

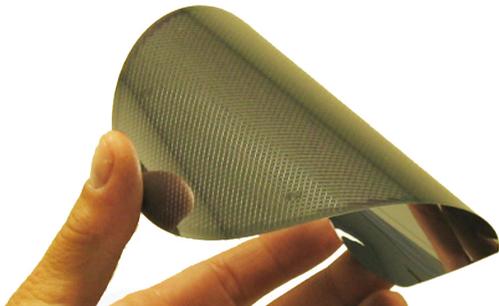
Unlimited Wafer Handling Possibilities

MICRON-LEVEL ACCURACY CUSTOM TOOL



THE CHALLENGE

For [Microelectro-mechanical systems \(MEMS\)](#) manufacturing: handling fragile substrate with tight tolerance and high complexity and flexibility, has made its process automation a challenge. The substrate can range from 50 μm thin wafers to 6mm bonded wafers, bumped, or even perforated, warped, and over-sized carrier



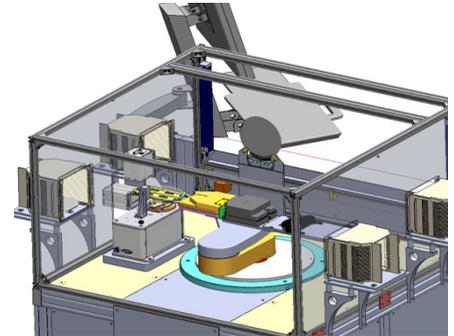
wafers that many leading robotic automation suppliers do not have off-the-shelf solution.

OUR CORE COMPETENCE

Based in Silicon Valley, Quartet Mechanics core technology lies in the area of micron-level accuracy material handling, machine vision systems, advanced clean-room robotics and custom automation. All our components are designed as modules, so a single tool can bridge various substrate materials, sizes, shapes, process steps with no or limited change-over.

VERTICAL INTEGRATION

Our product suite features standard or custom tool development, robotics and peripherals, high precision component tooling and fixturing, and tool connectivity, performance monitoring and e-diagnostics. We are your single-source automation solution provider.

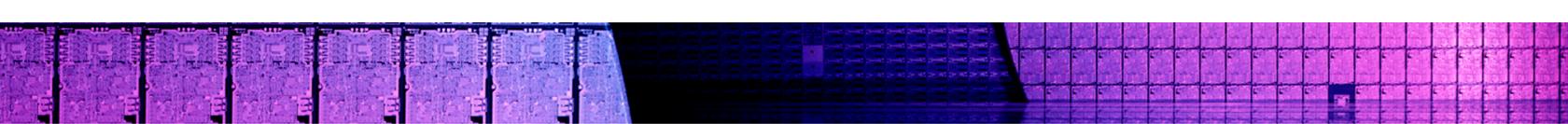


Design for manufacturability.

Design for maintenance.

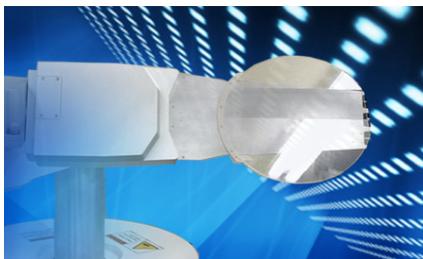
Design for flexibility.

Quartet
MECHANICS



TOOL AUTOMATION

A full service engineering and system integration company which develops and installs robotic-based work cells & integrated systems to meet specific cleanliness requirements. From BOLTS-compliant to custom tools such as thin wafer sorter, coin-stack jar unpacking & tool retrofitting.



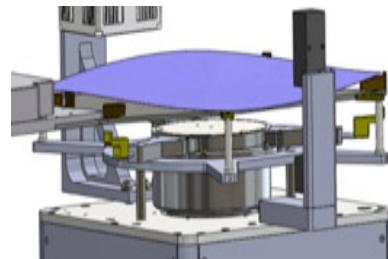
LED APPLICATION

Perfect for large diameters, 6"~8" sapphire wafer handling & flipping; slim gripper design for a standard 6" cassette with 4.76mm pitch & 8" with 6.35mm pitch; auto-adjust for notch or flats (primary & secondary); reads 2-sided wafer ID on clear or semi-transparent wafers.



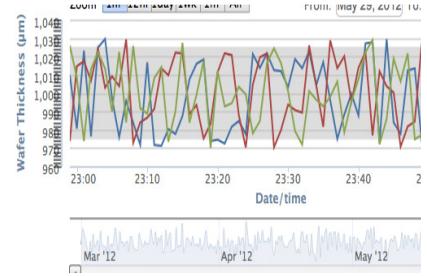
BUILDING BLOCK

Combining proprietary sensing and gripping technology with a low profile plug and play design, our wafer handling tools provide unparalleled flexibility in dealing with delicate wafers. All our products adhere to the most rigorous wafer manufacturing standards and requirements.



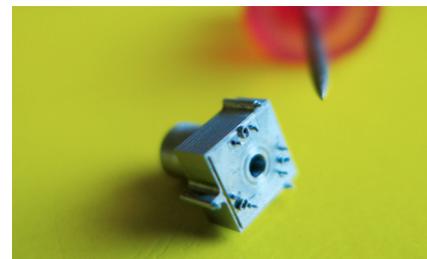
MEMS APPLICATION

Quartet Mechanics can help MEMS foundry or equipment maker to automate the wafer level packaging with our wafer handling solution for full range of wafer thickness (or potato-chip shaped as illustrated) and our machine vision alignment & placement to achieve the tight tolerance demanded.



VISUALIZATION

Prevent any out-of-specification operation before it happens. Quartet Mechanics offers the remote diagnostics and web-based Fab-@-A-Glance tool performance monitoring system to reduce the trouble shooting cost and enable exception management.



TOOLING & FIXTURING

MEMS automation requires the components to be of the highest quality and tightest tolerance. Quartet Mechanics also specializes in the micro machining and precision manufacturing for automatic fixturing. We are equipped with advanced CNC tools enabling close-tolerance work (± 0.0002 ").