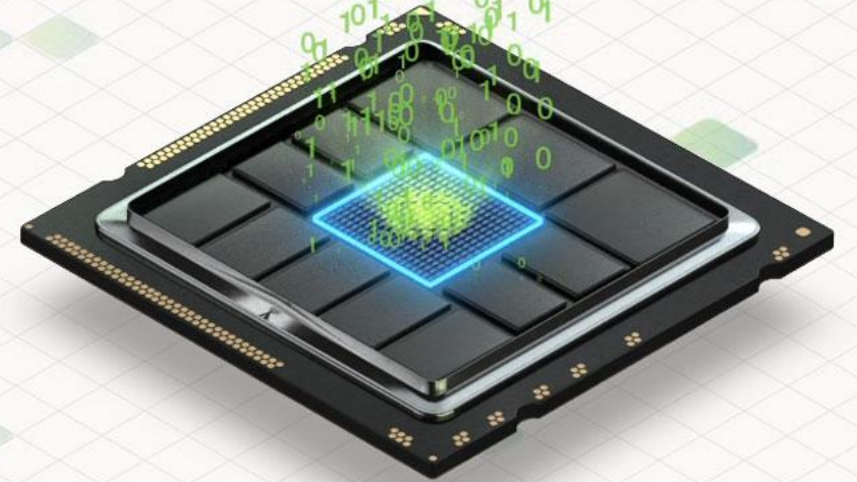


The End of Flash? Why ReRAM Is Taking Over the Edge

Eran Briman, VP Marketing and Business Development

November 21st, 2025



Weebit: Leading Licensor of ReRAM IP

Leading developer of innovative next-generation memory technologies for the global semiconductor industry

We are enabling a leap forward in memory technology for a new era of connected devices



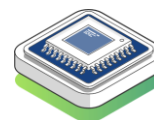
Founded: 2015

Located in Israel & France
ASX: WBT



R&D partner

CEA-Leti, leading micro-electronics research institute



Silicon-proven technology

Volume production expected 2026
Proven in multiple production-fab lots



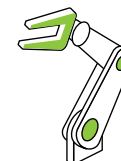
World-leading team

>60 personnel (90% engineers/ scientists)



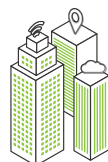
Signed multiple commercial deals

Engaged with most top-tier foundries, IDMs and customers



Qualified for 85°C, 125°C, 150°C

Fully qualified per JEDEC
Fully qualified per AEC-Q100 150°C
Available for chip designers



Financial strength

>A\$100m cash end of 2024
Well-funded going forward



Current business model

Product & IP licensing to semiconductor companies & fabs



Process nodes

130nm, 65nm, 28nm, 22nm and below
Bulk, BCD, FD-SOI, FinFET

ReRAM – Innovative NVM for a New Era



Weebit ReRAM

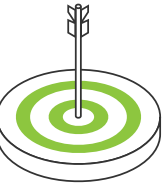
- ❖ Scales to advanced geometries where flash can't (<28nm)
- ❖ Ultra-low power
- ❖ Cost-effective
- ❖ Easy to integrate
- ❖ Highly reliable even at high temperatures
- ❖ Immune to EMI and radiation
- ❖ Fully qualified per JEDEC and AEC-Q100
- ❖ >90 patents/applications

| The ReRAM Difference

ReRAM is the Emerging Memory Best Positioned to Lead the Next NVM Wave

		OTP/ MTP	eFlash	MRAM	PCM	ReRAM
Reliability	High-temp reliability	●	●	●	●	●
	Radiation immunity	●	●	●	●	●
	EMI immunity	●	●	●	●	●
Performance	Low power	●	●	●	●	●
	Fast programming	●	●	●	●	●
	High endurance	●	●	●	●	●
Cost	Production cost	●	●	●	●	●
	Contaminating materials	●	●	●	●	●
	Small module size	●	●	●	●	●

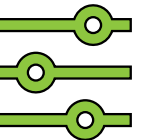
Weebit is the only independent provider of qualified ReRAM



We can license our technology to any fab



We can customize Weebit ReRAM per customer requirements



The Transformation of the Embedded NVM Market

The market has transitioned over the last 3-4 years, and today it is clear to everyone that ReRAM is it!

2020-2022 – The Transformation Begins

Automotive

MCU @ 28nm

Infineon & TSMC

ReRAM for power
mgmt. @ 40nm
TSMC

Trusted supplier
ReRAM qualified
Weebit & SkyWater



2023 – Broadening Applications and Market Momentum

IoT & mobile MCU

NVM @ 22nm

TSMC; UMC

MP shipment @ 40nm

TSMC; STMicro, others

Power mgmt. NVM

Weebit & DB HiTek



2024 – A Clear Shift

TSMC roadmap
moving from **MRAM**
to **ReRAM**

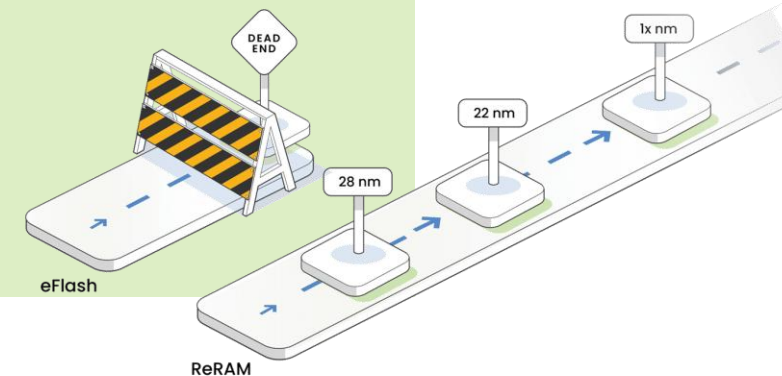
Shipping to more
customers @ 22nm
Nordic, BRCM, others

Power mgmt. NVM
Weebit & onsemi



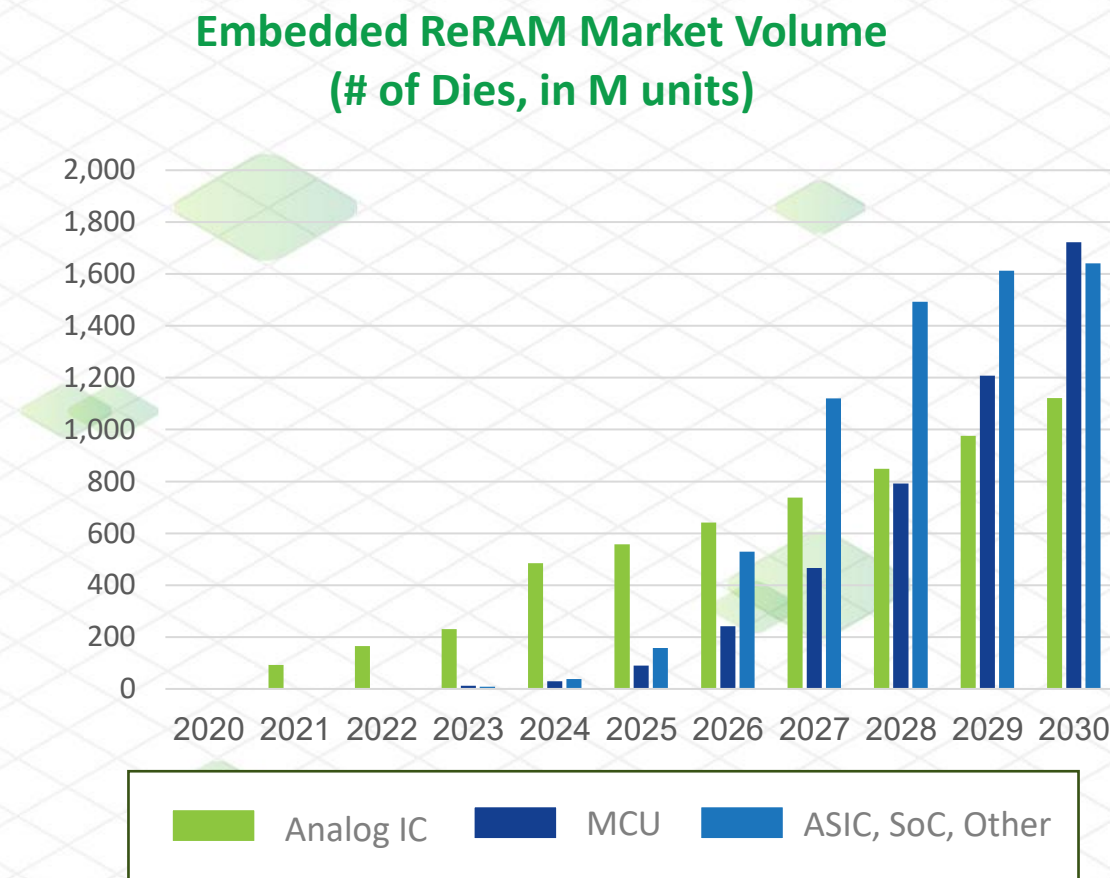
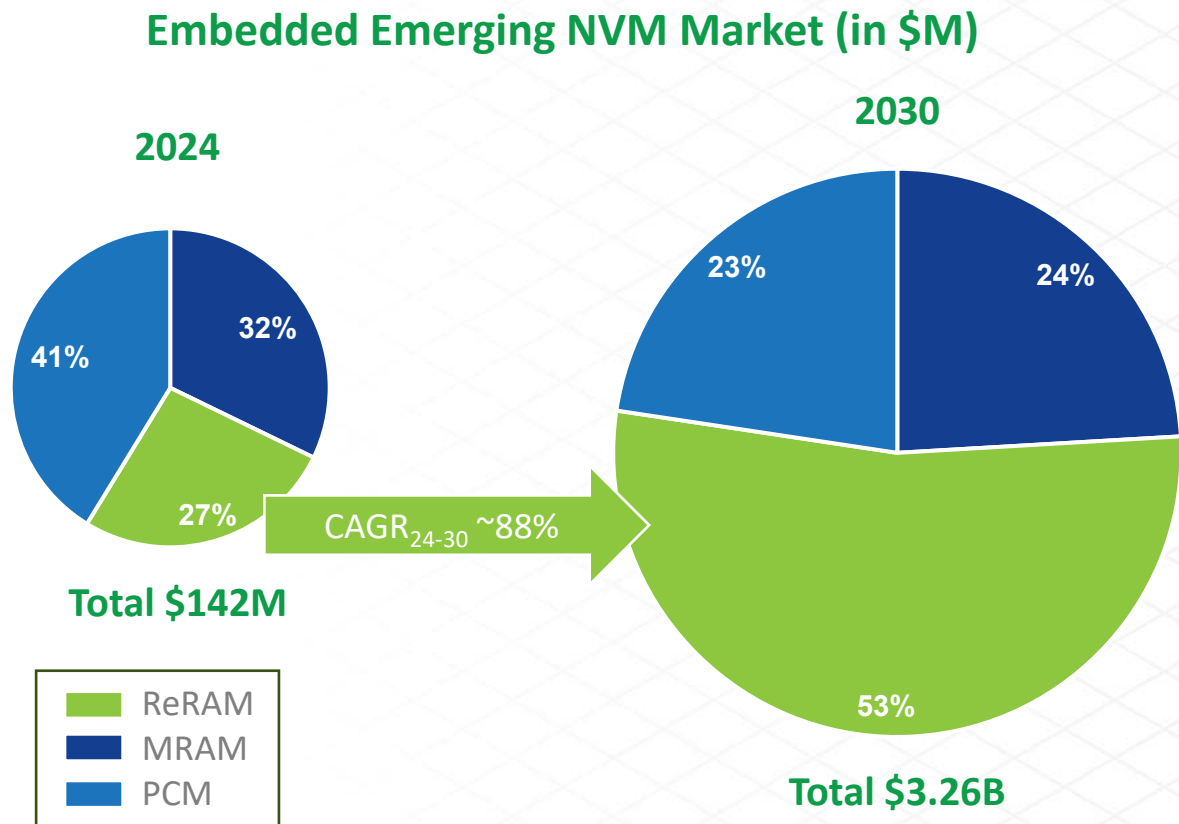
2025 Onwards

ReRAM becoming
the **de-facto**
embedded NVM
standard



* Source: Emerging Non-Volatile Memory report, Yole Intelligence, 2023 and 2024; Internal company information

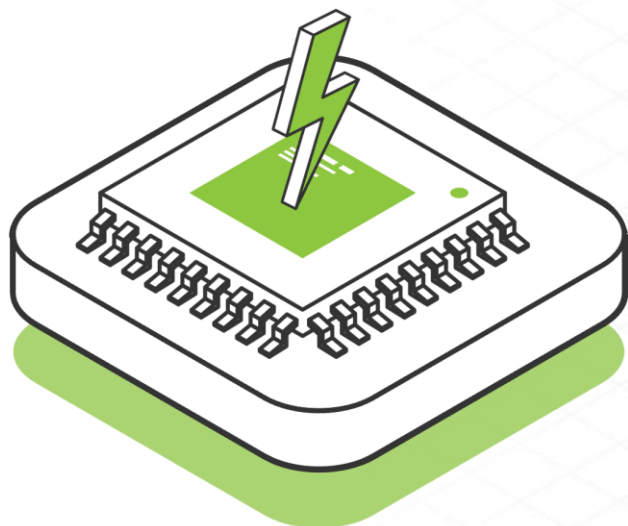
The Rise of ReRAM



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

Source: Emerging Non-Volatile Memory report, Yole Group, 2025

| Embedded NVM for Power Management ICs



APPLICATIONS

Code storage (controller), configuration, trimming and calibration in high-voltage designs & size-constrained devices



TREND: SYSTEM INTEGRATION

Reduces cost, size and complexity; enhances power efficiency and security



REQUIREMENTS

Low density (1Mb), low endurance (1K), high-temp operation (125°C)
Must be easy to integrate with BCD process (BEOL preferred)

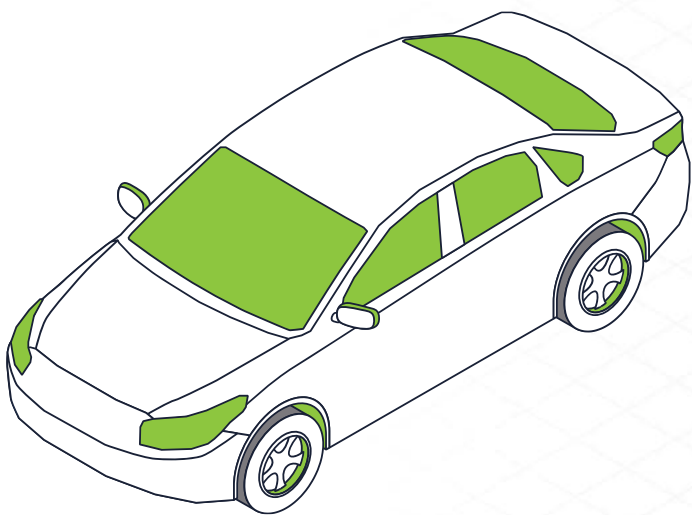


ALTERNATIVES

OTP and MTP (limited endurance, large die size)
eFlash (integration cost and risk!)
ReRAM (lower cost, easy integration, high-temp stability)

Weebit has agreements with onsemi (65nm BCD) and DB HiTek (130nm BCD)

| Embedded NVM for Automotive



APPLICATIONS

Microcontrollers, motor control, power management
NVM for: code storage, data tables, data logging, configuration



TREND: SCALING TO ADVANCED NODES

Increasing number of semiconductors per car, performance requirements increasing; NVM must effectively scale <28nm



REQUIREMENTS

High-temp reliability (>150°C), high endurance (>100K), high density (2-32MB), EMI immunity, fast switching speed, secure



ALTERNATIVES

eFlash can no longer scale <28nm
MRAM (not immune to EMI, high complexity and cost)
ReRAM (EMI immunity, high-temp stability)
PCM (expensive manufacturing, single source)

Weebit ReRAM Qualified to AEC-Q100 Operation

Confirms quality & reliability for high-temp automotive applications



AEC-Q100: Key to Getting Designed Into Automotive MCUs & Other Components

- ❖ Demonstrated **stability at 150°C operation for up to 100K endurance cycles**, including cycling and post-cycling high-temp data retention at **175°C**
- ❖ Completed qual in SkyWater S130 using module with **1T1R cell architecture**
- ❖ Parameters of Weebit ReRAM align with automaker specifications

Test Name	Test Description	Stress Conditions	Sample Size	Results
NVCE	High Temp Cycling Endurance	100K cycles @ $T_{\text{Cycling}} = 150^{\circ}\text{C}$	3 lots; 77 units from each lot	0 fails
PCHTDR	High Temp Post Cycle Data Retention	100K cycles @ $T_{\text{Cycling}} = 150^{\circ}\text{C}$ $T_{\text{Bake}} = 175^{\circ}\text{C}$ for 2000h	3 lots; 77 units from each lot	0 fails
HTOL	High Temperature Operating Life	Post 100K cycles @ $T_{\text{Cycling}} = 150^{\circ}\text{C}$ Read @ 150°C for 1000 hours	3 lots; 77 units from each lot	0 fails
ELFR	Early Life Failing Rate	48h Bake at 150°C	3 lots; 800 units from each lot	0 fails

| NVM for Edge AI



APPLICATIONS

AI inference at the edge
Broad applications in consumer, industrial, IoT, automotive and more



CHALLENGES

AI workloads are memory-intensive
Latency and throughput limits of traditional memory can cause stalls in AI pipelines
Ultra-low-power needed in many end devices

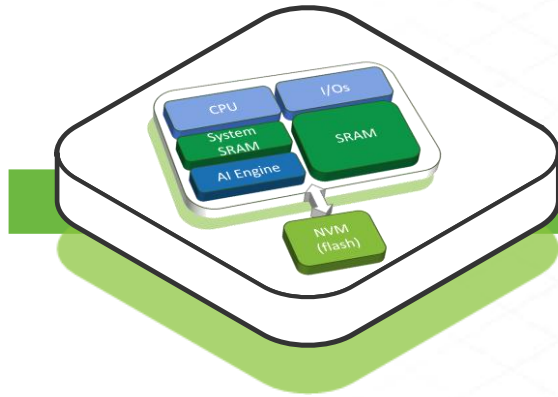


REQUIREMENTS

High density (4-32MB) for AI weights, high bandwidth, wide temperature range, low power consumption, scalable to advanced nodes

The Journey to New AI Architectures with ReRAM

TODAY'S TWO CHIP SOLUTION



- External NVM (flash) holds weights
- Wasteful in terms of size & cost
 - Prohibitive power
 - Constrained data bandwidth and performance
 - Insecure, vulnerable to hacking

SINGLE CHIP NEAR-MEMORY COMPUTE



- External NVM eliminated
- Eliminates most data movements → Low-power
 - More efficient storage: **4X greater capacity** than SRAM

IN-MEMORY COMPUTE WITH RERAM



- Computation performed *within* memory arrays
- **Completely eliminates** data traffic → Ultra-low power
 - Enables **Analog Compute** → Store larger models efficiently

NEUROMORPHIC COMPUTE WITH RERAM



- Future systems will mimic brain behavior
- Fast real-time processing on **massive amounts of data**
 - Three orders of magnitude **(x1000) better energy efficiency**

ReRAM-based architectures are central to the transformation of AI, bringing memory and compute together for faster, more brain-like intelligence

| In Conclusion...

eFLASH CAN'T MEET ADVANCED SOC REQUIREMENTS

Automotive, industrial MCUs, edge AI, Power Management ICs and ultra-low power IoT applications need a new NVM

THE INDUSTRY HAS CHOSEN RERAM

TSMC and other foundries are using ReRAM for numerous applications; Weebit is the only independent provider of qualified ReRAM



RERAM IS THE NVM FOR A NEW GENERATION

ReRAM meets the reliability, endurance, scalability, performance and cost requirements of modern SoCs

WEEBIT RERAM IS GAINING TRACTION

Multiple commercial deals including onsemi and DB HiTek; several products in design with Weebit ReRAM

Thank You!

www.weebit-nano.com



 **Weebitnano**
THE NEXT NVM IS HERE