+357 96 030922
info@marketpublishers.com

Global Optical Quantum Computing Core Supply, Demand and Key Producers, 2026-2032

https://marketpublishers.com/r/GC1F049E78E5EN.html
Date: January 2026
Pages: 100
Price: US$ 4,480.00 (Single User License)
ID: GC1F049E78E5EN

Abstracts

The global Optical Quantum Computing Core market size is expected to reach $ 2593 million by 2032, rising at a market growth of 19.5% CAGR during the forecast period (2026-2032).

The core of optical quantum computing lies in using photons as the carriers of qubits and leveraging quantum interference and quantum entanglement to programmably manipulate optical field states. Specifically, its computational nature is not a simple "switch" logic flip, but rather the generation of deterministic quantum states through a highly coherent single-photon source. In a low-loss integrated optical path, beam splitting, phase modulation, and nonlinear or measurement-induced mechanisms are used to achieve the interferometric evolution of multi-photon states in Hilbert space, ultimately completing the measurement readout through high-efficiency single-photon detection. The true technological core of optical quantum computing lies in three key aspects: high-quality single-photon sources, ultra-low-loss scalable photonic circuits, and high-fidelity entanglement and interference control capabilities. These factors collectively determine the system's scalability, computational accuracy, and commercial viability.

This report studies the global Optical Quantum Computing Core demand, key companies, and key regions.

This report is a detailed and comprehensive analysis of the world market for Optical Quantum Computing Core, and provides market size (US$ million) and Year-over-Year (YoY) growth, considering 2025 as the base year. This report explores demand trends and competition, as well as details the characteristics of Optical Quantum Computing Core that contribute to its increasing demand across many markets.

+357 96 030922
info@marketpublishers.com

Highlights and key features of the study

Global Optical Quantum Computing Core total market, 2021-2032, (USD Million)

Global Optical Quantum Computing Core total market by region & country, CAGR, 2021-2032, (USD Million)

U.S. VS China: Optical Quantum Computing Core total market, key domestic companies, and share, (USD Million)

Global Optical Quantum Computing Core revenue by player, revenue and market share 2021-2026, (USD Million)

Global Optical Quantum Computing Core total market by Type, CAGR, 2021-2032, (USD Million)

Global Optical Quantum Computing Core total market by Application, CAGR, 2021-2032, (USD Million)

This report profiles major players in the global Optical Quantum Computing Core market based on the following parameters - company overview, revenue, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Xanadu, PsiQuantum, TuringQ Co.,Ltd., Hefei Guizhen Chip Technology Co., Ltd., Beijing QBoson Quantum Technology Co.,Ltd., QuiX Quantum, Quandela, Photonic, CHIPX, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Stakeholders would have ease in decision-making through various strategy matrices used in analyzing the world Optical Quantum Computing Core market

Detailed Segmentation:

Each section contains quantitative market data including market by value (US$ Millions), by player, by regions, by Type, and by Application. Data is given for the years 2021-2032 by year with 2025 as the base year, 2026 as the estimate year, and 2027-2032 as the forecast year.

+357 96 030922
info@marketpublishers.com

Global Optical Quantum Computing Core Market, By Region:

United States

China

Europe

Japan

South Korea

ASEAN

India

Rest of World

Global Optical Quantum Computing Core Market, Segmentation by Type:

Continuous-Variable Photonic Quantum Computing

Discrete-Variable / Single-Photon Quantum Computing

Global Optical Quantum Computing Core Market, Segmentation by Position In the Value Chain:

Photonic Quantum Computer System Providers

Photonic Quantum Chip / Processor Developers

Global Optical Quantum Computing Core Market, Segmentation by Application Focus:

Universal Quantum Computing

+357 96 030922
info@marketpublishers.com

Quantum Communication & Security

Research & Industrial Prototyping

Global Optical Quantum Computing Core Market, Segmentation by Application:

Photonic Quantum Computing

Photonic Quantum Simulation

Quantum Cloud Platform

Companies Profiled:

Xanadu

PsiQuantum

TuringQ Co.,Ltd.

Hefei Guizhen Chip Technology Co., Ltd.

Beijing QBoson Quantum Technology Co.,Ltd.

QuiX Quantum

Quandela

Photonic

CHIPX

Key Questions Answered

1. How big is the global Optical Quantum Computing Core market?
2. What is the demand of the global Optical Quantum Computing Core market?
3. What is the year over year growth of the global Optical Quantum Computing Core

+357 96 030922
info@marketpublishers.com

market?

4. What is the total value of the global Optical Quantum Computing Core market?

5. Who are the Major Players in the global Optical Quantum Computing Core market?
6. What are the growth factors driving the market demand?

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

5 MARKET ANALYSIS BY TYPE

6 MARKET ANALYSIS BY POSITION IN THE VALUE CHAIN

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

10 INDUSTRY CHAIN ANALYSIS

+357 96 030922
info@marketpublishers.com

+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: Global Optical Quantum Computing Core Supply, Demand and Key Producers, 2026-2032

Product link: https://marketpublishers.com/r/GC1F049E78E5EN.html

Price: US$ 4,480.00 (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/GC1F049E78E5EN.html