



Press Release

Barcelona, February 27th 2023

ID Quantique, KCS and SK Telecom release a new quantum enhanced cryptographic chip at MWC23

Ultimate security for connected devices and IoT systems: combining IDQ's quantum random number generator (QRNG) technology and KCS' cryptographic communication semiconductor technology into one security chipset. This next generation security chip provides the highest level of security for IoT and connected devices and unrivalled protection against hacking.

In a digital and interconnected world, people and companies are using IoT connected devices for more and more services and applications, from healthcare to personal finance and the monitoring of industrial and utility processes. As with almost all connected and communication technologies, there comes an associated cybersecurity risk raising the need for security to the edge.

Today, at Mobile World Congress in Barcelona, SK Telecom (NYSE:SKM) and ID Quantique, the world leader in Quantum-Safe security solutions, present this new quantum-enhanced cryptographic chip co-developed with Korea Computer & Systems (KCS), a maker of IoT security cryptographic chips to secure IoT devices communication.

This quantum-enhanced cryptographic chip is an ultra-compact and low-power chip that provides strong security functions to various IoT-based products and devices. Adding ID Quantique's ultra-compact [QRNG chip](#) (IDQ250C3) to KCS's crypto chip ensures trusted authentication and encryption of sensitive information and make our connected world more secure. The combination of these two chips into one chipset is more cost effective and a compact solution, allowing board size to be reduced by 20% thanks to a higher integration level, compared to the case of mounting two existing and separate chips on a board. In addition, the new chip is in the process of acquiring the highest level of security from the Korean National Intelligence Service's KCMVP certification body. It targets the fast-growing security market with applications from national defence sectors to industrial and public sectors.



KCS, SK Telecom and IDQ have been collaborating for several years, bringing to the market a whole range of crypto chip-based solutions aiming at ensuring and enhancing IT security without compromising on performance and speed.

The effectiveness of any cryptographic system is associated with the encryption keys it uses. In turn, the strength of the key directly depends on the degree of randomness used in its generation. ID Quantique was the first company to develop a quantum random number generator (QRNG) in 2001 and it has remained the market leader in terms of reliability and certifications, with its [Quantis QRNG product family](#). ID Quantique's chips can easily be embedded in a wide variety of hardware security modules, data encryptors, IoT devices, communications systems for autonomous vehicles, drones, satellites, etc. QRNGs generate provably unbiased and totally unpredictable randomness with the highest entropy from a CMOS image sensor, using ID Quantique patented quantum technology.

At ID Quantique, we also focus on providing long-term security solutions for our customers' IT infrastructures. Our [Quantum Key Distribution \(QKD\)](#) solution is used to upgrade existing fiber optic telecommunication infrastructures by providing provably secure and unhackable key exchange for data encryption and to guarantee data security and confidentiality for the long-term. Our 4th generation QKD System will be displayed at MWC (booth in Hall 3 Stand 3130).



We unveil for the first time at MWC23 a 'quantum enhanced crypto chip' that provides strong security functions while increasing economic efficiency.

Ha Min-yong, CDO of SK Telecom



KCS has a long-established reputation in the security field. For over forty years we have been developing and integrating security-first solutions and software. With the addition of IDQ's ultra-small chip, we will be able to guarantee the highest level of security on the market.

Kwang-mook Kim, CEO of KCS



Even the simplest and least expensive IoT device needs to have the highest level of security as people health and safety can be compromised. The combination of our 2 chips in 1 quantum-enhanced crypto chip guarantees the highest level of trust for consumers.

Grégoire Ribordy, CEO and co-founder of ID Quantique

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.

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