

INDUSTRY OVERVIEW

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SOURCES OF INFORMATION

We engaged Frost & Sullivan, an independent market research consultant, to conduct an analysis of, and to prepare a report on China’s pan-semiconductor IMSS industry for the use in this document, which was commissioned by us for a fee of RMB540,000. In compiling and preparing the Frost & Sullivan Report, Frost & Sullivan adopted the following assumptions: (1) the social, economic and political conditions globally currently discussed will remain stable during the forecast period, (2) China’s government policies on pan-semiconductor IMSS industry will remain consistent during the forecast period, and (3) China’s pan-semiconductor IMSS market will be driven by the factors which are stated in the report in the forecast period. Except as otherwise noted, all of the data and forecasts contained in this section are derived from the Frost & Sullivan Report. The Frost & Sullivan Report has been prepared by Frost & Sullivan independently without any influence from us or other interested parties.

Frost & Sullivan is an independent global consulting firm founded in 1961 in New York and its services include, among others, industry consulting, market strategic consulting and corporate training. Frost & Sullivan conducted (1) primary research, which involved discussing the status of the industry with certain leading industry participants, and interviews with industry experts on a best-effort basis to collect information in aiding analysis; and (2) secondary research, which involved reviewing company reports, independent research reports and data based on its own research database.

OVERVIEW OF CHINA’S PAN-SEMICONDUCTOR IMSS MARKET

Introduction of Pan-Semiconductor IMSS

The pan-semiconductor industry refers to a collection of manufacturing sectors that are closely related to semiconductor technology and applications. It covers a wide range of fields, comprising semiconductor, display panel, PCB, and photovoltaic. All fields involve industrial processes such as automation, computation, software, sensing and networking.

IMSS for the pan-semiconductor industry are industrial software solutions that integrate the manufacturing processes of the pan-semiconductor industry with technologies comprising AI, big data, and automation. These solutions aim to achieve digitalization and intelligence of the entire supply chain. By collecting and analyzing massive amounts of data, these solutions enable intelligent decision-making and production, thereby improving production efficiency, product quality, and overall competitiveness.

The pan-semiconductor intelligent manufacturing software platforms work together to streamline manufacturing processes, improve data handling and analysis, and optimize the flow of materials and operations, which includes, 1) Manufacturing Operations Platform: a) MES (Manufacturing Execution System) that manages shop floor activities and ensures production is executed as planned, b) APS (Advanced Planning and Scheduling) that optimizes production schedules and resources, c) RTD (Real-Time Dispatching) that ensures timely dispatch of materials and products; 2) Integrated Automation Platform: a) EAP (Equipment Automation Program) that automates equipment operations and data collection, b) BC (Block Control System) that monitors specific lines within the manufacturing process, c) MCS (Material Control System) schedules and manages the movement of materials; 3) Intelligent Control and Digitalization Platform where TMS

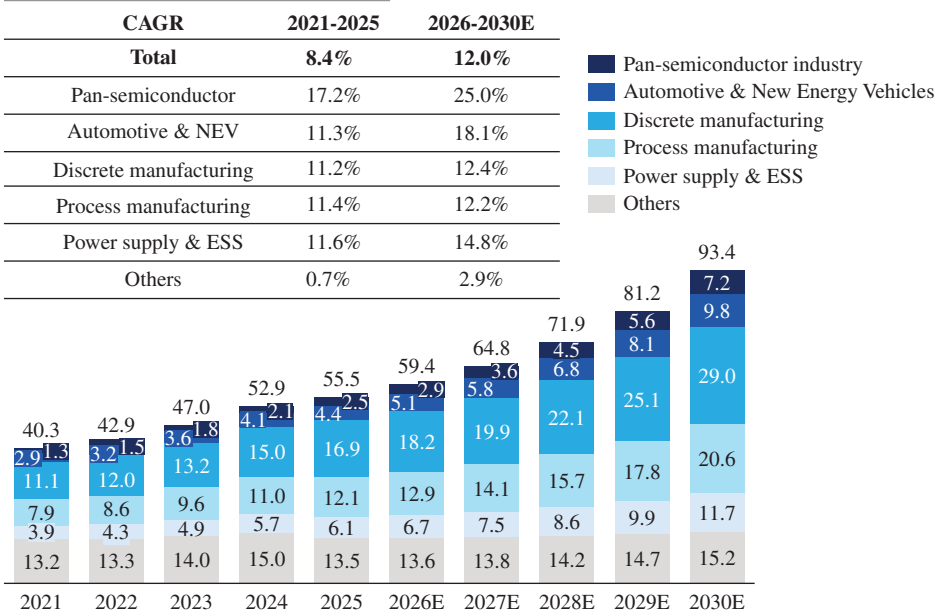
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(Test Management System) manages testing processes and results; 4) Intelligent Big Data Engine Platform: a) DC (Data Collection Platform) that gathers and integrates data from various sources, b) YMS (Yield Management System) monitors and improves production yield, c) EDA (Engineering Data Analysis) analyzes engineering data to support decision-making; 5) Digital Equipment Platform where SPC (Statistical Process Control) uses statistical methods to control process quality.

Size of China’s IMSS market increased from RMB40.3 billion in 2021 to RMB55.5 billion in 2025 with a CAGR of 8.4%, and is expected to reach RMB93.4 billion in 2030 with a CAGR of 12.0%.

China’s Intelligent Manufacturing Software Solutions Market, in terms of sales revenue

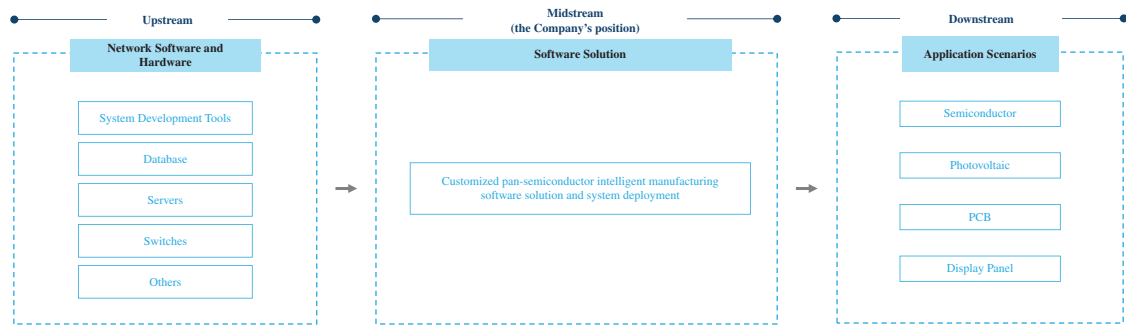
Billion RMB, 2021-2030E



Note: Others include food and beverages, Consumer goods, Pharmaceuticals, and etc.

Value Chain of China’s Pan-Semiconductor IMSS Market

The value chain of China’s pan-semiconductor IMSS market starts with network software and hardware in the upstream. Midstream involves pan-semiconductor IMSS providers that provide customers with customized pan-semiconductor IMSS and system deployment. Finally, the downstream application covers various pan-semiconductor scenarios.



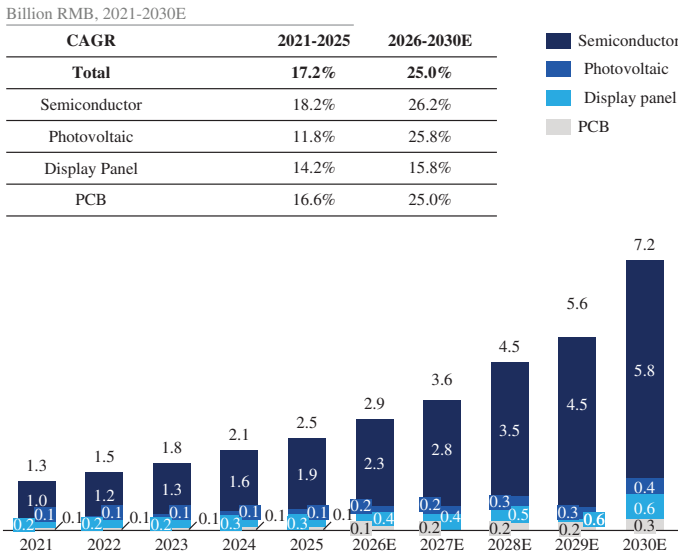
Source: China Industrial Technology Softwareization Industry Alliance, Frost & Sullivan

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Market Size of China’s Pan-Semiconductor IMSS Market

In terms of sales revenue, China’s pan-semiconductor IMSS market is predicted to rise from RMB1.3 billion in 2021 to RMB7.2 billion by 2030, marking a CAGR of 25.0% from 2026 to 2030.

China’s Pan-Semiconductor Intelligent Manufacturing Software Solutions Market, in terms of sales revenue



Source: Expert Interview, Semiconductor Equipment and Materials International, Frost & Sullivan

By the origin of players, the market size for China’s pan-semiconductor IMSS can be divided into domestic players and overseas players. It is projected that the market size for domestic players will increase from RMB1.5 billion in 2025 to RMB5.5 billion in 2030 with a CAGR of 29.7% from 2026 to 2030.

Downstream Application Analysis

- Semiconductor:** In semiconductor industry, the main pain point is process variations that cause nano-scale defects, leading to massive wafer wastage. IMSS enable real-time monitoring and control of production steps, which each requiring complex, precise control over temperature, pressure, and chemical exposure. The market size of China’s semiconductor industry is expected to reach RMB3,633 billion by 2030 from RMB1,874 billion in 2025 with a CAGR of 12.9% from 2026 to 2030.
- Display Panel:** The display panel industry struggles with high defect rates and yield loss due to complex manufacturing. IMSS enable real-time monitoring of over equipment sensors, detecting deviations. IMSS also optimize yield rates by integrating AI vision systems. The market size of China’s panel industry is expected to grow from RMB1.4 trillion in 2025 to RMB5.4 trillion in 2030 with a CAGR of 32.0% from 2026 to 2030.
- Printed Circuit Board:** The PCB industry grapples with the complexity of multi-layer designs, high-density interconnects, and the increasing demand for miniaturization. IMSS automate material movement, track work-in-process, and manage process data, ensuring seamless integration between production planning and equipment control. These systems also support applications like production scheduling, engineering data analysis, and defect detection. The market size of China’s PCB industry is expected to grow from RMB53.6 billion in 2025 to RMB74.4 billion in 2030 with a CAGR of 6.0% from 2026 to 2030.

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- **Photovoltaic:** The photovoltaic industry faces significant pain points in achieving high yields and efficiency, as even minor defects during cell manufacturing can lead to performance degradation. IMSS enable real-time monitoring of production processes, ensuring precise control over parameters. IMSS also support predictive maintenance and digital twin simulations. China’s cumulative installed photovoltaic capacity is expected to grow from 1,200GW in 2025 to 7,862GW in 2030 with a CAGR of 49.8% from 2026 to 2030.

Drivers of China’s Pan-Semiconductor IMSS Market

The vast market opportunities in pan-semiconductor industry

Downstream sectors are experiencing rapid growth and technological advancements, driving the need for intelligent production management systems. The increasing complexity of manufacturing processes, the demand for high precision and quality control, and the trend towards automation and digitalization all contribute to the growing adoption of IMSS. As these industries expand, manufacturers seek to optimize their operations, reduce costs, and enhance productivity, making IMSS essential for pan-semiconductor industry.

Digital transformation of pan-semiconductor industry

The digital transformation is creating a surge in demand for manufacturing management systems as the industry strives to enhance efficiency, precision, and quality control. These systems enable real-time data monitoring, process optimization, and seamless integration of various manufacturing processes, which are essential for achieving higher productivity and competitiveness. For example, in 12-inch wafer fabs, each wafer undergoes thousands of processing steps, making precise control and consistency critical. Intelligent manufacturing systems, such as CIM solutions, play a pivotal role in ensuring consistency across equipment parameters, while SPC is essential for controlling process deviations. The vast market opportunities in the pan-semiconductor industries further fuel the demand.

Favorable policy support

China government established the National Integrated Circuit Industry Development Investment Fund, which invested billions of dollars to support the industry. In July 2020, the China State Council issued *the Several Policies for Promoting High-Quality Development of the Integrated Circuit Industry and the Software Industry in the New Era* (《新時期促進集成電路產業和軟件產業高質量發展的若干政策》), which provides financial incentives to encourage the growth of the pan-semiconductor industry. In August 2025, China’s Ministry of Industry and Information Technology (MIIT) issued the *Action Plan for Stabilizing Growth in the Electronic Information Manufacturing Industry (2025-2026)* 《電子信息製造業2025-2026年穩增長行動方案》, which emphasizes accelerating research on next-generation industrial systems and software characterized by networked, open, intelligent, and collaborative architectures. This policy is expected to support the development of China’s pan-semiconductor IMSS market by strengthening system-level integration and enabling more efficient, intelligent, and coordinated semiconductor manufacturing processes. These policies, along with the emphasis on self-reliant technology, create a favorable environment for the development and application of IMSS, encouraging investment in technologies.

Drivers of China’s CIM Software Solutions Market

The following factors contributed to the growth in China’s CIM software solution revenue during the Track Record Period:

Favorable Government Policies

China’s 14th Five-Year Plan for Intelligent Manufacturing explicitly mandates that over 70% of large-scale manufacturing enterprises complete digital transformation by 2025. Due to its strategic importance in the development of advanced manufacturing, the pan-semiconductor sector receives prioritized support and governmental subsidies, directly driving essential demand for CIM systems. Further, pan-semiconductors produced by overseas vendors faced data security constraints and poor compatibility with domestic equipment issues. This has accelerated the replacement of imported systems by domestic wafer fabs, creating growth opportunities for Chinese domestic suppliers such as our Company.

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Industry Expansion

Global semiconductor production capacity continues to expand, with a surge in 12-inch wafer fab production. Investment in single-fab CIM system is expected to become a major revenue source of our Group. Besides, chip manufacturing processes are advancing toward 7nm and below. Traditional systems struggle to meet yield control and process coordination demands, driving the need for highly integrated CIM solutions. There is also surging demand for automotive-grade chips and third-generation semiconductors, which require customized CIM requirements.

Technological Innovation and Enhanced Product Competitiveness

Integration of technologies like AI algorithms and the use of cloud with CIM systems greatly improved production efficiency and yield optimization which highlights our product value.

Upgraded Customer Demands

Semiconductor manufacturers increasingly demand flexible manufacturing, agile production, and carbon footprint tracking. CIM systems serve as the core enabler for these goals, with expanded functional modules driving revenue growth.

Trends of China’s Pan-Semiconductor IMSS Market

Data-driven AI large models will be applied more widely and deeply

By leveraging AI, the IMSS can enhance their ability to adapt to complex and dynamic manufacturing environments, improving overall efficiency and reducing operational costs. The increasing sophistication of AI technology also allows for more intelligent decision-making, further driving the digital transformation of the pan-semiconductor industry. As a result, the adoption of AI-enhanced IMSS is expected to accelerate.

Domestic substitution becomes an inevitable trend with technology advancements

As these domestic vendors enhance their capabilities, they are able to offer solutions that are not only cost-effective but also highly reliable and feature-rich. This progress is driving a significant shift towards domestic substitution, making it an inevitable trend in the industry. With the growing confidence in domestic technologies and the support from national policies, more enterprises are opting for indigenous software solutions to meet their manufacturing management needs.

Gradual transition from single-module solutions to platform-based solutions

Initially, many manufactures adopted individual modules tailored to specific manufacturing needs. However, as the complexity of manufacturing processes increases and the demand for seamless integration and data sharing across various operations grows, there is a rising need for holistic platform that can integrate multiple functions and workflows. The platform offers a more unified and efficient approach to manufacturing management, enabling better data flow, enhanced process optimization, and improved overall operational efficiency. This shift towards platform-based solutions is driven by the industry’s pursuit of higher productivity, better adaptability to changing market demands, and the ability to leverage technologies.

Market trends in the combination of production software and related packages

By combining software with hardware, as well as offering services, IMSS providers can offer a more cohesive and reliable solution. This trend is driven by the growing complexity of pan-semiconductor manufacturing processes and the need for more interrelated integration between different components of the manufacturing system. It also reflects the industry’s demand for turnkey solutions that can be easily deployed and managed, ultimately enhancing operational efficiency and reducing the overall cost of ownership.

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Continuous investment to diversify downstream applications

Companies are increasingly seeking to expand into other industries to mitigate the risks associated with over-reliance on a single sector. While the semiconductor industry offers significant potential for technological innovation and market growth, highly vertical applications are vulnerable to cyclical downturns. By diversifying into adjacent sectors, companies can effectively hedge against industry-specific risks and unlock new avenues for growth. However, such diversification strategies require continuous investment to capitalize on emerging market opportunities, which typically results in substantial short-term capital expenditures and potential losses, with positive returns requiring a longer-term investment horizon.

COMPETITIVE LANDSCAPE OF CHINA’S IMSS MARKET AND PAN-SEMICONDUCTOR IMSS MARKET

China’s IMSS market is relatively fragmented, with the top five players accounted for 25.8% market share in terms of revenue in 2025.

Ranking of Major Players in China’s IMSS Market (2025)

Ranking	Company	Revenue	Market Share
		(RMB Million, 2025)	(%)
1	Company E	4,452	8.0%
2	Company A	3,338	6.0%
3	Company F	2,486	4.5%
4	Company G	2,357	4.2%
5	Company H	1,680	3.0%
...	...	...	...
16	Our Company	300	0.5%

China’s pan-semiconductor IMSS market is relatively concentrated, with the top five players accounted for 64% market share in 2025. Notably, in terms of revenue generated from pan-semiconductor IMSS, we ranked as the third player in China, with a revenue of RMB300 million, representing 12% of the total market share.

Ranking of Major Players in China’s Pan-Semiconductor IMSS Market (2025)

Ranking	Company	Revenue	Market Share
		(RMB Million, 2025)	(%)
1	Company A	727	30%
2	Company B	341	14%
3	The Company	300	12%
4	Company C	100	4%
5	Company D	90	4%

Notes:

- (1) Company A, founded in 1967, headquartered in the United States, is a global leader in semiconductor and display manufacturing equipment, listed on NASDAQ.
- (2) Company B, founded in 2017 and headquartered in China, is a private company in China’s semiconductor intelligent manufacturing solution market.
- (3) Company C, founded in 2018 and headquartered in China, is a private company focused on providing end-to-end industrial intelligence solutions for the pan-semiconductor industry.
- (4) Company D, established in 2001 and headquartered in China, is a private company focusing on MES solutions for solar and semiconductor materials.

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- (5) Company E, founded in 1847 and headquartered in Germany, is a multinational engineering giant listed on the Frankfurt Stock Exchange (SIE) and ADR (SIEGY), leading in automation, digitalization, and energy efficiency solutions.
- (6) Company F, founded in 1954 and headquartered in Japan, is a public company listed on both the Tokyo and Osaka stock exchanges, and develops advanced digital solutions, software services, and IT infrastructure across various industries worldwide.
- (7) Company G, founded in 1892 and headquartered in United States, is a public company listed on New York Stock Exchange, and focused on the development of software platforms for industrial IoT, sustainability, and asset performance management.
- (8) Company H, founded in 2016 and headquarterd in China, is a private company that empowers manufacturers with cloud-based collaboration and real-time data analytics to drive efficiency.
- (9) Represents revenues generated from pan-semiconductor IMSS in China in 2025.

Source: Expert Interview, Annual Reports of Listed Companies, Frost & Sullivan

Competitive Advantage: Understanding Customer Needs and Software Technology

Our Company’s self-developed solutions encompass a complete set of technologies and layers in developing a software application, including both front-end (user interface) and back-end (server, database, and application logic) components, this capability allow us to provide seamless integration and optimization across the entire semiconductor manufacturing value chain. Unlike other competitors that rely on externally acquired software modules, our self-developed solutions control over our entire technology stack — from crystal pulling and material manufacturing to packaging, testing, and downstream applications — and ensure a highly optimized, comprehensive solution which spans from the initial stages of production to the final output. Our Company is one of the only three domestic providers capable of developing all components and layers of an IMSS product or system in-house. This integration not only guarantees smoother workflows but also delivers more efficient, and scalable manufacturing solutions, benefiting customers with enhanced productivity, flexibility, and reduced operational complexity.

Our Company offers comprehensive downstream application coverage of pan-semiconductor industry, including semiconductor, PCB, photovoltaics, and panel production, this not only allows us to attract a more diverse pool of customers, but also reinforces our reputation as a trusted partner across multiple sectors. During the Track Record Period, we had obtained about 800 new projects, demonstrating our ability to provide effective solutions across various industries and build lasting relationships with our clients. Founded before 2010, our Company has had more than a decade to accumulate industry expertise and refine our solutions. We believe that these advanced technologies not only set it ahead of our competitors but also create a positive cycle of continuous innovation and leading position in the industry as we provide the industry know-how for separate sub-segments in the industry.

In comparing CIM (computer integrated manufacturing)/MES (manufacturing execution system) systems in the semiconductor industry, manufacturing execution systems in other manufacturing sectors, and general-purpose ERP (enterprise resource planning) systems, the key distinction lies in their scope and complexity. CIM/MES in semiconductor manufacturing are specialized systems designed to manage intricate, real-time production processes, such as wafer lot tracking, process control, and defect analysis, leveraging technologies like AI, IoT, and machine learning to optimize efficiency and minimize defects. These systems are integrated with production equipment, sensors, and automated material handling, providing control over every stage of production. ERP systems, on the other hand, are designed for enterprise-wide resource management, integrating functions like finance, procurement, and human resources but lacking the real-time, process-specific functionality of MES as in the semiconductor industry. They provide visibility across departments but do not offer the control over production processes that MES or CIM systems do.

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Further, our ability as solution provider to support our semiconductor customers with large scale of production coverage sets us apart from other players in the industry. As of today, according to Frost & Sullivan, with the largest production capacity for 12-inch wafers, we are positioned to meet the demands of high-volume semiconductor manufacturing with target production capacity of 100,000 wafers per month. The solution offerings of our Company allow downstream semiconductor companies to significantly increase production efficiency, aiming to further solidifying our position as the second largest domestic provider of pan-semiconductor IMSS.

Comparison Analysis of Competitiveness Among Major Players in China’s Pan-Semiconductor IMSS Market

	Competitiveness of Pricing	Development Capability (from crystal pulling and material manufacturing to packaging, testing, and downstream applications)	Whether cover the full pan-semiconductor industry	Technology Advancement (First validated application in 12-inch wafer fabs)
The Company	●	●	✓	2023
Company A	◐	●	✗	Prior to 2010
Company B	◐	●	✓	2022
Company C	◐	◐	✗	2025
Company D	◐	◐	✗	2022
Company E	◐	●	✓	Prior to 2010

Notes:

1. A full circle “●” denotes the strongest competitive advantage within the corresponding column.
2. Pricing competitiveness: Overseas IMSS providers generally command higher pricing, while our Company offers more cost-effective solutions tailored to domestic customers. Among domestic players, we intentionally adopt a competitive pricing strategy during our expansion phase to secure benchmark projects, expand market presence and strengthen relationships with key customers, thereby enhancing our overall market competitiveness.
3. Development capability: Unlike some competitors that rely on externally sourced software modules, our Company maintains in-house development capabilities spanning the entire semiconductor value chain, from crystal pulling and material manufacturing to packaging, testing and downstream applications, enabling us to provide comprehensive and highly optimized solutions tailored to customers’ production requirements.

The table below sets forth the year of foundation of our Group and other major players in China’s pan-semiconductor IMSS market and their respective downstream coverage:

	Year of Found	Downstream Coverage
Our Group	2007	Covered all pan-semiconductor industries
Company A	1967	Semiconductor, PCB, Display Panel
Company B	2017	Covered all pan-semiconductor industries yet photovoltaics just started in 2024
Company C	2018	Semiconductor, PCB, Display Panel
Company D	2001	Semiconductor, Photovoltaics
Company E	1847	Covered all pan-semiconductor industries

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Entry Barriers of China’s Pan-Semiconductor IMSS Market

One-stop Solution Capability

This involves the ability to develop software solutions that cater to the entire spectrum of pan-semiconductor manufacturing processes, from design to production. Moreover, these solutions must be highly adaptable to meet the specific and often unique needs of each manufacturer. The complexity of integrating various production stages and the need for continuous, uninterrupted operation further raise the bar, as any system downtime can lead to significant financial losses due to scrap of wafers.

Industry Know-how

The pan-semiconductor industry is inherently complex with numerous steps in its manufacturing process. Without prior industry experience and understanding, it is difficult for newcomers to provide mature products to downstream clients. This industry knowledge acts as a substantial barrier to entry, as it demands not only technical expertise in software development but also a thorough grasp of the intricate pan-semiconductor production processes and the ability to integrate these systems seamlessly into existing manufacturing environments.

Widely Recognized Brand and Reputation

Given the high stakes and critical nature of pan-semiconductor manufacturing, clients often prefer solutions from vendors with a proven track record and a strong reputation for reliability and performance. New entrants must overcome skepticism and build trust with potential clients, which can be a lengthy and challenging process.

Threats and Challenges of China’s Pan-Semiconductor IMSS Market

Rapid Technological Advancements

The pan-semiconductor industry is characterized by swift technological advancements, necessitating that CIM software solutions are continually updated to keep pace with evolving manufacturing requirements. This rapid iteration demands higher levels of R&D capabilities and responsiveness from software vendors, which also increases the associated costs and risks of market adaptation.

International Competition

Despite the rapid growth of the domestic CIM software market, international semiconductor giants still hold significant influence in China due to their mature technologies, strong brand recognition, and extensive customer base. Domestic companies are tasked with competing with these international players in terms of technological innovation, service quality, and market promotion, presenting a considerable challenge.

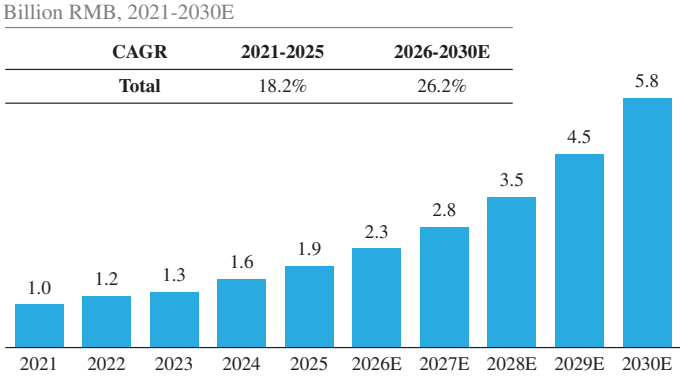
OVERVIEW OF CHINA’S SEMICONDUCTOR IMSS MARKET

Introduction of China’s Semiconductor IMSS Market

Semiconductor IMSS refer to solutions that focus on the semiconductor field, covering the entire semiconductor manufacturing process from front-end to back-end. The semiconductor industry emphasizes on high-precision process control, equipment automation, and yield improvement. China’s semiconductor IMSS market increased from RMB1.0 billion in 2021 to RMB1.9 billion in 2025, in terms of sales revenue. This expansion is supported by a CAGR of 18.2%, indicating a strong initial growth phase. The market is expected to further expand during 2026 to 2030, with a CAGR of 26.2%, reaching RMB5.8 billion by 2030.

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China’s Semiconductor Intelligent Manufacturing Software Solutions Market, in terms of sales revenue



Source: Expert Interview, Semiconductor Equipment and Materials International, Frost & Sullivan

Competitive Landscape of China’s Semiconductor IMSS Market

In China’s semiconductor IMSS market, the competitive landscape is marked by a few dominant players similar in China’s pan-semiconductor IMSS market. Top 5 companies takes 66% of the market. Among it, the Company is ranked as the third largest player with a marker share of 7% in 2025.

Ranking of Major Players in China’s Semiconductor IMSS Market (2025)

Ranking	Company	Revenue	Market Share
		(RMB Million, 2025)	(%)
1	Company A	727	38%
2	Company B	242	13%
3	The Company	125	7%
4	Company E	84	4%
5	Company D	72	4%

Drivers and Trends of China’s Semiconductor IMSS Market

Increased Downstream Market Demand and Industry Growth

The resurgence of the semiconductor market, coupled with the driving forces of consumer electronics and automotive sectors, is creating a substantial need for manufacturing technologies. Moreover, the expansion into emerging application areas such as 5G, big data, and AI further amplifies this demand. These factors are not only revitalizing the semiconductor market but also necessitating intelligent software solutions.

Upgrading of Traditional Semiconductor Manufacturing Industry and Collaborative Optimization of Industry Chain

As the industry moves towards higher efficiency and quality standards, there is a growing need for software solutions that can facilitate the digital transformation of manufacturing processes. These solutions are crucial for enhancing manufacturing capabilities, improving product quality, and reducing costs. Additionally, the optimization of the supply chain through better coordination and integration among different stages of manufacturing is becoming increasingly important. This is leading to a demand for intelligent production software that can support supply chain management.

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Threats and Challenges of China’s Semiconductor IMSS Market

Technological Barrier Compared with International Companies

While domestic vendors have made strides in various areas, their solutions for high-precision semiconductor manufacturing processes is still developing compared to global leaders. Semiconductor manufacturing demands extreme stability and reliability, as even minor system errors can lead to catastrophic production losses. However, limited access to real-world production environments for iterative testing and refinement has created a “validation deadlock” — fab operators prioritize proven foreign solutions over unvalidated domestic alternatives, perpetuating reliance on imported systems

Continuous Evolution in Semiconductor Industry

The continuous evolution of technology in semiconductor industries requires corresponding updates in IMSS. As hardware specifications and processes advance, each technological shift leads to changes in material properties, system parameters, and operational models. The core components of IMSS, must be recalibrated, retrained, and updated to keep pace with these changes.

According to Frost & Sullivan, entry barriers of China’s semiconductor IMSS market are substantially similar to those of the China’s pan-semiconductor IMSS market, please refer to the paragraph headed “— Entry Barriers of China’s Pan-Semiconductor IMSS Market” of this section above.

Entry Barrier of China’s Semiconductor IMSS Market

Talent Acquisition

The industry requires highly specialized professionals with expertise across semiconductor sector and system integration. Such talent is scarce and typically concentrated among established market participants, having been developed through extensive practical experience and long-term industry exposure. As a result, new entrants face challenges in recruiting and retaining qualified personnel, which may constrain their ability to support advanced product development.

Downstream Industry Network Barrier

Providers must maintain close collaboration with downstream stakeholders, including wafer fabrication facilities and integrated circuit design companies, to ensure product compatibility with specific process technologies. This collaboration typically involves access to critical resources, manufacturing data, and validation feedback accumulated over time. New entrants, lacking established partnerships and data access, may encounter difficulties in integrating into the established industry network and achieving commercial deployment.

Cost Analysis

Labor expenses represent our Group’s major cost component in China’s pan-semiconductor IMSS market. Fluctuation of such expense is considered relatively stable, although salary growth has been slowing down in recent years due to a sluggish job market, it is expected to resume moderate growth in the future in line with the market recovery. The average annual urban salary for employees in private companies within China’s information transmission, software, and IT services industry increased from RMB114.6 thousand in 2021 to RMB128.2 thousand in 2025, reflecting a CAGR of 2.8% from 2021 to 2025, and is expected to reach RMB157.4 thousand in 2030 with a CAGR of 4.2% from 2026 to 2030.