
GLOSSARY OF TECHNICAL TERMS

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

“AI”	artificial intelligence
“AI-enabled”	the integration of artificial intelligence technologies to enhance the intelligence of products, services, or processes, with AI governing only a subset of crucial functions rather than the entire operational system
“algorithm”	a step-by-step procedure or set of rules, often implemented in computer code, designed to perform a specific task or solve a particular problem
“API”	application programming interface, a method for different software applications to communicate with each other
“Architect Accountability System”	the R&D management model that gives lead architects full authority over project definition, technology roadmap, system design, and performance evaluation
“BASH”	brain assisted supervision hub + , a cloud-based platform that enables human experts to efficiently supervise, guide, and correct multiple robots in real-time, embodying the “human-in-the-loop” and “fast thinking” paradigm
“BOM” or “bill of materials”	a comprehensive list of raw materials, components, and parts required to manufacture a product, including their specifications and quantities
“CAGR”	compound annual growth rate
“closed-loop quality control”	a system where inspection data is automatically fed back to the production or repair process to immediately make corrections, creating a self-optimizing cycle that continuously improves quality
“cloud-edge-device”	a hierarchical computing architecture that distributes workloads across three layers to optimize efficiency, speed, and reliability
“cold start problem”	the common challenge of starting a new system (like a robot in a factory) that has no prior data or experience in that specific environment, making initial performance poor
“conditional diffusion models”	a generative AI technique that creates synthetic data or variations of samples based on specific conditions, used for augmenting training datasets
“data flywheel”	a self-reinforcing loop where the use of a product generates data, which is used to improve the product, which attracts more users, which in turn generates even more data, creating a powerful cycle of continuous improvement
“data moat”	a competitive advantage formed by large-scale proprietary datasets that are difficult for competitors to replicate, protecting a company’s technological leadership

GLOSSARY OF TECHNICAL TERMS

“DDD”	Domain-Driven Design, a software development methodology that structures system design around core business domains, ensuring that technical implementation closely reflects real-world business logic
“Digital Twin Simulation”	a high-fidelity virtual model of physical industrial systems used to test, validate, and optimize robotic solutions before physical deployment
“Dynamic Quality Intelligence” or “DQI”	the self-developed quality and process data management system that performs real-time analysis of process data, enables adaptive quality standards, and provides feedback for production optimization
“embodied intelligence”	the deep integration of artificial intelligence into the physical form of a robot, enabling human-like perception, learning, and adaptive capabilities
“embodied intelligent”	the integration of AI technologies, including deep reinforcement learning, multimodal fusion, and AI models, into physical entities to autonomously drive all critical functionalities of an intelligent system, such as perception, learning, decision-making and execution
“embodied intelligent industrial robot” or “EIIR”	a robot integrated with artificial intelligence that is capable of autonomously perceiving, learning, deciding and executing tasks in complex industrial environments, and represents our flagship product line
“End-Effector”	the device or tool attached to the end of a robotic arm, designed to interact with the environment, such as grippers, welders, or inspection instruments
“ERP”	enterprise resource planning, an integrated software platform used to manage key business operations such as production planning, procurement, inventory, and supply chain coordination
“fast and slow thinking”	a core AI philosophy where “fast thinking” refers to real-time, on-robot processing for immediate tasks and reactions, while “slow thinking” refers to deeper, offline processing in the cloud for learning, optimization, and improving the overall model
“few-shot learning”	a machine learning technique that enables a model to understand and perform a new task after being shown only a very small number of examples, dramatically reducing the data required for adaptation
“Fly-Scan”	the proprietary high-speed robotic scanning technology that enables smear-free imaging during continuous motion, significantly improving inspection efficiency
“FMCG”	fast-moving consumer goods
“full-stack development”	the in-house development of both hardware and software components across all layers of a technology system, ensuring tight integration and optimization

GLOSSARY OF TECHNICAL TERMS

“GPU”	graphic processing unit, a specialized electronic circuit designed to rapidly manipulate and alter memory to accelerate the creation of images
“gray-box testing”	a testing method that evaluates a system using partial knowledge of its internal structure while validating its behavior in a real-world operating environment
“human-in-the-loop”	a core paradigm where human intelligence is strategically integrated into the AI system’s operation, particularly for tasks requiring judgment, expertise, or correction, which then improves the AI’s automated performance over time
“IDC”	International Data Corporation, a globally renowned market intelligence firm
“Industrial Cognitive Model Library”	a proprietary library of AI-powered process models built through Human-in-the-Loop training, covering applications such as defect detection, welding inspection, and surface analysis in industrial production
“low-code process engine”	a software development approach that enables users to design and deploy process workflows with minimal coding, often through graphical interfaces
“MIM”	Metal Injection Molding, a manufacturing process that combines the design flexibility of plastic injection molding with the strength and integrity of machined metal. It is typically used to produce small, complex, and high-precision metal parts in large volumes
“mm”	millimeter
“mm/s”	millimeters per seconds, the number of millimeters traveled in second
“multi-axis robot”	a common type of industrial robotic arm with multiple points of movement (or “degrees of freedom”), allowing it to move and orient a tool with flexibility
“obstacle avoidance”	the capability of a robotic system to detect and avoid obstacles during operation, ensuring safe and efficient task execution
“OCT”	optical coherence tomography, an imaging technology that uses light to capture high-resolution, micrometer-level 3D cross-sectional images from within a scattering material (like plastic or glass), allowing it to see internal structures and defects that are invisible to surface-level cameras
“OTA”	over-the-air, a method of wirelessly distributing software updates, configuration files, and data to devices remotely via the internet, eliminating the need for physical access or manual intervention
“PCBA”	printed circuit board assembly, a printed circuit board with electronic components mounted and soldered onto it, ready for testing and use in electronic devices

GLOSSARY OF TECHNICAL TERMS

“PMD”	phase measuring deflectometry, a highly precise optical metrology technique that measures tiny distortions in light reflections from a surface to reconstruct and inspect the 3D shape, curvature, and surface quality of specular (shiny, mirror-like) objects
“point generation”	the process of defining specific operating points, such as grasping positions or welding spots, to guide robotic actions with precision
“R&D”	research and development
“SA”	the Subsystem of Algorithm, a platform used for developing, training, and refining AI algorithms for industrial robotics applications
“SC”	the Subsystem of Control, the proprietary general-purpose inference architecture embedded in edge computing systems, integrating decision-making and control to enable autonomous operations
“SO”	the Subsystem of Operations, a platform that supports real-time operational management, monitoring, and optimization of robotic systems
“ST”	the Subsystem of Digital Twin, a simulation system for testing, validating, and optimizing AI models in simulated industrial environments before deployment
“TDD”	Test-Driven Development, a software development methodology where test cases are written before code implementation, ensuring that each function is validated throughout development
“trajectory generation”	the process of generating an optimal path or motion trajectory for a robot to follow, balancing efficiency, accuracy, and collision avoidance in real time
“ViT structure”	vision transformer structure, a modern neural network architecture that uses a “transformer” model (originally for language) to process images by breaking them into patches, enabling a powerful understanding of global context and relationships within an image
“VLA Model(s)” or “Vision-Language- Action Model(s)”	AI models designed to integrate vision, language, and action, enabling robots to understand natural language and visual inputs to perform autonomous decision-making and task execution
“V&V”	Verification and Validation, a systematic process in R&D to confirm that a system is built correctly (verification) and that it meets user needs and requirements (validation)
“Yixiu Cloud”	the proprietary central data platform that coordinates with other capability platforms to enable data management, training, and deployment of industrial AI models
“3C electronics”	computer, communication and consumer electronics products, including but not limited to personal computers, smartphones, tablets, smart wearables and other related electronic devices
“6DoF”	6-degree-of-freedom, a computer vision technology that identifies an object’s precise position (X, Y, Z coordinates) and orientation (roll, pitch, yaw) in 3D space, giving a complete understanding of how it is placed