

INDUSTRY OVERVIEW

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Amid the wave of automotive intelligence and the shift toward “software-defined vehicles,” the automotive EEA is evolving toward domain-centralized designs. Structurally, vehicles are gradually divided into six major domains, namely connectivity domain, cockpit domain, intelligent driving domain, chassis domain, power domain, and vehicle body domain. Among them, the connectivity domain serves as the carrier of information exchange, enabling data flow within the vehicle, between vehicles, between vehicles and infrastructure, and between vehicles and the cloud. It plays a fundamental and critical role in the process of automotive intelligence.

The connectivity domain links the other five domains with the cloud and the external environment, forming an intelligent and collaborative whole. Through V2X, the connectivity domain enables vehicle-to-vehicle and vehicle-to-infrastructure coordination, enhancing autonomous driving safety. It supports seamless connectivity between the in-vehicle system and the cloud, providing real-time navigation, voice assistants, and streaming media services. It enables remote monitoring of battery and electric drive systems, supports OTA updates to optimize control strategies, and ensures the safety of powertrain and chassis systems. Additionally, the connectivity domain allows remote control of door locks, windows, and air conditioning, and supports integration with smart home systems to enable intelligent vehicle body functions. The integration of in-vehicle communication solutions and domain controller solutions is paramount, as the high-speed connectivity enables critical functions such as V2X, while the domain controller architecture provides the necessary computational and integration platform to execute these complex, data-intensive tasks reliably. Together, they help OEMs reduce development cycles, lower system integration costs, and deliver advanced intelligent features ranging from V2X-enabled autonomous driving to vehicle-cloud synergy services.

OVERVIEW OF GLOBAL AND CHINA’S IN-VEHICLE INTELLIGENT CONNECTIVITY SOLUTION MARKET

Development of Global and China’s Electric and Intelligent Vehicles

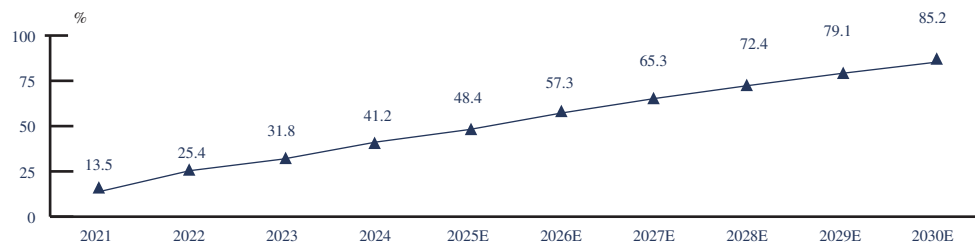
Global production grew from 79,588.1 thousand units in 2021 to 93,781.3 thousand units in 2025 at a CAGR of 4.2%, and is projected to hit 100,183.6 thousand units by 2030 with a CAGR of 1.2% during 2026 and 2030. As the world’s largest automotive market, China registered an automobile production volume of 34,531.0 thousand units in 2025, supported by automobile subsidies and trade-in policies. China’s automobile production is expected to grow to 39,126.7 thousand units in 2030 with a CAGR of 1.6% during 2026 and 2030, driven by robust EV development resulting from changing consumption habits, upgraded emission standards and alleviated chip shortages.

China’s EV production was 16,626.0 thousand units in 2025 and is forecast to reach 33,346.1 thousand units in 2030 with a CAGR of 12.2% during 2026 and 2030. Its EV penetration rate is expected to rise from 48.1% in 2025 to 85.2% in 2030, demonstrating strong market potential.

In 2025, Chinese EV production reached 16,626.0 thousand units. Projections indicate Chinese EV production will rise to 33,346.1 thousand units by 2030, translating to a CAGR of 12.2% during 2026 and 2030. China’s EV penetration rate is expected to leap from 48.1% in 2025 to 85.2% by 2030, highlighting the substantial potential and dynamic growth trajectory of the Chinese market. This robust expansion is underpinned by supportive government incentive policies across various regions including purchase subsidies and tax incentives, which have effectively accelerated EV adoption. Advancements in battery technology have significantly improved vehicle range and reduced charging times. Furthermore, declining costs driven by technological progress and economies of scale, coupled with the continuous enhancement of charging infrastructure, have further increased consumer acceptance and enhanced user convenience.

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Penetration Rate of EVs, China, 2021-2030E

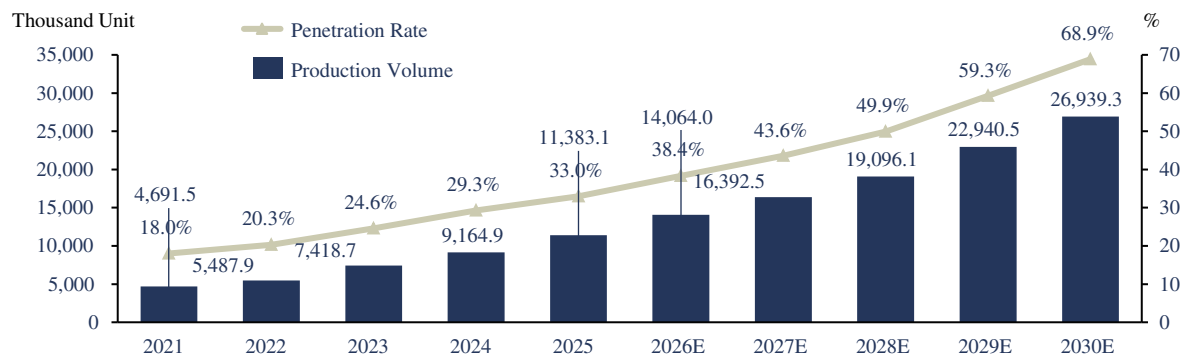


Source: China Association of Automobile Manufacturers, Frost & Sullivan

Notes: The penetration rate of EVs is calculated as the ratio of the production volume of EVs to the total production volume of all vehicles in China for the corresponding period.

Intelligent connected vehicle (ICV) refers to a new generation of vehicles that are equipped with advanced sensors, controllers, actuators, and other devices, and integrate advanced communication and network technologies to achieve information exchange and sharing between vehicles and X (such as people, vehicles, roads, cloud). It has functions such as complex environment perception, intelligent decision-making, and collaborative control, ultimately achieving “safe, efficient, comfortable, and energy-saving” driving, and can achieve unmanned operation. Fueled by supportive policies, rising market demand and technological progress, China’s ICV output grew steadily. In 2025, China’s ICV output hit 11,383.1 thousand units, making up 33.0% of the country’s total automobile production.

Production Volume and Penetration Rate of ICVs, China, 2021-2030E



Source: China Association of Automobile Manufacturers, Frost & Sullivan

Note: ICVs can be classified into three categories based on connectivity type: embedded connectivity, a hardwired, vehicle-integrated telematics unit for seamless, always-on connectivity and vehicle management; tethered connectivity, detachable portable devices that connect to vehicles to collect and sync data cost-effectively; and smartphone connectivity, which leverages internet/GPS-enabled smartphones to power telematics and expand the industry ecosystem. Only data for embedded connectivity are included here. The same applies below.

The penetration rate of ICVs is calculated as the ratio of the production volume of ICVs to the total production volume of all vehicles in China for the corresponding period.

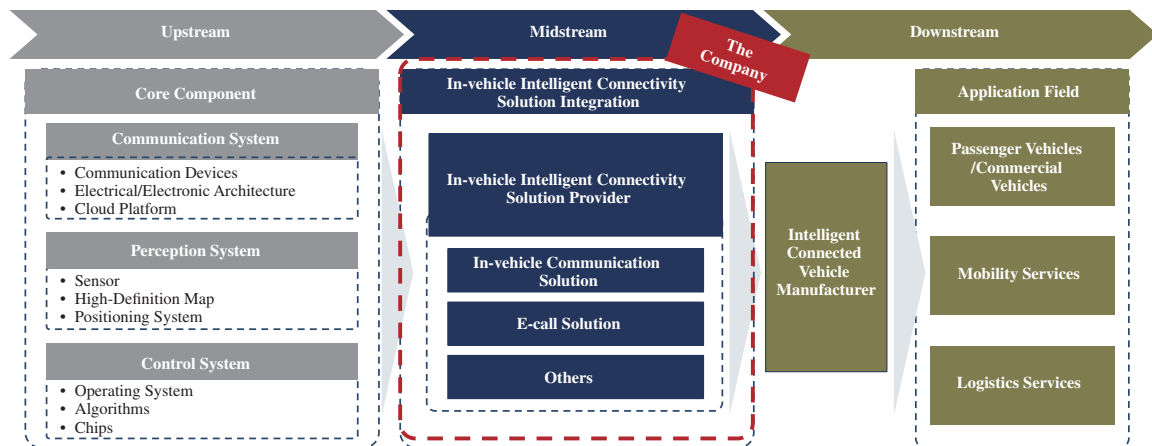
Overview of In-vehicle Intelligent Connectivity Solution Industry

In-vehicle intelligent connectivity is an interactive wireless network leveraging onboard devices and sensors. Taking moving vehicles as information perception targets, it builds full-coverage connections among vehicle-to-cloud, vehicle-to-vehicle, vehicle-to-infrastructure, vehicle-to-person and in-vehicle ends, powered by vehicle location, speed, route and other data. Six core vehicle domains underpin its functions: the connectivity domain delivers communication links; intelligent driving and cockpit domains extend service coverage via connectivity; chassis, power and body domains realize performance optimization and intelligent upgrade with relevant technologies, together forming a complete in-vehicle intelligent connectivity system. The industrial chain consists of upstream hardware and software suppliers, midstream solution integrators providing customized connectivity solutions for automakers, and downstream applications including passenger and commercial vehicles, as well as mobility and logistics services.

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In 2025, by shipment volume of T-Box, the Company ranked 5th and 4th among all suppliers and all domestic suppliers in China’s in-vehicle communication solution industry respectively.

Value Chain of In-vehicle Intelligent Connectivity Solution Industry

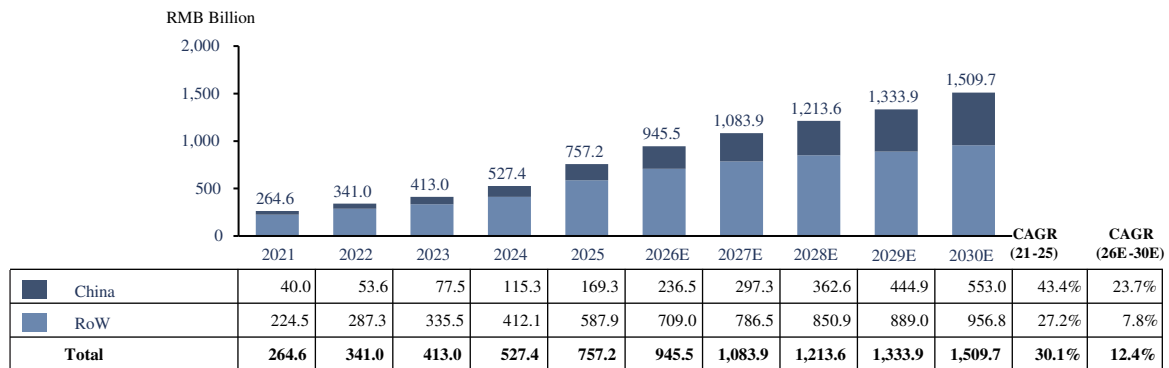


Source: Frost & Sullivan

Market Size of Global and China’s Intelligent Connected Vehicle Industry

A in-vehicle intelligent connectivity solution typically consists of hardware, software, and services. The hardware side mainly includes communication modules, T-Box units, and other hardware, as well as software such as vehicle networking platforms and other related services. With the continuous growth of ICV production, the market size of in-vehicle intelligent connectivity solutions is expanding worldwide and in China, projected to rise from RMB757.2 billion and RMB169.3 billion in 2025 to RMB1,509.7 billion and RMB553.0 billion by 2030.

Revenue of In-vehicle Intelligent Connectivity Solution, Global and China, 2021-2030E

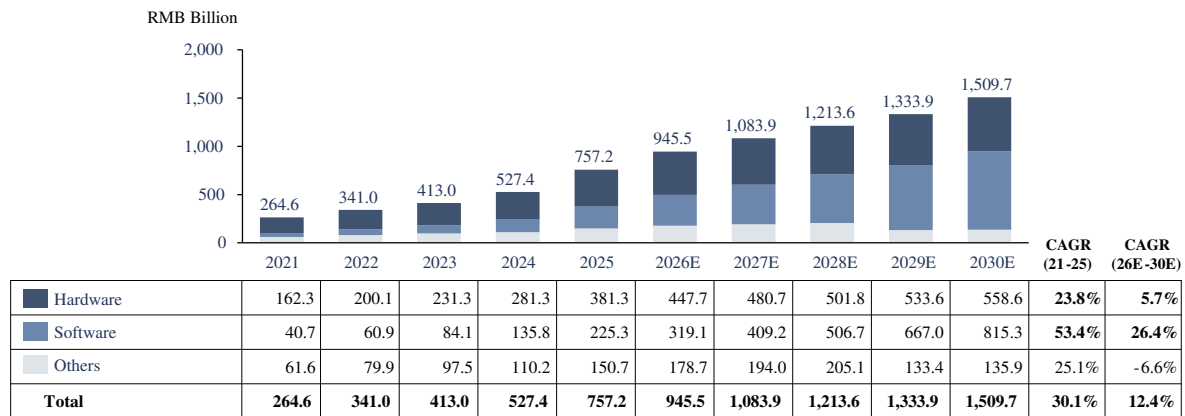


Source: Statistic, China Association of Automobile Manufacturers, Frost & Sullivan

In the global and Chinese in-vehicle intelligent connectivity solution markets, hardware constitutes the most dominant cost component, primarily comprising 4G/5G T-boxes, E-call units, infotainment hardware, security chips, and associated electronic components. In 2025, hardware accounted for 50.4% of the global market share and 53.7% of the Chinese market share. As the physical foundation enabling real-time vehicle-to-external communication, data transmission, and emergency rescue functions, hardware’s cost structure and technical performance directly determine the reliability, response speed, and commercial viability of intelligent connectivity solutions.

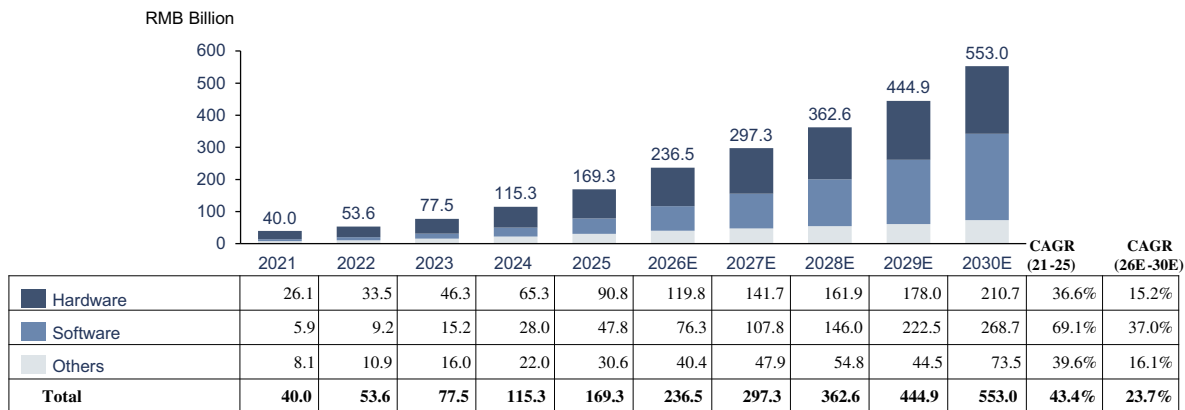
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Revenue of In-vehicle Intelligent Connectivity Solution, Global, 2021-2030E



Source: Statistic, Frost & Sullivan

Revenue of In-vehicle Intelligent Connectivity Solution, China, 2021-2030E



Source: China Association of Automobile Manufacturers, Frost & Sullivan

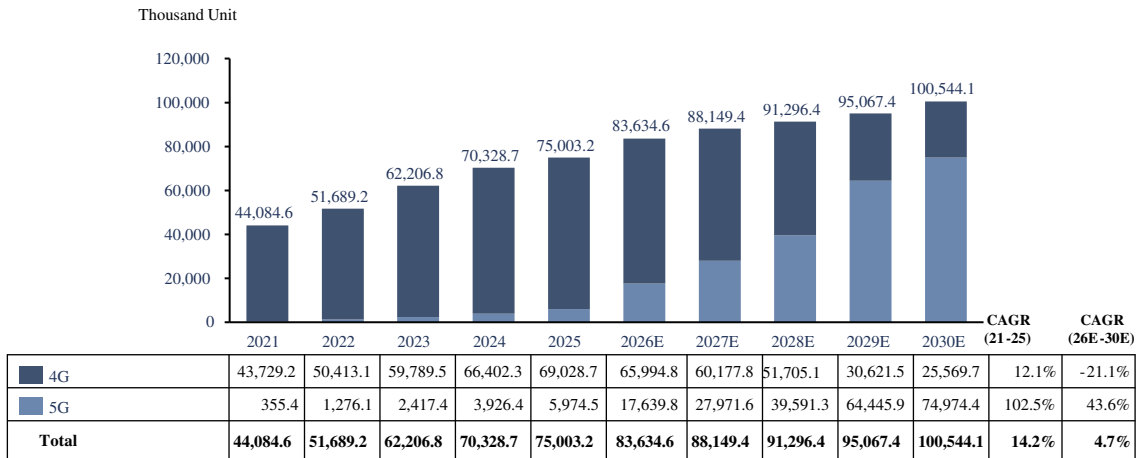
Market Size of Global and China's In-vehicle Communication Solution Industry

In-vehicle communication solution serves as the technical support for in-vehicle intelligent connectivity, providing the communication capability for vehicle connectivity to realize internal and external information interaction, thus enabling the collaborative interconnection and intelligent services among humans, vehicles, roads and the cloud.

In-vehicle communication solutions constitute a core technology system for achieving safety, automation, and enhanced user experience in EVs. As electrification, autonomous driving and vehicle-to-everything connectivity demands rise in parallel, the integration of on-board computing platforms, communication modules, sensors, and cloud services has been continuously deepened, driving a sustained rise in demand for these products. Classified by mobile communication standard, In-vehicle communication solutions include 4G and 5G. The 4G solution takes a leading position with mature base-station networks, complete in-vehicle terminal standards and low cost, supporting basic remote diagnostics, infotainment and telematics services. 5G provides higher bandwidth, lower latency and larger connection capacity for high-end applications such as high-precision positioning and advanced driver-assistance systems, with its shipment gap against 4G continuing to narrow. With more complex hardware and technology, 5G vehicle communication modules are priced higher. While 4G leads in shipments, 5G's premium price closes the revenue gap.

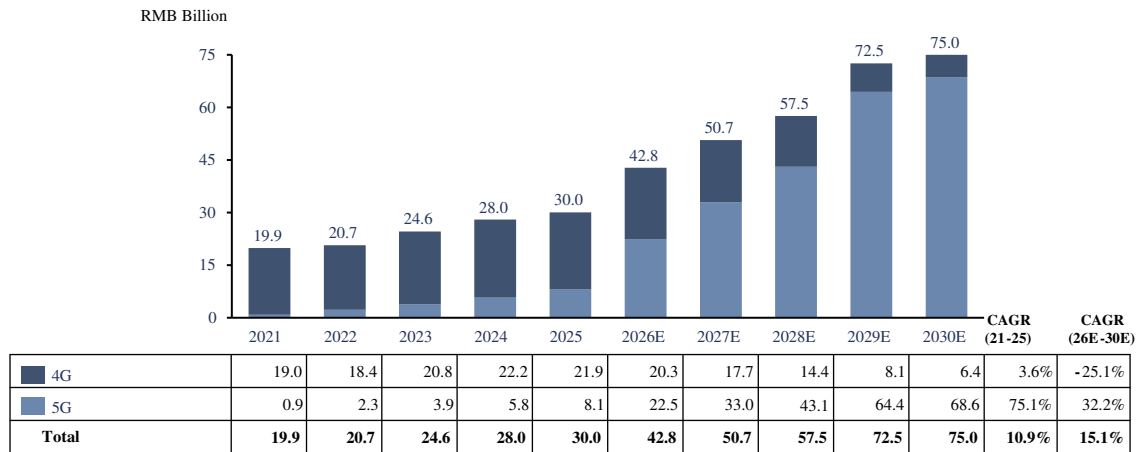
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Market Size of In-vehicle Communication Solution (by shipment volume), Global, 2021-2030E



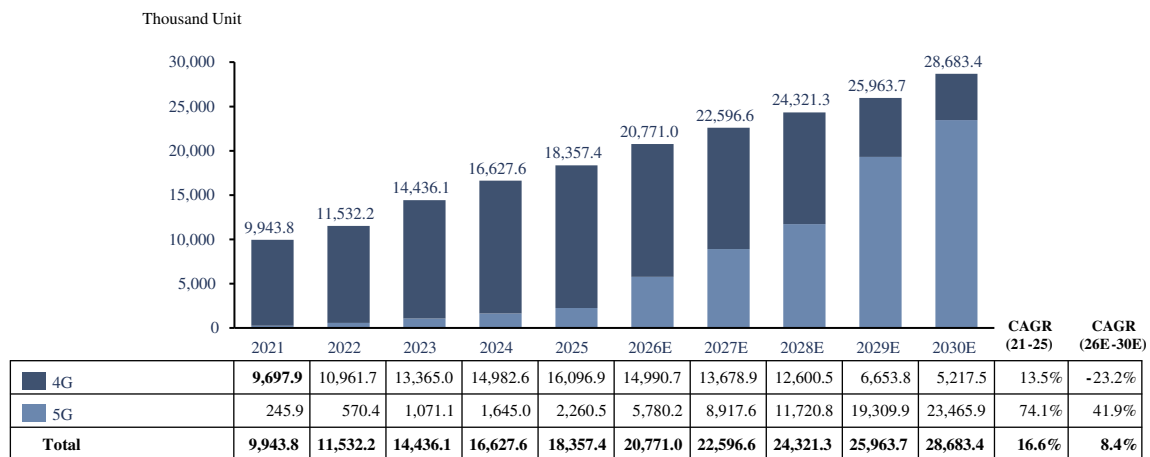
Source: Statistic, China Association of Automobile Manufacturers, Frost & Sullivan

Market Size of In-vehicle Communication Solution (by revenue), Global, 2021-2030E



Source: Statistic, China Association of Automobile Manufacturers, Frost & Sullivan

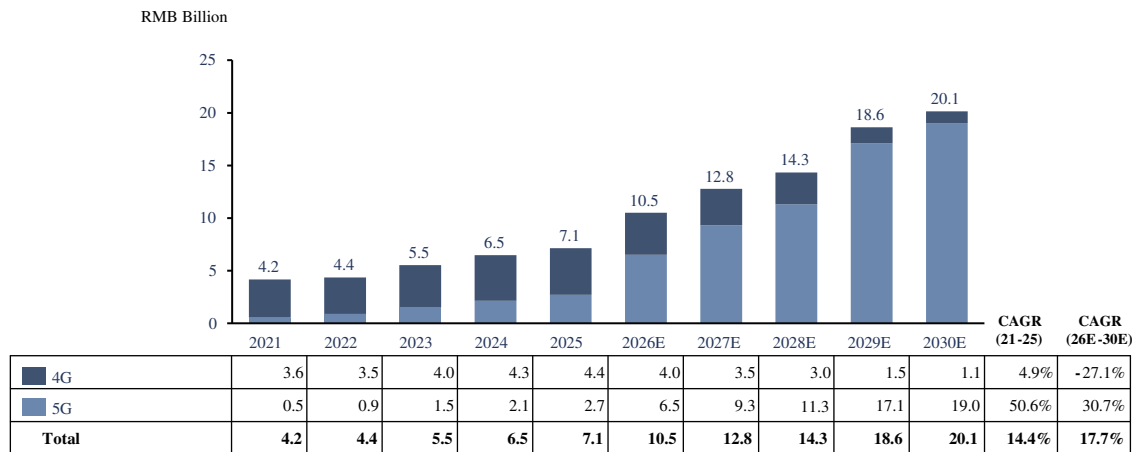
Market Size of In-vehicle Communication Solution (by shipment volume), China, 2021-2030E



Source: China Association of Automobile Manufacturers, Frost & Sullivan

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Market Size of In-vehicle Communication Solution (by revenue), China, 2021-2030E



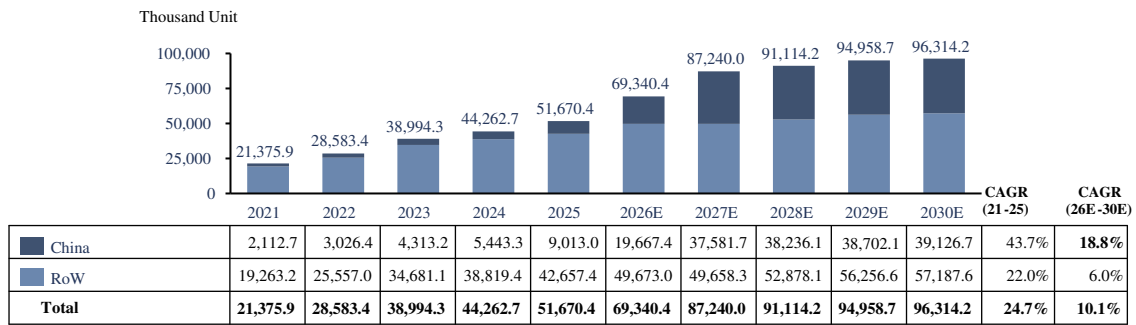
Source: China Association of Automobile Manufacturers, Frost & Sullivan

Market Size of Global and China's E-call Solution Industry

E-call is an emergency call system that, in the event of a severe vehicle collision, automatically or manually initiates a voice call to a public safety answering point and simultaneously transmits critical data such as the vehicle's location. Global vehicle-safety regulations have become increasingly stringent: The EU has mandated, under Regulation (EU) 2015/758 adopted in 2018, that all newly manufactured passenger vehicles and light commercial vehicles be equipped with E-call, creating a sustained large-scale demand for E-call devices in the European market and driving the initial formation of the global E-call industrial chain; In 2018, the UAE issued UAE.S 5019:2018, requiring every new vehicle of model-year 2021 onwards—up to 3.5 t gross mass and nine seats—to carry E-call as standard, expanding the Middle East market for E-call systems and boosting incremental shipments for global suppliers; Saudi Arabia published SASO 2944:2020 in 2020, requiring new light vehicle models exported to Saudi Arabia to be equipped with E-call starting from the 2021 model year, further consolidating the mandatory installation trend in the Gulf region and supporting steady growth in regional E-call demand. In China, the mandatory national standard GB 45672-2025 On-board accident emergency call system was issued in 2025, specifying the technical requirements for E-call systems, with implementation scheduled to begin in 2027, which will open up a huge incremental market and become a core driver for the continued growth of global E-call shipments. Mandatory E-call regulations introduced by China and other countries and regions have established a global rigid compliance demand by defining installation requirements and technical standards for new vehicles, directly driving the large-scale deployment of E-call solutions, promoting technological iteration and industrial collaboration, and thus strongly boosting the sustainable development of the E-call industry. Domestic substitution, cost reductions, and the rapid growth of the new-energy vehicle fleet have further stimulated local market demand. From 2021 to 2025, global and Chinese E-call shipments have continued to increase, reaching 51,670.4 thousand units and 9,013.0 thousand units respectively in 2025. During the forecast period, China's E-call shipment growth is expected to outpace the global average, driven by the upcoming enforcement of mandatory installation.

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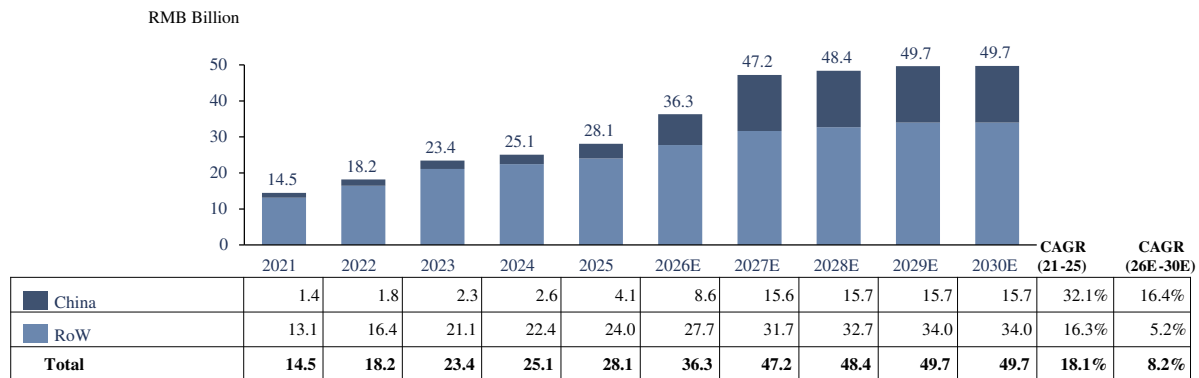
Shipment Volume of E-call Solution, Global and China, 2021-2030E



Source: Statistic, China Association of Automobile Manufacturers, Frost & Sullivan

The global and China E-call solution market revenue has grown continuously along with the expansion of shipment volume. Although the unit price of E-call solutions is projected to decline during the forecast period due to large-scale production, intensified market competition and technological maturity, the overall market revenue will keep growing driven by rising penetration driven by mandatory regulatory requirements and the rapid growth of intelligent connected vehicle shipments. The global E-call solution market revenue is expected to reach RMB49.7 billion and the China market will reach RMB 15.7 billion by 2030.

Revenue of E-call Solution, Global and China, 2021-2030E



Source: Statistic, China Association of Automobile Manufacturers, Frost & Sullivan

Drivers of China's In-vehicle Intelligent Connectivity Solution Market

Infrastructure Development

Over the past few years, operators have deployed large numbers of 5G base stations and C-V2X edge-computing nodes along highways, major urban arteries, and key traffic hubs, creating a wide-coverage, low-latency, high-bandwidth vehicle-road cooperative network that supplies the essential transport layer for high-bandwidth, low-latency services such as real-time high-definition map updates, cooperative vehicle decision-making and remote diagnostics. This progress primarily accelerates the development and commercial feasibility of advanced Communication Solutions.

Cost Reduction

Domestic chips, RF front-ends, and automotive-grade antennas have entered mass production. Module manufacturers achieve continuous cost compression through multi-function integration packaging, shared testing platforms, and large-scale procurement, keeping 4G module prices on a downward trajectory while the premium of 5G modules narrows rapidly. OEMs can therefore upgrade network performance from 4G to 5G on mainstream models without materially raising BOM pressure, accelerating the across-the-board adoption of in-vehicle intelligent connectivity solutions.

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Policy Support

China has successively issued development plans and targeted support policies to promote the development of intelligent connected vehicles, including the Smart Vehicle Innovation and Development Strategy, the Medium-to-Long-Term Development Plan of the Automotive Industry, the Autonomous Driving Classification, and other related policies and regulations. These measures provide financial subsidies, tax incentives, and project funding for key technology research and development, standards formulation, and demonstration applications, creating a policy-driven institutional environment that encourages companies to accelerate the deployment of in-vehicle intelligent connectivity solutions. In addition, the mandatory national standard GB 45672-2025 On-board accident emergency call system was issued in 2025, specifying the technical requirements for E-call systems, with implementation scheduled to begin in 2027, which will bring a large-scale rigid incremental demand for E-call equipment and become a core driver for the continuous expansion of the global E-call market.

Development Trends of China’s In-vehicle Intelligent Connectivity Solution Market

Modular and Customizable Solutions Demand

OEMs are prioritizing platform flexibility and scalability to cover multiple model lines and accommodate rapid product cycles. Consequently, in-vehicle intelligent connectivity solutions are shifting toward modular designs, with hardware modules (such as communication modules, E-call units, computing units, sensors) and software functions (such as OTA, vehicle-cloud services, ADAS) standardized through plug-and-play interfaces. This enables OEMs to add or remove features quickly according to model positioning or regional regulations while keeping the core architecture unchanged, thereby reducing R&D costs and shortening time-to-market. Besides, the smart cockpit solutions now offered by some OEMs and technology providers may incorporate communication features and emergency call functions, which were previously within the Company’s core business areas. This trend towards vertical integration could lead to the erosion of the Company’s market share, as competitors adopt these integrated solutions at potentially lower prices, thus attracting our existing customers.

Software-defined Vehicle

The implementation of vehicle functions is shifting from hardware-driven to software-driven, leading to a substantial increase in the amount of software code in the whole vehicle. Platform-based, modular software architectures and OTA updates have become the norm. Automakers use a unified software framework to achieve functional reuse across different models and platforms, making software services a primary source of differentiation and sustained profitability. This trend allows manufacturers to add new features, fix defects, and deliver commercial value-added services without changing the hardware, thereby extending the product lifecycle and accelerating the deployment of new business models.

Ecosystem Collaboration

Data generated by vehicle connectivity—including operational data, user behavior data, and vehicle status data—are increasingly treated as commercial assets. In-vehicle intelligent connectivity solutions are evolving into data platforms that provide capabilities for data collection, cleansing, analysis, and value-added services. This drives close cooperation among automakers, component suppliers, cloud platforms, and internet companies. The realization of data value and the construction of an ecosystem are the core reasons for expanding solution functionality and enhancing commercial returns.

Furthermore, the China Association of Automobile Manufacturers issued the “Initiative for Standardizing Payment Terms to Suppliers by Vehicle Manufacturers” in September 2025. This comprehensive guideline systematizes and formalizes payment practices across four critical stages, namely order confirmation, delivery and acceptance, payment and settlement, and contract duration, providing detailed operational protocols that transform previous 60-day payment commitments into enforceable daily processes. The initiative and the corresponding guidance mandates that automakers complete acceptance within three working days, calculate payment terms from the date of delivery and qualified acceptance, and cap payment periods at 60 calendar days, while encouraging cash payments and minimum one-year contract terms to foster stable, collaborative OEM-supplier relationships. The guideline has received immediate and widespread support from major OEMs across Chinese Mainland.

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Challenges of China’s In-vehicle Intelligent Connectivity Solution Market

Intense Price Competition and Unstable Profit Margins

Intense market competition has triggered continuous price pressure on hardware-centric in-vehicle connectivity solutions, squeezing gross margins for most manufacturers. With communication module costs trending downward, many market participants adopt low-price strategies to secure orders, further intensifying industry competition. The relatively underdeveloped software and service monetization model also restricts sustainable profitability across the sector.

Stringent Automotive-Grade Safety and Compliance Requirements

The in-vehicle intelligent connectivity sector is subject to increasingly strict functional safety, cybersecurity and automotive data compliance regulations, which involve complex certification processes and high R&D investment. Continuous upgrades of national data security laws and vehicle safety standards force enterprises to optimize system architecture and enhance protection capabilities, significantly increasing overall development costs. Such high compliance thresholds also restrict market access for small and medium-sized enterprises and intensify industry concentration.

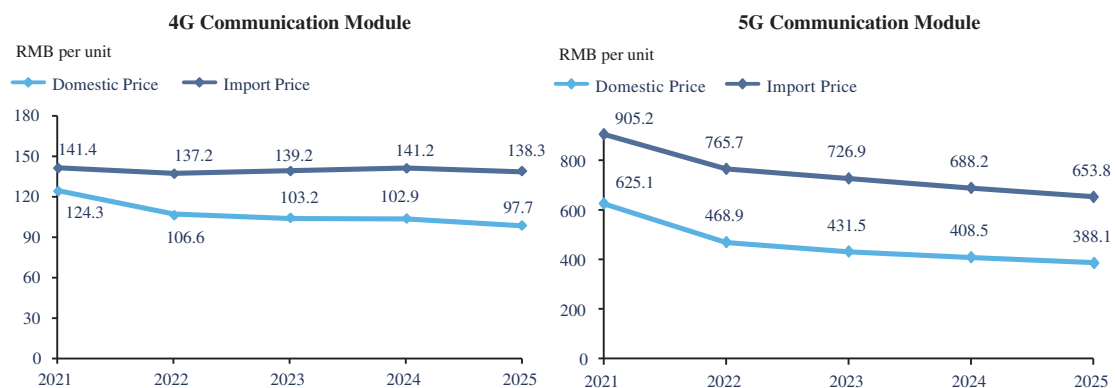
High Customer Concentration and Sustained Cost-Down Pressure

Market players rely heavily on designated projects from major automakers, resulting in high customer concentration and relatively weak bargaining power. Most mainstream OEMs impose annual cost-reduction requirements and long-term price pressure on component suppliers, posing ongoing challenges to cost control. Fluctuations in the sales volume of individual vehicle models directly affect shipment and revenue, bringing volatility to the operational stability of connectivity solution providers.

Cost Analysis of China’s In-vehicle Intelligent Connectivity Solution Market

As essential cost components of in-vehicle intelligent connectivity systems, communication modules have undergone sustained price declines in China between 2021 and 2025, driven by chip technology upgrades, large-scale production and improved supply chain efficiency. As communication modules represent a major portion of the BOM cost of the Company’s in-vehicle communication solutions, the decline in core component costs has provided the Company with flexible pricing space, allowing the Company to appropriately lower the historical selling prices of its in-vehicle communication solutions while maintaining stable gross profit levels, which in turn has strengthened its market competitiveness and supported the expansion of its customer base and shipment volume.

Average Price of Communication Module, China, 2021-2025



Source: Frost & Sullivan

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COMPETITIVE ANALYSIS OF CHINA’S IN-VEHICLE INTELLIGENT CONNECTIVITY SOLUTION MARKET

Competitive Overview of China’s In-vehicle Intelligent Connectivity Solution Market

Market participants in China’s in-vehicle intelligent connectivity solution market can be mainly classified as in-vehicle communication solution suppliers and E-call solution suppliers. Due to automotive customers’ high requirements on performance and technology iteration of in-vehicle communication solutions, in-vehicle communication solution market is relatively concentrated. Top in-vehicle communication solution suppliers capture most market shares, with competitive R&D capability and customer loyalty. Given that China’s eCall solution market is still in its early stages, although leading vendors occupy a certain market share, there are many other market players exploring the market.

Ranking of China’s In-vehicle Communication Solution Market

In 2025, by shipment volume of T-Box, top five market players in the in-vehicle communication solution market accounted for 35.7% of the overall market. The Company ranked 5th and 4th among all suppliers and all domestic suppliers, respectively, with a shipment volume of 898.0 thousand units, accounting for 4.9% of the overall market.

In 2025, by revenue of T-Box, top three market players in the in-vehicle communication solution market was Company B, Company C and Company A, with a revenue of RMB1.1 billion, RMB1.0 billion and RMB0.6 billion, separately.

Top Players in In-vehicle Communication Solution Industry (by T-Box Shipment Volume), China, 2025

Rank	Company Name	Shipment Volume (thousand units)	Market Share	Whether MNC
1	Company A	1,668.3	9.1%	Yes
2	Company B	1,619.5	8.8%	No
3	Company C	1,432.4	7.8%	No
4	Company D	926.6	5.0%	No
5	The Company	898.0	4.9%	No
	Others	11,812.6	64.3%	
Total		18,357.4	100.0%	

Note:

Company A is a private company headquartered in South Korea. Its main business includes the R&D, manufacturing, and sales of key electronic components and materials.

Company B is a private company headquartered in Guangdong, China. Its main business includes the provision of telecommunications equipment, smart devices, and cloud computing services.

Company C is a listed company headquartered in Liaoning, China. Its main business includes the provision of software technology, products, solutions, and IT services.

Company D is a listed company headquartered in Fujian, China. Its main business includes the R&D, design, and sales of automotive telematics control units (TCUs) and related core modules.

“MNC” refers to multinational company.

Source: Frost & Sullivan

In 2025, by shipment volume of 4G T-Box, top five market players in the in-vehicle communication solution market accounted for 32.5% of the overall market. The Company ranked 4th and 3rd among all suppliers and all domestic suppliers, respectively, with a shipment volume of 843.4 thousand units, accounting for 5.2% of the overall market.

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In 2025, by revenue of 4G T-Box, top three market players in the in-vehicle communication solution market was Company A, Company B and Company C, with a revenue of RMB0.5 billion, RMB0.3 billion and RMB0.3 billion, separately.

Top Players in 4G In-vehicle Communication Solution Industry (by T-Box Shipment Volume), China, 2025

Rank	Company Name	Shipment Volume (thousand units)	Market Share	Whether MNC
1	Company A	1,457.3	9.1%	Yes
2	Company B	1,108.9	6.9%	No
3	Company C	981.9	6.1%	No
4	The Company	843.4	5.2%	No
5	Company D	835.7	5.2%	No
	Others	10,869.7	67.5%	
Total		16,096.9	100.0%	

Source: Frost & Sullivan

In 2025, by shipment volume of 5G T-Box, top five market players in the in-vehicle communication solution market accounted for 71.5% of the overall market.

Ranking of China’s E-call Solution Market

In 2025, by shipment volume of E-call, top five market players in the E-call solution market accounted for 20.0% of the overall market. The Company ranked 2nd among all domestic E-call suppliers, with a shipment volume of 238.0 thousand units, accounting for 2.6% of the overall market.

In 2025, by revenue of E-call, top three market players in the E-call solution market was Company D, Company E and The Company, with a revenue of RMB0.6 billion, RMB0.2 billion and RMB0.1 billion, separately.

Top Players in the E-call Solution Industry (by E-call Shipment Volume), China, 2025

Rank	Company Name	Shipment Volume (thousand units)	Market Share	Whether MNC
1	Company D	739.5	8.2%	No
2	Company E	390.5	4.3%	Yes
3	The Company	238.0	2.6%	No
4	Company C	230.9	2.6%	No
5	Company F	199.5	2.2%	No
	Others	7,209.3	80.0%	
Total		9,013.0	100.0%	

Notes:

Company E is a listed company headquartered in France. Its main business includes the R&D, manufacturing, and sales of automotive components, integrated systems, and modules.

Company F is a listed company headquartered in Guangdong, China. Its main business focuses on the R&D, manufacturing, and sales of IoT (Internet of Things) connectivity products, modules, and solutions, as well as smart city systems.

Source: Frost & Sullivan

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By shipment volume of E-call from January 2025 to September 2025, the Company ranked 2nd among all domestic E-call suppliers and 3rd among all E-call suppliers, with a shipment volume of 136.0 thousand units, accounting for 1.4% of the overall market.

Barriers of China’s In-vehicle Intelligent Connectivity Solution Market

Customization Capability Barrier

Amidst the trend towards software-defined vehicles (SDV) and domain-centralized EEAs, customization capability has become a core competitive barrier for in-vehicle intelligent connectivity solution suppliers, with entry barriers continually rising. Significant variations exist among automakers in electronic architectures, communication protocols, functional definitions, and performance standards. This demands suppliers not only possess deep customization development capabilities spanning hardware, software, and systems, but also achieve full-stack integration and coordination from chips and sensors through to application services. The decoupling of software and hardware alongside centralized architecture further complicates system adaptation and continuous upgrades. This necessitates suppliers to possess cross-domain technology integration capabilities, agile response systems, and full lifecycle support services. These comprehensive requirements collectively form a significant barrier to market entry.

Capital Barrier

Developing, testing, and deploying intelligent connected vehicles requires significant and sustained funding. Companies must invest heavily in key components such as sensors, computing platforms, and communication modules. They also need to cover the costs of data platform construction and compliance. New market entrants without strong financial resources will find it difficult to support ongoing innovation and business expansion.

Standardization and Compliance Barrier

The intelligent connected vehicle industry faces challenges due to inconsistent regulations and strict approval processes. At the national level, there is no clear legal framework for higher-level autonomous driving (L3 and above). Key issues such as accident liability, data security, and vehicle registration remain unresolved. Moreover, technical standards are fragmented. Communication protocols, data interfaces, and roadside device specifications vary across regions. Companies must comply with different local policies, adding complexity and cost to market entry.

Customer Resource Barrier

The industry is relatively concentrated, and new entrants struggle to gain the trust of major manufacturers. To ensure quality and reliability, automakers prefer to work with established suppliers that have proven technical expertise and project experience. For example, integrating intelligent terminals requires early involvement in vehicle design, a role typically reserved for long-term partners. New suppliers lack the reference projects and customer confidence needed to compete. In addition, limited data sharing and poor platform interoperability strengthen the position of existing players, creating further obstacles for newcomers.

OVERVIEW OF CHINA’S DOMAIN CONTROL SOLUTION MARKET

Overview of Domain Control Solution Industry

The domain control solution industry is a rapidly growing sector that is central to modern vehicle architecture, driven by the increasing complexity of electronics and the demand for advanced features such as autonomous driving. By consolidating numerous Electronic Control Units (ECUs) into fewer, more powerful central computers, domain control solutions reduce complexity, weight, and cost while enabling high-speed communication and complex functions such as sensor fusion and decision-making.

INDUSTRY OVERVIEW

The evolution of automotive domain control solutions is transitioning from traditional distributed ECUs to the current mainstream “function-domain centralized” architecture, and further progressing toward “cross-domain integration”. The trend leads to enhanced architecture efficiency and flexibility. Due to technical constraints such as high-computing power chips, complex software integration, and supply chain restructuring, the industry is expected to require an additional 5–10 years to achieve the ultimate form of “central computing + zone control” architecture. In addition, the growth of China's domain controller market is driven by falling costs of key components through domestic technology breakthroughs and a highly integrated local supply chain that strengthens cost advantages and accelerates development. Major challenges stem from the need for greater computing power and low-latency, high-reliability performance to meet stricter functional safety requirements. The competitive landscape is characterized by leading Tier 1 suppliers and technology firms dominating high-compute intelligent driving segments, while domestic players leverage cost advantages and localized services to gain share in body and chassis domain controller markets. The market presents high entry barriers due to substantial capital requirements for R&D, stringent automotive-grade safety certifications, and the need for deep cross-disciplinary expertise in hardware, software, and system integration.

Among six major domains, the connectivity domain is the segment in which the Company engages in and serves as the foundational information infrastructure which provides essential pathways for data exchange not only within the vehicle but also between the vehicle and the cloud, infrastructure (V2X), and the external environment, enabling the intelligent collaboration of all other functional domains. The vehicle body domain mainly include body electronics such as lighting and door locks. The intelligent cockpit domain is responsible for information display, entertainment, and intelligent interaction. The intelligent driving domain enables advanced driver assistance systems and autonomous driving functions. The powertrain domain handles the control and optimization of engine and battery systems, and the chassis domain manage vehicle movement.

Market Size of China's Domain Control Solution Market

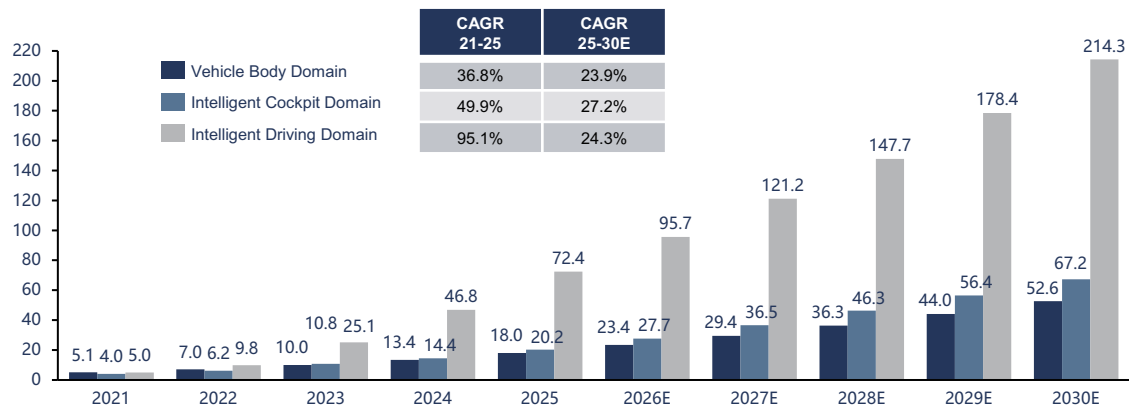
The division is based on functional relevance and core business attributes of vehicle components. Among the five domains, the vehicle body domain, intelligent cockpit domain, and intelligent driving domain constitute the three core domain control solution categories most closely associated with vehicle intelligence. They each undertake distinct vehicle control responsibilities while forming tight interconnections through R&D data exchange. The market sizes of the three categories are positively correlated with market's increasing focus on vehicle intelligence.

Additionally, the three domains exhibit significant differences in their requirements for computing power, safety levels, and real-time performance. The intelligent driving domain must process massive amounts of data from multiple sensors, demanding high computing power. In contrast, the intelligent cockpit domain, while increasingly requiring higher computing power, has lower safety requirements and places greater emphasis on ecosystem compatibility of the operating system. The vehicle body domain control solution demands the least computing power but requires high flexibility and openness to accommodate personalized configurations across different vehicle models.

China's vehicle body domain control solution market has experienced robust growth which is fundamentally being driven by the transition from distributed electronic architecture to centralized domain-oriented design. The trend is further accelerated by intense competition among OEMs, where integrating a body domain control solution has become a critical benchmark for vehicle modernity and intelligence. The market has grown from RMB5.1 billion in 2021 to RMB18.0 billion in 2025, with a CAGR of 36.8%. This momentum is projected to continue on a steep upward trajectory as the technology becomes a standard feature across both new energy and traditional vehicle segments. China's intelligent cockpit domain Control Solution market has witnessed sustained and accelerated growth from 2021 to 2030. The trend has been driven by the automotive industry's rapid transition to centralized electronic architectures and the intelligentization of vehicles. The market grew from RMB4.0 billion in 2021 to RMB14.4 billion in 2025, with a CAGR of 49.9%. Looking ahead, the market is expected to have continued robust expansion, driven by consumer expectations for advanced human-machine interfaces. China's sales revenue of intelligent driving domain Control Solution has witnessed exponential growth since 2021, fueled by the automotive industry's race in autonomous driving capabilities. The market grew from RMB5.0 billion in 2021 to approximately RMB72.4 billion in 2025, achieving a CAGR of about 95.1%. The driving force is shifting from achieving basic ADAS functions to mastering high-level autonomous features, making the intelligent driving domain Control Solution a critical component.

INDUSTRY OVERVIEW

Market Size of Domain Control Solution (by revenue), China, 2021-2030E



Source: Frost & Sullivan

Note: Domain control solutions refer to those used in passenger vehicles.

SOURCE OF INFORMATION

In connection with the [REDACTED], we engaged Frost & Sullivan, an independent market research consultant, to conduct an analysis of, and to prepare the Frost & Sullivan Report about, the in-vehicle intelligent connectivity solution market and the domain control solution 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 agreed to pay a fee of RMB450,000 to Frost & Sullivan, which we believe to be consistent with market rates.

In compiling and preparing the Frost & Sullivan Report, Frost & Sullivan conducted (i) primary research includes interviewing industry participants, competitors, downstream customers and recognized third-party industry associations; and (ii) 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 Frost & Sullivan Report are based on the following key assumptions during the forecast period: (i) the social, economic and political conditions in global and China markets discussed will remain stable during the forecast period, (ii) government policies on global and China markets will remain consistent during the forecast period, and (iii) global and China markets will be driven by the factors which are stated in the Frost & Sullivan Report. Except as otherwise noted, all the data and forecasts contained in this section are derived from the Frost & Sullivan 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, they have exercised reasonable care in selecting and identifying the sources of information used in this section (which are extracted from the Frost & Sullivan Report), compiling, extracting and reproducing the information, and ensuring no material omission of the information, and 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 Frost & Sullivan Report, which may qualify, contradict or have an impact on the information in this section.