

# Audac LUNA Update Manual

Release 1.3.0 – 17/05/2024



## Version Overview

File System	1.1.0
Recovery	1.1.0
FW MCU IO	1.3.2
FW MCU MPU	1.3.2
LUNA Software	1.3.0
Brooklyn Dante Module	1.6.1

## Prerequisites

- 1GB or larger USB flash drive, FAT32 formatted
- Optional USB-A to USB-C adapter
- The supplied LUNA update .zip file



## Update Procedure

To update all software and firmware components of your LUNA, it's imperative to perform all three updates in order as described below. (Step 1-2-3) . Skipping one or more steps can result in failure on device start-up.

### Prepare a USB Flash Drive

Format a USB flash drive with a single FAT32 partition. Unzip all contents of the update .zip file and place them in the root of the drive. Either use a USB-C drive or a USB-A to USB-C adapter and attach the drive to the front USB-C port of the LUNA device.

### Entering Recovery Mode

The LUNA Series is equipped with a hidden Recovery Mode for easy maintenance of all software components.

In the unfortunate case that a device is unable to boot normally, the Recovery Mode will be started automatically.

The service technician can also force the Recovery Mode. Make sure the device is in Standby Mode, indicated by a steady orange front LED. Press and hold the rotary button for 5 seconds. Then, while still holding the rotary button, press the power button. The device will now show 'Recovery' on the display, now release the rotary button. After a few seconds, you are presented with the Recovery Mode menu.

From the Recovery Mode, the technician can check or reflash all necessary soft-/firmware components. In the next sections, this will be explained in more detail. Please ensure that your previously prepared USB drive is connected to the front USB-C port of the LUNA.

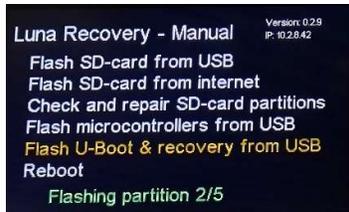
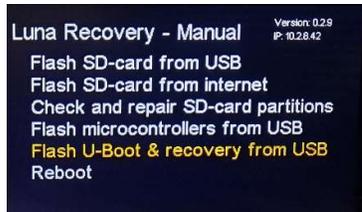


### Step 1: Flash U-Boot and Recovery

The U-Boot bootloader is programmed on the MPU and takes care of booting the operating system.

The Recovery operating system is fully contained on an external flash memory and provides the Recovery Mode.

To update U-Boot and Recovery, select 'Flash U-Boot and Recovery from USB' by scrolling with the rotary. The updater will now flash the 5 necessary partitions. After a few minutes, a notice will appear saying that the update succeeded.



Power off the LUNA and enter the recovery menu again and proceed with step 2.

## Step 2 : Flash Microcontroller Units

The LUNA is equipped with 2 MCUs. One MCU is located on the MPU board and acts as a housekeeper, monitoring front controls and device vitals. The second MCU is located on the IO board and handles GPIO and the Flex Channel relays.

To update these, re-enter Recovery Mode and select 'Flash microcontrollers from USB'. First, the IO MCU will be flashed, then the Main MCU. When finished, the display and front LED are re-initialized, and you are presented with a notice that the update was completed.



You do not need to power off your device at this point.

## Step 3 : LUNA SD Card Flashing

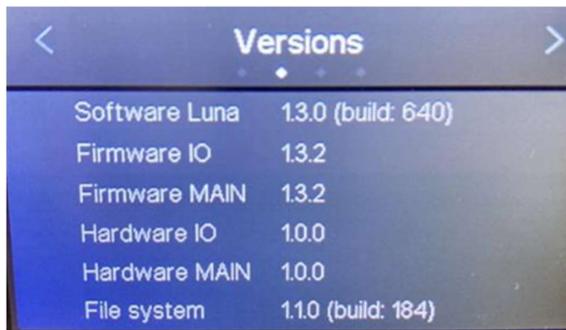
The main Linux-based operating system is stored on the internal 16GB micro-SD card. An empty SD card can easily be flashed from the Recovery Mode. Together with the main OS partition, three extra partitions are made, being:

- Settings: configuration and settings
- Logging: logs and analytical data
- Data: media, voice files, user data, ...
- To flash an SD card, select the 'Flash SD card from USB'. You can choose to keep one or more of the extra partitions if wanted. Scroll through the list and tick the checkbox of the partition you would like to keep, by pushing the rotary knob.



After a few minutes, the flashing is completed. Select 'Reboot' to boot into normal operating mode.

Check in the device menu all versions .



### Other Recovery Options

The Recovery Mode offers a few extra functions not discussed above. Normally, these are not used during the update procedure. However, they offer a handy toolset in case of software anomalies.

Currently following functions are implemented:

- Flash SD card from USB: reinstall the main operating system from a USB flash drive.
- Check and repair SD card partitions: file systems are checked for errors and repaired automatically.

### LUNA Software OTA

In future releases, the LUNA software updates will be available as over-the-air updates (OTA), replacing the SD Card flash option in Recovery Mode.

In normal operating mode, the user is presented with a pop-up notice if an update is available. Alternatively, the user can check for available updates in the 'Device' menu. Simply hold the rotary button for 5 seconds to start the update. After finishing, the user interface will be restarted.



Screenshots do not represent the latest firmware