



Press Release

Geneva, April 27th 2020

ID Quantique launches two high performance QRNG PCIe cards, based on its latest QRNG technology

ID Quantique (IDQ), the world leader in Quantum Random Number Generation (QRNG), today announced it adds two high throughput QRNG PCIe cards to its Quantis product family. They use ID Quantique's latest QRNG technology to provide 40Mbps and 240Mbps entropy data rates and integrate NIST compliant post-processing.

In today's connected world, the generation of unique and truly random numbers plays a critical role in many important applications such as cryptographic services to generate high-quality keys to effectively protect access to private networks, servers, virtual machines, and applications; to protect data integrity and confidentiality for numerical simulations and fintech. Beside classical Business Applications, Gaming is by nature in interest of highest Entropy, today even more as processing power and AI is on a rise. Each game, be it an application or a physical slot, is based on luck and randomly picks lottery numbers or shuffles cards; to do so it has to be based on the highest reliable random number generator. We from ID Quantique are dedicated to the success of our customers in all areas we contribute with cutting edge Randomness Quality from financial transactions to highest gaming experience.

Although random numbers are required in many applications, their generation is often overlooked. Being deterministic, computers are not capable of producing random numbers. A physical source of randomness is necessary. Quantum physics being intrinsically random, it is natural to exploit a quantum process for such a source. In cryptography for instance, only systems using a robust, unpredictable source of full entropy that produce true random numbers can be information theoretically secure. Both Pseudo Random Number Generators (PRNGs) based on algorithms and True Random Number Generators (TRNGs) based on classical physics are vulnerable. Since they are deterministic and thus predictable at their core, PRNGs cannot offer full cryptographic security.

ID Quantique's Quantum Random Number Generators (QRNGs) exploit simple physical processes that are fundamentally random and have the advantage over classical RNGs of being provably secure: elementary components can be easily monitored to detect any failure or attacks, environmental perturbations can be ruled out by simple health checks, guaranteeing QRNGs always produce high quality entropy.

The [new Quantis QRNG PCIe-40M and PCIe-240M](#) rely on ID Quantique's latest patented QRNG technology, that generates randomness from the shot noise of a simple light source captured by a CMOS image sensor. They can serve multiple applications in a server with true randomness, either directly from the entropy source or after NIST compliant post-processing. Live status verification and entropy source health monitoring performed at component level ensure the Quantis PCIe cards always provide the highest entropy, and because any failure or attacks can be detected, they can be trusted to provide the highest entropy from the very first to the last bit.



“With this new generation of PCIe cards, ID Quantique offers even higher performance QRNGs to better answer the increasing need from many applications for high quality and trusted source of entropy” said Grégoire Ribordy, CEO and co-founder of ID Quantique. “This is in particular important to strengthen the crypto applications that secure our communications and ensure our safety today.”

The Quantis QRNG family exists in several form factors: chips, PCIe, USB and appliance, which are certified market leaders since 2001.

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.

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