

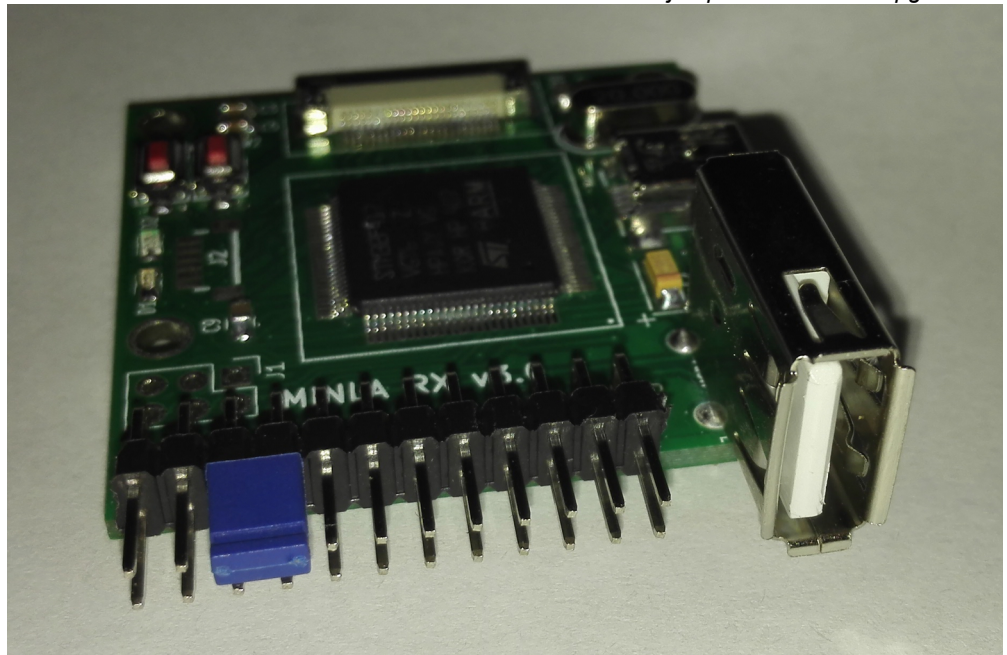
MINLA LTE receiver board has internal bootloader firmware that starts when power is connected to Minla and either starts main firmware code or starts firmware upgrade process via usb from Minla GUI application.

Bootloader can be easily uploaded or updated via mini USB cable.

Step by step process described below:

1. Disconnect all cables from MINLA receiver board.
2. Put jumper on pin number 10 and 9 (refer to MINLA pin-out manual) as shown on pic.1.

Pic 1. Minla receiver board jumper for firmware upgrade.



3. Download firmware upgrade tool:
<https://github.com/minla-rc/Minla-LTE-Receiver/raw/master/software/DfuSe.zip>
4. Download bootloader *.dfu file.
5. Connect MINLA receiver to windows PC with mini usb cable. Install drivers for new usb device if needed. Drivers are located in firmware upgrade tool in folder **DfuSe\Driver**.
6. Run bootloader firmware upgrade tool – **DfuSe\BIN\DfuSeDemo.exe**
7. Make sure you see “STM Device in DFU Mode” in left upper corner of upgrade tool (marked with 1 on pic.2)
8. Choose bootloader firmware *.dfu file by pressing “Choose” button in right bottom corner (marked with 2 on pic. 2)
9. Press “Upgrade” button (marked with 3 on pic.2). Wait until upgrade process ends. Don't remove mini usb cable from device or you PC when upgrade process is running.
10. Press “Verify” button (marked with 4 on pic.2).
11. Now you can safely disconnect mini usb cable. Bootloader is successfully uploaded/upgraded.

Pic 2. Upgrade tool.

