ALEXA 35 Xtreme
ALEXA 35
ALEXA 35 Live

Software Update Package SUP 5.1.0

RELEASE NOTES

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Overview

We are pleased to introduce ALEXA 35 Software Update Package SUP 5.1.0, which can be installed on all three cameras in the ALEXA 35 family: ALEXA 35 Xtreme, ALEXA 35, and ALEXA 35 Live. This update makes the new ARRICORE codec for the ALEXA 35 Xtreme production ready, provides new features for all three cameras and adds some of the ALEXA 35 Xtreme features to the ALEXA 35 and ALEXA 35 Live. Please note that ALEXA 35 Xtreme has streamlined recording formats options, but ALEXA 35 and ALEXA 35 Live will retain their existing recording formats.

We strongly recommend reviewing these release notes in full, including the Known Issues section, and consulting the ALEXA 35 User Manual for SUP 5.1.0 to ensure optimal operation.

New Features for ALEXA 35 Xtreme

- ARRICORE production ready
- Improved defect pixel correction
- New user button: Intercom call
- Additional 2.4 GHz WiFi host channels

New Features for ALEXA 35 and ALEXA 35 Live

- Improved defect pixel correction
- New user button: Intercom call
- Additional 2.4 GHz WiFi host channels
- Improved WiFi: known networks, mesh roaming, worldwide discovery service
- New user button: VF De-squeeze
- New user button: LPM-1 Return In
- Multicam submenu
- Extended shutter angle range
- Integrated LDA lens tables for Ensō primes

Peripheral Updates

The following peripheral software and firmware versions are included with SUP 5.1.0. Versions that have changed compared to the previous release are shown in **bold**:

- ARRICORE 0.1.8
- Multi Viewfinder MVF-2 3.62
- LPL Mount (LBUS) **1.62**
- PL Mount (LBUS) 1.100
- PL Mount (Hirose) 1.100
- EF Mount (LBUS) 1.14
- Camera Access Protocol **1.15.0**
- MXF Library **4.4.8**

Software Compatibility

To ensure full compatibility with SUP 5.1.0, the following software versions must be used:

- ARRI Reference Tool: **1.8.1**
- Camera Control Monitor CCM-1: 5.5.2
- Audio Extension Module AEM-1: V1.1G
- CODEX Device Manager **7.6.0**
- LPS-1 **1.2.0**
- Skaarhoj RCP Pro: **reactor.2.2.2.arm64.ipks**
  system-manager.1.0.9.arm.ipks
  hardware-manager.1.0.5.arm64.ipks

	devicecore-connector.1.0.2.arm64.ipks (optional) **core-arri-camera.1.0.5.arm64.ipks**
• DaVinci Resolve Studio	**20.2**

A comprehensive list of third-party software and their compatibility with the ALEXA 35 cameras is available at the top of the ALEXA 35 Workflow webpage. Always ensure you are using the latest version of any third-party software.

Registration

If you haven't registered your camera yet, please ensure you do so through our online customer registration. Registering your camera guarantees you'll receive notifications about future software updates as soon as they're released. Additionally, if you register your new camera within one month of purchase, you'll receive a complimentary one-year extended warranty. To register, visit the Product Registration webpage.

Sample Footage

Sample footage shot with the ALEXA 35 Xtreme or ALEXA 35 camera can be downloaded from the ALEXA 35 Sample Footage webpage.

New Features for ALEXA 35 Xtreme

ARRICORE Production Ready

With this update, the beta test phase for ARRICORE has ended and ARRICORE is production ready. ARRICORE is a new and efficient high-end codec introduced with the ALEXA 35 Xtreme. With ARRICORE, superb ARRI image quality is captured and great flexibility in post is maintained since sensitivity, white balance and tint are not baked in for. At the same time, the codec offers a low data rate, thereby saving productions money with fewer Compact Drives needed, recording times doubled and faster download speeds. Since the ALEXA 35 Xtreme launch, we have received very positive feedback on ARRICORE and conducted further internal test, resulting in various improvements to image quality and the ruthless squashing of bugs.

Improved defect pixel correction

All sensors exhibit defect pixels. In the past, there have been three methods used to correct defect pixels in ALEXA 35 type cameras.

1. During manufacturing and service, a Static Defect Pixel Map (SDPM) is generated, which marks permanently defect pixels that the camera will correct.
2. While powered up, the camera scans each frame for individual defect pixels and corrects them in that frame. This is the Dynamic Defect Pixel Correction (DDPC).
3. Customers can create their own User Pixel Mask (UPM) with the ARRI Reference Tool, as described in the ALEXA 35 Xtreme manual under "17.2 User Pixel Masking".

However, there are still pixels that cannot be caught with these methods. Therefore, a new method has been developed:

- A sophisticated Temporal Defect Pixel Correction (TDPC) keeps statistics of all questionable pixels and clusters of transient pixels ("blinkers") over multiple recordings. It will over time correct defect pixels and pixel clusters when needed and remove the correction when they stop misbehaving.

New user button: Intercom call

A user button on the camera can now be used to get the attention of personal in the control. Once the user button on the camera is pushed, a light on the RCP and/or an external light connected via GPIO to the Fiber Base Station will illuminate. A similar, already existing function going from the

RCP and/or Fiber Base Station to the camera displays a call message on the viewfinder, on-board monitor and illuminates the CALL button on the Fiber Camera Adapter.

Additional 2.4 GHz WiFi host channels

Now that the camera has Worldwide WiFi Discovery Service (see below), we can enable a maximum of three additional 2.4 GHz channels (channels 12, 13 and 14) in countries where that is legally permitted. This is most of the world with the exception of North America, where no more channels are permitted, and some countries that only allow two more channels, like Germany.

New Features for ALEXA 35 and ALEXA 35 Live

Please note:

- ALEXA 35 and ALEXA 35 Live will retain their recording formats
- 5 GHz WiFi Client mode is only available in ALEXA 35 Xtreme

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Improved WiFi: Known Networks

ALEXA 35 and ALEXA 35 Live now store successfully connected networks in a Known WiFi Networks list. This list contains SSIDs and passwords and will remain stored in the camera unless a software update is performed. It will remain persistent during a change from host to client or during a factory reset. Networks can be marked for Auto Join, allowing automatic reconnection. The camera will attempt to reconnect first to the last used network, or otherwise to the strongest available Auto Join network.

Improved WiFi: Mesh Roaming

ALEXA 35 and ALEXA 35 Live now support seamless roaming in wireless mesh networks using the standards 802.11k, 802.11r, and 802.11v. When connected to multiple access points within a mesh, they will automatically transitions to the best available signal as needed.

Improved WiFi: Worldwide Discovery Service

ALEXA 35 and ALEXA 35 Live will automatically determine where in the world they are located based on the location information of the nearest WiFi router. They will then use the highest legally permitted WiFi signal strength for this region. For countries like the USA, for instance, this is a stronger signal than possible with SUP 4.2.0, where we did not know the camera's location and therefore the WiFi signal strength could only be as high as permitted everywhere in the world.

New User Button: VF De-squeeze

On ALEXA 35 and ALEXA 35 Live, this user button toggles anamorphic de-squeeze on the viewfinder outputs (VF1 and VF2). It affects monitoring only and is useful for quickly switching between squeezed and de-squeezed image views during anamorphic shoots. It does not influence the Lens Squeeze Factor or any SDI output.

New User Button: LPM-1 Return In

ALEXA 35 and ALEXA 35 Live, this user button is intended for use with the ARRI Live Production System (LPS-1) and the Live Production Monitor LPM-1 (planned to be released later this year). It allows switching between the live image and an external return signal directly on the monitor— This is particularly useful when SDI 2 is set as an output and therefore cannot serve as an input for return video.

Multicam Submenu

ALEXA 35 and ALEXA 35 Live, a new Multicam submenu combines all multicam-related settings in a single menu section, including Live Painting, Tally configuration, and local menu access restrictions. The submenu is available only when a Multicam license is installed.

Extended Shutter Angle Range

ALEXA 35 and ALEXA 35 Live, the minimum adjustable shutter angle is changed from 5° to 1°, allowing finer control. This does not affect the camera’s exposure time capabilities.

Integrated LDA Lens Tables for Ensō Primes

On ALEXA 35 Xtreme, the full Ensō Prime lens series is now supported via integrated lens data tables, improving compatibility and metadata consistency across systems.

Update Procedure

The camera is updated via a USB-C memory stick, and the process can be initiated either through the MVF-2 viewfinder menu or the camera Web Remote. When the MVF-2 viewfinder and the lens mount are connected to the camera, they will automatically update during the camera update. If they were not connected at that time, they can be updated individually through the camera later. If you are using the camera Web Remote to perform the update, it is recommended to use a 'private' or 'incognito' browser window to avoid potential issues or unexpected behavior.

1. After downloading the update file from the Software Update Packages for Cameras webpage, double-click the downloaded .zip file to unpack it, or unpack it manually. This will extract two update files to your computer (*.SWU and *.lic).
2. If not done beforehand, prepare the USB-C memory stick for use with the ALEXA 35 by connecting it to the camera. Then, go to *MENU* > *Media* > *Prepare USB Medium...* on the MVF-2 viewfinder menu or the Web Remote and press *CONFIRM*. This will create the required folder structure on the USB-C stick.
3. Connect the USB-C stick to your computer.
   Place the downloaded *.SWU file in the *ARRI/ALEXA35/SUP* folder.
   Place the downloaded *.lic file in the *ARRI/ALEXA35/LICENSES* folder.
4. The camera Software Update Package includes updates not only for the camera body but also for the MVF-2 viewfinder and the lens mount. Therefore, ensure that the MVF-2 viewfinder and the lens mount are connected to the camera during the update process.
5. Ensure the camera is connected to a power supply or powered by a fully charged battery to prevent power loss during the update.
6. Perform a factory reset on the camera with the menu item *MENU* > *Setup* > *Factory Reset...*
7. Connect the USB-C stick to the camera and navigate to the menu item *MENU* > *System* > *Update* > *Update Camera...*
8. Select the SUP file from the list and start the installation.
   - The MVF-2 as well as the camera side display will show a screen displaying the update progress. Please note that the update can take up to 20 minutes.
   - The MVF-2 viewfinder may turn off during the update process and will not provide continuous visual feedback, refer to the camera side display for the update status in this case.
   - Do not power off or unplug the camera until it has rebooted.
   - After the update process has finished, a success message is displayed.
9. Ensure that the correct time zone is set in *MENU* > *System* > *System Time & Date.*
10. If the MVF-2 viewfinder or lens mount were not connected during the update, the camera will still store the updated software for these devices. The next time they are connected and have an older software version than the one stored in the camera, the camera will prompt you to update them.

In the rare event of an interrupted or failed update the camera may enter a state where the MVF-2 is unresponsive. In this situation, use the side display to enable Wi-Fi, connect to the camera, and reinstall the update using the Web Remote.

Update of Accessories

The camera update does not update the following devices, which must be updated separately. Update files for these devices must be downloaded individually from the ARRI Software Packages webpage.

Camera Control Monitor (CCM-1):
Download the update file, copy it to a USB-C stick (root folder), and connect the stick to the CCM-1. Disconnect the CCM-1 from the camera, then navigate to *Menu>Firmware>Update* on the CCM-1 and select the file to start the update.

Audio Extension Module (AEM-1):
Download the update, copy it to a USB-C stick (root folder), and connect the stick to the AEM-1. On the AEM-1, initiate the update via *MENU>SETUP>UPDATE* and confirm with YES.

LBUS Devices (e.g., Lens Motors):
Download the corresponding update file and copy it to the ARRI/ECS/ folder on a USB-C stick. Insert the stick into the camera, connect the LBUS device via the LBUS connector, and initiate the update through *MENU>System>Update>Update LBUS Devices*.

Live Production System LPS-1
Download the corresponding update file and copy it to the ARRI/ECS/ folder on a USB-C stick. Insert the stick into the camera, connect the LBUS device via the LBUS connector, and initiate the update through *MENU>System>Update>Update LBUS Devices*. A more detailed update procedure can be found in the latest release notes of the Live Production System LPS-1 on the ARRI website.

Skarhoj RCP
Download the corresponding update files and update instructions here:
https://wiki.skaarhoj.com/books/blue-pill-reactor/page/update-software

Downdating the Camera

Important: SUP 5.1.0 can be installed on all models, but once installed, it cannot be downgraded to an earlier version. In case of any issues, please contact ARRI Service.

Known Issues in SUP 5.1.0

Video Output Failure When Switching Sensor Modes at High Frame Rates
When the camera is running at high frame rates and the sensor mode is switched without a reboot (e.g., from 4K 16:9 to 3.8K 16:9), the video outputs may fail. If this occurs, a reboot is required to restore normal operation, as subsequent recordings may also be affected (ALEXA 35 / Live).

Temporary SDI Signal Loss During Certain Setting Changes
When certain settings are changed — such as switching sensor modes or entering and exiting playback — the SDI outputs may briefly re-synchronize, leading to a momentary loss of signal. This can affect connected devices such as wireless video transmitters. The behavior is currently under review.

Colored Edges Near Clipping Point in Highlights
Just before reaching the clipping point, some image areas may show colored fringes or a colored "corona" instead of a neutral white highlight roll-off. This can affect individual color channels and is most noticeable in extreme highlight regions.

Sensor Overdrive and High Frame Rate Settings Unavailable on CCM-1 Monitor
When using the CCM-1 monitor, it is currently not possible to enable Sensor Overdrive, nor to set frame rates above 120 fps (ALEXA 35 Xtreme).

Delayed Ready-to-Record State After Reboot with Many User Setups on Connected
Storage When user storage is connected and contains a large number of user setups, the camera may take longer to become ready to record after a reboot. This behavior is currently under investigation.

ENG Zoom Lens Control via ARRI Master Grips may not work with some lenses
The camera can control the three axes of an ENG zoom lens connected via the Hirose mount using ARRI Master Grips. However, in some instances, control may not function with certain lenses. To resolve this, please check the software or firmware version of the lens and, if necessary, update it to the latest version.

Hand Unit Nudge only functional via built-in radio
The Hand Unit Nudge function does not work if the hand unit is connected to the camera in any way other than through the camera's built-in white radio.

Incorrect EOTF Signaling in SMPTE 352 VPID Metadata When Outputting 12G-SDI
When 12G-SDI is used for video output, the EOTF (Electro-Optical Transfer Function) is not correctly signaled in the SMPTE 352 VPID metadata stream.

Incorrect Scaling of Frame Lines with Lens Squeeze Factor applied
When using frame line files containing three frame lines, incorrect scaling of individual frame lines may occur if the Lens Squeeze Factor is set to a value other than 1.0x.

RCP Iris Control may not function correctly with custom LDA Lens Tables
When using custom LDA Lens Tables to provide lens data, it may occur that the iris cannot be properly controlled or adjusted via a Skaarhoj RCP.

CCM-1 Timecode Options
The timecode menu of the camera has been updated; however, these updates have not yet been implemented in the CCM-1. As a result, it is not possible to set the LPS-1 System as the timecode source via the CCM-1.

Prerecording Requires a User Button
Prerecording can only be toggled on or off using a User Button. If the device with the assigned User Button is unavailable and prerecording remains active, start a regular recording and then remove the drive from the camera. This will cause the recording to fail, deactivating prerecording in the process.

Temporary Unresponsiveness After Playback or 'Check Last Clip'
After exiting playback, whether initiated via the PLAY button, 'Check Last Clip,' or the 'Playback' User Button, the camera may momentarily become unresponsive to inputs. This issue typically resolves within a maximum of four seconds, and the camera will return to its normal state.

Limited Clip Availability via Camera Access Protocol (CAP)
When playback is controlled via CAP, only the first 270 clips on the card can be selected. To access additional clips, use the MVF-2, the camera's side display, or the Web Remote.

Radio Interface Adapter RIA-1 Update via CAM Connector Fails
When updating the RIA-1 by connecting its CAM port to the ALEXA 35 and running the update from the camera, the process may occasionally fail. In such cases, the update can instead be performed via an LBUS connection.

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.

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.*

Cut-off Playback Image when using Magnification
When using magnification with surround view enabled, the playback image may display a cropped version of the original capture. This means that the playback view may show less than what was recorded and visible on the outputs during recording or standby.

Frame Lines Displayed in Surround View with Master Magnification
When using master magnification in conjunction with surround view, frame lines may appear in the surround area at certain magnifications, even though they should not be visible.

Missing or Incorrect Lens Scales with Certain /i Lenses
Some lenses using the Cooke /i protocol may fail to transmit lens data or lens data is displayed inaccurately. To resolve this issue, deactivate the lens mount and use lens tables instead.

Lower Headphone Output in Playback
When playing back a clip with audio, the headphone output on the MVF-2 is 3dB lower than during live recording.