

Weebit Nano nears productisation, negotiating initial customer agreements

Received first SkyWater wafers with Weebit ReRAM; taped-out first 22nm demo chips; evaluations progressing with Tier-1 fabs, customers

Q2 FY23 Quarterly Activities Report

Key highlights

- Received first SkyWater silicon wafers with embedded Weebit ReRAM, qualification now underway
- Taped-out first demo chip in advanced 22nm FD-SOI process
- Successfully qualified its first ReRAM module, meeting industry standard requirements for production quality
- ReRAM selector development serving embedded and discrete chips, using fab-friendly materials and tools
- Engagement with potential customers and partners, leading fabs in different stages of discussion and evaluation

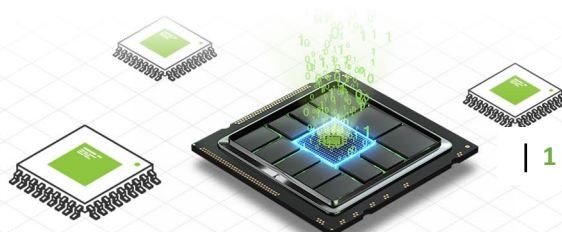
25 January 2023 – Weebit Nano Ltd (**ASX: WBT, Weebit or Company**) is pleased to provide this activity report for the quarter ended 31 December 2022 (**Q2 FY23**), along with the Company's Appendix 4C cash flow report.

Commenting on Q2 FY23, Weebit CEO Coby Hanoch said: "Weebit Nano achieved key milestones in its commercialisation roadmap during the period, receiving the first silicon wafers with its embedded ReRAM from a commercial fab, commencing qualification at SkyWater, taping-out its first 22nm demo chip, ramping up discussions and evaluations with Tier-1 foundries and potential customers, and progressing longer-term development activities for the discrete memory market. Our progress in the first half of the financial year means we are well-placed to productise our embedded ReRAM technology and secure first revenues in 2023.

"Technology qualification is now underway with SkyWater - the final step before productisation and first orders on SkyWater's 130nm process. Our first taped-out silicon wafers from SkyWater's U.S. fab have validated the manufacturing process, enabling potential customers to confidently start incorporating our ReRAM within their system-on-chips (SoCs). While qualification data from demo chips produced at Leti is highly valuable, technology qualification is required for every new foundry to confirm the technology meets production-level parameters at the specific facility.

"The tape-out of our first 22nm demo chip is a significant step forward for Weebit, enabling us to address a fast-growing segment of the market where the incumbent technology is not viable. While 22nm is one of the industry's most common process node, only a few foundries globally can manufacture at this advanced geometry. Our ability to deliver exceptional performance for connected and ultra-low power applications at 22nm FD-SOI further strengthens our engagement with the world's most sophisticated fabs.

"Our embedded ReRAM is nearing commercialisation at a pivotal juncture for the industry. Demand for ReRAM is growing rapidly with many Tier-1 foundries now looking to add ReRAM as an alternative NVM to cater to customer requests. The use of ReRAM from the world's leading foundry in major consumer products has been instrumental in changing industry perception of ReRAM as a future technology to one that is available right now. This change, combined with our qualification at Leti and the wafers from SkyWater, has seen our engagement



with multiple world-leading fabs increase, and we are in different phases of technical evaluation with several of them.

“During the period we also strengthened our leadership team with Ed McKernan joining as Director of North America Sales, driving our sales activities in North America in general and with SkyWater customers specifically. We also brought on Gideon Intrater as a consulting Business Strategy Advisor, helping us examine potential areas of growth and strategic expansion.”

First SkyWater wafers with Weebit ReRAM

Weebit achieved a major commercialisation milestone in Q2 FY23, receiving from SkyWater Technology the first silicon wafers integrating its embedded ReRAM module. These first wafers from a commercial fab confirm the ease of manufacturing of Weebit ReRAM with standard tools, enhancing customer confidence in the technology.

The wafers have been sliced into chips, packaged, and tested, and are fully functional. Weebit has started the qualification process for these wafers. Designed in SkyWater’s 130nm CMOS process, Weebit will use these chips to demonstrate its technology, and potential customers can use them for testing and prototyping.

Qualification is expected to be completed in the first half of CY23, enabling mass production on SkyWater’s 130nm CMOS process.

Taped-out first 22nm demo chip

On 2nd January, Weebit taped-out its first demo chips integrating its embedded ReRAM module in an advanced 22nm fully depleted silicon on insulator (FD-SOI) process. 22nm is one of the industry’s most common process nodes.

Weebit and its development partners CEA-Leti and CEA-List designed a full IP memory module integrating a multi-megabit ReRAM block targeting the 22nm FD-SOI process, delivering a low-power, cost-effective embedded non-volatile memory (NVM) able to withstand harsh environmental conditions.

New NVM technologies, such as Weebit ReRAM, are required to address these smaller process geometries for IoT, 5G, edge AI and automotive as embedded flash is not viable below 28nm.

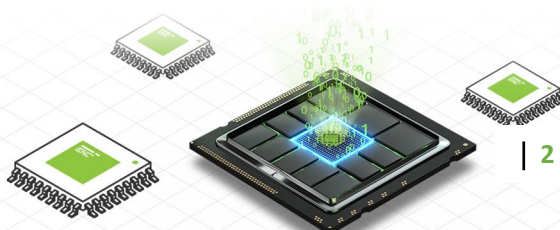
Qualified first ReRAM module

During the quarter, Weebit successfully qualified its embedded ReRAM memory module produced at Leti, demonstrating compliance with JEDEC microelectronics standards at industrial temperatures for endurance, retention, and SMT reflow. Technology qualification at Leti’s state-of-the-art facility shows the repeatability and maturity of Weebit’s ReRAM technology, with this data resulting in new discussions and technical evaluations with several Tier-1 fabs and potential customers.

Weebit and Leti have commenced the qualification process at higher temperatures and endurance levels, which are required for some advanced applications.

Development of ReRAM selector progress

Weebit and Leti progressed the development of a ReRAM selector during the quarter, a key step towards high-capacity memory arrays required for discrete memory chips using fab-friendly materials and standard tools. This innovation means the Weebit ReRAM selector can be easily integrated into any CMOS fab, reducing manufacturing complexity and costs.



A selector is a key component which enables implementation of large memory arrays in much smaller chip areas. While the initial focus of Weebit's ReRAM selector was for discrete chips, the recent progress makes it also suitable for future embedded applications, such as edge AI and automotive.

Evaluations with Tier-1 fabs and customers

Discussions and technical evaluations with several Tier-1 fabs and key customers are progressing well. While these evaluations are in different stages and some fabs require significant technical study and validation, they have the potential to lead to new licensing agreements and orders.

Strengthening the team, focus on US sales

During the quarter, Weebit enhanced its management team with two key appointments. Mr Ed McKernan was appointed Director of North America Sales and Mr Gideon Intrater joined as Business Strategy Advisor. Mr McKernan has broad sales experience across ReRAM and NVM technologies, including 11 years in Sales Director roles at ReRAM technology developer Adesto. Mr McKernan will drive Weebit's sales in North America, initially focused on SkyWater customers.

Mr Intrater brings vast experience in the semiconductor space to Weebit, previously holding executive roles in multiple companies including CTO at Adesto, Chair of the JEDEC JC-42.4 Non-Volatile Memory Committee, and EVP Marketing at MIPS, an embedded processor company. Mr Intrater will work with Weebit's executive team to explore potential growth opportunities.

ReRAM environmental impact analysis

In January, Weebit and CEA-Leti completed a lifecycle analysis of Weebit ReRAM compared to another emerging non-volatile memory technology with ReRAM shown to have a significantly lower environmental impact. The analysis estimated the contribution of ReRAM and Magnetoresistive Random Access Memory (MRAM) to climate change based on their production flows, including raw materials and manufacturing processes. The study found ReRAM was more eco-friendly than MRAM on all measured parameters, including:

- 30% reduction in GHG emissions
- 41% reduction in water use
- 53% reduction in use of minerals and metals

More information is available at <https://www.weebit-nano.com/weebit-nano-rram-reram-ip-nvm-for-semiconductors-green-materials-eco-friendly-technology-production/>

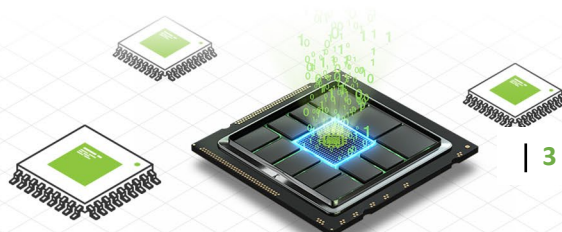
Market engagement ramping-up

Weebit is ramping-up engagement with potential customers and partners as it nears productisation, participating in several industry conferences during the quarter. These included Design & Reuse's IP-SoC Conference in Grenoble and an invited talk at Stanford University's Non-Volatile Memory Technology Symposium (NVMTS).

In November, Chair Dadi Perlmutter and CEO Coby Hanoch met with shareholders in Sydney, Melbourne and Perth and presented at three local investor conferences.

Upcoming events and conferences include:

- 14-16 March 2023: Embedded World 2023, Germany



- April 2023: IP-SoC Silicon Valley 2023, California

For more info visit www.weebit-nano.com/events

Financials

Notable operating cash flow items during the quarter included R&D expenses of \$2.5 million. Total R&D payments for the quarter were \$680,000. Payments to related parties over Q2 FY23 were \$199,000, inclusive of fees paid to Directors and the CEO's cost of payroll. At the end of the quarter, Weebit had a strong cash balance of \$45.6 million.

Looking forward

Weebit Nano is on track to achieve the following milestones over the coming quarters:

- Complete technology qualification with SkyWater;
- Sign new agreements with partners and customers;
- Sign up a Tier-1 fab; and
- Commence scaling embedded ReRAM technology below 22nm.

Investor briefing details

CEO Coby Hanoch will participate in a "Meet the CEO" interview following the Company's H1 FY23 results. More details on this event will be lodged on the ASX in the coming weeks.

- ENDS -

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

For further information, please contact:

Investors

Eric Kuret, Automic Group

P: +61 417 311 335

E: eric.kuret@automicgroup.com.au

Media – Australia

Tristan Everett, Automic Group

P: +61 403 789 096

E: tristan.everett@automicgroup.com.au

Media – US

Jen Bernier-Santarini, Weebit Nano

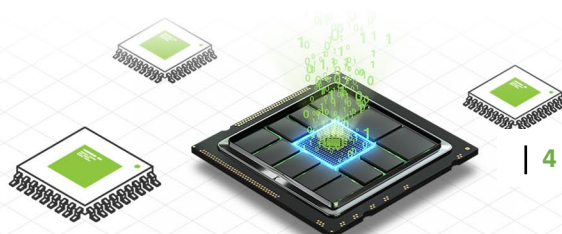
P: +1 650-336-4222

E: jen@weebit-nano.com

330 Collins St., Melbourne VIC 3000, Australia

Office: +61-3-8689 9997

info@weebit-nano.com | www.weebit-nano.com



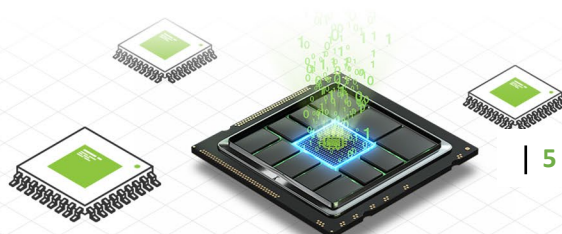
About Weebit Nano Limited

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, 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 or follow us on <https://twitter.com/WeebitNano>

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Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity

Weebit Nano Limited (ASX: WBT)

ABN

15 146 455 576

Quarter ended ("current quarter")

31 December 2022

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers		
1.2 Payments for		
(a) research and development	(680)	(898)
(b) product manufacturing and operating costs	-	-
(c) advertising and marketing	(208)	(442)
(d) leased assets	(70)	(148)
(e) staff costs	(1,454)	(2,869)
(f) administration and corporate costs	(364)	(916)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	310	387
1.5 Interest and other costs of finance paid	(9)	(13)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)	-	-
1.9 Net cash from / (used in) operating activities	(2,475)	(4,899)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) businesses	-	-
(c) property, plant and equipment	(8)	(13)
(d) investments	-	-
(e) intellectual property	-	-
(f) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from disposal of:		
	(a) entities	-	-
	(b) businesses	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) intellectual property	-	-
	(f) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	(8)	(13)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	64	64
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(1)	(1)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	63	63

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	48,026	50,211
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(2,475)	(4,899)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(8)	(13)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	63	63
4.5	Effect of movement in exchange rates on cash held	23	267
4.6	Cash and cash equivalents at end of period	45,629	45,629

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	45,629	28,026
5.2	Call deposits	-	20,000
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	45,629	48,026

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	199
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<p><i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i></p> <p>The payments at 6.1 relate to salaries of management and directors' fees for entities of the group.</p>		

7.	Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i> <i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	Total financing facilities	-	-
7.5	Unused financing facilities available at quarter end		-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)	(2,475)
8.2	Cash and cash equivalents at quarter end (item 4.6)	45,629
8.3	Unused finance facilities available at quarter end (item 7.5)	-
8.4	Total available funding (item 8.2 + item 8.3)	45,629
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	18
<i>Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.</i>		
8.6	If item 8.5 is less than 2 quarters, please provide answers to the following questions:	
8.6.1	Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
	Answer:	
8.6.2	Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
	Answer:	
8.6.3	Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
	Answer:	
<i>Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.</i>		

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 25 January 2023
.....

Authorised by: The Board of Directors
.....
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.