

INDUSTRY OVERVIEW

The information and statistics set out in this section and other sections of this document were extracted from the report prepared by Frost & Sullivan, which was commissioned by us, and from various official government publications and other publicly available publications. We engaged Frost & Sullivan to prepare the F&S Report, an independent industry report, in connection with the [REDACTED]. We believe that these sources are appropriate sources for such information and statistics and reasonable care has been exercised by us in selecting and identifying the named information sources, compiling, extracting and reproducing the information, and ensuring no material omission of the information. The information from official government sources has not been independently verified by us, the Sole Sponsor, [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED] or any of our or their respective directors, senior management, representatives or any other person involved in the [REDACTED] and no representation is given as to its accuracy.

SOURCE OF INFORMATION

We engaged Frost & Sullivan, an independent market research consultant, to conduct an analysis of, and to prepare the F&S Report about, the display chip, and sensing-control chip market. 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. In connection with the market research services provided, we have paid a fee of RMB500,000 to Frost & Sullivan, which we believe to be consistent with market rates.

In compiling and preparing the F&S Report, Frost & Sullivan conducted (1) primary research includes interviewing industry participants, competitors, downstream customers and recognized third-party industry associations; and (2) secondary research includes reviewing corporate annual reports, databases of relevant official authorities, as well as the exclusive database established by Frost & Sullivan over the past decades. The market projections in the F&S Report are based on the following key assumptions during the forecast period: (i) the social, economic and political conditions in Chinese markets discussed will remain stable during the forecast period, (ii) government policies on China display chip and sensing-control chip market will remain consistent during the forecast period, and (iii) display chip and sensing-control chip market will be driven by the factors which are stated in the F&S Report.

All the data and forecasts contained in this section are derived from the F&S Report. The commissioned report has been prepared by Frost & Sullivan independently without the influence from the Company or other interested parties. Our Directors confirm that, to the best of their knowledge, after making reasonable inquiries, there is no material and adverse change in the market information since the date of the F&S Report, which may qualify, contradict or have an impact on the information in this section.

OVERVIEW OF THE SEMICONDUCTOR CHIP INDUSTRY

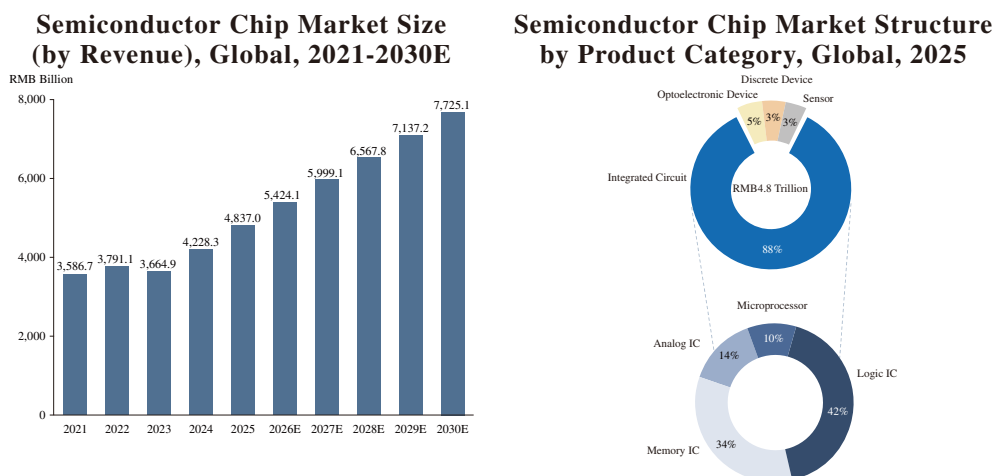
Classification and Market Overview of the Semiconductor Chip Industry

Driven by continued technological iteration and advancement across the electronics industry, the global semiconductor chip market has maintained steady expansion, with market size increasing from RMB3.6 trillion in 2021 to RMB4.8 trillion in 2025. Looking ahead, the global semiconductor chip market is expected to continue expanding, supported by rising demand for high-performance electronic components and systems across consumer electronics, automotive, robot and industrial applications. The market is forecast to reach RMB7.7 trillion by 2030, representing a CAGR of 9.2% from 2026 to 2030.

From the perspective of functional positioning, semiconductor chips are generally classified into four major categories: ICs, optoelectronic devices, discrete devices and sensors. Among these, ICs perform critical functions including information processing and transmission, computational control, data storage and power management, forming the technological backbone of intelligent and high-performance electronic systems. In 2025, integrated circuits accounted for approximately 88% of the global semiconductor market. ICs are further categorised into logic ICs, analog ICs, memory ICs and microprocessors. The display chip market and sensing-control chip market in which the Company

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operates are mainly positioned within the ICs and sensors. Within the display chip market, scalers and STDI are classified as microprocessors, with TDDI falling under analog ICs, while touch ICs and TMCU products within the sensing-control chip market are classified as sensors and microprocessors, respectively.



Source: Frost & Sullivan, Semiconductor Industry Association, World Semiconductor Trade Statistics

DISPLAY CHIP INDUSTRY ANALYSIS

Definition and Classification of Display Chips

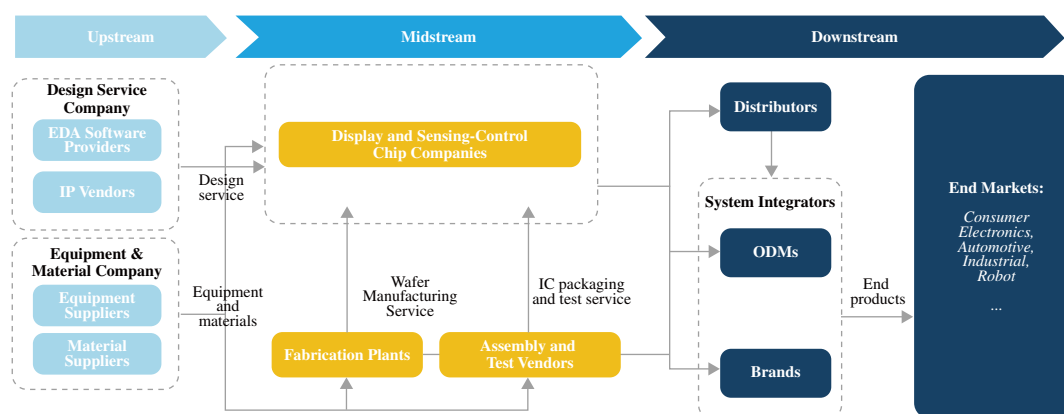
Display chips are the core control and processing units within display systems, responsible for receiving, processing and outputting image signals, driving display panels to complete image rendering, and connecting upstream image-signal sources with downstream display modules. As terminal display resolutions improve and device form factors diversify, display chips have undertaken increasing image-computing and control tasks within system architectures, becoming a key foundation for enhancing display performance and user experience. Functionally, they mainly include scaler chips, display driver chips and other display chips: scaler chips handle video-signal parsing, scaling and optimization to provide high-quality image input; display driver chips convert digital signals into voltage or current signals to drive pixels and enable image visualization; and other display chips, such as TCON, local dimming chips and SerDes, perform auxiliary functions including signal coordination and transmission optimization. In 2025, the global display chip market exceeded RMB100 billion, becoming a key support for the intelligent development of consumer electronics, automotive, robot and industrial sectors.

Display Chip Industry Value Chain

The value chain of display chips consists of upstream, midstream and downstream segments. The upstream segment includes suppliers of EDA tools, equipment and materials supporting chip design and manufacturing. The midstream segment comprises display chip companies focusing on design and sales while outsourcing manufacturing and packaging and testing to foundries and OSAT providers. The downstream segment includes distributors, system integrators and terminal-brand manufacturers that bring products to diverse end applications.

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Display Chip Industry Value Chain



Source: Frost & Sullivan, Semiconductor Industry Association, World Semiconductor Trade Statistics

Classification and Applications of Scalers

Scalers are critical units in smart display systems that receive, process and output image signals, enabling high-quality rendering and visual optimization. Through format conversion, scaling and image-quality adjustment, they support precise display control and adaptive content presentation.

Based on downstream applications, scalers are classified into traditional scalers for LCD modules and emerging scalers for OLED, Mini LED and other new display devices. In addition, based on how display-control functions are implemented at the chip level, scalers are generally classified into ASIC scalers and FPGA scalers. ASIC scalers implement core display-control and display-processing functions as fixed-function, application-specific hardware logic at the chip design stage. Key functions such as scaling, signal conversion, image processing and timing control are hardwired into dedicated circuits, allowing the overall chip architecture, data paths and resource allocation to be optimised from the outset for display-control applications. In contrast, FPGA scalers are developed based on a general-purpose, reconfigurable logic architecture. Rather than being designed specifically for display control, FPGA devices rely on programmable logic resources that are configured after fabrication to realise scaler functions alongside other potential applications. Compared with general-purpose FPGA architectures, ASIC scalers deliver higher efficiency and performance due to their purpose-built design, offering faster processing speed, lower power consumption, greater stability and lower mass-production costs. As a result, the market share of ASIC scalers is expected to continue increasing.

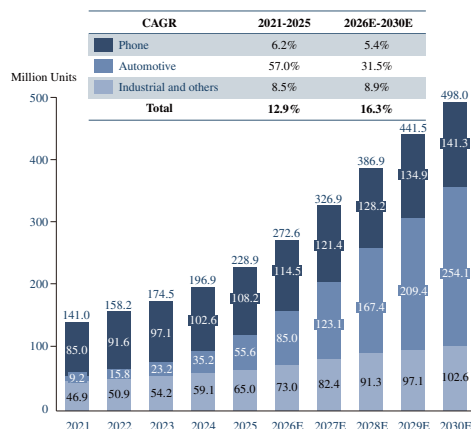
Market Size of Scalers

From a market-size perspective, the global scaler market has continued to grow, driven by emerging display technologies and the expansion of the smartphone repair market. Shipments increased from 141.0 million units in 2021 to 228.9 million units in 2025, and are expected to reach 498.0 million units in 2030 amid ongoing display upgrades. Over the same period, the market share of ASIC scalers is projected to rise from 37.6% to 45.7%.

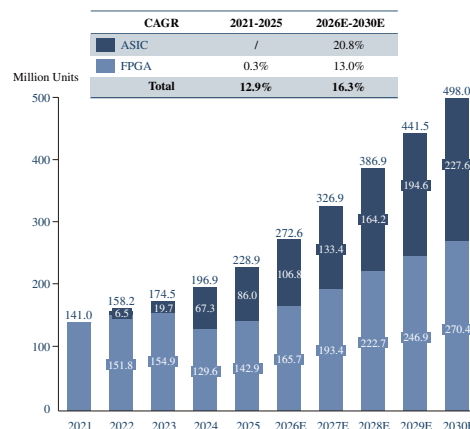
From the perspective of downstream applications, demand for scalers mainly comes from smartphones, automotive and other sectors. In smartphones, scalers are primarily used in the aftermarket repair and refurbishment segment for signal-protocol conversion across different screen models, with shipments expected to increase from 108.2 million units in 2025 to 141.3 million units in 2030. In automotive applications, driven by the adoption of smart cockpits and multi-screen display systems, shipments are projected to rise from 55.6 million units to 254.1 million units over the same period. In industrial and other fields, including industrial displays and projectors, shipments are expected to grow from 65.0 million units in 2025 to 102.6 million units in 2030.

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**Global Scaler Market Size
(by Shipments), by Downstream Application,
2021-2030E**



**Global Scaler market Size
(by Shipments), by Product Category,
2021-2030E**



Source: Frost & Sullivan, Semiconductor Industry Association, World Semiconductor Trade Statistics

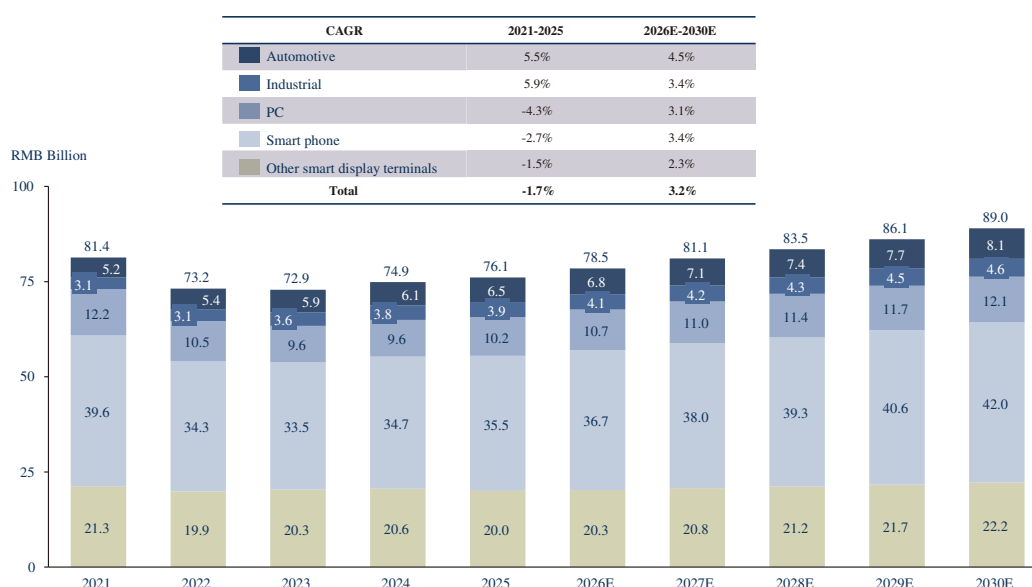
Market Overview of Display Driver Chips

Display driver chips convert control signals into pixel-driving signals, enabling final image output and determining display quality through precise voltage and current control. Based on their architectural design and level of functional integration, display driver chips can generally be classified into DDIC, TDDI and STDI. DDIC represents the conventional display-driving chip products and is broadly applied in terminals requiring display functions, including smartphones, PCs, automotive display systems and industrial devices. TDDI adopts an architecture that integrates display-driving and touch-sensing functions within a single chip and is primarily used in smart display devices requiring touch interaction, thereby helping downstream terminal manufacturers reduce system complexity, save board space and improve power efficiency as compared with discrete-chip products. STDI, by contrast, is designed under a more highly integrated architecture that combines display-driving, touch-sensing, scaler and certain image-processing functions within a single-chip products, and is primarily applied in intelligent display terminals requiring display, touch and image-processing capabilities, including smartphones, automotive display systems and other small-sized smart terminal devices. As smart display terminal devices continue to evolve toward thinner and lighter form factors, higher integration, lower power consumption and better display performance, downstream demand is increasingly shifting toward more integrated display driver chip products, which is expected to support the gradual penetration of TDDI and STDI in relevant application scenarios over time.

From a market perspective, the global display driver chip market reached RMB76.1 billion in 2025 and is expected to grow at a CAGR of 3.2% from 2026 to 2030, reaching RMB89.0 billion, supported by AI integration and ongoing display upgrades. From a downstream application perspective, smartphones remain the largest end market for display driver chips, with market size expected to reach RMB42.0 billion by 2030. Automotive is emerging as a key growth segment, driven by increasing display penetration and screen upgrades in vehicles, and is projected to grow at a CAGR of 4.5% from 2026 to 2030, reaching RMB8.1 billion by 2030. Meanwhile, the industrial segment is also expected to expand steadily, supported by broader applications in industrial control and display systems, and is projected to grow at a CAGR of 3.4% over the same period, reaching RMB4.6 billion by 2030.

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Global Display Driver Chips Market Size (by Revenue), 2021-2030E



Source: Frost & Sullivan, the Society for Information Display

Development Trends of the Display Chip Industry

- Advancement in display performance and integration.** Display technologies are evolving toward higher resolution, higher refresh rates and lower power consumption, driving improvements in image quality and energy efficiency. In response, scaler chips continue to enhance signal decoding and image optimization capabilities, while TDDI is progressing toward STDI architectures that integrate display, touch and image-processing functions into a single chip. Higher integration improves coordination, reduces space and power consumption, and increases design flexibility for smartphones, wearable devices and in-vehicle displays.
- Enhancement of intelligent capabilities and user experience.** Display chips are becoming more intelligent through embedded AI and algorithm optimization, enabling content recognition and adaptive adjustment. By integrating video and touch signals more deeply, they improve interaction responsiveness and visual immersion, supporting overall upgrades in display performance, energy efficiency and user experience.

Driving Factors of the Display Chip Industry

- Demand growth driven by rising terminal shipments and increasing per-device chip content.** Demand for display chips and sensing-control chips increases as a result of rising terminal device shipments and higher chip usage per device. On the one hand, growth in terminal device shipments directly drives demand, supported by expanding replacement demand as existing products undergo performance upgrades, as well as incremental demand generated by the penetration of emerging terminal products that were previously absent or limited in scale. On the other hand, demand is further driven by increasing chip usage per device: as display demand and sensing-control demand rise, terminal products that previously did not require display or sensing-control functions increasingly incorporate such functions, and as devices become more intelligent, they integrate more screens, interfaces and sensing capabilities, resulting in higher per-device usage of display chips and sensing-control chips.
- Market upgrading and product-value enhancement driven by AMOLED penetration, display-technology iteration and architectural upgrades.** The penetration rate of AMOLED displays increased from 3.9% in 2021 to 8.2% in 2025, and is expected to reach 17.5% by 2030. The continued penetration of AMOLED displays is driving demand growth for display chips through both performance upgrading and application expansion. Compared with traditional

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LCD displays, AMOLED displays generally impose higher requirements on display effect, response speed, power efficiency and system coordination, thereby driving demand for higher-performance display chips, in particular display driver chips with stronger signal control, power management and display optimization capabilities. At the same time, as AMOLED is more widely adopted in premium smartphones and other higher-end smart terminal devices, downstream manufacturers are placing greater emphasis on thinner and lighter form factors, better image quality, higher refresh rates and lower power consumption, which in turn promotes the adoption of more integrated display chip products such as TDDI and STDI, and supports product-value enhancement and ASP uplift of relevant chips. In addition, the expansion of AMOLED into a broader range of smart terminal applications is also enlarging the addressable demand base for display chips. Meanwhile, the penetration of Mini LED and Micro LED, together with broader display-technology iteration and architectural upgrades, is further increasing requirements on brightness control, image optimization, signal processing and intelligent calibration, thereby supporting continued value enhancement across display driver chips and scalars. As edge intelligence accelerates, display chips are also evolving toward higher performance and greater integration, with AI algorithms and system-level optimization further enhancing chip value and application versatility.

SENSING-CONTROL CHIP INDUSTRY ANALYSIS

Market Overview of Sensing-Control Chips

Sensing-control chips are critical components in terminal devices responsible for signal acquisition, perception processing and control-command output. They convert environmental information into processable electrical signals and, through integrated multimodal sensing circuits and intelligent algorithms, perform real-time detection, recognition and processing of user inputs or external signals. With the adoption of AI and AIoT technologies, their functions are evolving from single-mode detection to intelligent perception and adaptive interaction, becoming a foundational hardware layer for intelligent terminals. Functionally, they are divided into (i) sensing chips, represented by touch ICs, which enable multi-point touch, pressure sensing and input feedback across smartphones, TWS earphones, AR/VR, in-vehicle displays and smart home devices, and (ii) control chips, represented by MCUs, which perform fused computation and output of control commands. MCUs can be further divided into automotive-grade and non-automotive-grade, with the former applied in automotive electronic systems requiring extremely stringent safety and stability.

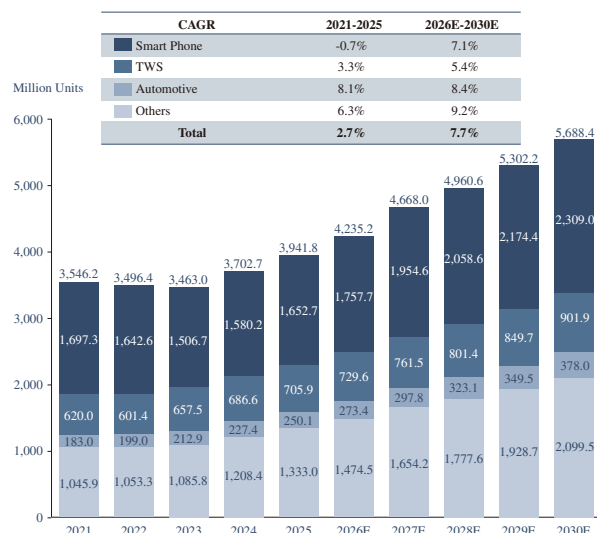
Market Size of Touch ICs

From a market size perspective, the global touch ICs market has maintained steady growth alongside the expansion of smartphones, TWS earphones, automotive electronics and other smart terminals. Global shipments increased from 3.5 billion units in 2021 to 3.9 billion units in 2025 and are expected to further rise to 5.7 billion units by 2030, representing a CAGR of 7.7% from 2026 to 2030. From a downstream perspective, smartphones remain the largest application market, with shipments increasing from 1.7 billion units in 2025 to an expected 2.3 billion units by 2030. The TWS earphone segment is projected to grow from 0.7 billion units in 2025 to 0.9 billion units by 2030. Automotive electronics is emerging as a fast-growing segment, with shipments expected to increase from 0.3 billion units in 2025 to 0.4 billion units by 2030. Other applications, including smart speakers, AR/VR devices and smart-home equipment, are also expected to expand over the same period.

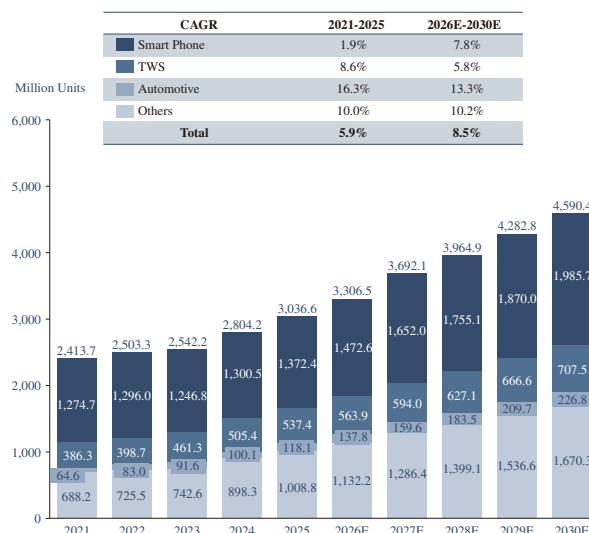
China, as the world's largest consumer electronics manufacturing and consumption base, represents the largest touch ICs market globally. From a downstream structure perspective, the Chinese market is broadly consistent with the global landscape, with smartphones accounting for the largest share and the automotive segment exhibiting the fastest growth momentum.

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**Market Size of Touch ICs
(by Shipments), by Downstream Applications,
Global, 2021-2030E**



**Market Size of Touch ICs
(by Shipments), by Downstream Applications,
China, 2021-2030E**



Source: Frost & Sullivan, Semiconductor Industry Association, World Semiconductor Trade Statistics

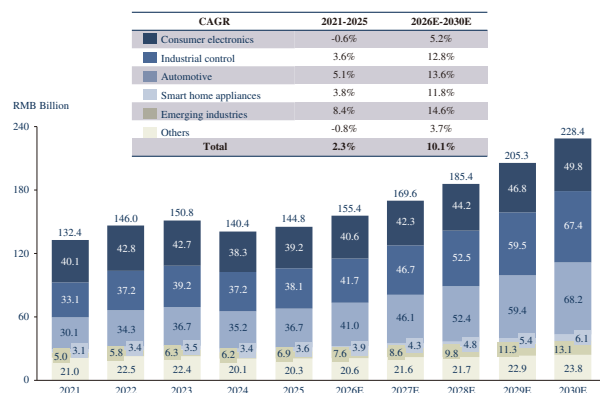
Market Overview of the MCU Sector

MCUs are highly integrated embedded control chips composed of a central processing unit, memory, input-output ports and timers, and perform computation, control and signal interaction functions. With low power consumption, small size and high integration, they serve as the computing and execution core of intelligent control systems and are widely used in consumer electronics, automotive, robotics and industrial fields. Among these, automotive has become the fastest-growing segment. Automotive-grade MCUs must comply with standards such as AEC-Q100 and ISO 26262 and possess wide-temperature tolerance, anti-interference capability and high functional safety. In line with the development of smart cockpits and human-machine interaction, MCU functionality is extending into the touch-sensing domain, giving rise to automotive-grade touch-control MCUs that integrate touch detection, capacitive sampling and signal processing within an MCU architecture.

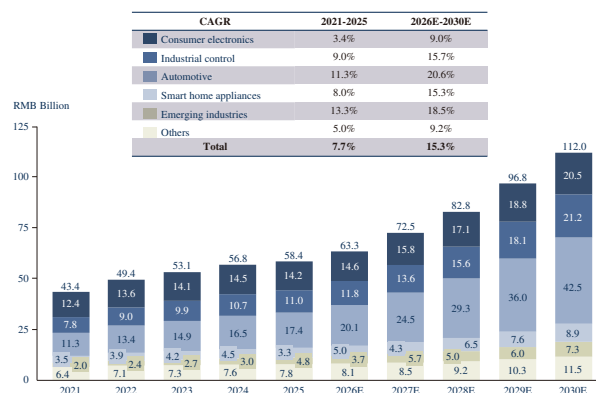
From a market perspective, the global MCU market increased from RMB132.4 billion in 2021 to RMB144.8 billion in 2025 and is expected to reach RMB228.4 billion by 2030, representing a CAGR of 10.1% from 2026 to 2030. Among segments, automotive-grade MCUs represent a key growth driver globally and are expected to grow at a CAGR of 13.6% from 2026 to 2030, supported by the increasing electrification and intelligence of vehicles, while within non-automotive MCUs, emerging application areas are expected to grow at a CAGR of 14.6%. China, as the largest MCU market, saw its market size grow from RMB43.4 billion in 2021 to RMB58.4 billion in 2025 and is projected to reach RMB112.0 billion by 2030, representing a CAGR of 15.3% from 2026 to 2030; within this, automotive-grade MCUs increased from RMB11.3 billion in 2021 to RMB17.4 billion in 2025 and are expected to reach RMB42.5 billion by 2030, representing a CAGR of 20.6% from 2026 to 2030, while within non-automotive MCUs, emerging application areas are expected to grow at a CAGR of 18.5% over the forecast period.

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**Market Size of MCU (by Revenue),
by Downstream Applications, Global,
2021-2030E**



**Market Size of MCU (by Revenue),
by Downstream Applications, China,
2021-2030E**



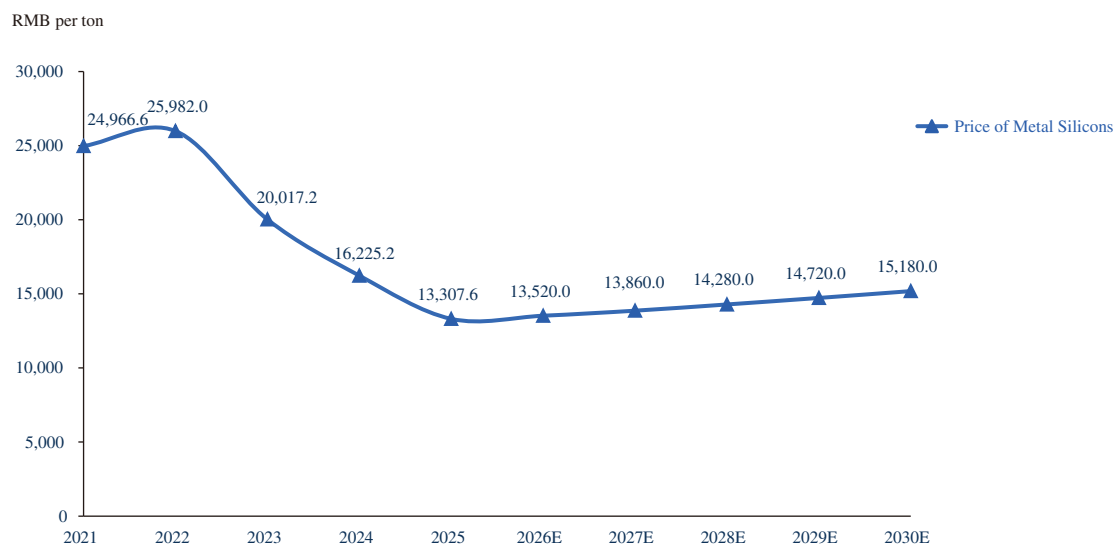
Source: Frost & Sullivan, Semiconductor Industry Association, World Semiconductor Trade Statistics

Cyclical Characteristics and Price Trend of raw materials of the Global and China Display Chip and Sensing-control Chip Industry

The Company operates under a fabless business model and does not directly procure or process raw materials. Accordingly, in relation to raw material price trends, the Company refers to the prices of key raw materials used by wafer foundries.

The price fluctuations of raw materials observed during 2021–2022 were primarily driven by a temporary imbalance between supply and demand. From the demand side, the rapid development of downstream industries led to a sharp increase in overall semiconductor demand, which in turn increased order volumes placed with wafer foundries and their procurement of raw materials. During this period, the large-scale adoption of electric vehicles and the acceleration of automotive electrification and intelligence significantly increased semiconductor content per vehicle, thereby amplifying overall semiconductor demand. In addition, heightened geopolitical uncertainties prompted certain downstream customers to place advance orders and build inventory beyond near-term production needs, further intensifying short-term demand pressure along the semiconductor supply chain. From the supply side, semiconductor manufacturing capacity is structurally concentrated among a limited number of leading wafer foundries, and pandemic-related disruptions constrained the ability of certain foundries to release capacity in a timely manner. The combination of rapidly increasing demand and constrained supply resulted in tight supply conditions at the wafer fabrication level, which were transmitted upstream and contributed to elevated raw material prices.

Price of Metal Silicon #533-2202#, China, 2021-2030E



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Source: Frost & Sullivan

In terms of the Group’s operating and financial performance, fluctuations in raw material prices do not have a significant direct impact on the Group’s operating and financial performance. Although raw material prices in the semiconductor industry are influenced by overall market supply-and-demand conditions, such fluctuations mainly reflect broader industry-level dynamics rather than factors directly affecting the Group’s operating and financial performance. For the Group, its operating and financial performance is primarily driven by supply-and-demand conditions within its specific product segments, particularly demand from downstream customers for the Group’s products, rather than by short-term volatility in raw material prices. Accordingly, changes in raw material prices do not have a direct or material impact on the Group’s operating and financial performance, as the Group’s operating and financial performance is mainly determined by demand dynamics in its targeted application areas and end markets.

Analysis of Driving Factors and Development Trends of Sensing-Control Chips

- **Rapid development of downstream application fields.** The advancement of automotive electrification, intelligence and connectivity, together with the rapid emergence of robots, is significantly increasing demand for sensing-control chips. In the automotive sector, interaction is shifting toward multimodal sensing integrated with intelligent decision-making, requiring fused recognition of touch, voice, vision and other signals for smart cockpits and driver assistance. In the robot sector, expanding applications drive greater needs for multi-sensor fusion and dynamic control. Enabled by high-precision sampling, signal fusion and low-latency processing, these capabilities are collectively driving the sustained growth of sensing-control chips across both sectors.
- **Accelerated adoption of touch-based intelligent terminal devices.** In smartphones, wearable devices and other terminals, user interaction and device control are transitioning from single-input modes to multimodal fusion and edge-intelligent computation. Sensing-control chips integrate multiple sensing algorithms—such as voice recognition, ambient-light detection and gesture tracking—to achieve more natural human-machine interaction and environmental adaptability. Meanwhile, the lightweight deployment of AI models enables sensing-control chips to perform local inference and self-learning, providing the foundation for low-power, high-response and highly reliable interaction control in intelligent terminals.

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Display Chips and Sensing-Control Chips under the Rapid Development of AI

AI has evolved from early discriminative learning to perception intelligence and further to generative intelligence centred on large models, with deployment gradually extending from the cloud to edge and terminal devices. Under this shift toward terminal-side intelligence, smart terminal devices are upgrading toward stronger perception, real-time interaction and system-level integration, forming the fundamental basis for sustained demand growth for display chips and sensing-control chips.

Demand for display chips and sensing-control chips is driven by the combined effects of growth in terminal device shipments and increasing chip content per device in downstream applications. First, shipment growth directly drives demand and is attributable to replacement demand and incremental demand. Replacement demand continues to expand as terminal products undergo performance upgrades and replacement cycles shorten. Global smartphone shipments are expected to increase from approximately 1.3 billion units in 2025 to 1.5 billion units in 2030; TWS earbud shipments from 0.5 billion units to 0.6 billion units; AR/VR shipments from 16.7 million units to 82.2 million units; and global automotive shipments from 90.9 million units to 97.0 million units over the same period. In addition, the global robot market size is projected to increase from RMB579.0 billion in 2025 to RMB976.9 billion in 2030. At the same time, incremental demand is supported by the rapid penetration of emerging intelligent terminals. AI smartphone shipments are expected to increase from 0.3 billion units in 2025 to 1.2 billion units in 2030, with penetration rising from 21.1% to 78.3%. AI earphone shipments are forecast to grow from 11.2 million units to 0.1 billion units, with penetration increasing from 2.4% to 26.5%. The penetration rate of smart vehicles is projected to rise from 20.1% to 42.6%, AR/VR devices with AI capabilities from 33.9% to 83.6%, and embodied intelligence devices from 0.9% to 21.0%, thereby expanding the downstream market. Second, demand is further driven by increasing chip usage per device. As terminal devices integrate more display, sensing and control functions, display chips and sensing-control chips are adopted more broadly and deployed in greater quantities per device, supporting sustained market expansion.

COMPETITION ANALYSIS OF THE COMPANY’S INDUSTRY

Overview of the Competitive Landscape

The global display chip and sensing-control chip markets exhibit a multi-track and fragmented competitive landscape due to the diversity of product categories and application scenarios. Display chips encompass multiple sub-segments—including scaler, display driving, timing control, SerDes and backlight dimming—each with different competitive dynamics. Among these, the scaler market, which is the Company’s primary focus, has a relatively higher level of market concentration and is mainly dominated by companies with core capabilities in algorithms, signal processing and system compatibility. Leveraging its technological innovation in architecture design and multi-interface compatibility, the Company has established a leading position in this sub-segment.

In addition, in the sensing-control chip field—including sub-segments such as touch ICs and MCUs—the market has long been dominated by overseas manufacturers, resulting in relatively high overall concentration. Looking ahead, as domestic manufacturers continue to make breakthroughs in low-power design, algorithm optimization and standard certification, and as product performance and stability continue to improve, they are gradually entering the supply chains of major international brands. This trend is expected to gradually reshape the industry’s competitive landscape.

The Company’s Market Ranking

In 2025, the global scaler market exhibited a highly concentrated competitive landscape, with the top five suppliers collectively accounting for approximately 69.6% of the market share. Among them, the Company accounted for a market share of 20.5% with a shipment volume of 47.0 million units and ranked first globally, underscoring its market-leading position. In terms of sales revenue, the top five suppliers collectively accounted for approximately 76.8% of the market share. Among them, the Company, with a sales revenue of RMB250.4 million, represented a 8.7% market share and ranked fourth globally.

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Ranking and Market Share of Scaler Providers (by Shipments), Global, 2025

Ranking	Company Name	Shipments (million units)	Market Share (%)
1.	The Company	47.0	20.5
2.	Company A	46.0	20.1
3.	Company B	32.3	14.1
4.	Company D	17.9	7.8
5.	Company C	16.1	7.0
	Others	69.6	30.4
	Total	228.9	100.0

Source: Frost & Sullivan, Companies' Annual Report

Notes:

- (1) Company A is a listed company established in 1983 and headquartered in Oregon, USA. It focuses on low-power FPGA and other programmable devices, with applications in communications, industrial control, automotive and consumer electronics. Its clients mainly include major global system manufacturers and OEMs.
- (2) Company B is a private company established in 2017 and headquartered in Beijing, China. It focuses on the R&D and sales of low-power FPGA and small-form-factor programmable devices, with applications in industrial control, communications equipment, security and consumer devices. Its clients mainly include domestic system manufacturers and smart-device suppliers.
- (3) Company C is a listed company established in 2011 and headquartered in Shanghai, China. It focuses on the R&D and sales of FPGA, programmable SoCs, and development tools, with applications in industrial control, video processing, communications and automotive electronics. Its clients mainly include industrial equipment manufacturers and equipment vendors.
- (4) Company D is a private company established in 2009 and headquartered in Taiwan, China. It focuses on the R&D and sales of display and touch controller IC products, as well as customized IC design and solution development for human-machine interface applications. Its clients mainly include display module manufacturers and downstream solution integrators.

Ranking and Market Share of Scaler Providers (by Revenue), Global, 2025

Ranking	Company Name	Revenue (RMB million)	Market Share (%)
1.	Company A	911.3	31.6
2.	Company B	539.4	18.7
3.	Company C	269.4	9.3
4.	The Company	250.4	8.7
5.	Company E	246.0	8.5
6.	Company D	115.2	4.0
	Others	553.7	19.2
	Total	2,885.5	100.0

Source: Frost & Sullivan, Companies' Annual Report

Note:

- (1) Company E is a private company established in 2014 and headquartered in Guangdong, China. It focuses on the R&D and sales of FPGA and programmable logic devices, with applications in industrial control, communications, consumer electronics and automotive electronics. Its clients mainly include industrial equipment manufacturers, electronics manufacturers and solution providers.

From a product-segment perspective, the Company held a leading position in the ASIC scaler market, with a shipment volume of 47.0 million units, capturing 54.6% of the market share, ranking first globally. In terms of sales revenue, the Company accounted for 50.2% of the market share, with a sales revenue of RMB250.4 million, ranking first globally.

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Ranking and Market Share of ASIC Scaler Providers (by Shipments), Global, 2025

Ranking	Company Name	Shipments (million units)	Market Share (%)
1.	The Company	47.0	54.6
2.	Company D	17.9	20.9
	Others	21.1	24.5
	Total	86.0	100.0

Source: Frost & Sullivan, Companies' Annual Report

Ranking and Market Share of ASIC Scaler Providers (by Revenue), Global, 2025

Ranking	Company Name	Revenue (RMB million)	Market Share (%)
1.	The Company	250.4	50.2
2.	Company D	115.2	23.1
	Others	133.7	26.8
	Total	499.4	100.0

Source: Frost & Sullivan, Companies' Annual Report

In 2025, the global touch IC market was primarily dominated by established international semiconductor companies, which benefit from strong technological capabilities and broad customer resources, while domestic players have been gradually gaining market share driven by ongoing technological advancement and increasing demand from local consumer electronics markets. The top five players collectively accounted for approximately 56.5% of the total market share, indicating a relatively concentrated competitive landscape. Against this backdrop, the Company remained at an early stage of development, with a revenue of RMB2,969 thousand from its touch IC business in 2025, representing a market share of less than 1%. Looking ahead, as the Company continues to enhance its product capabilities and deepen customer penetration, it is expected to further expand its presence and gradually increase its market share.

Ranking and Market Share of Touch IC Providers, Global, 2025

Ranking	Company Name	Market Share (%)
1.	Company F	16.6
2.	Company G	12.4
3.	Company H	9.9
4.	Company I	9.8
5.	Company J	7.8
	The Company	<1

Notes:

- (1) Company F is listed company established in 1986 and headquartered in California, United States. It focuses on the R&D and sales of human interface solutions, including touch controller ICs, display driver ICs and related connectivity solutions, with applications in smartphones, personal computers and other consumer electronic devices. Its clients mainly include major global consumer electronics manufacturers and OEMs.
- (2) Company G is a listed company established in 1999 and headquartered in Neubiberg, Germany. It focuses on providing MCUs, sensors, analog ICs and other semiconductors and system solutions for the automotive, networking and computing markets. Its clients mainly include domestic and international display panel manufacturers and consumer electronics companies.
- (3) Company H is a listed company established in 2005 and headquartered in Taipei, China. It focuses on the R&D and sales of display driver ICs and touch controller ICs, including touch and display driver integration (TDDI) chips, with applications in smartphones and other display devices. Its clients mainly include display panel manufacturers and consumer electronics brands.

INDUSTRY OVERVIEW

- (4) Company I is a listed company established in 2002 and headquartered in Shenzhen, China. It focuses on the R&D and sales of capacitive touch controller ICs, fingerprint recognition chips and other human interface solutions, with applications in smartphones, tablets and other smart devices. Its clients mainly include domestic and international consumer electronics brands and module manufacturers.
- (5) Company J is a listed company established in 1989 and headquartered in Arizona, the United States. It focuses on the R&D and sales of microcontrollers, analog ICs and embedded control solutions, with applications in automotive, industrial, communications and consumer electronics. Its clients mainly include global OEMs and industrial customers.

In 2025, the global MCU market was primarily dominated by established international semiconductor companies, which benefit from strong technological capabilities, broad product portfolios and long-standing customer relationships, while domestic players have been gradually gaining market share driven by ongoing technological advancement and increasing demand for localization. The top five players collectively accounted for approximately 76.5% of the total market share, indicating a highly concentrated competitive landscape. Against this backdrop, the Company remained at an early stage of development, with a revenue of RMB3,177 thousand from its TMCU business in 2025, representing a market share of less than 1%. Looking ahead, as the Company continues to enhance its product capabilities and deepen customer penetration, it is expected to further expand its presence and gradually increase its market share.

Ranking and Market Share of MCU Providers, Global, 2025

Ranking	Company Name	Market Share (%)
1.	Company G	19.2
2.	Company K	16.6
3.	Company L	14.8
4.	Company M	14.6
5.	Company J	11.3
	The Company	<1

Notes:

- (1) Company K is a listed company on the Tokyo Stock Exchange, established in 2002 and headquartered in Tokyo, Japan, with major business operations in Asia-Pacific, Europe and North America. Its main products include microcontrollers, system-on-chips and analog devices, supporting a wide range of control and computing applications.
- (2) Company L is a listed company on Euronext Paris, established in 1987 and headquartered in Geneva, Switzerland, with major business operations in Europe, Asia-Pacific and the Americas. It specializes in MEMS sensors, automotive MCU, and power management ICs for ADAS, industrial robotics, and edge computing, etc.
- (3) Company M is a listed company on Nasdaq, established in 2006 and headquartered in Eindhoven, the Netherlands, with major business operations in Europe, Asia-Pacific and North America. It is primarily engaged in the design, manufacture, and sale of ICs and discrete devices. Its products are mainly used in the automotive, industrial and IoT mobile devices, and communication infrastructure sectors.

Business Model Analysis of Display Chip and Sensing-Control Chip Companies

Companies in the display chip and sensing-control chip industries generally commercialize their products through two principal models: standalone chip sales and solution-oriented sales. Under the standalone chip sales model, companies primarily provide standard or general-purpose chip products, which are sold to downstream customers for further system design, software adaptation and functional integration based on specific end-use requirements. This model is characterized by broader applicability and greater flexibility, and is suitable for customers with independent system integration capabilities.

Under the solution-oriented sales model, companies commercialize more highly integrated chips, or package multiple chips together with firmware, drivers, algorithms or other supporting software for specific application scenarios. Compared with standalone chip sales, this model can reduce system complexity, shorten customer development cycles and improve overall system performance, power efficiency and product adaptation to end-use scenarios. As downstream applications continue to evolve toward higher integration, better performance and faster product iteration, both models remain common in the industry and are adopted by companies depending on product characteristics and customer needs.

INDUSTRY OVERVIEW

Entry Barriers Analysis

The display chip and sensing-control chip industries are characterized by high entry barriers.

- **Technology barriers.** Display and sensing-control chips require strong capabilities in algorithm architecture, signal processing, power management and multimodal integration. Companies must sustain continuous innovation in analog and mixed-signal design, AI algorithms and SoC architecture, while balancing performance, cost and energy efficiency. Cross-domain integration across display driving, touch sensing and signal-chain processing is critical. Long verification cycles and high tape-out costs further raise technological thresholds, making rapid replication by new entrants difficult.
- **Supply chain barriers.** Chip production involves wafer fabrication, packaging and testing, with high coordination requirements across the value chain. Leading companies secure stable partnerships with foundries and OSAT providers to ensure capacity, cost control and delivery stability. As supply-chain localization advances, strong coordination with domestic ecosystems enhances resilience and competitiveness, forming structural entry barriers.
- **Brand and customer barriers.** Downstream customers in smartphones, automotive and industrial sectors impose strict requirements on reliability, validation and long-term support. High customization needs and rapid iteration demand strong commercialization capability and close collaboration. Established players benefit from mature mass-production systems, software adaptation capabilities and diversified product portfolios, resulting in high customer stickiness and switching costs.
- **Policy and regulatory barriers.** Rising requirements for safety, reliability and environmental compliance require adherence to standards such as ISO 26262, AEC-Q100, RoHS and REACH. Complex and lengthy certification processes impose high demands on quality management and supply stability, creating significant institutional barriers.