

INDUSTRY OVERVIEW

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OVERVIEW OF GLOBAL INTEGRATED CIRCUITS INDUSTRY

Overview of Development of Integrated Circuits Industry

Integrated circuits, as the core components of electronic systems, play a key role in functions such as computing, storage, control, and communication. By product types, integrated circuits are generally classified into memory chips, logic chips, and analog chips, etc. With the rapid development of AI technology, cloud computing, and intelligent terminals, as well as the advancement of automotive electrification and intelligence, the demand for chips has been continuously growing in multiple terminals and application scenarios, serving as a core driving force for the upgrade and innovation of the global electronics industry.

AI and smart technology upgrades fueling integrated circuit industry expansion

The integrated circuit industry is experiencing massive expansion driven by the explosive demand for AI computing power, automotive advancements, and smart consumer electronics. On the computing front, global shipments of AI servers are projected to jump from 3.2 million units in 2026 to 7.8 million units by 2030, while AI PC shipments are expected to surge from 106.6 million to 268.3 million units within the same period. This exponential growth is accelerating the adoption of CXL interconnect technology and new-generation eSSDs, driving high demand for supporting SPD and VPD chips to resolve critical memory bottlenecks in data centers. Simultaneously, the automotive industry’s shift toward electrification and connectivity is significantly increasing the per-vehicle semiconductor value, relying heavily on memory chips like EEPROM and NOR Flash for systems such as intelligent cockpits and sensor calibration. Furthermore, the integration of AI into consumer electronics is boosting the need for advanced local memory and high-precision lens driver chips to support complex local data processing and intelligent imaging capabilities.

Market Size Analysis of Integrated Circuits Industry

Integrated circuits are the core carrier and data processing hub supporting strategic emerging industries such as artificial intelligence, cloud computing, and smart vehicles. The global market size of integrated circuit showed a fluctuating upward trend from 2021 to 2025. Despite the impact of cyclical supply and demand adjustments in the industry during this period, the overall market size still grew from US\$463.0 billion to US\$679.8 billion, with a CAGR of 10.1% from 2021 to 2025. With the deepening of digital transformation, the explosion in demand for high-performance computing, and the continuous iteration of semiconductor technology, the global market size of integrated circuit is projected to reach US\$1,363.5 billion by 2030, with an expected CAGR of 12.2% from 2026 to 2030.

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Memory chips have become increasingly strategic components within the integrated circuit industry, serving as the foundation for data storage and processing across data centers, automotive, and consumer electronics. As global digitalization expands the scale of data, these chips directly dictate the performance, reliability, and cost of downstream applications. Within this sector, non-volatile memory chips play an indispensable role due to their unique ability to retain data after power loss. Since they are essential for core functions such as system booting, firmware storage, and critical data protection, non-volatile memory chips represent highly valuable segment with significant long-term growth potential as terminal devices continue to increase in complexity.

OVERVIEW OF GLOBAL NON-VOLATILE MEMORY CHIPS INDUSTRY

Definition and Overview

Non-volatile memory chip is a semiconductor memory device that retains stored data even after power outage. It is widely used in scenarios requiring long-term data preservation as the data stored in it will not be lost when the power is off.

By product types, non-volatile memory chips primarily include EEPROM and NOR Flash, among others. EEPROM offers advantages such as power-off data retention, byte-level erasure/programming, low power consumption, high reliability, and long data retention time. EEPROM is mainly used for storing small-scale, frequently modified data in various devices, typically ensuring 1 million erasure/programming cycles and data storage over a 100-year period. NOR Flash, as a code-type flash memory chip, features fast random reading and high reliability. NOR Flash is primarily used for storing code and some medium-to-low capacity data, typically ensuring 100,000 erasure/programming cycles over a 20-year period.

By application scenarios, non-volatile memory chips are mainly used in memory module supporting chips, automotive electronics, consumer electronics, and other segments. Among these use cases, memory module supporting chips are those that provide additional functional support for the memory module. By working in coordination with memory chips, it enhances the performance, stability, and compatibility of memory modules, ensuring the correct storage, reading, and transmission of data.

Among memory module supporting chip applications, the primary products are SPD and VPD. In DDR5 memory modules, in addition to memory chips and interface chips, supporting chips such as SPD, temperature sensor (TS, monitors device temperature) and power management integrated circuit (PMIC, manages power supply and voltage levels) are also required. Among them, the SPD chip contains integrated EEPROM, which is used for storing module information and configuration parameters for various components. With the generational upgrade of DDR and the rapid increase in volume of server memory, demand for SPD chips continues to rise. Furthermore, as cloud computing, AI server, and enterprise storage system capacities accelerate expansion, the demand for VPD chips supporting the new generation of eSSD and CXL modules is in a period of rapid growth. VPD chip is used in storage systems to store product information, configuration parameters, and security authentication data, serving as crucial foundational components for the new generation of eSSD and CXL modules.

Value Chain Analysis of Non-Volatile Memory Chips Industry

The non-volatile memory chip industry chain spans upstream material and equipment supply, midstream design, manufacturing, and packaging & testing of non-volatile memory chips, and downstream applications. Upstream operations rely on essential raw materials like silicon wafers and core fabrication equipment, while the midstream phase focuses heavily on chip design, where the capital-light fabless business model enables companies to concentrate R&D resources on architecture and flexibly utilize professional foundries to rapidly meet market demands. Ultimately, these chips are deployed across downstream sectors such as AI servers, consumer electronics, and automotive electronics, with the automotive segment imposing the strictest design, testing, and

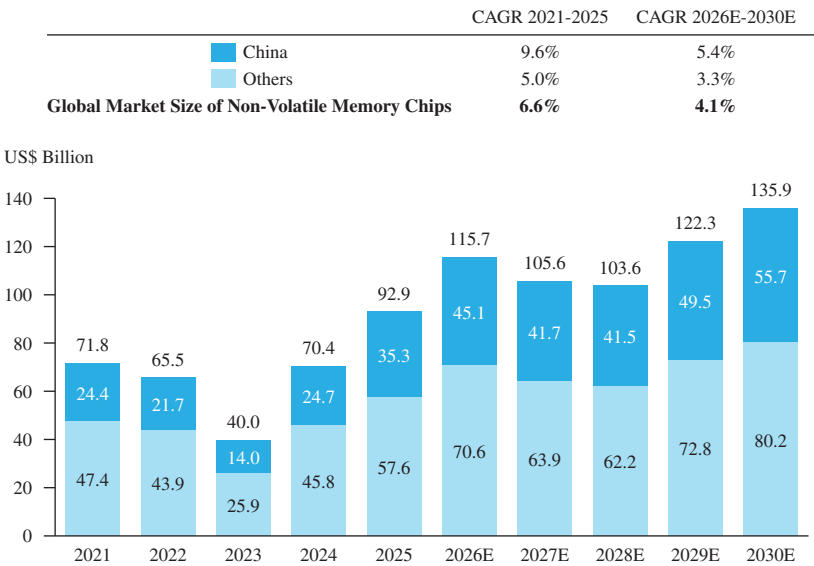
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quality control standards to guarantee high stability and reliability under extreme environmental conditions. Specifically, non-volatile memory chip company’s inventory turnover days are primarily driven by the cyclical demand fluctuations of the consumer electronics and storage markets, compounded by lengthy wafer fabrication lead times and strategic buffer stockpiling during generational technology transitions. Average industry inventory turnover days range from 150 to 300 days.

Market Size Analysis of Non-Volatile Memory Chips Industry

As core hardware that can permanently retain data in a powered-off environment, non-volatile memory chips have become strategic foundational components and data storage cornerstones for the development of key industries such as AI servers, automotive electronics, and consumer electronics. The global market size of non-volatile memory chip decreased from US\$65.5 billion in 2022 to US\$40.0 billion in 2023, primarily due to price declines caused by global overcapacity; subsequently, the market size quickly recovered to US\$92.9 billion in 2025, with a CAGR of 6.6% from 2021 to 2025. With the explosive growth in downstream markets such as AI servers, AI PCs, automotive electronics, and consumer electronics, the global market size of non-volatile memory chip is projected to reach US\$135.9 billion by 2030. Due to its high sensitivity to supply-demand dynamics and clear technological iteration rhythm, non-volatile memory chips exhibit distinct cyclical, with a cycle typically spanning three to five years. This is mainly attributed to the high concentration on the supply side as the non-volatile memory chips were dominated by a few global large players. Over the long term, the industry is likely to follow a rising trend with cyclical fluctuations.

Global Market Size of Non-Volatile Memory Chip, 2021-2030E



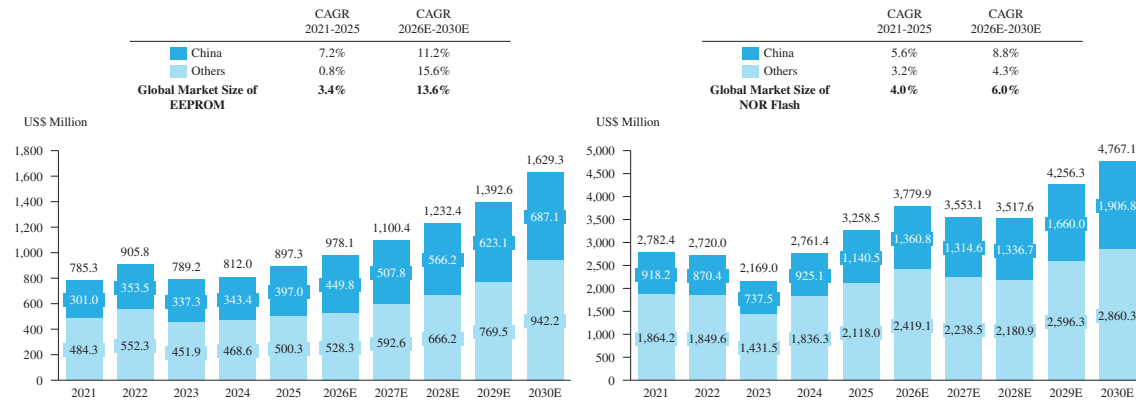
Sources: World Semiconductor Trade Statistics Organization, SEMI, Frost & Sullivan

Both EEPROM and NOR Flash, as core categories of non-volatile memory chips, play indispensable roles in critical applications such as automotive electronics, artificial intelligence and consumer electronics. The former enables flexible byte-level erasure/programming and high reliability for device parameter storage, while the latter, with its fast read speed and execute-in-place (XIP) capability, carries system boot code. The market size of EEPROM chips grew from US\$785.3 million in 2021 to US\$897.3 million in 2025, with a CAGR of 3.4%. The market size of NOR Flash chips grew from US\$2,782.4 million in 2021 to US\$3,258.5 million in 2025, with a CAGR of 4.0%. As the overall market for non-volatile memory chips grows steadily, the market size

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of EEPROM and NOR Flash chips are projected to reach US\$1,629.3 million and US\$4,767.1 million, respectively, by 2030. NOR Flash chips market will experience cyclical fluctuations in the future primarily due to the recurring misalignment between supply capacity, which is increasingly constrained by the semiconductor industry’s prioritization of emerging AI components, and the volatile inventory correction cycles typical of the consumer electronics and automotive end-markets.

Global Market Size of EEPROM and NOR Flash, 2021-2030E



Sources: World Semiconductor Trade Statistics Organization, SEMI, Frost & Sullivan

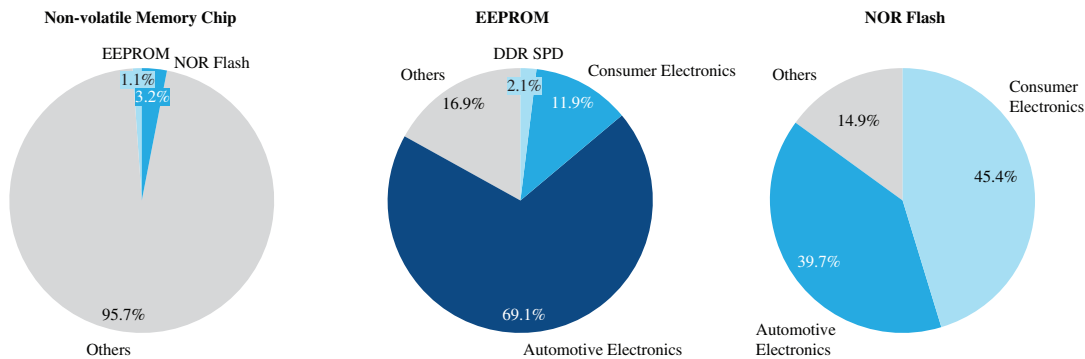
Consumer electronics EEPROM and automotive electronics EEPROM, as core non-volatile storage solutions in specific application scenarios, hold important positions in their respective segments. The former is widely used in various consumer terminals due to its flexible parameter configuration capability, while the latter supports the real-time response of automotive intelligent systems with better environmental adaptability and higher product stability. Due to the gradual slowdown in global consumer electronics sales in recent years, the market size of consumer electronics EEPROM has seen a decline. Benefiting from the explosive growth of new energy vehicles, the market size of automotive electronics EEPROM grew rapidly from US\$367.4 million in 2021 to US\$457.4 million in 2025, with a CAGR of 5.6%. As downstream application demand recovers and upgrades, the market sizes of consumer electronics EEPROM and automotive electronics EEPROM are projected to reach US\$135.2 million and US\$743.7 million, respectively, by 2030.

DDR5 SPD, as the core configuration chip for the new generation of memory modules, ensures high-speed, stable communication in memory systems with its integrated serial presence detect functionality and high-precision temperature sensor, playing an indispensable role in critical applications such as data centers, high-performance computing, and personal computers. The global market size of DDR5 SPD chip surged from US\$1.3 million in 2021 to US\$157.1 million in 2025, completing the leap from initial commercialization to large-scale application. As DDR5 memory penetration continues to increase and storage technology iterates, the market size of DDR5 SPD chip is projected to reach US\$505.6 million by 2030, with an expected CAGR of 29.0% from 2026 to 2030.

Within China’s overall non-volatile memory chip market, EEPROM and NOR Flash accounted for 1.1% and 3.2% of the whole market by revenue in 2025. In terms of specific application fields, market share of automotive electronics and consumer electronics segment in the EEPROM market in China by revenue reached 69.1% and 11.9% in 2025, whereas that of NOR Flash accounted for 45.4% and 39.7%.

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Breakdown of the Market Size of Non-volatile Memory Chip, EEPROM and NOR Flash by Revenue in China in 2025



Sources: World Semiconductor Trade Statistics Organization, SEMI, Frost & Sullivan

Market Drivers and Development Trends Analysis of Global Non-Volatile Memory Chips Industry

Development of AI servers, AI PCs, and eSSDs driving demand growth

The rapid development of AI computing power and large model training is driving profound changes in underlying hardware architecture, prompting significant increases in server memory configuration and accelerating demand for DDR5 memory modules and their supporting chips, such as SPD, etc. Furthermore, with the explosive growth in global data processing volumes, the rapid iteration of eSSDs will further unleash the enormous market potential for supporting VPD chips.

- AI server memory configuration upgrade:** With the sharp increase in parameters of large language models, computing systems face urgent demand for memory bandwidth and capacity. To match computing power, mainstream AI servers typically need to deploy over 20 DDR5 memory modules, a configuration density far exceeding that of traditional general-purpose servers. Meanwhile, global shipments of AI server are projected to surge from 3.2 million units in 2026 to 7.8 million units in 2030, with a CAGR of 25.0% during this period. This architectural shift greatly boosts demand for SPD chips and other supporting chips. DDR5 SPD and related supporting chips need to handle more complex temperature control and configuration tasks. Combined with the substantial increase in usage volume, the value contribution per server is experiencing a multiple-fold increase.
- High-end PCs and thin & light laptops driving new demand:** The realization of the AI PC concept is reshaping the consumer electronics market. As major processor manufacturers launch processors integrated with NPUs, AI PC penetration is expected to rise rapidly, driving a replacement wave for high-capacity memory. Global AI PC shipments are projected to grow from 106.6 million units in 2026 to 268.3 million units in 2030, with penetration increasing sharply from 42.0% in 2026 to 85.0% in 2030. As an innovative form in the DDR5 era, the LPCAMM/LPCAMM2 memory modules, with its compact size, low-power consumption, and detachable nature, is gradually replacing on-board LPDDR5X memory. Unlike on-board LPDDR5X memory solutions, each LPCAMM/LPCAMM2 module must be equipped with one SPD chip and one PMIC chip, opening up a brand-new pure incremental space for the supporting chips.
- eSSD demand growth driving VPD chips:** As cloud computing providers, AI server clusters, and enterprise storage systems accelerate capacity expansion, to ensure power supply stability and security for stored data under high loads, the demand for VPD chips

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supporting eSSD and CXL modules, as critical protective components, will also maintain a high-speed expansion synchronized with eSSD shipments. Global shipment of AI eSSD is projected to grow exponentially from approximately 130EB in 2026 to 650EB in 2030, with a CAGR of 49.5% during this period.

Rapid development of automotive electronics driving demand for automotive-grade memory chips

The trends of automotive electrification, intelligence, and connectivity, especially the evolution of vehicle electronic and electrical architecture towards domain control and zonal control, have triggered a structural leap in demand for in-vehicle memory chips. This transformation has significantly increased the demand for highly reliable memory in in-vehicle electronic systems, driving the continuous expansion of the market size for automotive-grade EEPROM and NOR Flash. The rapid adoption of new energy vehicles and intelligent cockpits provides a broad market space for the development of automotive-grade memory.

- **New energy vehicle sales growth driving market expansion:** Global new energy vehicle sales are projected to grow from 28.3 million units in 2026 to 44.3 million units in 2030, with a CAGR of 11.9% during this period. As new energy vehicle sales rise rapidly, the deployment of memory chips per vehicle is expanding from a few key nodes to multiple domains and nodes. This directly drives a substantial increase in the loading of memory chips in core units including the new energy three-electric system (motor, battery, and electronic control), chassis & transmission, body control systems, and visual perception.
- **Intelligent cockpit and autonomous driving applications increasing chip demand per vehicle:** The high-performance development of autonomous driving domain controllers and intelligent cockpits continuously increases the demand for highly reliable memory. For example, the number of EEPROM chips required per vehicle has increased from approximately 10-15 in traditional fuel vehicles to approximately 30-40 in new energy vehicles. Furthermore, with the upgrade of ADAS visual perception systems, the number of in-vehicle camera modules continues to grow, further boosting the usage of chips like EEPROM and NOR Flash in the perception layer.
- **High-standard technical threshold:** Automotive electronics impose extremely high requirements on chip reliability and anti-interference capability. Automotive-grade memory chips need to comply with the AEC-Q100 standard (a qualification standard for ICs that tests automotive safety and durability requirements under extreme conditions), meeting requirements for wide temperature range adaptability and extremely low failure rates. As certification cycles last long, this stringent entry mechanism creates deep technical barriers for manufacturers with mature mass-production capabilities and high-quality products, establishing a long-term, stable growth space.

Intelligent terminals upgrade driving expansion of demand for non-volatile memory

As consumer electronic products evolve towards comprehensive intelligence and connectivity, and the deployment of AI large models at the edge reshapes hardware architecture, this trend strongly drives explosive demand for medium and small capacity non-volatile memory chips like EEPROM and NOR Flash. Emerging lightweight intelligent hardware is not only growing exponentially in quantity but also continuously diversifying in functionality, greatly expanding the market boundaries for small-capacity memory in the non-volatile memory chip field.

- **AI intelligent terminals driving demand upgrades:** With the accelerated deployment of new categories such as AI smartphones, AI PCs, and AI glasses, running on-device AI models imposes higher requirements on hardware performance. Among them, global AI smartphone shipments are projected to grow from 550.3 million units in 2026 to 1,184.3 million units in 2030, with a CAGR of 21.1% during this period. To support more

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complex system booting code, faster wake-up speeds, and real-time recording of massive sensor data, systems demand higher data throughput, erasure/programming endurance, and ultra-low power consumption performance from memory chips. This has directly driven up the demand of high-stability EEPROM and high-capacity NOR Flash in high-end terminals.

- **Growth in wearables and lightweight devices:** Miniaturized devices like smartwatches, handheld gimbals and various smart home sensors are witnessing a wave of popularity. Among them, global wearables shipments are projected to grow from 582.1 million units in 2026 to 801.8 million units in 2030, with a CAGR of 8.3% during this period. Such devices are tiny in size and highly sensitive to power consumption, thus creating enormous rigid demands for small-capacity memory chips with small packaging, low voltage, and high reliability. In particular, the iteration of segments like smartwatches, handheld gimbals and fitness wristbands has multiplied the storage capacity per device, opening up a vast market space for memory chip manufacturers.
- **Diversification of consumer electronics ecosystem:** Application scenarios for consumer electronics are expanding from single scenarios to a diversified ecosystem. Functions such as secure authentication for mobile payments, data logging for all-weather health monitoring, and local command libraries for AI voice assistants all rely on high-performance storage media. The richness of such ecosystem requires memory chips to possess advanced features like hardware-level encryption, further driving specification upgrades and increased demand for memory chips.

Competitive Landscape of Global Non-Volatile Memory Chips Industry

The global EEPROM market is relatively concentrated. In terms of revenue in 2025, in the global EEPROM market, the Company is the third-largest EEPROM supplier worldwide and the largest China-based EEPROM supplier.

Competitive Landscape of Global EEPROM by Revenue in 2025

Ranking	Company Name	Revenue (US\$ Million)	Market Share
1	Company A	300.0	33.4%
2	Company B	145.0	16.2%
3	The Company	133.1	14.8%
Top 3		578.1	64.4%

Sources: World Semiconductor Trade Statistics Organization, SEMI, Frost & Sullivan

In the consumer electronics segment, the Company also holds the global leading position in both consumer electronics camera module EEPROM and consumer electronics LCD panel EEPROM markets with shares of 40.4% and 20.0%, respectively. Furthermore, in the global automotive electronics EEPROM segment, the Company ranked as the third-largest automotive electronics EEPROM supplier globally and the largest China-based automotive electronics EEPROM supplier. Through long-term dedication to the consumer electronics and automotive electronics segments, the Company has achieved a leading presence across multiple application sectors.

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Global Market Ranking of Consumer Electronics Camera Module EEPROM in 2025

Ranking	Company Name	Revenue (US\$ Million)	Market Share
1	The Company	28.8	40.4%
2	Company C	18.0	25.2%
3	Company D	6.0	8.4%
Top 3		52.8	74.1%

Global Market Ranking of Consumer Electronics LCD Panel EEPROM in 2025

Ranking	Company Name	Revenue (US\$ Million)	Market Share
1	The Company	4.4	20.0%
2	Company A	4.0	18.1%
3	Company C	2.0	9.0%
Top 3		10.4	47.1%

Global Market Ranking of Automotive Electronics EEPROM in 2025

Ranking	Company Name	Revenue (US\$ Million)	Market Share
1	Company A	220.0	48.1%
2	Company B	120.0	26.2%
3	The Company	21.3	4.7%
Top 3		361.3	79.0%

Sources: World Semiconductor Trade Statistics Organization, SEMI, Frost & Sullivan

Globally, there are currently two suppliers capable of providing SPD chips supporting DDR5 memory modules on a large scale. Among them, as the core market participant, the Company held a market share of over 40% by revenue in 2025. Moreover, in the market of global SPD chips supporting DDR memory modules, the Company also held a market share of approximately 40% by revenue in 2025. With the explosion in demand for DDR5 memory modules from AI servers and the penetration of DDR5 in the PC segment, this market is expected to achieve robust growth.

Global Market Ranking of SPD DDR Chip Markets in 2025

Ranking	Company Name	Revenue (US\$ Million)	Market Share
1	Company E	94.7	56.9%
2	The Company	66.6	40.1%
Top 2		161.3	97.0%

Global Market Ranking of SPD DDR5 Chip Market in 2025

Ranking	Company Name	Revenue (US\$ Million)	Market Share
1	Company E	93.5	59.5%
2	The Company	63.6	40.5%
Top 2		157.1	100.0%

Notes:

- SPD chip markets are highly concentrated, with other participants holding minor market share.
- Company A, founded in 1987 and headquartered in Switzerland, is listed on the New York Stock Exchange, Euronext Paris, and Borsa Italiana. It is primarily engaged in the design, R&D, manufacturing, and sales of semiconductors and related solutions, with products widely used in automotive electronics, industrial control, communications, and IoT, among other fields.
- Company B, founded in 1989 and headquartered in the United States, is listed on the NASDAQ. It is primarily engaged in the design, R&D, manufacturing, and sales of microcontrollers, analog chips, memory, and related embedded control solutions, with products widely used in automotive electronics, communications, consumer electronics, and IoT, among other fields.
- Company C, founded in 2016 and headquartered in China, is listed on the Shanghai Stock Exchange. It is primarily engaged in the R&D, design, and sales of non-volatile memory and related embedded storage solutions, focusing on application scenarios such as consumer electronics, industrial control, and IoT.

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5. Company D, founded in 1998 and headquartered in China, is listed on the Hong Kong Stock Exchange and Shanghai Stock Exchange. It is primarily engaged in the design, development, and sales of integrated circuits, with its products widely used in sectors such as financial security, government public services, Internet of Things, and industrial control.
6. Company E, founded in 2002 and headquartered in Japan, is listed on the Tokyo Stock Exchange. It is primarily engaged in the design and manufacturing of semiconductor solutions, with its products widely used in sectors such as automotive, industrial, infrastructure, and the Internet of Things.

OVERVIEW OF GLOBAL LENS DRIVER CHIPS INDUSTRY

Definition and Overview

Lens driver chips are a class of motor driver integrated circuits that control camera motor movement to enable auto-focus (AF) and optical image stabilization (OIS). They are widely used in consumer electronics, security and surveillance equipment, handheld gimbals, and other imaging-related fields. Lens driver chips can be categorized into open-loop, closed-loop, and OIS lens driver chips. Open-loop lens driver chips control motor movement based on image signal processing without position feedback, suitable for cost-sensitive applications with lower focusing requirements. Closed-loop lens driver chips enable real-time adjustment and are widely used in mid-to-high-end devices. OIS lens driver chips compensate for lens displacement caused by vibration, and are mainly applied in devices requiring high imaging performance.

Value Chain Analysis of Lens Driver Chips Industry

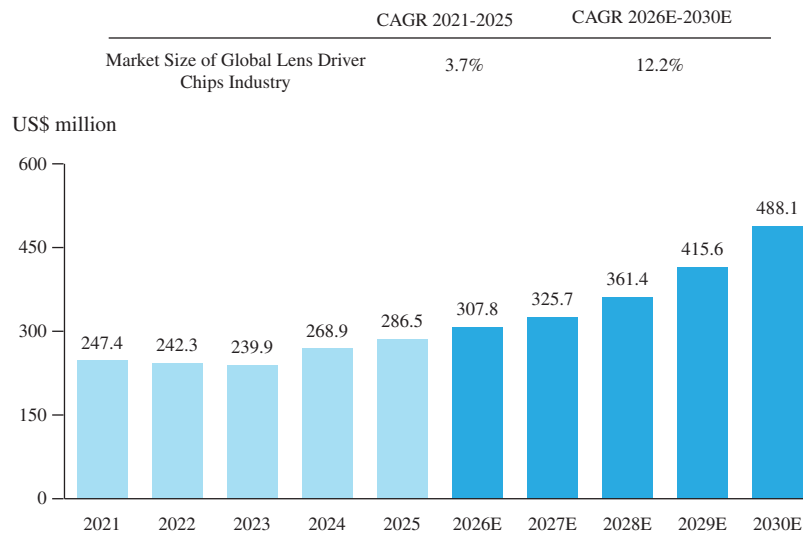
The value chain of lens driver chips industry can be divided into three segments: upstream raw materials and manufacturing equipment, midstream chip design and manufacturing, and downstream end-use applications. The upstream segment mainly includes semiconductor materials and manufacturing equipment, providing foundational support for the R&D and production of lens driver chips. The midstream segment, which encompasses the design, manufacturing, and packaging & testing of lens driver chips, is the core value-creating segment of the value chain. It involves key technologies such as precision current driving and motor control algorithms, while requiring strong capabilities in miniaturization, yield control, and mass production. The downstream segment includes smartphones, smart wearable devices, and other imaging equipment manufacturers. As imaging performance requirements continue to rise, downstream customers are placing increasing demands on lens driver chips in terms of precision, response speed, power consumption, size, and reliability.

Market Size Analysis of Global Lens Driver Chips Industry

Benefiting from the continuous improvement in terminal imaging demands and the diversified expansion of application scenarios, the application of lens driver chips in core areas such as smartphone imaging systems and high-end security is deepening. The market size of global lens driver chips industry grew steadily from US\$247.4 million in 2021 to US\$286.5 million in 2025, with a CAGR of 3.7% from 2021 to 2025. As mobile terminals continue to raise requirements for imaging quality, the market size of global lens driver chips industry is projected to grow to US\$488.1 million by 2030, with an expected CAGR of 12.2% from 2026 to 2030.

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Market Size of Global Lens Driver Chips Industry, 2021-2030E



Sources: World Semiconductor Trade Statistics Organization, SEMI, Frost & Sullivan

Market Drivers and Development Trends Analysis of Global Lens Driver Chips Industry

Smartphone imaging performance upgrades driving demand for high-precision, high-stability lens driver chips

The continuous evolution of the imaging system of smartphones, which is one of the most significant downstream application scenarios for lens driver chips, is a core factor driving the increasing performance demands for lens driver chips. From 2021 to 2025, the share of global high-end smartphones in total smartphone shipments grew from 23.6% to 28.2%, and is projected to further increase to 30.8% by 2030, providing market space for the large-scale application of closed-loop and OIS lens driver chips.

Emerging applications driving industry growth

The application scenarios for lens driver chips are expanding into diversified new devices such as action cameras, smartwatches, XR devices, AI glasses, and in-vehicle cameras, driving industry growth. As AI glasses and XR devices gradually enter the stage of large-scale production, the shipments are projected to reach 81.7 million units by 2030, with a CAGR of approximately 25.9% from 2026 to 2030, providing new medium-to-long-term incremental demand for lens driver chips. Simultaneously, constrained by battery capacity, device size, and heat dissipation conditions, smartwatches impose more stringent requirements on the ultra-low power consumption operation capability and high integration of lens driver chips, pushing products towards lower power consumption and miniaturization. In addition, as security & surveillance systems evolve towards higher resolution and more demanding shooting conditions, increasing requirements for imaging stability in low-light and vibration scenarios are driving the adoption of OIS solutions.

Product integration and diversification of driving technology requirements

Lens driver chips are increasingly evolving towards higher integration and diversified driving technologies. Initially, chips are integrating multiple functions such as AF and OIS control, improving system coordination, reducing signal delay, and enhancing overall imaging performance.

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Meanwhile, the integration of functional-level modules has been further deepened. Integrated solutions combine EEPROM and lens driving functions into a single chip, further increasing technical complexity and value-added of lens driver chips.

Competitive Landscape of Global Lens Driver Chip Industry

In 2025, the competitive landscape of the global lens driver chip market was relatively concentrated. In the open-loop lens driver chip market, the top three companies accounted for 42.3% of the market share by revenue. Among them, the Company ranked first in the industry with a 18.2% market share.

Competitive Landscape of Global Open-Loop Lens Driver Chips Market by Revenue in 2025

Ranking	Company Name	Revenue (US\$ Million)	Market Share
1	The Company	12.8	18.2%
2	Company F	12.0	17.0%
3	Company C	5.0	7.1%
Top 3		29.8	42.3%

Sources: World Semiconductor Trade Statistics Organization, SEMI, Frost & Sullivan

Notes:

1. Company F, founded in 2006 and headquartered in Seoul, Korea, is listed on the KOSDAQ. It primarily focuses on the analog semiconductor field, engaged in the R&D and manufacture of products such as auto-focus driver chips, optical image stabilization driver chips, and haptic feedback chips.

ANALYSIS OF ENTRY BARRIERS

The integrated circuit industry exhibits high entry barriers across multiple dimensions. Technologically, it requires long-term accumulation in chip design, algorithm optimization, and system-level validation to meet stringent performance and reliability standards. In terms of industrial chain collaboration, leading players benefit from stable upstream capacity support and deep co-development relationships with downstream customers. Meanwhile, high customer validation thresholds and strong switching costs create significant customer stickiness. In addition, the industry relies on scarce interdisciplinary talent and sustained capital investment, making it difficult for new entrants to establish competitive capabilities within a short timeframe.

ANALYSIS OF RAW MATERIALS

In 2021, the average selling price (ASP) of 8-inch silicon wafers stood at RMB2,903.2 per wafer. In 2022, fueled by industry-wide capacity tightness and robust downstream demand, the price surged to a cyclical peak of RMB4,035.7 per wafer. From 2023 to 2024, amid the semiconductor industry’s inventory destocking cycle and a phased moderation in consumer market demand, prices trended downward consecutively, dropping to RMB3,418.4 per wafer in 2024. In 2025, prices bottomed out and rebounded, with the ASP edging up slightly to RMB3,488.5 per wafer. Since 2026, underpinned by the normalization of supply chain inventory levels and robust incremental demand from emerging sectors such as AI and automotive-grade chips, prices have maintained a steady upward trajectory. Alumina ceramic substrates are one of the major raw materials used in packaging materials, particularly in power semiconductor packaging and electronic insulation

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applications. Its pricing varies significantly depending on factors such as alumina purity, thermal conductivity, and dimensional precision. From 2021 to 2025, the price of alumina ceramic substrates increased steadily from approximately RMB6.7 thousand per unit to around RMB7.0 thousand per unit, primarily driven by rising raw material costs and growing demand from AI-related electronics.

Leading companies have effectively mitigated the impact of raw material price volatility on costs by establishing long-term strategic partnerships with leading foundries, optimizing multi-source supply chain management, and continuously iterating process nodes to shrink die sizes, thereby providing a more controllable and stable cost environment for business operations.

SOURCE OF INFORMATION

We commissioned Frost & Sullivan to conduct market research on the global integrated circuit industry, the global non-volatile memory chip industry, and the global lens driver chip industry, and to prepare the Frost & Sullivan Report. Frost & Sullivan is an independent global consulting firm founded in New York in 1961, providing industry research and market strategies. We have entered into an agreement to pay Frost & Sullivan RMB700,000 for the preparation of the Frost & Sullivan Report.

In preparing the Frost & Sullivan Report, Frost & Sullivan conducted detailed primary research, including discussions with several leading industry participants regarding industry conditions and interviews with relevant individuals. Frost & Sullivan also conducted secondary research, including reviewing company reports, independent research reports, and data from its own research database. Frost & Sullivan derived the estimated statistics of total market size based on historical data analysis incorporating macroeconomic data, taking into account the aforementioned main industry drivers. Its market engineering forecast methodology combines multiple forecasting techniques with a system based on market engineering measurements and relies on the expertise of the analyst team to integrate the key market elements investigated during the project research phase. Such elements primarily include expert opinion forecasting methods, integration of market drivers and constraints, integration of market challenges, integration of market engineering measurement trends, and integration of econometric variables.

The Frost & Sullivan Report was prepared based on the following assumptions: (i) the social, economic, and political environments globally and in Chinese mainland are likely to remain stable during the forecast period; and (ii) the key relevant industry drivers may drive the market during the forecast period.

This section and other chapters of the document excerpt portions of information from the Frost & Sullivan Report, aiming to provide potential [REDACTED] with a more comprehensive introduction to the industry in which we operate. The Directors confirm that, to the best of their knowledge and after making reasonable enquiries, there have been no material adverse changes in overall market information since the date of the release of the Frost & Sullivan Report, which are sufficient to make material corrections, contradict or have an impact on such information.