

Chip Bonding Equipment Market Forecasts to 2034 – Global Analysis By Bonding Technology (Die Bonding, Flip-Chip Bonding, Thermocompression Bonding, Thermosonic Bonding, Hybrid Bonding, Eutectic Bonding, Anodic Bonding, and Adhesive Bonding), Equipment Type, Bonding Method, Wafer Size, Packaging Type, Semiconductor Device, End User, and By Geography

<https://marketpublishers.com/r/CDCF8F360A6EEN.html>

Date: August 2026

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: CDCF8F360A6EEN

Abstracts

According to Statistics MRC, the Global Chip Bonding Equipment Market is accounted for \$3.0 billion in 2026 and is expected to reach \$6.9 billion by 2034 growing at a CAGR of 10.7% during the forecast period. Chip bonding equipment refers to the specialized machinery used in semiconductor manufacturing to attach and interconnect semiconductor chips to substrates, packages, or other chips. This equipment is essential for creating electrical and mechanical connections between integrated circuits and their packaging, enabling functionality and reliability. The market encompasses various equipment types including die bonders, flip-chip bonders, wafer bonders, hybrid bonders, and advanced packaging bonders, utilizing bonding methods including die-to-wafer (D2W), wafer-to-wafer (W2W), and die-to-die (D2D). Growing demand for advanced semiconductor packaging, increasing adoption of heterogeneous integration, rising complexity of chip architectures, and expanding semiconductor manufacturing capacity are key drivers of market expansion across all regions.

Market Dynamics:

Driver:

Increasing adoption of advanced packaging and heterogeneous integration

The growing demand for advanced semiconductor packaging technologies and heterogeneous integration is a primary driver for the chip bonding equipment market. Advanced packaging including 3D stacking, system-in-package, and chiplets requires sophisticated bonding equipment for precise alignment and interconnection. Heterogeneous integration combines chips from different technologies and foundries, creating demand for flexible bonding solutions. The shift from monolithic to modular chip architectures is increasing bonding equipment requirements. As semiconductor packaging becomes increasingly critical for performance scaling, investment in advanced bonding equipment continues growing, supporting sustained market expansion across all packaging segments.

Restraint:

High equipment costs and technical complexity

The significant capital investment required for chip bonding equipment and the technical complexity of bonding processes represent a major restraint for the market. Advanced bonders cost millions of dollars, with specialized systems requiring substantial investment. Achieving precise alignment at micron and sub-micron levels demands sophisticated motion control and vision systems. Process development for new materials and bonding methods requires extensive engineering resources. Maintenance and operation require skilled personnel. These cost and technical barriers may limit adoption, particularly among smaller manufacturers and in price-sensitive segments where lower-precision alternatives may suffice.

Opportunity:

Emergence of advanced bonding methods for next-generation packaging

The development of new bonding methods including hybrid bonding, collective bonding, and self-assembly techniques presents significant opportunities for chip bonding equipment market expansion. Hybrid bonding enables direct copper-to-copper connection with fine pitch, supporting high-density interconnections. Collective bonding improves throughput for wafer-level processing. Self-assembly techniques reduce alignment complexity. Advanced bonding methods enable new packaging architectures including 3D-ICs and high-bandwidth memory stacks. As next-generation packaging

requirements emerge, new equipment solutions capture growing market share, enabling enhanced integration and performance.

Threat:

Geopolitical tensions affecting semiconductor supply chains

Escalating geopolitical tensions and technology restrictions affecting semiconductor supply chains pose significant threats to the chip bonding equipment market. Export controls on advanced equipment and technologies may limit market access in certain regions. Trade policies affecting semiconductor equipment availability create uncertainty. Technology decoupling may lead to parallel supply chains that do not fully compensate for lost markets. Restrictions on technology transfer affect research collaboration. These geopolitical pressures create uncertainty and may slow market growth in affected regions and segments.

Covid-19 Impact:

The COVID-19 pandemic had a significant impact on the chip bonding equipment market. Initial disruptions included factory shutdowns, supply chain interruptions, and reduced investment. However, the pandemic accelerated semiconductor demand and highlighted the importance of advanced packaging for high-performance computing and AI applications. Semiconductor shortages drove investment in manufacturing capacity and advanced packaging equipment. Post-pandemic, semiconductor demand recovery and capacity expansion have supported equipment market growth. The crisis reinforced the strategic importance of semiconductor manufacturing and advanced packaging capabilities.

The Die Bonders segment is expected to be the largest during the forecast period

The Die Bonders segment is expected to account for the largest market share during the forecast period, driven by their fundamental role in semiconductor assembly and packaging, widespread adoption across device types, and established manufacturing infrastructure. Die bonders are essential for attaching individual semiconductor die to substrates or packages using various methods including epoxy bonding, eutectic bonding, and solder bonding. The segment benefits from high-volume production requirements and extensive installed base. Continuous innovation improving placement accuracy and throughput supports sustained demand. As semiconductor production expands and packaging requirements evolve, die bonders maintain the largest

equipment type segment share throughout the forecast period.

The Wafer-to-Wafer (W2W) segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the Wafer-to-Wafer (W2W) segment is predicted to witness the highest growth rate, fueled by increasing demand for 3D stacked devices, high-bandwidth memory, and advanced packaging architectures requiring W2W bonding for high-density interconnections and improved performance. W2W bonding enables high-throughput processing with precise alignment for memory stacks and logic-on-logic integration. The segment benefits from growing adoption in memory devices, image sensors, and advanced computing applications. As 3D integration becomes more prevalent and W2W technology advances, this bonding method delivers the fastest segment growth.

Region with largest share:

During the forecast period, the Asia-Pacific region is expected to hold the largest market share, supported by concentrated semiconductor manufacturing, extensive packaging facilities, and the presence of major equipment manufacturers and foundries. Taiwan, South Korea, China, and Japan host the world's largest semiconductor production and packaging operations, driving substantial bonding equipment demand. The region accounts for a majority of global semiconductor assembly and testing activity. Government support for domestic semiconductor production is accelerating. With concentrated manufacturing and continuous capacity expansion, Asia Pacific maintains its dominant market position.

Region with highest CAGR:

Over the forecast period, the Asia-Pacific region is anticipated to exhibit the highest CAGR, driven by continued semiconductor production expansion, rising domestic demand, and increasing investment in advanced packaging across China, India, and Southeast Asia. The region's semiconductor industry continues expanding with new fabrication facilities and packaging capacity. Government programs promoting domestic semiconductor production are accelerating bonding equipment investment. Growing electronics manufacturing and domestic consumption create packaging demand. As semiconductor production and advanced packaging expand across the region, Asia Pacific delivers the fastest chip bonding equipment market growth globally.

Key players in the market

Some of the key players in Chip Bonding Equipment Market include ASMPT Limited, BE Semiconductor Industries N.V. (Besi), Kulicke and Soffa Industries, Inc., Shinkawa Ltd., Palomar Technologies, Panasonic Connect Co., Ltd., F&K Delvotec Bondtechnik GmbH, Fasford Technology Co., Ltd., Hanmi Semiconductor Co., Ltd., SET Corporation SA, Finetech GmbH & Co. KG, Toray Engineering Co., Ltd., Yamaha Motor Robotics Holdings Co., Ltd., West-Bond, Inc., Dr. Tresky AG, and Hybond, Inc.

Key Developments:

In July 2026, HANMI Semiconductor announced plans to launch its WIDE TC BONDER in the second half of 2026, engineered for next-generation HBM5 and HBM6 production with larger die areas.

In June 2026, ASMPT secured a repeat order for eight Thermo-Compression Bonding (TCB) tools for chip-to-wafer (C2W) applications from a leading global IDM to support advanced client and data center CPU production.

In March 2025, Kulicke & Soffa introduced its Asterion®-PW platform tailored for power semiconductor applications alongside new vertical wire solutions to expand its packaging portfolio.

Bonding Technologies Covered:

Die Bonding

Flip-Chip Bonding

Thermocompression Bonding

Thermosonic Bonding

Hybrid Bonding

Eutectic Bonding

Anodic Bonding

Adhesive Bonding

Equipment Types Covered:

Die Bonders

Flip-Chip Bonders

Wafer Bonders

Hybrid Bonders

Advanced Packaging Bonders

Bonding Methods Covered:

Die-to-Wafer (D2W)

Wafer-to-Wafer (W2W)

Die-to-Die (D2D)

Wafer Sizes Covered:

Up to 200 mm

300 mm

Above 300 mm

Packaging Types Covered:

2D Packaging

2.5D Packaging

3D IC Packaging

Fan-In Packaging

Fan-Out Packaging

System-in-Package (SiP)

Chiplet Packaging

Semiconductor Devices Covered:

Logic Devices

Memory Devices

Analog and Mixed Signal ICs

Power Semiconductors

RF Devices

MEMS Devices

CMOS Image Sensors

Photonic Devices

LED Devices

End Users Covered:

Integrated Device Manufacturers (IDMs)

Outsourced Semiconductor Assembly and Test (OSAT) Providers

Foundries

Research Institutes and Universities

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

Market share assessments for the regional and country-level segments

Strategic recommendations for the new entrants

Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)

Strategic recommendations in key business segments based on the market estimations

Competitive landscaping mapping the key common trends

Company profiling with detailed strategies, financials, and recent developments

Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

Contents

1 EXECUTIVE SUMMARY

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

2 RESEARCH FRAMEWORK

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
 - 2.4.1 Data Collection (Primary and Secondary)
 - 2.4.2 Data Modeling and Estimation Techniques
 - 2.4.3 Data Validation and Triangulation
 - 2.4.4 Analytical and Forecasting Approach

3 MARKET DYNAMICS AND TREND ANALYSIS

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

4 COMPETITIVE AND STRATEGIC ASSESSMENT

- 4.1 Porter's Five Forces Analysis
 - 4.1.1 Supplier Bargaining Power
 - 4.1.2 Buyer Bargaining Power
 - 4.1.3 Threat of Substitutes
 - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

5 GLOBAL CHIP BONDING EQUIPMENT MARKET, BY BONDING TECHNOLOGY

- 5.1 Die Bonding
- 5.2 Flip-Chip Bonding
- 5.3 Thermocompression Bonding
- 5.4 Thermosonic Bonding
- 5.5 Hybrid Bonding
- 5.6 Eutectic Bonding
- 5.7 Anodic Bonding
- 5.8 Adhesive Bonding

6 GLOBAL CHIP BONDING EQUIPMENT MARKET, BY EQUIPMENT TYPE

- 6.1 Die Bonders
- 6.2 Flip-Chip Bonders
- 6.3 Wafer Bonders
- 6.4 Hybrid Bonders
- 6.5 Advanced Packaging Bonders

7 GLOBAL CHIP BONDING EQUIPMENT MARKET, BY BONDING METHOD

- 7.1 Die-to-Wafer (D2W)
- 7.2 Wafer-to-Wafer (W2W)
- 7.3 Die-to-Die (D2D)

8 GLOBAL CHIP BONDING EQUIPMENT MARKET, BY WAFER SIZE

- 8.1 Up to 200 mm
- 8.2 300 mm
- 8.3 Above 300 mm

9 GLOBAL CHIP BONDING EQUIPMENT MARKET, BY PACKAGING TYPE

- 9.1 2D Packaging
- 9.2 2.5D Packaging

- 9.3 3D IC Packaging
- 9.4 Fan-In Packaging
- 9.5 Fan-Out Packaging
- 9.6 System-in-Package (SiP)
- 9.7 Chiplet Packaging

10 GLOBAL CHIP BONDING EQUIPMENT MARKET, BY SEMICONDUCTOR DEVICE

- 10.1 Logic Devices
- 10.2 Memory Devices
- 10.3 Analog and Mixed Signal ICs
- 10.4 Power Semiconductors
- 10.5 RF Devices
- 10.6 MEMS Devices
- 10.7 CMOS Image Sensors
- 10.8 Photonic Devices
- 10.9 LED Devices

11 GLOBAL CHIP BONDING EQUIPMENT MARKET, BY END USER

- 11.1 Integrated Device Manufacturers (IDMs)
- 11.2 Outsourced Semiconductor Assembly and Test (OSAT) Providers
- 11.3 Foundries
- 11.4 Research Institutes and Universities

12 GLOBAL CHIP BONDING EQUIPMENT MARKET, BY GEOGRAPHY

- 12.1 North America
 - 12.1.1 United States
 - 12.1.2 Canada
 - 12.1.3 Mexico
- 12.2 Europe
 - 12.2.1 United Kingdom
 - 12.2.2 Germany
 - 12.2.3 France
 - 12.2.4 Italy
 - 12.2.5 Spain
 - 12.2.6 Netherlands

- 12.2.7 Belgium
- 12.2.8 Sweden
- 12.2.9 Switzerland
- 12.2.10 Poland
- 12.2.11 Rest of Europe
- 12.3 Asia Pacific
 - 12.3.1 China
 - 12.3.2 Japan
 - 12.3.3 India
 - 12.3.4 South Korea
 - 12.3.5 Australia
 - 12.3.6 Indonesia
 - 12.3.7 Thailand
 - 12.3.8 Malaysia
 - 12.3.9 Singapore
 - 12.3.10 Vietnam
 - 12.3.11 Rest of Asia Pacific
- 12.4 South America
 - 12.4.1 Brazil
 - 12.4.2 Argentina
 - 12.4.3 Colombia
 - 12.4.4 Chile
 - 12.4.5 Peru
 - 12.4.6 Rest of South America
- 12.5 Rest of the World (RoW)
 - 12.5.1 Middle East
 - 12.5.1.1 Saudi Arabia
 - 12.5.1.2 United Arab Emirates
 - 12.5.1.3 Qatar
 - 12.5.1.4 Israel
 - 12.5.1.5 Rest of Middle East
 - 12.5.2 Africa
 - 12.5.2.1 South Africa
 - 12.5.2.2 Egypt
 - 12.5.2.3 Morocco
 - 12.5.2.4 Rest of Africa

13 STRATEGIC MARKET INTELLIGENCE

- 13.1 Industry Value Network and Supply Chain Assessment
- 13.2 White-Space and Opportunity Mapping
- 13.3 Product Evolution and Market Life Cycle Analysis
- 13.4 Channel, Distributor, and Go-to-Market Assessment

14 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

- 14.1 Mergers and Acquisitions
- 14.2 Partnerships, Alliances, and Joint Ventures
- 14.3 New Product Launches and Certifications
- 14.4 Capacity Expansion and Investments
- 14.5 Other Strategic Initiatives

15 COMPANY PROFILES

- 15.1 ASMPT Limited
- 15.2 BE Semiconductor Industries N.V. (Besi)
- 15.3 Kulicke and Soffa Industries, Inc.
- 15.4 Shinkawa Ltd.
- 15.5 Palomar Technologies
- 15.6 Panasonic Connect Co., Ltd.
- 15.7 F&K Delvotec Bondtechnik GmbH
- 15.8 Fasford Technology Co., Ltd.
- 15.9 Hanmi Semiconductor Co., Ltd.
- 15.10 SET Corporation SA
- 15.11 Finetech GmbH & Co. KG
- 15.12 Toray Engineering Co., Ltd.
- 15.13 Yamaha Motor Robotics Holdings Co., Ltd.
- 15.14 West-Bond, Inc.
- 15.15 Dr. Tresky AG
- 15.16 Hybond, Inc.

List Of Tables

LIST OF TABLES

Table 1 Global Chip Bonding Equipment Market Outlook, By Region (2023–2034) (\$MN)

Table 2 Global Chip Bonding Equipment Market Outlook, By Bonding Technology (2023–2034) (\$MN)

Table 3 Global Chip Bonding Equipment Market Outlook, By Die Bonding (2023–2034) (\$MN)

Table 4 Global Chip Bonding Equipment Market Outlook, By Flip-Chip Bonding (2023–2034) (\$MN)

Table 5 Global Chip Bonding Equipment Market Outlook, By Thermocompression Bonding (2023–2034) (\$MN)

Table 6 Global Chip Bonding Equipment Market Outlook, By Thermosonic Bonding (2023–2034) (\$MN)

Table 7 Global Chip Bonding Equipment Market Outlook, By Hybrid Bonding (2023–2034) (\$MN)

Table 8 Global Chip Bonding Equipment Market Outlook, By Eutectic Bonding (2023–2034) (\$MN)

Table 9 Global Chip Bonding Equipment Market Outlook, By Anodic Bonding (2023–2034) (\$MN)

Table 10 Global Chip Bonding Equipment Market Outlook, By Adhesive Bonding (2023–2034) (\$MN)

Table 11 Global Chip Bonding Equipment Market Outlook, By Equipment Type (2023–2034) (\$MN)

Table 12 Global Chip Bonding Equipment Market Outlook, By Die Bonders (2023–2034) (\$MN)

Table 13 Global Chip Bonding Equipment Market Outlook, By Flip-Chip Bonders (2023–2034) (\$MN)

Table 14 Global Chip Bonding Equipment Market Outlook, By Wafer Bonders (2023–2034) (\$MN)

Table 15 Global Chip Bonding Equipment Market Outlook, By Hybrid Bonders (2023–2034) (\$MN)

Table 16 Global Chip Bonding Equipment Market Outlook, By Advanced Packaging Bonders (2023–2034) (\$MN)

Table 17 Global Chip Bonding Equipment Market Outlook, By Bonding Method (2023–2034) (\$MN)

Table 18 Global Chip Bonding Equipment Market Outlook, By Die-to-Wafer (D2W)

(2023–2034) (\$MN)

Table 19 Global Chip Bonding Equipment Market Outlook, By Wafer-to-Wafer (W2W)

(2023–2034) (\$MN)

Table 20 Global Chip Bonding Equipment Market Outlook, By Die-to-Die (D2D)

(2023–2034) (\$MN)

Table 21 Global Chip Bonding Equipment Market Outlook, By Wafer Size (2023–2034)
(\$MN)

Table 22 Global Chip Bonding Equipment Market Outlook, By Up to 200 mm
(2023–2034) (\$MN)

Table 23 Global Chip Bonding Equipment Market Outlook, By 300 mm (2023–2034)
(\$MN)

Table 24 Global Chip Bonding Equipment Market Outlook, By Above 300 mm
(2023–2034) (\$MN)

Table 25 Global Chip Bonding Equipment Market Outlook, By Packaging Type
(2023–2034) (\$MN)

Table 26 Global Chip Bonding Equipment Market Outlook, By 2D Packaging
(2023–2034) (\$MN)

Table 27 Global Chip Bonding Equipment Market Outlook, By 2.5D Packaging
(2023–2034) (\$MN)

Table 28 Global Chip Bonding Equipment Market Outlook, By 3D IC Packaging
(2023–2034) (\$MN)

Table 29 Global Chip Bonding Equipment Market Outlook, By Fan-In Packaging
(2023–2034) (\$MN)

Table 30 Global Chip Bonding Equipment Market Outlook, By Fan-Out Packaging
(2023–2034) (\$MN)

Table 31 Global Chip Bonding Equipment Market Outlook, By System-in-Package (SiP)
(2023–2034) (\$MN)

Table 32 Global Chip Bonding Equipment Market Outlook, By Chiplet Packaging
(2023–2034) (\$MN)

Table 33 Global Chip Bonding Equipment Market Outlook, By Semiconductor Device
(2023–2034) (\$MN)

Table 34 Global Chip Bonding Equipment Market Outlook, By Logic Devices
(2023–2034) (\$MN)

Table 35 Global Chip Bonding Equipment Market Outlook, By Memory Devices
(2023–2034) (\$MN)

Table 36 Global Chip Bonding Equipment Market Outlook, By Analog and Mixed Signal
ICs (2023–2034) (\$MN)

Table 37 Global Chip Bonding Equipment Market Outlook, By Power Semiconductors
(2023–2034) (\$MN)

Table 38 Global Chip Bonding Equipment Market Outlook, By RF Devices (2023–2034) (\$MN)

Table 39 Global Chip Bonding Equipment Market Outlook, By MEMS Devices (2023–2034) (\$MN)

Table 40 Global Chip Bonding Equipment Market Outlook, By CMOS Image Sensors (2023–2034) (\$MN)

Table 41 Global Chip Bonding Equipment Market Outlook, By Photonic Devices (2023–2034) (\$MN)

Table 42 Global Chip Bonding Equipment Market Outlook, By LED Devices (2023–2034) (\$MN)

Table 43 Global Chip Bonding Equipment Market Outlook, By End User (2023–2034) (\$MN)

Table 44 Global Chip Bonding Equipment Market Outlook, By Integrated Device Manufacturers (IDMs) (2023–2034) (\$MN)

Table 45 Global Chip Bonding Equipment Market Outlook, By Outsourced Semiconductor Assembly and Test (OSAT) Providers (2023–2034) (\$MN)

Table 46 Global Chip Bonding Equipment Market Outlook, By Foundries (2023–2034) (\$MN)

Table 47 Global Chip Bonding Equipment Market Outlook, By Research Institutes and Universities (2023–2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) Regions are also represented in the same manner as above.

I would like to order

Product name: Chip Bonding Equipment Market Forecasts to 2034 – Global Analysis By Bonding Technology (Die Bonding, Flip-Chip Bonding, Thermocompression Bonding, Thermosonic Bonding, Hybrid Bonding, Eutectic Bonding, Anodic Bonding, and Adhesive Bonding), Equipment Type, Bonding Method, Wafer Size, Packaging Type, Semiconductor Device, End User, and By Geography

Product link: <https://marketpublishers.com/r/CDCF8F360A6EEN.html>

Price: US\$ 4,150.00 (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 <https://marketpublishers.com/r/CDCF8F360A6EEN.html>