

APPENDIX IX

GLOSSARY OF TECHNICAL TERMS

This glossary of technical terms contains terms used in this document as they relate to our business. As such, these terms and their meanings may not always correspond to standard industry meaning or usage of these terms.

“advanced industries”	high-tech-driven industrial sectors, primarily including semiconductors, electrification, electronics, automotive, display panels, photovoltaic, new energy batteries and high-end equipment manufacturing
“AI”	artificial intelligence, intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans or other animals
“AMS”	alarm management system, a software that collects real-time alarm data from individual equipment and systems to reduce the risk of quality issues
“APC”	advanced process control, a software-based solution that analyses real-time data and measurement data generated during operation for real-time optimization and control of recipe parameters
“APS”	advanced planning and scheduling, a software-based solution that optimizes production planning and scheduling on a real-time basis by building specialized engines for various manufacturing fields and developing simulation models
“application”/“software”	any set of machine-readable instructions that directs a computer’s processor to perform specific operations
“back-end”	manufacturing process consisting of cutting out semiconductor chips from wafers, packaging, assembly and inspection
“big data”	the use of advanced analytic techniques against large, diverse sets of information, which greatly exceed the capabilities of traditional database software tools in terms of data collection and analysis, to uncover hidden patterns, correlations and other useful information that can help organizations make more informed decisions
“CAGR”	compound annual growth rate, a method of assessing the average growth of a value over a certain time period
“CCMS”	cost control management system, a software-based solution that supports financial accounting, multi-dimensional analysis and cost optimization of semiconductor manufacturers
“chip probing”	the testing of various performance and functional parameters of wafer-level integrated circuits

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“CIM”	computer integrated manufacturing, an attempt to combine existing computer technologies in order to manage and control the entire production lifecycle. A CIM system is an integrated system that encompasses all the activities in the production system from the planning and design of a product through the manufacturing system, including control
“CMMI”	Capability Maturity Model Integration, a process level improvement training and appraisal program. CMMI is the successor of the capability maturity model and Level 5 is the highest maturity level
“COVID-19”	coronavirus disease 2019, a disease caused by a novel virus designated as severe acute respiratory syndrome coronavirus 2
“CoWoS”	Chip on Wafer on Substrate, a 2.5D/3D packaging technology widely used in high-performance computing, AI chips, graphics processing units and other fields
“customer(s)”	customer(s) for a given year/period refers to those who contributed revenue in the same year/period; in particular, in terms of the five largest customers for each year/period during the Track Record Period, an entity that contributes revenue through multiple of its subsidiaries and branch offices in a given year/period is counted as one customer in that year/period; whereas customers in other contexts, such as the number of customers, are counted on a stand-alone basis where multiple revenue-contributing subsidiaries and branch offices represent multiple customers
“digital twin”	a virtual representation of an object or system designed to reflect a physical object accurately
“DMS”	defect management system, a software-based solution for defect analysis and automated defect data processing
“DWMS”	data warehouse management system, a software-based solution that support enterprise digital transformation by integrating data across the organization and enhancing data management efficiency
“EAM”	enterprise asset management, a software system used to manage the lifecycle of an organization’s physical assets and equipment
“EAP”	equipment automation program, a software-based solution that serves as a bridge between MES (and other upstream systems) and manufacturing equipment to enhance overall efficiency in manufacturing processes

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“epitaxial wafer”	a wafer of semiconducting material made by epitaxial growth for use in photonics, microelectronics or photovoltaics
“ERP”	enterprise resource planning, a software system used to manage and streamline core business processes across an organization to provide a unified view of business activity
“eRPA”	e-robotic process automation, a software program that simulates human behavior to automate interactions with digital systems
“fab”	a factory for making advanced electronic products
“FDC”	fault defect and classification, a software-based solution that observes changes in equipment parameters and detect any adverse trends in the equipment to prevent or reduce production scrap
“foundry”	a facility that manufactures semiconductor chips for other companies
“front-end”	manufacturing process consisting of forming several layers of thin film on the surface of a wafer and manufacturing electronic circuits
“SMS”	subcon management system, a software-based solution that integrates with data of original equipment manufacturers to streamline the outsourcing process
“GaN”/“gallium nitride”	a binary III/V direct bandgap semiconductor well-suited for high-power transistors capable of operating at high temperatures. It is acknowledged for its capability to enhance power system efficiency, performance and system cost
“GFA”	gross floor area
“IDP”	intelligent document processing, a software system used to scan, read, extract, categorize and organizes meaningful information into accessible formats from large streams of data
“IGBT”	insulated-gate bipolar transistor, a power semiconductor device primarily used as an electronic switch
“inch”	the standard unit of measurement used to denote the diameter of substrates. In the semiconductor industry, the common sizes for substrates include 2-inch (50mm), 3-inch (75mm), 4-inch (100mm), 6-inch (150mm), 8-inch (200mm) and 12-inch (300mm)

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“integrated circuit”	integrated circuit, a type of miniature electronic device or component, manufactured using semiconductor techniques, integrating all the necessary transistors, resistors, capacitors, inductors and their connecting wires for a circuit onto a small semiconductor wafer (such as a silicon chip or substrate), which is then soldered and encapsulated within a casing to form an electronic device with the desired circuit functions
“IoT”	internet of things, the network of physical devices embedded with electronics, software, sensors and network connectivity, which enables these objects to collect and exchange data, allowing these devices to communicate with each other and with users
“ISA-95”	also known as ANSI/ISA-95 or IEC 62264, is an international set of standards aimed at integrating logistics systems with manufacturing control systems. It organizes technology and business processes into layers defined by activities taking place, and it outlines how an enterprise can set up an interface to communicate among these layers
“ISO”	the International Organization for Standardization, a worldwide federation of national standards bodies
“ISO9001”	the International Quality Management System standard published by the ISO
“ISO14001”	the Environmental Management System standard published by the ISO
“ISO20000”	the Information Technology Service Management System standard published by the ISO
“ISO27001”	the Information Security Management Systems standard published by the ISO
“ISO45001”	the Occupational Health and Safety Management System standard published by the ISO
“IT”	information technology
“KPI”	key performance indicator
“MCS”	material control system, a software-based solution to manage plant-wide material transport routes and optimize production efficiency
“memory”	a type of semiconductor device tasked with storing data

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“MES”	manufacturing execution system, a software-based solution that integrates and manages the entire manufacturing process to ensure real-time monitoring and control
“MESA”	Manufacturing Enterprise Solutions Association. The MESA-11 model defines the 11 core MES functions: resource allocation and status, operations/detailed scheduling, dispatching production units, document control, data collection and acquisition, labor management, quality management, process management, maintenance management, product tracking and genealogy and performance analysis
“MessageBus”	an app server to enable reliable and efficient communication across systems and components within the manufacturing environment
“middleware”	software that different applications use to communicate with each other
“Monitoring”	a web standard modular software product that integrates and allows users to view various complex data and visualization components of a manufacturing facility
“MOSFET”	metal oxide semiconductor field effect transistor, used for amplifying or switching electronic signals
“neural network”	a method in AI that teaches computers to process data in a way that is inspired by the human brain. It is a type of machine learning process, called deep learning, that uses interconnected nodes or neurons in a layered structure that resembles the human brain
“OEE”	overall equipment effectiveness, a metric used to measure the effectiveness and performance of manufacturing processes or any individual piece of equipment
“package”/“packaging”	a process wherein a semiconductor chip is packaged in a form suitable for the electronic device
“PlantU”	Plant to You, the core brand of the Company
“power semiconductor”	a type of semiconductor device that is used as a switch or rectifier in power electronics, and serves as the core component of power supplies
“Pytest”	a Python testing framework
“Python”	a programming language that is widely used in web applications, software development, data science and machine learning

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“RCM”	remote control management, the use of remote centralized monitoring and control to enable direct management across multiple manufacturing facilities
“Report”	a system that supports multiple report creation modes and allows for flexible combinations of different layouts and formats using grid and chart components
“RFID”	radio-frequency identification, a form of wireless communication that uses radio waves signaled from electronic tags attached to objects to automatically identify and track such objects
“RMS”	recipe management system, a software that centralizes the management of production line equipment programs
“RPA”	robotic process automation, the use of software robots to automatically handle a large number of repetitive and rule-based workflow tasks
“RTD”	real time dispatch, a software-based solution that combines real-time work-in-progress status, equipment and process conditions as well as bottleneck situations to provide the optimal production sequence
“SEMI”	SEMI standards are voluntary technical agreements for the semiconductor, flat panel display, micro-electromechanical systems, photovoltaic and high-brightness LED industries
“silicon carbide”/“SiC”	a wide bandgap semiconductor material used in various electronic applications
“SEMI-E84 protocol”	SEMI E84 Specification for Enhanced Carrier Handoff Parallel I/O Interface, an international standard promulgated by Semiconductor Equipment and Materials International (SEMI)
“SPC”	statistical process control, a software-based solution to systemically monitor and regulate production processes
“virtual private network”	an encrypted connection to ensure that sensitive data is safely transmitted when using public network
“wafer”	a thin slice of semiconductor material, such as a silicon crystal, on which arrays of integrated circuits or discrete devices are fabricated during the manufacturing process
“WFA”	workflow automation, a visual workflow development platform to automate production business processes

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“WMS”	warehouse management system, a software-based solution to automate, manage, control and optimize warehouse business processes
“YMS”	yield management system, a software-based solution that analyses yield data to identify and address root causes of defects
“2.5D/3D”	packaging methodologies for including multiple integrated circuit inside the same package. In 2.5D structure, two or more active semiconductor chips are placed side-by-side on a silicon interposer to achieve extremely high die-to-die interconnect density. In 3D structure, active chips are integrated by die stacking for shortest interconnect and smallest package footprint
“5G”	the fifth-generation technology standard for cellular networks in telecommunications