



# IDEMIA Secure Transactions Demonstrates the World's First Offline CBDC Payment Transaction Resistant to Quantum Computers

IDEMIA Secure Transactions (IST) revolutionizes the world of digital payments by demonstrating the first ever offline central bank digital currency (CBDC) payments incorporating enhanced security against quantum threats. This major innovation promises to transform financial transactions and pave the way for an era of post-quantum security with IST positioning itself as the leader in this transformation.

# PAYMENT

POSTED ON 06.20.24

## A pioneering innovation that combines state of the art safety and a seamless experience for everyday users

With quantum computers soon to enter all areas of business and finance, it is vital that companies prepare for all the new threats that will accompany these revolutionary technologies. Most experts estimate that a powerful quantum computer capable of breaking widely used cryptographic defenses could be developed within the next 10 years. IST has already demonstrated its ability to adapt to the new threats posed by quantum computers through its crypto agility solution and now takes the lead in the CBDC market with the world's most secure approach.

IST has been committed to this goal for many years, and today demonstrates its feasibility for central banks and financial institutions, offering their citizens ultra-secure, quantum-computer-resistant methods for their offline CBDC payments. The advent of quantum computers must be taken into account as central banks design today their CBDC solutions to ensure long-term security.

Offline CBDC allows digital currency transactions without internet, ensuring cash-like secure and seamless payments in areas with limited connectivity. This offline CBDC payment transaction uses quantum-resistant public key cryptography endorsed by the National Institute of Standards and Technology (NIST), a world first leveraging IST's pioneering leadership in advanced cryptography.

The offline transactions demonstrated as part of this quantum-safe solution are performed using two smartphones thanks to NFC. Money is stored inside a secure element fortified with quantum-safe cryptography to guarantee security and prevent the risks of double spending or unauthorized money creation.

For end-users, this means reassurance that their CBDC transactions are secure and seamless independently of the advent of powerful quantum computers. In other words, IST gives citizens access to the most secure methods of

payment without having to worry about possible risks.

## IST calls on central banks and financial institutions to join forces to co-innovate and prepare for future threats

The transition to post-quantum cryptography will require strong and long-term partnerships between technology providers, central banks and financial institutions to ensure continued trust in the financial system. This pioneering technology offers them the opportunity to work with IDEMIA Secure Transactions to develop their tailor-made CBDC solutions, adapted to the challenges of the post-quantum era.

*This world first confirms IDEMIA Secure Transactions' role as a pioneer and frontrunner in today and tomorrow's payment technologies. The quantum threat is real, but the good news is we demonstrated today it is possible to create a reliable quantum-safe offline CBDC. Starting now, we will integrate it from the design phase with our partner central banks.*

Jerome AJDENBAUM, VP Digital Currencies at IDEMIA Secure Transactions

**About IDEMIA Group** - IDEMIA Group unlocks simpler and safer ways to pay, connect, access, identify, travel and protect public places. With its long-standing expertise in biometrics and cryptography, IDEMIA develops technologies of excellence with an impactful, ethical, and socially responsible approach. Every day, IDEMIA secures billions of interactions in the physical and digital worlds.

IDEMIA Group brings together three market-leading businesses that enable mission-critical solutions:

- **IDEMIA Secure Transactions** is the leading technology provider who unlocks safer and easier ways to pay and connect.
- **IDEMIA Public Security** is a leading global provider of biometric solutions that unlock convenient and secure travel, access, and protection.
- **IDEMIA Smart Identity** leverages the power of cryptographic and biometric technologies to unlock a single trusted identity for all.

With a global team of nearly 15,000 employees, IDEMIA Group is trusted by over 600 governmental organizations and more than 2,400 enterprises in over 180 countries. For more information, visit [www.idemia.com](http://www.idemia.com) and follow @IDEMIAGroup on X.



your press contact(s).

**IDEMIA**

[contact.press@idemia.com](mailto:contact.press@idemia.com)

**HAVAS**

[idemia@havas.com](mailto:idemia@havas.com)