

GLOSSARY

This glossary contains explanations of certain technical terms used in this Document. As such, these terms and their meanings may not correspond to standard industry meanings or usage of these terms.

“AI”	artificial intelligence
“API”	application programming interface, a set of predefined rules, protocols and tools that allow users to integrate AI capabilities into applications, websites or software
“CAGR”	compound annual growth rate
“Cartesian robot”	a type of industrial robot that operates based on linear motion along three mutually perpendicular axes, typically the X, Y and Z axes, enabling precise positioning and repeatable movement within a rectangular working envelope. Cartesian robots are commonly driven by linear actuators or servo-controlled systems and are widely used in industrial automation applications such as material handling, pick-and-place operations, injection molding part removal, assembly and machining processes, where high accuracy, rigidity and ease of programming are required
“cloud-edge-end”	a system deployment architecture in which: (i) the “cloud” typically refers to brain models deployed in data centers or servers, primarily responsible for general reasoning, complex decision-making, long-term memory, model training, global coordination and strategic decision-making; (ii) the “edge” typically refers to master control units deployed on the robot side, primarily responsible for real-time perception, motion generation, localized decision-making, task execution and safety monitoring; and (iii) the “device” typically refers to joint actuators, sensors and similar components, primarily responsible for sensor data acquisition, emergency stop functions and control execution
“CNC”	computer numerical control, a technology that enables the automated control of machine tools through programmed instructions encoded in numerical data
“consumer electronics”	electronic devices and equipment designed for everyday personal or household use, including products for communication, entertainment, information processing and home applications
“embodied AI”	the integration of artificial intelligence into physical systems, enabling them to interact with the physical world. These systems can include general-purpose robots, humanoid robots and etc.

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“EtherCAT”	Ethernet for Control Automation Technology, an Ethernet-based fieldbus system developed for real-time industrial automation communication
“EtherCAT bus communication”	Ethernet for Control Automation Technology, an Ethernet-based open real-time industrial communication protocol designed to enable deterministic data transmission with microsecond-level cycle times among industrial control devices
“GFA”	gross floor area
“GTRT”	gear-driven cradle rotary table technology
“heterogeneous SoC-based control”	a control architecture utilizing a heterogeneous system-on-chip, where multiple processing units with different computing architectures are integrated on a single chip to collaboratively perform motion control and related processing functions
“humanoid robot”	a robot engineered to resemble the human body in shape and form, typically featuring human-like mobility and autonomous decision-making capabilities to perform complex tasks in real-world environments
“I/O”	input/output, referring to the communication interface between a control system and external devices or signals, through which data, commands or status information are received (input) and transmitted (output). I/O is commonly used in industrial automation and control systems to connect sensors, actuators, machines and peripheral equipment, enabling monitoring, control and coordination of system operations
“I/O control”	a signal chain management process in industrial automation systems whereby physical input signals from sensors, switches and similar devices are conditionally acquired, processed through control logic operations, and converted into control commands transmitted to actuators such as drives and valves
“injection molding machine”	machine that transforms raw plastic pellets into finished parts by heating the plastic until it melts, injecting it into a mold, and cooling it to solidify into the desired shape

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“IntarkDB”	a database platform developed based on openGauss, designed to serve as a data infrastructure for embodied AI and industrial applications. IntarkDB supports the collection, storage, management and analysis of industrial data, enabling the integration of perception, decision-making and execution data across robotic and automation systems. It is intended to support the evolution of industrial robots from traditional programmable equipment to intelligent agents with enhanced sensing, decision-making and execution capabilities
“IT”	information technology
“multi-joint robot”	robot that takes rotating joints as its main motion units and achieve spatial movement with multiple degrees of freedom through the combination of multiple joints
“OT”	operational technology, referring to hardware and software systems used to monitor, control and operate physical devices, processes and industrial equipment
“PLC”	programmable logic controller, a specialized industrial control device designed to perform real-time control of machinery and industrial processes
“QsemOS”	an embedded operating system developed based on the openEuler operating system. QSemOS is engineered for industrial and robotic applications, supporting real-time performance, system stability and security requirements, and provides an operating system foundation for industrial control, robotic control and other automated manufacturing equipment
“R&D”	research and development
“RGM”	real-time general motion, referring to a motion control framework or interface that supports deterministic, real-time control of multi-axis motion in industrial automation and robotic systems
“SCARA”	selective compliance assembly robot arm, with the ability to move freely and maintain stiffness in four axes while being compliant in the final axis
“UV printing”	a printing process that uses ultraviolet light to rapidly cure or dry inks during printing. UV printing enables high-resolution, durable and fast-drying prints and is widely applied in industrial manufacturing for surface marking, decoration and functional printing, particularly in automated production lines