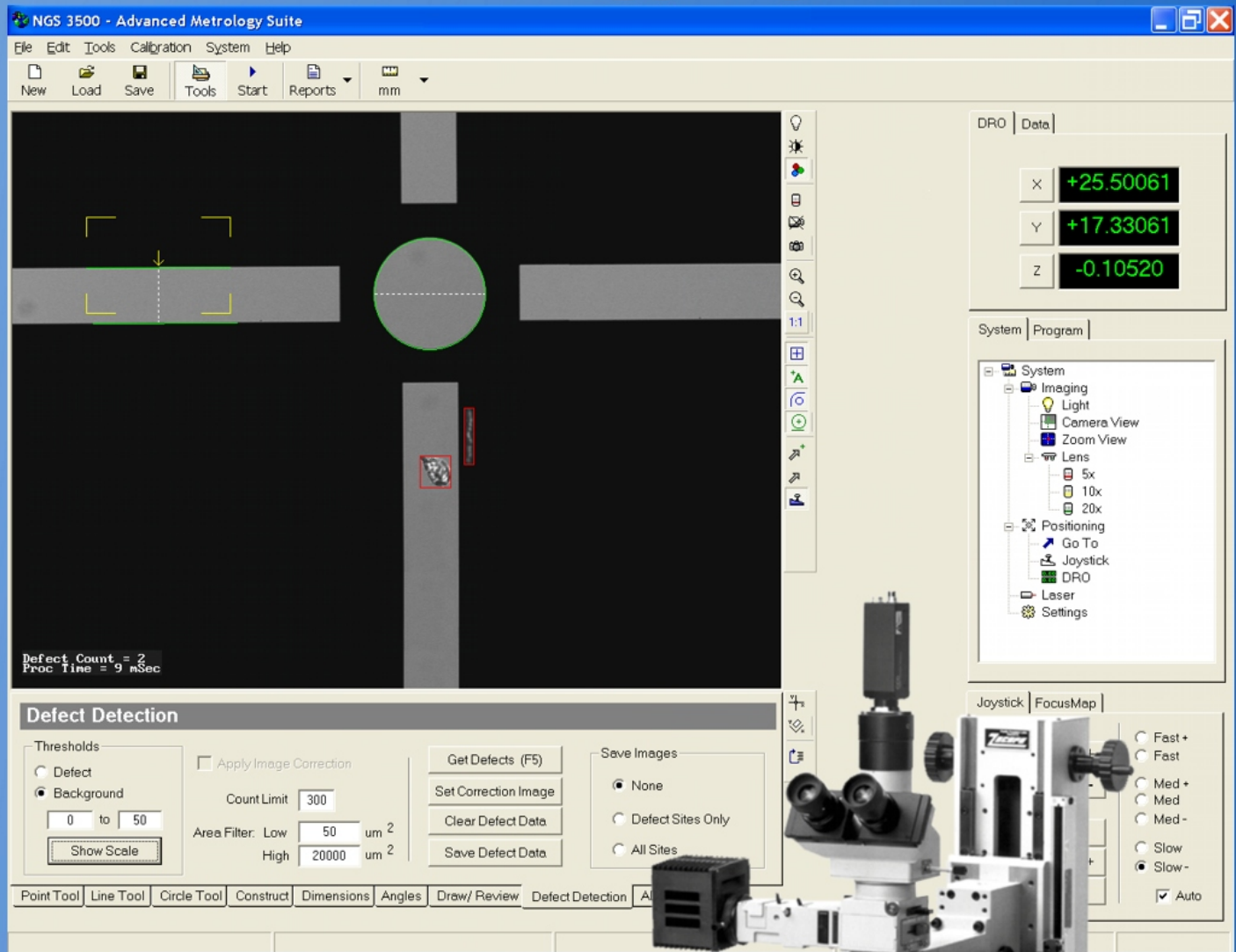


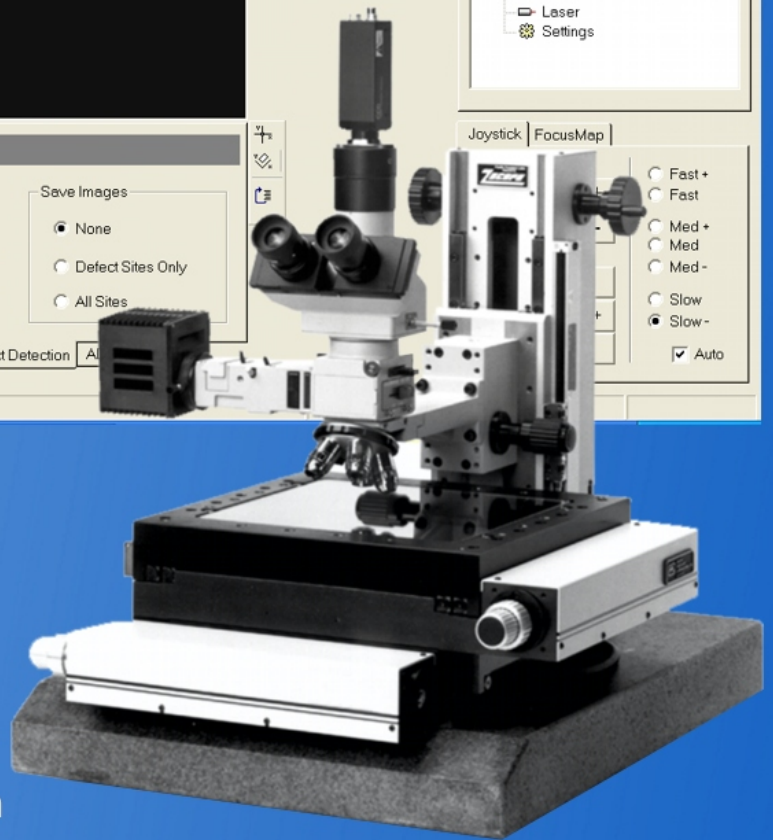
NEW

NGS 3500Z

Vision Metrology System



Defect Detection & Classification
 Precision Dimensional Metrology
 Automatic and Manual Operation
 Up to 200 mm Wafer/ Part Capacity
 Bench-top Versatile Optical Platform



NGS 3500Z – Vision Metrology System

This bench top lower cost, yet high performance system is designed for applications where defect detection and precision measurements on wafers and other parts (up to 200 mm) are required. It is well suited for use as a dedicated production tool or as a versatile process development system. It features a powerful set of automated as well as semi-automatic optical/ video tools optimized for high accuracy, production throughput, and ease of use.

This automated and versatile platform features a standard Nikon/ Olympus bright/ dark field microscope with optional Nomarski, and precise part staging. This system offers significant and unique advantages for dual production/ engineering use, and provides the perfect solution when both defect detection and dimensional metrology are required.

The system can be configured or customized to meet your exact requirements with a variety of optical and illumination accessories, custom wafer/part fixtures, as well as custom operator interface, data formats and reports.

APPLICATIONS

- ❑ Wafer level defect detection & measurement
- ❑ Precision MEMS and HD component inspection
- ❑ Advanced microelectronics package inspection

POWERFUL

- ❑ Designed for automatic/ semi-automatic operation
- ❑ Extensive Defect Detection features & capability
- ❑ Integrated Dimensional Metrology features

PRECISE

- ❑ Sub-micron precision optical measurements
- ❑ High accuracy staging with 0.5/ 0.1 um linear encoder resolution

FAST

- ❑ 50-100 defects/ measurements per second typical per field of view
- ❑ 20mm/ second part staging speed

USER FRIENDLY

- ❑ Very easy to use, program and set up
- ❑ Highly visual data with rich color graphics & Video

FLEXIBLE

- ❑ Nomarski Microscope and other advanced options
- ❑ Customizable for application specific solutions

Specifications

SYSTEM SPECIFICATIONS (Summary)

- ❑ 150mm or 200mm wafer/ multi-part size capacity
- ❑ Maximum stage Load capacity: 25 lb
- ❑ 50mm/ second maximum staging speed
- ❑ Compact bench top design with granite base
- ❑ Class 100 clean room compatible
- ❑ Precision lead screw drive with 0.5/ 0.1um resolution linear glass encoders
- ❑ Non-linear 2D accuracy error correction
- ❑ Stage Accuracy U2 (XY): 1.8+3.5L/100 um, U1 (Z): 1+13L/150 um. Where L is length in mm
- ❑ Computer: Windows XP Intel P4 system
- ❑ Platform: Pacific Precision Laboratories Z-Scope
- ❑ Software: RMS Vision Systems' NGS 3500 Advanced Metrology Suite
- ❑ Optical System: Flat Field objectives, with optional motorized 5 position turret
- ❑ Camera: High resolution CCD array 60+db S/N ratio
- ❑ Image Processing 256 grayscale with 1:5-1:50 sub-pixel ratio.
- ❑ Video and optional Laser Auto focus
- ❑ Illumination: software controlled Coaxial & backlight
- ❑ Environmental: 17-23 deg C, 20-80% Humidity
- ❑ Electrical 120/240 VAC, 15A single phase
- ❑ Footprint: WxD: 20x27 inches. Height: 39 inches
- ❑ Weight: depending on stage size 150-250 lb crated

SOFTWARE FEATURES

- ❑ Automatic defect detection and classification
- ❑ Graphical Defect maps, Image Archival, offline review of defects, and reprocessing of archived images
- ❑ Flexible part scanning for operator convenience and throughput optimization
- ❑ High Precision vision based part alignment
- ❑ Dimensional Metrology Tools:
 - Video Tools:** Point, Line, Circle, Arc edge detectors with built in best fit and defect removal
 - Constructions:** Extensive geometric constructions, with distance and angle measurements (e.g. line to line, etc.)
 - Origin & Skew:** Unlimited reference frames
 - Tolerancing:** Dimensional, Angular, Geometric True Position (MMC, LMC, RFS)
 - Units:** Metric & inches
 - Coordinates:** Cartesian & Polar
 - Step & Repeat:** Repeat Loops for repeating features and multiple parts
 - Reports:** Data on screen, text file, or exports to Excel
 - SPC:** Average, SD, Range, Min, Max, Cp, Cpk
 - Graphics & CAD:** Drawing import/ Export
 - Other:** Auto Focus, Auto Lighting & Outlier Removal