

# ALEXA Mini SUP 4.0/4.2

Software Update Package SUP 4.0.24/4.2.5

RELEASE NOTES

Date: November 24, 2016

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## A. Introduction

We are proud to announce the release of ALEXA Mini Software Update Package 4.2 for ARRI ALEXA Mini cameras.

**SUP 4.2 is a maintenance release of SUP 4.0. It includes major improvements for the ALEXA Mini and we strongly recommend installing this update at your earliest convenience.**

We highly recommend that you take your time to go through the Quick Guide, the User Manual and the Known Issues section of this document before you start using the camera.

If you have not done so already, please make sure you register your ALEXA Mini using our online customer registration. Your registration ensures that you receive information about future software updates as soon as they are available. You can register here:

[http://www.arri.de/login/register\\_alexamira\\_customers/?no\\_cache=1](http://www.arri.de/login/register_alexamira_customers/?no_cache=1)

For more information, please visit:

<http://www.arri.com/alexamini>

If you have questions or feedback regarding ALEXA Mini please feel free to contact us via email at:

[minifeedback@arri.de](mailto:minifeedback@arri.de)

### Changes since version 4.1.7

- **Fixed: Unexpected stop to recording when record was triggered via a wireless hand unit.**  
A bug in the wireless command handling was fixed that in some cases caused Start/Stop commands issued by wireless hand units (e.g. WCU-4 and SXU-1) to be executed twice, causing an unexpected recording stop within the first minute.  
Be aware that there is an additional hardware issue that may affect the connectivity of wireless hand units that is unrelated to this software bug. We have discovered wear and tear issues on the camera's antenna connector that causes antenna connection issues and affects range and operation of wireless hand units. If you experience even temporary connection issues when using WCU-4 and SXU-1 hand units then you should have the antenna connector and the internal antenna cable in ALEXA Mini replaced. Please contact ARRI Service!  
In order to avoid the wear and tear problems avoid turning the entire antenna when mounting it to the camera. The antenna grabbing the middle pin in the antenna connector and turning it loose causes the problem. We are currently changing the design of the antenna connector and cameras delivered from early 2017 should not experience this problem any more.
- A necessary driver update is being introduced to support hardware changes which are going to be introduced starting January 2017.
- **Important: Installing SUP previous to SUP 4.2 on cameras that have been shipped in 2017.**  
We generally recommend using the latest SUP in production. All SUP 4 releases are based on the same core functionality and architecture, so the updates deliver enhancements and bug fixes at very low risk.  
Cameras shipped in 2017 contain updated hardware that requires new drivers that are not supplied by SUPs prior to SUP 4.2.  
If a downgrade is necessary anyway, the camera can be downgraded from SUP 4.2 once. The update logic contained in SUP 4.2 will not install incompatible drivers during the downgrade.  
**In order to install or update any SUP previous to 4.2 you will need to have SUP 4.2 or later running on the camera first so that the necessary drivers and update logic are present on the camera!**  
Not running SUP 4.2 or later before installing an older SUP will cause installation of incompatible

drivers and as an effect failure of the SDI and EVF outputs of the camera. If you run into this situation do not panic! The driver will not affect the hardware of the camera. In order to rescue the camera SUP 4.2 or later will need to be installed via the web remote interface, as the monitor on the viewfinder won't work.

## New features and overview of changes introduced with SUP 4.0

- **4:3 recoding modes** - enables use of the larger sensor area as well as 2x anamorphic de-squeeze for the monitoring paths
- **Internal MXF/ARRIRAW 16:9 2.8K recording** – ARRIRAW recording to CFast 2.0 cards
- **Internal MXF/ARRIRAW Open Gate recording** – Open Gate recording to CFast 2.0 cards
- **Lens Data Archive and ECS improvements**
- **Super 16 HD recording mode** – recording mode that crops a S16 sensor area and scales it to HD
- **SDI Metadata** – metadata embedded into the SDI signal
- **Transvideo StarliteHD5-ARRI interface improvements** – UI improvements including access to user buttons and playback control
- **SDI enhancements in 3.2K and UHD recording**
- **Support for the CCP-1** – support for the camera control panel, including daisy-chaining the MVF-1 viewfinder
- **Wi-Fi toggle via user button** – ability to toggle Wi-Fi power via a user button to quickly enable and disable the Wi-Fi interface when the camera is used on a drone
- **Switchable zoom position in the viewfinder** – ability to select the position of the zoom area using the buttons surrounding the LCD panel on MVF-1
- **Recordings with longer exposure times** – the camera won't restrict exposure times longer than 1/24 sec any more, but will display a warning

## ALEXA Mini technical specifications

Camera type 35 mm format film-style digital camera with lightweight and compact carbon body, switchable active sensor area, support for ARRI MVF-1 viewfinder, built-in remote control capabilities via ARRI Electronic Control System and Wi-Fi, support for cforce motors, built-in motorized ND filters, interchangeable lens mounts and ARRI Lens Data System as well as Lens Data Archive.

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Dimensions Length: 185 mm/7.3"  
Width: 125 mm/4.9"  
Height: 140 mm/5.5"  
(camera body with PL lens mount)

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Weight ~ 2.3 kg/5 lbs (camera body with titanium PL lens mount)

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Sensor 35 mm format ARRI ALEV III CMOS with Bayer pattern color filter array

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Active photo sites (with surround view)

S16 HD:	1600 x 900	(1760 x 980)
HD:	2880 x 1620	(3168 x 1772)
2K:	2868 x 1612	(3154 x 1764)
3.2K:	3200 x 1800	(3424 x 1926)
4K UHD:	3200 x 1800	(3424 x 1926)
4:3 2.8K:	2880 x 2160	(3168 x 2160)
2.39:1 2K Ana.:	2560 x 2145	(3424 x 2202)
HD Ana.:	1920 x 2160	(3424 x 2202)
Open Gate 3.4K:	3424 x 2202	(3424 x 2202)

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Shutter Electronic shutter, 5.0° to 356.0°

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Exposure latitude 14+ stops over the entire sensitivity range from EI 160 to EI 3200 as measured with the ARRI Dynamic Range Test Chart (DRTC-1)

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Exposure index EI 800 base sensitivity

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Filters Built-in motorized ND filters 0.6, 1.2, 2.1

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Lens mounts Titanium PL mount with L-Bus connector and LDS  
EF mount  
PL mount with Hirose connector and LDS  
B4 mount with Hirose connector

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Recording media CFast 2.0 memory cards

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Recording formats *ProRes:*

S16 HD: 1920 x 1080 (up-sampled from 1600 x 900)

HD: 1920 x 1080

2K Cine 16:9: 2048 x 1152

3.2K: 3200 x 1800

4K UHD: 3840 x 2160 (up-sampled from 3.2K)

4:3 2.8K: 2880 x 2160 (padded to 2944 x 2160)

*Anamorphic ProRes formats with 2x in-camera de-squeeze:*

HD Anamorphic: 1920 x 1080\*

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2.39:1 2K Anamorphic: 2048 x 858\*

*MXF/ARRIRAW (in-camera recording to MXF-wrapped ARRIRAW files):*

2.8K 16:9: 2880 x 1620\*\*

Open Gate: 3424 x 2202\*\*\*

*MXF/ARRIRAW Open Gate modes with active image area matching 4:3 ProRes modes:*

4:3 2.8K (OG 3.4K): 2880 x 2160 (Recording in Open Gate 3.4K)\*\*\*

2.39:1 Ana. (OG 3.4K): 2560 x 2145 (Recording in Open Gate 3.4K)\*\*\*

16:9 HD Ana. (OG 3.4K): 1920 x 2160 (Recording in Open Gate 3.4K)\*\*\*

\*) requires ALEXA Mini 4:3 License Key, \*\*) requires ALEXA Mini ARRIRAW License Key,

\*\*\*) requires both ALEXA Mini 4:3 and ARRIRAW License Keys

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Recording codec	ProRes 4444XQ, 4444, 422 (HQ), 422, 422(LT), MXF/ARRIRAW
Color output	Rec 709, custom look or Log C
Look control	Import of custom 3D LUT, ASC CDL parameter (slope, offset, power, saturation)
Adjustable image parameters	Knee, gamma, saturation, black gamma, saturation by hue
Focus and exposure	Peaking, zebra, false color, waveform

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control

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White balance Manual and auto white balance

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Sound level < 20 dB(A) at standard frame rates

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Environmental -20° C to +45° C (-4° F to +113° F) @ 95% humidity max, non-condensing, splash- and dust-proof through sealed electronics.

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Viewfinder Multi Viewfinder MVF-1 (OLED and LCD) with flip-out LCD screen and military-grade connector to camera  
Camera Control Panel (CCP-1) LCD control panel with option to daisy-chain MVF-1

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Control interface Soft buttons and OSD on SDI output, integration of Transvideo StarliteHD5-ARRI touch interface  
WCU-4 hand unit with control over operational parameters

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ARRI lens motor control Built-in white-coded radio interface for ARRI lens and camera remote control  
LBUS motor output for daisy-chainable cforce lens control motors  
Lens Data Archive

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Wi-Fi remote control Built-in Wi-Fi interface and web-based remote control from phones, tablets and laptops.

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Custom control Optional GPIO interface for integration with custom control interfaces

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Power input Lemo 8-pin, 10.5-34 V DC

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Video outputs	2x HD-SDI out 1.5G and 3G: uncompressed HD video with embedded audio and metadata, 6G SDI in UHD and 3.2K recording modes.
Inputs	SDI-Genlock (optional activation through ARRI Service) Timecode (in and output)
Other interfaces	USB 2.0 (for user sets, looks etc.) Ethernet for service and web remote control EXT accessory interface w. RS pin and unregulated power output (outputs battery voltage)

## B. Update Instructions

### Download and registration process for software updates

You can find the Software Update Package (SUP) in the ARRI Downloads Section at <http://www.arri.com/downloads/>. Please select 'ALEXA Mini' from the top dropdown menu. You have to register your ALEXA Mini camera with your camera serial number to access the Software Update Package (SUP) download. Existing ALEXA customers with an active account for the download section can use this account, unless otherwise requested.

A SUP can be installed on the camera by using a USB stick as described in detail below.

### How to get a Software Update Package

- If you have not registered yet, please go to the ALEXA downloads page at <http://www.arri.com/downloads/> and scroll to the ALEXA Mini Software Update Package x.x' section (where 'x.x' is the version number of the desired Software Update Package). Click 'Please -> register to get an account.' The ALEXA Mini customer registration page will be opened.
- Fill in the requested data and make sure to put in the serial number(s) of your camera(s) in the format of K1.0003873-xxxxx . Don't forget to agree to the registration terms at the end of the page.
- When you hit the 'create account' button, the system will send you an acknowledgement email with a link to activate your account. After following the link, a welcome email is sent containing the login credentials. Please login at <http://www.arri.com/login/login.html> and navigate to the download section again.
- When accessing the software package download, you will be asked to agree to the terms and conditions of this download. As soon as you agree to these terms the download link is released.

### Camera update procedure

The ALEXA Mini software is updated with a USB stick. The SUP will update the ALEXA Mini camera as well as the Viewfinder (MVF-1) and the lens mount, as long as they are connected to the camera.

- After the download, please double click the downloaded file (\*.zip) to unpack it or unpack it manually. This will place two update files (\*.SUP and \*.lic) and the SUP release notes onto your computer.
- If not done beforehand, prepare the USB stick for use with ALEXA Mini by connecting it to the camera: please navigate to MENU>Media>Prepare USB medium and press CONFIRM. This will create the required folder structure on the USB stick.
- Connect the USB stick to your computer and place the downloaded \*.SUP file in the folder ARRI/A-MINI/SUP on the USB stick. Then place the downloaded \*.lic file in the folder ARRI/A-MINI/LICENSES on the USB stick.
- Make sure the camera is connected to a cable power source, or is powered with a full battery to avoid power loss during the update process.
- Perform a factory reset.
- Connect the USB stick to the camera and navigate to MENU>System>Camera update.
- Select the SUP file from the list.
- In the following message, press CONFIRM to start the installation.
- After the update process has finished, a success message is displayed.
- If you have been installing using the web remote make sure you clean your browser's cache, the browser may not show the web remote of the new software correctly otherwise.
- Make sure you set the correct time zone in the System Time configuration.
- The MVF-1 and the lens mount(s) need to be attached to the camera. SUPs not only contain updates for the camera body but also for EVF and lens mount. To ensure flawless performance, please make sure your MVF-1 and lens mount(s) are updated as well.
- For a downgrade to a previous SUP version, the license file of this previous version (amira\_fw\_update\_aes\_x.x.x.lic) needs to be available on the USB stick under \ARRI\A-MINI\LICENSES\.

## C. New Features SUP 4.0

### 4:3 ProRes recording modes

ALEXA Mini offers three new ProRes recording modes which access the full 4:3 sensor area and support the use of anamorphic lenses. The monitoring path of all 4:3 modes offers SDI setups featuring 2x 1.5G or 3G outputs.

The new 4:3 recording modes are:

- **4:3 2.8K**
- **2:39:1 2K Ana.**
- **16:9 HD Ana.**

The first mode **4:3 2.8K** provides access to the full 4:3 sensor area (2880 x 2160). It offers frame rates up to 50 fps and an optional 2x anamorphic de-squeeze for the EVF and SDI monitoring path. This recording mode can be used with anamorphic or spherical lenses. Please note that due to an optimization of the ProRes codec in ALEXA Mini the recording is padded with black pixels to a recording resolution of 2944 x 2160. The active image area is flagged in metadata, but care must be taken when scaling the image as not all tools may respect that information.

The two other modes, **16:9 HD Ana.** and **2:39:1 2K Ana.** are anamorphic recording formats and are designed for 2x anamorphic lenses. These two recording modes perform a 2x anamorphic de-squeeze in-camera so that no postproduction process (cropping and scaling) is necessary.

The **2:39:1 2K Ana.** records a 2:39:1 standard 2K format (2048 x 858), which does not require any cropping or scaling in postproduction. Due to the scaling in-camera the recording data rate is reduced so that recording speeds up to 120 fps are possible in this format.

The **HD Ana.** mode is designed for cases where the look of anamorphic lenses is desired but the end product is full 16:9 HD without letter boxes. This format also supports recording speeds up to 120 fps.

In order to use the 4:3 ProRes recording modes the ALEXA Mini 4:3 License Key must be installed on the camera. The ALEXA Mini 4:3 License Key is available from the ARRI License Shop at [https://alshop.arri.de/catalog/alexamini/licenses/alexamini-4\\_3](https://alshop.arri.de/catalog/alexamini/licenses/alexamini-4_3)

**Note:** New customers to the ARRI License Shop (<http://alshop.arri.de>) must register with complete business information. ARRI is required to validate the information provided, so the registration process usually takes 1-2 business days. Due to the 4:3 Beta we expect a significantly higher number of new registrations, which will increase the wait time considerably. If you are a new customer to the License Shop please make sure to provide complete and carefully validated information. Incomplete or invalid information will require ARRI sales to personally follow up with you and not only slow down your registration but also increase the wait time for other customers.

### Internal MXF/ARRIRAW recording to CFast 2.0 cards

Starting with SUP 4.0 ALEXA Mini supports internal ARRIRAW recording to CFast 2.0 cards. The new format is called MXF/ARRIRAW and is not a sequence of single files anymore (as with ALEXA ARRIRAW recording), but an MXF file which wraps the single frames into one clip like a QuickTime file (.mov). ARRIRAW frames generated in the classical single file scheme and in the MXF-wrapped files are mostly the same: both are uncompressed, both are unencrypted and contain the same metadata and MXF/ARRIRAW clips can be converted to frame sequences though the ARRIRAW converter (or third-party tools capable of handling MXF/ARRIRAW), e.g. when copying clips from CFast 2.0 cards to disk.

Please be aware that due to the revision of the ALEXA Mini ALEV III sensor, the so-called packing of the ARRIRAW frames generated by ALEXA Mini is different. In order to do ARRIRAW processing in the ARRIRAW Converter or in third-party tools (such as Codex, DaVinci Resolve, Baselight or Colorfront's OSD) these tools need to be updated to include the newest version of the ARRIRAW SDK (software development kit). Without the update postproduction tools won't be able to handle the files even if MXF/ARRIRAW clips are unwrapped and turned into single files.

Please check your postproduction pipeline before you start shooting to make sure that the tools you intend to use support MXF/ARRIRAW generated by ALEXA Mini. Contact your tool manufacturer for updates if necessary. ARRI has provided the new ARRIRAW SDK and all manufacturers are currently working on updates. In case you have problems processing MXF/ARRIRAW files, please contact [digitalworkflow@arri.de](mailto:digitalworkflow@arri.de). The workflow experts in Munich will take care of your requests.

### Internal MXF/ARRIRAW 16:9 2.8K recording

The first MXF/ARRIRAW recording mode is **16:9 2.8K**, which provides recording speeds up to 48 fps at the 16:9 sensor resolution of 2880 x 1620 known from ALEXA.

In order to use MXF/ARRIRAW recording on ALEXA Mini the **ALEXA Mini ARRIRAW License Key** must be installed on the camera. The ALEXA Mini ARRIRAW License Key is available at the ARRI License Shop: [https://alshop.arri.de/catalog/alexa\\_mini\\_licenses/alexa-mini-arriraw](https://alshop.arri.de/catalog/alexa_mini_licenses/alexa-mini-arriraw).

### Internal MXF/ARRIRAW Open Gate 3.4K recording

When both the ALEXA Mini 4:3 License Key and the ALEXA Mini ARRIRAW License Key are installed on a camera the **MXF/ARRIRAW Open Gate 3.4K** recording modes become available.

The recording resolution of Open Gate 3.4K is 3424 x 2202 and the maximum recording speed is 30 fps. As with the ProRes 4:3 recording modes an optional 2x anamorphic de-squeeze is available for all monitoring paths and a dual 1.5G or 3G SDI setup is supported.

In order to be able to complement an anamorphic ProRes shoot with some shots captured in MXF/ARRIRAW we are also introducing new Open Gate 3.4K recording modes which share the same active image area as the related 4:3 ProRes recording modes.

The new modes are:

- **4:3 2.8K (OG 3.4K)**
- **2.39:1 2K Ana. (OG 3.4K)**
- **16:9 HD Ana. (OG 3.4K)**

These modes record 3.4K Open Gate at up to 30 fps, but the monitoring paths are set up to reflect the corresponding 4:3 ProRes modes. The active image area is noted in the metadata so that postproduction tools will crop the images to the respective size automatically. ARRIRAW Converter and other tools that support the new ARRIRAW SDK are able to override that information and return the full Open Gate frame if this is required. Please note that the requirements stated above about MXF/ARRIRAW processing in postproduction also apply to MXF/ARRIRAW recording in Open Gate 3.4K.

## Super 16 HD recording mode

The **S16 HD** recording mode uses a 1600 x 900 sensor center crop and scales it to full HD 1920 x 1080. The S16 HD mode allows the use of Super 16 lenses such as the ARRI Ultra 16 series on ALEXA Mini. The image circle of the S16 HD mode is 15.1 mm, which is slightly larger than the usual Super 16 image circle of 14.5 mm. For most lenses this should not introduce vignetting in the recorded image area, but individual testing, covering all lens iris and focus settings, is recommended.

Care must be taken when mounting S16 lenses to AMIRA for the first time. Lenses that reach very deep into the mount may not work and collide with the cover glass in front of the internal ND filter system. The available depth is 39.5 mm, this does cover lenses that did fit in a standard S16 film camera.

## Lens Data Archive and ECS improvements

Electronic Control System (ECS) support in the ALEXA Mini has been extended to include the Lens Data Archive, enabling all benefits of the ARRI Electronic Control System. SUP 4.0 includes all standard ARRI lens files as well as the ability to add custom lens files created for example on the WCU-4 hand unit. Please note that in order to copy lens files from the WCU-4 to ALEXA Mini you will have to use a WCU-4 software version 2.02.22 or newer, copy the lens files from the SD card to a USB stick and place them into the correct folder

/ARRI/A-MINI/LDA. Please note that this folder does not exist if the file structure on the USB stick was created with a previous release. Preparing the USB medium does not harm existing data so that it is recommended to use the "Prepare USB medium" function again on SUP 4.0 before transferring the LDA table. Some usability issues, especially the inability to switch the focus unit for lens data have also been fixed. The Ultrasonic Distance Measure UDM-1 can be connected to the ALEXA Mini using the LCUBE CUB-1.

## Transvideo StarliteHD5-ARRI interface improvements

The functionality and layout of the touch interface used on the Transvideo StarliteHD5-ARRI has been improved. The interface has been modified with a more neutral look and feel, and additional functionality has been introduced. We have added Record Start/Stop, access to the top three user buttons and the ability to enter playback. Please update your existing StarliteHD5-ARRI with the latest software from the [ARRI website](#).

## SDI enhancements in in 3.2K and UHD recording

We have changed the SDI setup of the 3.2K and UHD recording modes so that dual 1.5G is possible; this is especially useful as most video transmitters will not work in the 3G mode. The SDI outputs in the ProRes 3.2K and UHD recording modes can be set to dual 1.5G, dual 3G or to 1x 6G and 1x 3G.

## Support for the Camera Control Panel CCP-1 (K2.0008151)

The CCP-1 is basically a MVF-1 viewfinder without an eyepiece. The CCP-1 can be used with the camera instead of the viewfinder and provides full access to the UI home screen and menu as well as a small monitor image. CCP-1 can also be used in combination with the MVF-1 viewfinder, in which case the viewfinder will be daisy-chained from the second EVF connector of CCP-1. Please refer to the ALEXA Mini SUP 4.0 manual for a description of CCP-1 operation.

## Additional usability improvements

### **SDI metadata**

The SDI outputs of ALEXA Mini have standard ARRI metadata embedded now.

### **Wi-Fi toggle via user button**

Wi-Fi power can be switched on and off using a user button. The status of Wi-Fi power is reflected by the LED on the camera user button.

### **Switchable zoom position in the viewfinder**

When zoomed into the image on the eyepiece of the MVF-1, the zoom position in the picture can be determined using the buttons located around the LCD monitor.

### **Recordings with longer exposure times**

We have removed the strict exposure time limitation and replaced it with a warning. Please note that the ALEV III sensor in ALEXA Mini is optimized for exposure times shorter than 1/24 s and that image artifacts like individual overexposed pixels can appear when using longer exposure times.

### **Increased number of looks in camera**

The number of looks that can be stored in camera has been increased from 20 to 50.

### **Protection against cross platform CFast 2.0 formatting issues**

ALEXA Mini will only record on CFast 2.0 cards which have been erased on ALEXA Mini or AMIRA under SUP 4.0 in order to protect against issues caused by different CFast 2.0 formatting schemes used by other cameras types. Please see the Known Issues section for additional information on media handling.

## D. Known Issues

This is a list of known issues for this particular SUP 4.1 software package.

### Accessories

- **USB devices for AMIRA and ALEXA MINI**

AMIRA and ALEXA MINI only support USB sticks or pen drives. Hard drives or similar will not be recognized. Please see the manual for more information.

- **Compatibility issues with some Sigma lenses**

Some Sigma lenses e.g. Sigma (EF) 105 mm f2.8 DG Macro show erratic behavior when controlling IRIS. Please test EF lenses for correct behavior before using them in production.

- **Built-in EF lens image stabilizers are not supported**

Built-in image stabilizers in EF lenses are not yet supported.

- **SDI embedded timecode with 3G HD-SDI output on some devices**

When HD-SDI outputs are set to 3G, some devices may not read the timecode embedded in the signal. No limitations are seen with timecode output using 1.5G HD-SDI output settings. Starting with SUP 3.0 the timecode is part of the overlay metadata and can be displayed in the overlay of EVF, monitor and SDI outputs under "Monitoring/SDI/SDI processing/overlays/status components".

- **AUTO IRIS not functional after reboot**

After rebooting the camera, the auto iris may not be functional. This issue has been seen with Fujinon Cabrio lenses. Workaround: Briefly turn the iris ring until AUTO IRIS is re-enabled.

- **Lens mount change**

When changing the lens mount, please make sure the camera is powered down when you remove or attach a lens mount. Changing lens mounts on a powered-up camera can potentially damage the camera electronics.

- **Record Start/Stop on Canon HJ18 B4 lens**

In case the start/stop function on the Canon HJ18 B4 lens is not working with the ARRI B4 Mount and connected Hirose cable, please execute a "Reset all" on the lens.

- **AUTO IRIS may not work after resolution/codec changes**

If AUTO IRIS is used with B4 or S35 "Cabrio" lenses the auto-manual switch of the lens needs to be toggled to re-enable AUTO IRIS.

### Inputs/outputs

- **SDI frame rate is not automatically set to project frame rate**

Other than the sensor frame rate, the SDI frame rate is not automatically set to the project frame rate. This may result in "jerky" motion on the SDI out in standby/record as well as in playback.

- **6G UHD-SDI output does not include embedded audio**

The 6G UHD-SDI does not support embedded audio in the signal stream.

- **Syncing two cameras with timecode generated in camera does not work**

Syncing the sensors of two cameras is not possible by connecting TC out to TC in. Please use an external timecode source instead.

- **Genlock sync accuracy may jitter**

When using a genlock source (Tri-Level, BlackBurst, HDSDI and Timecode) for syncing the camera, the SDI sync can be shifted to match the phase of the source, but it may jitter in the range between 0 and 0.2 us (microseconds).



- **Limitations of looks set to a color space (REC 2020, DCI, ...) in ACT**

Using the "color space" option in look files may result in an incorrect display when the monitoring path is set to LOG C. The image appears very dark. As a workaround please switch the path to LOOK and then back to LOG C.

- **No COLOR BARS output with 6G SDI**

In 4K UHD mode, COLOR BARS are not displayed on the SDI output when this is set to 422 6G SDI.

- **422 3G SDI signals in ARRIRAW 16:9 HD Ana. mode**

In ARRIRAW 16:9 HD Ana. mode, 422 3G SDI signals are not fully functional and may be distorted.

- **With ARRIRAW recording, no embedded audio in SDI**

With ARRIRAW recording modes (other than 2.8K), no audio is embedded in the SDI signal.

## Media

- **CFast 2.0 cards formatted on ALEXA XT or SXT will not work on AMIRA/ALEXA Mini**

CFast 2.0 cards formatted on ALEXA cameras have to be erased again on AMIRA/ALEXA Mini to be used.

- **CFast 2.0 cards with clips recorded on cameras running SUP 4.0 cannot be erased on SUP 3.0**

Cards with clips recorded on SUP 4.0 have to be erased on SUP 4.0, but can be used immediately afterwards on SUP 3.0. Alternatively the cards can be formatted on a PC or Mac and then erased again on SUP 3.0

- **CFast 2.0 cards need to be erased with SUP 4.0 or higher before they can be used**

Only cards that have been erased with SUP 4.0 or higher will work with SUP 4.0 or higher. Cards erased on cameras running previous SUPs have to be erased again with SUP 4.0 or higher.

- **60 GB CFast 2.0 cards are not supported with ALEXA Mini SUP 4.0 or higher**

60 GB CFast 2.0 cards do not have the performance required with SUP 4.0 or higher and are not supported with ALEXA Mini SUP 4.0 or higher.

## Metadata

- **Lens metadata in SDI and recorded ARRIRAW clips is always metric**

Lens metadata in the SDI outputs and in ARRIRAW MXF is always metric irrespective of the lens mapping or LDS lens used.

## Playback

- **ZEBRA/FALSE COLOR is disabled during clip playback**

The zebra/false color exposure tools cannot be activated during clip playback. Displaying the waveform is possible in the EVF and on a monitor.

- **Activating Playback does not disable peaking**

Please disable peaking manually in case you do not want peaking during playback.

- **Interlaced clips jitter vertically when played back with SDI output not set to interlaced**

This only affects the playback in SDI, the recording is correct. Make sure to always match SDI the output configuration to the project configuration (e.g.: 60i clips to be played back with 60i SDI output).

- **Potential timecode shift after playback**

Playing back clips recorded with frame rates higher than 30 fps, may cause a slight delay (< 1 frame) in the synced timecode. Please make sure to check or re-sync the timecode in this case.

- **In Pause mode, interlaced clips only show half vertical resolution**

This behavior is only when playback is monitored on the SDI outputs.

- **Fast scrubbing in cliplist**

Scrubbing fast through the cliplist in playback may result in the wrong clip been displayed in the viewfinder and SDI outputs. Clicking the jog wheel will show the correct clip.

- **Browsing cliplist with camera buttons may not update clip selection in monitor**

Using the buttons on the camera body for browsing the playback cliplist, may not update the selection of the clip in the cliplist displayed in the viewfinder monitor.

## Recording

- **Changing Exposure Index or White Balance during record**

When changing Exposure Index or White Balance during record it is possible that a single frame contains two different image characteristics.

- **Error message for maximum clip size.**

On very rare occasions, the camera may stop recording and report "Recording stopped - maximum clip size reached". This can only occur with image content that has very little detail and using a codec with low data rate like ProRes LT.

- **Number of clips limited to 400 clips per CFast 2.0 card**

The camera cannot record more than 400 clips on a single card. Please note that the camera gives no further information but just refuses to record more clips.

- **Limited scaling quality in HD-SDI outputs when recording in 2K**

The resulting image quality is considered as sufficient for monitoring but may be limited for recording the signal as the master record. This is due to the downscaling of the 2K resolution to HD. Please set the recording format to HD when recording HD on the HD-SDI output as master record.

- **Image de-noising in 4K UHD, "STRONG" mode**

The "STRONG" mode in Image de-noising (available in S16 HD, 3.2K 4:3 2.8K and 4K UHD) may result in image artifacts with fast moving objects. We recommend to test this accordingly before using the "STRONG" mode.

- **Limited amount of reels on CFast 2.0 cards**

Recording on CFast 2.0 cards is limited to 15 reels per card in ProRes and ARRIRAW MXF. With MPEG-2 HD 422 the limit is 2 reels. If the maximum number of reels is reached, recording is still possible if no further reel needs to be created.

- **Incorrect remaining time display in interval recording**

Using higher capacity CFast 2.0 cards for interval recording may cause wrong remaining time display.

- **Failure while recording**

In the very rare case of a failure while recording, the camera will reboot and display a message.

- **Limited card capacities with SanDisk CFast 2.0 cards**

To ensure maximum recording performance in all card states, the capacity of the SanDisk CFast 2.0 cards is limited by 5%.

## SUP update

- **Installing SUP previous to SUP 4.2 on cameras that have been shipped in 2017**

We generally recommend using the latest SUP in production. All SUP 4 releases are based on the same core functionality and architecture, so the updates deliver enhancements and bug fixes at very low risk.

Cameras shipped in 2017 contain updated hardware that requires new drivers that are not supplied by SUPs prior to SUP 4.2.

If a downgrade is necessary anyway, the camera can be downgraded from SUP 4.2 once. The update logic contained in SUP 4.2 will not install incompatible drivers during the downgrade. **In order to install or update any SUP previous to 4.2 you will need to have SUP 4.2 or later running on the camera first!** Not running SUP 4.2 or later before installing an older SUP will cause failure of the SDI and EVF outputs of the camera. If you run into this situation do not panic! The incompatible driver will not affect the hardware of the camera. In order to rescue the camera SUP 4.2 or later will need to be installed via the web remote interface, as the monitor on the viewfinder won't work.

- **Camera default setup is reset**

When updating the camera with a SUP, the "Default setup" is cleared.

- **Timezone and daylight saving time are set to default with the SUP update**

Please make sure to set Timezone and daylight saving time after the SUP update.

- **Software update takes longer than usual**

Software update from SUP 3 to SUP 4 takes significantly longer than prior updates. Make sure not to power off the camera during SUP update.

## Timecode

- **Timecode jam sync with clock tuning**

It is recommended to activate Menu/System/Sensor/Genlock/TC IN while the camera is being synced with an external timecode source. This will cause the internal clock to be tuned to the timecode signal and ensures the camera drifts less vs the timecode source. The quality of the tuning depends on the quality of the timecode source and the time the source was connected. Please leave the external source connected for at least 30 seconds. Before disconnecting the timecode source set Menu/System/Sensor/Genlock back to OFF in order to avoid an error message.

- **Syncing the sensor via LTC timecode requires a precision timecode generator**

A precision generator with low jitter is required when using an LTC timecode signal to genlock the camera. Devices that work without a problem as standard LTC timecode source may not work as LTC genlock source.

## Usability

- **Frame grab is only available in standby mode**

The frame grab to USB function is only available when the camera is in standby mode. It is not possible during RECORD (incl. PreRecord) and PLAYBACK, or when INTERVAL or STOP MOTION recording is activated. Frame grabs are always stored in HD 1920x1080 resolution and use the gamma setting of the SDI output.

- **Zebra is not available while the EVF/Monitor gamma is set to LOG C**

The Zebra function is deactivated when EVF/Monitor gamma is set to LOG C. Please switch to the false color display or WAVEFORM to check exposure values on the Log C image.

- **Using Zebra and Aperture Peaking in combination may result in false exposure indication**

When Zebra and Aperture Peaking are enabled in parallel, it may result in a false exposure indication.

- **User setups created with earlier SUPs are not compatible with SUP 3.0 or higher**

User setups created with an earlier SUP cannot be loaded into SUP 3.0 (or higher). A new user setup needs to be created with SUP 3.0 or higher.

- **Anamorphic de-squeeze is enabled by default in Open Gate**

If you are not shooting anamorphic in OG 3.4K disable anamorphic de-squeeze for EVF and SDI.

- **Limited number of camera files on USB sticks**

Only a limited number of camera files can be supplied on a USB stick: User Setups: 20, Look Files: 100, Frame lines: 100, License files: 100, SUPs: 20.

- **File name length 28 characters max.**

File names longer than 28 characters (excluding extension) cannot be loaded by the camera, they are neither seen in the corresponding lists nor can be used.

- **StarliteHD5-ARRI can change settings or trigger a record even if UI is not displayed on screen**

If the StarliteHD5-ARRI is connected to a SDI output showing "CLEAN" output, settings may be changed without notice when touching the respective areas on the screen. Please make sure the StarliteHD5-ARRI is connected to an SDI output that is set to "PROCESSED" to see the touch interface.

- **Anamorphic de-squeeze cannot be deactivated for monitoring with some formats**

Anamorphic de-squeeze cannot be deactivated for monitoring with the ProRes HD Ana. and 2:39:1 2K Ana. recording formats.

- **CHECK LAST CLIP during RECORD may result in lost frames**

Do not trigger the user button function CHECK LAST CLIP during record. This also applies if this function is i.e. assigned to VF1/VF2 buttons, GPIO trigger or LENS RET. Devices that depend on the state of the SDI record flag also suffer from this effect.

- **Switching to ARRIRAW while in ProRes 4K UHD or 3.2K does not work**

The resolution has to be altered to a lower resolution first when switching to ARRIRAW from ProRes 3.2K or UHD.

## Viewfinder

- **Heated Eyecup HE-6 is not compatible with the AMIRA viewfinder**

When using the heated eyecup, the proximity sensor that activates the OLED display will always be in an activated state. In this state, the OLED display will not switch off when not in use, and can burn in when the displayed image does not change over time. This is especially true for status overlays. Please use the new HE-7 Heated Eyecup instead. This is compatible with all MVF-1 viewfinders starting with serial number 2151, or viewfinders with the eyepiece upgrade installed.

- **ZOOM or SURROUND VIEW at very low frame rates**

The MVF-1/MONITOR's image momentarily fades when either zoom or surround view get activated or deactivated at very low frame rates (below about 5 fps).

- **For MVF-1 up to serial number 2150 which are not upgraded to the new eyepiece**

The viewfinder sometimes may not switch on as it uses a proximity sensor to activate the OLED display only while the eyepiece is in use. Approaching the MVF at an unfavorable angle may cause it not to trigger properly.

- **Viewfinder may show scaling artifacts 3.2K recording mode**

The artifacts are limited to the viewfinder monitoring, they do not affect the recordings.

- **Viewfinder may show scaling artifacts in 4:3 2.8K mode with anamorphic de-squeeze**

The artifacts are limited to the viewfinder monitoring, they do not affect the recordings.

- **Do not cover the viewfinder proximity sensor for a long time!**

Please note that constantly covering the proximity sensor (for MVF-1 serial number 2150 and below located at the edge of the viewfinder close to the eyepiece for Serial number 2151 and higher or upgraded eyepiece located within the eyepiece) with tape or similar, can cause an irreversible burn-in on the OLED display!

## Wireless

- **Range on Wi-Fi connection may be limited**

Frequent reloading of the remote camera interface connected with Wi-Fi indicates a limited Wi-Fi range. Please put the device closer to the camera or use the ethernet connection.