

# Compact Encryption Module (CEM) With Quantum Security



**Solution for  
Secure Communication  
in Era of Quantum  
Computers**



C-DOT's Compact Encryption Module (CEM) is a Quantum-safe Encryptor which supports classical as well as future- proof Post Quantum Cryptography (PQC) algorithms for encryption, authentication and key exchange mechanisms. C-DOT CEM can perform all the cryptographic operations, independent of application-level protocols, thus making it suitable and reliable for any application.



**Quantum  
Safe**

Using state-of-the-art inbuilt NIST ML-KEM (FIPS 203) & ML-DSA (FIPS 204) Post Quantum Cryptography (PQC) algorithms



**Segments**

Government & Strategies Sector, TSPs, BFSI, Healthcare Organizations, Powergrid infrastructure



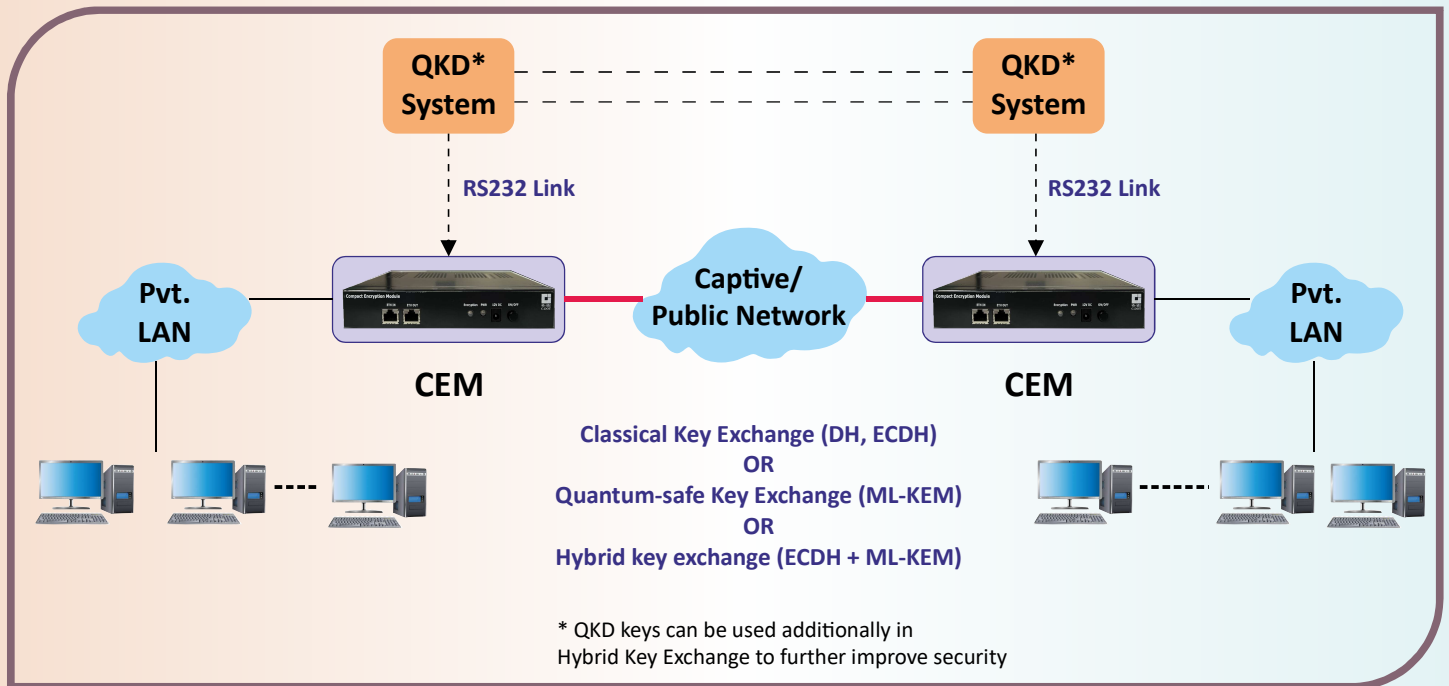
**Atmanirbhar** Completely designed and developed in India

## Product Features

- ▲ Supports both Layer 2 and Layer 3 encryption
- ▲ Support of both Internet Key exchange and Physical key loading mechanisms
- ▲ Support of standard encryption algorithms like AES128, AES256 etc
- ▲ Support of NIST standard ML-KEM (FIPS 203) & ML-DSA (FIPS 204) PQC algorithms
- ▲ Support of Hybrid key exchange, using one classical and one ML-KEM PQC algorithms
- ▲ Custom or proprietary encryption algorithms can also be supported
- ▲ Support for integration with any Quantum Key Distribution (QKD) System for key loading through RS232 serial interface, as per the ETSI standard ETSI GS QKD 014
- ▲ Support of redundancy to ensure uninterrupted operation

## Use Case Scenario

The following figure depicts a use case scenario for C-DOT's Compact Encryption Module (CEM), to connect Private Local Area Networks (LANs) of collaborating offices through Public network.



## Interfaces Supported

- ▲ Two 1G interfaces (one CIPHER and one PLAIN)
- ▲ One USB interface
- ▲ One RS232 interface



Scan the QR Code to Visit C-DOT Web

## Certifications

Common Criteria (CC) EAL3 Evaluation/  
certification (in-progress)



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