PITT STREET RESEARCH

Weebit Nano

onsemi deal is the largest yet

Share Price: A$3.21

ASX: WBT

Sector: Semiconductor Equipment

3 January 2025

On 2 January 2025, Weebit Nano (ASX:WBT) announced the third license deal for its ReRAM technology, in this case with US chip manufacturer onsemi (NASDAQ:ON), which plans to use the technology on its TREO Platform.

We believe this license deal is potentially Weebit Nano's large deal yet. onsemi generated revenues of US$8.3bn in 2023 and is by far the largest of Weebit Nano's three current customers. The company is Nasdaq-listed and has a market capitalisation of US$27bn.

Big ambitions with the TREO Platform

onsemi aims to integrate Weebit Nano's ReRAM in its TREO platform for analogue and mixed-signal applications, such as chips for power management, sensor interfaces and communication devices. These have their end use in areas such as Automotive, factory automation, robotics and healthcare. onsemi's ambition is to generate US$1BN in revenues from the TREO Platform by 2030, mainly from the Automotive, Industrial and Artificial Intelligence sectors.

Another major validation for Weebit Nano

Following the DB HiTek deal in 2023, we believe this deal with onsemi is yet another major validation of ReRAM as the next generation Non-Volatile Memory (NVM) in general. But specifically for Weebit Nano, we believe this deal validates the company as a very credible source of independent ReRAM IP (Intellectual Property), i.e. ReRAM other than from TSMC and UMC.

We believe the deal will definitely open some eyes in the industry and may also expedite existing commercial discussions Weebit Nano is having with other IDM's (Integrated Device Manufacturers), like onsemi, foundries and product companies.

Management incentives based on deals in 2025

Senior management's equity remuneration for 2025 has been tied 100% to closing 3 deals with foundries/IDMs, 3 deals with product companies and finalising the qualification at DB HiTek in 2025. We believe this shows a lot of confidence in the commercialisation process.

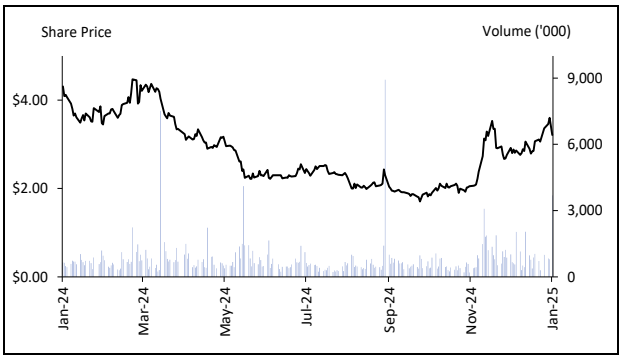
Valuation reiterated

We reiterate our valuation of Weebit Nano of A$9.56 per share. Key share price catalysts include additional commercial deals with IDM's, foundries and product companies as well as progress on qualification and the technology transfer with respect to DB HiTek and onsemi. Please see details on our valuation and key risks at the end of this note.

Market cap. (A$m)	665.3
# shares outstanding (m)	207.3
# shares fully diluted (m)	226.6
Market cap ful. dil. (A$m)	727.2
Free float	91.5%
12 months high/low	1.70 /4.59
Average daily volume (x1,000)	875.3
Website	www.weebit-nano.com

Source: Company, Pitt Street Research

Share price (A$) and avg. daily volume (k, r.h.s.)



Source: Refinitiv Eikon

Valuation metrics	
Valuation per share (A$)	9.56

Source: Pitt Street Research

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Disclosure: Pitt Street Research directors own shares in Weebit Nano.

onsemi is a highly diversified IDM

onsemi (NASDAQ:ON) was spun out of Motorola in 1999 and is a so-called Integrated Device Manufacturer (IDM), which means it designs and manufactures its semiconductors in-house. By contrast, fabless chip companies, such as Apple or Qualcomm, design their own chips, but outsource production of the actual chips to semiconductor foundries, such as TSMC and DB Hitek. The latter is another one of WBT's customers.

onsemi addresses a range of different verticals and applications.

onsemi generated US$8.3bn in revenues in 2023, mostly (~54%) from Power Solutions. The Analog & Mixed Signal unit and the Intelligent Sensing unit made up ~30% and ~16% of revenues respectively.

With these types of products, onsemi can address multiple industry verticals, such as Automotive, including Advanced Driver Assistance Systems, or ADAS, EV components, body electronics, LEDs and powertrain applications.

Another big vertical for onsemi is Industrial, which includes automation, energy infrastructure and smart buildings.

Lastly, given its Motorola roots, onsemi adresses the Cloud and Communications segments as well, including semiconductors for Telecom infrastructure, servers, interfaces and power management for mobile applications.

What is the Treo Platform?

onsemi aims to integrate Weebit Nano's ReRAM in its Treo platform for analogue and mixed-signal applications, such as chips for power management, sensor interfaces and communication devices. In turn, these have their end use in areas such as Automotive, factory automation, robotics and healthcare.

The most advanced node for WBT's ReRAM to-date.

These chips are built on BCD at 65 nanometer (nm) resolutions,. BCD alludes to the family of chip manufacturing processes (Bipolar-CMOS-DMOS) that can be integrated on a single chip.

Bipolar is best for analogue applications, CMOS (complementary metal-oxide semiconductor) is best for digital processing, while DMOS (Double diffusion metal oxide semiconductor field-effect transistor) is ideally suited for power and high voltage applications. By combining these processes on a single chip, you create a very versatile semiconductor.

The Treo platform is technically not new, since BCD has been around for many years, ever since STMicro (EURONEXT:STM) came up with the concept and technical execution back in 1985. The process has been improved upon and adopted by many other IDM's and foundries since then, including DB Hitek at 130nm.

onsemi is aiming for US$1bn in revenues from the Treo platform by 2030.

However, onsemi has refreshed its product offering to the point where the Treo platform now offers customers a very modular approach to manufacturing chips, i.e. various IP blocks using different processes can be integrated depending on product requirements. And it can be done at 65nm, which is sufficient for the use cases, like Automotive, which don't require leading-edge resolutions, say below 10nm.

onsemi is aiming for US$1bn in revenues from Treo by 2030.

This deal is different from a deal with a foundry

Fewer moving parts in the commercial negotiations.

We are very excited about this deal given that this is Weebit Nano's first IDM customer. This means that there is no third party involved, like with foundries. In the foundry model, either a product company (the foundry customer that sells its chips to electronics companies) needs to ask the foundry to manufacture a semiconductor with ReRAM as its Non-Volatile Memory (NVM), or the foundry needs to convince a product company to integrate ReRAM into its products. Either way, there's always two parties that Weebit Nano needs to convince of the need to use ReRAM going forward, which is very time-consuming.

An IDM, by contrast, is the chip designer, manufacturer and semiconductor product company all in one, which should make negotiations and discussions a lot easier given there are fewer moving parts in these discussions.

Timelines to revenues may be shorter

IDM deals may lead to revenues faster than foundry deals.

Because of this different dynamic, we expect the entire process from technology transfer, test chip manufacturing, testing, qualification and eventual commercial sales to be faster than with Weebit Nano's current and future foundry customers.

As is typical for these types of IP licensing deals, Weebit Nano will receive upfront license fee payments (in milestones), non-recurring engineering (NRE) fees to assist onsemi with the IP integration, and eventual royalty payments when onsemi's chips that include ReRAM are sold commercially.

What's in store for the rest of 2025

Following the DB Hitek deal in 2023, we believe this deal with onsemi is yet another major validation of ReRAM as the next generation Non-Volatile Memory (NVM) in general. In 2024 TSMC started moving away from MRAM (Magnetic RAM) as a viable replacement of Flash memory in favour of ReRAM. The consensus in the industry now seems to be that ReRAM is the best option to gradually replace Flash, starting with embedded ReRAM.

Weebit Nano is the only independent source of ReRAM IP.

Specifically for Weebit Nano, we believe this deal validates the company as a very credible source of independent ReRAM IP (Intellectual Property), i.e. ReRAM other than from TSMC and UMC. There is really only one option available to industry players that don't want to be dependent on TSMC, i.e. by definition most of the IDM's. And that option is ReRAM from Weebit Nano. UMC doesn't seem to have its ReRAM out in commercial products at the moment.

Therefore, we believe the deal will definitely open more eyes in the industry and may also expedite existing commercial discussions Weebit Nano is having with other IDM's, like onsemi, foundries and product companies.

onsemi's competitors will have a high interest in getting ReRAM into their products.

Very specifically, we believe companies such as NXP, STM, Texas Instruments, Infineon etc, that all compete with onsemi one way or another, have a very high interest in integrating ReRAM into their products now that onsemi is the first cab of the rank.

In other words, we expect multiple deals to come through during the rest of 2025 and we wouldn't be surprised if it's IDM's, not foundries, that will make up the majority of deals this year.

Very substantial runway following A$50m raise

On 14 November 2024, Weebit Nano raised A$50m at $3 per share, which was a 6% premium to the 5-day VWAP. When corrected for the cost of the raise and combined with the company's cash position per 31 October 2024 of $57m and taking into account an approximate $5m cash burn in Q4, we estimate Weebit Nano has approximately $100m in the bank per 1 January 2025.

We believe this provides the company with a very substantial cash runway to execute, and even accelerate, its strategy.

Reiterating valuation at A$9.56 per share

We reiterate our valuation for Weebit Nano of A$9.56 per share, which we outlined in our June 2023 report. There are multiple catalysts that could drive Weebit Nano's share price higher in the next 12 months:

- Additional commercial agreements and/or collaborations with large foundries, IDM's and product companies.
- Progress towards qualification mid-2025 with DB HiTek following the tape-out in 2024.
- Progress on the technology transfer to onsemi.
- Commercial progress/deal with GlobalFoundries.

Key risks

- **Competition risk:** Alternative emerging memory technologies are being developed by Weebit's competitors. These technologies could potentially be superior in nature and/or could be commercialised sooner than Weebit's technology, which could inhibit the company's future growth.
- **Funding risk:** Although Weebit now seems adequately funded for the medium term, the company may need to raise further capital in the medium to longer-term. That may be required, for instance, if development programmes and technology transfers/qualifications take longer than currently anticipated or multiple growth opportunities arise, resulting in dilution for existing shareholders.
- **Macroeconomic and geopolitical risks:** The semiconductor industry is quite vulnerable to macroeconomic and geopolitical risks – in particular, downturns in the global economy and tensions between China and the West. The prices of semiconductor stocks can fluctuate substantially in response to mere media reports of deteriorating conditions.
- **Operational risks:** Weebit Nano's success is assumed on its ability to successfully produce and market the ReRAM technology. A failure in either regard for whatever reasons, such as supply chain issues or departure of key personnel, may lead to a deterioration in investor sentiment.
- **Investment risks:** Since the stock's inclusion into the ASX300 and ASX200 indices in 2023, we have seen short sellers come into the stock. This has had a substantial negative effect on the share price. Additional short selling may push the share price down further.

Appendix – Analyst certification

Marc Kennis has been an equities analyst since 1996.

- Marc obtained an MSc in Economics from Tilburg University, Netherlands, in 1996 and a postgraduate degree in investment analysis in 2001.
- Since 1996, he has worked for various brokers and banks in the Netherlands, including ING and Rabobank, where his focus has been on the technology sector, including the semiconductor sector.
- After moving to Sydney in 2014, he worked for several Sydney-based brokers before setting up TMT Analytics Pty Ltd, an issuer-sponsored equity research firm.
- In July 2016, with Stuart Roberts, Marc co-founded Pitt Street Research Pty Ltd, which provides issuer-sponsored research on ASX-listed companies across the entire market, including technology companies.

Nick Sundich is an equities research analyst at Pitt Street Research.

- Nick obtained a Bachelor of Commerce/Bachelor of Arts from the University of Sydney in 2018. He has also completed the CFA Investment Foundations program.
- He joined Pitt Street Research in January 2022. Previously he worked for over three years as a financial journalist at Stockhead.
- While at university, he worked for a handful of corporate advisory firms.

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