



Press Release

Geneva, December 4th 2019

ID Quantique partners with ADVA to commercialise a quantum-safe encryption solution

ID Quantique (IDQ), the world leader in quantum-safe security solutions, integrates with ADVA's FSP 3000 platform to provide long-term security for critical data transported over optical networks.

ID Quantique is glad to announce that telecommunications solution provider ADVA now provides a dedicated commercial grade interface to IDQ's [Cerberis³ Quantum Key Distribution \(QKD\) system](#). The latest production release of ADVA's FSP 3000 scalable optical transport platform offers a dedicated interface for quantum keys based on the ETSI key delivery standard. The Cerberis³ is the latest generation of IDQ's Quantum Key Distribution systems, based on 16 years of experience in the development and commercialisation of quantum-based products.

The combination of the FSP 3000 ConnectGuard™ Optical Layer 1 encryption with IDQ's QKD provides long-term security for critical data transported over optical networks. QKD – also known as quantum cryptography – is a highly innovative key-exchange technique, which can ensure quantum-safe security today. It is a technology that exploits a principle of quantum physics – observation causes perturbation – to exchange cryptographic keys over optical fibre networks with ultimate security. A Quantum Random Number Generator (QRNG) embedded in the QKD system provides keys that are produced in an absolute random way. Once the key exchange is validated, the keys can be used to encrypt data and encrypted messages will remain confidential.

QKD is widely predicted to be a vital tool for securing highly sensitive data transport from all forms of cyberattack, including the threat of quantum computers that could render current public key cryptography useless. Distributing encryption keys in a quantum state ensures that all tapping attempts are detected as any attempt to intercept traffic disturbs photons, introducing coding errors and alerting operators.

The ADVA FSP 3000 platform receives quantum keys generated by IDQ's QKD using the standardised ETSI Key Delivery API. An internal dual key-agreement (combination of quantum keys with the internal exchanged dynamic keys using a Key Derivation Function) is used to assure seamless interworking with the platform. **This joint solution is the first commercially available quantum-safe optical platform built on a standardised interface. QKD is added as an extra layer of security on top of the encryption taking place at Layer 1 to protect data at all layers.**

"We have been working with ADVA for many years," says Grégoire Ribordy, CEO and co-founder of ID Quantique. "Combining secure Layer 1 encryption with QKD will provide the best security for data in motion. Sensitive data is increasingly in danger from the growing threat of cyberattacks and more and more companies, especially banks and governments are highly concerned by this issue."

"Large scale quantum computers will put the security of classical key exchange schemes at risk and endanger the long-term security of encrypted data" says Jörg-Peter Elbers, Senior Vice President of Advanced Technology, Standards & IPR, ADVA. "QKD is a method to secure the key exchange against quantum computer attacks. We were the first to implement the ETSI key delivery API on a commercial high-speed optical networking product. Our FSP 3000 provides an open and standardised interface to use quantum keys with existing data encryptors. Through our partnership with ID Quantique, we can leverage their technology and expertise to provide a new level of long-term security in data transport."

The joint solution has been validated and deployed by a key financial client in Europe to protect their critical links.

About ADVA

ADVA is a company founded on innovation and focused on helping our customers succeed. Our technology forms the building blocks of a shared digital future and empowers networks across the globe. We're continually developing breakthrough hardware and software that leads the networking industry and creates new business opportunities. It's these open connectivity solutions that enable our customers to deliver the cloud and mobile services that are vital to today's society and for imagining new tomorrows. Together, we're building a truly connected and sustainable future.

For more information on how we can help you, please visit www.adva.com.

For press:

Gareth Spence
+44 1904 699 358
public-relations@adva.com

For investors:

Stephan Rettenberger
+49 89 890 665 854
investor-relations@adva.com

More information on FSB 3000 ConnectGuard™:

[Layer 1 security](#)

[FSP 3000 datasheet](#)

[ConnectGuard Optical solution brief](#)

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 and trusted relationships with its customers and partners.

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

Contact info:

Catherine Simondi
VP Marketing & Communications
catherine.simondi@idquantique.com
+41 (0) 22 301 83 71