



Weebit Nano's ReRAM IP now fully qualified in SkyWater Technology's S130 process

Achievement attests to quality, reliability and repeatability of Weebit's embedded IP for use in customer production chips

HOD HASHARON, Israel and BLOOMINGTON, Minn. – June 29, 2023 – [Weebit Nano Limited](#) (ASX:WBT), a leading developer of advanced memory technologies for the global semiconductor industry, and [SkyWater Technology](#) (NASDAQ: SKYT), the trusted technology realisation partner, confirm Weebit Resistive Random-Access Memory (ReRAM) IP has been fully qualified for industrial temperatures employing SkyWater's 130nm CMOS (S130) process, including third party processing.

The full qualification confirms the quality, repeatability and reliability of Weebit's embedded ReRAM module, when SkyWater customers use Weebit's proven non-volatile memory (NVM) IP in volume production. The [qualification](#) used demo chips produced by SkyWater which integrate Weebit ReRAM IP. The tests were performed per the [JEDEC](#) industry standards for NVMs which impose rigorous testing of many silicon die blindly selected from three independent wafer lots.

All the die successfully passed the entire set of qualification tests, validating the ReRAM's suitability for volume production as embedded IP. The Weebit ReRAM IP was qualified for:

- High endurance: 10K flash-equivalent cycles
- Data retention: 10 years at industrial grade temperatures
- Retention after cycling, exhibiting robust lifetime performance
- 3x SMT solder reflow cycles

Weebit ReRAM enables companies to create systems on chip (SoC) designs that are more energy efficient, more reliable, better secured and lower cost than those using flash or other emerging NVMs. [Weebit ReRAM technology in S130](#) is an ultra-low power, radiation tolerant and fast NVM that companies can use in developing highly integrated SoCs for applications including analog/mixed-signal, IoT, automotive, industrial, medical and more.

Coby Hanoch, CEO of Weebit Nano, said: "Successful qualification of our technology in SkyWater S130 confirms that customers can have confidence that the IP will work reliably as specified. Together with SkyWater, we are engaged in numerous customer discussions and anticipate that Weebit ReRAM will be in design with one or more of these customers during this calendar year. SkyWater's technology as-a-service approach is a great differentiator for customers developing new IP, and its robust process technologies for mixed-signal designs, rad-hard ICs, ROICs and power management are an excellent fit for our ReRAM technology, offering a unique value-add to various markets and applications."

Steve Kosier, SkyWater CTO, said: "Our customers are increasingly looking to integrate NVM in their SoC designs to embed more intelligence and capabilities in their next-generation products across a range of markets. Weebit ReRAM is ideal for many of our customers' applications, with ultra-low power consumption, fast access time, excellent reliability even at high temperatures and tolerance to radiation and electro-magnetic fields. As a U.S.-based pure-play foundry, SkyWater's mixed-signal CMOS platform has been used reliably for billions of devices to-date, in the automotive, aerospace, industrial and medical

markets. Now with an embedded NVM enabled in our CMOS platform, we are able to better serve the smart IoT device and edge computing markets.”

Weebit ReRAM IP in S130

Weebit ReRAM IP is an embedded module with a complete set of EDA views and collateral compatible with the industry leading design flows to enable smooth integration by SoC architects. The module in S130 includes a 256Kb ReRAM array, control logic, decoders, IOs (Input/Output communication elements) and error correcting code (ECC). Its scalable, modular design enables customisation according to a customer’s specific design requirements (e.g., memory density, word size, system interface).

The module is designed with unique patent-pending analog and digital circuitry running smart algorithms that significantly enhance the memory array’s technical parameters. Upon request, the module can be made available as part of a complete subsystem including a RISC-V microcontroller (MCU), system interfaces, Static Random-Access Memory (SRAM), and peripherals. Weebit ReRAM can be easily scaled to other processes.

Weebit received final test results on its S130 process on 28 June 2023 after market close.

-ENDS-

Authorised for release by the Board of Weebit Nano Limited.

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Availability

The Weebit ReRAM IP module in SkyWater’s 130nm CMOS process is qualified and available now with full support in SkyWater’s S130 process design kit (PDK).

To learn more, visit www.weebit-nano.com/reram-s130 or contact your SkyWater or Weebit sales representative.

Weebit ReRAM can be easily scaled to other processes. Contact info@weebit-nano.com for more information.

Attendees of both [DAC](#) and [SEMICON West](#) 2023 in San Francisco, Calif. can see a demonstration of Weebit ReRAM IP in SkyWater’s S130 process in Weebit’s DAC booth #2224 from July 10-12. Contact info@weebit-nano.com to schedule a personal demonstration.

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 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. See www.weebit-nano.com and follow us on <https://twitter.com/WeebitNano>.

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About SkyWater Technology

SkyWater (NASDAQ: SKYT) is a U.S.-based semiconductor manufacturer and a DMEA-accredited Category 1A Trusted Foundry. SkyWater's Technology as a Service model streamlines the path to production for customers with development services, volume production and heterogeneous integration solutions in its world-class U.S. facilities. This pioneering model enables innovators to co-create the next wave of technology with diverse categories including mixed-signal CMOS, ROICs, rad-hard ICs, power management, MEMS, superconducting ICs, photonics, carbon nanotubes and interposers. SkyWater serves growing markets including aerospace & defense, automotive, biomedical, cloud & computing, consumer, industrial and IoT. For more information, visit: www.skywatertechnology.com.