



Stand Alone SMENA
(scanning-by-probe system configuration)

The Stand Alone SMENA expands the scope of scanning probe microscopy to bring you innovative facilities for investigating samples of unlimited size in all available SPM measuring modes. In spite of such versatile measuring capabilities, SMENA has a very compact low weight design and a reasonable price.

There is a configuration of SMENA with closed liquid cell with a flow of liquid. For more information please take a look at <http://www.ntmdt.com/device/smena>

Measuring Modes

In air: STM/ STS/ Contact AFM/ LFM/ ResonantMode (semicontact AFM+noncontact AFM)/ Phase Imaging/ Force Modulation (viscoelasticity)/ Spreading Resistance Imaging/ MFM/ EFM/ SCM/ SKM/ Adhesion Force Imaging/ Shear Force/ AFM (Force + Voltage), STM, RM Lithographies
In liquid: Contact AFM/ LFM/ ResonantMode AFM (semicontact)/ Phase Imaging/ Force Modulation (viscoelasticity)/ Adhesion Force Microscopy/ AFM (Force) Lithography

Applications

- Polymers
- Biology and Medicine
- Semiconductors
- Material Science
- Optical and Magnetic Storage
- Coating and Polishing Quality Control
- Large Optics, etc.

Technical Specification

Sample Size	Unlimited Note: Small samples (up to Ø100 mm) can be placed between the SMENA head legs Closed liquid cell limits sample size up to 22x22x2 mm
Scanners	50x50x2.5 µm (±10%); 100x100x3.5 µm (±10%) 12x12x1.5 µm (±10%) (for STM only) 80x80x3.5 µm (±10%) (for Shear Force only)
Min. Scanning Step	0.006 nm; 0.01 nm; 0.0015 nm; 0.009 nm
Scanning Type	by probe
Control System	SPM Controller (see "SPM Controller", page 25)
Vibration Isolation	Active anti-vibration system is available by request (see "Vibration isolation solutions", page 34)