

Qruise to help build open architecture quantum testbed with £1.65M Innovate UK grant

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Qruise, TreQ, Rigetti, Oxford Ionics, and Q-CTRL selected to help advance the UK's National Quantum Strategy with first-of-its-kind integration project.

Saarbrücken, Germany | 22 April 2025 – Qruise is part of a consortium awarded £1.65 million by [Innovate UK](#) to develop an open architecture quantum (OAQ) testbed. The project, developed in collaboration with TreQ, Rigetti, Oxford Ionics, and Q-CTRL, forms part of the [UK Quantum Missions](#) pilot, which aims to accelerate quantum technologies in line with the [National Quantum Strategy](#).

The aim of the project is to build a modular, open architecture quantum computing system that integrates components from across the quantum supply chain. This is reflected in the choice of partners, who comprise leading specialists in quantum processors, control systems, calibration, and software integration. With two processors, two control systems, and two quantum software stacks, the testbed will offer eight different configurations, with the potential for further upgrades and extensions at every layer of the stack. This approach allows for the evaluation of performance and functionality by flexibly combining QPUs, control hardware, and calibration software from different providers. The goal is to ensure all components work reliably and efficiently together, reducing integration complexity and enabling a more flexible, interoperable quantum ecosystem.

Qruise will provide its rapid automated bring-up platform, [QruiseOS](#), as one of the software options on the testbed. With its platform-independent characterisation, calibration, and optimal control capabilities, QruiseOS enables efficient bring up and tuning of quantum devices using 40+ pre-defined experiments, autonomous workflows, and an intuitive dashboard. Throughout the project, Qruise will work closely with the other consortium members to ensure seamless integration and operation of QruiseOS across all modules.

“We’re eager to bring our AI-powered system identification and calibration technology to a testbed designed for iteration and experimentation,” said Shai Machnes, Qruise CEO. “Interoperability means acceleration, and that’s exactly what this project delivers.”

The broader testbed effort will be led by TreQ, who will host and maintain the system at its facility in Oxfordshire. The initial focus will be on superconducting and trapped-ion systems, with Rigetti supplying its 9-qubit Novera™ QPU and Oxford Ionics contributing its trapped-ion technology. Q-CTRL will provide its own calibration tools as the additional software option.

The OAQ testbed project will also create a common interface between quantum software and hardware to facilitate collaboration across the quantum ecosystem and accelerate the development of practical, cost-effective quantum solutions. This represents a key step in unlocking the full potential of quantum computing and in strengthening the UK’s position in the global quantum landscape.

About Qruise

Qruise is developing a machine learning physicist to enhance experimental outcomes and drive discovery in quantum computing, magnetic resonance imaging, quantum sensing, and beyond. Their software integrates advanced machine learning techniques into a user-friendly framework that fits seamlessly within existing laboratory workflows, helping to streamline research and significantly accelerate scientific development.

Learn more at: www.qruise.com.

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