

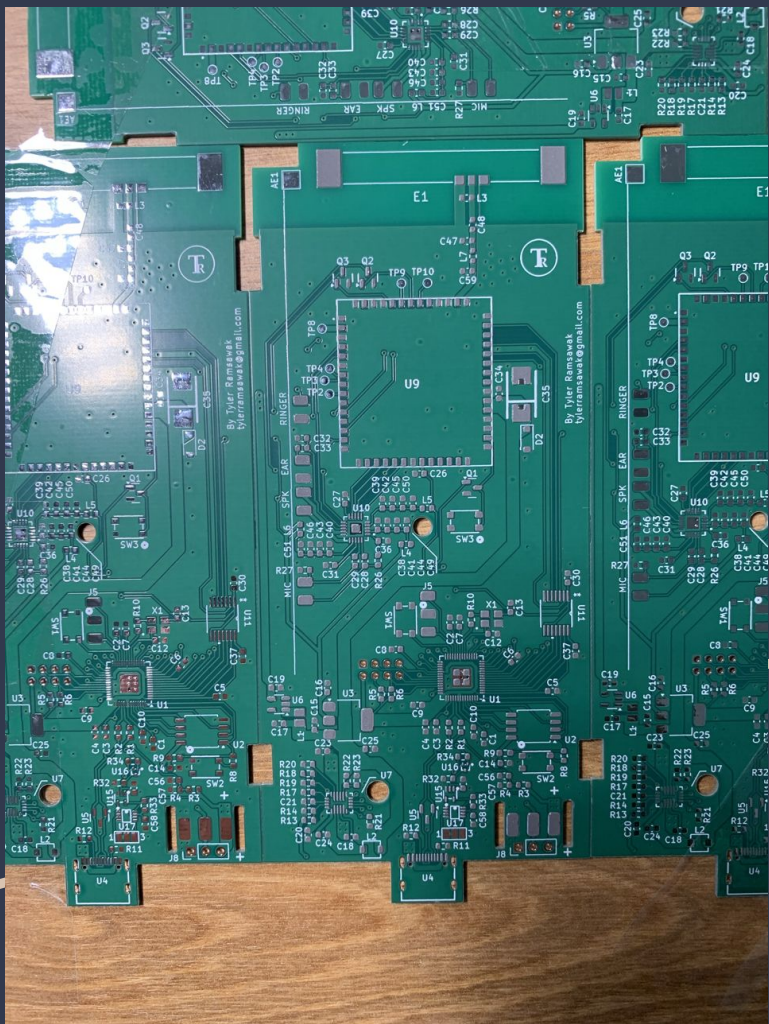
MicroTAC Assembly Process

1. Stencil Framing

First, I frame the prototype by taping down extra PCBs around it.

This ensures that the prototype won't shift around during solder paste application.





MicroTAC Assembly Process

2. Applying Solder Paste

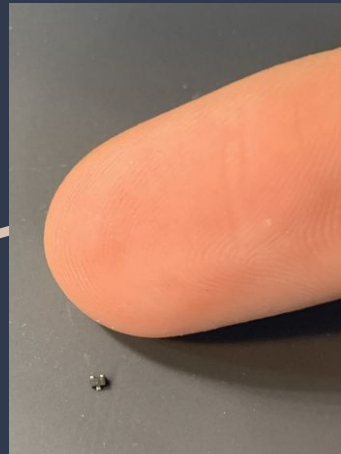
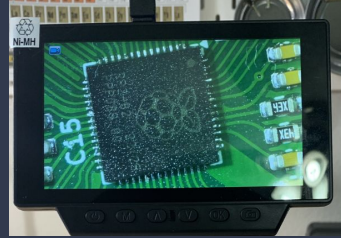
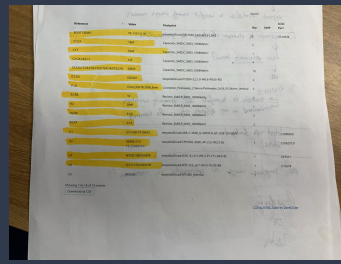
Using a metal squeegee, I pull solder paste across the stencil that lays on top of the prototype.

This applies solder paste to the pads of the board.

MicroTAC Assembly Process

3. Component Placement

Using a digital microscope, I place the tiny components with tweezers onto the prototype, constantly referring back to my bill of materials.

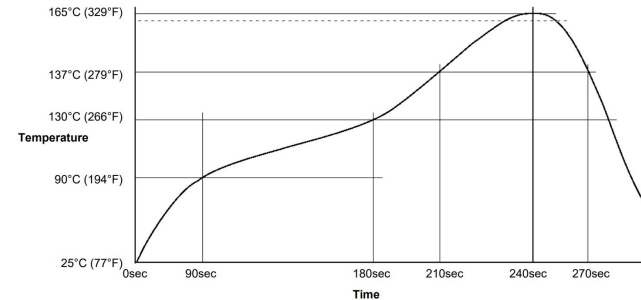
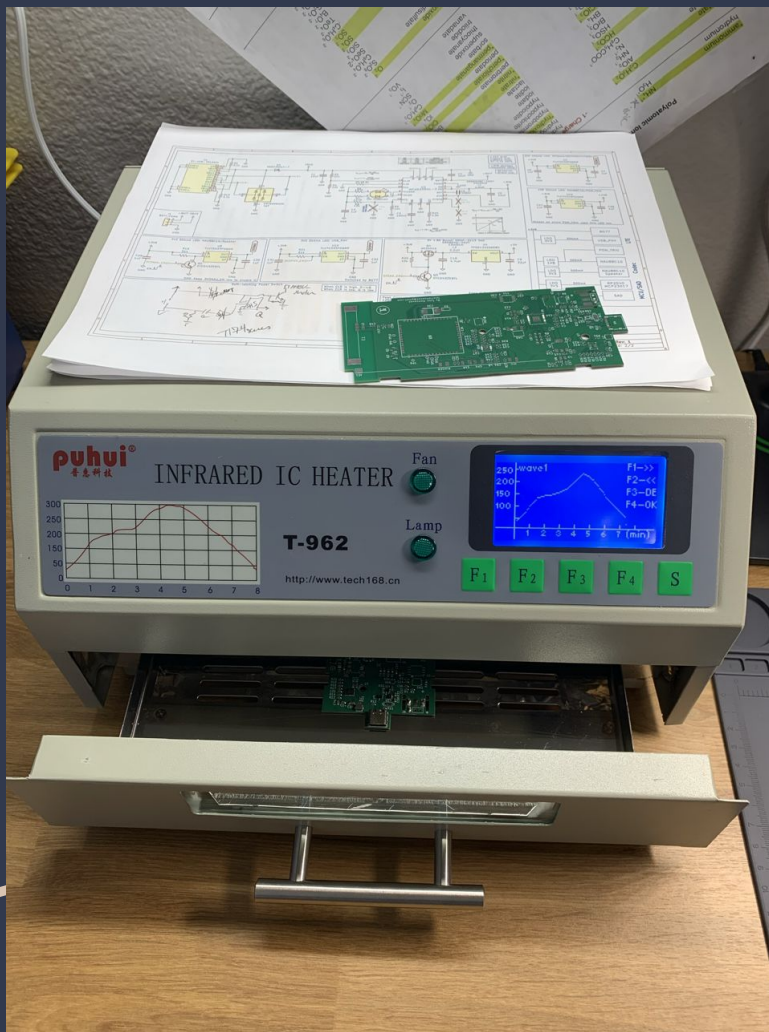


Finger for comparison

MicroTAC Assembly Process

4. Reflow Soldering

I place the populated prototype into my reflow oven, which carefully regulates the temperature of the board following a predefined profile.

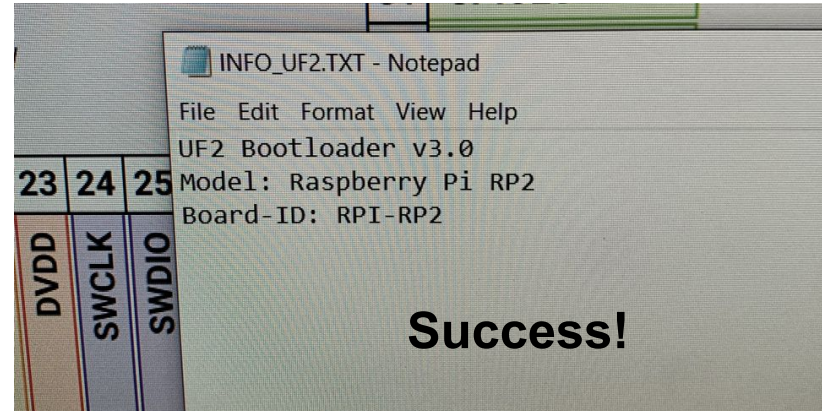




MicroTAC Assembly Process

4. Testing Part 1

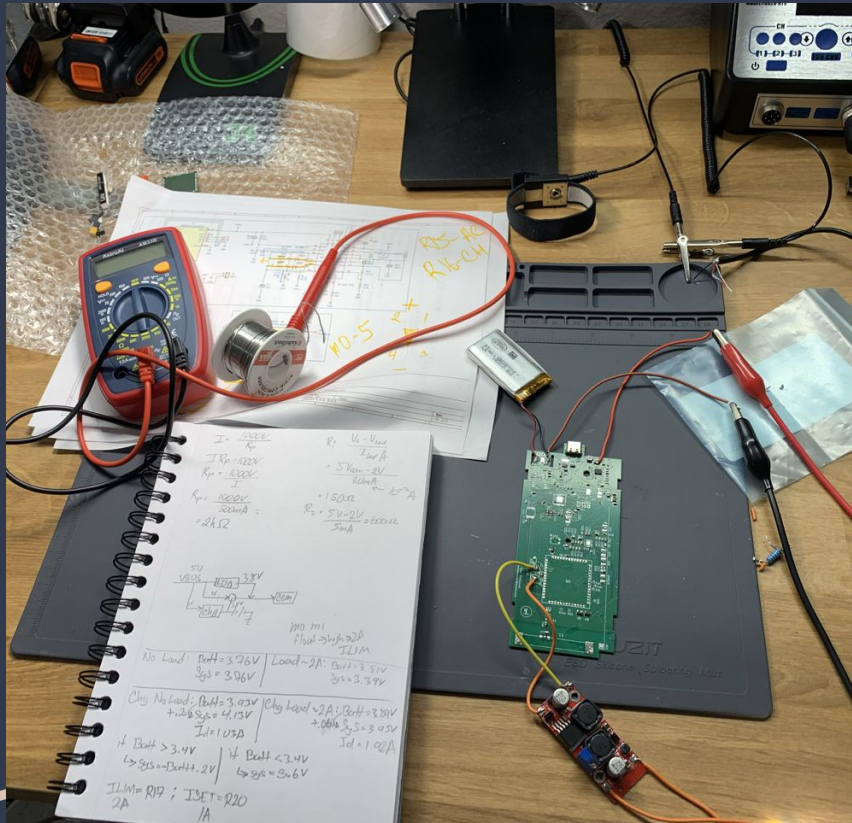
Once the board is complete, I plug it into my computer to see if I could get the RP2040 to boot.



Success!

4. Testing Part 2

I compare this data with the formulas in the PMIC datasheet.



MicroTAC Assembly Process

5. Cleaning

My lab turns into a mess after the assembly and debugging. So, I usually take the rest of the night to clean up and reorganize my equipment.



MicroTAC Assembly Process

Finished!



Prototype-1 only has a functioning display.
The LTE module is being redesigned as we speak!

