J·MAR PRECISION SYSTEMS, INC.

Ergonomic Accuracy

Measurement & Inspection Solutions for High-Precision Applications

DIS - AFM

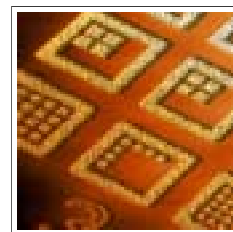
Applications:

- Defect Review
- CMP Process Verification
- IC Failure Analysis
- Width and Depth Measurements
- RMS Roughness
- Fiber Optic Gratings
- Pole Tip Recession
- CD/DVD Inspection

JMAR's Atomic Vision (AV) products add the capability of atomic force microscopy (AFM) to our inspection platforms. JMAR's Atomic Vision product resolves, literally, sub-nanometer details. JMAR's DIS-AFM adds an AFM head to our well-known Disk Inspection System (DIS), used widely for disk platter failure analysis. The DIS-AFM facilitates both optical disk inspection and atomic force disk inspection in one tool, and the AFM is par-centered to the visible lenses. This par-centering feature greatly reduces the time required to find a defect with the AFM. The DIS-AFM is also capable of magnetic force microscopy, known as MFM. JMAR's DIS-AFM will automatially locate faults from R-theta coordinates supplied externally. The failure sites may be inspected visually and via atomic force microscopy in intermittent contact mode. No disk failure is too small for detection to JMAR's DIS-AFM.

Characteristics:

- Non-Destructive
- Sub-nanometer Resolution and Accuracy
- Easy to Use
- Small equipment Foot Print



Standard Features:

- Windows Software
- Off line Data Processing
- Real time Manipulation of Data
- Image Archival and Retrieval
- Acoustic and Vibration Isolation

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Phone: 800-793-0179
www.jmar-psi.com

Precision

Submicron Applications

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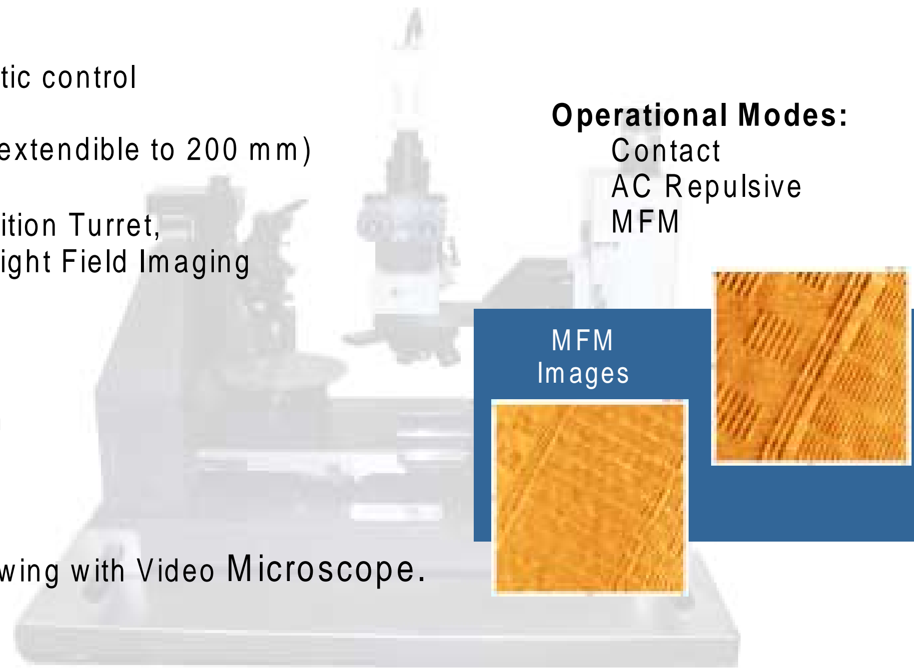

Specifications:

R-θ Stage with automatic control
X,Y Stages available
150 mm wafers/disks (extendible to 200 mm)

Visible Optics: 5 position Turret,
Both Dark Field and Bright Field Imaging
5x, 20x, 50x, 100x

AFM:

X, Y Scan Size: 40 µm
Z Range: 4.5 µm
X, Y resolution < 1 nm
Z resolution < 1 ¯
Sample and Probe Viewing with Video Microscope.

Operational Modes:
Contact
AC Repulsive
MFM

MFM Images

Software Features:

- 3D Visualization of scanned image.
- Image refinement with tilt removal, streak and spot removal, smoothing and user defined filter.
- Fourier transform analysis for analyzing and modifying the frequency spectrum of images.
- Histogram analysis to measure roughness of surfaces and height (depth) of features.
- Dimension Analysis for point-to-point measurement.

Precision Solutions for a Micro-World

ISO 9001

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