

Horizon Quantum Computing to Establish First-of-a-Kind Hardware Testbed

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Dr Joe Fitzsimons, CEO of Horizon Quantum Computing, with a Novera™ quantum processor from Rigetti Computing

- Horizon to create testbed to integrate its software stack Triple Alpha with quantum computing hardware
- Testbed will have capacity for multiple quantum computers, with Rigetti Computing and Quantum Machines selected to supply components for first system
- Horizon to become one of the first pure-play quantum software companies operating their own quantum computers

Singapore, 18 April 2024 — Horizon Quantum Computing, a company building software development tools for quantum computers, today announced that it is establishing a first-of-a-kind testbed for integrating quantum computing hardware with its software stack, Triple Alpha. The testbed, which will be set up at Horizon's Singapore headquarters, will have the capacity to host multiple quantum computers. By acquiring its own hardware, Horizon gains full control over both hardware and software stacks, allowing it to push the frontiers of quantum computing.

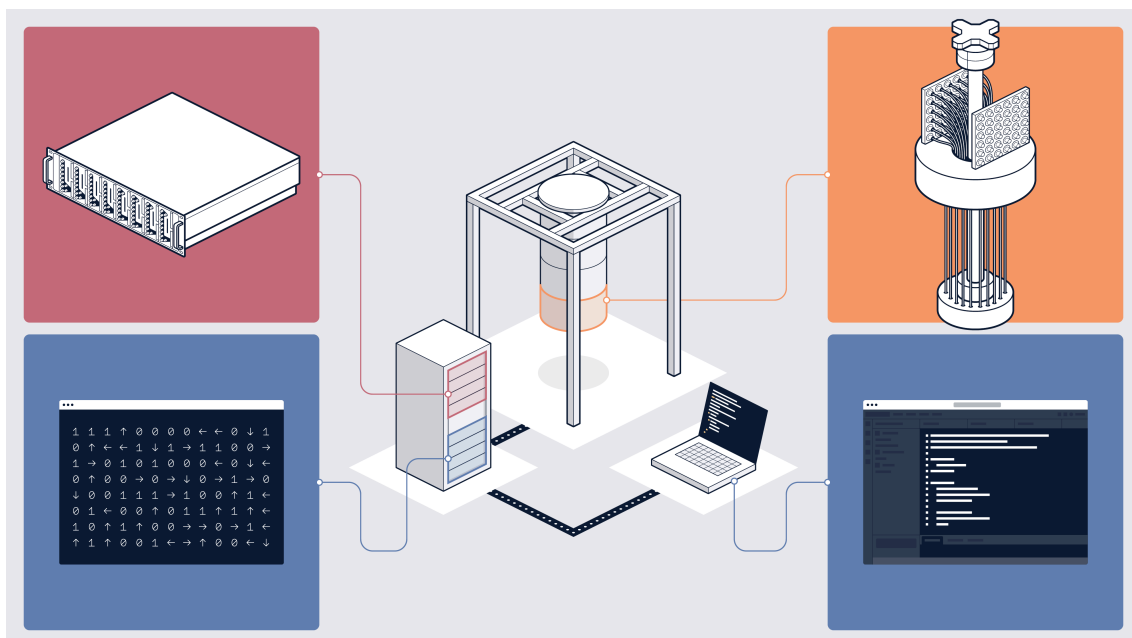
A key aspect of Horizon's quantum computing testbed is its modular multi-vendor approach. Rather than utilising a single-vendor solution, the company has purposely selected best-in-class components from different providers. This modularity allows Horizon to integrate its software stack with different hardware configurations and upgrade the system over time.

The first system will be based on a Novera™ quantum processor from Rigetti Computing and OPX1000, the processor-based quantum controller from Quantum Machines. The integrated system is expected to be installed by early 2025.

"Recent progress on quantum processors and error correction has underscored the rapid pace of progress in the field. We are taking the step of creating this testbed because we believe that tight integration between hardware and software is the shortest path to truly useful quantum computing," said Dr Joe Fitzsimons, Founder & CEO at Horizon Quantum Computing. "We are delighted to work with Rigetti Computing and Quantum Machines on our first system."

"We are thrilled that Horizon has selected the Novera QPU for their first quantum computing system. Establishing high performing on-premise quantum computing capabilities is key for working towards useful quantum computing," said Dr Subodh Kulkarni, CEO at Rigetti Computing. "We can't wait to witness what the Horizon team accomplishes with a quantum computing system powered by the Novera QPU and Quantum Machines' control system."

"We're excited to partner with Horizon Quantum Computing and Rigetti Computing in this pioneering initiative. Our approach has always emphasized scalability, interoperability and modularity, principles that resonate with Horizon's Triple Alpha," said Dr Itamar Sivan, co-founder and CEO of Quantum Machines. "This collaboration with industry pioneers like Horizon and Rigetti not only showcases the adaptability and effectiveness of our processor-based OPX1000 controller in diverse setups, but also marks a significant step forward in the collective journey towards useful quantum computers."



Triple Alpha web-based IDE and compiler suite from Horizon Quantum Computing, along with backend server, integrated with a Novera™ quantum processor from Rigetti Computing and OPX1000, the processor-based quantum controller from Quantum Machines

About Horizon Quantum Computing

Horizon Quantum Computing is developing a new generation of programming tools to simplify and expedite the process of developing software for quantum computers. By removing the need for prior quantum computing experience to develop applications for quantum hardware, Horizon's tools are making the power of quantum computing accessible to every software developer.

The company was founded by Dr Joe Fitzsimons in 2018, a former professor with two decades of experience in quantum computing and computational complexity theory. The leadership team also includes Dr Si-Hui Tan, Chief Science Officer, who holds a Ph.D. in Physics from MIT and has been actively involved in quantum research for the same period.

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