The information and statistics set out in this section and other sections of this document were extracted from the Frost & Sullivan Report, which was commissioned by us, and from various official government publications and other publicly available publications. We engaged Frost & Sullivan to prepare the Frost & Sullivan Report, an independent industry report, in connection with the **[REDACTED]**. *The information from official government sources has not been independently verified by us,* **[REDACTED]**, *Joint Sponsors,* **[REDACTED]**, *any of the* **[REDACTED]** *any of their respective directors and advisors, or any other persons or parties involved in the* **[REDACTED]**, *and no representation is given as to its accuracy.*

SOURCE OF INFORMATION

We commissioned Frost & Sullivan to conduct market research on Global and China's intelligent vehicle and integrated domain control solutions industries and prepare the Frost & Sullivan Report. Frost & Sullivan is an independent global consulting firm founded in 1961 in New York that offers industry research and market strategies. We have contracted to pay RMB280,000 to Frost & Sullivan for compiling the Frost & Sullivan Report.

In preparing the Frost & Sullivan Report, Frost & Sullivan conducted detailed primary research which involved discussing the status of the industry with certain leading industry participants and conducting interviews with relevant parties. Frost & Sullivan also conducted secondary research which involved reviewing company reports, independent research reports and data based on its own research database. Frost & Sullivan obtained the figures for the estimated total market size from historical data analysis plotted against macroeconomic data as well as considered the above-mentioned industry key drivers. Its market engineering forecasting methodology integrates several forecasting techniques with the market engineering measurement-based system and relies on the expertise of the analyst team in integrating the critical market elements investigated during the research phase of the project. These elements primarily include expert-opinion forecasting methodology, integration of market drivers and restraints, integration with the market challenges, integration of the market engineering measurement trends and integration of econometric variables.

The Frost & Sullivan Report is compiled based on the following assumptions: (i) the social, economic and political environment of the globe and mainland China is likely to remain stable in the forecast period; and (ii) related industry key drivers are likely to drive the market in the forecast period.

Our Directors confirm that, after taking reasonable care, there has been no material adverse change in the overall market information since the date of the Frost & Sullivan Report that would materially qualify, contradict or have an impact on such information.

OVERVIEW OF GLOBAL AND CHINA'S INTELLIGENT VEHICLE INDUSTRY

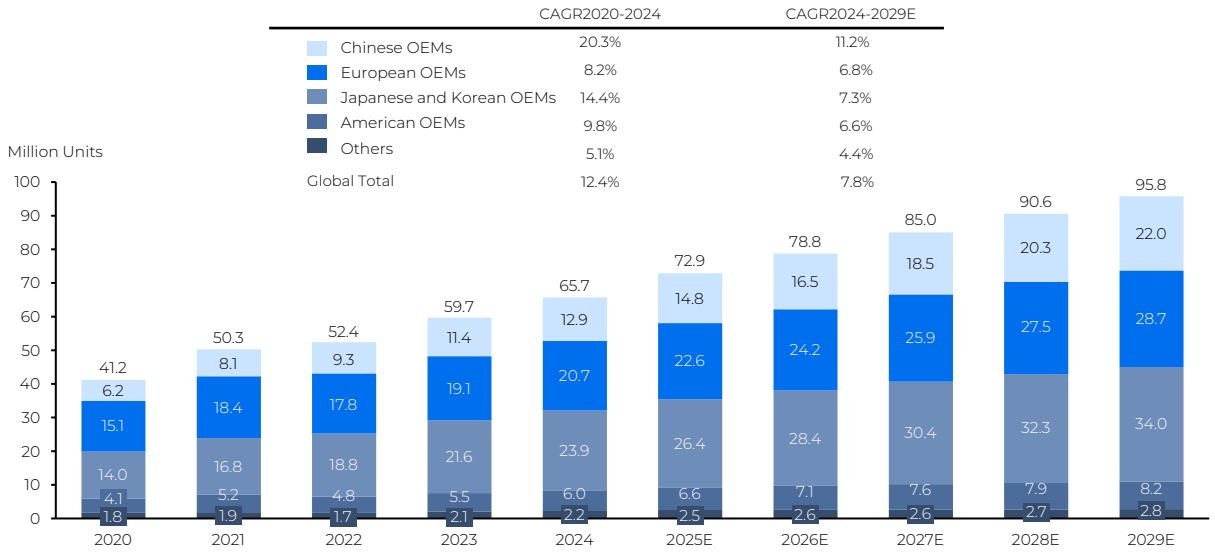
Definition of Intelligent Vehicle

Intelligent vehicles refer to next-generation automobiles equipped with advanced electronic and software systems that enable real-time perception, decision-making, control, and connectivity. At the core of intelligent vehicles is the integrated domain control solution, which delivers a highly interactive and immersive user experience through multimodal human-machine interfaces (HMI)—including voice commands, touchscreen inputs, and gesture recognition. These systems are supported by integrated digital displays and rich infotainment platforms, significantly enhancing in-cabin engagement and personalization. Beyond the cockpit, intelligent vehicles are equipped with an array of sensors, actuators, and communication modules that enable comprehensive environmental awareness, intelligent decision-making, and precise control. They enable data exchange with external systems such as other vehicles, infrastructure, pedestrians, and cloud platforms. Additionally, intelligent vehicles increasingly integrate advanced driver assistance systems (ADAS) and are advancing toward higher levels of autonomous driving. Together, these capabilities mark the transition of automobiles from traditional mechanical products into intelligent, software-defined mobility platforms, redefining the relationship between users and vehicles.

Market Size of Global and China's Intelligent Vehicle Industry

From 2020 to 2024, global sales volume of intelligent vehicles rose from 41.2 million to 65.7 million units. By 2029, global intelligent vehicle sales volume is projected to reach 95.8 million units. China has emerged as a key driver of this momentum, solidifying its role as a global vehicle manufacturing hub. Chinese OEMs have significantly outpaced the broader market, with intelligent vehicle sales volume rising from 6.2 million units in 2020 to 12.9 million in 2024, representing a CAGR of 20.3%. Looking to 2029, Chinese OEMs are expected to capture 23.0% of global intelligent vehicle sales volume, reaching 22.0 million units at a CAGR of 11.2% from 2024. The market is expected to shift from rapid expansion towards high quality development. Chinese suppliers now face a critical opportunity to expand globally alongside their OEM partners. As Chinese vehicle brands broaden their international footprint, related suppliers can diversify their customer base and tap into new markets—positioning themselves as global players in the intelligent mobility era.

Global Intelligent Vehicles Sales Volume by Origin of OEMs, 2020-2029E



Source: Interviews with Industry Experts, China Association of Automobile Manufacturers, Frost & Sullivan

Evolution of Intelligent Vehicle Electronic and Electrical (E/E) Architecture

The Electronic and Electrical (E/E) architecture of intelligent vehicles refers to the underlying system that integrates and manages all in-vehicle electronic components, including control units, domain controllers, communication interfaces, and supporting software infrastructure. Historically, vehicles adopted a distributed architecture, where numerous ECUs were dedicated to managing isolated functions—such as braking, infotainment, and lighting—independently. To meet the growing demand for higher computing power, data bandwidth, and feature integration, the industry is transitioning through three key architectural stages: From distributed to domain-centralized architecture, where control is consolidated by functional domains such as cockpit and ultimately to zonal architecture, where control is structured geographically by zones within the vehicle and governed by high-performance centralized computing platforms. This evolution allows for significantly reduced wiring complexity, improved communication efficiency, and lower system costs, while enabling deployment of advanced features such as autonomous driving, integrated domain control solution systems, and over-the-air (OTA) updates.

As the E/E architecture becomes more centralized, software is emerging as the primary enabler of intelligence and value creation. In particular, the integrated domain—which acts as the central interface for human–machine interaction—has become a key battlefield for software innovation. The ability to deliver integrated digital experiences through AI-powered UI/UX, voice interaction, personalized services, and scenario-based controls increasingly defines OEM differentiation. Furthermore, software plays a crucial role in addressing the "last mile" challenge for chipmakers: bridging raw computing capability with real-world application

scenarios. Through close integration between software and domain control chips, especially in the cockpit and autonomous driving domains, developers can optimize performance, ensure compatibility, and deliver unified user experiences across multiple systems. The convergence of software across domains—cockpit, ADAS, telematics, and body control—enables cross-domain synergy and supports the broader vision of the vehicle as a "third living space": an intelligent, mobile extension of the user's home and office environment. As a result, software has moved from a supporting role to a strategic focal point—not only facilitating system functionality, but also driving monetization, user engagement, and lifecycle innovation.

Major Catalysts for Global and China's Intelligent Vehicle Industry

Technology Advancements

The development of the intelligent vehicle industry is being propelled by a series of rapid technological advancements. These include the integration of integrated domain control solution technologies such as voice interaction, augmented reality (AR) displays, and multimodal input systems, as well as the continued evolution of intelligent driving systems—advancing from basic ADAS to higher levels of autonomous driving functionality. Another major driver is the emergence of telematics communication, which enables real-time interaction between vehicles, infrastructure, and surrounding environments. This facilitates improved traffic coordination, enhanced safety, and more efficient route planning. Meanwhile, smart energy management systems are improving the efficiency, range, and lifecycle performance of new energy vehicles (NEVs), addressing key barriers to mass adoption. Furthermore, over-the-air (OTA) update capabilities allow for continuous feature and performance enhancements without physical intervention. These innovations are collectively reshaping mobility by making vehicles safer, more connected, and increasingly user-centric, while also extending the relevance and value of each vehicle over its lifecycle.

Intelligence as an OEMs' Core Competitive Differentiator

Intelligent capabilities have evolved from optional features to core competitive differentiators for OEMs, driving a paradigm shift in both consumer expectations and manufacturer strategies. On the demand side, consumers increasingly prioritize holistic intelligent experiences that extend beyond convenience to include real-time safety enhancements, personalized interfaces, and human–machine interaction. Features such as intelligent navigation, autonomous parking, adaptive cabin environments, and continuous OTA upgrades are becoming key decision-making factors in vehicle purchases. Expectations are rising for safety redundancy, commuting efficiency, and tailored digital experiences, making intelligence a defining element of vehicle value. On the supply side, OEMs are integrating intelligent innovation into the core of their development roadmaps. Intelligence is now essential not only for product differentiation but also for building brand equity, enhancing customer engagement, and securing long-term user loyalty. As the industry transitions toward software-defined and service-oriented business models, intelligent features are enabling OEMs to unlock new revenue streams while reinforcing their positions in a highly competitive market landscape.

Policy Support

Governments worldwide increasingly view intelligent vehicles as a strategic industry and are offering comprehensive policy support across technology R&D, testing and validation, commercialization, and infrastructure development to accelerate growth. In 2025, China's Government Work Report emphasized the "AI+" initiative and prioritized the development of intelligent, connected new energy vehicles. In November 2023, the Ministry of Industry and Information Technology (MIIT) issued the "Circular on the Pilot Program for the Access and Road Testing of Intelligent Connected Vehicles," (《關於開展智能網聯汽車准入和上路通行試點工作的通知》) expanding policy support beyond autonomous driving to broader intelligent vehicle capabilities. By July 2024, China had designated 20 pilot cities for "Vehicle-Road-Cloud Integration," aiming to fast-track intelligent mobility deployment. Globally, governments are following suit. In December 2024, the U.S. National Highway Traffic Safety Administration (NHTSA) launched the "Automated Vehicles Safety, Transparency, and Evaluation Program" to promote the safe deployment of intelligent vehicles. The European Parliament and the Council implemented "Regulation (EU) 2022/1426", which established unified approval procedures and technical specifications for automated driving systems in fully automated vehicles, and

represented a critical step toward harmonizing technical standards and facilitating the commercial deployment of Connected and Automated Mobility (CCAM) in Europe.

Key Trends in Global and China's Intelligent Vehicle Industry

Intelligent Vehicles Entering the Mainstream

Intelligent vehicle features are rapidly expanding from premium models to the mass market, driven by rising consumer demand for intelligent functionalities and OEMs' need to differentiate their offerings in an increasingly competitive landscape. Continuous innovation—including algorithm optimization, system architecture upgrades, and localization of core components such as chips and sensors—has substantially lowered the cost of intelligent systems. At the same time, enhanced mass-production capabilities and improved collaboration along the value chain have fostered a virtuous cycle across the industry. These dynamics are accelerating the adoption of intelligent features, laying a solid foundation for deeper market penetration and long-term industry growth.

Smart Cockpits: From Interfaces to Intelligence Control Hubs

As the primary interface between users and vehicle intelligence, integrated domain control solutions have evolved beyond traditional display functions to deliver fully immersive, scenario-based experiences. Enabled by multi-screen interaction, multimodal inputs, and real-time user recognition, these systems can automatically adjust key cabin elements—including seating, climate, and ambient settings—to enhance comfort and personalization. More importantly, integrated domain control solutions are breaking functional silos and transforming into centralized control hubs, integrating with autonomous driving, body control, and other subsystems. This cross-domain integration improves resource allocation, operational efficiency, and overall system responsiveness, setting new benchmarks for intelligent in-vehicle experiences.

Software: Core Driver of the Intelligent Vehicle Evolution

Software has become the primary engine of transformation in the automotive industry, enabling vehicles to evolve into intelligent, connected platforms. Traditional development models have often struggled to balance innovation, system stability, and cost efficiency. In response, the industry is increasingly embracing the Software-Defined Vehicle (SDV) paradigm, characterized by centralized, cross domain computing platforms that replace fragmented electronic architectures. This transition allows for more flexible resource allocation, reduced development cycles, and cost-effective updates. OTA functionality further extends vehicle lifecycle by enabling continuous feature enhancements post-sale. Meanwhile, the rise of subscription-based services provides OEMs with new recurring revenue streams and fosters deeper user engagement.

From a cost perspective, hardware accounts for approximately 50%-60% of the total bill of materials (BOM) for intelligent vehicles as of 2024, followed by 20%-30% for software, and 10%-20% for other costs such as energy, labor, and manufacturing overhead. However, as vehicle architectures shift toward domain-centralized and software-defined models, the share of software is expected to increase significantly—reaching an estimated 45%–55% by 2029. This trend is driven by the consolidation of ECUs, which reduces hardware dependency and enables more functionality to be delivered via software, particularly in areas such as integrated domain control solutions and autonomous driving. Cross-domain integration is further accelerating this transformation by improving development efficiency and delivering more advanced user experiences.

OVERVIEW OF GLOBAL AND CHINA'S INTEGRATED DOMAIN CONTROL SOLUTIONS INDUSTRY

Definition of Integrated Domain Control Solution

An integrated domain control solution refers to a comprehensive vehicle control architecture centered around the integrated domain controller, designed to unify and coordinate multiple in-vehicle systems—such as ADAS, telematics, and body control—within a single, intelligent framework. By enabling deep cross-domain fusion, centralized computing, and intelligent orchestration of both hardware and software resources, this solution

significantly enhances system intelligence, integration efficiency, and overall vehicle performance. Unlike traditional smart cockpit domain control systems that operate in silos and primarily focus on infotainment or navigation, this integrated domain control solution adopts a scalable, platform-based architecture. It breaks down traditional domain boundaries by combining integrated domain control solution functions with ADAS capabilities, telematics, and body control functions. This unified approach delivers a higher level of system synergy, improves real-time responsiveness, and supports more adaptive, personalized user experience.

Traditionally, smart cockpit domain control systems were primarily based on IVI (In-Vehicle Infotainment) platforms, which typically offer basic functions such as navigation, media playback, and connectivity (e.g., Bluetooth, USB), alongside simple driver assistance features. While they were designed to enhance the in-car entertainment experience, such systems have often struggled to meet the rising demand for more complex and diversified functionalities in modern vehicles.

With the growing complexity and diversification of integrated domain control solution features, traditional IVI systems can no longer keep up with the performance demands driven by advancements in technologies such as ADAS (Advanced Driver Assistance Systems), V2X (Vehicle-to-Everything), and integrated multi-functional in-cabin systems such as cockpit infotainment system and the driver information system. Integrated Domain Control Systems have therefore emerged as the next-generation solution, featuring more advanced architectures and powered by high-performance SoCs, enabling them to support the higher computing and integration needs of modern vehicles.

The **Integrated Domain Control Solutions** are typically built on **cockpit domain control SoCs**, which enable the management of multiple screens, functions, and even distinct vehicle domains (e.g., the cockpit and intelligent driving domains) through a unified platform. This integration streamlines the overall system architecture and provides a more responsive user experience.

The **integrated domain control solutions industry** consists of two core segments:

1. **Traditional Integrated Domain Control Solutions:** These focus on integrating in-cabin intelligent functions like infotainment, navigation, and basic driver assistance.

2. **Advanced Integrated Domain Control Solutions**: These go further by expanding control across multiple domains, enabling real-time, system-wide coordination. This includes combining the advanced integrated domain control solution with ADAS-parking/driving solutions, advanced integrated domain control solution with telematics solutions, OTA updates, and subscription services, creating a comprehensive framework for the transition to intelligent, software-defined vehicle platforms.

Ultimately, the solution represents a critical enabler in the industry's transition toward software-defined vehicles. By consolidating functionality across previously fragmented domains, it lays the foundation for next generation intelligent mobility platforms characterized by centralized control, continuous software upgrades, and enhanced user engagement. In integrated domain control solutions, AI plays a pivotal role not only during system operation but also throughout the entire product development lifecycle. During the development phase, AI is extensively applied in data-driven system modeling, virtual simulation testing, and optimization of control strategies significantly shortening development cycles and enhancing overall efficiency. In the operational phase, AI technologies such as computer vision and deep learning enable a range of intelligent in-cabin functions, including driver monitoring, occupant recognition, and advanced HMI (Human Machine Interaction) features. Natural language processing enhances voice interaction capabilities, delivering a more intuitive human-machine interface. Machine learning supports user behavior modeling and personalized recommendations, continuously improving the cabin environment and driving experience. Moreover, AI powers predictive maintenance and OTA management, enabling real-time vehicle condition monitoring, early fault detection, and personalized feature updates accelerating the transition from traditional vehicles to intelligent, software-defined vehicle platforms.

During the Track Record Period, we offered two types of domain control solutions: (i) basic domain control solutions; and (ii) integrated smart control solutions. Collectively, these solutions are referred to as "integrated

domain control solutions." Basic domain control solutions only provide operating system-level functionalities and require the OEMs or their designated Tier-1 supplier to add features. When additional features are used only to integrate intelligent in-cabin functions, the basic domain control solutions become traditional integrated domain control solutions. When those features also extend control across multiple domains, the basic domain control solutions become advanced integrated domain control solutions. For our integrated smart control solutions, those only focus on integrating in-cabin intelligent functions are traditional integrated domain control solutions and those go further by expanding control across multiple domains are advanced ones.

As global smart vehicle market experiences rapid increase in autonomous driving adoption, the traditional separation between smart cockpits and intelligent driving domains is quickly dissolving. This shift is driven by the adoption of centralized E/E architectures, which replace fragmented multi-ECU systems to reduce hardware redundancy and lower costs. At the heart of this evolution lies the challenge of efficiently and accurately managing the highly variable and heterogeneous computing demands in light of dynamic cockpit-and-ADAS scenarios and road conditions.

The solution to this challenge is a unified technical architecture supported by a single-source solution provider. By eliminating the "silo effect" of multi-vendor hardware, this approach enables the real-time, flexible redistribution of computational resources between the cockpit-and-ADAS systems. This integration not only ensures system stability and operational efficiency but also provides a solid foundation for continuous over-the-air (OTA) updates and innovation.

Product Architecture of Integrated Domain Control Solutions

The integrated domain control solutions are built on a modular yet centralized architecture, defined as "Traditional integrated Domain Control System + Multi-Domain Control Systems and Functions." Within this structure, the integrated domain control system functions as the central coordination hub—managing data exchange, computing resources, and control logic across various functional domains. By enabling deep cross-domain integration, the architecture breaks down traditional system silos and unifies key subsystems such as infotainment, ADAS, body control, and telematics into a cohesive intelligent platform.

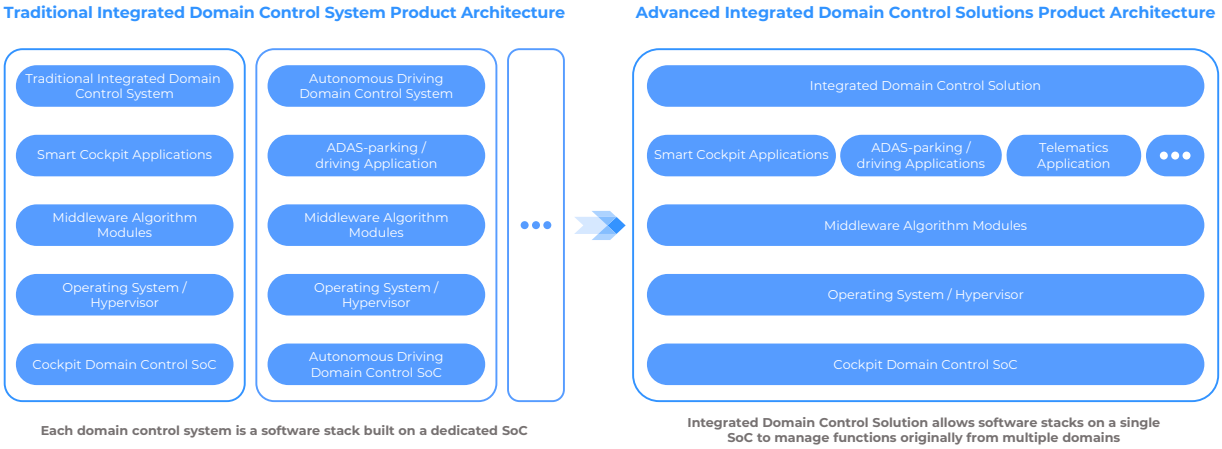
Key advantages of this architecture include:

- **Cross-domain convergence**: The architecture streamlines system development by reducing fragmentation and complexity, lowering integration costs, and enabling smarter, more connected features.

- **Future scalability and upgradeability**: The architecture is designed with forward compatibility in mind, allowing OEMs to quickly respond to emerging technologies and shifting user expectations through modular upgrades and software enhancements.

By consolidating multiple functions into a unified control framework, this solution supports the transformation of vehicles into intelligent, software-defined platforms capable of delivering enhanced performance, adaptability, and user-centric experiences.

Product Architecture of Integrated Domain Control Solutions



Source: Frost & Sullivan

Value Chain Analysis of Global and China's Integrated Domain Control Solutions Industry

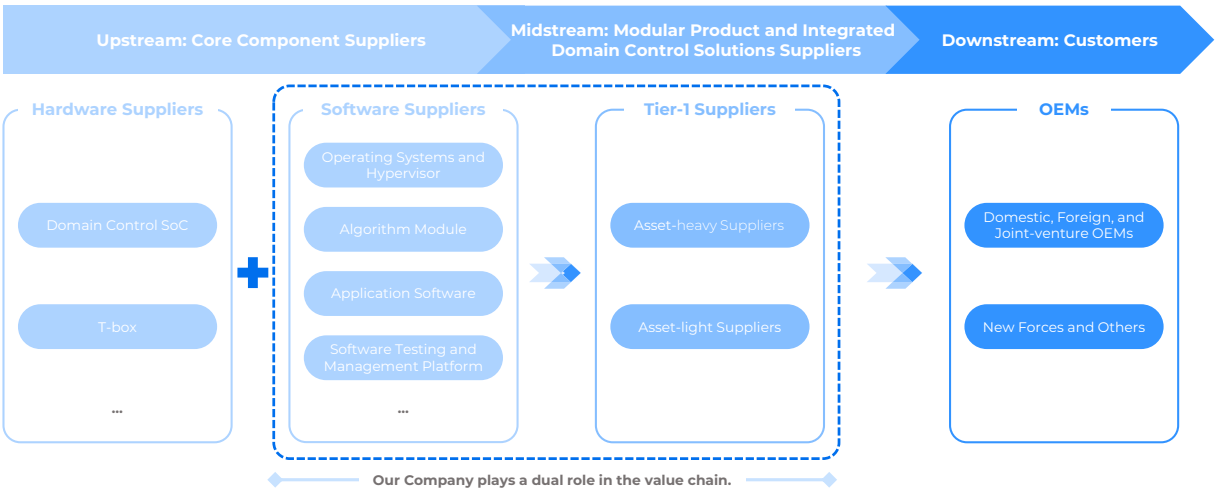
The upstream suppliers of China's integrated domain control solutions industry supply the critical technological foundation for integrated solutions. On the hardware side, this includes domain control System-on-Chips (SoCs), telematics, and other embedded computing modules. On the software side, key components include operating systems, hypervisors, middleware, algorithm modules, application software, and development and testing platforms. These core elements form the technical backbone for realizing intelligent domain integration, real-time decision-making, and software-defined functionalities.

The midstream of China's integrated domain control solutions industry is primarily composed of domain control solutions providers that offer end-to-end, modular products and software-hardware integrated solutions. These players act as technology enablers, bridging upstream innovations with downstream vehicle platforms. They provide scalable platforms that unify cockpit, ADAS, telematics, and body control systems into cohesive solutions, allowing OEMs to accelerate development while ensuring system-level performance, safety, and user experience. Leading midstream providers are increasingly expanding into upstream software development, enhancing their strategic position within the value chain. By building comprehensive software support ecosystems, these providers help upstream SoC manufacturers overcome the "last mile" challenge—from chip capability to in-vehicle applications. This vertical integration of hardware and software improves adaptation efficiency, shortens time-to-market, and enhances the commercial viability of chip platforms.

Downstream OEMs integrate domain control solutions into their vehicle platforms, delivering intelligent features that differentiate their offerings and elevate user experience. OEMs in China can broadly be categorized into five types: traditional domestic OEMs, foreign OEMs, joint-venture OEMs, emerging new forces, and others. These groups exhibit varying technology capabilities and development models, influencing their supplier preferences and integration approaches.

Historically, the market has been dominated by asset-heavy solution providers—companies that operate their own manufacturing facilities. They have been particularly favored by emerging OEMs, which often adopt a hybrid development strategy: developing core integrated domain control solution software in-house while outsourcing hardware manufacturing and integration tasks. However, as the industry transitions toward software-defined vehicle (SDV) architectures, the competitive landscape is undergoing a fundamental shift. Asset-light solution providers—characterized by their focus on software innovation and the outsource of production to third party manufacturers—are gaining traction. Without the burden of manufacturing infrastructure, these players enjoy the benefits of greater agility, scalability, and adaptability. Their key strengths lie in mature software stacks, fast deployment cycles, and flexible platform designs. As OEMs seek to streamline system complexity, reduce development risk, and accelerate product differentiation, asset-light solution suppliers are increasingly emerging as their preferred partners. This shift reflects a broader structural reconfiguration of the midstream value chain, emphasizing software-centric innovation and collaborative ecosystem models.

Value Chain of Global and China's Integrated Domain Control Solutions



Source: Frost & Sullivan

As automotive intelligence and electrification have gathered pace in recent years, OEMs have increasingly relied on integrated domain control systems to drive the transition toward centralized electronic and electrical architectures (E/EAs). This shift highlights the growing role of software-defined functionality and centralized computing in next-generation vehicle platforms. In response, OEMs have taken different paths, shaped by their distinct technological capabilities, supply chain readiness, and long-term ambitions in software development.

Leading new-energy vehicle companies are increasingly adopting a model that combines full-stack in-house software development with outsourced hardware manufacturing and selective integration support. By building proprietary software stacks internally, they retain control over core vehicle intelligence, speed up iteration cycles, and reduce reliance on third-party systems that are often less transparent. At the same time, they continue to partner with external suppliers for domain controller hardware and for hardware-software integration services. This approach allows them to manage costs and direct their internal resources toward software-defined vehicle development, while preserving scalability and meeting delivery timelines.

In contrast, traditional domestic, overseas and joint-venture OEMs continue to depend heavily on turnkey integrated domain control solutions provided by external suppliers with established software-hardware integration capabilities. This approach helps them mitigate R&D risks as well as limitations in internal software engineering capabilities. By outsourcing to experienced external suppliers, these OEMs benefit from reliable, production-ready platforms, cost efficiencies through scale, and greater supply chain stability.

Despite the growing trend of in-house development among certain leading new-energy vehicle companies in China, often referred to as the "new forces," their collective market share remains small relative to the global automotive industry. As a result, integrated domain control solution providers are expected to continue experiencing sustained and substantial demand across the downstream market. These providers play a critical role as they serve as full-stack solution partners for traditional OEMs, while also acting as modular, flexible suppliers to new-energy vehicle companies, supporting hardware design, system integration, and software abstraction layers.

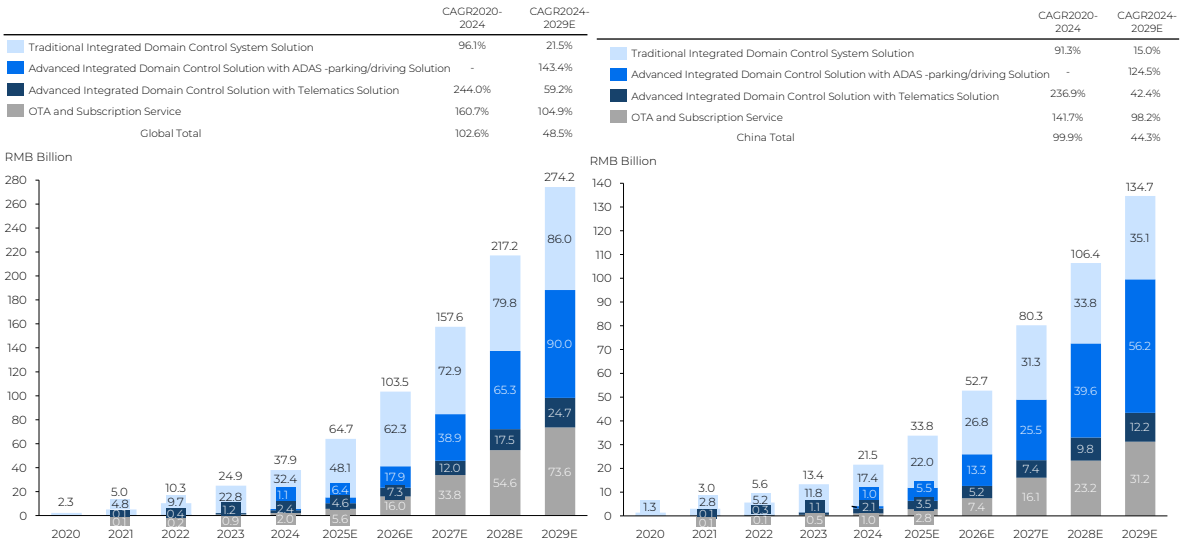
Market Size of Global and China's Integrated Domain Control Solutions Industry

The global market for integrated domain control solutions is expanding rapidly, driven by the widespread shift toward centralized E/E architectures and growing demand for integrated computing capabilities in intelligent vehicles. By revenue, the global integrated domain control solutions market grew from RMB2.3 billion in 2020 to RMB 37.9 billion in 2024, representing a CAGR of 102.6% and is projected to reach RMB274.2 billion by 2029, representing a CAGR of 48.5% from 2024 onward.

By revenue, the China's integrated domain control solutions market grew from RMB1.3 billion in 2020 to RMB21.5 billion in 2024, representing a CAGR of 99.9% and is projected to reach RMB134.7 billion by 2029,

representing a CAGR of 44.3% from 2024 onward. As intelligent vehicles evolve toward centralized computing and software-defined architectures, cross-domain fusion—particularly between integrated domain control solution and ADAS functions, and between integrated domain control solution and telematics systems—has become the mainstream development direction. These architectures enable real-time coordination between user interaction, environment perception, and vehicle control systems, significantly improving overall system efficiency, safety, and user experience.

Global and China's Market Size of Integrated Domain Control Solutions Industry by Segment by Revenue, 2020-2029E



Source: Interviews with Industry Experts, Frost & Sullivan

By combining integrated domain control solution interfaces with autonomous parking and driving capabilities, intelligent vehicles are delivering a more interactive, convenient, and safety-oriented driving experience. This integration also marks a key step toward full-stack domain fusion and central computing architecture, laying the technical foundation for future autonomous driving vehicles. In 2024, vehicles equipped with advanced integrated domain control solutions with ADAS-parking/driving functions began mass production. The global market size for advanced integrated domain control solutions with ADAS-parking/driving functions by revenue reached RMB1.1 billion in 2024, of which China market contributed RMB1.0 billion. The global market size of advanced integrated domain control solutions with ADAS-parking/driving functions is expected to grow to RMB90.0 billion by 2029, representing a CAGR of 143.4% starting from 2024 onward. As for China, the size of the market is expected to expand to RMB56.2 billion by 2029, representing a CAGR of 124.5 % from 2024 onward.

Driven by rising consumer expectations for intelligent, connected, and personalized in-car experiences, integrated domain control solutions are evolving into centralized hubs that integrate voice assistants, gesture controls, AR displays, and AI-based personalization, while telematics systems enable real-time connectivity, remote diagnostics, and data-driven services. Together, they form the backbone of software-defined vehicles, enabling automakers to differentiate through user experience, monetize data, and explore new revenue models such as ecosystem partnerships and subscription services. The global market for advanced domain control solutions with telematics functions reached RMB2.4 billion in 2024 and is projected to grow to RMB24.7 billion by 2029, representing a CAGR of 59.2% from 2024 onward. In China, the market for domain control solutions with telematics functions by revenue reached RMB2.1 billion in 2024 and is projected to grow to RMB12.2 billion by 2029, representing a CAGR of 42.4% from 2024 onward.

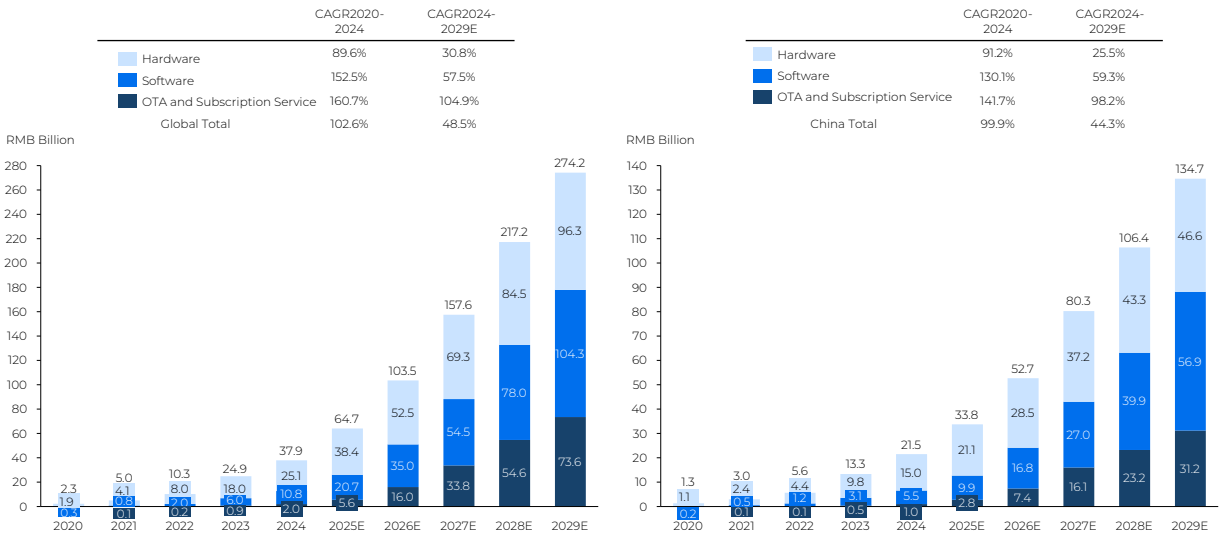
With the continued advancement of integrated domain control solution and ADAS technologies, OTA updates and subscription service are expected to experience rapid development in the coming years. OTA capabilities will enable vehicles to continuously improve and optimize their functions post-sale, while

subscription service will provide drivers with personalized features and services. Together, these technologies are diversifying revenue streams in the automotive sector and are expected to play an increasingly critical role in the future market landscape. It is expected that the global market size of OTA and subscription service by revenue will reach RMB73.6 billion in 2029 at a CAGR of 104.9% from 2024 onward. As for China market, the size of OTA and subscription service by revenue is expected to reach RMB31.2 billion in 2029 at a CAGR of 98.2% from 2024 onward.

As the industry transitions toward centralized computing architectures and software-defined vehicle (SDV) frameworks, the value composition of integrated domain control solutions is undergoing a fundamental shift from hardware dominance to software-driven innovation. While hardware still constitutes a major portion of system cost today, software has emerged as the core enabler of cross-domain integration, real-time coordination, and intelligent user experiences. It plays a pivotal role in unlocking advanced functionalities such as sensor fusion, dynamic resource allocation, and continuous feature updates.

Globally, revenue from software reached RMB10.8 billion in 2024 and is projected to grow to RMB104.3 billion by 2029, with a CAGR of 57.5% from 2024. In China, software revenue reached RMB5.5 billion in 2024 and is expected to surge to RMB56.9 billion by 2029, growing at a CAGR of 59.3%. By 2029, software alone is projected to account for approximately 40% of the value in integrated domain control solutions, highlighting its central role in the next generation of intelligent mobility solutions. Adding software and OTA updates and subscription service, the non-hardware composition is expected to account for over 60% of integrated domain control solutions in both the global and China's markets.

Global and China's Market Size of Integrated Domain Control Solutions Industry by Products by Revenue, 2020-2029E



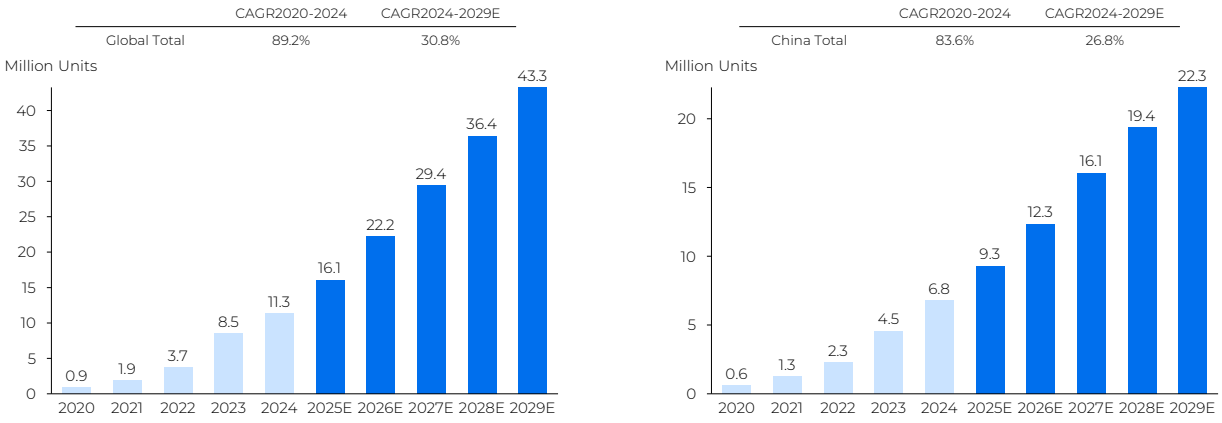
Source: Interviews with Industry Experts, Frost & Sullivan

Global passenger vehicle installations of integrated domain control solutions are accelerating, supported by growing consumer demand for smart cabin experiences and enhanced driving intelligence. The number of newly installed units worldwide rose from 0.9 million in 2020 to 11.3 million in 2024, and is projected to reach 43.3 million by 2029.

In China, newly installed volumes grew from 0.6 million units in 2020 to 6.8 million in 2024, and are forecast to reach 22.3 million by 2029. While early adoption was concentrated in premium vehicle segments, the technology is rapidly migrating toward the mass market. In China, the penetration rate of integrated domain control solutions in passenger vehicle sales increased from 3.0% in 2020 to 25% in 2024, while global penetration rate rose from 1.5% to 15.5% during the same period. In 2024, penetration rates among passenger

vehicles priced below RMB100,000 and RMB100,000–200,000 stood at 1% and 19%, respectively. These rates are expected to rise to 15% and 60% by 2029, reflecting the democratization of intelligent technologies. This trend is largely driven by the strong R&D capabilities of domestic suppliers, rapid product iteration cycles, and ongoing cost reductions—all of which are enabling the integration of domain control systems into vehicles at lower price points. As a result, integrated solutions are expected to become standard features in a broader range of vehicle classes, accelerating market penetration and contributing to long-term industry growth.

Global and China's Market Size of Integrated Domain Control Solutions Industry by Newly Installed Volume, 2024-2029E



Source: Interviews with Industry Experts, Frost & Sullivan

China's Newly Installed Volume and Penetration Rate of Integrated Domain Control Solutions by Vehicle Selling Price, 2024 and 2029E

Vehicle Selling Price	Below RMB100,000		RMB100,000-200,000		Above RMB200,000	
	2024	2029E	2024	2029E	2024	2029E
Newly Installed Volume (Million Units)	0.1	1.1	2.4	11.1	4.3	10.1
Penetration Rate (%)	1%	15%	19%	60%	55%	88%

Note: The vehicle selling price of the specific passenger vehicle models calculated in each price range is calculated based on its starting selling price.
Installed volume refers to the total sales volume of passenger vehicle equipped with integrated domain control solution during the year.
Source: Interviews with Industry Experts, Frost & Sullivan

Market Drivers and Trends Analysis of Global and China's Integrated Domain Control Solutions Industry

Global Policy Empowerment: Catalyzing High-Quality Development

The development of the global and China's integrated domain control solutions industry is being strengthened by a series of global policies and pilot programs that collectively guide technological advancement and industrial deployment. In China, the "Strategy for Innovative Development of Intelligent Vehicles" (《智慧汽車創新發展戰略》) set a long-term vision for building a nationwide intelligent vehicle system between 2035 and 2050, providing strategic direction for integrated domain control technologies. "Guidelines for the Construction of the National Internet of Vehicles Industry Standard System (Intelligent Connected Vehicles) (2023 Edition)" (《國家車聯網產業標准體系建設指南 (智慧網聯汽車) (2023版)》) established unified technical specifications and standardization requirements, offering a clear regulatory path for the development of domain controllers and other key components. In the EU, the "Industrial Action Plan for the European Automotive Sector" focuses on building sovereign technological capabilities, while the establishment of the European Connected and Autonomous Vehicle Alliance in 2025 aims to promote shared EU-wide software platforms, in-vehicle computing architectures, and integrated domain control solutions for Software-Defined Vehicles. Collectively, these policies and pilot initiatives form a structured regulatory and standardization framework that

encourages technological convergence, strengthens compliance requirements, and supports the transition toward centralized and software-defined vehicle architectures. Ultimately, the policy environment directly drives the development, adoption and investment in the integrated domain control solutions industry.

Rising Software Value: Enabling Cost Efficiency and Continuous Monetization

The automotive industry is undergoing a fundamental transition toward software-defined vehicles, driven by growing consumer demand for intelligent, connected experiences and OEMs' need to improve cost efficiency and product differentiation. Integrated domain control solutions are central to this transformation. By consolidating functions such as smart cockpit, ADAS, and body control onto a single computing platform, these solutions eliminate redundant hardware and simplify vehicle architecture—reducing the BOM cost by an estimated 20%–40%. This shift also unlocks new monetization opportunities. Through OTA updates and subscription-based services, vehicles are evolving into dynamic, upgradable platforms that generate recurring revenue throughout the lifecycle. In 2024 alone, China recorded 4,047 OTA events across 486 million vehicles, underscoring the scale and scalability of software-driven innovation. By breaking down traditional system silos, OEMs can now deliver personalized, feature-rich services more efficiently, while enhancing development agility and lifecycle management.

AI-Driven Acceleration: Powering Intelligent Integration and Operational Efficiency

AI is increasingly becoming the core enabler of next-generation vehicle intelligence. From autonomous driving and natural voice interaction to user behavior prediction and personalized services, AI is reshaping both hardware and software innovation. These advances are increasing demand for high-performance computing chips, sensor fusion algorithms, and real-time decision-making capabilities—accelerating the adoption and evolution of integrated domain control solutions. Beyond in-vehicle functionality, AI is also driving transformation across the entire automotive value chain. It is improving operational efficiency in R&D, manufacturing, supply chain coordination, marketing, and aftersales. As a result, OEMs and suppliers are collaborating more closely to develop modular, standardized, and scalable platform-based solutions. These platforms reduce development costs, improve software reusability, and support faster iteration—laying a solid foundation for a flexible, economically sustainable intelligent vehicle ecosystem.

Global Market Demand Expansion: Unlocking New Growth Frontiers

The global market for integrated domain control solutions is expanding rapidly, fueled by the dual trends of Chinese OEMs accelerating overseas expansion and international OEMs advancing their intelligent transformation strategies. This rising demand is creating significant new opportunities for Chinese solution providers, who are leveraging their strengths in cost competitiveness, technological maturity, and localized adaptability. By integrating more deeply into OEM development cycles and strengthening system-level delivery capabilities, Chinese suppliers are steadily overcoming traditional market entry barriers and building long-term global partnerships. This internationalization not only enhances their competitiveness in the global supply chain but also positions them as key contributors to the next phase of the global intelligent mobility landscape.

Entry Barrier Analysis of Global and China's Integrated Domain Control Solutions Industry

Technology Barrier

A provider's ability to deliver deeply integrated, customized software-hardware solutions is a key competitive differentiator. Success in this industry requires advanced capabilities in **e**mbedded software development, operating system adaptation, real-time computing, and platform-level system integration—all of which must align with the highly diverse and proprietary architectures of various OEMs. AI is further reinforcing these barriers. Leading providers leverage AI to enable intelligent code generation, automated validation, and adaptive system tuning, significantly accelerating development cycles while improving performance precision.

Customer Barrier

The automotive industry is characterized by long development timelines, rigorous safety certifications, and high reliability expectations. As a result, OEMs tend to form long-term, strategic partnerships with trusted

suppliers. Once an integrated domain control solution is selected and validated, it is typically deployed across an entire vehicle life cycle and carried over to future model generations. This deep integration creates a strong lock-in effect, resulting in high customer stickiness and switching costs.

Product Barrier

Integrated domain control solutions must offer high compatibility, scalability, and lifecycle resilience across diverse vehicle platforms. This requires robust capabilities in architecture design, system modularization, and cross-domain functionality support. Leading providers have accumulated extensive validation data, developed proprietary system architectures, and built customized toolkits over years of deployment across various OEMs. In addition, the ability to support frequent OTA upgrades and system reconfigurations further reinforces long-term differentiation.

Cost Control Barrier

As integrated domain control solutions scale into mid- and entry-level vehicle segments, cost optimization becomes a critical success factor. Providers must deliver a balance of high performance, flexibility, and cost-efficiency, particularly in an environment of increasing competition and price sensitivity. Leading players optimize costs through software reuse, hardware modularization, and multi-model deployment strategies. AI-driven development tools—such as automated testing platforms and predictive configuration engines—enhance efficiency and reduce R&D timelines. With extensive project experience and mature engineering workflows, incumbent providers are better equipped to scale AI-based automation, lowering adaptation and integration costs across OEM programs. In contrast, emerging players often lack the infrastructure and engineering scale to achieve similar cost-performance ratios.

COMPETITIVE LANDSCAPE OF CHINA'S INTEGRATED DOMAIN CONTROL SOLUTIONS INDUSTRY

The integrated domain control solutions industry in China is relatively fragmented. In 2024, the total newly installed volume of integrated domain control solutions in passenger vehicles in China reached 6.8 million units. The top five integrated domain control solutions providers in China collectively accounted for 49.0% of the market share. The total sales volume of vehicles equipped with Our Company's integrated domain control solutions in China reached 634.3 thousand units, capturing approximately 9.3% of the market share and ranking second nationwide. Notably, Our Company is the youngest among the top five providers, having achieved rapid growth and market recognition within a relatively short period of time—demonstrating strong innovation capability and competitiveness in this fast-evolving industry.

Ranking of Top 5 Chinese Integrated Domain Control Solutions Providers by Newly Installed Volume in Passenger Vehicles (China), 2024

Ranking	Company	Year of Establishment	Installed Volume (Thousand Units)	Market Share (%)
1	Company A	1986	1,084.0	15.9%
2	**Our Company**	**2018**	**634.3**	**9.3%**
3	Company B	2017	561.9	8.3%
4	Company C	2014	552.0	8.1%
5	Company D	2009	500.0	7.4%
		Total	3,332.2	49.0%

Source: Interviews with Industry Experts, Annual Reports and Websites of Listed Companies, Frost & Sullivan

Company A, headquartered in Huizhou, Guangdong Province, is a publicly listed company on the Shenzhen Stock Exchange. It specializes in autonomous driving technologies, in-vehicle infotainment systems, and electronics for new energy vehicles. Its products are primarily used in integrated domain control solution systems, ADAS, and in-vehicle display and interaction systems. The company provides customized electronic solution to leading automotive OEMs.

Company B, headquartered in Wuhan, Hubei Province, and listed on the Nasdaq, is a mobility technology company with capabilities in delivering integrated domain control solution systems, in-vehicle infotainment systems, IoV cloud platforms, intelligent driving solution, and others.

Company C, headquartered in Wuxi, Jiangsu Province, is a technology service provider focused on the development and operation of Internet of Vehicles (IoV) ecosystem platforms. Its core products include integrated domain controllers, primarily serving automotive OEMs, intelligent transportation systems, and the automotive aftermarket.

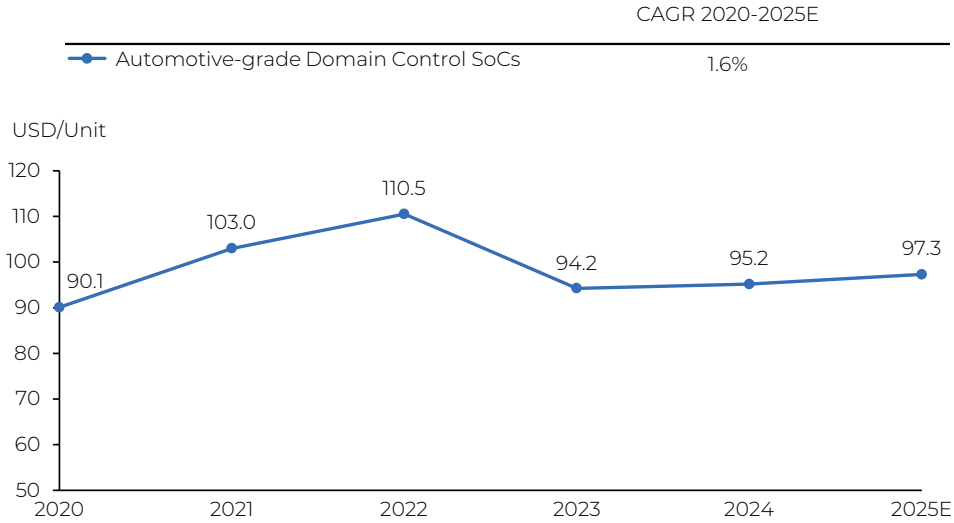
Company D, headquartered in Shanghai, is an innovative enterprise focused on the research, development, and application of intelligent, connected vehicle technologies. Its products and services include in-vehicle infotainment systems, IoV cloud platforms, and intelligent driving solution, with core applications in automotive manufacturing, smart mobility, and connected vehicle services.

RAW MATERIAL ANALYSIS

The provision of integrated domain control solutions relies heavily on automotive-grade integrated domain control SoCs as a key raw material. Typically, integrated domain control SoCs require a processing capability of around 105K DMIPS to handle multimedia processing, human-machine interaction, and basic AI functions. With technological advancements, some high-end SoCs have reached processing power levels of 230K DMIPS or higher, enabling support for more complex multi-modal perception, advanced driver assistance, and augmented reality features. Since the onset of the COVID-19 pandemic in early 2020, constrained production of SoCs triggered a global shortage beginning in late 2020. Compounding this, geopolitical tensions and supply chain uncertainties led Chinese automotive manufacturers to stockpile SoCs, intensifying the shortage and driving a significant price surge in China throughout 2021 and 2022. From 2023 onward, SoCs supply has stabilized and prices have gradually normalized. Since 2024, the growing demand for next-generation SoCs with higher processing capability led to a slightly increase in the unit price of SoC. As a result, the average price of the SoC increased from US$95.2 in 2024 to US$97.3 per unit in 2025. Looking ahead, ongoing technological advancements and increased production capacity among domestic SoC manufacturers are expected to accelerate localization efforts, reduce supply chain risks, and promote more stable pricing.

The price of automotive-grade integrated domain control SoCs is set forth in the below chart:

Prices of Automotive-grade Integrated Domain Control SoCs in China, 2020-2025E



Source: Interviews with Industry Experts, Annual Reports and Websites of Listed Companies, Frost & Sullivan

The automotive-grade integrated domain control SoCs market is highly concentrated. The Top 5 automotive-grade domain control SoCs providers accounted for nearly 95% of the market's total installed volume in 2024, underscoring high entry barriers and OEM reliance on proven suppliers.

Ranking of Top 5 Integrated Domain Control Solution SoC Providers by Sales Volume (China), 2024

Ranking	Company	Background	Market Share (%)
1	SoC Supplier A	Founded in 1985 and headquartered in the United States, it is a global leading semiconductor company listed on the Nasdaq Stock Exchange, with a diversified portfolio covering mobile processors, connectivity solutions, and automotive- grade SoCs.	~70.0%
2	SoC Supplier B	Founded in 1969 and headquartered in the United States, it is a Nasdaq-listed company engaged in the design and development of high-performance computing, graphics, and semiconductor solutions, with applications spanning automotive systems.	~10.0%
3	SoC Supplier C	Founded in 2002 and headquartered in Japan, it is a global semiconductor leader offering microcontrollers, analog, and power devices to automotive-grade SoCs.	~6.0%
4	SoC Supplier D	Founded in 2018 and headquartered in China, it is a company specializing in specializing in SoC solutions for integrated domain control solutions, ADAS, and in-vehicle central computing.	~5.0%
5	SoC Supplier E	Founded in 1987 and headquartered in China, it is a leading technology company specializing in telecommunications equipment, consumer electronics, and semiconductor solutions, including mobile processors, 5G infrastructure chips, and automotive-grade SoCs.	~4.0%
		Total	~95.0%

Source: Source: Interviews with Industry Experts, Annual Reports and Websites of Listed Companies, Frost & Sullivan