AJA Desktop Software Release Notes - v17

macOS v17 drivers and software for KONA, Io and T-TAP Pro

Introduction

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AJA Desktop Software

This unified software, driver and firmware package contains everything needed in order to use AJA video I/O hardware.

The following AJA applications are installed:
- AJA Control Panel v17:
    - For setup and control of your AJA KONA, Io or T-TAP Pro product, including firmware updates.
- AJA Control Room v17:
    - For high quality capture, monitoring, playback and output.
- AJA System Test v17:
    - For testing storage to determine if it will be possible to sustain frame rates for chosen format(s).
- AJA Multi-Channel Config v17:
    - For setting up video I/O for use with Telestream Wirecast.
- AJA NMOS v17:
    - Optional SMPTE ST 2110 application providing discovery, registration and control for AJA IP devices.

Operating System

This version of AJA Desktop Software supports Macs with both Intel processors and Apple silicon running macOS 13.x (Ventura) or later. It also supports older versions of macOS with Intel processors, from macOS 11 (Big Sur).

- **Before running this installer, best practice is to uninstall all previous versions of AJA Desktop software.**

If presented with macOS / Thunderbolt security messages when installing AJA hardware, see "Known Issues, Limitations and Additional Details" near the end of this document for instructions and notes specific to macOS 13.x (Ventura), macOS 13.x (Monterey), macOS 11.x (Big Sur), macOS 10.15 (Catalina), macOS 10.14 (Mojave), and macOS 10.13 (High Sierra)

Third Party Software

AJA KONA, Io and T-TAP Pro 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:

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AJA hardware also comes with out-of-the-box support for popular software from Adobe, Autodesk, Avid, OBS Project and Telestream on MacOS and/or Windows as follows:

- **Adobe -** Premiere Pro, After Effects, Photoshop, Character Animator, Audition 2024, 2023, 2022
- **Apple -** Final Cut Pro 10.6.x, 10.5.x, 10.4.x
- **Autodesk** - Flame, Flame Assist, Flare 2023.3 Update (macOS)
- **Avid** - Media Composer - 2022.x, 2021.x, 2020.x, 2019.x, Pro Tools 2023.x, 2022.x, 2021.x, 2020.x, 2019.x
- **OBS Project** - OBS Studio 28.1.x, 27.2.x
- **Telestream** - Wirecast 15.x, 14.x, 13.x

In all cases, AJA recommends checking the system and OS requirements for 3rd party software packages with the software creator/vendor directly, to ensure a supportable configuration.

Relevant Products

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The following products benefit from this update:

- KONA X
- KONA 5
- KONA IP
- KONA 4
- KONA 1
- KONA HDMI
- KONA LHi
- KONA LHe Plus
- T-TAP Pro
- Io 4K Plus
- Io X3
- T-TAP
- Io XT
- Io IP
- Avid Artist DNxIV
- Avid Artist DNxIP

Recommendations in v17

- It is recommended to set the Genlock setting to Auto for all AJA devices. For Io 4K Plus and Avid DNxIV only, see your manual for additional options and feature details.
- Using older drivers in combination with a newer software version (or vice versa) is not a supported configuration and will likely cause disruptive results.
- If using an AJA Thunderbolt device:
    - Upon initial installation, it may be necessary to locate and use the "Approve Attached Device" dialog in the Thunderbolt software on your system. For step-by-step guidance, see "Thunderbolt Devices" under "Known Issues, Limitations and Additional Details" below.
    - If presented with Thunderbolt security messages when installing AJA hardware, allow, and continue with installation.
- For Thunderbolt 3 devices, always use a certified, high quality Thunderbolt 3 cable to connect your AJA device to the host computer. The cable should have a Thunderbolt logo and the number 3 on it.
    - Passive cables can be up to 1.6 feet (0.5m) maximum length.
    - Active cables up to 6.5 feet (2m) can also be used.
- This update has also been tested with Thunderbolt 4 on the Apple Mac Studio hardware and should work on any other Apple Thunderbolt 4 device.
- **For issues around the AJA Driver not loading nor being recognized on Apple silicon powered hardware:**
    - Beginning with macOS Ventura, users must use a partition on the internal drive in order for our KEXT to load.
    - The Security Policy for this partition must be set to "reduced."
    - Note that the installer for macOS now includes the following information:
        - **Before Installing AJA Desktop Software:**
            - Upgrade to macOS "Big Sur" v11.0 or later.
            - Disable any virus protection software that may be installed.
        - **IMPORTANT: On Apple silicon Macs running macOS "Ventura" v13.0 or later:**
            - Shut down your Mac.
            - Press and hold the **Power** button to start in **Recovery Mode.**
            - Launch the **Startup Security Utility.**
            - Choose the startup drive that you intend to install AJA software on.
            - Set the **Security Policy** to **Reduced Security.**
            - Enable the **"Allow user management of kernel extensions from identified developers"** setting.
            - Click **OK**, then exit the **Startup Security Utility**... then reboot.
            - Re-launch the AJA Desktop Software installer.
        - Note that AJA Desktop Software requires:
            - **16 GB RAM** minimum
            - **32 GB RAM** minimum recommended for **UHD/4K or High Frame Rate applications**
            - Storage with adequate bandwidth to sustain capture or playback of the material you'll be working with
            - macOS "Big Sur" v11.0 or later

- Note that AJA Desktop Software v17 still works with EOL products, including Io XT/Io 4K/KONA IP/Io IP/T-TAP. However, releases after v16.2 were no longer qualified with end-of-life products. What this means is that issues affecting these EOL products may arise that are not caught during the testing phase for new software releases, and these issues may not be fixed. In some cases, AJA may elect to fix issues that affect EOL products, but that cannot be guaranteed.
- Note that the macOS driver will no longer load on Apple silicon-based Macs from an external boot drive, due to new security requirements.
- **Note that it is necessary to run AJA Control Panel prior to running AJA Control Room or third-party applications.**

Fixes and Improvements in v17

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.

- Removed extra, superfluous uninstallers for macOS versions of AJA Desktop software. These uninstallers were not required - now there is a single uninstaller.
- AJA Control Panel now includes the ability to generate an Audio Tone to accompany test patterns.
- Tone Generator Controls on macOS now only appear in the Audio Setup pan only if the connected AJA capture device supports Extra Host Audio.
- Added Closed Caption support for H.264 and H.265.
- Added playback controls for Reverse, Pause and Forward to AJA Control Room Transport Menu.
- Added the Avid DNxHD HQX codec to AJA Control Room's list of Interlaced Capture codecs.
- Updated AJA Control Panel icon for macOS installations.
- AJA Control Panel now supports Fast-User-Switching on all supported operating systems.
- AJA Control Room now utilizes FFMPEG v5.1 and it is now possible to capture H.264 and H.265 video on Intel powered iMac Pro.
- AJA Control Panel has received UI improvements including improved priorities of status messages, improved severity levels colors (critical-red, warning-yellow, notice-blue), added tooltips to provide status specific details and updated task states (Disabled, OEM, Standard).
- Fixed an issue affecting AJA Io IP product in which a restart of the device was required on disconnecting and reconnecting the Thunderbolt connection.
- Fixed an issue in which AJA Control Room was unable to capture in macOS Monterey and Ventura, on iMac Pro 2017 and Mac Pro 2019 (Intel CPU, AMD GPU).
- Implemented a 2 GB reserve buffer limit in macOS for AJA Control Room to address performance issues with H.264 media formats.
- Fixed an issue in AJA Control Panel in which the "Info Panel: Fas firmware switching" was displaying "Needs Power-Cycle" warning under VideoProc unnecessarily.
- Fixed an issue affecting REDCINE-X Pro application where macOS devices would kernel panic when AJA devices were connected, after REDCINE-X Pro was restarted.

- Fixed an issue affecting all AJA capture devices in which a format change, such as 10-bit YUV 4:2:2 at 1080p59.94 via 3G B (OR) at UHDp59.94 via 12G changing to 10-bit YUV 4:2:2 at 1080p59.94 via 3G A, the secondary device would fail to lock and fall into a failed state.
- Fixed an issue in AJA Control Room in which the application would occasionally crash when a device was removed. This issue was seen with AJA T-TAP Pro and Io X3 and possibly other devices.
- Fixed an issue affecting the Audio Tone in AJA Control Panel on most AJA devices. Note that this issue is still present when using the KONA 5 in 12-bit mode.
- Confirmed an Avid-fixed issue that was causing intermittent A/V synchronization during playback in Avid Media Composer on AJA capture devices.
- Fixed an issue in which the AJA Control Room scripting tutorial link was linking a general support page, rather than the correct tutorial page.
- Fixed an issue affecting AJA Control Room in which the application would display a misleading error message when a capture path was invalid. The error message displayed is now more specific.
- Fixed an issue affecting all AJA capture devices in which SD capture on H.264/H.265 was failing with black video with the audio present.
- Fixed an issue affecting the AJA KONA LHi in which a kernel message was being incessantly displayed, requiring force closure of the AJAAgent process.
- Fixed an issue affecting the AJA Io X3 in which analog audio was not being properly passed to the Voice Over (VO) tool in Adobe Premiere Pro.
- Fixed an issue in AJA Control Room that was causing an occasional indefinite hang upon exiting the application.
- Fixed an issue in which AJA Control Room would cause system lockup when playing certain videos with playback queues enabled. This issue was resolved by implementing a 2GB maximum size for queue depth.
- Improved performance in AJA Control Room when capturing on Apple silicon powered macOS systems.
- Fixed an issue in which AJA Control Room would always show yellow/blue thumbnails for Avid formats.
- Fixed an issue in which AJA Control Room would cause a kernel panic when attempting to capture YUV 4:2:2, when used with AJA Io 4K Plus and AJA Io X3 devices.
- Fixed an issue that was causing AJA Control Room to not be able to capture MP4 (HEVC, H.264) on Mac Studio systems.
- Fixed an issue that was causing dropped frames in AJA Control Room when playing back ProRes 4444.
- Fixed an issue with the AJA System Test icon displaying at an improper size compared to other AJA icons.
- Fixed an issue with the AJA Io 4K Plus in which SDI ports would operate intermittently.
- Fixed an issue that was affecting KONA HDMI 4K/UHD capture not working on HDMI inputs 1 and 2 when used with Open Broadcaster Software (OBS).
- Fixed an issue that was affecting the AJA Io X3 in which a slight horizontal tear would appear on the Multiviewer output when receiving interlaced sources.
- Fixed an issue in the AJA Open Broadcaster Software (OBS) plug-in in which colors were being washed out, and showed up when testing with the black video frame test pattern.
- Fixed an issue in the AJA Open Broadcaster Software (OBS) plug-in in which SDI and HDMI output would frame-double and show every other frame only.
- Fixed an issue in AJA Control Panel in which a beep would be played when focus with a selected device was lost.
- Fixed an issue in the AJA Open Broadcaster Software (OBS) plug-in in which stereo audio volume levels were not consistent in channels 1 and 2.

- Fixed an issue in AJA Control Room where the application would occasionally crash when playing certain videos at increased speed.
- Fixed an issue in AJA Control Panel where the application would crash when the Install Button was clicked without a device connected.
- Fixed an issue in AJA Control Panel where SDI output transport drop-downs would shift to the right-hand side of the window while they are both selected.
- Fixed an issue affecting the AJA Io IP device in which it would fail to boot when AJA Control Panel was running.
- Fixed an issue in AJA Control Room in which playback would stop and memory leakage would occur once focus returned to the application.
- Fixed an issue in AJA Control Panel in which the application would fail to generate support logs when devices were absent.
- Fixed an issue in AJA Control Room in which the first capture would be saved as "untitled" regardless of the title entered.
- Fixed an issue in AJA Control Room in which the application was writing DNxHD video at 8-bit even though it was configured to write at 10-bit.
- Fixed an issue in AJA Control Room in which the application was writing DNxHR HQX video at 8-bit even though it was configured to write at 10-bit.
- Fixed an issue in AJA Control Room in which the application was writing DNxHR video at 8-bit even though it was configured to write at 10-bit.
- Fixed an issue in AJA Control Room in which VPID generation failures would occur when capturing at UHD/4K.
- Fixed an issue in AJA Control Room in which Capture would fail due to an overwrite logic confusion issue.
- Fixed an issue affecting the AJA IoX3 in which there was a flicker on SDI input with signal loss. This issue may have been noticed when running the Pomfort Livegrade Pro application.
- Implemented a copy suppression bit to disable audio insertion in data streams 2-4 in KONA 5 6G and 12G outputs to address an issue with Grass Valley routers.
- Fixed an issue in which the following AJA devices could enter an unstable state when bad data is passed while receiving unsupported 12G video formats: Io 4K Plus, KONA 5, and Corvid 44 12G.
- Fixed an issue in which the following AJA devices could enter an unstable state when bad data is passed while receiving unsupported 3G video formats: Io 4K Plus, KONA 5, and Corvid 44 12G.
- Fixed an issue in which H.264 captures were not working correctly in AJA Control Room.
- Fixed an issue in the AJA System Test Lite application for macOS in which it would be required to re-launch the app in order to select a new target disk.
- Fixed an issue affecting AJA Io 4K Plus and KONA 5 in which a Tri-level sync Genlock Reference in Playback Lock could cause output flashing and AJA Control Panel would indicate Unknown Format.
- Fixed an issue in which AJA Control Room could enter a failure state following an invalid signal with a false capture occurring.
- Fixed an issue where SD video would be passed with errors in the following AJA devices:
  Corvid 44-12G and KONA 5.
- Fixed an issue in which Timecode would drop out every 15 frames during the capture of SD video.
- Fixed an issue in which AJA Control Room was displaying the following text when encountering a device capture error: *Unable to open selected file or codec for capture. Streams Error 7: StreamsErrDevice Check codec and system settings.*
- Fixed an issue in which the AJA Io 4K Plus would fail to receive certain signals that were passed to it via HDMI.

# Known Issues, Limitations and Additional Details

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General

- Currently when installing AJA retail packages on macOS Ventura, Mac prompts you to install Rosetta in order to continue installation.
- "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.

Known Issues

- AJA Control Room may crash when switching clips during playback of clips that cause frame drops.
- AJA Control Panel RGB Range dropdown selection is not always accurate to what is being output on Frame Buffer or SDI output.
- AJA Control Room fails to insert a standard color space when writing DNxHR.
- AJA Control Panel outputs BGRA test pattern on the wire with a zero alpha channel resulting in the alpha channel component being set to zero.
- AJA Control Room may crash when ending a capture during a frame drop condition.
- Playback Deep Buffer with preload queues enabled has playback issues with uncompressed formats.
- AJA Control Room experiences performance issues with Deep Buffer queues enabled.
- AJA Control Panel may become sluggish and CPU load runs high after detaching devices.
- The icon for AJA Control Panel currently only contains icons up to the size of 256. This results in a missized icon being displayed in Finder when using View As: Column Mode.
- Right clicking the AJA Control Panel icon in the dock, and selecting "Quit" will result both in termination of the application as well as termination of the service.
- Fast Firmware updates will take longer when performing the update on Apple silicon systems.
- Occasionally AJA Control Room will fail to play a video immediately after a device is attached to the system. If this occurs, switch the application to a different mode and reinitiate the playback.
- Issue with Adobe After Effects 2023: Change in behavior from AE 2022 - previously, the frame rate would match the sequence frame rate, but it now holds the frame rate that was present on launch of the application. Workaround is to set the desired frame rate on AJA Control Panel before launching After Effects.
- Issue with AJA Control Room affecting Apple M1 Mac Studio: SD ProRes 422 captures with 8-bit buffer setting may exhibit scrambled video. Workaround is to use 10 bit v210 buffers.
- AJA Control Room may crash when a "Reserve Buffer Size" setting is entered.
- AJA Control Room may exhibit a memory leak when playing H.264 at increased playback speeds. This memory leak can eventually lead to a program hang, or a crash requiring a restart.
- Capturing uncompressed UHD High Frame Rate content may impact overall system performance.
- AJA Control Panel window may fail to show when clicking the Dock icon or app icon in Finder. Workaround: Click on the menu bar (tray) icon.
- Issue with AJA KONA X HDMI input not detecting SD (525i & 625I).
- Issue with KONA X not supporting 12-bit RGB, including HDR test patterns.

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Important macOS Monterey installation information

- Starting with macOS 12.0 (Monterey), new installations of AJA's Desktop Software must be v16.2 or later.
- In some cases, you may be asked to allow driver in security settings - and this may happen more than once.
- AJA shortcuts are automatically deleted from Dock upon uninstall starting in macOS 11.2.
- Follow the images below to navigate the security and installation dialogs in the successful order.
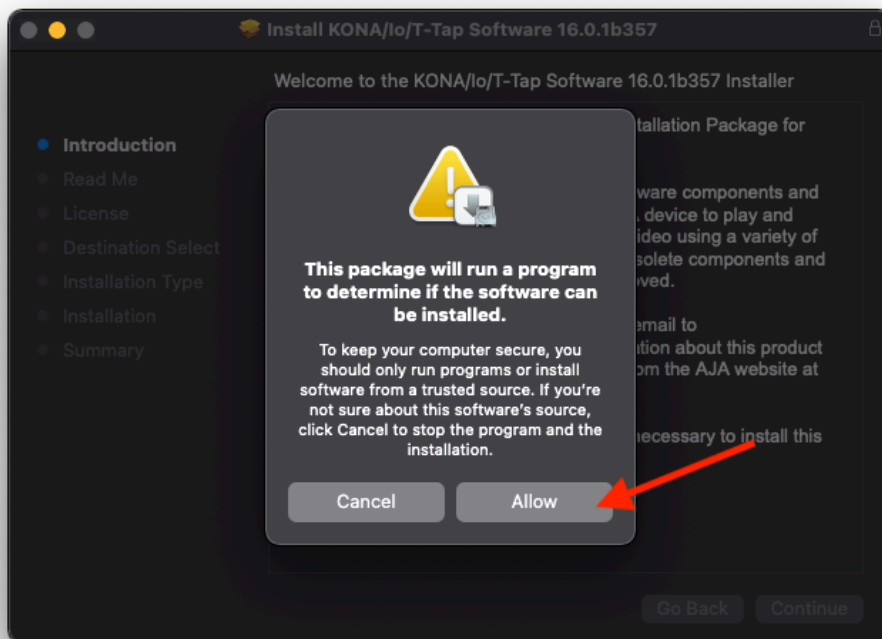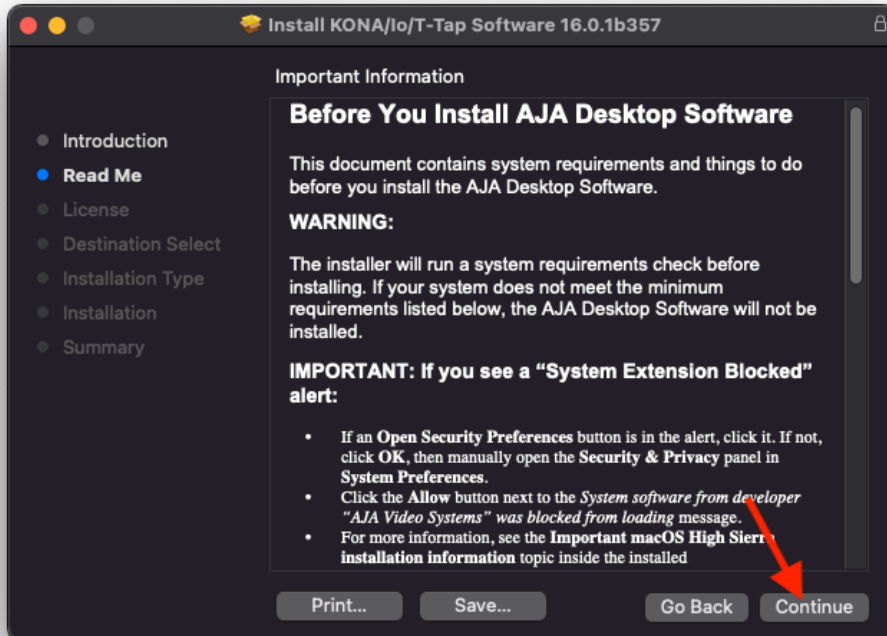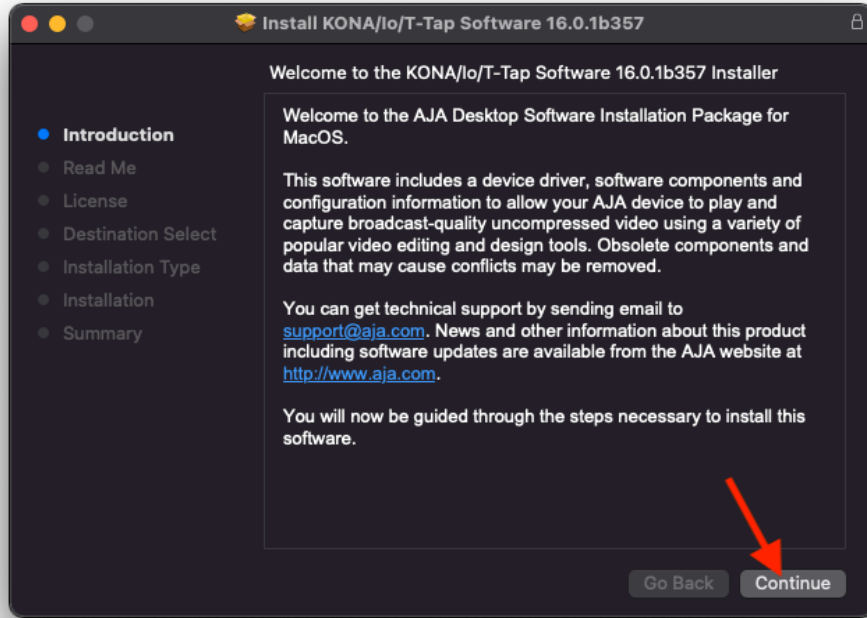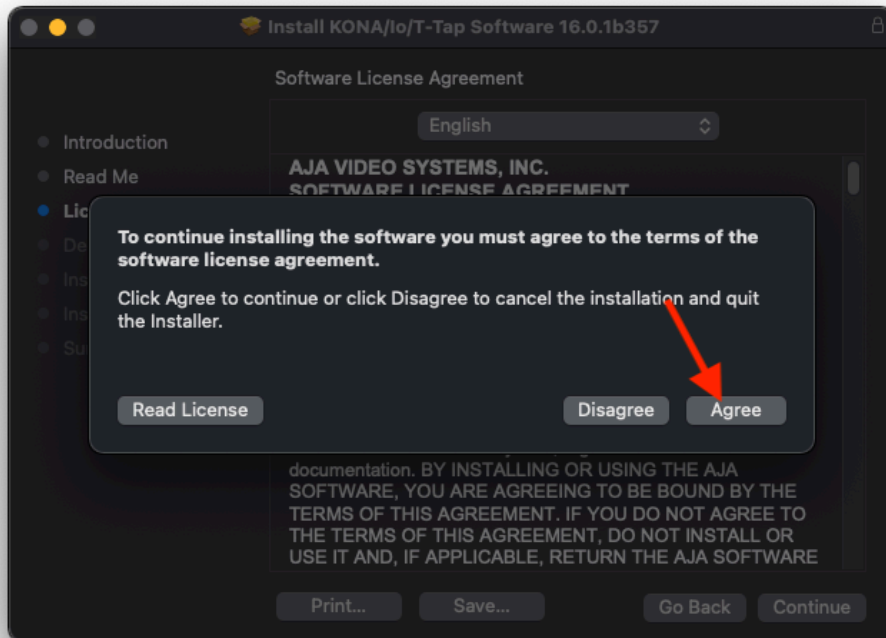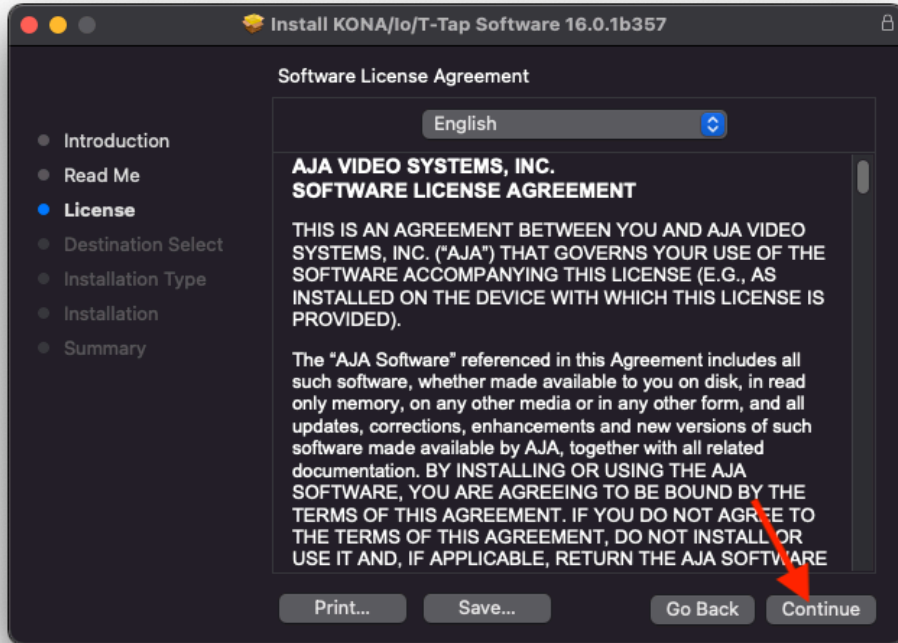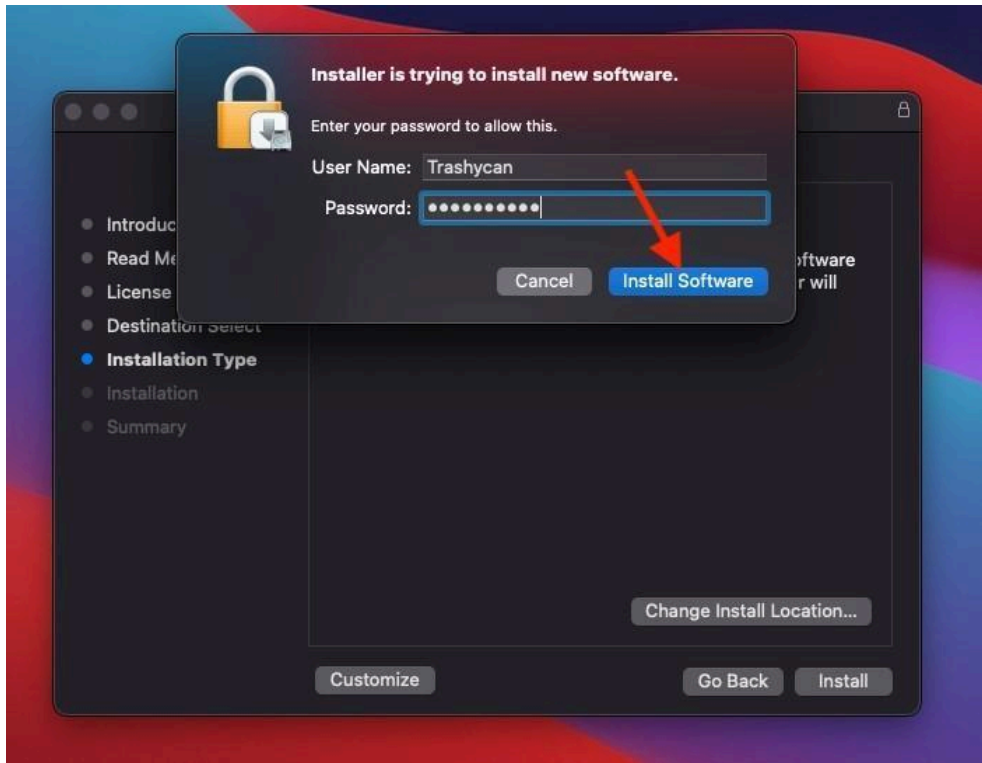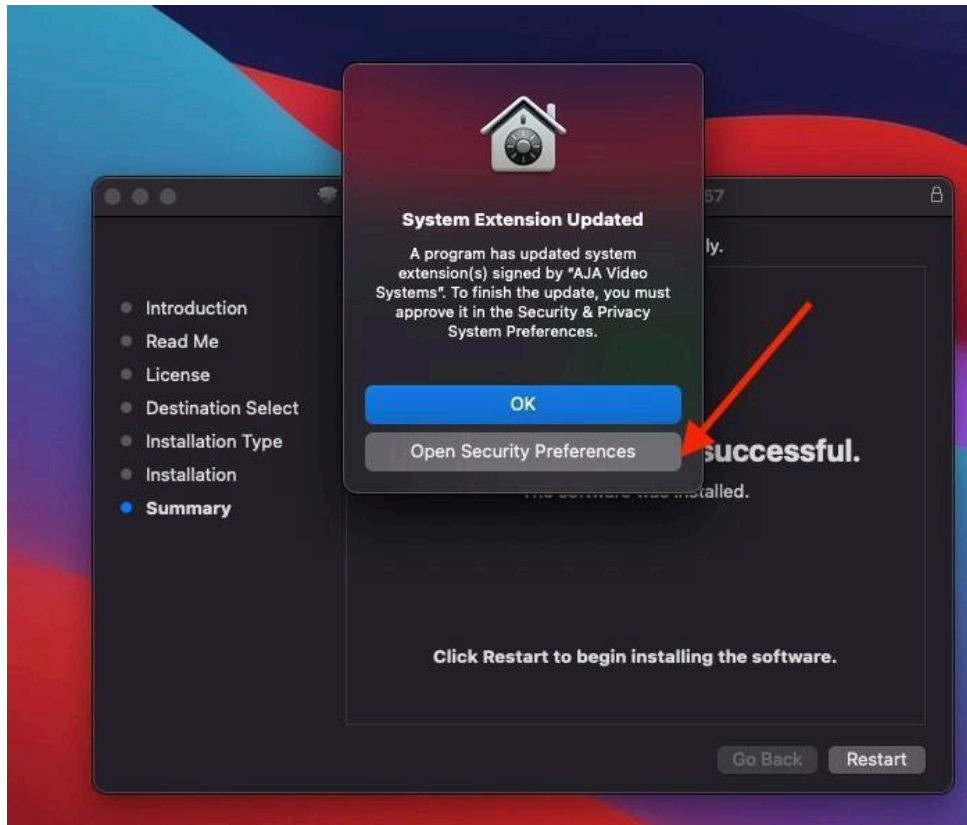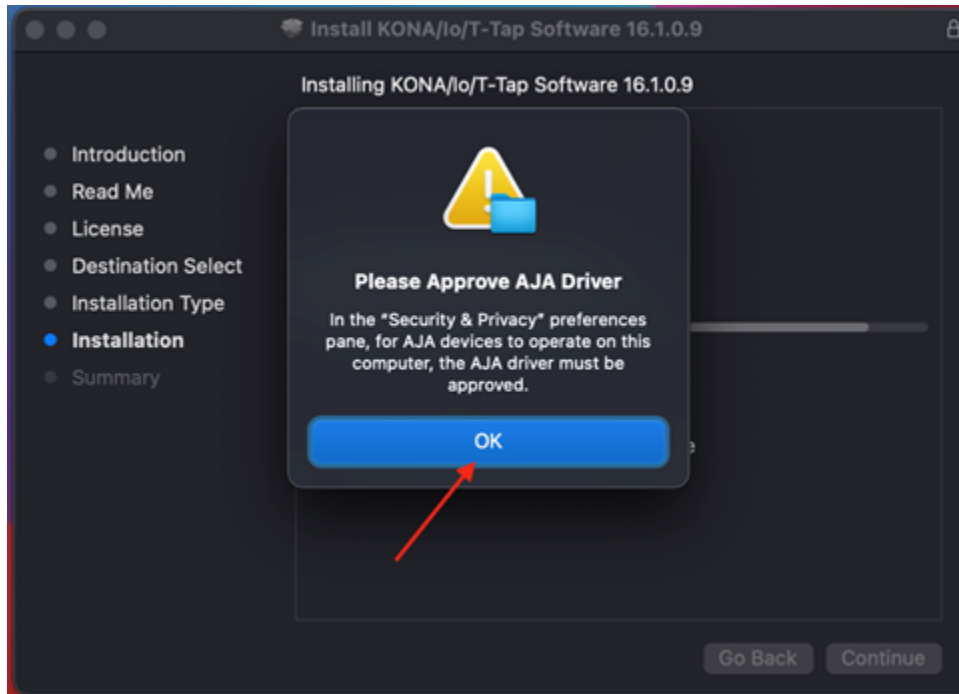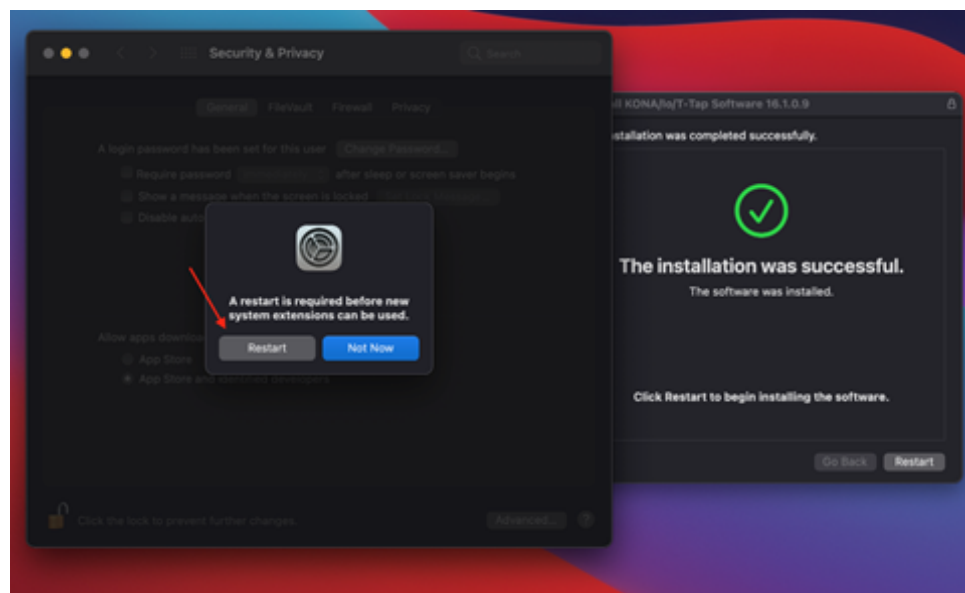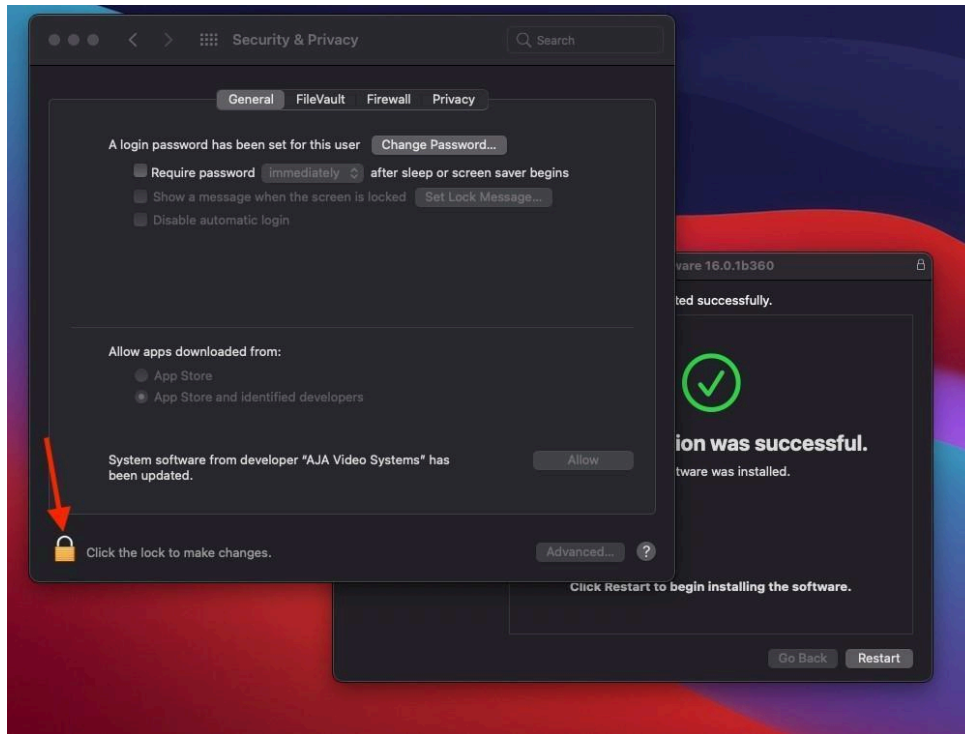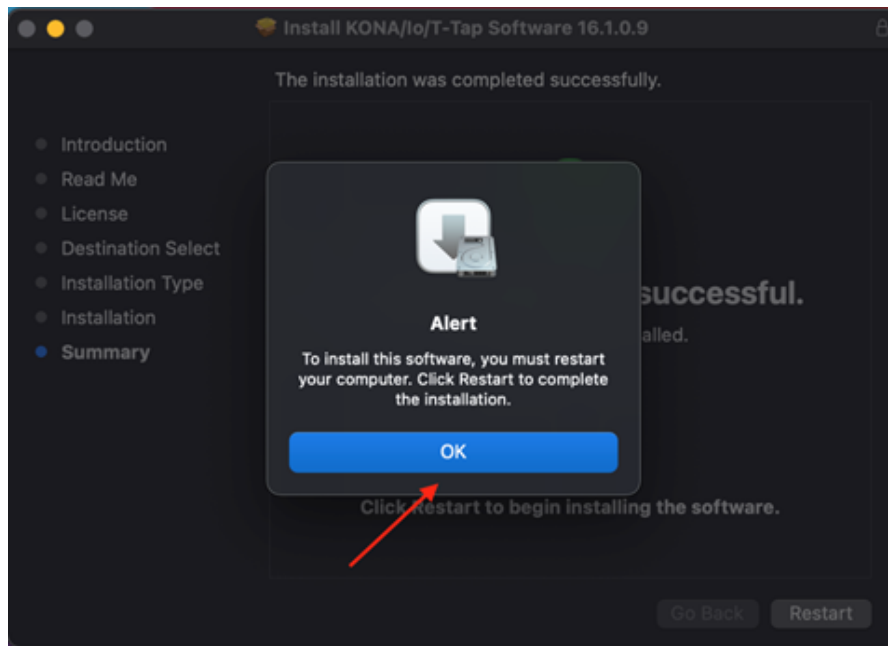
12-bit RGB support (4K/UHD)

- For working with 4K/UHD RGB 4:4:4 12-bit, use KONA 5 with the "KONA 5 (12bit)" firmware for the greatest flexibility via 12G-SDI and HDMI 2.0. 12-bit RGB functionality also exists with T-TAP Pro, Io 4K Plus and Avid DNxIV, but to a lesser extent.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

- Note that recently purchased (2023) KONA 5 cards will need to be used with AJA Desktop software version 16.2.6 or later.
- KONA 5 bitfile
    - There are three KONA 5 bitfiles, each tuned to harness the capabilities of the KONA 5 hardware in different ways "KONA 5", "KONA 5 (12bit)" and "KONA 5 (8K)".
- "KONA 5" bitfile supports:
    - Up to 4K I/O YCbCr & RGB (including Color Space Conversion)

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- AJA Control Panel (including AJA Audio-Mixer)
- AJA Control Room
- Adobe Premiere Pro
- Apple Final Cut Pro
- Avid Media Composer
- OBS Studio
- Telestream WireCast
- Video Mixer/Keyer up to HD 60p
- "KONA 5 (12bit)" bitfile supports:
  - Up to 4K I/O RGB (including 12-bit LUT support)
  - AJA Control Panel (including AJA Audio-Mixer)
  - AJA Control Room
  - Adobe Premiere Pro
  - Apple Final Cut Pro
  - Avid Media Composer
  - OBS Studio
  - 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 additional 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
  - Apple Final Cut Pro
  - Avid Media Composer
  - Video Mixer/Keyer not supported

KONA HDMI

- Audio channel configurations differ between Ports 1 and 2, vs. Ports 3 and 4.
  - AJA Control Panel has an audio channel swap feature to ensure compatibility.
- 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.

Io 4K Plus and Avid DNxIV

- New functionality introduced as of v15.5.3 for Io 4K Plus and Avid DNxIV provides for smoother and faster transitioning between Capture and Playback. See below under Media Composer for more notes, and consult the manual for full details.

- 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.

Io X3

- Some units shipped from AJA with incorrect Thunderbolt Firmware. This manifests as an issue whereby the "host" Thunderbolt 3 port is not recognized when a laptop host is running on battery power only (no laptop power supply in use). The workaround is to use the secondary "downstream" Thunderbolt 3 port, or apply power to the laptop host. For a permanent fix to this issue, please contact AJA Technical Support who may be able to solve this remotely.

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 Pro 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.
- AJA 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 LHe Plus

- KONA LHe Plus is not compatible with 2019 Mac Pro via PCIe slots.
- KONA LHe Plus is compatible with 2019 Mac Pro via Thunderbolt (i.e. PCIe card in Thunderbolt chassis)

KONA IP, Io IP and Avid DNxIP

- AJA Desktop Software v16.2 was the final official release for KONA IP, Io IP and Avid DNxIP.
- KONA IP, Io IP and Avid DNxIP can be used with three different firmware versions:
  - s2110 (ST 2110 YCbCr firmware)
    - 4K/UHD/2K/HD
    - Supports ST 2022-7 for Transmit (set SFP 2 to "true").
    - Does not support ST 2022-7 for Receive.
    - 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 for 4K/UHD
  - s2110 RGB12 (ST 2110 RGB firmware)
    - 2K/HD
    - Supports ST 2022-7 for Transmit (set SFP 2 to "true").
    - Does not support ST 2022-7 for Receive.
  - S2022-6 (ST 2022-6 YCbCr firmware)
    - 2K/HD

- Supports ST 2022-7 for Transmit and Receive.
  - It is currently necessary to enable Closed Captioning in AJA Control Room in order to Capture Time Code.
  - It is recommended to disable channels not in use i.e. disable Ch 3 when Ch 4 is desired.
  - The s2110 RGB12 (ST 2110 RGB firmware) is designed for post-production workflows and thus supports playback only for 2K/HD at 23, 24, 25.
  - A restart of AJA NMOS is always required following a firmware change.

AJA Control Panel

- AJA agent stops running following unplug of Thunderbolt device. This manifests itself most clearly when running more than one AJA device on the same host at the same time.
- Workarounds for macOS
  - Re-plug the Thunderbolt device, and the agent will restart.
  - Otherwise, on macOS "Warning Text" will show in AJA Control Panel ("restart Agent") and the agent can be restarted by clicking this menu item.

AJA Control Room

- H.264 and H.265 capture and playback introduced as of v16.2:
  - Create or playback HD media with Timecode, Closed Captioning and HDR metadata support.
    - YCbCr 4:2:0, 8-bit video.
    - AAC audio encoding for multiple tracks of Stereo and/or Mono.
  - All H.264 and H.265 encoding/decoding is courtesy of hardware acceleration on the host system.
  - For macOS based systems, AJA Control Room will seek VideoToolbox resources.
    - For Apple silicon systems:
      - built-in Apple Metal GPU
    - For Apple Intel-based systems:
      - NVIDIA
  - In each case, if the resource being sought is not found, the next resource possibility will be tried. If none of these resources are located on the system, then capture/playback of H.264 and H.265 will not be possible.
  - Notes:
    - You must be using the latest NVIDIA, AMD or Intel drivers. In some situations you may need to disable using a resource in order to update its driver version, and then re-enable.
    - H.264 and H.265 can behave differently as compared with uncompressed media or iframe codecs, especially during scrubbing and looping operations. This is to be expected with long-GOP media.
    - Interlaced material will be captured as progressive, this is as designed.
- When the Deep Buffer feature is being used for playback protection, note that changes to settings may take some time to be reflected. For example, muting an audio channel can take many seconds between the mouse click and the desired result. This is normal when using the Deep Buffer feature.
- MXF OP-1A capture in AJA Control Room does not support the following formats: 720p60, 1080i30, 1080p30, 1080p60.

Adobe Applications

- **Note that Adobe removed support for tape-based workflows as of Premiere Pro 2023. AJA Control Room can provide limited support for some of this functionality, but is not a direct replacement.**

- Incorrect HDR output over HDMI and SDI with Apple silicon using Adobe Premiere 22.4.0.
- When editing with 1080i25 clips/sequences in Adobe Premiere Pro, and with Sequence Settings > Video > Fields > Interlaced selected, then on pause interlaced artifacts are visible in the desktop (GUI) viewers, although the AJA hardware video output is unaffected. To remedy this, go to Sequence Settings > Video > Fields > and choose "No Fields (Progressive Scan)".
- Adobe Premiere Pro running natively on Apple silicon does not currently support capture. Instead, use AJA Control Panel to capture material which can then be used for editing within Premiere Pro.
    - Capture remains fully supported when using Adobe Premiere Pro under Rosetta.
- Versions of AJA Desktop software prior to v15.5 will not show video preview during capture on Premiere Pro 2020. However capture of content will not be affected.
- With rasters above HD/2K, Adobe After Effects may struggle to deliver frames in real time. AJA hardware will buffer as much as possible, but if frame rates get very slow, it will be difficult to sustain smooth real-time playback on the reference monitor.
- 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 720p50, 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.

Apple Final Cut Pro

- Currently in Final Cut Pro, scrubbing an audio only clip when in the "organize" workspace results in Final Cut Pro and the AJA device temporarily losing contact with each other. Switching back to a timeline should reinstate (acquire) the hardware smoothly, however, this should not occur when the A/V Output is turned on in the Window menu.

Avid Media Composer

- Support for HDR via Media Composer arrived with AJA Desktop software v16.0. One known limitation is when linking to HDR media, the Media Composer Source Setting Adapters may get misgenerated. Deleting them will resolve issues viewing HDR correctly.
- New functionality introduced as of v15.5.3 for Io 4K Plus and Avid DNxIV provides for smoother and faster transitioning between Capture and Playback. Note that there are recommended combinations of settings covering both Capture and Playback, please consult the manual for more detail.
    - Note: If a recommended settings combination is not chosen, then lock-up operations may take several seconds when engaging/disengaging the capture tool. This could occur for example, when External Ref is set for Capture but not for Playback, or vice versa.
- AJA hardware does not control for, legalize or clamp video according to broadcast legal values. Use the tools in Media Composer to achieve legal broadcast levels. Note that AJA does prevent illegal levels according to the SDI specification, but this is not the same as the broadcast legal controls available inside Media Composer.
- For HDR, there may be some inconsistency in the state of AJA Control Panel when changing projects. Recommended best practice is to check your HDR settings in AJA Control Panel after switching Avid projects.
- For HDR with 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

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- Indefinite looping of the timeline with Open I/O plug-in installed may cause Avid applications to stop playback and give an error message.
- 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.

Avid ProTools with T-TAP Pro

For Avid ProTools users, the following is helpful to bear in mind regarding AV Sync when using AJA T-TAP Pro for video monitoring:
- T-TAP Pro provides silent, high quality, stable and smooth playback. Since there is no reference, the A/V sync can be off by half a frame from the start of playback (expected behavior). This smooth and tight playback is courtesy of ProTools "slewing behavior" (since Pro Tools 11). When ProTools detects that the connected audio OR video interface are not both locked to some kind of incoming external clock, ProTools engages it's slewing algorithm. As long as the offset doesn't exceed 0.5 frames, all will play normally. Once the AV offset is above 0.5 frames ProTools will accommodate by dropping or duplicating a frame to keep in time. This is not intended as a frequent occurrence, for example it may take up to 20 minutes for clocks to drift far enough to drop a single frame.
- Note: Slewing does not account for start position offsets. Without a ProTools Sync HD/X to align the ProTools audio engine start position to a frame boundary, and instead with a video interface with a valid video reference, play starts will vary by up to a frame in either direction, and it will be different between each playback pass. This is fixed and known behavior. Slewing may drop its first frame immediately as a result, but then it will be a while before it would be needed again.

Avid ProTools with KONA / Io

For Avid ProTools users, the following is helpful to bear in mind regarding AV Sync when using AJA KONA and Io products, for video monitoring:
- KONA and Io devices with a reference input (including Avid Artist DNxIV) will achieve synchronous, stable and smooth playback when:
  - (a) ProTools Audio Hardware has reference connected
  - (b) ProTools Session "Video Ref" has been set to external reference
  - (c) AJA KONA or Io device has reference connected
  - (d) AJA Control Panel is set to use external reference
- Note: The ProTools Session Setup always defaults to "Internal/VSO" when creating a new session. The ProTools user must take the extra step of setting the Sync HD's Clock Reference to "Video Ref" manually each time a new Session is created. Failure to do so can result in skipped frames during playback.

Microsoft Teams

- Recent changes in Microsoft Teams has resulted in intermittent or non-functional operation with AJA capture devices. AJA is working with Microsoft to address these issues.

OBS Studio

- Support beginning with Desktop Software v16.2 and OBS v.27.2.
    - Io X3, Io 4K Plus, T-TAP Pro, KONA 5, KONA 4, KONA HDMI.
    - 2K/HD up to 60p.
    - 4K/UHD up to 30p.
- Avoid manipulating the output settings when engaged in critical streaming applications (e.g. live show), as this can cause OBS to crash. Make sure to set up outputs ahead of time.
- Unplugging the Thunderbolt cable connecting Io X3, Io 4K Plus or Io IP to the host system while capturing with said device, will cause OBS to crash.
- Analog Audio Output option is currently unavailable with KONA 4.

Telestream Wirecast

- When configuring a multi-channel card such as Io 4K Plus, KONA X, KONA 5, KONA 4, and/or KONA HDMI 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 1080i29.97 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.

Features, Fixes, Changes and Improvements in Prior Releases
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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.

V16.2.6

- Corrected a minor firmware issue that affected serialization on some AJA I/O products.

V16.2.5

- Fixed an issue affecting the KONA 5 board in which the latest board revisions were not recognized correctly in the Desktop software applications.

V16.2.4

- Fixed an issue that prevented MC DVCPRO50 PAL and MC DV25 PAL CODECs from appearing as options in Control Panel CODEC lists.
- Fixed an issue in which the use of Tri-Level sync Genlock Reference in playback on an Io 4K plus would cause flashing black output with no sync.
- Addressed an issue in System Test Lite that was causing dramatically slower write performance on Apple silicon Mac computers.

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- Fixed an issue in System Test that caused the Graph in the Report Tab to not update once the report is opened.
- Corrected an issue that required System Test to be relaunched in order to display targets mounted while the test was running.
- Fixed an issue in which the installation of AJA software, on a freshly installed Ventura OS (13.x) system would trigger an unnecessary installation of Rosetta.
- Fixed an issue that was causing a prompt of "This package will run a program to determine if the software can be installed" twice during the installation process, on Apple silicon powered Mac computers.

V16.2.3

- ProRes capture and playback now supported on the Apple Mac Studio computers.
- Major performance improvement to ProRes capture and playback on all Apple Mac computers (Apple silicon, & Intel).
- Supports 10 bit PQ YUV HDR options from Control Room and Adobe Premiere.
- Adds the ability to select reference format from Control Panel during Media Composer & ProTools startup.
- Control Room will now support the playback of interlaced MXF OP1a clips created in Avid.
- Fixes an issue in Adobe Premiere where after opening the app 5-10 times, the audio begins to stutter on AJA output.
- Resolves an issue on the Linux platform where Control Room, Control Panel and System Test applications would fail to render for high resolution.
- Solves an issue where audio channel 1 would sometimes show up on audio channel 4 and audio channel 2 would show up on audio channel 1 on the output of a KONA card.
- Fixes a bug where muting AAC audio resulted in bad audio during playback.
- Resolves an issue where some S-LOG modes of the Sony FX6 camera were unable to be captured.
- PTP domain number in SDP now visible in Control Panel for KONA IP and Io IP.
- Improvement for Closed Caption sidecar files generated in Control room and Premiere now have a congruent embedded Timecode relative to ANC Timecode for HD workflows.
- Fixes issue where REDCINE-X Pro would crash if an AJA device was attached. Please use the newest version from RED.

V16.2.2

- AJA KONA cards, plus Io and T-TAP Pro devices should be compatible with the broadcast out feature within Microsoft Teams as of version 1.5.00.11163. See known issues towards the end of this document for more details.
- Resolved issue with AJA KONA, Io devices and T-TAP Pro causing dropped frames when using an Apple M1 computer (with 16GB of RAM, or less) to either capture or play back with Avid Media Composer and/or Avid ProTools. This problem was/is not present when using an Apple silicon computer with 32GB of RAM.
- Remedied issue with MultiView output from Io X3, whereby interlaced SDI inputs displayed frame doubling every other frame.
- Rectified analog audio functionality on AJA Io X3, fixing both analog audio inputs via AJA Control panel, and analog audio punch-in via Avid Media Composer.
- Solved issue in AJA Control Panel with AJA Io X3 whereby activating the audio Ch 3/4 Swap feature had no effect.
- Fixed problematic 8K/UHD2 LFR video output with AJA Control Panel using AJA KONA 5.

- Solved "washed out" HDR output from Apple FCP and BT2020 PQ projects when using AJA KONA, Io devices and T-TAP Pro.
- Resolved intermittent host (macOS desktop) audio playback when using AJA KONA LHi, AJA KONA LHe Plus, AJA T-TAP, or AJA Io XT.
- Solved bad playback behavior and significant dropped frames when using Avid Media Composer to edit/playback 2K projects with AJA T-TAP.
- Fixed Match Override for SSRC and Payload parameters for Kona IP, Io IP and Avid DNxIP running ST 2110 firmware.
- Solved AJA NMOS crash and/or holding onto old video sources after making route changes from the VSM during capture with KONA IP, Io IP and Avid DNxIP running ST 2110 firmware with 2022-7 redundancy.
- Fixed problem with AJA NMOS when setting second leg of NMOS sender attributes with KONA IP, Io IP and Avid DNxIP running ST2110 firmware with 2022-7 redundancy.

V16.2

- Product Introduction for AJA Io X3. A versatile, portable new Thunderbolt 3 connected video I/O device for SDR/HDR 2K/HD/SD I/O with four 3G-SDI connectors, HDMI In, HDMI Out, Reference, LTC In, LTC Out, RS 422.
- Feature Introduction specifically with AJA Io X3. For MultiChannel Streaming/Switching/Capture, a new AJA MultiView feature provides confidence monitoring of up to all 4 incoming SDI signals simultaneously via HDMI Out.
    - Initially supported for OBS Studio, and Telestream WireCast (plus AJA Control Room). Additional application support planned for a future release.
- Application Support for OBS Studio with AJA KONA, Io and T-TAP Pro products. When installing AJA Desktop Software, alongside OBS Studio, the following AJA Devices can be used for Input/Output at 2K/HD 60p or 4K/UltraHD at 30p using OBS:
    - Io X3, Io 4K Plus, T-TAP Pro, KONA 5, KONA 4, KONA HDMI.
- A new high quality bitfile personality for KONA 5 is now available. "KONA 5 (12-bit)" enables working with a 4K/UHD RGB 4:4:4 12-bit path from capture, to color correction to output. Designed for 4K/UHD high quality color grading, finishing and playback.
- A new ST 2110 bitfile personality for KONA IP, Io IP and Avid DNxIP is now available. "KONA IP s2110 RGB12", "Io IP s2110 RGB12" and "DNxIP s2110 RGB12" all enable working with a 2K/HD RGB 4:4:4 12-bit path from capture, to color correction to output. Specifically designed for Post Production workflows for feature film and Episodic TV using film rates with file based material for RGB 444 12-bit editorial and playback.
- LUT functionality enhancements for AJA Control Panel. All current KONA, Io and T-TAP products which support LUTs now have the ability to import and export LUTs as .cube files for greater interoperability with other systems and software which also use the .cube format. The legacy method of supporting LUTs via CSV is still supported for import in Control Room, but no longer for export.
    - The following AJA Product / Firmware combinations support 12-bit LUTS, for other combinations and other products, LUT support is 10-bit:
        - KONA 5 with KONA 5 (12-bit) firmware
        - KONA IP with KONA IP s2110 RGB12 firmware
        - Io IP with Io IP s2110 RGB12 firmware
        - DNxIP with DNxIP s2110 RGB12 firmware
- AJA Control Room Playback Buffering. Functionality designed to protect critical playback from dropped frames. In some situations the host system may be challenged by interruptions to media file storage connectivity. This new

feature enables the allocation of RAM towards ensuring consistent playback even during storage connectivity interruptions. This is a complementary feature to the existing Capture Buffering also available in AJA Control Room.

- AJA Control Room now supports H.265 and H.264 progressive Capture and Playback up to HD 1920x1080, including Timecode, Closed Captions and HDR metadata.
    - Multiple data rates (6) can be selected; Low, Med-Low, Med, Med-High, High, Max
    - The application will seek out the best method for encode/decode based on the attributions of the host environment where it is installed. See the Control Room section under "Known Issues, Limitations and Additional Details" in the Release Notes below. Additional information available in the Control Room Manual.
    - Note: Interlaced material will be captured as progressive, this is as designed.
- AJA Control Room now supports playback of 16-bit RGB 'b64a' media (12-bit on the wire).
- AJA Control Panel Info Screen will now flag (red text) to warn when newer firmware is installed but not yet running (i.e. the host system needs to be power-cycled).
- Fixed inability to capture ProRes 4444 XQ with Adobe Premiere Pro with AJA KONA and Io devices (Apple Intel systems, and Apple Silicon System under Rosetta).
- Solved inability to access boot volume with AJA System Test, when mounted shares were present.
- Resolved Control Room crashing caused by having v16.1 beta (b60) installed prior to installing v16.1 release or later.
- Corrected cosmetic error whereby AJA Control Panel was incorrectly showing SDI (5) monitor as UHD/4K, vs. 1080 (with 4K quarter enabled), when using Io 4K Plus and Io IP (and DNxIP) for UHD/4K I/O.
- Solved cosmetic non-display of VU levels in AJA Control Panel (Audio Mixer tab > Capture Monitor) despite audio being present, when using Io 4K Plus and Io IP (and DNxIP).
- Solved cosmetic non-display of VU levels in AJA Control Panel
- Rectified problem causing Control Room to drop frames over extended playback of looped 1080p HFR video with Io 4K Plus and KONA 4.
- Fixed incorrect 3G-SDI Level-A VPID information on pass-through, with Io 4K Plus, whereby incoming RGB 12-bit was mischaracterized as RGB 10-bit causing problems with downstream devices.
- Rectified incorrect routing with a Dynamic Reconfig (bitfile swap) followed by a restart, manifesting as bogus 8K routing shown in Control Panel with 4K firmware active.
- Resolved Control Room bug with Io 4K Plus, whereby upon engaging Dual Link RGB Capture, there appeared to be no video present.
- Solved problem which prevented IP Audio being available to select in AJA MultiChannel Config for KONA IP and Io Ip when using ST 2022-6 firmware ("s2022") with Telestream Wirecast.

V16.1

- Added native support for Apple silicon including:
    - Compatibility for AJA KONA and Io products, plus T-TAP Pro.
    - AJA Desktop Software package, including Control Panel (and codec support), Control Room, System Test, Multi-Channel Config, NMOS, plus integrations with Adobe, Apple, Avid and Telstream applications.
- Optimizations for a tighter response between T-TAP Pro Rotary Encoder (Volume Knob) and AJA Control Panel Audio Mixer.
- Added 12G and 6G input support for Telestream Wirecast when using either KONA 5 (4K and 8K firmware) or Io 4K Plus, via AJA MultiChannel Config.

- Added 12G and 6G output support for Telestream Wirecast when using either T-TAP Pro, KONA 5 (4K and 8K firmware) or Io 4K Plus, via AJA MultiChannel Config.
- Added ST 2110 input support for Telestream Wirecast when using KONA IP, Io IP and Avid DNxIP, via AJA MultiChannel Config.
- Added AES and Analog Audio Input support for Telestream Wirecast with multiple AJA products, via AJA MultiChannel Config.
    - AES input now available in AJA MultiChannel Config for KONA 5, KONA 4, KONA LHi and KONA LHe Plus.
    - Analog (Line Level) input now available in AJA MultiChannel Config for KONA LHi, KONA LHe Plus, Io 4k Plus, Io IP, Avid DNxIV, Avid DNxIP.
    - Analog (Mic Level) input now available in AJA MultiChannel Config for Avid DNxIV and Avid DNxIP
- Additional visual feedback in AJA Control Panel
    - Tooltips on-hover over input and output widgets and for quickly seeing status.
    - Nuances that are taken care of automatically are called out explicitly in the Control Panel block diagram.
        - One example is that when outputting 4K, HFR, YCbCr 4:2:2 10-bit from the framebuffer, if the HDMI transmitter is version 1.4b then the video is adjusted to 4:2:0 8-bit (e.g. KONA 4, KONA IP).
- Added 2SI alignment pattern in AJA Control Panel, consisting of 1-pixel diagonal crosshairs plus a 3-pixel rectangle.
    - Whenever there is a misalignment, the diagonal crosshairs will be wrong, not a continuous line.
    - If it is a top-bottom misalignment, the top and bottom of the square line will be broken, with white between time. This is easily simulated by clicking the "Quad Swap" buttons in the control panel "Video Setup" tab.
    - If it is a left-right misalignment, the left and right lines of the square will be fuzzy, or broken.
- AJA Control Panel Restart Services is new functionality that allows for restarting the AJA services if necessary. This can help if various applications begin contesting for access to the Video I/O device. In this case using the "Restart Service" command will bring AJA Control Panel back to its startup state, and an application can freshly acquire control of the AJA Video I/O device.
- Resolved an application crash that occurred when Adobe Premiere capture was set for MXF, but the format was switched to SD (Standard Definition).
- Rectified import/export failures that occurred with Adobe Photoshop that resulted in a bad video output.
- Solved inaccurate reporting of read/write speeds in AJA System Test for 4K and 8K formats.
- Fixed inability to access boot volume with AJA System Test when a share was mounted.
- Solved for problem with Color Space setting set to Auto in AJA Control Panel, where when receiving 12-bit RGB, the SDI output was bad due to being set to YCbCr instead of RGB.
- Fixed problem in AJA Control Panel regarding non-display of KONA 5 serial number following Dynamic Reconfiguration to switch between 4K and 8K firmware.
- Fixed problem with KONA 5 where AJA Control Panel/Services surfaces incorrect routing after a Dynamic Reconfiguration followed by a restart.
- Resolved issue with correctly displaying SMPTE colors space for RGB SDI outputs with T-TAP Pro, whereby RGB was always being output as full range regardless of the AJA Control Panel color range setting.
- Rectified non-display of LTC Input Widget in AJA Control Panel with KONA 4.
- Fixed bad audio when capturing 2K LFR (Low Frame Rate) with AJA KONA HDMI.
- Fixed problem with KONA LHi whereby SDI passthrough VPID (Video Payload ID) was reversed.
- Solved bug causing 12-bit RGB HDMI video input to have no audio with AJA Io 4K Plus and KONA HDMI Inputs 3/4.
- Fixed problem in AJA Control Room which was causing the audio channel numbers to show incorrectly after Thunderbolt plug cycle with AJA T-TAP.

- Rectified interface issue whereby AJA Control Panel SDI Output drop-down menu was blank after initial installation.
- Solved problem in AJA Multi-Channel Config where KONA IP, Io IP and Avid DNxIP running under ST 2022-6 firmware would default audio inputs to "audio off" and with no option for IP, only SDI.
- Resolved problem with AJA NMOS whereby upon unplugging (Thunderbolt 3) AJA Io IP would cause repeated register / de-register.
- Optimizations across AJA NMOS and SDPs for AJA KONA IP and AJA Io IP (and Avid DNxIP):
  - Solved memory leak in AJA NMOS
  - Improved SDP and NMOS format for interlaced video
  - Fixed initialization of sender IP address in AJA NMOS
  - Fixed path bugs in AJA NMOS
  - Removed unnecessary lines from SDPs
  - Resolved issue whereby sometimes SDPs would be empty

v16.0.3

- Resolved inability to properly capture DVCPro / DVCProHD with Adobe Premiere Pro and AJA Control Room, with all AJA devices including legacy (EOL) products; Io 4K, Io XT and T-TAP.
- Fixed inability to correctly playback DVCPro / DVCProHD with AJA Control Room with all AJA devices including legacy (EOL) products; Io 4K, Io XT, Io Express (PCIe) and T-TAP.

v16.0.2

- v16.0.2 is the final version of AJA Desktop Software supporting AJA T-TAP. Though T-TAP may continue to work well with subsequent releases and OS versions, but full future compatibility cannot be guaranteed.
- v16.0.2 is the final version of AJA Desktop Software supporting KONA IP firmware for JPEG 2000 and the optional license required to use that functionality. ST 2022-6 and ST 2110 firmwares are not affected and remain valid.
- Fixed inability to play or capture DVCPRO/HD with AJA Control Room, and associated inability to capture DVCPRO/HD with Adobe Premiere Pro.
- Improved HDMI Output bit-depth signaling on playback in AJA Control Panel.
- Fixed problem with 12-bit HDMI capture in AJA Control Panel, where previously 12-bit sources were being captured as 10-bit.
- Solved problem in AJA Control Panel DownStream Keyer functionality, whereby loading a png_alpha file in the Graphic Over Frame Buffer Mode, resulted in a red "DS Keyer" message in the Frame Buffer and a message that states: "Foreground video does not have alpha channel".
- Fixed issue in AJA Control Panel causing High Frame Rate HD-DL (dual BNC) to be captured and output incorrectly.
- Resolved NMOS behavior where SDPs sometimes required refresh in AJA Control Panel with AJA KONA IP , Io IP and Avid DNxIP.
- Fixed problem with AJA KONA IP, Io IP and Avid DNxIP where despite being able to display video in Capture mode (manually entering SDP), when changing a route using LAWO VSM software, the video stops and IP 1 in AJA Control Panel displays "Unknown".
- Rectified SDP files generated via AJA Control Panel with AJA KONA IP, Io IP and Avid DNxIP to support increased NMOS compatibility.

- Increased filtering of PTP messaging to solve PTP not locking events in AJA Control Panel with AJA KONA IP, Io IP and Avid DNxIV.

v16.0

- Introduction of AJA T-TAP Pro, a compact Thunderbolt 3 device for 12G-SDI and HDMI 2.0 output/monitoring.
    - Supporting 4K/UltraHD/2K/HD/SD and including dual channel headphone monitoring.
- HDR Over SDI with KONA 5, KONA 4, KONA 1, Io 4K Plus, Io 4K, T-Tap Pro via Adobe Premiere, Adobe After Effects, Apple FCP, Avid Media Composer and AJA Control Room.
    - VPID signaling is now available for SDR/HDR Transfer Characteristics, Colorimetry and Luminance over SDI, bringing flexible output options to your AJA device. HDMI ports that were already HDR compatible will work simultaneously, resulting in HDR output via both SDI and HDMI.
- HDR Metadata Capture with KONA 5, KONA 4, KONA 1, KONA HDMI, Io 4K Plus, Io 4K via AJA Control Panel and Control Room.
    - AJA Control Room software adds support for HDR metadata capture from an incoming SDI or HDMI signal. The captured .mov video file will have embedded HDR metadata, allowing the file to be played back at its intended dynamic range.
- HDR Auto Playback Detection with KONA 5, KONA 4, KONA 1, Io 4K Plus, Io 4K, T-Tap Pro via AJA Control Panel and Adobe Premiere / Adobe Media Encoder or AJA Control Room.
    - Embedded HDR metadata in a recorded .mov file, is read and used to automatically set the HDR format on the monitor(s) connected to the AJA HDMI and/or SDI outputs.
    - Support for file-based .mov HDR outputs with metadata from Adobe Premiere Pro / Adobe Media Encoder HDR files is also available.
- HDR support with Avid Media Composer and KONA 5, KONA 4, KONA 1, Io 4K Plus, Io 4K, T-Tap Pro.
- Native 8K support for Apple FCP and Avid Media Composer (including draft mode) with KONA 5.
- KONA 5 now supports fast-bitfile-switching. In under 10 seconds you can flip between a KONA 5 personality tuned for 8K operations, to one dedicated to 4K and below. No waiting for firmware to update, no reboots required.
- 4K Closed Caption Support added to AJA Control Room with KONA 5, KONA 4, Io 4K Plus, Io 4K, T-TAP Pro
- New KONA HDMI feature for enabling incoming audio channels 3/4 to be swapped, on HDMI inputs 1 and 2.
    - This is useful for aligning audio channels coming from different sources in a mixed HDMI 1.4b and 2.0 environment.
- NMOS support updated to 1.3 for KONA IP and Io IP.
- AJA NMOS application new features and functionality, see KONA IP / Io IP Manual for details.
- Added LLDP (Link Layer Discovery Protocol) to provide for better NMOS compatibility and improved debugging abilities for KONA IP and Io IP (reporting via AJA Control Panel)
- v16.0 is the final version of AJA Desktop Software supporting AJA Io 4K. Io 4K may continue to work well with subsequent releases and OS versions, but full future compatibility cannot be guaranteed.
- v16.0 is the final version of AJA Desktop Software supporting AJA Io XT. Io XT may continue to work well with subsequent releases and OS versions, but full future compatibility cannot be guaranteed.
- v16.0 is the final version of AJA Desktop Software supporting AJA Io Express (PCIe). Io Express (PCIe) may continue to work well with subsequent releases and OS versions, but full future compatibility cannot be guaranteed.
- Solved inability to use numerous AJA devices for capture / playback under macOS Big Sur.

- Fixed problem with AJA Io IP where device may come up with bad video & audio output when connected via PCIe thunderbolt adapter card.
- Implemented parsing of source-filter parameter in SDPs for source IP address for AJA Io IP and KONA IP.
- Fixed inability to play 4K/UHD video using Apple FCP with AJA KONA 5 (8K firmware).
- Resolved lack of output from an additional AJA device when using Apple FCP with two or more AJA devices.
- Fixed problem whereby Apple FCP application audio output from AJA Io 4K Plus & Io 4K was being represented as host audio vs. FCP (Main App) output.
- Solved issue whereby Apple FCP may intermittently stop outputting video properly when swapping between different AJA devices.
- Fixed bad 8K/UHD2 video output from Apple FCP with AJA Kona 5 (8K firmware).
- Fixed HDR output from Apple FCP whereby video was not displayed correctly and appeared overexposed.
- Resolved absence of Adobe Premiere Pro HDR video output when monitoring HLG 10-Bit.
- Verified Adobe solution for a crash occurring with Premiere Pro when engaging NDI with AJA devices connected. Note that the solution requires the latest version of NDI tools installed on your host system (currently 4.x onwards).
- Verified Adobe fix for problem recalling Audio device settings after restart of the Premiere Pro.
- Corrected HDR PQ Output from Adobe Premiere Pro with AJA devices.
- Solved for incorrect duration reported with audio captured using Adobe Premiere Pro or AJA Control Room, whereby audio would be missing when used in other 3rd party tools.
- Fixed issue whereby .mov files captured with v210 codec in Adobe Premiere Pro or AJA Control Room using AJA devices, was using a bit-depth descriptor of 20 vs. 24.
- Fixed Apple TN2162 compatibility whereby CLAP ATOMs captured with Adobe Premiere Pro or AJA Control Room were using a descriptor of 2 vs. 0.
- Fixed issue with AJA Control Panel not reflecting HDR setting when Avid Media Composer enables HDR with AJA KONA 5.
- Solved inability to play Avid Media Composer DV clips in AJA Control Room (macOS Mojave only)
- Resolved lack of SDI audio output when using AJA KONA 1 with Telestream Wirecast.
- Continued optimization for 8K playback with AJA Control Room solved for dropped frames on first playback of HFR 8K/4K clips with AJA KONA 5.
- Continued optimization for 8K playback with AJA Control Room fixed frame dropping on playback with 8K HFR (p59.94, p60) with AJA KONA 5.
- Resolved insertion of 608 Closed Captions for both fields when working with interlaced material in AJA Control Room with AJA Io 4K plus.
- Solved for a problem where RGB 12-bit 3G-SDI Level A was not behaving properly with AJA Control Panel and Control Room running with Io 4K Plus.
- Rectified behavior whereby Time of Day Timecode in Control Room did not match burn in Timecode.
- Fixed Edit to Tape functionality with AJA Control Room and AJA devices, whereby performance would degrade and become non-functional when toggling to/from different application tabs.
- Resolved 2SI alignment issue with LFR 8K with AJA KONA 5 (8K bitfile).
- Fixed issue causing LTC Input from break-out-cable with AJA KONA 5 (4K bitfile) to not report in AJA Control Panel.
- Fixed behavior where HDMI output of AJA KONA 5 was not following the quad-swap feature when selected in AJA Control Panel.
- Fixed behavior where with AJA KONA 5 (4K bitfile) and AJA Io 4K Plus, Input Quad Swap was not being respected in AJA Control Panel.

- Solved for incorrect pass-through routing for RGB 12-bit video with AJA Io 4K Plus.
- Rectified audio playback problem in AJA Control Room, where audio channel-pairs could become swapped when KONA HDMI was present in the host system.
- Resolved problem preventing output of audio via 8Ch HDMI with AJA Io 4K.
- Fixed problem where some host systems were unable to Output AES 1-8 with AJA KONA 4 (UFC bitfile).
- Protected against crash/kernel panic when disconnecting AJA T-TAP / Thunderbolt device from Mac systems while playing clip in AJA Control Room.
- Solved problem outputting RGB from AJA Io XT with AJA Control Panel, where SDI Output remained YUV despite RGB settings applied.
- Fixed cosmetic reporting issue in AJA Control Panel, whereby AJA KONA LHi and AJA Io XT: would not show HDMI input, even though signal is present and capturable.
- Rectified Control Room fixed timecode on output where it was 1 frame late vs. currently visible frame after Play>Stop cycle
- Resolved cosmetic reporting issue in AJA Control Panel, whereby LTC / REF did not update per settings with AJA devices.
- Solved intermittent SDI Input and Output problems with AJA devices.
- Resolved intermittent AJA Control Panel crashing upon Thunderbolt unplug (both AJA Thunderbolt devices and AJA PCIe cards in Thunderbolt chassis).
- Solved problem where AJA System Test Lite could crash on startup when running on macOS Catalina 10.15
- Fixed potential crashing with KONA LHi during an SD MXF capture.
- Solved for issue when exporting an FCP Event with MOV files from AJA Control Room would result in a partial clip.

v15.5.3

- New Feature Io 4K Plus and Avid DNxIV:
    - New Genlock features added in AJA Control Panel for Io 4K Plus and Avid DNxIV, provides for smoother and faster transitioning between Capture and Playback. See your manual for additional feature specifics and recommended best practices. Note: For all other AJA cards and devices, best results in most situations can be achieved by setting Genlock to Auto.
- Io 4K Plus, Avid DNxIV, Io IP, Avid DNxIP with Avid Media Composer: Resolved problem whereby Quarter Res sequence setting would cause bad video output.
- KONA 5 (8K Firmware) with Avid Media Composer: Enabled Input of 4K/UHD I/O via 12G-SDI and 6G-SDI.
- KONA IP, Io IP and DNxIP with AJA Control Panel: Removed Genlock/Reference setting when using ST 2110 firmware, since only PTP is relevant. (Note: ST 2022-6 firmware will still display the Genlock/Reference setting, as no PTP is used with those workflows).
- IoXT with Avid Media Composer: Overcame issue where changing focus away from and then back to the Capture tool would block E-E audio.
- Io 4K Plus, Avid DNxIV with Avid Media Composer: Fixed problem which allowed illegal SDI values to be present on output.
- Io 4k Plus & Kona 5: Solved green tint on Fill + Key output with ARGB.
- Io 4K Plus, DNxIV with Avid Media Composer: Fixed problem with HDMI output not always playing back audio after selecting Ref In.

- Io IP and DNxIP with Avid Media Composer: Solved issue which prevented the device from completing initialization following a Thunderbolt plug cycle (unplug/replug).
- Io 4K Plus, Io 4K, Avid DNxIV with Apple Final Cut Pro X: Solved problem causing AJA hardware front panel to not show LED metering.
- Avid Media Composer: Fixed audio artifacts (clicks, pops, stale audio) presenting at the very beginning of timeline/clip playback.
- Avid Media Composer: Rectified bug whereby audio pass-through would continue even after closing capture tool.
- Avid Media Composer: Resolved problem where clicking the Audio Punch-In tool during numerous rounds of punch-in operations, would fail to re-engage input audio metering.
- Avid Media Composer: Fixed skipped and repeated frames at beginning of playback following frame stepping.

v15.5.1

- KONA 5: Added HDR support to Adobe Premiere Pro 8K playback (using 8K bitfile for KONA 5)
- Io 4K Plus, Avid DNxIV: Resolved output instability with some formats over 12G-SDI on SDI #3.
- Io 4K Plus, Avid DNxIV: Fixed input instability with SD formats on SDI #2.
- KONA 5: Resolved item causing bad SDI audio output on RGB clips when using 8K bitfile.
- KONA 5: Fixed interface error whereby AJA Control Panel presented a selectable option for 2-wire square division when using 8K bitfile.
- KONA 5: Removed redundant interface choice whereby AJA Control Panel presented a selectable option for 2-wire 2SI, (which is auto-sensed and thus no manual option is required) when using 8K bitfile.
- KONA 5: Solved audio problem for 1080i I/O when using 8K bitfile.
- KONA IP, Io IP and Avid DNxIP: Added hardware filtering on PTP delay response packets (clock ID) to fix PTP issues seen on networks with large numbers of ST 2110 devices.
- KONA IP, Io IP and Avid DNxIP: Resolved some anomalies in how dual SDPs were being handled.
- Adobe Premiere Pro: resolved problem whereby despite audio and video being captured correctly to disk, no video was presented in the Capture Window.
- Avid Media Composer: Fixed problem with AJA serial driver causing inability to connect to VTRs.

v15.5

- 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".
- 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.

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 Playout. 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 Trasnmit, 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 present (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.

Technical Support

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

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