

# TRI-CROWN Hybrid PQ Encryption Suite

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## ## Abstract

This white paper presents the TRI-CROWN Hybrid PQ Encryption Suite, a comprehensive cryptographic protocol that integrates classical elliptic-curve cryptography with cutting-edge post-quantum algorithms.

## ## Motivation

The rise of quantum computing is reshaping the cryptographic landscape...

## ## Protocol Design

- Classical Component: Ephemeral X25519 Diffie–Hellman for compact, efficient key exchange.
- Post-Quantum Components: ML-KEM-1024 and Classic McEliece 6960119...

## ## Security Properties

1. IND-CCA resilience...
2. Forward secrecy...
3. Downgrade protection...

## ## Conclusion

The TRI-CROWN Suite is a sovereign-grade, future-proof, hybrid cryptographic protocol that invites audit, verification, and deployment.