



NEWS RELEASE

Never Run Out of Power for Critical Environmental Alerts!

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Live demo of Ambiq's Unique Energy Harvesting Reference Design with Bosch Sensortec's 4-in-1 Environmental Sensor with AI at **Embedded World 2024** on April 9-11, 2024

Ambiq, a leader in exceptionally energy-efficient semiconductors for enabling AI on edge devices, will present an innovative live demonstration at Embedded World 2024. This demonstration features the HarvestKit, an energy-harvesting reference design embedded with the BME688, a low-power and highly accurate 4-in-1 environmental sensor with AI for gas, pressure, humidity, and temperature from Bosch Sensortec, the technology leader in sensing solutions based on microelectromechanical systems (MEMS) for consumer electronics.

Ambiq's Apollo3 Blue SoC enables the HarvestKit to function as a high-performance edge compute node. It seamlessly executes AI and other complex algorithms while operating solely on energy harvested from its environment, eliminating the need for batteries. The reference design can be used for compelling use cases across various wireless-connected applications.

The BME688 integrates high-linearity and high-accuracy pressure, humidity, and temperature gas sensors that can detect the presence of Volatile Organic Compounds (VOCs), volatile sulfur compounds (VSCs), and other gases such as carbon monoxide and hydrogen in part per billion (ppb) range. Moreover, users can train the BME688 sensor for new use cases using the BME AI-Studio software tool. This intuitive platform facilitates sensor configuration, data analysis, and labelling, empowering the users to train BME688 sensors for application-specific solutions. Target applications include smart homes, odor detection, indoor air quality, diaper states for childcare, and food spoilage from bacteria growth.

“The HarvestKit from Ambiq, featuring our environmental sensor BME688 with AI, is a great resource for customers, simplifying development processes and expediting prototyping across a wide range of consumer electronic applications. It enables full utilization of our sensor’s advanced sensing capabilities, empowering diverse proof of concepts,” says Marcellino Gemelli, Head of Global Business Development at Bosch Sensortec.

The HarvestKit, Ambiq’s Apollo3 Blue Energy Harvesting reference design featuring Bosch Sensortec’s BME688 environmental sensor will be on display at Ambiq’s booth during Embedded World 2024. Please **book a meeting** to learn more.

About Ambiq

Ambiq’s mission is to develop the lowest-power semiconductor solutions to enable intelligent devices everywhere and drive a more energy-efficient, sustainable, and data-driven world. Ambiq has helped leading manufacturers worldwide develop products that last weeks on a single charge (rather than days) while delivering a maximum feature set in compact industrial designs. Ambiq’s goal is to take Artificial Intelligence (AI) where it has never gone before in mobile and portable devices, using Ambiq’s advanced ultra-low power system on chip (SoC) solutions. Ambiq has shipped more than 230 million units. For more information, visit www.ambiq.com.

About Bosch Sensortec

Bosch Sensortec GmbH, a fully owned subsidiary of Robert Bosch GmbH, develops and markets a wide portfolio of microelectromechanical systems (MEMS) sensors and solutions tailored for smartphones, tablets, wearables and hearables, AR/VR devices, drones, robots, smart home and IoT (Internet of Things) applications. The product portfolio includes 3-axis accelerometers, inertial sensors and magnetometers, integrated 6- and 9-axis sensors, smart sensors, barometric pressure sensors, humidity sensors, gas sensors, optical microsystems and comprehensive software. Since its foundation in 2005, Bosch Sensortec has emerged as the MEMS technology leader in the markets it addresses. Bosch has been both a pioneer and one of the global market leaders in the MEMS sensor segment since 1995 and has, to date, sold more than 18 billion MEMS sensors.

For more information, please visit www.bosch-sensortec.com, twitter.com/boschMEMS, community.bosch-sensortec.com, linkedin.com/company/bosch-sensortec/, youtube.com/user/BoschSensortec

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