



Press Release

Geneva, May 14th 2024

ID Quantique launches a quantum-safe communication ecosystem to facilitate the adoption of Quantum networks, with HEQA Security, LuxQuanta, Quantum Optics Jena, and ThinkQuantum as first partners

To accommodate the growing demand for telecom-grade solutions that enable fast and cost-effective migration to quantum-safe communications, ID Quantique’s new Clarion KX software platform now supports multi-vendor Quantum Key Distribution (QKD) interoperability. Today, we are pleased to welcome new technology partners: HEQA Security, LuxQuanta, Quantum Optics Jena, and ThinkQuantum to our Clarion KX ecosystem.

With the looming threat of quantum computers capable of breaking public-key cryptography, the reality of “harvest now, decrypt later” attack poses immediate threat to the confidentiality of enterprise, government, and IT service providers’ data. Organizations worldwide are grappling with the urgency of migrating to quantum-safe infrastructure - the most complex, time-sensitive, and costly cryptographic overhaul in IT history. Stakes are high, as failure to timely employ available mitigation strategies could expose them to significant liabilities.

To fully mitigate the associated risks, organizations are now looking to enforce a defense in depth approach by leveraging both quantum-based and algorithmic technologies at different layers of the network stack. QKD solutions, the key building block of this strategy, have been already recognized to play a critical role in ensuring long term resilience to Quantum threat.

ID Quantique [Clarion KX platform](#) leverages an open and service-based architecture to support a cost-effective scale up of QKD networks. It provides for orchestration and management of out-of-band quantum-key delivery in real time, regardless of the underlying QKD solutions or the location of the consuming encryption appliances. With its support for heterogeneous QKD infrastructure in complex and SLA demanding environments, IDQ’s Clarion KX platform also enables telecom operators to generate new revenue streams by providing new Quantum-Safe as a Service offerings to their B2B customers looking for long-term security assurance.

With ID Quantique’s expanded ecosystem and open interfaces, customers can now also leverage hybrid QKD networks, including continuous variables (CV) QKD, discrete variables (DV) QKD or Entanglement based QKD.



We are extremely proud to break another important barrier to large-scale adoption of quantum networks. Offering a vendor-agnostic ecosystem allowing heterogeneous QKD infrastructure was one of the next logical steps the market was expecting – and this is now available thanks to our partners.

Grégoire Ribordy, CEO and co-founder, ID Quantique.

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Reaching QKD interoperability is a significant market milestone that empowers customers to choose products freely for their networks, maximizing flexibility and adaptability to meet business needs. This customer-centric approach reflects HEQA Security's dedication to delivering innovative solutions, even before standards are fully finalized.

Nir Bar-Lev, CEO, HEQA Security

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Safeguarding both present and future communications requires customized solutions aligned with specific network requirements. That is why we must ensure multi-vendor interoperability, allowing our industry to build on the unique properties and specifications of each QKD and related technologies from different providers. We are very pleased with the seamless work that both our teams have done to integrate our NOVA LQ® system with Clarion KX software, and we look forward to continuing to nurture this partnership.

Vanesa Diaz, CEO of LuxQuanta

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The integration of different technological approaches is an important step for future network architecture. The demonstration shows that our partners and customers can rely on simple and fast interoperability. This brings us a big step closer to multi-user and multi-vendor networks.

Kevin Füchsel, CEO of Quantum Optics Jena

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Partnering between ThinkQuantum and IDQ for the mutual recognition of our own quantum networking solutions is definitely moving in the direction of overcoming the competition we daily experience on the market to cooperate in the support of our common clients and industry growth.

Simone Capeleto, CEO of ThinkQuantum

About ID Quantique

Founded in 2001 as a spin-off of the Group of Applied Physics of the University of Geneva, ID Quantique is the world leader in quantum-safe crypto solutions, designed to protect data for the future. The company provides quantum-safe network encryption, secure quantum key generation and Quantum Key Distribution solutions and services to the financial industry, enterprises, and government organizations globally. IDQ's quantum random number generator has been validated according to global standards and independent agencies and is the reference in highly regulated and mission-critical industries such as security, encryption, critical infrastructure and IoT – where trust is paramount.

Additionally, IDQ is a leading provider of optical instrumentation products, most notably photon counters and related electronics. The company's innovative photonic solutions are used in both commercial and research applications.

IDQ's products are used by government, enterprise, and academic customers in more than 60 countries and on every continent. IDQ is proud of its independence and neutrality and believes in establishing long-term, trusted relationships with its customers and partners.

For more information, please visit www.idquantique.com.

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About HEQA Security

HEQA Security (formerly QuantLR), founded in 2018, is committed to safeguarding data communication against both existing and emerging cyber threats, posed by quantum computers. Led by world-renowned executives from the data protection, quantum communication, and academic domains, we focus on building the most cost-effective and scalable carrier-grade QKD offering in the market while guaranteeing the highest security levels.

HEQA Security products are used by world-leading telecom operators, defense organizations, global cloud providers, and financial institutions.

For further information, please visit: www.heqa-sec.com.

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About LuxQuanta

LuxQuanta was established as a spin-off from the Institute of Photonic Sciences (ICFO) in May 2021 to integrate advanced and secure quantum cryptography technologies into conventional optical communication infrastructures. The company is driven by a passion for innovation and a deep commitment to delivering state-of-the-art Quantum Key Distribution solutions that are easy to install while meeting the highest security requirements of governmental institutions, financial entities, data centres, and private telecommunication network providers.

In 2023, the company launched its first commercial CV-QKD System, NOVA LQ®, becoming the European leading provider of Continuous Variable QKD technology, which has been already deployed in across the European Union. LuxQuanta is also leading the consortium QUARTER, a European project focused on advancing the maturity of QKD and related technologies for the EuroQCI deployment.

With its cutting-edge technology, experienced team, dedication to excellence and solid European foundations, LuxQuanta is determined to shape the future of quantum-secured communications while nurturing the development of a robust quantum ecosystem in Europe.

For more information, please visit www.LuxQuanta.com.

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About Quantum Optics Jena

“Hack now, decrypt later” attacks, combined with the impending development of a cryptographically relevant Quantum Computer, intensify concerns over the vulnerability of traditional encryption methods. To combat these risks, Entanglement-based Key Distribution (EKD) emerges as a robust solution, providing secure communications in multi-user networks that can withstand the evolving threat landscape with the unique properties of quantum superposition and entanglement distribution.

Quantum Optics Jena GmbH was founded in 2020 with the vision to place the security of communication networks on the foundation of quantum physical laws and to deliver solutions with quantum added value. In recent years, the company has established itself worldwide as leading provider of entanglement-based key distribution systems. The product portfolio includes complete multi-user key distribution systems as well as their individual components, from entangled photon sources to quantum state analyzers and services for integration into IT networks.

For more information, please visit www.qo-jena.com.

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About ThinkQuantum

ThinkQuantum is a leading company in the quantum communication landscape. Born as spin-off of the University of Padua, it is now an established firm, offering complete solutions for cyber security based on quantum technologies to both private corporations and government bodies all across the world.

ThinkQuantum covers the Full Value Chain from design and manufacturing to the commissioning of industrial solutions for Quantum Key Distribution (QKD), Quantum Random Numbers Generation (QRNG), Key Management Systems (KMS) and Software Defined Network (SDN).

Beyond the complete solution for quantum networks, ThinkQuantum provides Free-Space Optical (FSO) terminals for linking nodes over the air, and plays a leading role in the research and development of quantum solutions for Space domain, both for Satellite payloads and Ground Stations.

ThinkQuantum, based in Italy with an Italian shareholder structure, offers a Reliable European supply chain.

For more information, please visit www.thinkquantum.com.

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