

Notebook 9

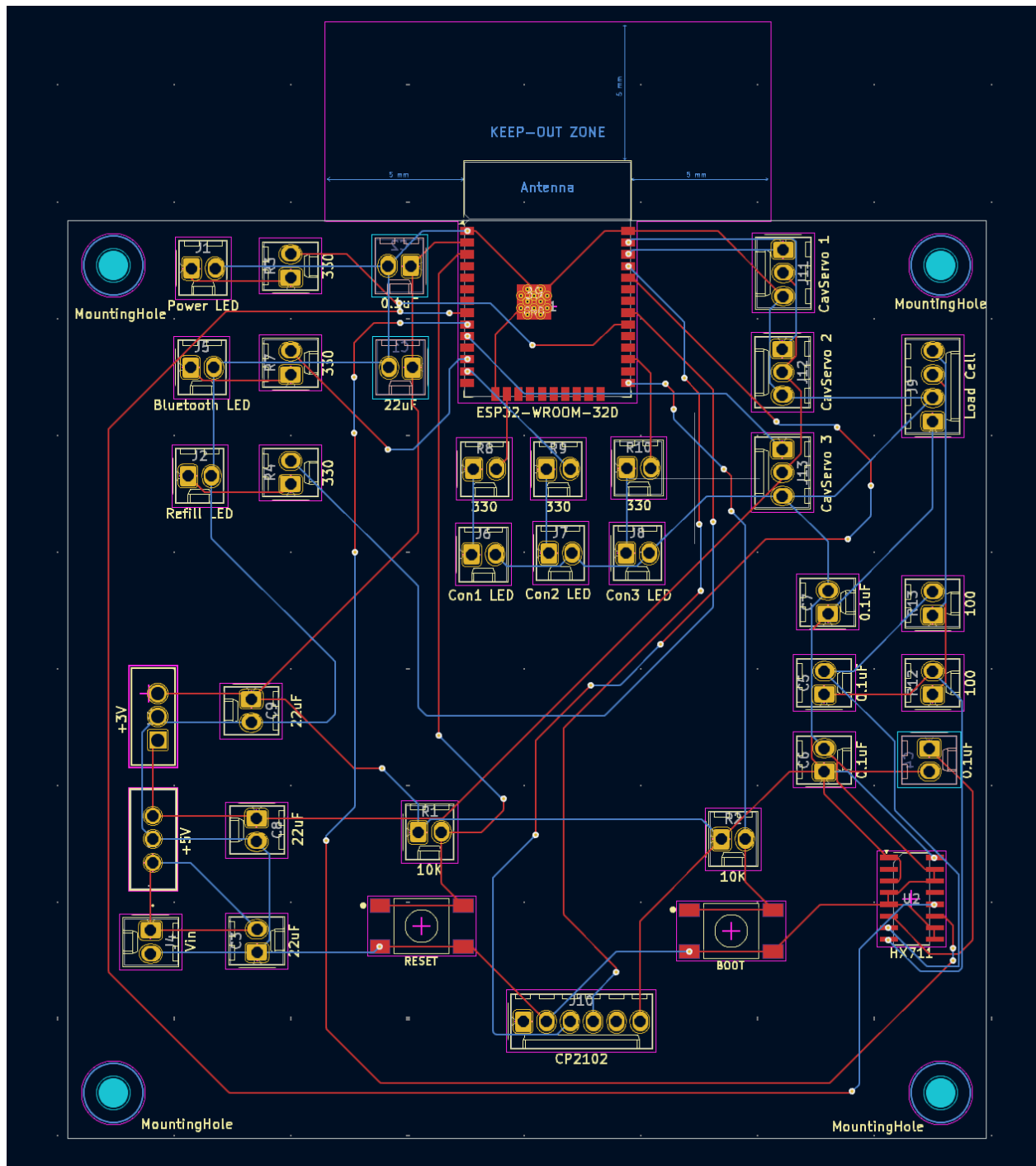
Date: 4/20/2025

Objectives:

1. Finish Power only PCB
2. Switch to the Breakout Board
3. Do last PCB with through holes
4. Get the trimmers for the device

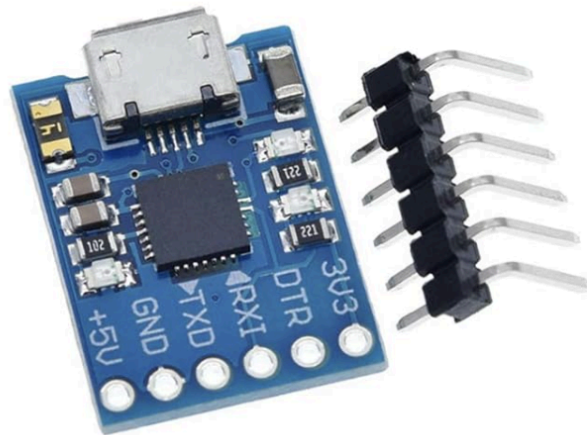
Record of Work:

We figured out the mistake with our trace widths and because we do have some time, we went ahead and ordered another PCB with the fixed trace widths. We know everything else is right in our PCB so this should work. We do need solder paste so we might get that from some store on campus. This is the last PCB design:

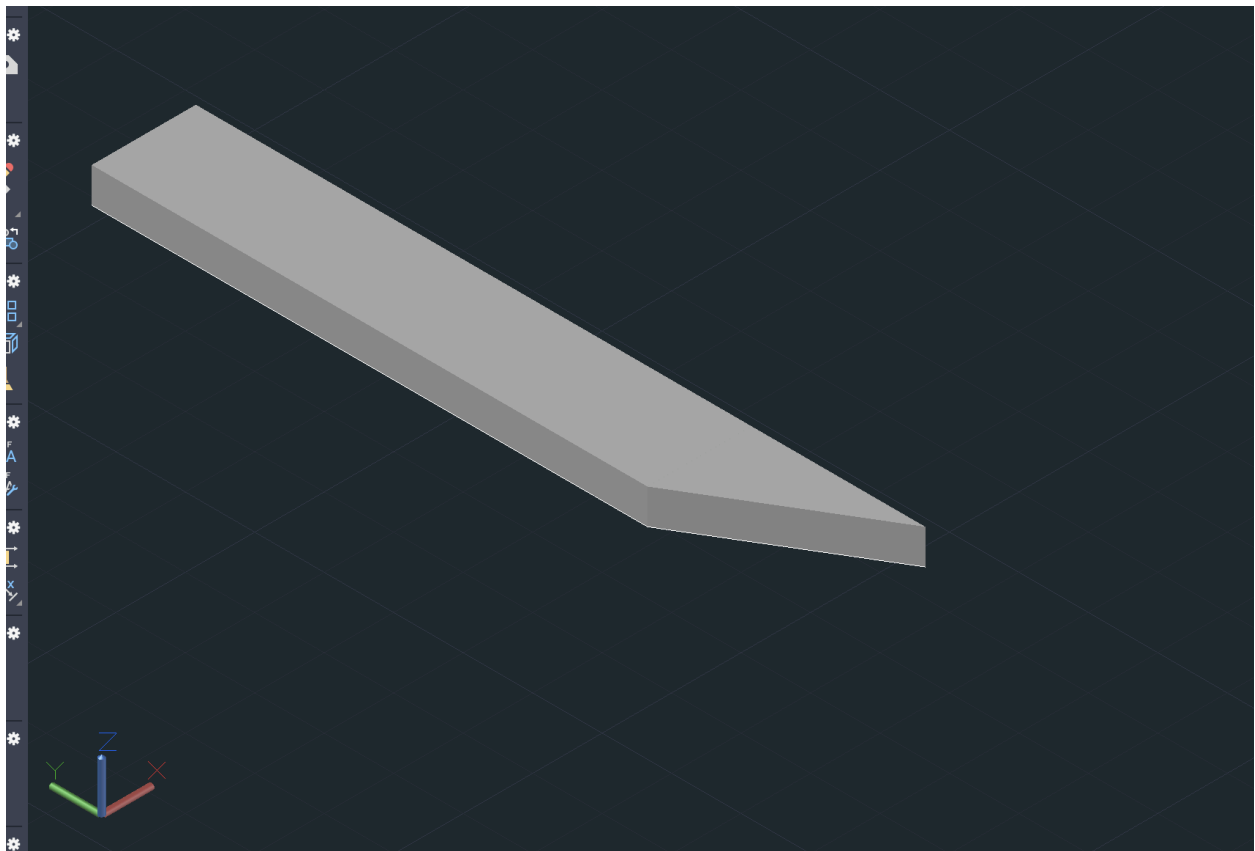


We also switched over to a breakout board instead as we kept running through micro USB ports breaking them every time as the solder is not strong enough. Another group told us this was fine

so we're going with it. This is the breakout board we plan to use:



We have also designed trimmers for this device as the pills were not staying aligned and were jamming. This was something we were worried about but the machine shop assured it will not be a problem but now it is. This is the design for that:



We have 6 of these now costing about \$1.57 and this will most definitely solve our issue.

Reflection:

When we tried powering the original PCB by feeding voltage through the regulator output through-holes, we ran into issues with only 1.7V at the 5V through-hole and 0.6V at the 3.3V one. We successfully tested the standalone power-only PCB, which is outputting solid values: ~5.1V and ~3.3V. Right now, the most stable plan is to keep the power subsystem on the dedicated PCB and run the rest of the system externally. Just hope the last PCB does get delivered on time