GLOSSARY OF TECHNICAL TERMS

This glossary contains explanations of certain technical terms used in this document in connection with our Company and our business. Such terminology and meanings may not correspond to standard industry meanings or usages of those terms.

"AI"	artificial intelligence
"anti-entanglement technology"	technology to prevent interference and signal degradation caused by environmental obstructions
"ASIC"	application-specific integrated circuit, a custom-designed semiconductor chip optimized for a specific application or task. Unlike general-purpose chips, ASICs deliver enhanced performance and efficiency for particular functions, making them widely used in various industries
"BLDC motor"	brushless direct current motor, an advanced electric motor design that eliminates traditional mechanical brushes through electronic commutation
"CAGR"	compound annual growth rate
"CIS"	CMOS image sensor, a type of image sensor that utilizes complementary metal-oxide-semiconductor technology to convert light into electronic signals
"CMOS"	complementary metal-oxide-semiconductor, a technology used in image sensors that converts light into electronic signals
"dTOF LiDAR"	measurement devices that determine distances by emitting laser pulses and recording the time it takes for the light to return after hitting an object. This technology enables high-precision, direct distance measurements, making it ideal for applications in autonomous vehicles, robotics and 3D mapping
"EEL"	edge-emitting lasers, where the laser light propagates parallel to the wafer surface of the semiconductor chip and is reflected or coupled out at a cleaved edge
"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
"FPGA"	field-programmable gate array, an integrated circuit that can be configured by the user after manufacturing, allowing for flexible hardware implementation of digital circuits and enabling rapid prototyping and reconfiguration for various applications in telecommunications, automotive and industrial sectors
"FOV"	the field of view

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"Infrared spot centroid extraction"	a process to determine the central point of an infrared light spot on a target surface. This technique enhances accuracy in spatial measurements and object detection by providing precise location data for the reflected signals
"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
"ISO"	the International Organization for Standardization, a worldwide federation of national standards bodies
"ISO14001"	an international standard that specifies requirements for an effective environment management system
"ISO45001"	an international standard that specifies requirements for an occupational health and safety management system
"ISO9001"	an international standard that specifies requirements for a quality management system
"LiDAR"	a remote sensing method that uses light to measure the distance or range of objects
"MEMS"	micro-electro-mechanical systems, miniaturized devices that integrate mechanical and electronic components at the microscale, enabling a wide range of applications in sensors, actuators and systems for automotive, biomedical and consumer electronics industries
"PCB"	printed circuit board, a board used to mechanically support and electrically connect electronic components using conductive pathways
"point cloud"	the outputs of the scanning process, which contain a large number of points that together represent the site scanned
"RMSE"	root mean square error, a statistical measure to assess the accuracy of spatial data by calculating the square root of the average of the squared differences between predicted and observed values. It provides a quantitative evaluation of measurement precision and model performance
"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. This capability is essential for applications such as robotics and real-time spatial awareness

"SLR"	structured light range, a technology that employs projected patterns of light to capture depth information and create three-dimensional representations of objects
"SMT"	surface mount technology, a method for producing electronic circuits in which components are mounted directly onto the surface of PCBs
"SPAD"	single-photon avalanche diode, a highly sensitive semiconductor device that can detect single photons, enabling applications in quantum optics, telecommunications and advanced imaging systems due to its fast response time and low noise characteristics
"spatial sensing"	the technology and techniques used to detect, measure, and interpret the spatial relationships and positions of objects within a defined environment
"submillimeter computation"	advanced processing techniques that achieve precision measurements at scales smaller than one millimeter. This capability enables highly accurate 3D mapping and fine detail recognition, enhancing the performance and reliability of LiDAR systems in various applications
"TOF"	time of flight, a measurement technique used in imaging and sensing technologies that calculates the distance to an object by measuring the time it takes for a light signal to travel to the object and back
"triangulation LiDAR"	measurement devices that determine the position of objects by analyzing the angle of laser beams reflected off surfaces. By using geometric principles to calculate distances based on the angles and known positions, these sensors provide high-resolution, 3D data for applications such as topography, architecture and environmental monitoring
"VCSEL"	vertical-cavity surface-emitting laser, a type of semiconductor laser that emits light vertically from its surface. VCSELs are utilized for their high efficiency, compact size and precise light emission, enabling effective distance measurement and enhanced performance in optical sensing applications
"XR"	extended reality, an umbrella term that encompasses virtual reality (VR), augmented reality (AR) and mixed reality (MR)