

Himax and Seeed Studio Collaborate to Debut the Industry's Most Innovative Battery-Powered Endpoint AI Vision Processing Module at CES 2024

Pioneering the Future of Endpoint AI Devices with Ultralow Power Consumption and High-Speed AI Inference Power, WiseEye2 AI Processor Empowers the Most Versatile and Extensive AI Capabilities

TAINAN, Taiwan and SHENZHEN, China – January 2, 2024 – Himax Technologies, Inc. (Nasdaq: HIMX) (“Himax” or “Company”), a leading supplier and fabless manufacturer of display drivers and other semiconductor products, today announced that the Company, in collaboration with Seeed Studio, the IoT hardware partner providing services that empower developers to implement their projects and products for digital transformation, will unveil a cutting-edge battery-powered endpoint AI vision processing module, Grove Vision AI Module V2, at CES 2024. This processing module features Himax’s WiseEye2 AI processor HX6538 (“WE2”), renowned for its extremely low power consumption and exceptional AI inference performance, offering the most versatile and extensive AI development capabilities. Positioned at the forefront of the industry, the processing module serves as a powerful endpoint AI development platform, paving the way for future AI applications.

Himax’s WiseEye™ Smart Image Sensing solution has been well adopted in a wide variety of endpoint AI applications. The new generation WE2 AI processor is built upon the success of its predecessor chip, WE1. WE2 leverages the advanced Cortex-M55 and Ethos U55 architecture to deliver 32 times faster inference speed and 50 times greater energy efficiency when compared to WE1. These enhancements allow the WE2 to enable more endpoint AI computational requirements while maintaining ultralow power consumption. The WE2 features a multi-layered power management structure and incorporates Dynamic Voltage Frequency Scaling (DVFS) technology, to achieve microampere level power consumption. WE2 also incorporates impressive security features, including a Physical Unclonable Function (PUF) security mechanism that ensures each chip possesses a unique identity, mitigating the risks of unauthorized access and counterfeiting, thus enhancing the chip security. Additionally, the built-in RSA and ECC hardware encryption and decryption engines achieve millisecond-level fast secure boot, further ensuring secure and efficient data transmission.

As a pioneer in the AI-enabled microprocessor sector, WE2 offers exceptional AI inferencing capabilities with ultralow power consumption outperforming specifications of traditional MCUs. These advantages make WE2 the ideal choice for the Seeed Studio Endpoint AI vision processing module. The Seeed Studio Endpoint AI module, equipped with WE2, is a comprehensive development platform for endpoint AI devices that caters to diverse development needs for both software and hardware. In terms of hardware development, the module supports MIPI CSI cameras and microphones to assist in collecting image and sound data. Additionally, it offers universal interface design that supports numerous IO interfaces, allowing developers to connect different types of external devices on the same interface, and greatly enhancing the flexibility and convenience of product development.

For software development, Seeed Studio’s Endpoint AI vision processing module not only provides dozens of pre-trained AI models but also features the EdgeLab AI toolchain. This powerful tool chain allows users to tailor AI model trainings according to their specific requirements, thereby achieving more personalized AI software developments. When it comes to system-level hardware and software interoperability and collaboration, the Seeed Studio processing module can seamlessly integrate with the widely popular Seeed’s universal XIAO microcontroller development board series. The combination enables the integration of the processing module into various household appliances with No-Code AI methodology, making the deployment of AI technology in home appliances more efficient.

“At Seeed Studio, we're passionate about putting technology within easy reach, especially with a focus on vision AI innovations. We're excited about Himax Technologies' launch of the WiseEye2 HX6538. This collaboration amplifies our efforts in visual machine learning, and we're proud to stand as partners with Himax,” said Joey Jiang, GM of Industry and Application Group of Seeed Studio.

“Our collaboration with Seeed Studio propels the WE2 technology into a broader market scope, thereby pioneering advancement in the field of endpoint AI devices,” said Mr. Mark Chen, Vice President of Smart Sensing business at Himax. “With its superb AI inference power, ultralow power consumption, and information security features, WE2 has become the top choice for development of endpoint AI applications. We continue our commitment to R&D investment to ensure that our products maintain their industry-leading position and look forward to working with more leading brands and eco-system partners to jointly promote the development of endpoint AI devices,” concluded Mr. Chen.

Himax and Seeed Studio invite all interested parties to stop by our exhibition booth at The Venetian Las Vegas Hotel (3355 Las Vegas Boulevard S, Las Vegas, Nevada, USA) Venetian Exhibit Suite 34-208 to experience firsthand cutting-edge endpoint AI applications of Himax and Seeed Studio. To schedule a meeting or booth tour, please contact Himax at: Himax_CES@himax.com.tw and Seeed Studio at branding@seeed.cc.

About Seeed Studio

Seeed Studio is the IoT hardware partner for digital innovators. Since 2008, they have been working closely with global technology ecosystems to provide hardware modules, devices, and related services. They integrate the latest technology into thousands of open-source hardware modules so that millions of developers, makers, and innovators coming from different backgrounds can innovate interdependently. With professional and industrial expertise in Embedded Machine Learning, Edge Computing, smart sensors, and networks, their ready-to-deploy products are increasingly accelerating myriads of emerging digital solutions in the real world. On this backdrop, their work has been well recognized by both technology and mainstream media, thanks to their avid services for smart energy, digital factory, smart retail, precise agriculture, and scientific research, to mention a few.

<https://seeedstudio.com>

About Himax Technologies, Inc.

Himax Technologies, Inc. (NASDAQ: HIMX) is a leading global fabless semiconductor solution provider dedicated to display imaging processing technologies. The Company's display driver ICs and timing controllers have been adopted at scale across multiple industries worldwide including TVs, PC monitors, laptops, mobile phones, tablets, automotive, ePaper devices, industrial displays, among others. As the global market share leader in automotive display technology, the Company offers innovative and comprehensive automotive IC solutions, including traditional driver ICs, advanced in-cell Touch and Display Driver Integration (TDDI), local dimming timing controllers (Local Dimming Tcon), Large Touch and Display Driver Integration (LTDI) and AMOLED display technologies. Himax is also a pioneer in tinyML visual-AI and optical technology related fields. The Company's industry-leading WiseEye™ Smart Sensing technology which incorporates Himax proprietary ultralow power AI processor, always-on CMOS image sensor, and CNN-based AI algorithm has been widely deployed in consumer electronics and AIoT related applications. While Himax optics technologies, such as diffractive wafer level optics, LCoS microdisplays and 3D sensing solutions, are critical for facilitating emerging AR/VR/metaverse technologies. Additionally, Himax designs and provides touch controllers, AMOLED ICs, LED drivers, EPD drivers, power management ICs, and CMOS image sensors for diverse display application coverage. Founded in 2001 and headquartered in Tainan, Taiwan, Himax currently employs around 2,200 people from three Taiwan-based offices in Tainan, Hsinchu and Taipei and country offices in China, Korea, Japan, Germany, and the US. Himax has 2,838 patents granted and 376 patents pending approval worldwide as of September 30, 2023.

<http://www.himax.com.tw>

Forward Looking Statements

Factors that could cause actual events or results to differ materially from those described in this conference call include, but are not limited to, the effect of the Covid-19 pandemic on the Company's business; general business and economic conditions and the state of the semiconductor industry; market acceptance and competitiveness of the driver and non-driver products developed by the Company; demand for end-use applications products; reliance on a small group of principal customers; the uncertainty of continued success in technological innovations; our ability to develop and protect our intellectual property; pricing pressures including declines in average selling prices; changes in customer order patterns; changes in estimated full-year effective tax rate; shortage in supply of key components; changes in environmental laws and regulations; changes in export license regulated by Export Administration Regulations (EAR); exchange rate fluctuations; regulatory approvals for further investments in our subsidiaries; our ability to collect accounts receivable and manage inventory and other risks described from time to time in the Company's SEC filings, including those risks identified in the section entitled "Risk Factors" in its Form 20-F for the year ended December 31, 2022 filed with the SEC, as may be amended.

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