+357 96 030922
info@marketpublishers.com

Quantum Technologies: Investment Landscape and Global Market 2025-2045

https://marketpublishers.com/r/Q512CE561341EN.html
Date: March 2025
Pages: 465
Price: US$ 1,650.00 (Single User License)
ID: Q512CE561341EN

Abstracts

The quantum technology sector is experiencing unprecedented growth, propelled by substantial venture capital investments and robust government support. In 2024, global deal value in quantum computing surpassed $1 billion for the first time. Quantum Technologies: Investment Landscape and Global Market 2025-2045 provides an in-depth analysis of the rapidly evolving quantum technology sector, covering revolutionary developments across quantum computing, communications, sensing, and materials. As the world transitions from the first quantum revolution to the second, this report delivers crucial insights into market dynamics, investment trends, and technological roadmaps that will shape the next two decades of quantum innovation.

The quantum technology market is experiencing unprecedented growth, with global investments reaching record levels between 2020-2025. This detailed analysis tracks funding patterns across different technology segments, companies, and regions, highlighting North America's dominant position while noting significant developments in Asia and Europe's quantum ecosystems. Government initiatives worldwide are catalyzing market expansion through strategic funding programs that aim to secure technological sovereignty in this critical domain. Quantum computing stands at the forefront of this revolution, with competing architectures including superconducting qubits, trapped ions, silicon spin qubits, topological approaches, photonic systems, and neutral atom designs. The report provides comprehensive technical evaluations of each approach, including SWOT analyses, coherence times, and key market players developing these technologies. Beyond hardware, the thriving quantum software ecosystem is analyzed, including cloud-based Quantum Computing as a Service (QCaaS) platforms that are making quantum capabilities accessible to enterprises.

The market applications section explores how quantum technologies are transforming

+357 96 030922
info@marketpublishers.com

industries, from pharmaceutical drug discovery and chemical simulation to transportation optimization and financial modeling. The report identifies early adopters and potential breakthrough use cases, providing strategic intelligence for businesses looking to gain competitive advantages through quantum technologies.

Quantum communications represent another critical segment, with detailed coverage of Quantum Key Distribution (QKD), Quantum Random Number Generators (QRNG), and post-quantum cryptography solutions addressing the growing threat to current encryption methods. The development of quantum networks and the quantum internet receives special attention, examining infrastructure requirements, technical approaches, and global deployment initiatives. The quantum sensing market shows particular near-term promise, with the report analyzing advances in atomic clocks, quantum magnetometers, gravimeters, gyroscopes, and emerging applications in imaging, radar, and RF sensing. Each technology is evaluated for its disruptive potential across sectors including healthcare, defense, navigation, and resource exploration.

Looking further ahead, the report examines emerging technologies like quantum batteries and the specialized materials underpinning quantum systems, including superconductors, nanomaterials, and advanced photonics. The comprehensive global market analysis provides revenue forecasts from 2025 to 2045, segmented by technology type and geographic region, with particular attention to high-growth segments.

With nearly 300 detailed company profiles covering the entire quantum ecosystem from established tech giants to innovative startups, this report serves as an essential resource for investors, corporate strategists, government agencies, and technology developers navigating the quantum revolution. The analysis identifies key challenges to market adoption, including technical hurdles, standardization needs, and talent shortages, while providing a clear roadmap of opportunities as quantum technologies mature from research to commercial deployment.

Report Contents include:

Investment Landscape Analysis:
Total market investments from 2012-2025
Breakdown by technology, company, and region
Detailed analysis of North American, Asian, and European quantum markets
Global government initiatives and funding programs
Quantum Computing:

+357 96 030922
info@marketpublishers.com

Comprehensive technology description and operating principles
Comparison between classical and quantum computing approaches
Detailed analysis of competing qubit technologies (superconducting, trapped ion, silicon spin, topological, photonic, neutral atom, diamond-defect)
Quantum software stack, algorithms, and cloud services
Industry applications in pharmaceuticals, chemicals, transportation, and financial services
Quantum Chemistry and AI:
Technology description and applications
Market challenges and opportunities
Key players and technology roadmap
Quantum Communications:
Quantum Random Number Generators (QRNG) - principles, applications, market players
Quantum Key Distribution (QKD) - protocols, security advantages, challenges
Post-quantum cryptography standardization and transition
Quantum networks infrastructure, trusted nodes, and global deployment initiatives
Quantum memory and internet development roadmap
Quantum Sensors:
Detailed analysis of atomic clocks, magnetic field sensors, gravimeters, gyroscopes
Quantum imaging, radar, chemical sensors, and RF field sensors
Application-specific adoption timelines across industries
Technology transition milestones and market opportunities
Quantum Batteries:
Technology principles, types, and potential applications
Market challenges and development roadmap
Materials for Quantum Technologies:
Superconductors, photonics, silicon photonics, and nanomaterials
Opportunities and technical requirements
Global Market Analysis:
Market map and ecosystem overview
Detailed investment funding analysis (VC, M&A, corporate, government)
Revenue forecasts from 2018-2045 for quantum computing, sensors, and QKD systems
Company Profiles:
Detailed profiles of nearly 300 companies across the quantum technology landscape
Analysis of startups, tech giants, and public-private partnerships. Companies profiled include A* Quantum, AbaQus, Absolut System, Adaptive Finance Technologies, Aegiq, Agnostiq GmbH, Algorithmiq Oy, Airbus, Alea Quantum, Alpine Quantum Technologies GmbH (AQT), Alice&Bob, Aliro Quantum, Anametric Inc., Anyon Systems Inc., Aqarios

+357 96 030922
info@marketpublishers.com

GmbH, Aquark Technologies, Archer Materials, Arclight Quantum, Arctic Instruments, Arqit Quantum Inc., ARQUE Systems GmbH, Artificial Brain, Artilux, Atlantic Quantum, Atom Computing, Atom Quantum Labs, Atomionics, Atos Quantum, Baidu Inc., BEIT, Bleximo, BlueQubit, Bohr Quantum Technology, Bosch Quantum Sensing, BosonQ Ps, C12 Quantum Electronics, Cambridge Quantum Computing (CQC), CAS Cold Atom, Cerca Magnetics, CEW Systems Canada Inc., Chipiron, Chiral Nano AG, Classiq Technologies, ColibriTD, Covesion, Crypta Labs Ltd., CryptoNext Security, Crystal Quantum Computing, D-Wave Systems, Dirac, Diraq, Delft Circuits, Delta g, Duality Quantum Photonics, EeroQ, eleQtron, Element Six, Elyah, Entropica Labs, Ephos, Equal1.labs, EuQlid, Groove Quantum, EvolutionQ, Exail Quantum Sensors, EYL, First Quantum Inc., Fujitsu, Genesis Quantum Technology, Good Chemistry, Google Quantum AI, g2-Zero, Haiqu, Hefei Wanzheng Quantum Technology Co. Ltd., High Q Technologies Inc., Horizon Quantum Computing, HQS Quantum Simulations, HRL, Huayi Quantum, IBM, Icarus Quantum, Icosa Computing, ID Quantique, InfinityQ, Infineon Technologies AG, Infleqtion, Intel, IonQ, ISARA Corporation, IQM Quantum Computers, JiJ, JoS QUANTUM GmbH, KEEQuant GmbH, KETS Quantum Security, Ki3 Photonics, Kipu Quantum, Kiutra GmbH, Kuano Limited, Kvantify, levelQuantum, Ligentec, LQUOM, Lux Quanta, M Squared Lasers, Mag4Health, Materials Nexus, Maybell Quantum Industries, memQ, Menlo Systems GmbH, Menten AI, Mesa Quantum, Microsoft, Miraex, Molecular Quantum Solutions, Montana Instruments, Multiverse Computing, Mycryofirm, Nanofiber Quantum Technologies, NEC Corporation, Neuranics, Next Generation Quantum, Nomad Atomics, Nord Quantique, Nordic Quantum Computing Group AS, NTT, Nu Quantum, NVision, 1Qbit, ORCA Computing, Orange Quantum Systems and many others representing the complete ecosystem from hardware manufacturers to software developers, component suppliers, and quantum service providers.

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

4 QUANTUM COMMUNICATIONS

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

12 REFERENCES

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Figures

LIST OF FIGURES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Quantum Technologies: Investment Landscape and Global Market 2025-2045
Product link: https://marketpublishers.com/r/Q512CE561341EN.html
Price: US$ 1,650.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/Q512CE561341EN.html