

Flatburn\*

# Assembly Guide

This assembly guide has step-by-step instructions on how to assemble a Flatburn. Look through the build section on our Github to gather all the required files for building the device. Follow the instructions in this guide (and feel free to customize the device and sensors as you see fit). We hope you have fun assembling your own Flatburn and collecting data about your environment!

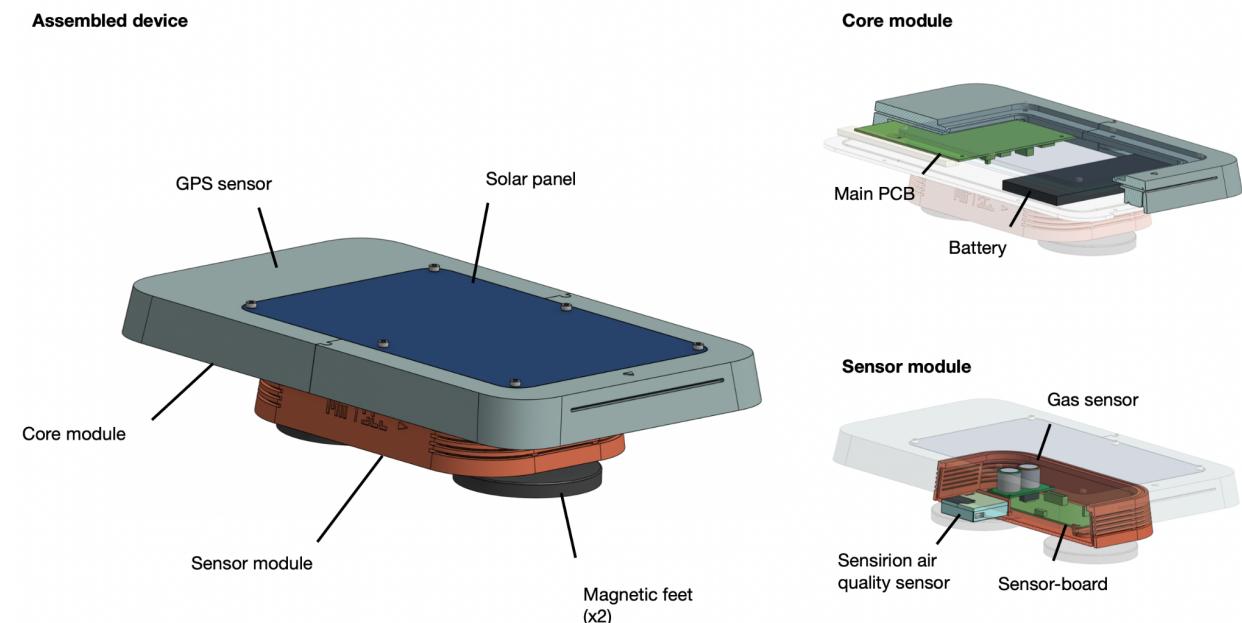


Figure 1: main features of the Flatburn device

## What you need to get started

- 3D printed and laser-cut parts,
- Fasteners and tools as specified in the [bill of materials](#).

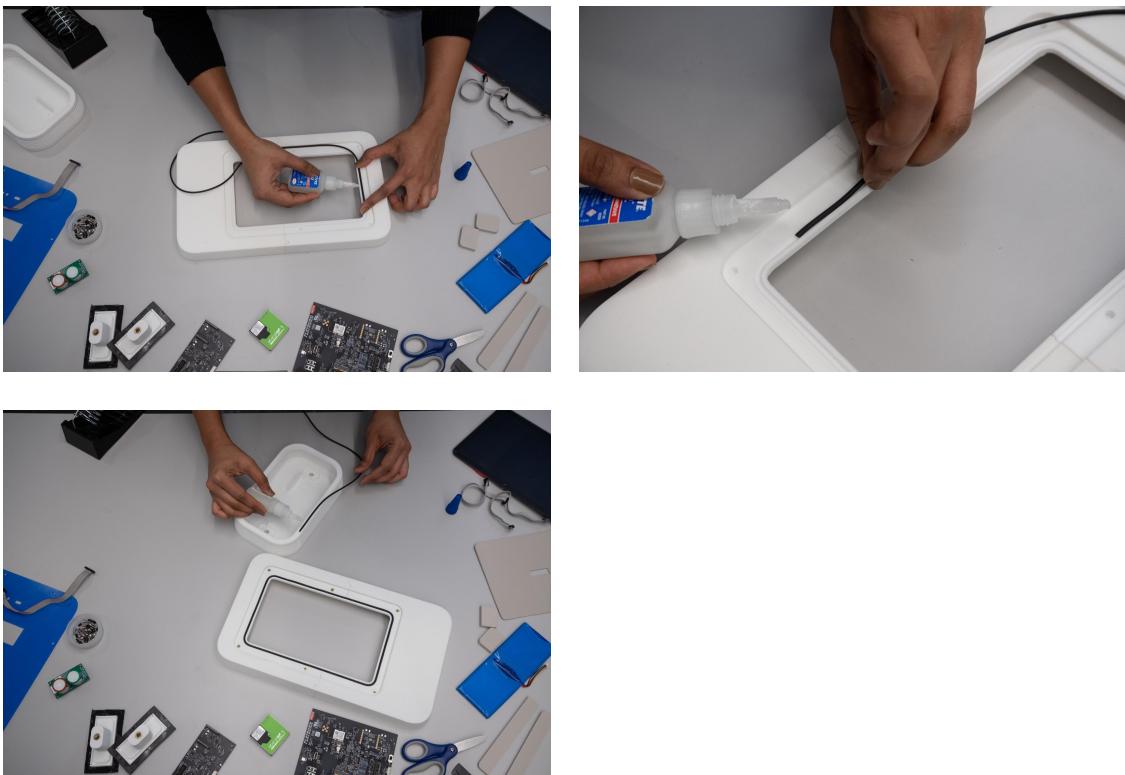


## Assembly Instructions

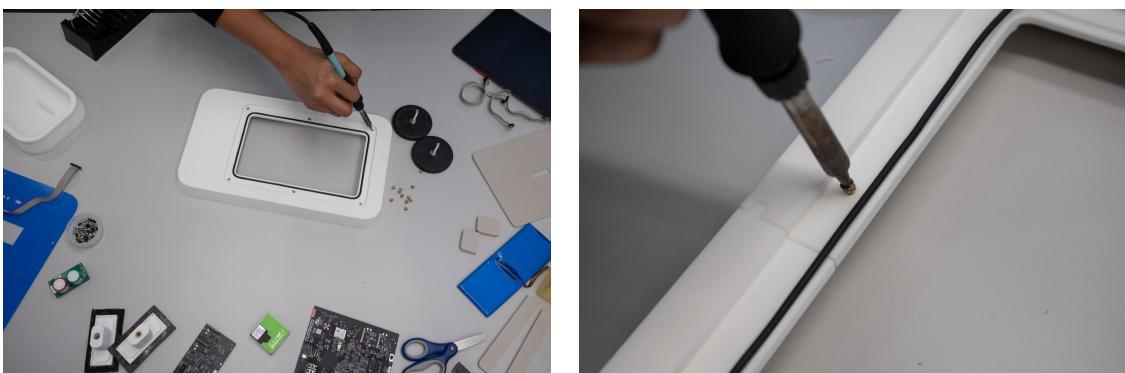
1. Slot together two halves of the core module

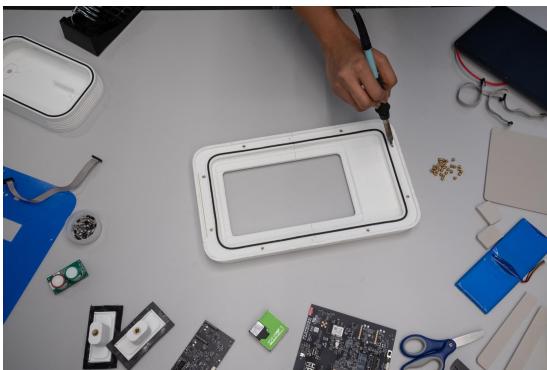


2. Use super-glue to secure the o-rings in the core module (solar-panel recess and base-plate recess) and to the top of the sensor module.

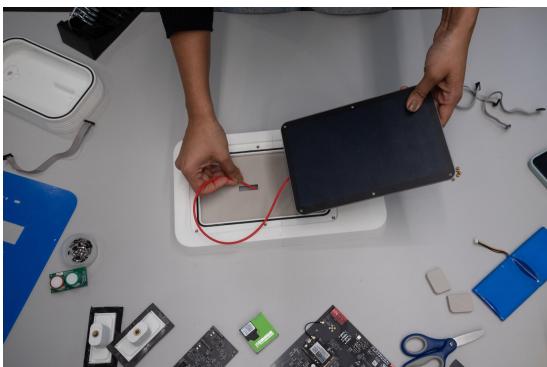
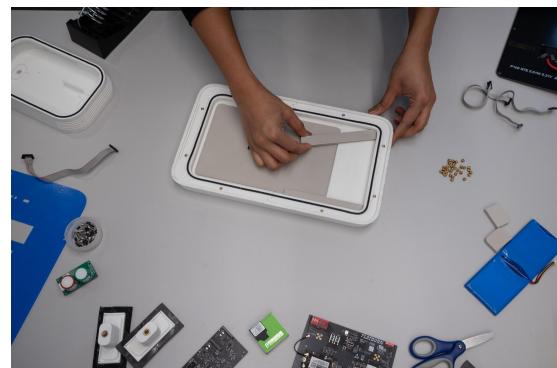
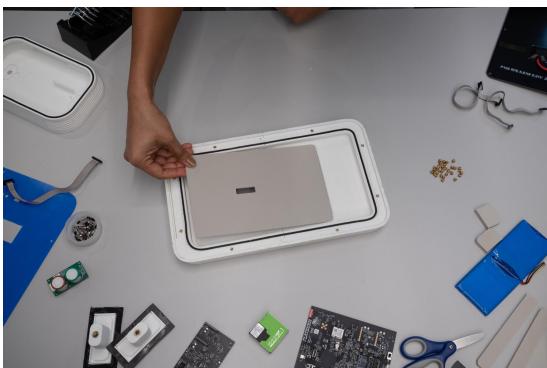


1. Using a soldering iron, add screw inserts to the core module and to the magnet-feet holders; small (M3) and large ( $\frac{1}{4}$  ") inserts respectively

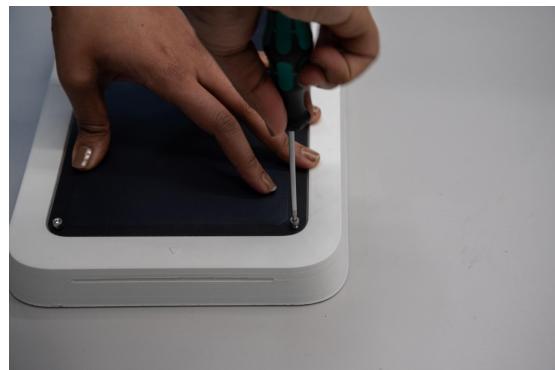
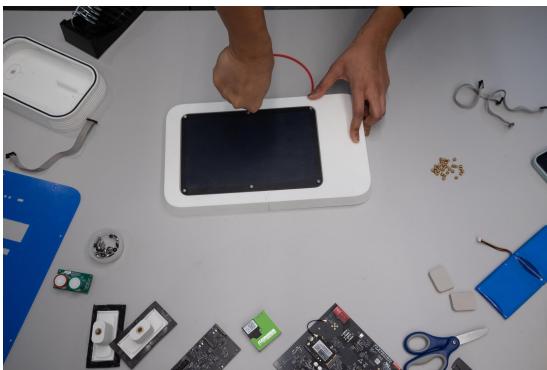




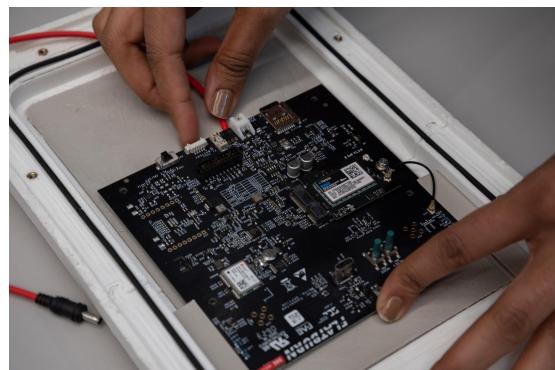
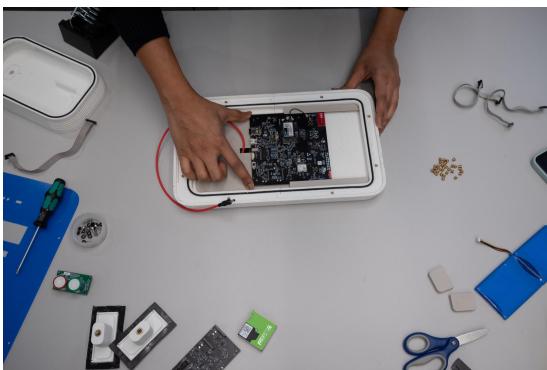
2. Clip 'in-between plate' into core module. Feed solar panel cable through slot.



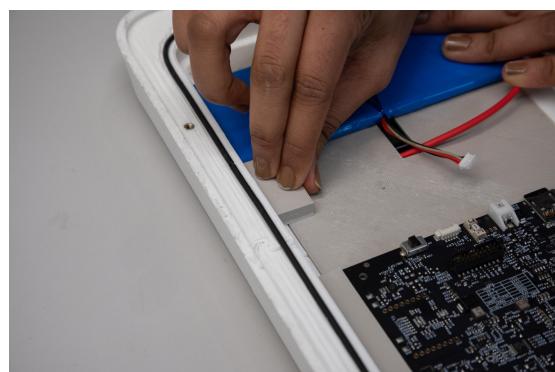
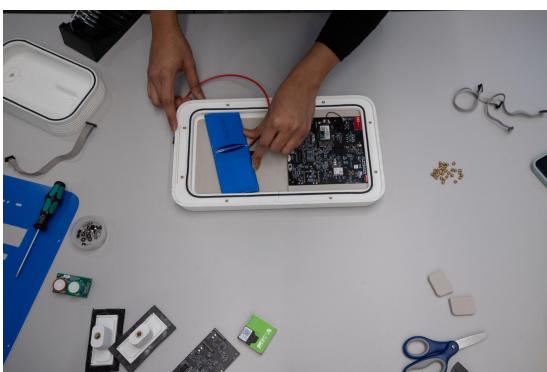
3. Screw solar panel onto the core module



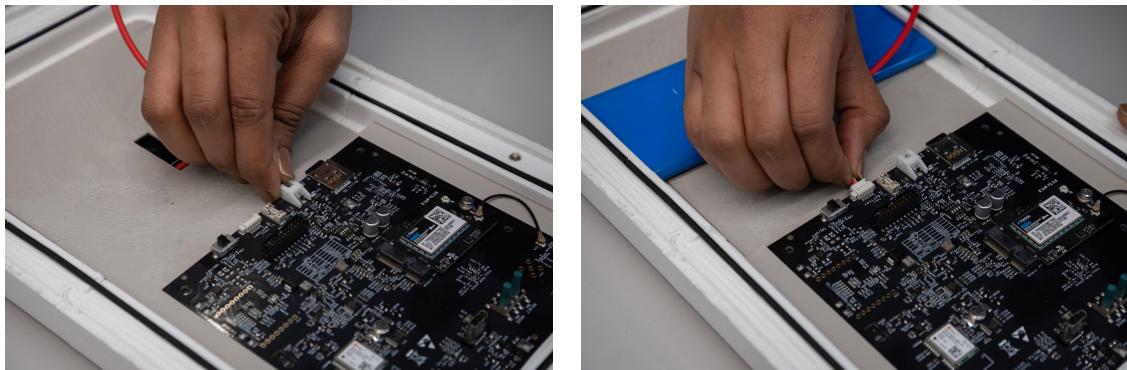
4. Slide the main PCB into the back of the core module; secure with 3D printed clamps.



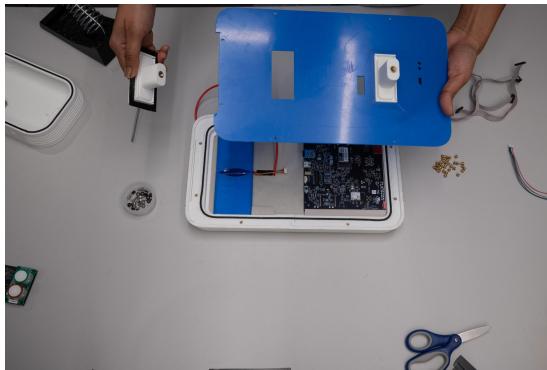
5. Slide battery into front of the core module



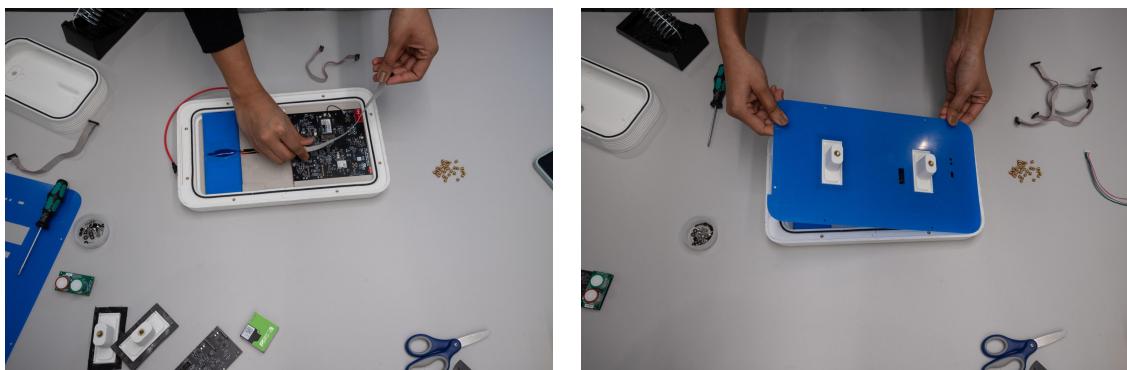
6. Connect solar panel and battery to the main PCB

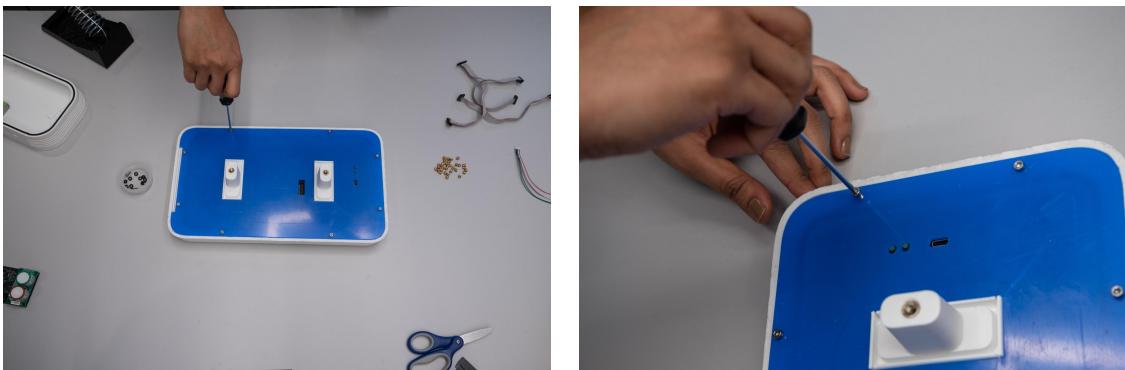


7. Clip the magnet-feet holders into the base-plate

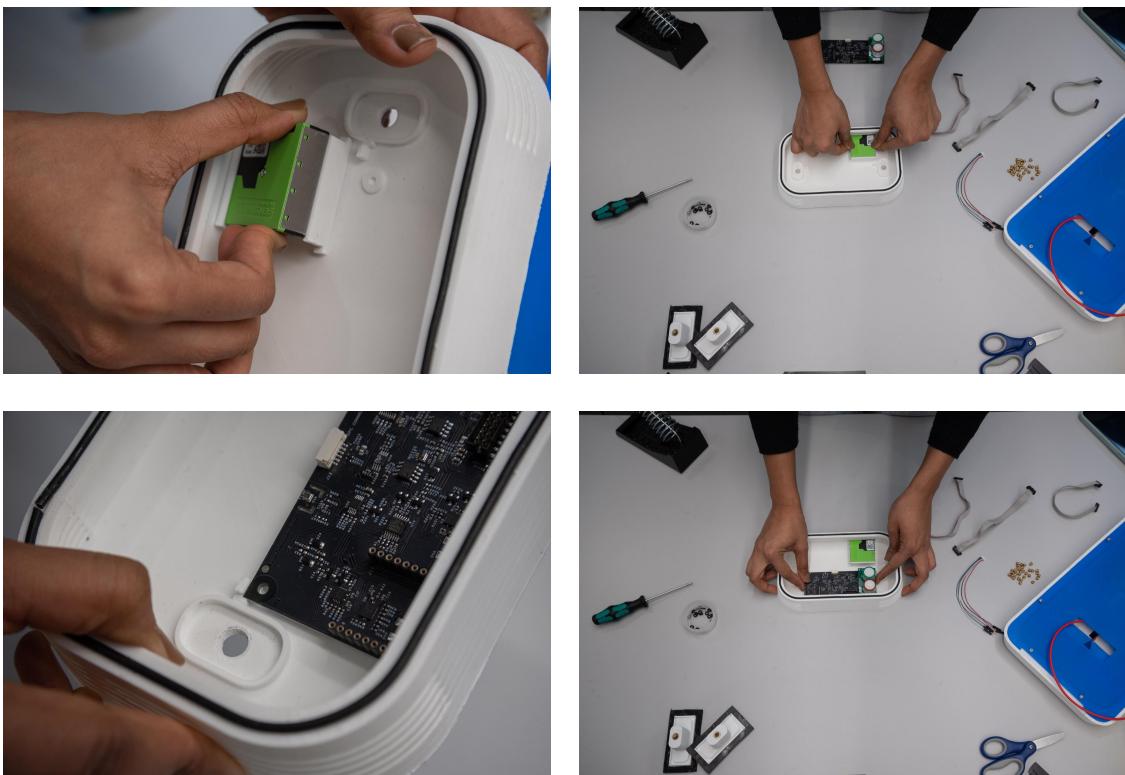


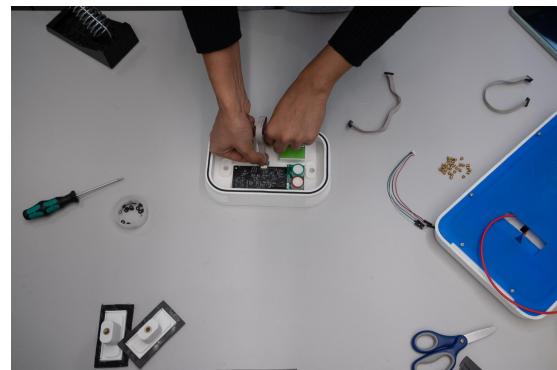
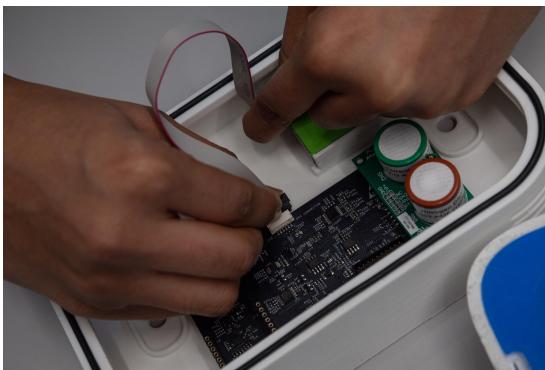
8. Feed the sensor-connector-cable through the slot in the base-plate and then secure the plate to the core module



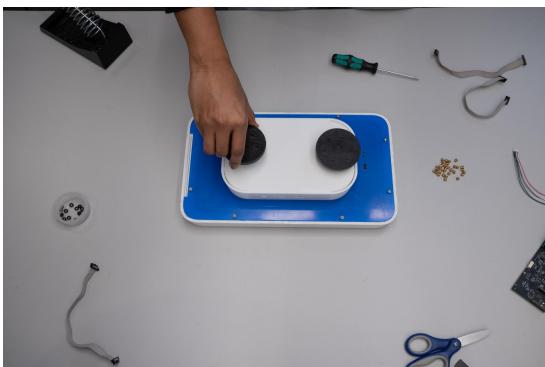
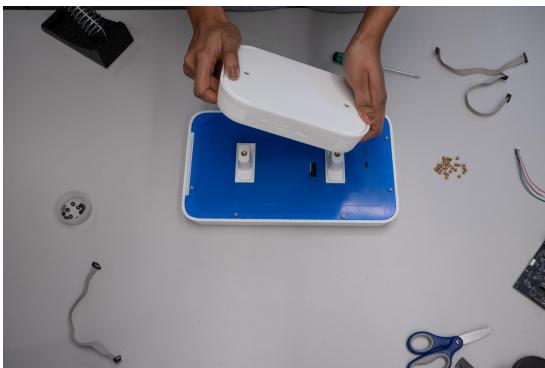


9. Clip the sensor-module PCB and Sensirion sensor into the sensor-module enclosure





10. Finally, use the magnet feet to screw the sensor module onto the core module from below.



Congrats, the device is now ready to deploy on your closest car roof!

