QTI

**Quantum Key Distribution for
ultra-secure communications**

QTI

QTI s.r.l. (Quantum Telecommunications Italy) is **the first Italian Quantum Key Distribution (QKD)** company, providing industrial grade systems and products for quantum networks.

Headquartered in **Florence**, **QTI** is an **innovative start-up founded in October 2020** as a spin-off of the Italian National Institute of Optics of the National Research Council (INO-CNR).

QTI engineers, develops, and produces reconfigurable **QKD** architectures thanks to the work of a team of **quantum experts and entrepreneurs**, with the vision of spreading **the use of quantum technologies in industry, government, and military organizations** to guarantee the ultimate security of digital communications.

QTI & Telsy

In 2021, part of **QTI** shares has been acquired by **Telsy S.p.A.**, cybersecurity and cryptography competence centre of the **TIM Group**.

This partnership has allowed the development of a fully entrusted end-to-end encryption system, compatible with current telecommunication infrastructures for civil and military applications.

Quell-X

Quell-X is a complete **QKD system** composed by 1 Alice unit and 1 Bob unit able to generate quantum secured keys for ultra-secure data communications. The system is deployable on existing networks, also in complex architectures, and can be complemented with trusted nodes in order to achieve long distances.

The product is available in **three main versions**:

Quell-X, the core product of family. It ensures a reliable and high-performance QKD quantum key generation and is compatible with third parties' encryptor units.

Quell-XR, the Quell-X version for academic and research activities. It generates raw key data for custom post-processing protocols and can be interfaced with third parties' detectors.
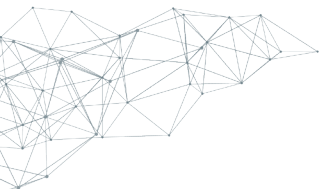
Quell-XC, QKD system integrated with Telsy L3 encryptors. The Telsy-QTI integration guarantees an end-to-end solution based on Quell-XC, compatible with existing telecommunications network infrastructures.

QKME

Key Management Entity for managing multiple clients and allowing communications between clients using different standards. QKME can be fully integrated with QTI Quell-X QKD systems and is an essential component of SDN configuration for a complete QTI turn key solution.

QSDN

State of the art **Software Defined Network** solution based on the ETSI GS QKD 015 standard. It couples the high level of flexibility, programmability and automation of SDN networks and the unconditional security of QKD.

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