

Brain Computer Interface Market by Product (Non-invasive, Invasive, Partial invasive), Technology (EEG, MEG, ECoG, fMRI), Application (Disability/Rehabilitation, Assistive technologies, Mental health, Research), End User - Global Forecast to 2029

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Report description:

The brain computer interface market is projected to reach USD 506 million by 2029 from USD 262 million in 2024, at a CAGR 14.1% during the forecast period. The growing incidence & prevalence of neurological disorders, increasing demand for non-invasive and wearable BCI devices, and rising investments in research and development, along with the increasing demand for non-invasive and wearable BCI devices are the factors that will drive the growth of this market. On the other hand, stringent regulatory requirements and high cost associated BCI systems may impede the adoption of brain computer interface solutions to a certain extent over the forecast period.

"Hardware segment is expected to register highest growth in the forecast period, by component."

Based on component, the brain computer interface market is segmented into hardware and software. The hardware segment is projected to witness the highest growth rate during the forecast period. Growth in this market can be attributed to the growing focus on adopting wearable BCI products such as headsets, headphones and others in response to the significant investment in hardware development by companies and research institutions.

"Non-invasive brain computer interface segment is expected to register highest growth in the forecast period of brain computer interface market, by product type."

Based on product type, the brain computer interface market is segmented into non-invasive brain computer interface, partially invasive brain computer interface, and invasive brain computer interface. The non-invasive brain computer interface segment is projected to witness the highest growth rate during the forecast period. This segment is expected to witness significant growth due to eliminating the need for surgical implantation, and growing adoption of this segment among end users.

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"The electroencephalography (EEG) segment is expected to register highest growth in the forecast period, by end user." Based on technology, the brain computer interface market is segmented into Electroencephalography (EEG), Functional Magnetic Resonance Imaging (fMRI), Magnetoencephalography (MEG), Electrocorticography (ECoG), and Functional Near-Infrared Spectroscopy (fNIRS). The electroencephalography (EEG) segment is projected to witness the highest growth rate during the forecast period. The adoption of EEG is expected to increase due to the large number of players involved in developing EEG hardware, and growing EEG based neuroscience research.

"The disabilities restoration/ rehabilitation accounted for the largest share of the application segment of the brain computer interface market"

Based on application, the brain computer interface market is segmented into disabilities restoration/ rehabilitation, assistive technologies, and other applications. The increasing prevalence of neurological conditions like stroke, spinal cord injury, and amyotrophic lateral sclerosis (ALS) along with the growing healthcare spending and rising research and development initiatives is expected to fuel the demand for disabilities restoration/ rehabilitation solutions among end users.

"The rehabilitation centers segment is expected to register highest growth in the forecast period, by end user."

Based on end user, the brain computer interface market is segmented into hospitals & clinics, rehabilitation centers, homecare settings, and other end users. . The rehabilitation centers segment is projected to witness the highest growth rate during the forecast period. The growth of brain computer interface adoption among rehabilitation centers is driven by their commitment to leveraging technological advancements, lower costs, easy accessibility, and lower waiting times as compared to hospitals to improve patient outcomes.

"Asia Pacific to register the highest growth in the brain computer interface market in the forecast period."

The global brain computer interface market is segmented into five major regions, namely, North America, Europe, APAC, Latin America, and Middle East & Africa. In 2023, Asia Pacific was expected to register the highest growth for brain computer interface solutions in the forecast period. Factors such as the affordable labor and a skilled workforce, rising disposable incomes, increasing incidence of neurodegenerative disorders, and a growing governmental focus on healthcare reforms within the region are expected to drive the growth of the brain computer interface market in the Asia Pacific.

Breakdown of the supply-side, demand side, primary interviews by company type, designation, and region:

- By Supply Side: Tier 1 (25%), Tier 2 (5%), and Tier 3 (70%)
- By Designation: C-level Executives (27%), Director-level (18%), and Others (55%)
- By Region: North America (40%), Europe (30%), Asia Pacific (20%), Latin America (5%), and Middle East and Africa (5%)

The prominent players in this market are Advanced Brain Monitoring, Inc. (US), Neurosky (US), Brain Products GmbH (Germany), CGX (US), Ripple Neuro (US), Neurable (US), InteraXon (US), Open BCI (US), Neuroolutions, Inc. (US), ANT Neuro (Netherlands), Bitbrain (Spain), Kernel (US), Paradromics (US), BrainCo (US), Blackrock Neurotech (US), G.Tech Medical Engineering GmbH (Austria), Emotiv (US), BirgerMind (Latvia), Cognixion (US), Artinis Medical Systems (Netherlands), MindMaze (Switzerland), Cortec GmbH (Germany), AAVAA Inc. (Canada), Nexstem (India), and Conscious Labs (France). Players adopted organic as well as inorganic growth strategies such as new product launches, agreements, collaborations, and expansions to increase their offerings, cater to the unmet needs of customers, increase their profitability, and expand their presence in the global market.

Research Coverage

The report studies the brain computer interface market based on component, product type, technology, application, end user, and region. The report analyzes factors (such as drivers, restraints, opportunities, and challenges) affecting the market growth. The report evaluates the opportunities and challenges in the market for stakeholders and provides details of the competitive

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landscape for market leaders. The report studies micro-markets with respect to their growth trends, prospects, and contributions to the total brain computer interface market. The report forecasts the revenue of market segments with respect to five major regions.

□

Reasons to Buy the Report

The report can help established firms as well as new entrants/smaller firms to gauge the pulse of the market, which, in turn, would help them garner a greater share. Firms purchasing the report could use one or a combination of the below-mentioned five strategies.

This report provides insights into the following pointers:

- Analysis of key drivers (growing incidence & prevalence of neurological disorders, increasing demand for non-invasive and wearable BCI devices, rising investments in research and development), restraints (high cost of BCI devices, and stringent regulatory requirements), opportunities (growth opportunities in emerging markets, and growing applications of BCI technology) and challenge (shortage of trained medical professionals, and data security and privacy concerns)
- Product Development/Innovation: Detailed insights on upcoming technologies, research and development activities, and product launches in the brain computer interface market.
- Market Development: Comprehensive information about lucrative emerging markets. The report analyzes the markets for various types of brain computer interface solutions across regions.
- Market Diversification: Exhaustive information about solutions, untapped regions, recent developments, and investments in the brain computer interface market.
- Competitive Assessment: In-depth assessment of market shares, strategies, products, distribution networks, and manufacturing capabilities of the leading players in the brain computer interface market.

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