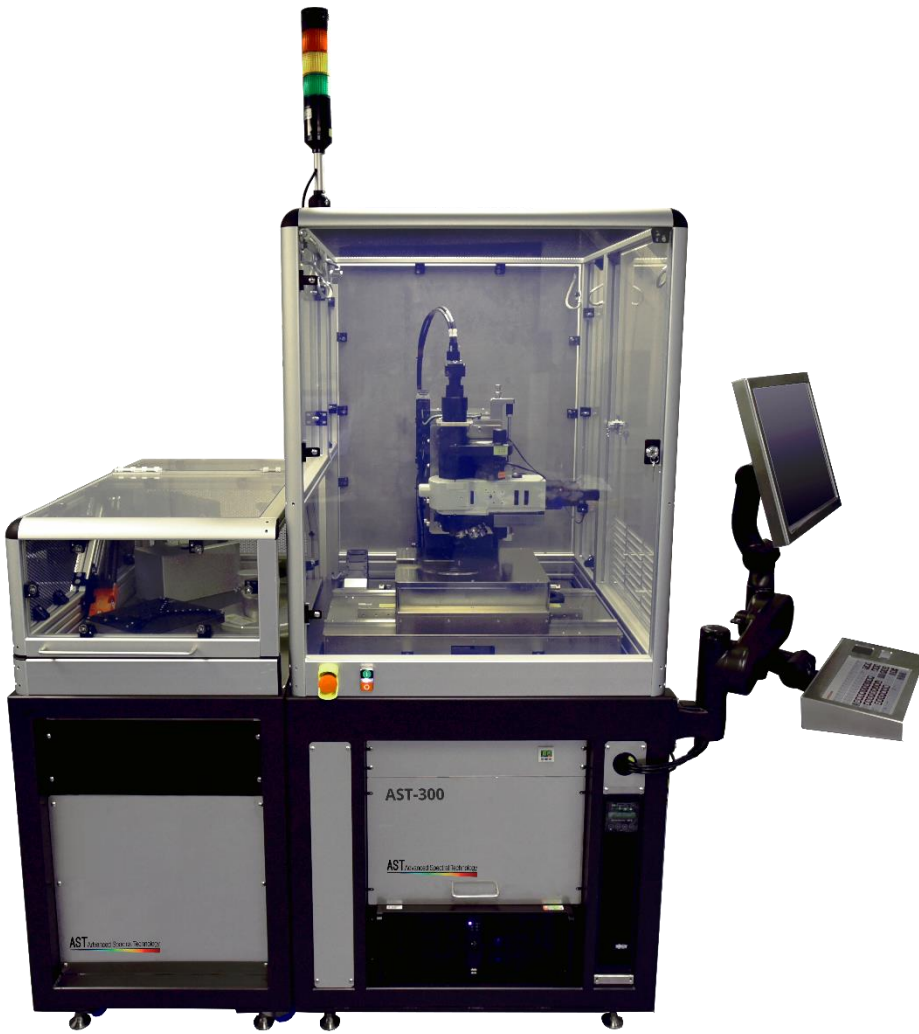


AST-300

Ultra-fast automated inspection and metrology system;
fully customizable to your exact application.

Advanced Inspection
and Metrology
System



Benefits:

- Fully Customizable
- Ultra-High UPH
- Multiple Device Format
- High Speed Stitching
- Ultra High Resolution IR/SWIR
- Upgradable and Adaptable for Future Applications
- Sub-Micron Precise Optical Measurement
- High Accuracy Staging with 5nm linear encoder resolution

APPLICATIONS

- Wafer/Die level CD (Critical Dimension) Metrology
- Precision MEMS & 3D Component Inspection
- Advanced Overlay Metrology
- VSCSEL Aperture Metrology & Inspection
- High Speed Probe Card Inspection & Metrology

Optional Additions

- Various Specialized Optical and Illumination Accessories for Infrared, Visible, and UV Spectrums.
- Unique Part Staging and Wafer/Strip/Custom Format Handling Capabilities.

Illumination

- Software controlled Coaxial, Backlight, or as required.



Platform

- 325mm x 400mm sample size capacity
- 100mm Z-axis travel
- Maximum stage Load capacity: 25kg
- 250mm/second maximum staging speed
- Granite base & Z-column, stainless steel finish
- Class 100 clean room compatible
- Non-linear 2D accuracy error correction

Stage accuracy (xy)

- 1 μ m limiting X-Y stage accuracy
- [error<(1.0 μ m+(L/300)) where L is stage travel in mm]
- 1 μ m limiting Z-axis accuracy
- [error<(1.0 μ m+(L/100)) where L is stage travel in mm] Granite base & Z-column, stainless steel finish
- Class 100 clean room compatible
- Non-linear 2D accuracy error correction

Camera

- Camera selected for your application: Ultraviolet, Visible, Near IR, Short Wave IR, or Mid-Wave IR
- High speed digital interface

Software

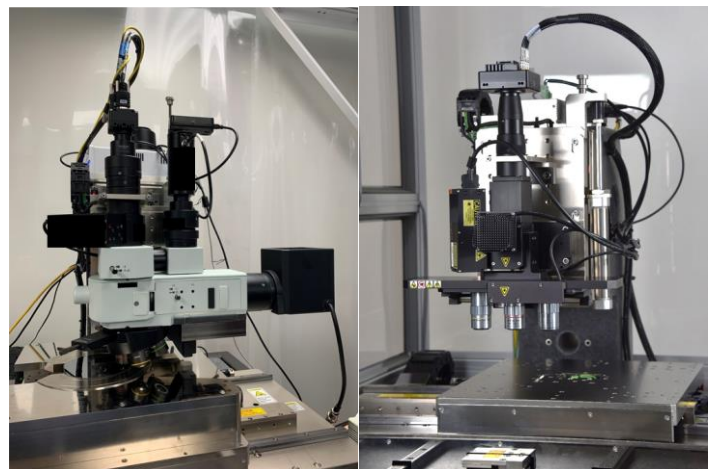
- Flexible part scanning for operator convenience & throughput optimization
- High precision vision-based part alignment
- AST ScopeViewer Software Application suite
- Windows 7 Pro / Windows 10 Pro

Dimensional measurement tools

- Video Tools: Point, Line, Circle, Arc edge detectors
- Constructions: Extensive geometric constructions with distance & angle measurements (line to line, etc)
- Origin & Skew: Unlimited reference frames
- Tolerancing: Dimensional & Angular
- Units: Metric
- Coordinates: Cartesian & Polar
- Step & Repeat: Repeat Loops for repeating features & multiple parts
- Reports: Data on screen, text file, or exports to Excel
- SPC: Average, SD, Range, Min, Max, Cp, Cpk
- Additional: Auto Focus, Auto Lighting, Outlier Removal

Optics

- Standard configurations for Bright Field, Dark Field, UV, NIR, SWIR
- Semi-custom optics readily available for your requirement as needed (DIC, Polarized, etc.)
- Flat Field objectives (multiple options) with motorized 5 & 6 position turrets
- Integral Video Auto Focus or optional Laser Auto Focus



Imaging optics configurable to achieve optimum image quality & performance based on application