
GLOSSARY OF TECHNICAL TERMS

“ADAS”	advanced driver-assistance systems, designed to assist drivers in the operation and safety of vehicles, by utilizing various sensors, cameras, and software algorithms to provide additional functionalities and enhance the driving experience
“AI”	artificial intelligence
“AOI”	automated optical inspection, a system that uses digital optical equipment to automatically inspect the appearance of circuit patterns
“API”	application programming interface, a type of software interface offering a service to other pieces of software
“APS”	advanced planning and scheduling
“AR”	augmented reality, a technology that overlays virtual digital images and information onto real world environment
“ASIL”	automotive safety integrity level, a risk classification scheme defined by ISO 26262 and there are four ASIL levels identified by the standard, namely ASIL A, ASIL B, ASIL C and ASIL D, among which ASIL D dictates the highest integrity requirements on the product and ASIL A the lowest
“CMMM”	the China Manufacturing Maturity Model, specifically standard GB/T 39116–2020, outlines five levels of intelligent manufacturing capability, ranging from planning (Level I) to leading (Level V)
“CPU”	central processing unit, a complex set of electronic circuitry that runs the machine’s operating system and apps
“ECU”	electronic control unit an embedded system or micro-controller-based device that controls one or more electrical systems or subsystems
“E/E”	electronic/electrical
“EHS”	environmental health and safety
“ERP”	enterprise resource planning
“EV”	electric vehicle
“generative AI”	generative artificial intelligence, a type of artificial intelligence that creates new content by learning patterns from existing data and generating original outputs
“HMI”	human-machine interface
“HUD”	head-up display, projects driving related information onto the windshield or a small screen in front of the driver
“IATF 16949”	international technical specification of automotive industry quality management system, which prepared by International Automotive Task Force (IATF) and ISO
“ICT”	in-circuit testing, a testing mechanism designed to evaluate and verify individual components on a PCBA

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“ISO”	International Organization for Standardization, an independent, non-governmental organization that develops and publishes international standards
“L1”, “L2”, “L3”, “L4”, “L5”	level 1, level 2, level 3, level 4 and level 5, the levels of autonomous driving, also known as taxonomy of driving automation for vehicles, categorize the extent to which a vehicle is capable of operating without human intervention, which levels are defined by State Administration for Market Regulation, China National Standardization Administration, see “Industry Overview” for further details
“L2 + ”	level 2 + , a commonly used term in the industry to describe system that requires constant human supervision and can offer functions surpassing L2 but not fully reaching L3
“LCD”	liquid-crystal display, a flat panel display technology that uses liquid crystals to modulate light and create images
“MES”	manufacturing execution system
“NPU”	neural processing unit, a microprocessor that specializes in the deployment of machine learning algorithms
“OLED”	organic LED, a flat panel display technology used in devices like TVs, monitors, and smartphones
“OS”	operating system
“OTA”	over-the-air, the transfer of information (telecommunication) to enable remote software and firmware updates to vehicle systems without requiring physical access
“PCB”	printed circuit board
“PCBA”	PCB assembly, a PCB populated with electronic components
“robovan”	an autonomous driving van mainly designed for cargo delivery
“SiP”	System-in-Package, an advanced semiconductor packaging technology that integrates multiple electronic components, such as processors, memory, sensors, and passive elements, into a single compact module. These components are connected internally, allowing the SiP to perform as a complete functional system while saving space and improving performance in electronic devices
“SMT”	surface mount technology, a method in which the electrical components are mounted directly onto the surface of a PCB
“SoC”	system-on-chip, programmable IC that integrates CPU, memory interfaces, on-chip input/output devices, input/output interfaces, and secondary storage interfaces, often alongside other components such as radio modems and a graphics processing unit, all on a single substrate or microchip
“TOPS”	tera operations per second

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“V2X”	vehicle-to-everything, referring to the communication between a vehicle and any entity that may affect, or may be affected by, the vehicle
“WMS”	warehouse management system