

Telefónica, IDEMIA Secure Transactions and Quside launch Quantum-Safe Connectivity for IoT devices



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Telefónica, IDEMIA Secure Transactions and Quside announce the launch of the Quantum-Safe connection for industrial IoT devices, a pioneering initiative that will pave the way for advances in quantum computing for Internet of Things (IoT) devices. This initiative introduces Quantum-safe SIM cards and Transport Layer Security (TLS), a cryptographic protocol that enables deployment without the need for hardware changes and the generator of stronger quantum randomness technology that ultimately leads to more secure connectivity and more efficient computing.

In the wake of quantum computing advancements, Internet of Things (IoT) devices are being confronted by unprecedented security challenges that requires to develop quantum-resistant security measures tailored to the unique constraints and requirements of IoT deployments.

These solutions will be particularly useful as a first step for industrial companies, especially for those with long-lasting devices (15+ years), granting secure connections between IoT devices, such as smart meters, and their operating systems.

This partnership between Telefónica, IDEMIA and Quside will set new standards for security and resilience in IoT ecosystems, protecting both device infrastructure and data from potential quantum attacks.

In the future, these innovations will enable Telefónica to offer new cryptographic quantum security services to IoT developers through the GSMA Open Gateway platform, the telecoms industry initiative to transform networks into open platforms.

This project is part of a long-term collaboration between Telefónica

and IDEMIA, which has already announced some significant milestones, such as the deployment of the world's first quantum-safe 5G SIM card in 2022 or the use of biometrics for contactless access control.

As businesses and governments alike seek to secure their IoT ecosystems, the market potential for quantum-safe technology is limitless. Telefonica and its partners are positioning themselves as the main and pioneer actors that will shape the sector in the years to come.

Antonio Guzmán- Discovery Director at Telefónica Innovación Digital, states:

At Telefónica, we persistently evolve our understanding of the future to transform it into reality. These quantum-safe developments will enable Telefónica and its customers to benefit from enhanced security with easier deployment. End users will also gain from the assurance of uninterrupted services and protection against advanced cyber threats, during the whole device lifetime

Fabien Jautard, EVP for Connectivity Services at IDEMIA Secure Transactions, said:

IDEMIA Secure Transactions has been engaged for years in creating quantum-resistant technologies that safeguard society in the post-quantum world. We are particularly proud of this transformative partnership with Telefónica that represents another milestone in secure communications. With such an innovative approach alongside Telefónica, IDEMIA Secure Transactions demonstrates its conviction that co-creating innovative solutions with its long-standing customers is shaping a safer digital future for consumers

Carlos Abellán, CEO and Co-founder at Quside, said:

At Quside, we're thrilled to work with Telefónica and IDEMIA Secure Transactions on this quantum-safe connectivity initiative. This groundbreaking effort reflects our dedication and joint commitment to bring stronger security to all connected devices, including industrial IoT, in the transition to quantum-resistant cryptography

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