

# Artificial Intelligence (chipsets) Market by Technology (Machine Learning, Natural Language Processing, Computer Vision), Function (Training, Inference), Hardware (Processor, Memory, Network), End-user Industry and Region - Global Forecast to 2028

https://marketpublishers.com/r/AD255800776EN.html

Date: May 2023

Pages: 240

Price: US\$ 4,950.00 (Single User License)

ID: AD255800776EN

# **Abstracts**

The global AI (chipsets) market is expected to be valued at USD 18.6 billion in 2023 and is projected to reach USD 64.5 billion by 2028 and grow at a CAGR of 28.1% from 2023 to 2028. AI (chipsets) are optimized to handle the computational requirements of AI algorithms, which involve tasks such as data preprocessing, training, and inference. AI (chipsets) have witnessed significant advancements in terms of computational power. Traditional CPUs (Central Processing Units) have been supplemented or replaced with specialized accelerators such as GPUs (Graphics Processing Units), TPUs (Tensor Processing Units), and NPUs (Neural Processing Units). These accelerators are designed to handle the parallel computations required for AI algorithms, delivering faster processing and improved performance.

"Machine Learning to account for the second largest technology segment for Artificial Intelligence (chipsets) market"

With the rise of edge computing and the increasing demand for real-time decision-making, there is a need for AI (chipsets) that can enable machine learning inference at the edge. Edge devices such as smartphones, IoT devices, and autonomous systems require on-device machine learning capabilities to perform tasks locally without relying on cloud connectivity. AI (chipsets) designed for machine learning enable efficient and low-latency processing, facilitating real-time decision-making and reducing reliance on cloud resources.



"Automotive industry to grow at the second highest CAGR for Artificial Intelligence (chipsets) market."

The automotive industry is rapidly progressing towards autonomous driving capabilities. AI (chipsets) are essential for powering the complex algorithms and sensor fusion required for autonomous vehicles to perceive their environment, make decisions, and control their movements. These chipsets enable real-time data processing from sensors like cameras, radar, lidar, and ultrasonic sensors, ensuring accurate perception and safe navigation. Additionally, AI (chipsets) play a vital role in driver assistance systems, enhancing safety features such as collision avoidance, lane keeping, and adaptive cruise control.

"China to grow at the highest CAGR for Asia Pacific Artificial Intelligence (chipsets) market."

The Chinese government has recognized the strategic importance of AI and has made it a priority in its national development plans. The government has launched initiatives such as the 'New Generation Artificial Intelligence Development Plan' and the 'AI 2.0 Development Plan' to foster AI research, innovation, and industrial development. These initiatives provide funding, incentives, and policy support to AI chipset companies, encouraging their growth and driving the overall market.

The study contains various industry experts' insights, from component suppliers to Tier 1 companies and OEMs. The break-up of the primaries is as follows:

By Company Type: Tier 1 – 45%, Tier 2 – 32%, and Tier 3 – 23%

By Designation: C-level Executives – 30%, Directors – 45%, and Others – 25%

By Region: North America – 26%, Europe – 40%, Asia Pacific – 22%, RoW – 12%

The key players operating in the Artificial Intelligence (chipsets) market are Intel Corporation (US), Nvidia Corporation (US), Qualcomm Technologies Inc. (US), Micron Technology, Inc. (US), and Advanced Micro Devices, Inc. (US).

Research Coverage:



The research report categorizes the Artificial Intelligence (chipsets) market by technology (Machine Learning, Natural Language Processing, Context-Aware, Computer Vision, and Predictive Analysis), by function (Inference, Training), by hardware (Processor, Memory, and Network), by end-user industry (Healthcare, Manufacturing, Automotive, Agriculture, Retail, Cybersecurity, Human Resources, Marketing, Law, Fintech and Government), and by region (North America, Europe, Asia Pacific, and RoW). The scope of the report covers detailed information regarding the major factors, such as drivers, restraints, challenges, and opportunities, influencing the growth of the Artificial Intelligence (chipsets) market. A detailed analysis of the key industry players has been done to provide insights into their business overviews, products, key strategies, Contracts, partnerships, and agreements. New product & service launches, mergers and acquisitions, and recent developments associated with the Artificial Intelligence (chipsets) market. This report covers the competitive analysis of upcoming startups in the Artificial Intelligence (chipsets) market ecosystem.

# Key Benefits of Buying the Report

Analysis of critical drivers (increasing data traffic and need for high computing power, the emerging trend of autonomous vehicles, increasing adoption of industrial robots, and rising focus on parallel computing in AI data centers), restraints (Lack of AI hardware experts and skilled workforce), opportunities (surging demand for AI-based FPGA, growing adoption of AI-based solutions for defense systems, and the growing potential of AI-based tools for healthcare systems), and challenges (data privacy concerns in AI platforms, unreliability of AI algorithms, and availability of limited structured data to train and develop efficient AI systems) influencing the growth of the Artificial Intelligence (chipsets) market.

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product launches in the Artificial Intelligence (chipsets) market

Market Development: Comprehensive information about lucrative markets – the report analyses the Artificial Intelligence (chipsets) market across varied regions.

Market Diversification: Exhaustive information about new products, untapped geographies, recent developments, and investments in the Artificial Intelligence (chipsets) market



Competitive Assessment: In-depth assessment of market shares, growth strategies, and service offerings of leading players like Intel Corporation (US), Nvidia Corporation (US), Qualcomm Technologies Inc. (US), Micron Technology, Inc. (US), Advanced Micro Devices, Inc. (US), among others in the Artificial Intelligence (chipsets) market.



# **Contents**

#### 1 INTRODUCTION

- 1.1 STUDY OBJECTIVES
- 1.2 MARKET DEFINITION
- 1.2.1 INCLUSIONS AND EXCLUSIONS
- 1.3 STUDY SCOPE
  - 1.3.1 MARKETS COVERED

FIGURE 1 AI CHIPSETS MARKET SEGMENTATION

- 1.3.2 REGIONAL SCOPE
- 1.3.3 YEARS CONSIDERED
- 1.4 CURRENCY CONSIDERED
- 1.5 STAKEHOLDERS
- 1.6 SUMMARY OF CHANGES
- 1.7 RECESSION IMPACT

FIGURE 2 GDP GROWTH PROJECTION UNTIL 2023 FOR MAJOR ECONOMIES

FIGURE 3 PROJECTIONS FOR AI CHIPSETS MARKET, 2019–2028

### 2 RESEARCH METHODOLOGY

#### 2.1 RESEARCH DATA

FIGURE 4 AI CHIPSETS MARKET: RESEARCH DESIGN

- 2.1.1 SECONDARY DATA
  - 2.1.1.1 Major secondary sources
  - 2.1.1.2 Key data from secondary sources
- 2.1.2 PRIMARY DATA
  - 2.1.2.1 Primary interviews with experts
  - 2.1.2.2 Key data from primary sources
  - 2.1.2.3 Key industry insights
  - 2.1.2.4 Breakdown of primaries
- 2.1.3 SECONDARY AND PRIMARY RESEARCH
- 2.2 MARKET SIZE ESTIMATION

FIGURE 5 RESEARCH FLOW FOR MARKET SIZE ESTIMATION

FIGURE 6 MARKET SIZE ESTIMATION METHODOLOGY (SUPPLY SIDE):

REVENUE GENERATED FROM SALES OF AI CHIPSETS

- 2.2.1 BOTTOM-UP APPROACH
- 2.2.1.1 Approach to derive market size using bottom-up analysis

FIGURE 7 MARKET SIZE ESTIMATION METHODOLOGY: BOTTOM-UP APPROACH



### 2.2.2 TOP-DOWN APPROACH

2.2.2.1 Approach to derive market size using top-down analysis

FIGURE 8 TOP-DOWN APPROACH

2.3 DATA TRIANGULATION

FIGURE 9 DATA TRIANGULATION

2.4 RESEARCH ASSUMPTIONS

2.5 RISK ASSESSMENT

TABLE 1 RISK FACTOR ANALYSIS

2.6 ASSUMPTIONS TO ANALYZE RECESSION IMPACT

TABLE 2 ASSUMPTIONS: RECESSION IMPACT

2.7 RESEARCH LIMITATIONS

#### **3 EXECUTIVE SUMMARY**

3.1 GROWTH RATE ASSUMPTIONS/FORECAST

FIGURE 10 PROCESSOR SEGMENT TO HOLD LARGEST MARKET SHARE

DURING FORECAST PERIOD

FIGURE 11 COMPUTER VISION SEGMENT TO DOMINATE AI CHIPSETS MARKET

DURING FORECAST PERIOD

FIGURE 12 INFERENCE SEGMENT TO DOMINATE AI CHIPSETS MARKET DURING

FORECAST PERIOD

FIGURE 13 MANUFACTURING SEGMENT TO DOMINATE AI CHIPSETS MARKET

**DURING FORECAST PERIOD** 

FIGURE 14 ASIA PACIFIC TO DOMINATE AI CHIPSETS MARKET DURING

FORECAST PERIOD

### **4 PREMIUM INSIGHTS**

4.1 ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN AI CHIPSETS MARKET FIGURE 15 RISING GOVERNMENT-LED INITIATIVES TO BOOST INDUSTRIAL AUTOMATION

4.2 NORTH AMERICAN AI CHIPSETS MARKET, BY HARDWARE AND COUNTRY FIGURE 16 PROCESSOR SEGMENT AND US TO DOMINATE NORTH AMERICAN AI CHIPSETS MARKET BETWEEN 2023 AND 2028

4.3 AI CHIPSETS MARKET, BY PROCESSOR

FIGURE 17 CPU SEGMENT TO HOLD LARGEST SHARE OF AI CHIPSETS MARKET IN 2028

4.4 AI CHIPSETS MARKET, BY COUNTRY

FIGURE 18 CHINA TO REGISTER HIGHEST CAGR IN AI CHIPSETS MARKET



### **BETWEEN 2023 AND 2028**

#### **5 MARKET OVERVIEW**

E /	4 11	VΤ	$\neg$	$^{\prime}$	11/	$\neg$	$\sim$	N I
2	1 11	M I	Rι	" "	u		ונאו	N

5.2 MARKET DYNAMICS

FIGURE 19 AI CHIPSETS MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES

- 5.2.1 DRIVERS
  - 5.2.1.1 Increasing data traffic and need for high computing power
  - 5.2.1.2 Emerging trend of autonomous vehicles
  - 5.2.1.3 Growing adoption of industrial robots
  - 5.2.1.4 Rising focus on parallel computing in Al data centers

FIGURE 20 AI CHIPSETS MARKET: IMPACT ANALYSIS OF DRIVERS

#### 5.2.2 RESTRAINTS

5.2.2.1 Lack of AI hardware experts and skilled workforce

FIGURE 21 AI CHIPSETS MARKET: IMPACT ANALYSIS OF RESTRAINTS

## 5.2.3 OPPORTUNITIES

- 5.2.3.1 Surging demand for Al-based field programmable gate array (FPGA) technology
  - 5.2.3.2 Integration of Al-based solutions into defense systems
  - 5.2.3.3 Growing potential of Al-based tools in healthcare sector

FIGURE 22 AI CHIPSETS MARKET: IMPACT ANALYSIS OF OPPORTUNITIES 5.2.4 CHALLENGES

- 5.2.4.1 Data privacy concerns associated with Al platforms
- 5.2.4.2 Unreliability of Al algorithms
- 5.2.4.3 Availability of limited structured data to develop efficient AI systems

FIGURE 23 AI CHIPSETS MARKET: IMPACT ANALYSIS OF CHALLENGES

5.3 VALUE CHAIN ANALYSIS

FIGURE 24 AI CHIPSETS MARKET: VALUE CHAIN ANALYSIS

5.4 ECOSYSTEM ANALYSIS

FIGURE 25 AI CHIPSETS MARKET: ECOSYSTEM ANALYSIS

TABLE 3 AI CHIPSETS MARKET: ROLE OF COMPANIES

5.5 PORTER'S FIVE FORCES ANALYSIS

TABLE 4 AI CHIPSETS MARKET: PORTER'S FIVE FORCES ANALYSIS

FIGURE 26 AI CHIPSETS MARKET: PORTER'S FIVE FORCES ANALYSIS

- 5.5.1 THREAT OF NEW ENTRANTS
- 5.5.2 THREAT OF SUBSTITUTES
- 5.5.3 BARGAINING POWER OF SUPPLIERS



5.5.4 BARGAINING POWER OF BUYERS

5.5.5 INTENSITY OF COMPETITION RIVALRY

5.6 KEY STAKEHOLDERS AND BUYING CRITERIA

5.6.1 KEY STAKEHOLDERS IN BUYING PROCESS

FIGURE 27 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR TOP THREE END-USER INDUSTRIES

TABLE 5 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR TOP THREE END-USER INDUSTRIES (%)

5.6.2 BUYING CRITERIA

FIGURE 28 KEY BUYING CRITERIA FOR TOP THREE END-USER INDUSTRIES
TABLE 6 KEY BUYING CRITERIA FOR TOP THREE END-USER INDUSTRIES
5.7 TRENDS/DISRUPTIONS IMPACTING CUSTOMERS' BUSINESSES
FIGURE 29 REVENUE SHIFT AND NEW REVENUE POCKETS FOR PLAYERS IN AI
CHIPSETS MARKET

5.8 CASE STUDY ANALYSIS

TABLE 7 DFI'S "INDUSTRIAL PI" SINGLE-BOARD COMPUTER LEVERAGES AMD RYZEN EMBEDDED PROCESSORS

TABLE 8 EXOR INTERNATIONAL DEVELOPS SMART FACTORY SOLUTIONS USING INTEL PROCESSOR

TABLE 9 INTEL XEON SCALABLE PROCESSORS POWER TENCENT CLOUD'S XIAOWEI INTELLIGENT SPEECH AND VIDEO SERVICE ACCESS PLATFORM TABLE 10 AIC HELPS WESTERN DIGITAL ENHANCE SSD TESTING AND VALIDATION EFFICIENCY USING AMD PROCESSOR

TABLE 11 BARCO EXPANDED PORTFOLIO OF COLLABORATION SOLUTIONS USING AMD PROCESSOR

5.9 TECHNOLOGY ANALYSIS

5.9.1 KEY TECHNOLOGIES

TABLE 12 COMPARISON BETWEEN AI CHIP TYPES

5.9.2 ADJACENT TECHNOLOGIES

5.9.2.1 Cloud GPU

5.9.3 COMPLEMENTARY TECHNOLOGIES

5.9.3.1 Cognitive robots

5.9.3.2 Internet of Things (IoT)

5.10 AVERAGE SELLING PRICE (ASP) ANALYSIS

FIGURE 30 AVERAGE SELLING PRICE (ASP) OF AI CHIPSETS, BY END-USER INDUSTRY

5.10.1 AVERAGE SELLING PRICE (ASP) OF AI CHIPSETS, BY KEY END-USER INDUSTRIES (USD)

TABLE 13 AVERAGE SELLING PRICE (ASP) OF AI CHIPSETS, BY KEY END-USER



INDUSTRIES (USD)

5.10.2 AVERAGE SELLING PRICE (ASP) TRENDS

FIGURE 31 AVERAGE SELLING PRICE (ASP) ANALYSIS

TABLE 14 PRICE COMPARISON OF AI CHIPSETS OFFERED BY LEADING COMPANIES

**5.11 PATENT ANALYSIS** 

FIGURE 32 NUMBER OF PATENTS GRANTED IN AI CHIPSETS MARKET, 2012–2022

TABLE 15 AI CHIPSETS MARKET: LIST OF MAJOR PATENTS 5.12 TRADE ANALYSIS

TABLE 16 IMPORT DATA, BY COUNTRY, 2017–2021 (USD MILLION)

FIGURE 33 IMPORT DATA, BY COUNTRY, 2017–2021 (USD MILLION)

TABLE 17 EXPORT DATA, BY COUNTRY, 2017–2021 (USD MILLION)

FIGURE 34 EXPORT DATA, BY COUNTRY, 2017–2021 (USD MILLION)

5.13 TARIFF ANALYSIS

TABLE 18 MFN TARIFF FOR HS CODE: 854231 EXPORTED BY CHINA

TABLE 19 MFN TARIFF FOR HS CODE: 854231 EXPORTED BY US

TABLE 20 MFN TARIFF FOR HS CODE: 854231 EXPORTED BY GERMANY

5.14 STANDARDS AND REGULATORY LANDSCAPE

5.14.1 REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 21 NORTH AMERICA: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 22 EUROPE: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 23 ASIA PACIFIC: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 24 ROW: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

5.14.2 STANDARDS AND REGULATIONS RELATED TO AI CHIPSETS MARKET 5.15 KEY CONFERENCES AND EVENTS, 2023–2024

TABLE 25 AI CHIPSETS MARKET: CONFERENCES AND EVENTS

# **6 AI CHIPSETS MARKET, BY HARDWARE**

6.1 INTRODUCTION

FIGURE 35 MEMORY SEGMENT TO REGISTER HIGHEST CAGR DURING FORECAST PERIOD

TABLE 26 AI CHIPSETS MARKET, BY HARDWARE, 2019–2022 (USD MILLION)



TABLE 27 AI CHIPSETS MARKET, BY HARDWARE, 2023–2028 (USD MILLION) 6.2 PROCESSOR

TABLE 28 AI CHIPSETS MARKET, BY PROCESSOR TYPE, 2019–2022 (USD MILLION)

TABLE 29 AI CHIPSETS MARKET, BY PROCESSOR TYPE, 2023–2028 (USD MILLION)

TABLE 30 AI CHIPSETS MARKET, BY PROCESSOR TYPE, 2019–2022 (MILLION UNITS)

TABLE 31 AI CHIPSETS MARKET, BY PROCESSOR TYPE, 2023–2028 (MILLION UNITS)

TABLE 32 PROCESSOR: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 33 PROCESSOR: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 34 PROCESSOR: AI CHIPSETS MARKET, BY FUNCTION, 2019–2022 (USD MILLION)

TABLE 35 PROCESSOR: AI CHIPSETS MARKET, BY FUNCTION, 2023–2028 (USD MILLION)

- 6.2.1 GRAPHIC PROCESSING UNIT (GPU)
  - 6.2.1.1 Provides higher bandwidth than CPUs
- 6.2.2 FIELD PROGRAMMABLE GATE ARRAY (FPGA)
- 6.2.2.1 Can be reconfigured and reprogrammed as per requirement
- 6.2.3 CENTRAL PROCESSING UNIT (CPU)
- 6.2.3.1 Cost-effective and can handle certain Al algorithms
- 6.2.4 APPLICATION-SPECIFIC INTEGRATED CIRCUIT (ASIC)
- 6.2.4.1 Offers user-specific customized solutions
- 6.3 MEMORY
- 6.3.1 DEVELOPED AND DEPLOYED FOR AI APPLICATIONS AND INDEPENDENT OF COMPUTING ARCHITECTURE

TABLE 36 MEMORY: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 37 MEMORY: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 38 MEMORY: AI CHIPSETS MARKET, BY FUNCTION, 2019–2022 (USD MILLION)

TABLE 39 MEMORY: AI CHIPSETS MARKET, BY FUNCTION, 2023–2028 (USD MILLION)

- 6.4 NETWORK
- 6.4.1 HELPS TROUBLESHOOT PROBLEMS QUICKLY



TABLE 40 NETWORK: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 41 NETWORK: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION)

TABLE 42 NETWORK: AI CHIPSETS MARKET, BY FUNCTION, 2019–2022 (USD MILLION)

TABLE 43 NETWORK: AI CHIPSETS MARKET, BY FUNCTION, 2023–2028 (USD MILLION)

# 7 AI CHIPSETS MARKET, BY TECHNOLOGY

#### 7.1 INTRODUCTION

FIGURE 36 COMPUTER VISION SEGMENT TO REGISTER HIGHEST CAGR DURING FORECAST PERIOD

TABLE 44 AI CHIPSETS MARKET, BY TECHNOLOGY, 2019–2022 (USD MILLION) TABLE 45 AI CHIPSETS MARKET, BY TECHNOLOGY, 2023–2028 (USD MILLION) 7.2 MACHINE LEARNING

- 7.2.1 DEEP LEARNING
- 7.2.1.1 Uses artificial neural networks to learn multiple levels of data
- 7.2.2 SUPERVISED LEARNING
- 7.2.2.1 Helps in classification and regression of major applications of supervised learning
  - 7.2.3 UNSUPERVISED LEARNING
- 7.2.3.1 Includes clustering methods consisting of algorithms with unlabeled training data
  - 7.2.4 REINFORCEMENT LEARNING
- 7.2.4.1 Allows systems and software to determine ideal behavior to maximize system performance
  - **7.2.5 OTHERS**
- 7.3 NATURAL LANGUAGE PROCESSING
- 7.3.1 OFFERS REAL-TIME TRANSLATION AND ALLOWS USERS TO COMMUNICATE IN NATURAL LANGUAGE WITH SYSTEMS
- 7.4 CONTEXT-AWARE COMPUTING
- 7.4.1 USES SUPPLEMENTAL INFORMATION TO IMPROVE SECURITY DECISIONS
- 7.5 COMPUTER VISION
- 7.5.1 GIVES HUMAN-LIKE CAPABILITIES TO MACHINES, ROBOTS, AND COMPUTERS
- 7.6 PREDICTIVE ANALYSIS



7.6.1 WIDELY USED IN HEALTHCARE AND AGRICULTURE INDUSTRIES TO ANALYZE CURRENT DATA AND PREDICT RESULTS OF UNKNOWN FUTURE EVENTS

# **8 AI CHIPSETS MARKET, BY FUNCTION**

#### 8.1 INTRODUCTION

FIGURE 37 TRAINING SEGMENT TO REGISTER HIGHER CAGR DURING FORECAST PERIOD

TABLE 46 AI CHIPSETS MARKET, BY FUNCTION, 2019–2022 (USD MILLION) TABLE 47 AI CHIPSETS MARKET, BY FUNCTION, 2023–2028 (USD MILLION) 8.2 TRAINING

8.2.1 COMPUTATIONALLY INTENSIVE AND BEST ACCELERATED WITH GPUS TABLE 48 TRAINING: AI CHIPSETS MARKET, BY HARDWARE, 2019–2022 (USD MILLION)

TABLE 49 TRAINING: AI CHIPSETS MARKET, BY HARDWARE, 2023–2028 (USD MILLION)

8.3 INFERENCE

8.3.1 ON-PREMISES INFERENCE PLATFORM USED TO GAIN FASTER RESULTS THAN CLOUD

TABLE 50 INFERENCE: AI CHIPSETS MARKET, BY HARDWARE, 2019–2022 (USD MILLION)

TABLE 51 INFERENCE: AI CHIPSETS MARKET, BY HARDWARE, 2023–2028 (USD MILLION)

# 9 AI CHIPSETS MARKET, BY END-USER INDUSTRY

#### 9.1 INTRODUCTION

FIGURE 38 HEALTHCARE SEGMENT TO HOLD LARGEST MARKET SHARE IN 2028

TABLE 52 AI CHIPSETS MARKET, BY END-USER INDUSTRY, 2019–2022 (USD MILLION)

TABLE 53 AI CHIPSETS MARKET, BY END-USER INDUSTRY, 2023–2028 (USD MILLION)

9.2 HEALTHCARE

9.2.1 GROWING USE OF MACHINE LEARNING (ML) AND DEEP LEARNING (DL) MODELS

TABLE 54 HEALTHCARE: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION)



TABLE 55 HEALTHCARE: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION)

9.3 MANUFACTURING

9.3.1 GROWING DEMAND FOR AI CHIPSETS IN QUALITY CONTROL AND PREDICTIVE MAINTENANCE

TABLE 56 MANUFACTURING: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 57 MANUFACTURING: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION)

9.4 AUTOMOTIVE

9.4.1 RISING ADOPTION OF ADVANCED TECHNOLOGIES

TABLE 58 AUTOMOTIVE: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 59 AUTOMOTIVE: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION)

9.5 AGRICULTURE

9.5.1 INCREASING USE OF MACHINE LEARNING (ML) AND COMPUTER VISION TECHNOLOGIES TO DIAGNOSE, MAP, AND EVALUATE CROP HEALTH TABLE 60 AGRICULTURE: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 61 AGRICULTURE: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION)

9.6 RETAIL

9.6.1 GROWING ADOPTION OF AI TO ENHANCE CUSTOMER EXPERIENCE TABLE 62 RETAIL: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION) TABLE 63 RETAIL: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION) 9.7 CYBERSECURITY

9.7.1 RISING CYBERSECURITY THREATS

TABLE 64 CYBERSECURITY: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 65 CYBERSECURITY: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION)

9.8 HUMAN RESOURCES

9.8.1 INCREASING DEPLOYMENT OF AI TO RESHAPE OPERATIONS OF COMPANIES

TABLE 66 HUMAN RESOURCES: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 67 HUMAN RESOURCES: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION)



### 9.9 MARKETING

9.9.1 RISING USE OF AI TO OFFER PROGRAMMATIC TRENDS TO MARKETERS TABLE 68 MARKETING: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 69 MARKETING: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION)

9.10 LAW

9.10.1 RISING DEPLOYMENT TO INCREASE PRODUCTIVITY AND MARGINS TABLE 70 LAW: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION) TABLE 71 LAW: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION) 9.11 FINTECH

9.11.1 INCREASED USE BY FINTECH COMPANIES TO DESIGN INVESTMENT STRATEGIES

TABLE 72 FINTECH: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 73 FINTECH: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION)

9.12 GOVERNMENT

9.12.1 GROWING ADOPTION OF AI TO TACKLE CYBERTERRORISM TABLE 74 GOVERNMENT: AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION)

TABLE 75 GOVERNMENT: AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION)

# 10 AI CHIPSETS MARKET, BY REGION

### 10.1 INTRODUCTION

FIGURE 39 ASIA PACIFIC TO HOLD LARGEST SHARE OF AI CHIPSETS MARKET DURING FORECAST PERIOD

TABLE 76 AI CHIPSETS MARKET, BY REGION, 2019–2022 (USD MILLION) TABLE 77 AI CHIPSETS MARKET, BY REGION, 2023–2028 (USD MILLION) 10.2 NORTH AMERICA

10.2.1 NORTH AMERICA: RECESSION IMPACT

FIGURE 40 NORTH AMERICA: SNAPSHOT OF AI CHIPSETS MARKET
TABLE 78 NORTH AMERICA: AI CHIPSETS MARKET, BY HARDWARE, 2019–2022
(USD MILLION)

TABLE 79 NORTH AMERICA: AI CHIPSETS MARKET, BY HARDWARE, 2023–2028 (USD MILLION)

TABLE 80 NORTH AMERICA: AI CHIPSETS MARKET, BY END-USER INDUSTRY,



2019-2022 (USD MILLION)

TABLE 81 NORTH AMERICA: AI CHIPSETS MARKET, BY END-USER INDUSTRY, 2023–2028 (USD MILLION)

TABLE 82 NORTH AMERICA: AI CHIPSETS MARKET, BY COUNTRY, 2019–2022 (USD MILLION)

TABLE 83 NORTH AMERICA: AI CHIPSETS MARKET, BY COUNTRY, 2023–2028 (USD MILLION)

10.2.2 US

10.2.2.1 Innovations and initiatives to fuel adoption of advanced technologies

10.2.3 CANADA

10.2.3.1 High investments in research and development (R&D)

10.2.4 MEXICO

10.2.4.1 Growing penetration of AI into security and BFSI sectors

10.3 EUROPE

10.3.1 EUROPE: RECESSION IMPACT

FIGURE 41 EUROPE: SNAPSHOT OF AI CHIPSETS MARKET

TABLE 84 EUROPE: AI CHIPSETS MARKET, BY HARDWARE, 2019–2022 (USD MILLION)

TABLE 85 EUROPE: AI CHIPSETS MARKET, BY HARDWARE, 2023–2028 (USD MILLION)

TABLE 86 EUROPE: AI CHIPSETS MARKET, BY END-USER INDUSTRY, 2019–2022 (USD MILLION)

TABLE 87 EUROPE: AI CHIPSETS MARKET, BY END-USER INDUSTRY, 2023–2028 (USD MILLION)

TABLE 88 EUROPE: AI CHIPSETS MARKET, BY COUNTRY, 2019–2022 (USD MILLION)

TABLE 89 EUROPE: AI CHIPSETS MARKET, BY COUNTRY, 2023–2028 (USD MILLION)

10.3.2 UK

10.3.2.1 Government initiatives to increase adoption of Al

**10.3.3 GERMANY** 

10.3.3.1 Growing adoption of cloud computing and Industry 4.0 technologies

**10.3.4 FRANCE** 

10.3.4.1 Rising investments by venture capitalists in startups to develop AI ecosystem

10.3.5 REST OF EUROPE

10.4 ASIA PACIFIC

10.4.1 ASIA PACIFIC: RECESSION IMPACT

FIGURE 42 ASIA PACIFIC: SNAPSHOT OF AI CHIPSETS MARKET



TABLE 90 ASIA PACIFIC: AI CHIPSETS MARKET, BY HARDWARE, 2019–2022 (USD MILLION)

TABLE 91 ASIA PACIFIC: AI CHIPSETS MARKET, BY HARDWARE, 2023–2028 (USD MILLION)

TABLE 92 ASIA PACIFIC: AI CHIPSETS MARKET, BY END-USER INDUSTRY, 2019–2022 (USD MILLION)

TABLE 93 ASIA PACIFIC: AI CHIPSETS MARKET, BY END-USER INDUSTRY, 2023–2028 (USD MILLION)

TABLE 94 ASIA PACIFIC: AI CHIPSETS MARKET, BY COUNTRY, 2019–2022 (USD MILLION)

TABLE 95 ASIA PACIFIC: AI CHIPSETS MARKET, BY COUNTRY, 2023–2028 (USD MILLION)

10.4.2 CHINA

10.4.2.1 Significant untapped AI opportunities

10.4.3 JAPAN

10.4.3.1 Expanding finance, healthcare, retail, automotive, and transportation sectors

10.4.4 INDIA

10.4.4.1 Increasing number of AI startups

10.4.5 SOUTH KOREA

10.4.5.1 Growing need for enhanced AI infrastructure

10.4.6 REST OF ASIA PACIFIC

10.5 ROW

10.5.1 ROW: RECESSION IMPACT

TABLE 96 ROW: AI CHIPSETS MARKET, BY HARDWARE, 2019–2022 (USD MILLION)

TABLE 97 ROW: AI CHIPSETS MARKET, BY HARDWARE, 2023–2028 (USD MILLION)

TABLE 98 ROW: AI CHIPSETS MARKET, BY END-USER INDUSTRY, 2019–2022 (USD MILLION)

TABLE 99 ROW: AI CHIPSETS MARKET, BY END-USER INDUSTRY, 2023–2028 (USD MILLION)

TABLE 100 ROW: AI CHIPSETS MARKET, BY COUNTRY, 2019–2022 (USD MILLION)

TABLE 101 ROW: AI CHIPSETS MARKET, BY COUNTRY, 2023–2028 (USD MILLION)

10.5.2 SOUTH AMERICA

10.5.2.1 Increased availability of computing services

10.5.3 MIDDLE EAST & AFRICA

10.5.3.1 Rise in smart mobile data traffic



#### 11 COMPETITIVE LANDSCAPE

11.1 INTRODUCTION

11.2 KEY STRATEGIES ADOPTED BY MAJOR PLAYERS

TABLE 102 OVERVIEW OF STRATEGIES ADOPTED BY COMPANIES IN AI CHIPSETS MARKET

11.3 COMPANY REVENUE ANALYSIS, 2020–2022

FIGURE 43 THREE-YEAR REVENUE ANALYSIS OF TOP FIVE MARKET PLAYERS

11.4 MARKET SHARE ANALYSIS, 2022

FIGURE 44 MARKET SHARES OF LEADING PLAYERS IN AI CHIPSETS MARKET, 2022

TABLE 103 AI CHIPSETS MARKET: DEGREE OF COMPETITION

11.5 COMPANY EVALUATION QUADRANT, 2022

11.5.1 STARS

11.5.2 EMERGING LEADERS

11.5.3 PERVASIVE PLAYERS

11.5.4 PARTICIPANTS

FIGURE 45 AI CHIPSETS MARKET (GLOBAL): COMPANY EVALUATION QUADRANT, 2022

11.6 SMALL AND MEDIUM-SIZED ENTERPRISES (SMES) EVALUATION QUADRANT, 2022

11.6.1 PROGRESSIVE COMPANIES

11.6.2 RESPONSIVE COMPANIES

11.6.3 DYNAMIC COMPANIES

11.6.4 STARTING BLOCKS

FIGURE 46 AI CHIPSETS MARKET: SMES EVALUATION QUADRANT, 2022

11.7 COMPETITIVE BENCHMARKING

**TABLE 104 COMPANY FOOTPRINT** 

TABLE 105 HARDWARE: COMPANY FOOTPRINT

TABLE 106 END-USER INDUSTRY: COMPANY FOOTPRINT

TABLE 107 REGION: COMPANY FOOTPRINT

11.8 STARTUP EVALUATION QUADRANT, 2022

11.8.1 LIST OF STARTUPS

TABLE 108 STARTUP MATRIX: DETAILED LIST OF KEY STARTUPS

11.8.2 COMPETITIVE BENCHMARKING OF KEY STARTUPS

TABLE 109 OVERALL STARTUP FOOTPRINT

TABLE 110 HARDWARE: STARTUP FOOTPRINT

TABLE 111 END-USER INDUSTRY: STARTUP FOOTPRINT



TABLE 112 REGION: STARTUP FOOTPRINT 11.9 COMPETITIVE SCENARIO AND TRENDS

TABLE 113 AI CHIPSETS MARKET: PRODUCT LAUNCHES, AUGUST

2019-NOVEMBER 2022

TABLE 114 AI CHIPSETS MARKET: DEALS, OCTOBER 2020-DECEMBER 2022

#### 12 COMPANY PROFILES

(Business Overview, Products/Solutions/Services Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats))\*

12.1 KEY PLAYERS

12.1.1 INTEL CORPORATION

TABLE 115 INTEL CORPORATION: COMPANY OVERVIEW

FIGURE 47 INTEL CORPORATION: COMPANY SNAPSHOT

TABLE 116 INTEL CORPORATION: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 117 INTEL CORPORATION: PRODUCT LAUNCHES

TABLE 118 INTEL CORPORATION: DEALS

12.1.2 NVIDIA CORPORATION

TABLE 119 NVIDIA CORPORATION: COMPANY OVERVIEW FIGURE 48 NVIDIA CORPORATION: COMPANY SNAPSHOT

TABLE 120 NVIDIA CORPORATION: PRODUCTS/SOLUTIONS/SERVICES

**OFFERED** 

TABLE 121 NVIDIA CORPORATION: PRODUCT LAUNCHES

TABLE 122 NVIDIA CORPORATION: DEALS

12.1.3 QUALCOMM TECHNOLOGIES, INC.

TABLE 123 QUALCOMM TECHNOLOGIES, INC.: COMPANY OVERVIEW

FIGURE 49 QUALCOMM TECHNOLOGIES, INC.: COMPANY SNAPSHOT

TABLE 124 QUALCOMM TECHNOLOGIES, INC.:

PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 125 QUALCOMM TECHNOLOGIES, INC.: PRODUCT LAUNCHES

TABLE 126 QUALCOMM TECHNOLOGIES, INC.: DEALS

12.1.4 MICRON TECHNOLOGY, INC.

TABLE 127 MICRON TECHNOLOGY, INC.: COMPANY OVERVIEW

FIGURE 50 MICRON TECHNOLOGY, INC.: COMPANY SNAPSHOT

TABLE 128 MICRON TECHNOLOGY, INC.: PRODUCTS/SOLUTIONS/SERVICES

**OFFERED** 

TABLE 129 MICRON TECHNOLOGY, INC.: PRODUCT LAUNCHES

TABLE 130 MICRON TECHNOLOGY, INC.: DEALS



12.1.5 ADVANCED MICRO DEVICES, INC.

TABLE 131 ADVANCED MICRO DEVICES, INC.: COMPANY OVERVIEW

FIGURE 51 ADVANCED MICRO DEVICES, INC.: COMPANY SNAPSHOT

TABLE 132 ADVANCED MICRO DEVICES, INC.:

PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 133 ADVANCED MICRO DEVICES, INC.: PRODUCT LAUNCHES

TABLE 134 ADVANCED MICRO DEVICES, INC.: DEALS

12.1.6 SAMSUNG ELECTRONICS CO., LTD.

TABLE 135 SAMSUNG ELECTRONICS CO., LTD.: COMPANY OVERVIEW

FIGURE 52 SAMSUNG ELECTRONICS CO., LTD.: COMPANY SNAPSHOT

TABLE 136 SAMSUNG ELECTRONICS CO., LTD.:

PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 137 SAMSUNG ELECTRONICS CO., LTD.: PRODUCT LAUNCHES

TABLE 138 SAMSUNG ELECTRONICS CO., LTD.: DEALS

12.1.7 APPLE INC.

TABLE 139 APPLE INC.: COMPANY OVERVIEW

FIGURE 53 APPLE INC.: COMPANY SNAPSHOT

TABLE 140 APPLE INC.: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 141 APPLE INC.: PRODUCT LAUNCHES

12.1.8 IBM

TABLE 142 IBM: COMPANY OVERVIEW

FIGURE 54 IBM: COMPANY SNAPSHOT

TABLE 143 IBM: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 144 IBM: PRODUCT LAUNCHES

TABLE 145 IBM: DEALS

12.1.9 ALPHABET INC.

TABLE 146 ALPHABET INC.: COMPANY OVERVIEW

FIGURE 55 ALPHABET INC.: COMPANY SNAPSHOT

TABLE 147 ALPHABET INC.: PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 148 ALPHABET INC.: PRODUCT LAUNCHES

TABLE 149 ALPHABET INC.: DEALS

12.1.10 HUAWEI TECHNOLOGIES CO., LTD.

TABLE 150 HUAWEI TECHNOLOGIES CO., LTD.: COMPANY OVERVIEW

FIGURE 56 HUAWEI TECHNOLOGIES CO., LTD.: COMPANY SNAPSHOT

TABLE 151 HUAWEI TECHNOLOGIES CO., LTD.:

PRODUCTS/SOLUTIONS/SERVICES OFFERED

TABLE 152 HUAWEI TECHNOLOGIES CO., LTD.: PRODUCT LAUNCHES

TABLE 153 HUAWEI TECHNOLOGIES CO., LTD.: DEALS

12.2 OTHER PLAYERS



- 12.2.1 GRAPHCORE
- 12.2.2 MEDIATEK INC.
- 12.2.3 MYTHIC
- 12.2.4 KALRAY
- 12.2.5 ARM LIMITED
- 12.2.6 BLAIZE
- 12.2.7 LG ELECTRONICS
- 12.2.8 IMAGINATION TECHNOLOGIES
- 12.2.9 GROQ, INC.
- 12.2.10 HAILO
- 12.2.11 CEREBRAS
- 12.2.12 XMOS
- 12.2.13 GREENWAVE TECHNOLOGIES
- 12.2.14 SIMA TECHNOLOGIES, INC.
- 12.2.15 KNERON, INC.
- \*Details on Business Overview, Products/Solutions/Services Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats) might not be captured in case of unlisted companies.

# 13 APPENDIX

- 13.1 DISCUSSION GUIDE
- 13.2 KNOWLEDGESTORE: MARKETSANDMARKETS SUBSCRIPTION PORTAL
- 13.3 CUSTOMIZATION OPTIONS
- 13.4 RELATED REPORTS
- 13.5 AUTHOR DETAILS



# About

According to the latest market research report "Artificial Intelligence (Chipsets) Market by Technology (Machine Learning, Natural Language Processing, Context-Aware Computing, Computer Vision), Hardware (Processor, Memory, Network), End-User Industry, and Geography - Global Forecast to 2025", the overall artificial intelligence (chipsets) market is estimated to be valued at USD 7.06 Billion in 2018 and is expected to be worth USD 59.26 Billion by 2025, growing at a CAGR of 35.5% from 2018 to 2025. The availability of big data, coupled with AI algorithms for an extensive range of application areas, is fueling the growth of the AI (chipsets) market. Increased productivity and improved customer satisfaction are the other key factors driving this market.

# Companies that are profiled in this report are





Mythic (US)

Adapteva (US)

Koniku (US)

# Machine learning to hold largest market share from 2018 to 2025

Machine learning is expected to hold the largest share of the AI (chipsets) market from 2018 to 2025. Machine learning enables systems to automatically improve their performance with experience. ML aims to develop a computer program/algorithm that can access data and use it to train itself with no human intervention. Machine learning's ability to collect and handle big data, and its applications in real-time speech translation, autonomous robots, and facial analysis are fueling its growth.

# Al (chipsets) market for memory to grow at highest CAGR from 2018 to 2025

The AI (chipsets) market for memory is expected to grow at the highest CAGR during the forecast period. Increasing demand for memory to run large and complex AI algorithms based on AI technologies such as machine learning, computer vision, and predictive analytics is driving the growth of memory devices. In addition, high-bandwidth memory is being developed and deployed for AI applications, independent of its computing architecture.

# Marketing to account for largest market size among other end-user industries between 2018 and 2025

The AI (chipsets) market is currently led by the marketing end-user industry. This is attributed to the increasing use of AI for performance improvement of marketing campaigns through better decision-making and offering personalized content to the target markets. Search advertising, social media advertising, and sales and marketing automation are the major applications of AI in marketing.

# North America to lead AI (chipsets) market in terms of market size

North America held the largest share of the AI (chipsets) market in 2017. The increasing adoption of AI technology in various end-user industries, such as healthcare,



manufacturing, automotive, agriculture, retail, marketing, law, and fintech, and strong presence of industry giants and emerging AI companies in the region are the key factors supporting the growth of the AI (chipsets) market in North America.



# I would like to order

Product name: Artificial Intelligence (chipsets) Market by Technology (Machine Learning, Natural

Language Processing, Computer Vision), Function (Training, Inference), Hardware

(Processor, Memory, Network), End-user Industry and Region - Global Forecast to 2028

Product link: <a href="https://marketpublishers.com/r/AD255800776EN.html">https://marketpublishers.com/r/AD255800776EN.html</a>

Price: US\$ 4,950.00 (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 <a href="https://marketpublishers.com/r/AD255800776EN.html">https://marketpublishers.com/r/AD255800776EN.html</a>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:	
Last name:	
Email:	
Company:	
Address:	
City:	
Zip code:	
Country:	
Tel:	
Fax:	
Your message:	
	**All fields are required
	Custumer signature

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <a href="https://marketpublishers.com/docs/terms.html">https://marketpublishers.com/docs/terms.html</a>

To place an order via fax simply print this form, fill in the information below



and fax the completed form to +44 20 7900 3970