ID Quantique (IDQ) launches an ultra-small Quantum Random Number Generator (QRNG) chip for mobile, IoT and edge applications

ID Quantique (IDQ), the world leader in quantum-safe security solutions, today announced its newest Quantum Random Number Generator (QRNG) chip developed to secure mobile, IoT and edge applications. It is ideal for applications, where compact size and low power consumption are critical.

In the hyper-connected 5G era where 43 billion devices are expected to be connected through wireless networks in 2026¹, the importance of cybersecurity to the edge rises exponentially.

Mobile applications today require the collection and transmission of more and more sensitive data including financial, health, business and personal information. IoT and edge devices are now connecting home, hospitals, factories, infrastructure, schools and shopping locations, raising the need for security to the edge.

IDQ’s Quantis QRNG chip (IDQ250C2) is low profile, small footprint, and now makes our connected world more secure.

Generating strong keys from a reliable entropy source is the cornerstone of any security system. Quantis QRNG chip (IDQ250C2) is the first Quantum Random Number Generator, designed and manufactured specifically for mobile handsets, IoT and edge devices. 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.

“With its compact size and low power consumption, our latest Quantis QRNG chip can be embedded in any smartphone, edge and IoT devices, to ensure trusted authentication and encryption of sensitive information.” said Grégoire Ribordy, CEO and co-founder of ID Quantique. “Using a Quantum Random Generator at the edge is a first step to make wireless and IoT ecosystems quantum-safe and prepare for the quantum computing age. Securing smartphones and IoT devices is a top priority for many manufacturers.”

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 and mobile, financial and security markets.

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