

ASX RELEASE

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ASX: NVU

EMASS Unveils New Compact Artificial Intelligence (AI) Prototyping Board

The Palm-Sized EMASS Evaluation Board to Support Engineers Prototype and Optimise a Wide Range of Applications for the EMASS System on a Chip (SoC)

Highlights:

- **Compact AI prototyping tool** - The new EMASS evaluation board offers a palm-sized compact design addressing the growing demand for flexible and space-efficient platforms.
- **Optimised Performance and Energy Efficiency** - EMASS evaluation board features dynamic frequency scaling, allowing developers to optimize performance and energy efficiency by adjusting frequencies from 50 MHz down to 1 MHz, important for power constrained markets like Internet of Things (IoT) and wearable technology.
- **A scalable, AI development platform** - Equipped with the ECS-Dot Chipset, the evaluation board supports complex tasks such as real-time 2D to 3D image conversion, while maintaining low power consumption supporting the integration of the EyeFly3D™ platform into new applications and devices
- **Comprehensive connectivity** - The evaluation board includes JTAG, USB serial ports, and standard interfaces like I2C, SPI, CPI, and UART, supporting an ability to interface with different peripherals, to ensure smooth integration with external components.
- **Tested and verified with multiple sensors**, the evaluation board is compatible with a wide range of power-sensitive applications such as IoT devices, wearable technology, and smart home systems, where energy efficiency is crucial for optimal performance.

Nanoveu Limited ("Nanoveu" or the "Company") (ASX: NVU) is pleased to announce that Embedded AI Systems Pte. Ltd. (EMASS), has developed a compact, palm-sized "evaluation board", specifically designed to streamline rapid prototyping and evaluation of the EMASS SoC across a wide range of embedded AI applications.

Equipped with the ECS-Dot Chipset this evaluation board is expected to progress the commercialisation of the EMASS SoC by supporting developers who are looking to fine-tune both performance and energy efficiency for a wide range of embedded AI applications and devices. The evaluation board is expected to expand the use of the EMASS SoC into sectors such as IoT, smart devices, and AI-driven automation.

Key Features:

Connectivity:

The evaluation board provides flexible connectivity to support commonly used interfaces such as I2C, SPI, UART, I2S, and CPI, as well as JTAG and USB serial ports. This allows easy connection to a wide variety of peripherals, helping developers prototype for wide range of small devices for the EMASS Soc.

Frequency Scaling:

The evaluation board also features frequency scaling, enabling developers to optimize performance and energy efficiency by adjusting the frequency from 50 MHz down to 1 MHz. This allows developers to optimize the evaluation board's performance for specific needs, making it highly adaptable for various applications. The inclusion of the ECS-Dot Chipset, mounted on a socket, adds an extra layer of flexibility, by facilitating easy upgrades and modifications throughout the development process.

Validated Testing:

Additionally, the evaluation board has undergone extensive testing and verification with various sensors, ensuring seamless integration with commonly used components in embedded systems. Designed to accelerate prototyping, the evaluation board allows developers to connect multiple peripherals and scale performance as needed. Its fast and flexible design provides an ideal solution for testing and refining embedded AI systems, offering the adaptability required for a wide range of applications. This combination of connectivity and performance scaling enhances development efficiency.

A Next-Level Improvement Over the Previous Board

The new evaluation board (Figure 1, Left) represents a significant improvement over the older, larger model (Figure 2, Right). While the original evaluation board featured multiple integrated sensors including a microphone, inertial sensor, proximity sensor, a display and an ARM host SoC for chip-to-chip data transfer testing, it was bulkier. The new version maintains the same features while offering a much smaller, more portable form factor ideal for rapid prototyping and evaluation.

The new, smaller evaluation board (Figure 1) introduces interface support for connecting to a wide range of external components (ECP), while maintaining the same features as the original. Its compact and flexible form factor allows developers to seamlessly integrate sensors and manage chip-to-chip communication, all within a significantly more portable design. This streamlined evaluation board is ideal for developers because it provides the same high-level capabilities as the original while enhancing rapid prototyping and evaluation through its ease of use and portability.



(Figure 1, iPhone used as size reference)



(Figure 2, iPhone used as size reference)

Ready for the Future

This evaluation board is perfect for early development stages and is the first step towards commercialisation, but the final product-specific boards will have even smaller form factors, depending on the target application and customer requirements. EMASS is committed to pushing the boundaries of AI and embedded technology to meet the demands of next-generation systems across various industries, including autonomous driving, smart home devices, robotics, 3D visualization, and more.

Commenting on the innovation, Mohamed M. Sabry Aly, Founder of EMASS, said,

"We are proud to introduce our new compact evaluation board, designed to accelerate the prototyping process. By providing fast, flexible connectivity and frequency scaling, this board empowers developers to swiftly create and optimize embedded AI solutions. This innovation reaffirms our commitment to advancing AI technology, offering a versatile tool that meets the demands of real-time testing and refinement."

This announcement has been authorised by the Board of Directors of Nanoveu Limited.

Further information:

Alfred Chong
Managing Director and CEO
t: +65 6557 0155
e: info@nanoveu.com

About Nanoveu Limited

Nanoveu is a company specialising in advanced films and coatings. <https://www.nanoveu.com/>.

Further details on the Company can be found at <https://wcsecure.weblink.com.au/pdf/NVU/02656570.pdf>.

EyeFly3D™

The EyeFly3D™ platform is a comprehensive solution for delivering glasses-free 3D experiences across a range of devices and industries. At its core, EyeFly3D™ combines advanced screen technology, sophisticated software for content processing, and now, with the integration of EMASS's ultra-low-power SoC, powerful hardware.

Nanoshield™ - is a self-disinfecting film that uses a patented polymer of embedded Cuprous nanoparticles to provide antiviral and antimicrobial protection for a range of applications, from mobile covers to industrial surfaces. Applications include:

Nanoshield™ Marine, which prevents the growth of aquatic organisms on submerged surfaces like ship hulls, and

Nanoshield™ Solar, designed to prevent surface debris on solar panels, thereby maintaining optimal power output.

EMASS

EMASS is a pioneering technology company specialising in the design and development of advanced systems-on-chip (SoC) solutions. These SoCs enable ultra-low-power, AI-driven processing for smart devices, IoT applications, and 3D content transformation. With its industry-leading technology, EMASS will enhance Nanoveu's portfolio, empowering a wide range of industries with efficient, scalable AI capabilities, further positioning Nanoveu as a key player in the rapidly growing 3D content, AI and edge computing markets.

Forward Looking Statements

This announcement contains 'forward-looking information' that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations and related expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance, or achievements to be materially different from those expressed or implied by such forward looking information