

### **Weebit Nano investor presentation**

18 March 2024 – Weebit Nano Ltd (ASX: WBT, Weebit or Company) Weebit Nano Limited (ASX:WBT, Weebit or Company), a leading developer of advanced memory technologies for the global semiconductor industry, has released the attached investor presentation to be delivered by Chair Dadi Perlmutter and CEO Coby Hanoch when meeting with investors in Australia this week, including the retail investor briefings.

Details of the retail investor briefing events are listed below:

### Perth (in-person) with Chair Dadi Perlmutter & CEO Coby Hanoch

Date: Monday, 18 March 2024

Time: 11:00am (AWST)

• Location: The Vault @Riff, 45 St Georges Terrace, Perth

### Melbourne (in-person) with Chair Dadi Perlmutter & CEO Coby Hanoch

Date: Tuesday, 19 March 2024

Time: 12:30pm (AEDT)

Location: KWM, Collins Arch, Level 27, 447 Collins Street, Melbourne

### Sydney (in-person & virtual) with Chair Dadi Perlmutter & CEO Coby Hanoch

Date: Thursday, 21 March 2024

Time: 3:30pm (AEDT)

• Location: KWM, Level 61, Governor Phillip Tower, 1 Farrer Place, Sydney

• Virtual link: register <u>here</u>

Places are limited. To attend, investors must RSPV to Christopher Lay at <a href="mailto:christopher.lay@automicgroup.com.au">christopher.lay@automicgroup.com.au</a>.

This announcement has been authorised for release by the CEO of Weebit Nano Limited.

### For further information, please contact:

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#### **About Weebit Nano Limited**

Weebit Nano Ltd. is a leading developer of advanced semiconductor memory technology. The company's ground-breaking Resistive RAM (ReRAM) addresses the growing need for significantly higher performance and lower power memory solutions in a range of new electronic products such as Internet of Things (IoT) devices, smartphones, robotics, autonomous vehicles, 5G communications and artificial intelligence.

Weebit's ReRAM allows semiconductor memory elements to be significantly faster, less expensive, more reliable and more energy efficient than those using existing flash memory solutions. As it is based on fab-friendly materials, Weebit ReRAM can be integrated within existing flows and processes faster and easier than other emerging technologies, without requiring special equipment or large investments.

See: www.weebit-nano.com

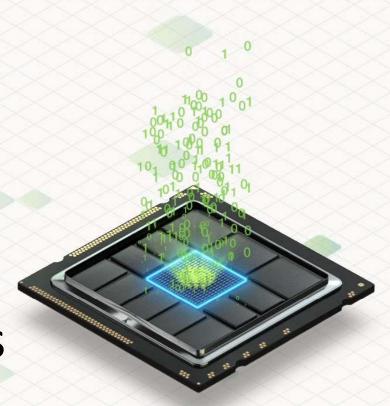
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March 2024 Investor Presentation







## Weebit: Leading Vendor of ReRAM IP

## **Advanced Non-Volatile Memory (NVM) Now Entering Production**



Founded: 2015

Located: Israel & France

ASX: WBT



### Multiple licensing deals

Licensed to 2 foundries, ongoing discussions & evaluations with other foundries and customers



### **World-leading team**

50 personnel<sup>(1)</sup> (90% engineers/scientists)



### **Greener NVM**

Lower environmental impact than other types of NVM (GHG footprint, resources, materials)



### R&D partner

CEA-Leti, a leading microelectronics research institute



# Proven, protected technology

Fully qualified per JEDEC; available for chip designers; 50 patents & applications







S&P/ASX 300

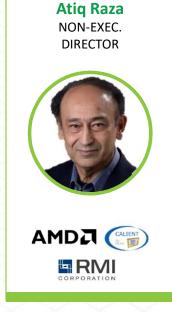
<sup>\*</sup> Source: https://www.mordorintelligence.com/industry-reports/non-volatile-memory-market (1) Includes employees and full-time contractors



## **Strong Board With World-renowned Semiconductor Industry Experience**













# **Strong & Experienced Management**





















## **Introducing Weebit's New Chief Revenue Officer**

# IP industry veteran Issachar Ohana to drive sales as company focuses on revenue generation

- Responsible for driving and maximizing growth for Weebit ReRAM with global customers and partners
  - Will lead the sales organization as Weebit's business continues to expand
  - Based in Silicon Valley
- Brings to Weebit 25+ years' experience in sales and business development in IP companies
  - Previously Managing Partner at Gimmel Ventures; EVP of Worldwide Sales at CEVA and VP of Sales of DSP Group's Core Licensing Division
  - At NASDAQ-listed company CEVA, built a salesforce from the ground-up into a high-performing team achieving US\$135 million in revenue in 2022





# **Weebit ReRAM Memory Inherent Advantages**

100x



Better endurance vs. flash

**✓** 10<sup>5</sup>-10<sup>6</sup> P/E cycles

~100x



More **energy efficient** vs. flash

- ✓ Low voltage, low currents
- ✓ Zero standby power

~100x



Faster programming time than flash

✓ Bit/byte addressable

3-4x



**Lower** added wafer cost vs. flash

- ✓ 2-mask adder
- ✓ Standard materials/tools

≤28nm

**Scales** to processes far below limits of flash

- ✔ Proven @ 28nm & 22nm
- ✓ Scalable to lower nodes



150°C



Reliable for automotive designs

 ✓ Grade-0 conditions and profiles

~350x



✓ Also tolerant to EMI

(1) Refers to ReRAM cell array

53%



Less minerals and metals resource use vs. MRAM

- ✓ Greener technology
- ✓ No rare earth materials

# Weebit ReRAM Addresses a Broad Range of Application Requirements

	Manager Shellength	\$4.00 B	0	60		100 mg
	Mixed-Signal / Power Mgmt	IoT / MCUs	Edge Al	Automotive	Aerospace & Defense	Medical
Example Applications:	Wireless charging; Motor control	Wearables; Smart cards	Security cameras; Industrial	ECUs for sensors & controllers	Flight safety systems; Satellites	Implantables; Hearables; Disposable
Back-end-of-line tech for easy analog integration						
Cost-efficiency						
Ultra-low power consumption						
Robustness in high temp / extreme environments						
Scaling advantage at 28nm and below						
High endurance						
Small footprint						
Longevity						
Roadmap to neuromorphic computing						





# **Recent Achievements**



# **Significant Progress in Recent 12 Months**



Research shows Weebit ReRAM insensitive to ionizing radiation



Licensed ReRAM to Top-tier foundry *DB HiTek* 



Received first

GlobalFoundries 22FDX®

wafers; functional

**MAR 2023** 

**JUL 2023** 

**OCT 2023** 

**NOV 2023** 

**NOV 2023** 

FEB 2024

Weebit ReRAM qualified at 125°C



Weebit ReRAM fully qualified 125°C in SkyWater S130



Demonstrated extended automotive performance: 150°C; 100K cycles





## **Major Operational Advancements in the Last 12 Months**

## **Driving Shareholder Value Creation**



Weebit added to MSCI Global Small Cap Index



Raised further AU\$60M; well funded for future growth



Naomi Simson appointed to Board

**FEB 2023** 

**MAR 2023** 

**APR 2023** 

**JUL 2023** 

**AUG 2023** 

**NOV 2023** 

Weebit added to ASX 300

S&P/ASX 300

Set up new Board committees

- Governance
- ✓ Remuneration
- ✓ Finance, Audit & Risk
- ✓ Strategy and Technology

Received first IP licensing revenue





## **Robust Performance under Extended Automotive Conditions**

Weebit ReRAM demonstrates high reliability and endurance at extreme temperatures and after extensive cycling

- Already qualified: Weebit ReRAM module in SkyWater S130 is fully qualified up to 125°C, temperature specified for Grade-1 automotive
- Now: Weebit is demonstrating:
  - High-temp stability: 150°C lifetime operation, including cycling & retention
    - 150°C is specified for Grade-0 automotive
  - High endurance: 100K cycles\*
    - Required for modern vehicle designs



Results reaffirm viability of Weebit ReRAM for use in automotive and other applications requiring high-temp reliability and extended endurance

\*flash equivalent



## Second Foundry to Adopt Weebit ReRAM; 1st License to a Tier-1 Foundry



- A global top-10 foundry HQ in South Korea
- One of world's top-tier foundries for analog & power ICs
- Annual revenue of US\$1.3 billion
- DB HiTek licensed Weebit ReRAM for its customers to integrate as NVM in their designs
  - Targeting 130nm BCD process ideal for many analog, mixed-signal and power designs; applications in consumer, industrial and IoT
- DB HiTek's hundreds of customers will now have access to Weebit ReRAM
  - ◆ DB HiTek customers include Intel, Mitsubishi, Sony and Qualcomm
- Technology transfer to a DB HiTek production fab is underway
  - Next step: to qualify technology towards volume production



Above: a DB HiTek plant



## Live ReRAM Demo on GlobalFoundries' 22FDX® Platform

### Weebit ReRAM Demo at Embedded World 2024

# Weebit will show live ReRAM demo on GlobalFoundries' 22FDX® platform

- Shows ReRAM is a viable solution in this advanced geometry where embedded flash can't scale
- Highlights some of the many advantages of Weebit ReRAM

## Weebit ReRAM module in 22nm FD-SOI process

 Largest memory capacity of any Weebit module to-date (8Mbit); implemented in the most advanced process so far





Embedded World 2024 Nuremberg, Germany April 9-11





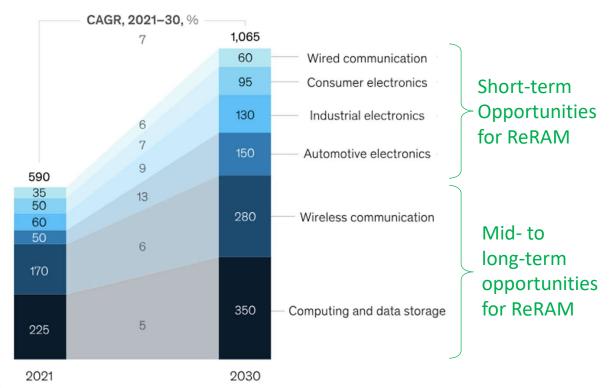
# Huge Opportunities Ahead \*\* Weebitnano



# The Global Semiconductor Industry is Projected to be a Trillion Dollar (USD) Industry by 2030

The overall growth in the global semiconductor market is driven by the automotive, data storage, and wireless industries.

Global semiconductor market value by vertical, indicative, \$ billion

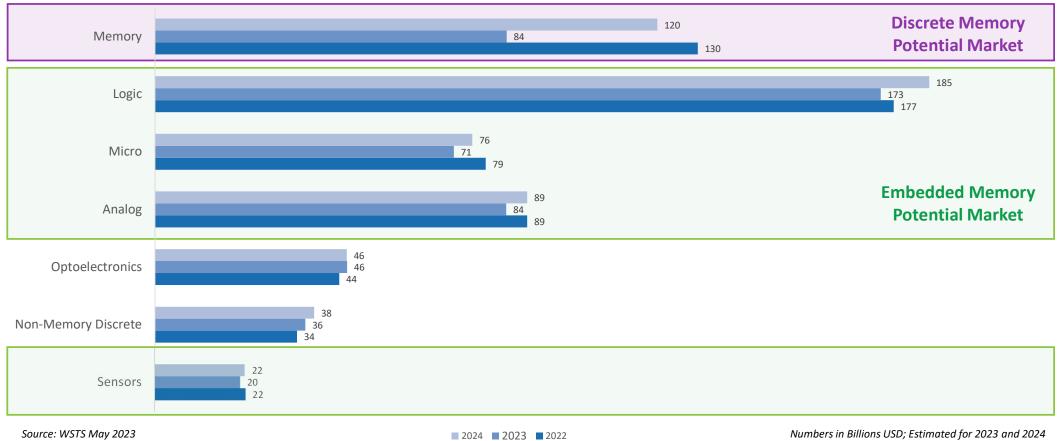


Source:

https://www.mckinsey.com/industries/semi conductors/our-insights/the-semiconductordecade-a-trillion-dollar-industry



# **Significant Market Opportunity for ReRAM Products**





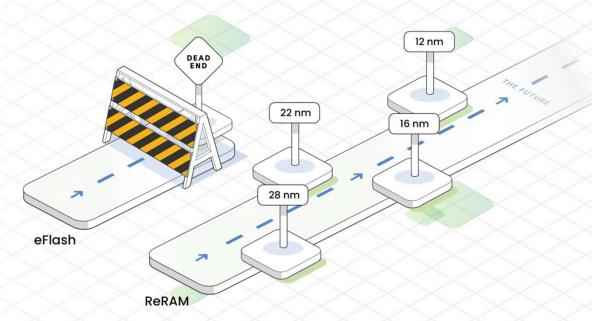
Numbers in Billions USD; Estimated for 2023 and 2024

# **Embedded NVM Market in Need of New Technology**

One challenge is the need of a new memory technology that combines the best features of current memories in a fabrication technology compatible with CMOS process flow and that can be scaled beyond the present limits of SRAM and FLASH.

 International Roadmap for Devices and Systems, 2022 Edition

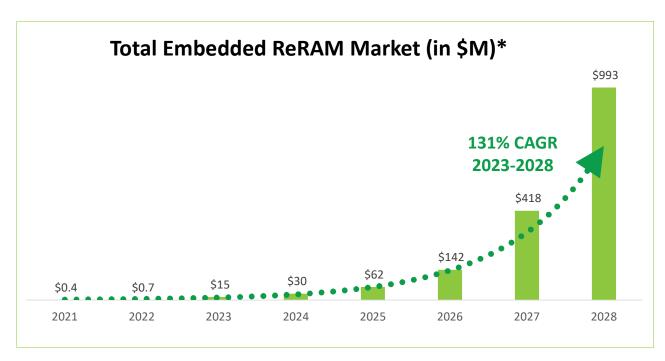
## **Embedded flash is running out of steam**

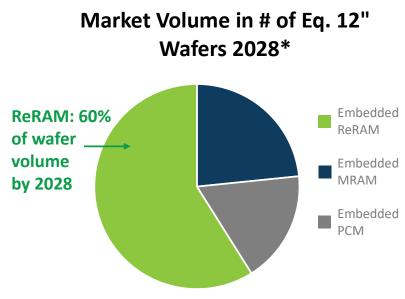




## **ReRAM** is Emerging as The Leading Solution

The embedded emerging NVM market is expected to reach \$2.7B by 2028, with ReRAM expected to represent 37%\*



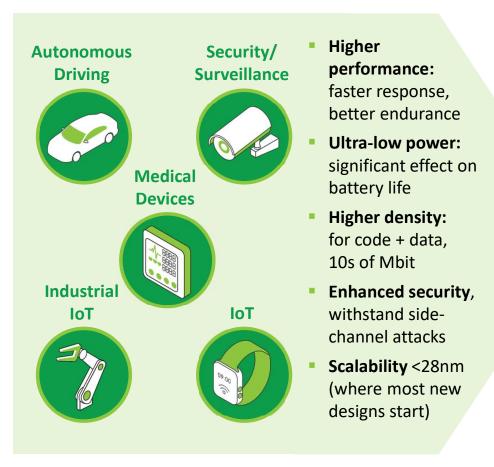




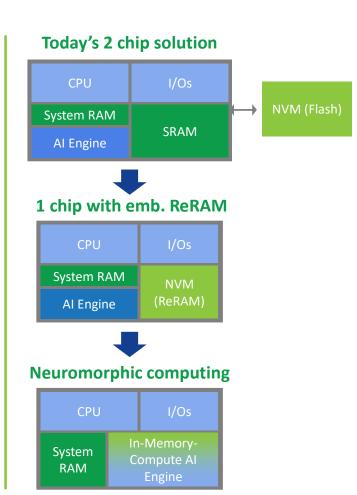
Note: The embedded emerging NVM market size is evaluated based on assumptions of the average chip area occupied by a given memory technology (Yole)

<sup>\*</sup> Source: Emerging Non-Volatile Memory report, Yole Intelligence, 2023

## **ReRAM** at the Heart of the Edge AI Revolution







# **Every Foundry Deal Represents Multiple Customer Opportunities**

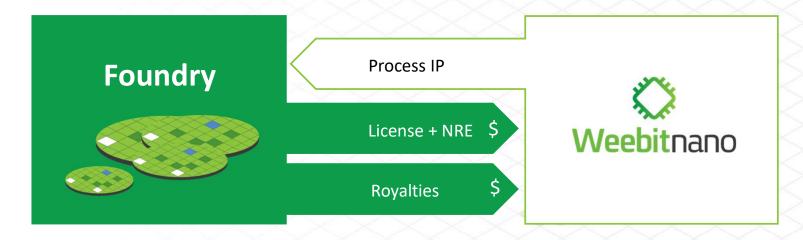




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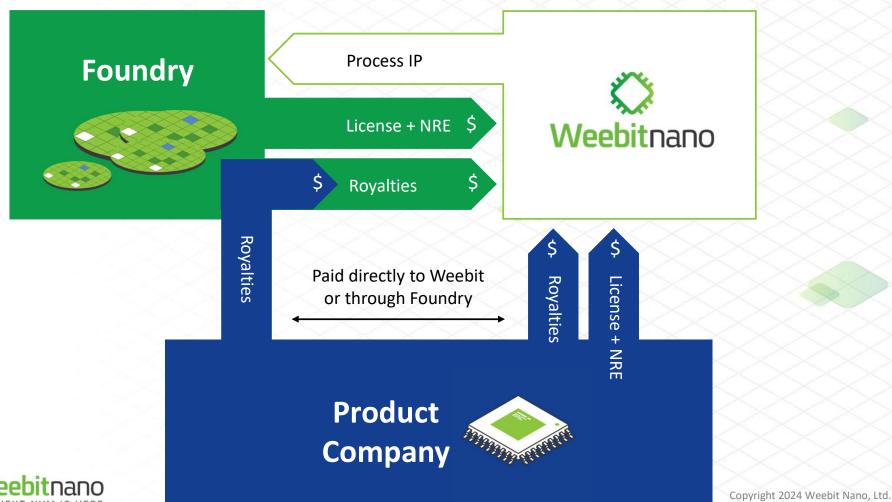


## **IP Business Model**





## **IP Business Model**





What's coming next?



## **Progressing with Foundries, IDMs and Product Companies**

- In different levels of evaluation/negotiation with most of the top foundries and IDMs
  - Increasingly moving from technical evaluations to business discussions
- Making progress with product companies
- Increased selective activity with China ecosystem
- Expect to sign more agreements in 2024
- CHIPS Act: Applying for government funded projects, as a partner in US & EU ecosystems



### **Top-10 Foundries\***

- 1) TSMC
- 2 Samsung
- 3 UMC
- 4 GlobalFoundries
- 5 SMIC
- 6 Hua Hong (HLMC)
- 7 PSMC
- 8 VIS
- (9) Tower
- 10 DB HiTek



- 1 Samsung
- (2) Intel
- 3 SK Hynix
- 4 Micron
- (5) Texas Instruments
- (6) Western Digital
- 7 Infineon
- 8 STMicroelectronics
- 9 NXP
- 10) Analog Devices



# **Weebit Nano Key Targets for FY24**

## Israeli tech delivers NO MATTER WHAT



## Revenues

Increase revenues from licensing and NRE



## **Fab Partners**

Sign more agreements; Finalize tech transfer with DB HiTek



## **Customers**

Close licensing agreements



## Qualification

Continue drive to qualify at higher endurance and broader temperature range



## **Continue R&D**

Further technical enhancements to ReRAM cell and selector technologies

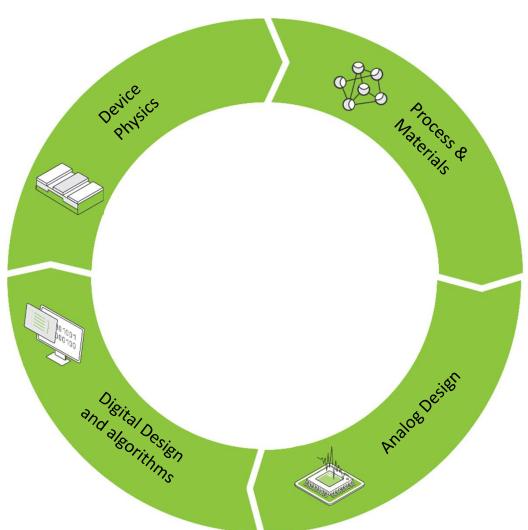


## **Scaling Technology**

Continue scaling to various process nodes, including 22nm

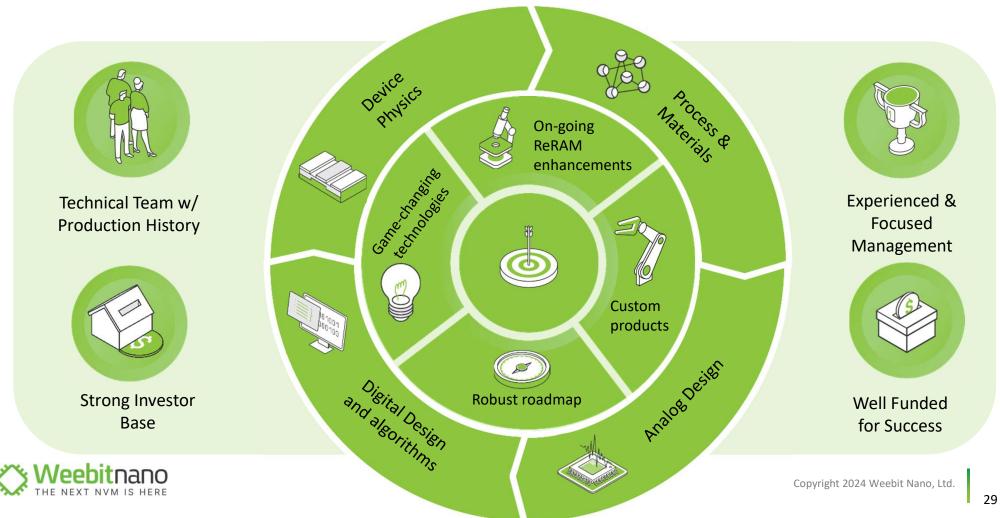


## We've Got What it Takes





## We've Got What it Takes



# Thank You!

www.weebit-nano.com

