Opto Edu A62.4511 Scanning Microscope Contact Tapping Mode Plane Atomic Force

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: OPTO-EDU
- Certification: CE, Rohs
- Model Number: A62.4511
- Minimum Order Quantity: 1pc
- Price: FOB $1~1000, Depend on Order Quantity
- Packaging Details: Carton Packing, For Export Transportation
- Delivery Time: 5~20 Days
- Payment Terms: L/C, T/T, Western Union
- Supply Ability: 5000 pcs/ Month

Product Specification

- Work Mode: "Contact Mode Tapping Mode Optional Friction Mode Phase Mode Magnetic Mode Electrostatic Mode"
- Current Spectrum Curve: "RMS-Z Curve F-Z Force Curve"
- XY Scan Mode: Sample Driven Scanning, Closed Loop Piezoelectric Shift Scanning Stage
- XY Scan Range: Closed Loop 100×100um
- XY Scan Resolution: Closed Loop 0.5nm
- Z Scan Range: 5um
- Z Scan Resolution: 0.05nm
- Scan Speed: 0.6Hz~30Hz
- Scan Angle: 0~360°
- Sample Weight: ≤15Kg
- Stage Size: "Dia.100mm Optional Dia.200mm Dia.300mm"
- Stage XY Moving: " 100x100mm, Resolution 1um Optional

Our Product Introduction

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Product Description

Plane Scanning Atomic Force Microscope

Gantry scanning head design, marble base, vacuum adsorption stage, sample size and weight are basically unlimited

A62.4510 + Closed-loop three-axis independent pressure shift scanner, which can scan with high precision in a wide range

Intelligent needle feeding method with automatic detection of motor-controlled piezoelectric ceramics to protect probes and samples

Automatic optical positioning, no need to adjust focus, real-time observation and positioning probe sample scanning area

Equipped with closed metal shield, pneumatic shock-absorbing table, strong anti-interference ability

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A62.4511

Plane Scanning Atomic Force Microscope (AFM)

Product Details

◆ The first commercial atomic force microscope in China to realize combined mobile scanning of probe and sample;

◆ The first in China to use a three-axis independent closed-loop piezoelectric shift scanning table to achieve large-scale high-precision scanning;

◆ Three-axis independent scanning, XYZ does not affect each other, very suitable for three-dimensional material and topography detection;

◆ Electric control of sample moving table and lifting table, which can be programmed with multi-point position to realize fast automatic detection;

◆ Gantry scanning head design, marble base, vacuum adsorption and magnetic adsorption stage;

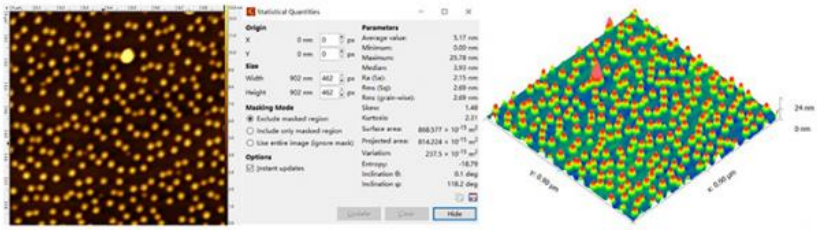
◆ The motor automatically controls the intelligent needle feeding method of the piezoelectric ceramic automatic detection to protect the probe and the sample;

◆ High magnification auxiliary optical microscope positioning, real-time observation and positioning of probe and sample scanning area;

◆ The closed-loop piezoelectric scanning stage does not require nonlinear correction, and the nanometer characterization and measurement accuracy is better than 99.5%.

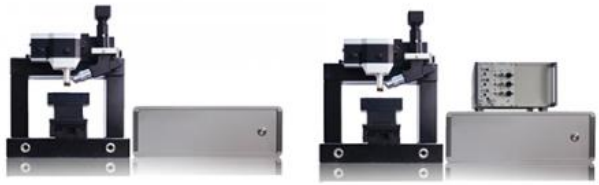
Application Case

Sapphire epitaxial wafer/scanning range 1μm×1μm/Sa=1.7nm,Sq=2.08nm



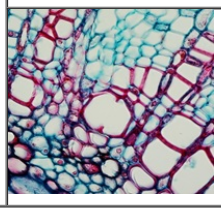
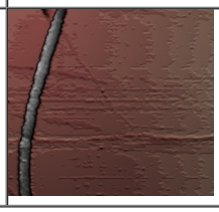
GaAs wafer/scanning range 0.9μm×0.9μm/Sa=2.15nm, Sq=2.69nm

Specification



	A62.4510	A62.4511
Work Mode	Contact Mode Tapping Mode Optional Friction Mode Phase Mode Magnetic Mode Electrostatic Mode	Contact Mode Tapping Mode Optional Friction Mode Phase Mode Magnetic Mode Electrostatic Mode
Current Spectrum Curve	RMS-Z Curve F-Z Force Curve	RMS-Z Curve F-Z Force Curve
XY Scan Mode	Probe Driven Scanning, Piezo Tube Scanner	Sample Driven Scanning, Closed Loop Piezoelectric Shift Scanning Stage
XY Scan Range	70×70um	Closed Loop 100×100um
XY Scan Resolution	0.2nm	Closed Loop 0.5nm
Z Scan Mode		Probe Driven Scanning
Z Scan Range	5um	5um
Z Scan Resolution	0.05nm	0.05nm
Scan Speed	0.6Hz~30Hz	0.6Hz~30Hz
Scan Angle	0~360°	0~360°
Sample Weight	≤15Kg	≤0.5Kg
Stage Size	Dia.100mm Optional Dia.200mm Dia.300mm	Dia.100mm Optional Dia.200mm Dia.300mm
Stage XY Moving	100x100mm, Resolution 1um Optional 200x200mm 300x300mm	100x100mm, Resolution 1um Optional 200x200mm 300x300mm
Stage Z Moving	15mm, Resolution 10nm Optional 20mm 25mm	15mm, Resolution 10nm Optional 20mm 25mm
Shock-Absorbing Design	Spring Suspension Optional Active Shock Absorber	Spring Suspension Optional Active Shock Absorber
Optical System	Objective 5x 5.0M Digital Camera Optional Objective 10x Objective 20x	Objective 5x 5.0M Digital Camera Optional Objective 10x Objective 20x
Output	USB2.0/3.0	USB2.0/3.0

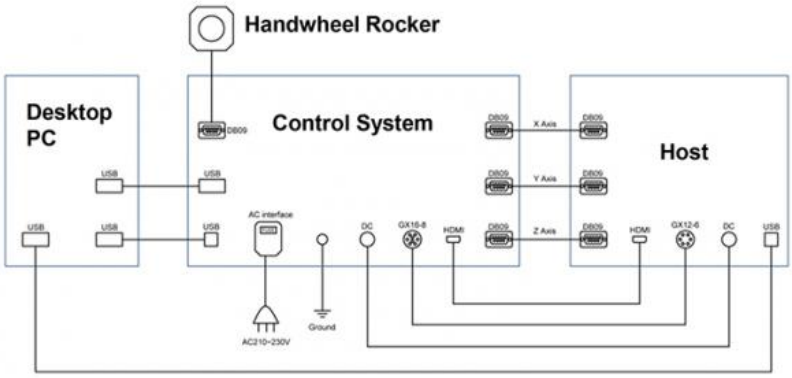
Software	Win XP/7/8/10	Win XP/7/8/10
Main Body	Gantry Scan Head, Marble Base	Gantry Scan Head, Marble Base

Microscope	Optical Microscope	Electron Microscope	Scanning Probe Microscope
Max Resolution (um)	0.18	0.00011	0.00008
Remark	Oil immersion 1500x 	Imaging diamond carbon atoms	Imaging high-order graphitic carbon atoms 

Probe-Sample Interaction	Measure Signal	Information
Force	Electrostatic Force	Shape
Tunnel Current	Current	Shape, Conductivity
Magnetic Force	Phase	Magnetic Structure
Electrostatic Force	Phase	charge distribution

	Resolution	Working Condition	Working Temperation	Damge to Sample	Inspection Depth
SPM	Atom Level 0.1nm	Normal, Liquid, Vacuum	Room or Low Temperation	None	1~2 Atom Level
TEM	Point 0.3~0.5nm Lattice 0.1~0.2nm	High Vaccum	Room Temperation	Small	Usually <100nm
SEM	6-10nm	High Vaccum	Room Temperation	Small	10mm @10x 1um @10000x
FIM	Atom Level 0.1nm	Super High Vaccum	30~80K	Damge	Atom Thickness

System Diaphragm



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