GLOSSARY OF TECHNICAL TERMS

This glossary contains terms used in this document in connection with us. As such, these terms and their meanings may not correspond to standard industry meanings or usage of these terms.

"AEC-Q100"	a qualification test sequence for integrated circuits developed by the Automotive Electronics Council (AEC), which is designed to ensure the reliability and quality of ICs used in automotive applications by subjecting them to a series of stress tests and reliability assessments
"AI"	artificial intelligence
"Analog IC"	chips that enable functions related to power management and signal processing in electronic systems, and are primarily responsible for power conversion, distribution as well as signal acquisition and conditioning
"CAGR"	Compound Annual Growth Rate
"CIM"	computing-in-memory
"CP test"	chip probing test
"DC-DC"	a type of power converter that transforms a source of direct current from one voltage level to another
"DDR"	a type of synchronous dynamic random-access memory design that transfers data on both the rising and falling edges of the clock signal, enabling faster data transfer. DDR2 refers to designs that comply with the second-generation DDR technical standard
"DRAM"	Dynamic Random Access Memory, a type of volatile memory used to store data that is actively being used or processed, requiring periodic refreshing to maintain the stored information
"DTR"	Double Transfer Rate, a data transfer mode that allows data transmission on both the rising and falling edges of the clock signal, effectively doubling the amount of data transferred per data line at the same clock frequency
"ECC"	error checking and correction technology
"edge computing"	a distributed computing model that places computation and data storage closer to where data is generated, namely edge devices such as IoT sensors, smartphones, industrial equipment and other local computing nodes

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"edge AI"	a technology paradigm that combines the capabilities of AI with edge computing, deploying AI algorithms and models directly on edge devices, such as IoT sensors, smartphones, industrial machines and other local computing devices
"ETOX"	a mature and widely adopted flash memory chip process platform, which adopts a floating-gate memory cell structure composed of polysilicon gates, where read and program/erase operations are performed within the same memory cell
"Fabless"	the fabless business model, under which companies focus solely on the design, research and development, and sales of chips, while outsourcing wafer fabrication and assembly and testing processes to specialized foundries and OSAT service providers
"Flash"	a type of non-volatile memory chip, which can retain codes or data without continuous power supply, featuring the ability to be repeatedly read, erased and written, and mainly include NOR Flash and NAND Flash
"GB"	gigabyte, a unit of digital information equal to one billion bytes
"Gbit"	gigabit, a unit of digital information equal to one billion bits
"IoT"	Internet of Things
"Integrated Circuits" or "IC"	a type of miniature electronic device or component manufactured using semiconductor processes, in which transistors, resistors, capacitors, inductors and the necessary interconnecting wiring are integrated onto a small semiconductor wafer (such as a silicon chip or substrate). The wafer is then soldered and encapsulated to form a packaged device that delivers the intended circuit functions
"IPD"	integrated product development, a systematic approach to product development that emphasizes the concurrent design of products and their related processes
"LDO"	Linear Dropout Regulator. High-dropout regulators are suitable for applications requiring tolerance of relatively high input voltages and are capable of converting high-voltage inputs into stable low-voltage outputs. LDOs, on the other hand, are designed for low-voltage supply applications and can deliver stable, low-noise output voltages even when the input voltage is slightly higher than the target output voltage

"LPDDR"	low power double data rate, a type of synchronous DRAM that consumes less power than other random access memory designs. LPDDR 2 refers to the design that comply with the second-generation LPDDR technical standard
"mA"	Milliampere, a unit of electric current commonly used to describe the current level of electronic components during normal operating conditions
"Mbit"	Megabit, a unit of digital information equal to approximately one million bits
"MCP"	multi-chip package, which is usually used in space-constrained electronic products
"MCU"	Micro Controller Unit, a miniature computer integrated on a single chip, is used to manage specific control tasks within embedded systems
"MHz"	unit of clock frequency, the frequency of the clock signal used to control communication timing, namely the number of clock cycles generated per second during communication between a chip and the main controller. It is one of the fundamental parameters affecting data transmission rates. In general, a higher clock frequency corresponds to faster data transmission
"MLC"	Multi-Level Cell, each memory cell may storage 2-bit data
"Moore's Law"	an empirical observation that the number of transistors on an integrated circuit tends to double approximately every 18 to 24 months, resulting in continuous improvements in computing performance and cost efficiency over time
"MOSFET"	a power semiconductor device that controls the conduction and cut-off of electric current through voltage signals. In motor driver systems, MOSFETs switch at high speed under the control commands of the main control chip and the driving of the motor driver IC, thereby precisely regulating the current flowing through the motor windings, generating the corresponding electromagnetic effects and enabling stable motor operation
"nm"	nanometer, a unit of length commonly used to describe semiconductor process nodes
"non-volatile memory"	a chip capable of retaining information after power is off
"NAND" or "NAND Flash"	a memory chip that memory cells are connected in series
"NOR" or "NOR Flash"	A memory chip that memory cells are connected in parallel

"NORD"	Non-Overlapping Read/Write Design, a flash memory process platform in which the read and write paths are physically separated to reduce interference between read and program/erase operations. Flash memory products manufactured based on the NORD process platform typically achieve smaller memory cell sizes and lower power consumption compared with traditional ETOX-based platforms
"OSAT"	Outsourced Semiconductor Assembly and Testing, a critical stage in the chip production process that is outsourced to third-party service providers. Assembly refers to the process of converting the diced IC dies from the wafer into finished chips with housings and pins through wire bonding or other connection methods. Test refers to the final testing conducted after the assembly process is completed
"P/E cycles"	The number of times that a flash memory cell can be programmed and erased before it becomes unreliable. Each programming and erasing operation slightly wears out the cell, and the total number of P/E cycles indicates the durability or endurance of the flash memory
"PPI"	Parallel Peripheral Interface, an interface used for parallel data transmission between a chip and peripheral devices
"R&D"	research and development
"ReRAM"	Resistive Random Access Memory, an non-volatile memory that stores data by changing the resistance state of a dielectric material when voltage is applied. ReRAM enables fast switching speed, low power consumption and high storage density, making it suitable for embedded memory and next-generation memory applications
"I/O"	Input/Output, the interface for data transmission between a chip and controller. Standard, Dual and Quad I/O denote the use of one, two or four data lines, respectively, to enable different levels of data throughput between the flash memory and the controller
"SPI"	Serial Peripheral Interface
"SLC"	Single-Level Cell, a memory architecture in which each memory cell stores one bit of data. Due to its simple cell structure and clear voltage margins, SLC Flash memory features fast read and write speeds, reliability, long program/erase endurance and strong data retention performance

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"UID, CID, OTP"	different types of identifiers and security-related features used for authentication and device management. UID, Unique Identifier, is used to uniquely identify individual chips, enabling device traceability and verification throughout production, testing and application processes. CID, Chip Identification, provides identification information such as the chip model, manufacturer or customer-specific configuration, and is commonly used for product tracking, customization and anti-counterfeiting purposes. OTP, One-Time Programmable, refers to a memory area that can be programmed only once and cannot be altered or erased thereafter, and is typically used to store security keys, product identifiers or configuration data. Together, these features enhance the security of data stored on the chip, thereby improving protection against unauthorized access, modification or counterfeiting
"uA"	Microampere, a unit of electric current commonly used to describe the current level of electronic components in standby or sleep modes