



# **ALEXA Software Upgrade Packet 11.1**

**for ALEXA XT/XR (SUP\_AlexaX\_11.1\_31779)**  
**and ALEXA Classic (SUP\_Alexa\_11.1\_31779)**

RELEASE NOTES

October 15, 2015

## A. Introduction

We are happy to announce that Software Update Packet (SUP) 11.1 is now available as a download for the ARRI ALEXA XT and ALEXA Classic cameras with the XR Module upgrade (ALEXA XT/XR) and for the ALEXA Classic cameras. SUP11.1 offers support for the new Controlled Lens Motor CLM-5 and other useful features related to ARRI's Electronic Control System (ECS), as well as some bug fixes.

This document describes new features and changes introduced with SUP 11.1 and if they apply to ALEXA XT and ALEXA Classic cameras with an XR Module upgrade and/or ALEXA Classic cameras.

### Codex Software Updates (ALEXA XT/XR)

Starting with SUP 11.0, the ARRIRAW format is enhanced by checksum information. Only the latest version of Codex software (Vault 3.0 and DTS 3.0) can read the ARRIRAW data from XR Capture Drives recorded with SUP 11.0 or later. **Therefore, it is essential to update the Codex software to the latest version as well.** You can find Codex software updates at <http://www.codexdigital.com/software>.

### New Features Overview

A more detailed description of each feature is given in the section 'New Features and Changes'.

- **CLM-5 Motor Support** (ALEXA Classic, XT/XR)  
SUP 11.1 supports the new Controlled Lens Motor CLM-5 which is an exceptionally small and lightweight, yet fast and responsive lens motor.
- **WCU-4 Controls ALEXA User Buttons 4, 5 and 6** (ALEXA Classic, XT/XR)  
Access to the ALEXA user buttons 4, 5 and 6 further expands the powerful Wireless Compact Unit WCU-4 remote control license features.
- **Lens Motor Calibration Time-out** (ALEXA Classic, XT/XR)  
The calibration of lens motors will automatically stop after 300 motor teeth, e.g. in the event that the motor is detached from the lens.
- **Automatic UDM-1 Distance Unit Setting** (ALEXA Classic, XT/XR)  
The UDM-1 distance unit read-out on the WCU-4 handset will automatically be set to the LDS focus scale unit.
- **WCU-4 Lens Data Display from LDS Lenses via UMC-4** (ALEXA Classic, XT/XR)  
When using the Universal Motor Controller UMC-4 with an ALEXA XT EV type camera with LDS mount and LDS lens, the LDS lens data will automatically be used by the UMC-4 and displayed on the WCU-4 handset.
- **Activation of Additional Lens Motors via Handset** (ALEXA Classic, XT/XR)  
WCU-4 and SXU-1 hand units recognize newly connected lens motors and ask via a pop up window for confirmation.

## Update Information

Cameras should always be running the latest SUP release version as this allows you to benefit from the latest improvements, features and bug fixes. We do not, however, recommend installing a new SUP in the middle of a production.

Please note that ALEXA Classic and ALEXA XT/XR cameras require different installation packages.

- **An installation package for ALEXA Classic cameras is named 'SUP\_Alexa\_[version-number]'.** It can be installed on the classic version (SxS recording module) of ALEXA, ALEXA M, ALEXA Plus, ALEXA Plus 4:3 and ALEXA Studio. It is not compatible with any ALEXA XT model, ALEXA cameras with an XR Module upgrade, ALEXA HD, ALEXA HD Plus, ALEXA Fiber Remote or ALEXA Fiber Remote Plus.
- **An installation package for ALEXA XT/XR models is named 'SUP\_AlexaX\_[version-number]'.** It can be installed on all cameras with an XR Module. This includes ALEXA XT, ALEXA XT M, ALEXA XT Plus, ALEXA XT Studio, and ALEXA Classic cameras with an XR Module Upgrade (all together in the following referred to as 'ALEXA XT/XR cameras'). It is not compatible with any ALEXA Classic model (with an SxS recording module), ALEXA HD, ALEXA HD Plus, ALEXA Fiber Remote or ALEXA Fiber Remote Plus.

**Warning: Do not install a SUP onto a camera model, which it is not made for! Do not attempt to install these SUPs on an ALEXA HD, ALEXA HD Plus, ALEXA Fiber Remote or ALEXA Fiber Remote Plus camera! Doing so may cause the camera to malfunction and become inaccessible. If that happens, the camera can only be made accessible with the support of an ARRI Service Center.**

## Updating XR Capture Drives (ALEXA XT/XR)

We have encountered a few cases where an XR Capture Drive became unresponsive and had to be sent to Codex service. The root cause has been found and resolved with a new firmware for the XR Capture Drives. Every ALEXA XT/XR running SUP 9.2 or later does automatically check and update all XR Capture Drives if an old firmware is found.

## Updating ALEXA Classic M or ALEXA XT M cameras

Please note that the update procedure for ALEXA Classic M and ALEXA XT M cameras differs slightly from the procedure for the other cameras. It is described in detail in the section 'Updating Instructions'.

## Downgrading

It is possible to revert back to a previous release version, as low as SUP 8.0.

**Warning: ALEXA Classic software before SUP 8.0 should no longer be used and may cause the camera to malfunction and become inaccessible. If that happens, the camera can only be made accessible with the support of an ARRI Service Center.**

# Table of Contents

<b>A. Introduction</b> .....	<b>2</b>
Codex Software Updates (ALEXA XT/XR) .....	2
New Features Overview .....	2
Update Information .....	3
Updating XR Capture Drives (ALEXA XT/XR).....	3
Updating ALEXA Classic M or ALEXA XT M cameras .....	3
Downgrading .....	3
<b>B. New Features and Changes</b> .....	<b>6</b>
Accessories .....	6
Electronic Viewfinder and/or MON OUT .....	6
External Recording .....	6
General .....	6
Imaging .....	6
Image Processing .....	6
Inputs .....	6
Internal Recording .....	6
Lenses .....	6
Media Access .....	6
Metadata/Time Code .....	7
Optical Viewfinder .....	7
Outputs .....	7
Recording Media .....	7
Remote Control/3D .....	7
User Interface .....	7
<b>C. Known Issues</b> .....	<b>7</b>
Frame Grab .....	7
Framelines .....	8
LDS/LDA.....	8
Metadata.....	8
Playback .....	8
Recording .....	8
Time Code .....	9
Usability (ALEXA Classic) .....	9
Usability .....	9
<b>D. Updating Instructions</b> .....	<b>10</b>
Download and Registration Process .....	10
How to get a Software Update Package.....	10
Updating ALEXA Classic M or ALEXA XT M Cameras .....	10
ALEXA Classic M and ALEXA XT M Downgrade .....	11
Camera Update Procedure via SD Card .....	11

Camera Update Procedure using a Web Browser on your Computer.....	12
Updating an Electronic Viewfinder EVF-1 .....	12
Updating the V-Mount Top/Back Battery Adapter with a Computer .....	13

## B. New Features and Changes

### Accessories

#### Controlled Lens Motor CLM-5



SUP 1.1 supports the new Controlled Lens Motor CLM-5 which is exceptionally small and lightweight, yet fast and responsive lens motor. It is perfectly suited for smaller lenses with little torque on lightweight camera setups. The CLM-5 motor is directly compatible with any Plus or Studio ALEXA (Classic, XT/XR) and can be used with other cameras together with the Universal Motor Controller UMC-4 or the Single Motor Controller SMC-1.

### Electronic Viewfinder and/or MON OUT

No changes.

### External Recording

No changes.

### General

No changes.

### Imaging

No changes.

### Image Processing

No changes.

### Inputs

No changes.

### Internal Recording

No changes.

### Lenses

No changes.

### Media Access

No changes.

## Metadata/Time Code

No changes.

## Optical Viewfinder

No changes.

## Outputs

No changes.

## Recording Media

No changes.

## Remote Control/3D

**WCU-4 Controls ALEXA User Buttons 4, 5 and 6** (ALEXA Plus, ALEXA XT/XR Plus only)

Access to the ALEXA user buttons 4, 5 and 6 further expands the powerful Wireless Compact Unit WCU-4 remote control license features.

**Lens Motor Calibration Time-out** (ALEXA Plus, ALEXA XT/XR Plus only)

The calibration of lens motors will automatically stop after 300 motor teeth, e.g. in the event that the motor is detached from the lens.

**Automatic UDM-1 Distance Unit Setting** (ALEXA Plus, ALEXA XT/XR Plus only)

The UDM-1 distance unit read-out on the WCU-4 handset will automatically be set to the LDS focus scale unit.

**WCU-4 Lens Data Display from LDS Lenses via UMC-4** (ALEXA EV, ALEXA XT/XR only)

When using the Universal Motor Controller UMC-4 with an ALEXA XT EV camera with LDS mount and LDS lens, the LDS lens data will automatically be used by the UMC-4 and displayed on the WCU-4 handset.

**Activation of Additional Lens Motors via Handset** (ALEXA Plus, ALEXA XT/XR Plus only)

WCU-4 and SXU-1 hand units recognize newly connected lens motors and ask the user via a pop up window for confirmation.

**3D Sync** (ALEXA Classic, XT/XR)

There has been an issue with 3D synchronization of two cameras in SUP 11.0.1. This has been fixed.

## User Interface

No changes.

## C. Known Issues

This is a list of known issues for this particular software update packet. For a listing of answers to frequently asked questions please visit our website at [www.arri.com/alexallearn](http://www.arri.com/alexallearn).

## Frame Grab

- **Lazy grab icon on EVF and MON OUT.**



When you trigger a frame grab, the MON out and EVF status bars will not show a grab icon for the first few seconds. If in doubt, please check the home screen on the camera menu, which immediately shows when the camera takes a frame grab.

- **No warning if frame grab failed.**

If a frame grab is triggered with one of the User buttons (assignable to button 1-3) while no SD card is inserted, the camera will not show a warning.

## Framelines

None

## LDS/LDA

- **Alura LDS information drops out during fast adjustments.**

If the Iris, Zoom or Focus ring on an LDS Alura Zoom is turned very quickly, the corresponding LDS information is lost and the camera will show 'Turn Lens rings!' A slow or normal ring turn recalibrates the lens and brings back the LDS information. Thresholds are (rotation of lens ring end to end):  
FOCUS: 1.0sec, ZOOM: 0.4sec and IRIS: 0.2sec.

- **LDS or Cooke/i Lens not detected.**

On rare occasions, a lens is not recognized by the LDS system of the ALEXA M and ALEXA XT M.

- **No full WCU-4 lens data functionality with Cooke /i lenses.**

There is no display of focus and iris lens scales on the WCU-4 hand set with lens data generated by Cooke /i lenses. WCU-4 lens mapping to pre-marked focus rings and focus tracking is not supported with lens data generated by Cooke /i lenses.

## Metadata

- **First frame of DNxHD may contain wrong metadata.**

The first frame of a DNxHD file may contain wrong (dynamic) metadata. After that, the data shows up normally.

- **LDA produces "random" Lens\_SN in metadata field.**

When the LDA (Lens Data Archive) is used to identify a lens, the camera records a random lens serial number in the metadata. This does not represent the actual serial number of the lens.

## Playback

- **2K 16:9 ProRes playback not showing full image.**

When playing back 16:9 ProRes 2K material from the camera, the playback image is slightly cropped/smaller. The recorded footage, however, shows the same framing as indicated in the live EVF/MON OUT image.

## Recording

- **Camera takes long to start recording with SxS PRO+ Cards.**

Compared with an original SxS PRO card (SBP-64A), it takes an ALEXA about 2 seconds longer to start/stop recording with an SxS PRO+ rev B card (SBP-064B and SBP-128B) and about 1 second longer with the latest SxS PRO+ rev C cards (SBP-064C and SBP-128C).

- **Damaged file from power loss during recording.**

If the camera loses power while it is recording, the clip may be damaged. We recommend immediately copying the contents from the memory card and checking if all clips, especially the last one, have been transferred properly. If the last clip is broken and it is not possible to shoot another take, please contact an



ARRI service center for assistance recovering the broken clip. To help avoid this problem, please make sure that the power warning levels are adjusted properly (MENU>SYSTEM>Power).

## Time Code

- **Time Code INT Free Run reset to 00:00:00.**

With asynchronous recording, i.e. "Project frame rate" NOT EQUAL to "Sensor fps" and time code set to INT FREE RUN, the time code will be reset to 00:00:00 after a reboot.

## Usability (ALEXA Classic)

- **Changing the SxS recording resolution may change your REC OUT setting.**

If you set the SxS recording resolution to e.g. 2K, the camera will default the REC OUT to the clean MON OUT clone setting. If you intend to record ARRIRAW via T-Link over the REC OUT, make sure to always adjust the REC OUT setting last.

## Usability

- **Frame grab slows down GUI.**

When you trigger a frame grab, the GUI may react slowly while the image is saved to the SD card. This becomes more noticeable, if you grab a frame during recording.

- **MON OUT CLONE stuck in Log C.**

If you assign a User Button to toggle the MON OUT Gamma and the REC OUT is set to show the MON OUT clone, then toggling from Log C to Rec 709 and back will leave the REC OUT stuck in Log C. Use HOME > COLOR > GAMMA > REC OUT to switch the Gamma back to REC 709.

## D. Updating Instructions

### Download and Registration Process

You have to register your ALEXA camera by serial number to access the Software Update Packets (SUP) in the ALEXA DOWNLOADS Section on the ARRI website. A SUP can be installed on the camera either by using an SD card directly on the camera (described in detail below) or from a computer via the ALEXA Ethernet Cable (K2.72021.0).

Please note that ALEXA Classic cameras and ALEXA XT/XR cameras require different SUP installation packages.

- Installation packages for ALEXA Classic models are named 'SUP\_Alexa\_[version-number]'.
- Installation packages for ALEXA XT/XR model are named 'SUP\_AlexaX\_[version-number]'.

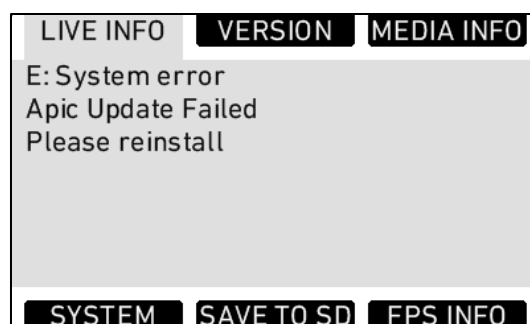
### How to get a Software Update Package

- If you have not registered yet, go to the ALEXA DOWNLOADS page at <http://www.arri.com/alexa/downloads> and scroll to the 'ALEXA Software Update Packet x.x' section (where 'x.x' is the version number of the desired Software Update Packet). Click 'Please -> register to get an account.' The ALEXA customer registration page will be opened.
- Fill in the relevant data and make sure to put in the serial number(s) of your camera(s) in the format of K1.711000.0-2xxx, K1.71100.0-4xxx, K1.71200.0-6xxx, etc. 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 mail is sent to you 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. If you agree to these terms, the download link is released.

### Updating ALEXA Classic M or ALEXA XT M Cameras

Please note that the first time an ALEXA Classic M or ALEXA XT M is upgraded from a version before SUP 10 Open Beta 2 to SUP 10 Open Beta 2 or later, a slightly different update process (two-pass upgrade) has to be used. So, for instance, when updating from SUP 9.2 to SUP 10 OB2, the two-pass update process should be used or when updating from SUP 8 to SUP 10. When updating from SUP 10 OB 2 to SUP 10, however, the regular one-pass update process can be used. The two-pass update process is as follows:

- Initiate the update as described in the release notes.
- The camera will start the update and at some point inform you that the APIC update failed. This is normal and not a problem. Please wait until the update is finished updating the CMC and ACOM boards.
- Then power down the camera and power it back up again.
- You will see an error and a message in the LIVE INFO screen like this:



- Initiate the update again. The camera should go through the entire update procedure this time.

## ALEXA Classic M and ALEXA XT M Downgrade

While in general we do not recommend downgrading ALEXA cameras to previous SUPs, it is possible to downgrade ALEXA Classic M and ALEXA XT M cameras from SUP 10 OB2 to SUP 9.2. When such a camera is upgraded again to SUP 10 OB2 or later, it will not have to use the two-pass upgrade process but the regular, one-pass upgrade process.

## Camera Update Procedure via SD Card

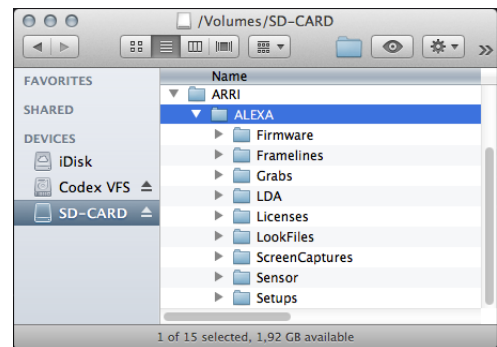
Using the SD card for updating is the easiest method. It updates the ALEXA camera as well as the Electronic Viewfinder (EVF-1) as long as the viewfinder is connected to the camera.

### Precautions

- Make sure the power supply of the camera is stable. The best way to achieve this is by using a mains power supply attached to the battery socket. We do not recommend updating a camera that is powered from a battery.

### Preparing the SD Card

- Have a FAT16 or FAT32 formatted SD-Card ready.
- Cards larger than 4 GB are not supported. If you have a larger SD card, you need to create one partition with max. 4GB so that it will be compatible with ALEXA.
- Go to MENU > SYSTEM > SD CARD and choose
  - 'Prepare SD card' to create the ALEXA folder structure on the SD card, and keep the existing data.
  - 'Format + prepare SD card' to DELETE ALL DATA on the SD card before creating the ALEXA folders.
- Copy the update package  
SUP\_AlexaX\_x.x\_zzzzz.pkg (for ALEXA XT/XR) or  
SUP\_Alexa\_x.x\_zzzzz.pkg (for ALEXA Classic)  
into the 'Firmware' folder on the SD card.



### Performing the Update

- Turn the camera on.
- **Perform a factory reset** in MENU > USER SETUPS > FACTORY RESET.
- Insert the SD card into the SD card slot of the camera. The slot is located below the display on the bottom of the camera, covered by a slider. The direction in which the SD card is to be inserted is shown on the camera housing.
- A card icon will show up in the notification area of the camera display. If not, the camera does not recognize the card.
- Go to MENU > SYSTEM > FIRMWARE.
- The FIRMWARE screen shows you which packet is currently installed (Current version: xxx).
- Press the jog wheel to select an update file. The list shows all SUP files available on the SD card.
- Choose the desired packet and press the two, lower outer screen buttons simultaneously to start the update.
- Caution: Do not remove the SD card while the packet is being copied to the camera!
- When the 'copying files' message disappears the SD card can be safely removed.
- The update process may take 15 to 20 minutes, depending on the actual software packet. Wait until the update process has finished. A green screen informing you that the update process is completed indicates this.
- If the update process fails, which will be indicated by a red screen, please restart the camera and repeat the update procedure.
- After the update, turn the camera off by holding down the power button for a few seconds.
- Turn the camera back on. The software is now updated and you can use the camera.

## Camera Update Procedure using a Web Browser on your Computer

### How to connect ALEXA to a computer

- Turn the camera on.
- Connect the Ethernet port of the computer to the camera with the ALEXA Ethernet/RJ-45 Cable KC 153-S (3.00m/9.8ft, order number K2.72021.0).
- Configure the computer's network interface to which the camera is connected with the following settings:  
IP address: 169.254.1.2 (static IP)  
Subnet mask: 255.255.0.0
- Open a web browser
- If you are using a Macintosh or a computer with Apple's Bonjour protocol installed enter the following URL into the address bar:  
<http://alexaXXXX.local/update.cgi>, where XXXX is the four-digit serial number of your camera (e.g. for ALEXA 7123: <http://alexa7123.local/update.cgi>).
- If you are using a computer without Bonjour support please use the camera's IP address to connect, e.g.:  
<http://192.168.xxx.xxx/update.cgi>, where xxx.xxx is the two last groups of your camera's actual IP address. You can determine ALEXA's IP address by going to INFO > SYSTEM.
- If the network settings are configured correctly, you will be presented with the update page of the camera.

### Performing the Update

- Download the Software Update Package to your computer.
- **Perform a factory reset** in MENU > USER SETUPS > FACTORY RESET.
- In the 'Camera Update' section, select the Software Update Package by clicking the 'browse' button and selecting the path to the downloaded SUP on your computer.
- Click the 'Update Camera' button in the 'Camera Update' section.
- The file will be uploaded to the camera, which takes about a minute. The browser will switch to the 'Update Log' page showing the update log of the three main boards. This page can be updated by refreshing the page. At the same time, the update screen with the progress bars appears on the camera display.
- The update process may take 15 to 20 minutes, depending on the actual software packet. Wait until the update process has finished. A green screen informing you that the update process is completed indicates this.
- If the update process fails, which will be indicated by a red screen, please restart the camera and repeat the update procedure.
- After the update, turn the camera off and on again. The software is now updated and you can use the camera.

### Updating an Electronic Viewfinder EVF-1

In case an ALEXA electronic viewfinder EVF-1 has not been updated with the camera, it is possible to update the EVF-1 separately by using a computer. Please note that the EVF-1 will be updated to match the SUP package that is installed on the camera.

- Connect the Ethernet port of the computer as described above in 'How to connect ALEXA to a computer'.
- Connect the EVF-1 to the camera.
- Open a web browser on the computer and open the update web page of the camera (see above).
- Click the 'Update EVF' button in the 'EVF Update' section.
- You can watch the progress of the update on the screen.
- When the update is done, the last line on the screen reads 'successfully updated Evf'. The update is now finished even though the web browser continues to refresh the page. This is normal. The viewfinder is up to date.
- Depending on its software version, the camera will state a 'software error – reboot camera' on the camera display. This is normal. Please reboot the camera.

## Updating the V-Mount Top/Back Battery Adapter with a Computer

This procedure requires the ALEXA to be connected to a computer and SUP 4.0 or later. To update the firmware of the V-mount battery adapters, please perform the following steps:

- Connect the Ethernet port of the computer as described above in 'How to connect ALEXA to a computer'.
- Attach a charged V-Mount battery to the mount.
- Open a web browser on the computer and open the update web page of the camera (see above).
- Click the 'Update VMOUNT' button in the 'V-Mount Update' section.
- The update will take approximately three minutes. You can watch the progress of the update on the screen.
- If you get an error, you might have an old style V-mount battery adapter, which cannot be updated.
- When the update is done, the last line on the screen reads 'successfully updated V-Mount Adapter' and the V-mount battery adapter's firmware is up to date.
- If your V-mount battery adapter cannot be updated, please contact ARRI Service <http://www.arri.com/service>.