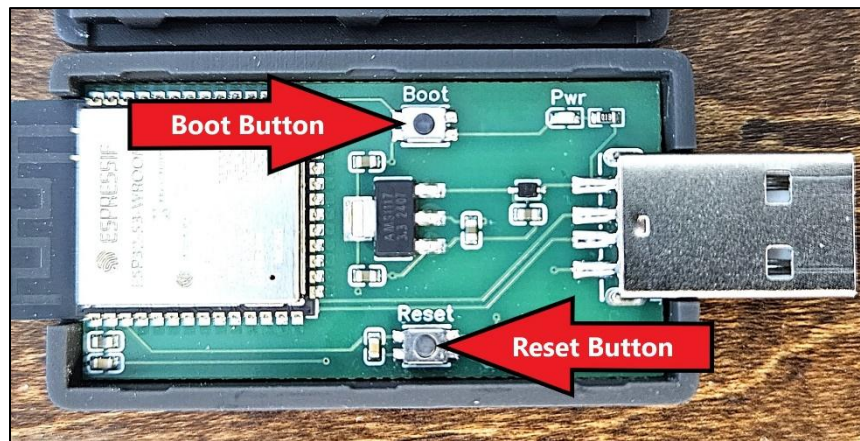


## UPGRADING THE ROTOR'S SERIAL-TO-UDP BRIDGE DONGLE FIRMWARE

Periodically, WA4MCMkits may release updates to the rotor's Serial-to-UDP Bridge Dongle firmware. This could be to fix bugs or provide enhancements. Firmware updates may easily be accomplished using the existing USB-A computer interface on the rotor's Serial-to-UDP Bridge Dongle by executing the following steps:

**Caution: Unless you follow these steps exactly, there is a possibility that you may “brick” your WiFi Dongle. Especially if you enter the wrong hexadecimal installation address. Please double-check your work before clicking the “Program” button. If you do end up bricking the WiFi Dongle, please contact WA4MCMkits @ [don.friend@wa4mcmkits.com](mailto:don.friend@wa4mcmkits.com) for assistance.**

1. Please refer to the image below for the locations of the boot and reset buttons on the Serial-to-UDP Bridge Dongle's circuit board:



Use a small screwdriver to pry the lid off of the Dongle's enclosure, then press and **hold** the “boot” button on the Dongle's circuit board. While still holding down the “boot” button, press and release the “reset” button. This will put the microcontroller module in a mode for uploading a new firmware image. It will also temporarily change the virtual serial port number being used by the rotor while in this mode.

2. Go to the following web site: [https://adafruit.github.io/Adafruit\\_WebSerial\\_ESPTool/](https://adafruit.github.io/Adafruit_WebSerial_ESPTool/)
3. Click the “Connect” button in the upper-right corner of the page, and then select the serial port that is labeled “USB JTAG/serial debug unit” and click connect. Please note that this will be a different virtual serial port than what has normally been used for your rotor.
4. Refer to the image for a sample response from the flasher tool – the MAC address you see will be different. The results text should show that you've connected successfully. Once this happens, you'll be able to set up the image file for programming.
1. Leave the top file offset at 0x0. **Note: the “0x” is already entered for you by the web page.**
2. Click the top “Choose a file...” button and navigate to and select the firmware file (**PSR-100 Bridge Dongle Merged vX.X.X.bin**) that is contained in the same .zip file as these instructions (the “X's” will vary based on the current version number).
3. Click the “Program” button and observe the progress bar until it's done.
4. Press the reset button on the dongle's microcontroller module.

```
ESP Web Flasher loaded.
Connecting...
Connected successfully.
Try hard reset.
Chip type ESP32-S3
Connected to ESP32-S3
MAC Address: C0:4E:30:0C:83:B4
Uploading stub...
Running stub...
Stub is now running...
Detecting Flash Size
FlashId: 0x1740C8
Flash Manufacturer: c8
Flash Device: 4017
Auto-detected Flash size: 8MB
```