	119.88 & 120
1/24	1/25	1/30	1/50	1/60	1/120
1/48 (default)	1/30	1/50	1/60	1/100	1/200
1/50	1/50 (def)	1/60 (def)	1/100 (def)	1/120 (def)	1/240 (def)
1/60	1/60	1/90	1/150	1/180	1/360
1/72	1/100	1/120	1/200	1/240	1/480
1/96	1/200	1/240	1/400	1/480	1/960
1/192	1/300	1/360	1/600	1/720	1/1440
1/288	1/600	1/720	1/1200	1/1440	1/2880

1/576

\* (def) = Default

#### Reference Input

- 1 x Reference input (BNC connector, analog color black)

#### Timecode

- 1 x LTC (BNC connector, 0.5 to 4.5Vpp)

#### Start/Stop Trigger

- 2 x LANC (1 x 2.5mm top connector and 1 x 2.5mm side connector)

#### Network Interface

- 1 x LAN connector (RJ-45 connector, 10/100/1000)

#### Data Output

- AJA Raw via 3G-SDI up to 120 fps or Thunderbolt™ up to 30 fps

#### Exposure Index

- 320, 500, 800, 1000

#### Color Correction

- Normal, Flat, Skin Tones, Video

#### Gamma

- None, Standard, Expanded, Video, Cine

#### Lens Mount

- Removable PL (positive lock), third party EF, B4 and G-Mount mounts are available

#### Filtration

- Optical Low Pass Filter (OLPF) and IR Cut Filter (combined)

#### Removable Storage

- Pak Media, Pak-Adapt-CFast (only with qualified CFast media)

#### Video Output

- 4 x 3G-SDI main outputs (4 x BNC connectors, 3G/1.485 Gbps)
- 2 x 3G-SDI monitor outputs (1 x front mounted BNC connector, 1 x rear mounted BNC connector, 3G/1.485 Gbps)
- 2 x HDMI outputs (1 x front mounted HDMI v1.3 Type A connector, 1 x rear mounted HDMI v1.4 Type A connector)

#### Audio Inputs

- 2 x Balanced Analog audio inputs (2 x 3-pin XLR connectors with dedicated line/mic/48V selection switch per input)

#### Audio Output

- 1 x Headphone jack (3.5mm stereo mini TRS)

#### Size (w x d x h)

- 4.4" x 12.5" x 5.5" (112mm x 318mm x 140mm)

#### Weight

- 6.4 lbs / 2.9 kg (without top handle attached)
- 7.4 lbs / 3.4 kg (with top handle attached)

#### Power

- AC Range: 100-240 VAC 50/60Hz (AC adapter)
- DC Range: 12-18Vdc, 5A maximum (4-pin XLR connector or 2-pin input connector)
- Consumption: 38-42W typical, 45-47W maximum (Note: does not include power draw from 2-pin output connector)
- Output: 2-pin power output connector, 10W recommended maximum

#### Format, Frame Rate, Encoding and Output

##### 4K

- (4K) 4096 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60, 119.88, 120
- Apple ProRes 4444 or Apple ProRes 422 (all versions) up to and including 30 fps
- Apple ProRes 422 (or a lower data rate ProRes version) for 50, 59.94, 60 fps
- SDI output support for 23.98, 24, 25, 29.97, 30 fps (SDI 1-4 YCbCr, SDI 1-4 RGB or SDI 1 Raw)
- SDI output support for 50, 59.94, 60 fps (SDI 1-4 YCbCr or SDI 1-2 Raw)
- SDI output support for 119.88, 120 fps (SDI 1-4 Raw)

##### UltraHD

- (UltraHD) 3840 x 2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60, 119.88, 120
- Apple ProRes 4444 or Apple ProRes 422 (all versions) up to and including 30 fps
- Apple ProRes 422 (or a lower data rate ProRes version) for 50, 59.94, 60 fps
- SDI output support for 23.98, 24, 25, 29.97, 30 fps (SDI 1-4 YCbCr, SDI 1-4 RGB or SDI 1 Raw)
- SDI output support for 50, 59.94, 60 fps (SDI 1-4 YCbCr or SDI 1-2 RAW)
- SDI output support for 119.88, 120 fps (SDI 1-4 Raw)

##### 2K

- (2K) 2048 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- Apple ProRes 4444 or Apple ProRes 422 (all versions) up to and including 30 fps
- Apple ProRes 422 (all versions) for 50, 59.94, 60 fps
- SDI output support for 23.98, 24, 25, 29.97, 30 fps (SDI 1 YCbCr, SDI 1-2 RGB, or SDI 1 RGB)
- SDI output support for 50, 59.94, 60 fps (SDI 1-2 YCbCr or SDI 1 YCbCr)

##### HD

- 1080p (HD) 1920 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- Apple ProRes 4444 or Apple ProRes 422 (all versions) up to and including 30 fps
- Apple ProRes 422 (all versions) for 50, 59.94, 60 fps
- SDI output support for 23.98, 24, 25, 29.97, 30 fps (SDI 1 YCbCr, SDI 1-2 RGB, or SDI 1 RGB)
- SDI output support for 50, 59.94, 60 fps (SDI 1-2 YCbCr or SDI 1 YCbCr)

##### 1080i

- (HD) 1920 x 1080i 25, 29.97, 30
- Apple ProRes 422 (all versions) up to and including 30 fps
- SDI output up to and including 30 fps (SDI 1 YCbCr)