
INDUSTRY OVERVIEW

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

SOURCE OF INFORMATION

We engaged CIC, an independent market research and consulting company that provides industry consulting services, commercial due diligence, and strategic consulting, to conduct detailed research on and analysis of the vehicle automation solution market in China and globally. We have agreed to pay a fee of RMB530,000 to CIC in connection with the preparation of the CIC Report. We have incorporated certain information from the CIC Report into this section, as well as into "Summary," "Business," "Financial Information," and elsewhere in this document to provide potential investors with a comprehensive presentation of the industries where we operate.

During the preparation of the CIC Report, CIC conducted both primary and secondary research, and gathered knowledge, statistics, information, and insights on industry trends within the target research markets. The primary research involved interviews with key industry experts and leading industry participants. The secondary research consisted of analyzing data from various publicly available sources, such as the National Bureau of Statistics.

The CIC Report was compiled based on the following assumptions: (i) the overall social, economic, and political environment in China and globally is expected to remain stable during the forecast period; (ii) the economic and industrial development in China and globally is likely to maintain a steady growth trajectory during the forecast period; (iii) key industry drivers are likely to propel the vehicle automation solution market in China and globally forward during the forecast period; and (iv) the market will not be dramatically or fundamentally affected by any extreme force majeure events or unforeseen industry regulations.

The Directors, upon acting with reasonable prudence, confirmed that there has been no occurrence of adverse change in the overall market information that would subject the data to significant restrictions, contradiction or negative effects since the date of the CIC Report.

GLOBAL AND CHINA'S MASS-PRODUCED SMART VEHICLE INDUSTRY

Global sales of new passenger vehicles are projected to exhibit a consistent upward trend, increasing from 55.7 million units in 2022 to 64.8 million units in 2025 and to 80.9 million units by 2030. Within this expanding global market, China remains the world's largest market, with sales volume of 20.5 million units, 23.0 million units and 30.3 million units in 2022, 2025, and 2030. China remains one of the world's largest and most important passenger vehicle markets and continues to underpin the development of vehicle automation solutions, despite short-term fluctuations in annual sales. Over the medium to long term, however, the market is expected to remain broadly stable, supported by China's large replacement demand, continued policy support for trade-in and replacement, and the ongoing

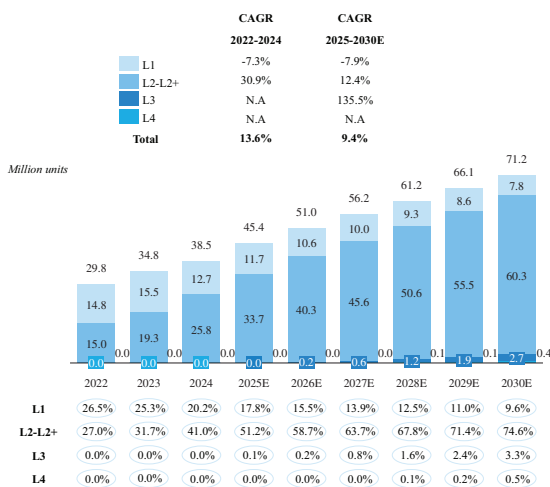
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penetration of new energy vehicles and vehicle automation. Meanwhile, a stronger regulatory framework for L2-L2+ systems is expected to promote safer and more standardized development, enhance consumer confidence and support the long-term commercialization of vehicle automation solutions.

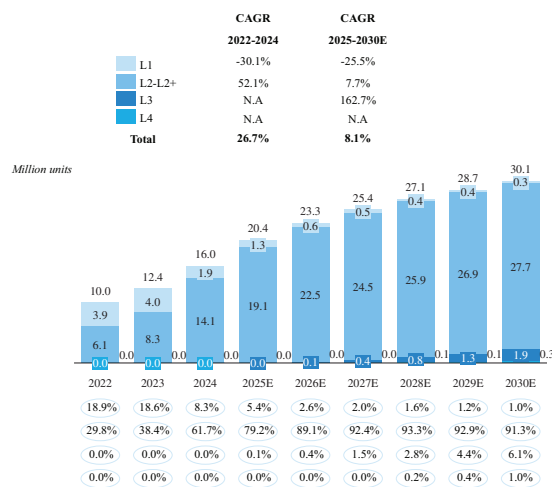
According to SAE, the automation of smart vehicles can range from Level 0 (L0) to Level 5 (L5). At Level 1 (L1), the vehicle assists with either steering or acceleration/braking, while at Level 2 (L2), it can handle both simultaneously, but the driver must remain fully responsible and attentive. As the industry evolves, an intermediate term, Level 2+ (L2+), has emerged to describe enhanced L2 systems. Level 3 (L3) vehicles shift the responsibility of driving and supervision from humans to the vehicle itself, and humans only intervene when the system requests it. Level 4 (L4) and L5 involve driverless vehicles and freeing humans from the need to perform driving tasks. According to CIC, advanced driver assistance systems, or ADAS, generally refer to vehicle automation functions ranging from L1 to L2.

In 2024, the penetration rates of mass-produced passenger vehicles with L1-L4 functions on smart vehicles reached 61.2% globally and 70.0% in China. Such figures are projected to increase to 88.0% and 99.4% by 2030, respectively. Correspondingly, the global and China's L1-L4 smart vehicle shipments are expected to grow from 38.5 million units and 16.0 million units in 2024 to 71.2 million units and 30.1 million units by 2030, representing a CAGR of 9.4% and 8.1% from 2025 to 2030, respectively. In China, the penetration of ADAS rose from 44.8% in 2022 to 57.1% in 2024, reflecting the rapid growth of ADAS adoption and the market's ongoing transition toward higher levels of driving automation.

Global Sales Volume of Mass-produced Smart Vehicles, by Levels, 2022-2030E



China's Sales Volume of Mass-produced Smart Vehicles, by Levels, 2022-2030E



Source: OICA, news, expert interviews, industry publications, CIC

Note: penetration rate is calculated by dividing the sales volume of mass-produced vehicles equipped with vehicle automation solutions (segmented by level) by the total sales volume of mass-produced vehicles

Globally, L2-L2+ penetration rate is projected to rise from 41.0% in 2024 to 74.6% by 2030, with sales volume increasing from 25.8 million to 60.3 million units at a CAGR of 12.4% from 2025 to 2030. Driven by intense competition among OEMs, China's leading penetration rate of new energy vehicles, and strong consumer willingness to adopt smart driving features such as NOA, China's L2-L2+ penetration rate is forecast to grow from 61.7% in 2024 to 91.3% in 2030, with sales volume increasing from 14.1 million to 27.7 million units at a CAGR of 7.7% from 2025 to 2030.

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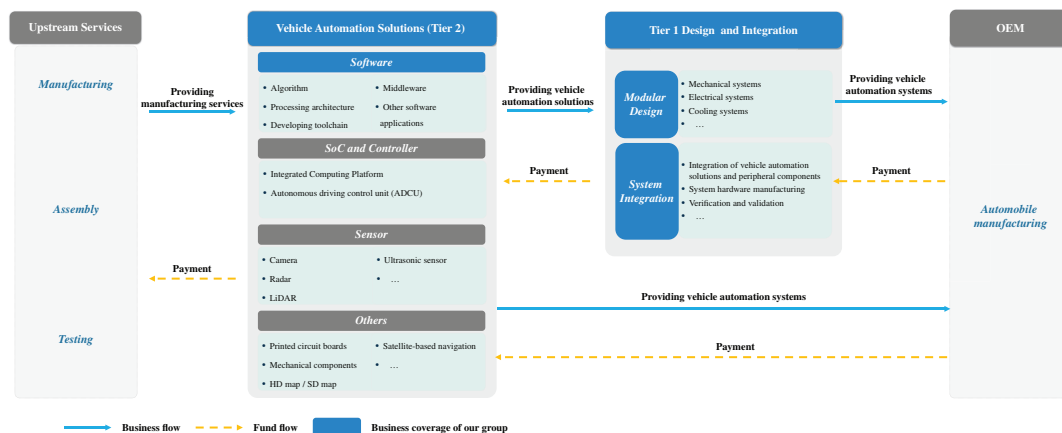
Rising sales of mass-market vehicle models are expected to become the primary driver of L2-L2+ penetration. In 2024, vehicles priced below RMB300,000 account for over 80% of total passenger vehicle sales. Mass-market vehicles refer to passenger vehicles positioned for broad-based consumer demand and mainstream household or individual users. In China, passenger vehicles priced below RMB300,000 are generally regarded as mass-market vehicles, according to CIC, given their over 80% share of passenger vehicle sales and their clear distinction from premium models typically priced above RMB300,000. Declining component costs and improving software performance are accelerating L2-L2+ penetration in mass-market models, supported by the large-scale production of key components and the competitive pricing of domestically produced chips approaching global performance standards. As a result, the share of China’s L2-L2+ smart vehicle shipments priced below RMB300,000 increased from 67.5% in 2022 to 74.9% in 2024 and is expected to further rise to 85.0% by 2028.

GLOBAL AND CHINA’S MASS-PRODUCED VEHICLE AUTOMATION SOLUTIONS INDUSTRY

The chart below illustrates the value chain of vehicle automation solutions. The upstream suppliers mainly include hardware manufacturers who provide manufacturing, assembly and testing services.

The midstream includes Tier-2 vehicle automation solutions providers and Tier-1 Suppliers. Within the vehicle automation solutions, software, SoCs, and controllers are key to vehicle intelligence. Other components like sensors support vehicle perception, decision-making, and control to better interact with surroundings. There are also high-definition maps providing precise environmental information to complement real-time sensor data. Tier-1 Suppliers are responsible for modular design and system integration, including the design of mechanical, electrical and cooling systems, as well as integrating the software and processing hardware with peripheral components.

Value Chain of Vehicle Automation Industry



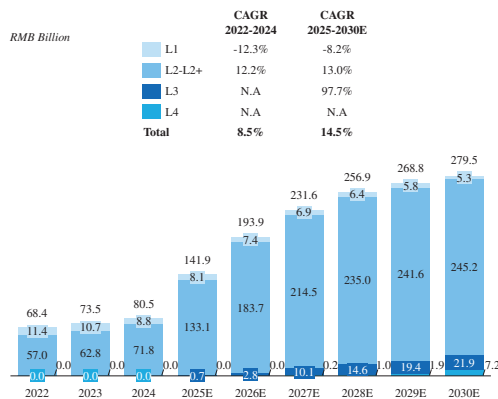
Source: OICA, news, expert interviews, industry publications, CIC

Market Size of Vehicle Automation Solutions Industry

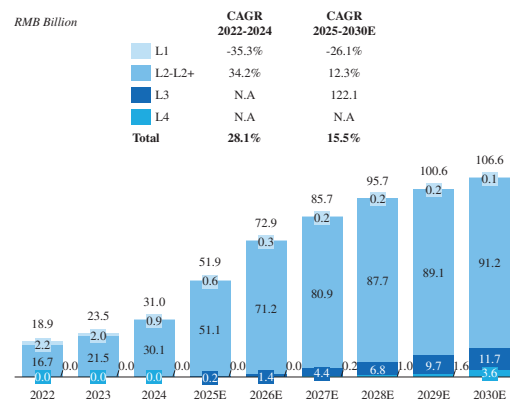
The global market size of vehicle automation solutions is projected to increase from RMB80.5 billion in 2024 to RMB279.5 billion by 2030, representing a CAGR of 14.5% from 2025 to 2030. In parallel, the market size of vehicle automation solutions in China is expected to grow from RMB31.0 billion in 2024 to RMB106.6 billion by 2030, with a CAGR of 15.5% from 2025 to 2030.

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Market Size of Global Mass-produced Vehicle Automation Solutions Market, by Levels, 2022-2030E



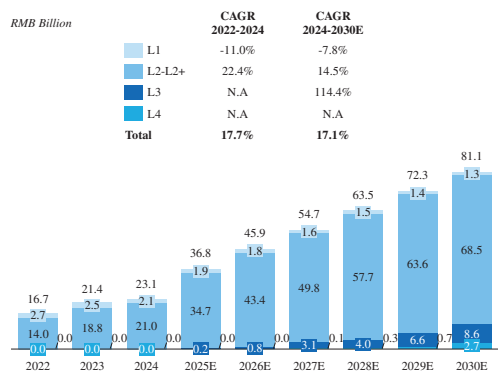
Market Size of China's Mass-produced Vehicle Automation Solutions Market, by Levels, 2022-2030E



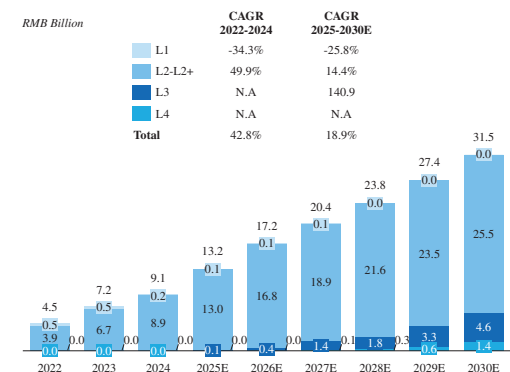
Source: OICA, news, expert interviews, industry publications, CIC

With the maturation of hardware technology, the key to unlock its potential lies in the continuous optimization of software. As a result, the value of software is gaining broader recognition, driving a steady increase in its deployment. The global and China's mass-produced vehicle automation software solutions markets are expected to grow from RMB23.1 billion and RMB9.1 billion in 2024 to RMB81.1 billion and RMB31.5 billion by 2030, representing CAGRs of 17.1% and 18.9% from 2025 to 2030, respectively.

Market Size of Global Mass-produced Vehicle Automation Software Solutions Market, by Levels, 2022-2030E



Market Size of China's Mass-produced Vehicle Automation Software Solutions Market, by Levels, 2022-2030E



Source: OICA, news, expert interviews, industry publications, CIC

Drivers and Trends of the Vehicle Automation Industry

- Decreasing solution cost to accelerate market penetration.** Advancements in software have enabled more streamlined hardware configurations, while domestically produced components have reduced costs without compromising performance. As a result, advanced features are increasingly deployed in mass-market vehicle models, which dominate sales, thereby accelerating the penetration of smart vehicles.

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- ***OEMs increasingly favor solutions providers with diverse offerings.*** Intensifying market competition has driven OEMs to seek solution providers with strong engineering capabilities and flexible delivery models. OEMs increasingly prioritise modular and scalable software compatible with diverse chips, sensors and vehicle platforms, enabling efficient development, faster deployment and greater control over system architecture.
- ***Technology development for enhanced user experience.*** Breakthroughs in vehicle automation software, including end-to-end models, simplify the software stack by directly linking sensor inputs to driving actions, reducing system complexity and latency and enabling faster response in dynamic conditions. Building on this, VLA and VLM models enhance multimodal understanding and contextual reasoning, improving the robustness and scalability of L2–L2+ functions (e.g., NOA) across diverse road scenarios.
- ***Policy tailwind to unlock overseas opportunity.*** Several countries have introduced regulations mandating smart driving features such as AEB and DMS in new vehicles, accelerating OEM deployment of basic safety functions worldwide. Clearer regulatory pathways for higher-level functions are creating opportunities for Chinese solution providers with established partnerships with international Tier-1 Suppliers and OEMs.

Key Industry Standards of the Vehicle Automation Industry

Within the vehicle automation solution industry, industry standards provide a common safety and engineering framework to support progress toward higher autonomy. In particular, standards such as ISO 26262, ASIL and SOTIF (ISO 21448), together with cybersecurity and software update requirements, establish structured guidance for hazard identification, safety validation and governance over cyber risks and in-field software changes. Collectively, these standards enhance transparency, traceability and confidence across the supply chain, facilitate regulatory approval, and support faster innovation and broader commercialization of features.

Recent Technology and Policy Development

Currently, the PRC vehicle automation industry is transiting from highway scenarios to complex urban scenarios, and evolving from L2/L2+ (partial automation) toward L3 (conditional automation). These trends are evident in both the technology developments and the implementation status of the regulations. From the technology side, the industry is shifting from rule-based algorithms to data-driven models. Due to the high cost and maintenance challenges of High-Definition (HD) Maps, leading solution providers are aggressively rolling out mapless solutions and Urban NOA functions to reduce reliance on HD maps. Meanwhile influenced by industry benchmarks like Tesla’s FSD V12, top-tier domestic players are actively deploying “End-to-End” neural networks, which process raw sensor data and directly generate driving control commands to enhance performance in complex scenarios. From the regulation side, China has been promoting L3 implementation through a staged licensing and pilot regime. In 2025, China granted conditional admission approvals for the first batch of L3 autonomous driving vehicle models, subject to designated operating entities, road sections, speed limits and scenario restrictions. This indicates that L3 autonomous driving in China is moving from road testing and technology verification toward regulated on-road operation under a controlled licensing framework.

Competitive Landscape of Mass-produced Passenger Vehicle Automation Solutions Market

Vehicle automation solutions are developed by both OEMs’ in-house teams and third-party providers, among which software-focused companies generally offer proprietary algorithms and modular, multi-scenario solutions adaptable to different computing platforms. Among such providers, companies offering both driving and parking solutions tend to demonstrate stronger competitiveness, as integrated solutions enhance module reusability, create R&D synergies and better address OEMs’ demand for system-level capabilities. Software-focused solution providers primarily compete with OEM in-house development teams and traditional Tier-1 Suppliers.

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Compared with OEM in-house development, software-focused players benefit from broader data access and stronger scalability, as deployment across multiple OEM platforms allows them to accumulate more diverse real-world driving data, accelerate algorithm iteration and improve model generalization across vehicle models, regions and scenarios. Compared with traditional Tier-1 Suppliers, software-focused players are more specialized in algorithm development and software architecture, and are therefore generally able to iterate faster, adapt more flexibly to evolving requirements and deploy solutions more efficiently across different hardware platforms. As a result, software-focused players are often better positioned to enhance performance continuously, improve R&D efficiency and support the commercialization of advanced capabilities at scale. As L2-L2+ currently represents the highest level of autonomy available in mass-produced passenger vehicles, we ranked as China’s second-largest software-focused provider of L2-L2+ solutions with both driving and parking capabilities by shipment volume in 2024, and were also the first Chinese solutions provider to deliver L2-L2+ solutions in overseas markets.

Competitive Landscape of software-focused L2-L2+ solution players in China with driving and parking capabilities, in terms of shipment volume in 2024

Solutions providers	Description	Market positioning	Shipment Volume in China, 2024 <i>'000 units</i>	Market Share <i>%</i>
Company A . . .	Founded in 2016 and headquartered in Beijing, China, Company A is a private company that develops scalable software driving solutions and collaborates with major OEMs for smart vehicle deployments.	Positioned in mid- to high-computing-power solutions, primarily based on foreign-chip platforms.	103.9	14.7%
The Company . . /		Positioned as one of the few players with full-range coverage across low-, mid- and high-computing-power solutions, supported by compatibility with both domestic and foreign chip platforms.	101.6	14.3%
Company B . . .	Founded in 2016 and headquartered in Shanghai, China, Company B is a private company providing software and platforms for L2-L2+ solutions.	Positioned in mid- to high-computing-power solutions, with compatibility across domestic and foreign chip platforms.	78.1	11.0%
Company C . . .	Founded in 2016 and headquartered in Shenzhen, China, Company C is a private technology company, specializing in perception systems, domain controllers, and algorithms.	Positioned primarily in mid-computing-power solutions, mainly based on foreign-chip platforms.	43.2	6.1%
Company D . . .	Founded in 2019 and based in Shenzhen, China, Company D is a private company with solutions for both mass-produced passenger vehicles and Robotaxis.	Positioned primarily in high-computing-power solutions, mainly based on foreign-chip platforms.	24.0	3.4%

Across key L2-L2+ performance parameters, our solution demonstrates leading capability in core driving-and-parking outcomes. In lane-change execution, we deliver a >95% lane-change success rate, placing us in the top tier. In automated parking, we combine fast completion time with broad scenario compatibility and an industry-leading parking success rate. We also support an end-to-end architecture, aligning with the more advanced implementations in the peer set. On safety robustness, our AEB false-positive frequency remains low, indicating strong calibration and stability.

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Competitive Landscape of software-focused L2-L2+ solution players in China with driving and parking capabilities, in terms of performance parameters in 2024

Company	Lane Change Success Rate	Parking Time	Compatible Parking Scenarios	Parking Success Rate	End-to-End Architecture	AEB False Positive
	%	second	unit	%	–	times/million kilometers
Company A	>95%	~35s	300+	>95%	✓	<1
The Company	>95%	~34.5s	300+	>95%	✓	<4
Company B	>90%	>40s	200+	>90%	x	<4
Company C	>90%	>40s	200+	>90%	✓	<3
Company D	>90%	>40s	200+	>90%	✓	<3

Competitive Landscape of software-focused L2-L2+ solution players in China with driving or parking capabilities, in terms of shipment volume in 2024

In the broader L2-L2+ solutions market, we ranked as the fourth largest software-focused L2-L2+ solutions provider in China in 2024, with a 13.1% market share by shipment volume. We also ranked among the top five software-focused solution providers in this market by revenue, with a market share of 8.0% in 2024.

Solutions Providers	Shipment Volume in China 2024	Market Share
	(000 unit)	(%)
Company S	280.6	36.2%
Company U	154.6	19.9%
Company A	103.9	13.4%
The Company	101.6	13.1%
Company W	93.3	12.0%

Notes:

1. Founded in 2019 and headquartered in Beijing, Company S is a private company focused on driving solutions especially on Highway NOA.
Founded in 2013 and headquartered in Shanghai, Company U is a private company focusing on automated parking solutions.
2. Founded in 2001 and headquartered in Hangzhou, Company W is an AIoT company listed on the Shenzhen Stock Exchange, focusing on integrated security and scenario-based digitalization.

Key Success Factors of China’s Vehicle Automation Software Solutions Provider

- **First-mover advantages.** Early entrants in the vehicle automation software market can secure deployment opportunities ahead of competitors and accumulate data for software training and iteration. Large-scale deployment helps amortize R&D costs and improves software through continuous data feedback across diverse road conditions, traffic rules, and driving behaviors, enhancing its generalization and safety performance.
- **Close collaboration with OEMs.** Software is a core enabler of vehicle intelligence, and OEMs have stringent requirements for reliability, safety, and long-term stability that result in multi-year validation cycles of up to 48 months, creating high entry barriers and strong customer stickiness. Close collaboration with OEMs helps software providers align with vehicle development timelines, optimise performance and cost, accelerate feature rollout, and strengthen long-term competitiveness.

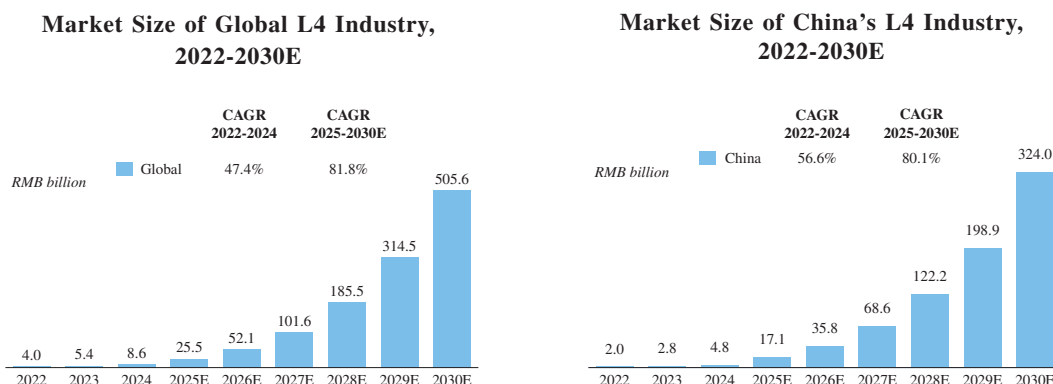
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- **Strong engineering capability.** Leading players have established systematic methodologies across the full process from development to delivery, supported by mass-production experience. These capabilities include standardized and modularized development, cross-SoC deployment, hardware-software optimization and flexible delivery, and are difficult for new entrants to replicate.
- **Overseas deployment capability.** International deployment requires higher technical maturity, greater customization, and adaptation to diverse regulations, driving habits and certification standards. Providers with proven overseas deployment capabilities, including real-vehicle testing, local certification or front-loaded integration with overseas customers, are generally better positioned to build long-term customer relationships, enhance brand visibility and strengthen long-term competitiveness.

GLOBAL AND CHINA’S L4 INDUSTRY

Driven by continuous advancements of L2-L2+ technology in mass-produced passenger vehicle market and the support of favorable policies, new applications in L4 sector, including Robotaxis, Robobuses, Robotrucks and Robosweepers, are also gaining tractions. The global L4 market reached a size of RMB8.6 billion in 2024. China is currently the largest L4 market in the world, with a market size of RMB4.8 billion in 2024. By 2030, the global and China’s L4 markets are projected to grow to RMB505.6 billion and RMB324.0 billion, respectively.

The market size of Robotaxi is expected to grow from RMB 0.2 billion and RMB 0.1 billion both globally and in China in 2024 to RMB 73.5 billion and RMB 39.1 billion in 2030, with its addressable market reaching over RMB 8.5 trillion in 2030. For the Robobus sector, the market size is expected to grow from RMB 0.3 billion and RMB 0.2 billion both globally and in China in 2024 to RMB 41.2 billion and RMB 18.2 billion in 2030, with its addressable market reaching nearly RMB 600 billion in 2030. Meanwhile the Robotruck sector is about to increase from RMB 0.4 billion and RMB 0.4 billion in 2024 to RMB69.5 billion and RMB34.8 billion in 2030, with its total addressable market reaching 29.1 trillion RMB in 2030.



Source: OICA, news, expert interviews, industry publications, CIC

Notes:

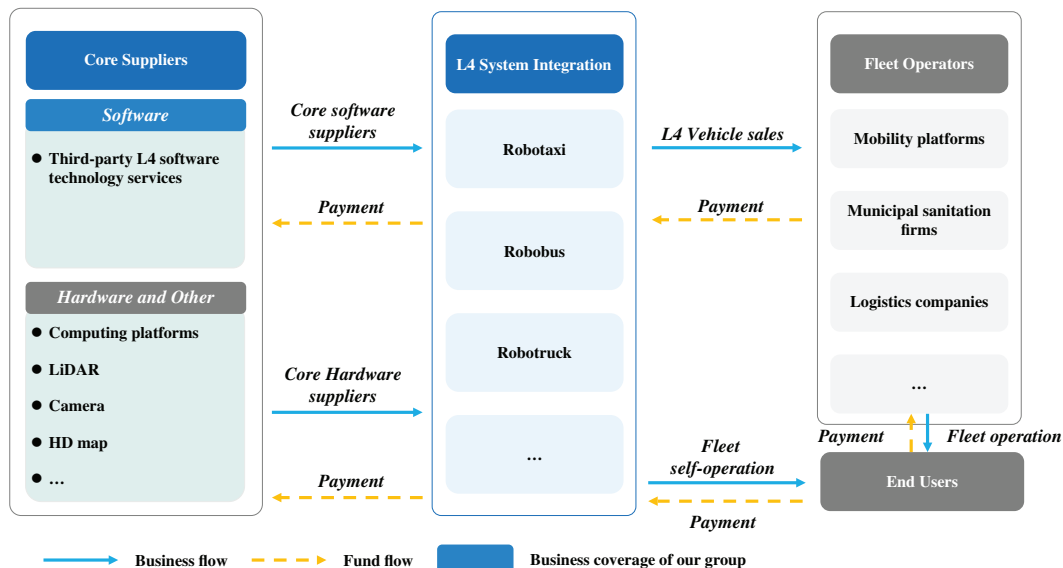
1. Market size refers to the revenue generated by L4 technology companies.
2. Market size includes Robotaxis, Robobuses, Robovans, Robosweepers, Robotrucks, and other scenarios such as autonomous mining trucks.

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Value Chain of L4 Market

The value chain of L4 market can be divided into three segments: upstream suppliers of core components such as computing platforms and sensors, midstream L4 technology companies, and downstream fleet operators and end users. L4 technology companies serve as the core of the value chain and generally operate under three major business models: (1) providing L4 solutions to fleet operators to accelerate their development and deployment; (2) selling complete vehicles integrated with L4 capabilities; and (3) directly offering driverless services to end users, such as mobility, logistics, and cleaning services.

Value Chain of L4 market



Source: News expert interviews, industry publications, CIC

Drivers of the Global and China’s L4 Market

- **Novel business model to facilitate scalable industry growth.** The emergence of independent L4 solutions providers has created new pathways to accelerate large-scale deployment across the L4 ecosystem. Through modular solution design and integrated hardware-software kits, these providers enable other participants to scale L4 fleets more efficiently, lowering entry barriers, accelerating rollout and improving system performance.
- **Imminent market demand.** The worsening labor shortage and rising safety concerns are accelerating demand for L4. In particular, an ageing driver workforce and significant traffic accident losses in China are driving growing demand for L4 automation to improve the long-term sustainability and safety of transportation systems.
- **Policy tailwind:** Favorable regulatory policies have been launched to promote the development and commercialization of L4 technology. In particular, China has issued a series of policies and guidelines such as the *Action Plan for Large-Scale Equipment Upgrades in the Transportation Sector*, promoting autonomous taxis and urban logistics vehicles, accelerating deployment and streamlining regulatory approvals.

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Competitive Landscape of China’s L4 technology companies

The current L4 market is highly competitive, with numerous participants operating across diverse application scenarios. Among them, only a handful have successfully achieved multi-scenario coverage, enabling broader commercialization potential and stronger technological synergies across use cases. In terms of L4 revenue in 2024, we ranked the seventh in China and were among the few top players with coverage across multiple L4 application scenarios.

Company	Description	L4 Revenue, RMB Million	Market Share, %	Application scenarios
Company I . . .	Founded in 2018 and headquartered in Fujian, China, Company I is a private L4 solutions provider specializing in mining trucks	986	20.3%	Autonomous mining truck
Company J . . .	Founded in 2015 and headquartered in Anhui, China, Company J is a private company specializing in robosweepers and robobus.	700	14.4%	Robosweeper
Company K . . .	Founded in 2016 and headquartered in Guangzhou, China, Company K is a company listed on Nasdaq in 2024, focusing on Robotrucks, Robotaxis, and sales of L4 control unit.	510	10.5%	Robotruck, Robotaxi
Company L . . .	Founded in 2015 and headquartered in Beijing, China, Company L is a private company focusing on diverse scenarios including logistics, sanitation vehicles, and others.	470	9.7%	Robosweeper, Autonomous inspection vehicle
Company M . . .	Founded in 2017 and headquartered in Guangzhou, China, Company M is a company listed on Nasdaq in 2024 focusing on Robotaxis, Robosweepers, Robovans, and Robotrucks.	360	7.4%	Robotaxi, Robosweeper, Robovan, Robobus
Company N . . .	Founded in 2017 and headquartered in Changsha, China, Company N is a private company focusing on autonomous mining trucks	250	5.2%	Autonomous mining truck
The Company. /		240	4.9%	Robotruck, Robotaxi, Robobus
Company O . . .	Founded in 2019 and headquartered in Beijing, China, Company O is a private company focusing on autonomous mining trucks.	200	4.1%	Autonomous mining truck
Company P . . .	Founded in 2021 and headquartered in Beijing, China, Company P is a private company focusing on the deployment and commercialization of autonomous heavy-duty trucks through truck platooning.	160	3.3%	Robotruck
Company Q . . .	Founded in 2020 and headquartered in Beijing, China, Company Q is a private company focusing on autonomous mining trucks.	150	3.1%	Autonomous mining truck

Competitive Landscape of Robotaxi in China			Competitive Landscape of Robotruck in China			Competitive Landscape of Robobus in China		
Rank	Company	Revenue 2024 <i>RMB millions</i>	Rank	Company	Revenue 2024 <i>RMB millions</i>	Rank	Company	Revenue 2024 <i>RMB millions</i>
1 . . .	Company R ¹	~62	1	Company K	~263	1	Company M	~70
2 . . .	Company M	~48	2	Company P	~160	2	Company S	~55
3 . . .	Company K	~47	3	The Company	~61	3	The Company	~31
4 . . .	The Company	~37						
5 . . .	Company A	<30						

Notes:

1. Established in 2017, headquartered in Beijing, Company R is a public company listed on Nasdaq and Hong Kong Stock Exchange, focusing on Robotaxi.
2. Established in 2019, headquartered in Beijing, Company S is a private company focusing on Robobus and mass-production solutions.

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Major Cost Component

The cost of vehicle automation solutions has been steadily decreasing, driven by the rise of domestic suppliers and scaled production of key components. For instance, the unit price of automotive-grade LiDAR, a key sensor commonly used in L2+ and above solutions, decreased from approximately RMB20.0 thousand per unit in 2020 to approximately RMB3.0 thousand per unit in 2024, and is expected to further decline to RMB1.0 thousand to around RMB2.0 thousand per unit by 2030.

Threats and Challenges

The vehicle automation solution industry faces several threats and challenges, including rapid technological iteration, high requirements for safety validation, evolving regulatory and liability frameworks, and intensifying competition from both independent solution providers and OEMs developing capabilities in-house. As solutions progress from basic L2 functions to higher automation, industry participants must continuously invest in algorithm development, real-world data accumulation, simulation and road testing, and engineering adaptation across different vehicle platforms. At the same time, OEMs may exert pricing pressure as advanced driving functions become more widely adopted in mass-market vehicles, while regulatory uncertainty, cybersecurity risks, data compliance requirements and public attention to safety incidents may add complexity to scaled market rollout. As a result, only players with strong software capabilities, scalable engineering delivery, proven safety performance and deep OEM relationships are likely to maintain long-term competitiveness.