Sensathon BEST Aachen

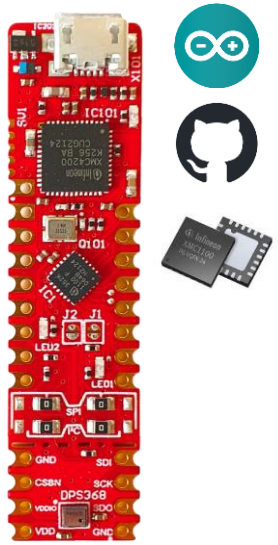
by Infineon Technologies

v1

The Sensors

Digital Pressure Sensors DPS310 & DPS368

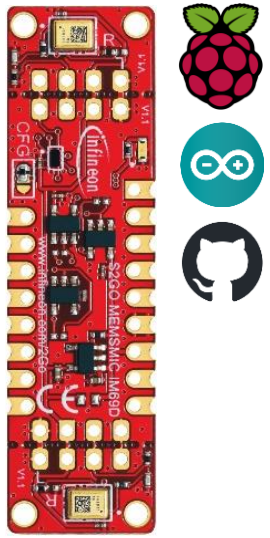
Kit 2Go



Shield 2Go

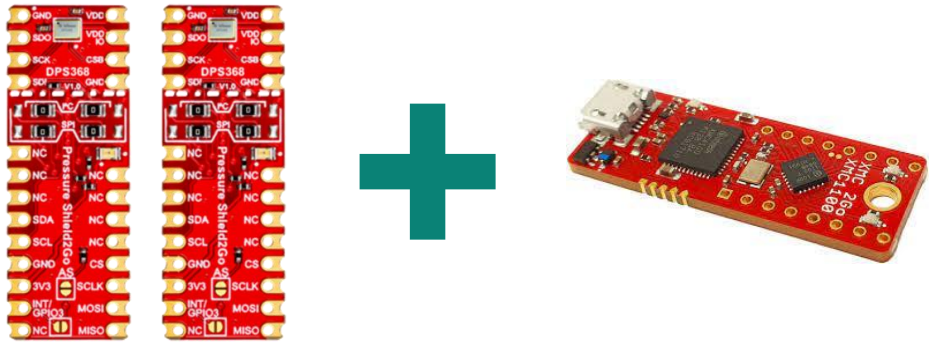
Silicon MEMS Microphone IM69D130

Shield 2Go

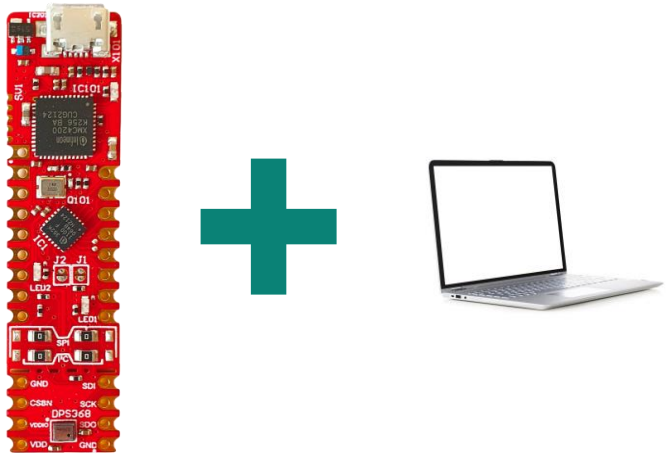


Challenge 1 – Unconventional use cases of air pressure sensors

Tech Package 1



Tech Package 2



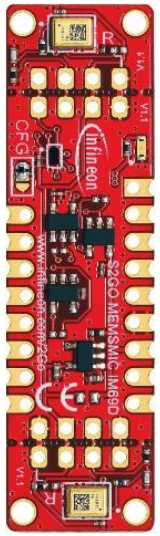
Examples

- Detection of door/window status in smart homes
- Presence detection for bed/chairs/...
- Game controller
- Fitness tracker
- Wind speed / direction measurement

- ...or come up with your own idea!

Challenge 2 – Acoustic indoor location tracking

Tech Package



Examples

- Indoor location tracking for smart homes
- Ping Pong ball tracking
- Speed measurement

- ...or come up with your own idea!

Submission Deliverables

- A **technical article**, including:
  - **Idea** description
  - Reproducable step-by-step guide on **technical implementation**
  - Overview of **project outcome**
  - **Outlook** for future improvement

- Your documented **code**

- A **project pitch** (incl. demo), presented by your team

Important

The technical article must be submitted as project in the Hackathon group within the Infineon developer community – https://community.infineon.com/t5/BEST-RWTH-Aachen-Hackathon-2023/gh-p/rwthhackathon23

The code can be attached to the project article or uploaded to a repository on GitHub, in both ways it needs to be linked and accessible from the article.

Evaluation Criterias

Idea — 30%

- Originality
- Impact and Potential

Execution — 40%

- Technical Complexity
- User Experience
- Documentation & Reproducability

Submission — 30%

- Technical Article
- Presentation

Jury

Dr. Olaf Filies
Infineon

Julian Eder
Infineon

Getting Started

Unconventional use cases of air pressure sensors

Here you find an article with all information you need to get started with our DPS air pressure sensors:
https://www.hackster.io/Infineon_Team/pressure-sensors-2go-the-dps310-dps368-fda7c6

Acoustic indoor location tracking

Here you find an article with all information you need to get started with our silicon MEMS microphone using a Raspberry Pi:
https://www.hackster.io/Infineon_Team/i2s-mems-microphone-im69d130-for-raspberry-pi-848b81


Infineon