

Simultaneous Localization and Mapping Market by Offering (2D SLAM, 3D SLAM), Type (EKF SLAM, Fast SLAM, Graph-Based SLAM, LSD SLAM, S-PTAM, ORB-SLAM, and ORB-SLAM2), Application (Robotics, UAV, AR/VR, Automotive), and Geography - Global Forecast to 2023

https://marketpublishers.com/r/S0557B3E452EN.html

Date: December 2018 Pages: 128 Price: US\$ 3,672.50 (Single User License) ID: S0557B3E452EN

Abstracts

"SLAM market to grow at a CAGR of 35.77% from 2018 to 2023"

The SLAM market is projected to reach USD 465 million by 2023 from USD 101 million by 2018, growing at a CAGR of 35.77%, during the forecast period. The growth of this market can largely be attributed to the advancements in visual SLAM algorithm, growth of SLAM in augmented reality (AR), and growing demand for self-locating robotics in homes and enterprises. However, the limitation of SLAM in dynamic environments is expected to restrict the market's growth to a certain extent.

"Market for AR/VR to register highest growth during forecast period"

Huge middle-class population, along with rising disposable income, in developing countries will act as a growth catalyst in these counties. This, in turn, is expected to drive the SLAM market during the forecast period. Advancements in SLAM technology, like improving mapping accuracy, flexibility from cloud services, and better user experience compared to its counterpart (marker-based technology) are expected to propel the growth of SLAM in AR/VR applications during the forecast period.

"Market for Fast SLAM to register highest growth during forecast period"



The market for Fast SLAM is expected to register the highest CAGR. Fast SLAM produces accurate maps in extremely large environments and environments with substantial data association ambiguity. Fast SLAM is an efficient algorithm for autonomous navigation of mobile devices. Improving accuracy of localization and mapping and reduced hardware requirements for the process using Fast SLAM support the increasing penetration of mapping technologies in domestic robots and rising number of AR applications, which are expected to tailwind the rapid growth of this type.

"APAC to register highest growth during forecast period"

Advancements in artificial intelligence (AI) have attracted investments from both private and public sectors in APAC. Many companies are trying to identify untapped areas of commercial applications in the region, which would enable optimal utilization of AI.

Breakdown of primary participants' profile:

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%, APAC = 22%, and RoW = 12%

Key players in the SLAM market include Intel (US), Microsoft (US), Alphabet (US), Amazon Robotics (US), Apple (US), Clearpath Robotics (Canada), Aethon (US), The Hi-Tech Robotic Systemz (India), Facebook (US), Intellias (Ukraine), Magic Leap (US), Rethink Robotics (US), Skydio (US), Navvis (Germany), and Mobile Industrial Robots APS (Denmark). The study includes an in-depth competitive analysis of these key players in the SLAM market, with their company profiles, recent developments, and key market strategies.

Research Coverage:

The market study covers the SLAM market across different segments. It aims at estimating the market size and the growth potential of this market, across different segments, such as offering, type, application, and region. The study also includes an indepth competitive analysis of the key market players, along with their company profiles, key observations related to product and business offerings, recent developments, and



key market strategies.

Key Benefits of Buying the Report:

The report will help leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall SLAM market and its subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to better position their businesses and plan suitable go-to-market strategies. The report will also help stakeholders understand the pulse of the market and provide them with information on key market drivers, restraints, challenges, and opportunities.



Contents

1 INTRODUCTION

- **1.1 STUDY OBJECTIVES**
- **1.2 DEFINITION**
- 1.3 STUDY SCOPE
- 1.3.1 MARKETS COVERED
- 1.3.2 SLAM MARKET, BY GEOGRAPHY
- 1.3.3 YEARS CONSIDERED
- **1.4 CURRENCY**
- **1.5 LIMITATIONS**
- **1.6 STAKEHOLDERS**

2 RESEARCH METHODOLOGY

2.1 RESEARCH DATA
2.1.1 SECONDARY DATA
2.1.1.1 Key data from secondary sources
2.1.2 PRIMARY DATA
2.1.2.1 Key data from primary sources
2.1.2.2 Key industry insights
2.1.2.3 Breakdown of primaries
2.2 MARKET SIZE ESTIMATION
2.2.1 BOTTOM-UP APPROACH
2.2.2 TOP-DOWN APPROACH
2.3 MARKET BREAKDOWN AND DATA TRIANGULATION
2.4 RESEARCH ASSUMPTION

3 EXECUTIVE SUMMARY

4 PREMIUM INSIGHT

4.1 ATTRACTIVE OPPORTUNITIES IN SLAM MARKET
4.2 SLAM MARKET, BY TYPE
4.3 SLAM MARKET, BY COUNTRY
4.4 SLAM MARKET IN APAC IN 2018, BY COUNTRY & APPLICATION
4.5 SLAM MARKET, BY OFFERING
4.6 SLAM MARKET, BY APPLICATION



5 MARKET OVERVIEW

5.1 INTRODUCTION

- 5.1.1 DRIVERS
 - 5.1.1.1 Growing demand for self-locating robotics in homes and enterprises
 - 5.1.1.2 Advancements in visual SLAM algorithm
 - 5.1.1.3 Growth of SLAM in Augmented Reality (AR)
- 5.1.2 RESTRAINTS
 - 5.1.2.1 UnpredicTable performance and reliability in untested environments
- 5.1.2.2 Limitation of SLAM in dynamic environments
- 5.1.3 OPPORTUNITIES
- 5.1.3.1 Growing demand for drones in military and commercial applications
- 5.1.3.2 Proliferation of cloud-based visual SLAM for outdoor applications
- 5.1.3.3 SLAM for smartphones

5.1.3.4 Increasing aging population in Europe and Japan will offer significant growth opportunities to autonomous home service robots

5.1.4 CHALLENGE

5.1.4.1 Incorrect initialization and loop closure can significantly alter SLAM accuracy

5.1.4.2 Complex design of data association in visual SLAM

6 SLAM MARKET, BY TYPE

- 6.1 INTRODUCTION
- 6.2 EKF SLAM

6.2.1 MOST WIDELY USED SLAM TECHNOLOGY

6.3 FAST SLAM

6.3.1 AN EFFICIENT ALGORITHM FOR AUTONOMOUS NAVIGATION OF MOBILE DEVICES

6.4 GRAPH-BASED SLAM

6.4.1 GRAPH-BASED SLAM MAJORLY USED FOR PACKAGE DELIVERY, SEARCH & RESCUE, AND TRAFFIC SURVEILLANCE

6.5 OTHERS

7 SLAM MARKET, BY OFFERING

7.1 INTRODUCTION

7.2 2D SLAM

7.2.1 USE OF 2D SLAM IN DIMENSIONAL MEASUREMENT APPLICATIONS



RESULTS INTO INCREASING LEVELS OF ACCURACY 7.3 3D SLAM

7.3.1 3D SLAM USED IN WIDE RANGE OF APPLICATIONS FOR REAL-TIME POSITIONING OVER LONG DISTANCES

8 SLAM MARKET, BY APPLICATION

8.1 INTRODUCTION

8.2 ROBOTICS

8.2.1 SLAM IN RESIDENTIAL ROBOTIC VACUUM CLEANERS TO INCREASE INDOOR MAPPING ACCURACIES

8.3 UAV

8.3.1 INCREASING DEMAND FOR SLAM-BASED DELIVERY DRONES

IN LOGISTICS INDUSTRY

8.4 AR/VR

8.4.1 SLAM TECHNOLOGY IS GAINING TRACTION IN ADVANCED AR/VR PLATFORM

8.5 AUTOMOTIVE

8.5.1 REAL TIME LOCALIZATION AND MAPPING IN AUTONOMOUS VEHICLES TO DRIVE SLAM MARKET 8.6 OTHERS

9 GEOGRAPHIC ANALYSIS

9.1 INTRODUCTION

9.2 NORTH AMERICA

9.2.1 US

9.2.1.1 Increasing funds for startups to imply the AI technology in autonomous drones and other flying vehicles

9.2.2 CANADA

9.2.2.1 Huge investments on advanced robotics and space exploration technologies 9.2.3 MEXICO

9.2.3.1 Increasing government initiatives to promote the growth of automotive industry in the country

9.3 EUROPE

9.3.1 UK

9.3.1.1 Government initiatives to create favorable environment that drives the utility of



drones in private sector

9.3.2 GERMANY

9.3.2.1 Germany an innovation hub for OEMs bolsters the growth of semiautonomous and autonomous vehicles market

9.3.3 FRANCE

9.3.3.1 Several product and solution launches in the field of robotics and unmanned aerial vehicles (UAVs)

9.3.4 REST OF EUROPE

9.4 APAC

9.4.1 CHINA

9.4.1.1 Increasing partnerships with leading giants to develop SLAM solutions for various verticals

9.4.2 JAPAN

9.4.2.1 Government support and strong organic growth capabilities expected to promote the growth of AI-enabled robots in Japan

9.4.3 SOUTH KOREA

9.4.3.1 Increasing adoption of SLAM solutions in consumer robots and robotic vacuum cleaners

9.4.4 REST OF APAC

9.5 ROW

9.5.1 SOUTH AMERICA

9.5.1.1 Increasing demand for deployment of SLAM solutions in automotive and drones markets

9.5.2 MIDDLE EAST & AFRICA

9.5.2.1 Potential for investments in augmented reality/virtual reality technologies

10 COMPETITIVE LANDSCAPE

10.1 INTRODUCTION

10.2 MARKET RANKING ANALYSIS: SIMULTANEOUS LOCALIZATION AND

MAPPING MARKET

10.3 COMPETITIVE SITUATIONS AND TRENDS

10.3.1 PRODUCT/SOLUTION LAUNCHES

10.3.2 PARTNERSHIPS/COLLABORATIONS

11 COMPANY PROFILES

11.1 INTRODUCTION 11.2 KEY PLAYERS

Simultaneous Localization and Mapping Market by Offering (2D SLAM, 3D SLAM), Type (EKF SLAM, Fast SLAM, Graph-...



(Business Overview, Solutions/Products Offered, Recent Developments, SWOT Analysis, and MnM View)*

11.2.1 INTEL
11.2.2 ALPHABET
11.2.3 AMAZON ROBOTICS
11.2.4 APPLE
11.2.5 MICROSOFT
11.2.6 CLEARPATH ROBOTICS
11.2.7 AETHON
11.2.8 THE HI-TECH ROBOTIC SYSTEMZ
11.2.9 FACEBOOK
11.2.10 INTELLIAS
11.2.11 MAXST
*Business Overview, Solutions/Products Offered, Recent Developments, SWOT
Analysis, and MnM View might not be captured in case of unlisted companies.
11.3 OTHER IMPORTANT PLAYERS

- 11.3.1 MAGIC LEAP
- 11.3.2 RETHINK ROBOTICS
- 11.3.3 SKYDIO
- 11.3.4 NAVVIS
- 11.3.5 MOBILE INDUSTRIAL ROBOT APS

12 APPENDIX

12.1 INSIGHTS OF INDUSTRY EXPERTS

12.2 DISCUSSION GUIDE

12.3 KNOWLEDGE STORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL

- 12.4 AVAILABLE CUSTOMIZATIONS
- 12.5 RELATED REPORTS
- **12.6 AUTHOR DETAILS**



List Of Tables

LIST OF TABLES

Table 1 SLAM MARKET, BY TYPE, 2016–2023 (USD MILLION) Table 2 EKF SLAM MARKET, BY REGION, 2016–2023 (USD MILLION) Table 3 EKF SLAM MARKET, BY OFFERING, 2016–2023 (USD MILLION) Table 4 FAST SLAM MARKET, BY REGION, 2016–2023 (USD MILLION) Table 5 FAST SLAM MARKET, BY OFFERING, 2016–2023 (USD MILLION) Table 6 GRAPH-BASED SLAM MARKET, BY REGION, 2016–2023 (USD MILLION) Table 7 GRAPH-BASED SLAM MARKET, BY OFFERING, 2016–2023 (USD MILLION) Table 8 OTHERS SLAM MARKET, BY REGION, 2016–2023 (USD MILLION) Table 9 OTHERS SLAM MARKET, BY OFFERING, 2016–2023 (USD MILLION) Table 10 SLAM MARKET, BY OFFERING, 2016–2023 (USD MILLION) Table 11 2D SLAM MARKET, BY REGION, 2016–2023 (USD MILLION) Table 12 2D SLAM MARKET, BY APPLICATION, 2016–2023 (USD MILLION) Table 13 2D SLAM MARKET, BY TYPE, 2016-2023 (USD MILLION) Table 14 3D SLAM MARKET, BY REGION, 2016–2023 (USD MILLION) Table 15 3D SLAM MARKET, BY APPLICATION, 2016–2023 (USD MILLION) Table 16 3D SLAM MARKET, BY TYPE, 2016–2023 (USD MILLION) Table 17 SLAM MARKET, BY APPLICATION, 2016–2023 (USD MILLION) Table 18 SLAM MARKET FOR ROBOTICS, BY REGION, 2016–2023 (USD MILLION) Table 19 SLAM MARKET FOR ROBOTICS, BY OFFERING, 2016–2023 (USD MILLION)

Table 20 SLAM MARKET FOR UAV, BY REGION, 2017–2023 (USD MILLION) Table 21 SLAM MARKET FOR UAV, BY OFFERING, 2017–2023 (USD MILLION) Table 22 SLAM MARKET FOR AR/VR, BY REGION, 2017–2023 (USD MILLION) Table 23 SLAM MARKET FOR AR/VR, BY OFFERING, 2017–2023 (USD MILLION) Table 24 SLAM MARKET FOR AUTOMOTIVE, BY REGION, 2018–2023 (USD MILLION)

Table 25 SLAM MARKET FOR AUTOMOTIVE, BY OFFERING, 2018–2023 (USD MILLION)

Table 26 SLAM MARKET FOR OTHERS, BY REGION, 2018–2023 (USD MILLION) Table 27 SLAM MARKET FOR OTHERS, BY OFFERING, 2018–2023 (USD MILLION) Table 28 SLAM MARKET, BY REGION, 2016–2023 (USD MILLION)

Table 29 SLAM MARKET IN NORTH AMERICA, BY COUNTRY, 2016–2023 (USD MILLION)

Table 30 SLAM MARKET IN NORTH AMERICA, BY TYPE, 2016–2023 (USD MILLION) Table 31 SLAM MARKET IN NORTH AMERICA, BY OFFERING, 2016–2023 (USD



MILLION)

Table 32 SLAM MARKET IN NORTH AMERICA, BY APPLICATION, 2016–2023 (USD MILLION)

Table 33 SLAM MARKET IN EUROPE, BY COUNTRY, 2016–2023 (USD MILLION) Table 34 SLAM MARKET IN EUROPE, BY TYPE, 2016–2023 (USD MILLION) Table 35 SLAM MARKET IN EUROPE, BY OFFERING, 2016–2023 (USD MILLION) Table 36 SLAM MARKET IN EUROPE, BY APPLICATION, 2016–2023 (USD MILLION) Table 37 SLAM MARKET IN APAC, BY COUNTRY, 2016–2023 (USD MILLION) Table 38 SLAM MARKET IN APAC, BY TYPE, 2016–2023 (USD MILLION) Table 39 SLAM MARKET IN APAC, BY OFFERING, 2016–2023 (USD MILLION) Table 40 SLAM MARKET IN APAC, BY APPLICATION, 2016–2023 (USD MILLION) Table 40 SLAM MARKET IN APAC, BY APPLICATION, 2016–2023 (USD MILLION) Table 41 SLAM MARKET IN ROW, BY REGION, 2016–2023 (USD MILLION) Table 42 SLAM MARKET IN ROW, BY TYPE, 2016–2023 (USD MILLION) Table 43 SLAM MARKET IN ROW, BY OFFERING, 2016–2023 (USD MILLION) Table 43 SLAM MARKET IN ROW, BY OFFERING, 2016–2023 (USD MILLION) Table 44 SLAM MARKET IN ROW, BY APPLICATION, 2016–2023 (USD MILLION) Table 45 PRODUCT LAUNCHES, 2016–2018

Table 46 PARTNERSHIPS/ COLLABORATIONS, 2016–2018



List Of Figures

LIST OF FIGURES

Figure 1 RESEARCH DESIGN Figure 2 PROCESS FLOW OF MARKET SIZE ESTIMATION Figure 3 DATA TRIANGULATION Figure 4 NORTH AMERICA TO HOLD LARGEST SIZE OF EKF SLAM MARKET DURING FORECAST PERIOD Figure 5 3D SLAM TO GROW AT HIGHER CAGR FROM 2018 TO 2023 Figure 6 SLAM MARKET FOR ROBOTICS IN APAC EXPECTED TO GROW AT HIGHEST CAGR DURING 2018–2023 Figure 7 MARKET FOR FAST SLAM IN APAC TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD Figure 8 SLAM MARKET IN APAC EXPECTED TO GROW AT HIGHEST CAGR DURING 2018-2023 Figure 9 GROWING DEMAND FOR DRONES FOR MILITARY AND COMMERCIAL APPLICATIONS TO PROVIDE POTENTIAL OPPORTUNITY FOR MARKET Figure 10 MARKET FOR FAST SLAM TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD Figure 11 SLAM MARKET IN CHINA TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD Figure 12 ROBOTICS TO HOLD LARGEST SHARE OF SLAM MARKET IN APAC IN 2018 Figure 13 MARKET FOR 3D SLAM TO GROW AT HIGHER CAGR FROM 2018 TO 2023 Figure 14 MARKET FOR AR/VR TO GROW AT HIGHEST CAGR FROM 2018 TO 2023 Figure 15 MARKET DYNAMICS Figure Figure 16 GROWTH IN AMAZON'S WAREHOUSE ROBOTICS Figure 17 ESTIMATED CUMULATIVE DRONE SPENDING BY COUNTRIES, 2017-2021 (USD BILLION) Figure 18 SLAM MARKET, BY TYPE Figure 19 EKF SLAM MARKET FOR 2D SLAM TO GROW AT HIGHER CAGR DURING FORECAST PERIOD Figure 20 GRAPH-BASED SLAM MARKET IN APAC TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD Figure 21 OTHERS SLAM MARKET FOR 2D SLAM TO GROW AT HIGHER CAGR DURING FORECAST PERIOD Figure 22 SLAM MARKET, BY OFFERING



Figure 23 2D SLAM MARKET FOR FAST SLAM TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD Figure 24 3D SLAM MARKET IN APAC TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD Figure 25 3D SLAM MARKET FOR FAST SLAM TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD Figure 26 SLAM MARKET, BY APPLICATION Figure 27 3D SLAM MARKET FOR ROBOTICS TO GROW AT HIGHER CAGR DURING FORECAST PERIOD Figure 28 SLAM MARKET FOR AR/VR IN APAC TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD Figure 29 3D SLAM MARKET FOR AUTOMOTIVE TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD Figure 30 SLAM MARKET, BY GEOGRAPHY Figure 31 GEOGRAPHIC SNAPSHOT: SLAM MARKET IN APAC EXPECTED TO GROW AT HIGHEST CAGR DURING FORECAST PERIOD Figure 32 SLAM MARKET IN CHINA ESTIMATED TO GROW AT HIGHEST CAGR FROM 2018 TO 2023 Figure 33 NORTH AMERICA SLAM MARKET, BY COUNTRY Figure 34 NORTH AMERICA: SLAM MARKET SNAPSHOT Figure 35 EUROPE SLAM MARKET, BY COUNTRY Figure 36 EUROPE: SLAM MARKET SNAPSHOT Figure 37 APAC SLAM MARKET, BY COUNTRY Figure 38 APAC: SLAM MARKET SNAPSHOT Figure 39 ROW SLAM MARKET, BY REGION Figure 40 KEY GROWTH STRATEGIES ADOPTED BY TOP COMPANIES, 2015–2018 Figure 41 RANKING OF TOP 5 PLAYERS IN SIMULTANEOUS LOCALIZATION AND MAPPING MARKET, (2017) Figure 42 INTEL: COMPANY SNAPSHOT Figure 43 ALPHABET: COMPANY SNAPSHOT Figure 44 APPLE: COMPANY SNAPSHOT Figure 45 MICROSOFT: COMPANY SNAPSHOT Figure 46 FACEBOOK: COMPANY SNAPSHOT



I would like to order

- Product name: Simultaneous Localization and Mapping Market by Offering (2D SLAM, 3D SLAM), Type (EKF SLAM, Fast SLAM, Graph-Based SLAM, LSD SLAM, S-PTAM, ORB-SLAM, and ORB-SLAM2), Application (Robotics, UAV, AR/VR, Automotive), and Geography - Global Forecast to 2023
 - Product link: https://marketpublishers.com/r/S0557B3E452EN.html
 - Price: US\$ 3,672.50 (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 <u>https://marketpublishers.com/r/S0557B3E452EN.html</u>

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 <u>https://marketpublishers.com/docs/terms.html</u>

Simultaneous Localization and Mapping Market by Offering (2D SLAM, 3D SLAM), Type (EKF SLAM, Fast SLAM, Graph-...



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