

Quantum Brilliance Advances Quantum Computing Development with NVIDIA

Leading developer of diamond quantum computers collaborates with NVIDIA on Quantum Optimized Device Architecture (QODA)

CANBERRA, AUSTRALIA, July 12, 2022 /EINPresswire.com/ -- Quantum Brilliance, the leading developer of quantum computing products and solutions, has announced a



collaboration with NVIDIA to accelerate the development of the world's first hybrid quantum-classical computing platform.

Announced today at Q2B Tokyo, NVIDIA QODA is designed to provide a uniform environment to



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Products at NVIDIA

connect quantum processors and traditional computers that will help scale quantum adoption for enterprise and edge applications.

"NVIDIA revolutionised high performance computing, and its new QODA platform is a bold step forward in innovating the quantum industry as well," said Dr. Marcus Doherty, Co-Founder and Chief Scientific Officer, Quantum Brilliance. "Our unique room-temperature diamond quantum microprocessor exploits this hybrid approach and will add a critical new element to the HPC and embedded computing landscape. It is essential that near-term quantum computing requires coupling of classical and quantum hardware to realize the technology's potential. This allows sources of classical computing power

such as an NVIDIA graphics processing unit (GPU) to be much closer to the quantum processing unit (QPU). The NVIDIA QODA platform provides the unifying framework for this vision."

"An increasing number of researchers worldwide believe that scientific breakthroughs will occur with hybrid solutions combining classical computing with quantum computing," said Tim Costa,

director of HPC and Quantum Computing Products at NVIDIA. "With the collaboration of innovative companies like Quantum Brilliance, we believe NVIDIA QODA will revolutionize quantum computing by giving many more developers fast access to the best tools for both worlds."

Working with NVIDIA computer processors and QODA, Quantum Brilliance's software and applications team will build quantum emulators that mimic the nitrogen-vacancy centres in the company's diamond-based quantum computers to enable efficient simulations of increasingly larger numbers of qubits.

"In addition to emulators, Quantum Brilliance is leveraging its qbOS software development kit to develop flagship applications focused on massive parallelisation of quantum computers for molecular simulations, as well as edge applications for signal processing such as speech-to-text conversion. The NVIDIA QODA platform will accelerate the progress of these applications and enable customers and partners to assess their performance," said Dr. Mark Mattingley-Scott, General Manager, Quantum Brilliance EMEA.

In a nascent industry crowded with developers using fragile, room-sized quantum mainframes, Quantum Brilliance has quickly established a reputation as an innovator for its rack-mounted, robust quantum computer. These computers leverage synthetic diamonds to run at room temperature in any environment and can be miniaturised, to eventually be held in the palm of one's hand.

About Quantum Brilliance

Founded in 2019, Quantum Brilliance is a venture-backed quantum products and solutions company developing diamond quantum computers supported by software and applications. The goal of Quantum Brilliance is to enable mass deployment of our quantum technology to propel industries to harness edge computing applications and next-generation supercomputers. Quantum Brilliance has global partnerships in the Americas, EMEA and Asia Pacific, working with governments, supercomputing centres, research organisations and industry.

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