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SensiML and Efabless Partner to Drive Open-Source Edge AI Innovation

- Empowering IoT innovators to build custom smart sensing SoCs at negligible upfront cost
- Utilizes fully open-source hardware and software to optimize edge AI applications

PORTLAND, Ore., Oct. 8, 2024 /PRNewswire/ -- SensiML™ Corporation, a leader in AI software for IoT and a subsidiary of QuickLogic (NASDAQ: QUIK), today announced a strategic partnership with Efabless, a pioneer in custom semiconductor SoC development. This collaboration addresses a key challenge in IoT development: the high cost and complexity of building optimized, application-specific AI at the edge. Together, SensiML and Efabless aim to simplify and accelerate this process by delivering fully open-source, customizable solutions designed to unlock the potential of intelligent IoT devices.

With a shared vision for transparency and open-source innovation, SensiML and Efabless are addressing two of the most complex challenges in IoT development:

- Sourcing silicon optimized to suit the unique requirements of a particular IoT edge product at low cost and power while providing the right mix of on-board peripherals and processing to meet the specific use case
- Implementing responsive and accurate sensor AI inference models capable of running entirely within these resource-constrained edge devices

This partnership makes developing advanced AI-driven solutions accessible by reducing the complexity and cost of designing both hardware and AI models for edge IoT applications.

"We're excited to be collaborating with Efabless to offer a comprehensive development pathway for intelligent edge devices," said Chris Rogers, CEO of SensiML. "By combining our strengths, our combined open-source solution will allow engineers to develop their AI workload and custom SoC in unison, empowering them to innovate and optimize intelligent IoT devices well beyond what is possible with stock hardware and general-purpose AI

frameworks."

Complementary Expertise for Next-Gen IoT Solutions

Efabless's pioneering approach to custom SoC development enables companies that once found designing silicon too expensive or complex to build application-specific hardware in mere months through the chipIgnite program. Meanwhile, SensiML's AutoML software provides embedded developers with the tools to rapidly build efficient AI models, even without extensive data science expertise. Together, the partnership opens doors to sophisticated edge AI solutions that were previously out of reach for many developers.

"Our partnership with SensiML brings the power of custom silicon within reach for developers working on cutting-edge machine learning applications," said Mohamed Kassem, CTO of Efabless. "By combining Efabless' accessible chip design platform with SensiML's advanced AI tools, innovators can develop custom hardware solutions up to 10x more energy-efficient than off-the-shelf alternatives."

A Comprehensive, Open-Source Workflow for Edge AI Development

This partnership enables a seamless hardware-software development workflow built fully on open-source technologies suitable for sensor data analytics at the IoT edge. Developers can leverage Efabless's open-source RISC-V processor core, a variety of open-source IP hardware libraries (I/O, memory, communications, and DSP/ML accelerators), and SensiML's open-source Piccolo AI™ AutoML toolchain to transform raw sensor data into highly efficient, on-device inference models.

Live Demo at Embedded World USA

Attendees at Embedded World USA in Austin, TX this week can see this collaboration in action. SensiML and Efabless will showcase a live demo of a power-optimized keyword recognition system, which highlights the efficiency of SensiML's voice recognition models running on Efabless custom silicon.

For more information about the SensiML and Efabless partnership, visit Efabless at booth 2535 at Embedded World USA or inquire further at info@sensiml.com.

About Efabless
Efabless offers a platform applying open source and community models to enable a global community of chip experts and non-experts to collaboratively design, share, prototype and commercialize special purpose chips. Over the past three years, 1,400 designs and six hundred tapeouts have been executed on Efabless. The company's customers include startups, Fortune 500 companies, universities, and research institutions around the world. For more information, please visit efabless.com.

About SensiML
SensiML, a subsidiary of QuickLogic (NASDAQ: QUIK), offers cutting-edge software that enables ultra-low power IoT endpoints that implement AI to transform raw sensor data into meaningful insight at the device itself. The company's flagship solution, the SensiML Analytics Toolkit, provides an end-to-end development platform spanning data collection, labeling, algorithm and firmware auto-generation, and testing. The SensiML Toolkit supports

a growing list of hardware including 8/16/32-bit MCUs from Microchip®, Arm® Cortex®-M class and higher microcontroller cores, Intel® x86 instruction set processors, and heterogeneous core AI/ML optimized SoCs. For more information, visit sensiml.com.

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