Q-DIGEST

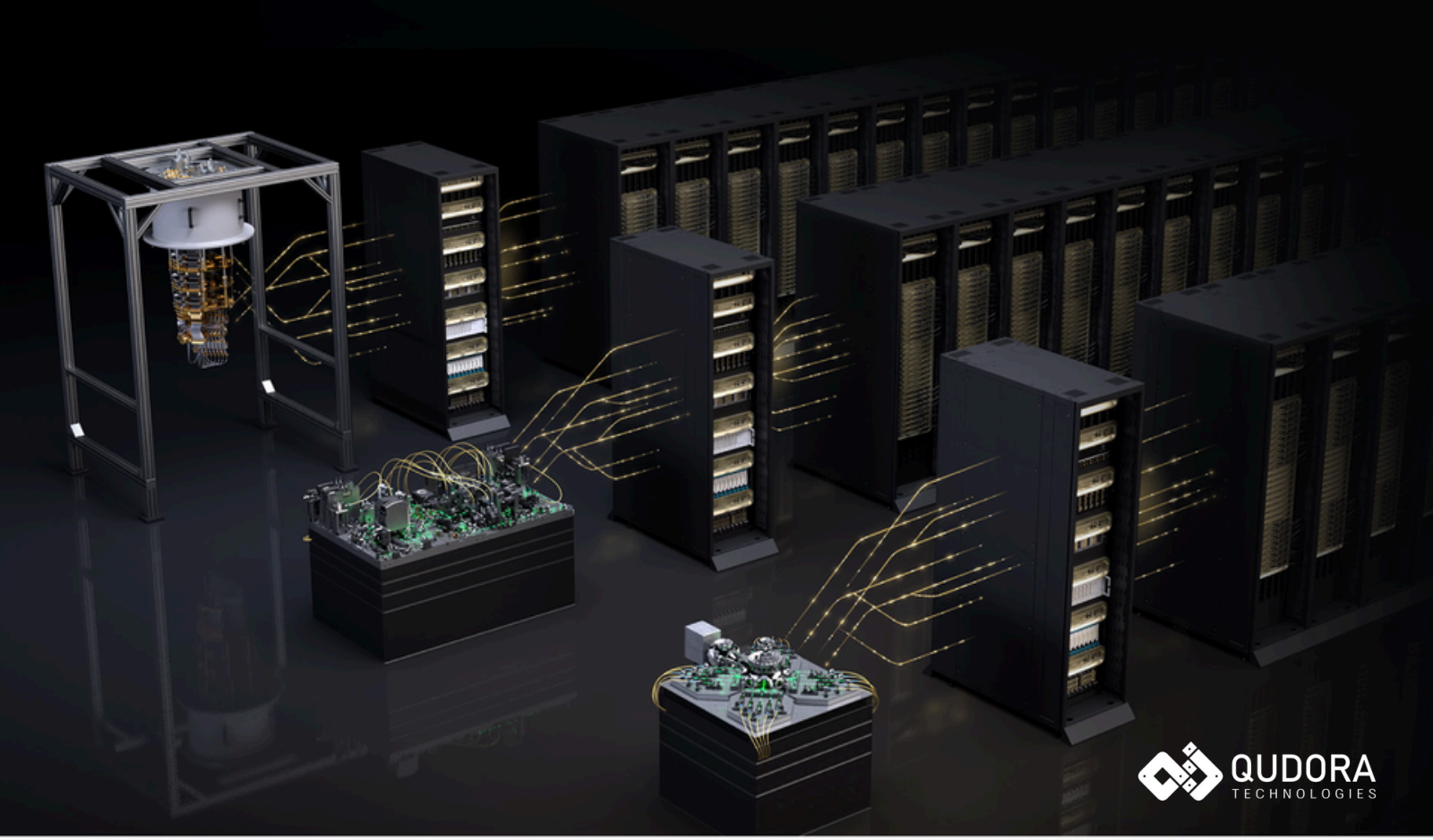
7th Edition

A Quantum-Driven Neuromorphic Chip Featuring 10,000 p-Qubits at Room-Temperature



Dynex - P5

Watch the Apollo launch Video



Zurich Instruments Showcases Collaboration with NVIDIA at GTC D.C.

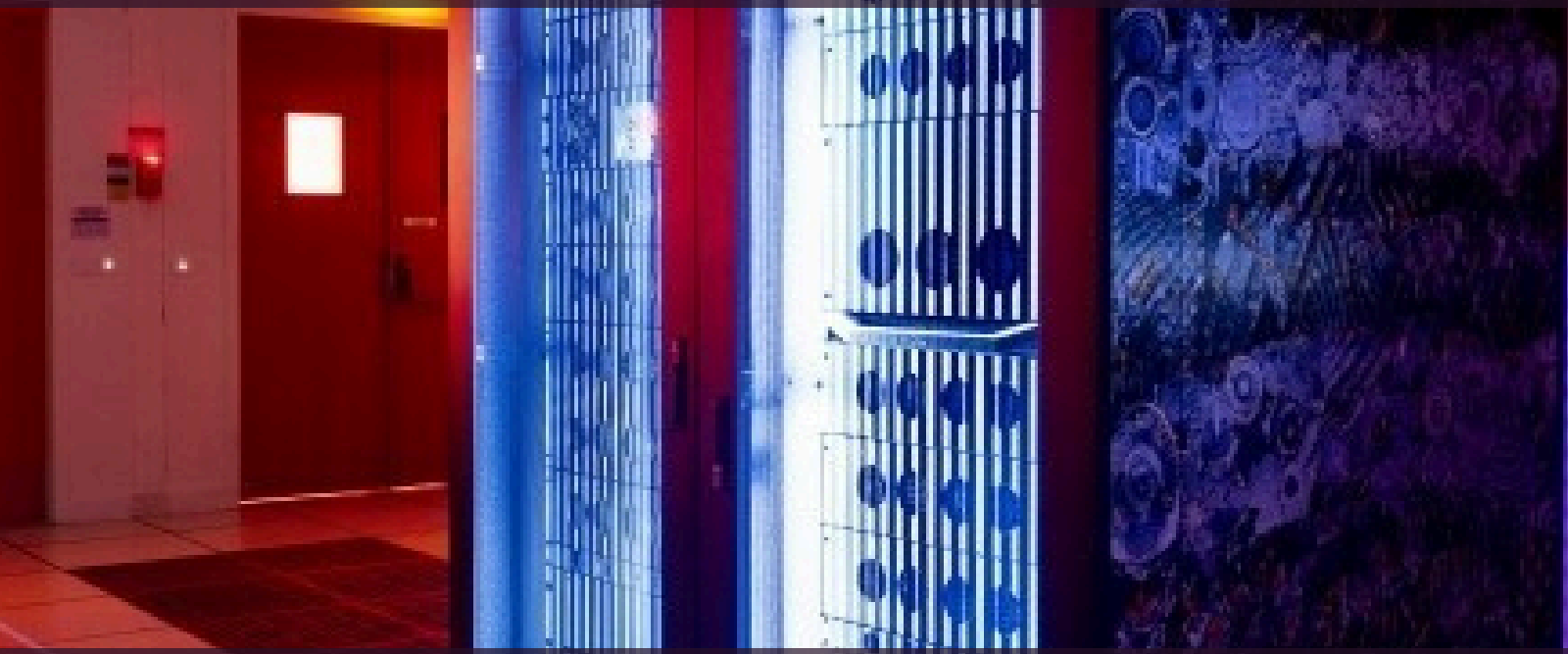
NVIDIA

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A quantum leap for Europe, powered by Quandela: meet Lucy, the world's most advanced photonic quantum computer



Europe takes a significant step forward with Lucy, the world's most advanced photonic quantum computer, delivered by Quandela to CEA's TGCC in just three days. With 12 fully connected qubits and MHz clock speed operations, Lucy enables hybrid HPC quantum workflows for optimisation, simulation and machine learning. Connected to the Joliot Curie supercomputer, it will support early applications in finance, energy, aerospace and materials science. Ahead of full availability in early 2026, Quandela, GENCI and CEA will launch webinars and training to prepare users.

QUANDELA

Read Full Story

Alice & Bob and STFC Hartree Centre Integrate Cat-Qubit Quantum Computers into Standard HPC Workflow and Job Scheduling Software SLURM

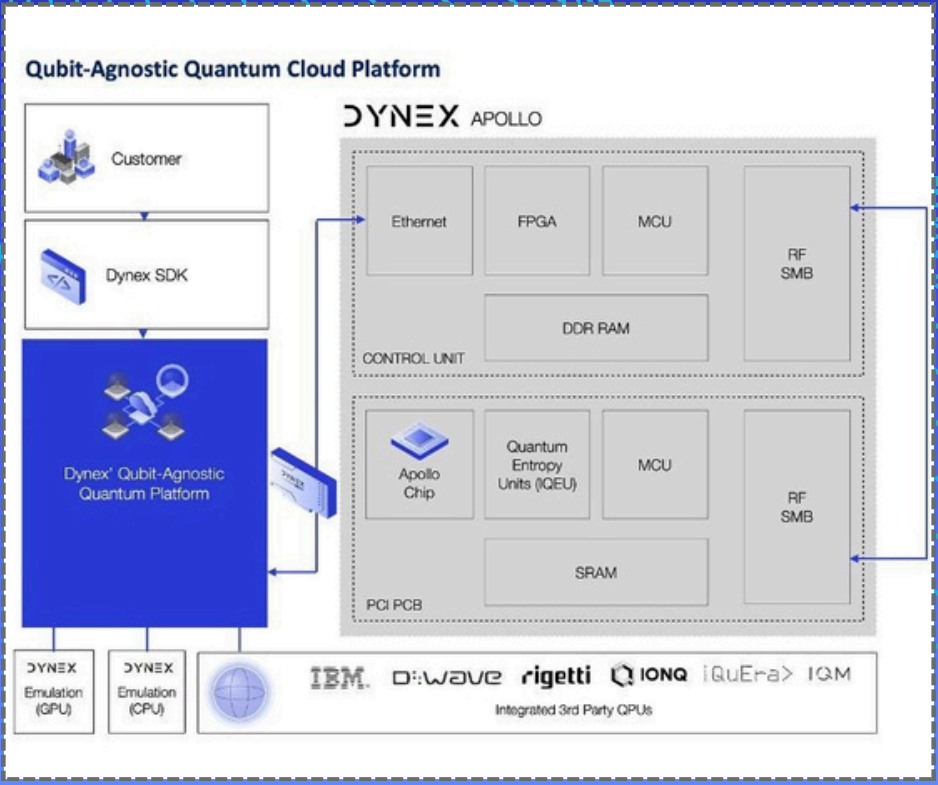


In collaboration with the STFC Hartree Centre, Alice & Bob has integrated its cat-qubit quantum processors into standard high-performance computing environments by enabling support for the SLURM workload scheduler, used by ~60% of the world's top supercomputers. This marks the first time "cat-qubit" hardware can be scheduled like classical CPUs or GPUs, enabling hybrid quantum-classical workflows. The move makes early fault-tolerant quantum computing accessible to researchers, paving the way for practical scientific or industrial applications.

Read Press Release

Dynex Unveils ‘Apollo’: Quantum-Driven Neuromorphic Chip Featuring 10,000 p-Qubits

Dynex, a global award-wining leader in developing quantum-driven solutions with its proprietary Quantum-as-a-Service (QaaS) technology has introduced ‘Apollo’, a quantum-driven neuromorphic computing chip operating at room temperature. ‘Apollo’ was presented to global industry players at the McKinsey’s EMEA Data & AI Summit 2025, Versailles.



‘Apollo’ extends probabilistic and stochastic computing into the quantum-driven regime through 10,000 physical p-qubits, each operating with continuous-time stochastic dynamics sourced from physical quantum entropy. With unprecedented scale, speed, and energy efficiency, Apollo integrates directly into Dynex’s qubit-agnostic cloud platform, offering a path to dramatically lower the energy footprint of modern AI inference across robotics, automotive, and other low-power applications.

Read Press Release



Qilimanjaro launches world's first multimodal Quantum Data Center

Read Press Release

Spanish Companies GMV and LuxQuanta Join Forces to Strengthen Europe’s Quantum-Safe Future

GMV and LuxQuanta have signed a strategic alliance to accelerate the deployment of quantum-safe communication technologies in Europe. The collaboration combines GMV’s expertise in secure key management and space systems—such as its QuKee solution—with LuxQuanta’s continuous-variable quantum key distribution (CV-QKD) technology. Together, they aim to develop integrated, interoperable solutions for terrestrial fibre networks and future space-based infrastructures.



The partnership supports the objectives of the European Quantum Communication Infrastructure (EuroQCI) initiative, reinforcing Europe’s technological sovereignty and cybersecurity resilience in the quantum era, while paving the way for commercial and institutional adoption of quantum-secure communications across critical sectors.

Read Press Release

Multiverse Computing has shrunk and de-censored DeepSeek R1

MULTIVERSE
COMPUTING



MIT Technology Review has highlighted a breakthrough achieved by Multiverse Computing using tensor networks to compress and de-censor DeepSeek R1. The company sees this as a signal of where the industry is heading: toward leaner, more transparent, and more efficient models capable of reasoning at scale. Compression makes AI smaller, faster, and more accessible, while transparency matters as AI shapes decisions, demanding clarity and responsible behavior.

Less “black-box” models strengthen governance and trust. This advance also raises an ethical debate: controlling censorship in LLMs brings opportunities and risks, requiring dialogue across industry, governments, and institutions.

Read Press Release

Quantum Simulation Begins a New Chapter with ColibriTD

ColibriTD and IBM Quantum are joining forces to bring quantum-enhanced scientific simulation to innovators worldwide.

With QUICK-PDE now available as a Qiskit Function, exploring quantum-accelerated PDE solving becomes easier, faster, and more accessible than ever. Experience now the next generation of scientific computing.

Get Started



IBM

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-EXPO

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QUDORA Presents New Quantum System in Braunschweig

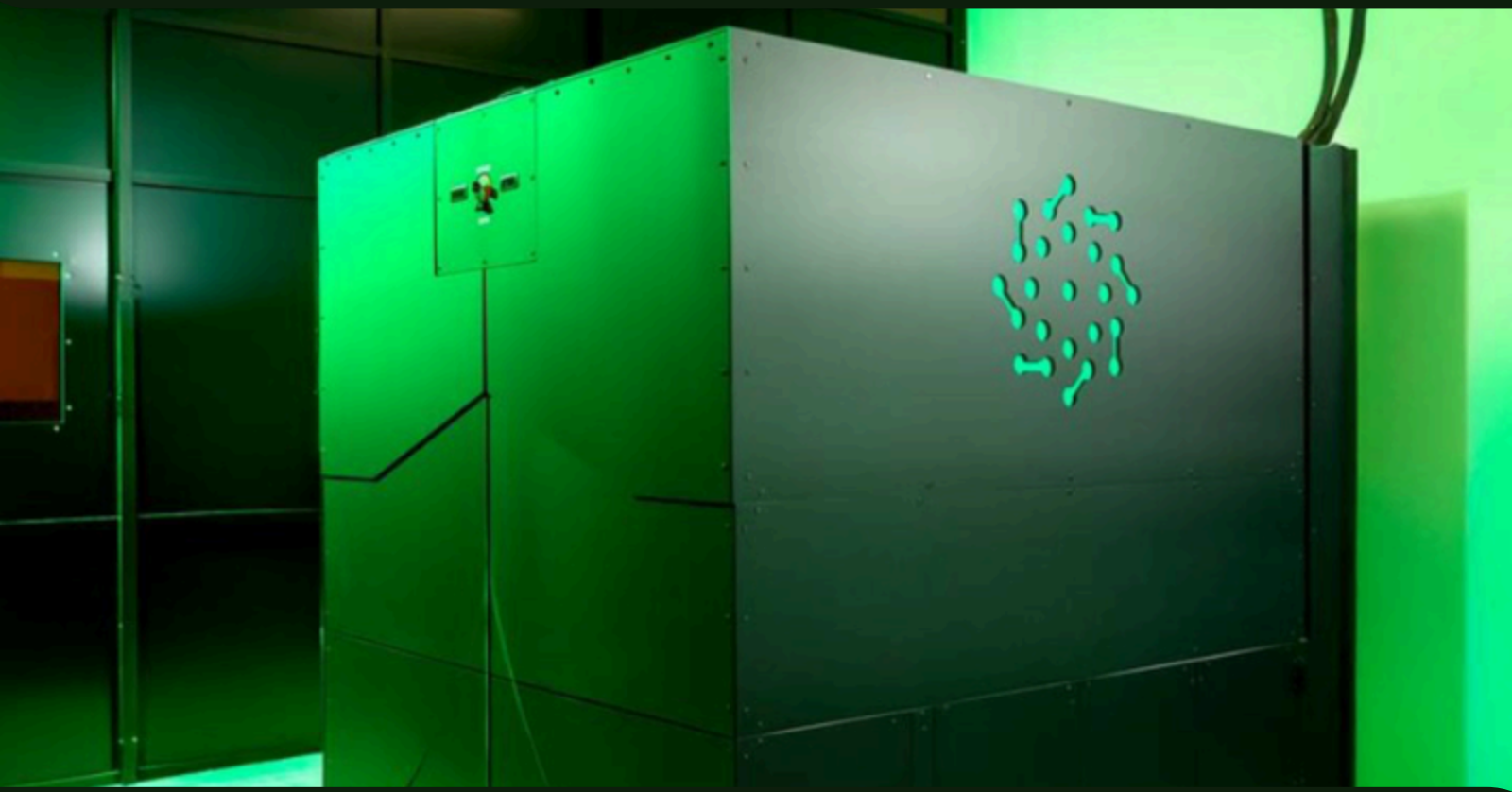
QUDORA TECHNOLOGIES



QUDORA presented its new quantum computer system at the opening of its Braunschweig headquarters in the historic Rolleiwerke. The system is scheduled to begin operation in 2026 and will scale to >200 high fidelity qubits by 2027. Built on QUDORA's proprietary NFQC technology and advanced ion trap architecture, it will be accessible through the cloud starting in 2026. QUDORA's systems are designed to integrate with existing industrial infrastructure, with on premises quantum computers already available and cloud access to follow, extending the reach of quantum computing across a broader range of applications and industries.

Read More

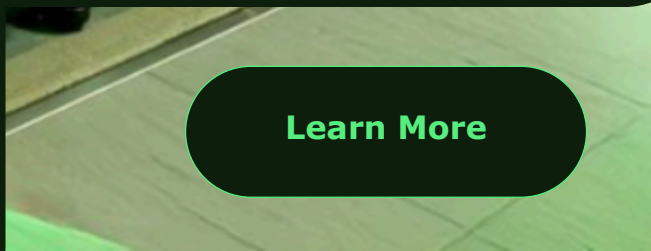
HPCQS project milestone: inauguration of the Jade and Ruby quantum processors



The High-Performance Computing and Quantum Simulator hybrid (HPCQS) project has reached a major milestone with the inauguration of two quantum processors, Jade and Ruby, respectively situated at Forschungszentrum Jülich (Germany) and CEA (France). The two Pasqal quantum processors and are now connected to Tier-0 supercomputers.

A specific HPC-Quantum Computing software stack was developed by the consortium, relying on industrial and open-source components, including the ParityQC Architecture and ParityOS operating system, Eviden Qaptiva, ParTec's ParaStation Modulo, and the Pasqal SDK.

parityqc



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Schneider Electric’s EM CSO and Former IBM Quantum VP Aparna Prabhakar Joins QuantWare’s Board of Directors

QUANTWARE



QuantWare has appointed Aparna Prabhakar, Chief Strategy & Sustainability Officer of Schneider Electric’s $32B Energy Management business and former VP of IBM Quantum Ecosystem, to its Board of Directors. Her experience in developing large technology ecosystems will support QuantWare as it deploys VIO, its proprietary 3D scaling architecture enabling MegaQubit quantum processors. The appointment strengthens QuantWare’s strategy to deliver utility-scale, energy-efficient quantum systems and accelerate industry adoption. To explore the perspectives shaping this next phase of compute, watch Aparna’s recent Fireside Conversation with QuantWare CEO Matt Rijlaarsdam on YouTube.

Watch the Video

Your Data - Secured by Quantum Keys







Quantum computers will break today's encryption methods. qtlabs builds quantum communication systems to secure the world's most critical infrastructures, on Earth and in Space.
They are building Europe's quantum communication network for Quantum Key Distribution (QKD).

As part of this initiative, qtlabs is developing entangled-photon sources for space applications, aligned with the Technology Readiness Level (TRL) roadmap and ESA qualification standards.

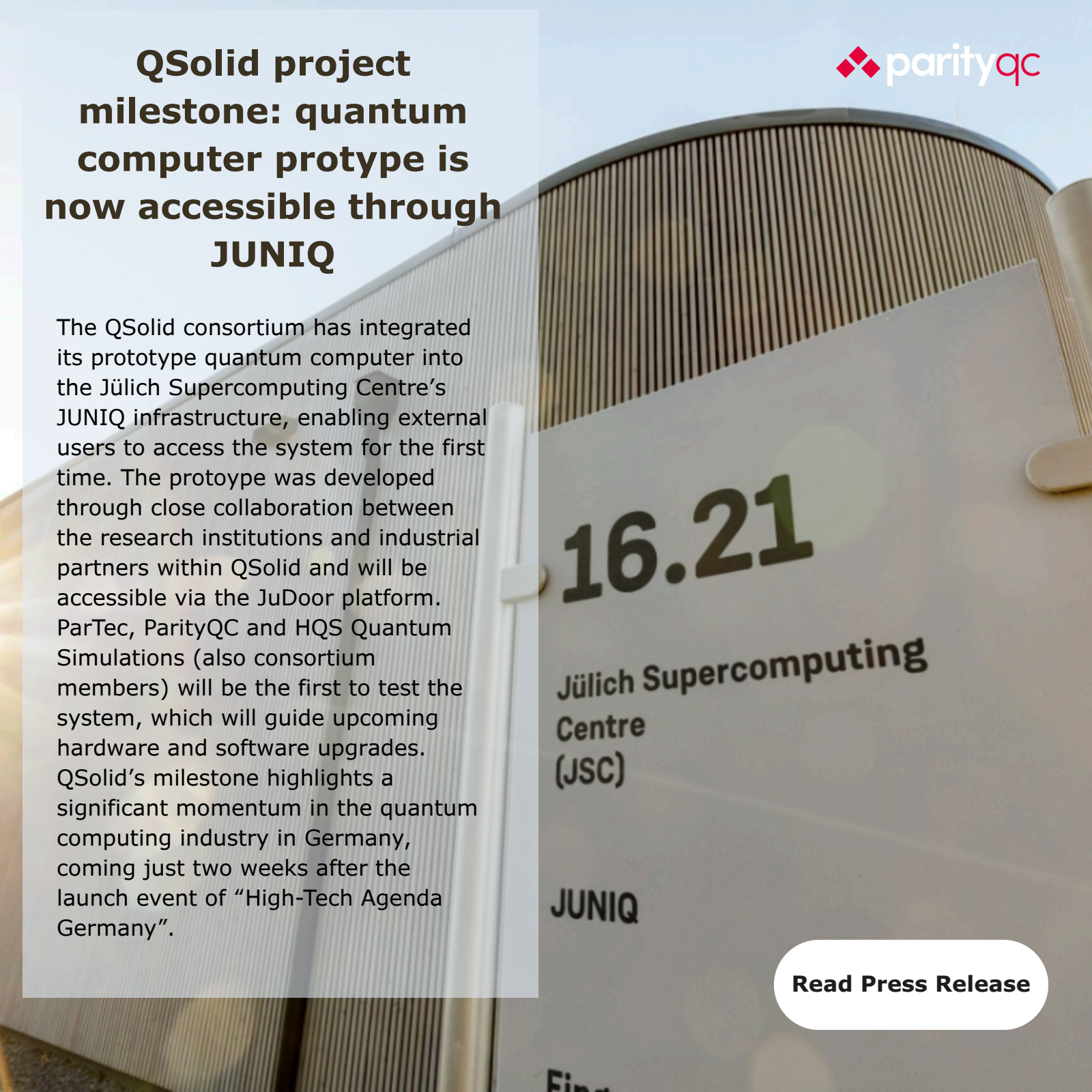
qtlabs also develops state-of-the-art Optical Ground Stations (OGS) that strengthen Europe's technological sovereignty and enable future-proof cybersecurity. These OGS facilities support quantum communication with GEO and LEO satellites and are designed to be compliant with missions such as EAGLE-1.

qtlabs
Quantum Technology Laboratories

Visit Website

QSolid project milestone: quantum computer protype is now accessible through JUNIQ

The QSolid consortium has integrated its prototype quantum computer into the Jülich Supercomputing Centre's JUNIQ infrastructure, enabling external users to access the system for the first time. The protoype was developed through close collaboration between the research institutions and industrial partners within QSolid and will be accessible via the JuDoor platform. ParTec, ParityQC and HQS Quantum Simulations (also consortium members) will be the first to test the system, which will guide upcoming hardware and software upgrades. QSolid's milestone highlights a significant momentum in the quantum computing industry in Germany, coming just two weeks after the launch event of "High-Tech Agenda Germany".



📣 The news is out! Q*Bird has won the Deloitte Rising Star Award!

The Deloitte Technology Fast 50, celebrating the fastest-growing tech companies in the Netherlands, revealed the winners of its 26th annual awards ceremony on 6 November 2025.

The Rising Star Award recognises the most promising tech start-ups that show incredible ambition, innovation, scalability and revenue potential.

Q*Bird is leading quantum-secure communication with their Falqon® Series, powered by Measurement-Device-Independent Quantum Key Distribution (MDI QKD) technology. Amid escalating data breaches and cyber threats, MDI QKD Falqon® Series safeguards critical communication networks and prepare organisations against quantum threats today and in the future!



Being named a Rising Star signals that Q*Bird is poised for exponential growth, ready to shape the future of secure communication worldwide.

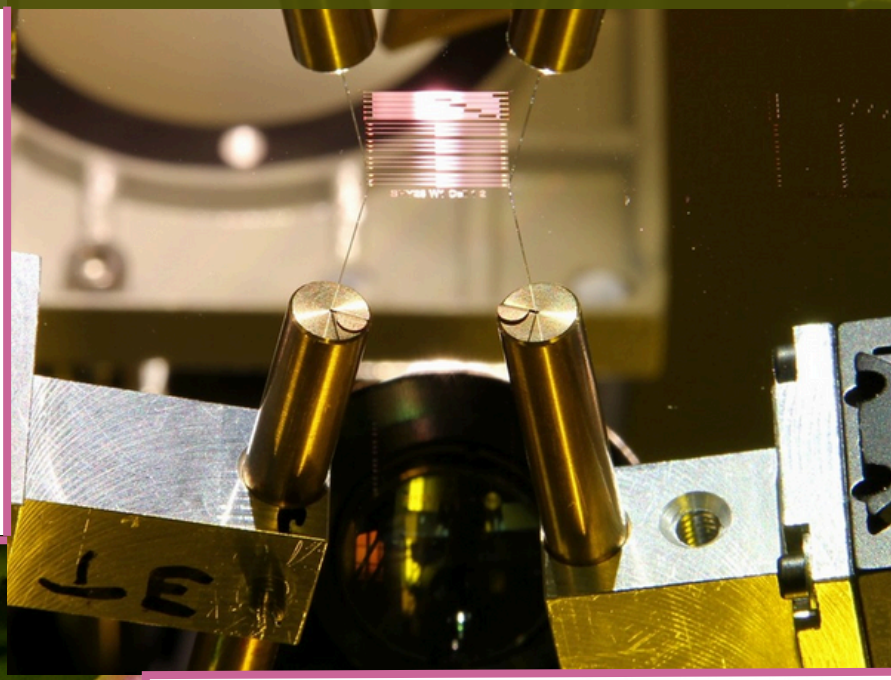
Q*bird quantum connectivity

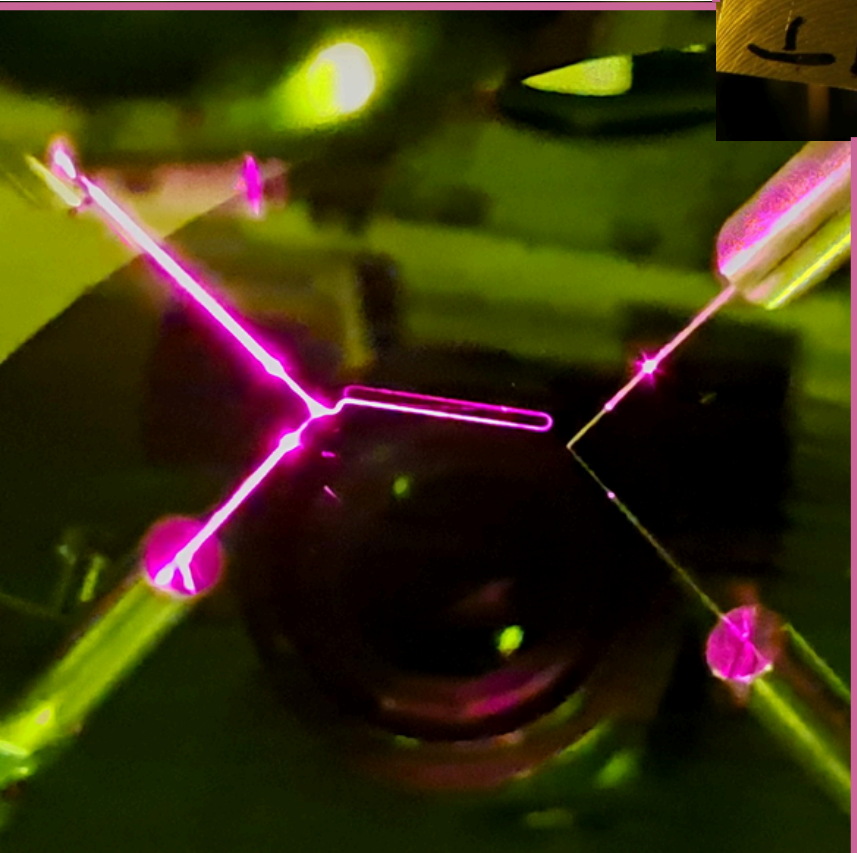
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SmaraQ: On-Chip UV Photonics for Ion-Trap Quantum Computers

QUDORA TECHNOLOGIES

QUDORA Technologies is leading the SmaraQ project to bring photonics directly onto ion-trap chips, replacing bulky free-space optical setups. Together with AMO GmbH and Fraunhofer IAF, QUDORA develops nanometer-scale UV waveguides from aluminum nitride and aluminum oxide, delivering laser light with pinpoint precision for qubit initialization and cooling.





Funded by BMFTR through 2028, SmaraQ also establishes a Germany-based supply chain for these enabling components. By embedding photonics on-chip, the project paves the way for more compact, precise, and industrial-ready ion-trap quantum computers, while strengthening Europe's technological leadership in critical quantum technologies.

Read More



AQT announces its trapped-ion quantum computer now available on Amazon Braket

Cloud access to AQT’s quantum computer IBEX Q1 on Amazon Braket AQT announces its trapped-ion quantum computer now available on Amazon Braket AQT (Innsbruck, Austria), a leading provider of quantum...

AQT / 8

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About QuIC and Q-Digest

The European Quantum Industry Consortium (QuIC) exists to unite, amplify, and accelerate Europe's quantum ecosystem. As the voice of the industry, we connect stakeholders across research, enterprise, and policy to ensure Europe leads the global quantum race.

Q-Digest is our monthly magazine designed to bring member achievements to the forefront of European quantum news. It highlights key developments across the continent spotlighting innovation, collaboration, and real-world impact.
Through Q-Digest, QuIC ensures that the progress of our members is visible, valued, and shaping the conversation on the future of quantum in Europe.

Q-DIGEST

By QuIC