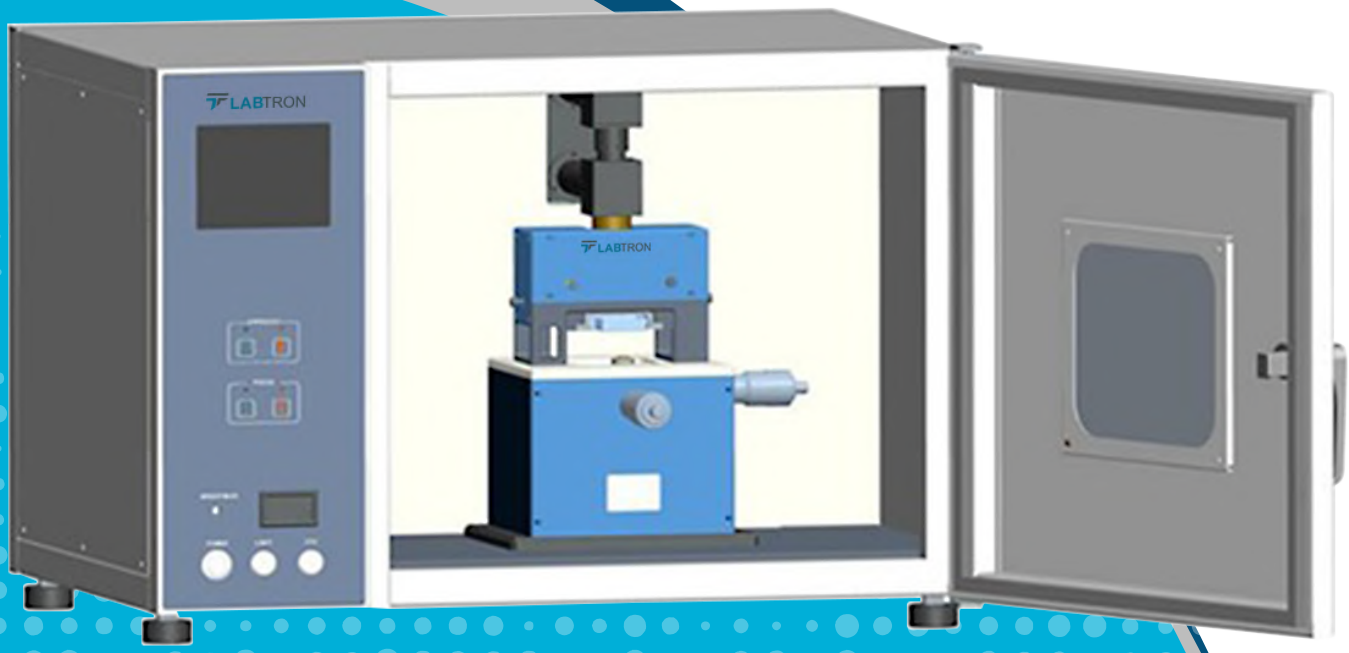
LABTRON

ATOMIC FORCE MICROSCOPE

LAFM-A11



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Atomic force microscope LAFM-A11

Atomic force microscope LAFM-A11 comes with combined design of scan head and sample stage, to give strong anti-vibration performance. Adopted with servomotor, drives the sample approaching tip manually or automatically, to evaluate precise scanning area position. Equipped with precision laser detection and probe alignment device, make easy adjustment of laser beam.

Features

- Large sample transfer range
- Optical observation system for checking tip & sample's position
- Modular electronic system for easy maintenance
- CCD observing system
- Equipped with servomotor to achieve CCD auto focusing
- Provides highly accurate results

Software Features

- Captures & display multi-channel images at same time, observes profile map in real-time
- Measures multiple curves like F-Z, F-RMS, RMS-Z 3
- Execute move & cut functions of scan area, selects an area of interest
- Scans sample in in 0 to 360^0 angle range
- Adjust laser spot detection system in real time
- Selection and setting for different color scanning images in palette
- Supports linear average and offset calibration in real time for sample title
- Supports scanner sensitivity calibration and electronic controller auto-calibration
- Supports offline analysis and process of sample image

Application

It finds best solution for applications in biochemistry for tissues, cells, cellular components imaging, nanotechnology for imaging of polymers, nanomaterials, and in chemistry physics for imaging of surface metals elements.

Specifications

Model No	LAFM-A11
Operation modes	Contact mode, friction mode, extended modes of tapping phase, MFM, EFM, scan angle 0 to 360°
Scan angle	0 to 360°
Maximum scan range	X/Y axis: 50 μm, Z axis: 5 μm
Optical system/ Magnification of CCD	Magnification: 10x, Resolution: 1 μm
Resolution	X/Y axis: 0.2 nm, Z axis: 0.05 nm
Sample size	Ø≤ 90 mm, H≤ 20 mm
Sample movement	0 to 20 mm
Pulse width of approaching motor	10 ± 2 ms
Scan rate	0.6 Hz to 4.34 Hz
Scanning control	XY: 18 bit D/A & double 16 bit A/D multiple channel simultaneously
Types of sampling pixel	256×256, 512×512
Feedback type	DSP digital feedback
Feedback sampling rate	64 KHz
PC connections:	USB 2.0
Windows software	Compatible with windows 98/2000/XP/7/8
Instrument dimension	700 × 500 × 460 mm
Net weight	50 kg
Gross weight	87.4 kg