

ALEXA 35 SUP 1.3.0

Software Update Package (SUP) 1.3.0

RELEASE NOTES

July 12, 2024



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A. Introduction

ALEXA 35 SUP 1.3.0 contains a new recording format and improvements to the AEM-1, WiFi performance and metadata. In addition, SUP 1.3.0 contains changes to the software architecture to prepare for the release of ALEXA 35 SUP 2.0.0, which will support the ALEXA 35 Live - Multicam System. As always, this SUP includes numerous bugfixes and stability improvements.

We highly recommend that you take your time to go through these release notes, the known issues section of this document and the user manual before operating the camera.

For more information on the camera, please visit www.arri.com/alex-35

Update Recommendation

This release includes useful new features as well as important bugfixes and stability improvements. We unequivocally recommend updating to all customers.

Please Note:

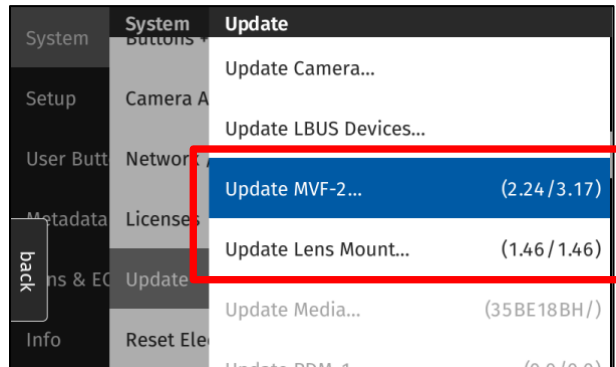
- SUP 1.3.0 contains a bug where the PreRecording duration cannot be adjusted. If this is necessary for your workflow, please use SUP 1.2.3.
- In order to apply HDE to Files the codex device manager has to be updated to version 7.3.1.
- The inclusion of a remote Tally setting has led to the SDI Record flag not working. There is an easy work-around for this: set Tally to OFF or ON (RECORDING) in Menu > System > Buttons + Display > Tally. This will be changed in the next Software Update Package.

Overview of New Features of SUP 1.3.0

- **New Recording Format ProRes 3.8K 16:9**
- **AEM-1 Output and Playback Monitoring**
- **Improvements to Dynamic Metadata**
- **Wi-Fi Improvements**
- **Additional Lens User Buttons for ENG-style Lenses**
- **EBU R095 Frame Line**

Updating Camera, Viewfinder and Lens Mount

- This SUP can be installed on all previously shipped ALEXA 35 cameras.
- We do not recommend updating in the middle of a production.
- When connected to the camera, the MVF-2 viewfinder and the lens mount will also be updated automatically.
- When you encounter a camera in rental or on set where the MVF-2 or the lens mount have older software installed, the camera will make you aware of this. We recommend to then perform a component update of the MVF-2 or lens mount (CAMERA MENU > System > Update). The first version number in brackets is the version of the component, the second the version of the component's software included in the camera's SUP. In the example below, the MVF-2 has an older software installed (2.24) than the MVF-2 software that is part of the camera's SUP (3.17). After the component update, both numbers should be the same, as is the case in the example below for the lens mount.



The following versions are included with ALEXA 35 SUP 1.3.0:

- Multi Viewfinder MVF-2: 3.51
 - LPL Mount: 1.55
 - PL Mount (LBUS): 1.96
 - PL Mount (Hirose): 1.96
 - EF Mount (LBUS): 1.14
 - Camera Access Protocol (CAP): 1.12
 - mxf Library: 4.2.0
- Please note that the viewfinder might switch off during the update process and does not give visual feedback of the update all the time. Refer to the side display in that case.
 - Make sure not to power off the camera during an update. Make sure not to unplug the viewfinder during an update. Detailed instructions for the update process can be found at the end of this document.
 - Always use a 'private' or 'incognito' browser window when using the Web Remote to perform a SUP update (or when remotely controlling the camera with the Web Remote) . This prevents possible erroneous behavior.

Updating the Camera Control Monitor CCM-1

- The camera SUP does not contain any Camera Control Monitor CCM-1 software. A CCM-1 that is connected to the camera during a camera SUP update will therefore not be updated.
- To update the CCM-1, download the CCM-1 update file from the ARRI website, copy it onto a USB-C Stick in the root folder and connect the USB-Stick to the CCM-1. Disconnect the CCM-1 from the camera and navigate to Menu > Firmware > Update and select the update file to initiate the update process.

Updating the Audio Extension Module AEM-1

- The camera SUP does not contain any Audio Extension Module AEM-1 software. An AEM-1 that is connected to the camera during a camera SUP update will therefore not be updated.
- To update the AEM-1, download the AEM-1 update file from the ARRI website, copy it onto a USB-C Stick in the root folder and connect the USB-Stick to the AEM-1. Initiate the update on the AEM-1 by going to MENU > SETUP > UPDATE and select YES to start the process.

Updating LBUS Accessories

- The camera SUP does not contain any LBUS accessory software. LBUS accessories (like RIA-1, ZMU-4, cforce mini motors, cforce plus motors, ARRI Master Grips, ARRI Operator Control Unit OCU-1 or ARRI LCUBE) connected to the camera during a camera SUP update will therefore not be updated.
- To update LBUS accessories, download the LBUS device update file from the ARRI website, copy it onto a camera USB stick in the folder ARRI/ECS/, place the USB stick into the camera, connect the LBUS device to the LBUS connector on the camera and then initiate the update from MENU > System > Update > Update LBUS Devices... .

Updating Codex Compact Drive 1TB

Codex Compact Drive 1TB units with a serial number lower than 602##### need to be updated before they can be used in an ALEXA 35. Newer drives are shipped with updated firmware. If a drive that needs a firmware update is inserted into the camera, an update prompt will be displayed. **Please note that only ALEXA 35 SUP 1.2.3 can update drives.** Updating with SUP 1.3.0 does not work but will work in future SUPs.

After the drive has finished updating, the camera will remain in update mode so that multiple drives can be updated. To restore normal operation, reboot the camera.

Caution: All data on the drive will be irreversibly erased when updating the drive firmware. Please back up your data before the update!

Note: Updated Compact Drive 1TB and the new Compact Drive 2TB will also be supported by ALEXA Mini LF starting with ALEXA Mini LF SUP 7.1.1.

Downdating the Camera

It is possible to downgrade from this SUP to an older SUP.

- However, MVF-2 viewfinders with serial numbers above 6849 and Compact Drive 2TB units with serial numbers starting with '273xxxxx' require ALEXA 35 SUP 1.0.4 or newer.
- Since ALEXA 35 SUP 1.x requires a different sensor calibration from any of the field test SUPs (0.8.x), please do not downgrade the camera from SUP 1.x to any of the field test SUPs.

Software Compatibility

- Please note that for AEM-1 output monitoring to work, the AEM-1 must be updated to AEM-1 software V1.1G, which will soon be posted on the ARRI AEM-1 webpage.
- Please note that the Camera Control Monitor CCM-1 must be updated to CCM-1 SUP 5.5.2 to work with ALEXA 35 SUP 1.2.3 or later. If you run CCM-1 SUP 5.5.1 or earlier, use of the CCM-1 is severely impeded or even impossible. The CCM-1 SUP 5.5.2 is compatible with ALEXA 35 SUP 1.2.0 and later.
- To use custom color management, you need the ARRI Reference Tool version 1.4.0 or later, which can create ALF4c look files that enable custom color management.
- To process files recorded with ALEXA 35 or create look files for ALEXA 35 (ALF4 or ALF4c), please use the latest version of the [ARRI Reference Tool \(ART\)](#). ALEXA 35 SUP 1.3.0 has been tested with and works well with ARRI Reference Tool 1.4.0 or later. The old ARRIRAW Converter will not be able to process ALEXA 35 files.
- ALEXA 35 SUP 1.1.0 or newer is not compatible with Hi-5 SUP 1.3 or earlier and RIA-1 SUP 1.2.1 or earlier. Both Hi-5 and RIA-1 must be updated to SUP 2.0 or higher to work with ALEXA 35 SUP 1.2.0 or later.
- A listing of third-party software and their compatibility to ALEXA 35 can be found on the [ALEXA 35 Workflow webpage](#). Please make sure to always use the latest version of any third-party software.

Sample Footage

Sample footage shot with the ALEXA 35 camera can be downloaded on the [ALEXA 35 sample footage webpage](#).

Registration

If you have not done so already, please make sure to register your camera using our online customer registration. Your registration ensures that you receive information about future software updates as soon as they are available. If you register your new camera within 1 month of purchase, you will get a one-year extended warranty for free. You can find the registration at www.arri.com/productregistration.

B. New Features of SUP 1.3.0

ProRes 3.8K 16:9

Previously only available in ARRIRAW, this popular recording format is for projects using spherical lenses for a 16:9 deliverable with a 4K UHD resolution (3840 x 2160). This format is useful when you want to achieve the lowest possible data rate in ProRes while still fulfilling 4K UHD mandates. In addition, this format has a smaller sensor area than sensor modes 4.6K 3:2 Open Gate, 4.6K 16:9 or 4K 16:9, which ensures that the illumination circle of most Super 35 format lenses covers the format.

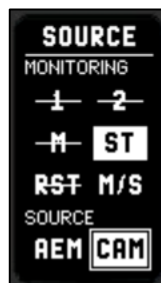


AEM-1 Output and Playback Monitoring

We are glad to see the AEM-1 used on many ALEXA 35 systems and understand that people are really happy with it. A highly requested feature was output monitoring – the ability to monitor the inputs as they are routed and recorded in the system. ALEXA 35 SUP 1.3.0 in conjunction with AEM-1 V1.1 G offers that feature. To enable it, set the monitoring source to 'CAM'.

In addition it is now possible to monitor the recorded sound while the camera is in playback from the headphone jack of the AEM-1.

Please note that for these AEM-1 features to work, the AEM-1 must be updated to AEM-1 software V1.1G, which will soon be posted on the ARRI AEM-1 webpage.



Improvements to Dynamic Metadata

Most software implementations including the ARRI MXF Library used static metadata for fps and shutter angles. This masked non-standard values for those two parameters in the dynamic metadata. Starting with SUP 1.3.0 the dynamic metadata will accurately represent fps and shutter angle values.

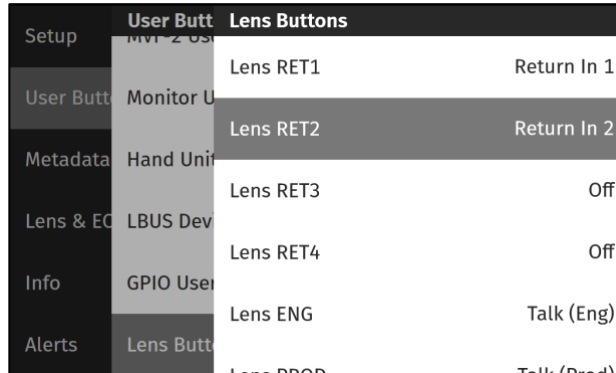
WiFi Improvements

We had reports regarding the WiFi performance on previous software updates. In response to that we took an in-depth look at the software and implemented a more up to date software stack which will offer performance improvements and stability fixes.

Additional Lens User Buttons for ENG-style Lenses

In place of the 'Lens Ret' user button we are introducing a Lens Buttons menu to support ENG style Lenses that feature more than one user button. Since these lenses do not communicate which user buttons are available, the indicator only shows if an ENG lens is connected and all possible buttons are available. The following buttons can now be assigned:

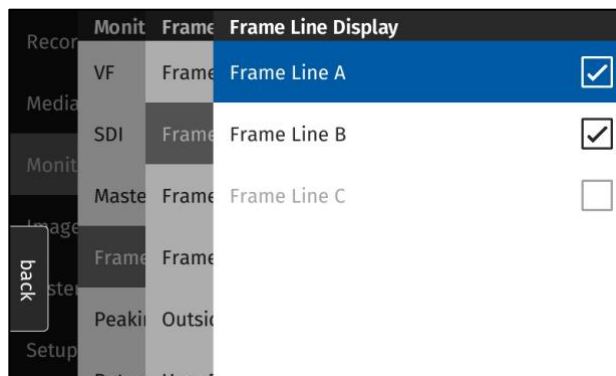
Lens RET1, Lens RET2, Lens RET3, Lens RET4, Lens ENG, Lens PROD, Lens VTR.



EBU R095 Frame Line

For 16:9 sensor modes a EBU R095 frame line has been added to the cameras frame line default list. In the xml file the two safe areas are included as frame line A and frame line B. In a Multicam environment it can be freely chosen which safe area is displayed (A, B, A+B) via the frame line display setting.

The action safe area is 3.5% and the graphics safe area is 5%, at the top, bottom and lateral part of the image.



C. Bugfixes and stability improvements in SUP 1.3.0

This release contains the following major bugfixes (minor bugfixes are not listed):

- Override on a Master Grip was lost if the Hi-5 lost and re-established connection.
- The scale factor is now calculated individually for each frame line A/B/C and the frame lines are (de)squeezed individually.
- The Rec/Info section of the Webremote now accurately represents a two letter camera index.
- Switching from LDS to an LDA table no longer changes the iris limit.
- Occasional flickering of the first two lines in the MVF-2 OLED does not occur anymore.
- ECS devices can now start/stop recording even if a recording is started during active playback.
- Headphone monitoring now has audio even if both channels are set to "Internal Mic L".
- Changing shutter or fps values no longer provokes a temporary wrong temperature warning.
- Return In displays a correct image in Open Gate Sensor modes.
- Clip recovery from a power loss during recording has been improved.
- The side display backlight turns off 3 seconds after being sent to sleep instead of 40.

D. Known Issues – Software

Accessories

FPS Preset cannot be used by Camera Control App

Currently, the Camera Control App cannot set frame rates for the “FPS Preset” user button.

Not possible to set Enhanced Sensitivity (ES) via Hi-5

Currently it is not possible to select Enhanced Sensitivity exposure indexes via the Hi-5. Those EI values must be selected via user button, Viewfinder or Web Remote.

Boot loop on WCU-4 with certain /i Lenses

Attaching certain Lenses that use the Cooke /i Protocol may send the WCU-4 into a boot loop. Please deactivate the Lens Mount and use LDA Tables in that case.

RIA-1 Update via CAM Fails

Updating RIA-1 by connecting the RIA-1 CAM port to the ALEXA 35 and then running the update from the camera sometimes fails. Use a LBUS connection in this case.

Hi-5: Assigned User Buttons have no labels

On the Hi-5 assigned Hand Unit Userbuttons have no labels. While an assigned function displays ‘Off’ if works nevertheless.

Lenses

Some /i lenses show missing or incorrect lens scales

For a few lenses using the Cooke /i protocol lens scales are either missing or not displayed correctly. Use LDA tables for these lenses instead.

Monitoring

ProRes 3K 1:1 format does not support 422 3G HD output

The ProRes 3K 1:1 recording format does not support 422 3G HD SDI output. Please use 422 1.5G or 444 3G.

Frame lines may be displayed in the surround view when using master magnification

When using surround view in conjunction with master magnification the frame line may be displayed in the surround area for certain magnifications while it should not be visible.

External LUTs desaturate camera overlays

A LUT applied to an external monitoring device may desaturate the camera overlays in a way that makes STBY and REC indications hard to distinguish. Reducing the SDI overlay brightness mitigates this issue. The setting is found in: MENU > MONITORING > SDI > SDI 1 PROCESSING > OVERLAYS > OVERLAY BRIGHTNESS

MVF-2 OLED may show magenta tint

In rare circumstances the MVF-2 OLED can show a magenta tint that is not observable on SDI. The recorded images are not affected.

Master Magnification not applied with first load of setup file

Master Magnification is not applied when the Setup file triggers a sensor mode switch. Load the setup file a second time to apply the Master Magnification.

Multicam Looks visible but not usable

Multicam Looks are a feature of SUP 2.0.0. They are visible in the Look menu but can not be used yet. We advise to delete them manually.

Playback

Small playback image

When using Magnification and Surround view the playback image may show less than monitored during recording and standby.

Lower Audio levels in Playback

When playing back a clip with Audio the headphone output on MVF-2 is 3dB less than in Live/Recording.

Limited clips available via CAP

When Playback is controlled via CAP only the first 270 clips on the card are available. To access later clips use the side display.

After leaving playback or check last clip, camera momentarily doesn't respond to inputs

After leaving any playback mode, whether started via 'Check last clip' or 'Playback' User Button the camera may occasionally not react to inputs for a few moments. The camera will return to normal state after a maximum of four seconds.

With MVF-2 and CCM-1 parallel use, some recording modes play back incorrectly

While using an MVF-2 and a CCM-1 at the same time in any 3.3K, 3K and 2.7K mode, playback on the CCM-1 will be displayed with blacked out image areas. Playback on SDI and the MVF-2 is unaffected. The recording is intact. If you need to use playback on the CCM-1 in the aforementioned modes, please downgrade to SUP 1.2.3.

Remote Control

Sync slips by one frame if recording is started while in playback

MENU > System > Sensor > Genlock Sync > SYNC IN

MENU > System > Sensor > Genlock Sync > TC IN

When several cameras are synchronized via TC IN or SYNC IN, and recording is started while one camera is in playback, that camera will be out of sync by one frame. There is an obvious, easy workaround: make sure all cameras are in standby, before starting to record.

Prerecording can only be turned off with a User Button

Prerecording can only be deactivated with a User Button assigned to that function. If you happen to lose access to the device that has the user button assigned start a recording and pull the drive from the camera. The recording will fail, and prerecording will be deactivated.

OCU-1 wired to camera via ZMU-4 cannot exit override

Override is not always possible if an OCU-1 or Master Grip are used in combination with a ZMU-4:

- Override is not supported for wireless control units. It is therefore not possible to use the override function of an OCU-1 or Master Grip if they are connected to a ZMU-4 in client mode.
- It is currently not possible to use the override function when the ZMU-4 is connected remotely to an ALEXA Mini or ALEXA Mini LF camera and a cabled MG-1 or OCU-1 at the camera.

Workaround: Connect the ZMU-4 to the camera only via CAM to EXT or set up the system that the corresponding axis is only controlled via the OCU-1 (disable that lens axis in the Hi-5 Menu > Control Setup).

Updating

Updating Codex Drive firmware not possible

SUP 1.3.0 cannot update Codex Compact Drive firmware. Please use SUP 1.2.3 or lower to perform drive updates. This will be fixed in future SUPs.

Usability

Closing menu on the CCM-1 opens menu on MVF-2

When a CCM-1 and a MVF-2 are in simultaneous use every time the menu is closed on the CCM-1 the MVF-2 will display the menu.

PreRecording duration can not be adjusted

The PreRecording maximum duration can not be adjusted and is set to 5s. The PreRecording User Button is available and working. This will be fixed in the next SUP.

Lens User Buttons default assignment

The Lens User Buttons are by default assigned with Multicam Features that are not yet accessible. If used reassign the buttons accordingly.

E. Known Issues – Hardware

BNC connectors breaking

Some BNC connectors on the ALEXA 35 can break off when the cable is pulled out at too much of an angle. Please make sure to pull out cables straight to avoid this. Please note: Only cameras with serial numbers between 62000 and 62400 are affected by this issue.

Broken connectors can be replaced by the customer/rental/dealer or by ARRI service. To be prepared, replacement connectors can be ordered from ARRI service free of charge. This video shows how to replace connectors:

<https://arri.academy/SE-replacing-bnc-connectors-alexa35>

F. Update Procedure

Where to download the new Software Update Package (SUP)

You can find the Software Update Package in the [Software Update Packages download section](#). A SUP can be installed on the camera by using a USB stick as described in detail below.

Camera Update Procedure

The ALEXA 35 software is updated from a USB memory stick. The Software Update package (SUP) will update the ALEXA 35 camera along with the Viewfinder (MVF-2) and the lens mount – provided they are connected to the camera.

If you are also updating the Camera Control Monitor CCM-1 (it has its own Software Update Packages that are installed separately from the camera), please update the CCM-1 before updating the camera.

The update can be started through the menu of the MVF-2 viewfinder or through the Web Remote. The Web Remote requires a connection to the camera via WiFi or Ethernet (with ALEXA Ethernet/RJ-45 Cable KC-153-S, K2.72021.0). Open a web browser and enter the URL: <http://alexa35-xxxxx.local> (replace xxxxx with your camera's 5-digit serial number). For further information on the Web Remote, please refer to the User Manual.

1. After the download, please double click the downloaded file (*.zip) to unpack it or unpack it manually. This will place two update files (*.SWU and *.lic) onto your computer.
2. Format your USB Stick using the exFAT file system.
3. If not done beforehand, prepare the USB memory stick for use with ALEXA 35 by connecting it to the camera. Then choose *MENU > Media > Prepare USB Medium...* in the camera's menu on the MVF-2 flip-out monitor and press CONFIRM. This will create the required folder structure on the USB stick.
4. Connect the USB stick to your computer and place the downloaded *.SWU file in the folder ARRI/ALEXA35/SUP on the USB stick. Then place the downloaded *.lic file in the folder ARRI/ALEXA35/LICENSES on the USB stick.
5. SUPs contain not only updates for the camera body but also for the MVF-2 viewfinder and the lens mounts. Therefore, the MVF-2 viewfinder and the lens mount should be attached to the camera when performing an update.
6. Make sure the camera is connected to a power supply (best) or is powered with a full battery to avoid power loss during the update process.
7. Perform a factory reset on the camera with the menu item *Menu > Setup > Factory Reset...*
8. Connect the USB stick to the camera and navigate to the menu item *Menu > System > Update > Update Camera...*
9. Select the SUP file from the list and click the item.
10. In the following message, press INSTALL to start the installation.
11. Press CONFIRM to start the installation.
12. The camera will present a screen presenting the update progress. Please do not shutdown the camera or unplug power until the camera reboots.
13. After the update process has finished, a success message is displayed. Please note, that the update can take up to 20 minutes.
14. Please execute steps 8 – 13 a second time.
15. Make sure you set the correct time zone in *Menu > System > System Time & Date*.
16. If the MVF-2 viewfinder or LPL lens mount were not connected to the camera during the update process, the camera will still store the new software for those devices. The next time those devices are connected and have an older software than the one stored in the camera, the camera will offer to update those devices.

In the rare case of an interrupted or failed update or a severe camera error the camera may enter a state where the MVF-2 is not responsive, and the camera does not display proper images. In this case use the side display to enable WiFi, connect to the camera and reinstall the update using the Web Remote.