

Quantum Cryptography & Network Market to Hit a Sales of US\$ 8,136 Million by 2031

CHICAGO, UNITED STATES, July 6, 2023

/EINPresswire.com/ -- Global [Quantum Cryptography & Network Market](#) size is estimated to witness a rise in revenue from **US\$ 1,000.00 million** in 2022 to **US\$ 8,136 million** by 2031, growing at a compound annual growth rate (CAGR) of **20.5%** during the forecast period from 2022 to 2031.

For more information, contact astute@astuteanalytics.com or visit <https://www.astuteanalytics.com/request-sample/quantum-cryptography-and-network-market>

Solutions for quantum cryptography are becoming more widely used, especially in industries, such as finance, healthcare, and defense. While the development of quantum computing technology is likely to play an increasingly significant role in the market, the rise of quantum-based computing and communication technologies is opening up new potential for businesses and governments to improve security and reliability.

With numerous transactions taking place every day, banks and other financial institutions need to protect communication with their customers. These transmissions must be secure and adhere to security standards including integrity, secrecy, and authentication. Since quantum key distribution (QKD) uses quantum mechanics to encrypt and transfer data, this may adopt quantum cryptography and network.

The increase in cybersecurity funding, the rising demand for next-generation security solutions for cloud and IoT technologies, and the development of next-generation wireless network technologies are likely to drive the growth of the global market. These factors are expected to be accompanied by an increase in cyberattack incidents and an acceleration of digitalization. For instance, In June 2023, Google spend US\$ 20 million to establish and grow 20 cybersecurity clinics at American institutions. According to data on cybersecurity, there are 2,200 cyberattacks per day, with one occurring around every 39 seconds. In the U.S., the average data breach cost is US\$ 9.44 million, and by 2023, cybercrime will cost US\$ 8 trillion.



Quantum cryptography and network solutions segment is anticipated to dominate the

With over 62% of the revenue share, the solution segment is anticipated to dominate the quantum cryptography and network market. This is due to the rise in the adoption of quantum cryptography technologies by governments and defense organizations in response to the rising demand for secure communication and data transport.

The network security segment is likely to generate over 71.30% revenue share. The use of

quantum cryptography and network solutions is rising owing to the growing demand for secure data transit across networks and communication. Additionally, the expansion of the segment is rising to the increase in server virtualization, expanded use of cloud computing services, heightened BYOD usage in workplaces, and surge in IoT application usage.

Quantum key distribution will attain a revenue share of more than 66%. As a result, quantum

key distribution systems can offer impenetrable security for the transport of sensitive data. A crucial use of quantum cryptography is quantum key distribution, which enables two parties to communicate securely across a public network without worrying about being intercepted or eavesdropped.

Large enterprise is likely to capture over 72% of the revenue share. As a result, developing and

implementing quantum cryptography and network solutions is expensive, making it challenging for smaller businesses to use the technology. Large corporations have the technological know-how and financial resources needed to invest in and maintain quantum network technologies.

Due to the expanding use of quantum technologies and the rising demand for secure

communication and data transfer, the Asia Pacific region is experiencing rapid market expansion. By 2031, the region is expected to earn US\$ 2,567 million in revenue, about 14 times more than in 2022.

The region's two largest economies, China and India, are setting the pace for the adoption of quantum networks and cryptography. Intending to dominate the market, the Chinese government has made considerable expenditures in the advancement of quantum technology. Several top firms in the quantum computing and network solutions market, including Alibaba and Huawei, are based in the nation.

In a similar vein, the Indian government established the National Mission on Quantum Technologies and Applications (NM-QTA) in order to encourage the adoption of quantum technologies in the Asia Pacific quantum cryptography and network market. The mission aims to advance quantum technologies in India with a particular emphasis on computing, communication, and cryptography.

In order to develop and implement quantum cryptography and network solutions, new projects are also being initiated in the Asia Pacific region. For instance, the Chinese Academy of Sciences is creating a quantum communication satellite network to enable secure communication for governmental organizations and financial institutions. Similar to this, the Indian Space Research Organization (ISRO) is creating the Quantum Experiments Using Satellite Technology (QUEST) quantum communication satellite to offer secure connectivity for the Indian government.

Quantum cryptography and network market is expected to grow at a CAGR of 13.5% from 2021 to 2028.

With many businesses offering several products to satisfy the rising demand for secure communication and data transfer, the global market is extremely competitive. The market is characterized by monopolistic competition, and the six largest firms collectively own close to 40.55% of the market. With a market share of nearly 13%, IBM dominates the market. Google is second with 7.46%, and Intel is third with 6.28%. Among the other significant market participants are Toshiba, Microsoft, and D-Wave.

Quantum cryptography and network market is expected to grow at a CAGR of 13.5% from 2021 to 2028. For more information, visit <https://www.astuteanalytica.com/industry-report/quantum-cryptography-and-network-market>

IBM has a significant market share due to its quantum roadmap, which produces ever-larger and better chips. The company's objectives include developing workforces, accelerating national and international R&D, and creating national quantum ecosystems. According to reports, IBM has a near-global monopoly on the market, and its products are found in significant quantum computers.

The competition between the players is likely to increase owing to the anticipated significant growth of the global quantum cryptography and network market in the upcoming years, with businesses expanding their geographic borders by purchasing small brands and domestic companies to increase their market share.

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- Amazon
- Crypta Labs
- IBM Corporation
- D-Wave
- Intel

- Isara and Post-Quantum
- Google LLC
- Magiq Technologies
- Microsoft
- Nucrypt
- Qasky
- Quantum Computing Inc (QCI)
- Quantum Xchange
- Quantumctek
- Qubitekk
- QuintessenceLabs
- Rigetti Computing
- Toshiba
- Xanadu
- Other Prominent Players

Quantum Cryptography Applications

Quantum cryptography offers a secure communication channel by leveraging the principles of quantum mechanics. It ensures that any attempt to intercept the communication will be detected, providing a level of security that is theoretically unbreakable. This technology is particularly useful in scenarios where data confidentiality and integrity are paramount, such as in financial transactions, government communications, and healthcare data exchange.

Quantum Key Distribution

- Solutions
 - Services
- Quantum key distribution (QKD) is a method of secure communication that uses quantum mechanics to establish a shared secret key between two parties. This key can then be used to encrypt and decrypt messages, ensuring that only the intended recipient can read the information.
- Network security
 - Application Security

Quantum Cryptography Applications

- Quantum Key Distribution
- Quantum Teleportation
- Others

Quantum Cryptography Applications

- Symmetric
- Asymmetric

Quantum Cryptography Applications

- Triple Data Encryption Standard (DES)
- RSA Encryption
- Advanced Encryption Standards (AES)
- Hash algorithm

Quantum Cryptography Applications

- Small and Medium Enterprises
- Large Enterprises

- By End User
- BFSI
- IT and Telecom
- Retail
- Media and Entertainment
- Government and Public Sector
- Manufacturing
- Healthcare
- Others

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- North America
 - o The U.S.
 - o Canada
 - o Mexico
- Europe
 - Western Europe
 - The UK
 - Germany
 - France
 - Italy
 - Spain
 - Rest of Western Europe
 - Eastern Europe
 - Poland
 - Russia
- Rest of Eastern Europe
- Asia Pacific
 - China
 - India
 - Japan
 - Australia & New Zealand
 - South Korea
 - ASEAN
 - Rest of Asia Pacific
- Middle East & Africa (MEA)
 - Saudi Arabia
 - South Africa
 - UAE
 - Rest of MEA
- South America
 - Argentina
 - Brazil
 - Rest of South America

Quantum Cryptography and Network Market Report@-

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