



# IDEMIA Secure Transactions Unveils IDEMIA Sphere Cryptographic Library: A Certified Set of Algorithms for Quantum-Safe Security

IDEMIA Secure Transactions (IST), a global leader in cryptography, launches the IDEMIA Sphere Cryptographic Library, the first milestone of its new IDEMIA Sphere cybersecurity offer. Designed for easy integration, it helps organizations adopt quantum-resistant cryptography today. Certified by NIST CAVP<sup>1</sup>, this modular library supports both classical and post-quantum cryptographic algorithms, enabling organizations to enhance their cyber security, while preparing for their transition to the post-quantum era.

# CYBERSECURITY

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## Anticipating the quantum security challenge

The emergence of quantum computing poses an unprecedented challenge to current cryptographic standards, throughout all sectors, with the potential to render traditional encryption obsolete and expose sensitive data on a massive scale. Recognizing this imminent risk, international bodies such as the National Institute of Standards and Technology (NIST) have finalized the first post-quantum cryptography (PQC) standards, urging governments, enterprises, and technology providers to act swiftly.

By launching IDEMIA Sphere Cryptographic Library, IDEMIA Secure Transactions tackles this new security challenge by providing organizations with the certified tools needed to transition to quantum-resistant infrastructure.

## IDEMIA Sphere Cryptographic Library: an end-to-end solution for a secure future

The IDEMIA Sphere Cryptographic Library provides a complete and certified foundation for building the next generation of secure services in our digital modern world. Designed to meet the needs of a rapidly evolving cybersecurity landscape, the IDEMIA Sphere Cryptographic Library offers classical and post-quantum algorithms which allows the implementation of hybrid protocols based on an easily integrable library. Certified by the NIST Cryptographic Algorithm Validation Program (CAVP), the digital library supports all standardized cryptographic algorithms. The IDEMIA Sphere Cryptographic Library also offers algorithms for embedded and WhiteBox solutions.

The library's modular architecture enables seamless integration into both off-the-shelf and customized solutions, while clients benefit from IST's expert support and consulting services for smooth deployment and long-term maintenance.

An end-to-end solution, the IDEMIA Sphere Cryptographic Library enables clients to safeguard their data and digital services against future quantum threats without disrupting operations or user experience.

## Concrete advantages for clients and end-users

For businesses:

- ➡ Acceleration of development cycles through ready-to-use certified modules.
- ➡ Reduced migration risks thanks to expert support during integration and maintenance phases.
- ➡ Ability to market quantum-resilient solutions rapidly, capitalizing on growing demand for trusted digital services.

For consumers and citizens:

- ➡ Stronger protection of financial, healthcare, and identity data.
- ➡ Continuous, seamless digital experiences, with no perceptible change but a guarantee of higher security against quantum threats.

## A strategic shift for IDEMIA Secure Transactions

The launch of the IDEMIA Sphere Cryptographic Library reinforces the position of IDEMIA Secure Transactions as a key enabler of the global transition to quantum-resilient digital infrastructures<sup>2</sup>. It will be part of IST's new cyber-security offer that will expand with innovative offerings throughout the year, enabling organizations' transition to quantum-resistant products and services while benefiting from expert support and consulting.

Building on its leadership in secure transactions, with more than 1.4 billion credentials issued every year worldwide, and a portfolio of hundreds of security certifications, IST also brings unmatched expertise in embedded cryptographic libraries, a crucial differentiator in high-security environments.

*Quantum computing is redefining the future of cybersecurity. With the launch of the IDEMIA Sphere Cryptographic Library, IDEMIA Secure Transactions empowers organizations across industries to protect today their critical assets against next-generation threats. This milestone confirms our commitment to anticipating market evolutions and delivering future-proof solutions to our partners and customers.*

Marc BERTIN, Chief Technology Officer at IDEMIA Secure Transactions

To learn more about IDEMIA Sphere cryptographic libraries, [click here](#)

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<sup>1</sup> The Cryptographic Algorithm Validation Program (CAVP) run by the U.S. National Institute of Standards and Technology (NIST), which certifies the correct implementation of cryptographic algorithms.

<sup>2</sup> According to Markets & Markets, the global post-quantum cryptography market is expected to grow from USD 302.5 million in 2024 to USD 1.88 billion by 2029, representing a CAGR of 44.2%.

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**About IDEMIA Group** - IDEMIA Group is a global technology leader with more than 12 500 employees worldwide. Its two market-leading divisions deliver mission-critical solutions that simplify and secure interactions in the physical and digital realms:

· **IDEMIA Secure Transactions (IST)** is the leading technology provider making it safer and easier to pay and connect. With unmatched expertise in cryptography and credential issuance, IST is trusted by over 2000 financial institutions, mobile operators, automotive manufacturers, and IoT providers worldwide. Every day, IST secures billions of essential transactions, ensuring the highest levels of data protection and convenience.

· **IDEMIA Public Security (IPS)** is a trusted provider of government-grade and convenient biometric-based solutions for 600 government, state and federal agencies. With decades of experience in biometric technologies, IPS enables safer, frictionless and fairer ways to secure travel, access and citizen protection.

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