GLOSSARY OF TECHNICAL TERMS

This glossary contains definitions of certain technical terms used in this document in connection with us and our business. These may not correspond to standard industry definitions and may not be comparable to similar terms adopted by other companies.

"3D"	three-dimensional, three spatial dimensions of width, height and depth
"active stereo vision"	a 3D sensing technique that adds an active light source, such as infrared speckle patterns, to binocular imaging to enhance feature matching and depth calculation in complex environments such as low-texture and low-light conditions
"AGV"	automated guided vehicle, a mobile robot that follows predefined paths or markers to transport materials within a facility
"AI"	artificial intelligence
"AIoT"	artificial intelligence of things. AIoT encompasses a vast range of devices across both consumer and industrial sectors
"AMR"	autonomous mobile robot, a mobile robot that uses sensors and algorithms to navigate autonomously in dynamic environments without predefined paths
"API"	application programming interface, a set of protocols that allows unconnected applications to communicate with each other
"ASIC"	application-specific integrated circuit, a custom-designed semiconductor chip optimized for a specific application or task
"CAGR"	compound annual growth rate
"CMOS"	complementary metal-oxide-semiconductor, a technology used in image sensors that converts light into electronic signals
"COB"	chip-on-board, a semiconductor packaging method in which a bare chip is directly mounted onto and electrically connected to a printed circuit board
"depth-engine"	a specialized processing unit, typically an application-specific integrated circuit, designed to perform real-time depth calculation from raw sensor data in a 3D visual perception system
"DOE"	diffractive optical element, an optical component that uses microstructures on its surface to shape, split or redirect light beams for 3D sensing applications
"dToF"	direct time-of-flight, a distance measurement technique that calculates the distance between a sensor and a target by directly measuring the time it takes for a light pulse to travel to the target and reflect back to the sensor

"DVT"	design verification test, a product development stage in which the design is validated against functional and performance specifications prior to production
"EGO"	egocentric vision data collection module, a data collection module designed to capture first-person visual data from the user's perspective
"embodied intelligence"	the integration of cognitive processes with physical form, allowing systems to learn, adapt and interact with their environment through sensory and motor functions
"ERP"	enterprise resource planning, an integrated software system used to manage and coordinate an organization's core business processes and resources, such as procurement, inventory, finance and human resources
"ESG"	environmental, social and governance
"EVT"	engineering verification test, a product development stage in which an initial prototype is tested to validate core engineering concepts and identify design issues
"firmware"	software embedded in hardware devices that provides low-level control and enables the hardware to perform its intended functions
"FOV"	field of view, the angular size of the scene captured by a sensor, as measured in vertical and horizontal angular extent
"frame rate"	the frequency at which consecutive images are captured or displayed
"IPD"	integrated product development, a structured product development framework that coordinates cross-functional teams and processes from concept through mass production
"IQC"	incoming quality control, the inspection and testing of raw materials and components upon arrival to ensure they meet required quality standards before being used in the production process
"iToF"	indirect time-of-flight, a depth sensing technique that measures the phase shift between emitted and reflected modulated light signals to calculate the distance to an object
"JDM"	joint development manufacturing, a collaboration model in which a supplier and a customer jointly design, develop and manufacture a product

"LiDAR"	light detection and ranging, a remote sensing method that uses light to measure the distance or range of objects
"mass production"	a large-scale production phase that adopts automated intelligent manufacturing and engineering facilities to ensure product consistency, reduce labor costs, enhance utilization and achieve cost-efficiency
"MEMS"	micro-electro-mechanical systems, a miniaturized device that integrates mechanical and electronic components at the microscale, enabling a wide range of applications in sensors, actuators and systems
"NFC"	near-field communication, a short-range wireless communication technology that enables data exchange between devices within close proximity
"NPI"	new product introduction, a process that transitions a product from design and engineering into volume manufacturing
"NPU"	neural processing unit, a specialized processor designed to accelerate machine-learning inference tasks
"ODM"	original design manufacturer, a company that designs and manufactures a product to be rebranded and sold by another company
"OEM"	original equipment manufacturer, a company that assembles and installs parts during the construction of a new product
"passive stereo vision"	a 3D sensing technique that relies on two cameras to capture images from different viewpoints under ambient lighting conditions and derives depth information through stereo matching and disparity computation
"PCB"	printed circuit board, a board used to mechanically support and electrically connect electronic components using conductive pathways
"PCBA"	printed circuit board assembly, a printed circuit board onto which electronic components have been soldered or otherwise mounted
"PCT"	the Patent Cooperation Treaty, an international treaty that simplifies the patent application process for inventors seeking protection in multiple countries
"Physical AI"	the application of artificial intelligence to real-world physical environments, encompassing the perception of, decision-making in and interaction with 3D spaces through intelligent terminal devices such as robots
"point cloud"	the output of a scanning process, which contains a large number of points that together represent the site scanned

"PoE"	Power over Ethernet, a technology that delivers electrical power along with data over standard Ethernet cabling
"PVT"	production verification test, a product development stage in which the manufacturing process is validated under production conditions prior to full mass production
"R&D"	research and development
"resolution"	a measure of the smallest detail a sensing system can distinguish: for an image sensor or an RGB or depth image, the number of pixels expressed as horizontal by vertical dimensions; for a LiDAR system, the minimum angular interval between adjacent scanning beams (angular resolution)
"RGB"	red, green and blue, the three primary color channels used in digital imaging
"RGB-D"	a type of imaging data that combines a standard RGB color image with a per-pixel depth map, providing both visual appearance and 3D spatial information
"RTK"	real-time kinematic, a high-precision satellite navigation positioning technique that utilizes carrier-phase measurements from global navigation satellite systems to achieve centimeter-level accuracy in real time
"SDK"	Software Development Kit, a collection of tools, libraries and documentation that enables developers to create applications for specific platforms or frameworks
"SLAM"	simultaneous localization and mapping, a technology that enables a system to create a map of its environment while simultaneously determining its own location within that map
"SMT"	surface mount technology, a method for producing electronic circuits in which components are mounted directly onto the surface of printed circuit boards
"SoC"	system on a chip, an integrated circuit that consolidates a processor, memory and peripheral functions onto a single chip
"SPAD"	single-photon avalanche diode, a highly sensitive semiconductor device that can detect individual photons, enabling applications in advanced imaging systems and distance measurement
"SPC"	statistical process control, a quality management method that uses statistical techniques to monitor and control a manufacturing process
"structured light"	a 3D sensing technique that projects a known pattern of light, such as stripes or speckles, onto a scene and analyzes the deformation of the pattern to calculate depth and surface geometry

"TAM"	total addressable market, an estimate of the total revenue opportunity available for a product or service if it were to achieve 100% market share in a specific market
"teleoperation"	the remote control of a robot or machine by a human operator, typically used to collect data on control commands, robot status and interaction processes for model training
"ToF"	time of flight, a measurement technique that determines the distance between a sensor and an object by calculating the time taken for a light signal to travel to the object and be reflected back to the sensor
"UMI"	handheld manipulation data collection module, a handheld data collection module designed to capture visual and manipulation and interaction tasks
"VCSEL"	vertical-cavity surface-emitting laser, a type of semiconductor laser that emits light vertically from its surface, utilized for its high efficiency, compact size and precise light emission in optical sensing applications
"VLA"	vision-language-action model, an artificial intelligence model that integrates visual perception, natural language understanding and robotic action generation to enable intelligent task execution
"VLM"	vision-language model, an artificial intelligence model that jointly processes visual and linguistic information to perform tasks such as image understanding, visual question answering and object recognition
"WristCam"	wrist-level near-field interaction capture module, a wrist-mounted data collection module designed to capture near-field visual and interaction data during hand-object interactions