

Qubitcore Joins JST Moonshot Goal 6 Phase 2 R&D Project

OIST spin-out startup to help develop ion-trap quantum computer systems and conduct quantum error correction experiments toward fault-tolerant quantum computing

YOKOHAMA, KANAWAGA, JAPAN, May 15, 2026 /EINPresswire.com/ -- /EINPresswire.com/ -- [Qubitcore Inc.](#), an ion-trap quantum computing startup spun out of the [Okinawa Institute of Science and Technology \(OIST\)](#), today announced its

participation in a Phase 2 R&D project under the Japan Science and Technology Agency (JST)'s [Moonshot Goal 6](#).

The project, "Fault-tolerant Quantum Computing with Scalable Integrated Ion Traps and Multiplexed Photonic Interconnects," is led by Project Manager Hiroki Takahashi, Assistant Professor at OIST. Under Moonshot Goal 6, JST aims to realize a fault-tolerant universal quantum computer that will revolutionize the economy, industry, and security by 2050.

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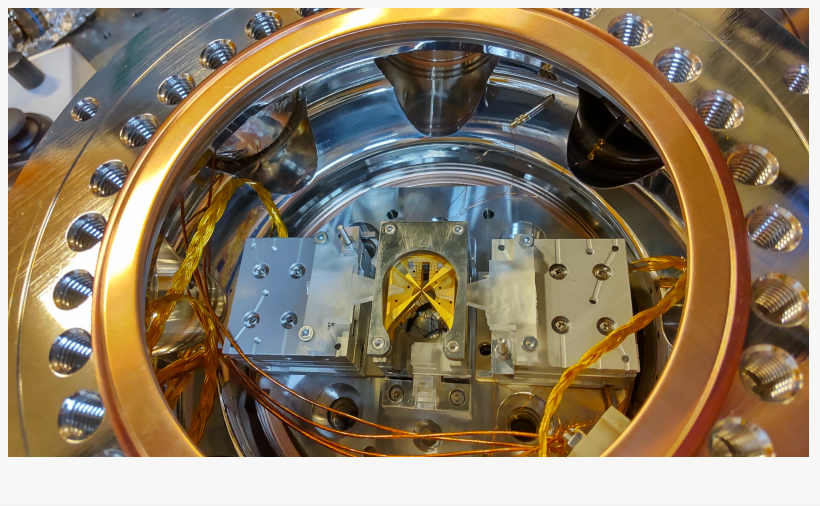
Qubitcore is focused on integrating advanced quantum technologies into working systems for fault-tolerant quantum computing.”

Ryuta Watanuki, Founder & CEO

In this project, Qubitcore will be responsible for research activities related to the development of ion-trap quantum computer systems and quantum error correction experiments. Through its participation, Qubitcore aims to advance the technologies required for fault-tolerant universal quantum computing and help bring quantum

computing closer to practical deployment.

The Phase 2 project aims to realize a photonic-interconnected, fault-tolerant quantum computer based on ion-trap technology. By 2030, the project targets the construction of a 100-qubit-scale quantum computer, demonstrations of quantum error correction and logical operations, and the establishment of key technologies such as a Universal Unit Cell (UUC) scalable beyond 1,000



qubits and multiplexed photonic interconnects. Building on these technologies, the project envisions a million-qubit-class quantum supercomputer by 2050, composed of coordinated quantum processing units (QPUs), as a transformative computational platform for materials discovery, drug development, and energy optimization.

Qubitcore's role will focus on developing an ion-trap quantum computer system and conducting error correction experiments using that system. The company will also work toward integrating advanced technologies being developed within the broader project, including photonic interconnects via micro-optical cavities, RF and microwave near-field quantum gates, and integrated photonic circuits, into a more advanced quantum computer system for further error correction experiments.

Comments

"I am pleased to contribute to the Phase 2 R&D project under Moonshot Goal 6 as Qubitcore's lead researcher for this project. Building on insights gained from ion-trap quantum computer development in the previous phase of the Moonshot program, we will further advance R&D toward realizing a quantum computer at a scale capable of supporting quantum error correction."

Koichiro Miyanishi, Principal Researcher at Qubitcore

"Within this Moonshot project, Qubitcore will play a key role in building and operating a working ion-trap quantum computer. We expect Qubitcore's participation to further accelerate the practical deployment of ion-trap quantum computers."

Hiroki Takahashi, Project Manager and Assistant Professor at OIST

"For quantum computers to become a computational foundation for society and industry, it is essential not only to advance core technologies but also to integrate them into working systems. Qubitcore is a startup dedicated to this integration and implementation, and we are advancing R&D toward distributed fault-tolerant quantum computing. Participation in JST's Moonshot Goal 6 Phase 2 R&D project is a significant milestone for Qubitcore, as it gives us the opportunity to contribute to the development of an ion-trap quantum computer system and quantum error correction experiments. Through this project, we aim to connect research outcomes to operational quantum computer systems and contribute to the realization of a fault-tolerant universal quantum computer originating from Japan."

Ryuta Watanuki, Founder & CEO of Qubitcore

About Qubitcore

Qubitcore Inc. is a quantum computing startup founded in July 2024 and spun out of OIST. Based on research from the OIST Experimental Quantum Information Physics Unit led by Assistant Professor Hiroki Takahashi, Qubitcore is developing a distributed ion-trap quantum computing architecture that integrates ion-trap technology and photonic quantum interconnects. The

company is headquartered in Yokohama, Japan, with its R&D center located at OIST in Okinawa.

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