

# A journey to the hardware world

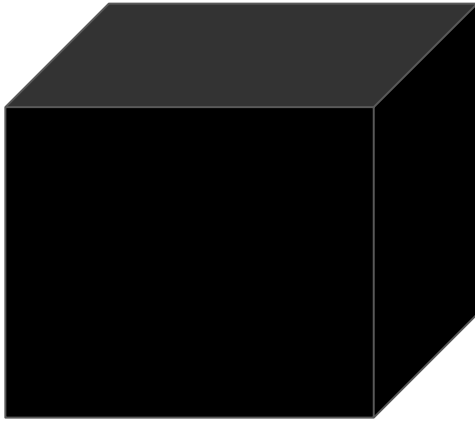
*A software engineer retrospective*

2023-02-04

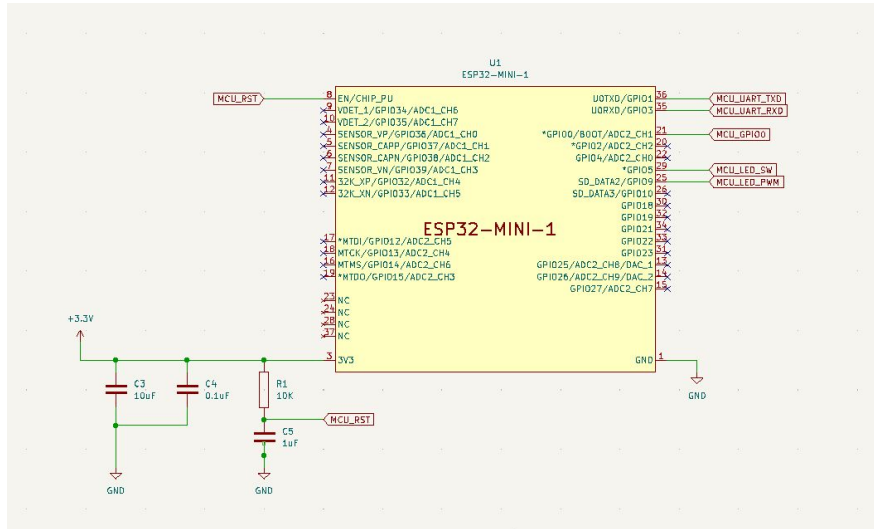
Mathieu Othacehe <[othacehe@gnu.org](mailto:othacehe@gnu.org)>

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# Hardware repair and microsoldering



# Schematics



IC

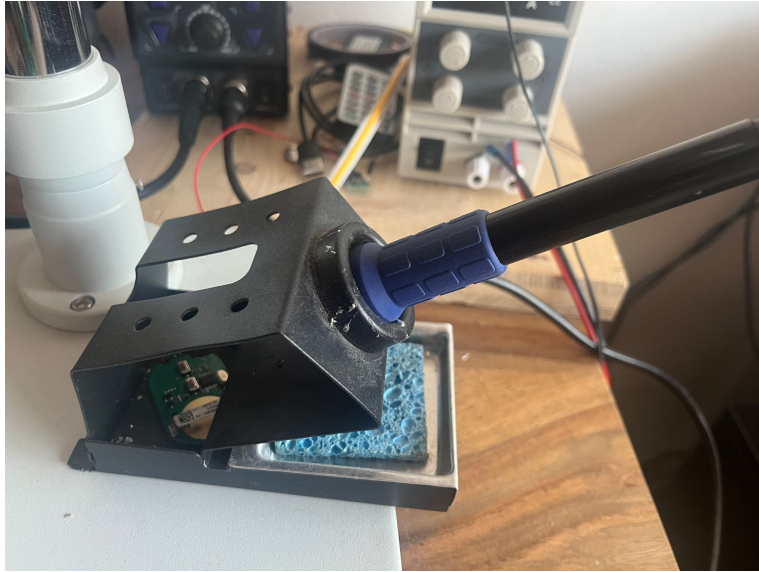


Buy a few tools





Microscope



Soldering iron



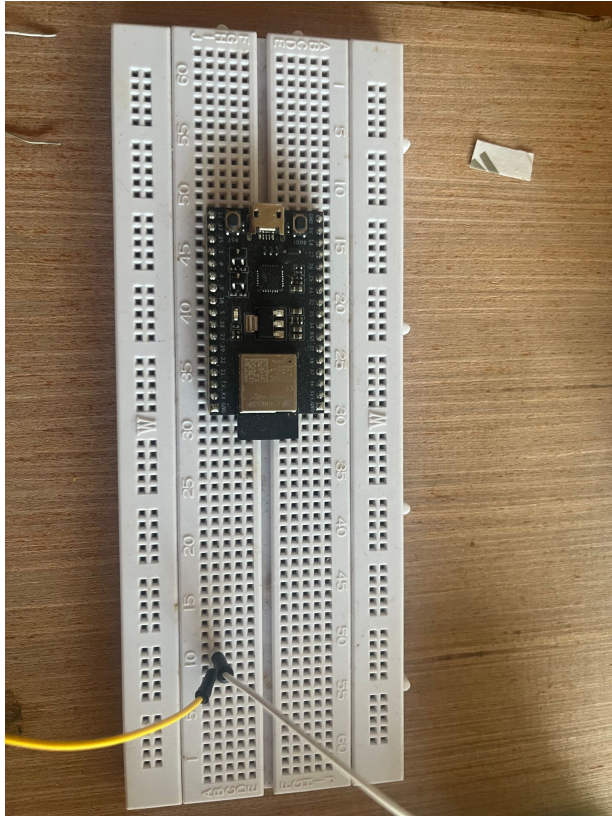
Hot air station



Generator



Oscilloscope



Breadboard



R, C, L



Multimeter





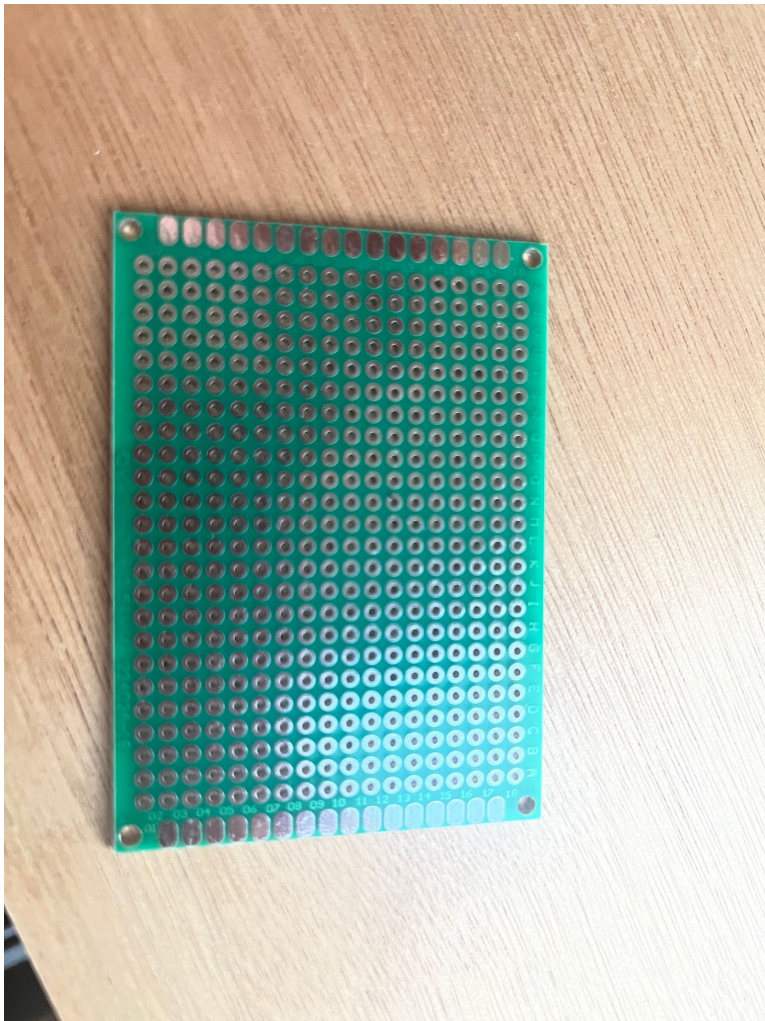
Flux



Solder wick



Tweezers



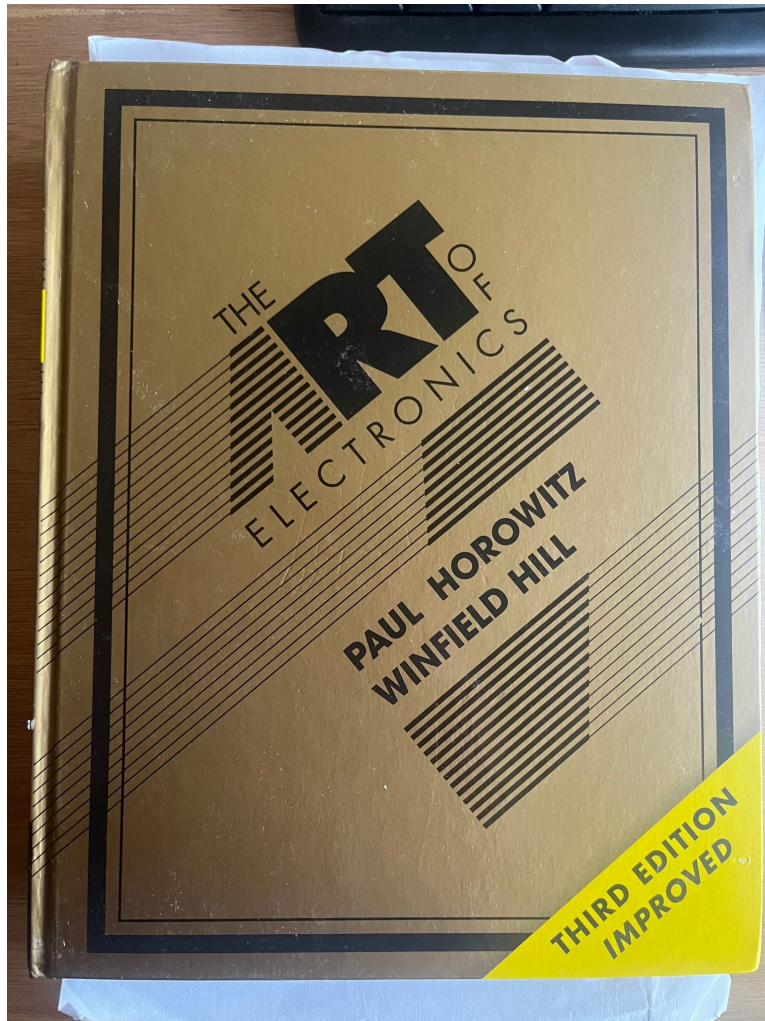
Perfboard



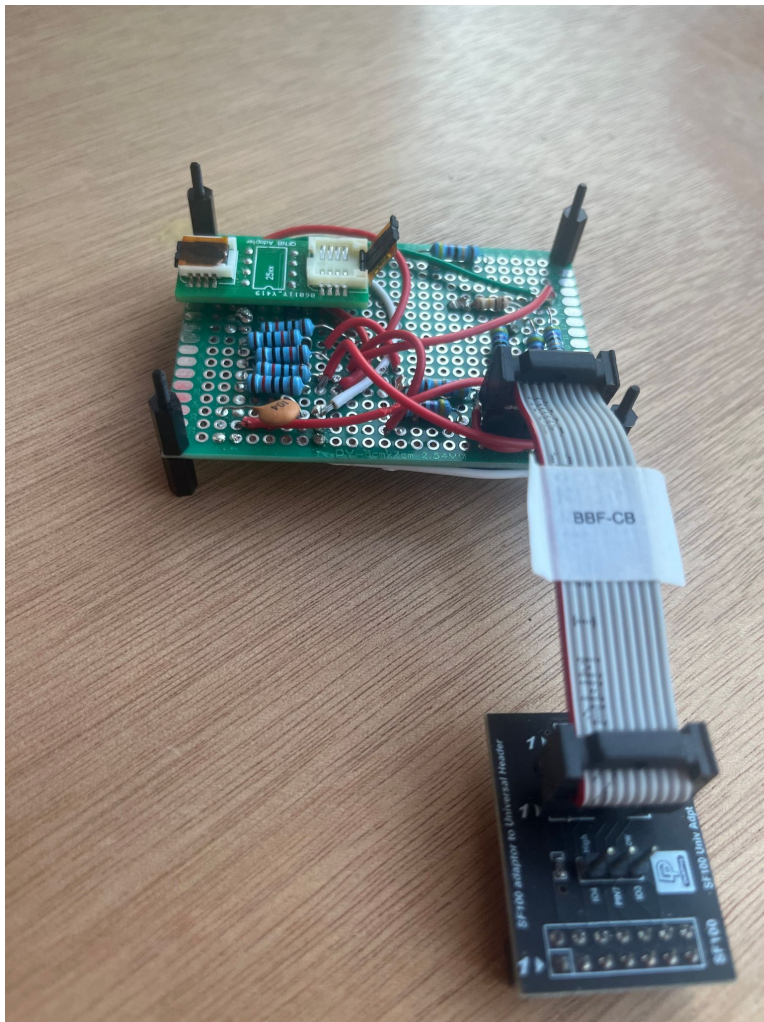
Wires



RLC meter

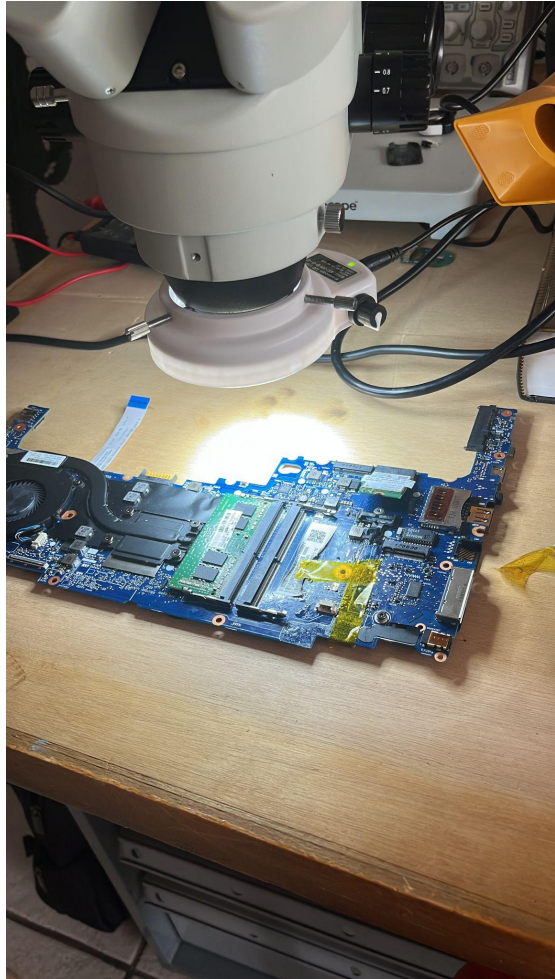


The art of electronics

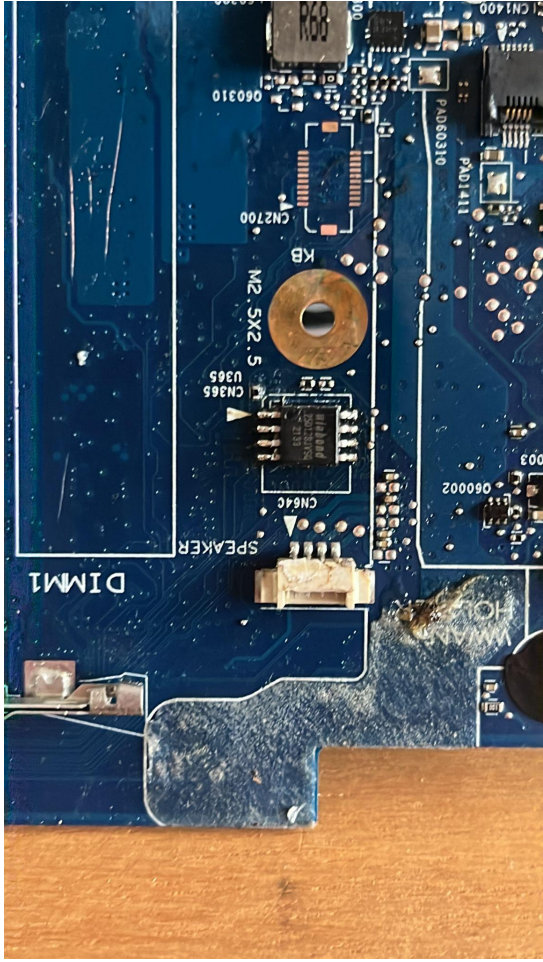


Flash memory programming device

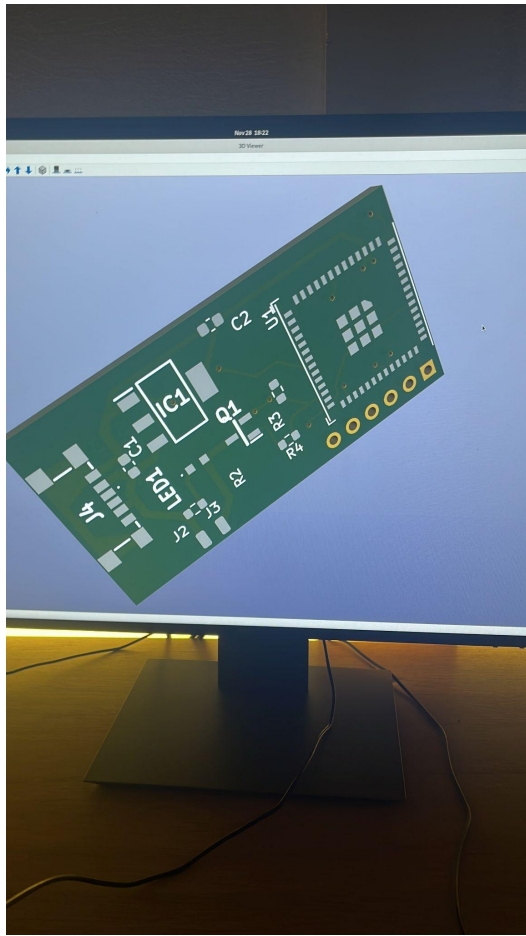




Few repairs



Hack a BIOS



Kicad / LibreCAD

That's it