

GLOSSARY OF TECHNICAL TERMS

“backplane”	large circuit board that contains circuitry and sockets to which additional electronic devices or other circuit boards or card can be plugged
“Berne Convention”	an international copyright treaty (formally International Convention For the Protection of Literary and Artistic Works) adopted by an international conference in Berne in 1886 and subsequently modified several times and has 147 contracting states as at 15th January, 2001. The core of the Berne Convention is its provision that each of the contracting countries shall provide automatic protection for works first published in other contracting countries and for unpublished works whose authors are citizens of or residents in such other countries. The convention requires member states to recognise the moral rights of integrity and attribution. Apart from the copyright protection within the country’s own legal system, the convention grants economic rights – exclusive rights to translate, reproduce, perform, or adapt protected works for as long as the life of the author plus 75 years
“BGA”	ball-grid array, an integrated circuit surface mount package with an area of solder balls used to attach integrated circuits to a printed circuit board
“BOM”	bill of materials, a comprehensive listing of all subassemblies, components, and raw materials that go into a parent assembly, showing the quantity of each required to make the assembly
“CAD”	computer aided design, a system where engineers create a design and visually inspect the image on a graphics screen or in the form of a computer printout or plot. In electronics, the result would be a printed circuit layout
“CAE”	computer assisted engineering whereby, in the context of electronics work, refers to schematic software packages
“CAM”	computer aided manufacturing, applications that use manufacturing specifications from CADs to control the manufacturing processes
“CCEE”	Certificate of Conformity for Electrical Equipment Committee (中國電工產品認證委員會), a state-level organisation for certification of quality standards of electrical equipment
“CEM”	contract manufacturer or contract electronics manufacturer, companies who manufacture electronic equipment on behalf of an ODM customer, in which the design and brandname belongs to the ODM
“circuit design”	design of circuit logic that allows electronic components to perform a specific function

GLOSSARY OF TECHNICAL TERMS

“component”	any of the basic parts used in building electronic equipment, such as a resistor, capacitor, PCB or connector, etc.
“CPCA”	China Printed Circuit Association
“design-for-manufacturability”	a product design concept during the design and development stage of an electronics products. During the product design stage, the product should be designed in a way that it can be tested for its functionality so that one can insure that the product meets the requirement(s) of its customer/user/owner/regulator. In order to improve timeliness and cost, great care should be taken to design the product to be easily tested
“design-for-testability”	a design approach to design products with an aim to enable that prototypes manufactured from such design will be testable
“DVD”	digital versatile disk
“dry film solder mask”	a solder mask film applied to a PCB with photographic methods. This method can manage the higher resolution required for fine line design and SMT. In terms of production cost, it is more expensive than a liquid photoimageable solder mask
“Electronic data interchange” or “EDI”	the electronic transfer of data over a network
“EMS”	electronic manufacturing services, which include the provision of contract design, manufacturing, and related product support services to electronics ODMs. The design will be owned by the ODM while the products will be sold under the ODM’s brand name
“ERP”	enterprise resource planning, an information system for effective planning and control of all enterprise-wide resources needed to take, make, ship and account for customer orders in manufacturing, distribution or service operations.
“functional tests”	tests that identify functional level faults in PCB assembly, including manufacturing related faults, timing related failures, and faults internal to components
“horizontal plating”	a new type of plating technology for PCB manufacturing that can better ensure the smoothness of the plating surface
“IC”	integrated circuit, a small-sized semiconductor device consisting of a large number of electronic components mounted on a piece of silicon

GLOSSARY OF TECHNICAL TERMS

“IC applications solutions”	in the context of this prospectus, it means PCB design solutions that target at maximising the performance of a new IC design. To provide this solution, companies must understand the function and design of an IC, and proactively develop a new PCB to complement the design of the new IC solution during the development of a new product
“Internet”	the combination of computer networks that use the same standard of protocols and that are connected to each other to form a single layer network through which file and data transfer together with electric mail function can be made available to users globally
“in-circuit test”	combination of hardware and software that identifies manufacturing induced faults of PCB assembly by isolating and individually testing devices using a bed-of-nails fixture. Potential faults include shorts, opens, wrong components, missing components
“IPC”	formerly known as The Institute for Interconnecting and Packaging Electronic Circuits, a trading association comprising PCB manufacturers, designers, suppliers and CEMs
“ISO 9000”	comprises a series of internationally accepted standards designed to assure customers of a quality management system resulting in the consistent delivery of quality products
“ISO 9001”	quality systems model for quality assurance in design, development, production, installation and servicing
“ISO 9002”	quality systems model for quality assurance in production, installation and servicing
“IT”	acronym for information technology
“just-in-time” or “JIT”	the materials management practices that minimise or eliminate the amount of product brought into inventory by setting up a delivery schedule that brings materials directly from the supplier to the production floor
“laser drilling”	a drilling process that uses a focused laser beam to drill holes that are less than 0.2mm in diameter.
“LCD”	liquid crystal display
“micro-via processes”	means those drilling processes the purpose of which is to drill a micro hole on a PCB, including through-hole vias and blind vias

GLOSSARY OF TECHNICAL TERMS

“MIL”	Military Specification of the United States, which are standards originally developed for defence and aerospace related organisations but have later been adopted by many commercial and industrial companies ranging from telecommunications to medical
“NC drill”	numeric control drill machine, which is used to drill the holes in a PCB at exact locations as specified in a data file
“ODM”	original design manufacturer which owns the brand name and traditionally designs, manufactures, markets, and provides customer support for its product
“outsourcing”	the practice of subcontracting
“PCB”	printed circuit board, a flat plate or base of insulating material containing a pattern of conducting materials, which becomes an electrical circuit when components are attached and soldered to it
“PCB database”	all of the data fundamental to a PCB design, stored as one or more files on a computer
“PCB layout design”	the process of transforming the electrical design (functional or logical representation) into a physical object; the physical layout of placing components and routing of interconnect wires
“PCMCIA”	an international standards body and trade association with over 200 member companies that was founded in 1989 to establish standards for integrated circuit cards and to promote interchangeability among mobile computers. In the context of this prospectus, it refers to the standard(s) on PCBs established by this body
“PCB assembly”	integration of active and passive devices (electrical, electronic, optical and/or mechanical) on a PCB
“plasma etching”	plasma, in physics, refers to fully ionised gas of low density, containing approximately equal numbers of positive and negative ions. It is electrically conductive and is affected by magnetic fields. Plasma etching is a method of making prints from a metal plate on PCB, usually copper, into which the design has been incised by acid. The copper plate is first coated with an acid-resistant substance, called the etching ground, through which the design is drawn with a sharp tool. The ground is usually a compound of beeswax, bitumen, and resin. It is a new technology for drilling holes that are less than 0.2mm in diameter
“prototype”	a working model of a product used to demonstrate the product, test design ideas for a complete version

GLOSSARY OF TECHNICAL TERMS

“QS 9000”	an internationally accepted standard developed for the motor vehicle industry
“quick-turn prototyping”	production on a quick turnaround basis of a small quantity of products that are used to prove the design
“SMT”	surface mount technology, a specialised manufacturing process used in the production of PCBs whereby electronic components, including ICs, are soldered onto the surface of the PCBs
“SMT line”	standard terminology for the automated manufacturing process for PCB assembly and testing, defined as having screen printing, placement, and reflow equipment
“schematic capture”	the process of entering the logical design of an electronic circuit into a CAE system by creating a schematic representation of components and interconnections
“software”	programs, data files, procedures, rules, and any associated documentation pertaining to the operation of a computer system or of a computer application
“statistical process control system”	a system that uses statistical techniques to analyse a process or its outputs, so as to take appropriate actions and achieve and maintain consistent quality in PCB fabrication
“sub-system”	a portion of a system that can be treated as a single element in the main system, but that can also be considered a distinct system itself
“supply-chain management”	the procurement, stocking and distribution of components, sub-assemblies and products throughout the design, manufacturing, and distribution stages, ensuring that the correct components, sub-assemblies and products are delivered to the appropriate destination at the proper time, with the lowest overall cost, and at acceptable quality levels
“system design”	designs that comprise the interaction and integration of sub-assemblies into a single assembly that performs an intended function. The sub-assemblies can consist of electrical, mechanical, optical and other components and software to achieve overall functionality. Examples include designing of personal computers, mobile phones and printers
“testing”	a method for determining whether sub-assemblies, assemblies and/or a finished product conform to a set of parameter and functional specifications. Test types include in-circuit, functional, system-level, reliability and environmental

GLOSSARY OF TECHNICAL TERMS

“through-hole” or “thru-hole”	having pins designed to be inserted into holes and soldered to pads on a PCB
“time-to-market”	the period of time to get a product from the product development stage to generating actual sales
“time-to-volume”	the period of time to get a product from the product development stage to volume production stage
“turnkey”	a type of outsourcing method that turns over to the subcontractor all aspects of manufacturing including materials acquisition, assembly and testing. Its opposite is consignment, where the outsourcing company provides all materials required for the products and the subcontractor provides only assembly equipment and labour
“turnkey sub-system solution”	a situation where a customer would outsource the engineering solution of a whole sub-system
“UL”	Underwriters Laboratories, Inc. an independent product safety testing and certification organisation
“Universal Copyright Convention”	an international copyright treaty adopted by an international conference in Geneva in 1952, which took effect in 1955 with an aim to ensure in all countries protection of literary, scientific and artistic works without impairing international systems already in force so as to facilitate a wider dissemination of works of human mind. The Universal Copyright Convention exists alongside the Berne Convention, which takes priority over it. The Convention provides for the same protection of foreign works as for domestic works in all countries, regardless of where the work was first published; it also provides exclusivity for translation rights of up to 7 years. The minimum term of copyright in member nation must be the life of the author plus 25 years and a formal copyright notice/symbol must appear in all copies of a work
“VCD”	video compact disk
“VCR”	video cassette recorder