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ASX RELEASE 10 September 2025

**ASX: NVU** 

### **Investor Webinar Presentation**

Nanoveu Limited (ASX: NVU, OTCQB: NNVUF) ("Nanoveu" or the "Company"), a technology innovator across advanced semiconductor, visualisation, and materials science, is holding its webinar commencing at 10.00 am(AWST) / 12.00pm (AEST) today.

The presentation materials are attached for the information of investors and can also be accessed via the "Announcements" page of the Company's website <a href="https://nanoveu.com/">https://nanoveu.com/</a>.

### Key highlights to be discussed:

- OEM design-ins of existing ECS-DoT SoC 22nm solution, with key U.S. Sales Network established
- ECS-DoT Landmark Drone Energy Efficiency Results, Averaging 60% Extended Flight Times with Sub 1mW Al
   Control
- Tape-out Progress of New Integrated Circuit on TSMC's 16nm FinFET Process

If you would like to join, please click on the link below to register:

Date: Wednesday, 10 September 2025

Time: 10.00 am Australian Western Standard Time (AWST) / 12.00 noon Australian Eastern Standard Times

(AEST)

Invite link: <a href="https://zoom.us/webinar/register/WN">https://zoom.us/webinar/register/WN</a> B-q6ZOwHQdWrzoZqs Wq6g

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

-ENDS-

### Nanoveu Media

Alfred Chong, Nanoveu MD and CEO P: +65 6557 0155

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#### **About Nanoveu Limited**

Further details on the Company can be found at https://nanoveu.com/.

**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, Al-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 Al capabilities, further positioning Nanoveu as a key player in the rapidly growing 3D content, Al and edge computing markets.

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

Nanoshield<sup>TM</sup> 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  $Nanoshield^{TM}$  Marine, which prevents the growth of aquatic organisms on submerged surfaces like ship hulls, and  $Nanoshield^{TM}$  Solar, designed to prevent surface debris on solar panels, thereby maintaining optimal power output.

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', 'ambition', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'mission', '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.



## **Investor Webinar**

10 September 2025





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AUTHORISATION This document has been authorised for release by the Company's Board of Directors.

## **Capital Structure**



### Nanoveu Share Price

ASX - AUD

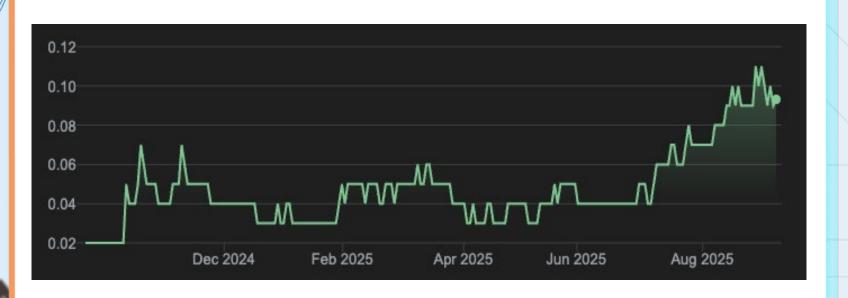
Nanoveu Limited (NVU.AX)

1D 5D 1M 6M YTD 1Y 5Y All

\$0.093

www.nanoveu.com

+0.08 ↑ 375.00% 1Y



### **Capital Structure**

| ASX Code         | NVU     |
|------------------|---------|
| OTCQB Code       | NNVUF   |
| Shares on Issue  | 948.7m  |
| Options on Issue | 260.9m  |
| Average Volume   | 11.8m   |
| Market Cap       | \$88.2m |
| Cash at bank*    | \$2.07m |

\*As at 30 June 2025, before \$2.82m capital raising & option conversions



## **EMASS Introduction**

### **Fabless Semiconductor Innovator in Edge AI Processing**

• Ultra-low-power Edge AI SoCs for always-on intelligence in battery constrained devices

### **Established Global Operations**

- Founded in 2020, Singapore headquartered
- 100% of EMASS acquired by Nanoveu Limited (ASX:NVU), March 2025
- Technical R&D centers in Singapore and Cairo, Egypt
- Commercial development team based in the United States

### **Expert Team Across Disciplines**

- Deep expertise in AI/ML, neural network acceleration, semiconductor design, sensor fusion, and embedded systems
- Experienced management with semiconductor and AI industry backgrounds





## **Board and Management**



**Dr. David Pevcic**Executive Chairman

- Experienced professional and investor in the resources and technology sector
- Non-Executive Chairman at Battery Age Minerals Ltd (ASX: BM8).
- Executive Director at Infini Resources Ltd (ASX: 188).
- Holds a Bsc, MBBS, from the university of Western Australia.



Alfred Chong
Group CEO and Director

- Founder of Nanoveu, has 30+ years of experience in scaling companies and trade sales
- Former CEO of: Atex Media Command (APAC) ,THISS Technologies, 121View
- Former CMO at 3D International



Michael Winlo

- Non-Executive Director
- Former CEO of Linear Clinical Research.
- Executive Director at Emyria Ltd (ASX:EMD)
- Former Health Lead at Palantir (NYSE:PLTR).
- Holds an MBA from Stanford and an MBBS from UWA.



**Steve Apedaile** 

Non-Executive Director

- 30 years of experience in accounting
- Worked at KPMG and Horwath Hong Kong.
- Fellow of the ICAEW.
- Member of the AICD.
- Executive Chairman of Sprintex (ASX:SIX).





## **Semiconductor Leadership Team**









### **Mark Goranson**

CEO of Semiconductor Technology

- VP of Global Ops, TE Connectivity
- SVP of Fab Ops, ON Semi
- VP of Fab Ops, Freescale
- Early Member of Intel

### **Dr. Mohamed Sabry**

CTO, Founder of EMASS

- Associate Professor, NTU Singapore
- Postdoc, Stanford
- Recipient of Nanyang Education Award
- Ph.D. from EPFL

### **Scott Smyser**

VP, Sales & Marketing

- EVP Marketing & BD, Si-Ware Systems
- VP & GM, VTI Technologies (Murata)
- SVP Sales, Atomica
- SVP Strategic Sales, Rockley Photonics





## **Key Operational Updates**

## **OEM Engagement**Current ECS-DoT (22nm)

- ECS-DoT has clear differentiation vs. competitors
- Current ECS-DoT is sampling to OEMs
- OEM evaluation and application development ongoing
- Design-ins with targeting ramp to full mask production

## **Tape-Out Progress Next Gen ECS-DoT (16nm)**

- **Efficiency** increase with a smaller **chip**.
- 24 engineers collaborating with CND in creating ECS-DoT Chip.
- Target completion date in Q4 CY2025 using TSMC's FinFET process.
- Transition to BGA packaging supports ultracompact deployment

### **Drone Results**

- +60% increased flight times
- **300**+ simulations done to back up the data.
- No change in battery, rotor and propulsion system.





## **Edge Al Market Opportunity**



### Core Challenges



**High power consumption** 



**Costly architectures** 



**Limited flexibility** 



### **Our Solution**



Enable meaningful AI at the sensor Edge



Dramatic improvements in power, size, cost, and integration

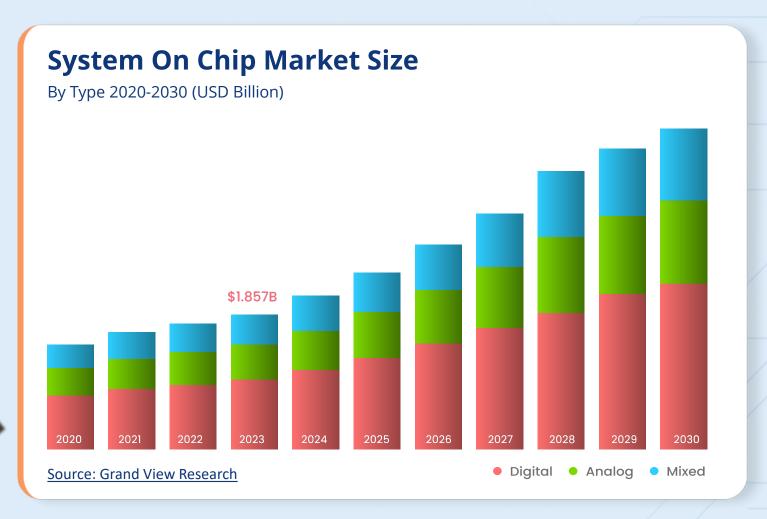


Unlock new uses cases on **devices** that were previously impractical





# Semiconductor & SoC Market Opportunity



### **SoC Market Growth:**

Applications demanding continuous sensing, context awareness, and real-time decision-making



Driven by AI, 5G, and smart devices.

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## **Target Industries for the ECS-DoT**









OEM evaluation and application development ongoing





Wearables, drones, and IoT devices









Design-ins and ramp to production in 2026



a nanoveu business

## **OEM Engagement Through Sales Network**











**Strategic Coverage** - reps embedded in key OEM hubs across drones, wearables, healthcare, industrial IoT, and defence







**Trusted Relationships** – longstanding customer ties and complementary tech expertise, with ECS-DoT positioned as their exclusive Edge Al SoC





**Scalable & Efficient Growth** – rapid market access without direct regional build-outs overheads, ensuring costeffective expansion



## What is Resonating with OEMs

### **Latency and energy consumption**

- < 10 ms vs. 150-300 ms for competitors\*</li>
- 20X lower energy consumption vs. competitors\*

### **Multi-sensor fusion**

- Ability to handle audio, vision, and environmental sensors on the same chip
- Versus competitors with single-function solutions

### Al model portability with SDK Toolkit

• Accelerates time-to-market by simplifying model migration and reducing development effort

\*MLCommons, 2025



# ECS-DoT Redefining What's Possible in Ultra-Low-Power Edge Al

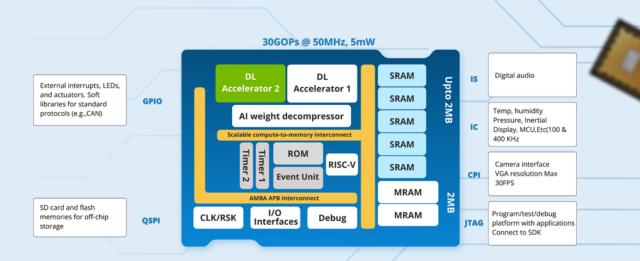
### **RISC-V control core + Dual DL Accelerators**

- Supports audio, vision, and sensor fusion workloads
- Compressed model support (~1.3 bits/weight)
   for larger models in small memory footprint

**Fully on-chip memory** 

0.1 to 5 mW active power for AI inference

5x5 mm QFN package with minimal BOM





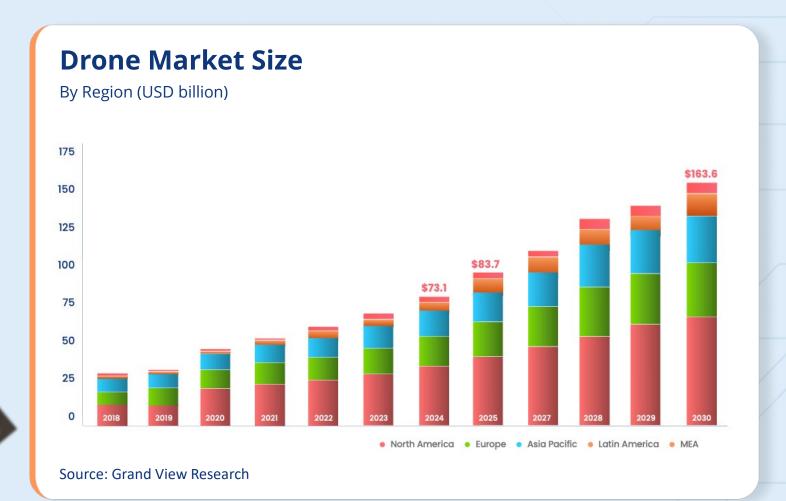


# Outperforming Established Edge Al Players

| Company  | Software<br>Optimization | Al Performance<br>per Watt<br>(Avg/Peak) | Power (Avg/Peak) | Al Performance | Max Al<br>Parameters |
|----------|--------------------------|--|------------------|----------------|----------------------|
| EMASS    | Yes                      | 3/15 TOPs                                | 0.1mW/10mW       | 30 GOPs        | 13 million           |
| Syntiant | No                       | 0.1/1 TOPs                               | 7mW/30mW         | 6.4 GOPs       | 7 million            |
| Himax    | No                       | 40/320 GOPS                              | 2.5mW/20mW       | 0.8 GOPs       | 500 thousand         |
| Ambiq    | No                       | 240/133 GOPs                             | 1mW/1.8mW        | 0.24 GOPs      | 1 million            |
| Maxim    | No                       | 1.6/64 GOPs                              | 50mW/2W          | 3.2 GOPs       | 3.5 million          |



## **The Drone Opportunity**



### **Drone Market Growth:**

Drones markets are growing across autonomous delivery, agricultural, military / ISR and consumer

> \$163.6B by 2030 14.3% Global Market CAGR

Driven by agriculture, surveillance and delivery.

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## **Leveraging Drone Gains**

# Testing Methodology

- **300+ HIL/SIL** campaigns and 100+ unique flight paths
- Multi-scenario testing
- Utilised Gazebo/ArduPilot for simulations



## **Key Performance Increases**

- Quadcopters: +60% average flight time, up to +80%
- Hexacopters: +58% average flight time, up to +74%
- Octocopters: +57% average flight time, up to +83%







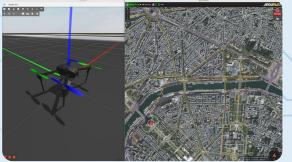
# **Commercial Development**

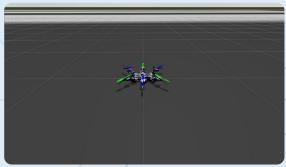
- Positions ECS-DoT as a disruptive
   Edge AI drone chip
- Enhances OEM sales and designins across drone use-cases
- Conduct phase 3 live flight trials to validate performance in real-world conditions
- Potential for technology licensing to Drone companies



## **Testing Methodology**

| Component                    | Details   |  |
|------------------------------|---|--|
| Simulation<br>Environment    | High-fidelity hardware-in-the-loop (HIL) and software-in-the-loop (SIL) frameworks. ECS-DoT processed real-time sensor data and flight control. |  |
| Control Cycle<br>Performance | ECS-DoT achieved stable 50H (20ms) closed-loop control cycles while consuming <1 milliwatt of power.  |  |
| Surrogate<br>Power Models    | Al models trained on real propulsion and telemetry data to dynamically predict and optimize energy usage per flight condition.                  |  |
| Test Campaign<br>Scale       | Over 300 unique campaigns across multiple drone types, each with 100+ distinct flight paths and mission variations.                             |  |
| Flight Profiles<br>Simulated | Waypoint navigation and loiter<br>Climb/descent under wind  |  |
| Evaluation<br>Metrics        | Energy consumed (Joules) Distance per Joule Mission endurance (minutes of flight time)  |  |
| System<br>Validations        | Demonstrated real-time control, energy efficiency, and flight adaptation without modifying battery or propulsion hardware                       |  |









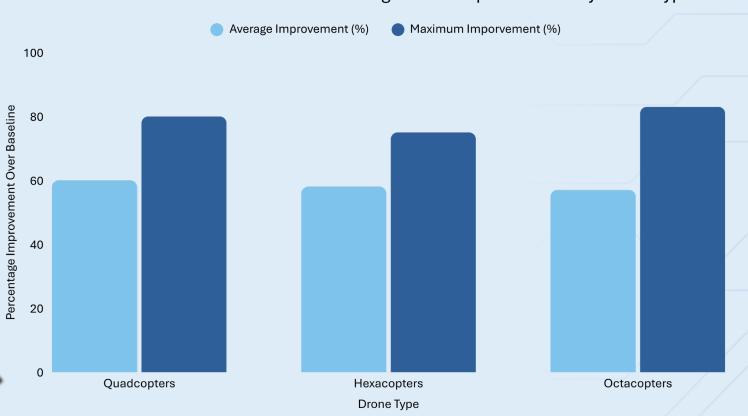
## **Performance Gains**

| <b>Drone Type</b>    | Quadcopter  | Hexacopter  | Octocopter   |  |
|----------------------|---|---|--|--|
| Graph                | ECS-DoT Quadcopter Performance Improvements  30  25  20  10  5  40% 45% 50% 55% 60% 65% 70% 75% 80% 85%  Distance Per Unit Energy Improvements (in %) | ECS-DoT Hexacopter Performance Imporvements  30 25 25 20 15 10 5 0 40% 45% 50% 55% 60% 65% 70% 75% 80% 85% Distance Per Unit Energy Improvements (in %) | ECS-DoT Octocopter Performance Imporvements  25  20  20  35% 40% 45% 50% 55% 60% 65% 70% 75% 80% 85%  Distance Per Unit Energy Improvements (in %) |  |
| Use-cases            | <ul><li>Consumer</li><li>Enterprise</li></ul>   | <ul><li>Agriculture</li><li>Logistics</li><li>Terrain Mapping</li></ul>   | <ul><li>Industrial inspection</li><li>Defence</li><li>Professional</li></ul>   |  |
| Performance<br>Gains | Achieved up to 80% improvement in mission endurance, with a 60% average extended flight time over baseline  | Delivered up to <b>75% improvement</b> in flight endurance, with an average   | Delivered consistent flight endurance up to 85% with an average 57% improvement  |  |



## **Higher Performance Across Drone Types**

ECS-DoT Phase 2 Results: Overall Flight Time Improvements by Drone Type



 Consistent endurance improvements, majority of runs above 50% gains



 Establishes ECS-DoT as the benchmark for energy-efficient Edge AI in UAVs.

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## **Target Drone Applications**



| Drone Use Case                          | Application Value   | Market Size<br>Forecast  |
|---|---|--|
| Autonomous Delivery Drones              | Extended range and endurance aligns with e-commerce/urban logistics | Estimated to grow to approximately <b>US\$10.5 billion by 2030</b> |
| Agricultural Drones (Precision Farming) | Increased coverage under payload stress (spraying/monitoring)       | Estimated to grow to approximately <b>US\$22.5 billion by 2030</b> |
| Military / ISR Drones                   | Longer missions, cloud-<br>independent autonomy for tactical<br>ops | Estimated to grow to approximately <b>US\$88.0 billion</b> by 2030 |
| Consumer                                | Significantly longer flight times without heavier batteries         | Estimated to grow to approximately <b>US\$11.6 billion</b> by 2030 |



## **Team Developments**



## **Specialized Engineering Team**



- 4 senior PhD-level engineers
- 5 experienced engineers with significant industry expertise
- 5 mid-level engineers
- 7 junior engineers and interns
- 10-member analog Division



### Partnership with Center of Nanoelectronics and Devices (CND)



- Access to a highly talented team within our region
- Efficient scaling at lower cost.
- Fast-tracking our path
   to fabrication







- Expanding embedded & edge-Al engineering team for firmware, system integration, app enablement
- Shipping with full software stack, adoption-ready & customer-compatible





## **Core Technical Focus**



### **Advanced Packaging for Integration**

- Reducing footprint
- Enhancing performance in space constraint environments
- Critical for mobile and embedded cases





## **Digital Architecture for Low-Latency Edge Al**



On-Chip memory innovations



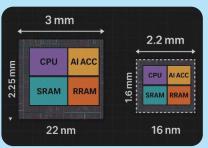
Al system optimization techniques



Advanced I/O and interface frameworks

## Built on TSMC's 16nm Fin Field Effect Transistor (FinFET)

- Higher Perf. & Lower Power
- Smaller Die Size
- Production Ready



### **Integrating Wireless Connectivity**



Bluetooth 5.x + Bluetooth Mesh



Wi-fi



Lora for low-power, long-range (optional)



## **ECS-DoT Engagement with OEMs**

### **Current (22nm) ECS-DoT chip sampling**

### **New evaluation platform**

- Arduino-like dev board with USB-C connection
- SDK Toolkit for model translation and optimization

### **OEMs** are:

- Doing evaluation and comparison
- Starting application development









## **Thank You**



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