IronCAP™ is a patent-protected, quantum-safe encryption technology that can protect users from the ever-evolving, illegitimate and malicious means of gaining access to data not only today but also in the fast-approaching quantum era.

Why You Need IronCAP™ Now

Encryption touches our lives everyday - from credit card transactions, banking, to email messaging, blockchains, and even using mobile phones. We rely on encryption to keep our data secure and private. Encryption technology is a critical component of today's information security infrastructure that protects data transmitted via the internet. The public and private key cryptosystems being widely used now are based on complex mathematical algorithms that will take classical computers 100+ years to crack. However, the excessive processing power of the new quantum computer can compress the 100+ years to hours, minutes and eventually milliseconds, hence breaking our current encryption schemes.

Quantum computer development is progressing at a faster pace than ever expected. The day (Q-day) when a quantum computer can crack current encryption may have arrived already without us knowing. There is really no time to wait. Data has a shelf life of many years. Bad actors can "obtain and wait" until after Q-day to compromise the data. It is also important to recongnize that rapid transition to new information security technologies and methodologies is unrealistic because much of our infrastructure and network systems today are inter-connected, often on a global level. For example, blockchains cannot be easily converted to quantum-safe once they have been put in use. Therefore, it is insightful to integrate IronCAP™'s quantum-safe encryption from the genesis block. Government bodies and business leaders should start the process to migrate their systems to quantum-safe now.

How IronCAP™ Works

IronCAP™ is designed to operate on conventional computers. Our IronCAP™ Toolkits contain not only those post-quantum cryptography (PQC) algorithms approved by NIST (The National Institute of Standards and Technology) but also our own patent-protected algorithm that is built on the longest time-tested (almost 50 years) Goppa code-based theory recognized by the world of post-quantum cryptography study field. Hence IronCAP™ can safeguard against cyberattacks from classical as well as quantum computers.
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IronCAP™ Is The Best-In-Class Solution

Innovative Technology

Combining many years of proven expertise in the field, IronCAP™'s crypto-scientists have created an encryption technology that's not only quantum-safe but also more efficient and safer than existing cryptography. IronCAP™ has been endorsed by industry experts and proven "un-hackable" in multiple global hackathons.

Seamless Integration

To empower vendors to transform their applications or systems seamlessly to quantum-safe, IronCAP™ has developed an API that's compliant with the PKCS#11, OpenSSL, and OpenPGP (RfC4880) industry standards. It is available for all major operating systems: Microsoft Windows, Apple macOS, Linux, Android and Apple iOS.

Future Of Cybersecurity

Combining both NIST-approved PQC algorithms as well as our own patent protected quantum-safe technology, our IronCAP™ Toolkits are designed to be used in all kinds of vertical solutions such as digital identity, email/file encryption, remote access/VPN, cloud storage, 5G/IoT, financial transactions, blockchains, etc. IronCAP™ lets you stay ahead of cyber threats today and in the quantum computing era.

Industry Leader

Utilizing the IronCAP™ API, we have developed the industry's first quantum-safe email encryption software, IronCAP™ X that everyone can use today on their classical computers. Besides setting a precedent for developing a practical solution using IronCAP™'s post-quantum cryptography, we can also help vendors to become the First Movers of their respective solutions for the quantum computing era.

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