
GLOSSARY OF TECHNICAL TERMS

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

“2.5D/3D packaging”	advanced semiconductor packaging technologies that integrate multiple chips or chiplets in a stacked or interposer-based layout to enhance performance, bandwidth, and power efficiency
“AI”	artificial intelligence
“ASIC”	Application-Specific Integrated Circuit, a type of IC customized for a particular use or application
“CAGR”	compound annual growth rate
“CPU”	Central Processing Unit, the primary component of a computer
“data lanes”	parallel data paths used for high-speed data transmission
“design-for-test”	a methodology that incorporates testability features into IC designs to enable efficient testing and fault detection during manufacturing
“EDA”	Electronic Design Automation, a reference to tools and software that automate the design, layout, simulation, and validation processes for electronic systems and products
“Ethernet”	a standard technology for local area network communication
“Foundation IP”	a set of fundamental, pre-designed, and silicon-proven building-block intellectual property components essential for semiconductor chip design
“GDS II”	Graphic Design System II, a binary database file format that is the de facto industry standard for electronic design automation data exchange of IC or IC layout artwork
“GPU”	Graphics Processing Unit, a specialized electronic circuit designed for processing digital image and rendering computer graphics
“HBM”	High Bandwidth Memory, a type of high-speed memory used in AI and high-performance computing systems
“heterogeneous computing”	a computing architecture that integrates and utilizes multiple different types of processors or accelerators within a single system to optimize performance and efficiency for diverse workloads
“IC”	integrated circuit, a miniaturized electronic circuit consisting of semiconductor devices and passive components fabricated on a single semiconductor substrate or chip

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“IoT”	Internet of Things
“IP”	intellectual property rights with respect to a pre-designed and pre-verified functional block of logic or data that can be licensed and integrated into larger chip designs
“JEDEC”	the Joint Electron Device Engineering Council, a global industry association that develops standards for semiconductor devices, memory, and related technologies
“LPDDR”	Low-Power Double Data Rate, a memory component commonly used in smartphones, tablet computers, and laptops, designed to use less power and enhance battery life
“ONFI”	Open NAND Flash Interface, a common standard that allows NAND flash memory chips to work with controllers in a consistent way
“OSAT”	Outsourced Semiconductor Assembly and Test, a reference to specialized companies in the semiconductor industry that provide third-party services for packaging IC into finished devices and conducting reliability and functionality tests, typically after front-end wafer fabrication by foundries or integrated manufacturers
“packaging”	the process of enclosing a semiconductor die in a protective case or substrate that provides electrical connections, thermal management, and physical protection for the IC
“PCI Express” or “PCIe”	a high-speed serial computer expansion bus standard
“post-silicon”	the phase of IC development that occurs after the physical silicon chip has been manufactured, encompassing testing, validation, debugging, and characterization of the actual hardware
“PPA”	Power, Performance, and Area, three key metrics used to evaluate the quality and efficiency of a silicon chip design
“RISC-V”	the fifth version of Reduced Instruction Set Computing, an open-source instruction set architecture
“RTL”	Register Transfer Level, a design abstraction level used in digital circuit design to model the flow of data between hardware registers and the logical operations performed on that data
“SerDes”	serializer/deserializer, a technology used in high-speed communications to compensate for limited input and output
“system-on-chip” or “SoC”	an IC that integrates all or most components of a computer or electronic system onto a single chip
“tape-out”	the final stage of the IC design process when the completed chip design is sent to the foundry for manufacturing

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“TOPS”	trillions of operations per second, a unit that measures AI computing power
“validation”	the process of testing and verifying that a manufactured silicon chip functions correctly and meets all specifications, performance targets, and reliability requirements in real-world operating conditions