# Sensor Box with Shield2Go Boards for Condition Monitoring

## How to build

## About this document

### Scope and purpose

This Application Note is intended to enable users to build a sensor box combining the Infineon Barometric Pressure Sensor Shield2Go (DPS310) and a 3D Magnet Sensor Shield2Go (TLV493D) with an ESP-32 microcontroller.

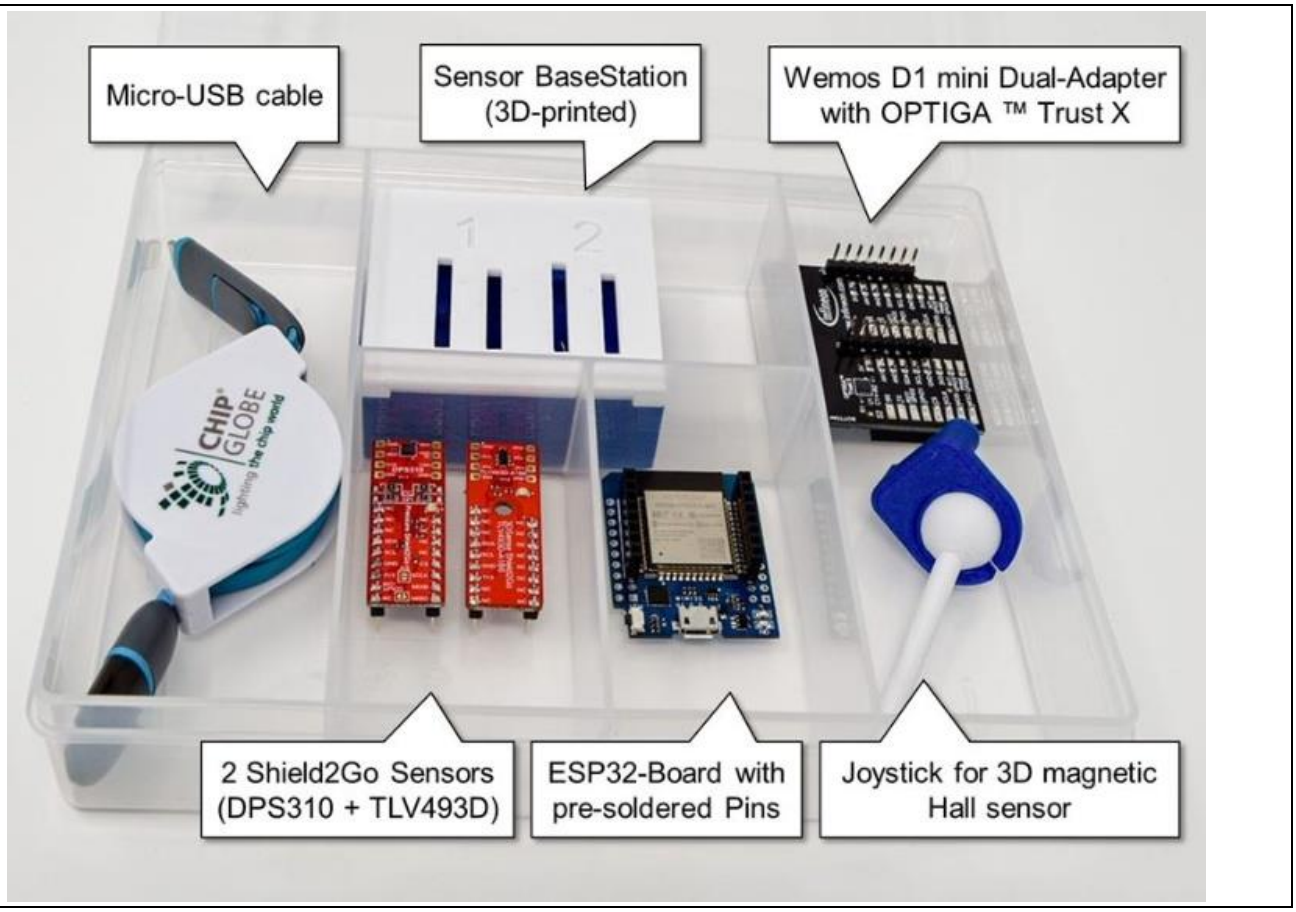


**Figure 1 Sensor Box with Shield2Go Boards**

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# 1 Hardware assembly

Stack the boards according to the following illustrations.

Step 1:
Stack the Dual-Adapter for Wemos d1 mini on top of the ESP32 Board (blue)

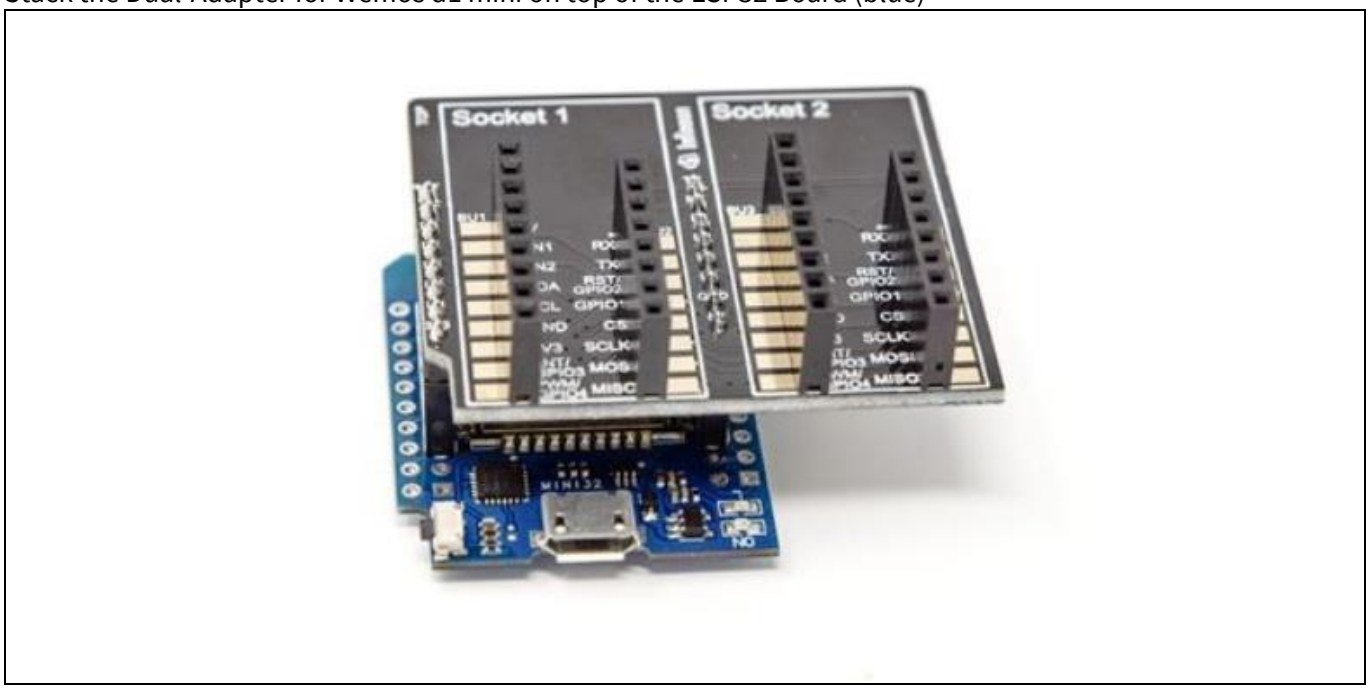


**Figure 2 ESP32 Board (blue) with stacked Dual-Adapter for Wemos d1 mini**

Step 2:
Stack the above setup in the 3D printed box and close the lid

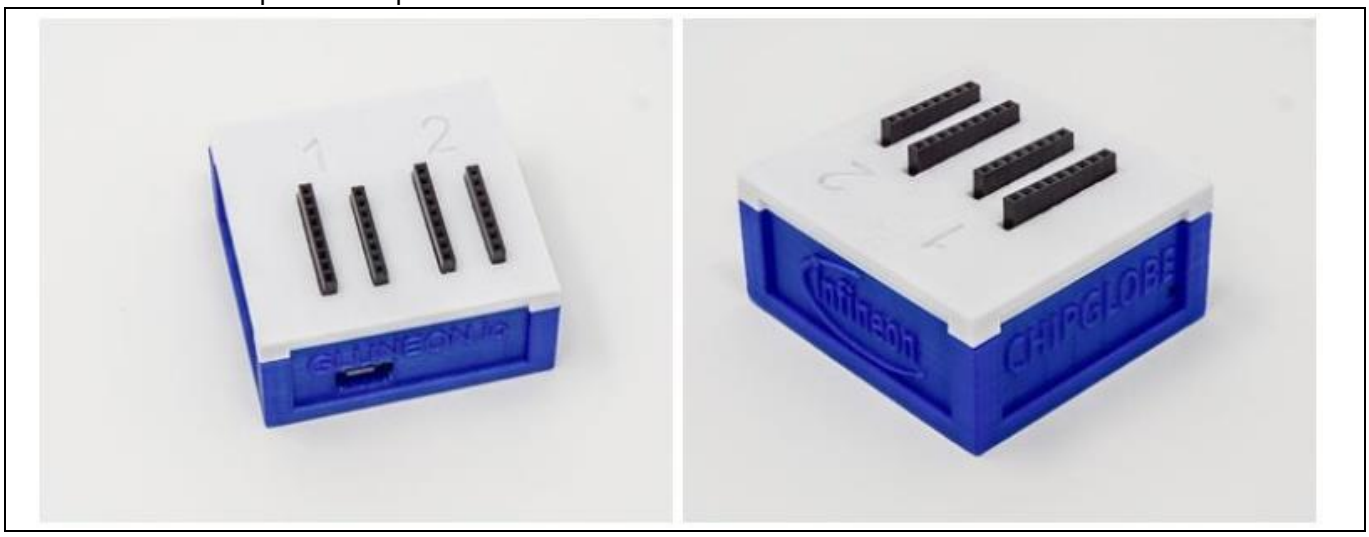

**Figure 3 BaseStation ready for evaluating the 2 sensors**

Step 3:
Mounting the Joystick to the 3D-Magnet Sensor

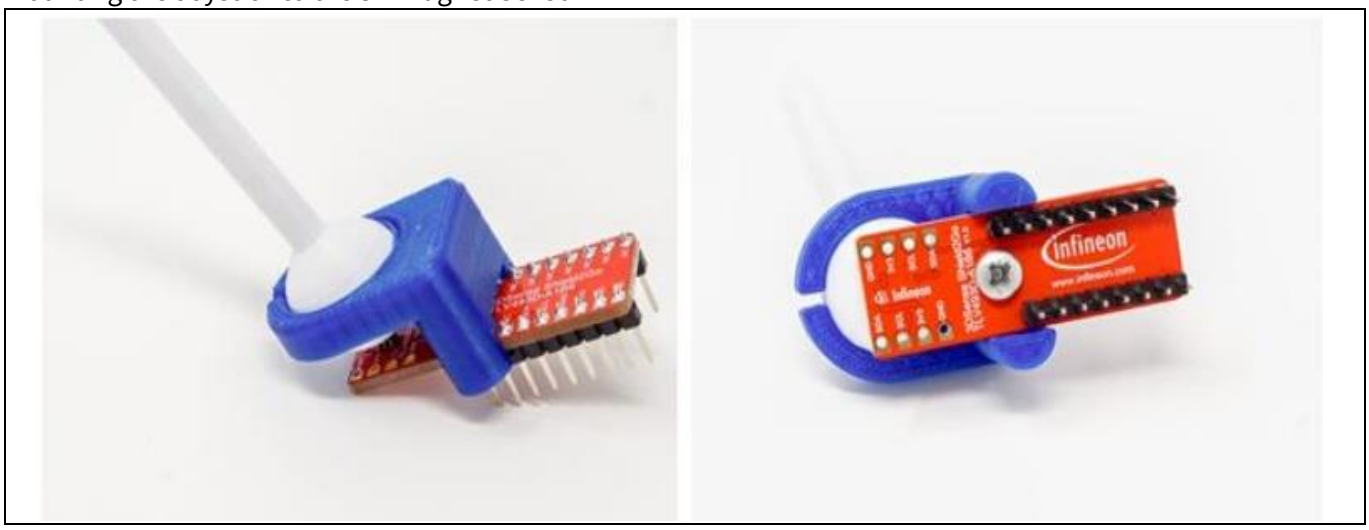


**Figure 4 Joystick on S2GO_3D-SENSE_TLV493D**

Step 4:
Plug the shields into the adapter and connect the Micro-USB cable to the BaseStation.




**Figure 5 BaseStation ready for evaluating the 2 sensors**

# 2 Software

You now can install the software as following:

- Install the Arduino IDE (get the latest version from here)
- Add the WeMos D1 mini board in the Arduino IDE (read this)
- Add Arduino libraries for the Shield2Go sensors (find them here)

Use the example sketch found here to get sensor values of both sensors.

Revision history

| Document version | Date of release | Description of changes |
|---|---|---|
| V1.0 | 06.03.2020 | Initial release |
| | | |
| | | |

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