

# Global Photonic Quantum Computing Chip Market Growth (Status and Outlook) 2026-2032

<https://marketpublishers.com/r/G8F55FC0D914EN.html>

Date: May 2026

Pages: 95

Price: US\$ 3,660.00 (Single User License)

ID: G8F55FC0D914EN

## Abstracts

The global Photonic Quantum Computing Chip market size is predicted to grow from US\$ 709 million in 2025 to US\$ 2620 million in 2032; it is expected to grow at a CAGR of 20.7% from 2026 to 2032.

A photonic quantum computing chip is a core computing device that uses photons as the carrier of quantum information and integrates photonics technology to achieve the generation, manipulation, and measurement of quantum states at the chip scale. This chip typically integrates waveguides, beam splitters, phase modulators, interference structures, and single-photon detection units, utilizing the quantum properties of photons such as superposition, interference, and entanglement to perform quantum logic operations. Compared to superconducting or ion trap approaches, photonic quantum computing chips have potential advantages in room-temperature operation, resistance to environmental noise, and long-distance transmission compatibility, and are considered one of the important technological pathways to achieve scalable quantum computing and quantum information processing.

This report presents a comprehensive overview, market shares, and growth opportunities of Photonic Quantum Computing Chip market by product type, application, key players and key regions and countries.

Segmentation by Type:

Continuous-Variable Photonic Quantum Computing

Discrete-Variable / Single-Photon Quantum Computing

Segmentation by Position In the Value Chain:

Photonic Quantum Computer System Providers

Photonic Quantum Chip / Processor Developers

Segmentation by Application Focus:

Universal Quantum Computing

Quantum Communication & Security

Research & Industrial Prototyping

Segmentation by Application:

Photonic Quantum Computing

Photonic Quantum Simulation

Quantum Cloud Platform

This report also splits the market by region:

United States

China

Europe

Other regions

Japan

South Korea

Southeast Asia

Rest of world

The report also presents the market competition landscape and a corresponding detailed analysis of the major players in the market. The key players covered in this report:

Xanadu

PsiQuantum

TuringQ Co.,Ltd.

Hefei Guizhen Chip Technology Co., Ltd.

Beijing QBoson Quantum Technology Co.,Ltd.

QuiX Quantum

Quandela

Photonic

CHIPX

## Contents

### 1 SCOPE OF THE REPORT

- 1.1 Market Introduction
- 1.2 Years Considered
- 1.3 Research Objectives
- 1.4 Market Research Methodology
- 1.5 Research Process and Data Source
- 1.6 Economic Indicators
- 1.7 Currency Considered

### 2 EXECUTIVE SUMMARY

#### 2.1 World Market Overview

- 2.1.1 Global Photonic Quantum Computing Chip Market Size 2026-2032
- 2.1.2 Photonic Quantum Computing Chip Market Size CAGR by Region

#### 2.2 Photonic Quantum Computing Chip Segment by Type

- 2.2.1 Continuous-Variable Photonic Quantum Computing
- 2.2.2 Discrete-Variable / Single-Photon Quantum Computing
- 2.2.3 Photonic Quantum Computing Chip Market Size by Type

##### 2.2.3.1 Global Photonic Quantum Computing Chip Market Size Market Share by Type (2026-2032)

##### 2.2.3.2 Global Photonic Quantum Computing Chip Market Size Growth Rate by Type (2026-2032)

#### 2.3 Photonic Quantum Computing Chip Segment by Position In the Value Chain

- 2.3.1 Photonic Quantum Computer System Providers
- 2.3.2 Photonic Quantum Chip / Processor Developers
- 2.3.3 Photonic Quantum Computing Chip Market Size by Position In the Value Chain

##### 2.3.3.1 Global Photonic Quantum Computing Chip Market Size Market Share by Position In the Value Chain (2026-2032)

##### 2.3.3.2 Global Photonic Quantum Computing Chip Market Size Growth Rate by Position In the Value Chain (2026-2032)

#### 2.4 Photonic Quantum Computing Chip Segment by Application Focus

- 2.4.1 Universal Quantum Computing
- 2.4.2 Quantum Communication & Security
- 2.4.3 Research & Industrial Prototyping
- 2.4.4 Photonic Quantum Computing Chip Market Size by Application Focus

##### 2.4.4.1 Global Photonic Quantum Computing Chip Market Size Market Share by

Application Focus (2026-2032)

2.4.4.2 Global Photonic Quantum Computing Chip Market Size Growth Rate by Application Focus (2026-2032)

2.5 Photonic Quantum Computing Chip Segment by Application

2.5.1 Photonic Quantum Computing

2.5.2 Photonic Quantum Simulation

2.5.3 Quantum Cloud Platform

2.5.4 Photonic Quantum Computing Chip Market Size by Application (2026-2032)

2.5.4.1 Global Photonic Quantum Computing Chip Market Size Market Share by Application (2026-2032)

2.5.4.2 Global Photonic Quantum Computing Chip Market Size Growth Rate by Application (2026-2032)

### **3 PHOTONIC QUANTUM COMPUTING CHIP KEY PLAYERS**

3.1 Date of Key Players Enter into Photonic Quantum Computing Chip

3.2 Key Players Photonic Quantum Computing Chip Product Offered

3.3 Key Players Photonic Quantum Computing Chip Funding/Investment Analysis

3.4 Funding/Investment

3.4.1 Funding/Investment by Regions

3.4.2 Funding/Investment by End-Industry

3.5 Key Players Photonic Quantum Computing Chip Valuation & Market Capitalization

3.6 Key Players Mergers & Acquisitions, Expansion Plans

3.7 Market Ranking

3.8 New Product/Technology Launches

3.9 Partnerships, Agreements, and Collaborations

3.10 Mergers and Acquisitions

### **4 PHOTONIC QUANTUM COMPUTING CHIP BY REGIONS**

4.1 Photonic Quantum Computing Chip Market Size by Regions (2026-2032)

4.2 United States Photonic Quantum Computing Chip Market Size Growth (2026-2032)

4.3 China Photonic Quantum Computing Chip Market Size Growth (2026-2032)

4.4 Europe Photonic Quantum Computing Chip Market Size Growth (2026-2032)

4.5 Rest of World Photonic Quantum Computing Chip Market Size Growth (2026-2032)

### **5 UNITED STATES**

5.1 United States Photonic Quantum Computing Chip Market Size by Type (2026-2032)

5.2 United States Photonic Quantum Computing Chip Market Size by Application (2026-2032)

## **6 EUROPE**

6.1 Europe Photonic Quantum Computing Chip Market Size by Type (2026-2032)

6.2 Europe Photonic Quantum Computing Chip Market Size by Application (2026-2032)

## **7 CHINA**

7.1 China Photonic Quantum Computing Chip Market Size by Type (2026-2032)

7.2 China Photonic Quantum Computing Chip Market Size by Application (2026-2032)

## **8 REST OF WORLD**

8.1 Rest of World Photonic Quantum Computing Chip Market Size by Type (2026-2032)

8.2 Rest of World Photonic Quantum Computing Chip Market Size by Application (2026-2032)

8.3 Japan

8.4 South Korea

8.5 Southeast Asia

## **9 MARKET DRIVERS, CHALLENGES AND TRENDS**

9.1 Market Drivers & Growth Opportunities

9.2 Market Challenges & Risks

9.3 Industry Trends

## **10 KEY INVESTORS IN PHOTONIC QUANTUM COMPUTING CHIP**

10.1 Company A

10.1.1 Company A Company Details

10.1.2 Company Description

10.1.3 Companies Invested by Company A

10.1.4 Company A Key Development and Market Layout

10.2 Company B

10.2.1 Company B Company Details

10.2.2 Company Description

10.2.3 Companies Invested by Company B

- 10.2.4 Company B Key Development and Market Layout
- 10.3 Company C
  - 10.3.1 Company C Company Details
  - 10.3.2 Company Description
  - 10.3.3 Companies Invested by Company C
  - 10.3.4 Company C Key Development and Market Layout
- 10.4 Company D
- 10.5 .....

## **11 KEY PLAYERS ANALYSIS**

- 11.1 Xanadu
  - 11.1.1 Xanadu Company Details
  - 11.1.2 Xanadu Photonic Quantum Computing Chip Product Offered
  - 11.1.3 Xanadu Photonic Quantum Computing Chip Market Size (2025 VS 2031)
  - 11.1.4 Xanadu Main Business Overview
  - 11.1.5 Xanadu News
- 11.2 PsiQuantum
  - 11.2.1 PsiQuantum Company Details
  - 11.2.2 PsiQuantum Photonic Quantum Computing Chip Product Offered
  - 11.2.3 PsiQuantum Photonic Quantum Computing Chip Market Size (2025 VS 2031)
  - 11.2.4 PsiQuantum Main Business Overview
  - 11.2.5 PsiQuantum News
- 11.3 TuringQ Co.,Ltd.
  - 11.3.1 TuringQ Co.,Ltd. Company Details
  - 11.3.2 TuringQ Co.,Ltd. Photonic Quantum Computing Chip Product Offered
  - 11.3.3 TuringQ Co.,Ltd. Photonic Quantum Computing Chip Market Size (2025 VS 2031)
  - 11.3.4 TuringQ Co.,Ltd. Main Business Overview
  - 11.3.5 TuringQ Co.,Ltd. News
- 11.4 Hefei Guizhen Chip Technology Co., Ltd.
  - 11.4.1 Hefei Guizhen Chip Technology Co., Ltd. Company Details
  - 11.4.2 Hefei Guizhen Chip Technology Co., Ltd. Photonic Quantum Computing Chip Product Offered
  - 11.4.3 Hefei Guizhen Chip Technology Co., Ltd. Photonic Quantum Computing Chip Market Size (2025 VS 2031)
  - 11.4.4 Hefei Guizhen Chip Technology Co., Ltd. Main Business Overview
  - 11.4.5 Hefei Guizhen Chip Technology Co., Ltd. News
- 11.5 Beijing QBoson Quantum Technology Co.,Ltd.

- 11.5.1 Beijing QBoson Quantum Technology Co.,Ltd. Company Details
- 11.5.2 Beijing QBoson Quantum Technology Co.,Ltd. Photonic Quantum Computing Chip Product Offered
- 11.5.3 Beijing QBoson Quantum Technology Co.,Ltd. Photonic Quantum Computing Chip Market Size (2025 VS 2031)
- 11.5.4 Beijing QBoson Quantum Technology Co.,Ltd. Main Business Overview
- 11.5.5 Beijing QBoson Quantum Technology Co.,Ltd. News
- 11.6 QuiX Quantum
  - 11.6.1 QuiX Quantum Company Details
  - 11.6.2 QuiX Quantum Photonic Quantum Computing Chip Product Offered
  - 11.6.3 QuiX Quantum Photonic Quantum Computing Chip Market Size (2025 VS 2031)
  - 11.6.4 QuiX Quantum Main Business Overview
  - 11.6.5 QuiX Quantum News
- 11.7 Quandela
  - 11.7.1 Quandela Company Details
  - 11.7.2 Quandela Photonic Quantum Computing Chip Product Offered
  - 11.7.3 Quandela Photonic Quantum Computing Chip Market Size (2025 VS 2031)
  - 11.7.4 Quandela Main Business Overview
  - 11.7.5 Quandela News
- 11.8 Photonic
  - 11.8.1 Photonic Company Details
  - 11.8.2 Photonic Photonic Quantum Computing Chip Product Offered
  - 11.8.3 Photonic Photonic Quantum Computing Chip Market Size (2025 VS 2031)
  - 11.8.4 Photonic Main Business Overview
  - 11.8.5 Photonic News
- 11.9 CHIPX
  - 11.9.1 CHIPX Company Details
  - 11.9.2 CHIPX Photonic Quantum Computing Chip Product Offered
  - 11.9.3 CHIPX Photonic Quantum Computing Chip Market Size (2025 VS 2031)
  - 11.9.4 CHIPX Main Business Overview
  - 11.9.5 CHIPX News

## **12 RESEARCH FINDINGS AND CONCLUSION**

## List Of Tables

### LIST OF TABLES

Table 1. Photonic Quantum Computing Chip Market Size CAGR by Region (2026-2032) (\$ millions)

Table 2. Major Players of Continuous-Variable Photonic Quantum Computing

Table 3. Major Players of Discrete-Variable / Single-Photon Quantum Computing

Table 4. Global Market Size by Type (2026-2032) (\$ millions)

Table 5. Global Photonic Quantum Computing Chip Market Size Market Share by Type (2026-2032)

Table 6. Major Players of Photonic Quantum Computer System Providers

Table 7. Major Players of Photonic Quantum Chip / Processor Developers

Table 8. Global Market Size by Position In the Value Chain (2026-2032) (\$ millions)

Table 9. Global Photonic Quantum Computing Chip Market Size Market Share by Position In the Value Chain (2026-2032)

Table 10. Major Players of Universal Quantum Computing

Table 11. Major Players of Quantum Communication & Security

Table 12. Major Players of Research & Industrial Prototyping

Table 13. Global Market Size by Application Focus (2026-2032) (\$ millions)

Table 14. Global Photonic Quantum Computing Chip Market Size Market Share by Application Focus (2026-2032)

Table 15. Global Photonic Quantum Computing Chip Market Size by Application (2026-2032) (\$ millions)

Table 16. Global Photonic Quantum Computing Chip Market Size Market Share by Application (2026-2032)

Table 17. Date of Global Key Players Enter into Photonic Quantum Computing Chip Market

Table 18. Global Key Players Photonic Quantum Computing Chip Product Offered

Table 19. Key Players Photonic Quantum Computing Chip Funding/Investment (Million USD)

Table 20. Funding/Investment by Regions

Table 21. Funding/Investment by End-Industry

Table 22. Key Players Photonic Quantum Computing Chip Valuation & Market Capitalization (Million USD)

Table 23. Key Players Mergers & Acquisitions, Expansion Plans

Table 24. Photonic Quantum Computing Chip New Product/Technology Launches

Table 25. Photonic Quantum Computing Chip Industry Partnerships, Agreements, and Collaborations

Table 26. Photonic Quantum Computing Chip Industry Mergers and Acquisitions

Table 27. Global Photonic Quantum Computing Chip Market Size by Regions

2026-2032 (\$ millions)

Table 28. Global Photonic Quantum Computing Chip Market Size Market Share by Regions 2026-2032

Table 29. United States Photonic Quantum Computing Chip Market Size by Type (2026-2032) (\$ millions)

Table 30. United States Photonic Quantum Computing Chip Market Size Market Share by Type (2026-2032)

Table 31. United States Photonic Quantum Computing Chip Market Size by Application (2026-2032) (\$ millions)

Table 32. United States Photonic Quantum Computing Chip Market Size Market Share by Application (2026-2032)

Table 33. Europe Photonic Quantum Computing Chip Market Size by Type (2026-2032) (\$ millions)

Table 34. Europe Photonic Quantum Computing Chip Market Size Market Share by Type (2026-2032)

Table 35. Europe Photonic Quantum Computing Chip Market Size by Application (2026-2032) (\$ millions)

Table 36. Europe Photonic Quantum Computing Chip Market Size Market Share by Application (2026-2032)

Table 37. China Photonic Quantum Computing Chip Market Size by Type (2026-2032) (\$ millions)

Table 38. China Photonic Quantum Computing Chip Market Size Market Share by Type (2026-2032)

Table 39. China Photonic Quantum Computing Chip Market Size by Application (2026-2032) (\$ millions)

Table 40. China Photonic Quantum Computing Chip Market Size Market Share by Application (2026-2032)

Table 41. Rest of World Photonic Quantum Computing Chip Market Size by Type (2026-2032) (\$ millions)

Table 42. Rest of World Photonic Quantum Computing Chip Market Size Market Share by Type (2026-2032)

Table 43. Rest of World Photonic Quantum Computing Chip Market Size by Application (2026-2032) (\$ millions)

Table 44. Rest of World Photonic Quantum Computing Chip Market Size Market Share by Application (2026-2032)

Table 45. Key Market Drivers & Growth Opportunities of Photonic Quantum Computing Chip

- Table 46. Key Market Challenges & Risks of Photonic Quantum Computing Chip
- Table 47. Key Industry Trends of Photonic Quantum Computing Chip
- Table 48. Company A Company Details
- Table 49. Companies Invested by Company A
- Table 50. Company A Key Development and Market Layout
- Table 51. Company B Company Details
- Table 52. Companies Invested by Company B
- Table 53. Company B Key Development and Market Layout
- Table 54. Company C Company Details
- Table 55. Companies Invested by Company C
- Table 56. Company C Key Development and Market Layout
- Table 57. Xanadu Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 58. Xanadu Photonic Quantum Computing Chip Market Size (2025 VS 2031)
- Table 59. PsiQuantum Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 60. PsiQuantum Photonic Quantum Computing Chip Market Size (2025 VS 2031)
- Table 61. TuringQ Co.,Ltd. Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 62. TuringQ Co.,Ltd. Photonic Quantum Computing Chip Market Size (2025 VS 2031)
- Table 63. Hefei Guizhen Chip Technology Co., Ltd. Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 64. Hefei Guizhen Chip Technology Co., Ltd. Photonic Quantum Computing Chip Market Size (2025 VS 2031)
- Table 65. Beijing QBoson Quantum Technology Co.,Ltd. Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 66. Beijing QBoson Quantum Technology Co.,Ltd. Photonic Quantum Computing Chip Market Size (2025 VS 2031)
- Table 67. QuiX Quantum Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 68. QuiX Quantum Photonic Quantum Computing Chip Market Size (2025 VS 2031)
- Table 69. Quandela Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 70. Quandela Photonic Quantum Computing Chip Market Size (2025 VS 2031)
- Table 71. Photonic Basic Information, Head Office, Major Market Areas and Its Competitors
- Table 72. Photonic Photonic Quantum Computing Chip Market Size (2025 VS 2031)

Table 73. CHIPX Basic Information, Head Office, Major Market Areas and Its Competitors

Table 74. CHIPX Photonic Quantum Computing Chip Market Size (2025 VS 2031)

## List Of Figures

### LIST OF FIGURES

- Figure 1. Picture of Photonic Quantum Computing Chip
- Figure 2. Photonic Quantum Computing Chip Report Years Considered
- Figure 3. Research Objectives
- Figure 4. Research Methodology
- Figure 5. Research Process and Data Source
- Figure 6. Global Photonic Quantum Computing Chip Market Size Growth Rate 2026-2032 (\$ millions)
- Figure 7. Photonic Quantum Computing Chip Market Size by Region (2025 & 2032) (\$ millions)
- Figure 8. Global Photonic Quantum Computing Chip Market Size Market Share by Type (2026-2032)
- Figure 9. Global Continuous-Variable Photonic Quantum Computing Market Size Growth Rate
- Figure 10. Global Discrete-Variable / Single-Photon Quantum Computing Market Size Growth Rate
- Figure 11. Global Photonic Quantum Computing Chip Market Size Market Share by Position In the Value Chain (2026-2032)
- Figure 12. Global Photonic Quantum Computer System Providers Market Size Growth Rate
- Figure 13. Global Photonic Quantum Chip / Processor Developers Market Size Growth Rate
- Figure 14. Global Photonic Quantum Computing Chip Market Size Market Share by Application Focus (2026-2032)
- Figure 15. Global Universal Quantum Computing Market Size Growth Rate
- Figure 16. Global Quantum Communication & Security Market Size Growth Rate
- Figure 17. Photonic Quantum Computing Chip in Photonic Quantum Computing
- Figure 18. Global Photonic Quantum Computing Chip Market: Photonic Quantum Computing (2026-2032) (\$ millions)
- Figure 19. Photonic Quantum Computing Chip in Photonic Quantum Simulation
- Figure 20. Global Photonic Quantum Computing Chip Market: Photonic Quantum Simulation (2026-2032) (\$ millions)
- Figure 21. Photonic Quantum Computing Chip in Quantum Cloud Platform
- Figure 22. Global Photonic Quantum Computing Chip Market: Quantum Cloud Platform (2026-2032) (\$ millions)
- Figure 23. Global Photonic Quantum Computing Chip Market Size Market Share by

Application (2026-2032)

Figure 24. Global Photonic Quantum Computing Chip Market Size in Photonic Quantum Computing Growth Rate

Figure 25. Global Photonic Quantum Computing Chip Market Size in Photonic Quantum Simulation Growth Rate

Figure 26. Funding/Investment

Figure 27. Global Photonic Quantum Computing Chip Market Size Market Share by Regions 2026-2032

Figure 28. United States Photonic Quantum Computing Chip Market Size 2026-2032 (\$ millions)

Figure 29. China Photonic Quantum Computing Chip Market Size 2026-2032 (\$ millions)

Figure 30. Europe Photonic Quantum Computing Chip Market Size 2026-2032 (\$ millions)

Figure 31. Rest of World Photonic Quantum Computing Chip Market Size 2026-2032 (\$ millions)

Figure 32. United States Photonic Quantum Computing Chip Consumption Market Share by Type in 2030

Figure 33. United States Photonic Quantum Computing Chip Market Size Market Share by Application in 2030

Figure 34. Europe Photonic Quantum Computing Chip Consumption Market Share by Type in 2030

Figure 35. Europe Photonic Quantum Computing Chip Market Size Market Share by Application in 2030

Figure 36. China Photonic Quantum Computing Chip Consumption Market Share by Type in 2030

Figure 37. China Photonic Quantum Computing Chip Market Size Market Share by Application in 2030

Figure 38. Rest of World Photonic Quantum Computing Chip Consumption Market Share by Type in 2030

Figure 39. Rest of World Photonic Quantum Computing Chip Market Size Market Share by Application in 2030

## I would like to order

Product name: Global Photonic Quantum Computing Chip Market Growth (Status and Outlook)  
2026-2032

Product link: <https://marketpublishers.com/r/G8F55FC0D914EN.html>

Price: US\$ 3,660.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/G8F55FC0D914EN.html>