



(From left) Mr Ted Taylor, adviser, Applied Angstrom Technology; Dr Richard Yang, founder and CEO, Applied Angstrom Technology; Mr Philip Yeo, chairman of venture capital firm iGlobe Partners; and Mr Wong Zeng Yi, assistant managing director for manufacturing at Enterprise Singapore, at the launch of the Atomic Precision Innovation Center on March 18. PHOTOS: APPLIED ANGSTROM TECHNOLOGY

New R&D facility to build next-generation chipmaking equipment

Ultra-high-precision technology targeted at Singapore-based semiconductor giants

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Chip technology firm Applied Angstrom Technology (AAT) launched on March 18 a research and development facility with the ability to design, test and produce next-generation semiconductor manufacturing equipment.

Dr Richard Yang, AAT's founder and chief executive, told The Straits Times that the facility will target major semiconductor players based in Singapore, such as Micron and GlobalFoundries.

AAT specialises in manufacturing at an atomic level of precision – an advanced technology enabling the production of more powerful graphics processing units, solid state drives and high-bandwidth memory chips.

Most chip manufacturers currently produce semiconductors at a lower nano-level of precision, with Taiwan's TSMC starting mass production of its "most advanced" 2-nanometre chips in the fourth quarter of 2025.

Dr Yang said: "We are building

the equipment to enable chipmakers. They will be able to make chips needed for AI data centres. If you think about a data centre, you need to pack more transistors into a limited space, so you need to have the precision."

Modern semiconductors contain tens to hundreds of billions of transistors which control the flow of electrical signals, allowing processing and storage.

AAT's facility, known as the Atomic Precision Innovation Center, spans more than 10,000 sq ft, including a cleanroom. Located in Yishun, the facility has been operational since November 2025.

The firm declined to name its customers but said its network of clients, suppliers and partners are located across Asia, Europe and the United States.

Mr Philip Yeo, chairman of venture capital firm iGlobe Partners, which invested in the facility, said the R&D facility "strengthens Singapore's position in the global AI race".

"Our investment in AAT is a testament to the team's leadership and expertise in scaling the high-precision



Dr Richard Yang giving a tour of the cleanroom at the Atomic Precision Innovation Center, which spans more than 10,000 sq ft. Located in Yishun, the facility has been operational since November 2025.

sion processes required to build the hardware powering the next frontiers of AI," he said.

The facility is also supported by Enterprise Singapore. Its assistant managing director for manufacturing Wong Zeng Yi said AAT's site "plays an important role in strengthening Singapore's position as a resilient and diversified semiconductor supply chain hub".

He added that it provides a "collaborative environment" for inno-

vators working to capture emerging opportunities in the global artificial intelligence supply chain.

Singapore accounts for around 20 per cent of global semiconductor equipment production. The country also produces one in 10 of the world's chips.

At the debate on the Ministry of Trade and Industry's budget on March 2, Dr Tan See Leng, Minister-in-charge of Energy and Science & Technology, said some

\$800 million will be channelled to the Research, Innovation and Enterprise (RIE) plan to establish the RIE Flagship in Semiconductors.

The RIE plan, managed by the National Research Foundation, charts and supports the country's five-year strategy to strengthen its research capabilities.

The flagship will focus on areas such as advanced packaging and advanced photonics, which boost chip performance while cutting power use.

Dr Yang believes that the world is on the frontier of physical AI, where the technology is embodied in physical hardware. Agentic AI, which is widely used by businesses and individuals, operates in a digital environment through platforms like ChatGPT.

"I think our equipment development in the physical AI field will be more nimble than big players' because we are able to design from the ground up (in one facility)," he said.

Meanwhile, Swiss industrial equipment manufacturer Endress+Hauser opened a technological and calibration hub in Singapore on March 18. The facility in Jurong supports product calibration and will host a process training unit and interactive technology demonstrations.

The company said the hub "supports closer collaboration with customers throughout the life cycle of their processes, strengthening Endress+Hauser's ability to address practical, industry-specific challenges across Singapore and South-east Asia".

Singapore managing director Richard Yu said the company will "work closer with customers and turn real-world application challenges into practical solutions".

Endress+Hauser established a presence in Singapore in 1989 and has around 100 employees in the Republic.

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