

ASX RELEASE

31 January 2025

ASX: NVU

## Quarterly Activities Report and Appendix 4C for the Quarter ended 31 December 2024

Nanoveu Limited (**Nanoveu** or the **Company**) (**ASX: NVU**), a company specialising in innovative films and coatings, is pleased to provide its quarterly activities and cash flow report for the December 2024 quarter. With its imminent acquisition of EMASS, a semiconductor company specialising in ultra-low power edge AI System on Chip (SoC) technology, Nanoveu is expanding its expertise into semiconductor applications, enabling the development of innovative products that combine advanced materials with smart technology.

### Highlights:

The Company has made significant progress with its EyeFly3D technology.

### EyeFly3D™ Milestones

- **USD 850,000 Purchase Order Received:** Rahum Nano Tech, Nanoveu's exclusive distributor in South Korea, placed an order fulfilling the first-year minimum commitment under the USD 19.73m Heads of Agreement. Deliveries for iPhone and Samsung models are scheduled for the first half of 2025 reflecting strong market demand for the EyeFly3D™ platform and its integration of apps and hardware.
- **AI-Powered 2D-to-3D App Launched:** The EyeFly3D™ app for iOS was released, incorporating real-time monocular depth conversion. This capability enables glasses-free 3D viewing of spatial photos and videos, delivering high engagement at a fraction of the cost of other 3D solutions.

### EMASS System-on-a-Chip (SoC) Advancements

- **Benchmarking Achievements:**
  - EMASS's ECS-Dot chipset demonstrated up to 287x energy efficiency improvements in anomaly detection tasks, outperforming industry peers and solidifying its leadership in low-power AI processing for IoT, wearables, and real-time 2D-to-3D conversion.
  - Next-phase benchmarking commenced for anomaly detection and keyword spotting focusing on applications in industrial IoT, healthcare, and smart city integrations.
- **USA Patent Granted:** EMASS secured a groundbreaking U.S. patent for its Non-Maximum Suppression hardware block, enabling real-time object detection with ultra-low-power consumption. This innovation enhances edge AI applications in sectors like autonomous vehicles and augmented reality.
- **ReRAM Integration:** EMASS began transitioning from STT-MRAM to Resistive Random Access Memory (ReRAM) technology. This shift enables faster, scalable, and more energy-efficient AI solutions for deep learning and 2D-to-3D image processing applications.

### **Real-World Applications and Testing**

- **Integration Testing for ECS-Dot Chipset:** Testing commenced in controlled settings for healthcare and smart city applications, including biometric monitoring, fall detection, and automated utility readings. Results are expected to showcase exceptional energy efficiency and scalability, bolstering commercial readiness.

### **Corporate Developments**

- **Acquisition Progress:** The planned acquisition of Embedded AI Systems (EMASS) advanced significantly, with its cutting-edge technology set to integrate seamlessly with Nanoveu's EyeFly3D™ platform. This acquisition positions Nanoveu for broader market opportunities in AI-driven edge computing.

### **Operational Update**

#### **EyeFly3D™:**

The EyeFly3D™ platform expanded its market presence through an exclusive distribution agreement with Rahum Nano Tech in South Korea reinforcing its leadership in glasses-free 3D solutions. The platform integrates AI-powered apps for real-time 2D-to-3D conversion, enhancing user engagement and creating new monetization opportunities. Expansion into additional markets is under evaluation.

Development efforts focused on app upgrades, including live 3D video streaming and seamless integration with Apple's Spatial technology. Deliveries for hardware products, including smartphone covers, are on track for the first half of 2025. The Company also advanced its Monocular Depth Estimation algorithms, enabling 2D to 3D image conversion.

#### **Nanoshield™ Solar:**

During the quarter, Nanoveu advanced the development of its Nanoshield™ Solar product line. This innovative coating is designed to prevent surface debris accumulation on solar panels, optimizing energy output across diverse environmental conditions. Targeted reformulations have enhanced the product's performance in extreme climates, ranging from high humidity to arid desert environments. These efforts position Nanoshield™ Solar as a key solution for customers in regions with challenging environmental conditions, driving sustainability and operational efficiency.

The Company is progressing with further in-field testing for this product range which, upon success, has the potential to generate significant revenue for the business.

### **Financial and Corporate Update**

In Q4 FY24, Nanoveu recorded cash receipts from customers of \$63k.

Payments to related parties totalling \$91k were paid during the quarter for directors' fees, executive remuneration, and pension / superannuation benefits.

Expenditure for the Quarter have included:

- Staff costs of \$76k comprising the costs of all staff employed by the Company and directors' remuneration; and
- Administration and corporate costs of \$316k associated with operations of the Company, including ASX fees, audit fees, legal fees, share registry fees and rent. This also included payments from prior quarters that were completed in Q4 2024.

The Company received \$465k in capital raising proceeds during the quarter. Subsequent to the quarters end, the Company has received an additional \$500k in capital raising funds, with a further \$410k expected to be received imminently (\$910k in total), relating to Placements announced on 4 June 2024 and 15 October 2024, and approved by shareholders on 23 December 2024.

### Events Subsequent to the Quarter

Breakthrough in Ultra-Low Power AI Technology: EMASS ECS-Dot Chipset

Nanoveu's EMASS division achieved industry-leading energy efficiency with its ECS-Dot Chipset.

Key metrics include 90x lower power consumption compared to traditional systems and execution of fall detection AI models in just 1ms.

Demonstrates transformative potential for wearables, IoT, and edge devices in healthcare and smart home applications.





EMASS   BENCHMARKING RESULTS				
	Person Detection	Image Classification	Anomaly Detection	Keyword Spotting
Benchmark Status	✓ Completed	✓ Completed	✓ Completed	✓ Completed
Benchmark Description	Evaluate the chipset's latency and energy efficiency in detecting human presence	Measure the chipset's performance in accurately classifying images	Test the chipset's ability to detect anomalies	Assess the chipset's capability to efficiently recognize spoken keywords
Results & Outcomes	> Latency: 5.2 ms > Energy: 3.7 $\mu$ J <b>Industry-leading performance</b>	> Latency: 6.3 ms > Energy: 5.5 $\mu$ J. <b>20x energy improvement compared to industry leader</b>	> Latency: 1.22 ms > Energy: 0.8 $\mu$ J. <b>200x energy improvement compared to industry leader</b>	> Latency: 3.9 ms > Energy: 3.07 $\mu$ J. <b>10x energy improvement compared to industry leader</b>
Next Steps	Integration testing in edge cameras	Integration into IoT devices for trials	Test in predictive maintenance systems	Apply in smart assistants and wearables
				

Figure 1: EMASS SoC AI-Task Benchmarking Results Summary

Semiconductor Technologies Division CEO Appointment: Nanoveu has appointed Mark Goranson as CEO of its Semiconductor Technologies division. With over 40 years of experience in semiconductor commercialisation, including leadership roles at Intel, ON Semiconductor, and TE Connectivity, Mark will drive the integration of EMASS's ultra-low-power AI-enabled SoC technology. His expertise is expected to accelerate Nanoveu's strategic expansion into the semiconductor market and AI-driven edge computing solutions.

### Outlook

Nanoveu remains focused on expanding the EyeFly3D™ platform and accelerating the commercial rollout of EMASS technologies. Key priorities include:

Scaling production and deliveries for EyeFly3D™ in South Korea and new markets.

Advancing SoC development for next-generation AI applications.

Exploring real-world deployment opportunities in healthcare, smart cities, and other high-growth sectors.

This announcement has been authorised for release by the Board of Directors.

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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.

**Nanoshield™ Solar**, designed to prevent surface debris on solar panels, 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.