



Weebit Nano and DB HiTek tape-out ReRAM module in DB HiTek's 130nm BCD process

Advanced NVM technology expected to be fully qualified and available to DB HiTek customers in Q2 2025

HOD HASHARON, Israel and SEOUL, South Korea – July 31, 2024 – [Weebit Nano Limited \(ASX:WBT\)](#) (Weebit), a leading developer and licensor of advanced memory technologies for the global semiconductor industry, and tier-1 semiconductor foundry [DB HiTek](#) have taped-out (released to manufacturing) a demonstration chip integrating Weebit's embedded Resistive Random-Access Memory (ReRAM) module in DB HiTek's 130nm Bipolar-CMOS-DMOS (BCD) process. The highly integrated demo chips will be used for testing and qualification ahead of customer production, while demonstrating the performance and robustness of Weebit's technology.

This important milestone in the collaboration between Weebit and DB HiTek (previously announced on 19 October 2023¹) was completed on-schedule as part of the technology transfer process. The companies are working to make Weebit ReRAM available to DB HiTek customers for integration in their systems on chips (SoCs) as embedded non-volatile memory (NVM), and aim to have the technology qualified and ready for production in the second quarter of the 2025 calendar year. Weebit ReRAM is available now to select DB HiTek customers for design prototyping ahead of production.

DB HiTek's 130nm BCD process is ideal for analog, mixed-signal and high-voltage designs in applications such as consumer, industrial, and IoT devices. For these applications, Weebit ReRAM provides a cost-effective, low-power NVM that is easy to integrate and has proven excellent retention at high temperatures. ReRAM offers significant advantages over flash for BCD processes because it is a back-end-of-line (BEOL) technology which does not require significant process tuning. Weebit ReRAM also provides higher density and endurance compared to conventional Multi-Time Programmable (MTP) technologies.

Coby Hanoch, CEO of Weebit Nano, said: "This milestone confirms we are proceeding towards qualification of our ReRAM in DB HiTek's BCD process on schedule, making the technology available to this leading foundry's extensive customer base. We're already in early adopter discussions with several DB HiTek customers who are interested in integrating ReRAM in their SoCs. One area of interest is smart power management integrated circuits (PMICs), where integrating the PMIC with the microcontroller (MCU) on one die can lead to performance, security, power and cost advantages."

Ki-Seog Cho, CEO, DB HiTek, said: "Many of our customers, especially those with power management and high-voltage designs, are looking to gain the advantages of embedded ReRAM. Weebit ReRAM will provide customers using our 130nm BCD process with a low-power, cost-effective and high-density NVM. And by moving from a two-chip to a single-die solution, they can save cost and power, and reduce complexity and size. We have a great working relationship with Weebit, and we're excited to continue this very promising collaboration."

¹ <https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02727177-3A628636&v=70bc033a22188bdfefb8a0b8ad3c24897ef2837d>

Once qualified, DB HiTek will add Weebit's memory module to its BCD 130nm Process Design Kit (PDK). DB HiTek customers can use the standard modules in the PDK or have modules customized for their needs.

The demonstration chip includes a 1Mb ReRAM module that can be scaled to other densities as needed. This fully-integrated module also includes all necessary control logic, smart algorithms, decoders, IOs (Input/Output communication elements) and error correcting code (ECC). It is designed with unique patent-pending analog and digital circuitry running smart algorithms that significantly enhance the memory array's technical parameters. This ReRAM module is further integrated into the demo chip, comprising a full sub-system for embedded applications, including the Weebit ReRAM module, a RISC-V MCU, SRAM, peripherals and system interfaces including SPI, UART, JTAG and GPIO.

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

About DB HiTek

Headquartered in South Korea, DB HiTek Co., Ltd. is world leader in specialty foundry with a broad range of support services plus a robust portfolio of competitive process technologies that include Analog/Power (BCDMOS), CMOS Image Sensor (CIS), Mixed-Signal, High Voltage CMOS, RF HRS/SOI CMOS, Super Junction MOSFET technologies. For more information, visit www.dbhitek.com.

About Weebit Nano Limited

Weebit Nano Ltd. is a leading developer and licensor 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 or follow us on LinkedIn: <https://www.linkedin.com/company/weebit-nano>.

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