Elmos wins the 2026 German Innovation Award for the world's smallest Quantum Random Number Generator (QRNG)

The Elmos QRNG chip sets new standards for cybersecurity in the age of AI and quantum computing

Leverkusen, April 20, 2026: Elmos Semiconductor SE (FSE: ELG) has won the prestigious German Innovation Award 2026 for the first time in the "Medium-Sized Companies" category. The award recognized the world's smallest quantum random number generator (QRNG), a groundbreaking semiconductor solution for secure encryption in the age of artificial intelligence and quantum computing.

The German Innovation Award has been presented annually since 2010 by Accenture, O_2 Telefónica, and WirtschaftsWoche under the patronage of the Federal Ministry for Economic Affairs and Energy, and recognizes visionary innovations. It is one of the most prestigious awards for cutting-edge technologies in Germany. The award was presented by Santiago Argelich Hesse, CEO of Telefónica Deutschland, during the awards ceremony.

With its award-winning QRNG, Elmos is setting new standards in cybersecurity. While many systems have traditionally relied on pseudorandom figures, which can become predictable as computing power increases, Elmos' QRNG generates true random numbers based on quantum physical processes. Individual photons are generated and detected within the chip, resulting in an unpredictable random number of the highest quality. Elmos' QRNG offers a future-proof solution: The technology is inherently robust against external influences such as temperature, voltage fluctuations, light, pressure, or electromagnetic interference, thereby ensuring the highest level of cryptographic security.

The quantum random number generator is fully integrated onto a single chip and manufactured using standard CMOS technology. This makes it particularly cost- and energy-efficient, thereby playing a key role in building a secure digital infrastructure for applications in the automotive, communications, and IoT industries. Measuring just 2 mm x 2 mm, it is the smallest solution of its kind in the world.

"This award confirms our commitment to actively shaping the security of the digital world through innovative semiconductor solutions," says Dr. Jan Dienstuhl, Chief Sales Officer at Elmos Semiconductor SE. "With our quantum random number generator, we are laying the foundation for secure and trustworthy encryption, both today and in the quantum age."

By winning the German Innovation Award, Elmos underscores its innovative strength and its role as a leading provider of mixed-signal semiconductors. The award-winning QRNG technology has the potential to strengthen the security of digital systems as a forward-looking solution and opens up new possibilities for applications in security-critical areas worldwide. Furthermore, Elmos is open to licensing this technology to other semiconductor manufacturers upon request in the future, in order to further strengthen the protection of digital infrastructures and, thereby, society as a whole.

We would like to thank the Federal Ministry for Economic Affairs and Energy for supporting this project under the IPCEI MECT initiative, based on a resolution of the German Bundestag; the European Union – NextGenerationEU; the Ministry of Economic Affairs, Industry, Climate Action, and Energy of the State of North Rhine-Westphalia; the Ministry of Economic Affairs, Labor, and Tourism of Baden-Württemberg; and the Ministry of Economic Affairs, Labor, and Energy of the State of Brandenburg.

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About Elmos

Elmos has been developing intelligent microchip solutions for over 40 years, primarily for the automotive industry. As a fabless company and specialist for analog mixed-signal ICs, Elmos makes the mobility of the future safer, more comfortable and more efficient. The innovative products of Elmos enable reliable driver assistance systems, intelligent sensors, efficient motors and new LED lighting concepts in modern vehicles. As a market leader in cutting-edge applications, Elmos is powering global megatrends such as autonomous driving, electromobility and software-defined vehicles.

Note

This release contains forward-looking statements that are based on assumptions and estimates made by the Elmos management. Even though we assume the underlying expectations of the forward-looking statements to be realistic, we cannot guarantee the expectations will prove right. The assumptions may carry risks and uncertainties, and as a result actual events may differ materially from the forward-looking statements. Among the factors that could cause such differences are changes in general economic and business conditions, fluctuations of exchange rates and interest rates, the introduction of competing products, lack of acceptance of new products, and changes in business strategy. Elmos neither intends nor assumes any obligation to update its statements with respect to future events.