

# **Global Quantum Cryptography Market -By Components (Hardware, and Software); By Applications ( Network Security, Application Security, and Database Encryption); By End-users (Governing & regulatory Bodies, SMEs, Large Enterprises); By Regions (Americas, EMEA, and, APAC) Drivers, Opportunities, Restraints, Trends, and Forecast to 2024**

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## **Abstracts**

Quantum Cryptography Market: Global Drivers, Restraints, Opportunities, Trends, and Forecasts up to 2024

Overview:

Quantum cryptography is a new method for secret communications that provides the assurance of security of digital data. Quantum cryptography is primarily based on the usage of individual particles/waves of light (photon) and their essential quantum properties for the development of an unbreakable cryptosystem, primarily because it is impossible to measure the quantum state of any system without disturbing that system. It is hypothetically possible that other particles could be used, but photons offer all the necessary qualities needed, their behavior is comparatively understandable, and they are the information carriers in optical fiber cables, the most promising medium for very high-bandwidth communications.

Quantum computing majorly focuses on the growing computer technology that is built on the platform of quantum theory which provides the description about the nature and

behavior of energy and matter at quantum level. The fame of quantum mechanics in cryptography is growing because they are being used extensively in the encryption of information. Quantum cryptography allows the transmission of the most critical data at the most secured level, which in turn, propels the growth of the quantum computing market. Quantum computing has got a huge array of applications.

#### Market Analysis:

According to Infoholic Research, the Global Quantum cryptography Market is expected to reach \$1.53 billion by 2023, growing at a CAGR of around 26.13% during the forecast period. The market is experiencing growth due to the increase in the data security and privacy concerns. In addition, with the growth in the adoption of cloud storage and computing technologies is driving the market forward. However, low customer awareness about quantum cryptography is hindering the market growth. The rising demands for security solutions across different verticals is expected to create lucrative opportunities for the market.

#### Market Segmentation Analysis:

The report provides a wide-ranging evaluation of the market. It provides in-depth qualitative insights, historical data, and supportable projections and assumptions about the market size. The projections featured in the report have been derived using proven research methodologies and assumptions based on the vendor's portfolio, blogs, whitepapers, and vendor presentations. Thus, the research report serves every side of the market and is segmented based on regional markets, type, applications, and end-users.

#### Countries and Vertical Analysis:

The report contains an in-depth analysis of the vendor profiles, which include financial health, business units, key business priorities, SWOT, strategy, and views; and competitive landscape. The prominent vendors covered in the report include ID Quantique, MagiQ Technologies, Nucrypt, Infineon Technologies, Qutools, QuintessenceLabs, Crypta Labs, PQ Solutions, and Qubitekk and others. The vendors have been identified based on the portfolio, geographical presence, marketing & distribution channels, revenue generation, and significant investments in R&D.

#### Competitive Analysis

The report covers and analyzes the global intelligent apps market. Various strategies, such as joint ventures, partnerships, collaborations, and contracts, have been considered. In addition, as customers are in search of better solutions, there is expected to be a rising number of strategic partnerships for better product development. There is likely to be an increase in the number of mergers, acquisitions, and strategic partnerships during the forecast period.

Companies such as Nucrypt, Crypta Labs, Qutools, and Magiq Technologies are the key players in the global Quantum Cryptography market. Nucrypt has developed technologies for emerging applications in metrology and communication. The company has also produced and manufactured electronic and optical pulsers. In addition, Crypta Labs deals in application security for devices. The company deals in Quantum Random Number Generator products and solutions and Internet of Things (IoT). The major sectors the company is looking at are transport, military and medical.

The report includes the complete insight of the industry, and aims to provide an opportunity for the emerging and established players to understand the market trends, current scenario, initiatives taken by the government, and the latest technologies related to the market. In addition, it helps the venture capitalists in understanding the companies better and to take informed decisions.

## Regional Analysis

The Americas held the largest chunk of market share in 2017 and is expected to dominate the quantum cryptography market during the forecast period. The region has always been a hub for high investments in research and development (R&D) activities, thus contributing to the development of new technologies. The growing concerns for the security of IT infrastructure and complex data in America have directed the enterprises in this region to adopt quantum cryptography and reliable authentication solutions.

## Benefits

The report provides an in-depth analysis of the global intelligent apps market aiming to reduce the time to market the products and services, reduce operational cost, improve accuracy, and operational performance. With the help of quantum cryptography, various organizations can secure their crucial information, and increase productivity and efficiency. In addition, the solutions are proven to be reliable and improve scalability. The report discusses the types, applications, and regions related to this market. Further, the report provides details about the major challenges impacting the market growth.

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