Neuromorphic Chip Market by Application, End-User Industry and Geography - Global Forecast & Analysis to 2016-2022

Description:

"Neuromorphic Chip Market by Application (Image recognition, Speech Recognition, Data Mining), End-User Industry (Aerospace, Defense & Military, Medical, Industrial, Automotive, Consumer, Other Industries), and Geography - Global Forecast & Analysis to 2016 - 2022"

Neuromorphic chips are brain inspired electronic chips made out of multiple neurons. Combination of several artificial neural network chips is called Neuromorphic architecture. Current microprocessors can crunch numbers seamlessly, but they are terrible at tasks that brains do with ease. Motivation behind designing these chips is to build a platform for running large-scale, real-time simulations to aid neuroscience research. Studying a system as complex as the brain invariably leads to analytically intractable circuits or time-consuming, surgically-invasive laboratory experiments. Very large scale integration implementations of biologically-accurate neural network models can result in powerful tools for experimentation, where theoretical insight can be put to test through large-scale simulations. Hardware acceleration would allow researchers to run real-time simulations beyond scales that are possible in supercomputers and at a fraction of the cost (once commercialized) and power consumption. As a result, innovation in processor architecture is seen with increased interest by governments, research institutes, and business entities and the market is thereby evolving with significant developments in neuromorphic arena.

This report is based on an extensive research study of the neuromorphic chip market and aims at identifying the entire market and all its subsegments through extensively detailed classifications. The demand for neuromorphic chip is expected to grow moderately and gain importance among industry players across various domains over time. North America is expected to be the fastest-growing market at a CAGR of 33.85% between 2016 and 2022, owing to the presence of key players in the development of neuromorphic chip. Europe is expected to hold a share of 16.29% in 2016. Asia-Pacific is expected to hold the highest market share of 50.86% in 2016 for the neuromorphic chip market.

The report focuses on giving a bird's eye-view of the industry with regard to the neuromorphic chip market, with qualitative analysis of each and every aspect of the classification done on the basis of end-user industry, application, and geography. The report provides a forecast for the growth of the neuromorphic chip market between 2016 and 2022. A complete competitive landscape of the current market is analyzed from the market share analysis and rankings of current key players and all the other details of key players are discussed in their company profiles. The information provided in this report includes the market share of leading companies in the neuromorphic chip ecosystem, key developments, core strategies deployed by various players, mergers and acquisitions, new product developments, collaborations, and joint ventures of key manufacturers along with their company profiles.

The report also discusses the future of the global market with roadmaps, upcoming technologies, markets, and applications with respect to the neuromorphic chip market. Key players in this industry include Samsung Group (South Korea), IBM Corp. (U.S.), Intel Inc. (U.S.), Qualcomm Inc. (U.S.), Hewlett Packard Company (U.S.), General Vision Inc. (U.S.) and others.

Scope of the report:

This report categorizes the global neuromorphic chip market on the basis of applications, end-user industry, and geography. It forecasts the revenue for 2016-2022 and analyzes the trends in the neuromorphic chip market.

On the basis of Application:

The neuromorphic chip market is segmented on the basis of application into image recognition, speech recognition, and data mining market.

On the basis of end-user industry:

In this section, the market is segmented on the basis of the end-user industries for which the neuromorphic
chip is used. These include aerospace, defense & military, automotive, consumer, medical, industrial and other industries.

On the basis of geography:

In this section, the market is segmented on the basis of different regions, namely, North America, Europe, Asia-Pacific, and the RoW.
5.3.3.2 Help Understand the Operation of Human Brain
5.3.4 Challenges
5.3.4.1 Software Compatibility of Neural Hardware

6 Industry Trends
   6.1 Introduction
   6.2 Value Chain Analysis
   6.3 Supply Chain Analysis
   6.4 Industry Trends
   6.5 Porter’s Five Forces Analysis
      6.5.1 Threat From New Entrants
      6.5.2 Threat From Substitutes
      6.5.3 Bargaining Power of Suppliers
      6.5.4 Bargaining Power of Buyers
      6.5.5 Intensity of Rivalry

7 Global Neuromorphic Chip Market, By Application
   7.1 Introduction
   7.2 Image Recognition
   7.3 Signal Recognition
   7.4 Data Mining

8 Global Neuromorphic Chip Market, By End-User Industry
   8.1 Introduction
   8.2 Aerospace, Military & Defense Sector
   8.3 Automotive Industry
   8.4 Medical Industry
   8.5 Consumer Sector
   8.6 Industrial
   8.7 Others

9 Global Neuromorphic Chip Market, By Geography
   9.1 Introduction
   9.2 North America
   9.3 Europe
   9.4 Asia-Pacific
   9.5 RoW

10 Competitive Landscape
    10.1 Overview
    10.2 Ranking Analysis, Neuromorphic Chip Market in 2015
    10.3 Significant Developments in the Neuromorphic Chip Market

11 Company Profiles
   11.1 Introduction
   11.2 International Business Machine Corporation
      11.2.1 Business Overview
      11.2.2 Product Offered
      11.2.3 Recent Developments
      11.2.4 MnM View
         11.2.4.1 Key Strategies
         11.2.4.2 SWOT Analysis
   11.3 Hewlett Packard Corp.
      11.3.1 Business Overview
      11.3.2 Product/Service Offered
      11.3.3 Recent Developments
      11.3.4 MnM View
         11.3.4.1 Key Strategies
         11.3.4.2 SWOT Analysis
   11.4 Samsung Group.
      11.4.1 Business Overview
      11.4.2 Product/Service Offered
      11.4.3 Recent Developments
11.4.4 MnM View
11.4.4.1 Key Strategies
11.4.4.2 SWOT Analysis
11.5 Intel Corp.
11.5.1 Business Overview
11.5.2 Product/Service Offered
11.5.3 Recent Developments
11.5.4 MnM View
11.5.4.1 Key Strategies
11.5.4.2 SWOT Analysis
11.6 Qualcomm Inc.
11.6.1 Business Overview
11.6.2 Product/Service Offered
11.6.3 Recent Developments
11.6.4 MnM View
11.6.4.1 Key Strategies
11.6.4.2 SWOT Analysis
11.7 Brain Corporation
11.7.1 Business Overview
11.7.2 Product/Service Offered
11.7.3 Recent Developments
11.7.4 MnM View
11.7.4.1 Key Strategies
11.8 HRL Laboratories, LLC
11.8.1 Business Overview
11.8.2 Products/Service Offered
11.8.3 Recent Developments
11.8.4 MnM View
11.8.4.1 Key Strategies
11.9 General Vision
11.9.1 Business Overview
11.9.2 Product/Service Offered
11.9.3 Recent Developments
11.9.4 MnM View
11.9.4.1 Key Strategies

12 Appendix
12.2 Discussion Guide
12.3 Introducing RT: Real Time Market Intelligence
12.4 Available Customizations
12.5 Related Reports

List of Tables
Table 1 Demand for High Performance Integrated Circuits and Pattern Recognition Abilities are Expected to Propel the Growth of Neuromorphic Chips
Table 2 Further R&D Investment and Hardware Complexity in Learning Complex Algorithms Would Restrict Development of Neuromorphic Chips
Table 3 Possibility of Innovative Applications and Quest to Reverse-Engineer the Human Brain are Generating New Opportunities for Neuromorphic Chips Market
Table 4 Software Comparison: Conventional With Neuromorphic Chips
Table 5 Software Compatibility of Neuromorphic Hardware is the Biggest Challenge for Neuromorphic Chips Market
Table 6 Growing Sensor Market and Increasing Internet of Things
Table 7 Neuromorphic Chip Market, By Application, 2016 - 2022 (USD Million)
Table 8 Image Recognition Market, By Subapplication, 2016 - 2022 (USD Million)
Table 9 Image Recognition Market, By End-User Industry, 2016 - 2022 (USD Million)
Table 10 Image Recognition Market, By Geography, 2016 - 2022 (USD Million)
Table 11 Signal Processing Market, By Subapplication, 2016 - 2022 (USD Million)
Table 12 Signal Processing Market, By End-User Industry, 2016 - 2022 (USD Million)
Table 13 Signal Processing Market, By Geography, 2016 - 2022 (USD Million)
Table 14 Data Mining Market, By Subapplication, 2016 - 2022 (USD Million)
Table 15 Data Mining Market, By End-User Industry, 2016 - 2022 (USD Million)
Table 16 Data Mining Market, By Geography, 2016 - 2022 (USD Million)
Table 17 Neuromorphic Chip Market, By End-User Industry, 2016 - 2022 (USD Million)
Table 18 Aerospace, Military & Defense Industry: Neuromorphic Chip Market Size, 2016 - 2022 (USD Million)
Table 19 Aerospace, Military & Defense Industry: Neuromorphic Chip Market Size, By Geography, 2016 - 2022 (USD Million)
Table 20 Automotive Industry: Neuromorphic Chip Market Size, 2016 - 2022 (USD Million)
Table 21 Automotive Industry: Neuromorphic Chip Market Size, By Geography, 2016 - 2022 (USD Million)
Table 22 Medical Industry: Neuromorphic Chip Market Size, 2016-2022 (USD Million)
Table 23 Medical Industry: Neuromorphic Chip Market Size, By Geography, 2016 - 2022 (USD Million)
Table 24 Consumer Industry: Neuromorphic Chip Market Size, 2016 - 2022 (USD Million)
Table 25 Consumer Industry: Neuromorphic Chip Market Size, By Geography, 2016 - 2022 (USD Million)
Table 26 Industrial: Neuromorphic Chip Market Size, 2016-2022 (USD Million)
Table 27 Industrial: Neuromorphic Chip Market Size, By Geography, 2016 - 2022 (USD Million)
Table 28 Other Industries: Neuromorphic Chip Market Size, 2016 - 2022 (USD Million)
Table 29 Other Industries: Neuromorphic Chip Market Size, By Geography, 2016-2022 (USD Million)
Table 30 Global Neuromorphic Chip market, By Region, 2016 - 2022 (USD Million)
Table 31 North American Neuromorphic Chip Market, By End-User Industry, 2016 - 2022 (USD Million)
Table 32 North American Neuromorphic Chip Market, By Country, 2016 - 2022 (USD Million)
Table 33 European Neuromorphic Chip Market, By End-User Industry, 2016 - 2022 (USD Million)
Table 34 European Neuromorphic Chip Market, By Country, 2016 - 2022 (USD Million)
Table 35 Asia-Pacific Neuromorphic Chip Market, By End-User Industry, 2016 - 2022 (USD Million)
Table 36 Asia-Pacific Neuromorphic Chip Market, By Country, 2016 - 2022 (USD Million)
Table 37 RoW Neuromorphic Chip Market, By End-User Industry, 2016 - 2022 (USD Million)
Table 38 RoW Neuromorphic Chip Market, By Country, 2016 - 2022 (USD Million)
Table 39 Qualcomm and IBM are Expected to Lead the Neuromorphic Chip Market in 2015
Table 40 Significant Developments

List of Figures

Figure 1 Markets Covered
Figure 2 Research Design
Figure 3 Research Methodology
Figure 4 Market Size Estimation Methodology: Bottom-Up Approach
Figure 5 Breakdown of Primary Interviews: By Company Type, Designation, & Region
Figure 6 Market Breakdown and Data Triangulation
Figure 7 Neuromorphic Chips Market Snapshot, By Application (2016 vs 2022): Image Recognition is Expected to Dominate the Overall Market (USD Million)
Figure 8 Consumer Industry is Expected to Lead the Overall Neuromorphic Chip Market
Figure 9 Global Neuromorphic Chips Market, By Region, 2018
Figure 10 Consumer Industry is Expected to Drive the Neuromorphic Chip Market
Figure 11 Image Recognition to Grow at A Higher Rate During the Forecast Period
Figure 12 China is Expected to Hold the Largest Share in the Asia-Pacific Neuromorphic Chip Market in 2018
Figure 13 North American Neuromorphic Chip Market to Grow at the Highest CAGR Between 2016 and 2022
Figure 14 Consumer Industry are Expected to Dominate the Neuromorphic Chip Market Between 2016 and 2022
Figure 15 Image Recognition Application has A Promising Future
Figure 16 Architectural Difference: Von Neumann vs Neural Network
Figure 17 Biological Inspiration of Neuromorphic Design: By Carver Mead in 1990
Figure 18 Purdue University Researchers Use Neural Networks to Create an Image-Processing Application That Can Categorize Objects From A Moving Car in Real-Time
Figure 19 Segmentation: By Application
Figure 20 Segmentation: By End-User Industry
Figure 21 Drive for Reduction in Manufacturing and Process Costs Would Lead to New Growth Opportunities
Figure 22 Cost Per Transistor for A Single Ic Chip is Rising After the Launch of 28nm Semiconductor Device Fabrication Technology
Figure 23 Potential Value Chain Mapping (2016): Major Value is Added During the R&D and Design Phases
Figure 24 Potential Supply Chain of Neuromorphic Chip Market
Figure 25 Porter’s Five Forces Analysis
Figure 26 Anticipated Porter’s Five Forces Analysis: Neuromorphic Chip Market
Figure 27 Image Recognition Subapplication is Expected to Hold the Largest Market Share Between 2016 and 2022
Figure 28 The Video Monitoring Segment in the Market for Image Recognition Application of Neuromorphic Chip is Expected to Hold the Highest Share Between 2016 and 2022 (USD Million)
Figure 29 The Voice Identification Segment in the Market for Signal Recognition Application of Neuromorphic Chip is Expected to Hold the Highest Share Between 2016 and 2022 (USD Million)
Figure 30 The Fingerprint Identification Segment in the Market for Data Mining Application of Neuromorphic Chip is Expected to Hold the Highest Share Between 2016 and 2022 (USD Million)
Figure 31 Neuromorphic Chip Market: By End-User Industry
Figure 32 Neuromorphic Chip Market: Year of Adoption By End-User Industries
Figure 33 The Market for Neuromorphic Chip in the Medical Sector is Expected to Witness the Highest Growth Between 2016 - 2022 (USD Million)
Figure 34 The Market for Signal Recognition Application of Neuromorphic Chip to Witness the Highest Growth in Aerospace, Military & Defense Sector Between 2016 - 2022 (USD Million)
Figure 35 The APAC Market for Neuromorphic Chips Used in Aerospace, Military, & Defense Sector is Expected to Witness the Highest Growth Between 2016-2022 (USD Million)
Figure 36 The Market for Image Recognition Application of Neuromorphic Chip Used in the Automotive Industry is Expected to Register the Highest Growth in the Automotive Industry Between 2018 - 2022 (USD Million)
Figure 37 The Asia-Pacific Market for Neuromorphic Chip Used in Automotive Sector is Expected to Witness the Highest Growth Between 2018-2022 (USD Million)
Figure 38 The Market for Image Recognition Application of Neuromorphic Chip is Expected to Register the Highest Growth in the Medical Sector Between 2018 - 2022 (USD Million)
Figure 39 The Asia-Pacific Market for Neuromorphic Chip Used in Medical Sector is Expected to Witness the Highest Growth Between 2018 - 2022 (USD Million)
Figure 40 The Market for Image Recognition Application of Neuromorphic Chip in the Consumer Sector is Expected to Witness the Highest Growth Between 2016-2022 (USD Million)
Figure 41 The North American Market for Neuromorphic Chip Used in Consumer Sector to Witness the Highest Growth Between 2016-2022 (USD Million)
Figure 42 The Market for Image Recognition Application of Neuromorphic Chip is Expected to Witness the Highest Growth in the Industrial Sector Between 2018 - 2022 (USD Million)
Figure 43 Asia-Pacific to Witness the Highest Growth in Industrial Neuromorphic Chip Market Between 2018-2022 (USD Million)
Figure 44 The Market for Image Recognition Application of Neuromorphic Chip is Expected to Register the Highest Growth in the Other Industry Between 2018 - 2022 (USD Million)
Figure 45 North America to Witness the Highest Growth in Other Industries Neuromorphic Chip Market Between 2018 - 2022 (USD Million)
Figure 46 Benefits of Neuromorphic Chip
Figure 47 Geographic Snapshot (2016 - 2022) - U.S., Germany and South Korea are Emerging as the Potential Market for Neuromorphic Chips
Figure 48 North America and APAC - an Attractive Destination for All End-User Industries for Neuromorphic Chips
Figure 49 North America to Witness the Highest Growth Between 2016 and 2022 (USD Million)
Figure 50 Consumer Sector is Expected to Drive the North American Market Between 2016 and 2022 (USD Million)
Figure 51 Consumer Sector is to Hold the Highest Share in the European Market Between 2016 and 2022 (USD Million)
Figure 52 APAC Market With Respect to the Top Applications and End-User Industries
Figure 53 Consumer Sector to Hold the Highest Share in the Asia-Pacific Neuromorphic Chip Market Between 2016 and 2022 (USD Million)
Figure 54 Consumer Sector is Expected to Hold the Highest Share in RoW Market Between 2016 and 2022 (USD Million)
Figure 55 Key Strategies Adopted By the Major Players in Neuromorphic Chip Market
Figure 56 North America and APAC Region are the Major Markets for Top Five Market Players
Figure 57 International Business Machines: Business Overview
Figure 58 IBM Corp: SWOT Analysis
Figure 59 Hewlett Packard: Business Overview
Figure 60 HP: SWOT Analysis
Figure 61 Samsung Group: Business Overview
Figure 62 Samsung Group: SWOT Analysis
Figure 63 Intel Inc.: Business Overview
Figure 64 Intel Inc.: SWOT Analysis
Figure 65 Qualcomm Inc.: Business Overview
Figure 66 Qualcomm Inc.: SWOT Analysis
Figure 67 Brain Corporation: Business Overview
Figure 68 Hughes Research Laboratories: Business Overview
Figure 69 General Vision: Business Overview
Ordering:  
Order Online - http://www.researchandmarkets.com/reports/3421588/

Order by Fax - using the form below

Order by Post - print the order form below and send to

Research and Markets,
Guinness Centre,
Taylors Lane,
Dublin 8,
Ireland.
Fax Order Form
To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit http://www.researchandmarkets.com/contact/

Order Information
Please verify that the product information is correct and select the format(s) you require.

Product Name: Neuromorphic Chip Market by Application, End-User Industry and Geography - Global Forecast & Analysis to 2016-2022
Web Address: http://www.researchandmarkets.com/reports/3421588/
Office Code: SCDK8JUR

Product Formats
Please select the product formats and quantity you require:

<table>
<thead>
<tr>
<th>Format</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic (PDF) - Single User</td>
<td></td>
<td>USD 4650</td>
</tr>
<tr>
<td>Electronic (PDF) - 1 - 5 Users</td>
<td></td>
<td>USD 5650</td>
</tr>
<tr>
<td>Electronic (PDF) - Site License</td>
<td></td>
<td>USD 7150</td>
</tr>
<tr>
<td>Electronic (PDF) - Enterprisewide</td>
<td></td>
<td>USD 9000</td>
</tr>
</tbody>
</table>

Contact Information
Please enter all the information below in BLOCK CAPITALS

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title:</td>
<td>Mr ☐ Mrs ☐ Dr ☐ Miss ☐ Ms ☐ Prof ☐</td>
</tr>
<tr>
<td>First Name:</td>
<td>___________________________</td>
</tr>
<tr>
<td>Last Name:</td>
<td>___________________________</td>
</tr>
<tr>
<td>Email Address:</td>
<td>* ___________________________</td>
</tr>
<tr>
<td>Job Title:</td>
<td>___________________________</td>
</tr>
<tr>
<td>Organisation:</td>
<td>___________________________</td>
</tr>
<tr>
<td>Address:</td>
<td>___________________________</td>
</tr>
<tr>
<td>City:</td>
<td>___________________________</td>
</tr>
<tr>
<td>Postal / Zip Code:</td>
<td>___________________________</td>
</tr>
<tr>
<td>Country:</td>
<td>___________________________</td>
</tr>
<tr>
<td>Phone Number:</td>
<td>___________________________</td>
</tr>
<tr>
<td>Fax Number:</td>
<td>___________________________</td>
</tr>
</tbody>
</table>

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)
Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

☐ Pay by credit card: You will receive an email with a link to a secure webpage to enter your credit card details.

☐ Pay by check: Please post the check, accompanied by this form, to:

Research and Markets, Guinness Center, Taylors Lane, Dublin 8, Ireland.

☐ Pay by wire transfer: Please transfer funds to:

Account number 833 130 83
Sort code 98-53-30
Swift code ULSBIE2D
IBAN number IE78ULSB98533083313083
Bank Address Ulster Bank, 27-35 Main Street, Blackrock, Co. Dublin, Ireland.

If you have a Marketing Code please enter it below:

Marketing Code: __________________________

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

Please fax this form to:

(646) 607-1907 or (646) 964-6609 - From USA
+353-1-481-1716 or +353-1-653-1571 - From Rest of World