

Factsheet



ACRONYM OpenSuperQPlus100

FULL TITLE Open Superconducting Quantum Computers

PROGRAMME HORIZON-CL4-2021-DIGITAL-EMERGING-02-15 and HORIZON-CL4-2022-QUANTUM-01-SGA

CONTRACT NUMBER 101080139 and 101113946

ABSTRACT This project is continuing and enhancing the project OpenSuperQ and brings together most of its team along with some new partners, full-stack quantum computing startups and many other key players in the field. This team has formed a framework partnership and put forward an ambitious seven year agenda leading to a 1,000 qubit quantum computing system. The consortium is now launching its first stage OpenSuperQPlus 100 that on the one hand aims at developing several systems for evaluating hard- and software as well as a user-oriented 100 qubit system for first quantum applications within the next 3.5 years. With regard to the second stage it will also look at the critical components and technological decisions needed for the 1,000 qubit quantum computing system. Partners combine their quantum engineering and technology expertise to realize large-scale superconducting quantum computers capable of demonstrating quantum advantage and fault-tolerant quantum computing within less than a decade. The consortium anticipates special use cases in quantum simulation for the chemical industry, materials science or in solving optimisation problems and in machine learning.

DURATION First stage: 42 months (01/03/2023 - 31/08/2026)

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