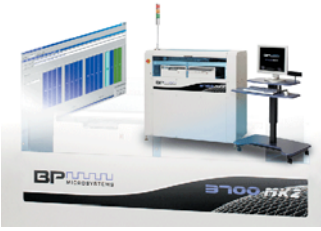
Lead-free Cleaning/Defluxing System

The SMT1000-LF aqueous cleaning/defluxing system is designed specifically for post-reflow, lead-free defluxing applications. To overcome the cleaning challenges presented with a lead-free process, the system is equipped with an ultra-high-performance, stainless steel, nine-stage wash pump, producing in excess of 100 PSI. The system's four-sided rinse section is powered by a high-performance stainless steel pump completely segregated from the wash section to prevent cross contamination and decrease overall operating costs.

Aqueous Technologies, Rancho Cucamonga, CA

Booth 1079



Automated Fine-Pitch Programming System

The 3700 MK2 is an automated fine-pitch programming system that features fast programming times and throughput, resulting in lower cost-per-device. The system is an automated device programmer that combines high-speed Flash programming with full universal support for over 16,000 devices. Whether you are programming 20,000 or 200,000 parts per month, the system is a low cost per device solution for high-density flash up to 256 Mb with programming times from 15 to 120 seconds.

BP Microsystems, Houston, TX

Booth 651

Lead-Free BGA Rework System

The DRS24L is an advanced, flexible ball grid array (BGA)/surface-mount technology rework system. A 10 x 16 in., 3500-watt bottom heater combined with a 1000-watt top heater provides the thermal capability necessary for reworking lead-free components. The system provides 24 x 24 in. board handling capability. A proprietary site cleaning system provides non-contact site solder removal without potential damage to the pads or solder mask that can occur from solder wick.

Air-Vac Engineering, Seymour, CT

Booth 875

Digital Dispensing System

The Champion 6809 is a servo-driven, automated dispensing system designed for precision processes. Featuring powerful, easy-to-use proprietary software and a graphical user interface that allows for intuitive programming and control, the system includes a large, bright, high-contrast color thin film transistor (TFT) display. The system can be configured to match application requirements from dots to underfills with a broad array of options. Placement accuracy is within 3 microns.

Creative Automation Co., Sun Valley, CA

Booth 1053

Work Table

The RTW work table meets the needs of manufacturers who desire durable, modular and ergonomically sound furniture for their facilities. The work surface can be adjusted from 30 to 36 in. high. Based on the tasks, accessories and add-on work tables create additional workspace functionality. A laminated, industrial-grade particleboard work surface and 14-gauge steel supports up to 750 pounds. The company also offers an electrostatic discharge (ESD) work surface.

Production Basics, Watertown, MA

Booth 1203

TAB Repair Systems

EAPRO Emerald series tape-automated bonding (TAB) repair systems for LCD/PDP panels are designed for panel sizes ranging from 6 to 60 in. The universal systems feature a pulsed heat power supply, motorized bonding head, separated loading/unloading positions with manual panel movement and precise panel adjustment and vision systems for fine-pitch alignment and marker recognition.

Unitek Miyachi Corp., Monrovia, CA

Booth 1105

Composite Pallet Material

ECP Pro is the latest composite material in the ECP family and one of the most advanced composites for the electronics assembly market. The material exceeds reflow and wave solder requirements, is static dissipative, offers longevity and is produced in the U.S.

EMC Global Technologies Inc., Doylestown, PA

Booth 876

Correction:

The product spotlight in December for DEK's Stencil Inspection System was incorrect (p. 43). DEK has installed the system, but does not manufacture it.

Benchtop Automatic Pick-and-Place Machine

LE20 and LE40 accurately place virtually all surface-mount components—including discretes, small-outline integrated circuits (SOICs), plastic leaded chip carriers (PLCCs), quad flat packs (QFPs) and ball grid arrays (BGAs)—from interchangeable tape, tube, bulk or tray feeders. These systems accommodate up to 64 feeder positions and boards up to 13.5 x 22 in. The systems have placement rates up to 3000 cph. Options include digital glass scale encoders for ultra fine pitch and 0201 placement, touchless laser centering vision, CAD editor software and a fluid dispenser.

Automated Production Systems Inc., Huntingdon Valley, PA

Booth 440

Programmable Dispenser

The Posiratio Mini advanced dispenser comes equipped with programmable controls and a touch-screen interface for ease of use. Operators can readily calibrate, adjust and monitor all dispensing functions with a touch of their finger. Process data and maintenance screens greatly improve record keeping and manufacturing uptime. The dispenser is used for a wide range of applications, including electrical potting, bonding, sealing and gasketing.

Liquid Control, North Canton, OH

Booth 808

Automated Tray Feeder

The TF30 automated tray feeder is a self-adjusting, automated handling solution for processing devices in and out of JEDEC and semiconductor-specific matrix trays during device programming. The feeder can replenish trays within machine takt time, providing a true non-stop system with a 30% improvement in machine utilization and flexibility. It accommodates a variety of matrix trays from Motorola, NEC, Mitsubishi, Sharp, Hitachi, Toshiba and other manufacturers.

Data I/O Corp, Redmond, WA

Booth 1179

Test Instruments

The MS/s PXI suite of instruments increases flexibility and system performance for rapid prototyping and test of mixed-signal devices and systems. The modular instrumentation suite is matched in frequency and capability and includes four new instruments built on a common hardware architecture. The new modules are ideal for applications in consumer electronics, communications, semiconductor, military/avionics and scientific research, including digital audio and video, data converters, baseband communications, RADAR and high-energy physics.

National Instruments, Austin, TX

Booth 1439

Vision Measuring System

The Summit vision measuring system is designed to meet the demanding requirements of a wide variety of electronics assembly applications. Elements software automatically creates measurement programs using CAD data and pre-programmed component libraries for component placement accuracy verification and printed circuit board (PCB), stencil and solder paste/glue measurement.

View Engineering Inc., Simi Valley, CA

Booth 2046

Automated Optical Inspection System

The GEM series tabletop automated optical inspection system is modeled after the AutoInspector 1820 series, allowing similar advanced capabilities in a tabletop platform. The tabletop has a 50% smaller footprint than comparable systems. With full solder joint inspection and measurement capabilities, the system comes standard with one large format digital camera and a high precision x/y stage. The one-camera system allows for a configurable field of view depending on the application. The standard pixel resolution is adjustable from 17 to 22 micron/pixel. The system has CAD-driven, library-based programming.

Machine Vision Products Inc. (MVP), Carlsbad CA

Booth 1915

Stencil Printing System

TouchPrint is a fully automatic stencil printing system. As a combined stencil printing and dispensing technology system, it incorporates the ability to dispense dots on circuit boards for low- to mid-volume applications. Because of the system's uniquely designed open area side shuttle, epoxy or paste dispensing can be achieved within a single machine, saving cost and factory floor space

Milara Inc., Medfield, MA

Booth 1356

Automated Solder Dispensing System

The SolderPlus dispensing system provides cost-effective automated solder application in bench-top assembly processes. The compact, turnkey package integrates three products—high-performance solder paste, a precision dispense valve and a new xyz positioning platform. The paste is formulated and packaged for precise, trouble-free dispensing from the valve mounted on the tabletop automation system. The system is configured by application specialists to eliminate the risks and unknowns often associated with process integration.

EFD, Lincoln, RI

Booth 1141

Material Control Platform

The Cogiscan platform for material control is a set of hardware and software modules that provides a practical solution on the production floor. Materials may include components, boards, chemicals, feeders and other tooling. Application modules include real-time inventory, line setup validation, moisture-sensitive device control, route control, chemical shelf-life control and product traceability. The system aims to reduce human errors in the assembly process by automating critical quality and process controls. The platform can work with barcode labels and radio frequency (RF) tags.

Cogiscan Inc., Bromont, Québec, Canada

Booth 1032

Placement Machine Feeder

The Twin Tape feeder's design, based on Dual Tape Single Slot (DTSS) technology, enables users to implement high-density 8 mm surface-mount device (SMD) tape component part numbers. The availability of additional lanes improves component balancing and expanded feeder capacity provides opportunities for family set-up. The feeder technology will soon be available for 12 mm taped SMD components. Integrated intelligence allows zero-error set-up, lot traceability, internal diagnostics, empty-reel advanced warning, repair history and splice detection.

Assembléon, Eindhoven, The Netherlands

Booth 1057

Dispensing System

PVA5000 is a computer-based dispensing system for microelectronics applications such as underfill and glob top. A two- or three-zone conveyor with non-contact heating is standard, with optional contact heating. Dispensing repeatability is ensured with laser height sensing, needle calibration and a fiducial correction camera.

PVA, Halfmoon, NY

Booth 1585

Horizontal Convection Oven

The 1800HC reflow oven has a simple design principle and can be used for standard or lead-free reflow soldering. Air is circulated horizontally in one direction across the top of the board and in the opposite direction beneath the board. This circular air current around the board eliminates hot spots by producing consistent temperature, pressure, velocity, volume and direction across the board. Options include an edge rail conveyor, nitrogen inerting, PC interface/Windows software and enhanced printing capabilities. All new models include an on-board computer controller and real-time temperature profiler with graphic display.

Novastar Technologies Inc., Huntingdon Valley, PA

Booth 440

Process Control Software

The KIC 24/7 thermal management system brings automation and management to the thermal process. Users get real-time, around-the-clock process monitoring, statistical process control (SPC) charting, zero-defect production, thermal analysis, documentation and production traceability in a single, intuitive product.

KIC, San Diego, CA

Booth 1842

X-Ray System

The XD7000 XiDAT large format digital x-ray inspection system's inspection area of 573 x 687 mm makes it ideal for the inspection of motherboard, large format network cards and boards larger than 16 x 18 in. It offers magnification up to 5800x and feature recognition of less than one micron over the entire inspection area. The system achieves its high resolution and magnification levels through use of proprietary x-ray tube technology, focusing lens and optimized image chain. It acquires images with a resolution of 1280 X 1024 pixels and over 65,000 levels of grayscale. The resolution is available on live images at 25 frames per second.

Dage Precision Industries Inc., Fremont, CA

Booth 1263

PCB Cleaning Machine

Nikko Power Cyclone is a printed circuit board cleaner with conveyor. The machine removes dust and particles from bare boards before solder application by using a combination of a brush, high-pressure air knife and vacuum. The unit requires minimal supervision, and the brush needs to be replaced approximately once a year.

NIX of America, San Jose, CA

Booth 913

Lead-Free, No-Clean Solder Paste

R905 lead-free, no-clean solder paste, engineered for the thermal demands of lead-free alloys, was formulated for consistent release from the stencil for critical fine-pitched applications (0.4 mm/16 mils) with anti-slump characteristics and solder deposit definition. The printing characteristics are constant with varying print speeds of up to 6 in./sec (150 mm/sec). The paste offers consistent solder paste volume deposits regardless of print speed and both lead-free processing and 0201 print and reflow capabilities. The paste is reflowable in air and nitrogen atmospheres and offers brick definition and bridging prevention.

Kester, Des Plaines, IL

Booth 1201

Water-Based Flux Remover

The VIGON A 300 water-based cleaning agent uses patent-pending MPC® technology. The cleaner not only operates effectively at room temperature, but also cleans hard-to-remove flux residues. The technology provides the user with a cost effective cleaning process and can be used in high and medium pressure spray equipment, such as in-line or batch cleaners.

Zestron America, Ashburn, VA

Booth 1365

Bench-Top BGA Rework Station

Den-on Instruments RD-500SH, designed for lead-free and standard solder, is a vision-based, semi-automated reflow, removal and placement rework station. It combines top and bottom heaters with auto-profiling technology to heat and reflow rework applications. The system uses a combination of dark infrared (IR) and localized hot gas heating to deliver temperature and time profiles for even thick boards and high input/output count area array packages. Rework profiles can be established and verified using auto-profiling software. Components are aligned and positioned using a digital dual-vision imaging system.

FocalSpot, San Diego CA

Booth 800

Flexible Placement Machine

The KE-2060 high-speed flexible mounter provides one multi-nozzle laser head with four nozzles and one high-resolution head for fine-pitch component placement. The machine is capable of placing up to 12,500 cph for the multi-nozzle laser head and up to1,850 fine-pitch integrated circuit (IC) component placement for its high-resolution laser head. Component size placement capabilities range from 0201 to 50 mm x 150 mm.

Juki Automation Systems, Morrisville, NC

Booth 820

BGA Rework Station

The X410 ball grid array (BGA) and surface-mount technology rework station is a tool-free, gas-free system based on Focused IR technology. The unit provides profiling and process control for rework of advanced packages and delivers 150W of component heating using lens-based infrared technology. Boards up to 420 x 500 mm are held securely on a macro-micro x/y table. The table features micrometer control providing ±10micron movement in the x and y directions and has a macro override facility. The system delivers component heating through an adjustable lens attachment. Its standard attachment creates heating spot sizes from 25 to 70 mm in diameter. Underside heating is provided by two, switchable, 600W medium wave infrared sources.

PDR, West Sussex, UK

Booth 1518

Cleaning Solvent

AQUANOX A4512 is an enhanced concentrated cleaning solvent designed for cleaning of reflowed, no-clean flux residues. The solvent has been tested on 86 leading solder pastes, tacky fluxes and wave solder fluxes with a 95%+ success rate. It is effective on reflowed solder paste as well as uncured surface-mount device adhesives.

Kyzen Corp., Nashville, TN

Booth 887

Platform for Film Laser Trim

The TrimSmart LT2100 platform for film laser trim applications has a large work area, updated positioning system and new software and user controls. The series performs trim and test of thick film components and circuits, including printed circuit boards, surface-mount components and hybrids, as well thin film resistors and resistor networks. It uses a stiffe frame for process stability, a new air-bearing stage for positioning, accommodates parts up to 10 x 12 in., has a high-speed pattern recognition system for precision beam placement and part alignment and fully integrated test functions.

GSI Lumonics Inc., Wilmington, MA

Booth 2061

Glue Printing System

The MPM UltraDot glue printer is an adhesive deposition system that meets the needs of high-throughput electronics assembly lines. The glue printer offers advantages over adhesive dispensing technology, including: printing speeds of up to 145,000 dots per hour; an unlimited number of dots placed in one squeegee stroke; and unlimited combinations of dot sizes and shapes. The number of dots does not affect cycle time. The system is available with Rheometric pump technology and handles all glue printing applications and stencil types. It also can be used for solder paste printing.

Speedline Technologies, Franklin, MA

Booth 1271

No-Clean Liquid Flux

NoVOC is a water-based, no-clean liquid flux for use in wave soldering. The low solids flux contains no rosins, resins or volatile organic compounds (VOCs). The no-clean formula eliminates the need for wash-up, since residual flux residues are non-corrosive and halide-free. The flux features low surface tension for wetting prior to wave soldering double sided or multilayer boards. It is ideal for board assemblies containing sensitive sliding switches or conductive carbon pads. The flux is available in 1, 5 and 55 gallon containers, can be applied by spraying or dipping and can be diluted when required by using deionized water.

AMTECH Inc., Branford, CT

Booth 935

Localized Residue Tester

The C3 (Critical Cleanliness Control) provides localized testing for corrosive or conductive residues on critical areas of assemblies that will monitor and facilitate improvement in the manufacturing process. The process takes less than 10 minutes and eliminates lab testing. The tester features a manually positioned arm allowing users to select a targeted test area. The process works as a localized residue assessment tool and as a sample collection tool for ion chromatography analysis.

FinePoint Inc., Carmel, IN

Booth 1895

Modular Workstations

Series 8000 modular workstations can be assembled and reconfigured quickly. Each workstation can be configured in a variety of heights and lengths, and all are available in five standard industry widths and three different heights, providing effective use of vertical space up to 84 in. The workstations are easily converted from single to double sided.

Arlink, Boston, MA

Booth 1020

Lead-Free, No-Clean Solder Paste

NC254 lead-free, pin probe testable no-clean solder paste offers broad process windows for printing, reflow and pin probe testing. The paste has proven to reduce or eliminate solder defects such as voiding under micro ball grid arrays (µBGAs) and solder beading by discrete components. The paste can be printed at high speeds without slumping, provides consistent stencil release and repeatable print volumes for fine-pitch applications and performs well with open squeegees and enclosed pump printing processes.

AIM, Cranston, RI

Booth 1253

Automated Optical Inspection System

The YTV-2080 high-speed automated optical inspection (AOI) system has color megapixel Thin Camera technology to provide high-speed printed circuit board inspection with defect coverage. The system inspects for solder and lead defects, component presence and position, correct part, polarity and paste. It offers quick setup, allowing operators to create a complete inspection program in under 45 minutes. The AOI system is available with up to eight cameras—four top down and four for side-viewing. The camera technology integrates color, normalized correlation and rule-based algorithms for inspection coverage with a low false failure rate.

YESTech, San Clemente, CA

Booth 1513

Stencil-Printing Squeegee Holders

Permalex Universal Holders' stencil-printing squeegee technology focuses on improving print quality and production yield. The holders, available for DEK and MPM screen printers, feature a full-length holder that can be used with a range of blades. The holder accepts blades without holes for faster blade changes and blades of any length, which can reduce costs. Sliding paste retainers allow for flexible blade mounting position within the holder.

Transition Automation, Billerica, MA

Booth 345

Feeder System

The Full Active feeder system with Quick Change Racks combines "triple intelligent" Triligent feeder technology with the concept of exchangeable feeder banks for speed and flexibility in high-mix assembly environments. The feeder reduces feeder exchange time through active high-speed optical communication between the system, intelligent feeders and the operator. The racks can handle groups of feeders for quick exchange. With the quick-change feature, operators can use single active feeders or exchange racks with pre-selected feeder-families.

MIMOT, Irvine, CA

Booth 1433

AOI System

K4-AOI automated optical inspection (AOI) system features patent-pending, large-format color imaging and parametric measurement technology. The system can continuously gauge variations in component placement and generate accurate and reliable SPC trend data. The system's four million pixel, 16-million-color digital camera can capture images as large as 4 x 6 in., allowing inspection of a typical 4 x 6 in. board with fine-pitch components in 8 seconds. It uses parametric measurement—measuring every component every time—to prevent missing components, false calls and wrong components being used.

Vectron Inc., San Diego, CA

Booth 473

Multi-Chip Die Bonder

The Datacon 2200 apm Multi-Chip Die Bonder platform provides users with flexibility and minimal space requirements for demanding die attach and flip chip processes. The bonder takes the platform concept to the next level, handling wafers up to 300 mm and die up to 50 mm, in addition to handling specialized advanced packaging needs. Overall machine accuracy on machines shipped to customers is 7 µm at 3 seconds. Throughput ranges from 1000 uph for high-end singulated flip chip applications (including flux dipping) to 3000 uph for low-end matrix flip chip applications (excluding flux dipping).

Datacon North America Inc., Trevose, PA

Booth 905