

An applied technology company



PITT STREET Semiconductor Conference 2025 Presentation

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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 - Delayed Quote - AUD

Nanoveu Limited (NVU.AX)

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

\$0.033



#### **Capital Structure\***

ASX Code	NVU		
Shares on Issue	742.4m		
Options on Issue	235.3m		
Performance Rights on Issue	157.1m		
Previous Close	\$0.035		
Average Volume	2.42m		
Market Cap	\$25.98m		

<sup>\*</sup>Before issuance of securities from placement on 01/05/25

## Our Board





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).
- Non-Executive Director at Infini Resources Ltd (ASX: 188).
- Holds a Bsc, MBBS, from the university of Western Australia.



ALFRED CHONG
Group Chief Executive Officer

- 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.



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).



DR. MICHAEL WINLO Non-Executive Director

- Former CEO Of Linear Clinical Research.
- Former Health Lead At Palantir (NYSE:PLTR).
- Holds An MBA From Stanford And An MBBS From UWA.

## Semiconductor Leadership Team







"We are positioning ourselves to ourselves to meet growing global global demand for low energy but but powerful chips driven by the the increasing demand for Alsupported applications."



"EMASS's ultra-low-power semiconductor technology has has remarkable potential to transform AI enabled hardware, hardware, addressing a critical industry need for more efficient efficient edge computing."



"NVU's mission to reshape the ultra-low power edge semiconductor landscape through innovation and strategic execution aligns perfectly with my passion"

#### Mark Goranson **CEO of Semiconductor Technology**

#### **Notable Positions**

- Vice President of global operations, TE connectivity (NYSE: TEL).
- Senior Vice President of Fab Operations, ON Semiconductor (NASDAQ: (NASDAQ: ON).
- Vice President of Fab Operations Freescale Semiconductor (NYSE: FSL). (NYSE: FSL).
- Early member of Intel Corporation (NASDAQ: INTC) for 18-years.
- Holds a B.Sc. in Physics/Electronics from New Mexico Tech.











#### **Notable Positions**

- Associate Professor at NTU Singapore, specializing in AI computing computing systems.
- Former Postdoc at Stanford (2014–2017).
- Senior IEEE Member.
- Collaborated with Stanford and TSMC.
- Recipient of the Nanyang Education Award (2023).
- Holds a Ph.D. from EPFL.









#### **Scott Smyser** VP, Sales and Marketing, Semiconductor Technology

#### **Notable Positions**

- EVP, Worldwide Marketing & Business Development, Si-Ware Systems
- VP & GM, VTI Technologies (Murata)
- SVP of Sales, Atomica
- SVP of Strategic Sales, Rockley Photonics
- Holds an MBA and B.Sc. In Electrical Engineering from University of Southern California





## Semiconductor And System On Chip (SoC) For Al Computing "On The Edge"









The Backbone of Modern Tech — Semiconductors & SoCs power healthcare, automotive, and smart IoT, making devices faster & more intelligent.



Compact & Energy–Efficient – Low–
power, high–performance Al
processing, perfect for next–gen
connected technology.

## **Major Sectors Driving Demand for Energy Efficient Al Infrastructure**





#### **Aerospace And Defense**

- Drones and UAVs for navigation, video processing and communication
- Military radar and surveillance



#### **Consumer Electronics**

- Smart Phones and Tablets.
- · Wearables and Smartwatches.
- Smart TV and appliances.



#### **Smart Cities**

- · Robotics and real time control.
- Predictive maintenance to collect and process sensor data on equipment health.



#### Healthcare

- Portable diagnostics equipment's
- Imaging Systems like CT and MRI use SoCs for advanced processing



#### **Energy And Utilities**

- Smart Meters for efficient energy resource management
- Optimized solar and wind energy systems



EMASS-I2R MOSCHIP ECS-DOT 2231 Singapore



#### **Automotive**

- Optimized Battery Management.
- Seamless Navigation Systems.
- Enable Safe And Intelligent Driving.



#### **Gaming & Entertainment**

- Used in consoles for graphics and processing.
- VR/AR for immersive experiences.



#### Data Centers & Cloud Computing

• Unprecedented growth in demand for cloud computing to support AI and ML usage



#### **Telecommunications**

- Networking communications such as Routers and Modems.
- Satellites for space communication.







# The EMASS Opportunity



### **An SoC With AI Capabilities**

- **Problem** Increasing demand for computational power that can handle AI workloads on the "edge", faster data processing and analysis
- Solution EMASS's chip is capable of high AI workloads at its low power and form factor

### **Ultra Energy Efficient**

- Problem Current Solutions struggle to run Al computations without high power consumption
- Solution EMASS can run Al models efficiently allowing for a wide range of applications

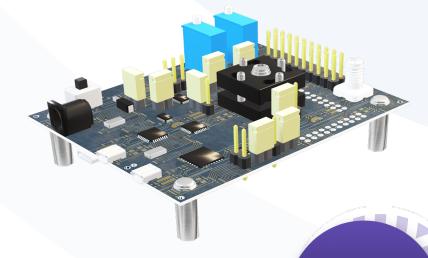
### **High Levels Of Interoperability**

- Problem Integrating SoCs into edge devices can be complex
- Solution EMASS's RISC-V architecture is widely accepted with a strong community ensuring seamless integration, and future-proof solutions.



## **CEMASS** Superior Performance, Low Power, Small Form Factor

Leveraging The RISC-V Chip Architecture For Efficiency And Interoperability



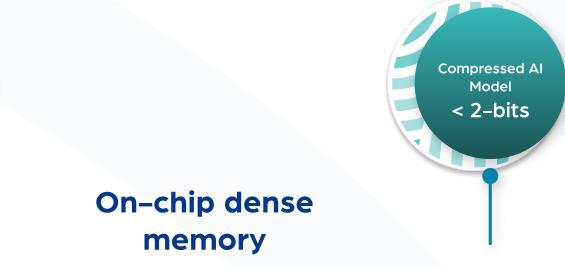
Integrated **EMASS SoC with** AI & Accelerator module

Up to 12 TOPs/Watt

Al Capacity



Power **Efficiency** 



4 MBytes

Hardware support for compressed Al models



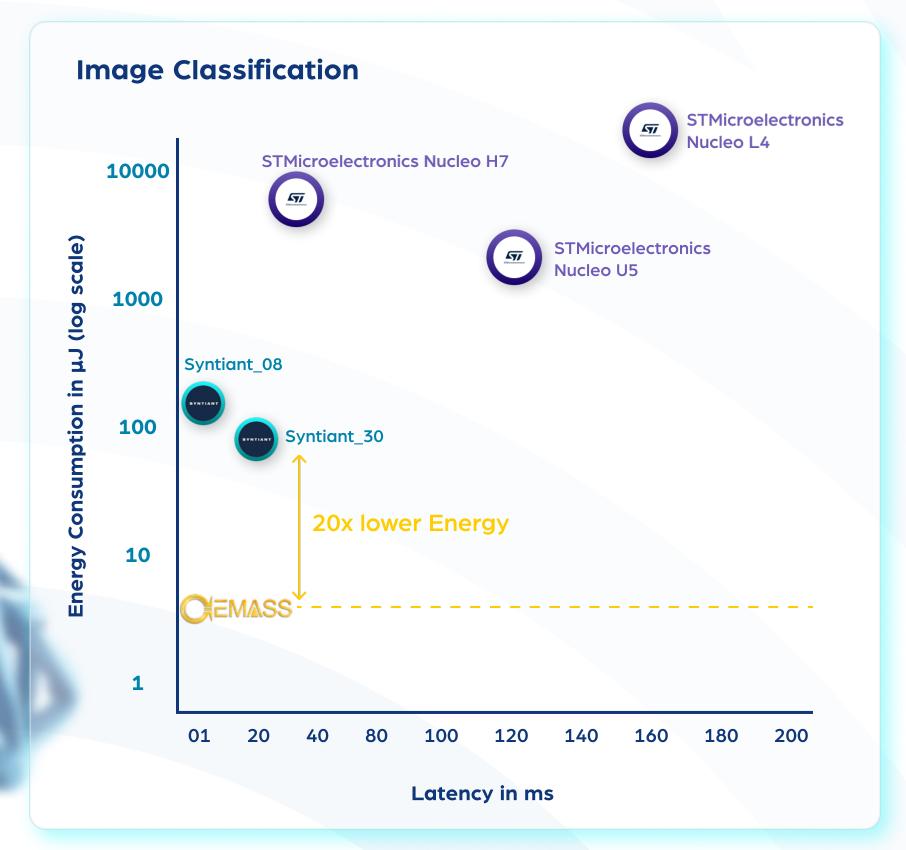
**Physical size** 

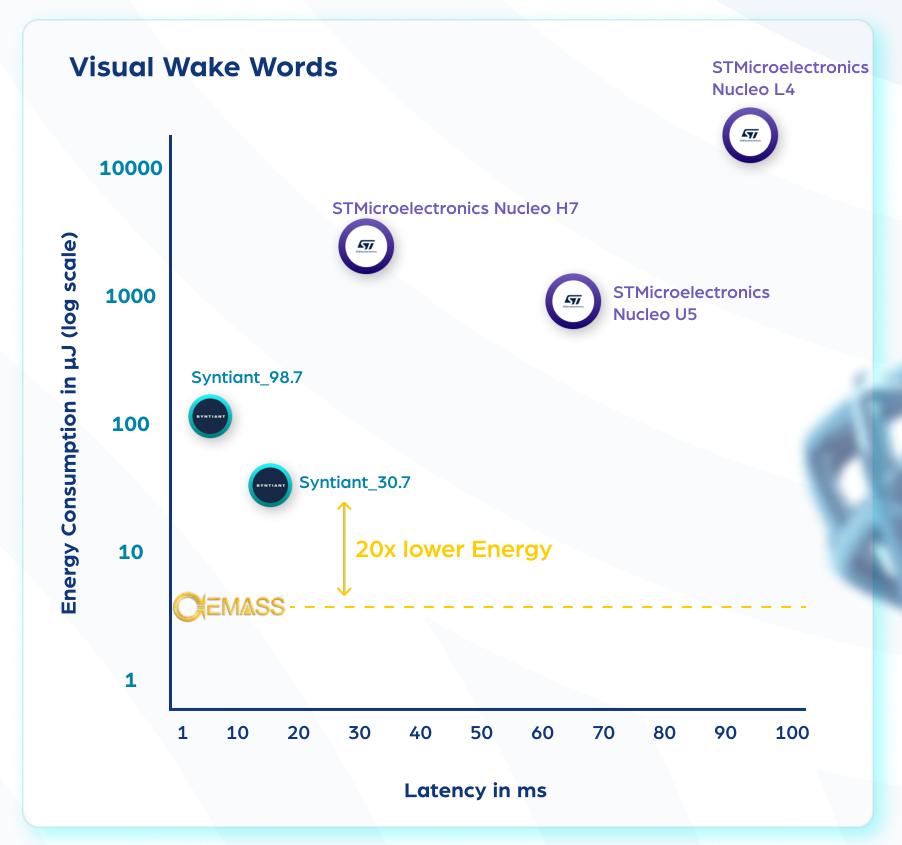
### EMASS Exceptional Al Computation, 20X Lower Energy





EMASS's SOC has greater Al performance compared to today's leading chips







## CEMASS Leads Industry Peers In Al Computation Tasks

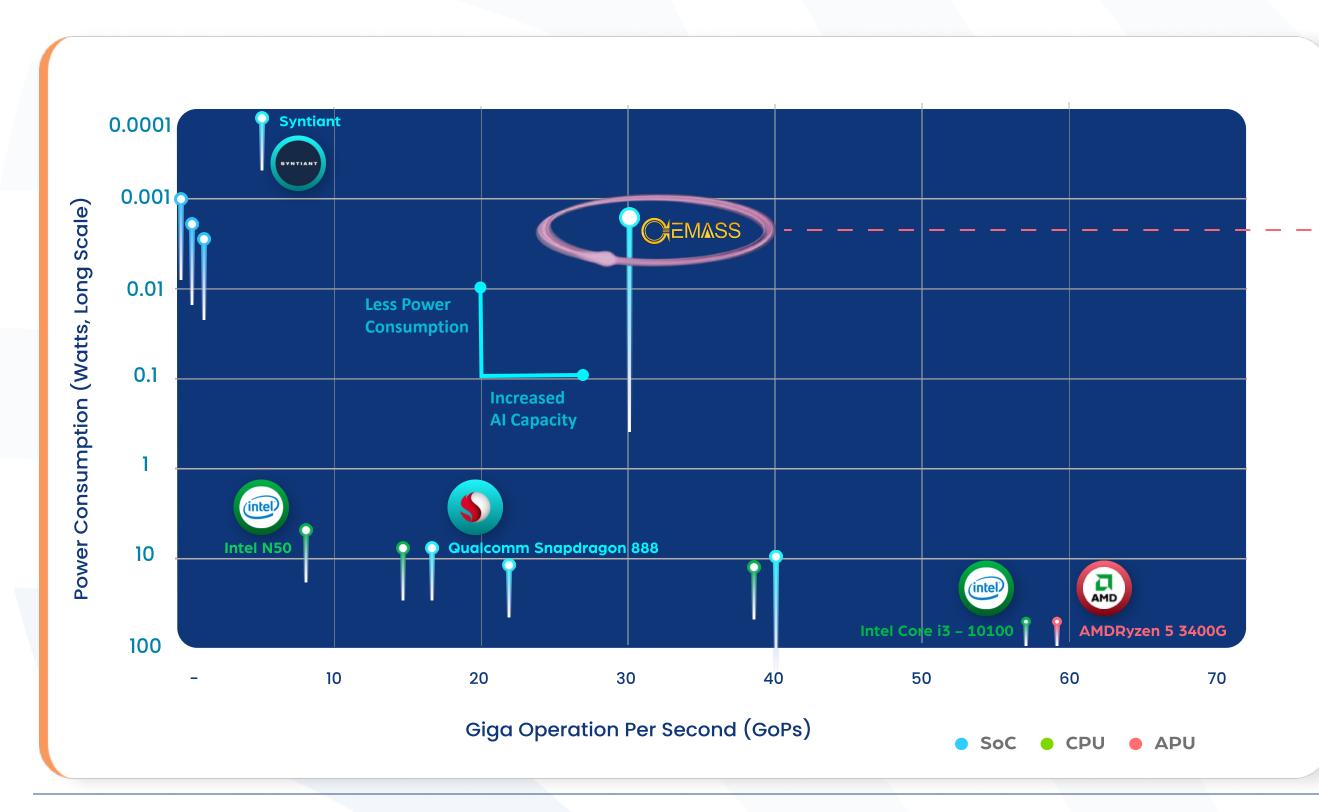
Company	Software Optimization	Target Application	Al Performance per Watt (Avg/Peak)	Power (Avg/Peak)	Al Performance	Max Al Parameters
Nanoveu	YES	3D Vision, Health Monitoring, Wearable, Smart infrastructure	3/15 ToPs	0.1mW/10mW	30 GOPs	13 million
Maxim Integrated	NO	Medical, Patches, Wearable	1.6/64 GoPs	50mW/2W	3.2 GOPs	3.5 million
Himax Himax	NO	Vision, Speech, Gesture, Agriculture, Retail	40/320 GoPs	2.5mW/20mW	0.8 GOPs	500 K
Syntiant	NO	Vision, Smart home, Smartwatches	0.1/1 ToPs	7/30mW	6.4 GOPs	7 Million
ambiq Ambiq	NO	Smart home, Smart watches, Fitness trackers, Animal tracker, Voice remote	240/133 GoPs	1mW/1.8mW	0.24 GOPs	1 Million
ETA Compute	NO	Vision	200 GoPs	2mW	0.4 GOPs	256 K

<sup>\*</sup>GoPs ≈ Clock Speed (GHz) × Instructions Per Cycle (IPC) × Number Of Cores



## **CEMASS** Delivers Exceptional Energy Efficiency

EMASS's SOC has greater AI performance compared to today's leading chips



#### EMASS SoC: Power-Efficient Al For Next-Gen IoT

- Complete Al Capability EMASS SoC delivers full Al operations with top power efficiency.
- Optimized for IoT Ideal for battery– sensitive devices without performance loss or extra power drain.
- Seamless Integration No hardware modifications required, enabling next–gen IoT development.

## **CEMASS Has Leading Energy Efficiency Compared To Peers**





Company	Chip	Chip Type	Target Industry	Max Performance per Watt	Power Consumption(TBP)	Max Perfomance
NANOVEU	EMASS	SOC	loT, Wearables, Drones Artificial Intelligence	3-15 TOPS	0.1 — 10 MilliWatts	~30 GoPs
AMD AMD	Ryzen 5 3400G	APU	Computing	~0.91 TOPS	65 Watts	~59 ToPs
INTEL	Processor N50	CPU	loT, Chromebook	~0.53 TOPS	75 Watts	~40 ToPs
ARM	Cortex-A53	CPU	Smartphone, Tablets, Wearables, IoT	~0.0019 TOPS	7.5 Watts	~14 GoPs
QUALCOMM	Snapdragon 888	SOC	Artificial Intelligence, Wearables, Smartphone	~2.1 TOPS	8 Watts	~17 ToPs
• BROADCOM	BCM2712	CPU	Robotics, industrial automation, edge computing	~3.2 TOPS	12 Watts	~38 ToPs
MEDIATECH	Helio P60	SOC	Artificial Intelligence Processing, Smartphones	~4 TOPS	10 Watts	~40 ToPs
MARVELL MARVELL	Octeon TX2	SOC	5G Networks & Data Centres	~0.67 TOPS	30 Watts	~20 ToPs

\*GoPs ≈ Clock Speed (GHz) × Instructions Per Cycle (IPC) × Number Of Cores





## **CEMASS** Expands Market Opportunities for Nanoveu



#### **Smartwatch**

- Live Biometric Processing Non-invasive oxygen, hydration, and blood glucose analysis.
- Predictive Diagnosis Early disease detection.



#### **Drones**

- Al Self-Navigating Drones For crop and livestock monitoring.
- Predictive Harvesting Using multi–spectral and hyper–spectral data



#### **EMASS SoC Integration**

Embeds AI in devices with low power and no hardware upgrades.



#### **Medical Devices**

- 2D to 3D Models Instant scans and integrated medical imaging.
- Real-Time Diagnostics For pacemakers and cochlear implants.



#### **Glasses & Lens**

- 2D to Augmented 3D Virtual FaceTime and calls.
- Immersive Al Assistant Enhanced experiences





## Advancing Our Semiconductor Roadmap

Strengthening our position as the leader in ultra-low-power, high-efficiency Edge AI through next-generation IP development

#### **Strategic Collaboration**

Center of



X Nanoelectronics &

Devices (CND)



#### **Strategic Advisor Appointed**

Dr. Yehia Ismail (Director, CND) joins as Strategic Advisor to Nanoveu



#### Rartnership with CND (Cairo)

Advanced SoC design and nanoelectronics expertise

#### Collaborative R&D



Joint development of next-gen edge AI chips on TSMC 16nm

#### Strengthening ECS-DoT Platform



Co-developing IP to accelerate innovation and independence

#### **Defined Technical Goals**



#### Cutting-Edge 16nm FinFET Node

Utilising TSMC's advanced 16nm FinFET process for ultra-efficient AI chips



#### Performance-Per-Watt Optimization

Increase energy efficiency and thermal stability



#### Advanced On-Chip Compression

Expand model size with ~1.3bits/weight architecture



#### Scalable Integration Across Devices

Diverse use cases with more advanced Al

## **Business Impact**& Scalability



#### **Strengthening Market Position**

Enhanced competitiveness in edge AI hardware.



#### Global Scale & Export Readiness

Chips tailored for fast-growing international markets.

#### Bolstering of IP Portfolio



Expanding proprietary technology to strengthen our competitive moat.

#### Access to Talent & Regional Innovation

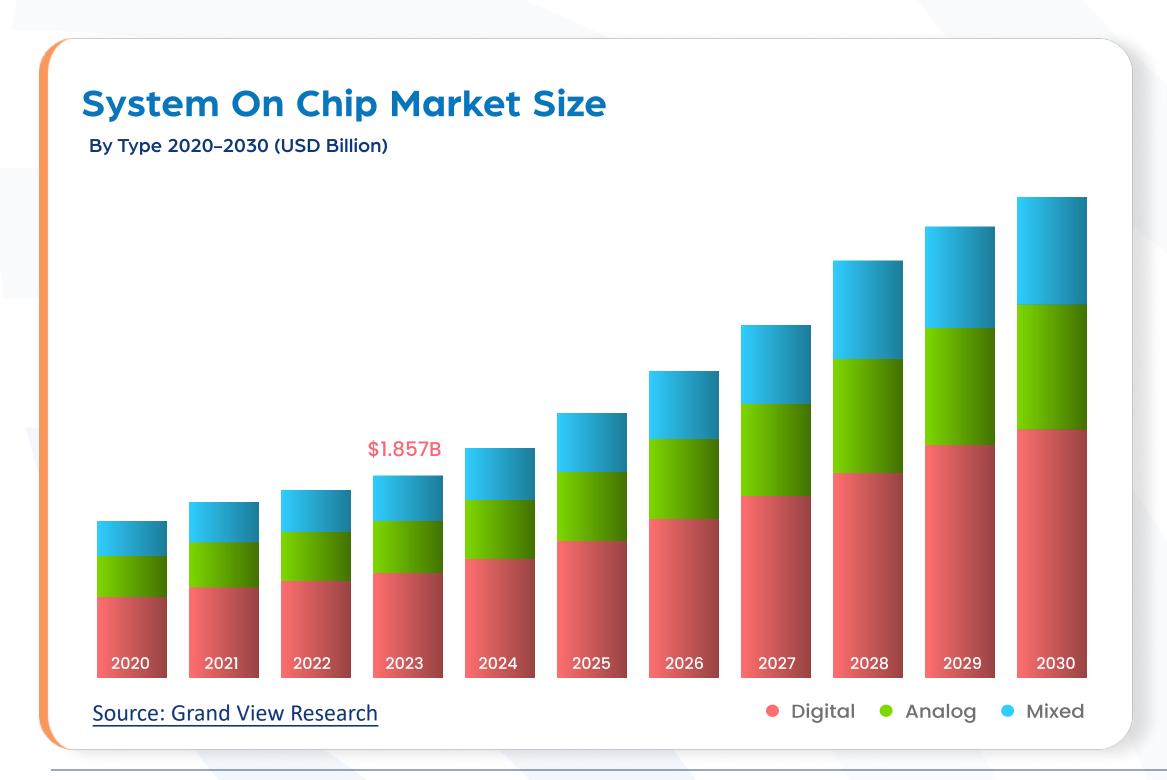
Egypt as a launchpad for deeper MENA engagement.





## Semiconductor & SoC Market Set For Rapid Growth

Powering The Future Of Al & Devices



## **SOC Powering The Future Of Al** & Devices:

Essential for Next–Gen Tech – SoCs power Al, IoT, and autonomous systems with compact, high–performance computing.

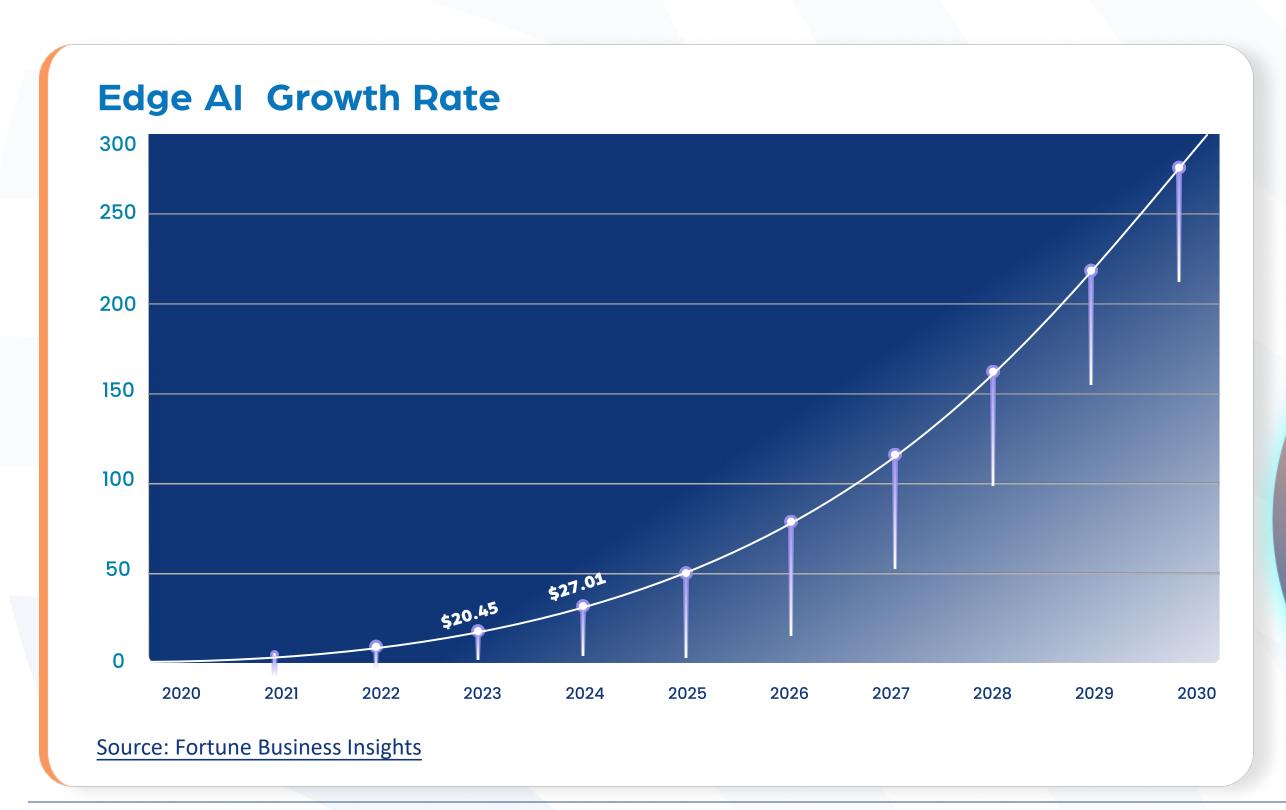
\$325.7B \$325.7B by 2030 8.5% Global Market CAGR

Driven by AI, 5G, and smart devices.



## Poised For Exponential Growth

Edge Al Smart And Efficient Computing For IOT



## Edge Al: Smart & Efficient Computing For IoT

Faster, Smarter Al – Powers real–time decisions for IoT, autonomous vehicles, and next–gen tech.

**Expected To Reach** 

\$259.82B by 2030

33.3% CAGR

As AI moves to on-device processing.



## **EMASS** Global Development and Collaboration Partners

EMASS has been developed with the world's leading Chip manufacturers and partners



Early Backers, IP & Development



ReRAM Collaboration
Partner



IC Fabrication, PCB Fabrication, Packaging







## Thank You

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