
INDUSTRY OVERVIEW

The information and statistics set out in this section and other sections of this document were extracted from the Frost & Sullivan Report prepared by Frost & Sullivan, which was commissioned by us, and from various official government publications and other publicly available publications. We engaged Frost & Sullivan to prepare the 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, the Sole Sponsor, the [REDACTED], any of their respective directors and advisers or any other persons or parties involved in the [REDACTED], and no representation is given as to its accuracy.

SOURCE AND RELIABILITY OF INFORMATION

We have commissioned Frost & Sullivan, an independent market research and consulting company, to conduct an analysis of Global vision-based AI solution industry in transport service vehicle. Frost & Sullivan is an independent global consulting firm, founded in 1961 in New York. It offers industry research and market strategies and provides growth consulting and corporate training. It has over 40 offices worldwide with over 2,000 industry consultants, market research analysts, and economists. We commissioned Frost & Sullivan for a total fee of RMB520,000 in connection with the preparation of the market research report (the “**Frost & Sullivan Report**”). We have included certain information from the Frost & Sullivan Report in this document to provide our potential [REDACTED] with a more comprehensive understanding of the industries in which we operate.

During the preparation of the Frost & Sullivan Report, Frost & Sullivan performed both (i) primary research, which involved in-depth interviews with leading industry participants and industry experts; and (ii) secondary research, which involved review of company reports, independent research reports and data based on Frost & Sullivan’s own research database. Projected data was obtained from historical data analysis plotted against macroeconomic data with reference to specific industry-related factors. The Frost & Sullivan Report was compiled based on the following assumptions: (i) Global economy is likely to maintain a steady growth in the next decade; (ii) Global social, economic and political environment is likely to remain stable in the forecast period from 2026 to 2030, which ensures the stable and healthy development of the Global vision-based AI solution industry in transport service vehicle.

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OVERVIEW OF GLOBAL AI SOLUTION MARKET IN TRANSPORT SERVICE VEHICLE

Overview of Transport Service Vehicle Market

Transport service vehicles are designed to meet the needs of commercial activities and public services by transporting goods or people. Transport service vehicles mainly include logistics vehicles, public transportation vehicles (such as buses, taxis, ride-hailing vehicles, etc.) and special-purpose vehicles (such as mining vehicles, etc.).

Logistics vehicles are primarily used for transporting goods, mainly include light, medium, and heavy-duty trucks. According to Frost & Sullivan, as of the end of 2025, the global and China ownership of logistics vehicles were approximately 52 million and 21 million units, respectively, indicating the global and China logistics vehicle service market have significant market potential.

Public transportation vehicles are primarily used for transporting people and include buses (transit buses, school buses, etc.), taxis, ride-hailing vehicles, etc. According to Frost & Sullivan, as of the end of 2025, the global fleet size of taxis and ride-hailing vehicles was about 13 million units and the China fleet size of taxis and ride-hailing vehicles was about 6.4 million units. As of the end of 2025, the global and China ownership of buses were about 6.3 million and 1.6 million units, respectively, indicating a vast market capacity.

Special-purpose vehicles refer to vehicles that have specific functions or are used for special purposes, such as mining vehicles, street sweepers, and ambulances. These vehicles are typically equipped with specialized equipment and are used in specific industries or emergency services. Taking mining transportation as an example, according to Frost & Sullivan, in 2025, the mining transportation market sizes were about RMB850 billion globally and RMB195 billion in China, indicating a significant market potential for special-purpose vehicle services.

The fleet size of transport service vehicles constitutes the fundamental base for vision-based AI solutions and video devices. Transport service vehicle fleets typically exhibit long replacement cycles, resulting in a sizeable and continuously upgradeable in-service vehicle base. Vision-based AI solutions and video devices, can be deployed on both newly produced vehicles and existing units through retrofit installation, hardware replacement or software upgrades. Consequently, the existing fleet size of transport service vehicles represents a substantial source of incremental demand, and each vehicle remains a potential installation unit throughout its operational life cycle.

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Pain points of Transport Service Vehicle Market

Safety is one of the most concerning factors in the transport service vehicle industry. Drivers are exposed to complex road environments for long periods of time, prone to fatigue driving and distraction.

According to Frost & Sullivan, based on the data from Governors Highway Safety Association of the United States, the number of pedestrian fatalities in road traffic accidents across the United States reached 7,380 in 2024, with over 60.0% of these fatalities caused by transport service vehicles.

According to the latest China Statistical Yearbook of 2024 compiled by National Bureau of Statistics of China, there were over 254 thousand cases of road traffic accidents in China, with over 60 thousand cases of fatality in 2023.

Operational efficiency is another concern for transport service fleet managers. Due to the absence of systematic management such as route planning, transport service vehicles are operated in a deadhead state for a long term, causing additional energy costs and labor costs. According to the American Transportation Research Institute, an authoritative non-profit research organization in the U.S., the deadhead rate of the American trucking industry reached 16.7% in 2024, causing estimated operating cost losses of over USD700 billion.

AI has broad application prospects in the transport service vehicle market. AI technology has made certain progress in areas like autonomous driving and smart cockpits. AI-powered autonomous driving technology is gradually evolving in the transport service vehicle sector, especially in logistics where its advantages are more evident. Intelligent driving is defined as a continuum from Level 1 to Level 5. Level 1 to Level 2 are classified as Advanced driver assistance system (ADAS), where the driver remains responsible for monitoring and control. ADAS can achieve functions such as safety warnings, road monitoring, and automatic braking, thereby enhancing safety.

OVERVIEW OF GLOBAL VISION-BASED AI SOLUTION MARKET IN TRANSPORT SERVICE VEHICLE

Introduction of Vision-Based AI Solution in Transport Service Vehicle

In the application of empowering the information management of transport service vehicles, AI technology can enhance operational efficiency and reduce the risk of accidents. Building large models for transport service vehicles based on extensive operational and vehicle data has become a major trend for future development.

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In the application of transport vehicle safety, the integration of AI technology, combined with the addition of visual sensors such as cameras, enables advanced driver assistance features like Automatic Emergency Braking (AEB) and Driver Monitoring Systems (DMS). This not only improves vehicle safety during operation but also boosts fleet management efficiency, helping customers reduce traffic accidents and cargo losses.

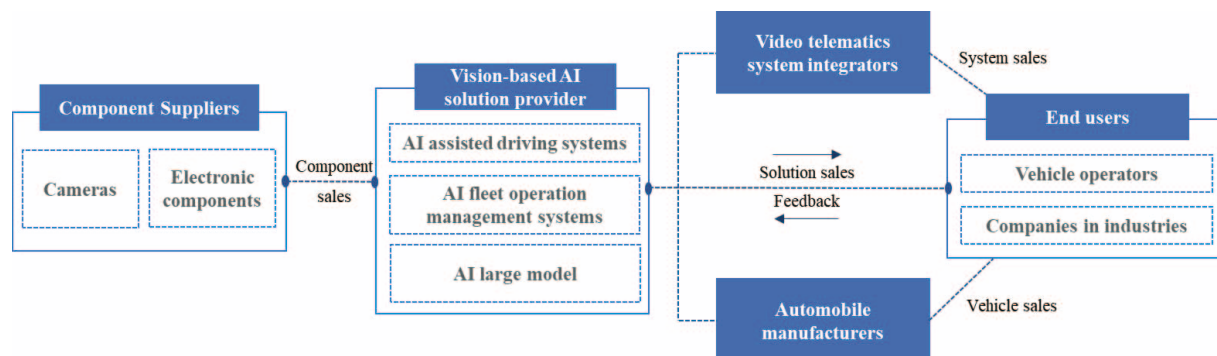
AI technology is progressively being applied to key aspects of information management and vehicle safety, including vehicle data analysis, driving behavior recognition, and optimization of operational decision-making. Vision-based AI solution in transport service vehicle provides AI assisted driving systems and AI fleet operation management systems for both drivers and fleet operators, addressing the driving safety and operating efficiency for transport service vehicles.

Vehicle Types	AI Technology Applications			
	AI-empowered Vehicle Information and Safety Management		AI Large Model Applications	
	Value Contributions	Main Functions	Value Contributions	Main Functions
Logistic Vehicle.	- Leveraging advanced AI technologies such as computer vision and deep learning, combined with high-definition display technology, to offer transportation services with data analysis, processing, and real-time optimization. - Conducting intelligent analysis of the operational data collected by in- vehicle terminals, which enables functions like fatigue driving detection, route optimization and predictive maintenance alerts. This significantly enhances the safety and operational efficiency of transport service vehicles.	AI assisted driving systems—For Drivers - ADAS - DMS - AEBS - BSD AI fleet operation management systems — For Fleet Operators - Freight loading monitoring	By integrating AI large models specific to the transport service vehicle sector, it is possible to further consolidate multi-source data and enhance intelligent decision-making and scheduling capabilities. This ultimately achieves a full- stack intelligent upgrade from individual vehicle management to fleet operations.	- Driver evaluation - Fleet dispatch - Logistic efficiency

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Vehicle Types	AI Technology Applications			
	AI-empowered Vehicle Information and Safety Management		AI Large Model Applications	
	Value Contributions	Main Functions	Value Contributions	Main Functions
Public Transportation Vehicle	Addressing the safety concerns of buses by integrating in-vehicle driver status monitoring with external perception for early warning and braking function. Reducing the accident rate in the taxi industry through AI-driven driver behavior modeling and risk intervention measures for taxi drivers.	AI assisted driving systems—For Drivers • ADAS • DMS • AEBS • BSD AI fleet operation management systems — For Fleet Operators • Intelligent Bus Central Processing Unit (IBCU) • Passenger flow detection	Integrating multi-dimensional information such as vehicle operation data, driver behavior characteristics, and environmental perception data, and utilizing deep learning and reasoning algorithms to achieve real-time identification, prediction and early warning, as well as intelligent prevention of traffic risks.	• Driver evaluation • Fleet dispatch

Value Chain of Vision-based AI Solution Market in Transport Service Vehicle



Source: Frost & Sullivan Report

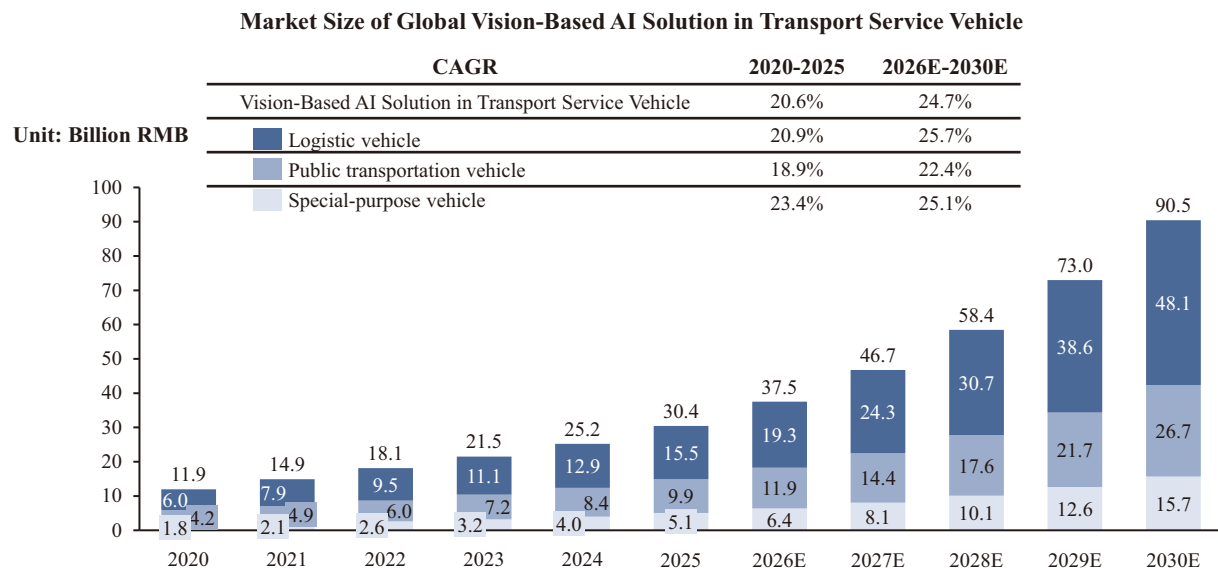
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The flowchart above illustrates the respective roles of key stakeholders along the vision-based AI solution market value chain for transport service vehicles.

Vision-based AI solution providers: develop and provide vision-based AI solution in transport service vehicles for video telematic system integrators, automobile manufacturers and end users.

Market Size of Global Vision-Based AI Solution in Transport Service Vehicle

In recent years, vision-based AI solution market in transport service vehicle grew in a considerable speed, with a CAGR of 20.6% from 2020 to 2025, while the CAGRs for logistics vehicles, public transportation vehicles and special-purpose vehicles are 20.9%, 18.9% and 23.4%, respectively. In 2025, the market size of vision-based AI solution in transport service vehicle achieved RMB30.4 billion, while the market size of vision-based AI solution in logistics vehicles, public transportation vehicles and special-purpose vehicles are RMB15.5 billion, RMB9.9 billion and RMB5.1 billion, respectively. In the foreseeable future, with advancing AI technology and accelerating AI applications in transport service vehicle, the market is projected to continue to expand, with an estimated CAGR of 24.7% from 2026 to 2030, while the CAGRs for logistics vehicles, public transportation vehicles and special-purpose vehicles are 25.7%, 22.4% and 25.1%, respectively.



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

(1) Not including the market size of AI large model applications

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Competitive landscape of Global Vision-Based AI Solution Market in Transport Service Vehicle

According to Frost & Sullivan, global vision-based AI solution market in transport service vehicle reached RMB30.4 billion in 2025, with the top five players accounting for 45.6% of the market. The following table presents the ranking of global vision-based AI solution market in transport service vehicle, as measured by revenue in 2025:

Ranking	Company	Country	Market Share, 2025
1	Company A	USA	19.5%
2	Company B	USA	9.0%
3	Company C	USA	7.6%
4	The Company	China	7.2%
5	Company D	USA	2.3%

Source: Annual Reports of Related Companies, Frost & Sullivan report

Notes:

- (1) The ranking is based on global revenue from vision-based AI solution in transport service vehicle in 2025.
- (2) The revenue data of Company A to D is based on estimation calculated by unit sales and other available public information, cross-checked with industry participants and experts on best effort, thus may be different from the auditing data from the above players.
- (3) Available public information includes financial reports of listed companies and publicly available industry reports, etc.
- (4) Company A is a cloud technology company specializing in providing connected operations cloud services for industries including construction, transportation and public services, founded in 2015 and headquartered in San Francisco, USA and listed on the New York Security Exchange.
- (5) Company B is a video telematics company specializing in providing vision-based AI solutions and cloud platform for transport service vehicle, founded in 1998 and headquartered in San Diego, USA.
- (6) Company C is an intelligent safety platform company specializing in providing integrated solutions with hardware, AI models and cloud platform for commercial fleet management, founded in 2007 and headquartered in Missouri, USA.
- (7) Company D is an AI-based fleet safety management company specializing in providing vision-based AI solutions and data services for commercial fleet, founded in 2015 and headquartered in San Diego, USA.

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According to Frost & Sullivan, global vision-based AI solution market in logistics vehicle reached RMB15.5 billion in 2025, with the top five players accounting for 62.9% of the market. The company ranked as the third place with the market share of 7.0%, as measured by revenue in 2025.

Ranking	Company	Country	Market Share, 2025
1	Company A	USA	30.2%
2	Company B	USA	17.6%
3	The Company	China	7.0%
4	Company D	USA	4.6%
5	Company G	USA	3.5%

Source: Frost & Sullivan report

Notes:

- (1) The ranking is based on global revenue from vision-based AI solution in logistics vehicle in 2024.
- (2) Company G is a company specializing in providing AI-based integrated solutions and platform for fleet management, founded in 2015 and headquartered in San Francisco, USA.

According to Frost & Sullivan, global vision-based AI solution market in public transportation vehicle reached RMB9.9 billion in 2025, with the top five players accounting for 45.5% of the market. The company ranked as the second place with the market share of 10.3%, as measured by revenue in 2025.

Special-purpose vehicles cover a wide range of application scenarios comprising mining, medical emergency, engineering and construction, etc. Different application scenarios impose strict demands on the specialization and adaptability of vision-based AI solution. Correspondingly, the vision-based AI solution market in special-purpose vehicle is characterized as relatively fragmented.

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Entry Barriers of Vision-Based AI Solution Market in Transport Service Vehicle

Technical capabilities of AI model development and system integration

In the field of vision-based AI solutions in transport service vehicle, AI models development and system integration have formed significant technical barriers for new entrants. Widely used in diverse scenarios, AI models are required to have high adaptiveness to satisfy the operational demands in various vertical scenarios, while a large scale of scenario data is demanded.

Comprehensive globalized sales network

Vision-based AI solutions in transport service vehicle provide a comprehensive metrics of products and services for differentiated customers’ demands, which requires a globalized sales network to explore and respond to the demands of downstream customers, and efficiently customize for specific customers’ operating areas and special scenarios. The globalized sales network requires costs of time and funding, which can’t be achieved in a short period for new entrants.

Trends and Drivers of Vision-Based AI Solution Market in Transport Service Vehicle

Favorable Policies

The safety problems of transport service vehicle are a consistent concern of governments and official authorities in worldwide. A series of favorable policies have been published in recent years, fostering the growth in demand for vision-based ai solution.

In China, the Automotive Technology & Research Center, which is under the jurisdiction of the State Council of China, officially implemented the China Commercial Vehicle Special Evaluation Regulation (Version 1.0) in January, 2025. This regulation integrates BSD, AEBS, and DMS into the safety evaluation criteria for transport service vehicles. Through a market-oriented evaluation mechanism, it guides enterprises to enhance the performance of these technologies and increase their penetration rate.

In Europe, European Union published the General Safety Regulation (GSR) that serves as a comprehensive framework mandating a wide range of vehicle safety technologies. This regulation requires all newly registered vehicles in the EU to include specified ADAS features from July 7, 2024.

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Enhanced driving safety

According to the United States Department of Transportation, there are over 150 thousand logistics vehicle accidents in 2024, with a fatality rate of approximately 3.0%, indicating the significance to improve the driving safety of transport service vehicles. Vision-based AI solutions apply DMS in the continuously monitoring of the driver’s facial features and eye status for the detection and warning of potential driving risks. ADAS can provide expansion of the driver’s perception boundaries and reduces the probability of traffic accidents.

Elevated operational efficiency

According to the American Transportation Research Institute, the deadhead rate of the trucking industry reached 16.7% in 2024, causing estimated operating cost losses of over USD700 billion. With vision-based AI solutions, managers can accurately evaluate the operational efficiency, optimize transportation plans, and comprehensively improve utilization and efficiency.

Challenges of Vision-Based AI Solution Market in Transport Service Vehicle

Large logistics fleets often need large-scale deployment of vision-based AI systems. Customizing solutions for different vehicle types and routes can significantly increase both cost and system complexity. Developing adaptable models that can quickly adjust to various tasks, and implementing modular systems for easy customization across different applications, can effectively improve scalability and flexibility.

The visual recognition accuracy may decrease in urban traffic environments with heavy congestion, or in scenes with poor lighting (such as at night, in rainy weather, or in tunnel). By applying enhanced image capture, preprocessing, and advanced filtering techniques, the input quality can be improved, thereby increasing the accuracy and reliability of computer vision systems.

Overview of AI Large Model Application Market in Transport Service Vehicle

The AI large model application in the transport service vehicle primarily focuses on the performance improvement in driving safety, operational efficiency, and intelligence.

AI large model application market in transport service vehicle is in the process of rapid development, with a CAGR of 84.7% from 2020 to 2024. In 2025, the market size of AI large model application in transport service vehicle achieved RMB2.7 billion. Looking forward, the market is projected to maintain a high growth rate, with an estimated CAGR of 39.1% from 2026 to 2030.

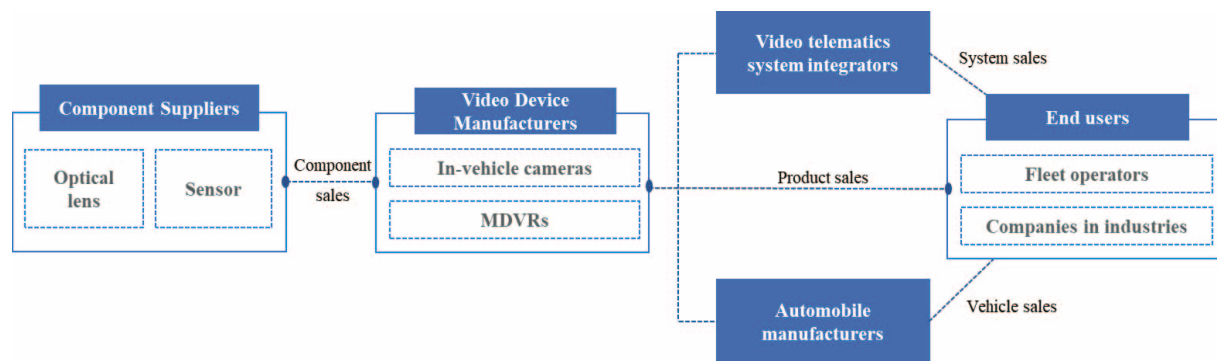
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OVERVIEW OF GLOBAL VIDEO DEVICE MARKET IN TRANSPORT SERVICE VEHICLE

Definition of Video Device in Transport Service Vehicle

The video device market in transport service vehicle primarily refers to the deployment of in-vehicle cameras and supporting hardware systems without AI functions, to enhance driving safety and fleet operation management through video collection and storage. These systems can operate independently or serve as an extension of traditional fleet telematics. In logistics, public transportation and special-purpose transport, they are widely used to meet regulatory requirements, improve safety and efficiency, and support driver behavior management through monitoring, analysis and feedback mechanisms.

Value Chain of Video Devices Market in Transport Service Vehicle



Source: Frost & Sullivan Report

The flowchart above illustrates the respective roles of key stakeholders along the video device value chain for transport service vehicles.

Video device manufacturers design, produce and sell vehicle-grade video devices, including cabin cameras, AHD cameras, mobile digital video recorders (MDVRs) and other supporting hardware systems for video telematics system integrators, automobile manufacturers and end users.

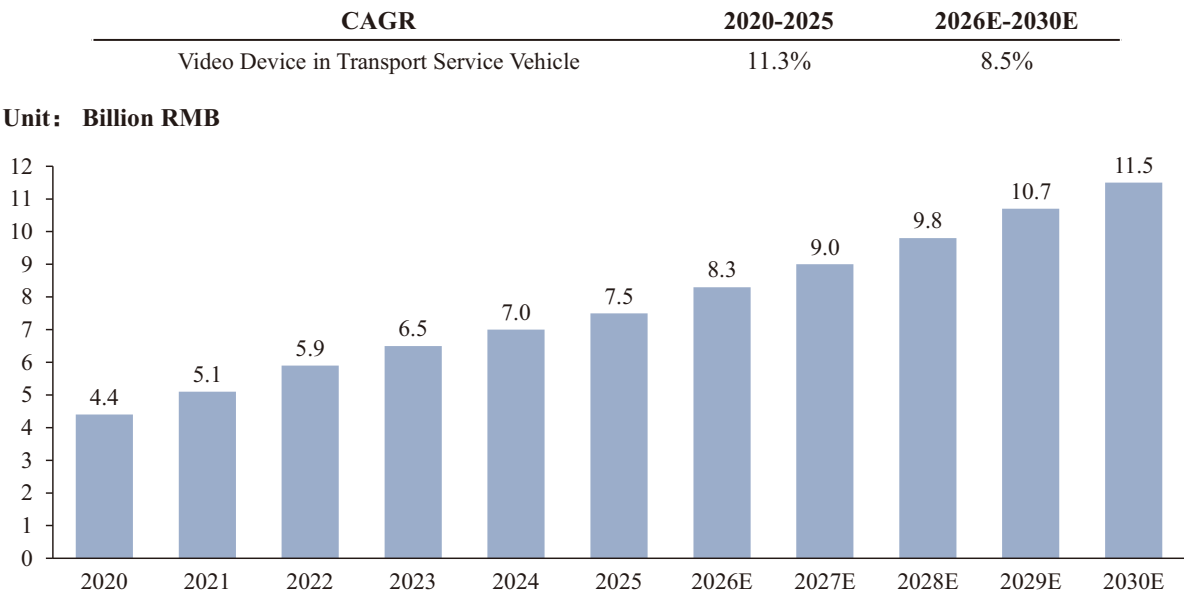
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Market Size of Global Video Device in Transport Service Vehicle

The global video device market in transport service vehicles is expected to grow steadily, driven by rising safety requirements, digitalized fleet operations and advances in hardware and intelligent processing technologies. Increasing regulatory emphasis on video-based monitoring, fleet operators’ need to reduce safety-related costs, and improvements in imaging, sensing and edge-computing capabilities all enhance the functional value and affordability of video devices.

According to Frost & Sullivan, global video device market in transport service vehicle grew from RMB4.4 billion in 2020 to RMB7.5 billion in 2025, representing a CAGR of 11.3%, and is expected to reach RMB11.5 billion in 2030, representing a CAGR of 8.5% from 2026 to 2030.

Market Size of Global Video Device in Transport Service Vehicle



Source: Frost & Sullivan Report

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Competitive Landscape of Global Video Device Market in Transport Service Vehicle

According to Frost & Sullivan, global video device market size in transport service vehicle reached RMB7.5 billion in 2025, with the top five players accounting for 22.1% of the market. The company ranked as the first place with the market share of 5.5%, as measured by revenue in 2025.

Ranking	Company	Country	Market Share, 2025
1	The Company	China	5.5%
2	Company C	USA	5.2%
3	Company E	China	4.9%
4	Company I	USA	3.5%
5	Company J	USA	3.1%

Source: Frost & Sullivan Report

Notes:

- (1) The ranking is based on global revenue from video device in transport service vehicle in 2025.
- (2) The revenue data of Company C to J is based on estimation calculated by unit sales and other available public information, cross-checked with industry participants and experts on best effort, thus may be different from the auditing data from the above players.
- (3) Available public information includes financial reports of listed companies and publicly available industry reports, etc.
- (4) Company E is an AIoT (Artificial Intelligence of Things) company specializing in providing scenario-based and intelligent digital solutions, founded in 2001 and headquartered in Zhejiang, China, and listed on the Shenzhen Stock Exchange.
- (5) Company I is a transit technology company specializing in providing technology solutions that increase intelligence, safety, and efficiency for public transit operations, founded in 1928 and headquartered in Texas, USA.
- (6) Company J is a mobile video surveillance company specializing in providing in-vehicle mobile surveillance for the student transit, mass transit, fleet/driver behavior with AI, locomotive and waste management industries, founded in 1999 and headquartered in Alabama, USA.

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Challenges of Video Device Market in Transport Service Vehicle

Durability performance challenge

The video devices must operate reliably under harsh transport service-vehicle conditions, including extreme temperatures, humidity, dust, vibration and electromagnetic interference. Meeting long-term durability expectations raises requirements for optical modules, sensors, enclosures and other subsystems, increasing the R&D, manufacturing and testing workload for hardware suppliers.

Device iteration challenge

Video device hardware is subject to rapid upgrades in core components, including continuous improvements in resolution, low-light performance, dynamic range and power efficiency. This fast evolution necessitates frequent platform updates, compatibility with new sensor and processor generations and smooth product transitions. Without timely adaptation, hardware risks becoming technologically outdated, raising development and operational burdens for market participants.

Entry Barriers of Video Device Market in Transport Service Vehicle

Technology and Product Certification Barriers

Video device in transport service vehicle must meet stringent requirements in high-definition imaging, night vision, wide-angle coverage, and anti-vibration, while adapting to harsh transport service vehicle conditions such as dust, rain, fog, and glare. Meanwhile, video device in transport service vehicle must pass stringent automotive-grade certifications covering durability, electro-magnetic compatibility (“EMC”), and electrical safety, while also complying with data security and privacy regulations.

Customer Preference and Partnership Barriers

Key customers such as large fleets, logistics enterprises, and automobile manufacturers have long procurement cycles, strict certification processes, and stable partnerships. They prefer established suppliers with deep system integration and extensive distribution and service networks, creating strong entry barriers for newcomers.

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Trends and Drivers of Video Device Market in Transport Service Vehicle

Vehicle Safety and Operational Monitoring Policy

Governments are introducing mandatory regulations and supportive measures to accelerate the adoption and upgrade of video device in transport service vehicle.

In China, regulations require hazardous goods transport vehicles to install fatigue and distraction monitoring systems. The revised Regulation on the Dynamic Supervision of Road Transport Vehicles in 2022 further reinforced video monitoring and data collection requirements. In the U.S., the Federal Motor Carrier Safety Administration (FMCSA) has prioritized in-vehicle video and driver monitoring systems, advancing adoption through studies, guidelines and exemptions.

Shift from Passive Monitoring to Active Warning

Video device in transport service vehicle is evolving from post-incident evidence collection to real-time risk detection and intervention, such as overtaking alerts, emergency braking warnings, distance reminders, and fatigue alerts. Integrated with ADAS, the system enables collision avoidance, lane departure warnings, and pedestrian detection, significantly enhancing safety and accident prevention. The transition from passive recording to active warning enabled risk detection and driver-monitoring functions, that enhances safety outcomes and expands the functional value of video devices. This shift increases adoption in both newly deployed and in-service commercial vehicles, supporting market demand.

HISTORICAL PRICE TRENDS OF RAW MATERIAL

The raw materials and parts of the Company’s main products and solutions include electronic components, including PCBs, PCBA and other components. The Producer Price Index (“PPI”) for the computer, communications and other electronic components and equipment manufacturing industry is the composite price index including the electronic components and equipment as above. It reflects the price trend of the raw materials and parts of the Company.

From 2020 to 2022, driven by factors such as the growth in demand from downstream sectors and technological iteration and upgrading, the PPI of this industry rose from 98.5 to 100.7, and the prices of raw materials showed an upward trend. After 2022, with the gradual expansion of industry capacity and intensified market competition, the PPI fell to 97.6 in 2024, and the prices of raw materials declined accordingly. In the long run, although the continuous innovation of downstream technologies will stimulate new demand for raw materials, the increasingly improved global capacity layout and sufficient market competition will drive the prices of raw materials to stabilize.