
INDUSTRY OVERVIEW

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OVERVIEW OF TRAVEL-ORIENTED PORTABLE SMART IMAGING DEVICE INDUSTRY

Definition

Travel-oriented Portable Smart Imaging Devices refer to independent computing hardware terminals designed for travel, outdoor sports, and content creation scenarios. They encompass aftermarket vehicle smart imaging devices used for vehicle recording, outdoor and action smart imaging devices designed for sports and adventure activities, and handheld smart imaging devices used for content creation scenarios such as vlogging. These devices typically build on core imaging hardware with algorithm- and AI-enabled enhancements and are supported by companion applications and cloud services to enable an integrated experience across capture, management, editing, and sharing.

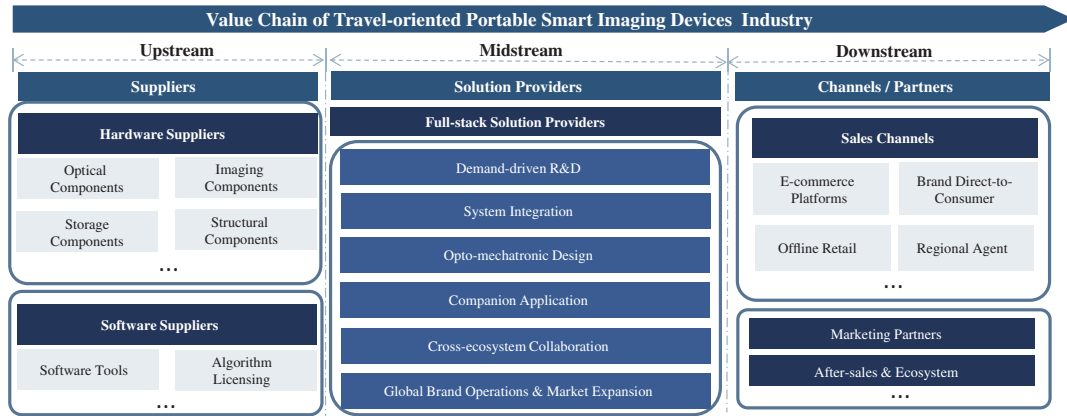
Value chain

The upstream segment comprises specialized hardware and software suppliers providing the foundational building blocks of imaging devices. Hardware suppliers deliver critical physical elements such as image sensors, SoC, and high-performance storage modules, while software suppliers provide essential algorithm licensing and software development tools. These providers enable the raw capturing and processing capabilities that define the basic performance of the final hardware terminal.

Midstream players, act as the core orchestrators by integrating hardware and software into independent computing terminals through demand-driven R&D and sophisticated system engineering. They are responsible for complex opto-mechatronic design, the development of companion applications, and the management of cross-ecosystem collaborations. Beyond manufacturing, these firms drive global brand operations and market expansion by tailoring specialized imaging solutions to unique regional demands.

The downstream segment manages a diverse array of sales channels, ranging from global e-commerce platforms and Direct-to-Consumer (DTC) sites to offline retail networks and regional agents. This segment also incorporates vital marketing partners and after-sales ecosystems that facilitate user-generated content and community engagement. By leveraging strategic B2B alliances and digital marketing, downstream entities ensure broad market penetration and sustained customer loyalty.

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Source: Frost & Sullivan

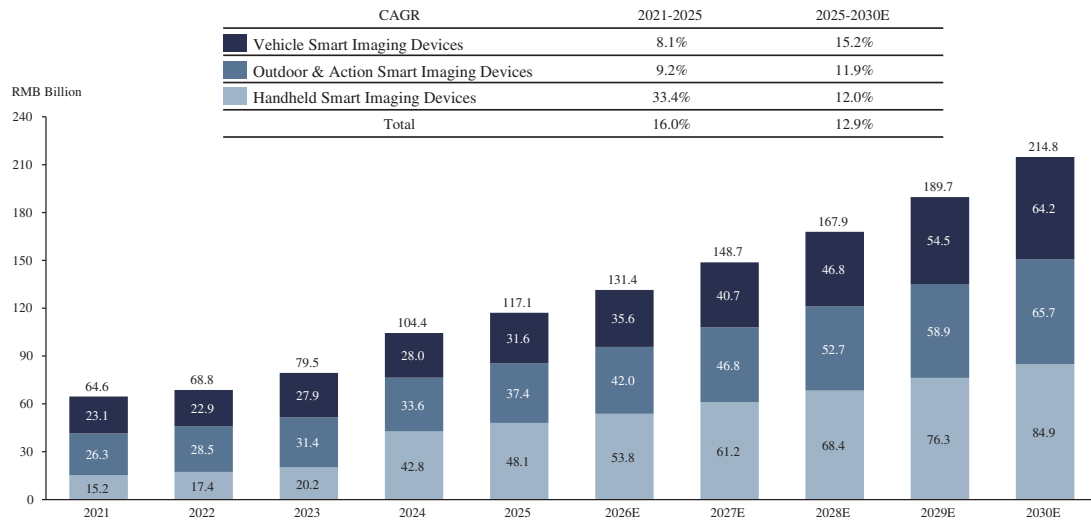
Market Size of Global Travel-oriented Portable Smart Imaging Devices Industry

From 2021 to 2025, global revenue of the travel-oriented portable smart imaging devices industry increased from RMB64.6 billion to RMB117.1 billion, representing a CAGR of 16.0%. Over the same period, vehicle smart imaging devices segment grew from RMB23.1 billion to RMB31.6 billion, with a CAGR of 8.1%. Outdoor & action smart imaging devices segment expanded from RMB26.3 billion to RMB37.4 billion, with a CAGR of 9.2%. Handheld smart imaging devices segment rose from RMB15.2 billion to RMB48.1 billion, with a CAGR of 33.4%, which was primarily propelled by the launch of hit products. The industry maintained steady expansion during the historical period, supported by the contentization of travel and outdoor scenarios, while ongoing imaging hardware upgrades and stronger computational photography improved usability and output stability in challenging environments, encouraging broader adoption of dedicated devices as a complement to smartphones.

From 2025 to 2030, total industry revenue is expected to increase from RMB117.1 billion to RMB214.8 billion, implying a CAGR of 12.9%. Vehicle smart imaging devices segment is forecast to grow to RMB64.2 billion, with a CAGR of 15.2%. Outdoor & action smart imaging devices segment is projected to expand to RMB65.7 billion, with a CAGR of 11.9%. Handheld smart imaging devices segment is expected to grow steadily to RMB84.9 billion, with a moderate CAGR of 12.0%. Growth momentum will be driven by continued demand expansion across in-vehicle and outdoor capture scenarios, AI-enabled video processing and creation that lowers editing barriers, and improving companion app and cloud services that enhance media management, faster content output, and cross-platform sharing efficiency, thereby shifting competition toward integrated capabilities across hardware, software, and services.

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Market Size of Global Travel-oriented Portable Smart Imaging Devices Industry, by Revenue, 2021-2030E



Note:

- 1) The exchange rate used in the report is 1 US dollar = 7.14 RMB, according to the Chinese foreign exchange trading system.
- 2) The market size reflects retail sales value.

Source: Consumer Technology Association (CTA), Frost & Sullivan

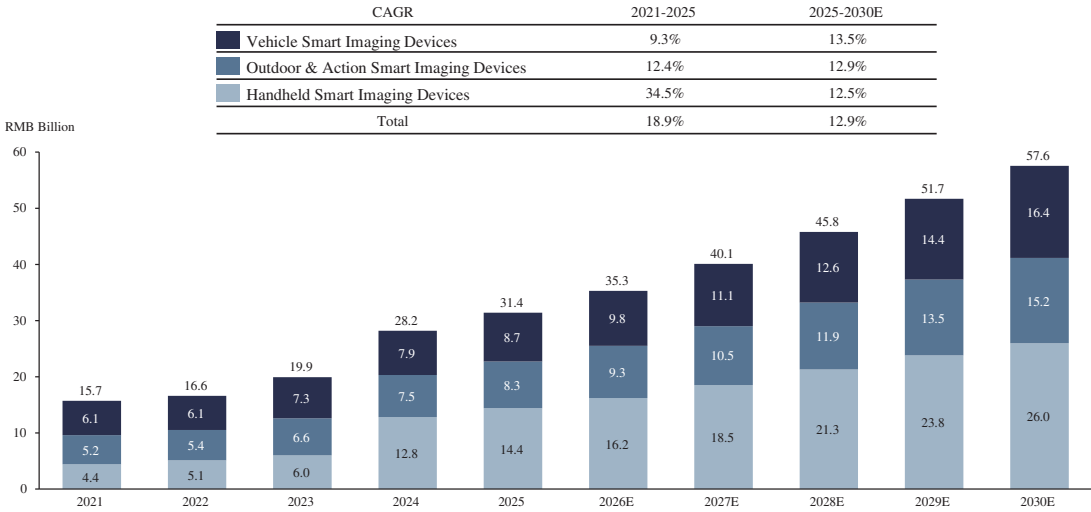
Market Size of Travel-oriented Portable Smart Imaging Devices Industry in the PRC

From 2021 to 2025, the travel-oriented portable smart imaging devices industry in the PRC increased from RMB15.7 billion to RMB31.4 billion, representing a CAGR of 18.9%. Vehicle smart imaging devices segment grew from RMB6.1 billion to RMB8.7 billion, with a CAGR of 9.3%. Outdoor & action smart imaging devices segment expanded from RMB5.2 billion to RMB8.3 billion, with a CAGR of 12.4%. Handheld smart imaging devices segment rose from RMB4.4 billion to RMB14.4 billion, with a CAGR of 34.5%, which was propelled by the launch of hit products. Historical growth was closely supported by the highly active local content ecosystem in the PRC, where short video and social platforms reinforced high-frequency capture, editing and sharing behaviors, alongside rising penetration of local travel and self-driving trips that sustained demand across in-vehicle and outdoor scenarios. In parallel, the mature consumer electronics supply chain and manufacturing base in the PRC enabled rapid product iteration, allowing imaging hardware upgrades and computational photography capabilities to scale into broader product tiers and support wider adoption of dedicated devices.

From 2025 to 2030, total revenue is expected to rise to RMB57.6 billion, implying a CAGR of 12.9%. Vehicle smart imaging devices segment is forecast to reach RMB16.4 billion, with a CAGR of 13.5%. Outdoor & action smart imaging devices segment is projected to increase to RMB15.2 billion, with a CAGR of 12.9%. Handheld smart imaging devices segment is expected to rise to RMB26.0 billion, with a moderate CAGR of 12.5%. Growth will be supported by the continuous expansion of in-vehicle and outdoor capture scenarios, growing content creation and sharing needs, and improved efficiency in content production and media management brought by AI-enabled video processing, companion apps and cloud services. Industry competition is evolving towards integrated hardware, software and service capabilities.

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Market Size of Travel-oriented Portable Smart Imaging Devices Industry in the PRC, by Revenue, 2021-2030E



Note: The market size reflects retail sales value.

Source: China Center of Information Industry Development (CCID), Frost & Sullivan

Market Drivers

Continuous Upgrades in Imaging Technology

Supply-side upgrades of Travel-oriented Portable Smart Imaging Devices are driven by improvements in imaging hardware and stronger computational photography, enabling these devices to better meet diverse consumer demands across various challenging environments. On the hardware side, ongoing optimization of higher-performance video SoCs and image sensors, continues to lift baseline image quality in HDR, low-light, and motion scenarios. On the software side, algorithm- and AI-enabled enhancements, such as multi-frame fusion, noise reduction, HDR, stabilization, and scene optimization, improve capture stability and usability. Overall, hardware upgrades are easier to standardize through the supply chain, while computational photography depends more on software capabilities and long-term iteration, making it a key differentiator for leading brands.

Rising Demand for Travel and Outdoor Recording

Demand growth is fundamentally driven by an intensifying desire for self-exploration and personalized expression, leading to the increasing “contentization” of travel and outdoor scenarios. As activities such as road trips, cycling, and camping become more mainstream, users are placing higher demands on stable recording in complex environments, particularly in use cases involving high vibration, extreme weather, underwater conditions, or long-duration continuous capture, where smartphones are often insufficient. Meanwhile, the widespread adoption of short-form video platforms and vlogging has significantly shortened the content creation cycle, with users increasingly adopting a continuous “capture–light edit–instant share” behavior pattern. This shift is driving stronger demand for fast editing and seamless sharing capabilities, accelerating the transformation of imaging devices from pure recording tools into content creation tools.

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Global Expansion of Chinese Brands

Supported by China’s strong manufacturing ecosystem, the global expansion of Chinese brands is creating new growth opportunities in portable travel-oriented smart imaging devices. Beyond traditional advantages in supply-chain efficiency and scaled delivery, Chinese players are increasingly leveraging a deeper understanding of global lifestyle trends, enabling products that better align with consumer demand for self-expression and outdoor travel experiences. By refining product definition and strengthening localized operations, leading brands are accelerating overseas channel development and software ecosystem integration to enhance user engagement and long-term retention. As overseas demand for in-vehicle and action imaging continues to grow, industry competition is shifting from standalone hardware performance to integrated “hardware + software + services” capabilities, positioning Chinese brands to capture greater global market share.

Future trends

AI-enabled Video Processing and Creation

Future travelers will demand effortless, story-ready videos: instead of recording long, unedited footage and spending hours cutting it down, they will expect a near-instant, polished narrative that captures the moments they care about. AI can enable this by embedding intelligence across capture and post-production: real-time stabilization, auto-framing and subject tracking during recording; automatic shot segmentation, semantic highlight extraction, and one-tap story assembly in post; and personalization that learns a user’s preferences to prioritize scenes and tone. Multimodal fusion of device sensors, user and vehicle metadata, and short questionnaires lets the system generate context-rich, platform-formatted clips (e.g., Reels vs. Stories) with AI-suggested music, captions, and pacing. The result is an always-on, cross-device AI agent that turns raw travel footage into shareable, emotionally coherent videos with minimal user effort.

Hardware-Software-Cloud Platform Integration

Users will require a seamless, unified platform to manage and publish media across in-vehicle, outdoor, and handheld devices, eliminating fragmented workflows and manual file coordination. AI can enable this by automatically aggregating and synchronizing footage, generating rich metadata through content-aware tagging and semantic indexing, and providing intelligent search and auto-curation to surface relevant clips. In the cloud, AI-driven rendering and format conversion will deliver high-quality, platform-optimized exports while adaptive transfer and storage policies minimize latency and cost. Automated privacy and permission management will enforce user preferences and regulatory constraints across devices. Together, these capabilities create a consistent cross-device experience that reduces user effort, shortens time-to-publish, and strengthens retention and monetization opportunities.

OVERVIEW OF VEHICLE SMART IMAGING DEVICE INDUSTRY

Definition

A vehicle smart imaging device is a specialized electronic device installed in vehicles to capture and store real-time video and audio data during driving. Serving as a “digital witness” for on-road scenarios, it is primarily designed to record traffic conditions, vehicle movements, and unexpected events such as collisions or disputes. Together with supporting software systems, accessories and value-added services, dash cams have evolved from basic recording tools into multi-functional devices integrated with entertainment, connectivity, and artificial intelligence capabilities, playing an increasingly important role in ensuring driving safety, protecting user rights, and enhancing in-vehicle experiences.

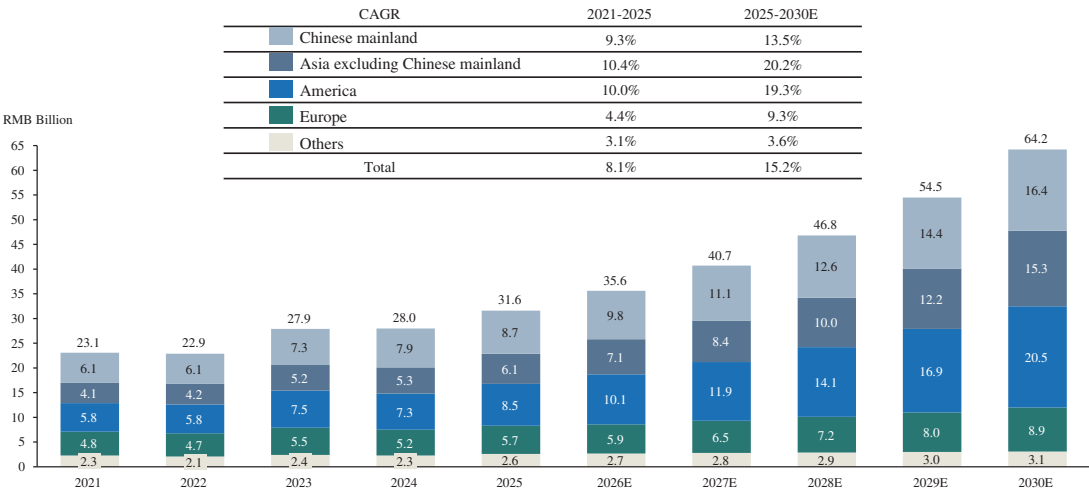
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Market Size of Global Vehicle Smart Imaging Device Industry

From 2021 to 2025, the global vehicle smart imaging device industry expanded from RMB23.1 billion to RMB31.6 billion, registering a CAGR of 8.1%. Among regional segments, Chinese mainland emerged as the core growth engine, with market size growing from RMB6.1 billion to RMB8.7 billion with a CAGR of 9.3%. The market size of America followed closely, expanding from RMB5.8 billion to RMB8.5 billion at a CAGR of 10.0%, while the market size of Asia excluding Chinese mainland rose from RMB4.1 billion to RMB6.1 billion with a CAGR of 10.4%. Europe, as a mature market, grew moderately from RMB4.8 billion to RMB5.7 billion at a CAGR of 4.4%, and the “Others” segment (including Africa, etc.) saw modest growth from RMB2.3 billion to RMB2.6 billion with a CAGR of 3.1%. Growth in this phase was primarily driven by the rising adoption of basic driving safety and recording systems in passenger vehicles across key markets.

By 2030, the global vehicle smart imaging device market is projected to surge from RMB31.6 billion in 2025 to RMB64.2 billion, reflecting an accelerated CAGR of 15.2% driven by AI integration and smart travel demand. The market size of Chinese mainland is expected to grow to RMB16.4 billion with a CAGR of 13.5%. America market will expand to RMB20.5 billion at a CAGR of 19.3%, while the market size of Asia excluding Chinese mainland is forecast to reach RMB15.3 billion with a CAGR of 20.2%. Europe segment is anticipated to grow steadily to RMB8.9 billion at a CAGR of 9.3%, and the “Others” segment is set to witness accelerated growth to RMB3.1 billion with a CAGR of 3.6%. This projected expansion will be underpinned by the deep integration of AI-enabled creative functions, the popularization of smart cockpits, and the rising demand for personalized travel video content in the post-pandemic era.

Market Size of Global Vehicle Smart Imaging Device Industry, Breakdown by Region, by Revenue, 2021-2030E



Notes:

- 1) Others mainly include Australia and Africa
- 2) The exchange rate used in the report is 1 USD = 7.14 RMB, according to the China Foreign Exchange Trading System.

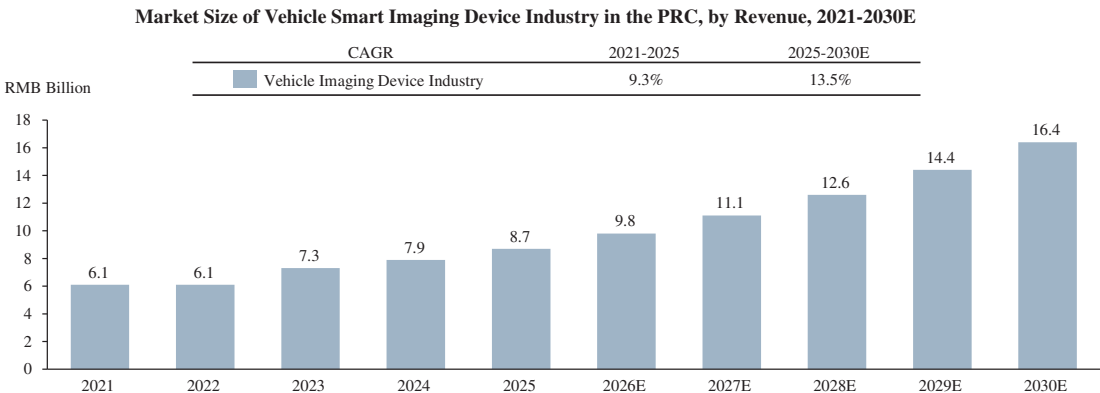
Source: International Organization of Motor Vehicle Manufacturers (OICA), Frost & Sullivan

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Market Size of Vehicle Smart Imaging Device Industry in the PRC

From 2021 to 2025, the market size of vehicle smart imaging device industry in the PRC expanded from RMB6.1 billion in 2021 to RMB8.7 billion in 2025, reflecting a CAGR of 9.3% during this period. Growth was primarily supported by the increasing vehicle parc and new vehicle sales in China as well as rising consumer awareness of driving safety.

By 2030, the market size of vehicle smart imaging device industry in the PRC is projected to reach RMB16.4 billion, expanding at a CAGR of 13.5% from 2025 to 2030. Against a relatively moderate overall growth pace compared with the global market, the domestic aftermarket segment will continue to develop steadily. This trend is fueled by the evolving role of automobiles as the mobile third space, as well as the integration of artificial intelligence and smart interactive functions into aftermarket imaging products to enrich in-vehicle experience. These developments are expected to drive demand for higher-value products.



Source: Shenzhen Automotive Electronics Industry Association (AEIA), Frost & Sullivan

Market Drivers

Vehicles Evolve into Mobile Third Spaces

In 2025, China’s passenger car parc reached 366 million units while the global vehicle stock is widely estimated at 1.6–1.7 billion units, laying a massive foundational user base for in-vehicle smart devices. With the widespread adoption of intelligent vehicles, the automobile has evolved from a traditional means of transportation into a mobile third space, serving as an important daily scenario for users beyond home and the workplace. This transformation has given rise to an automotive culture centered on entertainment, relaxation and intelligent interaction, driving strong demand for vehicle-mounted smart imaging devices. This trend is further accelerated by the booming smart cockpit industry, which is projected to surge from approximately RMB478.4 billion in 2025 to RMB1,330.5 billion by 2030, creating a massive incremental market for integrated visual systems. Consequently, these devices are no longer just optional accessories but have become essential components for users to document their intelligent travel journeys, monitor vehicle status, and interact with the surrounding driving environment, thus fueling the market growth of vehicle smart imaging device industry.

From Passive Recording to Proactive Safeguarding

The market growth logic of vehicle smart imaging devices is increasingly centered on the enhancement of their core safety utility, evolving from simple passive recording to a comprehensive proactive safeguarding system. Initially used primarily to record traffic accidents for liability determination, these terminals are now being redefined by their dual

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capabilities in pre-incident prevention and post-incident traceability. On one hand, the integration of advanced sensors and AI algorithms allows devices to offer proactive prevention, such as real-time ADAS alerts that warn of potential collisions or lane departures, significantly reducing the probability of accidents. On the other hand, for post-incident traceability, the focus has shifted toward high-precision evidence retrieval, where improved imaging resolution and cloud-synchronized storage enable faster, more accurate searches and timeline reconstruction. This continuous strengthening of the device's utilitarian safety value remains a contributing driver for market penetration and product iteration.

Content-oriented Travel Recording Scenarios

Travel recording scenarios have gradually become daily and content-oriented, marking the transition of vehicle smart imaging devices from pure functional tools to important content carriers. With the improvement of people's living standards and the popularization of social media, recording and sharing travel experiences has become an integral part of modern lifestyle. Drivers now use vehicle smart imaging devices to capture not only traffic incidents but also daily commuting highlights, weekend getaways, and road trips. The generated content is widely shared on social platforms, forming a unique travel content ecosystem. This trend is further reinforced by the rapid growth of the global vehicle C-end community SaaS industry, which expanded from RMB4.4 billion in 2021 to RMB13.4 billion in 2025 with a CAGR of 32.1% and is projected to reach RMB44.4 billion by 2030, underscoring the rising demand for in-vehicle content sharing and community engagement. This has significantly boosted the demand for high-performance, user-friendly vehicle smart imaging devices, as users pursue clearer image quality, more convenient content editing and sharing functions, which in turn drives the continuous development and upgrading of the market.

AI-Powered Smart Imaging Capabilities

The evolution of vehicle smart imaging devices is shifting from passive recording to becoming intelligent agents that perceive and interpret the physical world, acting as an essential extension of human vision. Current terminals not only perform passive recording, but also actively identify and understand the environment in real time. By leveraging the collaboration between edge-based lightweight large models and cloud-based large models, these devices function as a sensory extension, helping drivers perceive hidden risks and complex road semantics that beyond visual range, such as ultra-long-range obstacle detection and 360-degree blind-spot awareness. Furthermore, AI enables to analyze travel habits and real-time road conditions to recommend optimal routes and nearby services. As a key interactive component of smart cockpits, AI-powered imaging devices continue to enrich practical functions and create real value for users across all travel scenarios.

Future Trends

Popularization of Multi-Perspective Linkage and Multi-Terminal Collaborative Shooting

The popularization of multi-perspective linkage and multi-terminal collaborative shooting will become a prominent trend in the vehicle smart imaging device market. With the continuous advancement of intelligent driving technology and the increasing demand for comprehensive travel perception, a single perspective can no longer meet users' needs for all-round scene recording. As the average number of automotive cameras has increased from about 2.1 per vehicle in 2020 to approximately 6–8 per vehicle in 2030, future vehicle smart imaging devices will form a multi-camera linkage system covering front, rear, side, and in-car perspectives, realizing seamless stitching of images from multiple angles to present a complete travel scene. Meanwhile, the collaborative shooting between vehicle-mounted imaging terminals and mobile devices, smart wearables, and other terminals will be further

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strengthened. Users can synchronously record travel content through multiple devices and realize real-time data sharing and integrated editing, which not only enriches the forms of travel recording but also expands the application scenarios of vehicle smart imaging devices.

Deepening of AI-Powered Intelligent Editing and Content Distribution

AI empowerment will drive the deepening development of intelligent editing and content distribution in the vehicle smart imaging device market. With the integration of advanced AI algorithms such as computer vision and natural language processing, vehicle smart imaging devices will be able to automatically identify key information in travel videos, such as scenic spots, characters, and wonderful driving moments, and complete intelligent editing tasks including clip selection, background music matching, and subtitle generation without manual intervention. On the content distribution side, AI will realize precise push of travel content based on user preferences and social platform characteristics, helping users quickly share high-quality travel content to relevant platforms. This deep integration of AI and content production and distribution will greatly improve the user experience, enhance the value of vehicle smart imaging devices, and promote the sustainable development of the market.

AI Agent and Smart Mobility Ecosystems

Driven by rapid advances in AI, IoT, and connected vehicle technologies, the vehicle smart imaging industry is shifting from competition among standalone hardware products toward competition among integrated ecosystem platforms. The global connected vehicle parc is projected to exceed 800 million vehicles by 2030, forming a highly interconnected mobility network that spans in-vehicle recording, end-to-end mobility scenarios, intelligent interaction, and lifestyle services, with deeper integration of devices, data, content, and services across the user lifecycle. In parallel, the fast-growing AI agent market (expanding at a CAGR of over 30% from 2025 to 2030), together with breakthroughs in large language models, multimodal perception, and robotics, is accelerating the transformation of vehicle smart imaging devices becoming key interfaces for AI agent-based services. Serving as a key entry point enabling cars to function as the mobile third space, they will bring intelligent cockpit experiences, AI-powered interaction and smart mobility services to a broad installed base of legacy and internal combustion engine vehicles, narrowing the intelligence gap between existing legacy vehicles and new-generation smart vehicles.

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COMPETITIVE LANDSCAPE

Rankings

1. Ranking of Global Vehicle Smart Imaging Device Companies, by Market Share Measured by Revenue¹ (2025)

Ranking	Company	Listing Status	Market Share in Global Vehicle Smart Imaging Device Industry, 2025
1	Company A ²	Listed	3.3%
2	Company B ³	Unlisted	3.2%
3	Company C ⁴	Unlisted	2.9%
4	Company D ⁵	Unlisted	2.0%
5	<i>The Company</i>	<i>Unlisted</i>	<i>1.5%</i>
Top 5 Subtotal			12.8%

Notes:

- (1) Revenue is measured by shipment price.
- (2) Headquartered in South Korea, founded in 1997, it is a key player in advanced automotive electronics, specializing in ADAS-integrated vehicle smart imaging devices; its main markets cover Asia, Europe, and North America.
- (3) Headquartered in the UK, founded in 1999, it focuses on vehicle safety electronics (primarily vehicle smart imaging devices) with user-friendly designs; its products are widely distributed across Europe, North America, and Asia-Pacific regions.
- (4) Headquartered in China, founded in 2016, it focuses on intelligent automotive electronics (such as vehicle smart imaging devices and in-car accessories); its cost-effective products are popular in China, Southeast Asia, and European consumer markets.
- (5) Headquartered in China, founded in 2020, it is a fast-growing innovative brand in the global automotive electronics market. Specializing in high-definition smart dash cams and rangefinders, its main markets covers the North American and European e-commerce markets.

Source: Annual reports, Frost & Sullivan

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2. Ranking of Global Vehicle Smart Imaging Device Companies, by Market Share Measured by Shipments (2025)

Ranking	Company	Listing Status	Market Share in Global Vehicle Smart Imaging Device Industry, 2025
1	Company C	Unlisted	7.6%
2	<i>The Company</i>	<i>Unlisted</i>	4.9%
3	Company E ¹	Listed	4.8%
Top 3 Subtotal			17.3%

Notes:

- (1) Headquartered in China, founded in 2001, it is one of a global leader in video surveillance and vehicle imaging solutions (including vehicle smart imaging devices and in-car monitoring systems); its products serve automotive, security, and industrial markets worldwide.

Source: Annual reports, Frost & Sullivan

3. Ranking of Global Screenless Vehicle Smart Imaging Device Companies, by Market Share Measured by the Shipments (2025)

Ranking	Company	Listing Status	Market Share in Global Screenless Vehicle Smart Imaging Device Industry, 2025
1	<i>The Company</i>	<i>Unlisted</i>	7.0%
2	Company C	Unlisted	6.4%
3	Company E	Listed	3.7%
Top 3 Subtotal			17.1%

Source: Annual reports, Frost & Sullivan

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4. Ranking of Vehicle Smart Imaging Device Companies in the PRC Market, by Market Share Measured by the Revenue Generated in the PRC (2025)

Ranking	Company	Listing Status	Market Share in Vehicle Smart Imaging Device Industry in the PRC, 2025
1	Company E	Listed	3.8%
2	Company F ¹	Listed	3.1%
3	<i>The Company</i>	<i>Unlisted</i>	2.4%
4	Company C	Unlisted	1.6%
5	Company G ²	Unlisted	1.2%
Top 5 Subtotal			12.2%

Notes:

- (1) Headquartered in China, founded in 2005 (originally as a cybersecurity firm), it expands into intelligent vehicle electronics (including vehicle smart imaging devices); its automotive products target the Chinese consumer market with cybersecurity-integrated features.
- (2) Headquartered in China and founded in 2010, it is a key player in entry-level to mid-range vehicle smart imaging devices; its core market is domestic China with distribution in emerging markets.

Source: Annual reports, Frost & Sullivan

5. Ranking of Vehicle Smart Imaging Device Companies in the PRC Market, by Market Share Measured by the Shipments Generated in the PRC (2025)

Ranking	Company	Listing Status	Market Share in Vehicle Smart Imaging Device Industry in the PRC, 2025
1	Company E	Listed	10.3%
2	Company F	Listed	8.9%
3	<i>The Company</i>	<i>Unlisted</i>	7.7%
Top 3 Subtotal			26.8%

Source: Annual reports, Frost & Sullivan

Entry Barriers

Technology and R&D Barrier

The intelligent transformation of vehicle smart imaging devices has significantly elevated the technical threshold, making advanced R&D capabilities a core barrier to entry. Modern vehicle smart imaging devices integrate multiple cutting-edge technologies, including high-resolution imaging sensors, AI chips, multi-sensor fusion, and 5G/V2X communication modules. High-end products require high-performance CIS to ensure clear imaging under complex lighting conditions, as well as dedicated AI chips with sufficient computing power to support advanced functions like ADAS, fatigue driving recognition, and

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real-time accident analysis. The development of core algorithms for these functions, such as lane departure warning and forward collision warning with high accuracy, requires long-term accumulation of technical expertise and massive real-road data training. Leading enterprises typically invest heavily in R&D and have established mature technical ecosystems, while new entrants face huge challenges in bridging the technology gap, accumulating R&D resources, and achieving product performance parity.

Brand and Localization Barrier

Beyond hardware capabilities, the primary barrier to entering the global vehicle smart imaging market lies in the sophistication of localized market understanding and the establishment of brand trust. A successful entry requires more than a standardized product; it demands a deep alignment with regional cultural nuances, legal frameworks, and consumer behaviors. Brands must navigate diverse privacy regulations – such as GDPR in Europe, while tailoring their marketing to resonate with local values, such as “reliability and safety” in the West or “social connectivity and tech-innovation” in Asia. Furthermore, building a sustainable brand identity is critical to overcoming the “commoditization trap.” Leading players distinguish themselves by moving past pure hardware specs to foster emotional connections through localized service ecosystems and professional distribution networks. Ultimately, the ability to translate global technological strengths into a locally relevant brand story is what separates enduring market leaders from short-term entrants.

Policy and Compliance Barrier

The vehicle smart imaging device market is heavily regulated by stringent policies and technical standards globally, forming a significant entry barrier for new entrants. Governments and regulatory authorities in major markets have established mandatory certification systems and technical specifications to ensure product safety, data accuracy, and compliance with traffic management requirements. For instance, European Union has introduced relevant regulations such as General Safety Regulation (GSR) Phase II and eCall, imposing corresponding requirements on vehicle smart imaging devices involving driving safety and data protection. Complying with these diverse and evolving regulations requires substantial investment in product testing, certification procedures, and legal consulting. New entrants often face long certification cycles and high costs, and failure to meet regulatory requirements can result in product bans or market withdrawals, further raising the threshold for market entry.

SOURCE OF INFORMATION

In connection with the [REDACTED], we have engaged Frost & Sullivan to conduct a detailed analysis and prepare a market research report on the vehicle smart imaging device industry. Frost & Sullivan is an independent global market research and consulting company which was founded in 1961 and is based in the U.S. Services provided by Frost & Sullivan include market assessments, competitive benchmarking, and strategic and market planning for a variety of industries. The agreed fee paid to Frost & Sullivan for the preparation and use of the Frost & Sullivan Report is RMB480,000. The payment of such amount was not contingent upon our successful [REDACTED] or on the results of the Frost & Sullivan Report. Except for the Frost & Sullivan Report, we did not commission any other market research report in connection with the [REDACTED]. We have included certain information from the Frost & Sullivan Report in this document because we believe such information facilitates an understanding of the vehicle smart imaging device industry. Unless otherwise indicated, market estimates or forecasts in this section represent Frost & Sullivan’s view on the future development of the vehicle smart imaging device industry. In preparing the Frost & Sullivan Report, Frost & Sullivan has relied on its in-house database, independent third-party reports, and publicly available data from reputable industry organizations. Where necessary, Frost & Sullivan contacts companies operating in the industry to gather and synthesize information in relation to the market, prices, and other relevant information. Frost

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& Sullivan has exercised due care in collecting and reviewing the information so collected and believes that the basic assumptions used in preparing the Frost & Sullivan Report, including those used to make future projections, are factual, correct, and not misleading. Frost & Sullivan has independently analyzed the information, but the accuracy of the conclusions of its review largely relies on the accuracy of the information collected. In compiling and preparing the research, Frost & Sullivan assumed that the social, economic, and political environments in the relevant markets are likely to remain stable in the forecast period, which ensures the stable and healthy development of the vehicle smart imaging device industry. In addition, Frost & Sullivan has developed its forecast on the following bases and assumptions: (i) the economy in the global range is likely to maintain stable growth in the next decade, and (ii) the vehicle smart imaging device industry is expected to grow based on the macroeconomic assumptions of the economy. Frost & Sullivan's research may be affected by the accuracy of these assumptions and the choice of these primary and secondary sources. Except as otherwise noted, all data and forecasts in this section come from the Frost & Sullivan Report.