OVERVIEW

We are a leading provider of advanced driver assistance systems ("ADAS") and autonomous driving ("AD") solutions for passenger vehicles, empowered by our proprietary software and hardware technologies. Our solutions combine algorithms, purpose-built software and processing hardware, providing the core technologies for assisted and autonomous driving that enhance the safety and experience of drivers and passengers. We are a key enabler for the smart vehicle transformation and commercialization with our integrated solutions deployed on mass scale. We are the first and have consistently been the largest Chinese company providing integrated ADAS and AD solutions in terms of overall solution installation volume since the mass deployment of our solutions in 2021, according to CIC. We ranked the fourth among all global ADAS and AD solution providers in China by overall solution installation volume in 2023 and the first half of 2024, with a market share of 9.3% and 15.4%, respectively. We act as a tier-two supplier and have a large, global customer base of industry-leading OEMs and tier-one suppliers for vehicles manufactured in China. Our business has achieved significant growth at scale over the past three years as we capitalize on the mega industry tailwind as a market leader. As of June 30, 2024, a total of 25 OEMs selected our ADAS and AD solutions for implementation in one of their vehicle models, by directly engaging with us or through our tier-one supplier customers.

Smart vehicle transformation is a mega trend that has been reshaping the estimated US$13.0 trillion global automotive, mobility and road freight industries in 2023. ADAS capabilities are increasingly common in cars nowadays, thanks to the rapid technology advancement and higher consumer demand in recent years. This is demonstrated by the ADAS penetration rates of over 50% in both the global and Chinese markets in 2023, according to CIC. Meanwhile, industry participants continue to make ongoing, inexhaustible efforts to march towards broader adoption of AD with increasing level of automation. We believe the demand for driving automation solutions will continue to grow significantly in the years to come. According to CIC, the global ADAS and AD solutions market presents a RMB61.9 billion opportunity in 2023 and is expected to grow at a CAGR of 49.2% through 2030 to reach RMB1,017.1 billion.

However, a few core challenges need to be addressed to realize mass adoption of smart vehicles enabled by ADAS and AD. ADAS and AD systems are highly complex, requiring high processing capacity, high reliability, low latency and low energy consumption, and need to be produced at affordable costs. Therefore, ADAS and AD solutions require the co-design of software and hardware to achieve the necessary system-level performance and reliability of driving functions. Deployment of such solutions on vehicles also requires optimal energy efficiency while guaranteeing application performance. In addition, mass adoption of ADAS and AD needs an open platform approach where value chain participants can all join and continuously leverage the enabling technologies to develop functions and features that suit their needs while reducing time to market.

By architecting our solutions to address these fundamental challenges, we build the core enabling technology for smart vehicle revolution. Our solutions enable the full spectrum of driving automation functions for passenger vehicles from mainstream assisted driving to advanced levels of autonomous driving. Built through nine years of development, testing and iterative improvements, our integrated solutions have been successfully validated, commercialized and deployed on mass scale. With our product maturity, technological advantage and commercial success, we have established ourselves as a clear market leader. The comprehensiveness and uniqueness of our solution matrix, as summarized below, allow us to rapidly penetrate the market, achieve high customer stickiness and capture a significant portion of the value chain.

We offer a comprehensive portfolio of ADAS and AD solutions, namely Horizon Mono, Horizon Pilot and Horizon SuperDrive, to address different customer needs from mainstream assisted driving (Level 2) to advanced level autonomous driving (Level 2+ in China for regulatory compliance. According to CIC, in terms of level of autonomous driving, as of the Latest Practicable Date, there is no mass-produced passenger vehicle at autonomous driving Level 3 or above in China.

- ***Horizon Mono.*** Horizon Mono is our active safety ADAS solution designed to improve daily driving safety and comfort. It enables basic functions such as automatic emergency braking (AEB) and intelligent high beam (IHB) to improve passenger and road-user safety, as well as comfort functions such as adaptive cruise control (ACC) and traffic jam assist (TJA) to improve driving experience. We embed Journey 2 or Journey 3 processing hardware in Horizon Mono currently.

- ***Horizon Pilot.*** Horizon Pilot is our highway navigate on autopilot (NOA) solution, categorized as an AD solution, that provides safe and efficient driving experience. In addition to enhanced active safety features, Horizon Pilot performs more advanced tasks such as automatic ramp on/off, autonomous merge-in and exit during traffic congestion, automated lane change, highway auto-pilot and more. These functions improve driving and riding experience for end users, especially in long-distance commute. At the same time, Horizon Pilot provides advanced parking functions such as auto parking assist (APA) and automated valet parking assist (VPA). We embed Journey 3 or Journey 5 processing hardware in Horizon Pilot currently.

- ***Horizon SuperDrive.*** Horizon SuperDrive is our AD solution equipped with our most advanced processing hardware. It is designed to achieve smooth and human-like autonomous driving in all urban, highway and parking scenarios. It is expected to tackle a comprehensive range of complex road conditions with more assertive and interactive driving style, featuring smooth execution of obstacle avoidance, gentle and human-like braking, dynamic speed control, smooth execution of unprotected left turns, and more. We plan to embed Journey 6, our latest processing hardware in Horizon SuperDrive.

Our ADAS and AD solutions are built on a comprehensive stack of technologies, including algorithms for driving functions, the underlying processing hardware, as well as various tools to facilitate software development and customization.

- ***Algorithm.*** Our algorithms play an important role for our proprietary software-hardware co-designed solution. They are purpose-built and optimized for a wide spectrum of driving scenarios. Our full spectrum of algorithm capabilities range from perception, environmental modeling, planning and control to driving automation functions, fulfilling the development requirement for all levels of ADAS and AD solutions.

- ***Brain Processing Unit (BPU).*** BPU is our proprietary processing architecture tailored for automotive applications, including ADAS and AD functions. We incorporate our deep understanding of advanced software and algorithms into BPU architecture to empower the processing hardware with outstanding performance, high energy efficiency, low latency when running automotive algorithms.

- ***Horizon OpenExplorer.*** Horizon OpenExplorer is our flexible algorithm development toolkit that encompasses a series of ready-to-use modules and reference algorithms. With a user-friendly interface and abundant auxiliary tools, OpenExplorer enables the users to accurately and efficiently deploy algorithms and software on our processing hardware.

- ***Horizon TogetheROS.*** Horizon TogetheROS is a safe, simple and user-friendly autonomous driving embedded middleware. TogetheROS provides standardized automotive grade services and tools to help accelerate development, integration and verification efforts to boost mass production readiness.

- ***Horizon Automotive Intelligence Development Instrument (AIDI).*** Horizon AIDI is our software development platform, designed to accomplish automatic iterative improvements of models with enhanced efficiency. By offering various tools and application interfaces, as well as streamlined workflow, AIDI helps software developers optimize the entire software development process from deployment, training, verification, evaluation, to iteration.

We take a software and hardware co-optimization approach, which we believe is crucial in ensuring optimal processing efficiency at affordable costs, hence the right technological path towards an autonomous driving future. We also believe that by offering flexible collaboration methods and open development tools, we enable our ecosystem partners to accelerate mass adoption of autonomous driving solutions. Such key philosophies underpin our product design and technology architecture, leading to these clear differentiating advantages of our solutions:

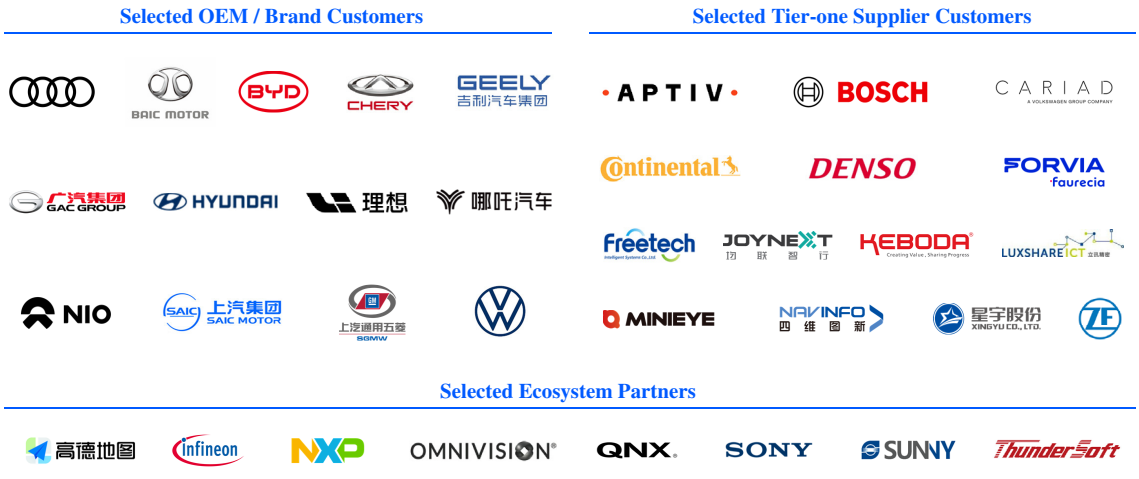
- System performance. Our software and hardware are developed and optimized hand-in-hand to ensure optimum system performance when integrated.

- High efficiency at affordable costs. Our solutions are highly efficient due to our co-optimization approach, delivering outstanding processing performance with low power consumption and low latency, which are crucial for automotive-grade deployment. In addition, our solutions are produced at affordable costs, laying the foundation for mass scale adoption.

- Open platform. We make available a series of base models, toolchains, frameworks and reference solutions to enable our customers and ecosystem partners to develop their own software applications catering to specific needs, helping them significantly shorten development cycles and reduce development costs.

Our distinguishing solutions and open platform approach have won us a growing and loyal base of customers and ecosystem partners. We act as a tier-two supplier and work both with OEMs directly and through tier-one suppliers to install our integrated ADAS and AD solutions into mass-produced vehicles. Our integrated solutions have been selected by 27 OEMs (42 OEM brands) for implementation in over 285 car models, with price range from approximately RMB86,800 to RMB429,800, as of the Latest Practicable Date. We had 152 cumulative number of car models for which we achieved SOP as of the Latest Practicable Date.

All top 10 Chinese OEMs have selected our solutions for mass production into their passenger vehicle models. We have accumulatively obtained design-wins for 44, 101, 210 and 275 car models, net of terminated projects, as of December 31, 2021, 2022 and 2023 and June 30, 2024, respectively. We obtained more than 100 new design-wins of car models in 2023 alone. Design-win does not guarantee sales order. In 2021, 2022 and 2023 and for the six months ended June 30, 2024, we had five, four, four and nil terminated projects, respectively. The following table presents selected and publicly announced key OEMs and tier-one suppliers who have adopted our solutions, as well as chosen ecosystem partners. These ecosystem partners collaborate with us to address challenges ranging from software development to the integration of our solutions.



We have a highly flexible and scalable business model. Our customers can choose any solution or any combination of components in our whole stack offerings from algorithms to software and development tools and to processing hardware. Such flexibility has helped us continuously acquire new customers and expand market share. In addition, our business model is highly scalable. We typically scale deployment of our solutions with mass production of our OEM customers' nominated vehicles. In addition, OEM customers who have found success with our solutions in one of their vehicle models would typically expand collaboration with us to more vehicle models. Furthermore, we have the opportunity to sell more advanced solutions and additional components from our offerings to our customers. These help us build a stable pipeline of contracts in the years to come.

Our flexible and scalable business model has led to significant growth of our business in the Track Record Period and lays the foundation for our continued success in the future. Our revenue increased by RMB439.0 million, or 94.1%, from RMB466.7 million in 2021 to RMB905.7 million in 2022, and further increased by RMB645.9 million, or 71.3%, to RMB1,551.6 million in 2023. Our revenue increased by RMB563.1 million, or 151.6%, from RMB371.5 million for the six months ended June 30, 2023 to RMB934.6 million for the six months ended June 30, 2024. Our gross profit increased from RMB331.0 million in 2021 to RMB627.7 million in 2022, and further to RMB1,094.3 million in 2023. Our gross profit increased from RMB226.6 million for the six months ended June 30, 2023 to RMB738.7

million for the six months ended June 30, 2024. We had high and stable gross profit margin of 70.9%, 69.3% and 70.5% in 2021, 2022 and 2023, respectively. Our gross profit margin increased from 61.0% for the six months ended June 30, 2023 to 79.0% for the six months ended June 30, 2024.

OUR MARKET OPPORTUNITIES

The ongoing smart vehicle transformation is highly disruptive. As an early form of this ongoing technology-driven transformation, ADAS functions have gained traction among OEMs and are quickly becoming standard features of new car models nowadays. Recognizing such trend, OEMs around the world have begun to ramp up their adoption of ADAS solutions as the key competitive edge to compete in the global automotive industry. Meanwhile, it is expected that wide adoption of AD technology could be realized as early as 2025, which is set to revolutionize the global automotive, mobility and road freight industries, with a combined estimated market size of US$20.0 trillion in 2030. The penetration of AD is expected to reach 10.5% and 16.4% globally and in China in 2025, respectively, according to CIC. AD solutions are expected to upgrade to provide more advanced features to tackle complex driving scenarios. As a result, more processing capacity and more advanced algorithms are critical for the evolution of the AD solutions in the future, which will lead to higher dollar content per vehicle for AD solutions. The size of the global ADAS and AD solutions market has reached RMB61.9 billion in 2023 and is expected to grow to RMB1,017.1 billion by 2030, representing a CAGR of 49.2% from 2023 to 2030, according to CIC.

As the largest automotive market in the world in terms of sales volume, China has also become the world's largest ADAS market and largest AD market in 2023, driven by an increasing focus on vehicle safety, a growing preference for enhanced driving and riding experience, and an increasing amount of investment and support. By 2030, the penetration rate of smart vehicles with ADAS or AD solutions is projected to reach 99.7% in China, according to CIC. China presents unique traffic conditions that add to the complexity of AD, hence demanding more sophisticated AD solutions. Consumers in China have shown great acceptance and enthusiasm for smart vehicles and are willing to pay a premium for features that improve driving safety and experience. These factors could drive OEMs to adopt more ADAS and AD solutions in China to tailor their automobile products to the Chinese consumers and market. The size of China's ADAS and AD solutions market has reached RMB24.5 billion in 2023 and is expected to grow to RMB407.0 billion by 2030, representing a CAGR of 49.4% from 2023 to 2030, according to CIC.

OUR COMPETITIVE STRENGTHS

Established Market Leader with Significant Commercial Success and Substantial Barriers

We are a leading provider of ADAS and AD solutions for passenger vehicles, empowered by our proprietary software and hardware technologies. Our highly competitive ADAS and AD solutions with market-proven performance have become the go-to choices for many OEMs and tier-one suppliers. Such rapidly expanding commercialization has solidified our leading market position and established our branding that can drive and accelerate our growth in the future. The automotive industry holds strict quality standards to safeguard driver and passenger safety. Therefore, OEMs typically go through rigorous validation process to onboard suppliers to ensure product reliability, performance and adherence to top industry standards. As a result, it takes significant time and efforts to go through these challenges and prove a trust-worthy supplier. With our established reputation and track record of consistently delivering high-quality solutions, we managed to win the trust and confidence from OEMs, further solidifying their leading position.

Leveraging our leadership position, we are expanding market share and winning more contracts. For example, in 2023 alone we obtained more than 100 new design-wins of car models. Capitalizing on our market position and reputation, we have successfully built our fortress and are well positioned to further benefit from it in the future. Such substantial barriers built upon our market position and reputation will keep propelling our business growth and widening our leadership.

Localized Expertise in China Ensuring Our Leading Position Today and in the Future

Our localized expertise in China is a core competitive advantage and serves as the bedrock of our future growth. According to CIC, China is the largest automotive market in the world in terms of sales volume in 2023. In the same year, China has the world's largest ADAS and AD market, driven by an increasing focus on vehicle safety, a growing preference for enhanced driving and riding experience, and an increasing amount of investment and support. The size of China's ADAS and AD solutions market has reached RMB24.5 billion in 2023 and is expected to grow to RMB407.0 billion by 2030, representing a CAGR of 49.4% from 2023 to 2030, according to CIC. Our commitment to understanding and addressing the unique challenges and opportunities in China ensures that we not only thrive in the present but also maintain a competitive edge in the future.

Our localized expertise sets us apart from our competitors and ensures the competitiveness of our solutions in the ADAS and AD market in China. Our extensive research and development efforts, coupled with years of local business operations, have equipped us with insightful knowledge and practicable experience in designing our ADAS and AD solutions to address China's unique and challenging road conditions. We have a proven record of developing ADAS and AD solutions that are suited for deployment in China, as manifested by the fact that all top 10 Chinese OEMs have selected our solutions for mass production into their

passenger vehicle models. In addition, with a dedicated team of professionals with valuable insights in China's automotive industry landscape, we are committed to providing exceptional on-the-ground customer support in China, differentiating from other ADAS and AD solution providers, particularly certain global competitors who lack local insights. Moreover, our in-depth understanding of the business and regulatory environment in China enables us to effectively navigate through complex regulatory landscape.

Large, Blue-chip Customer Base with High Stickiness

We have maintained a large base of blue-chip customers that are established leaders in the automotive industry. All top 10 Chinese OEMs have selected our solutions for mass production into their passenger vehicle models. Additionally, we have formed joint ventures with global industry giants such as Volkswagen Group, evidencing our position as a trusted partner in assisted and autonomous driving for passenger vehicles. In addition to OEMs, we have also formed strategic partnerships with global leading tier-one supplier customers such as Aptiv, Bosch, Continental, Denso and ZF. These customers and partners of ours represent the most advanced technology and largest scale production and are the most influential forces in leading the global smart vehicle transformation, keeping us at the leading edge of market evolution and reinforcing our role as a leading provider of ADAS and AD solutions for passenger vehicles.

We form a long-term relationship with our customers by deeply integrating our ADAS and AD solutions into their systems and partnering with them in the development of specific features to meet their needs. We believe such integration and collaboration ensure a symbiotic partnership that fosters loyalty and mutual success. As a result, our customers are inclined to maintain these relationships, given that the substantial interdependence renders the prospect of switching challenging and unlikely due to costs of system redesign and loss of customized functions.

Integrated Solutions with Co-optimized Software and Hardware

We provide integrated ADAS and AD solutions encompassing algorithms, processing hardware and a suite of development tools. In solution design and development, we specialize in a software-hardware co-optimization approach. With our strong capabilities in both software and hardware, we are able to design hardware that better meets the evolving demands of software and algorithms in the automotive industry. Simultaneously, our sophisticated software and advanced algorithms can fully utilize the potential of our processing hardware to achieve optimal system-level performance. Leveraging such co-optimization, we are able to provide our customers with software-hardware integrated solutions which operate at optimal efficiency, high performance and minimal system latency.

The development, verification and testing of our solutions require years of dedicated research and engineering, strong algorithmic capabilities as well as deep industry know-how in hardware engineering and system integration. Our sophisticated algorithms are tailored for a wide range of complex driving scenarios and have received recognitions and awards from reputable journals and competitions in the industry for their outstanding efficiency and

performance. To better support our customers in the cascading process of production development, we also encompass strong system design and engineering capabilities, which are further strengthened by our rich mass-production experiences.

Our unique combination of software, hardware and engineering capabilities represents a significant competitive advantage, establishing higher barriers to entry.

Open Technology Platform to Foster Thriving Ecosystem

Openness is our philosophy, as we want to empower automotive industry participants with an open platform that can facilitate their innovation and product development, and thus accelerating the adoption of ADAS and AD in mass production. To serve that purpose, we provide an open platform to allow OEMs and third-party developers to develop ADAS and AD features tailored to specific needs, using our algorithms and processing hardware as the base. Our open technology platform consists of a comprehensive suite of development tools, including but not limited to OpenExplorer, TogetheROS and AIDI. Please see "— Our Technologies" for details.

Our open, flexible and easy-to-use tools obviate the need for users to build complex ADAS and AD software and systems from the ground up, thus largely lowering the barriers and improving the efficiency of product development. The users include not only our customers, but also upstream and downstream ecosystem partners with synergistic capabilities, such as domain control hardware and module companies. Together with these partners, we collaborate on system-level planning and go-to-market strategies to drive economies of scale in standardized products. In addition, as more customers and ecosystem partners adopt our solutions and technologies, we are able to collect feedbacks and iterate our solutions more rapidly, hence creating a Matthew effect, forming a virtuous cycle to maintain our product leadership.

Highly Flexible and Scalable Business Model

Our business model is characterized by its flexibility. We allow customers to choose any solution or any combination of components in our whole stack offerings from algorithms to software and development tools and to processing hardware, showcasing our ability to meet diverse and tailored customer demand.

Benefiting from such flexibility, we are able to continually attract new customers to our platform and expand our market share. Our design-wins in 2023 were more than three times of that in 2021, and the installation volume of our solutions increased by fourfold from 2022 to 2023. According to CIC, our market share in ADAS and AD solutions increased by approximately seven percentage points from 2022 to 2023 in terms of ADAS and AD solution installation volume in China.

Moreover, our business model also exhibits high scalability. As our customers ramp up production scale, our business scales in tandem with our customers' increasing production volumes of vehicles equipped with our solutions. For instance, Li Auto significantly increased production of its L series vehicle model, equipped with our solutions.

Furthermore, following initial success with our solutions, our customers tend to adopt more categories of our solutions for additional vehicle models. This is primarily driven by the exceptional value we created for our customers and the considerable costs associated with switching to other suppliers and the platform design approach favored by mainstream OEMs, which incentivizes OEMs to apply the same solutions to all vehicle models with the same platform design. Additionally, we have the opportunity to sell more advanced solutions. For example, BYD has a wide range of demands for the advancing driving automation from its passenger vehicle consumers. We can help meet such requirements with our diverse solution portfolio, highly collaborative and scalable business model. Through our first cooperation with BYD, we gained in-depth understanding of their customized requirements across all stages of development, production and after-sales processes, and delivered highly satisfactory services to BYD. BYD has established a strategic and synergistic partnership with us. Our collaboration with BYD currently covers various driving automation solutions targeted for different scenarios on multiple vehicle platforms. During the Track Record Period, the number of our design-wins with BYD has significantly increased.

In addition, our standard solutions portfolio and toolkits can serve the variety of demand from different OEMs for different vehicle models. This enables us to rapidly scale our production without spending extra development resources and efficiently cater to new customer demand to further grow our business.

Visionary and Experienced Management Team, and Talents with Competitive Mindset

Our founding and executive team consists of visionary and experienced leaders in the industry with a combination of technical expertise, commercial acumen and organizational management skills. Our founders have published hundreds of research papers which have received thousands of citations. They were instrumental in initiating one of China's first autonomous driving project in 2013. They also have unique strategic insights and strong managerial skills to lead our operations to achieve financial success, as demonstrated by our business performance during the Track Record Period.

Benefiting from the wealth of experience brought by our founding and executive team, we are able to establish a proven track record of successful product development and commercialization. Their ability to navigate evolving operating environment and execute strategic initiatives has been pivotal in driving our growth. Furthermore, we can attract many R&D talents to continue pushing the boundaries in product innovation to advance the autonomous driving industry.

Integral to our success is our competitive mindset, characterized by pillars of innovation, meritocracy, transparency, and excellence. This mindset fosters an environment where creativity flourishes, ideas are valued, and high standards are upheld. It enables us to remain agile, innovative, and competitive, ensuring that we stay at the forefront of technological and commercial leadership.

OUR GROWTH STRATEGIES

Continue to Invest in Technology and Expand Our Solutions Portfolio to Capitalize on the Industry Tailwind

According to CIC, the industry will witness significantly growing customer demands for ADAS and AD solutions in terms of both volume and solution complexity. We plan to continue our investments in technology to capture such growth and meet customer needs. We are expanding our solutions portfolio, including developing more advanced AD solutions based on our next generation of hardware. Such hardware embodies an optimized architecture, augmented performance capabilities, higher safety standard and enhanced compatibility with more categories of sensors. We also intend to continue to invest in advanced algorithms and AD software applications that are co-designed and co-optimized with our new generation of hardware to further optimize system level performance. These advanced solutions are designed to achieve automation in comprehensive range of complex road conditions with high level of sophistication, providing drivers and passengers with a safer, more efficient and more comfortable experience.

Win Additional Mass Production Contracts with Existing and New Customers

We plan to deepen collaboration with our existing customers and implement our solutions on additional vehicle models of theirs. By becoming an essential partner for our OEM customers' global platforms, we not only strengthen our current relationships with them but also increase our prospects of winning further mass production contracts. We believe this approach ensures that our solutions become embedded within our OEM partners' products. At the same time, we can grow alongside with our OEM customers, aligning ourselves closely with their expansion plans and reinforcing our role as a trusted partner. We also plan to grow the size of our customer base through new design-wins from new customer, leveraging our current industry-leading position and technology know-how.

Continue to Enrich Our Ecosystem

Building an ecosystem around our open, scalable and efficient platform has been a core part of our strategy. OEMs are increasingly favoring highly open, flexible and compatible platforms such as ours that facilitate them to customize and build products that best suit their design preferences. To that end, we will continue to enhance and broaden our development portfolio, such as OpenExplorer, TogetheROS and AIDI, and services to better support our customers and partners, enabling them to design, develop and mass produce their customized products in a faster and more cost-efficient manner.

Attract Top Talents and Expand Our Team

We intend to continue our efforts in attracting top technology talents from well-known institutions and industry peers worldwide to augment our capabilities in both software development and hardware design. We also intend to enhance our field engineering team in order to improve our customer service capabilities and strengthen our relationships with various ecosystem participants. To further expand our business scale, capture market opportunities and maintain business relationships, we plan to expand and strengthen our sales and marketing team to ensure satisfaction of our existing customers, while exploring the opportunities to obtain additional mass production contracts from more OEMs and tier-one suppliers.

We will continue to allocate significant resources to the development of more advanced solutions to enable higher level autonomous driving. Our R&D personnel constitute 73.1% of our total employee base as of June 30, 2024, underscoring our commitment to innovation.

Continue to Enable Global Partners

We aim to enable global OEM and tier-ones to become more competitive in China and globally. We believe our success with Chinese OEMs is replicable to global OEMs with our highly flexible and scalable model. Many global OEMs, including our partner Volkswagen Group, are enhancing their ADAS and AD capabilities in China and globally. We can facilitate the upgrades of their models and expedite their research and development efforts. Such collaborative approach will strengthen our partnership and brings us industry visibility on a global scale.

We also plan to trailblaze the global markets by building partnerships with global industry leaders. Japan, South Korea and Europe will be our focus markets for our global expansion. After initial market research and exploration, we have made meaningful progress by establishing strategic and commercial partnership with global industry leaders in these markets. For example, we have entered into long-term collaborations and strategic partnerships with leading global tier-one suppliers such as Aptiv, Bosch, Continental, Denso and ZF. We and Aptiv reached a strategic cooperation in developing fully integrated hardware and software solutions tailored for OEMs of passenger vehicles in China. Such solutions were integrated in vehicle models mass produced in 2024. We are collaborating with Bosch on mass production of vehicle models embedded with our next generation processing hardware. We and Continental are co-developing through a joint venture next generation driving and parking integrated domain controller which will support advanced level autonomous driving (Level 2+) with higher-level of automated parking assist functionality. We are collaborating with Denso on mass production of vehicle models embedded with our next generation processing hardware. We and ZF reached a strategic cooperation in developing ZF's high-performance computing platform solution. The first ZF solution designed with our assistance is expected to be available in the market in 2024. While our current long-term collaborations and strategic partnerships with these leading global tier-one suppliers primarily target the Chinese market, we are of the view that such collaborations and partnerships will provide us with valuable insights into the

needs and expectations of global tier-one suppliers and global OEMs. This, in turn, will enhance our understanding of global market trends, industry demand and best practices in foreign regions where these global tier-one suppliers have significant influence, including Japan, South Korea and Europe. Therefore, we believe these partnerships pave the way for our market expansion in global regions and we will continue to explore such partnership opportunities with global industry leaders.

OUR PRODUCTS AND SERVICES

Overview

We offer a comprehensive portfolio of ADAS and AD solutions, namely Horizon Mono, Horizon Pilot, and Horizon SuperDrive, to address different customer needs from mainstream assisted driving to advanced levels of autonomous driving. Built through nine years of development, testing and iteration, our Horizon Mono and Horizon Pilot solutions have been successfully validated, commercialized and deployed on mass scale, and we are working with a handful of OEMs who plan to implement our Horizon SuperDrive solution. We strive to constantly improve our solution offerings for the best experience of our customers and end customers.

We act as a tier-two supplier in the industry supply chain and generate the vast majority of our revenue from the sale of ADAS and AD solutions to OEMs and tier-one automotive suppliers as well as the corresponding licensing and services. Our customers under the product solutions segment are primarily OEMs and tier-one suppliers. We record revenue primarily from sale and delivery of our ADAS and AD solutions ("Solution Delivery Model") and/or providing licensing and related services ("Licensing and Service Model") to our customers.

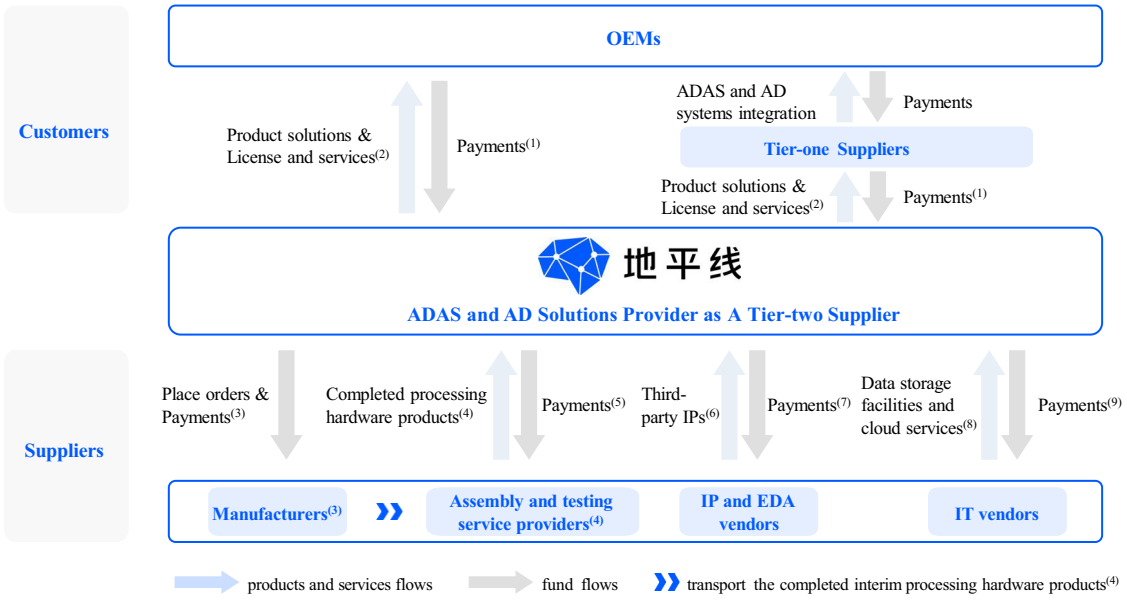
Under Solution Delivery Model, we generate revenue from the sale and delivery of our solutions, which combine our self-developed processing hardware with proprietary algorithms and software, to OEMs and tier-one suppliers. The price of each product solution depends on the complexity and amount of algorithm and software involved, as well as the type and quantity of processing hardware integrated. Within product solutions, we allow our customers to choose any solution or any combination of components in our whole stack offerings from algorithms, software, processing hardware to development toolkit, with multiple adaptable components usually provided as a package, and customers are charged the package price instead of on a standalone basis.

With respect to Licensing and Service model, we generate revenue from licensing algorithms and software and delivering relevant codes and design manual to customers for licensing fee, enabling them to develop their own ADAS and AD applications. We typically charge licensing fees in a pre-determined fixed amount based on the complexity, advancement and variety of algorithms, software and development toolkits involved. In less common cases, we charge recurring royalties referenced to the quantity of mass-produced vehicles based on similar factors. We maintain a large pool of codes of algorithms and software of our ADAS and AD solutions that we can license under an open platform or white box approach. Our customers

have the flexibility to select algorithm and/or software of their needs and integrate such intellectual properties into their products to achieve desired ADAS and AD functions. In addition to licensing, we also provide design and technical services to customers for a fee, helping our customers achieve customized ADAS and AD functions. Our service fees are generally set with reference to expertise and number of engineers involved, duration, complexity of work and functionalities developed. See "— Licensing and Services" for further details and "Industry Overview — Overview of the ADAS and AD Solutions Market — Open Platform and Close Platform" for features of the open platform approach.

We build our solutions with the philosophy of software and hardware co-optimization. Such key philosophy underpins our product design and technology, differentiating our solutions in terms of performance, efficiency and openness. Our software serves as the foundation of our solutions, of which algorithms, BPU, OpenExplorer, TogetheROS and AIDI each plays an important role and works seamlessly to empower our solutions. We adopt a highly flexible and scalable business model. We allow our customers to choose any solution or any combination of components in our whole stack offerings from algorithms to application software and development tools and to processing hardware. Such business model has also helped us continuously acquire new customers and expand market share.

We frequently and consistently interact with OEMs regarding their solution needs and generally receive visibility, typically a few years in advance, regarding the functions of solutions as well as budget and number of vehicle models expected to incorporate our solutions. We price our solutions based on specific customer needs and solution value. When we provide solutions to various customers, including both OEMs and tier-one suppliers, we remain flexible in combination of offerings. Our customers often prefer to work with open-platform and to choose flexible combinations like those we offer. More specifically, OEMs often seek to develop new products in tandem with solution providers, with an intention to build highly differentiated and customized products based on our flexible offerings, while minimizing the risks of unsuccessful deployment and commercialization. As of the Latest Practicable Date, all of the top 10 Chinese OEMs have selected our solutions for mass production into their passenger vehicle models. The following chart sets forth our business collaboration flow of ADAS and AD solutions with our customers, suppliers and ecosystem partners.



Notes:

(1) Our customers procure our product solutions, the price of which depends on the type of algorithm and software involved, as well as the type and number of processing hardware integrated, or pay service fees, based on type of services and the amount of personnel or resources involved.

(2) We sell and deliver our product solutions, which combine our self-developed processing hardware with proprietary algorithm and software, or license our algorithm, software and development toolkits to our customers, enabling them to develop their own applications catering to specific needs. Our customers, including tier-one suppliers and OEMs, may choose to purchase an entire solution from us, or licensing in our software or algorithm to develop products of their own. Generally, OEMs purchase our solutions for deployment on their passenger vehicles, and tier-one suppliers purchase our solutions to integrate with their products for further deliveries to OEMs.

(3) We engage Supplier A, an industry leading semiconductor manufacturer, as the manufacturer of our processing hardware for our product solutions. We place actual orders according to our business needs. We make prepayments to Supplier A prior to shipment.

(4) Upon completion of the manufacturing process, Supplier A then typically transports the completed interim products to Supplier C, our assembly and testing provider. Supplier C completes the manufacturing of processing hardware as a typical outsourced assembly and testing vendor and delivers the completed products to us.

(5) Supplier C issues bills based on their assembly and testing progress, and we make payment accordingly.

(6) We in-license certain third-party IPs such as interface, hardware functioning block and electronic design automation tools from IP and EDA vendors.

(7) Depending on the particular in-license, we either pay pre-determined license fees for in-licensed IP and EDA or services fees along with in-licensing arrangement, or royalties on a price-per-unit basis for every processing hardware.

(8) We procure data storage facilities and cloud services from notable IT vendors in the industry. Data storage facility providers supply us secure and stable data storage environment. Cloud service suppliers provide pre-built functionalities and services that we can integrate into our development needs.

(9) Depending on the services we used, we pay IT service fee to IT vendors.

Automotive Solutions

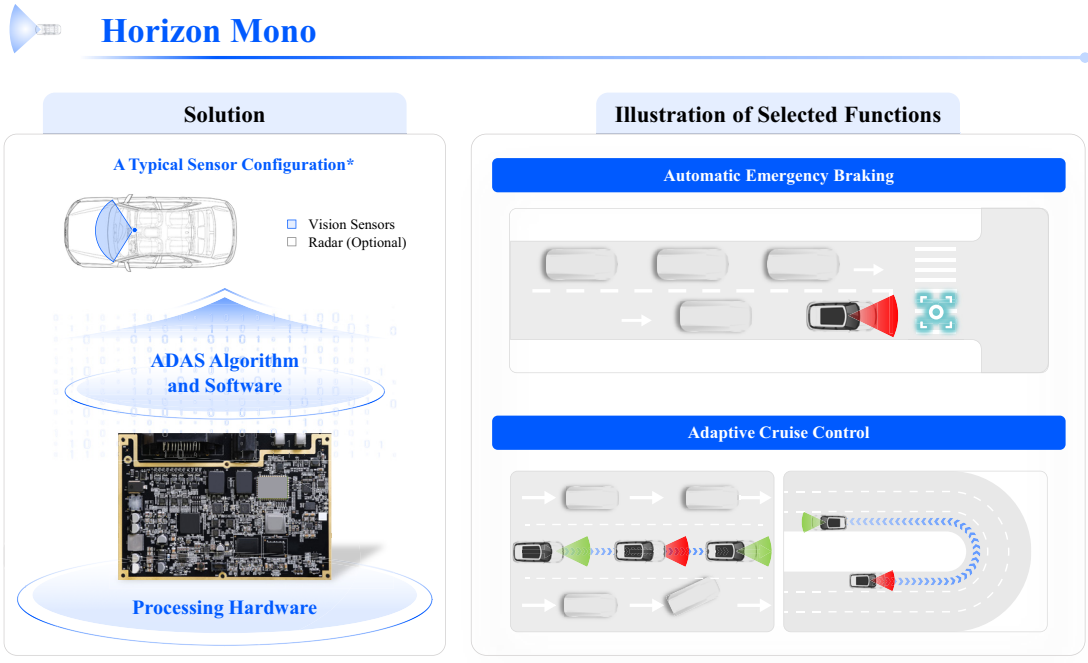
We offer ADAS and AD solutions that perceive and process surrounding inputs, and deliver strong processing capabilities and efficiency. Our ADAS and AD solutions combine a series of software and hardware to improve driving experience, keeping drivers and passengers safe and making trips more comfortable and more enjoyable.

Horizon Mono

Horizon Mono is our active safety ADAS solution designed to improve daily driving safety and comfort. Globally, we were the first to launch an 8-megapixel monocular vision-only ADAS solution, and is still the only provider of this offering among Chinese providers, according to CIC. Horizon Mono can identify various objects, such as pedestrians, vehicles, roads and traffic signs. It provides active safety functions such as automatic emergency braking (AEB) and intelligent high beam (IHB) to improve passenger and road-user safety, as well as comfort functions such as adaptive cruise control (ACC), lane centering control (LCC), intelligent cruise assist (ICA) and traffic jam assist (TJA) to improve driving experience. According to CIC, we are the largest Chinese ADAS solution provider with a market share of 21.3% in 2023, in terms of ADAS installation volume to Chinese OEMs in China.

Horizon Mono is supported by our proprietary software portfolio and processing hardware. The number and choice of processing hardware may differ based on specific customer needs. Horizon Mono can work with third-party sensors to provide front view perception and support the qualifications of E-NCAP (2023) and C-NCAP (2024) five star ratings, representing industry-leading safety capabilities as of December 31, 2023, according to CIC. In addition, Horizon Mono can reach a successful rate of 90% for common traffic sign recognition in China, 95% for speed limit traffic sign in the EU and 98% for speed limit traffic sign in pan-European countries, Southeast Asia and South America. Moreover, up to the speed of 130 kph, Horizon Mono can support ACC for comfortable speed adjustments in response to real-time traffic conditions. Horizon Mono also supports detection of unconventional vehicles such as three-wheeled electric vehicles, elderly mobility scooters and delivery vehicles that are prone to tipping over or rolling over. Horizon Mono can also integrate 360-degree fisheye perception for APA. Our Journey 2 or Journey 3 processing hardwares are currently embedded in Horizon Mono.

The following table sets forth the structure and selected functions for Horizon Mono:



* Solution may be configured to customer's choice of third-party sensor sets

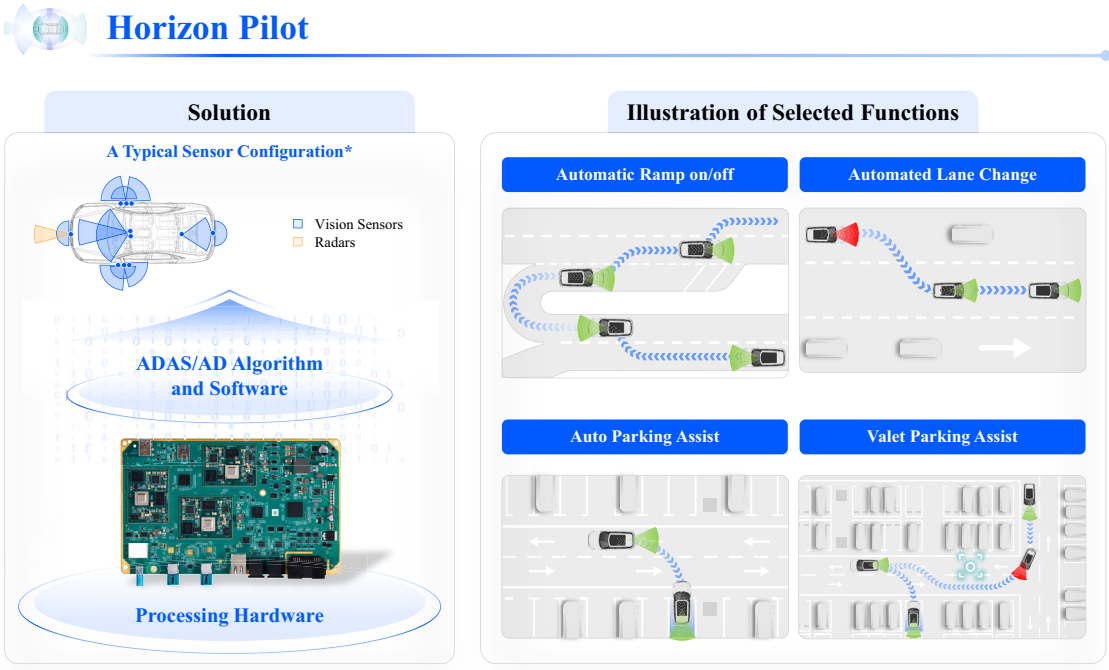
The first series production of Horizon Mono was launched in 2020 and various upgrades have been made since then. Built on our proprietary processing hardware and third-party sensors, Horizon Mono is capable of providing mainstream ADAS functions. With these functions, Horizon Mono can reduce the stress and fatigue level of drivers, improve their awareness of the surroundings and promote safer driving practice, as well as increase driving confidence. In addition, with our deep local knowledge and insight, Horizon Mono is designed to better suit the unique road scenarios in China. Moreover, our Horizon Mono solution can evolve with the upgrades of our processing hardware. It may be configured to different sensor portfolios to meet the diverse needs of our customers. As of December 31, 2023, Horizon Mono has been the choice of more than 200 OEM car models, including many of the industry's best-selling models.

Horizon Pilot

Horizon Pilot is our highway navigate on autopilot (NOA) solution, categorized as an AD solution, that provides safe and efficient driving experience. In addition to enhanced active safety features, Horizon Pilot performs more advanced tasks such as automatic ramp on/off, autonomous merge in and exit during traffic congestion, automated lane change, highway auto-pilot and more. These functions improve driving and riding experience for end users, especially in long-distance commute. At the same time, Horizon Pilot provides advanced parking functions such as auto parking assist (APA) and valet parking assist (VPA).

Horizon Pilot solution is designed to empower vehicles with functions which support qualifications of Euro-NCAP (2023) and C-NCAP (2024) five star standard. In addition, Horizon Pilot can reach more than 200 km safety MPI in the average traffic flow and realize high performance MPI in complex traffic conditions. MPI, or miles per intervention, is a performance metric used to measure the distance a vehicle can travel autonomously before requiring human intervention or driver takeover. According to CIC, such MPIs represent industry-leading NOA capability. Moreover, Horizon Pilot is capable of covering highways nationwide in China.

The following table sets forth the architecture and representative features of Horizon Pilot:



* Solution may be configured to customer's choice of third-party sensor sets

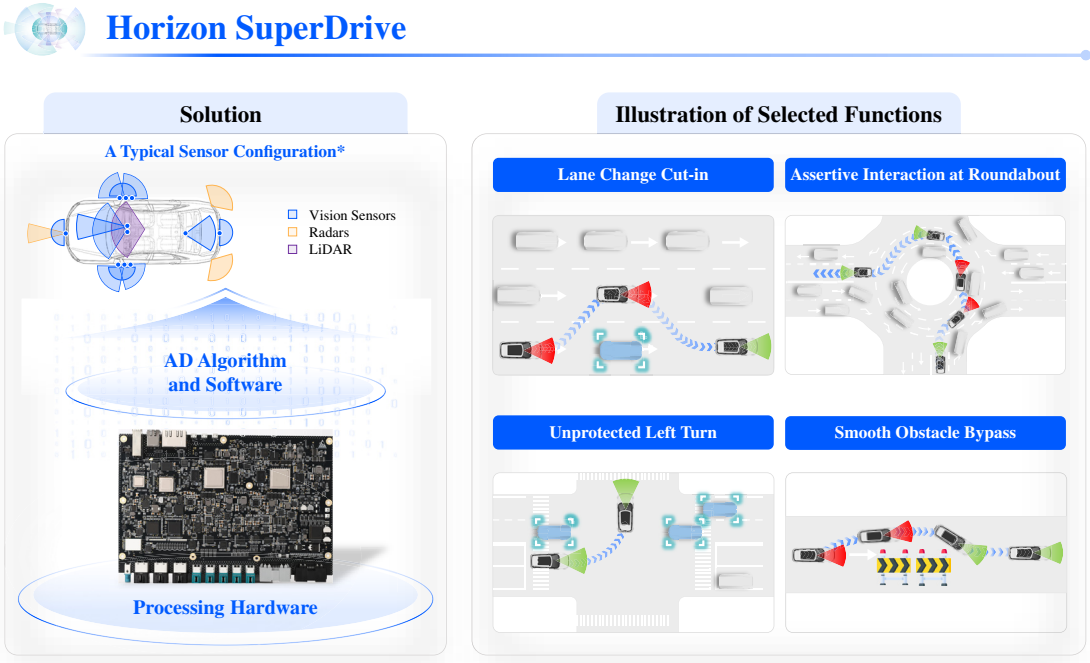
As of December 31, 2023, Horizon Pilot has been the choice of more than 25 car models. For example, the Li Auto flagship six-seat family SUV Li L9 Pro is equipped with our Horizon Pilot solution. By utilizing our processing hardware and third-party sensors, this solution is capable of achieving a vision-centric 360-degree perception capability, allowing for more precise and timely detection of the surrounding traffic environment and participants. With Horizon Pilot, the Li Auto Li L9 Pro can deliver smoother performance in advanced driver assistance functions and offers a wide range of features such as high-speed point-to-point navigation assistance, automatic lane change, automatic ramp on/off, intelligent cruise control, and auto parking assist. Horizon Pilot helps the Li Auto Li L9, Li L8 and Li L7 series to establish their positions as leading smart vehicles in the current Chinese market in terms of sales volume.

Horizon SuperDrive

Horizon SuperDrive is our autonomous driving (AD) solution expected to be empowered by our most advanced processing hardware. Horizon SuperDrive theoretically supports advanced-level autonomous driving with capabilities of up to Level 4 functions. It is designed to be capable of perceiving surrounding environment and making decisions without driver input, and achieve smooth and human-like autonomous driving functions in all urban, highway and parking scenarios, which supports higher level of driving automation subject to local regulations. It is expected to tackle a comprehensive range of complex road conditions with high level of sophistication, providing drivers and passengers with a safer, more efficient and more comfortable driving and riding experience. We believe Horizon SuperDrive stands at the forefront of driving innovation, skillfully handling advanced automation tasks in compliance with regulatory standards. It adeptly performs specific driving functions autonomously, such as easing through traffic jams, and offers a driving approach that is both confident and engaging. The technology embedded in Horizon SuperDrive is designed to navigate intricate urban landscapes and adverse conditions like heavy rain in metropolitan areas during rush hours without requiring driver intervention for extended periods. This ensures a refined, efficient, and secure driving experience for all occupants.

As of the Latest Practicable Date, we are working with a handful of OEMs who plan to implement our Horizon SuperDrive solution. We aim to keep expanding the operating domain of Horizon SuperDrive and improving its driving performance, featured with more smooth and effortless driving style and more human-like and assertive interactions with road participants. For instance, in congestion scenarios, vehicles empowered by Horizon SuperDrive can seamlessly maneuver between lanes and cut in efficiently to overtake other vehicles based on precise perception and prediction of surrounding vehicles' behavior. At a busy intersection, Horizon SuperDrive can enable interactions with other road participants in an assertive manner to take unprotected left and right turns safely. Other features include smooth execution of obstacle avoidance, gentle and human-like braking, dynamic speed control, swift reactions to surrounding environment, enhanced APA and VPA functionalities, and more.

The following table sets forth the key features and selected functions for Horizon SuperDrive:



* Solution may be configured to customer's choice of third-party sensor sets

Horizon SuperDrive AD system uses a BEV transformer-based end-to-end perception architecture for more accurate physical world representation, especially improving response to urban challenges like occlusions-awareness. It combines dynamic, static and occupancy networks into one, enabling a comprehensive perception system that enhances the vehicle's understanding of its environment and reducing processing loads and boosting efficiency. Its BEV framework supports adaptive multi-scale perception and optimizes resource distribution across different ranges, improving near and distant object perception and meeting diverse specifications. Instead of using rule-based planning methodology, Horizon SuperDrive is designed to imitate human driving behavior, which ensures interpretability and usability. With enhanced capabilities in interactive prediction and planning, Horizon SuperDrive empowers the vehicles with human-like decision making to deftly tackle complex traffic situations.

Other Automotive Solutions

In addition to our ADAS and AD solutions, we also provide an automotive in-cabin solution for the passenger vehicle to better understand and interact with drivers and passengers based on inputs, making journeys more comfortable and entertaining. Our in-cabin solution can perceive multi-modal inputs, such as verbal commands. Based on these inputs, it interacts with humans to satisfy users' needs of safety, comfort, and entertainment. In terms of safety, our in-cabin solution can alert drivers to take rests when necessary. With respect to comfort functions, our in-cabin solution can help users to control windows, lights and air-conditioner, making vehicle control easier and journeys more enjoyable.

Revenue Contribution of Automotive Solutions

During the Track Record Period, we generated revenue from automotive solutions of RMB410.2 million, RMB801.1 million, RMB1,470.4 million, RMB345.0 million and RMB913.1 million, accounting for 87.9%, 88.5%, 94.8%, 92.9% and 97.7% of our total revenue in 2021, 2022 and 2023 and for the six months ended June 30, 2023 and 2024, respectively.

Our revenue from automotive solutions is comprised of revenue from product solutions and license and services. During the Track Record Period, revenue generated from product solutions amounted to RMB208.1 million, RMB319.3 million, RMB506.4 million, RMB192.3 million and RMB222.3 million in 2021, 2022 and 2023 and for the six months ended June 30, 2023 and 2024, respectively, accounting for 44.6%, 35.3%, 32.7%, 51.8% and 23.8% of our total revenue for the same periods, respectively. During the Track Record Period, revenue generated from license and services amounted to RMB202.1 million, RMB481.8 million, RMB964.0 million, RMB152.7 million and RMB690.8 million in 2021, 2022 and 2023 and for the six months ended June 30, 2023 and 2024, respectively, accounting for 43.3%, 53.2%, 62.1%, 41.1% and 73.9% of our total revenue for the same periods, respectively.

The following table sets forth certain operating data breakdown by type of automotive product solutions derived from our operating systems. As our solution offerings evolved during the Track Record Period, we categorized all ADAS-related product solutions revenue and delivery volume of processing hardware to Horizon Mono, all AD-related product solutions revenue and delivery volume of processing hardware to Horizon Pilot and the remaining into "others", based on sales contracts and/or internal sales records from our operating systems, instead of customers' final installation of our solutions. We launched Horizon SuperDrive in April 2024, which did not generate any revenue during the Track Record Period and up to the Latest Practicable Date. Typically, our customers will inform us regarding the desired end-application, namely, ADAS or AD-related products, when entering into agreements with us. However, there remains the possibility that some customers may make adjustments in accordance with their actual needs, and such customers are not obligated to inform us of any application change. Our customers have the ultimate decision on when and how to install our solutions into their passenger vehicles and/or products. For example, theoretically an OEM can combine multiple processing hardware embedded in the Horizon Mono solutions and integrate with AD algorithms and software to realize the functions of Horizon Pilot. Under such circumstance, we record multiple sets of Horizon Mono sales rather than one set of Horizon Pilot sale, unless the customer informs us the change. Moreover, tier-one suppliers may further process the ordered solutions into their own products tailored to OEMs' specific needs, the ultimate application of which can be different from their initial orders.

	For the Year Ended December 31,									For the Six Months Ended June 30,					
	2021			2022			2023			2023			2024		
	Horizon Mono	Horizon Pilot	Others[1]	Horizon Mono	Horizon Pilot	Others[1]	Horizon Mono	Horizon Pilot	Others[1]	Horizon Mono	Horizon Pilot	Others[1]	Horizon Mono	Horizon Pilot	Others[1]
Automotive product solutions revenue[2] (RMB in thousands)	104,514	1,214	102,355	181,857	46,061	91,394	263,318	182,659	60,409	91,358	81,270	19,670	108,198	100,015	14,051
Percentages of automotive product solutions revenue	50.2%	0.6%	49.2%	57.0%	14.4%	28.6%	52.0%	36.1%	11.9%	47.5%	42.3%	10.2%	48.7%	45.0%	6.3%
Percentages of total revenue	22.4%	0.3%	21.9%	20.1%	5.1%	10.1%	17.0%	11.8%	3.9%	24.6%	21.9%	5.3%	11.6%	10.7%	1.5%
Delivery volume of processing hardware (thousand units)	566	3	432	1,081	98	322	1,673	274	176	602	108	41	763	157	43
Average selling price[3]	185	355	N/A[4]	168	468	N/A[4]	157	666	N/A[4]	152	754	N/A[4]	142	636	N/A[4]

Notes:

(1) "Others" includes product solutions unrelated to provision of ADAS and/or AD solutions, including, among others, automotive in-cabin solutions, sales of raw processing hardware without algorithms and software specifically tailored for the application of our ADAS and AD solutions and other miscellaneous items.

(2) Revenue generated from automotive product solutions during the Track Record Period is derived from our operating systems and presented as operating data rather than financial data, which is not audited by our Reporting Accountant.

(3) Average selling price of Horizon Mono and Horizon Pilot for the period equals the revenue by type of automotive product solutions divided by the delivery volume of processing hardware of the corresponding automotive product solutions during the respective period.

(4) Labeled as "N/A" as "others" encompasses various miscellaneous items, none of which are our core business focuses, rendering the calculated average selling price fluctuates significantly from period to period and not meaningful in reflecting the nature of "others."

Our revenue of automotive product solutions derived from Horizon Pilot amounted to RMB1.2 million, RMB46.1 million, RMB182.7 million, RMB81.3 million and RMB100.0 million in 2021, 2022 and 2023 and for the six months ended June 30, 2023 and 2024, respectively. This increase is attributable to increased demand for AD solutions. See "Financial Information — Discussion of Results of Operations" for details. Additionally, the average selling price for Horizon Pilot, which equals the revenue by Horizon Pilot divided by the delivery volume of processing hardware of Horizon Pilot during the respective period, increased from RMB355 per unit of processing hardware in 2021, to RMB468 per unit of processing hardware in 2022, and further to RMB666 per unit of processing hardware in 2023 as we continue to refine our AD solutions and introduce advanced features with better system performance and higher efficiency. The average selling price for Horizon Pilot decreased from RMB754 per unit of processing hardware for the six months ended June 30, 2023 to RMB636 per unit of processing hardware for the six months ended June 30, 2024 as we strategically lowered the pricing of Horizon Pilot during the first half of 2024 to gain additional market share in the AD solutions market.

Our revenue of automotive product solutions derived from Horizon Mono amounted to RMB104.5 million, RMB181.9 million, RMB263.3 million, RMB91.4 million and RMB108.2 million in 2021, 2022 and 2023 and for the six months ended June 30, 2023 and 2024, respectively. Such growth is attributable to increased demand for ADAS solutions. See "Financial Information — Discussion of Results of Operations" for details. The average selling price for Horizon Mono, which equals the revenue by Horizon Mono divided by the delivery volume of processing hardware of Horizon Mono during the respective period, decreased from RMB185 per unit of processing hardware in 2021, to RMB168 per unit of processing hardware in 2022, and further to RMB157 per unit of processing hardware in 2023 and from RMB152 per unit of processing hardware for the six months ended June 30, 2023 to RMB142 per unit of processing hardware for the six months ended June 30, 2024, as we strategically lowered the pricing for our Horizon Mono to gain additional market share in the ADAS solutions market. Our market share among ADAS solutions providers to Chinese OEMs in China, by installation volume, increased from 21.3% in 2023 to 35.9% in the first half of 2024, according to CIC.

The remaining revenues, which are categorized as "others", refer to revenue from automotive product solutions that are not core to our businesses, which is evidenced by their decreasing percentage of total revenue of 21.9%, 10.1%, 3.9%, 5.3% and 1.5% in 2021, 2022 and 2023 and for the six months ended June 30, 2023 and 2024, respectively. The relatively large revenue contribution from others in 2021 was primarily attributable to revenue generated from automotive in-cabin solutions. Such automotive in-cabin solutions address various human-machine-interaction scenarios by capturing in-cabin sensory information to better understand and interact with drivers and passengers. As we increasingly focus on ADAS and AD solutions, the revenue contribution from automotive in-cabin solutions decreased accordingly. For seasonality factors affecting our results of operations for product solutions, see "Financial Information — Seasonality."

Non-Automotive Solutions

We also offer non-automotive solutions for our customers, such as OEMs of home appliances and distributors. Our non-automotive solutions enable device manufacturers to design and manufacture devices and appliances, such as lawn mowers, fitness mirrors, and air purifiers, emphasizing on scenarios and applications in home services and with enhanced levels of intelligence, leading to better user experience. Our non-automotive solutions enjoy significant synergies with our automotive solutions, and are underpinned by our technological capabilities in software, algorithms and hardware. Nonetheless, despite sharing similar components in processing hardware such as BPU, the algorithms and software underpinning our non-automotive solutions are different from that of our automotive solutions, which are more consumer-oriented with a focus on performance and application in home service and other recreation scenarios, without the fulfillment of automotive-grade requirements. Our non-automotive solutions include perception algorithms that enable devices to recognize and interact with its surrounding environment and plan routes, as well as processing hardware that provides efficient and effective support. During the Track Record Period, we generated revenue

from non-automotive solutions of RMB56.6 million, RMB104.5 million, RMB81.2 million, RMB26.5 million and RMB21.5 million accounting for 12.1%, 11.5%, 5.2%, 7.1% and 2.3% of our total revenue in 2021, 2022 and 2023 and for the six months ended June 30, 2023 and 2024, respectively.

Licensing and Services

In addition to sale and delivery of our automotive product solutions, we license algorithms and software to customers and deliver relevant codes and design manual for licensing fee and royalties, and provide design and technical services to customers for service fee. The following set forth salient terms of typical licensing and service agreements with our customers:

- ***Fee basis***: we charge our customer licensing and service fees, as applicable, based on (i) for licensing, the complexity, advancement and variety of algorithms, software and development toolkits involved and in some projects, we charge royalties referenced to the quantity of mass-produced vehicles; and (ii) for service, expertise and number of engineers involved, duration, complexity of work and functionalities developed. License fees are pre-determined fixed amount payments for the right to use our intellectual properties, while royalties are recurring payments based on the ongoing use of our intellectual properties.

- ***Duration***: for customers licensing in our technologies we generally set a ten-year period with renewal arrangements; and for customers seeking our technical development services, we generally set a duration ranging from one to three years.

- ***Scope of services***: with respect to services, we provide customized technical assistance and training to our customers, such as providing technical documentation, deploying technical personnel and participating in technical consultation meetings, helping them develop ADAS and AD functions of their needs.

- ***Intellectual property clauses***: for licensing, we license our algorithms and software on a non-exclusive basis and keep the intellectual property rights. By delivering our algorithm and software codes alongside the design manual, we enable them to utilize our technologies. We take a open platform approach, and allow the licensee to make improvements to the licensed technology through research and development, provided that it does not infringe upon our intellectual rights; for service, our technical services to the customers based on the existing background intellectual property rights will not be regarded as a transfer of such intellectual property rights and the customers shall be only entitled to the non-exclusive right to utilize such intellectual property rights within the scope of the contract. See "Industry Overview — Overview of the ADAS and AD Solutions Market — Open Platform and Close Platform" for features of the open platform approach.

- ***Payment terms***: we collect milestone payments from our customers, and key milestones typically include signing of agreement, delivery of intellectual property or technical information, and start of production (if applicable).

- ***Termination***: agreements may be terminated upon one party's material breach of obligations, upon fulfillment of parties' obligations, or upon mutual consent.

After signing a licensing agreement, we typically engage in a process of organizing and processing various codes of algorithms and software based on the specific needs of the customer. This involves the packaging of codes, referring to the process of organizing and bundling code into a structured format for distribution, reuse, or deployment, and we tailor the package to exclude irrelevant codes. After packaging the specified codes, we deliver it to customers through predetermined secured and encrypted channels. Upon receiving the codes, customers conduct their own acceptance procedures, ensuring completeness, consistency and effectiveness of packaging in accordance with their needs. Subsequently, customers typically provide feedback, confirming receipt and acceptance of the relevant codes. This feedback serves as the basis for addressing the fulfillment of performance obligations and confirming revenue recognition at the corresponding points in time. Our customers will then implement the package of codes received into their own solutions and/or vehicle models throughout the term of the licensing agreement, which commonly spans over a period of up to ten years. We generally include an automatic renewal clause under the same fee rate in our licensing agreement, which allows extension of term for one year per extension, subject to termination procedure upon mutual consent.

We continuously develop, upgrade and introduce new algorithms and software to the market to stay at the forefront of the industry. Therefore, although the right to use our licenses may last for years and the licensed codes are usually not restricted to any particular car models under our open platform approach, our customers may license additional and more advanced intellectual properties from us. Technology development and iteration in our industry are rapid, and our customers may need to regularly procure new licenses for algorithms and software to stay competitive in the dynamic market. This provides us with opportunities to license our intellectual property and offer technology services to them incrementally. For instance, one of our top customers initially requested licenses for ADAS solutions' algorithms and software, and later procured more sophisticated AD solutions' algorithms and software from us to elevate its autonomous driving functionalities. The growth and sustainability of our licensing revenue stream depends on our ability to (i) introduce our algorithms, software and development toolkits to new customers, (ii) cross sell additional intellectual properties to our existing customers and (iii) continuously develop and introduce new technology to existing and new customers. We will continue to leverage our existing intellectual property library and develop new IPs to gain new license contracts with both existing and new customers.

The following table sets forth our largest licensing project and largest service project in terms of revenue contribution in each year/period during the Track Record Period.

Customer	Background	Contract Value (inclusive of VAT)	Contract Duration	Selected Functions Realized/Services Provided	Payment Terms	Delivery Time	Revenue	Gross Profit
For the year ended December 31, 2021								
Customer 21L1	a Chinese OEM headquartered in Chongqing	RMB61.3 million	10 years	ACC, LCC, ICA, TJA, among other functions based on front view perceptions	By milestone, including upfront payment, delivery payment and balance payment	2021 and 2022	RMB52.0 million in 2021, RMB5.8 million in 2022	RMB52.0 million in 2021, RMB5.3 million in 2022
Customer 21S1	a Chinese OEM headquartered in Shanghai	RMB29.7 million	Long term (without specific termination date)	Assist the customer in its development and adoption of perception solutions	By milestone, including upfront payment, payment of delivery and SOP payment	2021, 2022 and 2023	RMB22.3 million in 2021, RMB1.8 million in 2022 and RMB3.9 million in 2023	RMB20.6 million in 2021, RMB1.7 million in 2022 and RMB3.9 million in 2023
For the year ended December 31, 2022								
Customer 22L1	a Chinese OEM headquartered in Shanghai	RMB50 million	Long term (without specific termination date)	Front view, side view and surround view perceptions algorithms as well as ADAS and NOA related algorithms and software	By milestone, including upfront payment, payment of delivery and SOP payment	2022	RMB47.2 million in 2022	RMB46.4 million in 2022
Customer 22S1	a Chinese tier-one supplier headquartered in Beijing	RMB79.5 million	Until all rights and obligations have been performed	Assist the customer in developing ADAS functions	Upon completion of acceptance procedures	2022	RMB75.0 million in 2022	RMB68.3 million in 2022
For the year ended December 31, 2023								
CARIZON[1]	see "Our Partnership with Volkswagen Group – CARIZON – Our Joint Venture with Volkswagen Group"	RMB1,017.0 million	Long term (without specific termination date)	Enhanced highway NOA and urban NOA	By milestone, including payment of delivery, balance payment and upon completion of acceptance procedures	2023 and 2024	RMB271.9 million in 2023 and RMB327.2 million for the six months ended June 30, 2024	RMB271.7 million in 2023 and RMB327.0 million for the six months ended June 30, 2024

Customer	Background	Contract Value (inclusive of VAT)	Contract Duration	Selected Functions Realized/Services Provided	Payment Terms	Delivery Time	Revenue	Gross Profit
CARIZON[(1)]	see "Our Partnership with Volkswagen Group – CARIZON – Our Joint Venture with Volkswagen Group"	RMB184.4 million	Until all rights and obligations have been performed	Assist the customer in developing localized ADAS solutions tailored for the China market	Upon completion of acceptance procedures	2023	RMB174.0 million in 2023	RMB120.2 million in 2023
For the six months ended June 30, 2024								
CARIZON[(1)]	see "Our Partnership with Volkswagen Group – CARIZON – Our Joint Venture with Volkswagen Group"	RMB1,017.0 million	Long term (without specific termination date)	Enhanced highway NOA and urban NOA	By milestone, including payment of delivery, balance payment and upon completion of acceptance procedures	2023 and 2024	RMB271.9 million in 2023 and RMB327.2 million for the six months ended June 30, 2024	RMB271.7 million in 2023 and RMB327.0 million for the six months ended June 30, 2024
CARIAD (China) Co., Ltd.	an affiliate of Volkswagen Group and CARIAD Estonia AS, which is one of our Pre-IPO investors, headquartered in Beijing	RMB28.58 million	Long term (without specific termination date)	Assist the customer in technical evaluation of NOA solution tailored for China market	Upon the completion and full delivery of services	2024	RMB22.9 million for the six months ended June 30, 2024	RMB17.2 million for the six months ended June 30, 2024

Note:

(1) During the Track Record Period, in addition to the projects as disclosed, we also entered into one other project with CARIZON. Revenue recognized from such project amounted to RMB181.4 million and RMB19.9 million in 2023 and for the six months ended June 30, 2024, respectively. Gross profit recognized from such project amounted to RMB181.4 million and RMB19.9 million in 2023 and for the six months ended June 30, 2024, respectively.

See "Financial Information — Material Accounting Policy Information and Estimates — Revenue Recognition — Automotive Solutions — License and Services" for details regarding revenue recognition of our license and services.

OUR TECHNOLOGIES

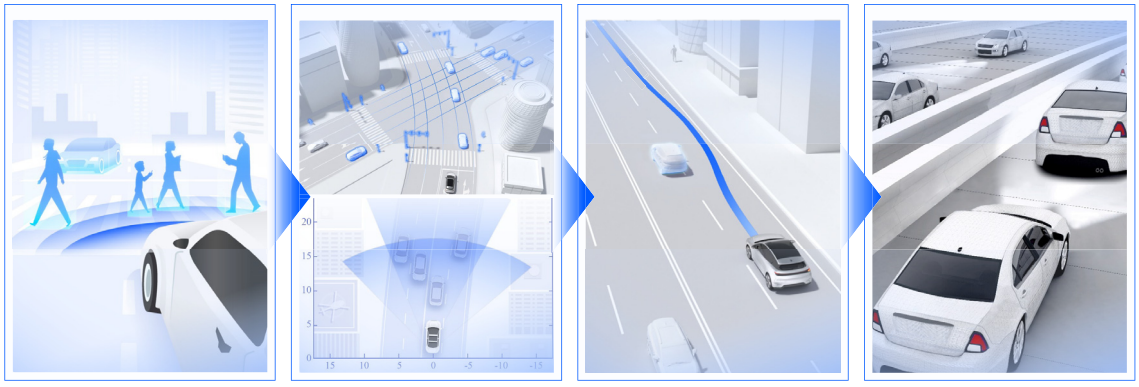
Software-Hardware Co-optimization Approach

We specialize in a software-hardware co-optimization approach in our solution design and development. With our strong capabilities in both software and hardware, we are able to design hardware that better meets the evolving demands of software and algorithms in the automotive industry. Simultaneously, our advanced algorithms and sophisticated software can fully utilize the potential of our processing hardware to achieve optimal system-level performance. Leveraging such co-optimization, we are able to provide our customers with products and solutions at optimal efficiency, high performance and minimal system latency.

Our software-hardware co-optimization approach differentiates us from our competitors. We possess a unique combination of technical capabilities: we not only have top-notch software and algorithm capabilities, including an ADAS and AD algorithm framework, algorithm trend analysis, and a reservoir of effective algorithms, but also possess the ability to design architecture and optimize it for processing hardware. Additionally, we have automotive engineering capabilities and deep industry experience in mass production. This enables us to resolve the challenges and incorporate the requirements of ADAS and AD solutions into mass production, providing tailored services to our customers, helping them achieve optimized product performance and enhance their competitiveness. All of our technology pillars set forth below are self-developed.

Algorithm

Algorithms play a pivotal role in software-hardware co-optimization approach. Our commitment to developing industry-leading products is underpinned by the robust support of our software suite, with a particular focus on algorithms. Guided by our insight into the evolving trends of the industry, we dedicate significant investment in the development of algorithms to enhance our solutions and benefit our customers. Additionally, our algorithms can also be directly monetized as our flexible business model allows customers to procure algorithms as independent modules or in conjunction with other components in our technology stack. The following diagram sets forth modules of our end-to-end autonomous driving framework:



Our full stack of algorithm capabilities are sufficient to cover requirements from various levels of ADAS and AD development, including cutting-edge processing algorithms such as perception, environment modeling, planning and control, user function of driving application. The perception algorithm stack supports accurate detection and recognition of hundreds of different types of traffic elements, road users and various obstacles across different countries and regions. The environment modeling combines position, speed, shape and other information of various objects, road elements and obstacles in the environment, as well as the relationship between them. Through environment modeling, the autonomous driving system can understand the situation around the vehicle in real time, and the planning and control algorithm stack is designed to support a multitude of functions in diverse scenarios, including highways, urban areas, and parking lots, demonstrating the ability to manage intricate traffic dynamics and challenging road conditions effectively. Various user functions of the driving application are built based on the standard ability, such as ACC, LKA, APA, NOA, AEB and more.

The prevailing architectures for autonomous driving algorithms utilize BEV Transformer, and end-to-end perception to prediction. While these techniques offer superior accuracy, they often struggle to meet the desired latency on the embedded computing platforms. To address this challenge, we have curated a team of algorithm specialists who have a deep understanding of both algorithms and processing architectures. This blend of cross-disciplinary expertise empowers them to devise model structures that not only align perfectly with our hardware setup but also facilitate the swift deployment of these highly accurate algorithms.

Our expertise in algorithms has also received recognitions and awards from reputable journals and industry competitions. With our long-term insight and deep understanding of ADAS and AD technology development, we believe our algorithms are well-positioned to help us stay ahead of the curve and to design holistic automotive ADAS and AD solutions.

BPU

BPU, or Brain Processing Unit, is our proprietary processing structure tailored for automotive applications, including ADAS and AD functions. We developed BPU with our deep understanding of software development, algorithmic trends, and processing architecture to deliver outstanding results in terms of energy efficiency, performance and cost. With a focus on software-hardware co-design and co-optimization, our BPU combines performance efficiency, programming flexibility and ease of use. Our BPU also features versatile and customizable base elements, enabling customers to keep pace with the algorithmic innovations. We are capable of commercializing our BPU as an independent module, including through IP licensing.

We developed BPU to address the constraints by traditional processing structure, as the performance level of advanced and sophisticated algorithms is often limited by processing capacity and power efficiency of the processing hardware that run the algorithms. Such constraint is exacerbated in the domain of ADAS and AD technologies, as smart vehicles require continuous, accurate, and real-time situational awareness by processing a massive amount of multi-modal inputs. ADAS and AD functions of smart vehicles also require simultaneous processing of different types of information, such as object extraction, detection and segmentation, among others. These constraints and requirements call for a high performance processing platform with sufficiently strong processing capabilities, high power efficiency, cost efficiency and low latency. To address such needs, BPU was designed and developed specifically for the improvement of algorithm performance. BPU co-optimizes and exploits the synergy of software (such as the compiler) and hardware (such as the architecture of processing structure), with the goal to maximize performance and minimize latency.

Technology Highlights. In particular, BPU has enabled us to achieve the following technological breakthroughs:

- BPU enables processing hardware to deliver high performance at low latency, which enables vehicles to accurately perceive, plan, and make decisions in real-time, with the ultimate goal of improving the overall vehicle safety and riding experience;

- BPU also incorporates multiple proprietary architectures, including memory-in-compute and high-bandwidth data bridge, which further reduce processing power consumption and latency, contributing significant advantage in product metrics. These metrics, such as FPS per Watt, are key to our customers' design and sourcing decisions;

- BPU enables multiple hardware units to operate concurrently, which leads to better utilization of such units; and

- BPU also contributes to high level of software parallelism, which leads to more efficient processing hardware memory utilization while minimizing power consumption.

We launched our next generation Journey 6 processing hardware in April 2024, based on our latest BPU architecture Nash. The Journey 6 processing hardware is expected to provide ideal support for the industry's latest mainstream architectures of algorithms including BEV Transformer. Full-stack processing tasks for complete ADAS and AD functions including perception, planning and decision-making and control are all expected to be realized with a single Journey 6 processing hardware. It delivers both improved performance and better power efficiency, as compared to our previous generations of processing hardware. As of the Latest Practicable Date, Journey 6 has not been installed on any of the mass-produced passenger vehicles of our customers.

Horizon OpenExplorer

OpenExplorer is a flexible development toolkit featuring a wide collection of sample algorithms, models, development framework and toolchains. It ensures accurate and efficient algorithm deployment on Journey series processing hardware, which creates synergies with our processing hardware and provides us with more sales opportunities. Leveraging software-hardware co- optimizations, the toolkit enhances the performance of advanced algorithms and greatly reduces the engineering efforts to adapt and finetune algorithms for mass production.

In OpenExplorer, we offer reference algorithms to help accelerate the development and optimization of mass production solutions for our customers and partners, lowering the barriers to developing proprietary algorithms and creating significant customer value. The toolkit also includes optimized network architecture examples for modern hardware, providing a base for tuning and designing efficient algorithms. It also offers best practices in key areas like BEV fusion, object detection, and free-space segmentation, aiding the development of production-ready models. Our standardized tools, born from extensive debugging and tuning experience, enable users to complete independent optimization and effective production engineering.

During the Track Record Period, we have attracted a variety of customers who leverage our OpenExplorer development toolkit to develop algorithms that run on our processing hardware.

Horizon TogetheROS

TogetheROS is a safe, simple and user-friendly autonomous driving embedded middleware. Aiming to address the common industry challenges of inefficient and tedious integration as well as testing of autonomous driving applications for mass production, TogetheROS provides standardized automotive grade services and tools for accelerating mass production readiness. Combining support for development, integration and verification, its key features include (i) a modular application development framework tailored for volume production, supporting application configuration and optimization, (ii) advanced visualization and analysis tools for performance enhancement, (iii) multi-layered framework and standardized interface protocols that simplify system integration and (iv) recommended development checkpoints to facilitate the integration of third-party products and services at optimal stages of development. Additionally, TogetheROS is open-source and compatible with leading commercial and open-source systems, offering developers the flexibility to adapt and customize according to their specific requirements.

Horizon AIDI

AIDI is our software development platform, designed to accomplish automatic model iterations with enhanced efficiency. AIDI offers ready-to-use software building blocks that obviate the need for users to construct complex systems from the ground up, and allow them to concentrate on developing their proprietary models. As the automotive industry evolves towards a more algorithm and software-centric approach, AIDI creates value by providing a comprehensive and effective portfolio of tools tailored to meet the demands of industry stakeholders.

In summary, AIDI facilitates software developers by providing various tools and application programming interfaces (APIs), including for example (i) automatic recognition, segmentation and classification, and more, (ii) graphical user interface (GUI) for task management and (iii) development platform for algorithm training and compilation, software deployment and verification, as well as performance evaluation and analysis. These tools are seamlessly integrated within AIDI, making it a practical and all-encompassing solution for development needs.

RESEARCH AND DEVELOPMENT

R&D Philosophy and Process

Since our inception, we have been dedicated to developing industry-leading solutions, recognizing that comprehensive support from research and development is essential to achieve this goal. We understand that leading solutions require holistic support in software, algorithms, and hardware. In the design of our solutions, we emphasize the deep integration and efficiency optimization of software, algorithms, and hardware consistently, while taking into full consideration the industry's understanding of algorithms, as well as the usability and convenience of our development tools.

Our commitment to R&D covers from the foundational architecture to the end solutions. We dedicate ourselves to developing key technical aspects, fostering interconnectedness across various stacks right from the initial design phase, to achieve a synchronized state for our solutions. Since our establishment, we have accumulated comprehensive expertise in partnerships, industry insights, large-scale production capabilities, technical talents, and supply chain management within the industry. Leveraging our industry position and collaborating with ecosystem partners, we can strategically position ourselves three to five years ahead of industry development. This allows us to make targeted research and development investments, coupled with significant generational upgrades, including algorithms and backend hardware structure.

R&D Focus

ADAS solutions: We are committed to utilizing the latest technology to enhance our ADAS and AD solutions. This includes adapting to a wider range of peripheral hardware available in the market to improve the performance of our solutions, achieving continuous optimization of the cost structure of ADAS and AD solution offerings, and meeting additional safety regulatory requirements. For instance, in terms of safety ratings, our ADAS solutions have supported the qualifications of E-NCAP (2023) and C-NCAP (2024) five-star ratings. As of December 31, 2023, according to CIC, this achievement demonstrates the industry-leading safety capabilities of our solutions. Moving forward, we remain committed to continuous optimization and improvement of our ADAS solutions to meet evolving customer needs and industry standards.

AD solutions: We are actively developing and commercializing AD solutions to effectively address the demands of various scenarios, including urban, highway, parking, human-vehicle interaction, co-driving, and more. In April 2024, we launched our latest AD solution, Horizon SuperDrive, which is designed to achieve smooth and human-like autonomous driving functions in all urban, highway and parking scenarios. It is expected to tackle a comprehensive range of complex road conditions with high level of sophistication, providing drivers and passengers with a safer, more efficient and more comfortable driving and riding experience. In addition, we have initiated collaborations with several top OEMs and tier-one suppliers, with the mass-production of the first vehicle model with Horizon SuperDrive expected in 2026. As of the Latest Practicable Date, we have initiated collaborations for Horizon SuperDrive with seven OEMs and three tier-one suppliers in multiple vehicle models. In the coming years, we will primarily focus on commercializing our Horizon SuperDrive through expanding collaborations with OEMs on integrating Horizon SuperDrive into more vehicle models and assisting OEMs in mass productions of these vehicle models. We remain committed to continuous optimization and improvement of Horizon SuperDrive as part of our ongoing efforts to meet evolving market demands.

Technology pillars: We are committed to the development and continuous improvement of our technology pillars, which include algorithms, BPU, OpenExplorer, TogetheROS, and AIDI. This is achieved through efforts such as retaining, expanding, and strengthening our R&D team and acquiring necessary intellectual properties and other intangible assets. We have introduced an end-to-end perception autonomous driving architecture in Horizon SuperDrive. This architecture combines dynamic, static, and occupancy networks into one, enabling a comprehensive perception system that enhances the vehicle's understanding of its environment. Furthermore, we also released the latest BPU architecture, Nash, which provides more efficient support for multiple driving scenarios, improving the overall performance and capabilities of our autonomous driving systems. We remain dedicated to continuous optimization and advancement of our underlying technology pillars in light of the launch of Horizon SuperDrive. These ongoing efforts aim to further enhance our solutions and ensure they meet the evolving demands of the market.

For further details on our R&D roadmap, see "Future Plans and Use of Proceeds."

Our R&D Team

We believe our strong research and development capabilities are a core competitive strength and have led to our leading position in the industry. As of June 30, 2024, we have 1,696 full time-equivalent research and development employees, representing 73.1% of our total employees. Our research and development expenses were RMB1,143.6 million, RMB1,879.9 million, RMB2,366.3 million, RMB1,049.0 million and RMB1,419.7 million in 2021, 2022 and 2023 and for the six months ended June 30, 2023 and 2024, respectively.

Our research and development efforts focus on projects to improve our ADAS and AD solutions, as well as enhance our technological capacity. Our future R&D plans are primarily focused on (i) development and commercialization of new generation of autonomous driving technology; (ii) continuously improving our existing ADAS and AD solutions; (iii) development of our next generation processing hardware and (iv) development and upgrades of our technology pillars, including algorithms, BPU, OpenExplorer, TogetheROS, and AIDI.

We also focus on building and maintaining a large pool of talented researchers to drive our research and development efforts. Our R&D team is led by multiple industry veterans with profound experience, including former scientist and architect of leading technology companies in China. The publications of our R&D team members received more than 100,000 citations in aggregate. Our core R&D team members have extensive industry experience, either graduated from top academic institutions globally or have global working experience in leading technology and industrial companies. As of June 30, 2024, 73.5% of our research and development employees have post-graduate qualifications. We provide rigorous training to new recruits to familiarize them with our platforms and our research and development team. Our R&D team is led by our co-founders Dr. Yu and Dr. Huang, both of whom have profound technology background and broad industry recognition.

INNOVATIONS

We launched our ADAS solution Horizon Mono in 2019, which started revenue generation in 2021 and mass production in second quarter of 2021. We launched our highway NOA solution Horizon Pilot (categorized as an AD solution) in 2021, which started revenue generation in 2022 and mass production in the second quarter of 2022. In April 2024, we launched our AD solution Horizon SuperDrive. We expect Horizon SuperDrive to start revenue generation in 2024 from algorithms and software licensing and initiate mass production in 2026, subject to market conditions.

Our solutions are highly competitive, and the following table sets forth selected performance indicators and functional positioning and advantages for each of our current solution offerings:

	Horizon Mono	Horizon Pilot	Horizon SuperDrive
Positioning	Active safety ADAS	Highway NOA	Urban NOA for all scenarios
Launch time[(1)]	2019	2021	2024
Beginning of revenue generation	2021	2022	2024*
Initial mass production	2021	2022	2026*
Typical sensor set	Up to 8MP front view camera	Cameras and radars[(2)]	Cameras, radars and LiDAR[(3)]
Selective functions and highlights	Mainstream ADAS functions, including AEB, IHB, ACC, LCC, ICA, TJA and more Global first to launch an 8MP monocular vision-only ADAS solution	Enhanced active safety and comfort functions, including automatic ramp on/off, autonomous merge in and exit during traffic congestion, automated lane change, highway auto-pilot, APA, VPA and more	Smooth and human-like AD functions in all urban, highway and parking scenarios
Supported safety recognition	Euro-NCAP five star C-NCAP five star	Euro-NCAP five star C-NCAP five star	To be authenticated
Ecosystem synergy	OpenExplorer, TogetheROS, and AIDI	OpenExplorer, TogetheROS, and AIDI	OpenExplorer, TogetheROS, and AIDI
Miles per intervention[(9)]	N/A[(4)]	200 km in the average traffic flow	N/A[(5)]
Image processing capacity (frame per seconds)	174[(6)]	1,283[(7)]	N/A[(5)]
Pixel capacity of vehicle camera	Up to 8MP[(8)]	8MP[(7)]	N/A[(5)]
Power consumption	2.5w[(8)]	30w[(7)]	N/A[(5)]

Notes:

* Expected timing, which is subject to change with actual development and production progress.

(1) Refers to the initial release time, which does not indicate the completion of start of production (SOP) or mass production.

(2) Typical sensor set of Horizon Pilot includes 11 camera(s), including front camera(s) of 8.3MP, side camera(s) of 2.5MP, surround camera(s) of 2.9MP, rear camera(s) of 2.5MP; and five millimeter wave radars and 12 ultrasonic radars.

(3) Typical sensor set of Horizon SuperDrive is expected to include 11 camera(s) of 8.3MP, 3.0MP and 2.5MP, three millimeter wave radars, 12 ultrasonic radars and one LiDAR.

(4) According to CIC, it is not common to use miles per intervention (MPI) to evaluate ADAS solution. As an alternative of safety demonstration, Horizon Mono has a false activation rate of less than one time in 200,000 kilometers driven.

(5) No data available as of the Latest Practicable Date, as Horizon SuperDrive was launched in April 2024 and is still under testing.

(6) Tested under scenario created to evaluate performance with industry-standard application models as of launch year representing the parameter of one Journey 3 processing hardware embedded.

(7) Representing the parameter of one Journey 5 processing hardware embedded.

(8) Representing the parameter of one Journey 3 processing hardware embedded.

(9) Mile per intervention or MPI, is a performance metric used to measure the distance a vehicle can travel autonomously before requiring human intervention or driver takeover. According to CIC, the industry level of mile per intervention ranges from 50 km to 250 km in average traffic flow as of December 31, 2023.

INTELLECTUAL PROPERTY

Since our inception, we have internally developed a variety of intellectual property rights. As of June 30, 2024, we have 673 granted patents, including 585 invention related patents, as well as 616 trademarks both in China and overseas. We also own more than 100 copyrights, including both software and design copyrights, as of June 30, 2024. Of the 673 granted patents, we own 266 algorithms related patents, 203 software related patents, 109 processing hardware related patents and 95 other patents. We also own one domain name in China for our website, as of June 30, 2024. In addition, we co-owned seven patent applications with third parties in China, as of June 30, 2024. Considering the supplemental nature of such patent applications, none of such patent applications may cause a material adverse impact on our operations, if the application is unsuccessful or there appears any disputes between the co-owner and us. See "Appendix IV — Statutory and General Information — B. Further Information About Our Business — 2. Intellectual Property Rights of Our Group" for details of our material intellectual property rights. We have not experienced any material disputes or claims for infringement of intellectual property rights with third parties during the Track Record Period and up to the Latest Practicable Date.

We believe these intellectual property rights are critical for us to reinforce our substantial barriers and we intend to continue to develop more advanced algorithms and processing hardware with stronger processing power and efficiency, which are expected to bring long-term benefits to participants of our ecosystem. See "Risk Factors — Risks Related to Our Intellectual Property — We may not be able to adequately protect or enforce our intellectual property rights throughout the world, and our efforts to do so may be costly." for additional detail describing the protection of our intellectual property rights.

During the Track Record Period and up to the Latest Practicable Date, we did not have any material disputes or any other pending legal proceedings regarding intellectual property rights with third parties.

SALES AND MARKETING

Sales

Our sales personnel are teamed up by geological regions, and each team is led by a regional manager with key accounts coverage duties under its territory. As of the Latest Practicable Date, our sales team has covered most reputable Chinese OEMs, including all of the top 10 Chinese OEMs in terms of sales volume in China, according to CIC.

We adopt an account-solution-fulfillment co-responsible triangular model for sales. Account representative (AR) is responsible for customer relations, key accounts coverage and business development for our potential customers. Solution representative (SR) is responsible for identifying customer needs and tailoring solutions for our customers. Fulfillment representative (FR) is responsible for the overall external and internal coordination. To meet the needs of our strategic OEM customers, we establish a dedicated and systemized sales team consisting of AR, SR and FR with a close and stable team structure. Our sales team operates differently from the typical project-based approach: the triangular team structure allows for seamless coordination with various roles and levels within the customer's organization. With such full process coverage, we are able to establish and maintain comprehensive and multi-dimensional customer relationships. Furthermore, most members of our sales team are based locally at the customer's location to ensure tailored service and timely response.

Many of our customers are undergoing critical strategic shift to align with the rapidly involving industry landscape. This requires us to go beyond simple sale of solutions to engage in deep collaboration with customers in strategy, technological roadmap, and even organizational management. We strive to establish comprehensive and all-encompassing partnerships with our customers, where we can achieve full alignment at the strategic level with our customers before implementing the solutions through specific vehicles. By establishing and maintaining such strategic relationships with our customers, we will be able to sell our solutions effectively and efficiently.

Marketing

We enhance the awareness of our brand and promote our new and existing platforms through both offline and online channels. We participate in various offline events, such as industry conferences, product launches and industry salons to showcase our technological advancements and develop relationships with industry participants. We attend auto trade shows and industry forums to actively market and promote our solutions to new OEMs and tier-one company partners. We use this strategy to expand our presence in the automotive industry, particularly for international partners.

Distributors for Non-automotive Solutions

During the Track Record Period, we generated a minor portion of revenue from non-automotive solutions of RMB56.6 million, RMB104.5 million, RMB81.2 million, RMB26.5 million and RMB21.5 million, accounting for 12.1%, 11.5%, 5.2%, 7.1% and 2.3% of our total revenue in 2021, 2022 and 2023 and for the six months ended June 30, 2023 and 2024, respectively. The number of distributors of non-automotive solutions were six, six, five and five in 2021, 2022 and 2023 and for the six months ended June 30, 2024, respectively, with only one termination in December 2022. The revenue from our distributors for non-automotive solutions only account for an immaterial portion of our total revenue and we expect the percentage of total revenue contribution from them to continue to decline.

We engage independent third-party distributors in China to sell our non-automotive solutions, which is consistent with the industry norm. We believe our distributors help us effectively execute our marketing strategies specifically tailored to each geographical location. We and our distributors constitute a seller and buyer relationship. Accordingly, we recognize revenue when our solutions are delivered to and accepted by the distributors. To the best of knowledge of the Company, a majority of the revenues of such distributors are from offline channel.

We selected our distributors based on their business qualifications and distribution capabilities, such as distribution network coverage, quality, number of personnel, cash flow conditions, creditworthiness, logistics, compliance standard and past performance, and its capacities in customer management. We consider various factors in renewing agreements with distributors, including their qualifications, sales and marketing capabilities, sales network, financial resources, customer resources and synergies with our brands. In addition, we proactively manage our distributors to comply with the requirements of relevant laws and regulations. We require our distributors to have adequate storage conditions and facilities, a sufficient number of quality management personnel, and adequate sales channels resources. We adopt and implement a suite of distributor management rules to ensure distributors are in compliance with the legal requirements. These rules include a variety of operational guidelines, including pricing, inventory management and payment requirements. We also regularly review the performance of our distributors to evaluate their eligibility. We require our distributors to provide sales demand forecasts six months in advance, and place orders three months in advance. We will then arrange production based on the actual needs of our customers. As of the Latest Practicable Date, we were not aware of any potential abuses or improper use of our name by our distributors which could adversely affect our reputation, business operation or financial condition. During the Track Record Period and as of the Latest Practicable Date, our product return rate from distributors was nil.

We typically enter into a framework distribution agreement with our distributors with regard to our sales of our solutions. The key terms of the agreements primarily include:

- *Duration*: generally two years, subject to renewal by mutual agreement;
- *Geographical region*: within the agreed areas;
- *Risk allocation*: all significant risks, including inventory risks, are transferred to our distributors upon delivery and acceptance, and we retain no ownership control over the products sold to our distributors;
- *Credit terms*: we generally offer a 20-30 day credit terms upon delivery and acceptance to our distributors;
- *Product returns and warranty*: we do not allow our distributors to return our solutions without cause (causes generally only include defects) and provide warranty of one-year term;
- *Product supply*: we should respond to the proper demand of distributors within reasonable time with sufficient product supply; and
- *Pricing*: a fixed price provided in each purchase order under the framework distribution agreement.

OUR CUSTOMERS

Our customers are mostly OEMs and tier-ones, both of which purchase ADAS and AD solutions and/or in license algorithms and software from us. We have a highly flexible business model, and our customers may choose to purchase an entire solution from us, or a portion of our solutions such as software or algorithm to develop products of their own. Generally OEMs purchase our solutions for deployment on their passenger vehicles, and tier-ones purchase our solutions to integrate with their products for further deliveries.

We are committed to establishing strategic partnerships with our customers. Through our constant dialogue, we understand their overall driving automation strategies, technology roadmaps and product plans. Based on this understanding, we provide customized solutions tailored to their needs. Our field application engineer (FAE) team collaborate closely with our marketing team to provide comprehensive and one-stop shop services to our customers.

In the initial stages of a project, we match our product solutions to specific vehicle platforms and configurations based on the customer's requirements. We assign specialists to present the solution proposals in detail. If the customer is satisfied with our proposals, it provides us with more detailed project information and cost requirements. In response, we provide formal project assessments, solution responses, and quotations. Subsequently, we communicate with the customer to finalize the solution, price, and sign the contract. It typically

takes two to four months from obtaining design-win to contract signing, depending on the progress of terms negotiation and our customers' internal procedure requirements. After the contract is signed, we proceed with comprehensive development per agreement. Due to the unique nature of ADAS and AD solutions, ongoing communication and adjustments with the customer are necessary during the development and production phases, including adapting and optimizing the solution based on identified issues. This process culminates in mass production acceptance, and the process from contract signing to mass production typically takes another eight to 36 months, depending on the complexity of solutions and the development cycle of customer. Mass production is not the end of our project collaboration, and we maintain continuous communication with the customer to continuously optimize the solution based on end-user feedback and requirements. We will normally provide at least one year warranty to our customers. The following flow chart sets forth a typical process of a project with our customers.

Throughout the process, we maintain strong direct relationships and strong channels of communication with our customers. According to CIC, the duration from the start of a collaboration to mass production usually takes one to two years and will depend on the specifications of the OEM customers and the testing requirements. We have established business relationships with a large number of OEMs and tier-one companies in the automotive industry. As of the Latest Practicable Date, our ADAS and AD solutions have been selected by 27 OEMs (or 42 OEM brands) for implementation in over 285 car models. We have been particularly successful in the Chinese market and all of the top 10 Chinese OEMs in terms of sales volume in China are our customers.

For example, we work closely with Li Auto for them to integrate our solutions through concept inception, solution design and development, verification and validation, implementation and mass production. We first engaged Li Auto in 2019. Through resource sharing and open collaboration, Li Auto and we have shortened the verification cycle and achieved remarkable efficiency in development and delivery. Our Horizon Mono solution empowered by Journey 3 processing hardware debuted and achieved mass production on the Li Auto One in just eight months. In addition, our Horizon Pilot solution empowered by Journey 5 processing hardware debuted and successfully reached delivery on the Li Auto Li L series — Pro and Air models in a mere seven months. Since our initial collaboration, we have deeply engaged with Li Auto and built a sticky and lasting relationship with them. As a result, we scaled deployment of our solutions with mass production of Li Auto's vehicles, and they trusted us to equip our solutions into more of their vehicle models, many of which were proven to be very successful best-sellers. In October 2023, Li Auto granted us "Li Auto Top Award" to recognize as one of its most important global partners. We believe such award demonstrated our significant contribution to Li Auto as a leader in China's new energy vehicle market.

Our popularity and success among China OEMs have attracted the attention of international giants, such as Volkswagen, which enlarged our customer base to the global market. Volkswagen has invested in the Company and we have strategically established a joint venture with them to capture the future opportunities of customized driving automation solutions in China. See "— Our Partnership with Volkswagen Group" for further details.

Some of our OEMs and tier-one suppliers look to establish their in-house teams and develop similar technologies of ours. However, their development efforts in many ways may benefit our businesses for the following reasons:

- ***Partner but not Competitor***: As a tier-two supplier, we can provide modular services to our customers, including OEMs and tier-one suppliers, based on our flexible business model and open technology platform. This allows our customers to establish algorithm self-development capabilities and enhance their product differentiation competitiveness. In many occasions, working with us to develop their own products will facilitate the process and reduce their overall development costs.

- ***IP Licensing***: OEMs and tier-one suppliers may engage in the development of certain algorithms and software. Our business model allows us to support our customers' R&D through IP licensing, for which we may charge licensing fees and/or service fees.

- ***Hardware Support***: OEMs and tier-one suppliers may develop entire or a portion of ADAS and/or AD systems of their own. We can provide processing hardware and system-level reference designs or simply sell our processing hardware to them for their integration to support their development efforts, and we may charge solution delivery fees, licensing, and/or service fees accordingly.

- ***Continuous Upgrades***: We are continuously developing more advanced next-generation solutions. As ADAS and AD systems continue to iterate and update, our customers will have a growing demand for our more advanced solutions. With such ongoing needs, we will have the opportunities to expand our sales. During the Track Record Period, OEMs purchased our solutions generally expanded their purchase rather than terminated their relationships with us.

According to CIC, the likelihood of OEM or tier-one suppliers establishing their in-house team to develop similar technologies depends on their sales volume and scale of car models. As of the Latest Practicable Date, according to CIC, there are only very limited OEMs choose to develop full-stack system of their own.

Our Ecosystem Partners

In addition to OEMs and tier-one suppliers, we maintain relationships with a variety of ecosystem partners within the industry value chain. Our ecosystem partners include companies upstream and downstream that have complementary capabilities we need, such as domain control hardware and module companies. Together with these partners, we collaborate on system-level planning and go-to-market strategies to drive economies of scale in standardized products, thereby enhancing solution performance and reducing costs, and creating a positive cycle that accelerates our competitiveness. In many customer projects, we may collaborate with our ecosystem partners through various ways to jointly provide more competitive solutions and services to our end-customer OEMs. For example, we collaborate with a leading global provider of automotive cameras and vision sensors by configuring and adapting our vision perception algorithms to their certain sensor products and incorporating these sensors as part of our certified reference design of ADAS/AD system. A recent example of this is the adaptation and incorporation of their 17MP ultra-high-resolution camera into our front view perception solution. By doing so, we can share synergy in go-to-market efforts and help promote each other's product to end customers. As another example, in the collaboration with an operating system technology provider to develop autonomous driving system for OEM customer, we provide certain knowhow to facilitate their software and system development based on our processing hardware. Furthermore, we collaborate with capable software companies to expand our capacity and customer reach. We believe our ecosystem partners will gradually become familiar with and accustomed to our development platform, technical tools and processing hardware, resulting in user stickiness and dependency. We may not generate revenue directly from ecosystem partners. However, we believe that the habits of ecosystem partners to our offerings serve as the tentacles and leverage of our go-to-market efforts, which enlarges our customer base and deepens our moat. On the other hand, our ecosystem partners can generate revenue or enhance their product capabilities by leveraging our solutions, resulting in a win-win outcome.

Top Five Customers

During the Track Record Period, we derived a majority of our revenues from our automotive solutions. In 2021, 2022 and 2023 and for the six months ended June 30, 2024, the aggregate revenue generated from our five largest customers were RMB283.1 million, RMB482.1 million, RMB1,067.0 million and RMB727.0 million, representing 60.7%, 53.2%, 68.8% and 77.9% of our revenue, respectively. Revenues generated from our largest customer in the same periods were RMB115.2 million, RMB145.3 million, RMB627.3 million, and RMB351.6 million, representing 24.7%, 16.0%, 40.4% and 37.6% of our revenue, respectively. We generated a substantial amount of RMB627.3 million and RMB351.6 million, representing 40.4% and 37.6% of our revenue, from CARIZON in 2023 and for the six months ended June 30, 2024, respectively. Our five largest customers in each year/period during the Track Record Period included OEM and tier-one supplier customers for our automotive solutions and a distributor for our non-automotive solutions. Saving for Volkswagen Group and SAIC, both Shareholders of the Company, to the best of our knowledge, during the Track Record Period and up to the Latest Practicable Date, our five largest customers were independent third parties.

Save for CARIZON, CARIAD Estonia AS and SAIC, none of our Directors, their associates or any of our Shareholders (who or which to the knowledge of the Directors owned more than 5% of our issued share capital) had any interest in any of our five largest customers. Save for CARIZON and CARIAD (China) Co., Ltd., both of which are affiliated with Volkswagen Group and to the best of our knowledge, during the Track Record Period and up to the Latest Practicable Date, each of our top five customers are independent from each other.

Rank	Customers	Type of Products Purchased	Background	Approximate Years of Business Relationship	Revenue	% of Our Total Revenue
					(RMB in millions)	*%*
For the year ended December 31, 2021						
1	Customer A	Automotive Solutions	a leading OEM incorporated in the Cayman Island in 2017, listed on both the Nasdaq and the Stock Exchange and headquartered in Beijing.	five years	115.2	24.7
2	Customer B	Automotive Solutions	a software company in the automotive industry, established in Chongqing with a registered share capital of approximately RMB99.0 million, and being subsidiary of a state-owned automotive company listed on the Shenzhen Stock Exchange.	three years	52.0	11.1
3	Customer C	Automotive Solutions	an automotive electronics solutions provider, established in Hong Kong in 2001 and listed on the Stock Exchange.	four years	45.0	9.6
4	Customer D	Automotive Solutions	a technology company established in Zhejiang province in 2017, with a registered share capital of RMB1,500.0 million.	five years	42.5	9.1
5	Customer E	Automotive Solutions	a technology company established in Jiangsu province in 2020, with a registered share capital of RMB16,000.0 million.	four years	28.4	6.1
For the year ended December 31, 2022						
1	Customer A	Automotive Solutions	a leading OEM incorporated in the Cayman Island in 2017, listed on both the Nasdaq and the Stock Exchange and headquartered in Beijing.	five years	145.3	16.0

Rank	Customers	Type of Products Purchased	Background	Approximate Years of Business Relationship	Revenue	% of Our Total Revenue
					(RMB in millions)	*%*
2 . .	SAIC	Automotive Solutions	an automobile manufacturer listed on the Shanghai Stock Exchange, established in Shanghai in 1984, with a registered share capital of approximately RMB11,683.5 million.	five years	101.8	11.2
3 . .	Customer F	Automotive Solutions	a technology company, listed on the Shenzhen Stock Exchange and established in Beijing in 2002, with a registered share capital of approximately RMB2,377.8 million.	three years	87.8	9.7
4 . .	CARIAD (China) Co., Ltd.	Automotive Solutions	an affiliate of Volkswagen Group and CARIAD Estonia AS, which is one of our Pre-IPO investors, headquartered in Beijing with a registered share capital of RMB680.0 million.	two years	75.0	8.3
5 . .	Customer G	Non-automotive Solutions	an electronic component and technical service provider, established in Shanghai in 2005, with a registered share capital of RMB10 million.	four years	72.2	8.0
For the year ended December 31, 2023						
1 . .	CARIZON	Automotive Solutions	see "Our Partnership with Volkswagen Group — CARIZON — Our Joint Venture with Volkswagen Group".	one year	627.3	40.4
2 . .	Customer A	Automotive Solutions	a leading OEM incorporated in the Cayman Island in 2017, listed on both the Nasdaq and the Stock Exchange and headquartered in Beijing.	five years	193.7	12.5
3 . .	Customer D	Automotive Solutions	a technology company established in Zhejiang province in 2017, with a registered share capital of RMB1,500.0 million.	five years	107.0	6.9
4 . .	SAIC	Automotive Solutions	an automobile manufacturer listed on the Shanghai Stock Exchange, established in Shanghai in 1984, with a registered share capital of approximately RMB11,683.5 million.	five years	82.4	5.3
5 . .	Customer C	Automotive Solutions	an automotive electronics solutions provider, established in Hong Kong in 2021 and listed on the Stock Exchange.	four years	56.5	3.6

Rank	Customers	Type of Products Purchased	Background	Approximate Years of Business Relationship	Revenue	% of Our Total Revenue
					(RMB in millions)	*%*
For the six months ended June 30, 2024						
1 . .	CARIZON	Automotive Solutions	see "Our Partnership with Volkswagen Group — CARIZON — Our Joint Venture with Volkswagen Group".	one year	351.6	37.6
2 . .	Customer F	Automotive Solutions	a technology company, listed on the Shenzhen Stock Exchange, and established in Beijing in 2002, with a registered share capital of approximately RMB2,377.8 million.	three years	213.6	22.9
3 . .	Customer A	Automotive Solutions	a leading OEM incorporated in the Cayman Island in 2017, listed on both the Nasdaq and the Stock Exchange and headquartered in Beijing.	five year	97.7	10.5
4 . .	Customer D	Automotive Solutions	a technology company established in Zhejiang province in 2017, with a registered share capital of RMB1,500.0 million.	five years	33.5	3.6
5 . .	Customer H	Automotive Solutions	an automotive manufacturing company headquartered in Guangdong province and incorporated in 1995, with a registered share capital of RMB2,911.1 million.	three years	30.6	3.3

OUR SUPPLIERS

Manufacturers

We engage an industry-leading multinational semiconductor manufacturer ("Supplier A") as the manufacturer of our processing hardware. We then engage another manufacturer ("Supplier C") to perform assembly and testing services for our processing hardware. We first established business relationship with Supplier A in 2016, and have been in close collaboration with them throughout the design and manufacturing process. Consistent with market practice, we do not maintain any long-term contract or framework agreement with Supplier A. We place actual orders for different processing hardware with Supplier A, where we set out key commercial terms such as price, quantity and product technology. We place actual orders according to our business needs. Once a purchase order is confirmed, Supplier A starts the manufacturing process and then ships the products in due course. We make prepayments to Supplier A prior to shipment. We currently depend on Supplier A to manufacture all of our processing hardware. See "Risk Factors — Risks Related to Our Business and Industry — We depend on a limited number of third-party business partners for certain essential materials, equipment and services" for details.

Supplier A then typically transports the completed interim products to our assembly and testing provider Supplier C. Supplier C completes the manufacturing of processing hardware as a typical outsourced assembly and testing vendor and delivers the completed products to us. With initial engineering sample, we perform additional testing to ensure proper functioning and compatibility with the relevant algorithms. The manufacturing process by Supplier A typically takes three to four months, depending on the design and process complexity, and the assembling and testing process by Supplier C generally takes another two to three months.

The following sets forth the salient terms of our arrangements with Suppliers A and C:

- ***Renewal and Termination***: consistent with market practice, we do not maintain any long-term contract or framework agreement with Supplier A. We enter into five-year framework contract, subject to renewal, with Supplier C, and place purchase orders in accordance with business needs. Our agreement with Supplier C can be terminated or rescinded if (i) there is a failure to perform and such party fails to remedy the situation without justification within 30 days after written notice by the other party, or (ii) if a party goes bankrupt, ceases operations, has its business license revoked, or becomes a bank blacklisted entity or upon other similar material adverse events;

- ***Payment Terms***: we make prepayments to Supplier A prior to shipment. We make payments to Supplier C within 30 days upon recipient of invoice, which is issued to us based on Supplier C's assembly and testing progress;

- ***Intellectual Property***: we are entitled for all intellectual property rights of our products and maintain the ownership and intellectual property rights of the design plans and related materials that we provide to Supplier A and Supplier C, and are responsible for maintaining good title to such rights we provide to suppliers. Our suppliers are only entitled to use underlying intellectual properties for the purpose of manufacturing, assembling and testing the processing hardware we have requested. Suppliers are contractually bound not to infringe our intellectual property rights. In the event of termination or expiration of the relevant agreements, our suppliers and we are contractually bound to immediately cease using, return and/or destroy intellectual properties of the other party in their possession; and

- ***Period of Warranty***: for Supplier A, one year from delivery date. For supplier C, it offers two years warranty from the day after the acceptance date for automobile-grade finished products.

The Company is not aware of any material breach or infringement of intellectual property rights by Supplier A and Supplier C during the Track Record Period and up to the Latest Practicable Date.

Our Directors are of the view that, after consultation with CIC and enquiries with the Company's departments that are responsible for suppliers management, our procurement of semiconductors and the outsourcing of manufacturing and assembling services from Supplier A and Supplier C are in line with industry practices. According to CIC, there are alternative manufacturers and assembly and testing provider with the technical knowledge to produce products and service as currently supplied by Supplier A and Supplier C with certain variations in prices and specifications to achieve similar functions and product and provide services under reasonable commercial terms. The semiconductors we are currently using are produced for the mass market, which means that alternative suppliers have the capacity to manufacture similar products.

IP and EDA Vendors

We in-license certain third party IPs such as interface, hardware functioning blocks and electronic design automation tools from IP and EDA vendors. The hardware functioning blocks are pre-verified foundational elements in the design of processing hardware, such as central processing, micro-controller, memory and security which can be used in shortening our processing hardware design cycle and reducing development costs. The EDA services and tools primarily assist the design and manufacture of our processing hardware.

We enter into licensing and service agreements with our IP and EDA Vendors and place orders in response to price quotations solicited. The key terms of our agreements with them include:

- ***Duration***: generally one to three years subject to renewal by mutual agreement;

- ***Payment Terms***: depending on the particular in-license, we either pay pre-determined license fees for in-licensed IP and EDA or services fees along with in-licensing arrangement, or royalties on a price-per-unit basis for every processing hardware; and

- ***Product Returns and Warranty***: the IP and EDA Vendors generally provide warranty (post-delivery service) for 90 days after closing of project, and the nature of the product does not allow us to return the product.

IT Vendors

We procure data storage facilities and cloud services from notable industry suppliers. Data storage facility providers supply us secure and stable data storage environment. Cloud service suppliers provide pre-built functionalities and services that we can integrate into our development needs.

We typically enter into framework agreements with our IT Vendors. The key terms of our agreements with them include:

- ***Duration***: generally one year subject to renewal by mutual agreement;
- ***Credit Terms***: our IT Vendors require pre-payments for prepaid products, and charge us based on the actual usage for postpaid products;
- ***Service Termination***: early termination with mutual consent or termination upon maturity; and
- ***Payment Terms***: we pay one-off purchase or service fee, or subscription fee by period (sometimes refer to actual usage).

Top Five Suppliers

In 2021, 2022 and 2023 and for the six months ended June 30, 2024, the aggregate purchase amounts from our five largest suppliers were RMB251.6 million, RMB890.2 million, RMB1,177.9 million and RMB392.4 million, representing 52.0%, 61.8%, 50.2% and 40.8% of our total purchase amount, respectively. The purchase amounts from our largest supplier in the same periods were RMB100.7 million, RMB226.3 million, RMB458.5 million and RMB115.5 million, representing 20.8%, 15.7%, 19.5% and 12.0% of our total purchase amount, respectively. Our five largest suppliers in each year/period during the Track Record Period included manufacturers, assembly and testing service providers, and IP vendors and EDA vendors. During the Track Record Period, we relied on Supplier A and Supplier C for the manufacturing, assembling and testing of our processing hardware. During the Track Record Period, we did not experience any significant fluctuation in prices set by our suppliers or material breach of contract on the part of our suppliers. As of the Latest Practicable Date, none of our Directors, their associates or any of our shareholders (who or which to the knowledge of the Directors owned more than 5% of our issued share capital) had any interest in any of our five largest suppliers. To the best of our knowledge, during the Track Record Period and up to the Latest Practicable Date, each of our top five suppliers are independent from each other.

In 2021, 2022 and 2023 and for the six months ended June 30, 2024, we procured RMB108.5 million, RMB349.9 million, RMB548.6 million and RMB20.3 million of semiconductors and assembly and testing services from Supplier A and Supplier C, respectively, which were recorded as inventories, representing 22.4%, 24.3%, 23.4% and 2.1% of our total purchase amount, respectively. The procurement amount and the proportion of the total purchase amounts from Supplier A and Supplier C in any of the years from 2021 to 2023 were higher than that in the six months ended June 30, 2024 on an annualized basis, primarily as a result of (i) our decision to proactively build up strategic inventories to ensure sufficient supply of processing hardware to meet the downstream demands during the industry's supply chain shortage from 2021 to 2022, and (ii) the alleviation of the global supply shortage of auto parts from the second half of 2023. As of August 31, 2024 approximately 46% of such procurement is utilized, in terms of dollar value, and no significant impairment provision was

recorded with respect to such semiconductors during the Track Record Period or is expected to be recorded in the short term. According to CIC, such inventories usually have a life cycle ranging from approximately seven to 15 years. We do not expect our solutions or inventory to have any material risks of becoming obsolete in the short term, as (i) all of our product solutions are in their product life cycle with visible market demands, (ii) our ADAS and AD solutions cover various levels of autonomous driving, from mainstream assisted driving to advanced level autonomous driving, to address different consumer needs, and we expect our existing ADAS and AD solutions to be continuously implemented in mass-produced passenger vehicles with different levels of functions as we continue to achieve design-wins and SOPs, (iii) the phase-out of processing hardware as newer technologies emerge is gradual rather than imminent, and (iv) many of the passenger vehicles equipped with our solutions are at the beginning of their life cycle or still have a long life cycle of more than three years. In addition, as the penetration rates of both ADAS and AD solutions in China are expected to grow in the years to come, driven by rapid technology advancement, growing consumer demand and OEMs' launch of new models, we expect our ADAS and AD solutions to be adopted in more passenger vehicle models. Therefore, our processing hardware inventory will continue to be consumed to support delivery of our solutions.

Rank	Suppliers	Type of Products/ Services Provided	Background	Approximate Years of Business Relationship	Credit Terms	Purchase Amount	% of Our Total Purchase
						(RMB in millions)	*%*
For the year ended December 31, 2021							
1. . . .	Supplier A	manufacturer	a multinational semiconductor contract manufacturing and design company.	eight years	100% prepayment before shipment	100.7	20.8
2. . . .	Supplier B	supplier of materials	an electronic component distributor established in Shanghai in 2002, with a registered share capital of US$25.00 million.	five years	100% prepayment before shipment	66.4	13.7
3. . . .	Supplier C	assembly and testing service	a provider of semiconductor manufacturing services.	five years	30 days upon the invoice	45.7	9.4
4. . . .	Supplier D	outsource service	an intelligent operating system products and technologies provider established in Jiangsu province, with a registered share capital of RMB80.00 million.	six years	30 days upon the invoice	20.7	4.3
5. . . .	Supplier E	server and equipment	a technology company that provides IT products and services established in Beijing in 2018, with a registered share capital of RMB11.00 million.	five years	30 days upon the invoice	18.0	3.7

Rank	Suppliers	Type of Products/ Services Provided	Background	Approximate Years of Business Relationship	Credit Terms	Purchase Amount	% of Our Total Purchase
						(RMB in millions)	*%*
For the year ended December 31, 2022							
1. . . .	Supplier H	IP/EDA vendor	an electronic design automation company established in the United States in 1987 and listed on the Nasdaq.	five years	45 to 90 days upon the invoice	226.3	15.7
2. . . .	Supplier A	manufacturer	a multinational semiconductor contract manufacturing and design company.	eight years	100% prepayment before shipment	214.5	14.9
3. . . .	Supplier F	IP vendor	a processing hardware design and service provider established in Shenzhen in 2016, with a registered share capital of approximately US$66.10 million.	seven years	30 days upon the invoice	156.2	10.8
4. . . .	Supplier D	outsource service	an intelligent operating system products and technologies provider established in Jiangsu province, with a registered share capital of RMB80.00 million.	six years	30 days upon the invoice	152.0	10.6
5. . . .	Supplier C	assembly and testing service	a provider of semiconductor manufacturing services.	five years	30 days upon the invoice	141.3	9.8
For the year ended December 31, 2023							
1. . . .	Supplier A	manufacturer	a multinational semiconductor contract manufacturing and design company.	eight years	100% prepayment before shipment	458.5	19.5
2. . . .	Supplier B	supplier of materials	an electronic component distributor established in Shanghai in 2002, with a registered share capital of US$25.00 million.	five years	100% prepayment before shipment	232.9	9.9
3 . . .	Supplier C	assembly and testing service	a provider of semiconductor manufacturing services.	five years	30 days upon the invoice	200.7	8.6
4 . . .	Supplier G	construction	a building construction services provider established in Beijing in 1980, with a registered share capital of RMB10,000 million.	five years	20 days upon the invoice	149.9	6.4
5. . . .	Supplier H	IP/EDA vendor	an electronic design automation company established in the United States in 1987 and listed on the Nasdaq.	five years	45 to 90 days upon the invoice	136.0	5.8

Rank	Suppliers	Type of Products/ Services Provided	Background	Approximate Years of Business Relationship	Credit Terms	Purchase Amount	% of Our Total Purchase
						(RMB in millions)	*%*
For the six months ended June 30, 2024							
1 . . .	Supplier F	IP vendor	a processing hardware design and service provider established in Shenzhen in 2016, with a registered share capital of approximately US$66.10 million.	seven years	30 days upon the invoice	115.5	12.0
2. . . .	Supplier G	construction	a building construction services provider established in Beijing in 1980, with a registered share capital of RMB10,000 million.	five years	20 days upon the invoice	86.8	9.0
3 . . .	Supplier J	cloud and software service	a subsidiary of multinational technology company specializing in Internet-related services.	three years	monthly basis with 30 days upon the invoice	77.7	8.1
4. . . .	Supplier D	outsource service	an intelligent operating system products and technologies provider established in Jiangsu province, with a registered share capital of RMB80.00 million.	six years	30 days upon the invoice	72.5	7.5
5. . . .	Supplier B	supplier of materials	an electronic component distributor established in Shanghai in 2002, with a registered share capital of US$25.00 million.	five years	100% prepayment before shipment	39.8	4.1

Supply Chain Management

We utilize a supply chain management framework to manage our overall product development, procurement and production processes. Starting from the product research and development phase, we establish detailed supplier onboarding procedures. We primarily consider price, quality, technology capabilities, delivery speed and qualifications before onboarding a supplier. We also conduct periodic supplier review, quarterly, annually, or at key project milestones, to assess their performance. In addition, we also implement measures for anomaly management to continuously monitor the final product quality. See "Quality Assurance — Quality Assurance Procedures" for further details.

We believe that we have effectively managed our supply chain during the Track Record Period and up to the Latest Practicable Date. During the Track Record Period, we did not encounter any material supply chain issues, enabling us to continuously deliver ADAS and AD solutions to our customers. Even during the industry's supply chain shortage, especially from 2021 to 2022, we managed to fulfill deliveries to our customers, which is benefited from our strategy to further accumulate and store a secure supply of inventory to counteract the cyclical nature of the automotive industry. According to CIC, the COVID-19 pandemic has led to disruptions in the auto-part supply-chain, such as production halts, decreased output and extended delivery, among other issues. As the market demand for auto-parts remained strong, such disruptions resulted in varying degrees of auto-parts shortages globally, including the automotive semiconductors. As a result, our procurement prices of automotive semiconductors hiked approximately 19.5%, 14.5% and 10.5% in 2021, 2022 and 2023, respectively. Such increase made the procurement prices of automotive semiconductors higher during the COVID-19 and led to increased cost of sales. However, we were still able to maintain our gross profit margin at 70.9%, 69.3%, 70.5% and 79.0% in 2021, 2022, 2023 and for the six months ended June 30, 2024. Starting from the second half of 2023, the impact of automotive semiconductor shortages on the global automotive industry has started to subside, and the global supply of automotive semiconductors is gradually returning to normal, as evidenced by the growth rate of global average price of automotive semiconductors decelerating to approximately 5.0% in 2023, which is expected to turn negative in 2024, according to CIC. For the six months ended June 30, 2024, our procurement prices of automotive semiconductors decreased by 12.7% compared to 2023. From 2021 to 2023, our procurement prices for automotive semiconductors increased at a higher rate than the global average price growth rate for automotive semiconductors. According to CIC, this was because we engage top-tier industry suppliers who demand a premium over the industry average due to their qualifications, advanced processes and high product quality.

In order to mitigate the risk of supply chain shortage and ensure our delivery of our own products to our customers in time, we proactively built up our strategic inventories, with our inventory turnover days increasing from 192 days in 2021 to 313 days in 2022. Our inventory turnover days further grew to 461 days in 2023. This was due to global auto-part shortage started to alleviate until the second half of 2023. Given the lengthy production lead time as well as the time required before consuming finished goods, the impact of the supply chain shortage alleviation was not apparent in 2023. In addition, as we continue to scale our business at rapid pace, to meet the growing order volume of our product solutions for the coming year and taken into account the lengthy development cycle of a vehicle model, it is essential for us to preemptively stock up our inventories to ensure sufficient product supply in the next year. The increase in inventory turnover days to 694 days for the six months ended June 30, 2024 was mainly driven by relatively high average opening and closing balance of the inventories for the six months ended June 30, 2024. Such inventory balance cannot decrease significantly within six months because of the lengthy production lead-time as well as time required before consuming finished goods. The increase in inventory turnover days for the six months ended June 30, 2024 was also attributable to slower occurrence of cost of sales during the first half of the year. According to CIC, the first half, in particular the first quarter, of each year is usually not a peak season for vehicle sales due to seasonal influence, which affects the delivery

volume of product solutions as well as related cost of sales. These factors are reflected in the revenue mix change for the six months ended June 30, 2024 compared to the year ended December 31, 2023. An increase in revenue from licenses and services as a percentage of total revenue in the first half of 2024 is resulting in a higher gross profit margin and a proportionately lower cost of sales, leading to an increase in inventory turnover days for the six months ended June 30, 2024. Nonetheless, with the gradual phasing out of the global auto-part supply shortage, we do not expect our inventory levels to increase significantly going forward. As of the Latest Practicable Date, we maintain strong collaborative relationships with various suppliers in the field, journeying with them together to drive industry growth.

OUR PARTNERSHIP WITH VOLKSWAGEN GROUP

CARIZON — Our Joint Venture with Volkswagen Group

We strategically partner with affiliates of Volkswagen Group ("Volkswagen") through the joint venture Carizon (Beijing) Technology Co., Ltd ("CARIZON"), which was established in 2023, to capture the future opportunities of customized driving automation solutions in China. Volkswagen is a German multinational conglomerate manufacturer of passenger and commercial vehicles, motorcycles, engines and turbomachinery and is headquartered in Wolfsburg, Germany and listed in Frankfurt Stock Exchange (ETR:VOW). China is one of Volkswagen Group's most important business regions globally. The collaboration with us is a cornerstone of Volkswagen Group's strategic transformation and the strengthening of its core business in China. CARIZON will develop cutting-edge technologies, including a complete software and hardware stack, enabling Volkswagen Group to continuously provide customized products and services to Chinese consumers at a faster pace. This collaboration will accelerate Volkswagen Group's development in the field of autonomous driving, driving business transformation and upgrades in China. Volkswagen Group will provide business recommendations to its joint venture OEM enterprises in China in respect of situations agreed in the agreement. By establishing CARIZON, Volkswagen Group will enhance its ADAS and AD functions in passenger vehicles for its Chinese consumers, and we will bring our solutions and technologies to the consumers of leading global automotive companies. This collaboration is a win-win cooperation that creates long-term value for both Volkswagen Group and us. CARIZON engages in the business of research and development, manufacture of autonomous driving application software and self-driving systems, and it also provides aftersales services, training, consulting, testing and technical services of its products (the "CARIZON Business"). In the short term, its primary customer will be Volkswagen Group, and its products will be applied towards vehicles Volkswagen sells in China. CARIZON does not exclude Volkswagen Group to purchase ADAS and AD solutions from independent third parties, however, upon meeting certain technical and performance standards, CARIZON will procure our processing hardware on an exclusive basis. Considering aforementioned strategical positioning of CARIZON for Volkswagen Group, we believe CARIZON is well positioned to capture a significant amount of Volkswagen's order in China. As of the Latest Practicable Date, CARIZON has obtained design-win by Volkswagen Group, which is expected to achieve SOP in 2025. Volkswagen holds 60% and we hold 40% of the equity interest in CARIZON, respectively. The total registered capital of CARIZON is RMB6,757.0 million, and we have

committed to contributing RMB2,703.0 million by installment prior to December 14, 2025, representing 40% of the total registered capital of CARIZON. As of June 30, 2024, we have contributed RMB1,351.0 million as registered capital of CARIZON. There is no term limitation of CARIZON. Neither Volkswagen or we may transfer our equity interests without the other party's prior written consent, subject to customary right of first offer, right of first refusal and transfer among affiliates conditions.

In January 2022, Volkswagen Group got in touch with us to explore the possibilities to invest in our Company and conduct business cooperations. Throughout 2022, we held multiple rounds of discussions regarding the investment amount, method, and scope of cooperations. In November 2022, we entered into the convertible loan agreement, which was subsequently amended on October 11, 2024, and share purchase agreement for Volkswagen Group to invest in the Company and the joint venture agreement for Volkswagen Group and us to establish CARIZON. In November 2023, after the fulfillment of certain preconditions, CARIZON was officially established. In December 2023, Volkswagen Group and we completed the first injection of capital into CARIZON, and Volkswagen Group's investment in our Company was completed. On December 7, 2023, the Company issued 269,711,694 series D preferred shares to CARIAD, an affiliate of Volkswagen Group, during its series D financing, for a consideration amounting to US$200 million. As of the date of this Prospectus, CARIAD held approximately 2.31% in the issued shares of the Company. As of the Latest Practicable Date, CARIZON is actively conducting R&D and progressing the CARIZON Business. Pursuant to our agreement with affiliates of Volkswagen, we will license our ADAS and AD solutions for a fee to CARIZON and provide technical support to CARIZON for its R&D and manufacturing of its products; and CARIAD will provide technical support to CARIZON in product roadmap, sales facilitation, sales channel management and marketing. Besides shared responsibilities of licenses application, Volkswagen Group is responsible for providing technical support to CARIZON's requests for its products, road mapping, facilitating sales, sales channel management, whereas we are responsible for supplying and selling our solutions to CARIZON, and providing relevant technical services to CARIZON. In addition, we are responsible for providing our experience, expertise and know-how on relevant technical support in research and development and manufacturing of CARIZON's products. Each of Volkswagen Group and us can nominate two out of the four directors of CARIZON, and Volkswagen has the right to nominate the chairman of CARIZON's board. CARIZON's adoption of board resolutions requires the affirmative vote of a simple majority of the directors present at the board meeting with a quorum and the chairman has a casting vote in the case of an equality of votes, except that certain protective rights (such as formulating the annual budget and accounting plans, incurrence of material loans or indebtedness, providing guarantee, material capital investment, purchase and sale of material assets, and more) will be subject to the unanimous affirmative vote of all directors presented at the board meeting with a quorum, and the chairman does not have a casting vote under such circumstances. Due to recent changes in PRC Company Law, the articles of association of CARIZON will be amended to remove the casting vote of the chairman and to replace this with an escalation mechanism to the shareholders to decide by simple majority vote in the event of an equality of votes at board meetings on matters that were previously subject to the casting vote of the chairman. We license IPs to CARIZON for license fees and royalties, and CARIZON has an option exercisable after January 1, 2027, subject to

the terms and conditions of our agreement, to buy out the royalties with one-time payment, which is determined with reference to the net present values of future royalties. By licensing such IPs from us, CARIZON can develop its own autonomous driving applications, which will eventually be integrated into vehicle models of Volkswagen Group. We retain IP rights of the licensed IPs, and CARIZON can copy, modify and use the licensed IPs for their developments pursuant to the terms of our agreements. CARIZON is entitled to retain the rights of foreground IPs upon improvement being made or developed. CARIZON may distribute its after-tax profits in proportion to respective paid-up of registered capital to shareholders, following the contribution of statutory surplus reserve fund, loss made-up of previous years and upon approval of its shareholders. Furthermore, if any dispute arises, relevant parties shall attempt in the first instance to resolve through friendly consultation. If such dispute cannot be resolved within 60 days following a party serving written notice on the other party to such dispute requesting the commencement of friendly consultation, then any party may refer the dispute to Hong Kong International Arbitration Centre (HKIAC) under its rules. In the future, we will continue to license additional intellectual properties to CARIZON to support their ongoing development needs. We have also provided technical and manufacturing know-how services to CARIZON to fulfill its the technical and commercial requirements of an ADAS Level 2+ solution.

The following sets forth the major terms of our material intellectual right arrangements with CARIZON:

- ***Non-exclusive License***: We still retain ownership of all intellectual property rights related to the licensed technology and have the right to continue granting licenses to other entities, without involving the transfer of our core technology.

- ***License Territory***: Mainland China. CARIZON is only permitted to use the licensed technology within the geographical scope of mainland China for its own purposes and for subsequent research and development, manufacturing, and commercial activities. The software and processing hardware products developed and produced by CARIZON based on the licensed technology will primarily be sold to Volkswagen Group's vehicle assembly plants in China and will be incorporated into their mass-produced vehicle models. If CARIAD or entities outside of Volkswagen Group participate in joint development activities, CARIZON will generally only be able to engage in sublicensing arrangements. Furthermore, when delivering the licensed technology, the receiving party may only use the licensed technology as provided without gaining access to internal algorithms, logic, or structural designs, unless (i) required by law or government authorities (such as to achieve approval for sale); or (ii) to conduct performing checks and carry out software integration, in a way consistent with how members of Volkswagen Group customarily work with tier-one suppliers (in such cases, only on an on-premise or remote screen sharing basis, and the key source code remains in the Company's own information technology domain).

- ***Duration***: Indefinite duration, CARIZON has the right to use the licensed intellectual right perpetually, without the license automatically expiring at a specific point in time, but we reserve the right to terminate the license in the event of a material intentional breach of the intellectual right arrangements by CARIZON.

- ***Payment***: We will issue the invoice to CARIZON for payment relates to each of our IPs and CARIZON shall make all payments upon receipt of the invoice. Typical payment milestones include (i) delivery of an IP, (ii) completion of validation process and (iii) balance payment.

- ***Consideration***: CARIZON is required to pay fair consideration for the license to us.

- ***Protection Measures***: We have agreed with CARIZON on multiple intellectual property protection measures, including the following:

    - CARIZON is required to implement adequate security measures, including: (i) storing the licensed technology on secure computers and servers with password protection; (ii) controlling access permissions for personnel and maintaining access records to track unauthorized access and disclosure; (iii) complying with various applicable IT security policies when handling the licensed technology and in the event of any unauthorized access or disclosure, CARIZON is required to immediately notify us.

    - CARIZON and its downstream users are required to comply with various usage restrictions when using the licensed technology. These restrictions include prohibitions on reverse engineering, reverse assembling, and the use of infectious open-source licenses to prevent the need to publicly disclose source code of the licensed technology due to the application of such infectious open-source licenses. CARIZON is also required to store the source code of the licensed technology within mainland China.

    - CARIZON is strictly limited in its ability to sublicense to third parties and can only sublicense intellectual properties to third parties to the extent required and primarily in a black box mode with the purpose to conduct research for the development, manufacture, and commercialization of products within mainland China.

    - CARIZON will be held responsible for any breaches by itself or its sublicensees under situations agreed under the intellectual right license agreement and will bear the consequences of such breaches.

We license algorithms and software related to ADAS and AD solutions to CARIZON and provide related technical services for licensing and service fees. In 2023 and for the six months ended June 30, 2024, we recorded revenue from CARIZON of RMB627.3 million and RMB351.6 million, respectively, after the elimination of unrealized profits and losses from the transactions with CARIZON. We delivered algorithms and software for different ADAS and AD functions to CARIZON in 2023 and for the six months ended June 30, 2024, respectively. As we recognize licensing revenue at a point in time when the customer obtains control, revenues of such licensing to CARIZON were recorded both in 2023 and for the six months ended June 30, 2024 when the underlying licenses are made available to CARIZON and when CARIZON is able to use and benefit from the licenses. CARIZON's revenue contribution to us is not one-off in nature and its future revenue contribution will depend on its project development progress and sales, which is also linked to downstream consumer demand of the passenger vehicles of its customers. The majority of our revenue from CARIZON is derived from licensing algorithms and software to CARIZON for their development needs, with a smaller portion generated from providing technical services to them. In 2023 and for the six months ended June 30, 2024, CARIZON did not record any revenue during its eight-month operation period and had net loss of approximately RMB200-250 million and RMB400-450 million, respectively (unaudited numbers based on its management account).

Convertible Loan

In November 2022 and on October 11, 2024, we strategically entered into a convertible loan agreement and an amendment agreement with an affiliate of Volkswagen. Pursuant to which and subject to the terms therein, Volkswagen has agreed to provide us a convertible loan in the amount of US$800 million for a term of three years since the utilization date with tiered annual interest rates from 2.67% to 5.67%. For conversion mechanics and further details of the convertible loan, please see "History, Reorganization and Corporate Structure — Convertible Loan."

QUALITY ASSURANCE

Quality Assurance Procedures

We follow thorough quality assurance procedures to monitor the quality, product safety and conformity of our solutions during the entire development, manufacturing, delivery and services processes. We have dedicated quality assurance procedures and protocols to deliver outstanding solutions to our customers.

Our quality assurance starts with stringent onboarding procedure. For manufacturers, we engage well-known industry-leading suppliers and require them to be IATF16949 (or equivalent) qualified. For IP and EDA suppliers, we consider their technological capacity and problem-solving ability in fulfilling the requirements of the IPs needed. For IT service providers, we require their services to be reliable and easy-to-use. We aim to maintain long-term and stable relationships with our suppliers fostering win-win partnerships.

We train our staff, including technical engineers and production engineers, to follow quality assurance and technical review protocol as documented in our quality assurance manuals. Our quality assurance personnel are responsible for ensuring compliance with internal quality assurance procedures as prescribed in our written manuals. Our Journey 2, Journey 3 and Journey 5 series processing hardware are all qualified for AEC Q100 Grade 2, a robust and well-recognized stress test in the automotive industry. The efficiency and effectiveness of our quality management system is reviewed on a regular basis.

Our key suppliers who communicate with us throughout their processes and independently engage in internal quality assurance procedures to ensure the quality of their outputs. Our SQE and R&D teams control quality and products, and our R&D team evaluates the level of technical expertise and innovation of the suppliers. We conduct formal evaluations and audits of our suppliers and manufacturing sites to ensure that they meet our quality assurance procedures and requirements.

We have designated supplier quality engineering (SQE) functions, integrating supply chain quality control capabilities, to ensure raw material quality, process quality and outgoing quality. Our software development is based on integrated product development (IPD), combining the Automotive Software Process Improvement and Capability Determination (ASPICE) framework. A number of our staff have received external training for ASPICE practices and obtained ASPICE assessors certification.

Certifications

We have established a full suite of functional safety (FuSa) processes meeting the highest level of ISO26262 process (ASIL-D). We have also obtained ISO9001, ISO14001, ISO27001, ISO21434 ML3 and ISO21448 certifications. We also serve as the committee member and participated in the setting of several international standards such as ISO26262. Our processing hardware Journey 5 is the first automotive processing hardware in China and one of the first globally to meet the ASIL-B level under ISO26262 standard.

DATA SECURITY AND PRIVACY

As our customers are OEMs and tier-one companies rather than individual consumers, we do not collect personal information from third parties for our research and development purposes. In the course of our research and development, we process data in compliance with the applicable legal requirements and cooperate with qualified partners responsible for desensitizing data and anonymizing personal information to ensure the data security. See "Risk Factors — Risks Related to Our Business and Industry — The data privacy and data security laws, including those in China, are subject to rapid and evolving changes, imposing significant compliance requirements on us, and any failure or perceived failure to comply with such laws, or other concerns about our practices or policies with respect to the processing of data, could materially and adversely affect our business, financial condition, reputation and results of operations." for further detail describing the data privacy risks associated with our operations.

We have also established an information technology security program in order to implement data security requirements and best practices and we intend to continuously invest heavily in data security and privacy protection. Our information technology security program applies multiple layers of safeguards. We strive to adopt encryption technologies throughout the data lifecycle to safeguard privacy and enhance data security. We implement internal policies governing the authentication and authorization of access to our systems to ensure confidential and certain categories of data can only be accessed by authorized staff. Our employees only have access to data which is relevant and necessary for their responsibilities, for limited purposes, and are expected to verify authorization upon access. We have also implemented internal rules and procedures relating to the design and implementation of R&D projects and code auditing, to ensure that the designed security requirements are met in our R&D activities and code quality and security. We implement access control and account authority control for all data. We provide data security training to these employees and require them to report any information security breach.

During the Track Record Period and up to the Latest Practicable Date, we have not received any claim from any third party against us on the ground of infringement of such party's right to data and privacy protection as provided by any applicable laws and regulations in the PRC or other jurisdictions.

COMPETITION

The global smart vehicle industry is rapidly evolving with frequent updates to ADAS and AD technologies. We compete with other players in the industry whose businesses include the design and development of software, algorithms and hardware related to ADAS and AD. We face increasingly intense competition with other leading players in various aspects of our business, including solution coverage, product design, processing capabilities as well as consumer experience. See "Industry Overview." According to CIC, during the Track Record Period, Chinese OEMs gained notable market share in the China passenger vehicle market, and all of the top 10 Chinese OEMs are our customers. According to CIC, we are the largest Chinese ADAS solution provider with a market share of 21.3% in 2023, in terms of ADAS installation volume to Chinese OEMs in China.

EMPLOYEES

As of December 31, 2021, 2022 and 2023 and June 30, 2024, we employed an aggregate of 1,454, 1,986, 2,066 and 2,319 full-time employees, respectively. The following table sets forth a breakdown of the number of our employees as of June 30, 2024 by work function.

Research and Development	1,696
Sales and Marketing	462
General and Administrative	161
Total	**2,319**

Substantially most of our employees are based in the PRC. Our success depends on our ability to attract, retain and motivate qualified personnel, and we believe that our high-quality talent pool is one of our core strengths. We adopt high standards and strict procedures in our recruitment, including campus recruitment, online recruitment, internal referral and recruitment through executive search, to satisfy our demands for different types of talents. We recruit employees based on their educational background, relevant experience in similar positions and professional qualifications, as well as our expansion strategy and job vacancies. We offer competitive compensation for our employees. In addition, we regularly evaluate the performance of our employees and reward those who perform well with higher compensation or promotion.

We provide regular and specialized training tailored to the needs of our employees in different departments. Our employees can also improve their skills through our development of technologies and mutual learning among colleagues. New employees will receive pre-job training and general training.

As required by PRC laws and regulations, we participate in various employee social security schemes organized by municipal and provincial government, including pension, maternity insurance, unemployment insurance, work-related injury insurance, health insurance and housing provident fund. We are required under PRC laws and regulations to make contributions to employee social security schemes at specified percentages of the salaries, bonuses and certain allowances of our employees, up to a maximum amount specified by the local government from time to time.

We believe our leadership in the industry is the key factor in the retention of talent, as our employees are attracted and motivated by the exposure of working with us. However, we also enter into standard contracts and agreements regarding confidentiality, noncompetition, intellectual property, employment and commercial ethics with our executive officers and full-time employees. These contracts typically include a noncompetition provision effective during and up to two years after their employment with us and a confidentiality provision effective during and after their employment with us.

We believe that we maintain a good working relationship with our employees, and we have not experienced any significant labor disputes or any difficulty in recruiting staff for our operations during the Track Record Period and up to the Latest Practicable Date.

INSURANCE

Pursuant to PRC regulations, we provide social insurance including pension insurance, unemployment insurance, work-related injury insurance, maternity insurance and medical insurance for our employees based in China. We also purchase supplemental commercial medical insurance for our employees.

In line with general market practice, we do not maintain any business interruption insurance or product liability insurance, which are not mandatory under PRC laws. We do not maintain key man life insurance, insurance policies covering damages to our network or information technology systems or any insurance policies for our properties. See the section headed "Risk Factors — Risks Related to Our Business and Industry — We may not have sufficient insurance coverage to cover our business risks" in this Prospectus. During the Track Record Period, we did not make any material insurance claim in relation to our business.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE

Overview

We are committed to fostering sustainable practices, promoting social responsibility, and maintaining strong governance standards, reflecting our dedication to Environmental, Social, and Governance ("ESG") principles. We will establish a set of ESG policies ("ESG Policy") in accordance with the standards of Appendix C2 to the Listing Rules, which outlined, among others, (i) the appropriate risk governance on ESG matters, including climate-related risks and opportunities, (ii) ESG strategy formation procedures, (iii) ESG risk management and monitoring, (iv) the identification of key performance indicator ("KPI") and (v) the relevant measurements and mitigating measures.

Our ESG Policy will set out different parties' respective responsibilities and authority in managing ESG matters. Our Board will have overall responsibility for overseeing and determining our environmental, social, and climate-related risks and opportunities impacting us, establishing and adopting the ESG Policy and our targets, and reviewing our performance annually against the ESG targets and revising the ESG strategies as appropriate if significant variance from the target is identified.

Our Board will establish an ESG working group to support our Board in implementing the agreed ESG Policy, targets and strategies; conducting materiality assessments of ESG related risks; collecting ESG data from different parties while preparing for the ESG report; and continuous monitoring of the implementation of measures to address our Group's ESG-related risks. The ESG working group has to report to our Board on an annual basis on our ESG performance and the effectiveness of the ESG systems.

During the Track Record Period and up to the Latest Practicable Date, we had not been subject to any material claim or penalty or accident in relation to health, work safety, social and environmental protection, as advised by our PRC Legal Advisors we had been in compliance with the relevant PRC laws and regulations in all material aspects.

Potential Impacts of ESG-related Risks

Given the nature of our business, we do not produce any material generation of emissions and wastes and cause severe pollution. Nonetheless, we monitor environmental and climate-related risks that may impact on our business, strategy and financial performance as our key agenda. Supervised by our Board, we actively identify and monitor the ESG-related risks and opportunities over the short, medium and long term, and we seek to incorporate such climate-related issues into our businesses, strategy and financial planning.

We regularly check and analyze the carbon emissions caused by our own business operations, and continuously explore solutions to reduce carbon emissions. As an ADAS and AD solutions provider, we will only produce scope 2 emissions under the Listing Rules. Based on the tracking and review of emission indicators, we actively explored actions to reduce carbon emissions and disposal. Non-hazardous waste is handled by the property in compliance. During the Track Record Period, we have not incurred significant capital expenditure or compliance costs related to climate and environmental protection.

Strategies for Addressing ESG-related Risks

We are adopting various strategies and measures to identify, assess, manage and mitigate ESG and climate-related risks, including but not limited to:

- Reviewing and evaluating ESG reports of comparable companies in the industry so as to ensure timely identification of general ESG-related risks;

- Discussing with the management from time to time and holding regular meetings so as to ensure that all material ESG areas are identified and reported;

- Discussing key ESG principles and practices with key stakeholders to ensure that important aspects are covered;

- Formulating specific ESG risk early warning system and management approaches, which quantify the performance indicators so as to identify and consider ESG risks and opportunities and separate ESG risks and opportunities from other business risks and opportunities; and

- Setting short-term and long-term targets for environmental key performance indicators, including emissions, pollution and other impacts on the environment, so as to reduce emissions and consumption of natural resources.

In addition, we will take comprehensive measures to mitigate, adapt and build resilience to the impact of the environment on our business, strategies and financial performance, as summarized below.

Important Areas	Key Measures
Solid waste management	• Requiring proper handling and disposal of solid waste • Carrying out hazardous waste storage in accordance with relevant standards, establishing a system for standardized management of hazardous waste, and delivering to qualified third party for proper disposal
Energy and resources saving	• Establishing a "Green Office Management System" • Replacing with energy-saving equipment in offices

Metrics and Targets

The ESG working group sets targets for each material KPI at the beginning of each financial year in accordance with the disclosure requirements of Appendix C2 to the Listing Rules and other relevant rules and regulations upon listing. The relevant targets on material KPIs will be reviewed by the Board on an annual basis to ensure that they remain appropriate to the needs of our Group. In setting targets for the KPIs, we have taken into account their respective historical levels and have considered our future business expansion thoroughly and prudently with a view of balancing business growth and environmental protection to achieve sustainable development.

Our Board has overall responsibility for overseeing and determining our environmental, social, and climate-related risks and opportunities impacting us, establishing and adopting the ESG Policy and targets of us, and reviewing our performance annually against the ESG targets and revising the ESG strategies as appropriate if significant variance from the target is identified. We will carry out a corporate risk assessment at least once a year which covers current and potential risks that we face, including but not limited to ESG risks and strategic risks from disruptive forces (such as climate change). The decisions on the reduction, transfer, acceptance or control of the risks are affected by various factors. We will incorporate climate-related issues, including the analysis on physical and transition risks, into risk assessment process and risk appetite setting. We will consider the risks and opportunities in strategic and financial planning process if such risks and opportunities are deemed to be

material. After reviewing the environmental, social and climate-related risks and our performance in response to such risks each year, we may revise and alter our ESG strategies and corporate governance policies as appropriate.

We monitor the following indicators to assess and manage our environmental and climate-related risks arising from our business operations.

Indicators		For Year Ended December 31,			For the Six Months Ended June 30,
		2021	2022	2023	2024
Greenhouse gases	Total greenhouse gas emission (tons of CO2e)	978.7	1,642.4	2,250.0	1,380.5
	Total greenhouse gas emission per unit of revenue (tons of CO2e/RMB in million)	2.1	1.8	1.5	1.5
	Year-over-year/period-over-period change of total greenhouse gas emission per unit of revenue	NA	(13.5%)	(20.0%)	(38.6%)
Power consumption	Total electricity consumption (MWh)	1,623.4	2,797.6	3,783.8	2,321.3
	Total electricity consumption per unit of revenue (MWh/RMB in million)	3.5	3.1	2.4	2.5
	Year-over-year/period-over-period change of total electricity consumption per unit of revenue	N/A	(11.2%)	(21.1%)	(38.7%)
Water consumption	Total water consumption (tons)	5,756.4	12,657.3	17,529.4	6,701.8
	Total water consumption per unit of revenue (tons/RMB in million)	12.3	14.0	11.3	7.2

Indicators		For Year Ended December 31,			For the Six Months Ended June 30,
		2021	2022	2023	2024
	Year-over-year/period-over-period change of total water consumption per unit of revenue	N/A	13.3%	(19.2%)	(36.3%)
Waste generation	Amount of non-hazardous waste (tons)	76.3	89.2	137.0	57.8
	Amount of hazardous waste (tons)	0.9	–[(1)]	1.0	–[(2)]
	Total amount of waste:	77.2	89.2	138.0	57.8
	Total amount of waste per unit of revenue (tons/RMB in million)	0.2	0.1	0.1	0.1
	Year-over-year/period-over-period change of total amount of waste per unit of revenue	N/A	(40.4%)	(9.7%)	(58.1%)

Notes:

(1) The original data is 0.01, since only one decimal place is retained, it is written "–".

(2) Our hazardous waste mainly includes toner cartridges, ink cartridges and discarded electronic devices, of which toner cartridges and ink cartridges are recycled by qualified suppliers at the end of the service cycle, and discarded electronic devices is recycled by qualified suppliers when needed.

During the Track Record Period, our power consumption, water consumption, and waste generation have increased, which aligns with our business development. We identify the range of greenhouse gas emissions that we mainly generate as Scope 1 and Scope 2 emissions according to the Greenhouse Gas Accounting System — Enterprise Accounting and Reporting Standard. Scope 1 emissions refer to direct greenhouse gas emissions primarily from the consumption of direct energy in our operations, namely the fuel consumed by our company-owned vehicles. Scope 2 emissions refer to indirect greenhouse gas emissions primarily from the consumption of electricity at our office spaces. During the Track Record Period, the total amount of GHG emission (Scope 1 and Scope 2) were 978.7 tons, 1,642.4 tons, 2,250.0 tons and 1,380.5 tons of CO2 equivalent, respectively. Based on the resource consumption data in 2023, we plan to reduce electricity density of 2.4 MWh per million revenue and water density

of 11.30 tons per million revenue by approximately 5% by 2027. Based on the 2023 GHG emission density data (Scope 1 and Scope 2) of 1.45 tons of CO2 equivalent per million revenue, we plan to reduce GHG emission density (Scope 1 and Scope 2) by approximately 5% by 2027.

Corporate Social Responsibility

We have been committed to corporate responsibility projects, especially education. In line with this commitment, our CEO and Chairman, Dr. Yu, has donated RMB11.0 million to establish the Horizon Fund with a leading education institution in the PRC. This special fund aims to contribute to the enhancement of education and support scientific research and talent development in related fields.

Building upon our dedication to education, we have initiated the Horizon University Developer Program. This program has a broad vision of reaching thousands of universities globally and cultivating millions of university-level developers. Central to this program is the Horizon Development Kit, which serves as a comprehensive teaching resource for software and hardware programs in universities.

Through the Horizon University Developer Program, we seek to foster collaboration between universities and our organization. Specific collaborations include co-building curriculum systems, conducting research collaborations, fostering innovation and entrepreneurship, as well as partnering in competitions and events. By working together, we aim to create a vibrant ecosystem that nurtures talent, promotes innovation, and empowers students to excel in the fields of science and technology.

Employment and Care

We have entered into employment contracts with our employees in accordance with the applicable PRC laws and regulations such as the Labor Law of the People's Republic of China and the Labor Contract Law of the People's Republic of China, and formulated the Employee Manual, the Labor and Employment Management Regulations and other internal policies. We hire employees based on their merits, following the principles of lawfulness, fairness, equality, voluntariness, consensus, honesty and credibility. We prohibit any use of child labor in any of our operations.

We believe that having a balanced lifestyle is crucial to achieving a good mindset at work. Therefore, we encourage employees to maintain good mental and physical health by participating in sports and recreational activities.

We nurtured a friendly and inspirational corporate culture that we believe is attractive to the talented scientists who are keen to our success, and we invest heavily in training and retaining them. We provide adequate resources to help them succeed, including easy access to our rich internal resources for training and studying, our invaluable industry-related insights and opportunities to work in an inclusive community with our similar-minded scientists.

Benefits and Welfare

We strive to offer competitive salaries to attract and retain employees, and we provide attractive benefits and care to employees, including wedding and birth benefits, festival care and community activities, as well as gym, mother and baby room, lounge and other complete functional rooms.

We will also focus on embracing diversity within our organization and equal and respectful treatment of all of our employees in their hiring, training, wellness and professional and personal development. While maximizing equal career opportunity for everyone, we will also continue to promote work-life balance and create a pleasant workplace for all of our employees.

Workplace Safety

We have adopted and maintained a series of rules, standard operating procedures, and measures to maintain our employees' healthy and safe environment to ensure our operations comply with applicable workplace safety regulations in jurisdictions where we operate. We implement safety guidelines to set out information about potential safety hazards. Also, we have policies in place and have adopted relevant measures to ensure the hygiene of our work environment and the health of our employees. As we do not operate any production facilities, we are not subject to significant health, work safety, social or environmental risks. To ensure compliance with applicable laws and regulations, our human resources department would, if necessary and after consultation with our legal advisers, adjust our human resources policies to accommodate material changes to relevant labor and safety laws and regulations.

Development and Training

To further support professional development, staff training management is divided into on-the-job training and onboarding training. The onboarding training for employees includes explaining professional knowledge and company culture and values. At the beginning of the year, our human resources department collects the training requirements of all departments and conducts on-the-job training according to the common needs or pain points. At the same time, we also provide relevant leadership training for managers at different levels to help managers improve their team management skills and continue to move towards better management positions.

Anti-corruption and Anti-bribery

In addition, we have implemented a set of policies to ensure our operations comply with applicable anti-bribery and anti-corruption regulations in jurisdictions where we operate. The policies explain potential bribery and corruption conduct and our anti-bribery and anti-corruption measures. Improper payments prohibited by the policy include bribes, kickbacks, excessive gifts or facilitation payment, or any other payment made or offered to obtain an undue business advantage. Our compliance department is responsible for investigating the

reported incidents and taking appropriate measures as necessary. We conduct background check procedures before hiring any third party and ensure that the hiring procedure is implemented fully in accordance with the anti-bribery and anti-corruption policies. We also have regular trainings for employees regarding anti-bribery and anti-corruption policies to facilitate better implementation.

Supply Chain Management

Our suppliers mainly include manufacturers and assembly and testing service providers and IP, EDA, IT vendors. We utilize a supply chain management framework to manage our overall product development, procurement, and production processes. We have a supplier management policy, based on which we evaluate our suppliers carefully according to their historical quality performance and ask them to provide certificate including ISO14001 certification, ISO45001 certification, Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) and Restriction of Hazardous Substances (RoHS) by the EU.

In addition, we also encourage our suppliers to comply with relevant environmental and social regulations. Since we are not engaged in manufacturing of products and we do not directly perform the delivery of goods, we do not purchase any cartons or other packaging materials to package the products we sold under the distribution method. We commit to reducing our environmental footprint. We adhere to the principles of simplicity, high efficiency and convenient use for customers, and expect to collaborate with our suppliers to package the products in a more environment friendly manner. We have also included anti-corruption clauses in our agreements with our suppliers to prevent collusion and corruption.

Product Quality and Safety

We inform our customers that certificates have been obtained from professional testing institutions that conducted efficacy tests and safety assessments on our products. Through these results, we communicate to our customers about the reliability and efficacies of our products. We have established a full-suite of functional safety (FuSa) processes meeting the highest level of ISO26262 process (ASIL-D). We have also obtained ISO9001, ISO14001, ISO27001, ISO21434 ML3 and ISO21448 certifications. We also serve as the committee member and participated in the setting of several international standards such as ISO26262.

During the Track Record Period and up to the Latest Practicable Date, we had not been subject to any material claim or penalty in relation to any product safety issues, including accidents, injuries and fatalities involving end users or passengers of vehicles equipped with our ADAS and AD solutions, false advertising incidents or any material defects or malfunctioning of our ADAS and AD solutions and we had been in compliance with the relevant laws and regulations in China in all material aspects.

PROPERTIES

Our principal executive offices are located in Beijing and Shanghai, China, respectively. According to section 6(2) of the Companies (Exemption of Companies and Prospectuses from Compliance with Provisions) Notice, this Prospectus is exempted from compliance with the requirements of section 342(1)(b) of the Companies (Winding Up and Miscellaneous Provisions) Ordinance in relation to paragraph 34(2) of the Third Schedule to the Companies (Winding Up and Miscellaneous Provisions) Ordinance, which requires a valuation report with respect to all our interests in land or buildings, for the reason that, as of the Latest Practicable Date, none of the properties leased by us had a carrying amount of 15% or more of our consolidated total assets.

We currently do not own any properties. As of the Latest Practicable Date, we own one land use right with a total area of approximately 15.6 thousand sq.m., which shall be used for the purpose of "scientific research and design (R&D headquarters industry project category)" according to the relevant land grant contract which we entered into with local government authority in Shanghai. We had fully paid the considerations for the land use right and obtained the real estate right ownership certificate. We mortgaged the aforesaid land use right for a loan from Shanghai Pudong Development Bank Co., Ltd. in the new branch of Shanghai Pilot Free Trade Zone and has registered the mortgage. As of the Latest Practicable Date, we primarily leased 17 properties in China with an aggregate gross floor area of 37.8 thousand sq. m. as our office space. We believe that there is sufficient supply of properties in mainland China and we do not rely on the existing leases for our business operations. We believe that our current facilities are adequate to meet our current needs.

U.S. EXPORT CONTROL LAWS AND REGULATIONS

The United States maintains a system of export controls restrictions through the Export Administration Regulations (the "EAR"), which are administered by the Bureau of Industry and Security of the U.S. Department of Commerce (the "BIS"). The restrictions imposed under the EAR purport to apply globally, and their application varies depending on various factors, including the nature of the item being exported, re-exported or transferred, the countries and entities involved, and the intended end-uses of the regulated item. Items that are subject to U.S. export controls under the EAR include:

- All items in the United States;
- All U.S.-origin items, wherever located;
- Each of:
    (i) Non-U.S.-made commodities that incorporate controlled U.S.-origin commodities or are "bundled" with controlled U.S.-origin software above *de minimis* thresholds;

(ii) Non-U.S.-made software that incorporates controlled U.S.-origin software above *de minimis* thresholds; or

(iii) Non-U.S.-made technology that is commingled with controlled U.S.-origin technology above *de minimis* thresholds;

This is referred to as the EAR's "*de minimis* rule"; and

- Certain non-U.S. produced products that are "direct products" of specified technology or software or are produced by plants or major plant components that are themselves direct products of specified technology or software (collectively, the EAR's foreign direct product rules, or "FDPR").

In October 2022, BIS issued an interim final rule (the "BIS October 2022 IFR") aimed at restricting China's ability to obtain advanced computing integrated circuits, develop and maintain supercomputers, and manufacture advanced semiconductors. In October 2023, BIS issued another interim final rule (the "BIS October 2023 IFR") that updated and expanded U.S. export controls imposed by the BIS October 2022 IFR (the BIS October 2022 IFR and the BIS October 2023 IFR collectively, and together with the BIS's April 2024 interim final rule making technical corrections and clarifications to the BIS October 2023 IFR, the "BIS 2022/23 IFRs"). Among other measures, the BIS 2022/23 IFRs add to the Commerce Control List (which is a list of commodities, software, and technologies that are subject to the EAR's more restrictive controls) certain advanced and high-performance computing integrated circuits and computer commodities that contain these integrated circuits, and impose new or expanded license requirements for items subject to the EAR destined for end-use in the development or production of supercomputers, certain types of advanced node integrated circuits and advanced, or semiconductor manufacturing equipment in, certain jurisdictions, including China.

In addition to the restrictions introduced by the BIS 2022/23 IFRs, BIS maintains lists of persons that are subject to enhanced export control restrictions. One such list, the Entity List, includes a list of foreign persons on which certain trade restrictions are imposed, including business, research institutions, government and private organizations, individuals and other types of legal persons. The United States in recent years has placed an increasing number of entities, including a number of entities in China, on the Entity List and other restricted or prohibited parties lists. Given the sudden and unpredictable nature of these determinations, it is difficult to predict developments in this area and we have no ability to influence such determinations.

As of the Latest Practicable Date, the restrictions imposed by the EAR, including the BIS 2022/23 IFRs, have not negatively impacted our operations or financial performance. Furthermore, for the reasons outlined in the paragraph below (but subject to the factors referenced therein), as of the Latest Practicable Date, our Directors is of the view that the restrictions imposed by the EAR have not and are not expected to impact our business activities or expansions plans.

We have evaluated the application of the EAR to our operations, with support from U.S. export control counsel. We understand, after consultations with U.S. export control counsel and taking into account their view, that because the semiconductors incorporated into our solutions are not produced in or exported from the United States, these semiconductor items would not be subject to U.S. export controls under the EAR when being exported, reexported, or transferred entirely outside the United States, except in limited circumstances that could trigger the EAR's *de minimis* rule or an FDPR:

- EAR's *de minimis* rule: As outlined in more detail above, under the *de minimis* rule, the EAR can apply to non-U.S.-made items that incorporate, are bundled with, or comingled with certain controlled U.S.-origin items above certain *de minimis* thresholds.

- FDPR: Under the FDPR, the EAR can apply to certain non-U.S. origin items that are the "direct product" of certain specified technology or software or produced by plants or major components of plants that are direct products of these specified technology or software.

The semiconductors incorporated into our solutions may fall within certain aspects of both the *de minimis* rule and the FDPR, but the resulting EAR restrictions potentially apply only if our solutions are being sold to Russia, Belarus, or the U.S.-sanctioned jurisdictions of Cuba, Iran, North Korea, Syria, and the Russian-occupied Crimea, Donetsk, and Luhansk regions of Ukraine or for certain prohibited end uses (such as supercomputing) or certain prohibited end users. Because we do not sell our solutions incorporating our semiconductors to any of these countries or territories or to or for these prohibited end uses or end users, the EAR, including the BIS 2022/23 IFRs, have not negatively impacted our operations or financial performance as of the Latest Practicable Date.

As part of our management of the risks associated with our EAR compliance — specifically, the potential application of the EAR's *de minimis* rule to these non-U.S. produced semiconductors — we consider these rules in the design, manufacture, procurement and sales of these items to try to ensure that more restrictive application of the EAR's *de minimis* rule or the FDPR will not be applicable to any export, reexport, or transfer (in-country) of our solutions incorporating such semiconductors. However, because sanctions and export controls laws and regulations continue to expand and evolve, future sanctions and export controls may materially and adversely affect or target some of our significant suppliers or customers, raw materials or key components or technologies necessary for our operations, including the semiconductors incorporated in our solutions. If any of these risks were to materialize, our business could be adversely affected if we fail to promptly secure alternative sources of supply on terms acceptable to us. See "Risk Factors — Risks related to our business and industry — We are subject to the risks associated with sanctions and export controls laws and regulations, international trade policies, and developing domestic and foreign laws and regulations on smart vehicles and related technologies, and our business, financial condition and results of operations could be adversely affected" for further details.

Based on the reasons set forth above and the due diligence conducted by the Joint Sponsors, nothing has come to the attention of the Joint Sponsors that would reasonably cause the Joint Sponsors to disagree with the Directors' view as set out above in any material respects.

LEGAL PROCEEDINGS AND COMPLIANCE

During the Track Record Period and up to the Latest Practicable Date, we had not been involved in any actual or pending legal, arbitration or administrative proceedings (including any bankruptcy or receivership proceedings) that we believe would have a material adverse effect on our business, results of operations, financial condition or reputation and compliance.

According to our PRC Legal Adviser, the business operations we engaged in had been carried out in compliance with applicable PRC laws and regulations in all material respects during the Track Record Period and up to the Latest Practicable Date.

LICENSES AND PERMITS

The following table sets forth the details of the material licenses and permits necessary for the business operations in which we engaged in China.

License/Permit	Entity Holding the License/Permit	Grant Date	Expiration Date
High and New Technology Enterprises Certificate	Horizon Shanghai	2023.12.12	2026.12.11
High and New Technology Enterprises Certificate	Horizon Information	2023.11.30	2026.11.29
High and New Technology Enterprises Certificate	Horizon Shenzhen	2022.12.19	2025.12.18
High and New Technology Enterprises Certificate	Beijing Horizon Robotics	2022.10.18	2025.10.17
High and New Technology Enterprises Certificate[(1)]	Horizon Nanjing	2021.11.30	2024.11.29
Quality management system certification: ISO9001:2015	Beijing Horizon Robotics	2024.08.24	2027.08.23
Quality management system certification: GB/T19001-2016/ISO9001:2015	Horizon Shanghai	2022.12.07	2025.11.06
Quality management system certification: GB/T19001-2016/ISO9001:2015	Horizon Shenzhen	2022.12.08	2025.11.04
Quality management system certification: GB/T19001-2016/ISO9001:2015	Horizon Nanjing	2022.12.02	2025.11.06

License/Permit	Entity Holding the License/Permit	Grant Date	Expiration Date
Quality management system certification: GB/T19001-2016/ISO9001:2015	Horizon Information	2023.02.10	2026.02.09
Environmental management system certification: ISO14001:2015	Beijing Horizon Robotics	2024.09.22	2027.09.21
Environmental management system certification: GB/T24001-2016/ISO14001:2015	Horizon Information	2023.02.10	2026.02.09
Environmental management system certification: GB/T24001-2016/ISO14001:2015	Horizon Nanjing	2022.12.02	2025.12.01
Environmental management system certification: GB/T24001-2016/ISO14001:2015	Horizon Shanghai	2022.12.07	2025.12.06
Environmental management system certification: GB/T24001-2016/ISO14001:2015	Horizon Shenzhen	2022.12.08	2025.12.07
IT Product Information Security Certification	Beijing Horizon Robotics	2022.11.23	2025.11.22

Note:

(1) We submitted our renewal request in July 2024 before the license expiration date and we expect to obtain renewal in the fourth quarter of 2024 without any material difficulties.

During the Track Record Period and up to the Latest Practicable Date, we had obtained all material licenses, permits, approvals and certificates necessary to conduct our actual business operations from the relevant government authorities in the PRC, and such licenses, permits, approvals and certificates remained in full effect.

RISK MANAGEMENT AND INTERNAL CONTROL

We have established and currently maintain risk management and internal control systems consisting of policies and procedures that we consider to be appropriate for our business operations. We are dedicated to continuously improving these systems. We have adopted and implemented risk management policies in various aspects of our business operations. Our Board of Directors is responsible for the establishment and updating of our internal control systems, while our senior management monitors the daily implementation of the internal control procedures and measures with respect to each subsidiary and functional department.

Financial Reporting Risk Management

We have adopted comprehensive accounting policies in connection with our financial reporting risk management, such as financial management, budget management and financial statement preparation. We also have procedures in place to carry out such accounting policies, and our finance department reviews our management accounts in accordance with such procedures. In addition, we provide ongoing training to our finance staff to ensure that these policies are well-observed and effectively implemented.

Information System Risk Management

Sufficient maintenance, storage and protection of our data and other related information are critical to our success. We have implemented relevant internal procedures and controls to ensure that our data is protected and that leakage and loss of such data are avoided.

We have implemented comprehensive internal policies on protecting data privacy and security. We also engage external legal counsel to review and update our internal policies and ensure continuous compliance with all applicable laws and regulations.

During the Track Record Period and up to the Latest Practicable Date, we have not become aware of any material information leakage or loss of our data. Our IT systems had not experienced any material third-party intrusions, viruses, hacker attacks, ransomware attacks and other cyberattacks, information or data theft or other similar threats during the Track Record Period and up to the Latest Practicable Date. See "Data Security and Privacy" in this section for more information about our information security procedures and policies.

Compliance and Intellectual Property Risk Management

We have designed and adopted strict internal procedures to ensure the compliance of our business operations with the relevant rules and regulations, as well as the protection of our intellectual property rights. Our legal department examines the contract terms and reviews all relevant documents for our business operations, including licenses and permits obtained by the counterparties or us to perform contractual obligations and all the necessary underlying due diligence materials, before we enter into any contract or business arrangements. There was no material and systemic noncompliance during the Track Record Period and as of the Latest Practicable Date.

We have in place detailed internal procedures to ensure that our in-house legal department reviews our solutions and services, including upgrades to existing solutions, for regulatory compliance before they are made available to the general public. Our legal department is also responsible for obtaining any requisite governmental pre-approvals or consent, including preparing and submitting all necessary documents for filing with relevant government authorities within the prescribed regulatory timelines and ensuring all necessary application, renewals or filings for trademark, copyright and patent registration have been timely made to the competent authorities.

Internal Control Risk Management and Measure

We have designed and adopted strict internal procedures to ensure the compliance of our business operations with the relevant rules and regulations. We maintain internal procedures to ensure that we have obtained all material requisite licenses, permits and approvals for our business operation, and conduct regular reviews to monitor the status and effectiveness of those licenses and approvals. We obtain requisite governmental approvals or consents, including preparing and submitting all necessary documents for filing with relevant government authorities within the prescribed regulatory timelines.

Human Resources Risk Management

We have established internal control and risk management policies covering various aspects of human resource management such as recruitment, training, work ethics and legal compliance. We maintain high standards in recruitment with strict procedures to ensure the quality of new hires and provide specialized training tailored to the needs of our employees in different departments. We also conduct periodic performance reviews for our employees, and their remuneration is performance-based. We monitor the implementation of internal risk management policies on a regular basis to identify, manage and mitigate internal risks in relation to the potential noncompliance with our code of conduct, work ethics, and violations of our internal policies or illegal acts at all levels of our Group.

Investment Risk Management

Our investment department is responsible for investment project sourcing, screening, execution and portfolio management. The department sources investment projects in accordance with our investment strategy, and conducts thorough pre-investment due diligence to assess the risks, business synergies and potential return of the investment projects.

Audit Committee Experience and Qualification and Board Oversight

We will establish an audit committee to monitor the implementation of our risk management policies across our Company on an ongoing basis to ensure that our internal control system is effective in identifying, managing, and mitigating risks involved in our business operations. The audit committee will consist of three members, namely Dr. Jun Pu (chairman), Dr. Katherine Rong XIN and Dr. Ya-Qin Zhang, all being independent non-executive Directors. For the professional qualifications and experiences of the members of our audit committee, see "Directors and Senior Management — Board Committees."

We also maintain an internal audit department that is responsible for reviewing the effectiveness of internal controls and reporting to the audit committee on any issues identified. Our internal audit department holds regular meetings with the management to discuss any internal control issues we face and the corresponding measures to implement toward resolving such issues.

AWARDS AND RECOGNITIONS

Award/Recognition	Award Authority	Award Year
China Auto Parts Award of the Year in Mass Production	Auto Business Review	2022
China Auto Parts Award in Prospective Category	Auto Business Review	2021
China Auto Parts Award in Mass Production	Auto Business Review	2020
Innovation Awards in the Vehicle Intelligence and Self-driving Technology Category	Consumer Electronics Show (CES)	2019
One of the 50 Smartest Companies, TR50	MIT Technology Review	2019
China Auto Parts Annual Contribution Award	Auto Business Review	2019
Most Innovative Company of the Year in China	Forbes China	2018