DorsaVi Ltd.

Entering the neuromorphic realm

DorsaVi (ASX:DVL) is strengthening its competitive edge in the semiconductor space through the acquisition of neuromorphic processing-in-memory (PIM) intellectual property from Technion in Israel, led by Professor Shahar Kvatinsky, a globally recognised pioneer in neuromorphic hardware. This acquisition positions DorsaVi at the forefront of one of the fastest-growing segments of the semiconductor industry, with the global neuromorphic computing market projected to grow from US$5.3 billion in 2023 to more than US$20 billion by 2030, according to IBM[1].

DorsaVi unlocks additional growth path

For long-term investors following DorsaVi's story, this move marks a major technological leap forward. The company now holds valuable intellectual property that opens opportunities in robotics, a market valued at US$44 billion in 2024 and projected to reach an impressive US$280 billion by 2034. The integration of neuromorphic processing could drive the next generation of advanced learning and energy-efficient systems, mimicking how neurons in the biological brain respond to stimuli, an idea we will explore in more detail later.

Within its core biosensor business, DorsaVi's neuromorphic PIM technology will allow computation to occur inside the hardware itself, enabling its wearables to "sense, think, and act locally" without needing to send data externally to make critical decisions, a significant improvement over the current generation of technology. We believe this strategic acquisition not only enhances DorsaVi's technological capabilities, but also opens new pathways for value creation across emerging computational needs in robotics and sensor-driven applications.

Sum-of-the-Parts valuation of $0.22 per share

The acquisition of neuromorphic processing-in-memory (PIM) intellectual property does not have an immediate impact on DorsaVi's valuation, but it strengthens the company's competitive advantage by enhancing its technology portfolio and market positioning. Therefore, we continue to value DorsaVi using our Sum-of-the-Parts approach.

Under this method, we value the Sensor business at A$0.13 per share on a twelve-month horizon and the ReRAM business at A$0.09 per share. Together, these components yield a total valuation of A$0.22 per share for DorsaVi. For more detail around our valuation, please refer to our initiation report from 4 November 2025. Key share price catalysts include successful ReRAM development updates, potential collaboration agreements with semiconductor companies and additional commercial contracts for the clinical Sensor business.

Share Price: A$0.04

ASX: DVL

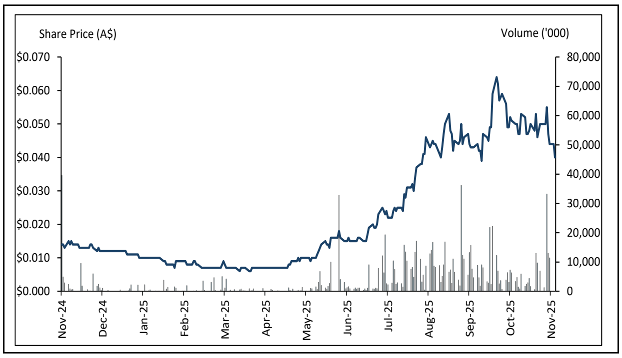
Sector: Health Care

19 November 2025

Market cap. (A$m)	45.0
# shares outstanding (m)	1,125.4
# shares fully diluted (m)	1,371.3
Market cap ful. dil. (A$m)	54.9
Free float	100%
12 months high/low	0.053 / 0.006
Average daily volume (x1,000)	3,722
Website	dorsavi.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$)	0.22

Source: Pitt Street Research

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Disclosure: Pitt Street Research directors own shares in DorsaVi.

[1] Source: dorsaVi Ltd 2025, dorsaVi acquires leading processing-in-memory neuromorphic IP for next-gen robotics and edge platforms, ASX announcement, 12 November.

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The back-and-forth problem in every computer

In traditional computing, the processor and memory are split, forcing constant back-and-forth data shuffling.

For investors trying to understand this next generation of semiconductor technology, it helps to first revisit how traditional computing works. In today's systems, the processor and the memory are two separate units following what is known as the von Neumann architecture. CPUs or GPUs handle the calculations, while memory chips like DRAM and NAND store the data. Every task requires a constant back-and-forth transfer of information between these two components. This creates latency, slows performance and consumes large amounts of energy because the system is continually moving data rather than processing it where it actually resides.

DorsaVi's sensors just got a brain

Neuromorphic PIM works like the brain, with neuron-like circuits that process information and synapse-like elements that store it in parallel.

Neuromorphic PIM fundamentally reshapes traditional computing. Instead of treating memory as a passive storage unit, processing-in-memory (PIM) allows the memory chip itself to carry out computational tasks. It is important to recognise that the chip does not contain a traditional processor. Rather, the neuromorphic chip integrates neuron-like and synapse-like circuits directly inside the memory layer. These circuits behave similarly to biological neurons and follow the same principles as a spiking neural network, where computation happens only when a specific event or stimulus occurs and is significant enough to be propagated to other neurons in the network.

In the context of DorsaVi's biosensor business, this means processing begins only once body movement is detected. The signal is then interpreted through a synaptic weight, which is the chip's way of assessing how important that movement event (the signal) is. This weight can either amplify or reduce the information coming through and is stored directly in memory, updated locally, and used immediately. All of this happens in parallel with other incoming signals. This is a major shift from traditional convolutional neural networks, which continuously compute and consume power on every single input[2].

When one chip does two jobs

Processing data where it's stored eliminates unnecessary transfers and reduces latency.

This gives neuromorphic PIM a dual functionality role. PIM integrates storage and computation inside the same memory cell array. As artificial intelligence models continue to scale, this architecture becomes especially valuable. Neuromorphic PIM can act as a performance multiplier for AI systems and form one of the foundational technologies that support higher-level machine intelligence.[3] The efficiency gains come from a simple shift. Computation now happens exactly where the data lives. This removes the constant back-and-forth movement of data between the processor and memory chip. With far less data movement, latency drops, energy use falls, and overall performance rises. This is why neuromorphic PIM is considered a breakthrough.

How brain inspired computing gives DorsaVi an edge.

From an energy efficiency standpoint, this is where the technology behind DorsaVi becomes genuinely compelling. Neuromorphic computing is designed to mirror how the human brain processes information as we have established. Neurons in the brain carry out the calculations and synapses store and update weights, all working together in parallel.[4] The human brain is still one of the most efficient computing systems known, operating on roughly 20 watts of

[2] See Understanding Neuromorphic Computing section in the DVL announcement.

[3] Source: Caballar, R. D. & Stryker, C., 2024. What is neuromorphic computing? [online] IBM Think.

[4] See the benefits of neuromorphic processing as outlined by Caballar and Stryker (2024).

Neuromorphic PIM tackles the cloud-energy problem directly by processing and learning inside the memory itself.

power while performing levels of parallel computation that even modern supercomputers cannot match without consuming millions of watts.[5] The neuromorphic structure saves energy because not all signal inputs are treated equally; the synapse "weight" determines how much computation, adjustment, or storage each input requires.

Additionally, when you ask voice assistants like Siri a question on your iPhone or Android device, the query is sent to large cloud servers for processing before returning an output, a process that consumes a significant amount of energy and takes time. Neuromorphic PIM cannot replace cloud processing for giant AI models like ChatGPT today, but it can address the energy and bandwidth problem for a large range of real-time, on-device intelligence tasks by eliminating the need to send data to the cloud.

In principle, neuromorphic PIM targets this exact issue by processing data inside memory cells, requiring significantly less power than cloud-based AI and allowing the system to learn locally without shipping large amounts of data externally. These core principles are exactly what neuromorphic PIM aims to replicate, and it forms the foundation of why this architecture can unlock meaningful gains for next generation AI systems, specifically Edge AI devices, like robots, drones, phones, wearables, cars etc.

ReRAM's smarter cousin

Neuromorphic PIM relies on memristive memory, which behaves much like ReRAM in the way it stores information.

DorsaVi's announcement includes many technical terms, but to keep it simple, the "Reflex Engine" the company discusses uses a special type of memory that is not the same as traditional DRAM or NAND flash. Instead, it relies on memristive and magnetic memory elements that behave much like synapses in the brain. For those familiar with ReRAM, memristive memory follows similar principles, although it is not exactly the same. Both belong to the broader family of emerging non-volatile memory, which means the device can store and retain information without needing constant power, unlike most traditional memory chips today.

Once computation is complete, the memory stores information by changing the resistance or magnetic state of a memory cell, so the architecture behaves in a way that is broadly similar to ReRAM. Effectively, this technology delivers energy efficiency and performance characteristics that are broadly similar to those seen in leading ReRAM-based memory solutions, depending on the application.[6]

Wearables that start thinking for themselves

Neuromorphic PIM has the potential to adapt to each patient's specific biomechanics and activity, producing better outcomes.

With these capabilities, DorsaVi now has the potential to strengthen its competitive advantage as an early mover in neuromorphic technology. When you look closely at the company's sensor business, several advantages start to emerge. DorsaVi's biosensors already capture high quality movement, muscle and ergonomic data, but the neuromorphic PIM Reflex Engine allows this information to be processed directly inside the memory layer itself.7 This could enable the memory chip to receive inputs from a patient's movement patterns and muscle activity, potentially gradually learning how that individual moves. As a result, the technology could deliver real time insights and alerts for injury risk movements or abnormal muscle function, while improving performance without a material increase in power consumption.

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[5] Julian, M. A. D., Villarino, D. B., & Soberano, K. T. (2024) "The human brain versus computer: which is smarter?" International Journal of Multidisciplinary Research and Analysis.

[6] See In depth look into the Neuromorphic technology found on page 3 of the announcement.

[7] See page 4 of the announcement, "The reflex engine executes inference and adaptation."

From an operating leverage perspective, the technology also gives DorsaVi an opportunity to reduce its cost per unit over time. Neuromorphic systems can learn incrementally on the device, allowing each sensor to fine tune itself to the customer's body without relying on the cloud. Less data transfer means lower bandwidth costs and a reduced risk of data leaks, which strengthens the value proposition for clinical and enterprise clients, while improving DorsaVi's operating leverage. This combination of on-device intelligence, lower operating costs and enhanced data privacy creates a clear strategic edge as the company scales, in our view.

The brain-like tech that humanoid robots will need

A five trillion dollar robotics market with up to ten billion humanoids by 2040.

Where we see the most exciting long-term opportunity for DorsaVi, beyond its core sensory business, is in industrial robotics and emerging humanoid platforms. Morgan Stanley estimates that the humanoid robotics sector could become a five trillion-dollar market by 2050, when you include sales and supply chain activity, with meaningful adoption likely beginning in the late 2030s.[8] Elon Musk stated at the 8th Future Investment Initiative conference "that by 2040, there will be at least 10 billion humanoid robots."[9]

We believe for Intellectual Property (IP) owners like DorsaVi, this is where the long-term growth story becomes very interesting. These robotic systems will need to process and store information in ways that resemble how the human brain operates, which positions neuromorphic processing as a natural fit.

Reflex-speed intelligence for next-gen robots

Neuromorphic PIM gives robots millisecond reflexes, letting them sense, compute and act instantly without the cloud.

In this high-growth industry, neuromorphic PIM offers several high-value advantages for robotics. The first is reflex speed. Because inference and learning take place inside the chip itself, a robot could theoretically react to a stimulus in under a millisecond. Imagine a package slipping off a shelf: instead of sending data to the cloud and waiting for a response, the robot can sense, compute and act instantly. This level of localised decision-making represents a significant structural leap forward, not only reducing energy use, but also lowering the risk of accidents through faster, adaptive responses.

The second advantage comes from the memory architecture. Since the underlying memory cell is non-volatile, power consumption drops sharply. Combine this with the fact that the system no longer needs to shuttle data between a CPU or GPU and memory, and the device/robot benefit from meaningfully lower operating costs. Battery life extends, thermal load decreases and the overall efficiency of the system improves.

An IP play with long-term upside

DorsaVi has the potential to shift toward an IP-led robotics model, where neuromorphic technology can be licensed to OEMs for upfront license fees and recurring per-unit royalties.

We believe the acquisition of neuromorphic processing-in-memory (PIM) intellectual property shifts DorsaVi from being a biosensor company to becoming an IP-driven Edge-AI robotics technology provider. While the company's announcement does not specifically outline how DorsaVi intends to transition its business model into the robotics industry, it does highlight the broad applicability of the neuromorphic portfolio across robotic and humanoid platforms.

For investors, the key question is how this IP acquisition can translate into long-term value. In our view, DorsaVi can potentially license this technology to chip companies, OEMs and product companies, receiving upfront license fees that could evolve into per-unit royalties, a high margin business model.

[8] Source: Morgan Stanley (2025) Humanoids: A $5 Trillion Market. Morgan Stanley Insights, 14 May.
[9] Source: Reuters (2024) 'Elon Musk : 10 billion humanoid robots by 2040 at $20K-$25K each', Reuters.com, 29 October.

Additionally, if DorsaVi is able to translate these neuromorphic learning capabilities into its own adaptive learning algorithms, this could form another meaningful revenue stream for sensor/robotics customers. The underlying thesis is that the acquisition of neuromorphic PIM opens up new commercial pathways and business models.

Conclusion: Valuation reiterated, but with substantial upside

We reiterate our valuation for DorsaVi of A$0.22 per share in a Sum-of-the-Parts method. We value the Sensor business at A$0.13 per share on a twelve-month horizon and the ReRAM business at A$0.09 per share. Together, these components yield a total valuation of A$0.22 per share for DorsaVi. For more detail around our valuation, please refer to our initiation report from 4 November 2025.

We do note that successful integration of the newly acquired technology into both the company's existing sensor technology and its recently licensed ReRAM IP can potentially substantially increase the DorsaVi's valuation in due course.

Share price catalysts

- Successful **development updates** for the ReRAM business that underscore DorsaVi's adherence to its development roadmap.
- Potential **collaborations** with semiconductor manufacturers, foundries or product companies.
- **Experienced additions** to the semiconductor management and development team.
- Additional **commercial deals for the clinical Sensor business**, similar to the deal with Select Medical in the US.

Key risks

- **Competition risk:** Alternative emerging memory technologies are being developed by DorsaVi's competitors. These technologies could potentially be superior in nature and/or could be commercialised sooner than DorsaVi's technology, which could inhibit the company's future growth. The same is true for the Sensor business, where superior products, or larger competitors, can potentially take (future) market share away from DorsaVi.
- **Funding risk:** Although DorsaVi now seems adequately funded for the short to medium term, the company will likely need to raise further capital in the medium to longer-term.
- **Operational risks:** DorsaVi's future success in developing its new ReRAM IP in large part depends on the company's ability to set up and manage an experienced technical and operational team, preferably internal, to monitor its technology partners and their development progress.
- **Key personnel risks:** There is the risk the company could lose key personnel and be unable to replace them and/or their contribution to the business.

Appendix I: 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.

Charlie Youlden is an associate equities research analyst at Pitt Street Research.

- Charlie holds a Bachelor of Business and Commerce from the University of Technology Sydney. He has also completed the Value Investing Program at Columbia Business School and the Wall Street Prep Financial Modeling course.
- He joined Pitt Street Research in 2025, following experience as the founder of his own business and as an FX hedging broker.
- Charlie has authored equity research reports on ASX-listed and US technology companies and actively shares market insights with a growing professional audience.

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