



5N Plus Micro Powders

Booth #: 339

www.5nplus.com

5N Plus Micro Powders has developed a proprietary atomizing technology particularly effective in producing ultrafine metal powders ranging from 1 to 25 microns. The result of this technology development is powders with low oxygen content, high purity and high sphericity ideal for solder paste and conductive adhesive applications. Our flexible process is ideally suited for customized alloys and particle size distributions. We offer a wider range of Pb-free powders with melting temperatures ranging from 61°C to 1200°C. Our product line and technical support enables us to meet your current and next generation requirements as the drive to miniaturization in the microelectronic industry continues.

AdTech Ceramics

Booth #: 323

www.adtechceramics.com

AdTech Ceramics is a fully integrated US based manufacturer of high temperature co-fire ceramic (HTCC) electronic packages and precision injection molded ceramic components. Standard ceramic materials offered include multilayer aluminum oxide and aluminum nitride. AlN is often preferred due to its excellent thermal conductivity and desirable coefficient of thermal expansion. AdTech also produces chemically or CNC milled metal components including package lids, leads and seal rings. Our injection molded products can be provided as fired, with metallization and plating or as full ceramic-to-metal assemblies. In our continuous drive for innovation and advanced technology for our growing customer base, we have recently added copper thick film metallization on alumina or aluminum nitride and ENEPIG plating capabilities. Located in Chattanooga, TN and with over 45 years of experience producing multilayer ceramic packages, we are ideally positioned to take on your most challenging package designs. Originally established as American Lava in 1903, AdTech has been owned by 3M, GE and Coorstek prior to its becoming Advanced Technical Ceramics Company in 2004. AS9100C/ISO9001:2008 certified.

Advance Reproductions

Booth #: 204

www.advancerepro.com

Advance Reproductions is a leading supplier of high-quality, large-area and optical photomasks and phototools. Advance is an ISO 9001 and ITAR registered company. We support manufacturers throughout the world involved in the manufacturing of semiconductor, hybrid, microwave, nanotechnology, medical and electronic packaging devices. Advance Reproductions provides solutions and custom manufacturing services for research and development, custom shaped substrates and engineered tooling.

Advanced Dicing Technologies

Booth #: 117

www.adt-co.com

Advanced Dicing Technologies serves the micro electronics market with mechanical dicing equipment, blades, process develop, service and support. We offer single/twin spindle dicing equipment fully automatic or semi automatic configurations supporting 200mm/300mm substrates. ADT has a strength in hard materials processing such as ceramics and glass.

Advanced Substrate Microtechnology Corporation

Booth #: 224

www.advancedsubstrate.com

Advanced Substrate (ASMC) is the leader in producing substrates with complex design requirements. We build substrates on Al₂O₃, BeO, AlN, Zirconia, Glass, 12" Si wafer and other specialty materials with various types of conductors, insulators and passive components. ASMC works with customers to optimize their design and reduce manufacturing cost. All processes and procedures have been set up to comply with ISO9000 and MIL-PRF-38534. All products are manufactured in class10K equivalent clean room. ASMC provides a 100% turnkey solution from one location in North Carolina. Having in-house capabilities enables ASMC to provide the shortest cycle time for urgent customer orders and new prototype designs. Our customers' products serve in various industries: RF, Optical, Telecom, Defense, MEMS and Semiconductor.

AI Technology, Inc.

Booth #: 510

www.avantetech.com

AI Technology, Inc. (AIT) developed flexible epoxies for microelectronic packaging in 1985. Today, AIT's product line includes patented component, substrate and large die bonding adhesives and underfills, stack-chip packaging with dicing die-attach film (DDAF), flip-chip bonding and underfilling, single and multiple-chip module die bonding (230°C and above), and component and substrate bonding adhesives for military and commercial applications. AIT's thermal interface materials, including phase-change pads, greases, gels and adhesives, ensure ultimate performance in semiconductors, modules, computers and communication electronics applications.

Ajinomoto Fine-Techno USA Corporation

Booth #: 246

www.aft-website.com/en

Ajinomoto Fine-Techno is an "Innovation Provider" through fine chemicals. Our Key technologies are Molecular Design, Formulation, Process Development and Solution Proposal. "Ajinomoto Build-up Film" (ABF) is a insulation film for IC packages. ABF can make IC package smaller, thinner and higher performance by better insulation reliability, low CTE and low Df. For FOWLP and Panel Level Package, we can provide molding ink and film. Our molding material can reduce internal stress to get flat wafer/ panel after molding.

Akrometrix

Booth #: 100

www.akrometrix.com

Akrometrix is the worldwide leader of PCB and component thermal warpage metrology systems and test services for the electronics industry. We measure at-room-temperature warpage, thermal warpage [-50°C to 300°C], and thermal strain of substrates, materials, and electronic components and assemblies at critical reflow temperatures. Our technologies include: Shadow Moiré, Digital Fringe Projection (DFP), and Digital Image Correlation (DIC). Akrometrix equipment is capable of providing graphical, statistical, and tabular results to prove compliance to industry standards.

AMETEK Coining

Booth #: 337

www.ametek-ecp.com/coining

Coining Inc., a business unit of AMETEK Electronics Components and Packaging, is a global supplier of products for components manufacturing and the packaging and assembly of optical, automotive, medical, microwave and high-speed digital devices. We are a leading producer of solder and braze preforms consisting of high purity alloys of gold, silver, lead, tin, indium, bismuth and palladium. Coining also manufactures cover assemblies (lid with attached preform), gold and aluminum wire and ribbon, as well as Kovar™, molybdenum, copper, tungsten and multi-layer clad stamped parts used for jumper chips, bonding pads, tabs, heat sinks and lead frames. A variety of packaging options are offered including tape & reel and waffle pack.

AMICRA Microtechnologies

Booth #: 420

www.amicra.com

AMICRA Microtechnologies is a worldwide leading supplier of Die Attach Equipment specializing in submicron placement accuracy (+/- 0.5µm@3sigma). Equipment offering supports Die Attach and Flip Chip bonding processes including the following capability: in-situ eutectic bonding, dynamic alignment, heated tool, pulse heating, laser heating, volumetric and jet dispensing, active bond force control, high speed solutions, in-situ UV curing, 550x600mm bonding area, quantitative tilt calibration system, etc. Market focus: Opto, Silicon Photonics, AOC, VCSEL, Laser Diode, WLP, 2.5D/3D IC, TSV, TCB, Fan-out/EWLP. Other products include: High Speed Wafer Inking and Inspection, Automated LED/LD Test & Sort Systems, Gel Fill Line and Custom Solutions.

Amkor Technology

Booth #: 106

www.amkor.com

@AmkorTechnology

Amkor Technology, Inc. is one of the world's largest providers of outsourced semiconductor packaging and test services. Founded in 1968, Amkor pioneered the outsourcing of IC packaging and test, and is now a strategic manufacturing partner for more than 250 of the world's leading semiconductor companies, foundries and electronics OEMs. Amkor's operating base includes more than 10M ft2 of floor space, with production facilities, product development centers, and sales and support offices located in key electronics manufacturing regions in Asia, Europe and the U.S. For more information, visit www.amkor.com.

ASE Group

Booth #: 122+124

www.aseglobal.com/en

@asegroup_global

Alongside a broad portfolio of established technologies, ASE is also delivering innovative advanced packaging and System-in-Package solutions to meet growth momentum across a broad range of end markets. For more about our advances in SiP, WLP, Fan Out, MEMS, Flip Chip, and, 2.5D, 3D & TSV technologies, all ultimately geared towards applications to improve lifestyle and efficiency, please visit: aseglobal.com. To follow ASE on Twitter: @asegroup_global

ASM Pacific

Booth #: 524

www.asmpacific.com

ASM Pacific is the world leader in assembly and packaging equipment. We provide systems for every step from Laser Dicing to final package test handling. We have equipment for the IC, COB, LED and CMOS Imager markets.

Axus Technology

Booth #: 313

www.axustech.com

Axus Technology delivers CMP and substrate thinning process solutions for advanced packaging and other emerging technologies. With a fully staffed and equipped development facility, the highly-experienced Axus process engineering team can employ a range of technologies, including novel consumables, different types of process tools, and their unequalled experience to address the particular needs of our clients. Process capabilities include standard silicon materials, a range of III-V and II-VI materials and a variety of other substrate materials plus a wide range of thin-films. Substrates can be SEMI-standard size and shape as well as non-standard and large panels, up to 500mm. Whether the requirement is for a bonded wafer assembly, TSV/TGV, panel-level fan-out packaging, or other MEMS, photonics, and alternative advanced processes, the Axus Technology process team has the insight, experience, and equipment needed to address your evolving requirements. Axus Technology provides process services as well as process development consulting services. Processes can be developed and tested in Axus' Chandler, AZ process development facility and subsequently installed and tested at the user site. Axus Technology also delivers customized production equipment, installation and warranty services, and long-term equipment and process support.

Besi North America, Inc

Booth #: 528

www.besi.com

Besi is a leading supplier of semiconductor assembly equipment for the global semiconductor and electronics industries offering high levels of accuracy, productivity and reliability at a low cost of ownership. Besi develops leading edge assembly processes and equipment for leadframe, substrate and wafer level packaging applications in a wide range of end-user markets including electronics, mobile internet, computer, automotive, industrial, LED and solar energy. Customers are primarily leading semiconductor manufacturers, assembly subcontractors and electronics and industrial companies. Besi's ordinary shares are listed on Euronext Amsterdam (symbol: BESI), its Level 1 ADRs participate in the Nasdaq International Program (OTC: BESIY) and its headquarters are located in Duiven, the Netherlands.

Binghamton University - S3IP

Booth #: 123

www.binghamton.edu/s3ip

The New York State Center of Excellence in Small Scale Systems Integration and Packaging (S3IP) performs high-impact basic and applied research to support the technical translation of economically significant innovations such as electronics systems integration, flexible electronics, thin film solar power, energy management for electronic systems, new materials and sensors, and modeling, analysis and characterization, to national industry sectors. S3IP, a leading academic-industry-government partnership, is a critical participant in advancing these technologies and in training, with industrial partners, the essential educated work force. S3IP brings together an interdisciplinary, inter-institutional team of scientists, engineers and technologists, along with unparalleled infrastructure to achieve the following goals:

Develop novel research outcomes in emerging, people-friendly electronics;
Ensure economic development by providing a platform to assist with creation of new emerging technology companies;
Enhance US science and engineering education at all levels.

BTU International, Inc.

Booth #: 311

www.btu.com

BTU International, a wholly-owned subsidiary of Amtech Group (Nasdaq: ASYS), is a global supplier and technology leader of advanced thermal processing equipment solutions in the electronics manufacturing market. BTU's high-performance convection reflow ovens are used in the production of SMT printed circuit board assemblies and in semiconductor packaging processes. BTU also specializes in precision controlled, high-temperature belt furnaces for a wide range of custom applications, such as brazing, direct bond copper (DBC), diffusion, aluminum sintering and advanced solar cell processing. BTU has operations in Billerica, MA, USA, and Shanghai, China, with a sales and service presence in over 30 countries. Since 1950, and with over 10,000 units shipped, BTU International has been the trusted name for high-tech customers with a need to solve high-volume thermal processing challenges. BTU's products excel in processes where precise control of atmosphere and temperature are critical to product yield. Our extensive patent library includes traveling gas barrier technology among other advances. BTU is an ISO certified company in both the USA and China manufacturing facilities.

Cadence Design Systems

Booth #: 413

www.cadence.com

@cadence

Cadence enables global electronic design innovation and plays an essential role in the creation of today's integrated circuits and electronics, packages, and PCBs. Cadence® IC packaging and cross-domain co-design automation provide efficient solutions in system-level co-design and advanced mixed-signal packaging, delivering the automation and accuracy to expedite the design process. Cadence also offers an integrated system design solution for TSMC's advanced wafer-level Integrated Fan-Out (InFO) packaging technology. The solution includes implementation, signoff, and electrothermal analysis tools that enable concurrent multi-chip optimization for designs incorporating InFO technology. With complex advanced packages, designers are faced with power integrity (PI) and signal integrity (SI) issues driven by increasing IC speeds and data transmission rates combined with decreases in power-supply voltages and denser, smaller geometries. Stacked die and packages, higher pin counts, and greater electrical performance constraints are making the physical design of semiconductor packages more complex. To address these issues, Cadence provides advanced PI and power-aware SI Sigrity™ tools that can be used throughout the design process. For more information, visit www.cadence.com

Camtek USA Inc.

Booth #: 125

www.camtek.com

Camtek develops and manufactures state-of-the-art Inspection and Metrology systems for the Semiconductor industry. Camtek's Eagle line delivers unparalleled Inspection and Metrology solutions supporting the Semiconductor industry from R&D to the high production volume environment, providing combined 2D and 3D capabilities on the same platform. The Eagle is designed to support the increased requirements for inspection and metrology for the market's most demanding applications, including bumps, surface defects, post dicing, RDL and the emerging advanced packaging segment. Camtek Ltd. provides automated solutions dedicated for enhancing production processes and yield in three industries: Semiconductors, Printed Circuit Board (PCB) and High Density Interconnect Substrates.

Canon USA

Booth #: 135

www.usa.canon.com/industrial

Canon USA Industrial Products Division provides advanced wafer & panel process equipment for applications including semiconductor, Advanced Packaging & display. Canon provides cost-effective wafer processing solutions including i-line & KrF optical lithography, nanoimprint lithography & Canon Anelva deposition equipment. Canon also has a variety of panel based lithography & deposition solutions that can be extended to a variety of applications. Contact semi-info@cusa.canon.com for more info.

Cicor Group

Booth #: 242

www.cicor.com

Cicor is a global engineering and manufacturing partner with innovative technology solutions for the electronics industry. With about 1900 employees at ten production sites, Cicor manufactures highly complex flex, rigid-flex and rigid printed circuit boards, and hybrid circuits with thin- and thick-film technology. Cicor also offers complete electronic assembly with the latest packaging and interconnection techniques. The Group supplies customized solutions from design to finished product for international customers.

COMPUNETICS, INC

Booth #: 347

www.compunetics.com

Compunetics, Inc. is a leading manufacturer of advanced technology printed circuit boards, flex/rigid-flex circuits, RF/microwave PCB's, IC packaging substrates and embedded passives. Established in Pittsburgh in 1968, Compunetics focuses on time critical prototypes to low or medium volume US based production of advanced interconnects for leading defense, medical, ATE, semiconductor and instrumentation OEM's and CMs. Compunetics manufacturing site is a state of the art 50,000 sq. ft. facility with industry leading equipment and supported by industry's most educated and experienced workforce.

Conductive Containers, Inc.

Booth #: 530

www.corstat.com

At CCI, we eliminate ESD. Every day we take on ESD problems and wrestle them into submission. From material handling products to shippers and packaging to production process reviews. We know what it takes to eliminate ESD from your manufacturing and handling processes. Our path to leadership in the static safe packaging industry has included the invention of Corstat conductive corrugated materials in 1978 and the design of a broad scope of products using that material. Our roots go back to a passion for creating complete packaging materials for static sensitive products.

Corning

Booth #: 103

www.corning.com

We are one of the world's leading innovators in materials science. For more than 165 years, we've applied our unparalleled expertise in specialty glass, ceramics, and optical physics to develop products that have created new industries and transformed lives. We succeed through sustained investment in R&D, a unique combination of material and process innovation, and close collaboration with customers to solve tough technology challenges.

The Specialty Materials segment manufactures products that provide more than 150 material formulations for glass, glass ceramics and fluoride crystals to meet demand for unique customer needs. Consequently, this segment operates in a wide variety of commercial and industrial markets that include display optics and components, semiconductor optics components, aerospace and defense, astronomy, ophthalmic products, telecommunications components and cover glass that is optimized for portable display devices.

CWI Technical Sales

Booth #: 410

www.cwitechsales.com

CWI Technical Sales is a manufacturers' representative organization offering products & solutions to the semiconductor, optoelectronic, wireless, defense/aerospace, life sciences and other related industries.

Located in Central New Jersey, the company has been representing tier-one equipment suppliers on the east coast for over 30 years. These companies offer products in the test & measurement, wafer processing, inspection/metrology, backend operations and failure analysis areas.

CWI has maintained very strong relationships with its customers and is committed to delivering top quality solutions to them. We are a hands-on organization, making sure we know the products intimately. Our sales staff prides itself with understanding how the products operate and apply to our customers' applications.

CWI Technical Sales also employs a technical service support staff highly knowledgeable in hardware, software and automation, reinforcing our commitment to each customer's success.

cyberTECHNOLOGIES USA, LLC

Booth #: 130+132

www.cybertechtechnologies.com

cyberTECHNOLOGIES is a leading global provider of standalone and integrated high resolution Profile and 3D Optical Metrology Systems for non-destructive process control of surface topography, dimensional metrology, shape, film thickness and quality inspection of Integrated Devices, Wafers, MEMS, Solar Cells, Fuel Cells, Lenses, Printed Products, Chip Packages or any type of engineered surfaces.

Our systems reliably measure on absorbent, highly reflective, wet, soft or transparent materials with high vertical and lateral resolution even over very large areas of interest.

Our customers take advantage of the systems' easy to use software, automation capabilities, high speed, accuracy and comprehensive analytic capabilities in R&D and production in industries as varied as MEMS, automotive, medical devices, electronics manufacturing, semiconductors, solar, hybrid, pharmaceutical as well as optics manufacturing and more.

Deweyl Tool Company

Booth #: 104

www.deweyl.com

DeWeyl provides the finest quality bonding wedges in the world. Located in the Petaluma, CA, DeWeyl's primary business is manufacturing wire bond wedges and custom high precision tooling for the semiconductor, aerospace and medical industry. DeWeyl produces wedges made from ceramic, titanium and tungsten carbide for small and large round wire and ribbon applications.

DfR Solutions

Booth #: 400

www.dfrsolutions.com

@DfRSolutions

DfR Solutions is the leader in quality, reliability and durability solutions for the electronics industry. We support clients throughout the electronic component and material supply chain, and across a wide range of electronic technology markets including: avionics & aerospace, automotive, consumer, industrial, medical, military, solar and telecommunications. Our innovative Sherlock Automated Design Analysis™ software and industry expertise maximize and accelerate product design for reliability and development, helping clients save time, manage resources and improve customer satisfaction. Recognized as the world's authority in electronics reliability, we solve even the toughest quality, reliability and durability (QRD) problems, regardless of where they fall in the product lifecycle—and lend ongoing guidance backed by proven and sought-after engineering design knowledge and methodologies.

DOWA International Corporation

Booth #: 405

www.dowa-electronics.co.jp/en/index.html

DOWA is a Japanese material manufacturer of non ferrous metals and largest supplier of Ag powder. In this show, DOWA offers Nano Ag paste for soldering. DOWA's nano Ag paste has low soldering temperature, high shear strength, and high thermal conductivity.

Dupont Advanced Materials

Booth #: 504

www.mcm.dupont.com

DuPont has over 40 years of experience in the development, manufacture, sale, and support of specialized thick film and GreenTape(tm) low temperature co-fired ceramic (LTCC) compositions for a wide variety of printed electronic applications in the photovoltaic, display, automotive, biomedical, industrial, military, and telecommunications markets. We deliver solutions that lower the cost of ownership and improve performance, reliability and functionality. For more information please visit <http://mcm.dupont.com>.

East China Research Institute of Microelectronics

Booth #: 502

www.ecrim.cn

ECRIM engages in developing, manufacturing and sales of variety of Microelectronic and Package products. ECRIM is known for its technical strength, proven product reliability, innovative solutions, quick response, competitive pricing and overall value. We have seven product lines including LTCC, AIN/HTCC, Thick Film, Thin Film, Metal Hermetic Package and Furnace.

EMD Performance Materials

Booth #: 205

<http://www.emd-performance-materials.com/en/index.html>

Performance Materials comprises the entire specialty chemicals business of Merck KGaA, Darmstadt, Germany. The portfolio includes high-tech performance chemicals for applications in fields such as:

- Displays
- Integrated Circuits
- Lighting Applications
- Solar & Energy
- Coatings
- Semiconductor Packaging

Customer sectors in consumer electronics, lighting, printing technology, plastics applications and integrated circuits make use of materials and solutions from EMD Performance Materials. Thanks to comprehensive investments in research & development, we are constantly extending our leading position as an innovator and reliable partner.

Our future growth integrates key materials consisting of high purity chemicals used in wafer fabrication to sustainable materials for advanced back end solutions.

EPP GmbH

Booth #: 424

www.epp-germany.com

EPP was founded 30 years ago and is a supplier of Automatic Optical Inspection (AOI) systems for Thick/Thin Film, Electro plated or sputtered electronics, for Wafers, LTCC/HTCC and other High Precision structures. Our Worldwide installations include Semi- or Fully Automatic Systems in Automotive, Military, Telecom, Pharmaceutical and Sensor Applications.

F&K Delvotec

Booth #: 435

www.fkdelvotec.com/en

F&K Delvotec is the worldwide leader in innovative wire bonding technology. F&K Delvotec's expansive portfolio of products deliver intelligent one-stop shop solutions for any wire bonding application, from lab bond process development to completely automated systems. Over 40 patents in wire bonding technology, and award-winning new products and customer satisfaction, attest to the continuing emphasis on providing innovative solutions that drive the industry forward. Whatever bonding is required, F&K Delvotec delivers smart technology that follows the "staying ahead" philosophy that is the heart of the company. F&K Delvotec's main office is in Germany, with satellite offices in Singapore and the U.S. For more information, please visit www.fkdelvotec.com/en.

Ferro Corporation

Booth #: 411

www.ferro.com

Ferro is a manufacturer of a full range of thick-film packaging materials, thick-film component materials and glass powders used in the production of hybrid circuits, microelectronics, advanced packaging, and devices. Ferro's electronics product portfolio has expanded with the acquisition of Electro-Science Laboratories adding new capabilities in electronic material technologies for metal, glass, ceramic and other substrates.

Finetech

Booth #: 317

www.finetechusa.com

Finetech is a manufacturer of innovative equipment solutions for advanced packaging and micro assembly. The FINEPLACER die bonders are used for R&D and prototyping (high accuracy, low volume) to fully-automated production environments with high yield. Due to their modular architecture, the manual, semi-automated and full-automatic systems offer maximum process flexibility: thermo-compression, thermosonic, eutectic, epoxy, high force, ACF/Indium bonding. Applications areas include flip chip, opto-e, sensors, Si photonics, MicroLEDs, C2W, Cu pillar, Focal Plane Arrays, Chip-on-Glass, Chip-On-Flex and more. Finetech also provides advanced rework systems for today's challenging applications. Finetech serves a broad range of industries, such as aerospace, medical technologies, automotive, consumer electronics, semiconductor, opto-electronics, defense, universities and research centers.

FRT of America

Booth #: 522

www.frtmetrology.com

FRT is recognized as a valued partner for non-contact, optical metrology systems and solutions. FRT of America serves our customers by providing high quality, measuring tools and services, which fulfill your research, Q.A., inspection and verifications needs. FRT 2D and 3D surface measuring systems with various non-contact, optical sensors, such as chromatic, WLI/CFM and film thickness measuring heads are used for a wide range of microelectronic applications.

Gannon & Scott

Booth #: 438

www.gannon-scott.com

Established in 1919, Gannon & Scott has been providing customized precious metals refining, reclamation and physical/intellectual property destruction services. With facilities in AZ and RI, we provide geographic advantages for customers worldwide. We are ITAR Registered, CHWMEG reviewed, (ISO) 9001:2015 Certified and zero discharge. With leading-edge refining technologies, stringent environment standards, superior returns and customer service; advancing our industry's standards: Doing it right

Geib Refining Corp

Booth #: 307

www.GeibRefining.com

High Reliability precious metal reclaim: Gold, Silver, Platinum, Palladium, and Iridium. Production scrap, printed circuits, rags, wipes, jars, etch, ceramics, cyanide solutions. 100% destruction of your proprietary materials. Transportation of your assets are always safe, secure, and insured with us. We also offer expert EPA documentation and handling of your hazardous wastes throughout the USA. ITAR registered, EPA compliant, and Conflict Free Minerals Certified to satisfy your supply chain. Please stop over booth 307

GPD Global, Inc.

Booth #: 244

www.gpd-global.com

GPD Global is a leading manufacturer of fluid dispensing systems and other capital equipment for the semiconductor, telecommunications, automotive, aerospace, consumer electronics, and medical device industries. Our primary product lines are: - Precision Fluid Dispensing Systems - Precision Lead Forming machines for through-hole component preparation - SMT Cover Tape Peel Back Force Tester

Haiku Tech, Inc.

Booth #: 417

www.haikutech.com

Customized Technical and equipment solutions for the manufacture of electronic passive components, e.g. LTCC, HTCC, MLCC, etc. Products' portfolio includes: dielectric powders, binders, tape casters, sheet blankers, mechanical punches, screen printers, stackers, isostatic laminators, green chip (hot knife) dicers, termination equipment, furnaces, optical dilatometers and visual inspection equipment. We also offer ceramic tape development and manufacturing consulting services.

Hary Manufacturing Inc. (HMI)

Booth #: 500

www.hmiprinters.com

Hary Manufacturing, Inc (HMI) is a premier supplier of Precision Screen Printers for the thick-film, hybrid and other precision deposition applications. Complimenting products include infrared conveyor dryers and substrate handling automation for a wide range of applications. HMI offers full spare parts and technical support for AMI Presco printers as well as all HMI equipment. Our consumable product lines provide printing squeegee and lint-free cleaning cloths to satisfy the production needs of our customers. Please visit www.hmiprinters.com for more information.

Heraeus Electronics

Booth #: 201

www.heraeus-electronics.com

Heraeus Electronics provides an innovative product portfolio and trusted expertise in matching for high performance electronics. With our knowledge in electronic packaging materials; higher density, longer product life and superior reliability in harsh conditions can be realized. Our materials solutions will shorten your development life cycles, lower development costs and bring next generation products to market faster.

Hesse Mechatronics, Inc.

Booth #: 102

www.hesse-mechatronics.com

Hesse Mechatronics, Inc. is a wholly-owned subsidiary of Hesse GmbH, one of the world's leading producers of fully automated wedge wire bonders. The main expertise of Hesse GmbH is the development, manufacturing and marketing of fully automated machines for interconnect and assembly technologies, including standard and product-specific automation solutions. Hesse GmbH was founded in 1986.

Hi-Rel Laboratories

Booth #: 212

www.hrlabs.com

Hi-Rel Laboratories, Inc. is an independently owned and operated corporation whose main concentration of activity is in the materials evaluation of the micro-electronic oriented phases of commercial, aerospace and defense industries. We specialize in the solution of process, production and application problems requiring knowledge and experience in such diverse fields as microelectronics and materials technology. Using proven analytical techniques such as metallography, light and scanning electron optics coupled with energy dispersive spectroscopy, FTIR and FIB, we are able to isolate and solve your materials related issues. The largest activity in the laboratory is the performance of DPA testing for a wide variety of commercial, civil, and military space programs. Hi-Rel was the first commercial test lab in the U.S. to perform DPA testing in a support role to "in house" OEM Laboratories beginning in 1972. We also have over 45 years of experience in performing root cause failure analysis of electrical and electronic components; from passive components like resistors, inductors and capacitors, to transistors, integrated circuits and hybrids. In response to industry requests, Hi-Rel also offers non-electrical testing upgrade services such as P.I.N.D., Real-time Radiography, Hermeticity testing, and Dot Marking. All operations are carried out in our 100% ESD protected Upgrade services Lab.

IBM Canada Ltd

Booth #: 429

www.ibm.com/assembly

IBM Bromont is a world leader in semiconductor packaging technology, products and services. Now available to customers worldwide, we invite you to take advantage of our experience, system level mindset, and skilled engineers to execute your most advanced packaging and test solutions. Tap into our deep competencies as the industry continues to shift to custom SoCs and SiPs. IBM is known for its multi-chip packaging and heterogeneous integration. We offer full turnkey solutions from modelling and characterization through Burn-in and test. Our test capability spans digital, analog, mixed signal, RF as well as multi-site programming, test pattern conversion, and load board design. We provide high quality mechanical, thermal and electrical design (including high speed/SERDES, signal integrity and power integrity), ensuring effective execution of new and updated platforms. Services include materials and process characterization, optimized substrate design, and failure analysis while package platforms range from large organic substrates to silicon and glass interposers, and the newest coreless technologies. We invite you to discuss your next generation requirements – our developments in areas such as silicon photonics are unrivaled. IBM will help you deliver differentiated solutions while providing personalized, expert support to meet even the toughest application goals.

Indium Corporation

Booth #: 343

www.indium.com

Indium Corporation is a premier materials manufacturer and supplier to the global electronics, semiconductor, thin-film, thermal management, and solar markets. Products include solders and fluxes; brazes; thermal interface materials; sputtering targets; indium, gallium, germanium, and tin metals and inorganic compounds; and NanoFoil®. Founded in 1934, Indium has global technical support and factories located in China, Malaysia, Singapore, South Korea, the United Kingdom, and the USA. For more information about Indium Corporation, visit www.indium.com. You can also follow our experts, From One Engineer To Another® (#FOETA), at [@indiumor](https://www.facebook.com/indiumor).

ISI - Interconnect Systems

Booth #: 214

www.isipkg.com

Interconnect Systems, ("ISI") specializes in the design and manufacture of microelectronics. Our system level engineering, substrate design, high density packaging, advanced interconnect capabilities, coupled with our vertical integration strategy, enable ISI to quickly deliver optimized solutions to meet our customer's specific requirements. ISI's microelectronics solutions deliver value into the medical, transportation, mil/aero and industrial segments, where electronics miniaturization and ruggedization are most critical.

KOA Speer Electronics, Inc.

Booth #: 404

www.koaspeer.com

KOA Speer Electronics offers a wide range of products which include LTCC's and modules, thick and thin film resistors, shunts, current sensing resistors and resistor arrays; thermal sensors, fuses, varistors and inductors; . KOA's LTCC package is multilayer ceramics for various applications including high density module, high frequency module, semiconductor interposer and cavity package. Hybrid IC enables downsizing and readily model changing as well as reduces inspection. KOA Corporation whose global presence includes corporate headquarters in Japan, and sales locations in the USA, Germany, China and Singapore. . KOA Speer Electronics, an affiliate of KOA Corporation, has served the electronics industry since 1980.

Kulicke & Soffa Industries Inc.

Booth #: 238

www.kns.com

Kulicke & Soffa (NASDAQ: KLIC) is a leading provider of semiconductor packaging and electronic assembly solutions supporting the global automotive, consumer, communications, computing and industrial segments. As a pioneer in the semiconductor space, K&S has provided customers with market leading packaging solutions for decades. In recent years, K&S has expanded its product offerings through strategic acquisitions and organic development, adding advanced packaging, electronics assembly, wedge bonding and a broader range of expendable tools to its core offerings. Combined with its extensive expertise in process technology and focus on development, K&S is well positioned to help customers meet the challenges of packaging and assembling the next-generation of electronic devices.

Kyocera International, Inc.

Booth #: 220

www.americas.kyocera.com/kai-semiparts/

Kyocera International, Inc., Semiconductor Components Group (KII-SC) has been manufacturing ceramic packages in San Diego, CA since 1971. Kyocera offers an extensive array of semiconductor packages and complex modules for simple to challenging applications including RF, millimeter wave, power semiconductor, DNA sequencing, phased array radar, and space / telecom. Packages are available in HTCC, LTCC, MTCC, HiTCE, AlN and BeO. Also available are organic build-up packages, state-of-the-art high-density PCBs, and assembly materials such as Ag sinter paste and high Tc epoxies. Kyocera has state-of-the-art package design capability in-house that includes electrical and thermo-mechanical design, modeling / simulation and analysis to maximize package and circuit performance in your application. Our Assembly Technology Division accepts prototype to volume production orders for flip chip, wirebond, wafer dicing, and vacuum soldering to provide a convenient one-stop-shop solution for customers.

LINTEC OF AMERICA, INC.

Booth #: 345

www.lintec-usa.com

LINTEC is a worldwide leader in adhesive technologies through the Adwill brand of products. For 30+ years, LINTEC has created equipment and continues to develop materials to solve difficult semiconductor wafer level packaging issues. LINTEC has a catalog of hundreds of tapes, a myriad of equipment, and decades of application experience to help. Whether you are looking for a tape, need equipment to mount, peel, or UV cure, or would like assistance from our applications labs in Phoenix and Dallas to tackle a difficult issue; our staff stands ready to assist you to provide the Adwill Advantage. We are located at booth #345 in the exhibition hall. On display is our 2-in-1 background and bump support material for wafer level packaging.

Metalor Technologies USA

Booth #: 118

www.metalor.com

Metalor's Advanced Coatings Division is uniquely positioned as the only global source of precious metal commodities and plating solutions with manufacturing sites and refineries throughout US, Asia, and Europe. Our comprehensive plating process range includes precious metal solutions and ancillary products. Metalor offers gold, silver, platinum, palladium, rhodium, ruthenium materials designed for use in semiconductor, electronic, and decorative applications. We offer a complete service; the supply of precious metal replenishment salts and anodes, process chemistry, as well as refining services can be your one-stop provider for precious metal needs. Our Technical Service Team, located facilities worldwide, is on call and equipped to provide rapid response to specific customer queries as well as on-site installation support.

Micro Systems Technologies

Booth #: 325

www.mst.com

@microsystemstec

The Micro Systems Technologies group comprises four technology companies providing innovative electronic modules for high-reliability/high-performance markets, like medical technology, aerospace & defense, telecommunication and various industrial segments. The offering includes HDI/microvia PCBs in flex, rigid-flex and rigid technology, LCP substrates, ceramic substrates, electronic module design and manufacturing, advanced assembly and semiconductor packaging technologies, as well as batteries for active implants.

MicroScreen LLC

Booth #: 217

www.microscreenllc.com

MicroScreen LLC manufactures thick film screens and large format/solar screens in a wide variety of mesh and frame sizes, with highly controlled coating machines for uniform emulsion. Lines and spaces resolution down to 25um, and frame sizes from 3x4 to 43x59. MicroScreen also manufactures surface mount stencils for solder paste printing. All stencils are 100% inspected using ScanCheck AOI. Options include Nano Coating, PhD and Tension materials, step stencils, large format stencils for LED printing, and Wizard frame and Space Saver frame systems. MicroScreen is ITAR Registered and ISO 9001:2015 compliant.

Micross

Booth #: 401

www.micross.com

@microsscomps

Micross is the leading one-source, one-solution provider of bare die & wafers, wafer bumping & advanced interconnect technologies, custom packaging & assembly, component modification services, electrical & environmental testing and Hi-Rel products to manufacturers and users of semiconductor devices. In business for 35+ years, our comprehensive array of high-reliability capabilities serves the global defense, space, medical, industrial and fabless semiconductor markets. Micross possesses the sourcing, packaging, assembly, test and logistics expertise needed to support an application throughout its entire program cycle. Micross Advanced Interconnect Technology (AIT), a specialized division of Micross, is home to one of the premier wafer bumping and wafer level packaging facilities in the U.S., with 20+ years of experience developing and providing leading edge interconnect and 3D integration technologies (TSV, Si interposers, 3D IC) to customers around the world. AIT has the unique ability to support early stage development needs as well as low-to-mid volume production for more mature applications and platform technologies. Our ITAR-registered facility supports wafer sizes up to 200mm with established and proven processes and the flexibility to tailor unique solutions for your most demanding interconnect requirements. The facility can also support the processing of non-standard materials, as well as the fabrication of novel device structures (e.g. MEMS and 3D microstructures).

Midas Technology, Inc.

Booth #: 321

www.midastechnology.com

For over 30 years Midas Technology has been the leading edge of component rework technology for Hi-Rel devices. The goal at Midas is to remove the need for devices leaving the clean room to remove lids and to eliminate the use of hammers to remove die and components from devices. This is accomplished with two Midas exclusive technologies. De-lidders™, have been developed to allow for the removal hermetic lids while maintaining a surface that allows for resealing, in the clean room. Midas offers multiple systems to accommodate almost any package configuration. The DL series de-lidder™ is offered in various sizes for accommodating standard packages and the DF series for managing attached fibers during the de-lidding process. Midas also offers the DR series for removing lids from round packages. HGRS (Hot Gas Rework Stations) are designed to affectively remove die and components from substrates while protecting other temperature sensitive devices on the board. This can be accomplished using Midas' exclusive high temperature nitrogen jet and shear tool systems. The HGRS-1J has a single jet, for smaller devices. The HGRS-V has dual jets for larger devices. Visit us today to learn more.

Mini-Systems Inc.

Booth #: 315

www.mini-systemsinc.com

For over 44 years, MSI has been supplying superb quality and on-time deliveries. Absolute tolerances starting at 0.005% and TCR's at 2ppm/C. Case sizes start at 0101. Standard deliveries under 2 weeks. MSI is ISO 9001 certified and is on the QPL for MIL-PRF-55342 and MIL-PRF-32159.

MRSI Systems

Booth #: 234

www.mrsisystems.com

@mrsi_systems

MRSI Systems is a leading manufacturer of fully automated, ultra-precision, high speed, die bonding and epoxy dispensing systems. We enable customers to optimize the performance of their process including yield, throughput and uptime by building systems that use our unique expertise. In summary this includes, our proprietary software, proven hardware, deep process knowledge, state-of-the-art manufacturing and a world-class customer service team. MRSI's systems are built on common platforms that can be configured to meet specific customer requirements. These platforms are designed to be scalable from prototype to volume manufacturing. Our solutions deliver the best financial returns in the industry, while integrating seamlessly into our customer's production. Markets include Telecom/ Datacom, Aerospace & Defense, Medical Devices, Computers and Peripherals, and Industrial. Since 1984, we have been recognized as the standard of the industry, delivering our solutions to leading optoelectronic and microelectronic customers worldwide.

NAMICS Corporation

Booth #: 121

www.namics.co.jp/e

NAMICS CORPORATION is a leading source for underfills, encapsulants, adhesives, and insulating and conductive materials used by producers of semiconductor devices, passive components and solar cells. Headquartered in Niigata, Japan with subsidiaries in the USA, Europe, Singapore, Korea, Taiwan and China, NAMICS serves its worldwide customers with enabling products for leading edge applications.

Neu Dynamics Corporation

Booth #: 406

www.neudynamics.com

Neu Dynamics Corp is an ISO 9001:2008 certified Tool, Mold and Die manufacturer specializing in tooling and equipment used in building Semiconductors, Electronics components and a wide variety of the devices used in automotive, telecommunications, solar and medical applications. We further offer small to medium volume contract molding services for microelectronic packages such as BGA, QFN, MLP, optical components etc. We also have capability to provide insert molding services for items such as connectors. Our Sister company, NDC International offers a complete line of specialized assembly equipment built for today's high-tech semiconductor assembly processes.

NorCom Systems, Inc.

Booth #: 301

www.norcomsystemsinc.com

NorCom Systems, Inc. manufactures the NorCom 2020 series Optical Leak Test System, which provides automated in-line, full matrix leak testing of hermetically sealed microelectronic, optoelectronic and wafer level devices. The 2020 eliminates the need for helium mass spectroscopy and gross leak bubble testing by utilizing a patented laser interferometer to simultaneously measure gross and fine leaks in hermetic devices. The system provides quantitative leak test results in the industry standard of cc-atm/second helium and is MIL STD compliant and CE marked. The NorCom 2020 is ideal for optoelectronic, semiconductor, MEMS, and PC board mounted devices for military, aerospace and telecommunication applications.

Nordson DAGE

Booth #: 403

www.nordsondage.com

Nordson DAGE manufactures and supports a range of award-winning bondtesters for failure analysis which are recognised as the Industry Standard. The 4000 bondtester is multipurpose, capable of performing all pull and shear applications. Configured as a simple bond wire pull tester or upgraded for ball shear, die shear, bump pull, vectored-pull, or tweezer pull tests. The 4000Plus performs shear tests up to 200kg, pull tests up to 100kg and push tests up to 50kg, covering all test applications including hot bump pull for PCB pad cratering testing in accordance with IPC9708. The camera assist automation system is ideally suited for pull and shear testing of wafer interconnections, lead frames, hybrid microcircuits or automotive electronic packages. The 4000 Optima offers fast, accurate and reliable bond testing in the volume manufacturing environment. Patented technology and superior ergonomics with intelligent and intuitive software makes this the number one production bond tester with typical test times of less than 2 seconds per bond for wire pull and ball shear. Nordson DAGE's uniquely designed MFC's expand the versatility of manual testing enabling ultra-quick application changeover. The 4800 bondtester is at the forefront of wafer testing technology catering for wafers from 200mm up to 450mm.

nScript, Inc

Booth #: 402

www.nscript.com

nScript sells 3D printing and micro-dispensing platforms with 3 to 6 axis of motion. nScript's SmartPump™ technology dispenses a wide range of materials to include epoxies, solders, conductive polymers and pastes. The fine line ability to reach 50 microns and less in line widths and dots of 75 microns and less enables many next generation packaging applications. They also excel at printed conformal antennas.

NTK Technologies

Booth #: 200

www.ntktech.com

NTK Technologies is a leader in IC Ceramic Packaging. With global service centers, NTK offers a wide range of packaging materials and package design services for Medical, Automotive, SiP/MCM, Opto, RF, CMOS Image Sensors, Hi-Rel, Satellite, FCBGA, FCCSP, FPGA, CPU and MPU applications. Monolithic package designs for Medical and Mobile applications. Optimum package designs for 10G, 40G, and 100/400G. Large and small scale Ceramic STFs are manufactured for high-speed/high density probe-cards for semiconductor wafer test. Large and small scale ceramic substrates can be configured with narrow pitches and a wide range of pin count capabilities. NTK supports fast paced product cycle times with our advanced design and production flows featuring high precision processes for fast turn-around with the highest quality.

Nuvotronics, Inc.

Booth #: 436

www.nuvotronics.com

@nuvotronics

In 2008, a few seasoned entrepreneurs founded Nuvotronics with a simple but grand vision – to revolutionize microelectronics hardware. These entrepreneurs set about to commercialize Polystrata® Technology, a disruptive 3D micro-coax architecture they had developed in partnership with DARPA. After attracting some of the industry's best electrical, mechanical and manufacturing talent, Nuvotronics began to supply peerless radio frequency and millimeter wave solutions to commercial and defense markets – including miniaturized next-generation phased arrays, solid state power amplifiers, and advanced microwave and millimeter wave passives such as baluns, filters, diplexers, and time delay units. When success resulted in outgrowing the original Virginia facility, Nuvotronics added a second location near North Carolina's technology dense Research Triangle Park. In 2017, Nuvotronics completed an expansion to the North Carolina facility which doubled office space to a total of 30,000 square feet. This office space, combined with their 17,000 square foot wafer fabrication, manufacturing and test clean rooms, allows Nuvotronics to own the entire chain of development, program management and manufacturing for a wide range of defense, space and commercial customer needs. Today, Nuvotronics still attracts the brightest and most creative talent and is a key supplier to customers who value the smallest, highest performing solutions available.

PacTech USA Inc.

Booth #: 101

www.pactech.com

PacTech Packaging Technologies GmbH, (group member of NAGASE & CO., Ltd.) is headquartered in Nauen, Germany, with wholly-owned subsidiaries: PacTech USA - Packaging Technologies Inc. in Silicon Valley, USA and PacTech ASIA Sdn. Bhd. in Penang, Malaysia. PacTech is comprised of two unique advanced packaging units: 1- EQUIPMENT MANUFACTURING: PacLine 300 A50: Automatic ENIG & ENEPIG plating tools. SB²-Jet: Laser solder jetting tool Ultra-SB²: Wafer level solder ball transfer system LAPLACE: Laser-assisted flip-chip bonders 2- SUBCONTRACT SERVICES: Flip Chip and Wafer Level Package Bumping Services including ENIG or ENEPIG for UBM (solder bumping) or OPM (wirebond) Other services include: AOI, X-Ray, Repassivation, RDL, Wafer Thinning, Backmetal, Laser Marking, Dicing and Tape & Reel.

Palomar Technologies

Booth #: 304

www.palomartech.com

Palomar Technologies, a former subsidiary of Hughes Aircraft, is the global leader of automated high-accuracy, large work area die attach and ball and wedge wire bonding equipment and precision contract assembly services. Customers utilize the products, services and solutions from Palomar Technologies to meet their needs for optoelectronic packaging, complex hybrid assembly and micron-level component attachment. For more information, visit www.palomartech.com.

Panasonic Factory Solutions Company

Booth #: 215

www.panasonicfa.com

Panasonic Factory Solutions Company of America (PFSA) develops and supports innovative manufacturing processes around the core of circuit manufacturing technologies and computer-integrated manufacturing software—thereby, contributing to the growth and prosperity of our customers' businesses regardless of their mix or volume.

Perfection Products, Inc.

Booth #: 108

www.perfection-products.com

Perfection Products manufactures Process Magazines and Carriers. Such products are Film Frames, Grip Rings, Magazines for Frames and Rings, Lead Frame Magazines, Process Boats (formed & flat style) & Magazines, Antistatic Shippers for Frames and Rings. Also, available are the 12.0" (300 mm) Wafer Frames and Magazines. Perfection – Accept Nothing Less

PhotoStencil

Booth #: 105

www.photostencil.com

Photo Stencil has been the premier provider of advanced stencil printing solutions to the electronics assembly and semiconductor markets in the Americas since 1979. Located in Golden, Colorado Photo Stencil's new factory is equipped with cleanrooms, R&D labs, proprietary new plating lines, and precision fabrication equipment. We design and manufacture high-performance stencils and tooling for a wide range of industries including: Semiconductor, SMT, Defense, Medical Devices and Automotive. At Photo Stencil, we are driven to provide our customers with innovative solutions to the most challenging paste, flux, epoxy ink and special materials printing applications. Our current market leading products include patented AMTX electroformed Nickel and Nickel-Cobalt stencils, high-performance AccuScreen™ stencils, 3-D and step stencils, ultra-thin fine pitch stencils as well as our cost-conserving NiCut stencils. For any current printing challenges or upcoming R&D projects, please email us via info@photostencil.com or call: +1 (719) 599- 4305 www.photostencil.com Visit us at Booth#105 to know more about our products and learn how we can help you benefit over your competitors.

Plasma-Therm, LLC

Booth #: 107

www.plasmatherm.com

Plasma-Therm® is a leading provider of advanced plasma processing equipment. Plasma-Therm systems perform critical process steps in the fabrication of integrated circuits, micro-mechanical devices, solar power cells, lighting, and components of products from computers and home electronics to military systems and satellites. Specifically, Plasma-Therm systems employ innovative technology to etch and deposit thin films. The company's Mask Etcher® series for photomask production has exceeded technology roadmap milestones for more than 15 years. Plasma-Therm's Singulator® systems bring the precision and speed of plasma dicing to chip-packaging applications. Manufacturers, academic and governmental institutions depend on Plasma-Therm equipment, designed with "lab-to-fab" flexibility to meet the requirements of both R&D and volume production. Plasma-Therm's products have been adopted globally and have earned their reputation for value, reliability, and world-class support. Plasma-Therm's status as a preferred supplier of plasma process equipment has been recognized with VLSIresearch Customer Satisfaction awards for 17 consecutive years, including "RANKED 1st" awards from 2012 to 2016.

PlasmaTreat **Booth #: 443**

www.plasmatreat.com

Plasma pretreatment is the key enabler technology for microfine cleaning, surface activation and plasma coating of nearly all kinds of materials – from plastics, metals and glass to cardboard, textiles and composites. More and more conventional industrial pretreatment methods are being replaced by plasma technology in order to make processes more effective and environmentally friendly.

Innovation is pivotal to what we do. Every day we work on developing new and creative solutions to meet our customers' challenges. Plasmatreat offers a broad spectrum of plasma systems and equipment for atmospheric plasma processes (Openair® Plasma) and for low-pressure plasma technology (Aurora®). With our own technology centers and sales teams at 34 different locations around the world, the Plasmatreat group has a global presence.

Backed by 20 years of experience, we can say with conviction that the future belongs to Plasma. The potential for application of plasma technology is virtually inexhaustible.

PREES/FREEDM Systems Center

Booth #: 534

www.freedm.ncsu.edu/prees

@FREEDMerc

The Packaging Research in Electronic Energy Systems (PREES) Lab is a unique power electronics packaging and design center located at NC State University. With a focus on the specific needs for wide bandgap semiconductors, PREES combines simulation and modeling with rapid prototyping and additive manufacturing to conduct R&D for government, industry and academic clients. Our capabilities include processes to etch DBC, 3D print conductive interconnects and package encasements, use ribbon and wire bonding, and apply encapsulate. PREES is affiliated with the Future Renewable Electric Energy Delivery and Management (FREEDM) Systems Center, an NSF funded Engineering Research Center addressing the grand challenge of grid modernization through the application of power electronics to the power system. If you have research needs in packaging or are looking for new applications of SiC and GaN devices, please stop by our booth.

Promerus

Booth #: 516

www.promerus.com

Promerus is the global leader in polynorbornene technology and is driven to providing advanced material solutions to your challenges in semiconductor, optoelectronics, electronic packaging, as well as emerging markets. As a subsidiary of Sumitomo Bakelite Co., Ltd., Promerus is well positioned to deliver our unique materials to the market. Among other strengths, our innovative polymer technology combines thermal attributes of polyimides with the glass-like transparency characteristics of Cyclic Olefin Polymers (COP). Please visit our website (www.promerus.com) and learn about our "Materials & Applications". We would love to meet you at the iMAPS show in October (Booth 516).

PVA TePla America Inc.

Booth #: 115

www.pvateplaamerica.com

PVA TePla America is an experienced supplier of gas plasma solutions. In addition to being a systems manufacturer, the company provides total support for surface-modification needs with a team of experts, systems technology, contract-processing capabilities and quality programs.

Quik-Pak, a division of Promex

Booth #: 210

www.icproto.com

Quik-Pak, a division of Promex, provides IC packaging, assembly, and wafer preparation services in its ISO 9001:2008 and ITAR registered facility in San Diego, California. Quik-Pak manufactures over molded QFN/DFN packages and pre-molded air cavity QFN packages that provide a fast, convenient solution for prototype to full production needs. Same-day assembly services are provided to shorten time to market. Quik-Pak now provides high volume IC assembly services utilizing its automated assembly and molding equipment for production runs in the 10,000s of units. In addition to wire bond assembly, the company assembles flip chips, BGAs, stacked die, sensors, MEMS, and chip-on-board and chip-on-flex assemblies. Promex, located in Santa Clara, California, provides mixed technology assembly processes that integrate conventional surface mount technology (SMT) with semiconductor microelectronic packaging and assembly methods for flip chip or chip/wire devices. The company operates a 30,000 square foot assembly facility with Class 100 and 1000 clean rooms that is ISO 13485:2003 and ISO 9001:2008 certified, ITAR registered, and compliant to regulatory requirements for medical products. With a highly skilled engineering team, Promex combines broad technical capabilities, advanced packaging and microelectronics assembly expertise with scalable manufacturing capacity to fast track new medical and bioscience products to volume production.

Reldan Metals Co div of Abington Reldan Metals, LLC

Booth #: 134

www.armetals.com

Reldan Metals Co. Div. of Abington Reldan Metals, LLC refinery has been operating and handling precious metal scrap for over 35 years. Our goal is to maximize the value of your precious metal scrap. The company's State of the Art, LEED certified facility is ISO 14001:2004 certified, OHSAS 18001:2007, e-Steward 2.0:2013, R2:2013 certified, GreenCircle certified, CHWMEG reviewed and ITAR registered. LEED certification sets forth strict standards for energy-efficient and environmentally responsible workplaces. Abington Reldan Metals reflects its commitment to environmental sustainability at every step of the refining process. Our expertise, knowledge and skills help us serve many customers in an ever changing industry as well as providing the highest level of service for your precious metal recovery program.

Riv Inc. ~ Precision Printing Screens

Booth#: 206

www.rivinc.com

Riv Inc. is a leading manufacturer of high quality printing screens; we cater to the Thick Film Hybrid Microelectronics, Flex Circuitry, Membrane Switches, RFID Antennas, Solar Cell Manufacturing and any other related industries. Since 1986 we have been helping our customers Print with Quality. With our 28+ years of experience we can help screen printers find the perfect combination of Mesh and Emulsion maximize their printing skill. We use nothing but the highest quality material available in the industry. Service and Quality is what Riv Inc is. Let us help you

Royce Instruments

Booth #: 305

www.royceinstruments.com

Consider Royce Instruments your preeminent supplier for Bond Testing and Die Sorting equipment. Our equipment provides outstanding accuracy to meet a full range of bond test and die sorting requirements. Because bond testing and die sorting are our sole focus, we are able to dedicate ourselves to developing and supplying leading, high-precision solutions for our customers. The Royce 600 Series Bond Test Instruments brings unparalleled networking capability and scalability to the bond test market. With a choice of 3 bond testers, Royce offers an instrument solution to meet the evolving needs of manufacturers and institutions worldwide. Royce Die Sorters (DE35-ST, AutoPlacer MP300, and our new AP+) offer semi-automatic and fully-automatic die sorting solutions for today's challenging applications, including die as small as 200 um square or 50 um thick. Our new automated die sorter, the AP+ has the capability to handle the output mediums your process requires (carrier tape, waffle pack, Gel-Pak®, JEDEC tray, film frame, grip ring, and custom trays) while maintaining input to output traceability at the die level. Come visit us at booth #305 to learn more!

Rudolph Technologies

Booth #: 425

www.rudolphtech.com

Rudolph Technologies, Inc. is a leader in the design, development, manufacture and support of defect inspection, lithography, process control metrology, and process control software used by semiconductor and advanced packaging device manufacturers worldwide. Rudolph delivers comprehensive solutions throughout the fab with its families of proprietary products that provide critical yield-enhancing information, enabling microelectronic device manufacturers to drive down costs and time to market of their devices. Headquartered in Wilmington, Massachusetts, Rudolph supports its customers with a worldwide sales and service organization.

Sales & Service Inc.

Booth #: 110

www.salesandserviceinc.com

Realizing the need for a service and a relationship based representative company, Bill Winn founded Sales & Service Incorporated in 1989. Located in the heart of Orange County, SSI has emerged as a proven and dedicated manufacturer's representative for over 20 years. Our mission is to provide an exceptional level of service that is mutually beneficial to our customers and principals. We at SSI understand the importance of communication and strive to provide a smooth channel of correspondence that ensures a productive and supportive link to facilitate the flow of business. At SSI, all of our efforts are focused towards building strong, long term relationships between ourselves, the customer, and the principal. SSI's product line includes industry leading consumable products and equipment for the packaging, testing, materials and reliability areas of the Semiconductor, Aerospace, and Hybrid industries. SSI takes great care in selecting our partners and are proud to offer products from these companies.

Samtec

Booth #: 314+316

www.samtec.com

Samtec is the worldwide service leader for electronic interconnect systems. Samtec focuses on leading edge high speed products and services, including IC packaging and optics. Key capabilities include microelectronics, IC Packaging, Glass Core Technology, and system design. Samtec provides full turnkey solutions for your entire signal path from IC, through the package, and through substrates, connectors and cables. Samtec can help you design, model, layout and assemble your IC package with highest level of Signal Integrity.

Sekisui Chemical Co., Ltd.

Booth #: 113

www.sekisuicheical.com

Sekisui Chemical utilizes its unique fine particle, adhesion and precise synthesis technology to develop and provide high-performance and intermediate materials for wide variety of fields such as electronics, automobiles and transportation, buildings and infrastructures, life science and industries. The company's semiconductor material business lineup includes high temperature resistive UV releasable temporary bonding film, inkjet material for additive processing and build-up dielectric film used for next generation FC-BGA and FC-CSP substrate needs

SemiDice, inc.

Booth #: 423

www.semidice.com

SemiDice is the preferred global wafer and bare die component supplier to the microelectronic industry. SemiDice is the only global wafer processor with a High Reliability Division dedicated to providing bare die for military, aerospace, medical and robust industrial applications. Headquartered in SoCal and sales offices in the USA, UK and China, SemiDice is well-positioned to support customer requirements worldwide.

Sentec E&E Co., Ltd.

Booth #: 506

www.sentecgroup.com/en

Sentec is a TS16949 and National Awards certified with headquarters in Taiwan and it is a solid middle scaled enterprise with more than 1,000 employees worldwide. Technologies are co-developing together with Panasonic Ceramic Devices Group since early 1990's.

Non-Shrinkage LTCC

Direct Plating Copper (DPC)

Ni/Pd/Au Plating

Au/Sn Metallization

Module Packaging Prototyping

Quality volume production record for tier 1 automotive, medical and industrial sectors. With multiple manufacturing locations in Taiwan, India, China and Vietnam.

SHINKO Electric America, Inc.

Booth #: 111

www.shinko.com

SHINKO Electric Industries Co., LTD., is a leading manufacturer of semiconductor and microelectronic packaging products including Organic Laminate Build-up Substrates, Etched and Stamped Lead Frames, Integrated Heat Spreaders, and IC and Module Assembly. We manufacture a full line of Organic Substrate structures including coreless options offering enhanced electrical performance and package miniaturization. SHINKO also provides subcontract IC assembly services with an emphasis on packaging solutions such as PoP, SiP and Molded Core Embedded Package (MCeP®) as well as Module assembly and test in support of a wide range of markets. From mobile to industrial and automotive, SHINKO provides high yielding, quality packages designed to exceed the requirements for each application. Founded in Nagano, Japan in 1946, SHINKO's headquarters and primary production plants continue to reside in the greater area. In addition to our production facilities, we also provide the ultimate in service and solutions for our customers with Sales and Engineering support Worldwide. Come visit us at our booth to learn more about our latest product offerings for fine pitch interconnection, miniaturization and high density die mounting.

Sikama International, Inc.

Booth #: 222

www.sikama.com

For the past 35 years Sikama International has been in the business of designing, manufacturing and marketing solder reflow & curing systems, wafer flux coaters and wafer washers. We are recognized around the world for our reliable small footprint machines. Our ovens feature a patented conduction plus convection heating technology and are used for Wafer Bumping, LED Die Reflow, BGA Re-balling, High Density Package Reflow, Lid Attach, Fluxless Gold Tin Reflow, Lead Frame Reflow and Epoxy Curing and many other applications. Please stop by Sikama booth number 18 to discuss your reflow soldering or curing requirements.

SIMS Recycling - Precious Metal Division

Booth #: 422

www.us.simsrecycling.com

Sims Precious Metals Group is comprised of a dedicated team of professionals. We perform to the highest standards in precious metal refining and innovation to meet client needs. We are a publicly traded corporation whose core values of Safety – Integrity – Respect – Transparency – Excellence and Social Responsibility dictate our decisions.

Our full service refinery offers uniquely tailored recovery programs to maximize values of gold, silver, platinum and palladium scrap streams. Our operations group receives and discusses each shipment to determine the most efficient process techniques. We are proficient with solutions, burnables, plated scrap, sludges, circuit boards and assorted production materials.

Our metallurgical laboratory, with fire assay capability, provides accurate and prompt results. Once a value determination is complete, we customize payments to suit our clients' needs. Settlements are in accordance with a refining schedule, per pound payment structure or deposit to your precious metal provider's account. Our accounting staff works to provide you the most effective payment strategy.

Call Sims Precious Metals Group and our logistics team joins the loop. They provide containers, labels and arrange transportation for hazardous and non-hazardous materials. Our SHEC group works closely with sales, operations and logistics to assure the safety of your materials. Our \$10,000,000 insurance policy assures security in the refinery and from downstream liability.

SMART MICROSYSTEMS

Booth #: 431

www.smartmicrosystems.com

Located in Northern Ohio, SMART Microsystems' facility has over 15,000 sq. ft. of ISO 6 (class 1000) and ISO 5 (class 100) cleanrooms. This state of the art facility, furnished with flexible equipment capabilities for assembling a high mix of materials and products, creates a turn-key solution for microelectronic package assembly of MEMS and sensors. From prototyping through market entry, SMART can help you reduce the total cost of product development. Prototype development and manufacturing capabilities include dicing, die attach/flip chip, vacuum solder reflow, wire bonding, and encapsulation. Their environmental life testing identifies reliability issues early in your MEMS sensor product development. They build early proof-of-concept samples as well as feasibility studies to help you avoid challenges that appear early in process development. SMART Microsystem's engineering team's expertise in MEMS sensor products has solved many of these challenges.

Somacis

Booth #: 442

www.somacis.com

For more than forty years, SOMACIS has been a dynamic company producing high-tech PCBs and delivering innovative solutions. SOMACIS, headquartered in Italy, is one of the leading PCB manufacturers, with more than 800 employees and production plants in Italy (SOMACIS SpA), USA (SOMACIS Inc.) and China (DSG PCB Co., Ltd.). SOMACIS is a worldwide partner supplying HDI, rigid, rigid-flex and flex PCBs for time critical and mass production requirements.

Sonoscan, Inc.

Booth #: 303

www.sonoscan.com

Founded in 1973 and headquartered in Chicago, IL, Sonoscan®, Inc. is a worldwide leader and innovator in Acoustic Micro Imaging (AMI) technology. Sonoscan manufactures and markets acoustic microscope instruments and accessories to nondestructively inspect and analyze products. Our C-SAM® scanning acoustic microscope provides unmatched accuracy and robustness setting the standard in AMI for the inspection of products for hidden internal defects such as poor bonding, delaminations between layers, cracks and voids. In addition, Sonoscan offers analytical services through regional testing laboratories in Asia, Europe and the U.S. and educational workshops for beginners to advanced on AMI technology.

Stellar Industries Corp.

Booth #: 335

www.stellarind.com

Stellar Industries Corp. is a preferred supplier to the Telecom, Biomedical, Microwave, and Defense Industries for custom metallized ceramic components and services.

Tanaka Precious Metals

Booth #: 114

www.tanaka.co.jp/english

The Tanaka Precious Metals (TANAKA) was founded in 1885, and as Precious metals professionals, we have always pursued new value and potential in this field. We have experience in development, manufacturing, sale and support of precious metal thick film paste and powders. Our products are selected by various customers and used in various industries from automobile, aerospace, component parts, semiconductor and printers. Tanaka will be introducing pastes for low temperature co-fired ceramic (LTCC), exhaust gas sensors, heater, Aluminum nitride (ALN) and precious metal powders. We will continue to work to meet customer demands and market needs by producing new technique and products, as well as improving our productivity and cost competitiveness. Furthermore, we offer a comprehensive recycling system ranging from recovery and refining of used scrap metal containing precious metals to the remanufacture of those metals into products.

Technic Inc.

Booth #: 439

www.technic.com

Since 1944, Technic has established a global reputation for technical excellence in the electro-deposition of precious metals. Following the expansion of our product lines through organic growth, strategic partnerships, and acquisitions, Technic has grown to be a global leader in: Specialty Chemicals, Surface Finishing Equipment, Engineered Powders, and Analytical Control Tools

TechSearch International, Inc.

Booth #: 520

www.techsearchinc.com

TechSearch International Inc. 4801 Spicewood Springs Rd., Ste 150 Austin, TX 78759 Phone: 512-372-8887 Fax: 512-372-8889 <http://www.techsearchinc.com> E-mail: becky@techsearchinc.com Contacts: Becky Travelstead Booth 520. TechSearch International, Inc. has a 28-year history of market and technology trend analysis focused on semiconductor packaging, materials, and assembly. Research topics include WLP, FO-WLP, Flip chip, CSPs including stacked die, BGAs, 3D ICs with TSVs, 2.5D interposers, and System-in-Package (SiP), embedded components, ADAS and automotive electronics and panel-based processing. In conjunction with SavanSys Solutions, wire bond, flip chip, WLP, and 3D IC cost models are offered. TechSearch International professionals have an extensive network of more than 18,000 contacts in North America, Asia, and Europe and travel extensively, visiting major electronics manufacturing operations and research facilities worldwide.

Teikoku Taping Systems

Booth #: 434

www.teikoku-taping.com

For more than 25-years Teikoku Taping System has been an innovative leading custom equipment supplier for the backend semiconductor industry.

Teikoku's backend semiconductor products include Wafer Mounting Systems, UV Irradiation Systems, Tape Removal Systems, Backgrind Tape Laminators, and Dry Film Resist Laminators. TTS will continue to revolutionize the semiconductor industry and exceed industry expectations with new and innovative equipment designs.

Teledyne Advanced Electronic Solutions

Booth #: 216

www.teledyneaes.com

@TeledyneAES

Teledyne Advanced Electronic Solutions provides custom engineered solutions for your complex electronic packaging challenges. From complex circuit cards, modules, box level assembly and test to creative microelectronics packaging; from single chip packaging to complex box build assemblies, we offer the most advanced manufacturing solutions. We are committed to providing innovative technologies to the aerospace, space, defense and high-tech industries, backed by unparalleled service and support.

Torrey Hills Technologies, LLC

Booth #: 407

www.torreyhillstech.com

Torrey Hills Technologies, LLC is a leader in developing and delivering high-quality yet extremely affordable materials, fabricated parts, and equipment for multiple industries. The company's core business includes refractory metal heat sinks (CuW, CuMo, CMC, CPC); fabricated microelectronics packaging components; molybdenum, tungsten and their alloy materials; belt furnace equipment for electronics and solar cell industry; mixing equipment like three roll mills and planetary ball mills.

UNITRON & LUXO by UNITRON

Booth #: 437

www.unitronusa.com

Development, manufacturer, distribution and service of certified Unitron and LUXO by Unitron optical microscopes, digital imaging cameras, LED lighting, Omni, Inspex HD & Ion 4.3 for Industrial and electronics applications

UnitySC

Booth #: 421

www.unity-sc.com

@UnitySemi

UnitySC is recognized worldwide as a key player in inspection and metrology, combining advanced technologies in automated optical inspection and 3D imaging with microscopy, temporal-mode interferometry, and spectrometry, which enables customers to achieve higher yields and faster time to market. Customers include the largest foundries, integrated device manufacturers, outsourced semiconductor assembly and test service providers, and R&D centers. We provide standard and customized solutions adapted to specific industrial needs and constraints, enabling a new era in process control. Headquartered in Grenoble, France, the company maintains offices in Taiwan and is supported by a network of representatives and distributors. Learn more at unity-sc.com.

University of Maryland- A. James Clark School of Engineering

Booth #: 415

www.eng.umd.edu

The A. James Clark School of Engineering at the University of Maryland serves as the catalyst for high-quality research, innovation, and learning, delivering on a promise that all graduates will leave ready to impact the grand challenges of the 21st century.

UTZ LLC

Booth #: 128

www.utz.com

UTZ is premier manufacture of Thick Film Screens (PE) and Solder Paste Stencils (SMT). Established in 1968 UTZ has the most diverse manufacturing capabilities inside the US, which leads to more comprehensive solutions to printing problems and allow's UTZ to utilize multiple manufacturing avenues to insure our customers get the best technology for their application. UTZ's focus is to solve the challenges and drawbacks in the industry and to bring solutions and new products to the industry.

White Knight Engineered Products

Booth #: 112

www.wkep.com

Since 1947 White Knight Engineered Products has been an expert in specialty fabrics and precision construction methods to produce the highest quality garments that meet our customer's needs. WKEP has created innovative textile solutions for some of the most demanding industries that include: Compounding Pharmaceutical, Bio-Tech, Nano Research, Microelectronics Assembly, Medical Device Manufacturing, and Precision Optics.

WKEP has sustained success over time by innovation, and continuously collaborating with the most advanced textile suppliers in the world to provide high-performance solutions.

Our Corporate Headquarters is based in Charlotte, North Carolina, and has operations in Asheville NC, as well as El Salvador, and China.

XYZTEC

Booth #: 414

www.xyztec.com

XYZTEC, Inc. manufactures the latest in bond testing equipment. Our Rotating Measurement Unit (RMU) eliminates cartridge changeover issues. Our latest systems include full automation functionality including robotics if bond testing wafer applications. Come see us at Booth #414.

YINCAE Advanced Materials

Booth #: 416

www.yincae.com

@YINCAE_Albany

Founded in 2005 & headquartered in Albany, New York, YINCAE Advanced Materials is a leading manufacturer and supplier of high-performance coatings, adhesives and electronic materials used in the electronic & optoelectronic devices. YINCAE products provide new technologies to support manufacturing processes from wafer level, to package level, to board level and final devices while facilitating smarter and faster production and supporting green initiatives.

YXLON FeinFocus

Booth #: 236

www.yxlon.com

YXLON is a leading supplier of industrial X-Ray inspection and CT solutions for the non-destructive testing of materials and electronics. The New YXLON FF20 CT system provides the finest spatial resolution for the inspection of semiconductors. YXLON introduces a new standard for focal spot size, stability and power with our new FeinFocus transmission tube. YXLON product portfolio also includes the Y.Cheetah and Y.Cougar which offer effortless high-quality X-Ray imaging for a wide range of continuous inspection tasks. The Y.Cheetah and Y.Cougar are equipped software including that includes reliability, repeatability and traceability for standard and customized automated inspection. With advanced ultra-high-speed flat panel detector technologies, the systems adapt between inspection tasks including failure analysis, research and development, process control and product testing. The standard 2D inspection systems have an upgrade path to Quick Scan CT.