Global Silicon Photonics Market to Witness Substantial Growth by 2028, Says Research Reports Hub

The global silicon photonics market expected to increase market value by USD 6.5 billion, with spurring CAGR in the forecast period from 2021-2028.

TEXAS, US, January 11, 2022 /EINPresswire.com/ -- The global silicon photonics market expected to increase market value by USD 6.5 billion, with spurring CAGR in the forecast period from 2021-2028. The market demand for the global silicon photonics is emerging due to rising consumer electronics demand, IT and telecommunication, and commercials driving the market demand.

For optical communications, silicon photonics is a cutting-edge technology that can bring more reliable and cheaper products and can achieve the high data rate density required by switches five years later. It has attracted essential manufacturers in the field of data communication infrastructure.

Moreover, with the emerging internet penetration and various advanced technology such as artificial intelligence, cloud computing, video streaming, and internet of things is driving network traffic thus, fueling the market demand for optics transceivers. The data center's growth has fueled the need for internal transmission, which is solved by silicon photonics.

Silicon photonics is an essential optical communication technology that can provide more reliable and economical products and achieve the high data rate density required by switches in the next five years. Therefore, it attracts essential manufacturers in the field of data communication infrastructure.

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Product overview in the Global Silicon Photonics Market

Based on the product, the global silicon photonics market bifurcated into Transceivers, Switches, Variable Optical Attenuators, Cables, Sensors. The transceivers segment is dominating the global silicon photonics market in the forecast period. It is mainly due to the use of transmission to help the tiny chips provide high-speed routers and switches in data centers that support 100 gigabits per second transmission. The transceiver provides a high coupling rate, low power

consumption, and low price.

Application overview in the Global Silicon Photonics Market

Based on the application, the global silicon photonics market segmented into Data Center and High-performance Computing, Telecommunication, Military & Defense, Life Sciences, Sensing. The data center and high-performance computing segment dominate the market share for the global silicon photonics market. It is mainly due to the emerging volume of a worldwide network, and data center traffic needs an interconnection scheme with cost-effective, high energy efficiency, and high bandwidth magnitude. The use of silicon photonics is widely increasing to solve the bottleneck problem by providing an intrinsically secure feature to obtain robust bandwidth and efficient power interconnection with lower cost.

Component overview in the Global Silicon Photonics Market

Based on the component, the global silicon photonics market segmented into Lasers, Modulators, Photo Detectors, Wavelength-Division Multiplexing (WDM) filters. The Wavelength-Division Multiplexing (WDM) filter segment captures the highest share in the forecast period from 2020-2027. It is mainly owing to the use of wavelength-division multiplexing technology that multiples various optical carrier signals onto single optical fiber by using a different wavelength of laser light. Thus, the use of silicon photonics with wavelength-division multiplexing to implement a versatile circuit that provides low cost and high bandwidth.

Region overview in the Global Silicon Photonics Market

Based on geography, the global silicon photonics market segmented into North America, Europe, Asia Pacific, South America, and Middle East & Africa. North America is the world's fastest-growing global silicon photonics market, accounting for the largest share. It is mainly due to the increasing use of silicon photonics owes to its unique features that consume less power, are cost-effective, and have high efficiency and small size. The silicon photonics aim is to reduce the cost of high-speed internet fueling its share in North America.

Global Silicon Photonics Market: Competitive Landscape
Companies such as Goal Zero, Jackery, Duracell, Milwaukee Tool, Anker Technology, Indiegogo, EcoFlow, Lion Energy, and others are players for the Global Silicon Photonics Market.

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Market Modelling

By Product:

Transceivers

Variable Optical Attenuators
Switches
Cables
Sensors

By Component:

Lasers
Modulators
Photo Detectors
Wavelength-Division Multiplexing (WDM) filters

By Application:

Data Center and High-performance Computing
Telecommunication
Military, Defense, and Aerospace
Medical and Life Science
Sensing

By Region:

Europe
North America
Asia Pacific
South America
Middle East & Africa

This Research Report Contain:

1. Research Strategic Development
1.1. Market Modelling
1.2. Product Analysis
1.3. Market Trend and Economic Factors Analysis
1.4. Market Segmental Analysis
1.5. Geographical Mapping
1.6. Country Wise Segregation
2. Research Methodology
2.1. Identification of Target Market
2.2. Data Acquisition
2.3. Refining of Data/ Data Transformations
2.4. Data Validation through Primary Techniques
2.5. Exploratory Data Analysis

2.6. Graphical Techniques/Analysis
2.7. Quantitative Techniques/Analysis
2.8. Visual Result/Presentation
3. Executive Summary
4. Market Insights
4.1. Economic Factor Analysis
4.1.1. Drivers
4.1.2. Trends
4.1.3. Opportunities
4.1.4. Challenges
4.2. Competitors & Product Analysis
4.3. Regulatory Framework
4.4. Company market share analysis, 2019
4.5. Porter’s Five forces analysis
4.6. New Investment Analysis
4.7. PESTEL Analysis

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