

Live Production System LPS-1

Software Update Package SUP 1.5.0

RELEASE NOTE

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LPS-1 Live Production System, Software Update Package 1.5.0

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Original version.

Overview

The LPS-1 Live Production System is the fiber transmission system forming the backbone of the ARRI ALEXA 35 Live - Multicam System and consists of the Fiber Base Station FBS-1 and Fiber Camera Adapter FCA-1.

We are pleased to announce the release of LPS-1 Software Update Package SUP 1.5.0 as a public release. This update is compatible with all LPS-1 systems and can be downloaded from the [ARRI Software Update Packages](#) webpage.

Please review these release notes carefully, including the known issues section. Consult the Live Production System LPS-1 User Manual to ensure optimal operation.

It is available for free download from the [ARRI documentation portal](#).

General

LPS-1 Software Update Package SUP 1.5.0 New Features

SMPTE ST 2110 Support for IP Infrastructure

With the introduction of SUP 1.5.0, the LPS-1 now supports SMPTE ST 2110 for the routing and distribution of live video, audio and metadata over IP networks. The LPS-1 ST 2110 implementation allows for 25Gbit Transmission and Receive (25GbE full duplex) of uncompressed video, audio and metadata. PTP is also supported as part of this flexible and scalable solution. Reliability is assured through network redundancy for a seamless switchover with ST2022-7. Multiple 3G streams can be received from camera meaning that it also supports High Frame Rate video over ST 2110 (camera feature dependent.)

The LPS-1 ST 2110 functionality includes the following standards:

ST2110-10 - Synchronization and Timing

ST 2110-20 - Uncompressed video transport

ST 2110-21 - Traffic shaping and packet timing

ST 2110-30 - PCM audio transport (AES67 compatible)

ST 2110-40 - Ancillary data transport (captions, VITC, etc.)

ST2022-7 - Network Redundancy for a seamless switchover in case of failure.

In addition, NMOS IS-04, IS-05, IS-08, IS-09, BCP-003-01 and BCP-003-03 are supported for network discovery, network management, audio mapping and security.

To activate the ST 2110 functionality you can purchase a license through the ARRI online License shop <https://shop.arri.de/catalog>.

Please note that the SFP28 25G Fiber Optical Transceiver modules are not supplied with LPS-1 systems and should be selected to suit the specific needs of the ST2110 Infrastructure. Two 25G SFP28 are required to take advantage of the ST2022-7 Network Redundancy for a seamless switchover in case of failure. For recommended models please see the LPS-1 SUP 1.5.0 User Manual.

SDI Outputs and Metadata

Metadata, included in the SDI output of the ARRI ALEXA 35 Live, is now converted for the different frame rates and standards (progressive/interlaced) that can be output from the down converted HD Outputs. Metadata is also now present on all SDI outputs from the Fiber Base Station FBS-1 including when Quad Link outputs are used.

Bug Fixes and Enhancements

Known Issues Fixed Since Last Release

- Embedded Audio is now available on all SDI outputs of the Fiber Base Station FBS-1.
- Safeguards are now in place to prevent time and date being corrupted in the event of the backup battery becoming depleted where a system is left unpowered for 30 days or more. This, in turn, resulted in the Fiber Base Station FBS-1 showing the message 'Waiting for connection' on the FBS-1 device menu and the system failing to boot up. The safeguards introduced prevent this and the user will be notified if the time and date have been restored.

Software Compatibility

To ensure the latest enhancements are available with LPS-1 SUP 1.5.0, it is recommended to use the following software versions:

ARRI ALEXA 35 Live
Skaarhoj RCP Pro

ARRI ALEXA 35 SUP 6.2.0
<https://devices.skaarhoj.com/otherpackages>

- reactor.2.2.7.arm64.ipks
- system-manager.1.0.19.arm.ipks
- hardware-manager.1.0.8 pre1.arm64.ipks
- core-arri-camera.1.0.8.arm64.ipks

Further Information and Applications

You can find further information and applications of the ARRI ALEXA 35 Live Multicam System on the [ARRI ALEXA 35 Live](#) web page.

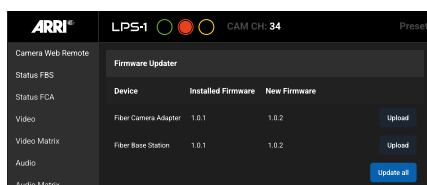
Update Procedure

LPS-1 Update Procedure

You can update the LPS-1 system with a PC connected through an ethernet cable to one of the RJ45 management ports of the LPS-1 system.

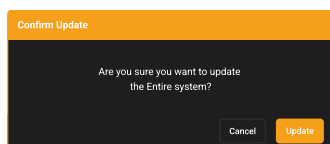
Due to the extensive changes in SUP 1.5.0, it is necessary to install the Software Update Package two times. Please carefully follow the update instructions below.

- 1 Download the SUP 1.5.0 update file (LPS-1_1.5.0.zip) from the [ARRI Software Update Packages](#) webpage. Double-click the downloaded .zip file to unpack it or unpack it manually. This will extract two update files.
LPS-1_fw_1.5.0.raucb - Combined update file for LPS-1 FBS-1 and FCA-1.
LPS-1_fw_FCA_1.5.0.raucb – Individual update file for FCA-1 only.
- 2 Ensure that
 - the LPS-1 system is energized,
 - the Fiber Camera Adapter FCA-1 has an active fiber connection to the Fiber Base Station FBS-1, and
 - the system is fully booted.
- 3 Enter the IP address of the Fiber Base Station FBS-1 into the address bar of a web browser to open the LPS-1 web UI. Navigate to the *Settings* page.

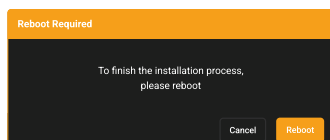


Update Procedure

- To update FBS-1 and FCA-1 together select *Settings > Firmware Updater*. Push the **UPLOAD ALL** button. Browse to the location of the **LPS-1_fw_1.5.0.raucb** update file and select it.
- To update only the FCA-1 select *Settings > Firmware Updater > FCA*. Push the **UPLOAD** button. Browse to the location of the **LPS-1_fw_FCA_1.5.0.raucb** update file and select it.



Once the file is uploaded, a message is reported in a popup dialog box to prompt the user to start the upload process, and the progress of the update will be reported in a popup dialog window. Please allow approximately 5 minutes for the update.



- To complete the update the system will prompt you to perform a reboot.

OPTIONAL: If it is not desirable to perform a reboot at this time, it can be avoided by installing the Software Update Package a second time to ensure all internal devices are reconfigured.

- 4 **IMPORTANT:** Due to the changes in SUP 1.5.0, once the system has rebooted, repeat the update procedure to install the firmware a second time and repeat the reboot.
- 5 Following the power on, check the versions in the settings page to confirm the update was successful (it may be necessary to refresh the page.)
- 6 Access the LPS-1 web UI network page and check the camera connection status.

ARRI ALEXA 35 Live Update Procedure

The camera is updated through a USB-C medium. You can initiate the process 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 medium for use with the ARRI ALEXA camera 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 push *CONFIRM*. This will create the required folder structure on the USB-C medium.
- 3 Connect the USB-C medium 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.

ARRI ALEXA 35 Live Dwndate Procedure

It is possible to dwndate an ARRI ALEXA 35 to a previous software release.

Please note that ARRI ALEXA 35 Live is not compatible with any software version earlier than SUP 2.0.0.

Skaarhoj RCP Update Procedure

To update the Blue Pill Enabled Skaarhoj RCP Pro ARRI V2B, please see the instructions on the Skaarhoj Update Software page here:

<https://wiki.skaarhoj.com/books/blue-pill-reactor/page/update-software>

Known Issues in SUP 1.5.0

- ARRI ALEXA 35 Live Metadata is not available on any SDI outputs of the Fiber Base Station FBS-1 when the video format is 3G Level B and 4:4:4.
- FBS-1 SDI Monitor Output video and LPS-1 status overlays are predominantly green in color when the ARRI ALEXA 35 Live camera is set to output 12G 4:4:4 or 3G 4:4:4 formats.
- Improvements to the intercom audio mixer include providing headroom to avoid clipping. A corresponding adjustment to the input audio level is advised.
- If you power the ARRI ALEXA 35 and Fiber Camera Adapter FCA-1 from an external power supply and connect the system simultaneously over SMPTE311, then swapping the SMPTE 311 connection to another Fiber Base Station FBS-1 and back again results in disruption to communication between FBS-1 and FCA-1.
- When you use the ARRI ALEXA 35 Live Xtreme in High Frame Rate Mode, the ST2110 Return AUX channel is not available for use.
- When you open the LPS-1 web UI in a browser for the first time, a warning may appear stating that the connection is 'not secure'. The warning will be different depending on the browser used, but an option is provided for the user to accept the connection. If the browser window is closed, then the warning will appear again on re-opening the page.
- When selecting the Camera Web Remote from the LPS-1 web UI for the first time, the window of the page only shows a black screen. If this occurs, click on the 'information' icon in the top right to open the Camera Web Remote in a new window. If a security warning appears, accept the connection and then close this new window to go back to the LPS-1 web UI. Refresh the page and then the Camera Web Remote should be visible.
- When you installing or de-install the ST 2110 License and reboot the system as part of that process, the system is slow to reboot and can take approximately 3 minutes before being ready for use.
- Due to major changes in SUP 1.5.0 it is necessary to install the Software Update Package two times to avoid a possible version conflict when attempting recovery.
- When using PAL/NTSC Black and Burst signal as a Genlock source, the format is not reported on the front panel display of the FBS or on the side panel display of the FCA. To verify the format and status please check in the LPS-1 web UI where it shall be correctly reported.
- In HFR mode, the HD Outputs of the Fiber Base Station do not show a camera image or test pattern if the Cameras Project Rate Setting does not match the format of the Genlock signal.

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