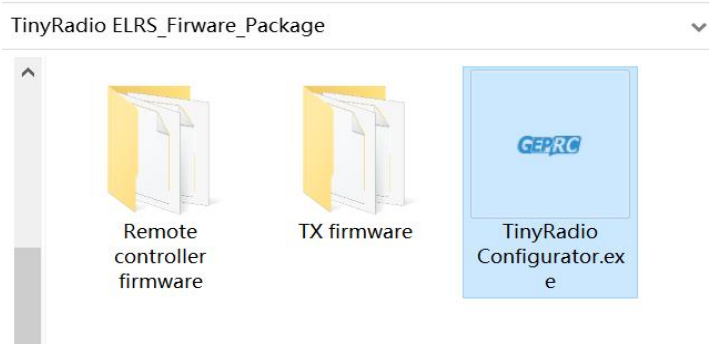
TinyRadio ELRS

遥控器固件升级指导书

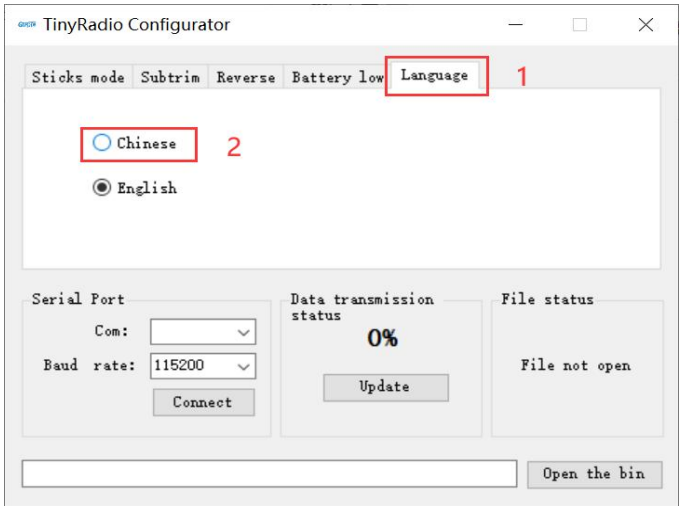
遥控器固件更新

1. 下载 TinyRadio ELRS 遥控器升级包，解压；

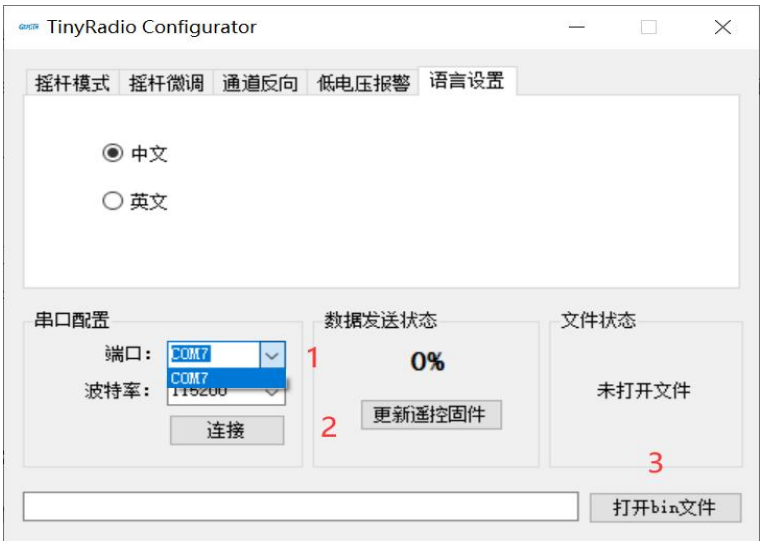
2. 在解压文件中找到 TinyRadio Configurator.exe 配置程序，双击打开；



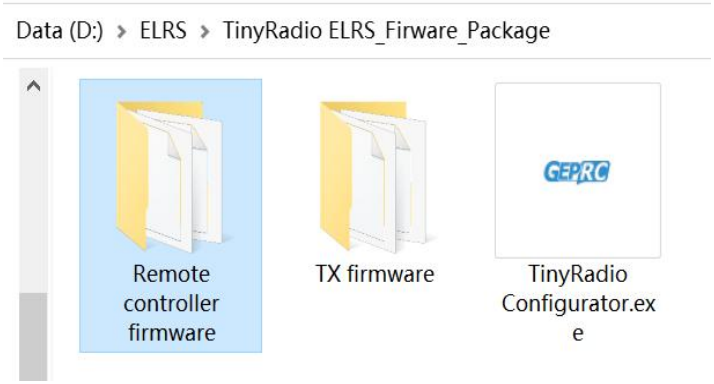
3. 打开后在语言选项中，选择 Chinese，切换为中文；

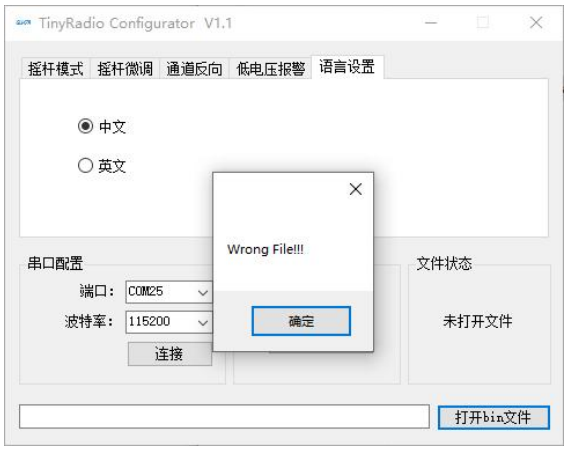


4. 遥控器连接供电，长按开机键 2 秒进行开机，刷写固件需要在开机状态下进行；
5. 用 Type-c 数据线将遥控器连接到电脑上，然后在配置程序中选择遥控器的端口，点击连接,然后选择打开 bin 文件；

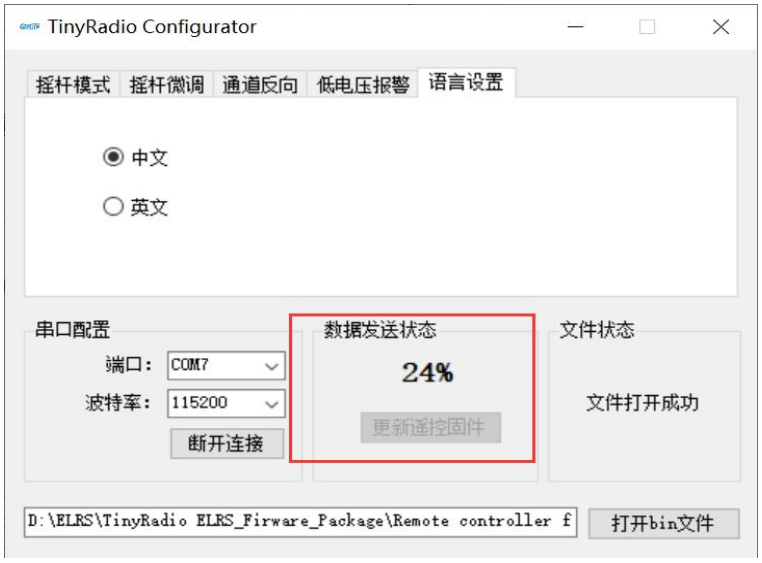


6. 打开 Remote controller firmware 文件夹，选择对应的遥控器固件；注意要选择正确的遥控器固件，选择错误的固件会出现“wrong file”的提示。

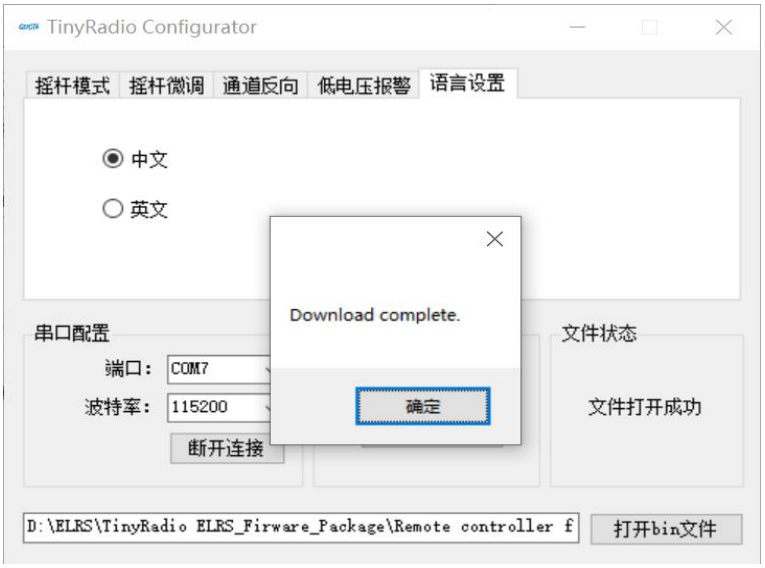




7. 点击更新遥控固件并短按一下电源键，遥控器 LED 灯会快速闪烁，进入固件刷写状态，等待进度条完成；



8. 待提示升级完成时，关闭提示框即可；



9. 点击断开连接，拔掉数据线，即可完成升级。

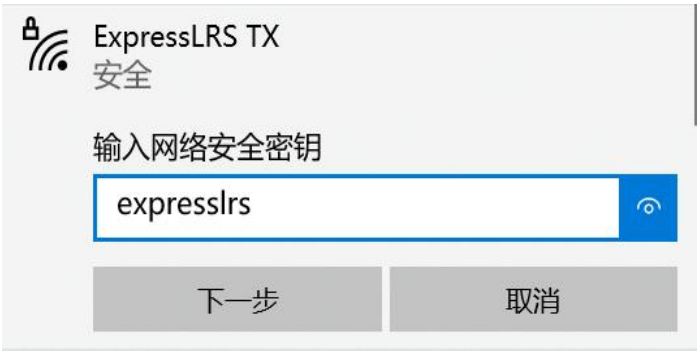
高频头固件更新

WIFI 升级

高频头固件可通过 WIFI 进行升级，具体步骤如下：

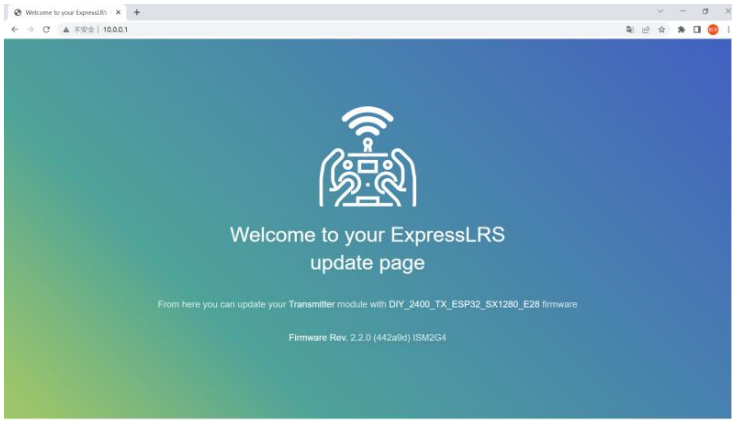
1. 遥控器关机状态下，长按 SETUP 键开机，待指示灯变为快速闪烁的流水灯状态时，便进入了 WIFI 升级模式；

2. 打开电脑或手机的 WIFI 选项，找到名为 ExpressLRS TX 的 WIFI 名，输入 WIFI 密码：expresslrs，进行连接；

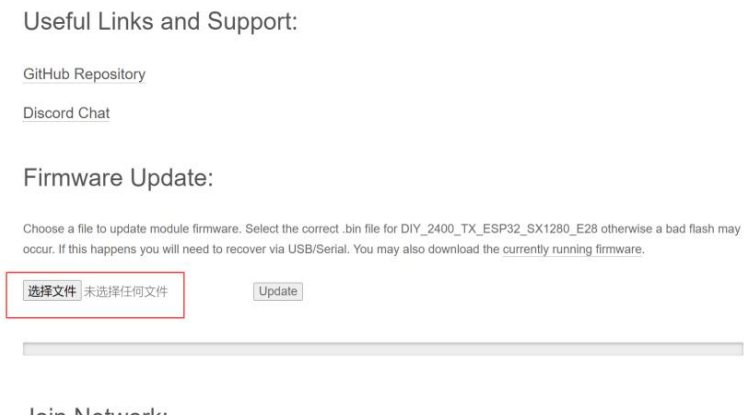


3. 连接 WIFI 后打开浏览器，输入网址：10.0.0.1；

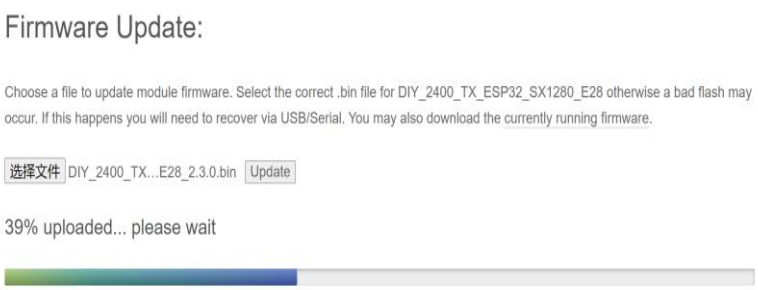
4. 成功打开 web 页面后，便可以在此页面进行高频头固件升级；



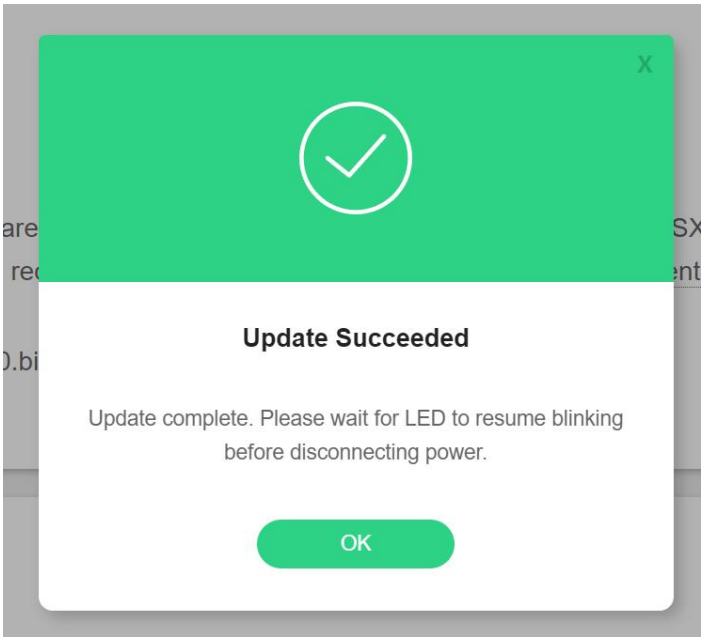
5. 在页面下方找到升级固件的选项，选择对应的高频头固件，点击刷写；



6. 等待进度条完成；



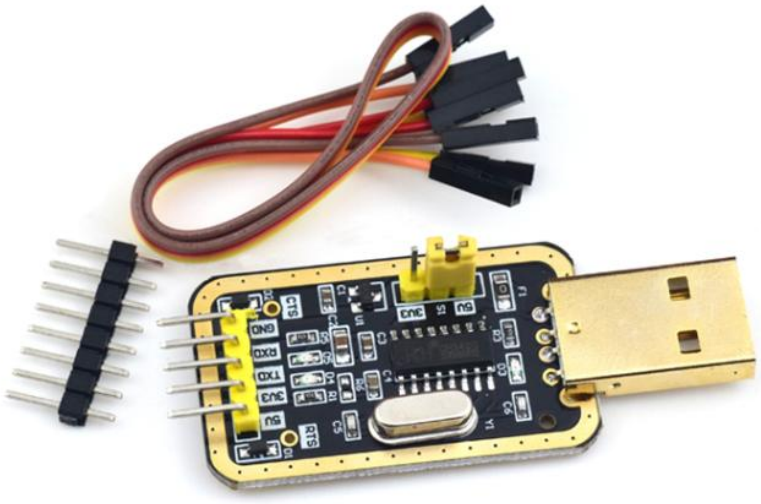
7. 提示升级成功后，遥控器关机重启即可完成高频头升级。



TTL 升级

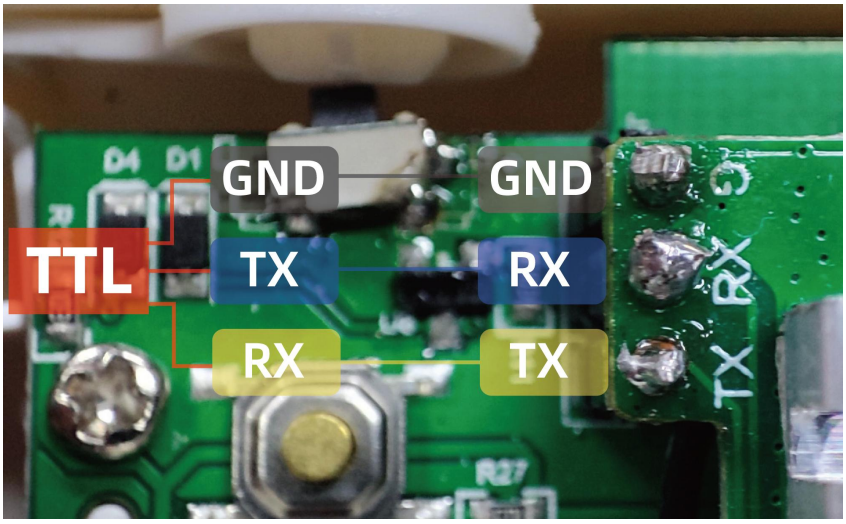
如果高频头通过 WIFI 升级固件过程中，因为断电或者其他原因导致升级失败，无法重新启动 WIFI 升级时，需要使用 TTL 工具重新升级固件，具体操作如下：

1. 准备一个 USB 转 TTL 刷写器,用于将高频头连接到电脑上升级固件；



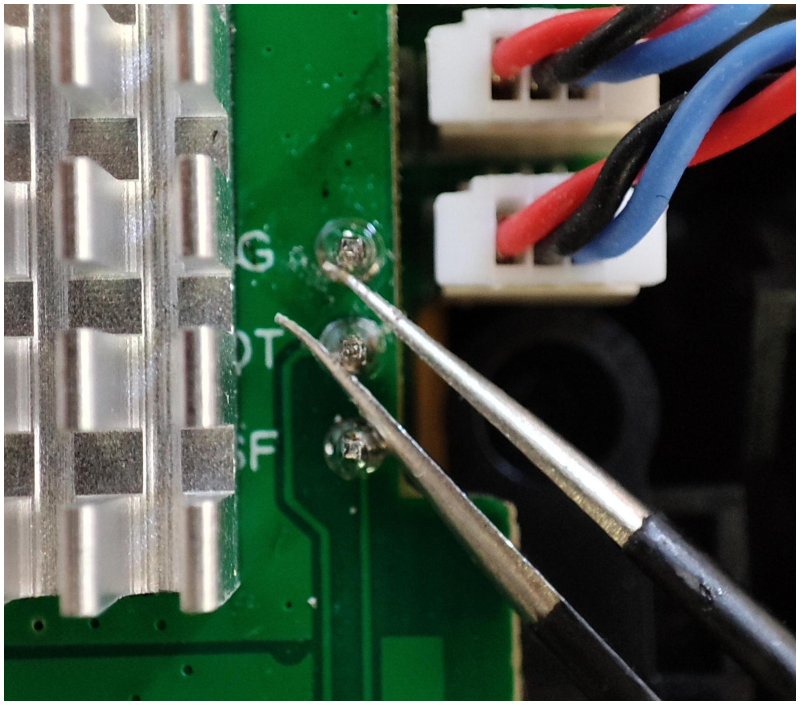
2. 拧下遥控器背部的 4 颗固定螺丝，拆下遥控器后盖；

3. 将 TTL 的 GND，TX，RX，分别连接到高频头的 GND，RX，TX 上，如图所示；

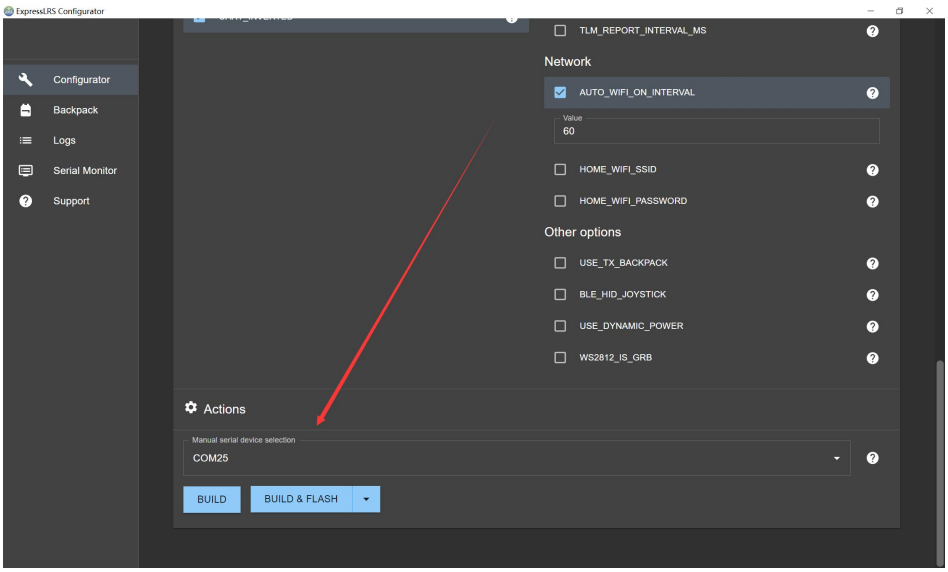


4. 给遥控器安装好天线，连接电源；

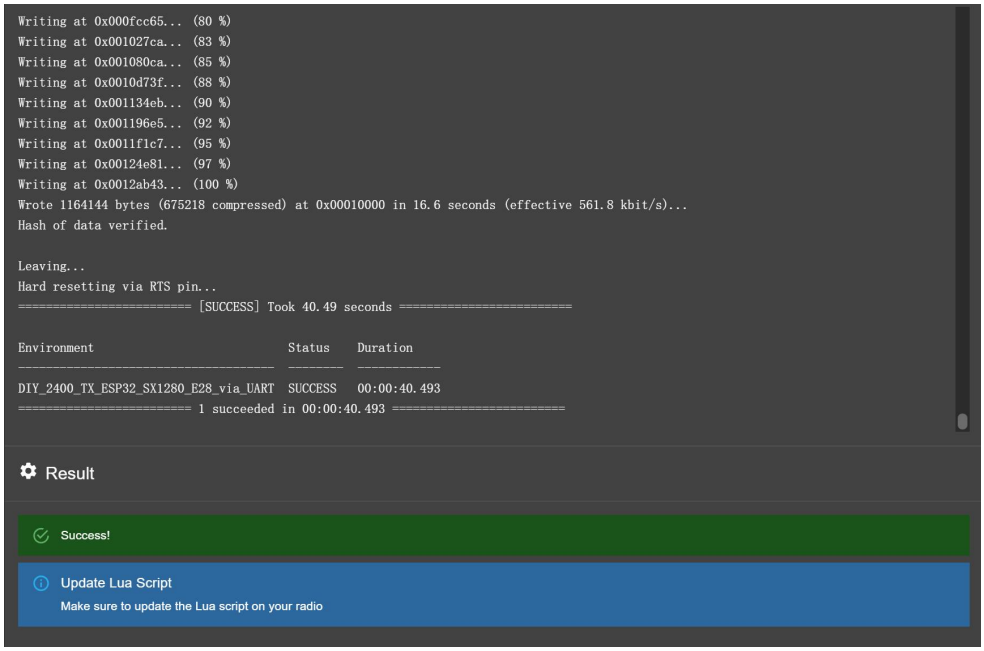
5. 使用一根镊子，短接 GND、BOOT、CRSF 这三个引脚，如图所示。同时按电源键开机，使得高频头进入 DFU 状态；



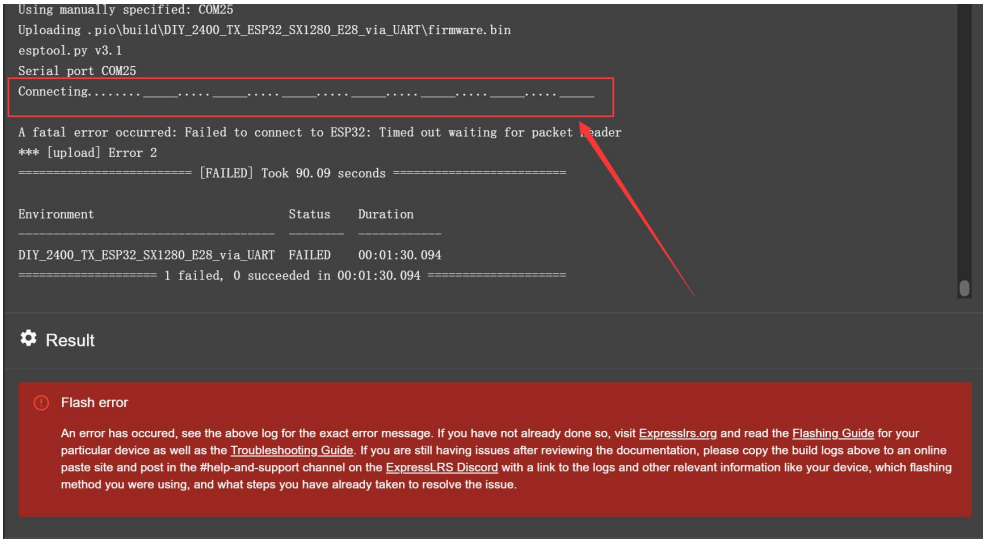
6. 将 TTL 连接到电脑，然后在 ExpressLRS 地面站中选择对应的固件名称，然后设置好对应的端口，点击“BUILD&FLASH”开始刷写固件；



7. 当出现绿色的“Success”提示时，则代表刷写高频头固件成功，断开连线重启即可正常使用。



8. 若提示连接失败了，可先检查 TTL 的接线是否正确、引脚是否短接，排查过后，再重复以上步骤刷写。

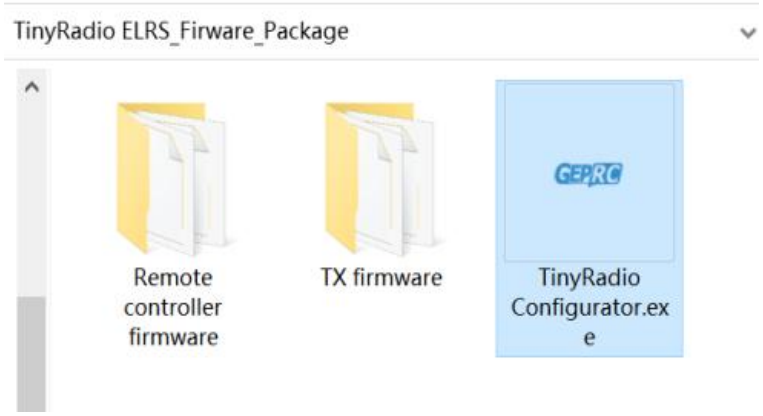


TinyRadio ELRS Remote Control Firmware Upgrade Guidance

Remote controller Firmware Update

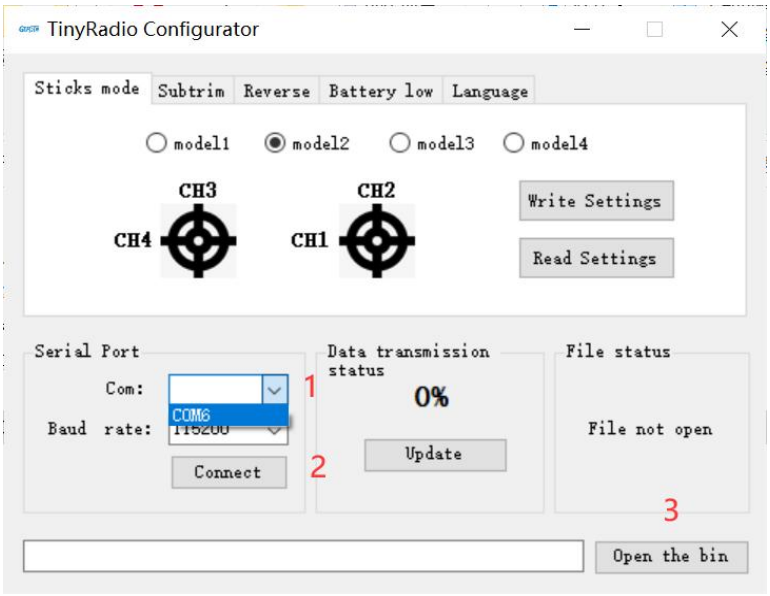
1. Download and unzip the TinyRadio ELRS upgrade the package.

2. Find out the **TinyRadio Configurator.exe** and double-click to open.

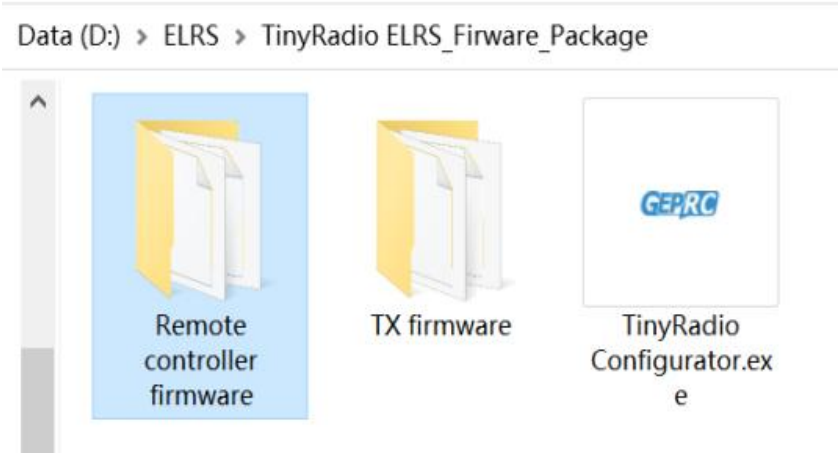


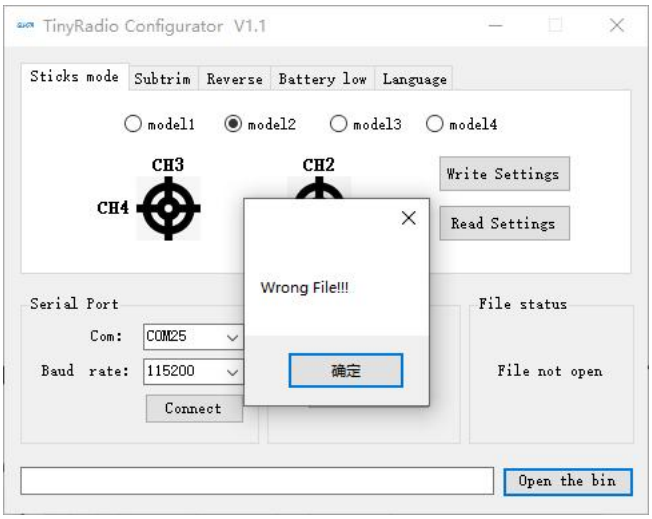
3. Supply power to remote control and press the power button for 2 seconds to start the machine. Upgrade firmware needs to run on starting condition.

4. Connect the remote control to the computer by using Type-C , select the port of the remote control in the configurator, Click connect, and then select Open bin file.

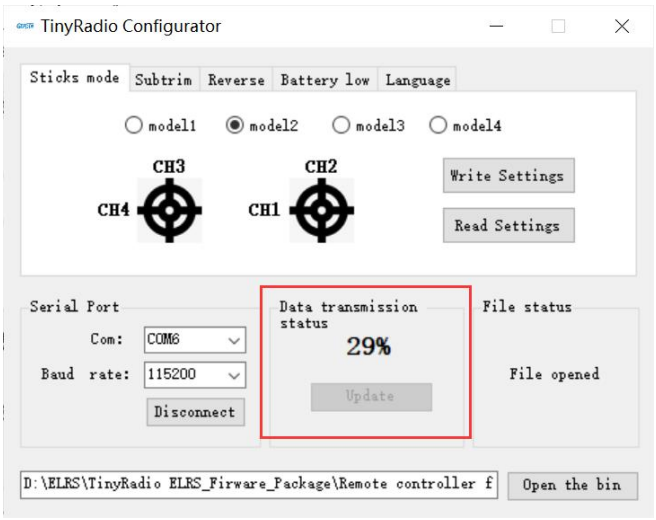


5. Select the appropriate remote control firmware by opening the Remote controller firmware folder. Note that you need to select the correct firmware. If you select the wrong firmware, the message "Wrong File" will appear.

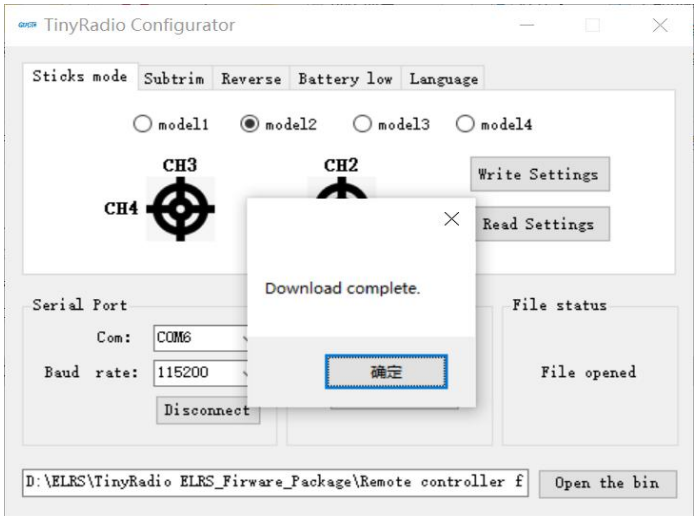




6. Press the power button briefly, click to upgrade the remote control firmware, and then wait for the progress meter to finish. The remote control LED light will blinking quickly.



7. After showing download complete, close the pop-up message.



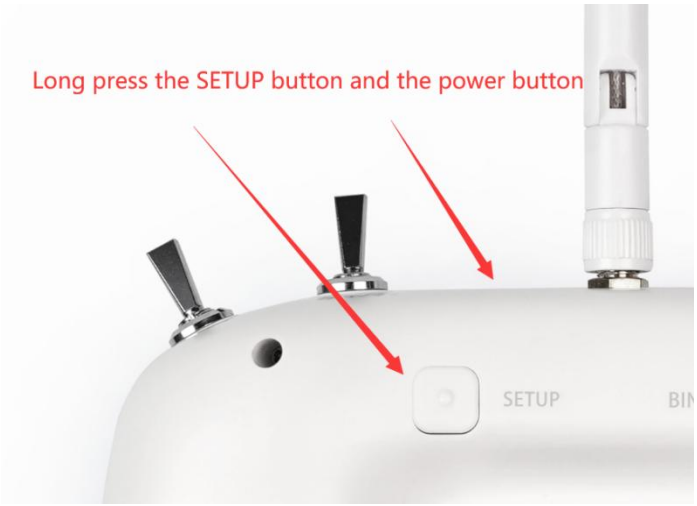
8. Click the disconnect option and unplug the Type-C cable.

TX Module Firmware Upgrade

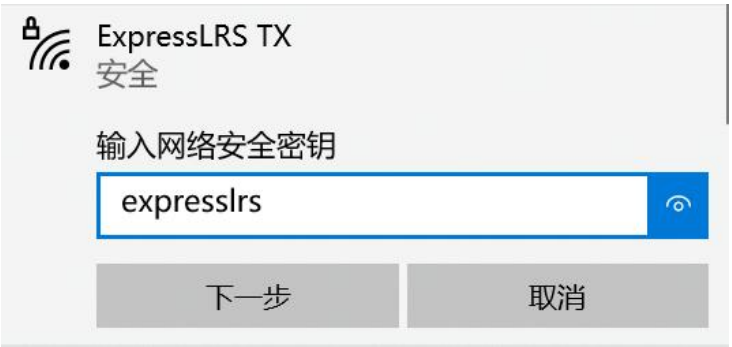
WIFI Update

The firmware of the high frequency header can be upgraded through WIFI. The detailed steps are as follows:

When the remote control is off, long press the SETUP button and the power button to start up. When the indicator turns into the Red running Led quick flashing,it enters the WIFI upgrade mode;

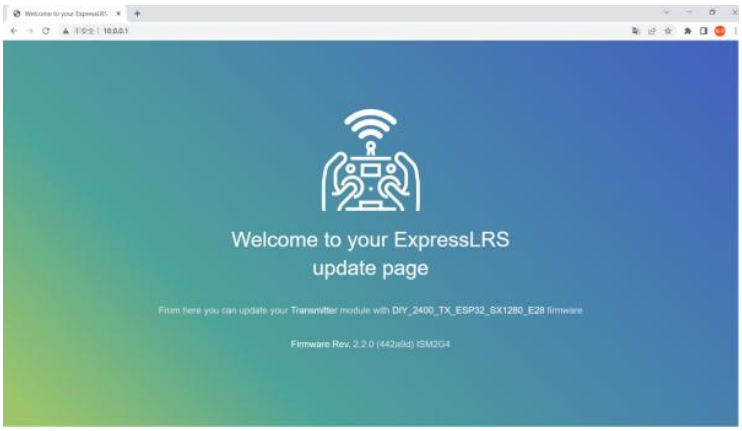


1. Open the WIFI option of the computer or mobile phone and find out the ExpressLRS TX to connect. The password is “ **expresslrs**” .

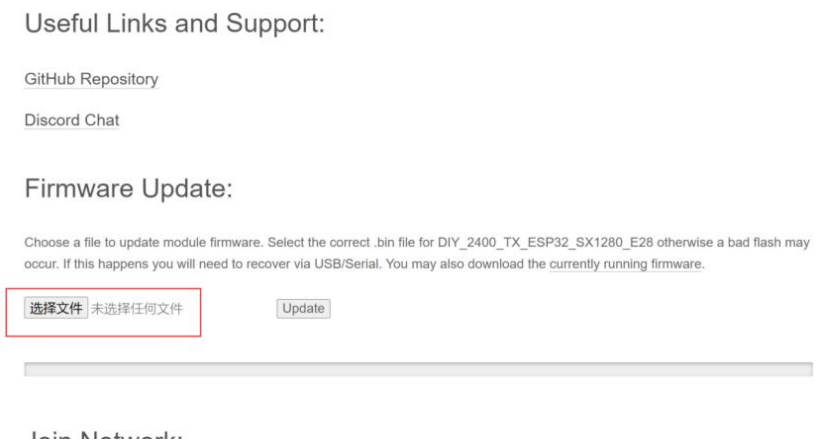


2. Open the browser and enter the URL:10.0.0.1

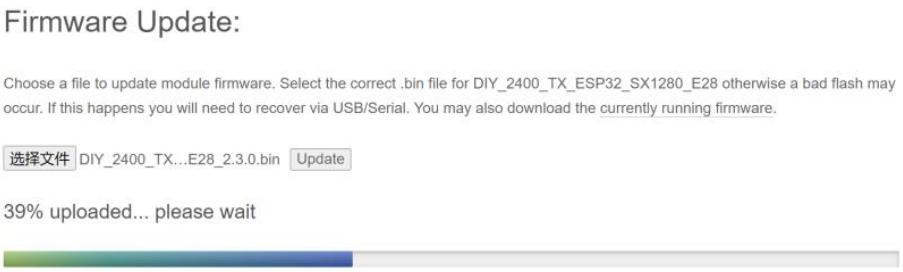
3. After opening the website, you can upgrade the TX module firmware on this page.



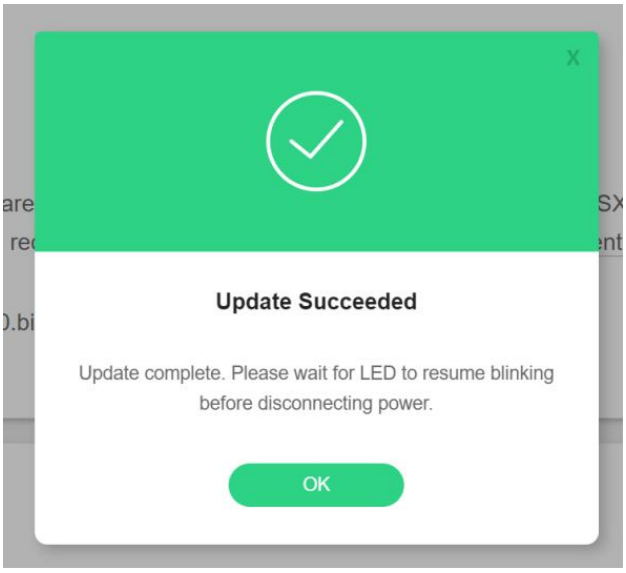
4. Find the Firmware Update at the bottom of the page and choose a appropriate firmware to upgrade.



5. Wait for the progress meter to finish.



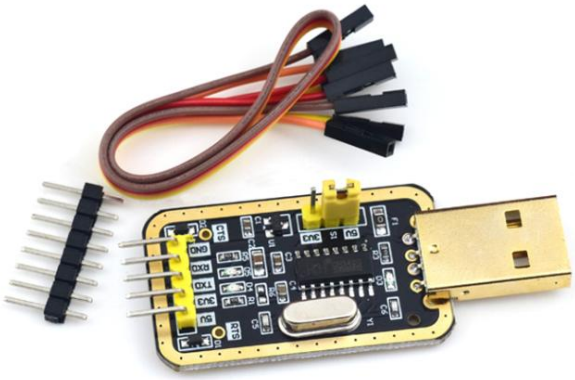
6. After the upgrade is successful, closes the remote control restart can be completed the TX module firmware upgrade.



TTL Update

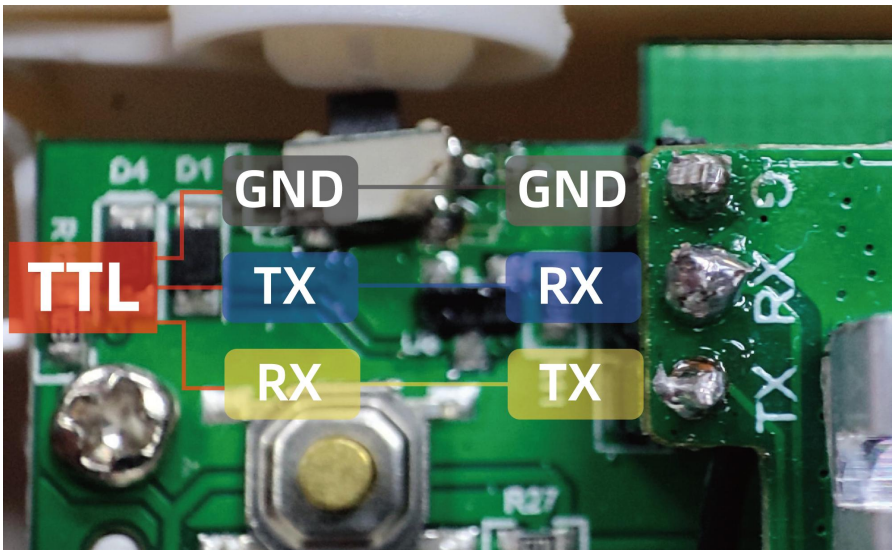
During the TX module upgrade through the WIFI firmware, if the TX module can not restart the WIFI upgrade for power failure or other reasons, you have to use TTL tool to re-upgrade the firmware. The steps are as follow.

1. Prepare a USB to TTL blusher for connecting the TX module to the computer in order to upgrade the firmware.



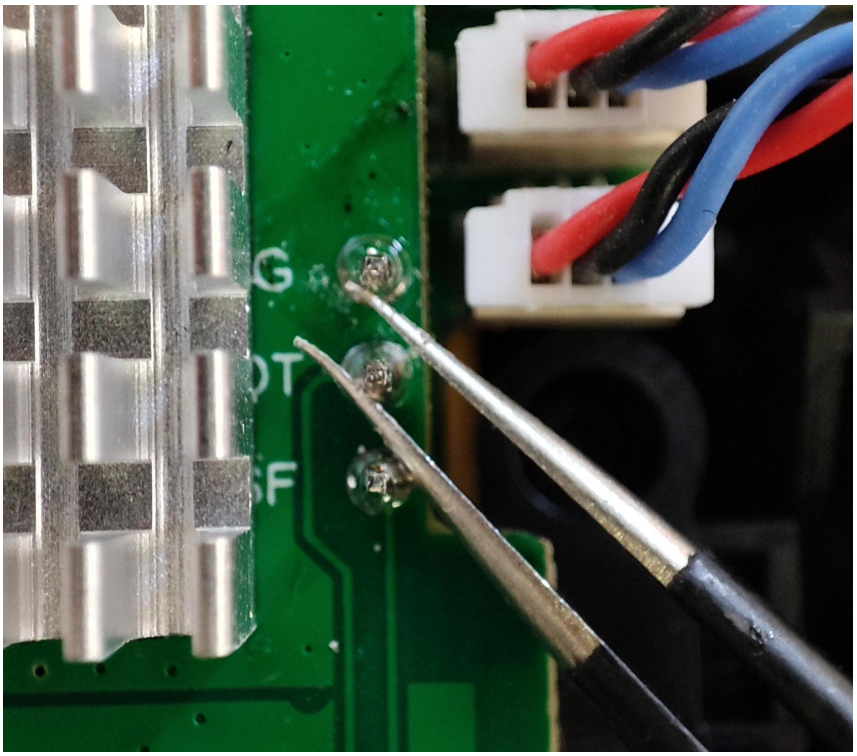
2. Unscrew 4 screws on the back of the remote control and remove the rear cover.

3. Connect GND, TX, RX on TTL to GND, RX, TX of TX module respectively, as shown in the figure;

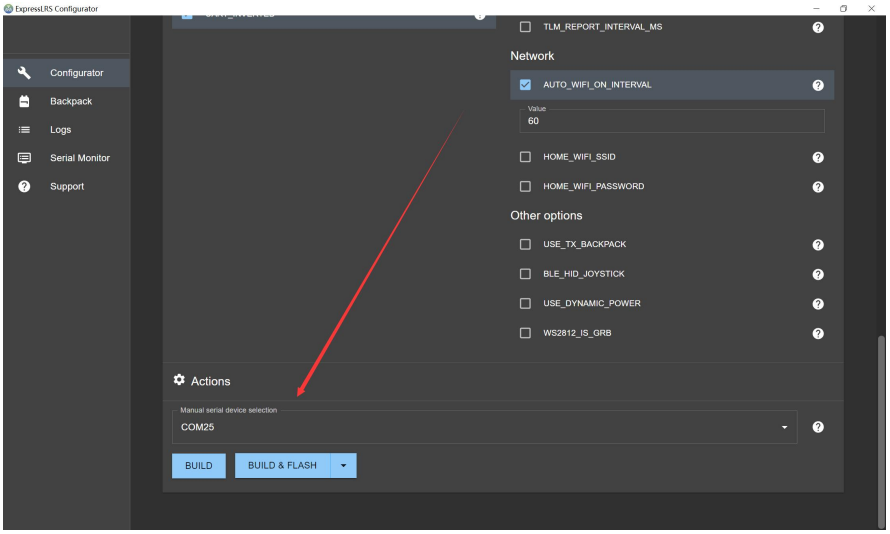


4. Install the antenna to the remote control and supply power.

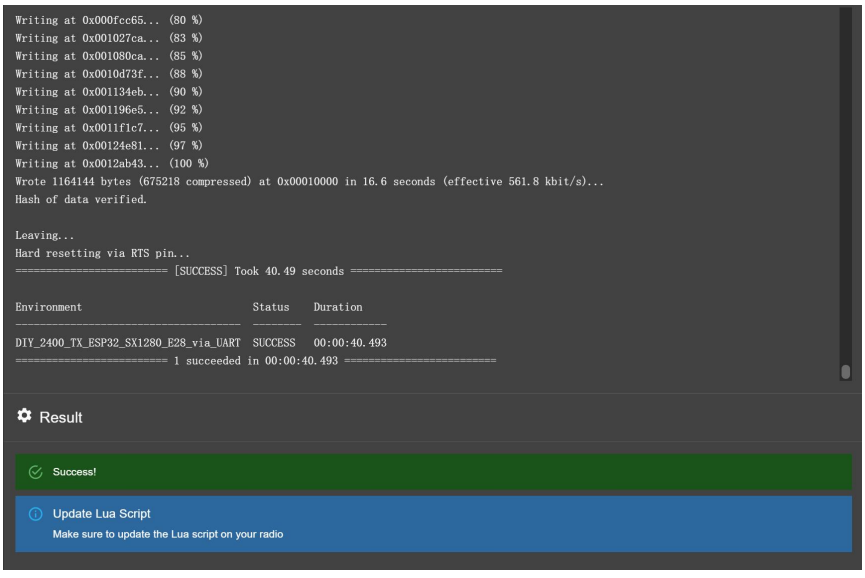
5. Connect the GND, BOOT, CRSF by tweezers and press the power button at te same time. The TX module will enter the DFU condition.



6. Connect the TTL to the computer, select the your firmware name on ExpressLRS ground station and then click “BUILD&FLASH” to update the firmware.



7. When the green pop-up message “Success ”appears, it means the update is successful, disconnect and restart to use it.



8. If failure message appears, check whether the TTL wiring is correctly connected and whether the pins is short-connected. Then repeat the preceding steps.