SeedSigner Setup Guide

BY: @shishi21m for www.Bip39.guide

More info & support for this project -> tweet @seedsigner or www.seedsigner.com/

Shopping List

- **Raspberry Pi Zero v1.3 (No wifi, bluetooth)**
  - https://www.amazon.com/gp/product/B01GEHPI0E/ref=ppx_yo_dt_b_asin_title_o04_s00?ie=UTF8&psc=1
- **Aokin / AuviPal 5MP 1080p with OV5647 Sensor Video Camera Module**
  - https://www.amazon.com/gp/product/B07RXKZ1KN/ref=ppx_yo_dt_b_asin_title_o04_s00?ie=UTF8&psc=1
- **Waveshare LCD Hat with 240x240 pixel display**
  - https://www.amazon.com/gp/product/B07VJ8G6SX/ref=ppx_yo_dt_b_asin_title_o04_s00?ie=UTF8&psc=1
- **Hammer Jig for solderless setup (Male + Female)**
  - https://www.adafruit.com/product/3413
  - https://shop.pimoroni.com/products/gpio-hammer-header?variant=35643318026
- **MicroSD card min. 4GB**
  - https://www.amazon.com/gp/product/B07CV344WJ/ref=ppx_yo_dt_b_asin_title_o06_s00?ie=UTF8&psc=1
- **Enclosure included in this guide must be special ordered from cryptocloaks.com by direct request or 3d printed yourself.**
  - https://www.cryptocloaks.com/
  - https://btc-hardware-solutions.square.site/product/orange_pill/5?cp=true&sa=true&sbp=false&q=false
- **5/64 hex key, 1.5x50mm flathead screwdriver, PH00x50mm Phillips head screw driver, Hammer.**

-> btc-hardware-solutions is the online store operated by the founder of SeedSigner.

They are offering the "open pill" design as well as pre-soldered and pre-built devices.

If you buy a kit a long with your case make note of what you don't need to order from this shopping list.

Software Setup

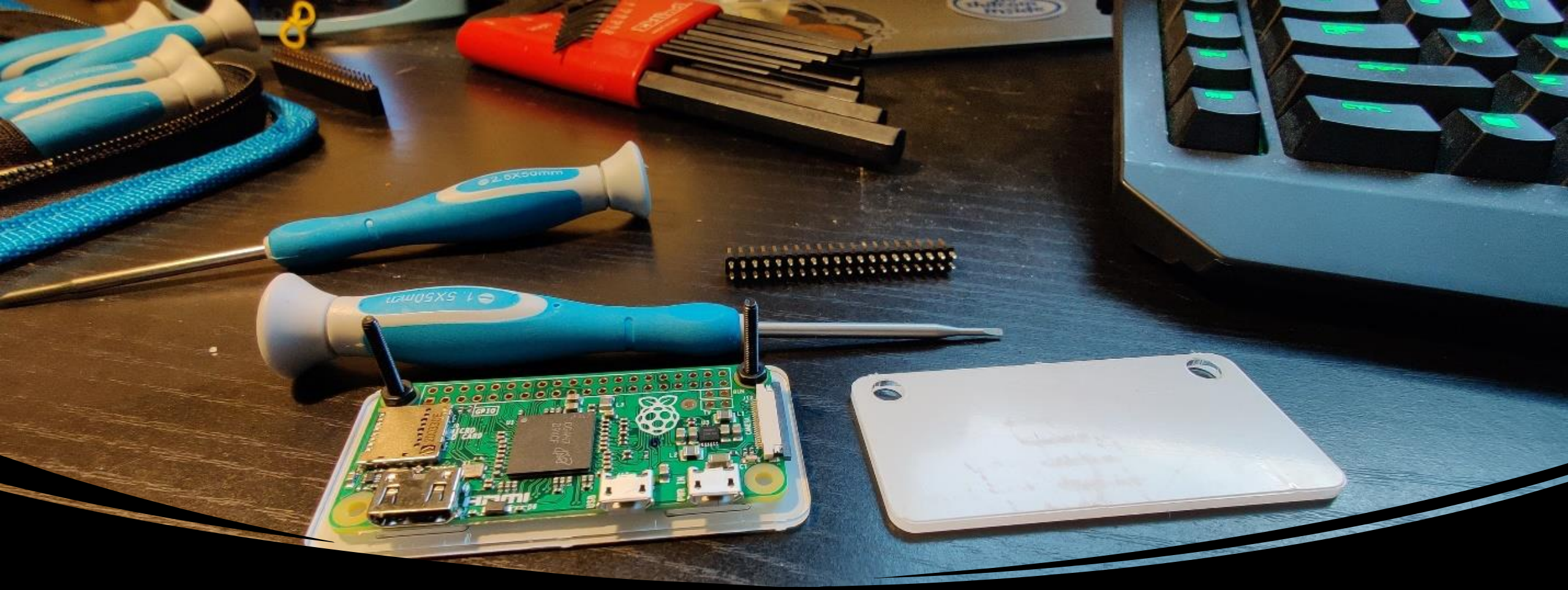
-> Flash the MicroSD card w the latest firmware before you begin the hardware build.

1. **Put the MicroSD card into your computer.**
2. **Download the latest SeedSigner firmware by clicking the file ending …IMG.ZIP , which is the first link under the "Assets" tab: https://github.com/SeedSigner/seedsigner/releases**

3. **Make sure to extract the contents of the ZIP file.**
4. **Download & install Balena Etcher here: https://www.balena.io/etcher/**
5. **Select the extracted SeedSigner image file in Balena Etcher.**
6. **Select the drive that the MicroSD card is in.**
7. **Press the "Flash" button.**

Hardware Setup. 1

-> Take the Pi Zero and place it on top of the Hammer jig base plate, lining up the appropriate screws that come with the kit.

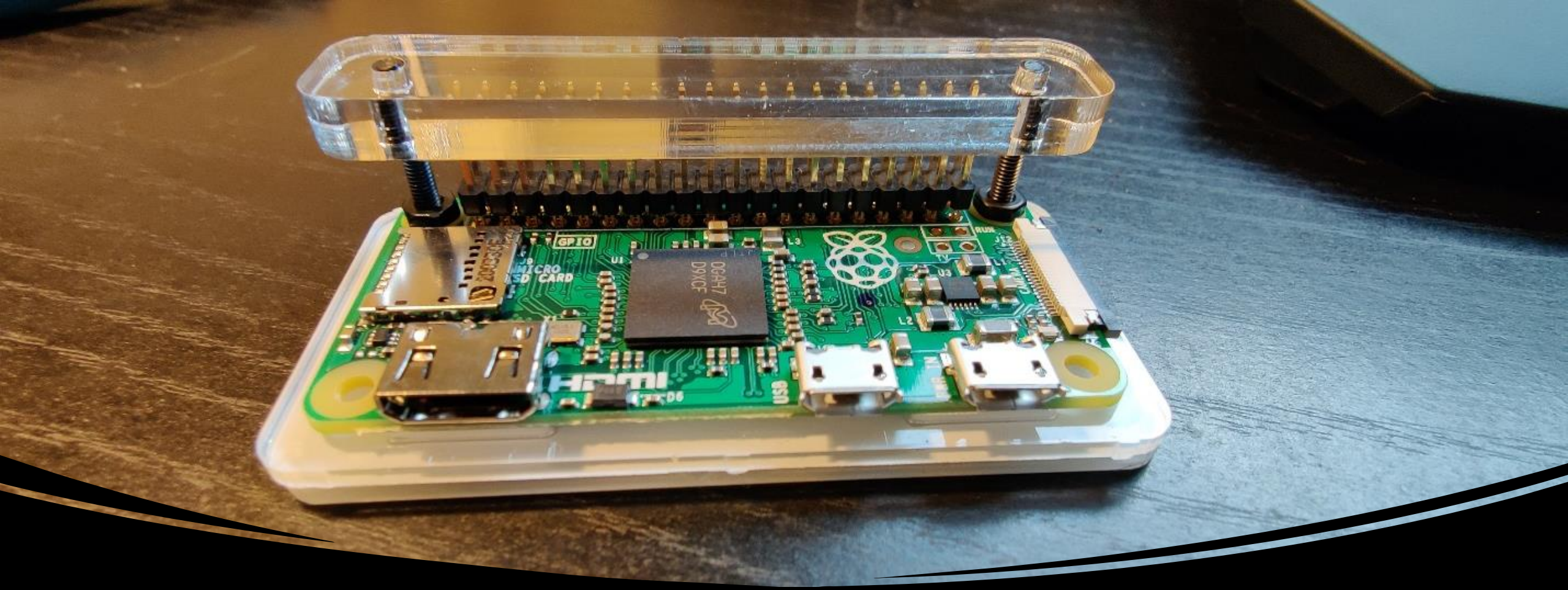


Hardware Setup.2

-> Take the 1.5x50mm flathead and use your fingers to hold the nut in place until it is fully secured, do not over tighten.

Hardware Setup.3

-> Place the secured Raspberry Pi and place it on top of the second base plate.

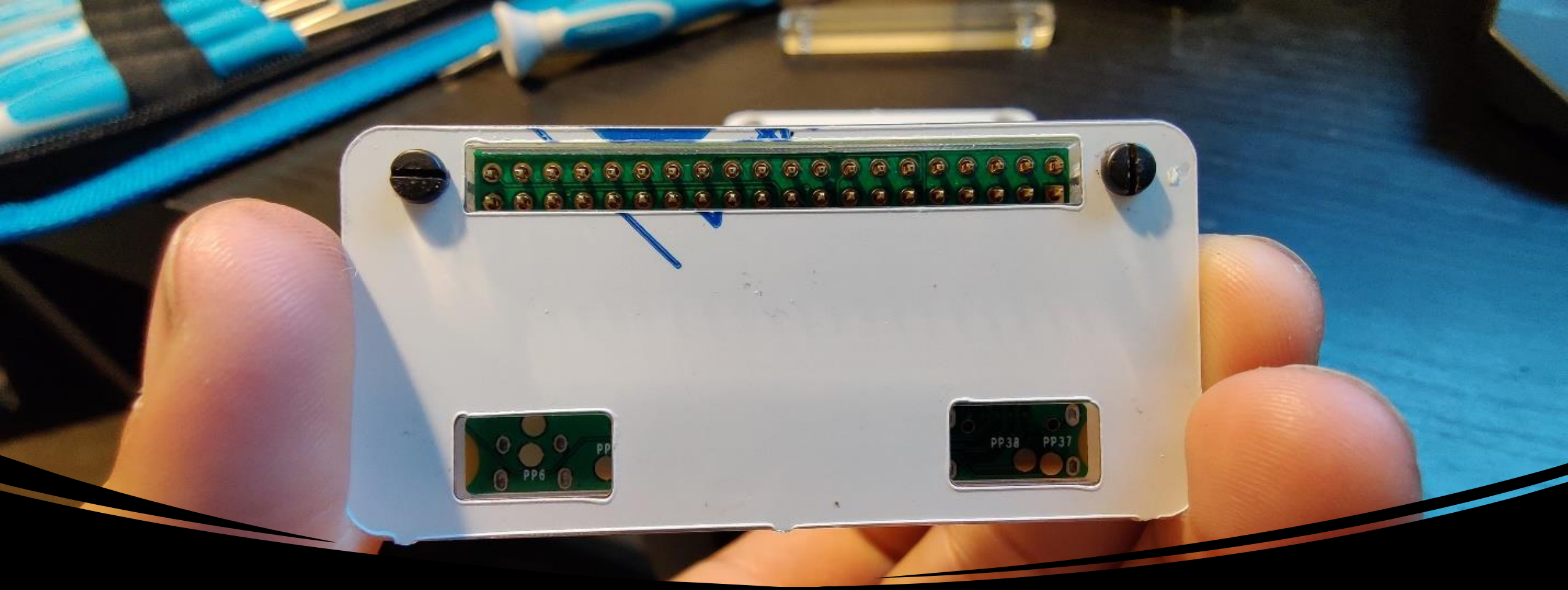


Hardware Setup.4

-> Place the pins, short side down, on top of the grid located between the two screws. Then place the last piece of the hammer jig on top of the pins with the screws through the two holes.

Hardware Setup.5

-> Hammer the pins down so they are secured to the Raspberry Pi Zero, use a little force here but don't overdo it.

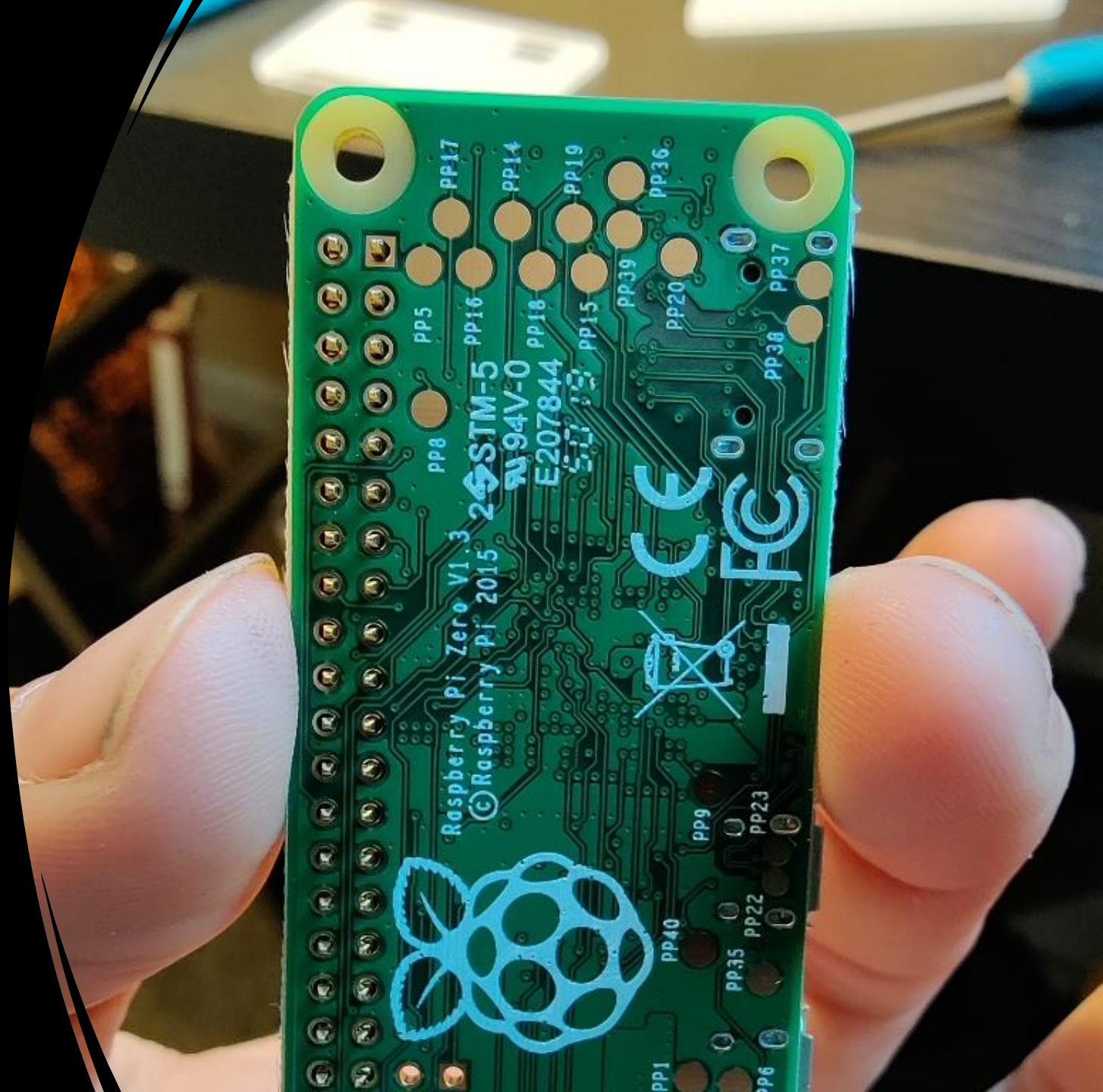


Hardware Setup.6

-> Inspect the pins and make sure they all penetrated their respective holes.

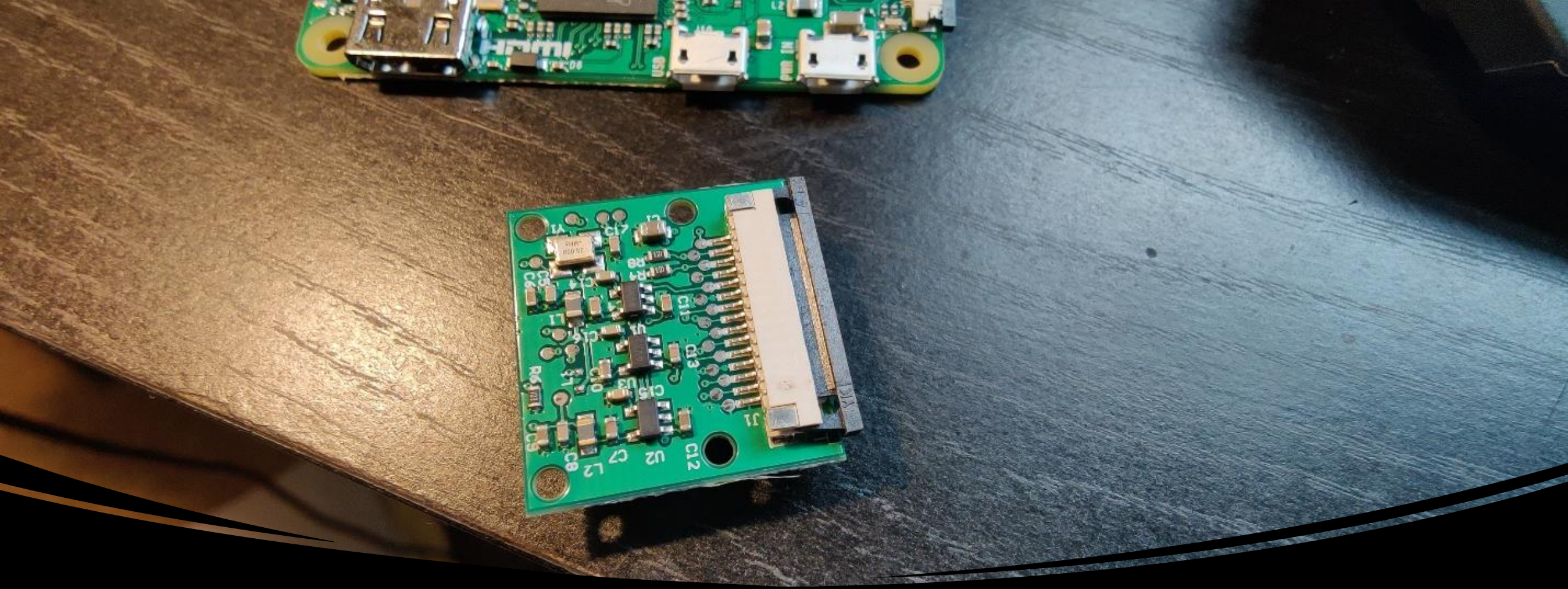
Hardware Setup.7

-> Remove the Raspberry Pi with the pins attached from the hammer jig, take care to not damage the pins and inspect the pins one more time.



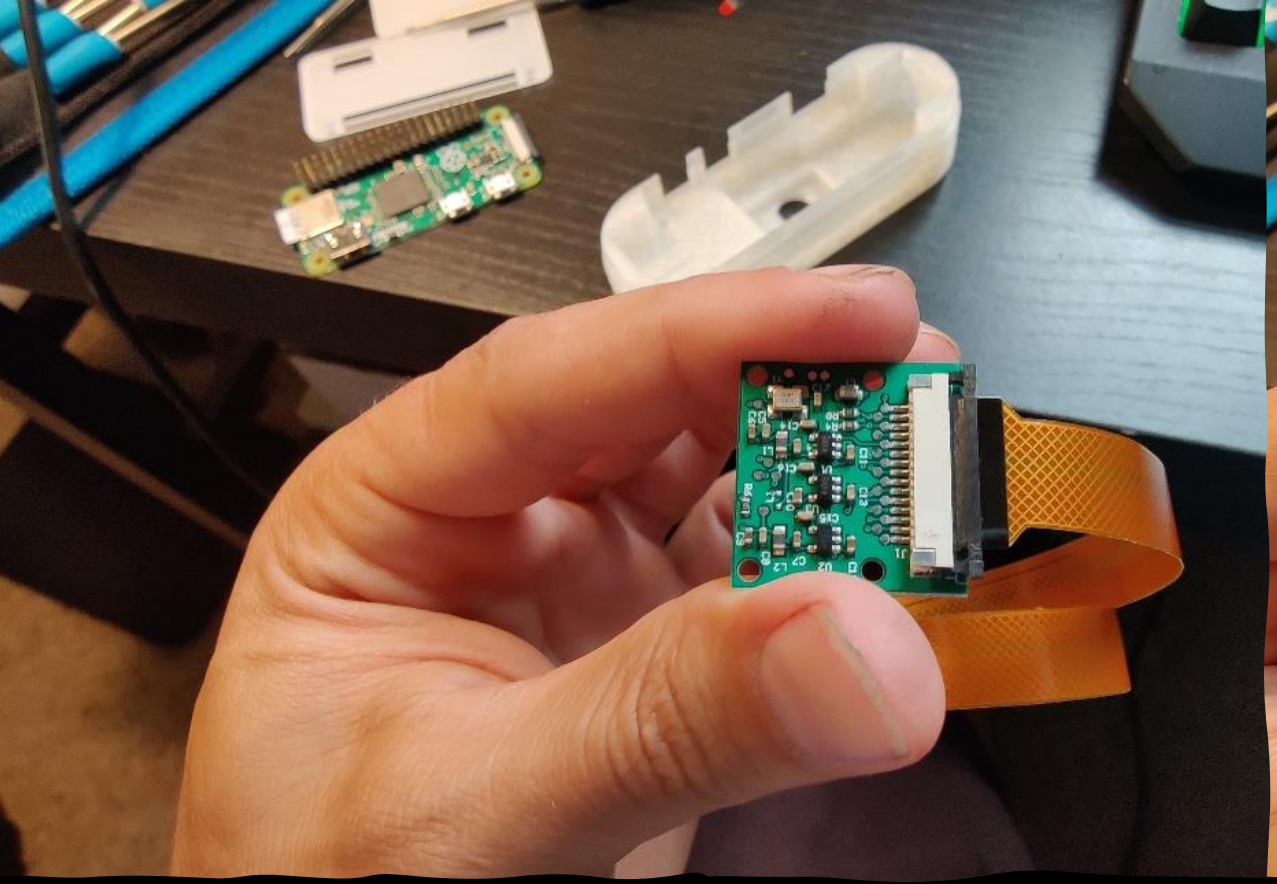
Hardware Setup.8

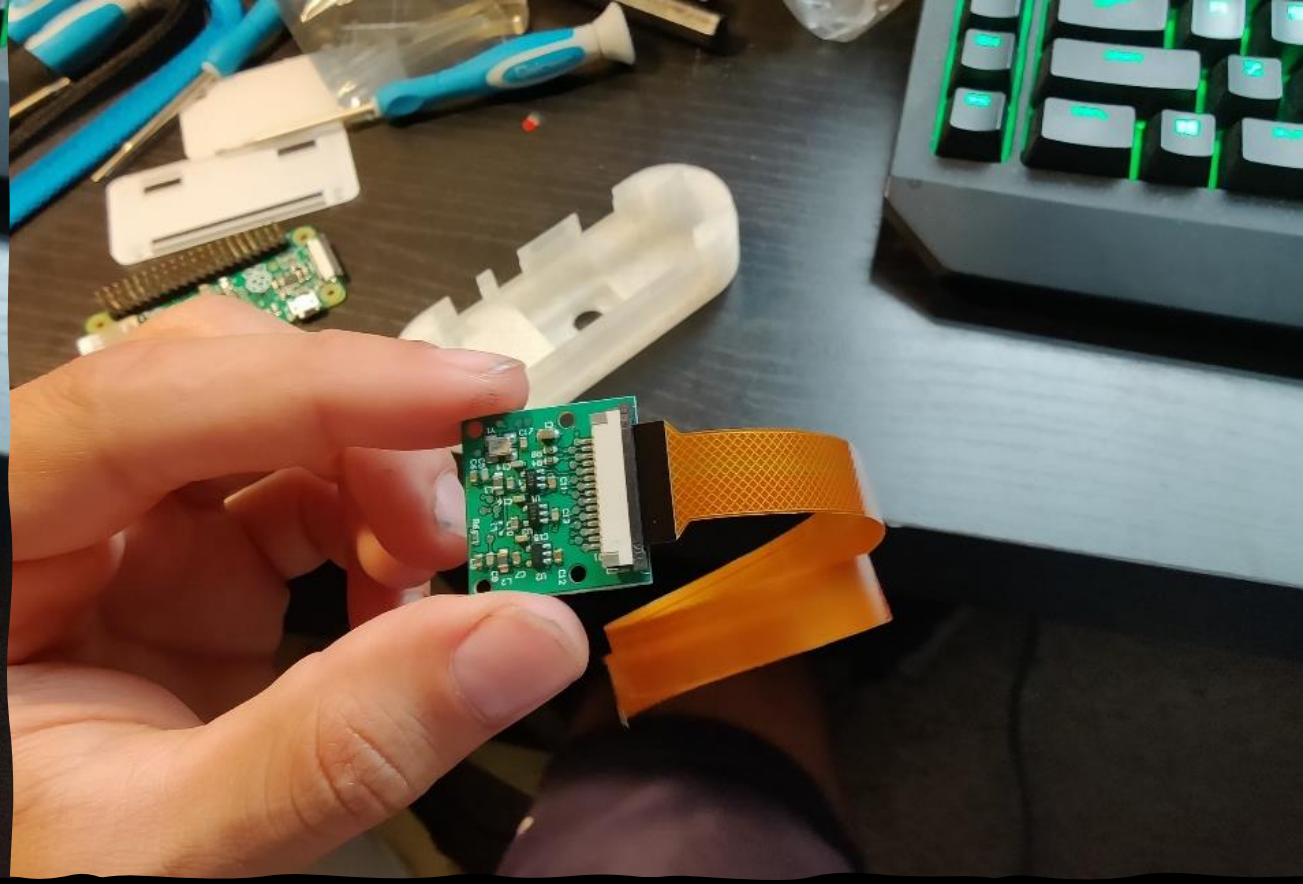
-> Take the already flashed MicroSD card and connect it to the Raspberry Pi Zero.



Hardware Setup.9

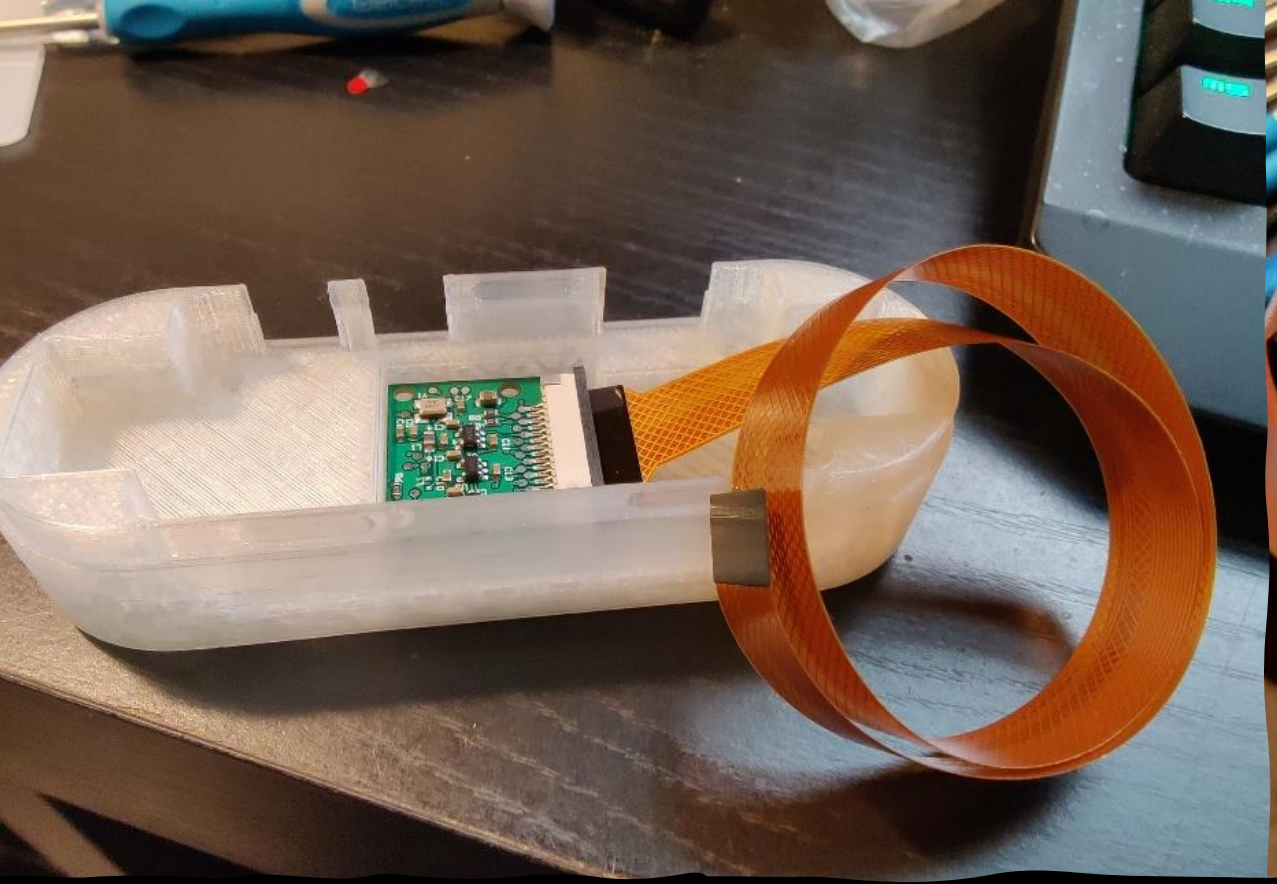
-> Take the camera module and loosen the black header by pulling the two ends.





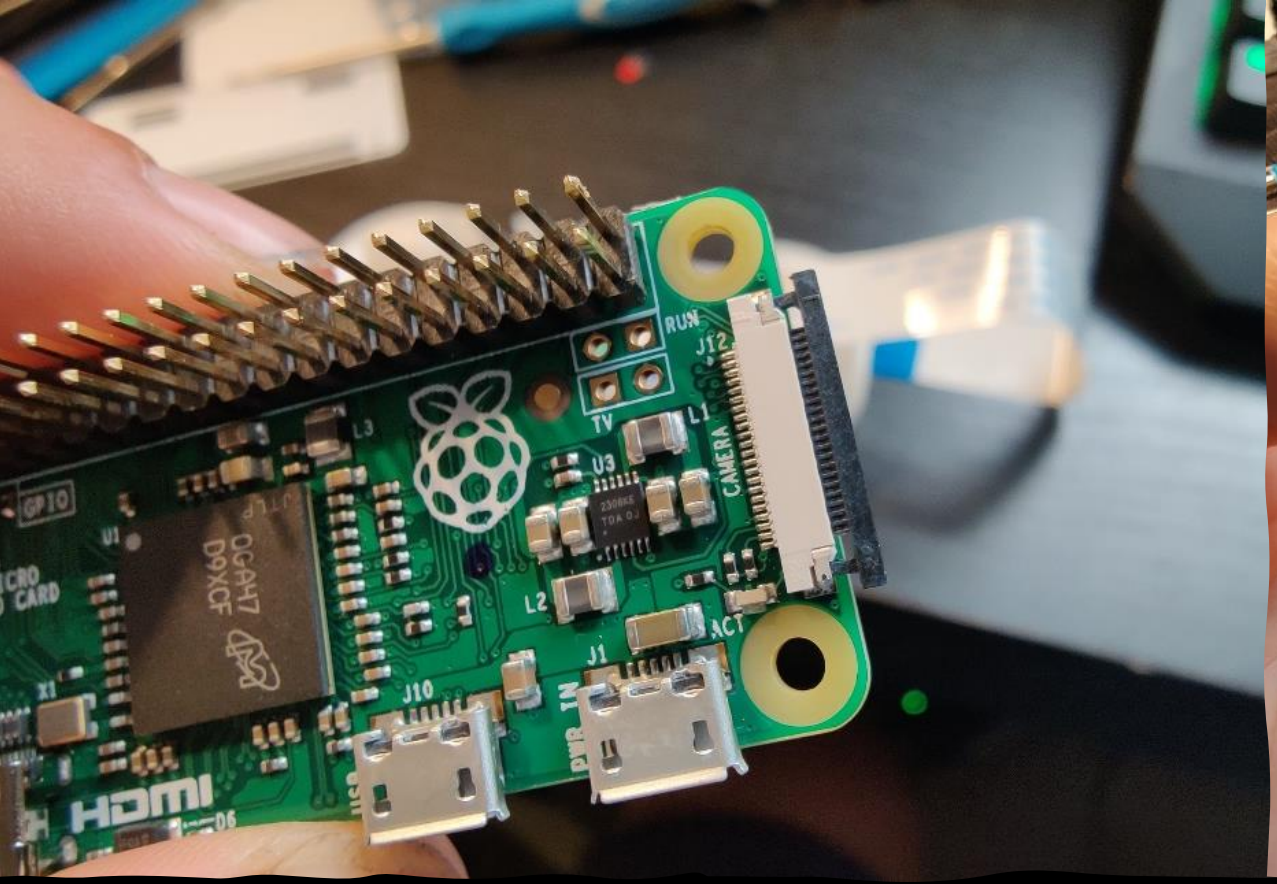
Hardware Setup.10

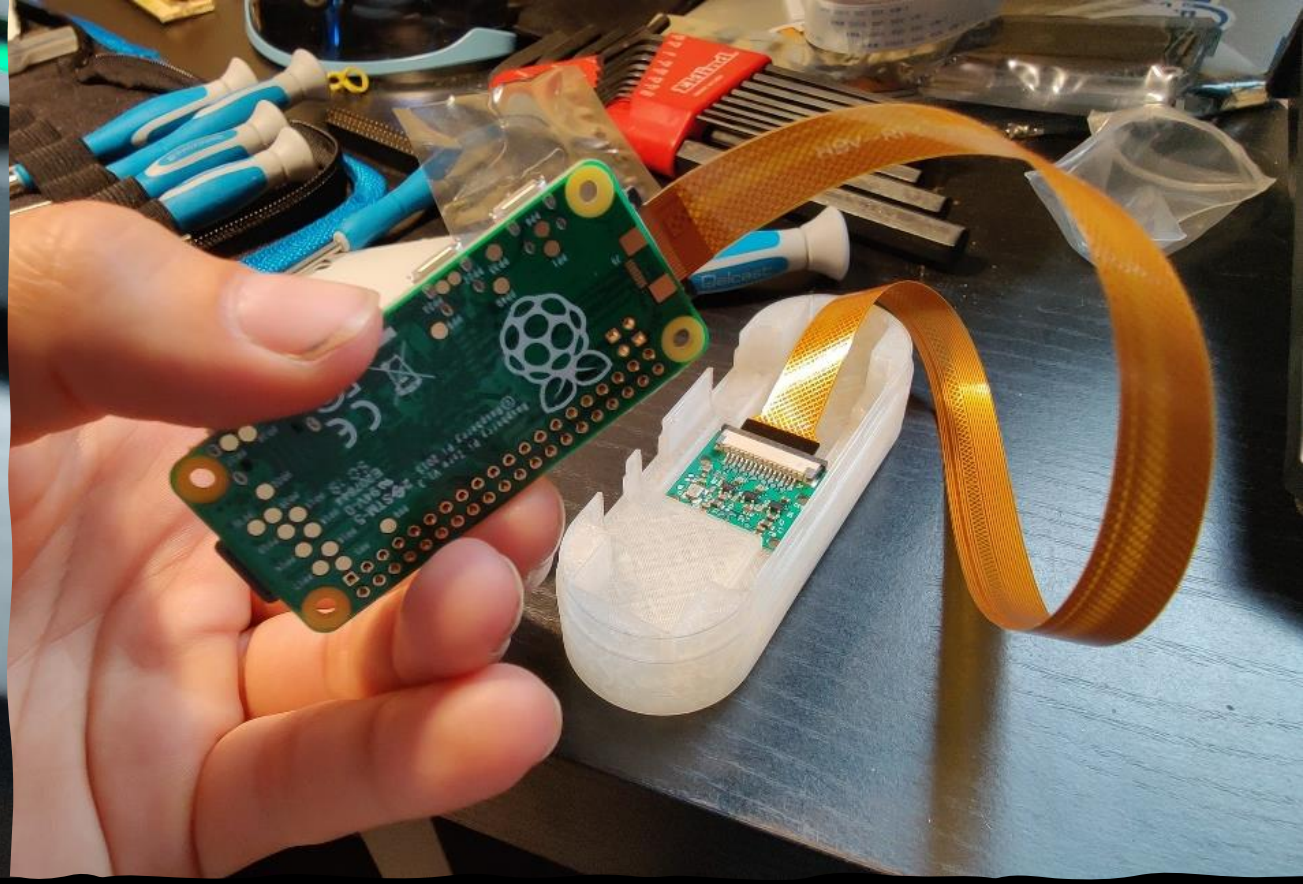
-> Place the brown ribbon cable into the camera module and press the black header back into place to secure the cable.



Hardware Setup.11

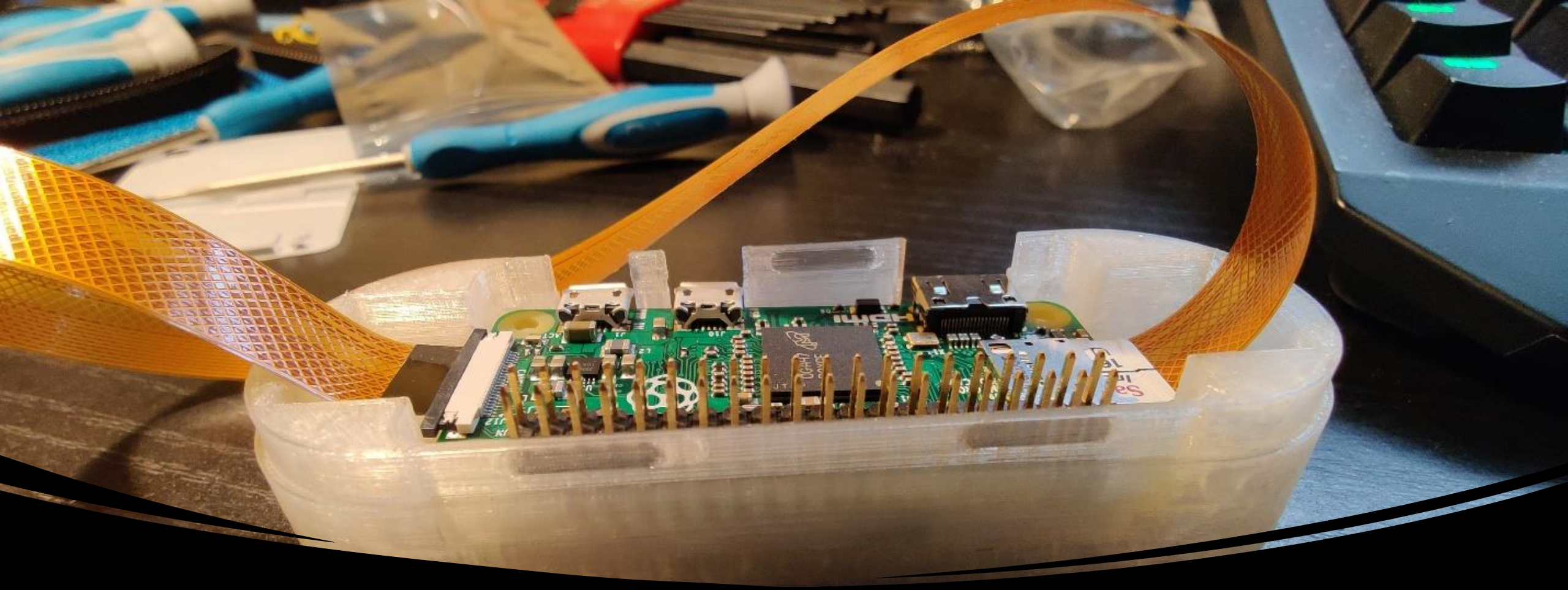
-> Place the camera module into the enclosure until you feel a slight click into place, it shouldn′t move if you flip it upside down or shake it a little.





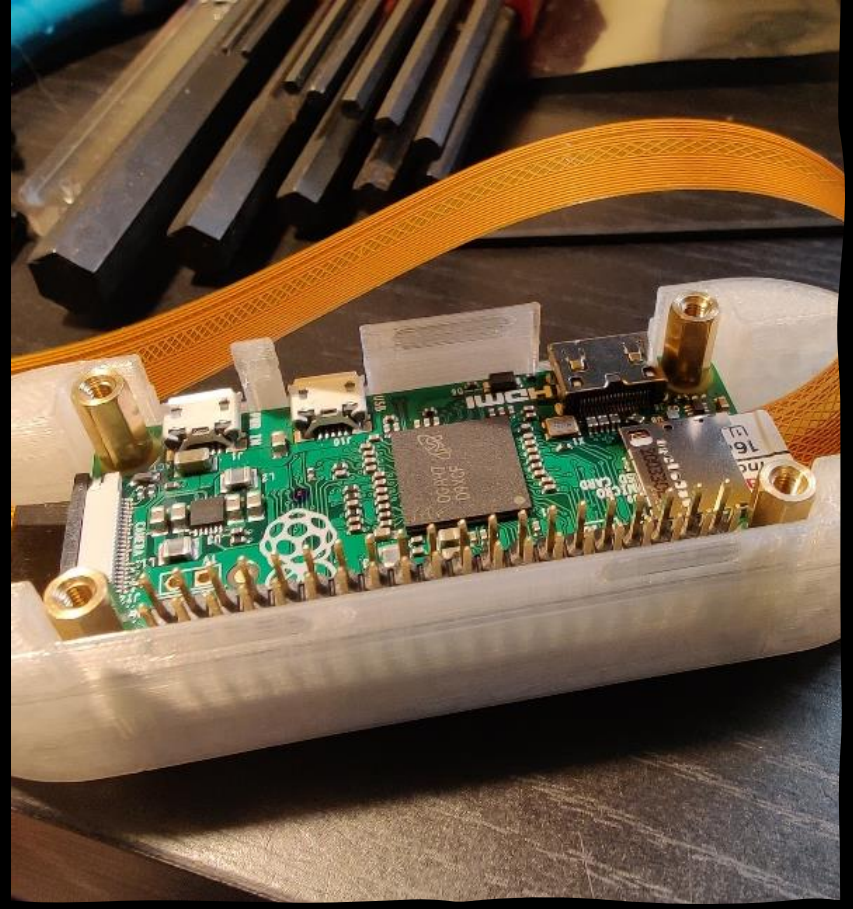
Hardware Setup.12

-> Pull open the black headers on the Raspberry Pi Zero and connect the other end of the brown cable to connect the camera to the Raspberry Pi. Make sure to push the black header back into place to secure the connection.



Hardware Setup.13

-> **Place the now connected Pi into the case.**

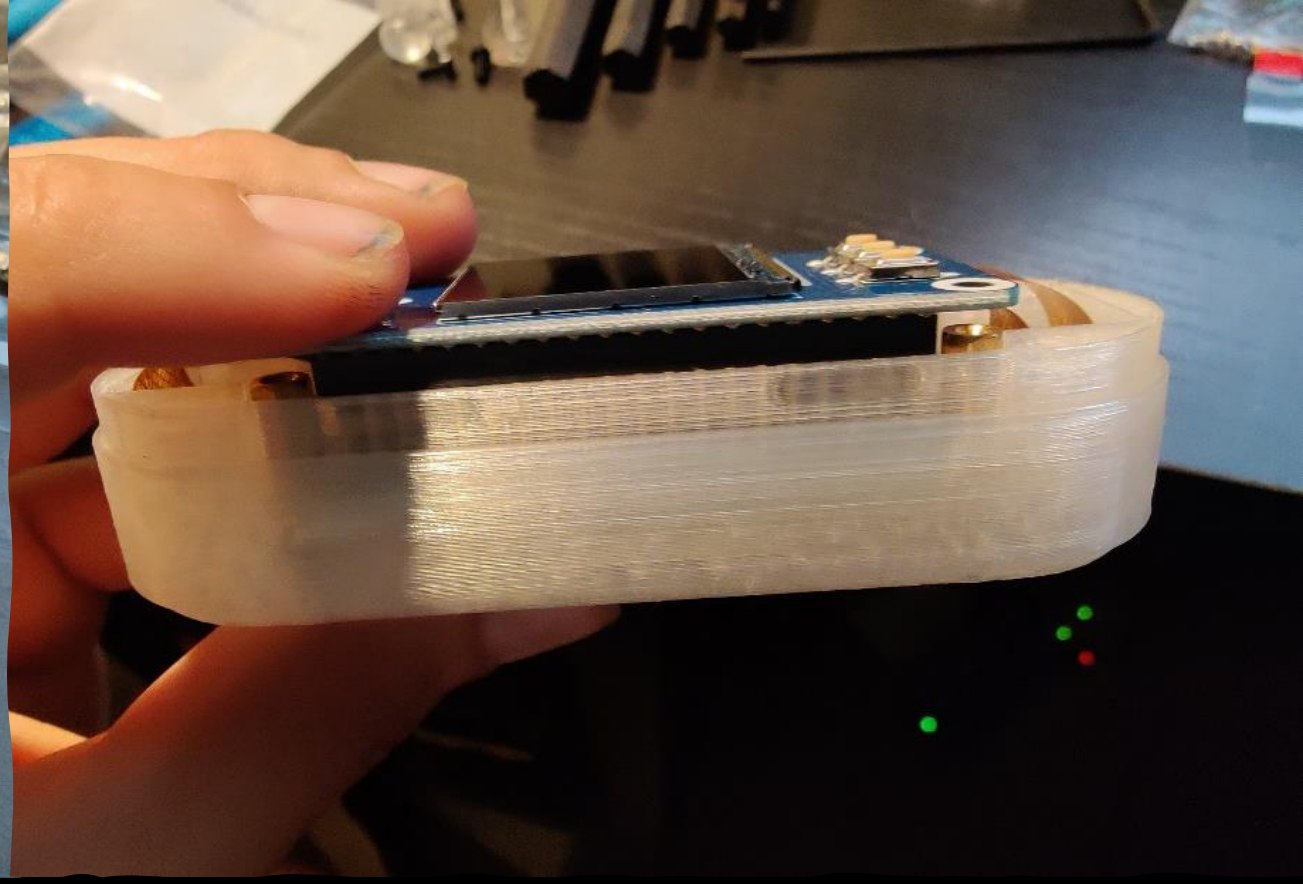


Hardware Setup.14

-> Using the 5/64 hex key, secure the Pi to the case with the long nut and screw pack that should have came with the enclosure in each of the four corners.

Hardware Setup.15

-> Pack the ribbon as shown and place the LCD Hat on top, lining up the pins with the holes on the LCD.



Hardware Setup.16

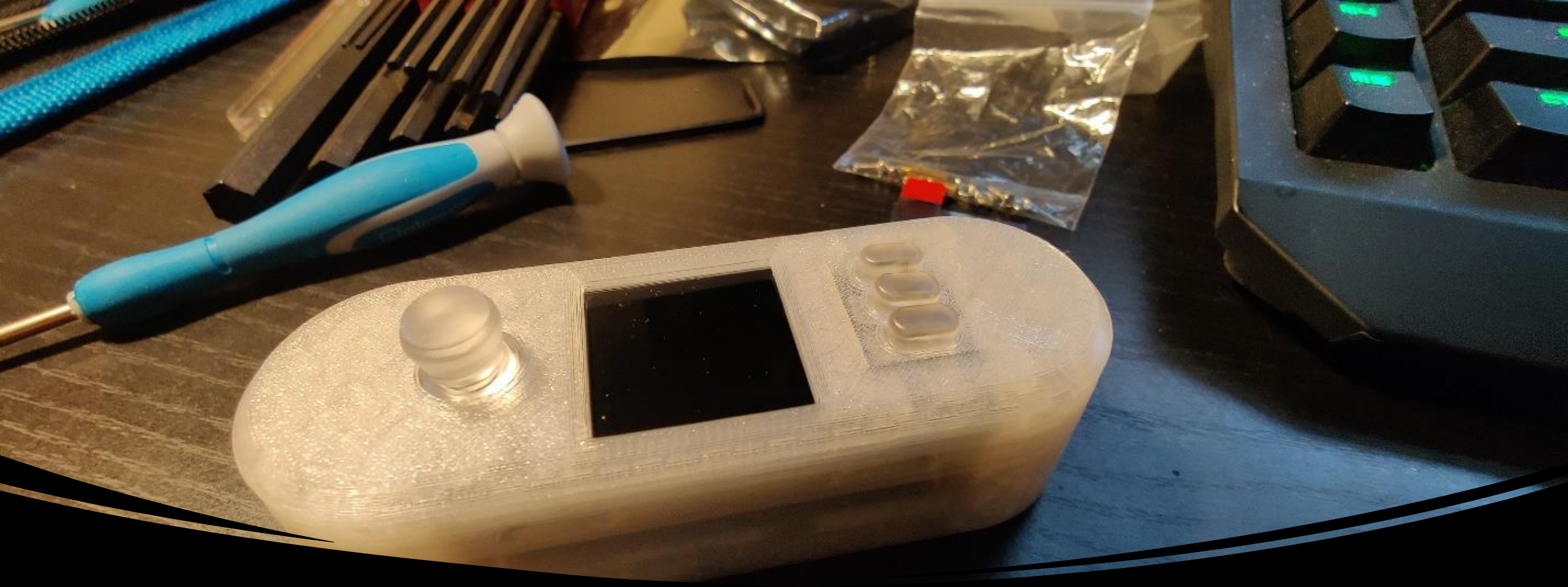
-> Press the LCD hat down lightly & evenly across the pins, then use the PH00x50mm Phillips head screwdriver to secure the LCD Hat to the device. Make sure you tighten the screws all the way but don't make them too tight.

If you don't secure the screws all the way the case will not close properly and the joystick might malfunction.

Please make sure you do this everytime as you will need to remove the LCD hat everytime you want to update the device, which requires you to remove the MicroSD card and reflash it with the new firmware as you did initially.

Hardware Setup.17

-> Place the faceplate down with the buttons lined up. It might take you a couple of tries to get it from here onto the device without the buttons falling out.



Hardware Setup.18

-> Carefully attach it to the device by pressing it on one side then the other, you should hear a big click together with the buttons in place and all in working order. If the joystick feels stuck do not force it, it means the LCD is not screwed in all the way. Remove the faceplate, tighten the screws and try again.

Hardware Setup.19

-> Plug it in to a power source, never directly into your computer. Takes about a minute to startup so be patient. The startup time is being reduced as this is a rapidly developing free-open-source project (FOSS).

Updates

-> To update the firmware you will need to:

1. remove the faceplate & LCD Hat
2. shimmy out the MicroSD card
3. reflash the device from scratch with the latest firmware
4. put it right back in & close the device back up.

-> Don't forget to screw the LCD Hat all the way back in or you risk damaging the plastic buttons + joystick.

-> If you're using the "open pill" case this doesn't apply.