

Weebit Nano successfully qualifies its ReRAM module

*Milestone attests to quality, reliability and repeatability of Weebit's technology;
brings the Company closer to customer production*

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Weebit Nano Limited (ASX:WBT; Weebit or the Company), a leading developer of next-generation memory technologies for the global semiconductor industry, is pleased to announce it has successfully completed full technology qualification of its Resistive Random-Access Memory (ReRAM) module manufactured by its R&D partner CEA-Leti. This is the first full qualification of Weebit ReRAM technology, a key step that must be completed for every semiconductor product on each new target process.

The [qualification](#), using Weebit's demo chips incorporating its ReRAM module, was performed based on well-known [JEDEC](#) industry standards for non-volatile memories (NVMs). It confirmed the suitability of Weebit's embedded technology for volume production.

The JEDEC standards impose rigorous testing of many silicon dies blindly selected from three independent wafer lots, as well as collecting a significant data set for detailed analysis. Obtaining in-depth statistics with a standards-based approach is key to showing the maturity of Weebit's ReRAM.

All the dies successfully passed the entire set of qualification tests, demonstrating the quality, repeatability and reliability of Weebit's ReRAM, and confirming its suitability for volume production as embedded IP.

The results of the qualification show high endurance, long data retention before and after endurance testing, as well as industrial-grade high-temperature stability:

- High endurance: 10K cycles (Flash equivalent) endurance
- 10 years' data retention before and after endurance testing
- Industrial-grade high-temperature stability – up to 85°C
- 3x SMT cycles (by itself a powerful retention test).

These represent key advantages of Weebit ReRAM compared to other embedded NVM technologies.

Weebit is now working to extend the qualification to even higher temperatures and endurance levels.

Coby Hanoch, CEO of Weebit Nano, said: "Successfully completing full qualification of our technology is a major milestone. As is customary for NVM qualification and semiconductor devices in general, tests are based on industry standards, providing confidence in the quality, repeatability and reliability of Weebit's ReRAM. Leti's state-of-the-art fab makes these qualification results significant and relevant for other foundries and potential customers and could be used by customers as a baseline for their qualification process. We are now engaged at various stages with multiple Tier-1 foundries and semiconductor companies, and having achieved this milestone, our activities with potential customers are accelerating."



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The Weebit ReRAM demo chip comprises a full sub-system for embedded applications, including the Weebit ReRAM module, a RISC-V microcontroller (MCU), system interfaces, memories and peripherals. The ReRAM module includes a 128Kb ReRAM array, control logic, decoders, IOs (Input/Output communication elements) and error correcting code (ECC). It is designed with unique patent-pending analog and digital smart circuitry running smart algorithms that significantly enhance the memory array's technical parameters.

Approved for release by the Board of Weebit Nano Limited.

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About Weebit Nano Limited

Weebit Nano Ltd. is a leading developer of next-generation 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, the technology can be quickly and easily integrated with existing flows and processes, without the need for special equipment or large investments.

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