

Global Semiconductor Equipment Market: Analysis By Segment, By Supply Chain, By Dimension, By Region Size and Trends with Impact of COVID-19 and Forecast up to 2026

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Abstracts

In 2021, the global semiconductor equipment market, was valued at US\$104.65 billion, and is probable to reach US\$167.78 billion by 2026.

Semiconductor equipment are used to in the making of semiconductors and integrated circuits, which are utilized in the manufacturing of several different industries such as medical, banking, telecommunication, automobile, etc., which directly increased the demand for semiconductor equipment. The semiconductor equipment market is projected to grow at a CAGR of 9.90%, during the forecast period of 2022-2026.

Market Segmentation Analysis:

By Segment: The report splits the global semiconductor equipment market into three different segments: Wafer equipment, Assembly and packaging equipment and Test equipment. The wafer equipment segment accounted for majority of approximately 86% of the semiconductor equipment market in 2021. In the future, the demand for silicon wafers and equipment footprints would aid in the analysis of the semiconductor wafer fab equipment market. Furthermore, advancements in wafer technologies that have resulted in 'denser packaging' of devices such as MEMS (micro-electro-mechanical system) and transistors are expected to lay the groundwork for new opportunities that companies can capitalize on. The global wafer semiconductor equipment market can be further divided into four segments: Logic, NAND, DRAM and Others.

By Supply Chain: The market report has bifurcated the global semiconductor equipment

market into three segments on the basis of supply chain: IDM, OSAT, and Foundry. IDM segment held almost half of the share in semiconductor equipment market in 2021, while the same segment is the fastest growing during the forecast period, as IDM Semiconductor equipment market is expected to enhance their Integrated Circuit (IC) production capacity, the companies are partnering with semiconductor manufacturing equipment providers.

By Dimensions: The semiconductor equipment market report has categorized the global market into three segments on the basis of dimensions: 2D, 2.5D and 3D. 2.5D dimension packaging held approximately 36% of the share in semiconductor equipment market in 2021. The fastest growing segment is 3D dimensions due to heavy investments on the R&D by many key players, including Amkor Technology, ASE group, Silicon ware Precision Industries Co., Ltd., and others, leading to the improvement in advanced packaging techniques.

By Region: According to this report, the global semiconductor equipment market can be divided into four major regions, on the basis of geographical areas: Asia Pacific (China, Japan, Taiwan and South Korea), North America (The US, Mexico, and Canada), Europe (Germany, UK, France, Italy and Rest of Europe) and Rest of the World. The Asia Pacific semiconductor equipment market enjoyed the major share of 84.5% in 2021, primarily owing to the dominance of China, Taiwan, South Korea, which are the Asia-Pacific most attractive market for semiconductor equipment. Europe and North America are considered the emerging market for semiconductor equipment.

China is the world's largest semiconductor equipment market. China's semiconductor equipment market is expected to achieve solid growth, underpinned by high foundry capex expectations driven by rising demand; technology process development, where more equipment investment is needed; memory process development; photovoltaic demand driven by environmental production; and rising demand in LEDs, MEMS, power devices, and advanced packaging. It is believed semiconductor localization would remain one of China's most important national goals, and, as a result, domestic players stand to gain market share over the next few years.

Global Semiconductor Equipment Market Dynamics:

Growth Drivers: Semiconductor Equipment industry is mounting due to the cumulative consumption of electronics industry. Semiconductor chips, which are used as components in power devices, compactness optical sensors, and light emitters, are the basic requirement for the manufacture of these smart electronic devices. Further, the

market is expected to increase due to rapid urbanization, increased use of semiconductors in medical devices, rising government support, mounting usage of semiconductor equipment in Gaming industry, etc. in recent years.

Challenges: The tension between the U.S. and China has resulted in a possible decoupling between the two economies. The U.S. is developing new strategies to prevent itself from falling further behind China in chip manufacturing as trade tensions continue to grow. This is a foremost challenge faced by semiconductor equipment industry. Additionally, other factors like, functional defects and complexities, high cost associated, etc. are some challenges to the market.

Trends: A major trend gaining pace in semiconductor equipment market is the launch of 5G network, which would connect and support the massive surge of current and future wireless data. Data centers and devices require smaller, stronger semiconductors with extremely high transmission rates that can also store massive amounts of embedded memory as network traffic and complexity grow exponentially. More trends in the market are believed to augment the growth of semiconductor equipment market during the forecasted period include sustainability, emerging industrial robotics, surging demand for electronic vehicles and increasing demand for artificial intelligence, etc.

Impact Analysis of COVID-19 and Way Forward:

During the pandemic, semiconductor equipment manufacturers witnessed a fall for a very short period of time as lockdown was imposed suddenly. While in the second half of 2020 and after that, the semiconductor equipment market sharply increased exceeding the fall due to acceleration of global economies' digital transformation as pandemic has boosted the digitalization. Increased use of electronic devices due to online classes and work from home, indirectly increased the demand for semiconductor equipment as these devices need semiconductors and integrated circuits to be installed in them, which are manufactured from semiconductor equipment. Competitive

Landscape and Recent Developments:

The market for semiconductor equipment is concentrated with top five players accounted for more than 60% share. Chinese players accounted for less than 5% of the global market share, although they are expanding quickly. China domestic players are well-positioned for the semiconductor localization trend. Most of China's semiconductor equipment market share has been taken up by global leaders, who have absolute competitive edge in technology and customer base. Chinese players have been making good progress in R&D and customer verification, and have market share gain potentials

in mid-to-low-end products.

Further, key players of the semiconductor equipment market are:

Applied Materials Inc.

ASML Holding Semiconductor Company

Tokyo Electron Limited

Lam Research Corporation

KLA Corporation

Teradyne Inc.

Screen Holding Co. Ltd

Advantest Corporation

Hitachi High Tech Corporation

ASM International N.V

Nikon Corporation

Canon Inc.

Scope of the Report

The report titled “Global Semiconductor Equipment Market: Analysis By Segment, By Supply Chain, By Dimension, By Region Size and Trends with Impact of COVID-19 and Forecast up to 2026”, includes:

An in-depth analysis of the global semiconductor equipment market by value, by segment, by supply chain, by dimension, by region, etc.

The regional analysis of the semiconductor equipment market, including the

following regions:

Asia Pacific (Japan, China, Taiwan and South Korea)

North America (The US, Mexico and Canada)

Europe (Germany, UK, France, Italy and Rest of Europe)

Rest of the World

Comprehensive information about emerging markets. This report analyses the market for various segments across geographies.

Provides an analysis of the COVID-19 impact on the global semiconductor equipment market, with post COVID impact analysis.

Assesses the key opportunities in the market and outlines the factors that are and will be driving the growth of the industry. Growth of the overall semiconductor equipment market has also been forecasted for the period 2022-2026, taking into consideration the previous growth patterns, the growth drivers, and the current and future trends.

Evaluation of the potential role of semiconductor equipment to improve the market status.

Identification of new technological developments, R&D activities, and collaborations occurring in the semiconductor equipment market.

In-depth profiling of the key players, including the assessment of the business overview, market strategies, regional and business segments of the leading players in the market.

The recent developments, mergers and acquisitions related to mentioned key players are provided in the market report.

The in-depth analysis provides an insight into the market, underlining the growth rate and opportunities offered in the business.

Contents

1. EXECUTIVE SUMMARY

2. INTRODUCTION

2.1 Semiconductor Equipment: An Overview

2.1.1 Advantages of Semiconductor Equipment

2.1.2 Semiconductor Equipment Segmentation

3. GLOBAL MARKET ANALYSIS

3.1 Global Semiconductor Equipment Market: An Analysis

3.1.1 Global Semiconductor Equipment Market by Value

3.1.2 Global Semiconductor Equipment Market by Segments (Wafer Equipment, Test Equipment, Assembly and Packaging Equipment)

3.1.3 Global Semiconductor Equipment Market by Supply Chain (IDM, OSAT, Foundry)

3.1.4 Global Semiconductor Equipment Market by Dimensions (2D, 2.5D, 3D)

3.1.5 Global Semiconductor Equipment Market by Region (Asia pacific, North America, Europe, Rest of the World)

3.2 Global Semiconductor Equipment Market: Segment Analysis

3.2.1 Global Assembly and Packaging Semiconductor Equipment Market by Value

3.2.2 Global Test Semiconductor Equipment Market by Value

3.2.3 Global Wafer Semiconductor Equipment Market by Value

3.2.4 Global Wafer Semiconductor Equipment Market by Segments (Logic, NAND, DRAM, Others)

3.2.5 Global Logic Wafer Semiconductor Equipment Market by Value

3.2.6 Global NAND Wafer Semiconductor Equipment Market by Value

3.2.7 Global DRAM Wafer Semiconductor Equipment Market by Value

3.2.8 Global Others Wafer Semiconductor Equipment Market by Value

3.3 Global Semiconductor Equipment Market: Supply Chain Analysis

3.3.1 Global IDM Semiconductor Equipment Market by Value

3.3.2 Global OSAT Semiconductor Equipment Market by Value

3.3.3 Global Foundry Semiconductor Equipment Market by Value

3.4 Global Semiconductor Equipment Market: Dimension Analysis

3.4.1 Global 2D Semiconductor Equipment Market by Value

3.4.2 Global 2.5D Semiconductor Equipment Market by Value

3.4.3 Global 3D Semiconductor Equipment Market by Value

4. REGIONAL MARKET ANALYSIS

4.1 Asia Pacific Semiconductor Equipment Market: An Analysis

4.1.1 Asia Pacific Semiconductor Equipment Market by Value

4.1.2 Asia Pacific Semiconductor Equipment Market by Region (China, South Korea, Japan, Taiwan)

4.1.3 China Semiconductor Equipment Market by Value

4.1.4 Taiwan Semiconductor Equipment Market by Value

4.1.5 South Korea Semiconductor Equipment Market by Value

4.1.6 Japan Semiconductor Equipment Market by Value

4.2 North America Semiconductor Equipment Market: An Analysis

4.2.1 North America Semiconductor Equipment Market by Value

4.2.2 North America Semiconductor Equipment Market by Region (The US, Canada, Mexico)

4.2.3 The US Semiconductor Equipment Market by Value

4.2.4 Canada Semiconductor Equipment Market by Value

4.2.5 Mexico Semiconductor Equipment Market by Value

4.3 Europe Semiconductor Equipment Market: An Analysis

4.3.1 Europe Semiconductor Equipment Market by Value

4.3.2 Europe Semiconductor Equipment Market by Region (Germany, Italy, UK, France)

4.3.3 Germany Semiconductor Equipment Market by Value

4.3.4 Italy Semiconductor Equipment Market by Value

4.3.5 United Kingdom Semiconductor Equipment Market by Value

4.3.6 France Semiconductor Equipment Market by Value

4.3.7 Rest of Europe Semiconductor Equipment Market by Value

4.4 Rest of World Semiconductor Equipment Market: An Analysis

4.4.1 Rest of World Semiconductor Equipment Market by Value

5. IMPACT OF COVID-19

5.1 Impact of COVID-19 on Semiconductor Equipment Market

5.1.1 Impact of COVID-19 on Semiconductor Equipment

5.1.2 Post COVID-19 Impact

6. MARKET DYNAMICS

6.1 Growth Drivers

- 6.1.1 Growth in Consumer Electronics Industry
- 6.1.2 Rapid Urbanization
- 6.1.3 Increased use of Semiconductors in Medical Devices
- 6.1.4 Rising Government Support
- 6.1.5 Mounting usage of semiconductor equipment in Gaming Industry
- 6.2 Challenges
 - 6.2.1 Functional Defects and Complexities
 - 6.2.2 High Cost Associated
 - 6.2.3 Geo Political Tension
- 6.3 Market Trends
 - 6.3.1 Increasing demand for Artificial Intelligence
 - 6.3.2 Escalation of Internet of Things (IOT)
 - 6.3.3 Surging Demand for Electronic vehicles
 - 6.3.4 Emerging Industrial Robotics
 - 6.3.5 Launch of 5G Network
 - 6.3.6 Sustainability
 - 6.2.7 New Advancements in Semiconductor Equipment

7. COMPETITIVE LANDSCAPE

- 7.1 Global Semiconductor Equipment Players by Market Share

8. COMPANY PROFILES

- 8.1 Applied Materials Inc.
 - 8.1.1 Business Overview
 - 8.1.2 Operating Segments
 - 8.1.3 Business Strategy
- 8.2 ASML Holding Semiconductor Company
 - 8.2.1 Business Overview
 - 8.2.2 Operating Regions
 - 8.2.3 Business Strategy
- 8.3 Tokyo Electron Limited
 - 8.3.1 Business Overview
 - 8.3.2 Operating Segments
 - 8.3.3 Business Strategy
- 8.4 Lam Research Corporation
 - 8.4.1 Business Overview
 - 8.4.2 Operating Regions

- 8.4.3 Business Strategy
- 8.5 KLA Corporation
 - 8.5.1 Business Overview
 - 8.5.2 Operating Segments
 - 8.5.3 Business Strategy
- 8.6 Teradyne Inc.
 - 8.6.1 Business Overview
 - 8.6.2 Operating Segments
 - 8.6.3 Business Strategy
- 8.7 Screen Holding Co. Ltd
 - 8.7.1 Business Overview
 - 8.7.2 Operating Segments
 - 8.7.3 Business Strategy
- 8.8 Advantest Corporation
 - 8.8.1 Business Overview
 - 8.8.2 Operating Segments
 - 8.8.3 Business Strategy
- 8.9 Hitachi High Tech Corporation
 - 8.9.1 Business Overview
 - 8.9.2 Operating Segments
 - 8.9.3 Business Strategy
- 8.10 ASM International N.V.
 - 8.10.1 Business Overview
 - 8.10.2 Operating Regions
 - 8.10.3 Business Strategy
- 8.11 Nikon Corporation
 - 8.11.1 Business Overview
 - 8.11.2 Operating Segments
 - 8.11.3 Business Strategy
- 8.12 Canon Inc.
 - 8.12.1 Business Overview
 - 8.12.2 Operating Segments
 - 8.12.3 Business Strategy

List Of Figures

LIST OF FIGURES

Figure 1: Advantages of Semiconductor Equipment

Figure 2: Semiconductor Equipment Segmentation

Figure 3: Global Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 4: Global Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 5: Global Semiconductor Equipment Market by Segments; 2021 (Percentage, %)

Figure 6: Global Semiconductor Equipment Market by Supply Chain; 2021 (Percentage, %)

Figure 7: Global Semiconductor Equipment Market by Dimension; 2021 (Percentage, %)

Figure 8: Global Semiconductor Equipment Market by Region; 2021 (Percentage, %)

Figure 9: Global Assembly and Packaging Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 10: Global Assemble and Packaging Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 11: Global Test Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 12: Global Test Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 13: Global Wafer Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 14: Global Wafer Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 15: Global Wafer Semiconductor Equipment Market by Segments; 2021 (Percentage, %)

Figure 16: Global Logic Wafer Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 17: Global Logic Wafer Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 18: Global NAND Wafer Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 19: Global NAND Wafer Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 20: Global DRAM Wafer Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 21: Global DRAM Wafer Semiconductor Equipment Market by Value; 2022-2026

(US\$ Billion)

Figure 22: Global Others Wafer Semiconductor Equipment Market by Value; 2017-2021

(US\$ Billion)

Figure 23: Global Others Wafer Semiconductor Equipment Market by Value; 2022-2026

(US\$ Billion)

Figure 24: Global IDM Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 25: Global IDM Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 26: Global OSAT Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 27: Global OSAT Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 28: Global Foundry Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 29: Global Foundry Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 30: Global 2D Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 31: Global 2D Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 32: Global 2.5D Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 33: Global 2.5D Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 34: Global 3D Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 35: Global 3D Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 36: Asia Pacific Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 37: Asia Pacific Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 38: Asia Pacific Semiconductor Equipment Market by Region; 2021 (Percentage, %)

Figure 39: China Semiconductor Equipment Market by Value; 2020-2021 (US\$ Billion)

Figure 40: China Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 41: Taiwan Semiconductor Equipment Market by Value; 2020-2021 (US\$ Billion)

Figure 42: Taiwan Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 43: South Korea Semiconductor Equipment Market by Value; 2020-2021 (US\$ Billion)

Figure 44: South Korea Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 45: Japan Semiconductor Equipment Market by Value; 2020-2021 (US\$ Billion)

Figure 46: Japan Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 47: North America Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 48: North America Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 49: North America Semiconductor Equipment Market by Region; 2021 (Percentage, %)

Figure 50: The US Semiconductor Equipment Market by Value; 2020-2021 (US\$ Billion)

Figure 51: The US Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 52: Canada Semiconductor Equipment Market by Value; 2020-2021 (US\$ Million)

Figure 53: Canada Semiconductor Equipment Market by Value; 2022-2026 (US\$ Million)

Figure 54: Mexico Semiconductor Equipment Market by Value; 2020-2021 (US\$ Million)

Figure 55: Mexico Semiconductor Equipment Market by Value; 2022-2026 (US\$ Million)

Figure 56: Europe Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 57: Europe Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 58: Europe Semiconductor Equipment Market by Region; 2021 (Percentage, %)

Figure 59: Germany Semiconductor Equipment Market by Value; 2020-2021 (US\$ Billion)

Figure 60: Germany Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 61: Italy Semiconductor Equipment Market by Value; 2020-2021 (US\$ Million)

Figure 62: Italy Semiconductor Equipment Market by Value; 2022-2026 (US\$ Million)

Figure 63: United Kingdom Semiconductor Equipment Market by Value; 2020-2021 (US\$ Million)

Figure 64: United Kingdom Semiconductor Equipment Market by Value; 2022-2026 (US\$ Million)

Figure 65: France Semiconductor Equipment Market by Value; 2020-2021 (US\$ Million)

Figure 66: France Semiconductor Equipment Market by Value; 2022-2026 (US\$ Million)

Figure 67: Rest of Europe Semiconductor Equipment Market by Value; 2020-2021 (US\$ Billion)

Figure 68: Rest of Europe Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 69: Rest of World Semiconductor Equipment Market by Value; 2017-2021 (US\$ Billion)

Figure 70: Rest of World Semiconductor Equipment Market by Value; 2022-2026 (US\$ Billion)

Figure 71: Global Consumer Electronics Revenue; 2022-2026 (US\$ Billion)

Figure 72: Developed Economies and Developing Economies Urban Population; 2015, 2020 & 2050 (Million)

Figure 73: Global Artificial Intelligence Market Revenue; 2020-2024 (US\$ Billion)

Figure 74: Global Number of Internet of Things (IOT) connected devices; 2019-2024 (Billion)

Figure 75: Global Electronic Vehicles Sales; 2017-2021 (Million)

Figure 76: Global Annual Installations of Industrial Robots; 2019-2024 (Thousands)

Figure 77: Global 5G Network Revenue; 2020-2022 (US\$ Million)

Figure 78: Global Semiconductor Equipment Players by Market Share; 2021 (Percentage, %)

Figure 79: Applied Materials Net Sales by Segments; 2021 (Percentage, %)

Figure 80: ASML Holding Semiconductor Company Net Sales by Region; 2021 (Percentage, %)

Figure 81: Tokyo Electron Limited Net Sales by Segments; 2021 (Percentage, %)

Figure 82: Lam Research Corporation Revenue by Region; 2021 (Percentage, %)

Figure 83: KLA Corporation Revenue by Segments; 2021 (Percentage, %)

Figure 84: Teradyne Inc. Revenues by Segments; 2021 (Percentage, %)

Figure 85: Screen Holding Co. Ltd Net Sales by Segments; 2021 (Percentage, %)

Figure 86: Advantest Corporation Net Sales by Segments; 2021 (Percentage, %)

Figure 87: Hitachi High Tech Corporation Revenues by Segments; 2022 (Percentage, %)

Figure 88: ASM International Revenue by Region; 2021 (Percentage, %)

Figure 89: Nikon Corporation Revenue by Segments; 2021 (Percentage, %)

Figure 90: Canon. Inc. Net Sales by Segments; 2021 (Percentage, %)

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