



## Press Release

Geneva, May 14<sup>th</sup> 2020

### **ID Quantique and SK Telecom announce the world's first 5G smartphone equipped with a Quantum Random Number Generator (QRNG) chipset**

**ID Quantique (IDQ), the world leader in quantum-safe security solutions, today announced that its newest Quantum Random Number Generator (QRNG) chip has been integrated in the 'Galaxy A Quantum', a custom edition of the Samsung Galaxy A71 5G smartphone commercialized by SK Telecom (NYSE:SKM), Korea's Telecom giant, to protect its customers' most valuable information.**

In today's hyper-connected world, we rely on our phones to process and store reams of personal digital data. Mobile applications require the collection and transmission of more and more sensitive information, such as digital identification, raising the need for security to the edge.

Samsung, SK Telecom and ID Quantique partnered to release a custom edition of the Galaxy A71 5G – the Galaxy A Quantum, the world's first QRNG-powered 5G smartphone – which will feature a Quantum Random Number Generator (QRNG), an advanced security tool designed to protect consumers' sensitive information.

The release of the Galaxy A Quantum carries a significant meaning as it enables individual consumers to experience the benefits of quantum security technologies in their everyday lives. This QRNG chipset allows smartphone holders to use selected services in a safe and secure manner by generating true random numbers that cannot be hacked. It delivers a unique differentiation by providing a much higher level of trust to the users, and is the basis for new revenue streams especially in combination with e-sim and quantum secured data centers.

The two companies have been working together since 2016 developing quantum technologies for the telecom and IoT markets. Last year SK Telecom [applied ID Quantique's QRNG systems](#) in its 5G mobile core network to improve the security of the subscriber authentication.

*"Smart phones and phone applications secure and transmit financial information, health information, home information, business information and personal data. Securing mobiles phones has become a top priority for mobile operators, who are also looking to generate new revenues"* said Grégoire Ribordy, CEO and co-founder of ID Quantique. *"With its compact size and low power consumption, our latest Quantis QRNG chip can be embedded in any smartphone, to ensure trusted authentication and encryption of sensitive information. It will bring a new level of security to the mobile phone industry. This is truly the first mass market application of quantum technologies."*

*"With the release of the Galaxy A Quantum, we are opening a new chapter in the history of the quantum security industry"* said Ryu Young-sang, Vice President and Head of MNO Business of SK Telecom. *"We will offer differentiated security solutions to enable our customers to use ICT services in a safe and secure manner in the hyper-connected era of 5G."*

Generating strong keys from a reliable entropy source is the cornerstone of any security system. IDQ's [Quantis QRNG chip](#) (IDQ250C2) is the first Quantum Random Number Generator designed and manufactured specifically for mobile handsets. It generates provably unbiased and unpredictable randomness with high entropy from the very first bit from the shot noise of a light source captured by a CMOS image sensor, a patented quantum technology from ID Quantique.

IDQ's Quantis QRNG chip (IDQ250C2) is low profile, small footprint, and now makes our connected world more secure. In the hyper-connected 5G era where 43 billion devices are expected to be connected through wireless networks in 2026<sup>1</sup>, the importance of cybersecurity to the edge will increase exponentially. With its low power consumption, ID Quantique's new ultra-small QRNG chip can be embedded in any smartphone, edge and IoT devices, to ensure trusted authentication and encryption of sensitive information.

ID Quantique was the first company to develop a quantum random number generator (QRNG) in 2001 and it remains the market leader in terms of reliability and certifications, with its [Quantis QRNG product family](#). It is actively developing new QRNG products for its customers in various fields like automobile, consumer electronics, computer, mobile, financial, gaming and security markets.

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 distribute encryption keys, whose security is based on quantum physics and is thus guaranteed for the long-term.

### 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](http://www.idquantique.com).

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### About SK Telecom

SK Telecom is Korea's leading ICT company, driving innovations in the areas of mobile communications, media, security, commerce and mobility. Armed with cutting-edge ICT including AI and 5G, the company is ushering in a new level of convergence to deliver unprecedented value to customers. As the global 5G pioneer, SK Telecom is committed to realizing the full potential of 5G through ground-breaking services that can improve people's lives, transform businesses, and lead to a better society.

SK Telecom boasts unrivaled leadership in the Korean mobile market with over 30 million subscribers, which account for nearly 50 percent of the market. The company now has 47 ICT subsidiaries and annual revenues approaching KRW 17.8 trillion.

For more information, please contact [skt\\_press@sk.com](mailto:skt_press@sk.com) or visit our [Linkedin page](#).

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<sup>1</sup> based on data by market research firm Gartner about expected number of connected devices in 2026