

Quantum eMotion Progress Report: Advancing Quantum-Safe Solutions Across Blockchain, Healthcare, and IoT

written by Raj Shah | December 5, 2024

December 5, 2024 ([Source](#)) – Quantum eMotion Corp. (TSXV: QNC) (OTCQB: QNCCF) proudly announces remarkable progress in its mission to deliver state-of-the-art quantum cybersecurity solutions. Bolstered by ISO 27001 certification and breakthroughs across blockchain, telemedicine, and advanced QRNG chip development, QeM is setting new standards for digital security.

ISO 27001 Certification: A Testament to Excellence

QeM's recent achievement of ISO/IEC 27001:2022 certification underscores its leadership in implementing world-class cybersecurity standards. This globally recognized certification strengthens QeM's ability to meet rigorous compliance requirements and significantly enhances its market credibility. With this milestone, QeM is well-positioned to expand its presence in industries where trust and data protection are paramount, including finance, healthcare, blockchain, and government networks.

Blockchain & Cryptocurrency: Transforming Digital Asset Security

The synergies between QeM's QRNG technology and blockchain applications are reshaping cryptocurrency security. The company's proprietary Quantum crypto-wallet offers unmatched protection for digital assets by combining true quantum randomness with post-quantum encryption. This innovation ensures secure storage and transactions, addressing emerging threats

posed by quantum computing.

- **Secure Key Generation:** QRNG-based entropy delivers unparalleled randomness for cryptographic operations, mitigating vulnerabilities inherent in traditional pseudo-random number generators.
- **Enhanced Security Architecture:** By incorporating post-quantum encryption, QeM has fortified its wallet against quantum attacks, future-proofing digital asset management systems.
- **Intellectual Property Leadership:** With robust patents on QRNG for blockchain, QeM is establishing itself as a pioneer in securing tokenized ecosystems.

Telemedicine & Digital Therapeutics: Securing Healthcare Innovation

As digital therapeutics (DTx) become integral to healthcare, safeguarding patient data is critical. QeM's Sentry-Q platform integrates QRNG and post-quantum cryptography to secure data flow across devices, ensuring compliance with regulations like HIPAA and GDPR.

- **Key Milestone:** QeM is nearing its first sales in the DTx market, addressing vulnerabilities that leave platforms exposed to cyber threats.
- **Use Case Highlights:** The platform is demonstrating its efficacy in securing patient data during clinical interactions, offering peace of mind to both patients and providers.

Project PINQ² Sentry-Q: Pioneering Post-Quantum Simulations

Through a strategic partnership with PINQ², QeM's Sentry-Q platform is undergoing rigorous testing against simulated

quantum attacks using IBM's Qiskit framework. Early results are encouraging, and the final report is anticipated in early 2025.

- **Project Scope:** Evaluation of the Kyber algorithm alongside QRNG technology in adversarial scenarios.
- **Significance:** This initiative marks a critical step toward creating an open-source test bed for post-quantum security solutions.

Miniaturized CMOS QRNG Chip: Revolutionizing IoT Security

QeM has developed a working prototype of a miniaturized QRNG chip for IoT devices, mobile applications, and cloud systems. Manufactured in collaboration with leading partners, the new version prototype is now undergoing extensive testing to validate readiness for integration.

- **Innovative Design:** Incorporates advanced tunnel junctions and digital signal processing units using CMOS technology.
- **Broad Applicability:** The chip is poised to deliver scalable security for industries ranging from consumer electronics to automotive systems.

Looking Ahead

As the quantum cybersecurity landscape evolves, QeM's future is very bright as the Company remains committed to delivering cutting-edge solutions that address the pressing challenges of the digital era. From pioneering advancements in blockchain security to ensuring the safety of healthcare data and IoT devices, QeM is leading the charge in quantum-safe innovation.

About QeM

The Company's mission is to address the growing demand for affordable hardware and software security for connected devices.

QeM has become a pioneering force in classical and quantum cybersecurity solutions thanks to its patented Quantum Random Number Generator, a security solution that exploits the built-in unpredictability of quantum mechanics and promises to provide enhanced protection for high-value assets and critical systems.

The Company intends to target highly valued Financial Services, Healthcare, Blockchain Applications, Cloud-Based IT Security Infrastructure, Classified Government Networks and Communication Systems, Secure Device Keying (IOT, Automotive, Consumer Electronics) and Quantum Cryptography.

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