
GLOSSARY OF TECHNICAL TERMS

In this document, unless the context otherwise requires, explanations and definitions of certain terms used in this document in connection with our Company and our business shall have the meanings set out below. The terms and their meanings may not always correspond to standard industry meaning or usage of these terms.

“AC”	alternating current, an electrical current that periodically reverses direction
“ADC” or “analog-to-digital converter”	a converter that changes analog signals into digital data
“ADAS”	advanced driver-assistance systems, electronic systems in a vehicle that use sensors and software to assist a driver with driving and parking functions
“AEC-Q100”	a failure mechanism-based reliability test qualification for packaged ICs established by the Automotive Electronics Council for use in automotive applications
“AI”	artificial intelligence
“AMR”	anisotropic magnetoresistance, a magnetic field detection technology based on resistance changes due to electron alignment
“AMOLED”	active-matrix organic light-emitting diode, a display technology using an organic compound layer that emits light when an electric current is applied
“amplifier” or “AMP”	an electronic device or circuit that increases the power, voltage, or current of a signal
“analog IC”	IC that transmits, transforms, processes, amplifies, measures and displays analog signals, including analog signal ICs and mixed-signal ICs
“AR/VR”	augmented reality/virtual reality; AR overlays computer-generated images on a user’s view of the real world, while VR replaces the user’s real-world environment with a simulated one
“ASIC”	application-specific IC, a type of IC that is customized to the needs of a specific application
“AspenCore”	a global media group serving the electronics industry and technology community with news, analysis, and data, whose publications include EE Times and EDN
“BCD”	a monolithic integration process technology that allows for the integration of Bipolar, CMOS, and DMOS, enabling robust and power-efficient ICs

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“BCM”	body control module, an electronic control unit in a vehicle responsible for controlling various body electronics functions, such as lighting, power windows, and door locks
“BMS”	battery management system, an electronic system embedded within NEVs that monitors, controls and optimizes the performance, safety and longevity of the vehicle’s battery pack
“CMOS”	complementary metal-oxide-semiconductor, a technology for manufacturing ICs known for low static power consumption
“CPU”	central processing unit, the central unit in a computer containing the logic circuitry that performs the instructions of a computer program
“DAC” or “digital-to-analog converter”	a converter translating digital signals into analog form
“DC/DC”	converts direct current from one voltage level to another
“Delta-Sigma ADC”	a type of ADC architecture that uses oversampling and noise-shaping to achieve high resolution, suited for precise measurement of low-frequency signals
“DrMOS”	driver-MOSFET, a type of highly integrated power device combining a gate driver and power MOSFETs in a single package
“E/E Architecture”	electrical/electronic architecture, the overall layout of a vehicle’s electrical and electronic systems, including ECUs, sensors, and wiring
“ECU”	electronic control unit, a generic term for any embedded system in automotive electronics that controls one or more electrical systems in a vehicle
“EDA”	electronic design automation tools, a category of software tools used for designing electronic systems such as integrated circuits and printed circuit boards
“EEPROM”	electrically erasable programmable read-only memory, a type of non-volatile memory that can be electrically erased and reprogrammed in-circuit, commonly used for storing small amounts of data that must be retained without power
“eFuse”	electronic fuse, a circuit protection device designed to protect electronic circuits from overcurrent conditions, which is resettable
“ESD/TVS”	electrostatic discharge/transient voltage suppressor, devices designed to protect electronic circuits from damage caused by sudden and momentary electric currents or voltage spikes

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“ESS”	energy storage system, a system that captures energy for later use, often referring to battery-based systems that store electrical energy
“EV”	electric vehicle, a vehicle powered by one or more electric motors, using energy stored in rechargeable batteries
“fables”	a business model where a company designs and sells semiconductor chips while outsourcing the fabrication to a specialized foundry
“field effect transistor”	a semiconductor component that controls the current in the output circuit by leveraging the electric field effect in the input circuit
“foundry”	a manufacturer specializing in the manufacture of ICs for other companies
“frequency”	the rate at which a power electronic device, such as a switch or rectifier, operates. It is a crucial factor influencing the performance and efficiency of power systems
“GaN”	gallium nitride, a binary III/V direct bandgap semiconductor well-suited for high-power transistors capable of operating at high temperatures
“high-performance computing”	the practice of aggregating computing power to deliver much higher performance than a typical desktop computer
“Hz”	hertz, a measurement of frequency
“IC” or “integrated circuit”	a small electronic device made of semiconductor materials like silicon that contains multiple interconnected electronic components such as transistors, resistors, and capacitors on a single chip
“IoT”	internet of things, the network of physical objects embedded with sensors and software to connect and exchange data over the internet
“Iq”	quiescent current, the current consumed by an electronic circuit in a quiet state with no load. A low Iq is critical for extending battery life in battery-powered devices
“ISO 26262”	an international standard for functional safety of electrical and/or electronic systems in production automobiles
“LCD”	liquid crystal display, a flat-panel display technology that uses the light-modulating properties of liquid crystals, typically in conjunction with a backlight, to produce images

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“LDO”	low dropout regulator, a type of linear voltage regulator that can operate with a very small input-to-output voltage differential
“LED”	light-emitting diode, a semiconductor diode that emits light when voltage is applied
“LiDAR”	light detection and ranging, a remote sensing method that uses a pulsed laser to measure ranges to objects
“MOSFET”	metal-oxide-semiconductor field-effect transistor, a type of transistor used for amplifying or switching electronic signals
“MSCI”	Morgan Stanley Capital International, a global provider of investment decision support tools, including stock market indices, portfolio analytics, and ESG research and ratings for companies
“MSPS”	mega samples per second, a unit of sampling rate for ADCs
“NEV”	new energy vehicle, a term referring to vehicles that are fully or partially powered by electricity
“on-board charger”	a device in an EV that converts AC power from an external source to DC power to charge the vehicle’s battery
“OEM”	original equipment manufacturer, a company that produces parts and equipment that may be marketed by another manufacturer
“operational amplifier” or “op amp”	a DC-coupled electronic voltage amplifier with a differential input and typically a single-ended output. It amplifies the voltage difference between its two inputs
“OSAT”	outsourced semiconductor assembly and test
“OSAT provider” or “packaging and testing provider”	outsourced semiconductor assembly and test provider, a provider that provides third-party IC packaging and testing services, abbreviated as packaging and testing provider
“PD/QC”	power delivery and quick charge, which are widely adopted fast-charging protocols that allow for higher power to be delivered to devices, reducing charging times
“Pipeline ADC”	a high-speed ADC with a multi-stage structure that achieves high-speed data conversion through staged processing

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“PLC”	programmable logic controller, an industrial computer used to automate electromechanical processes by monitoring inputs from sensors and controlling outputs such as motors and actuators based on a user program
“PMU”	power management unit, an ICs that consolidates and manages the power supply for various components within an electronic system
“point-of-load Converter”	a DC/DC converter placed very close to the circuit it is powering to reduce power loss and improve voltage regulation
“PSRR”	power supply rejection ratio, a measure of a circuit’s ability to reject noise from its power supply voltage
“R&D”	research and development
“RF”	radio frequency, a range of electromagnetic wave frequencies used for wireless communication
“SAR ADC”	successive-approximation-register ADC, a type of ADC that converts an analog waveform to a digital representation via a binary search, offering a balance of speed, resolution, and power consumption
“semiconductor”	a material, such as silicon, which has an electrical conductivity between that of a conductor and an insulator
“sensor”	a component or device that measures or detects the state of the real world, such as motion, heat or light, and converts the conditions into analog or digital signals
“SiC”	silicon carbide, a wide-bandgap semiconductor composed of silicon and carbon, ideal for high-power applications
“signal chain”	the path an analog signal takes through a system from acquisition to processing, typically including components for signal conditioning and data conversion
“SIMO”	single-inductor, multiple-output, a DC/DC converter architecture that uses a single inductor to generate multiple regulated output voltages
“SNR”	signal-to-noise ratio, a measure that compares the level of a desired signal to the level of background noise
“SSD”	solid-state drive, a data storage device that uses integrated circuit assemblies to store data persistently

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“tape-out”	the final stage of the IC design process, where the finalized design data is sent to a semiconductor foundry for wafer manufacturing
“TEC”	thermoelectric cooler, a solid-state heat pump that transfers heat from one side of the device to the other when direct current is applied, used for precise cooling of electronic components
“TDFN”	thin dual flat no leads, a type of small, leadless surface-mount package for integrated circuits, characterized by its low profile and contact pads on the underside of the package
“total harmonic distortion”	a measurement of the harmonic distortion present in a signal
“Tier-1”	automotive system integrator(s), company(ies) that supply(ies) assembled components or systems directly to OEMs. Tier-1 suppliers need to work closely with OEMs during the design and development stages of vehicles, ensuring the integration of their components into the final product
“V”	basic unit of voltage
“voltage”	electrical potential difference between two points in a circuit