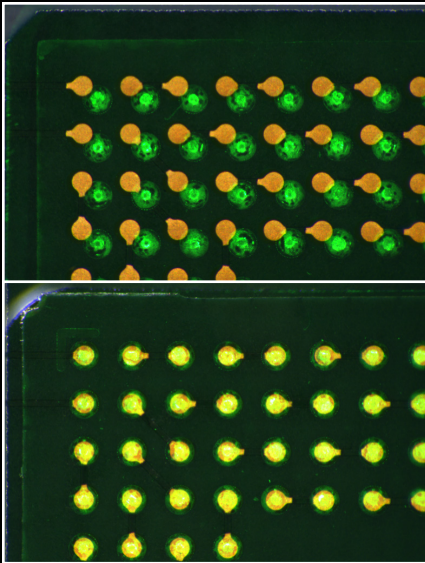
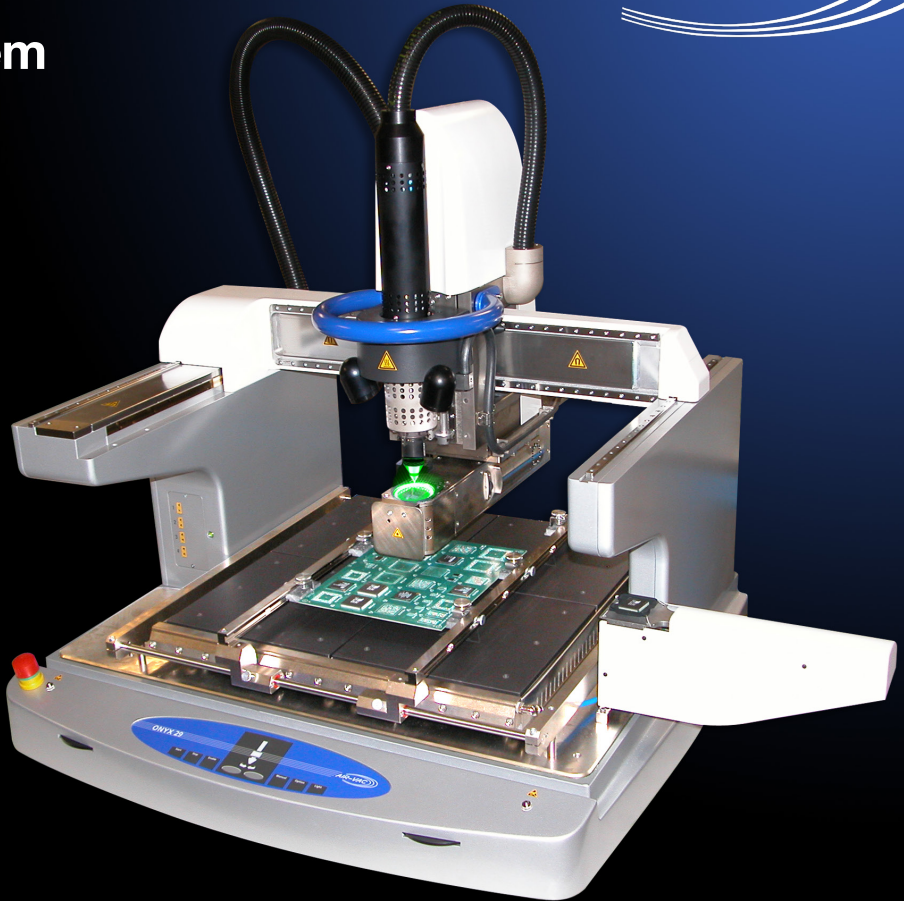


# ONYX29

## Robotic Rework System



BGA: Unaligned (top) / Aligned (bottom)



### Robotic Rework System

Seven (7) automated axes virtually eliminates operator involvement.

### Precision Placement Accuracy

Linear encoders and “worm gear” z-axis drive combine to provide industry leading 9 micron placement accuracy with no mechanical calibration ever!

### Vision System

Beam splitter, color camera with zoom lens and programmable intensity LED's (green/top-white/bottom), simplify the alignment process.

### Non-Contact Site Cleaning

- Proprietary, non-contact site cleaning nozzle provides heat and vacuum needed to remove residual site solder after component removal.
- A vacuum sensor automatically and continuously adjusts the vacuum tip height above the board.
- Eliminates pad and mask damage caused by mechanical contact solder wick.

### Program Development Wizard (PDW) Software

Uses thermocouples and adjust-on-the-fly feature to create thermal profiles for new applications. Timed-based production profiles are automatically created.

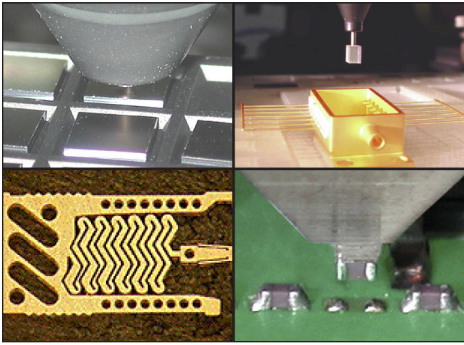
### Board Image

- An image of the board with all component locations and location identifiers is made available to the operator who selects the location(s) and processes to be run.
- Once the board zero frame fiducial is found, all of the component locations are known, multiple component locations can be reworked in a single cycle.

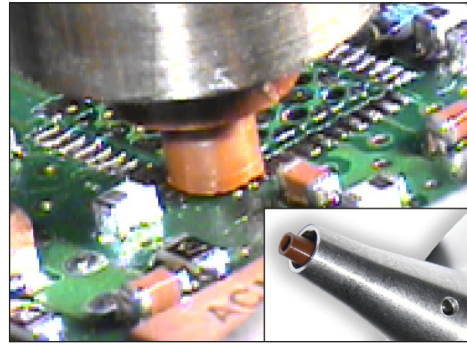
### Thermal Repeatability from Run-To-Run and Machine-To-Machine

- A heater stabilization routine uses a thermocouple in the head to heat the machine if it is cold or cool the machine if it is hot.
- The heater stabilization routine, combined with temperature-based board preheat provides excellent thermal repeatability from run-to-run and machine-to-machine.

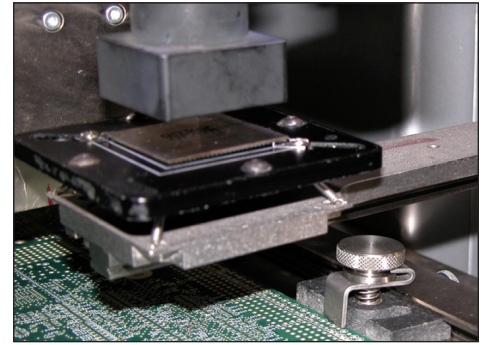
# High Performance Automation Rework



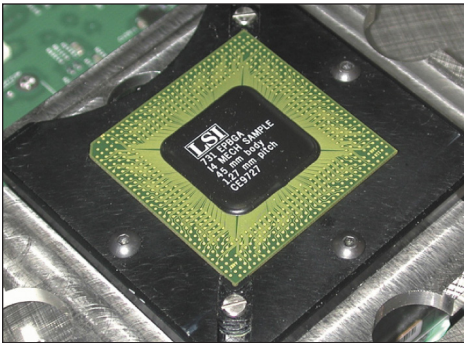
Micro-Force Pick & Place



Automated Micro Site Cleaning



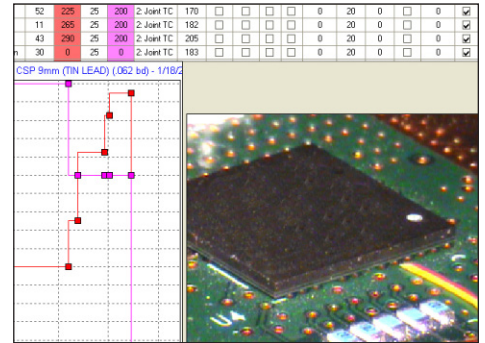
Automated Component Handling



Multi-Position Pick Capability



Micro Rework & Site Cleaning Kits



Ready-Made Component Processes

## Recommended Options

- **Pivoting IR Sensor w/Laser Pointer** (0029.12.040)  
Provides process repeatability by insuring that the board is at the exact same target temperature each time before localized reflow begins.
- **Site Cleaning Kit** (0029.03.012) - Standard and micro nozzles for complete residual solder removal.
- **Universal Insertion Tool** (AU6LGA47R) - Mechanically self-centers any device for accurate pick up. Used in conjunction with the automatic component shuttle. Component size range of 6-47mm.
- **Direct View HD Camera System** (0029.04.044)  
Provides high magnification site viewing including the ability to verify when component reflow has occurred.
- **Fume Extraction Manifold with Vacuum Assembly** (300.00.547) - Removes flux vapors from the environment for health and safety. Includes a self contained filtering system.

- **Paste-On-Device Stencil Adapter** (0024.24.111)  
Component specific stencil applies solder paste directly to the component spheres.
- **4 Additional Thermocouple Ports** (300.00.504)
- **Recommended Spare Parts** (0029.00.040)

## Other Options

- **Ergonomic Workstation with CPU Holder** (1003.05.010)
- **Monitor Stand Option for Workstation** (1003.05.005)
- **Nozzle Stand Option for Workstation** (1003.05.006)
- **Locking Drawer Option for Workstation** (1003.05.007)
- **Thermocouple Organizer** (0024.90.047)
- **Dipping Kit for Solder Paste or Flux** (FASET1)  
Superior to applying paste via component or board stencils.



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