

Surface Mount Technology Market Assessment, By Equipment Type [Inspection Equipment, Placement Equipment, Soldering Equipment, Screen Printing Equipment, Cleaning Equipment, Rework and Repair Equipment], By Application [Consumer Electronics, Telecommunications, Aerospace and Defense, Automotive, Medical, Industrial, Energy and Power Systems], By Region, Opportunities and Forecast, 2016-2030F

<https://marketpublishers.com/r/S6AB2CB13F47EN.html>

Date: March 2025

Pages: 236

Price: US\$ 4,500.00 (Single User License)

ID: S6AB2CB13F47EN

Abstracts

Global surface mount technology market has experienced significant growth in recent years and is expected to maintain a strong pace of expansion in the coming years. With projected revenue of approximately USD 6.07 billion in 2022, the market is forecasted to reach a value of USD 10.67 billion by 2030, displaying a robust CAGR of 7.3% from 2023 to 2030.

Surface mount technology has many benefits for electronic assembly, such as lower component sizes, increased component density, greater signal integrity, and quicker assembly times. SMT is a favored option for contemporary electronics manufacturing since it lowers manufacturing costs, improves dependability, and allows for the downsizing of electronic components.

The market for surface mount technology is expanding due to consumer demand for more compact and smaller electronic products. However, high-frequency PCB designs must be more efficient as IoT and 5G technologies advance. Furthermore, automation and robotics improvements streamline SMT manufacturing, lowering costs and raising

quality. These elements are accelerating the growth of the surface mount technology market.

Surface mount technology development is closely related to the developing Internet of Things (IoT) market. The IoT's rising need for connected devices, sensors, and smart technologies require SMT's downsizing and efficiency. SMT is essential for connecting and mounting the parts that power IoT devices, which are predicted to number over 15 billion by 2023 and generate a market worth USD 1 trillion by 2024. SMT is essential for effective manufacturing and electronics assembly to support developing markets as IoT applications continue to spread across industries including smart homes, healthcare, and agriculture.

For instance, in August 2023, Juki released LX-8, a sophisticated flexible mounter with a variety of mounting options for placing electrical components quickly. According to their production needs, users can select between speed and flexibility using the machine's exclusive Takumi and P20S Planet heads.

Role of Miniaturization Contribute to the Market

Miniaturization is a key contributor to the surface mount technology market as customer demand for smaller and more portable electronic gadgets rises. SMT enables manufacturers to produce small, light, and highly functioning electronic goods by allowing smaller and densely packed components on printed circuit boards (PCBs). The surface mount technology market's inclination for sleek and compact gadgets is in line with it, promoting the expansion. SMT is the favored assembly method for contemporary electronics due to its effectiveness in putting and soldering these tiny components, guaranteeing that the SMT stays at the forefront of technical breakthroughs and product innovation.

For example, in September 2023, for effective Research and Development to production transitions, Zhejiang Taiyun Automotive Technology, a division of the Zhejiang Taiyun Group, used Mycronic's MYPro assembly solutions. With an average of 4-5 new products per week, they concentrate on quick NPI and prototype production.

Innovation in Consumer Electronics Fuel the Surface Mount Technology Market

Consumer electronics constantly push the limits of technology by demanding more compact and robust components to create sleek and user-friendly designs. To satisfy these needs, surface mount technology is essential since it makes it possible to include

cutting-edge functionality in small and visually beautiful devices. The creation of high-performance smartphones, tablets, wearables, and gaming consoles has been made possible by SMT's capacity to densely pack PCBs with micro components. It makes it easier to position processors, sensors, and communication modules, preserving the affordability and consumer appeal of these products. SMT plays a crucial role in fostering innovation as consumer electronics continue to advance, fueling its development as a crucial manufacturing technology.

For example, in July 2023, Mycronic machinery was implemented by NVZN Labs, a design and manufacturing company situated in Silicon Valley, to increase flexibility and internal production. They put a lot of effort into reducing procedures to satisfy clients' requests for quick product creation.

Dominance of Placement Equipment in Surface Mount Technology Market

Placement equipment continues to dominate the surface mount technology market owing to its crucial function in the precision assembly of electronic devices on printed circuit boards. Advanced robotics and vision technologies built into these machines allow for the rapid and precise positioning of miniature components. The effectiveness and accuracy of placement equipment is crucial given the rising need for small and complicated electronic devices, such as smartphones and IoT gadgets. It has a major impact on SMT's overall functionality, fueling its hegemony as it meets the market's demand for miniaturization, high throughput, and high-quality assembly.

For instance, in February 2023, the MYTower series X models introduced by Mycronic, tripled storage capacity through creative design, accommodating up to 2,468 reels, while maintaining essential features like quick retrieval and automated stock monitoring

Asia-Pacific Dominates Surface Mount Technology Market

Asia-Pacific dominates the surface mount technology market. As Asia-Pacific is a significant electronics manufacturing hub, with many electronics and semiconductor businesses based in nations like China, Japan, South Korea, and Taiwan. These countries have a strong SMT infrastructure, which supports surface mount technology market expansion. Additionally, Asia-Pacific gains from a labor base that is both talented and affordable, which boosts manufacturing productivity. The adoption of sophisticated SMT techniques is a result of the region's strong emphasis on technology and innovation. Consequently, Asia-Pacific is the hub of SMT activity globally due to its

proximity to the rapidly expanding consumer electronics industries. As devices like smartphones and wearables continue to develop, the region's demand for SMT is amplified.

For instance, in May 2023, Yamaha Motor unveiled the YRP10 solder paste printer, a high-speed, high-precision, fully automated printer capable of dual-lane production and featuring improved printing accuracy and automation capabilities that contribute to efficient PCB assembly processes.

Government Initiatives Acting as Catalyst

Government initiatives are essential for the development of the global surface mount technology market. Programs have been put in place by several nations, including the United States, to advance the electronics manufacturing industry, of which SMT is a crucial component. Initiatives emphasize encouraging innovation, workforce development, and research and development. For instance, the National Network for Manufacturing Innovation (NNMI) in the United States has started programs to improve advanced manufacturing methods, which are advantageous to SMT. These initiatives boost domestic SMT growth and improve a country's standing in the international electronics market, promoting competitiveness and technical advancement.

For example, in January 2023, Mycronic presented Escape Tracker, an automated programming assistant for inspection models. It automatically refreshes the inspection library based on actual production data, boosting accuracy without manual programming and requiring less time and work .

Impact of COVID-19

Before COVID-19, the surface mount technology market was expanding due to rising demand for compact, high-performing electronic gadgets. Although the pandemic hampered supply chains, production ceased, and SMT equipment and components shipments were affected. On-site installation and maintenance of SMT machinery became difficult due to travel restrictions and lockdowns. Due to the rise in remote work and digital transformation, increased demand for electronics after COVID-19, the SMT market recovered. SMT was crucial for the productive production of smart devices, 5G infrastructure, and IoT technology as these needs grew. The sector adjusted with automation and remote assistance, providing dependable production and growth in the constantly changing electronics market.

Future Market Scenario (2024 – 2030F)

The use of cutting-edge materials, such as flexible substrates and cutting-edge solder formulations, would increase the reliability and effectiveness of surface mount technology components, enabling the creation of more durable electronics.

Predictive maintenance and quality control powered by AI will be standard in SMT procedures, increasing productivity, and lowering faults.

SMT will meet the rising demand for high-frequency applications, including radar systems, driverless vehicles, and 5G infrastructure.

To reduce the effects of geopolitical risks like the ongoing conflict between Russia and Ukraine, SMT market may adjust to more diversified and robust supply chains.

Key Players Landscape and Outlook

The global surface mount technology market is characterized by intense rivalry, with prominent companies including FUJI CORPORATION, Hitachi, Ltd., Panasonic Corporation, Yamaha Motor Co., Ltd., and Nordson Corporation dominating the market. The growing demand for highly efficient and downsized electronic devices, notably in the consumer electronics and automotive industries, is what is driving this market's outlook. SMT is essential for enabling compact and effective electronic assembly as technology develops. Businesses are investing in automation, AI-driven quality control, and environmentally friendly procedures to stay competitive. The market is anticipated to expand as applications based on 5G technology and Internet of Things will develop further, creating potential for SMT solutions.

In March 2023, Nordson expanded the size of its plant in the United States and now provides a variety of industries with cutting-edge adhesive and sealant dispensing systems and services. The Pro-Meter S, a cutting-edge dispensing device built for accuracy and automation in sealant and adhesive application, is a prime example of how this expansion will improve production efficiency and quality control.

In February 2023, Yamaha Motor launched the YRM20DL surface mounter, which provides high-efficiency modular PCB assembly with a dual-lane conveyor, increased

productivity, and high-speed, high-accuracy performance.

Contents

1. RESEARCH METHODOLOGY

2. PROJECT SCOPE & DEFINITIONS

3. IMPACT OF COVID-19 ON GLOBAL SURFACE MOUNT TECHNOLOGY MARKET

4. EXECUTIVE SUMMARY

5. VOICE OF CUSTOMER

5.1. Product and Market Intelligence

5.2. Mode of Brand Awareness

5.3. Factors Considered in Purchase Decisions

5.3.1. Features and other value-added service

5.3.2. IT Infrastructure Compatibility

5.3.3. Efficiency of Solutions

5.3.4. After-Sales Support

5.4. Consideration of Privacy & Safety Regulations

6. GLOBAL SURFACE MOUNT TECHNOLOGY MARKET OUTLOOK, 2016-2030F

6.1. Market Size & Forecast

6.1.1. By Value

6.1.2. By Volume

6.2. By Equipment Type

6.2.1. Inspection Equipment

6.2.2. Placement Equipment

6.2.3. Soldering Equipment

6.2.4. Screen Printing Equipment

6.2.5. Cleaning Equipment

6.2.6. Rework and Repair Equipment

6.3. By Application

6.3.1. Consumer Electronics

6.3.2. Telecommunications

6.3.3. Aerospace and Defense

6.3.4. Automotive

6.3.5. Medical

- 6.3.6. Industrial
- 6.3.7. Energy and Power Systems
- 6.4. By Region
 - 6.4.1. North America
 - 6.4.2. Europe
 - 6.4.3. Asia-Pacific
 - 6.4.4. South America
 - 6.4.5. Middle East and Africa
- 6.5. By Company Market Share (%), 2022

7. GLOBAL SURFACE MOUNT TECHNOLOGY MARKET OUTLOOK, BY REGION, 2016-2030F

- 7.1. North America*
 - 7.1.1. Market Size & Forecast
 - 7.1.1.1. By Value
 - 7.1.1.2. By Volume
 - 7.1.2. By Equipment Type
 - 7.1.2.1. Inspection Equipment
 - 7.1.2.2. Placement Equipment
 - 7.1.2.3. Soldering Equipment
 - 7.1.2.4. Screen Printing Equipment
 - 7.1.2.5. Cleaning Equipment
 - 7.1.2.6. Rework and Repair Equipment
 - 7.1.3. By Application
 - 7.1.3.1. Consumer Electronics
 - 7.1.3.2. Telecommunications
 - 7.1.3.3. Aerospace and Defense
 - 7.1.3.4. Automotive
 - 7.1.3.5. Medical
 - 7.1.3.6. Industrial
 - 7.1.3.7. Energy and Power Systems
 - 7.1.4. United States*
 - 7.1.4.1. Market Size & Forecast
 - 7.1.4.1.1. By Value
 - 7.1.4.1.2. By Volume
 - 7.1.4.2. By Equipment Type
 - 7.1.4.2.1. Inspection Equipment
 - 7.1.4.2.2. Placement Equipment

- 7.1.4.2.3. Soldering Equipment
- 7.1.4.2.4. Screen Printing Equipment
- 7.1.4.2.5. Cleaning Equipment
- 7.1.4.2.6. Rework and Repair Equipment

7.1.4.3. By Application

- 7.1.4.3.1. Consumer Electronics
- 7.1.4.3.2. Telecommunications
- 7.1.4.3.3. Aerospace and Defense
- 7.1.4.3.4. Automotive
- 7.1.4.3.5. Medical
- 7.1.4.3.6. Industrial
- 7.1.4.3.7. Energy and Power Systems

7.1.5. Canada

7.1.6. Mexico

*All segments will be provided for all regions and countries covered

7.2. Europe

- 7.2.1. Germany
- 7.2.2. France
- 7.2.3. Italy
- 7.2.4. United Kingdom
- 7.2.5. Russia
- 7.2.6. Netherlands
- 7.2.7. Spain
- 7.2.8. Turkey
- 7.2.9. Poland

7.3. Asia Pacific

- 7.3.1. India
- 7.3.2. China
- 7.3.3. Japan
- 7.3.4. Australia
- 7.3.5. Vietnam
- 7.3.6. South Korea
- 7.3.7. Indonesia
- 7.3.8. Philippines

7.4. South America

- 7.4.1. Brazil
- 7.4.2. Argentina

7.5. Middle East & Africa

- 7.5.1. Saudi Arabia

7.5.2. UAE

7.5.3. South Africa

8. MARKET MAPPING, 2022

8.1. By Equipment Type

8.2. By Application

8.3. By Region

9. MACRO ENVIRONMENT AND INDUSTRY STRUCTURE

9.1. Demand Supply Analysis

9.2. Import Export Analysis

9.3. Value Chain Analysis

9.4. PESTEL Analysis

9.4.1. Political Factors

9.4.2. Economic System

9.4.3. Social Implications

9.4.4. Technological Advancements

9.4.5. Environmental Impacts

9.4.6. Legal Compliances and Regulatory Policies (Statutory Bodies Included)

9.5. Porter's Five Forces Analysis

9.5.1. Supplier Power

9.5.2. Buyer Power

9.5.3. Substitution Threat

9.5.4. Threat from New Entrant

9.5.5. Competitive Rivalry

10. MARKET DYNAMICS

10.1. Growth Drivers

10.2. Growth Inhibitors (Challenges and Restraints)

11. KEY PLAYERS LANDSCAPE

11.1. Competition Matrix of Top Five Market Leaders

11.2. Market Revenue Analysis of Top Five Market Leaders (in %, 2022)

11.3. Mergers and Acquisitions/Joint Ventures (If Applicable)

11.4. SWOT Analysis (For Five Market Players)

11.5. Patent Analysis (If Applicable)

12. CASE STUDIES

13. KEY PLAYERS OUTLOOK

13.1. FUJI CORPORATION

13.1.1. Company Details

13.1.2. Key Management Personnel

13.1.3. Products & Services

13.1.4. Financials (As reported)

13.1.5. Key Market Focus & Geographical Presence

13.1.6. Recent Developments

13.2. Hitachi, Ltd.

13.3. JUKI CORPORATION

13.4. KLA Corporation

13.5. Mycronic AB

13.6. Nordson Corporation

13.7. Panasonic Corporation

13.8. Universal Instruments Corporation (Delta Electronics, Inc.)

13.9. Viscom AG

13.10. Yamaha Motor Co., Ltd.

*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work.

14. STRATEGIC RECOMMENDATIONS

15. ABOUT US & DISCLAIMER

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