Infineon DPS310 pressure sensor evaluation environment

Fostering great designs in less time

The majority of the target applications for the Infineon new barometric pressure sensor DPS310 come from consumer electronics field, where short time-to-market is essential. With this goal in mind, Infineon has developed sensor hubs and software tools that help customer design engineers to minimize evaluation and prototyping time. Infineon pressure sensor evaluation environment enables customers to make quick trials and integrate pressure sensor quickly.

Infineon pressure sensor evaluation environment comprise of the Infineon wireless sensor hub 2.0 or Infineon sensor hub nano boards along with the SES2G Sensor evaluation software and the Infineon pressure sensor android App shown in figure 1.

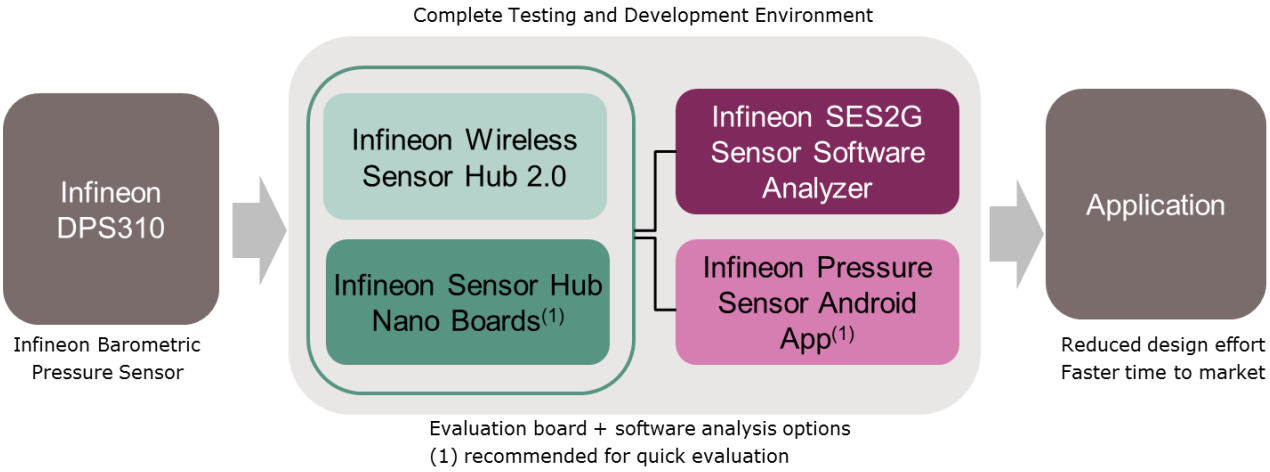

Figure 1: Infineon DPS310 complete evaluation environment.

Infineon wireless sensor hub 2.0 and Infineon sensor hub nano boards

The Infineon Wireless Sensor Hub 2.0 supports the concurrent evaluation of up to 12 different DPS310 pressure sensors and provides two I^2C and one SPI interface, to which DPS310 shuttle boards SPI and I2C can be connected. Each sensor shuttle board comprises up to four sensors. An SD card supports standalone operation while both Bluetooth® and USB connectivity are available for the real-time transfer of data to the host computer.

The Infineon's Sensor Hub Nano is a standalone board measuring just 30 mm x 15 mm x 10 mm (including battery) that accommodates one DPS310 sensor and allows developers to quickly test the DSP310 in various use cases. Data is transferred to the host PC via a Bluetooth® connection.

Infineon SES2G sensor software analyzer

The Sensor Evaluation software (SES2G) along with programmed sensor hub hardware and sensor shuttle board provides customers an evaluation platform for Infineon barometric pressure sensors. Both of the sensor hub evaluation environments are designed for use with the Infineon SES2G sensor software analyzer. This software allows the user to configure sensor and display settings, record real-time data received from the sensor hub board, and export that data in a variety of formats for further analysis. Designers can register and access free of charge to the full capabilities of this software via Infineon DPS310 Software & Tools.

New user registration: https://www.infineon.com/cms/en/myInfineon/registration/
Already a registered user: https://myicp.infineon.com/sites/pressure_sensor

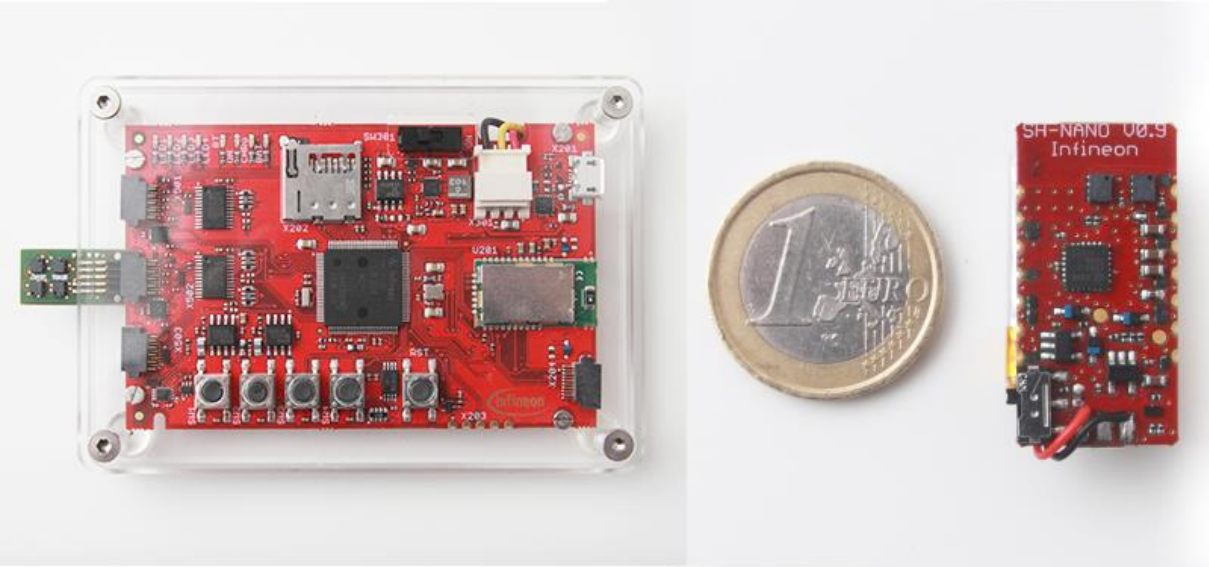

Figure 2: Infineon DPS310 sensor bub evaluation boards.
A 1-Euro coin has been placed next to the chip for size comparison.

Infineon pressure sensor Android App

As an alternative to using the SES2G sensor evaluation software on host PC, the Infineon Pressure Sensor Android App is available free of charge for Infineon customers. Compatible with both of the sensor hubs, this app connects via Bluetooth® and provides access to key sensor functionality to speed the evaluation and testing of sensor performance in a target application.

Designers can use the evaluation environment to test, among other features, various IIR (infinite impulse response) filtering implementations for specific use cases. IIR filtering enables air pressure sensing applications to distinguish between different types of air turbulence, whether generated by atmospheric conditions or the type of user motion encountered during fitness activities. In effect, disturbances can be suppressed or triggered at the software driver or application level by implementing different filtering alternatives. Since the sensor provides raw data, the DPS310 architecture is flexible. The DPS310 software driver includes a filter bank and filtering operations are performed in a host device.

For further information please visit www.infineon.com/pressuresensor