

AJA Desktop Software v17.6 Release Notes

Linux Ubuntu v17.6 Drivers and Software for KONA

Introduction

AJA Desktop Software

This unified software, driver, and firmware package contains the necessities to use AJA video I/O hardware.

The following AJA applications are installed:

- AJA Control Panel v17.6:
 - For setup and control of your AJA KONA hardware, including firmware updates.
- AJA Control Room v17.6:
 - For high quality capture, monitoring, playback, and output.
- AJA System Test v17.6:
 - For testing storage to determine if it will be possible to sustain frame and data rates for a chosen format(s).

Note: AJA NMOS is no longer available to install (It is not required for the new KONA IP25).

Note: If AJA Control Panel does not see the KONA IP25 on initial machine boot, restart the system and it should then be discovered.

Note that it is recommended to use the control port connection (RJ45) to perform firmware updates for the KONA IP25 card when used in Linux systems.

Fixes and Improvements in v17.6

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.

Refer to the issue number shown below if contacting support for more information.

New Features in this release:

- Video+Key Playout/TX support added to KONA IP25
 - KONA IP25 now supports Video+Key signaling as per SMPTE ST 2110-20:2022. This feature allows for combining a main video signal (the "fill" or "program" video) with a separate key signal that controls how another video element (like graphics or titles) is overlaid onto the main video.

- 4:2:2 10-bit Alpha channel: default configuration
- 4:0:0 10-bit KEY marked in SDP: optional selection
- Added support for the following formats to KONA IP25:
 - 4:2:2 10-bit 2048x1080 (2K) and 4096x2160 (4K)
 - 4:4:4 12-bit 1920x1080 (HD), 2048x1080 (2K) and 4096x2160 (4K)
- Added support for multiple ST 2110-30 audio streams per video to KONA IP25. The following modes are supported:
 - Signal Flow: Support up to 16 channels with 125µs and up to 8 channels with 1ms timing.
 - 4x4: Support for 4x ST 2110-30 audio flows with 4 channels each @ 125µs or 1ms timing, totaling 16 channels.
 - 2x8: Support for 2x ST 2110-30 audio flows with 8 channels each @ 125µs or 1ms timing, totaling 16 channels.
- KONA IP25 now supports IGMPv3 (Internet Group Management Protocol) for managing multicast traffic across Layer 3 networks with SSM (Source Specific Multicasting).
- KONA IP25 now supports Forward Error Correction (FEC) on 25GigE SFPs to mitigate potential packet loss in IP networks, ensuring reliable media transport over longer distances / more complex networks.
- **Beta option to access KONA IP25 browser configuration through PCIe. Note that the RJ45 on the card will remain the default / primary means of configuration is covered in the manual.

Fixes in this release:

- #1216 – Fixed an issue where the KONA IP25 card could experience one or more of the following issues upon initialization: popping, pitch shift, or audio-to-video desynchronization.
- #1218 – Fixed an issue where the KONA IP25 card could exhibit audio issues such as popping or desynchronization upon reconnection of a media stream.
- #1220 – Fixed an issue with the KONA IP25 in which IP 2110 streams could be interrupted when enabling outputs during interlaced fractional playout from AJA Control Room.
- #1222 – Fixed an issue with the KONA IP25 in which IP 2110 streams could be interrupted by secondary media port toggles.
- #1223 - Fixed an issue with the KONA IP25 in which UHD would fail to be ingested on inputs 3 and 4.
- #1230 - Fixed an issue in which the Corvid 44-12G would fail to recognize captured timecode on LTC2.
- #1266 - Fixed an issue in which 2K and 4K formats were missing from the KONA IP25 Control Panel video input configuration interface.

- #1285 Fixed an issue in which the KONA IP25 would occasionally boot with all inputs deactivated.
- #1351 – Fixed an issue with the KONA IP25 card in which toggling NMOS or EMBER+ could cause a glitch in the output stream.

Operating System Information

This driver/software version is compatible with Ubuntu 20.04 LTS and Ubuntu 22.04 LTS. Note that this release is also compatible with Ubuntu 24.04.

- Before running this installer, uninstall all previous versions of AJA software:
 - apt-get purge ajantv2-dkms ajaretail
- Two packages must be installed: DKMS driver and AJA Retail Software.
- The DKMS Driver installer requires the following package:
 - sudo apt-get install dkms
- The driver installer must run either in a root shell or with root permissions.
 - sudo apt-get install ./ajantv2-dkms_XXXXXX_all.deb
 - Note: Use the exact package name here, see file name in install package
 - sudo apt-get install ./ajaretail_XXXXXX_amd64.deb
 - Note: Use the exact package name here, see file name in install package
- For GPU accelerated desktop display, an OpenCL version 1.2 or greater capable GPU is required.
- Check the Known Issues, Limitations and Additional Details section near the end of this document.
- Note that on later versions of GNOME, the extension management has been moved to its own dedicated app called GNOME Extensions (gnome-extensions-app). Execute the following to perform the installation:
 - Ubuntu 20.04:
 - sudo apt-get install gnome-tweaks
 - open GNOME Tweaks
 - click Extensions on the left list
 - turn on Ubuntu AppIndicators
 - launch AJA Control Panel
 - Ubuntu 22.04:
 - sudo apt-get install gnome-extensions-app
 - open Extensions app
 - turn on Ubuntu AppIndicators
 - launch AJA Control Panel

Third Party Software

AJA KONA 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 (**note that the new KONA IP25 card is pending third-party testing and may not work with some or all of these applications as of the date of release**):

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

- Autodesk - Flame and related products
- AJA KONA hardware also comes with out-of-the-box support for OBS Studio as follows:
 - **OBS Project** - OBS Studio 30, 29.1.3, 28.1.x, 27.2.x (note that there are known issues with 29.13 and 30 for KONA 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

The following products benefit from this update:

- KONA IP25
- KONA X
- KONA 5
- KONA 4
- KONA 1
- KONA HDMI
- KONA LHi
- KONA LHe Plus
- Io 4K Plus
- Io X3
- T-TAP Pro

Recommendations in v17.6

- AJA offers a comprehensive SDK for developers who are interested in doing more with KONA, Corvid, and Io products. We have recently moved repositories to GitHub at <https://github.com/aja-video>. Our GitHub site now offers access to both open source and pre-compiled code and tools that make developing applications that support our products much easier.
- Note that AJA Desktop Software v17.x still works with EOL products, including Io XT, Io 4K, Io IP, T-TAP, and DNxIP. 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 “End-of-Life” products will continue to receive best effort SDK support, but the supported SDK version may be frozen to the version available when the device went “End-of-Sale.”
- Note that Corvid HEVC (CORVID-HEVC-ATX6) is no longer being tested with new software releases.

Additional Details

General

- “System Sleep” and “Hibernation” should not be used with KONA cards. All sleep and power efficiency modes should be disabled in the operating system settings.
- AJA Control Room captures can fall behind and may fail to retain the entirety of the recording when used with hard drives and SSDs that cannot maintain sufficient read/write speeds. Enabling deep buffers can improve the situation but may not prevent issues in all cases. Please use AJA System Test (free tool available on AJA web site and also installed with the Desktop software package) to measure disk performance to make sure your storage systems can handle the resolution and bit rates of the recordings you wish to make.
- Note that AJA Control Room cannot play clips in which “Time of Day” timecode was used, if the capture happened from one “Day” to the next “Day” across 12:00AM.
- Note that users who are using a BIN in AJA Control Room and have not saved it will continue to receive prompts to save the BIN after every change. This is “as designed” to protect file retention in the user’s BIN.
- Note that in some environments, PCIe Gen2 boards (KONA 4, KONA HDMI, KONA 1, Corvid 88, Corvid 44) do not link with 8 lanes after the OS boots. When using these boards on these systems, maximum performance or functionality may not be available. Please contact AJA support if you experience these issues. Affected motherboards and CPU’s:
 - Motherboards:
 - ASRock IMB-1314 with "PCIE1" and "PCIE3" slot (x8 supported slots)
 - AAEON MAX-Q670A with "PCIEX16_1" and "PCIEX16_2" slot (x8 supported slots)
 - (Note: The BIOS setting of CPU/PCIe slot for both motherboards does not affect the appearance ratio of the issue.)
 - CPUs when used on the motherboards above:
 - Core i7 13700
 - Core i7 12700
 - Core i9 12900

Known Issues

- #1223 – Regarding KONA IP25 - As a current solution to limit the risk of over subscription (with AJA Desktop Software), KONA IP25 supports UHD input streams on IP 1 and IP 2. IP 3 and IP 4 support input streams up to 3G.
- #1218 – Regarding KONA IP25 - if upstream sending device network interface is disrupted, there is a potential to occasionally induce crackling on KONA IP25 audio input. Resetting the audio input of that stream in the web UI or the KONA IP25 will alleviate the issue.
- #1220 – Regarding KONA IP25 – Enabling outputs while other outputs are already streaming may result in momentary glitches to the existing output streams. In order to avoid this potential, enable all the outputs you intend to use ahead of time.
- #265 - AJA Control Room can perform destructive resizing under certain conditions when scaling video without GPU acceleration. When users perform the following steps: Launch Control Room, Go to Preferences – Viewer, Disable GPU Acceleration, add a video and send to the Viewer, Resize the Viewer either independently or by changing application dimensions, Repeat the last step more than once – Each resize is scaled from the previous Viewer image rather than from the original source.

- #262 - AJA Control Room does not properly handle “Click and Drag” within Time Fields for certain video files.
- #695 - AJA Control Room may hold displayed captions when moving the play head forward or back. The previously displayed captions will remain on both canvas and output indefinitely.
- #776 - The AJA KONA LHi is not detecting RP188 timecode.
- #273 - AJA Control Room alerts may fail to display during playback mode when No Device is selected.
- #222 - AJA Control Room improperly allows device switching during Capture, when at least two devices are available to the system.
- #272 - AJA Control Room may fail to update position in viewer when the play head is moved during a frame drop.
- #223 - AJA Control Panel RGB Range dropdown selection is not always accurate to what is being output on Frame Buffer or SDI output.
- #199 - AJA Control Room fails to insert a standard color space when writing DNxHR.
- #198 - 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.
- #824 - AJA Control Room does not properly output 708 captions on Linux versions of the application.
- There is an intermittent issue in AJA Control Room in which captions captured from AJA FS1 frame synchronizer can produce bad or empty sidecar files.
- #691 - AJA Control Room may display captions from previous captures, and these may remain on the canvas until the application is restarted.

Technical Support

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:

Email: support@aja.com

Phone: +1-530-271-3190

Fax: +1-530-274-9442

Web: <https://www.aja.com/support/contact>

Shipping: 180 Litton Dr. Grass Valley, CA 95945 USA