



Clarion KX

Quantum Key Exchange platform for end-to-end Post Quantum Security

Clarion KX is a comprehensive cybersecurity solution which effortlessly ensures telecommunication networks are resistant to quantum computer attacks. Assuring long-term confidentiality of your data against “harvest now, decrypt later” cyber attacks¹ has been our mission.

Purpose-built for large-scale quantum-safe key distribution, Clarion KX delivers the highest end-to-end security for data in transit.

Already field-proven in nationwide deployments, Clarion KX platform intelligently leverages both algorithm-based encryption and quantum physics-based communication security to ensure a highly secure out of band key exchange anywhere on the network. It tightly integrates with the Quantum Key Distribution (QKD) infrastructure to leverage long term security of key generation and encryption. It also leverages the highest available NIST-approved source of randomness, Quantum Random Number Generation (QRNG), together with hybrid cryptography to ensure maximum level of security.

“Make Qubits work hard for your security today.”

Quantum-safe cryptographic migration

Cryptographic migrations are complex and costly endeavors. Organizations can now leverage multiple cryptographic technologies to both lower the migration risks and costs, as well as to mitigate the long-term risk to their data posed by the rapidly emerging quantum threat.

¹ WEF: Quantum Economy Blueprint (Jan. 2024)

Essential functionalities of Clarion KX

01

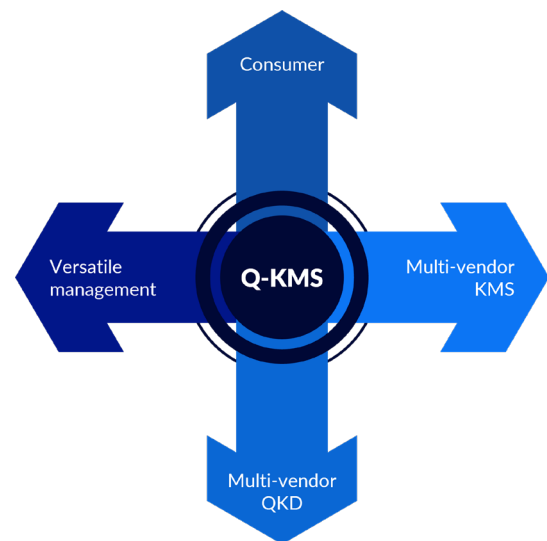
Retrieves Quantum keys from the QKD and QRNG sources

02

Secures the key routing across the network to the Key consumers

03

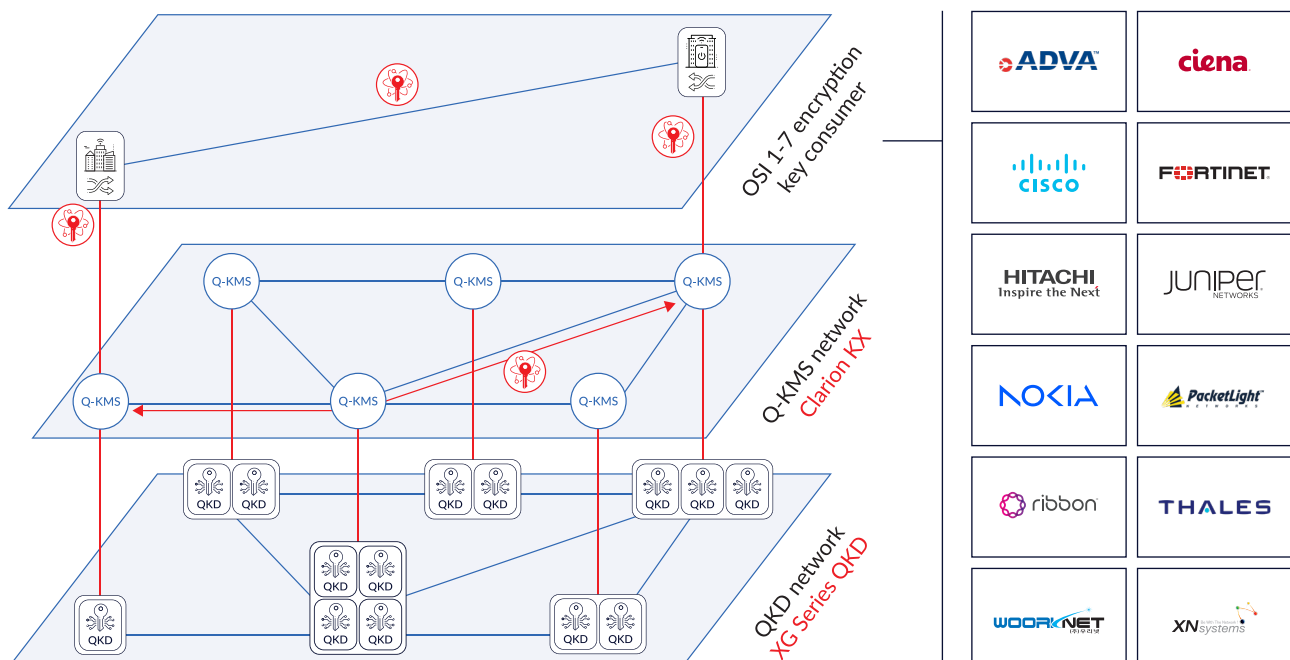
Guarantees high availability, manageability, and interoperability of the QKD infrastructure



Clarion KX software platform extends QKD networks beyond point-to-point: it acts as the glue of the QKD network and ensures long-distance reach of the quantum keys through the QKD network and beyond.

It orchestrates the key distribution in real time across complex network topologies, ensuring secure key delivery to encryption appliances regardless of their locations on the network.

Clarion KX supplies keys over industry standard interfaces to encryptors on any OSI layer whether that being optical, MACSec or IPSec based VPN.



Benefits of Clarion KX



One united platform to manage hybrid cryptography on the network

- Multiple security mechanisms can be used for hybridization
- Pre-shared Secret Key exchange enables key hybridization and authentication
- Optional combination of key exchange methods or protocols between Q-KMS nodes can be used to achieve compliance with national regulations
- When QKD isn't available, Clarion KX can extend the key exchange to the last mile to ensure end-to-end security



Easy integration

- Extensive support for monitoring and management interfaces for data center and telecom
- Easy to control & orchestrate via Q-SDN / NOC integration
- Manageable via standard communication network technologies, such as Software Defined Networking (SDN)



Seamless interoperability

- Support for an extensive list of layers 1 to 3 network encryptor solutions over existing industry interfaces such as ETSI-014, Cisco (SKIP) and Nokia
- Support for other key management solutions via ETSI 020 draft
- Fully QKD vendor agnostic via ETSI 014



Enables telecom operators to launch new Quantum-Safe as a Service offerings

Clarion KX enables new Quantum-Key as a Service (IaaS) as well as Quantum-Safe bandwidth as a Service (PaaS) offerings that our telecom partners can easily extend to their B-to-B customers.

These telecom bundles allow for an enterprise organization to benefit from the best-in-class quantum-safe network security without any capital expenditures, time investment, and overwhelming complexity of the migration.

ID Quantique's experience

The solution has been proof tested and is used today in large Quantum Key Distribution (QKD) networks. Our customers using XG series and Clarion KX are able to deploy large-scale secure quantum safe networks.

With IDQ's Clarion KX ecosystem, QKD security – hence forward security – is always at the center of the solution to guarantee the highest level of data protection for governments, enterprise companies and people.

In addition, ID Quantique offers consulting, installation, commissioning and support services globally to customers willing to upgrade their infrastructure to quantum-safe security.

How to buy?

Clarion KX platform comes with flexible and transparent commercial subscription models and levels that fit the needs of various use cases, industry segments, and sizes of deployments. Non-commercial and Academia users benefit from a special tier of pricing.

Clarion KX platform is included in all IDQ's XG Series of QKD systems. For QKD agnostic deployments, it can be provided in standalone Solteris KX hardware system.



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ID Quantique (IDQ) is the world leader in quantum-safe security solutions, designed to protect data for the long-term future. The company provides quantum-safe network encryption, secure quantum key generation and quantum key distribution solutions and services to the financial industry, enterprises and government organisations globally.

IDQ also commercialises a quantum random number generator, which is the reference in the gaming and security industries.

Additionally, IDQ is a leading provider of optical instrumentation products; most notably photon counters and related electronics. The company's innovative photonic solutions are used in both commercial and research applications.