Evaluation kit for the CCS800 product family of ultra-low power gas

Technology Advantage

Cambridge CMOS Sensors (CCS) micro-hotplate technology provides a unique silicon platform for the CCS80x range of Metal Oxide (MOX) gas sensors. These devices enable sensor miniaturisation, have ultralow power consumption and provide fast response times due to the ability to heat the micro-hotplate very quickly.

The Micro-hotplates are fabricated using a robust silicon dioxide membrane and include an embedded tungsten heater acting as a heating element for the MOX based sensing material. The micro-hotplate can be used to heat the MOX sensing material up to 500°C and the electrical resistance of the MOX sensor can be monitored to detect the target gas. Through enabling fast heater cycling times, temperature modulation techniques can be used to reduce the device power consumption and implement advanced gas sensing methods.

Product Overview

The CCS_EVK02 evaluation kit is designed to allow easy test and development with our CCS800 product family of ultra-low power MOX sensors for monitoring indoor air quality including Carbon Monoxide (CO) and a wide range of Volatile Organic Compounds (VOCs). CCS801 can be used as an equivalent carbon dioxide (eCO₂) sensor to represent eCO₂ levels in real world environments, where the main cause of VOCs is from humans.

The evaluation kit includes the following:

- Main processor board
- Sensor daughter board
- USB to mini-USB cable
- Windows based software for set-up, measurement and logging results (CCS_EV02)
- User guide

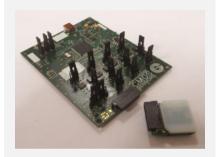
Software Interface

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The CCS_EVK02 evaluation kit includes software to evaluate different modes of operation and select configuration options for driving and monitoring our CCS800 devices

Key Benefits

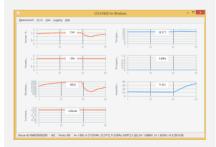
- Direct connection to PC via USB
- Simple software GUI for easy setup and data logging
- Determine effects of temperature and humidity on the gas sensor
- Evaluate different sensor drive modes



CCS_EVK02 Evaluation kit (Shown with optional plastics)

Applications

- Total VOC sensor for Indoor air quality monitoring
- Alcohol breathalyser
- Toxic gas (CO) detection



CCS_EVK02 software GUI

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