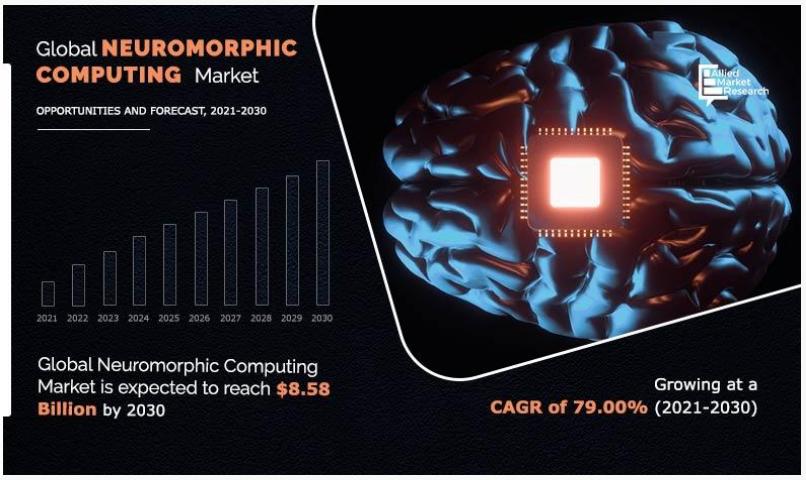
Neuromorphic Computing Market to Witness Comprehensive Growth by 2030

Neuromorphic Computing Market Expected to Reach $8,583.98 Million By 2030



Neuromorphic Computing Market

WILMINGTON, DE, UNITED STATES, March 14, 2025 /EINPresswire.com/ -- The neuromorphic computing market share is expected to witness the highest growth rate during the forecast period, owing to a rise in demand for artificial intelligence and machine learning technology and high usage of software in neuromorphic computing. In addition, various product launches and advancements in technologies in the neuromorphic computing market are anticipated to have a huge growth during the forecast period. Allied Market Research, titled, “Neuromorphic Computing Market By Offering, Deployment, Application, and Industry Vertical: Global Opportunity Analysis and Industry Forecast, 2021–2030”, the global neuromorphic computing market size was valued at $26.32 million in 2020, and projected to reach $8,583.98 million by 2030, registering a CAGR of 79.0%. North America is expected to be the leading contributor to the global market during the forecast period, followed by Asia-Pacific and Europe.

> “Factors driving the neuromorphic computing market growth include the rising demand for AI and machine learning, increased software usage, and the need for high-performance integrated circuits (ICs).”
>
> *Allied Market Research*

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Neuromorphic computing aims at processing information in a way similar to the human brain. Instead of a conventional von Neumann computer, a neuromorphic system generally relies on a neural network, where memory and processing elements are intimately co-located within the same hardware. Neuromorphic computing takes advantage of computational memories, which can both store and process data via physical laws within the device and the circuit. This summarizes

the history and main concepts of neuromorphic computing, including both deep neural networks (DNNs) which are adopted for extensive artificial intelligence tasks, such as driverless cars, and spiking neural networks (SNNs), which aim at a more realistic brain-inspired computation.

Neuromorphic computing gets its inspiration from the human brain's architecture and dynamics to create energy-efficient hardware for information processing, making it capable of highly sophisticated tasks. Neuromorphic computing includes the production and use of neural networks. It takes its inspiration from the human brain to design computer chips that can merge memory and processing.

Recently, Intel Corporation delivered 50 million artificial neurons to Sandia National Laboratories, which is equivalent to the brain of a small mammal. The shipment is the first in a three-year series, by the end of which they are expecting the number of experimental neurons in the final model to reach 1 billion or more. This collaboration aims to boost neuromorphic computing solutions to newer heights while prototyping the software, algorithms, and architectures.

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Prominent factors that impact the neuromorphic computing market growth include a rise in demand for artificial intelligence and machine learning technology, high usage of software in neuromorphic computing, and a rise in demand for better-performing integrated circuits (ICs). However, the rise in the complexity of algorithms and backend operations restricts market growth. On the contrary, an increase in the adoption of neuromorphic chips in the automotive industry is expected to create lucrative opportunities for the market. Therefore, these factors are expected to affect the global neuromorphic computing industry during the forecast period.

Region-wise, the neuromorphic computing market trends are analyzed across North America (U.S., Canada, and Mexico), Europe (Germany, UK, France, Italy, and Rest of Europe), Asia-Pacific (China, Japan, India, South Korea, Taiwan, and Rest of Asia-Pacific), and LAMEA (Latin America, the Middle East, and Africa). North America is dominating the market due to rising awareness about the benefits of neuromorphic computing in industries such as aerospace, military & defense, and healthcare. The overall neuromorphic computing market analysis is determined to understand the profitable trends to gain a stronger foothold.

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- In 2020, the hardware segment accounted for the maximum revenue and is projected to grow at a notable CAGR of 77.00% during the forecast period.
- The image recognition segment accounted for more than 40% of the global neuromorphic computing market share in 2020.
- The consumer electronics segment witnessed the highest growth rate during the forecast

period.
- The UK was the major shareholder in the European neuromorphic computing market revenue, accounting for approximately 26% share in 2020.

The key players profiled in the report include IBM Corporation (US), Intel Corporation (US), BrainChip Holdings Ltd. (US), Qualcomm Incorporated (US), Hewlett Packard Development LP (US), Samsung Electronics Ltd. (South Korea), General Vision Inc. (US), L Applied Brain Research Inc. (US), Numenta (US), and Huawei Technologies (China). These players have adopted various strategies, such as partnership, agreement, collaboration, and product launch, to expand their foothold in the neuromorphic computing industry.

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