

Our team develops the systems with modern development tools:



- Concept Development
- 3D Design Environment
- Prototype Systems
- Finite Element Analysis
- Vision System Integration



- Software development
- Customized machine controls
- Process vision systems
- Image processing systems

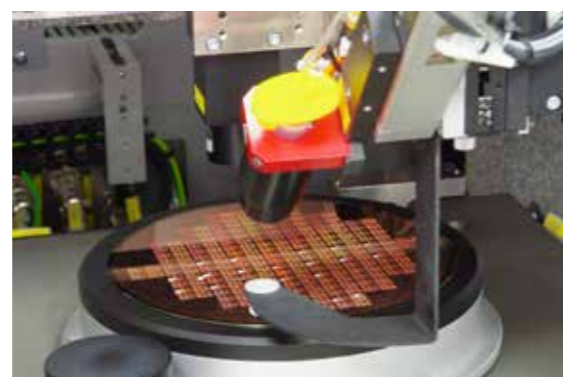


- Process development and process production transfer
- Sampling and small volume production

AMICRA is also open to custom designs and complete solution developments

For Example:

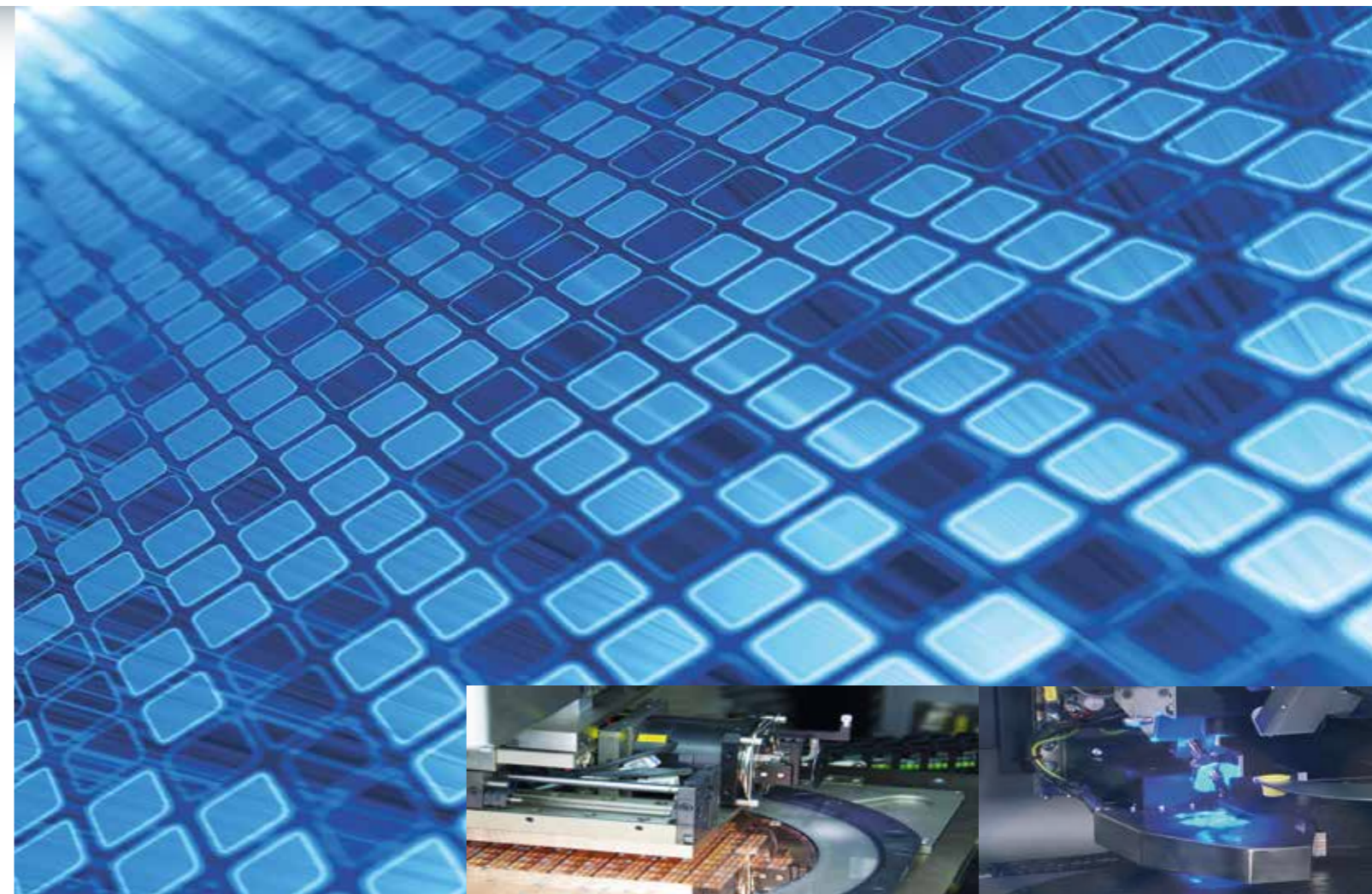
- Gel Fill Assembly Line
- Pressure Sensor Lid Attach Line
- Customized 6-axis of Freedom System
- Integration of unique Dispensing Systems
- Active Alignment System
- Plasma Cleaner Integration
- FOUP Wafer Loader
- Innovative Submount Fixture Solutions
- Unique Process Gas Solutions
- Wafer Bonding Integration



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PRODUCT OVERVIEW

Product Solutions,
Advanced Technology,
& Unique Capabilities

Die Bonder & Flip Chip Bonder

AFC^{PLUS}

FULLY AUTOMATIC ULTRA-PRECISE DIE BONDER



- Accuracy down to $\pm 0.5 \mu\text{m}$ @ 3s with cycle-times down to 25 sec AuSn Eutectic Process
- Eutectic laser soldering or epoxy bonding
- Small Die Size down to $100 \mu\text{m}$
- Closed Loop Bond Force Control
- Supports all dispensing technologies
- Optional: flip chip bonding, wafer mapping, post bond inspection, heated tools, etc.

MARKETS

- Single Mode/SiPhotonics/PIC/AOC/WLP
- Laser Bar and MEMS assembly
- Semiconductor advanced packaging (3D, Stack Die etc.)

NOVA^{PLUS}

HIGH-SPEED DUAL HEAD DIE BONDER



- Accuracy down to $\pm 2.5 \mu\text{m}$ @ 3s with cycle-times down to <3 sec AuSn Eutectic Process
- Modular machine concept for all micro assembly applications
- Eutectic laser soldering for high-speed assembly
- Supports all dispensing technologies
- Optional: flip chip bonding, wafer mapping, post bond inspection, heated tools, etc.

MARKETS

- AOC/Optoelectronic/Photonics/LED
- Semiconductor advanced packaging- (TSV, eWLB, FanOut, WLP, 3D, Stack Die)
- Laser Bar and MEMS Assembly

NOVA^{FANOUT}

HIGH-SPEED DUAL HEAD DIE BONDER



- Accuracy down to $\pm 3.0 \mu\text{m}$ @ 3s with cycle-times down to 1.2 sec
- Modular machine concept for all micro assembly applications
- Laser heat and heated tools for unique epoxy bonding process
- Supports all dispensing technologies
- Optional: flip chip bonding, wafer mapping, post bond inspection, etc.

MARKETS

- FanOut process is the primary application
- Optoelectronic, MEMS, Laser Bar
- Semiconductor advanced packaging- (FanOut, eWLB, WLP, 3D, Stack Die, TSV)

High-Speed Dispense System

HDS

FULLY AUTOMATIC HIGH-SPEED AND PRECISION DISPENSE SYSTEM

- Quad or Dual Headed Dispensing System
- Underfill, Glob Top, General Dispensing Applications
- Supports all Standard Dispensing Pump Technologies (Jet Pump, Spindle Pump, Time-Pressure- Vacuum Pump)
- Cognex Vision System (Automatic Fiducial Mapping, Post Inspection system)
- Support PCB, Laminate Strip, Leadframes, Carriers, etc.
- Inline, Magazine to Magazine, Reel to Reel

MARKETS

- MEMS, Automotive, Semiconductor Industry, Electronics



Test System

LTS

LASER DIODE AND LED MULTI BIN TEST SYSTEM

- Cycle-time <2 sec
- Modular machine concept
- Up to three test stations
- Fully automatic mag-to-mag system
- Up to 8" wafer

MARKETS

- LED, Laser Diode, HDD



Wafer Inking Systems

AIS & SIS

FULLY AUTOMATIC OR SEMI AUTOMATIC HIGH-SPEED INKING SYSTEM

- Dot size down to $70 \mu\text{m}$
- Inking of diced und undiced wafers down to 20 dots/s
- Automatic wafer loader for up to 12" wafer

