



NXP and German Aerospace Center DLR Collaborate on Quantum Computing Technologies in Germany

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- NXP will leverage its semiconductor expertise to help build ion trap-based quantum computers in collaboration with DLR and partners
- NXP's contributions include the hardware components required for integrating quantum computers in classical computing environments, photon detection sensor technology and packaging
- The DLR Innovation Center is located at the NXP site in Hamburg, Germany

HAMBURG, Germany, Oct. 27, 2022 (GLOBE NEWSWIRE) -- NXP Semiconductors (NASDAQ: NXPI) today announced its collaboration with the [German Aerospace Center \(DLR\) and other partners on ion trap-based quantum computers](#) as part of the DLR's Quantum Computing Initiative. The initiative aims to build quantum computers to help enable new innovations across energy, automotive, government, aerospace and other critical infrastructure.

Quantum computers can process data significantly faster than classical computers, allowing them to solve complex problems that can help society in many ways, including weather and climate model calculations, accelerated development of medications and vaccines, improved model calculations for mobility and logistics, cyber security protection and many more. While these complex machines are rapidly evolving, they remain challenging to build, require deep levels of expertise and a path towards industrialization must be further developed.

To help achieve these new innovations, NXP is collaborating with recognized leaders in the field of quantum computing. Together with eleQtron, ParityQC, QUDORA Technologies and the Technical University of Hamburg, NXP will pool expertise from across the industry to enable rapid advances in quantum computing and help roll out scalable and marketable solutions in the near future.

With its long-standing track record in the scaling and miniaturization of physical applications required for industrial component manufacturing of chip-based detection logic and sensor technologies, NXP will provide the control electronics necessary for embedding quantum computing in a classical computing environment, as well as cryogenically-suitable packaging and photon detection for the reading of quantum states.

"Quantum computers will bring about the next big wave of innovation in our society, enabling new solutions to complex and long-standing challenges," said Lars Reger, CTO at NXP. "In collaboration with the DLR and other participants in this project, NXP's experts will be at the forefront of that innovation, contributing their expertise to enable new innovations that will help our society become smarter, safer and more secure."

"DLR is awarding contracts as part of its Quantum Computing Initiative, with the aim of creating qubits based on ion traps. This technology is considered highly promising and will be explored through targeted research. This brings us one step closer to a programmable, fault-tolerant quantum computer," said Anke Kaysser-Pyzalla, Chair of the DLR Executive Board. "Through the close cooperation of business and science, synergies are created that strengthen the quantum computing ecosystem and thus also provide start-ups with new opportunities."

To support a close collaboration between the organizations involved, the DLR Innovation Center is located at NXP's site in Hamburg, Germany, and is scheduled to be launched in Q1 2023.

[eleQtron](#) is a spin-off from the Department of Quantum Optics at the University of Siegen. Founded in 2020, the company develops, produces, operates and markets computing time on ion trap-based quantum computers. As the first German quantum computer manufacturer, eleQtron currently builds increasingly powerful quantum computers and connects them to the cloud. Its proprietary technology eliminates the need for laser light for quantum logic operations, providing a clear path to scalability.

[ParityQC](#) is the only quantum architecture company worldwide. The focus is the development of blueprints for quantum computers and their operating system. ParityQC works with hardware partners around the world to build quantum computers with applications ranging from universal error-corrected quantum computing to solving optimization problems on near term devices.

[QUDORA Technologies](#) is a deep tech spin-off of Physikalisch-Technische Bundesanstalt (PTB), Braunschweig University of Technology and Leibniz University of Hanover, rooted in the Quantum Valley Lower Saxony (QVLS) ecosystem. The start-up develops trapped-ion quantum computers based on highly integrated quantum processors utilizing a scalable laser-less quantum gate mechanism.

About NXP Semiconductors

NXP Semiconductors N.V. (NASDAQ: NXPI) enables a smarter, safer and more sustainable world through innovation. As a world leader in secure connectivity solutions for embedded applications, NXP is pushing boundaries in the automotive, industrial & IoT, mobile, and communication infrastructure markets. Built on more than 60 years of combined experience and expertise, the company has approximately 31,000 employees in more than 30 countries and posted revenue of \$11.06 billion in 2021. Find out more at www.nxp.com.

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About QUDORA Technologies

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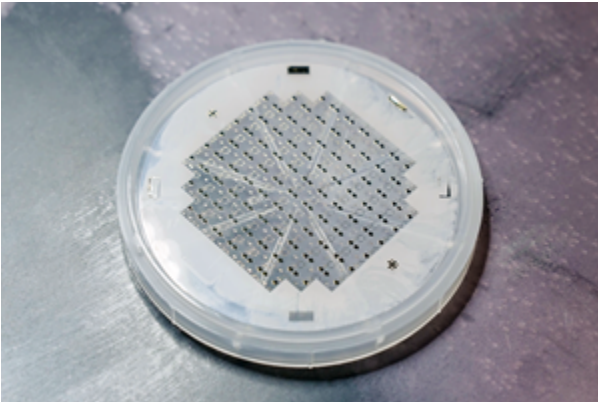
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A photo accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/4384d66e-bb70-42fe-875b-55b38e014d56>



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QUDORA Technologies_This picture shows a 3-inch wafer with microfabricated quantum processors based on trapped ion technology. Photo credits: QUDORA Technologies GmbH

Source: NXP USA, Inc.