

Global Quantum Cryptography Market Size Study & Forecast, by Type (Quantum Key Distribution, Quantum Random Number Generation, Others), by Security Type (Application Security, Network Security), by Industry (BFSI, Cloud & Datacentre, Government, Energy & Utilities, Healthcare, Automotive, Others), and Regional Analysis, 2023-2030

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Abstracts

Global Quantum Cryptography Market is valued at approximately USD 111.6 million in 2022 and is anticipated to grow with a healthy growth rate of more than 19.8% over the forecast period 2023-2030. Quantum cryptography is a field of study and technology that leverages the principles of quantum mechanics to provide secure communication between two parties. It aims to ensure the confidentiality and integrity of information exchanged over a communication channel. The market growth is driven by key factors including increasing government funding for cybersecurity, surging demand for next-generation security solutions for cloud and IoT technologies and evolving next-generation wireless network technologies.

Additionally, the rising concerns about cyberattacks in the digitalization era are further contributing to market expansion around the world. Quantum cryptography has the potential to give higher security assurances than conventional cryptographic techniques, making it a suitable choice for companies and governments to improve data security. According to the report of Israel21c in 2021, cyber-attacks have increased to around 225% in the past three years from 2018 to 2021. In 2021, nearly 85% of cyber-attacks were carried out remotely, and 40% of attacks targeted back-end servers. Additionally,

in 2021, about 54.1% of attacks took place by Black Hat hackers which is up from 49% in 2020. It includes 38% data/privacy breaches, 27% car theft /break-ins, and 20% control system attacks. Thus, these aforementioned factors are fueling the growth of the Quantum Cryptography Market during the estimated period. Moreover, the spur in demand for security solutions across industry verticals, as well as the increasing need for integrated solutions present various lucrative opportunities over the forecast years. However, the unavailability of skilled professionals and the high implementation cost are challenging the market growth throughout the forecast period of 2023-2030.

The key regions considered for the Global Quantum Cryptography Market study include Asia Pacific, North America, Europe, Latin America, and Middle East & Africa. North America dominated the market in 2022 owing to the growing cybersecurity funding, high demand for next-generation security resolutions for cloud and IoT technologies, the evolution of wireless network technologies, and multiple partnerships and collaborations to promote and develop apprenticeship programs. Whereas, Asia Pacific is expected to grow at the highest CAGR over the forecast years. rising incidents of cyber-attacks with acceleration in digitalization, supportive government regulations for data security, growing trend of the Internet of Things (IoT), as well as emerging Quantum Key Distribution (QKD) solutions are significantly propelling the market demand across the region.

Major market players included in this report are:

QuintessenceLabs. (Australia)

Quside Technologies (Spain)

MagiQ Technologies (U.S.)

Toshiba Digital Solutions Corporation (Japan)

QNu Labs Private Limited. (India)

KETS QUANTUM SECURITY LTD. (U.K.)

LuxQuanta Technologies S.L. (Spain)

Quantum Xchange. (U.S.)

ID Quantique (Switzerland)

Qrypt (U.S.)

Recent Developments in the Market:

In May 2023, Amazon Web Services launched two quantum computing skill-development programs in India. The company is working with educational institutions and learning platforms to integrate Amazon Braket, a fully managed quantum computing service, into the courses.

In May 2021, QNu Labs announced the introduction of a QRNG chip and QKD system with a range beyond 100 km. With this launch, the company is focusing on expanding its market presence in India.

Global Quantum Cryptography Market Report Scope:

Historical Data – 2020 - 2021

Base Year for Estimation – 2022

Forecast period - 2023-2030

Report Coverage - Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Segments Covered - Type, Security Type, Industry, Region

Regional Scope - North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope - Free report customization (equivalent up to 8 analyst's working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to the coming years. The report is designed to

incorporate both qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with the detailed analysis of competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

By Type:

Quantum Key Distribution

Quantum Random Number Generation

Others

By Security Type:

Application Security

Network Security

By Industry:

BFSI

Cloud & Datacentre

Government

Energy & Utilities

Healthcare

Automotive

Others

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

Contents

CHAPTER 1. EXECUTIVE SUMMARY

- 1.1. Market Snapshot
- 1.2. Global & Segmental Market Estimates & Forecasts, 2020-2030 (USD Million)
 - 1.2.1. Quantum Cryptography Market, by Region, 2020-2030 (USD Million)
 - 1.2.2. Quantum Cryptography Market, by Type, 2020-2030 (USD Million)
 - 1.2.3. Quantum Cryptography Market, by Security Type, 2020-2030 (USD Million)
 - 1.2.4. Quantum Cryptography Market, by Industry, 2020-2030 (USD Million)
- 1.3. Key Trends
- 1.4. Estimation Methodology
- 1.5. Research Assumption

CHAPTER 2. GLOBAL QUANTUM CRYPTOGRAPHY MARKET DEFINITION AND SCOPE

- 2.1. Objective of the Study
- 2.2. Market Definition & Scope
 - 2.2.1. Industry Evolution
 - 2.2.2. Scope of the Study
- 2.3. Years Considered for the Study
- 2.4. Currency Conversion Rates

CHAPTER 3. GLOBAL QUANTUM CRYPTOGRAPHY MARKET DYNAMICS

- 3.1. Quantum Cryptography Market Impact Analysis (2020-2030)
 - 3.1.1. Market Drivers
 - 3.1.1.1. Surging demand for next-generation security solutions for cloud and IoT technologies
 - 3.1.1.2. Rising concerns about cyberattacks in the digitalization
 - 3.1.2. Market Challenges
 - 3.1.2.1. Unavailability of skilled professionals
 - 3.1.2.2. High implementation cost
 - 3.1.3. Market Opportunities
 - 3.1.3.1. Spur in demand for security solutions across industry verticals
 - 3.1.3.2. Increasing need for integrated solutions

CHAPTER 4. GLOBAL QUANTUM CRYPTOGRAPHY MARKET INDUSTRY

ANALYSIS

- 4.1. Porter's 5 Force Model
 - 4.1.1. Bargaining Power of Suppliers
 - 4.1.2. Bargaining Power of Buyers
 - 4.1.3. Threat of New Entrants
 - 4.1.4. Threat of Substitutes
 - 4.1.5. Competitive Rivalry
- 4.2. Porter's 5 Force Impact Analysis
- 4.3. PEST Analysis
 - 4.3.1. Political
 - 4.3.2. Economical
 - 4.3.3. Social
 - 4.3.4. Technological
 - 4.3.5. Environmental
 - 4.3.6. Legal
- 4.4. Top investment opportunity
- 4.5. Top winning strategies
- 4.6. COVID-19 Impact Analysis
- 4.7. Disruptive Trends
- 4.8. Industry Expert Perspective
- 4.9. Analyst Recommendation & Conclusion

CHAPTER 5. GLOBAL QUANTUM CRYPTOGRAPHY MARKET, BY TYPE

- 5.1. Market Snapshot
- 5.2. Global Quantum Cryptography Market by Type, Performance - Potential Analysis
- 5.3. Global Quantum Cryptography Market Estimates & Forecasts by Type 2020-2030 (USD Million)
- 5.4. Quantum Cryptography Market, Sub Segment Analysis
 - 5.4.1. Quantum Key Distribution
 - 5.4.2. Quantum Random Number Generation
 - 5.4.3. Others

CHAPTER 6. GLOBAL QUANTUM CRYPTOGRAPHY MARKET, BY SECURITY TYPE

- 6.1. Market Snapshot
- 6.2. Global Quantum Cryptography Market by Security Type, Performance - Potential

Analysis

6.3. Global Quantum Cryptography Market Estimates & Forecasts by Security Type 2020-2030 (USD Million)

6.4. Quantum Cryptography Market, Sub Segment Analysis

6.4.1. Application Security

6.4.2. Network Security

CHAPTER 7. GLOBAL QUANTUM CRYPTOGRAPHY MARKET, BY INDUSTRY

7.1. Market Snapshot

7.2. Global Quantum Cryptography Market by Industry, Performance - Potential Analysis

7.3. Global Quantum Cryptography Market Estimates & Forecasts by Industry 2020-2030 (USD Million)

7.4. Quantum Cryptography Market, Sub Segment Analysis

7.4.1. BFSI

7.4.2. Cloud & Datacentre

7.4.3. Government

7.4.4. Energy & Utilities

7.4.5. Healthcare

7.4.6. Automotive

7.4.7. Others

CHAPTER 8. GLOBAL QUANTUM CRYPTOGRAPHY MARKET, REGIONAL ANALYSIS

8.1. Top Leading Countries

8.2. Top Emerging Countries

8.3. Quantum Cryptography Market, Regional Market Snapshot

8.4. North America Quantum Cryptography Market

8.4.1. U.S. Quantum Cryptography Market

8.4.1.1. Type breakdown estimates & forecasts, 2020-2030

8.4.1.2. Security Type breakdown estimates & forecasts, 2020-2030

8.4.1.3. Industry breakdown estimates & forecasts, 2020-2030

8.4.2. Canada Quantum Cryptography Market

8.5. Europe Quantum Cryptography Market Snapshot

8.5.1. U.K. Quantum Cryptography Market

8.5.2. Germany Quantum Cryptography Market

8.5.3. France Quantum Cryptography Market

- 8.5.4. Spain Quantum Cryptography Market
- 8.5.5. Italy Quantum Cryptography Market
- 8.5.6. Rest of Europe Quantum Cryptography Market
- 8.6. Asia-Pacific Quantum Cryptography Market Snapshot
 - 8.6.1. China Quantum Cryptography Market
 - 8.6.2. India Quantum Cryptography Market
 - 8.6.3. Japan Quantum Cryptography Market
 - 8.6.4. Australia Quantum Cryptography Market
 - 8.6.5. South Korea Quantum Cryptography Market
 - 8.6.6. Rest of Asia Pacific Quantum Cryptography Market
- 8.7. Latin America Quantum Cryptography Market Snapshot
 - 8.7.1. Brazil Quantum Cryptography Market
 - 8.7.2. Mexico Quantum Cryptography Market
- 8.8. Middle East & Africa Quantum Cryptography Market
 - 8.8.1. Saudi Arabia Quantum Cryptography Market
 - 8.8.2. South Africa Quantum Cryptography Market
 - 8.8.3. Rest of Middle East & Africa Quantum Cryptography Market

CHAPTER 9. COMPETITIVE INTELLIGENCE

- 9.1. Key Company SWOT Analysis
 - 9.1.1. Company
 - 9.1.2. Company
 - 9.1.3. Company
- 9.2. Top Market Strategies
- 9.3. Company Profiles
 - 9.3.1. QuintessenceLabs. (Australia)
 - 9.3.1.1. Key Information
 - 9.3.1.2. Overview
 - 9.3.1.3. Financial (Subject to Data Availability)
 - 9.3.1.4. Product Summary
 - 9.3.1.5. Recent Developments
 - 9.3.2. Quside Technologies (Spain)
 - 9.3.3. MagiQ Technologies (U.S.)
 - 9.3.4. Toshiba Digital Solutions Corporation (Japan)
 - 9.3.5. QNu Labs Private Limited. (India)
 - 9.3.6. KETS QUANTUM SECURITY LTD. (U.K.)
 - 9.3.7. LuxQuanta Technologies S.L. (Spain)
 - 9.3.8. Quantum Xchange. (U.S.)

9.3.9. ID Quantique (Switzerland)

9.3.10. Qrypt (U.S.)

CHAPTER 10. RESEARCH PROCESS

10.1. Research Process

10.1.1. Data Mining

10.1.2. Analysis

10.1.3. Market Estimation

10.1.4. Validation

10.1.5. Publishing

10.2. Research Attributes

10.3. Research Assumption

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