

# Quantum-Safe Trusted Platform Module Market Report 2025 | Growth, Key Drivers & Future Trends to 2029

*The Business Research Company's  
Quantum-Safe Trusted Platform Module  
Global Market Report 2025 - Market Size,  
Trends, And Global Forecast 2025-2034*

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How Much Is The Quantum-Safe Trusted Platform Module Market Worth?

[The market size for quantum-safe trusted platform module](#) has seen a swift expansion in recent times. Estimations show an increase from \$1.52 billion in 2024 to \$1.76 billion in 2025, with a compound annual growth rate (CAGR) of 15.6%. The remarkable growth in the historic period is a result of increased use of hardware security modules, a rising dependence on trusted computing in critical sectors, deepening worries about long-term data privacy, early governmental focus on post-quantum cryptography, and the proliferation of connected devices within corporate networks.

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Anticipated [expansion in the quantum-safe trusted platform module market](#) is forecasted to experience a

surge over the approaching years, reaching an approximate value of \$3.11 billion come 2029, an increase reflected by a 15.3% compound annual growth rate (CAGR). This predicted growth within the anticipated timeframe is attributed to various factors including legislated demands for quantum-resistant encryption, heightened organizational needs for secure integration with the cloud, the growing susceptibility of traditional cryptography to quantum perils, strategic alliances between chip manufacturers and cybersecurity firms, as well as the requirement for lifecycle safeguarding in critical infrastructures. Significant trends projected in this period include

progressive strides in quantum-resistant algorithm integration, breakthroughs in security modules embedded in hardware, evolutions in post-quantum secure boot technologies, R&D in hybrid cryptographic structures, and the rise of cloud-based quantum-safe trusted platform modules.

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### What Are The Factors Driving The Quantum-Safe Trusted Platform Module Market?

The expanding worries about both national and enterprise cybersecurity are predicted to stimulate the expansion of the quantum-safe trusted platform module market in the times to come. The reference to national and enterprise cybersecurity signifies the safeguarding efforts for government systems, critical infrastructure, and organizational digital properties against hostile attacks, data breaches, and potential quantum computing risks. The cause of worry over national and enterprise cybersecurity is getting more severe due to the escalating financial and operational consequences of cyber incidents, marking an increase as the exploitation techniques by attackers become more sophisticated for exploiting vulnerabilities. Quantum-safe trusted platform modules serve to bolster national and enterprise cybersecurity by offering elevated cryptographic safeguards against quantum computing risks, making them indispensable for the protection of confidential data and critical systems. These modules cut down the risk of cyberattacks by facilitating post-quantum encryption and secure key management, thereby enhancing overall digital security resilience. As an illustration, in July 2024, as stated by Check Point Software Technologies Ltd., a cybersecurity firm based in Israel, the weekly cyberattacks on corporate networks experienced a 30% rise in Q2 2024, opposing the same duration in 2023, and showing an increase of 25% from Q1 2024. Consequently, the growing worries regarding national and enterprise cybersecurity are serving as catalysts for [the rising growth of the quantum-safe trusted platform module market](#).

### Who Are The Major Players In The Quantum-Safe Trusted Platform Module Market?

Major players in the Quantum-Safe Trusted Platform Module Global Market Report 2025 include:

- Google LLC
- Microsoft Corporation
- Huawei Technologies Co. Ltd.
- Intel Corporation
- Accenture plc
- International Business Machines Corporation
- Thales Group
- Texas Instruments Incorporated
- STMicroelectronics N.V.
- Infineon Technologies AG

### What Are The Prominent Trends In The Quantum-Safe Trusted Platform Module Market?

Key businesses in the quantum-safe trusted platform module market are concentrating on advancing their solutions such as RISC-V-based open architecture quantum-resistant microcontroller platforms. These platforms offer cryptographic agility and extensive security flexibility. A RISC-V-based open architecture quantum-resistant microcontroller platform is a hardware framework that is constructed on the RISC-V open instruction set. This type of platform includes post-quantum cryptographic algorithms and enables businesses to safely customize their firmware. Moreover, this type of platform ensures adherence to accepted certification standards. For example, in June 2024, the cybersecurity company Sealsq Corp. based in Switzerland, introduced the QS7001 microcontroller to the market. This new product is a certified RISC-V quantum-resistant and CC EAL 5+ hardware platform that has been optimized for Kyber and Dilithium algorithms. Such a product provides businesses with the flexibility to create and load their firmware while guaranteeing powerful resistance against quantum-based threats. The ultimate goal of this product is to equip companies with the capability to establish their own customized post-quantum secure ecosystems that boast a scalable and future-oriented architecture.

Which Segment Accounted For The Largest Quantum-Safe Trusted Platform Module Market Share?

The quantum-safe trusted platform module market covered in this report is segmented

- 1) By Component: Hardware, Software, Services
- 2) By Security Type: Authentication, Encryption, Attestation, Key Management, Other Security Types
- 3) By Deployment Mode: On-Premises, Cloud
- 4) By Application: Consumer Electronics, Automotive, Industrial, Banking And Finance, Healthcare, Government, Other Applications
- 5) By End-User: Enterprises, Small And Medium Enterprises, Individuals

Subsegments:

- 1) By Hardware: Discrete Trusted Platform Module, Integrated Trusted Platform Module, Firmware Based Trusted Platform Module
- 2) By Software: Quantum Resistant Cryptographic Software, Trusted Platform Module Management Software, Secure Boot And Attestation Software
- 3) By Services: Integration And Deployment Services, Consulting And Advisory Services, Lifecycle Support And Maintenance Services

View the full quantum-safe trusted platform module market report:

<https://www.thebusinessresearchcompany.com/report/quantum-safe-trusted-platform-module-global-market-report>

What Are The Regional Trends In The Quantum-Safe Trusted Platform Module Market?

In 2024, North America held the leading position in the global market for quantum-safe trusted platform modules. The Quantum-Safe Trusted Platform Module Global Market Report 2025

includes various regions such as Asia-Pacific, Western Europe, Eastern Europe, South America, the Middle East, and Africa.

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