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**ASX RELEASE**                                                                                  **18 October 2024**

**ASX: NVU**

# Nanoveu commences crucial benchmark testing for System-on-a-Chip (SoC) Semiconductor technology

**Benchmark analysis set to reveal AI performance insights key to Nanoveu's EyeFly3D 2D to 3D image conversion platform**
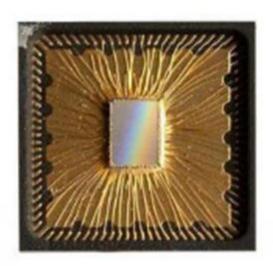
**Highlights:**

- Benchmark testing for the ECS-DOT chipset by Embedded A.I. Systems Pte. Ltd (EMASS) begins October 18, 2024, with results expected in a week
- The tests will focus on two critical tasks AI-driven tasks—**Person Detection and Image Classification,** using standardised workloads from the MLPerf Tiny AI suite[1]
- The EMASS ECS-DOT's chipset's performance and energy efficiency will be compared against current peer-leaders, STMicroelectronics (~**US$24.8B Market Cap[2]**) and Syntiant **(~US$500m valuation[3])**
- Benchmarking results will be released upon completion.

**Nanoveu Limited** ("Nanoveu" or the "Company") (ASX: NVU) is pleased to announce the commencement of benchmark testing for the ECS-DOT chipset, developed by Embedded A.I. Systems (EMASS), shortly to be acquired by NVU This marks a significant step in the Company's strategy to leverage EMASS's cutting-edge AI semiconductor chip technology and demonstrate its potential for industry-leading AI performance and energy efficiency.

The benchmarking process will evaluate the ECS-DOT System on Chip (SoC) using the MLPerf Tiny AI benchmarking suite - a widely recognised standard for measuring the performance and power efficiency of AI-driven visual tasks. The focus will be on two key AI applications: Person Detection and Image Classification, tasks that are critical tasks for a wide range of industries, from smart home systems and autonomous vehicles to medical imaging.

The objective of benchmarking ECS-DOT's capabilities against industry leaders STMicroelectronics is to demonstrate technological leadership in the rapidly expanding AI and 3D technology markets. The benchmarking results are expected to provide valuable insights to support the proposed integration of ECS-DOT's ultra-low-power SoC into Nanoveu's EyeFly3D™ platform. The peer comparison results are also expected to demonstrate the competitive edge of EMASS in the rapidly growing System on Chip (SoC) market in terms of performance and efficiency, reinforcing  its core patented technology.

Commenting on the benchmarking, **Alfred Chong, Managing Director, and CEO of Nanoveu said**, *"As the anticipated demand for our EyeFly3D™ technology grows, this testing is a critical step in preparing for the integration of EMASS chipsets into devices supporting our EyeFly3D™ platform. It also allows for optimisation of the chipset's performance for next-generation 3D applications and help demonstrate the market-leading potential of the ECS-DOT chipset itself. By validating person detection and image classification specifically, EMASS is positioning itself to play a crucial role in meeting the growing demand for powerful and power-efficient SoCs with leading image processing capabilities across industries such as autonomous driving, robotics, smart home systems and medical imaging".*



**Figure 1: EMASS Current SoC**

## THE IMPORTANCE OF BENCHMARKING IN SOC TECHNOLOGY

EMASS will conduct the benchmarking internally, following the strict industry-standard protocol set by MLCommons' MLPerf Tiny. This standardised suite of assessments is critical for evaluating and comparing the performance and energy efficiency of SoC designs. By offering reproducible, reliable assessments, benchmarking can provide a clear picture of how EMASS's technology performs in key areas like speed, accuracy and energy efficiency.

Benchmarking is also crucial to optimise the full potential of EMASS's AI capabilities, especially within visual processing, which is relevant for optimised 2D to 3D image processing for the EyeFly3D platform. It is also expected to help define the chip's potential for emerging markets:

- Self-Navigation of Drones
- Autonomous Driving Systems
- Robotics
- Smart Home Systems
- Security and Surveillance
- Medical Imaging

The current benchmarking will focus on two crucial visual AI workloads:

- **Person Detection**: Identifying and recognising individuals in various environments, key for applications in surveillance, smart home systems, robotics, and autonomous driving systems.
- **Image Classification:** Categorising objects in images, vital for quality control, medical imaging, and embedded vision systems.

Benchmarking commences October 18<sup>th</sup> and NVU will update the market and its shareholders with a progress report once available.

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[1] Benchmark MLPerf Inference: Tiny | MLCommons V1.1 Results

[2] https://www.nasdaq.com/market-activity/stocks/stm

[3] Syntiant - Funding, Financials, Valuation & Investors (crunchbase.com)

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

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**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 (to be acquired by Nanoveu)**

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