



Data Sheet

MEMS & Custom Assembly

Advanced Microelectronic Packaging

Aspen Technologies has become the premier sub-contract MEMS packaging and assembly facility in the U.S., removing a critical stumbling block to the development and manufacture of commercial, medical, and military MEMS devices. Aspen's experience includes custom MEMS package design, development, and manufacturing of photonics, imagers, displays, DNA analyzers, fuel cells, inertial sensors, fluid regulation and control devices, RF devices, and more. Initially using adaptations of IC assembly techniques, Aspen Technologies has made continued refinements in MEMS package design and manufacturing techniques, having developed numerous MEMS-specific processes. A multidisciplinary field, Aspen's engineers have designed unique packaging solutions using new materials for several MEMS devices currently in volume production.

Development Engineering

- Analysis of device specific design concepts, technologies, and materials
- Planning (product development roadmaps, risk analysis, qualification plan)
- Substrate or package design
- Package, system, and product test design and development
- Manufacturing process design and materials validations
- Package, manufacturing process, and test vehicle tooling
- Quality and document planning
- Pre-production prototyping and product qualification

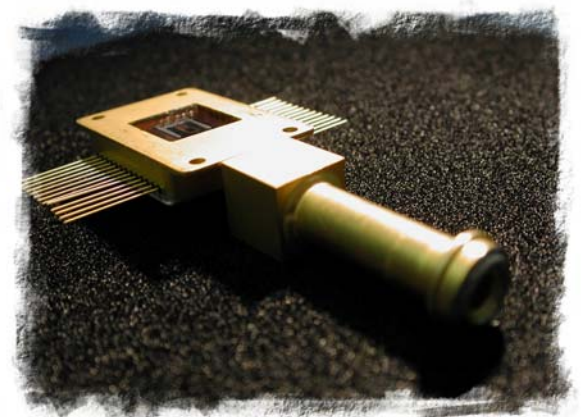
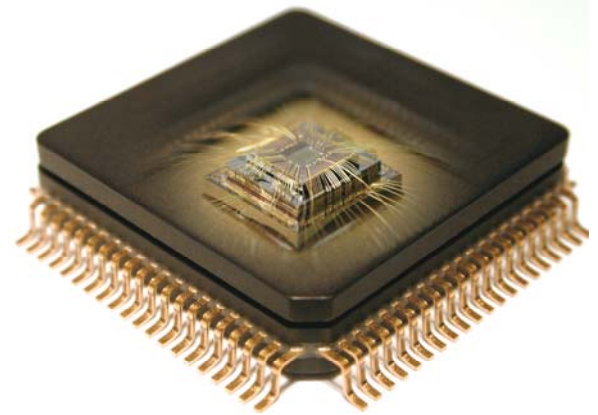
Manufacturing Services

- Custom wafer / die inspection processes
- Coat-saw-strip wafer singulation
- Wet and dry MEMS release processes, including XeF_2 etch
- Custom dispense processes and low stress materials
- Custom Au ball and wedge wirebonding techniques
- Au Stud Bumping
- Flip Chip assembly (see Flip Chip Data Sheet)
- Getter integration
- Lid seal (seam seal, solder seal, epoxy seal, etc.)
- Frit-based and solder-based wafer or die bonding
- Custom test benches
- Pilot Production
- Volume Manufacturing

Facilities

Full Class 100 MEMS manufacturing cleanroom

ITAR Registered (Reg. Code: M24169)



One of Aspen Technologies' strengths is making our customers successful through MEMS and Custom Assembly.

How can we help you be successful?

ASPEN TECHNOLOGIES

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