AJA KONA™ Software Installer

Release Notes - Linux (Ubuntu) v15.0

Requirements and Recommendations

Operating System

This driver/software version is compatible with Ubuntu 16.04 LTS and Ubuntu 18.04 LTS.

- Before running this installer, uninstall all previous versions of AJA software:
    - sudo apt-get purge ajantv2-dkms
      (also removes ajaretail since it depends on the ajantv2-dkms package)

- 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 dpkg -i ajantv2-dkms_15.0-00_all.deb

- The AJA Retail software must run either in a root shell or with root permissions.
    - sudo dpkg -i ajaretail_15.0-00_amd64.deb

- For additional hardware recommendations and requirements, please see:
  http://www.aja.com/en/support/kona-pc-system-configuration/

Software

The following AJA software versions are recommended for use with this installer: AJA Control Room v15.0, Control Panel v15.0, System Test v15.0

For GPU accelerated desktop display, an Open CL version 1.2 or greater capable GPU is required.

New Features in 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.*

New Recommendations in v15.0

- For best results when capturing **AJA Control Room**, set Ref In to Video In with **AJA KONA products.** This recommendation began with v14.3 and is therefore here as a reminder.

Fixes, Changes and Improvements in v15.0

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.

- Rectified problem with **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 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

Features, Fixes, Changes and Improvements in Prior Releases

v14.3

- Introduction of SMPTE 2110 support for AJA KONA IP (receive and transmit) up to HD/2K 60p
- Solved problem in **AJA Control Panel** when using **AJA KONA HDMI**, where swapping sources to different inputs can take up to 20 seconds for the signal to be detected from some Panasonic cameras
- Solved problem in **AJA Control Panel** when using **AJA KONA HDMI**, where inputs 1 & 2 are incorrectly reporting incoming source as DVI (RGB 8 bit) from some Panasonic cameras
- Solved problem in **AJA Control Panel** when using **AJA KONA HDMI**, where inputs 3 & 4 are incorrectly reporting incoming source as DVI (RGB 8 bit) from KONA 4 HDMI output
- Solved problem in **AJA Control Panel** when using **AJA KONA HDMI**, where right clicking on the inputs within Control Panel brings up the window for the input options, but fails to switch to the desired input change
- Solved problem in **AJA Control Panel** when using **AJA KONA HDMI**, where 4K/UHD playback will crash the application
- Resolved issue in **AJA Control Panel** when using **AJA KONA HDMI**, where HDMI sources from MacBook Pro were not locking successfully as inputs
- Resolved issue in **AJA Control Panel** when using **AJA KONA 1**, where Follow Input is not functioning correctly when source format changes.
- Resolved issue in **AJA Control Panel** when using **KONA IP, KONA 4,** where Info tab reports bitfile as "bad bitfile type".

v14.2.1

- Lack of audio when capturing Deep Color with HDMI ports 3 and 4 in AJA Control Room, is now resolved with KONA HDMI.

v14.2

- Introduction of **AJA KONA 1** support (new AJA PCIe card)
- Introduction of **AJA KONA HDMI** support (new AJA PCIe card)
- Support for V4L2:

        - Compile the AJA V4L2 driver components per desired platform (Ubuntu / CentOS)
            - Downloads and instructions here: https://github.com/aja-video/ntv2-v4l2
- "Deep Buffer" setting in AJA Control Panel, improves handling of storage interruptions during ingest with AJA Control Room.
    - User can now allocate RAM for caching to protect media being written during ingest:
        - AJA Control Room: Preferences > Capture > "Reserve buffer size for deep capture queues"
- AJA Desktop Software firmware and software versions are tightly integrated. If back-revving to an earlier version for example, then you may be prompted to update your firmware to match; i.e. update to an earlier version of the firmware than you currently have installed. AJA Control Panel firmware update notification language has now changed to reflect this more accurately.
- Important updates have been added to the Known Issues and Limitations section near the end of this document. See items relating to Sleep / Hibernation / Fast Boot.
- AJA Control Room now provides a confirmation dialog if the application is quit or exited during capture
- Solved problem in AJA Control Room causing 720p TGA and BMP sequences to either not play back or else play back incorrectly (i.e. flipped or flopped)
- Fixed issue when using SMPTE 2022-6/7 firmware, whereby a receiving KONA IP would not reestablish video streams following a manual disable and then re-enable of Video Output (in AJA Control Panel) on the transmitting KONA IP.
- Solved transmit (playback) and receive (ingest) problems with 2K formats (up to p30 max) when using SMPTE 2022 firmware and JPEG 2000 firmware, with KONA IP.
- Solved problem in AJA Control Panel where switching from 2K to SD formats could interrupt transmit (playback) when using SMPTE 2022-6/7 firmware, with KONA IP.
- Fixed intermittent black frames showing across HDMI and SDI output with Downstream Keyer when using FrameBuffer over Video In, with either HDMI or SDI In selected as the source (and setting Match Frame Buffer format to Source), with KONA LHi.
- Solved locking to input problem with Downstream Keyer when using FrameBuffer over Video In, with HDMI In selected as the source, with KONA LHi.
- Solved problem where buffer format selections in AJA Control Panel intermittently provided incorrect output raster and corrupted imagery, with KONA LHi.

v14.0.1

- General Linux Installation Optimization
- Added SDI Input Quad Swap feature to AJA Control Panel for KONA 4
    - When checked (default setting), changes the input Quad to SDI quadrant mapping from 1 to 1 to: Quad1 SDI3 Quad2 SDI4 Quad3 SDI1 Quad4 SDI2
- Added SDI Output Quad Swap to AJA Control Panel for KONA 4
    - When checked (default setting), changes the output Quad to SDI quadrant mapping from 1 to 1 to: Quad1 SDI3 Quad2 SDI4 Quad3 SDI1 Quad4 SDI2
- Fixed UltraHD HDMI output in 2SI
- Fixed lack of Quarter Res output on SDI 3
- Fixed Closed Captioning for SD output
- Fixed input pass-through widget in Control Panel to show correct activity (HDMI down convert)
- Reinstated Python models

- Fixed issue whereby Control Room would display an AV sync issue during capture (but capture OK)

v14.0

- Added Audio Mixer to AJA Control Panel
- Added VTR on/offline icon to Batch Capture bin window in AJA Control Room
- Fixed issue whereby device offline dialog gets stuck in loop for batch captures when clicking
- "OK" in AJA Control Room
- Fixed bad timecode with playback of DPX Cineon header sequences in AJA Control Room
- Fixed problem deleting a clip if loaded in the playback viewer in AJA Control Room
- Fixed problem with KONA LHi and KONA LHe Plus Analog inputs not detecting HD formats
- When using Square Division with KONA 4, Quad link SDI sources are no longer viewable in UltraHD via HDMI, instead these sources will be down-converted for HD monitoring via HDMI
    - NOTE: This limitation does not apply to 2SI sources.
    - When using 2SI, Quad link SDI sources can be monitored in UltraHD via HDMI.
- It is no longer possible to decimate HFR material in order to facilitate HDMI playback on a monitor not capable of HFR when using KONA 4

v13.0

- Initial full-release supporting Linux Ubuntu for KONA firmware, drivers and software including AJA Control Panel, AJA Control Room, AJA System Test and more.
- Added KONA IP SMPTE 2022-6/7 firmware
- Added KONA IP Optional firmware for TR-01 complaint JPEG 2000 workflows
- Capture, monitoring and output for DNxHD and DNxHR (mov) up to 4K 60p using AJA Control Room
- Application presets can be saved and recalled in AJA Control Room
- In cases where AJA Control Room won't launch, holding SHIFT during startup allows users to reset preferences or use software only mode
- Upon enabling scripting, the preference to "hold onto device in background" is automatically engaged in AJA Control Room
- 16- and 24-bit audio capture support in AJA Control Room
- Timecode burn-in for video playback and application player in AJA Control Room
- Closed caption burn in for video playback and application player in AJA Control Room
- VTR control in AJA Control Room
- Audio track re-routing now available for QuickTime file playback in AJA Control Room
- 4K / UltraHD down-convert to HD now available via SDI 3 output contextual menu – including new drop-down menus and ability to save presets in AJA Control Panel

Relevant Products

The following products are covered by this update:

KONA 5
KONA 4
KONA HMDI
KONA IP
KONA 1
KONA 3G
KONA LHi
KONA LHe Plus

Known Issues and Limitations

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.
- 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 LHi

- When using level A 1080p50/59.94/60 YUV input to a RGB frame buffer for capture, the image is scrambled or non-working for various NLEs. Note that Level B works correctly with all supported NLEs.

KONA HDMI

- Currently, some SD sources do not work correctly when using channels 1 and 2. Please use channels 3 and / or 4 for SD ingest.

- Currently, certain HDMI camera sources do not work correctly. Please contact support so AJA can investigate.

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

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