

# AJA Desktop Software – Release Notes v15.5

## macOS v15.5 drivers and software for KONA, Io and T-TAP

### Introduction

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#### AJA Desktop Software

This unified software, driver and firmware package contains everything you need in order to start using your AJA video I/O hardware.

The following AJA applications are installed:

- AJA Control Panel v15.5:
  - For setup and control of your AJA KONA, Io or T-TAP product, including firmware updates.
- AJA Control Room v15.5:
  - For high quality capture, monitoring, playback and output.
- AJA System Test v15.5:
  - For testing storage to determine if it will be possible to sustain frame rates for chosen format(s).
- AJA NMOS v15.5:
  - Optional SMPTE ST 2110 application providing discovery, registration and control for KONA IP and Io IP.

#### Operating System

Starting with macOS 10.15 (Catalina), new installations of AJA’s Desktop Software must be v15.5 or later.

Starting with macOS 10.14.5 (Mojave), new installations of AJA’s unified software package must be v15.2, or later.

New Apple notarization requirements for macOS 10.14.5 onwards mean that previous versions of the AJA Desktop Software package will not install / work correctly with macOS 10.14.5 onwards (unless “grandfathered” in via being installed previous to the macOS upgrade to 10.14.5).

- macOS 10.14 (Mojave), 10.13 (High Sierra) and 10.12 (Sierra) also support AJA Desktop Software 15.2 and later, as well as earlier versions of AJA Desktop Software. See version-specific Release Notes for details.
- For additional hardware recommendations and requirements, please see:
  - <https://www.aja.com/support/kona-system-configuration>
- The AJA Thunderbolt Solutions page has details to help get you up and running, including cable specifications:
  - <https://www.aja.com/solutions/thunderbolt>
- Check the Known Issues, Limitations and Additional Details section near the end of this document.
  - See section “**Important MacOS Mojave Installation Information**” relating to Apple notarization compatibility for versions of AJA Desktop Software prior to 15.2, installed under macOS 10.14 and later.
  - See section “**Important MacOS High Sierra Installation Information**” relating to security issues for hardware recognition on first install under macOS 10.13 and later.

## Third Party Software

AJA KONA, Io and T-TAP hardware is used by many software and systems manufacturers, who provide their own software for user installation. The links below provide a guide to software support AJA is aware of, with additional software support being added frequently. Please contact the appropriate software vendor for information on whether AJA software or drivers are required when using their application. AJA recommends the latest released versions of 3rd party software for best performance:

<https://www.aja.com/compatibility/kona>

<https://www.aja.com/compatibility/io>

AJA hardware also comes with out-of-the-box support for Adobe, Apple, Avid and Telestream applications on macOS as follows:

- **Adobe** Premiere Pro, After Effects, Photoshop, Prelude, Audition 2020\*, 2019\*, 2018, 2017
- **Apple** Final Cut Pro X – 10.4.x\*, 10.3.2, 10.3.1, 10.3, 10.2.3
- **Avid** Media Composer - 2019.x\*, 2018.x\*, 8.10, 8.9, 8.8
- **Telestream** Wirecast 13.x, 12.x, 11.x, 10.x, 9.x, 8.x

*\*In some cases, software vendors are no longer supporting certain older versions of macOS, so while the AJA unified package may support those OS versions, it may not be possible for AJA to support customers or troubleshoot issues, if problems arise with an OS that is no longer supported by 3rd party software vendor(s).*

## Relevant Products

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The following products benefit from this update:

- KONA 5
- KONA IP
- KONA 4
- KONA 1
- KONA HDMI
- KONA LHi
- KONA LHe Plus
- Io 4K Plus
- Io IP
- Io 4K
- Io XT
- Io Express (PCIe)
- T-TAP
- Avid Artist DNxIV
- Avid Artist DNxIP

## Recommendations in 15.5

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- Do not run v15.5 software with anything other than the 15.5 driver. Using older drivers in combination with v15.5 or later is not a supported configuration and will likely cause disruptive results.
- For best results when capturing using Avid Media Composer or AJA Control Room, set Ref In to Video In with AJA KONA, AJA Io products and Avid Artist DNxIV, DNxIP. Here as a reminder, this recommendation began with v14.3.

## New Features and Changes in v15.5

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- AJA Desktop Software, Driver and Firmware:
  - macOS 10.15 (Catalina) ready and supporting AJA Control Panel/Room, AJA System Test, AJA NMOS, AJA MultiChannel Config, plus AJA Plugins for supported applications from Adobe, Apple, Avid and Telestream.
- AJA Control Room:
  - New functionality supporting Apple Metal for Desktop rendering (monitoring) on macOS.
- KONA 5, KONA 4, Io 4K plus, Avid DNxIV and Io 4K:
  - HDR over SDI via VPID now supported in a new combined HDR Tab, for both HDMI and SDI, in AJA Control Panel.
- Adobe Premiere Pro HDR with KONA 5, KONA 4, KONA IP, Io 4K plus, Avid DNxIV, Io IP, Avid DNxIP and Io 4K:
  - Added support for 12-bit thus enabling an expanded range of HDR possibilities. Note that 12-bit support includes frame rate support up to 30p only, due to the hardware limitation of HDMI 2.0 whereby there is insufficient bandwidth to output 12-bit HFR.
- Avid Media Composer HDR with KONA 5, KONA 4, Io 4K plus, Avid DNxIV and Io 4K:
  - HDR settings are now driven by Media Composer directly to AJA Control Panel, thus no longer obliging user to manually set HDR parameters when working with Media Composer.
- AJA Control Panel:
  - Variety of HDR test patterns are now available for UHD2/UHD/HD.
- AJA KONA 5 (and Corvid 44 12G):
  - 8K firmware now also supports RGB (up to 30p), rather than YCbCr only.
- AJA KONA 5 (and Corvid 44 12G):
  - 8K firmware now also supports a full 2SI path (rather than Square Division only). Sometimes referred to as "8K SMPTE", this full 2SI path means that each of the four 12G-SDI links (which are themselves 2SI) can now be presented as either 2SI or Square Division to deliver 8K output.
- Adobe Premiere Pro with KONA 5:
  - Added support for 8K/UHD2 monitoring/output via 4x 12G-SDI connections.
- Adobe Premiere Pro with KONA 5:
  - Added support for 8K/UHD2 to 4K/UHD downsample via HDMI 2.0 output."
- Io IP and Avid Artist DNxIP:
  - With SMPTE ST 2110 firmware, display of ANC data via SDI monitor spigot is now supported.
- AJA NMOS:
  - Now supporting multiple devices attached to a single host system.
- AJA Control Room Clip Countdown Duration:

- Meaning that operators can see how much time is left until either the Clip Out Point or Clip End Point, making live playback contributions easier.
- AJA Control Panel: New reporting and control possibility for Fan Speed on Io 4K Plus, Avid DNxIV and Io 4K:
  - Fan Speed is now reported as "Low", "Medium" or "High". This helps users understand better how their unit is reacting to the current environmental conditions.
  - For those who are using their Io 4K Plus, Avid DNxIV or Io 4K in a machine room, a new option allows for overriding the cooling algorithm entirely, and setting the fan speed to maximum."
- KONA 5 bitfile name change:
  - There remain two bitfiles for KONA 5. "KONA 5" supports up to 4K (YCbCr and RGB). "KONA 5 (8K)" supports up to 8K (YCbCr and RGB). See more detail near the end of these Release Notes in the section "Known Issues, Limitations and Additional Details".

## Fixes and Improvements in v15.5

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*Note: Items below are identified against the main AJA products affected.*

*These same issues may have also affected other AJA products that are not specifically called out.*

- KONA 5: fixed unstable signal/bad color with 12-bit 4K/UHD HDMI output.
- KONA 5 & Io 4K Plus, Avid DNxIV: solved problem with SDI output integrity across 4K p29.97/30 RGB (Square Division & 2SI)
- KONA 5 & KONA HDMI: Resolved issue with HDMI input not detecting 4K 47.95p & 4K 48p.
- KONA 4: Solved problem with HDMI output being detected as DVI by some devices.
- KONA 1: Rectified bad audio on embedded SDI channels 9-16 with an SD input.
- KONA IP & Io IP, Avid DNxIP: Resolved problem reading SDP files whereby source IP address was being reported as "/r".
- KONA IP: Rectified transmission of ANC data.
- Io 4K Plus, Avid DNxIV & Io 4K: Solved problem whereby HDMI input was adversely affected when switching SDI input between YCbCr and RGB.
- Io 4K Plus, Avid DNxIV: Overcame issue with 4K/UHD HDMI input not passing-through SDI outputs 1-4 when set for 4K/UHD 2SI
- Io XT & T-TAP: rectified output with Avid Media Composer where green lines were present at the very top of frame during output/monitoring.
- AJA Control Panel: Solved issue whereby KONA LHi Break-out-Box AES settings were not persistent when toggling between "AES-XLR" and "AES-BNC".
- AJA Control Panel: Fixed lack of expected E-E for LTC inputs.
- AJA Control Panel: Resolved problem when Transport set to Auto and selecting RGB 4:4:4 would cause Level B to be set (instead of Level A)
- AJA Control Panel: Overcame issue with HDMI output not respecting switch to RGB
- AJA Control Room: Solved problem with frame dropping during playback of HFR media following enablement of Show Closed Captioning.
- Adobe Premiere Pro: Solved for problem where UHD/4K HDR content output was not viewable or had instability (only relevant to AJA devices supporting HDR)
- Adobe Premiere Pro 2020: Updated AJA install location (driver was not installing in correct directory).

- Adobe Premiere Pro: Overcame problem where ANC CC playback was not working with TV Logic monitors.
- Fixed cosmetic item where Avid Media Composer crashed on exit with AJA plugin installed, but no AJA device attached. Note that no data was harmed during this “crash on exit”.
- Fixed general instability/crashing with Windows 10 running on Mac under Bootcamp.
- KONA 5, KONA 4, KONA HDMI, Io 4K plus, Avid DNxIV and Io 4K: Numerous stability and communication updates for HDMI I/O.

## Features, Fixes, Changes and Improvements in Prior Releases

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### v15.2.3

- KONA IP and Io IP: Improvements to PTP locking functionality.
- KONA 5 and Io 4K Plus: Resolved issue whereby HDMI 2.0 output was 8-bit rather than 10-bit.
- KONA and Io devices: Performance enhancements for when multiple AJA devices are present in/connected to, a single host system.

### v15.2.2

- Io 4K Plus: New Firmware to fix occasional loss of HDMI output.
- KONA HDMI: New Firmware and software components to improve input compatibility and stability.

### v15.2

- Cross-Platform Apple ProRes family available for Capture and Playback with AJA Control Room using macOS, Windows, or Linux.
- AJA KONA 5 now has two firmware choices.
  - The original “KONA 5” (4K bitfile) remains as-is with support for up to 4K 60p I/O via either single-channel Capture, Pass-Through and Output over 12G-SDI, or four-channel (2SI) Capture or Output over 3G-SDI.
  - A new “KONA 5 - 4x 12G” (8K bitfile) supports up to four simultaneous channels of 12G-SDI Capture or Output for 8K/UHD2 60p, or multi-channel Ingest or Playback. Check which firmware you have loaded.
- 8K/UHD2 logic added to AJA Control Panel for KONA 5.
- 8K/UHD2 Capture or Playback with AJA Control Room and KONA 5.
- AJA Io IP now has two firmware choices.
  - The original “s2022” firmware for SMPTE ST 2022-6/7 remains as-is with support for up to HD 60p I/O.
  - A new “s2110” firmware for SMPTE ST 2110 supports up to either (i) 2K 60p I/O with 2022-7 Transmit, or (ii) 4K 60p Input or Output via SMPTE ST 2110-23. Check which firmware you have loaded.
- AJA KONA IP has the following SMPTE ST 2110 feature enhancements (all also now available with AJA Io IP).
  - SMPTE ST 2110-40 for ANC data; for transmittal and reception of timecode, closed captioning and more.
  - SMPTE ST 2110-23 for combining multiple ST 2110-20 Streams into a single video essence for 4K/UltraHD support. Essentially, 4K 2SI over ST 2110 using both 10 GigE links.
  - Redundancy support for ST 2110 Transmit as defined in ST 2022-7 up to 2K/HD.
  - NMOS support and the new AJA NMOS application. During installation of the AJA Desktop Software package, you can choose to install an optional component. This application (which can be set to autorun on

boot/restart) will announce and attempt to register the host with an NMOS control system. See KONA IP or Io IP manual for more detail.

- Fixed lack of LTC output when playing back timeline sequence in Adobe Premiere Pro.
- Solved for absence of Closed Caption output from Adobe Premiere Pro, following playback of a non CC clip.
- Rectified problem with AJA Blithook plugin for Adobe After Effects, where the plugin enable/disable menu was not being drawn correctly.
- Fixed performance deficits with Apple FCPX, including frame dropping experienced during multi-layer timeline playback.
- Remedied hang-on-boot with Apple Pro 6,1 and macOS when both Thunderbolt Storage and AJA Thunderbolt devices (or AJA KONA cards in Thunderbolt chassis) are connected simultaneously.
- Fixed bad video output from AJA Control Panel when set HDMI output to color space 4:2:0.
- Rectified ability to playback ProRes 422 HQ media exported from Autodesk Flame in AJA Control Room, which would hang on import.
- Solved problem whereby after frame-stepping in Avid Media Composer, the following attempt to playback resulted in frame skipping and/or repeated frames.
- In conjunction with Avid, and working with their new release of Media Composer (2019.6), addressed some audio metering deficiencies whereby depending on the order of window selection/activity in Avid Media Composer, audio metering for Capture and Audio Punch-In was not available, despite audio being present.
- Fixed benign crash-on-exit with Avid Media Composer.
- Removed references to Analog Audio I/O when controlling AJA KONA 5 with AJA Control Panel.
- Fixed ability to properly read/write drop-frame vs. non-drop-frame timecode with AJA KONA IP with SMPTE ST 2110.
- Fixed problematic Standard Definition I/O for AJA Io IP with SMPTE ST 2022-6.
- Solved intermittently choppy playback via HDMI with NTSC Standard Definition with AJA KONA 5 and Io 4K Plus.
- Fixed broken 12-bit RGB Input support in AJA Control Panel..
- Rectified a problem when, following capture or playback of a 2K 25p clip in AJA Control Room, audio mapping upon playback would now be incorrect (channels swapped).
- Eliminated problem when capturing from VTRs with no RP188 embedded TC (i.e. send TC via RS422), such that AJA Control Room would Capture DF (Drop Frame) clips as NDF (Non-Drop-Frame). Applies to analog VTRs, or older digital VTRs (e.g. DVW-A500 or DVCAM decks with machine control).
- Fixed item whereby following capture or playback of a 2K 25p clip in AJA Control Room, audio mapping upon playback would now be incorrect (channels swapped).
- Fixed problem where audio output from AJA Control Room was missing, until either reboot or device disconnected and reconnected.
- Eliminated incorrect entry in AJA System Test “System Report” such that Win and macOS versions referred to the application as System Performance Tester x.x.

## v15.1

- AJA Control Room has numerous user interface enhancements including, but not limited to:
  - Full screen monitoring of video Playback or Capture including new keyboard shortcuts for fast toggling.
  - The ability to add/remove AJA Control Room windows to create custom interface layouts.
  - Please see manual for more details including a full list of all new functionality, icons and keyboard shortcuts.
- AJA Control Panel now includes the ability to use TOD (Time-of-Day) Timecode during Capture. Time is based on the host system clock which the AJA KONA or Io is connected to/installed within.

- When exiting Adobe Premiere Pro after using an AJA device to display HDR material, AJA Control Panel will now automatically turn off HDR settings. Next time Adobe Premiere Pro is launched and an HDR project selected, AJA Control Panel will again enable display of HDR content.
- Implemented 4K/UHD HDMI input support for Wirecast in AJA Multi-Config, with KONA HDMI, Io 4K Plus, Io 4K.
- KONA 5, Io 4K Plus and Avid Artist DNxIV now provide a simultaneous down-convert of 4K/UHD to 2K/HD via SDI #4, when outputting 4K/UHD over 12G-SDI (from SDI #3). When using 2SI (two sample interleave) the image will be subsampled, when using square division the image is down-converted.
- KONA 5, Io 4K Plus and Avid Artist DNxIV now support RGB 444 UHD Level A and Level B.
- KONA 5, KONA 4, Io 4K Plus, Avid Artist DNxIV and Io 4K now support 47.95/48P for 2K and 4K, for both Level A and Level B.
- KONA HDMI can be used for capture within Adobe Premiere Pro Capture Window (vs. AJA Control Room only).
- KONA HDMI can be used for capture within Avid Media Composer Capture Tool (vs. AJA Control Room only).
- KONA IP SMPTE ST 2110 firmware and software combination now supports SDP grouping.
- Solved problem whereby upon activating "Digital Scrub" in Avid Media Composer (Caps Lock or Shift) and then scrubbing, the video output from the AJA hardware appears to freeze.
- Addressed issue with Avid Media Composer and ProTools, where garbage video was being displayed upon initial launch with AJA card or device.
- Avid/AJA have confirmed a fix for an issue which caused Media Composer to quit unexpectedly on exit with AJA hardware.
- Solved ANC data being inadvertently captured from SDI input, when HDMI selected as source for Avid Media Composer with AJA Io 4K Plus and Avid Artist DNxIV.
- Adobe/AJA have confirmed the resolution of a problem whereby when in Adobe Premiere Pro, upon setting the AJA Capture Settings dialog to Control Panel, these changes were unsaved.
- Achieved Resolution on an audio problem when using FCPX with various AJA devices, where audio Ch. 2 would "hop" to audio Ch. 4 on down-converted SDI output, from an HD project.
- Fixed failure to save "Follow Input" within a preset in AJA Control Panel.
- Solved problem in AJA Control Panel, where inputs would be detected as 'Psf' instead of 'i', when the frame buffer progressive/interlace setting didn't match the incoming signal.
- Overcame problem in AJA Control Panel causing a Firmware update progress-bar malfunction along with a delay in update completion.
- Resolved problem following a Preferences Reset in AJA Control Room, whereby if a capture path was not set, initiating a capture could cause a disabled state.
- Rectified issue with 2K HDMI inputs on various AJA devices such that when in input-passthrough, the result was PSF on SDI outputs.
- Solved item where Closed Captioning output ceased upon switching between clips of differing frame rates/rasters in AJA Control Panel.
- Fix applied to the Analog Video Setup contextual menu in AJA Control Panel, removing incorrect options (for relevant AJA hardware).
- Fixed behavior in AJA Control Room with various AJA devices such that closed-captions were playing back formatted for 708 instead of 608 ANC.
- Overcame issue where RGB Output over 3G-SDI Level A, produced bad color from several AJA 3G-SDI capable cards and devices. Important Note: AJA desktop cards and devices do not at this time support RGB 3G-SDI Level A Input.
- Overcame problem with numerous products getting into a state where Closed Captions incoming to AJA Control Panel would not display correctly.



- Rectified HD HFR inputs not routing correctly for RGB capture in AJA Control Panel across several desktop products.
- Solved issue with AJA Control Panel where Reference input would switch to LTC, when right-clicking to select a different SDI input, across some devices.
- Solved incorrect field-order for HDMI interlaced captures with Io 4K Plus, DNxIV, Io4k, and KONA HDMI.
- Fixed visual artifacts on right side of picture with KONA 4 and Io 4K when outputting HFR Level B.
- Solved problem where SD analog video output was not being setup correctly with KONA 4.
- Fixed AJA Control Panel crash triggered via selection of DSK, while a 12G-SDI 4K signal is presented for input when using Io 4K Plus, DNxIV or KONA 5.
- Overcame issue whereby SDI 5 (Down converted Monitor Output) on Io 4K Plus, DNxIV, or Io 4K, had bad video on either 12G and/or 2SI UHD/4k HFR formats.
- Rectified a line reversal present for HDMI input pass-through with Io 4K.
- Fixed analog audio output phase shift at high frequency across Io 4K, Io 4K Plus and DNxIV.
- Fixed error causing audio drop-outs every 20-30 seconds over HDMI output when set to RGB-10, with AJA Io 4K Plus or Avid DNxIV.
- Solved HDMI audio output timing errors stemming from format change or Thunderbolt 3 plug cycle, with AJA Io 4K Plus or Avid DNxIV.
- Solved issue causing HDMI to be not properly detecting RGB 10-bit inputs, and some associated instability stemming from that detection problem.
- Corrected issue whereby AJA System Test would fail to perform capture test, when T-Tap connected to host.
- Solved problem under High Sierra, causing AJA Control Room to crash upon playing clips of different frame rates from the bin.
- Rectified problem in AJA Control Room where Timecode on GUI is 1 frame late vs. video output.
- Fixed AJA Control Panel behavior so that inputs no longer show blue (indicating a signal present) when no video is yet preset yet (False Positive) with KONA IP running SMPTE ST 2110 firmware.
- Solved problem whereby transmission (output) will sometimes stop packetizing on certain IP Addresses with KONA IP running SMPTE ST 2110 firmware.
- PTP optimizations for KONA IP running SMPTE ST 2110 firmware.
- Fixed duplicate output from Channel #4 when outputting on Channel #3 with 2K/HD with KONA IP running SMPTE ST 2110 firmware.
- Solved corrupt frame at beginning of capture with AJA Io IP and DNxIP running SMPTE ST 2022 firmware.
- Fixed slight bounce in 1080 HFR image with KONA IP running SMPTE ST 2022 firmware.

#### v15.0.1

- Fixed item with Adobe Premiere Pro CC across numerous AJA devices, such that audio mute was not being respected when scrubbing, with some repeated audio being audible.
- Solved crashing with AJA Control Room when successively playing back clips of different frame rates from the bin.
- Fixed bad HDMI output from AJA Control Room with AJA Io 4K when playing back / passing through 4K at p25, p29.97, p30.
- Overcame issue with AJA KONA LHi, where RP 188 timecode was not capturable using AJA Control Room or 3rd party applications. Note however, this board does not support EE pass-through of RP188 LTC. Note also a current known issue is that this board is not delivering RP188 LTC playback on macOS.
- Resolved 4K capture problem with AJA KONA 4, such that picture was scrambled in AJA Control Room due to problems with respecting “quad swap” feature.



- Achieved resolution to AJA Control Panel problem whereby saving a preset with Follow Input turned off then resulted in Follow Input being on when recalling the preset, and vice versa.
- Resolved issue with AJA Control Panel whereby LTC displayed on input widget doesn't increment/display hours and minutes. Note that the display in the Timecode tab did display correctly.
- Rectified issue with AJA KONA 4 and AJA Io 4K Plus, where HFR level B output had visual artifacts on right side of frame
- Rectified long wait times when updating AJA device firmware with AJA Control Panel. The updates would finish fine, but it could appear to a user as if the updating process had frozen.
- Solved problem where changing frame buffer was not setting up the inputs for 4K capture with AJA KONA IP running SMPTE 2110 firmware. Note this functionality is not on general release and is not currently supported outside of direct engagement with AJA Product Management.

## v15.0

- Introduction of support for AJA KONA 5 (12G-SDI, 8-lane PCIe Gen 3 video I/O card with HDMI 2.0 monitoring).
  - *Note that AJA KONA 5 requires ATX power from the motherboard. Unlike other KONA cards, AJA KONA 5 does NOT use PCIe bus power.*
- AJA KONA HDMI is now able to simultaneously ingest dual 4K 60p streams (vs. one 4K 60p plus one 4K 30p as in previous releases).
- For playback, AJA Control Room can now be used a fully independent media player, meaning video and audio assets can be played back without AJA hardware attached.
- Video will be played back on the host monitor within AJA Control Room, and audio can be monitored using the host system audio. Note however, AV sync cannot be guaranteed when using host system audio monitoring. To set the audio to host system:
- AJA Control Room: Preferences > General > Host Audio monitor > “Built-in Output”.
  - Note: You will also need to change your OS settings to use system audio (speakers / headphones) rather than AJA device
- For capture, AJA Control Room can now be set to enable audio monitoring via host system, audio. This is especially useful when ingesting material using a capture-only device such as KONA HDMI.
  - Note however, AV sync cannot be guaranteed when using host system audio monitoring.
- To set the audio to host system:
- AJA Control Room: Preferences > General > Host Audio monitor > “Built-in Output”.
  - Note: You will also need to change your OS settings to use system audio (speakers / headphones) rather than AJA device.
- Fixed problem with AJA Io 4K Plus, AJA Io 4K whereby output image is clipped when 4K Input / Output is Down converted to HDMI.
- Solved problem with AJA Io 4K Plus, with audio channels being mixed into other audio channels on playback.
- Fixed issue with AJA Io 4K Plus, where SDI pass-through crops top line of image on interlaced HDMI inputs.
- Rectified problem with AJA Io 4K Plus, AJA KONA 4, where HDMI output of 4444 video (UHDp30 4444) shows blotchy areas.
- Rectified issue when using AJA Control Panel with AJA KONA 4, whereby 2K HFR Format Options were not reading correctly.
- Fixed problem when using AJA KONA IP with ST 2022 firmware, such that intermittently an IP address can become stale and stop working until switching to a new IP address.
- Improved accuracy of Insert & Assemble Edit to Tape for certain VTRs when using AJA devices with Adobe Premiere Pro CC.

- Solved lack of audio monitoring during playback when using AJA devices with Avid Media Composer.
- Solved lack of timeline audio monitoring during audio punch-in when using AJA devices with Avid Media Composer.
- Solved issue with AJA MultiChannel Config when setting up Telestream Wirecast whereby setting 4K input caused AJA devices to get stuck in “OEM tasks” on Wirecast exit.
- Solved issue with Telestream Wirecast whereby progressive and interlaced signals could not be used simultaneously with AJA devices.

### v14.3

- Introduction of SMPTE ST 2110 support for AJA KONA IP (receive and transmit) up to 2K/HD 60p.
- Added 6G-SDI as a valid I/O for using AJA Io 4K Plus with Telestream Wirecast\* (via MultiChannel Config 4K settings). Note: Wirecast setup is done via AJA Multi-channel Config (not AJA Control Panel).
- QuickTime components are now legacy and have been removed from the AJA unified desktop software package and thus, are no longer installed by default. If you still wish to obtain and install the QuickTime components, you can find the package under the support section for your AJA product, inside “Software Archive”.
  - For AJA Control Room, there are no dependencies on the legacy QuickTime components, since AJA has internal QuickTime libraries which remain available to the application.
  - For up to date 3rd party NLEs and other software applications using AJA hardware, there should be no dependencies on the legacy QuickTime components. If you need more information, please contact your software vendor.
- VANC checkbox for “tall frame” support is now legacy and has been removed from AJA Control Panel on Mac. This was a feature that specifically supported FCP 7 and AJA VTR Xchange.
- Solved problem in AJA Control Panel when using AJA KONA HDMI, where inputs are incorrectly reporting incoming source as YUV 4:4:4 with numerous Canon cameras.
- Solved problem in AJA Control Panel when using AJA KONA HDMI, where swapping sources to different inputs can take up to 20 seconds for the signal to be detected from some Panasonic cameras.
- Solved problem in AJA Control Panel when using AJA KONA HDMI, where inputs 1 & 2 are incorrectly reporting incoming source as DVI (RGB 8 bit) from some Panasonic cameras.
- Solved problem in AJA Control Panel when using AJA KONA HDMI, where inputs 3 & 4 are incorrectly reporting incoming source as DVI (RGB 8 bit) from KONA 4 HDMI output.
- Solved problem in AJA Control Panel when using AJA KONA HDMI, where right clicking on the inputs within Control Panel brings up the window for the input options, but fails to switch to the desired input change.
- Solved problem in AJA Control Panel when using AJA KONA HDMI, where 4K/UHD playback will crash the application.
- Resolved issue in AJA Control Panel when using AJA KONA HDMI, Io 4K Plus or Io 4K, where HDMI sources from MacBook Pro were not locking successfully as inputs.
- Resolved issue in AJA Control Panel when using AJA KONA 1, where Follow Input is not functioning correctly when source format changes.
- Resolved issue in AJA Control Panel when using KONA IP, KONA 4, Io 4K, where Info tab reports bitfile as "bad bitfile type".
- Fixed issue with Telestream Wirecast when using Io 4K Plus, Io 4K, KONA 4, KONA IP, Io IP, Avid DNxIV and Avid DNxIP, where incoming audio was always defaulting to input from SDI 1, regardless of setting chosen.
- Fixed issue with Telestream Wirecast where with no shot selected, incoming (pass-through) audio was present and could not be muted on outputs for Analog, Headphones, SDI monitoring and HDMI at application launch, when using AJA KONA or Io products.

- Resolved problem when using Apple FCPX whereby frame drops would occur at the beginning of playback, when using AJA KONA or Io products.
- Resolved problem when using Apple FCPX whereby audio might be intermittently repeated at playback stop, when using AJA Io 4K Plus, Io 4K, Io XT, KONA 4 and KONA LHi.
- Fixed issue when using Adobe Premiere Pro CC with the capture window open, whereby application or entire host system may crash when changing incoming video format with AJA KONA or Io products.
- Fixed issue when using Adobe Premiere Pro CC, whereby frames are dropped upon playback of HFR material from either captured or imported sources with AJA KONA or Io products.
- Solved issue when using Avid Media Composer, whereby Snap forward then back would occur when starting play follow a scrub, with AJA KONA or Io products and / or Avid DNxIV, Avid DNxIP.
- Solved issue when using Avid Media Composer, whereby application would not launch if SDI inputs are connected to AJA KONA or Io products and / or Avid DNxIV, Avid DNxIP.
- Solved issue when using Avid Media Composer, whereby a corrupt frame was present at the start of capture with AJA Io 4K Plus, Io IP, Avid DNxIV, Avid DNxIP.
- Improved performance when using either AJA Control Room or Avid Media Composer, whereby capture or playback was slow to start with Reference set to Video In, with AJA KONA or Io products.
- Solved problem when using Io XT, where Analog Audio output had phase shift at high frequencies.
- Solved problem when using Io XT (UFC firmware), where applying a secondary down-converted output was not possible.

## v14.2.1

- Introduction of support for Avid DNxIP (new Avid Thunderbolt 3 device) supporting SMPTE 2022-6/7.
- Expanded analog audio configuration options for Avid DNxIV, Avid DNxIP.
- With AJA Control Panel, user can now select from four modes:
- “8 in”: eight-channel input across A1-8
- “8 out”: eight-channel output across A1-8
- “4 in, 4 out”: four-channel input across A1-4, four-channel output across A5-8
- “4 out, 4 in”: four-channel output across A1-4, four-channel input across A5-8
- Problems with 3G-SDI output are rectified for KONA LHI and KONA LHe Plus.
- Lack of audio when capturing Deep Color with HDMI ports 3 and 4 in AJA Control Room, is now resolved with KONA HDMI.

## v14.2

- Introduction of AJA KONA HDMI support (new AJA PCIe card).
- Introduction of AJA KONA 1 support (new AJA PCIe card).
- Introduction of AJA Io IP support (new AJA Thunderbolt 3 device).
- “Deep Buffer” setting in AJA Control Panel, improves handling of storage interruptions during ingest with AJA Control Room.
- User can now allocate RAM for caching to protect media being written during ingest:
- AJA Control Room: Preferences > Capture > “Reserve buffer size for deep capture queues”.
- Expanded analog audio configuration options for Io 4K Plus, Avid DNxIV, Io IP, Avid DNxIP.
  - With AJA Control Panel, user can now select from four modes:
    - “8 in”: eight-channel input across A1-8
    - “8 out”: eight-channel output across A1-8

- “4 in, 4 out”: four-channel input across A1-4, four-channel output across A5-8
- “4 out, 4 in”: four-channel output across A1-4, four-channel input across A5-8
- “Disable creation of SCC/MCC files from Closed Caption data” option in Adobe Premiere Pro CC 2017 onwards, provides user with ability to prevent automatic generation of SCC/MCC Closed Caption files when capturing a signal with the data present:
  - Adobe Premiere Pro CC > Window > Capture > Settings > Edit > Settings > “Disable creation of SCC/MCC files from Closed Caption data”.

*Note that this option is not engaged by default. This is so older projects will remain unaffected.*

*Note that enabling this feature does not prevent the recorded media from encoding the Closed Caption data. If the data is present in the source signal, then it will be retained in the captured media.*

- Important updates have been added to the Known Issues and Limitations section near the end of this document. See items relating to hardware recognition on first install under macOS High Sierra and later.
- Amended display problem with Adobe Premiere Pro CC where during capture of ProRes 422, ProRes HQ or DNxHR HQX, the canvas appears to show dropped frames (even though the captured file contains all frames).
- Fixed capture problem with Adobe Premiere Pro CC where setting up for ProRes 4444 captures, resulted instead in uncompressed BGRA clip being written disk.
- Fixed capture problem with Adobe Premiere Pro CC where when selecting RGBA for capture, instead resulted in a black clip being written to disk.
- Solved issue with Adobe Premiere Pro CC where auto-creating a sequence from an AJA clip (in a new project for the first time) could either take over 30 seconds, or else crash the application.
- Resolved bad SD video playback in Adobe Premiere Pro CC canvas and loss of AJA Video output, when choosing to display both fields.
- AJA Control Room now provides a confirmation dialog if the application is quit or exited during capture.
- Amended incorrect interface reporting in AJA Control Panel whereby it appeared that input pass-through is checked, when actually in playback, and vice versa.
- AJA Control Panel Frame Buffer and Output are now correctly set to 525i 29.97 when presented with P2/MXF 480i 29.97 material that is flagged as 23.98.
- When Open GL acceleration is not being utilized, SD material no longer shows black at the bottom of the frame in AJA Control Room viewer during playback.
- Fixed issue whereby T-TAP output image would shift horizontally.
- Amended behavior in Adobe Premiere Pro CC capture tool, such that it is no longer possible to attempt to capture from T-TAP (being a monitoring-only device).
- Fixed issue whereby upon quitting / exiting Telestream Wirecast, T-TAP was left in a non-standard configuration. AJA Control Panel reported “In use by OEM application”.
- Solved problem in AJA Control Panel, where clicking on the Timecode tab could cause the application to crash, with T-TAP. Corrected various HDMI display and capture problems caused when AJA device is connected to an already powered-up HDMI monitor , and then powered on, with lo 4K, Avid DNxIV.
- Solved intermittent issue where switching modes or moving the playhead could then cause loss of (incoming) EE audio monitoring when using audio punch-in within Avid Media Composer. Only monitoring was affected, as the audio captured did contain the voice over content recorded, with lo 4K, Avid DNxIV.
- Fixed problem whereby unplugging Thunderbolt 3 cable when AJA Control Panel is set to 4K Quad Input (Square Division), could in some instances create a kernel panic, with lo 4K, Avid DNxIV.
- Amended AJA Control Panel feedback where SDI 5 was being erroneously labelled as Video and Key, when SDI 3 and 4 were set to Video and Key, with lo 4K, Avid DNxIV.
- Corrected banding on HDMI output when AJA Control Panel Frame buffer is set to YCbCr and HDMI color space is set to 10bit YUV, with lo 4K, Avid DNxIV.

- Rectified problem whereby HDR would turn on, but not turn off completely, with lo 4K, Avid DNxIV.
- Remedied audible “tapping” effect during manipulation of volume knob, with lo 4K, Avid DNxIV.
- Solved problem with AJA Control Panel where when set to Quad (Square Division) SDI input, the HDMI output suffered from a green tint, and the HDMI widget reports incorrectly that it is passing 4K/UHD instead of a down convert to 2K/HD, with lo 4K.
- Corrected problem whereby Adobe Premiere playback of 2K formats would set the AJA Control Panel frame buffer to UHD, with lo 4K.
- Fixed display of garbage video instead of color bars upon launching AJA Control Panel, with lo 4K, lo XT.
- Solved loss of HDMI output when using an RGB-10 (or ARGB-8 / RGB-12) framebuffer setting and attempting to set color space to either 10-bit YCbCr / 4:2:0, with lo 4K plus, Avid DNxIV, lo 4K, KONA 4.
- Rectified AJA Control Room problem causing the wrong color space and image aberrations to display when using SDI RGB input, with lo 4K plus, Avid DNxIV, lo 4K, KONA 4.
- Fixed wrong output from AJA Control Panel. Upon selecting 2K, HD was instead output, and when selecting 4K, UHD was instead output, with lo 4K, lo XT, KONA LHi.
- Solved problem where buffer format selections in AJA Control Panel intermittently provided incorrect output raster and corrupted imagery, with KONA LHi and lo Express.
- Fixed audio quality problem when using Wirecast while running the UFC firmware available for KONA 4.
- Fixed issue when using SMPTE 2022-6/7 firmware, whereby a receiving KONA IP would not reestablish video streams following a manual disable and then re-enable of Video Output (in AJA Control Panel) on the transmitting KONA IP
- Solved transmit (playback) and receive (ingest) problems with 2K formats (up to p30 max) when using SMPTE 2022 firmware and JPEG 2000 firmware, with KONA IP.
- Solved problem in AJA Control Panel where switching from 2K to SD formats could interrupt transmit (playback) when using SMPTE 2022-6/7 firmware on KONA IP.
- Fixed intermittent black frames showing across HDMI and SDI output with Downstream Keyer when using FrameBuffer over Video In, with either HDMI or SDI In selected as the source (and setting Match Frame Buffer format to Source), with KONA LHi.
- Solved locking to input problem with Downstream Keyer when using FrameBuffer over Video In, with HDMI In selected as the source, with KONA LHi.
- Fixed missing video output when using Wirecast with KONA LHe Plus.

## v14.0.2

- Added improved fan speed regulation for lo 4K Plus and Avid DNxIV.
- Removed gain-knob “zipper” sound on Mic Input for Avid DNxIV.

## v14.0.1

- Added option for HDMI Audio Ch 3/4 Swap for lo 4K Plus and Avid DNxIV.
- Added option for SDI Input / Output Quad Swap for lo 4K Plus, lo 4K, KONA 4 and Avid DNxIV.
- Fixed general HDMI output timing and stability (of particular benefit for HDMI 1.4 monitors).
- Fixed HDMI output issues with Kona 4 on macOS.
- Fixed UltraHD HDMI output in 2SI.
- Fixed intermittent input detection when HDMI is input source.
- Fixed lack of Quarter Res output on SDI 3.
- Fixed Closed Captioning for SD output.

- Fixed input pass-through widget in Control Panel to show correct activity (HDMI down convert).
- Fixed issue whereby Control Panel reports device as both Io 4K Plus and DNxIV.
- Fixed Virus Check issue with AJA Multi Channel Config.
- Reinstated Python models within macOS and Windows installers.
- Fixed issue whereby Control Room would display an AV sync issue during capture (but capture OK).
- Fixed issue whereby Adobe Premiere Pro would display an AV sync issue during capture and resultant capture was out of sync.
- Fixed intermittent snapback at start of playback with Avid Media Composer.
- Fixed Toggle P/PSF reactivity with Avid Media Composer (now instant).

## v14.0

- Added Audio Mixer to AJA Control Panel.
- Fixed issue whereby wake from sleep required FCPX restart.
- Fixed reliability of Timecode out with FCPX.
- Fixed issue whereby an application restart was required to recognize changes in HDR settings changed in AJA Control Panel when running FCPX.
- Fixed Kernel Panic after Sleep > Wake > Launch FCPX cycle.
- Fixed issue whereby “loclasscount for AudioStream” did not reset to zero upon Thunderbolt plug cycle with Apple FCPX.
- Fixed reverse playback of interlaced material (where fields were incorrectly swapped) within Adobe Premiere Pro CC.
- Fixed issue with cueing clips from the bin following an icon scrub, whereby a frozen frame manifested on playback on 1st attempt within Adobe Premiere Pro CC.
- Fixed jump in playback when video delay is set past zero within Adobe Premiere Pro CC.
- Fixed RP188 output from source viewer in Adobe Premiere Pro CC.
- Fixed playback issue for 2Kp60 projects in Avid Media Composer.
- Fixed severe frame dropping & A/V sync loss when playing AMA linked P2 AVC-I within Avid Media Composer.
- Fixed issue whereby T-TAP leaves device in OEM mode on Wirecast exit.
- Fixed issue whereby Control Panel crashes if launched with no device connected.
- Fixed inoperable contextual menus on Mac within Control Panel.
- Added VTR on/offline icon to Batch Capture bin window in Control Room.
- Fixed issue whereby device offline dialog gets stuck in loop for batch captures when clicking "OK" in Control Room.
- Fixed issues whereby Timecode for current position stops updating, when video option set to “no video” within Control Room.
- Fixed bad timecode with playback of DPX Cineon header sequences in Control Room.
- Fixed 1 second lag for actual capture to begin, with DVCPHD 'on the fly' captures in Control Room.
- Now possible to choose category dividers in compressor dropdown menu as compressors within Control Room.
- Fixed failure to connect to AJA device after 2nd sleep with downstream Thunderbolt device attached.
- Fixed issue whereby AJA thunderbolt device fails to be seen after sleep/wake cycle.
- Fixed issue whereby ProRes 4k 4444 clips w/ alpha don't setup AJA device correctly.
- Renamed the main AJA Desktop uninstaller in Program and Features.
- Fixed intermittent 720p Varicam playback issues with T-TAP.
- When using Square Division with KONA 4, Io 4K, Io 4K Plus and Avid DNxIV, Quad link SDI sources are no longer viewable in UltraHD via HDMI, instead these sources will be down-converted for HD monitoring via HDMI.
  - NOTE: This limitation does not apply to 2SI sources.



- When using 2SI, Quad link SDI sources can be monitored in UltraHD via HDMI.
- It is no longer possible to decimate HFR material in order to facilitate HDMI playback on a monitor not capable of HFR when using KONA 4, Io 4K, Io 4K Plus.

## v13.0

- Fixed video freeze occurring during loop playback in Adobe Premiere Pro CC.
- Fixed bad video resulting from RGBA 8 bit capture in Adobe Premiere Pro CC.
- Enabled AJA plug-in for Adobe After Effects to be installed, without Premiere Pro CC.
- Fixed memory leak when Capture windows left open in Adobe Premiere Pro CC.
- Fixed issue whereby MXF files captured in Control Room, could not be linked to with Avid Media Composer (File>Import>Link to media).
- Fixed a duplicate clip issue in AJA Control Room (when attempting to overwrite with new file).
- Fixed AJA Control Room GUI issues (Capture / Playback interface problematic with no input connected).
- Fixed AJA Control Room issue with missing edit In Point (shuttling engaged via frame stepping following “go to IN”).
- Apple ProRes now recognized on imported clips in AJA Control Room.
- Improved Thunderbolt™ plug and play performance.
- Fixed Timecode reporting for DF RP188 captures (DF was reported as NDF).
- Fixed Horizontal line in SDI 4 of Io 4k and KONA 4.
- Fixed UHD test patterns.
- Fixed ETT issues (where having a DVCProHD clip loaded caused video input distortion).
- Improved compatibility with AMD graphics cards.
- Fixed DVCProHD Routing issue (stuck in DVCProHD playback).
- Fixed issue with HDMI input producing bad video with AJA Io 4K.
- Fixed issue where selecting analog input as reference, causes HDMI input to instead become reference source on AJA KONA LHi.
- Improved Level B handling (on input to AJA device).
- Fixed conflict between AJA desktop software and Blackmagic Design software occurring when uninstalling AJA desktop software.

## v12.5.1

- Fixed Genlock selection for Analog Input Video Source on KONA LHi.
- Fixed issue where 12-bit HDR Color Space setting was missing on Adobe Premiere 2017.
- Fixed issue where QuickTime files captured with 32-bit integer audio wouldn't play audio in some 3rd party apps.
- Removed 32-bit audio option from MXF to prevent incompatibility in Adobe Premiere.
- Fixed VPID issues for Dual-Link connections on all KONA and Io devices.
- Fixed issue whereby quick use of JKL keyboard keys on Avid Media Composer could put audio into a loop.
- Fixed issue in AJA's Control Panel whereby AJA's Control Panel would crash following a click of the line in test pattern drop down.
- Fixed 2K 23.98 playback issues on T-TAP.

## v12.5.0

- Improved DNxHR performance on capture.
- Improved Thunderbolt hotplug cycles behavior.



- Fixed issue where RP188 VITC shown when only RP188 LTC is present.
- Fixed issue when ANC TC on SDI 2 was not previously shown in AJA's Control Panel.
- Fixed issue where State of Genlock was not saved or recalled correctly in AJA's Control Panel Presets with lo XT.
- Fixed issue where Ref/LTC would switch to Ref when selecting the Playback pane in AJA Control Room with lo XT.
- Fixed Capture Now offset issues between video and timecode with 9 pin set as timecode source.
- Fixed issue with audio system crashes when switching from one application to another or from one plugin instance to another on macOS.
- Fixed issue with applications hanging when lo4K is hot unplugged.
- Fixed many improper VPID issues.
- Fixed issue with 4K/UHD 2SI input not being captured properly on KONA 4 and lo 4K.
- Fixed issue where Control Room captured clips are always non-drop TC.
- Fixed issue with bad output after wake from sleep on macOS.
- Changed all '425' strings in AJA Control Panel to read '2-SI' to denote 2 Sample Interleave method of transmitting 4K and UHD.
- Fixed issue with AJA output not working in Premiere Pro after changes in Adobe Playback Preferences.
- Fixed issue with capture in Premiere Pro where selection of Stereo Audio would create files with discrete mono tracks.
- Fixed issue where closing some applications caused HDMI audio output to always reset to 8 channels.
- Fixed issue where old video frame flashed on AJA output when switching from timeline to timeline, or from timeline to source monitor in Premiere Pro.
- Fixed issue with audio stutter on Wirecast output.
- Fixed issue with background noise created on live stream and recorded file in Wirecast.

## v12.4.1

- Fixes issue which intermittently caused AJA driver not to read the AJA hardware serial number correctly.

## v12.4.0

- Fixed issue where 8-bit YUV playback was bad in Premiere Pro with when Mercury GPU is off.
- Fixed issue where switching from AJA device to Adobe Desktop Audio in the Premiere Pro Playback preferences causes erratic behavior when the AJA device is selected as the System Audio device in macOS.
- Removed AJAUncompressedCodec.component from the AJA Driver installer on macOS.
- Fixed issue that caused video output to freeze in Premiere Pro when performing a trim function.
- Changed the way the audio hardware was being used.
- Fixed issue that causes Premiere Pro to freeze and/or crash during capture on macOS 10.11.
- Fixed issue where AJA Control Panel does not hold onto a user preference for 1080p high frame rate 3G Level B. After a reboot, it always reset to Dual Link 1.5G.
- Fixed issue with audio only files in the Premiere Pro source monitor playing back with a stutter when AJA Transmit plugin is using minimum buffer mode.
- Fixed issue where legacy AJA After Effects Preview Plugin (Blithook) would not release the AJA hardware when trying to switch out of After Effects to another application.
- Changed the way Adobe After Effects is supported. Two different plugins were being installed before. The 'Blithook' plugin was the old legacy plugin and is no longer installed by default. It must be deliberately chosen as an option in the installer. The Transmit plugin is installed with the default installation options. Please see the Adobe Plugins manual for more information.

- Added NCLC color profiles to QuickTime file creation in Control Room.
- Added updated DNxHR codec to Control Room and Adobe Capture plugin which improved DNxHR capture performance.
- Fixed issue where AJA System Test failed when trying to test DMA speed on T-Tap.
- Fixed issue where DV and DVCProHD codecs didn't appear in Control Room and in Premiere Pro capture plugin when AJA hardware was in 25 or 50 fps modes.
- Fixed issue where 1080p50/59.94/60 projects in Media Composer would always switch AJA hardware into 3G SDI Level A. Mode. Dual Link and Level B were not possible. Now, the user can choose this setting in AJA Control Panel before Launching Media Composer, and the setting will be honored.
- Fixed issues with controlled capture failing in Control Room.
- Changed DNxHD naming conventions in AJA Control Room to match the conventions in the DNxHR.
- Fixed issue where controlled capture in AJA Control Room always created a file with 16 tracks of audio.
- Fixed issue where 10-bit HDMI Input to lo4K was being handled as 8 Bit.
- Fixed Capture in Premiere Pro using DV compression.
- Fixed issue with bad test pattern output from lo 4K after host computer sleeps (firmware update).
- Fixed issue where capture of several DNxHD clips in AJA Control Room causes Control Room to crash.
- Changed macOS and Windows installers to not install the legacy AJA After Effects Preview plugin by default. The plugin is still inside the installer, but must be selected by the user in a custom install. This older plugin should only be used in situations where performance of Transmit is not fast enough.
- Fixed issue in KONA 3G where RP-188 Timecode could not be read correctly from SDI Input 2 (firmware update).
- Fixed issue where controlled capture in Control Room appears that the out value changes after the capture begins. The out point is correctly executed, but the value appears cosmetically incorrect.
- Fixed issue where frames might be skipped at start of timeline playback from Media Composer.
- Fixed issue where first frame of playback after scrub might be incorrect frame in Media Composer.
- Fixed issue where looped playback in Media Composer could cause an exception error.
- Fixed issue where Video and Audio millisecond offsets in Premiere Pro Playback could cause video to skip a few frames at the beginning of timeline playback.
- Fixed cosmetic issue in AJA Control Room where VTR out point appeared to change after a controlled capture began.
- Fixed issue in KONA LHe+ where AES XLR could not be selected as the Audio Input source in the AJA Control Panel. Requires firmware update.
- Fixed issue on lo 4K where analog audio settings were not reflected correctly in AJA Control Panel.
- Fixed Frame accuracy during capture of 720p formats in Adobe Premiere Pro.
- Improved device control in Adobe Premiere Pro with fractional frame offsets in the device control plugin. Fractional frame offsets can be used to tweak capture and layoff offsets by less than one frame when edits and captures are out intermittently. Please contact AJA support for more information.
- Fixed capture of R-188 Timecode in Premiere Pro.
- Fixed issue with T-Tap and lo Express not holding their correct video format settings in Premiere Pro.
- Fixed issue with RGB HDMI input not working correctly in lo 4K.
- Fixed issue with AJA Control Room not inserting the first frame of audio during an insert edit.
- Fixed issue with AJA Import plugin for Adobe Photoshop where captures would have crushed levels.
- Fixed issue with VPID on 2-Sample Interleave formats being wrong.
- Fixed banding in lo 4K and Kona 4 with HDMI output of 4K and UltraHD.
- Fixed issue in KONA 4 and lo4K where images get skewed if the downstream keyer is being used.
- Fixed issue where switching video formats can cause the picture to lock up in the wrong place vertically.
- Fixed Audio and Video offset settings in Premiere Pro Playback Settings.

## Known Issues, Limitations and Additional Details

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### General

- ‘System Sleep’ or ‘Hibernation’ should not be used with KONA and Io devices. All sleep and power efficiency modes should be disabled in the operating system settings.
- Do not run v15.5 software with anything other than the 15.5 driver. Using older drivers in combination with v15.5 or later is not a supported configuration and will likely cause disruptive results.

### Important macOS Mojave installation information

- With the introduction of macOS Mojave (v10.14), Apple now requests that third party kernel extensions be “notarized” by Apple. AJA’s device driver kernel extension has been notarized starting with AJA Software version 15.2. Apple has indicated that for security purposes, future macOS versions may prevent the loading of unnotarized device drivers, in which case, AJA software prior to v15.2 will result in AJA devices failing to operate (Unsupported AJA Device).

### Important macOS High Sierra installation information

- With the introduction of macOS High Sierra (v10.13), Apple now requires that third party application developers be identified during kernel extension installations. Failure to do so will make AJA devices fail to operate (Unsupported AJA Device).
- Depending on your macOS version and AJA Desktop Software installation history, the following installation outcomes are possible:
  - macOS Sierra and Earlier Supported Versions
    - No problems exist for AJA software installation or updates with these earlier versions of macOS.
  - Earlier macOS to High Sierra Update
    - No problems should occur if the AJA Desktop Software package is already installed on macOS Sierra (or earlier) and then update your Mac to High Sierra. The identification of AJA as a trusted developer is “grandfathered in” to High Sierra.
  - macOS High Sierra First AJA Desktop Software Install
    - No problems should occur if your Mac is running High Sierra macOS, you install AJA Desktop Software for the first time, and you follow the instructions shown during installation (Figure 1).
    - Do NOT click OK (Figure 1).

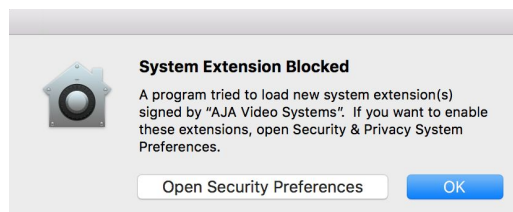


Figure 1 – First-time installation on macOS High Sierra

Instead click Open Security Preferences (or go to System Preferences>Security and Privacy) and then click Allow for AJA Video Systems (Figure 2).

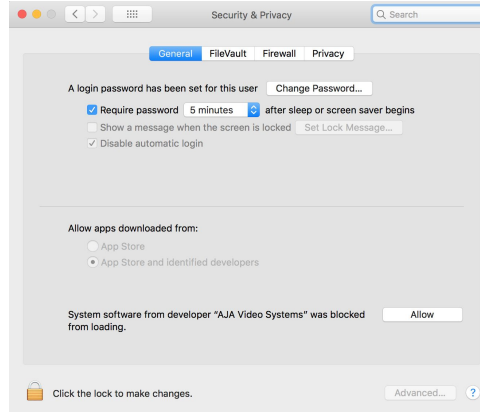


Figure 2 — click Allow for AJA Video Systems

*NOTE: If after successful installation, you remove AJA applications from your computer using the AJA Uninstaller developer identification is retained by macOS High Sierra. Re-installation should proceed without any problems.*

- Recovery from Installation Approval Failure:
  - If you clicked OK during installation and skipped the developer approval step, the AJA Desktop Software installation will complete, but macOS' GateKeeper security will prevent AJA's device driver from loading, and AJA devices will not operate (Unsupported AJA Device).
  - Apple has allowed a time window, within which you can belatedly approve a developer after installation. If you go to System Preferences>Security and Privacy, within 30 minutes of installation, the developer message and Allow button will be available for use. After 30 minutes, however, the message and button are removed from the window. Recovery from this involves uninstalling all AJA files (some manually), reinstalling the AJA Desktop Software package, and clicking on Allow for AJA Video Systems developer.
  
- Recovery from Installation Approval Failure (2nd Level if necessary)
  1. Run the AJA Uninstaller, located in the AJA Utilities folder in the Mac Applications folder.
  2. Access the Users Library, which is hidden. To access the library:
  3. Go to the Finder.
    - In the Finder Menu Bar and click on Go.
    - Hold down the Option key. The Library folder appears as long as the Option key is held down.
    - Go to Library>Preferences and delete all com.aja.\*.\* files. There may be one file or several files.
  4. Remove AJA Control Panel from the Dock, if applicable.
  5. Restart the Mac.
  6. Install the AJA Desktop Software package.
  7. During installation click on Open Security Preferences (or go to System Preferences,>Security and Privacy).
  8. Under the General tab click on the Allow button for AJA Video Systems. The button is only available for 30 minutes.

## 12-bit RGB support (4K/UHD)

- Additional 12-bit RGB support has been added for KONA 5, Io 4K plus, Avid DNxIV, Io IP, Avid DNxIP enabling an expanded range of HDR and other 4K/UHD workflow possibilities via both HDMI 2.0 and SDI. Note that 12-bit RGB support includes frame rates up to 30p only.
- 12-bit RGB via HDMI from KONA or Io will deliver 12-bit to the downstream (sink) device provided it is capable, otherwise the bit depth can be down-rated based on the capabilities of the monitor or other sink (communicated to KONA via sink device's EDID):
  - In AJA Control Panel "Auto Detect" will put out the signal that works with the receiving monitor.
  - In AJA Control Panel "Auto-Set" will use what the Frame Buffer is set to.

## AV Sync

- For highest accuracy, always use the Video and Audio coming from your AJA device for monitoring. Using an AJA device for Video monitoring, but using the host for Audio monitoring may result in AV sync or drift issues. If these issues arise it is a function of your host system/OS, and AJA recommends monitoring Audio via AJA device.

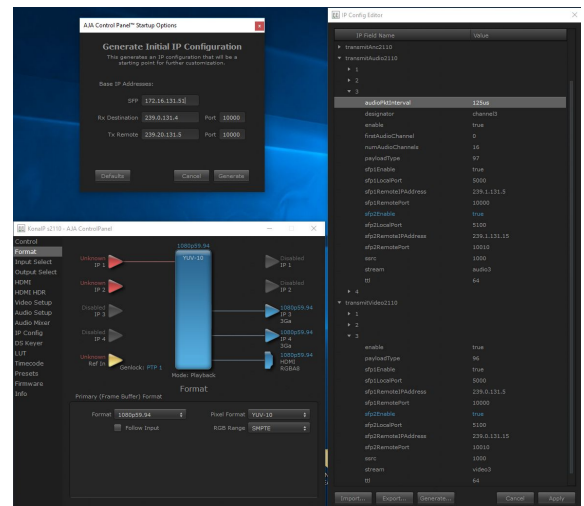
## KONA 5

- KONA 5 bitfile name change.
  - There remain two main KONA 5 bitfiles: "KONA 5" and "KONA 5 (8K)".
- "KONA 5" bitfile supports:
  - Up to 4K I/O YCbCr & RGB (including Color Space Conversion)
  - AJA Control Panel (including AJA Audio-Mixer)
  - AJA Control Room
  - Adobe Premiere Pro
  - Apple FCP X
  - Avid Media Composer
  - Telestream WireCast
  - Video Mixer/Keyer up to HD 60p
- "KONA 5 (8K)" bitfile supports:
  - Up to 8K I/O YCbCr \*or\* RGB (no Color Space Conversion)
  - Full 2SI path for the 8K raster (in addition to a Square Division presentation of 4x 4K 2SI)
  - 8K to 4K subsample via HDMI 2.0 out
  - AJA Control Panel (not including AJA Audio-Mixer)
  - AJA Control Room
  - Adobe Premiere Pro
  - Video Mixer/Keyer not supported
- If loading KONA 5 (8K) bitfile, be aware of the following:
  - For 4K/UHD 12G-SDI and 6G-SDI are supported for I/O.
    - No 3G-SDI or 1.5G-SDI support for 4K/UHD.
    - 3G-SDI or 1.5G-SDI for 2K/HD I/O is supported.
  - Host system performance is going to be the gating factor in what frame rate is achievable for 8K Capture or Playback. Test Playback first, since it's unlikely a system which cannot play 8K will be able to capture 8K.
  - When set to Square Division, I/O configurations must be manually set using the frame buffer in AJA Control Panel (see below).
  - To set up for 8K Input with 2SI, under 8K Transport choose "Auto" or "8K-2SI"
  - To set up for 8K Input/Output with Square Division, under 8K Transport choose:

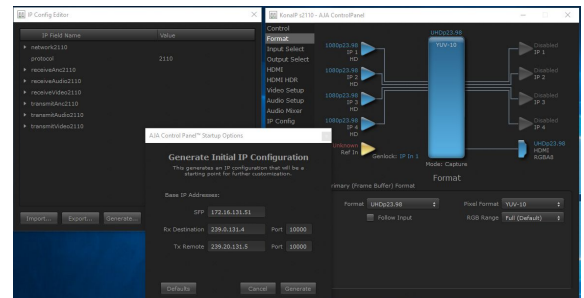
- “4x8K” for either 8K YCbCr HFR or 8K RGB LFR over 4 connections
- “2x8K” for 8K YCbCr LFR (6G-SDI) over 2 connections
- AJA System Test is not presenting data in a user friendly manner for 8K/UHD2.
- AJA Control Room, Adobe Premiere Pro and Adobe After Effects are supported for 8K/UHD2 Input and Output. There is currently no support for Apple, or Avid applications.
- Level-A only for 8K/4K. Level-B support is only relevant to HD signals.
- 10-bit I/O with YCbCr., 12-bit I/O with RGB only.
- Apple ProRes family supported (encode and decode).
- Audio is present and can be Captured or Output. AJA Control Panel Audio Mixer is not present.

## KONA IP and Io IP

- KONA IP and Io IP, with ST 2110 firmware:
  - Is capable of supporting ST 2022-7 for Transmit- set SFP 2 to “true”.
  - The maximum resolution and frame rate supported via ST 2022-7 is 2K/HD 60p.
  - There is no ST 2022-7 support when using ST 2110-23.
  - It is currently necessary to enable Closed Captioning in AJA Control Room in order to Capture Time Code.
- Io IP and DNxIP only, with ST 2110 firmware:
  - SDI Monitor Spigot can display ANC data (2110-40) for playout or pass-through, derived from the SMPTE ST 2110 metadata essence. Note that this functionality is also present when using ST 2022-6 firmware.
- Guidance notes for redundancy with SMPTE ST 2110 via ST 2022-7 (Transmit only).
  - For JSON configuration:
    - Go into Advanced Ip Config / Generate for JSON
    - Set Tx Remote to the IP address to which you are sending
    - And, Manually set the frame rate in the frame buffer within AJA Control Panel.

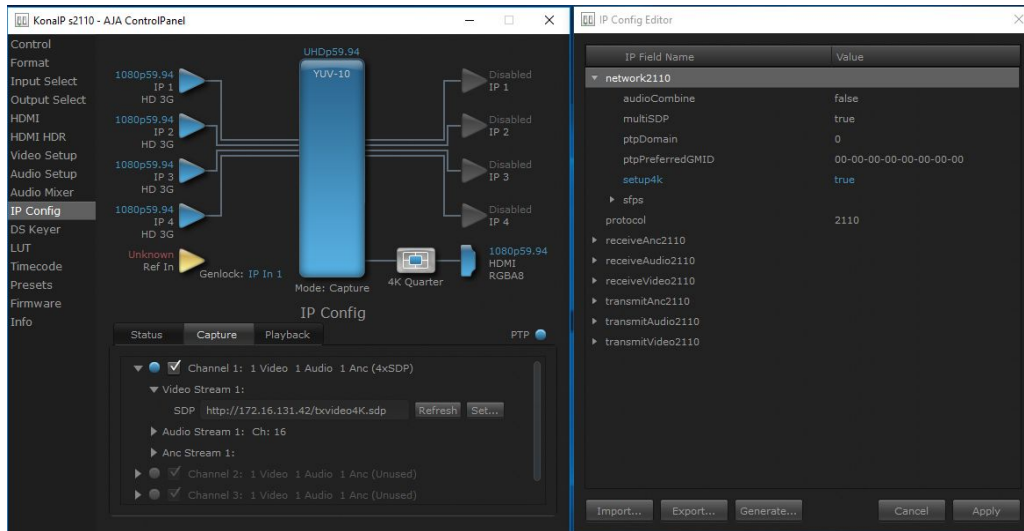


- Guidance notes for SMPTE ST 2110-23 (information not yet available in KONA IP / Io IP manual).
  - For JSON configuration:
    - Go into Advanced Ip Config / Generate for JSON
    - When doing this behavior is to now automatically set up for 2K/HD on SFP 1, or 4K/UHD across both SFPs
    - Set Tx Remote to the IP address to which you are sending
    - On receiving device use this same IP address (i.e. Rx IP address should match your Tx IP address)
    - Also, un-check follow input on the receiving Kona IP
    - And, Manually set the frame rate in the frame buffer within AJA Control Panel.





- For SDP's:
  - Change the 4K/UHD network settings in the JSON 4K setup from false to true
  - Un-check follow input
  - Then just one SDP is entered in capture input 1 and sets automatically for all 4 streams
  - Manually change frame buffer on any format change



## lo 4K Plus

- Currently, some SD sources do not work correctly when ingesting via HDMI. Please contact AJA Support to report this issue if you run into it.

## lo 4K

- With some monitors, HDMI output is cropped or scaled not showing outside border pattern. Workaround for now is to use the monitor's pan and scan settings.

## lo XT

- When using SDI 2 for down-conversion, note that the down-converted Video path is delayed by 1-2 frames, whereas the Audio path is not delayed. Instead, audio will remain in sync with the primary, non down-converted, output on SDI 1.

## KONA LHi

- RP188 LTC playback on macOS is not currently functional. RP188 LTC capture is functional. RP188 LTC pass through is not a feature of the card.



- When using level A 1080p50/59.94/60 YUV input to an RGB frame buffer for capture, the image is scrambled or non-working for various NLEs. In Adobe Premiere CC, this issue causes the app to become unresponsive when using an RGB10 frame buffer/capture codec. Note that Level B works correctly with all supported NLEs.
- KONA LHi has only one audio system and is limited to capturing or outputting one channel at a time with audio. In applications where multiple video inputs and outputs can be used at the same time, the SDI input will have audio and the HDMI input will not. Additionally, if both input and output are used simultaneously and independently (as opposed to output passed through from input) only one channel will have audio.

## KONA HDMI

- Currently, some SD sources do not work correctly when using channels 1 and 2. Please use channels 3 and/or 4 for SD ingest.
- Occasionally, HDMI sources do not work correctly. Please contact AJA Support to report this issue if you run into it.

## AJA Control Room

- MXF OP-1A capture in AJA Control Room does not support the following formats: 720p60, 1080i30, 1080p30, 1080p60.

## Adobe Applications

- Video Monitored via the Adobe Premiere Pro Capture Window (GUI) may flicker despite capturing valid content to disk. Likewise, taking focus away from the Adobe Premiere Pro Capture Window, will result in black shown within the monitoring window. However capture of content will not be affected
- Previous versions of AJA desktop software will not show video preview during capture on Premiere 2020. However capture of content will not be affected.
- Audio output from AJA devices can be compromised when sequence frame rates do not match hardware frame rates.
  - This can occur when working in 720p formats other than 720p-50, 59.94, 60.
  - To work around this limitation, go to Premiere Pro Playback preferences, and set the AJA video device to 'Match Control Panel'. Then set up a cross-conversion to output 1080 format. For example, if using a 720p-23.98 project, set the AJA Control Panel to cross-convert to 1080PsF-23.98, which is a valid SDI output.
- Timecode is not stored in crash captured clips when the timecode source is RS-422. If this is required, use embedded timecode instead of RS-422 timecode.
- Variable frame rates (VFR) with pull down added are not adjusted for timecode.
- 'Crash Capture' and 'Print to Video' will work on Varicam frame rates over HD-SDI, but 'Insert Edit', 'In/Out. Capture', and 'Batch Capture' will not.
- When insert editing on Panasonic decks, destructive edits may occur too early on the tape. In order to avoid this, be sure that menu item 202 "ID SEL" is set to "OTHER".
- Preroll shorter than 4 seconds is not recommended for use with any deck, for capture or layback.
- Premiere Pro defaults to 'Display First Field' in its monitor wing menus. If interlacing issues appear on the output of AJA hardware, try changing this setting to 'Display Both Fields'.
- When changing from a DF tape to an NDF tape on the same deck, with the Premiere Pro capture window open, the NDF/DF status may not be picked up correctly. If this happens, the timecode values seen in the Premiere Pro capture window may be incorrect.

- This Issue will NOT affect users unless they are changing between DF and NDF tapes on the same deck, in the same Premiere Pro Capture session.
- To Avoid This: Always give the new tape a new name in the 'Tape Name' dialog that appears when changing tapes and be sure to let the new tape spool up all the way before clicking the 'OK' button on the dialog.
- To Fix This: Close the Premiere Pro capture window and reopen it.
- When capturing from or exporting to a Panasonic D5 deck, the timecode source setting in the AJA Premiere Pro Device Control plug-in must be LTC+VITC.
- MXF OP-1A capture in Adobe Premiere Pro does not support the following formats: 720p60, 1080i30, 1080p30, 1080p60.

### Avid Media Composer

- Media Composer 2019.11 and after, with AJA KONA 5, KONA 4, KONA IP, Io 4K Plus, Avid DNxIV, Io IP and Avid DNxIP is able to drive AJA Control Panel directly, so adjusting HDR parameters manually in AJA Control Panel should not be necessary.
- Avid Media Composer may occasionally take up to 15 seconds to quit. This is not an indicator of a problem.
- For the AJA device to be selectable for audio-only capture in the Capture Tool, it must first be selected in the Capture Tool:
  - Open the Capture Tool
  - Select both the Video Input and Audio Input as AJA KONA or AJA Io
  - Initiate your audio only capture
- For the AJA device to be selectable in the Audio Punch-In Tool, it must first be selected in the Capture Tool:
  - Open the Capture Tool
  - Select the Video Input as AJA KONA or AJA Io
  - Close the Capture Tool
  - Open the Audio Punch-In Tool
  - Select the Input Device as AJA KONA or AJA Io
- Indefinite looping of the timeline with Open I/O plug-in installed may cause Avid applications to stop playback and give an error message.
- The AJA hardware genlock may switch between 'Input' and 'Reference' when 'Reference' has been selected in the AJA Control Panel. Specifically, this is known to happen when attempting to batch capture in Media Composer, causing some clips in the batch to not be captured. To work around this issue, select 'Input' genlock in the AJA Control Panel when batch capturing.
- Occasionally analog video input will not be detected correctly in the Media Composer Capture Tool. As a workaround, play the source video when you start up Media Composer.

### Telestream Wirecast

- When configuring a multi-channel card such as Io 4K or KONA 4, the inputs must be configured first (using AJA Multi-Channel Config application), if you plan to use the live program output feature. This will set the master clock for the card (either NTSC or PAL), otherwise the card will be set to 1080i-29.97 by default and could cause the card to attempt a mix of PAL and NTSC clocks. Be sure to configure all of your inputs and outputs in AJA Multi-Channel Config prior to launching Wirecast.

## AJA TV

- AJA TV currently (v14.3 through v15.2.2) can't acquire AJA device.

## QuickTime to DPX Translator

- QuickTime to DPX Translator crashes on launch. This results from QuickTime deprecation. Use a pre v15.0 version of AJA Desktop Software if you need this functionality.

## Technical Support

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AJA Technical Support is free and available to help you answer questions or resolve issues with any of your AJA products.

### To contact AJA Technical Support:

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