

GLOSSARY OF TECHNICAL TERMS

This glossary of technical terms 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.

“CAGR”	compound annual growth rate
“controller chip”	a specialized microprocessor that provides drive and high-speed data transfer for Flash memory media, with specific external interfaces and protocol processing modules responsible for communication with the host, determining the form and category of the memory product
“CGU”	cash-generating unit
“cloud-based training”	a training method that utilises the powerful computational resources of cloud computing platforms (such as servers and GPU clusters in data centres) to train artificial intelligence models
“CPU”	central processing unit, an integrated circuit that serves as the computational and control core of an electronic product
“DDR”	double data rate, an industry standard for SDRAM products introduced by JEDEC
“die”	an individual integrated circuit that is cut from a semiconductor wafer
“DIMM”	dual inline memory module, a type of memory module that features a series of DRAM integrated circuits mounted on a printed circuit board, with electrical contacts on both sides to connect to a device’s motherboard, providing volatile memory for data processing. Major types of DIMMs include Registered DIMM (“ RDIMM ”), Small Outline DIMM (“ SODIMM ”), and Unbuffered DIMM (“ UDIMM ”), each designed to cater to specific performance and form factor requirements in various computing environments
“DRAM”	dynamic random access memory, a type of volatile memory used in computers and other devices to store data that is actively being used or processed, requiring periodic refreshing to maintain the stored information

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“edge computing”	a computing model that places computational and data processing capabilities at devices near the data source (such as mobile phones, sensors, or in-vehicle terminals), rather than relying solely on remote cloud servers
“embedded storage”	memory products that are integrated into the main system of an electronic product, featuring high-capacity embedded NAND Flash solutions or DRAM solutions or compounded NAND and DRAM solutions, and are primarily used in devices such as smartphones and tablets
“eMCP”	embedded multi-chip package, a semiconductor packaging technique where eMMC and LPDDR are enclosed within a single package, allowing for increased functionality and performance while minimizing space and enhancing connectivity between the chips
“eMMC”	embedded multi-media card, an integrated non-volatile memory system consisting of Flash memory and a Flash memory controller, used primarily in portable devices for reliable and efficient data storage and management
“ePoP”	embedded package on package, a semiconductor packaging technique where eMMC and LPDDR are integrated within a package, and stacked directly on top of the CPU surface
“firmware”	a pre-installed program code in memory, running within the Flash memory controller, responsible for core tasks such as protocol processing, data management and hardware driving in the memory
“Flash”	a type of non-volatile semiconductor memory chip, which retains stored information even when powered off, featuring the ability to be repeatedly read, erased and written
“FTL”	flash translation layer, a software layer built on raw flash memory that carries out garbage collection and wear leveling strategies and hides the special characteristics of flash memory from upper file systems by emulating a normal block device like magnetic disks
“HBM”	high bandwidth memory, a type of memory used in high-performance computing and graphics applications

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“IDM”	integrated device manufacturer, a company that designs, manufactures and sells its own products, handling the entire production process from design to fabrication and distribution, and in the context of the semiconductor industry, a company that covers the entire business segment, including chip design, wafer manufacturing and packaging and testing
“Integrated Circuit” or “IC”	a type of miniature electronic device or component, manufactured using semiconductor techniques, integrating all the necessary transistors, resistors, capacitors, inductors and their connecting wires for a circuit onto a small semiconductor wafer (such as a silicon chip or substrate), which is then soldered and encapsulated within a casing to form an electronic device with the desired circuit functions
“IoT”	internet of things, a network of interconnected devices that communicate and exchange data with each other
“JEDEC”	Joint Electron Device Engineering Council, a standardization institution in the solid-state and semiconductor industry that develops industry standards for solid-state electronics
“LLM”	large language model, an AI model trained on extensive text data to understand and generate human language
“LPDDR”	low power double data rate, an industry standard for low-power SDRAM products introduced by the JEDEC
“MCP”	multi-chip package, a semiconductor packaging technique that encapsulates two or more memory chips within a single package through methods such as stacking
“NAND Flash”	a type of non-volatile Flash memory technology and the products based on this technology, typically used for data storage
“NOR Flash”	a type of non-volatile Flash memory technology and the products based on this technology, typically used for data storage, typically used for code storage
“OEM”	original equipment manufacturer, a company that uses its brand advantages, core technologies and sales channels to have products produced by a manufacturer with production capabilities and then sells them to the market

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“On-device AI”	technology that performs artificial intelligence computation and processing directly on end devices rather than relying on remote servers or the cloud
“PCB”	printed circuit board, a board used in electronics to connect electronic components using conductive pathways, tracks, or signal traces etched from copper sheets laminated onto a non-conductive substrate
“PCIe”	peripheral component interconnect express, a high-speed interface standard used to connect various hardware components to a computer’s motherboard, providing fast data transfer and improved performance, with different generations such as Gen1 to Gen5
“RAM”	random access memory, a type of computer memory that can be accessed randomly, used to store working data and machine code currently in use, allowing for quick read and write access
“ROM”	read-only memory, a type of non-volatile memory used in computers and other electronic devices to store firmware or software that is not intended to be modified frequently
“SATA”	serial advanced technology attachment, an interface standard that uses serial connection, and is widely used to connect storage devices like hard drives and SSDs to a computer’s motherboard, facilitating data transfer
“SRAM”	static random access memory, a type of RAM that uses bi-stable latching circuitry to store each bit, providing faster access times than DRAM and not requiring periodic refreshing
“semiconductor memory product”	a semiconductor component with information memory capabilities, widely used in various electronic products, serving as the hardware medium for data or programs
“SiP”	system-in-package, a type of chip packaging technology that combines multiple electronic components, such as processors, memory and sensors, passive components, and other electronic components into a single package, offering high integration, design flexibility and reduced space for compact electronic devices

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“SSD”	solid-state drive, an internal storage component installed within a computer or server, providing enhanced performance and reliability over traditional hard disk drives
”System on Chip (SoC) Platform”	a platform that integrates key components such as CPU, GPU, memory, and communication modules into a single chip. It offers small size, low power use, and high efficiency, and is commonly used in smartphones, IoT devices, automotive systems, and industrial equipment
“TB”	terabyte, a unit of digital information storage equal to approximately one trillion bytes
“UFS”	universal flash storage, a high-performance, scalable flash storage specification designed for use in mobile devices and consumer electronics, offering fast data transfer speeds and improved power efficiency
“uMCP”	UFS-based multi-chip package, a semiconductor packaging technique that integrates UFS and LPDDR within a single package, designed to be versatile and adaptable for various applications by supporting a wide range of functionalities and interconnections
“USB”	universal serial bus, a standardized interface that enables communication and power supply between computers and peripheral devices, facilitating easy connectivity and data transfer across a wide range of electronic equipment
“VR”	virtual reality, a technology that creates a simulated, immersive environment
“wafer supplier”	companies that design, manufacture and supply memory wafers