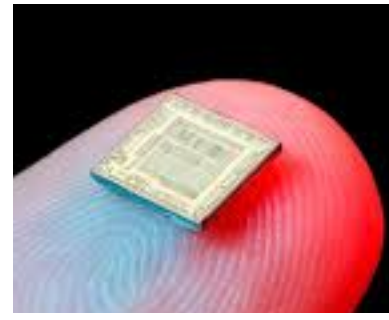
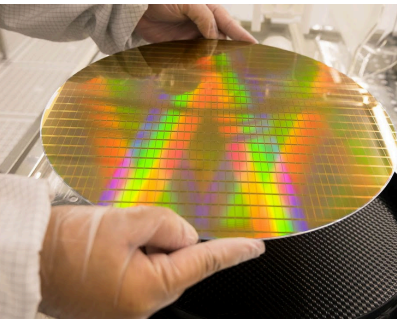
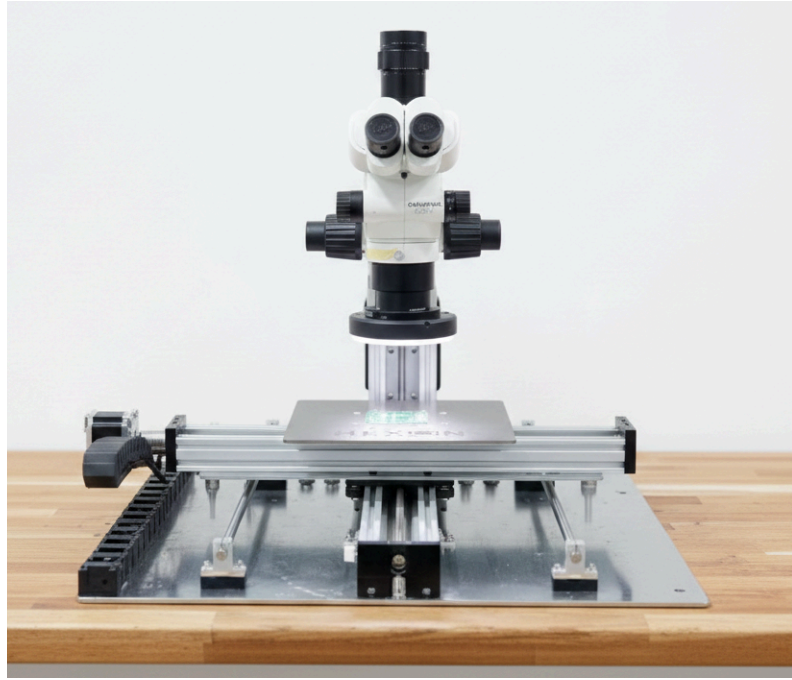


Automated Optical Inspection (AOI) System



Precision. Automation. Reliability.

Hexon Instruments proudly introduces its next-generation Automated Optical Inspection (AOI) System, engineered to meet the evolving quality control demands of semiconductor, electronics, and advanced manufacturing industries.

Designed with intelligent automation and high-resolution optical performance, the AOI system enables rapid, repeatable, and accurate inspection of large-area samples — ensuring superior defect detection and process optimization.



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Product Overview

The Hexon AOI system integrates a high-performance optical microscope with a precision motorized XY scanning stage, delivering automated inspection capability across wafers, PCBs, and microelectronic components.

The platform combines advanced imaging, programmable scanning, and AI-driven defect analytics, allowing manufacturers and research laboratories to achieve reliable inspection outcomes with minimal operator dependency.

Applications

Semiconductor Industry

- Wafer surface defect inspection
- Particle and contamination analysis
- Microstructure evaluation

Electronics & PCB Manufacturing

- Solder joint inspection
- Component placement verification
- Track and pad defect detection

Advanced Manufacturing

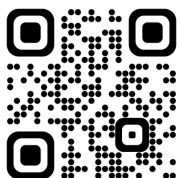
- MEMS and sensor inspection
- Micro-mechanical component analysis
- Precision assembly verification

Research & Failure Analysis

- Material defect characterization
- Quality benchmarking
- Process development support

Specification

- Programmable automated scanning across large inspection areas : 300x300mm stage
- Supports wafer inspection for 4 inch, 6inch, 8inch.
- High repeatability and positioning accuracy in microns
- Stable platform for vibration-free imaging
- Automated inspection workflow generation
- Real-time defect detection algorithms with machine learning
- Pattern recognition and anomaly identification
- Pass/Fail classification with audible buzzer alert
- Inspection data storage and reporting capability
- Advanced optical imaging system magnification (5x to 100x or more)
- Auto-focus functionality for consistent clarity
- Enhanced visualization of micro-defects
- Flexible magnification for multi-scale inspection



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