GLOSSARY OF TECHNICAL TERMS

In this document, unless the context otherwise requires, explanations and definitions of certain terms used in this document in connection with our Group and our business shall have the meanings set out below. The terms and their meanings may not correspond to standard industry meanings or usage of these terms.

Term	Explanation
"1+N" Mode	a hybrid platooning model consisting of "1 lead truck (with a safety driver) + N following trucks (autonomous)". This mode aims to achieve high efficiency and safety by combining human decision-making with automated following capabilities.
"AI"	artificial intelligence; the simulation of human intelligence processes by computer systems, including learning, reasoning, and self-correction.
"ASIL-D"	the highest functional safety integrity level defined by the ISO 26262 standard for the automotive industry, representing the most stringent safety requirements. It is widely adopted in core systems of autonomous vehicles to ensure safe operation even in extreme fault scenarios.
"Autonomous Driving"	the technology that enables a vehicle to sense its environment and navigate with little or no human input.
"BVR" "beyond-visual-range", or "beyond-line-of-sight"	in vehicle perception, refers to the ability of a vehicle to detect and respond to objects or hazards that are beyond the immediate line of sight using advanced sensing technologies such as radar, lidar and V2X communication.
"CAGR"	compound annual growth rate.
"closed-loop"	a system where the output is fed back into the system as input to improve future performance. In the context of autonomous driving, it refers to the cycle of data collection, model training, simulation, and real-world deployment that continuously optimizes algorithms.
"closed-road scenario"	an operational environment with controlled access and predetermined routes, such as ports, industrial zones, and logistics parks.
"cognitive reasoning"	an artificial intelligence approach that emphasizes deep environmental understanding and active reasoning to inform driving decisions, as opposed to purely reactive control.
"data closed-loop platform"	an integrated system that continuously cycles data through collection, processing, model training, and validation to iteratively improve the performance and robustness of autonomous driving algorithms.

"domain controller"	A powerful centralized computing unit that manages a specific domain of vehicle functions (such as the autonomous driving domain), replacing multiple distributed electronic control units to handle high-speed data processing and complex algorithms.
"Drive-by-Wire Chassis"	A vehicle chassis design that replaces traditional mechanical links with electronic control systems to realize functions such as steering, braking, and acceleration operations.
"edge computing"	a distributed computing framework that brings computation and data storage closer to the sources of data (i.e., the vehicle). This minimizes latency and bandwidth use, allowing for real-time decision-making critical for autonomous driving.
"edge device"	hardware unit deployed at the network edge (such as our AiBox on vehicles or roadside infrastructure) that processes data locally in real-time to reduce latency and bandwidth usage, rather than sending all data to a central cloud.
"end-to-end"	A comprehensive operational or technological model that covers the entire process from the starting point (e.g., data input or cargo origin) to the final result (e.g., control execution or cargo destination) without relying on fragmented or external intermediaries.
"ETC fee"	electronic toll collection fee; automated road toll payments charged to vehicles for the use of highways, tunnels, and bridges.
"full-stack"	refers to the capability to develop all key aspects of the autonomous driving technology chain independently, including hardware design, software algorithms, operating systems, and cloud platforms.
"full-stack solutions"	A comprehensive technology architecture that integrates all critical layers required for autonomous driving, including hardware (sensors and computing platforms), system software, and core algorithms (perception, planning, and control), as well as cloud-based infrastructure.
"fully driverless"	Autonomous driving operations conducted without a human driver present in the driver's seat or the vehicle, typically corresponding to Level 4 autonomous driving capabilities where the system handles all aspects of the dynamic driving task within a specific operational design domain.
"GPU"	graphic processing unit, a specialized electronic circuit designed to rapidly manipulate and alter memory to accelerate the creation of images.

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"GNSS/IMU Navigation System"	a high-precision positioning system that combines Global Navigation Satellite System (GNSS) and Inertial Measurement Unit (IMU) technologies. It compensates for GNSS signal loss or interference (e.g., in tunnels, under viaducts, or in dense urban canyons) using IMU data, maintaining centimeter-level or decimeter-level positioning accuracy for autonomous vehicles.
"heavily mixed-traffic port environments"	Complex operational zones within logistics hubs where vehicles must navigate alongside a high volume of manual traffic with non-standardized traffic flows. This includes the interaction between internal autonomous transport vehicles and external human-driven container trucks, as well as port machinery (such as cranes and forklifts) and personnel.
"ISO 9001"	an international standard for quality management systems, specifying requirements for products and services that meet customer and regulatory requirements, and to enhance customer satisfaction through effective process control and continual improvement.
"ISO 26262"	an international standard for functional safety of road vehicles, defining the requirements for automotive electronic and electrical systems to avoid unreasonable risk due to system hazards.
"L2" or "Level 2"	level 2 autonomous driving under the SAE (Society of Automotive Engineers) J3016 standard. It refers to "Partial Automation", where the vehicle can control both steering and acceleration/deceleration simultaneously under certain conditions. However, the human driver must remain engaged at all times, monitor the driving environment, and be ready to take full control immediately when required.
"L4" or "Level 4"	level 4 autonomous driving under the SAE (Society of Automotive Engineers) J3016 standard. It refers to "High Automation" where the vehicle can perform all driving tasks and monitor the driving environment in specific circumstances (such as specific geographic areas or weather conditions) without human intervention.
"L5" or "Level 5"	level 5 autonomous driving under the SAE (Society of Automotive Engineers) J3016 standard. It refers to "Full Automation," where the vehicle can perform all driving tasks and monitor the driving environment continuously under all roadway types, traffic scenarios, and environmental conditions in which a human driver could operate, without any human intervention. No human driver attention, supervision, or readiness to take over is required, and operation is not limited by specific geographic areas or conditions.

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"LiDAR"	a remote sensing device that emits laser signals to measure the distance, position, and shape of surrounding objects.
"LTL"	less-than-truckload, the transportation of goods that do not require a full truckload.
"Mixed Traffic"	A traffic environment where autonomous vehicles operate alongside human-driven vehicles, pedestrians, non-motorized vehicles, and other road users.
"Multi-Sensor Fusion"	a technology that comprehensively analyzes and fuses data from multiple types of sensors (lidar, cameras, millimeter-wave radar, GNSS/IMU). It compensates for the limitations of single sensors to improve the accuracy, reliability, and robustness of environmental perception.
"OEM"	original equipment manufacturer, typically refers to vehicle manufacturers that produce the final vehicle product.
"open-road scenario"	an operational environment on public roads, such as highways and urban streets, characterized by mixed traffic and uncontrolled interactions with human-driven vehicles, pedestrians, and other road users.
"OTA"	Over-the-Air; a technology that updates software, firmware, or configuration settings wirelessly. It enables the continuous improvement of the autonomous driving system's performance and the remote deployment of new features to the fleet without physical recall.
"perception redundancy"	the use of multiple types of sensors (such as cameras, LiDARs, and radars) to cover the same field of view, ensuring accurate environmental detection even if one sensor type is compromised by weather or lighting conditions.
"Platooning"	a method of driving a group of vehicles together in a convoy, connected via wireless communication. This reduces air drag, saves fuel, and improves road capacity.
"Redundancy"	the inclusion of extra components (such as sensors, computing units, or braking actuators) that are not strictly necessary to functionality but serve as a backup in case of failure, ensuring the system's reliability and safety.
"RSU"	roadside unit, a computing device installed along the roadside that communicates with vehicles (V2I) and the cloud, providing perception data and traffic information to support autonomous driving.

"safety redundancy"	a specific design principle ensuring that critical vehicle control systems, such as braking and steering, have backup mechanisms to maintain safety and control if the primary systems malfunction.
"Simulation"	a virtual testing environment that recreates real-world driving scenarios. It allows the autonomous system to be tested against millions of corner cases and dangerous situations safely and efficiently without physical road testing.
"smart zero-carbon"	Logistics and transportation solutions that combine autonomous driving technology with new energy vehicles (such as battery electric or hydrogen fuel cell trucks) to optimize energy efficiency and minimize carbon emissions during operations.
"technological reusability"	The capability of core software algorithms and hardware modules to be effectively adapted and deployed across different vehicle models and operational scenarios (such as ports, highways, and urban roads) with minimal modification, thereby enhancing R&D efficiency.
"V2V"	vehicle-to-vehicle communication; a technology that allows vehicles to wirelessly exchange information (such as speed, location, and heading) with each other to prevent accidents and coordinate maneuvers.
"V2X"	a wireless communication technology that enables information interaction between vehicles and other entities (vehicles, roadside infrastructure, pedestrians, cloud platforms). It includes Vehicle-to-Vehicle (V2V), Vehicle-to-Infrastructure (V2I), and Vehicle-to-Cloud (V2C) communication, enhancing the environmental awareness and collaborative decision-making capabilities of autonomous driving systems.
"vehicle-agnostic"	refers to the capability of an autonomous driving system to be deployed across multiple vehicle types and models from different manufacturers without requiring fundamental redesign of the core software and hardware.
"vehicle-infrastructure-cloud" or "vehicle-edge-cloud"	a collaborative ecosystem that integrates autonomous vehicles, roadside infrastructure, and cloud-based platforms. It enables real-time data exchange and coordinated decision-making to enhance the safety and efficiency of autonomous driving.
"World Model"	an advanced AI architecture that enables the autonomous system to build an internal representation of the physical world, allowing it to simulate future scenarios and predict the outcomes of potential actions, moving beyond simple reactive behaviours.