



## **Himax Unites with Seeed Studio to Bring SenseCAP LoRaWAN Vision AI Sensor on Smart Agriculture to CES 2023**

*TinyML AI Combined with LoRaWAN to Enable Ultralow Power, Long-Range Transmission and High-Performance AI for Indoor and Outdoor Utilization*

**TAINAN, Taiwan and SHENZHEN, China – December 29, 2022** – Himax Technologies, Inc. (Nasdaq: HIMX) (“Himax” or “Company”), a leading supplier and fabless manufacturer of display drivers and other semiconductor products, and Seeed Studio, the IoT hardware partner providing services that empower developers to implement their projects and products for digital transformation, today announced the joint showcase of the SenseCAP A1101 LoRaWAN Vision AI Sensor, embedded with Himax WiseEye™ smart image sensing solution (“WiseEye”), at the upcoming CES 2023 from January 5 – 8, 2023 in Las Vegas, Nevada.

Seeed Studio, with its tinyML Edge AI platform enabling expertise, has created a plug-and-play and easy-to-integrate SenseCAP A1101 vision sensor that runs machine learning in support of a variety of AI models, such as image recognition, people counting, target detection, meter recognition and many others. This industry-leading battery-powered sensor solution incorporates Himax HM0360 CMOS image sensor, supporting up to 60 FPS VGA solution, and WiseEye WE1 AI processor, running at 400MHz local inferencing that facilitates powerful machine learning at extremely low power consumption, as well as a LoRaWAN module, featuring low-power, wide-area (LPWA) networking protocol for long-range networks.

At CES, Himax and Seeed Studio will showcase the SenseCAP A1101 sensor which has already been applied to real smart agriculture cases. Powered by Himax’s ultralow power WiseEye technology, the SenseCAP A1101 vision AI sensor can operate for over 9 months while continuously collecting field images and uploading the final data results from local inferencing every minute. The vision AI sensor hardware is designed to adopt high industrial protection grade that supports an operating temperature range of -40 to 85 degrees Celsius and IP66 waterproof rating, making it a good fit for IoT applications placed either in outdoor or indoor argo-ecosystems. The sensor solution also supports rapid configuration of the Bluetooth APP, and fast connection to gateways and cloud servers, with only few clicks setup.

“We’re really happy and honored to work with Himax to embed their WiseEye solution to this Vision AI device. To be the most reliable IoT Hardware Partner for global developers, we at Seeed are always looking to integrate advanced technologies into ready-to-deploy hardware solutions for digital transformation in vertical industries,” said Joey Jiang, GM of Industry and Application Group of Seeed Studio. “Working with Himax is yet another step forward in Seeed’s Vision to empower every developer to achieve their digital transformation goals with Vision AI technology. With SenseCAP A1101 LoRaWAN Vision AI Sensor, the developers can combine vision and LPWAN to their IoT solutions to serve various scenarios of smart farming, smart metering and more.”

“Our WiseEye solution has been proven in the notebook and many other applications, including automatic meter reading, automotive, surveillance and smart office/home, just to name a few. Seeed Studio is one of the leading AI platforms in the world and our collaboration in the smart agriculture application is a further validation of the suitability of our WiseEye technology to a wide range of markets,” said Jordan Wu, CEO of Himax. “The demand for battery-powered smart devices with AI-enabled smart sensing is rapidly growing providing an opportunity for us to further expand by joining forces with other AI platform partners by offering value-added features for our customers in terms of privacy, security, and superior battery life for diversified endpoint AI devices.”

Himax and Seeed Studio invite all interested parties to stop by their exhibition booth at the Renaissance Las Vegas Hotel (3400 Paradise Road, Las Vegas, Nevada, USA) Suite 1230. To schedule a meeting or booth tour, please contact Himax at [hx\\_CES@himax.com.tw](mailto:hx_CES@himax.com.tw) and Seeed Studio at [branding@seeed.cc](mailto: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 fabless semiconductor solution provider dedicated to display imaging processing technologies. Himax is a worldwide market leader in display driver ICs and timing controllers used in TVs, laptops, monitors, mobile phones, tablets, automotive, digital cameras, car navigation, virtual reality (VR) devices and many other consumer electronics devices. Additionally, Himax designs and provides controllers for touch sensor displays, in-cell Touch and Display Driver Integration (TDDI) single-chip solutions, AMOLED ICs, LED driver ICs, power management ICs and LCoS micro-displays for augmented reality (AR) devices and heads-up displays (HUD) for automotive. The Company also offers CMOS image sensors, wafer level optics for AR devices, 3D sensing and ultralow power WiseEye™ smart image sensing, which are used in a wide variety of applications such as mobile phone, tablet, laptop, TV, PC camera, automobile, security, medical device, home appliance, AIoT, etc. Founded in 2001 and headquartered in Tainan, Taiwan, Himax currently employs around 2,100 people from three Taiwan-based offices in Tainan, Hsinchu and Taipei and country offices in China, Korea, Japan, German, and the US. Himax has 2,980 patents granted and 417 patents pending approval worldwide as of September 30, 2022. Himax has retained its position as the leading display imaging processing semiconductor solution provider to consumer electronics brands worldwide.

<https://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, 2021 filed with the SEC, as may be amended.

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