GLOSSARY OF TECHNICAL TERMS

This glossary contains explanations of certain terms used in this document in connection with our Company and our business. The terminology contained in this glossary and their given meanings may not correspond to standard industry meaning or usage of these terms.

"actuator"	a component in a control system that converts an energy source into physical motion or mechanical action to control a device or system
"AI"	artificial intelligence
"algorithm(s)"	a well-defined, finite sequence of instructions or rules used to solve a specific problem or perform a computation
"amplifier"	an electronic device that can increase the power of a signal. It is a two-port electronic circuit that uses electric power from a power supply to increase the amplitude (magnitude of the voltage or current) of a signal applied to its input terminals, producing a proportionally greater amplitude signal at its output
"analog"	a signal that is a voltage, current or physical quantity that continuously varies in accordance with some time-varying parameter
"ASP"	average selling price
"augmented reality" or "AR"	a technology that overlays real-time 3D-rendered computer graphics onto a portion of the real world through a display, such as a handheld device or head-mounted display
"audio amplifier"	an electronic device or circuit that increases the power, voltage, or current of an audio-frequency signal so that it can drive loudspeakers or headphones effectively
"audio codec"	a hardware or software component that compresses and decompresses digital audio data, allowing for smaller file sizes and more efficient transmission and storage
"BCD"	a family of silicon processes comprising Bipolar, CMOS and DMOS technologies, each of which combines the strengths of three different process technologies onto a single chip
"bokeh effect"	a photography term for the aesthetic quality of the blur in the out-of-focus parts of a photographic image
"back-side illumination" or "BSI"	a type of digital image sensor that uses a novel arrangement of the imaging elements to increase the amount of light captured and thereby improve low-light performance
"CAGR"	compound annual growth rate

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"chip"	a small piece of semiconductor compact assembly that contains multiple interconnected components on a single semiconductor chip, also known as an integrated circuit or microchip
"CMOS"	complementary metal-oxide semiconductor
"CoE"	Color filter on encapsulation, a technology used in foldable OLED displays
"CPU"	central processing unit, the primary processor in a given computer
"design-in"	the engineering, technical and other support performed to allow an OEM device to incorporate products of another vendor
"digital"	a signal that represents data as a sequence of discrete values
"digital twin"	a virtual representation of an object or system designed to accurately reflect a physical object
"digital signal processor" or "DSP"	a specialized microprocessor chip, with its architecture optimized for the operational needs of digital signal processing
"direct ToF" or "dToF"	a technique used in ToF sensors for directly measuring the time it takes for a light pulse to travel to a target and return
"EDA"	electronic design automation, a category of software tools for designing electronic systems such as ICs and printed circuit boards. The tools work together in a design flow that chip designers use to design and analyze entire semiconductor chips
"ESD"	electrostatic discharge, a sudden and momentary flow of electric current between two differently-charged objects when brought close together or when the dielectric between them breaks down, often creating a visible spark associated with the static electricity between the objects
"fundamental frequency" or "F0"	the lowest frequency component of a complex periodic waveform, often perceived as pitch
"F0 Detection"	the estimation of F0
"fabless"	a business model where the entity focuses on R&D and design of ICs and outsources manufacturing to external parties
"filter"	a device or process that removes some unwanted components or features from a signal
"flicker"	a visible change in brightness between cycles displayed on video displays

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"foundry"	a factory that manufacturers integrated circuits
"Hall sensitivity"	the effectiveness of a sensor converting a magnetic field into a measurable voltage in a Hall effect sensor. It indicates the output voltage change for a given change in magnetic field strength
"haptic core waveform generation algorithm"	methods used to create the specific vibration patterns and tactile sensations delivered by haptic devices. Haptic devices are technologies that enable users to interact with digital content or environments through the sense of touch
"human-computer interaction"	process through which people operate and engage with computer systems
"integrated circuit" or "IC"	a set of electronic circuits on one small plate of semiconductor material (a chip)
"Intelligent imaging ICs"	ICs focused on enhancing system performance and optimizing image quality through specialized analog ICs
"intelligent sensing ICs"	ICs used in smart devices to collect and provide feedback on various types of environmental information
"inch"	the standard unit of measurement used to denote the diameter of wafers. In the semiconductor industry, the common sizes for wafers include 2-inch (50mm), 3-inch (75mm), 4-inch (100mm), 6-inch (150mm), 8-inch (200mm) and 12-inch (300mm)
"Internet of Things" or "IoT"	the physical objects (or groups of such objects) with sensors, processing ability, software and other technologies that connect and exchange data with other devices and systems over the Internet or other communications networks
"ISP"	image signal processor, a circuit for image processing
"indirect ToF" or "iToF"	a technique used in ToF sensors for indirectly measuring the phase shift of a modulated light signal
"LCD"	liquid-crystal display, a flat-panel display or other electronically modulated optical device that uses the light-modulating properties of liquid crystals combined with polarizers
"LiDAR"	light detection and ranging, a method for determining ranges by targeting an object or a surface with a laser and measuring the time for the reflected light to return to the receiver
"linear resonant actuator" or "LRA"	a type of vibration motor that uses a voice coil and a spring-loaded moving mass to produce haptic feedback along a single axis by vibrating at its resonant frequency
"low latency"	minimal delay or lag between an input or command and the corresponding response or action

"machine vision sensor"	an image-capture device designed to acquire visual data from a scene and convert it into digital signals for automated inspection, measurement, or identification tasks
"microcontroller unit" or "MCU"	a type of chip that contains a general-purpose processor core, input/output interfaces and other modules for a variety of applications
"MEMS"	micro-electromechanical system, a tiny device that integrates both electronic and mechanical components on a microscopic scale
"multi-spectral"	operating in or involving several regions of the electromagnetic spectrum
"near-infrared"	a portion of the electromagnetic spectrum that is invisible to the human eye but falls between the visible red light and the mid-infrared range
"neural processing unit" or "NPU"	a class of specialized hardware accelerator or computer system designed to accelerate AI and machine learning applications, including artificial neural networks and computer vision
"OEM"	acronym for "original equipment manufacturer", a company whose products are manufactured in accordance with a customer's specifications for sale under the customer's brand
"optical image stabilization" or "OIS"	a mechanical image stabilization technology powered by a special motor structure in the camera lenses
"optical sensor"	devices that detect light rays and convert them into electrical signals that can be interpreted by humans or electronic instruments
"OLED"	organic light-emitting diode, a light-emitting diode in which the emissive electroluminescent layer is a film of organic compound that emits light in response to an electric current
"OLED Lux/CCT"	the illuminance level and correlated color temperature of light emitted from OLED
"process design kit" or "PDK"	a collection of files and data provided by a foundry that allows chip designers to design and simulate ICs for a specific manufacturing process
"photodiode"	a semiconductor device that converts light into electrical current
"pixel"	the smallest addressable element in a raster image

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"power management integrated circuit" or "PMIC"	an integrated circuit for power management, often included in battery-operated devices (such as mobile phone, portable media players) and embedded devices (such as routers) to decrease the amount of space required
"PWM"	pulse-width modulation signal, a digital signal used to encode analog information by varying the width of pulses in a carrier wave
"PWM wave"	a waveform of the PWM
"R&D"	research and development
"RISC-V"	a free and open standard instruction set architecture based on reduced instruction set computer principles
"robotics"	an interdisciplinary study and practice of the design, construction, operation, and use of robots
"sensor"	a device that measures or detects physical world conditions, such as motion, heat or light, and converts the conditions into analog or digital representations
"short-wavelength infrared" or "SWIR"	the portion of infrared radiation closest to the visible red light
"signal-to-noise ratio" or "SNR"	a measure that compares the strength of a desired signal to the strength of background noise
"single-photon avalanche diode" or "SPAD"	a class of photodetectors that can detect low-intensity signals down to a single photon
"SIP" or "System in Package"	a type of technology that integrates multiple functional chips, such as processors and memory, along with various electronic components, into a single package through side-by-side or stacked packaging methods, achieving a fundamentally complete functional unit within one package
"smart audio amplifier"	an audio amplifier applied on smart devices
"system-on-chip" or "SoC"	an IC that integrates most or all components of a computer or other electronic system. These components almost always include on-chip central processing unit, memory interfaces, input or output devices, input or output interfaces, and secondary storage interfaces, often alongside other components such as radio modems and a graphics processing unit
"sq.m."	square meter(s)

"tape-out"	the process of converting an integrated circuit design into a chip for pilot production or manufacturing. Tape-out is a process to check whether the chip has achieved the expected functions and performance of the design
"time of flight" or "ToF"	a method for measuring the distance between a sensor and an object, based on the time or phase difference between the emission of a signal and its return to the sensor, after being reflected by an object. ToF can be further categorized as direct time-of-flight ("dToF") and indirect time-of-flight ("iToF")
"V"	volt, a unit for voltage
"verification"	a method to verify the correctness of a circuit and evaluate and confirm the initial design plan and to ensure the design satisfies the needs of downstream customers and conforms to the design initiatives
"virtual reality" or "VR"	a simulated experience that employs 3D near-eye displays and pose tracking to give the user an immersive feel of a virtual world
"wafer"	a thin slice of semiconductor used for the fabrication of ICs