



Opto Edu A62.4501 Scanning Microscope with Atomic Force AFM XY Scan Range 20×20um XY Scan Resolution 0.2nm Z Scan Range 2.5um

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: OPTO-EDU
- Certification: CE, Rohs
- Model Number: A62.4501
- 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 Range: 20×20um
- XY Scan Resolution: 0.2nm
- Z Scan Range: 2.5um
- Y Scan Resolution: 0.05nm
- Scan Speed: 0.6Hz~30Hz
- Scan Angle: 0~360°
- Sample Size: "Φ≤90mm H≤20mm"
- Shock-Absorbing Design: "Spring Suspension Metal Shielding Box"
- Optical System: "4x Objective Resolution 2.5um"
- Output: USB2.0/3.0
- Software: Win XP/7/8/10

Product Description

Opto Edu A62.4501 Scanning Microscope Curve Basic Level Atomic Force

Product Overview

Basic Level system with separate controller and main body design

Supports Contact Mode and Tapping Mode operation

XY Scan Range: 20×20μm with 0.2nm resolution

Z Scan Range: 2.5μm with 0.05nm resolution

Sample Size: Diameter <90mm, Height <20mm

Stage Movement: 15×15mm

Optical Objective: APO 4x with 2.5μm resolution

Scan Speed: 0.6~30Hz with 0-360° scan angle

Output: USB3.0 compatible with Windows 7/8/10/11

Optional Work Modes: Friction Mode, Phase Mode, Magnetic Mode, Electrostatic Mode

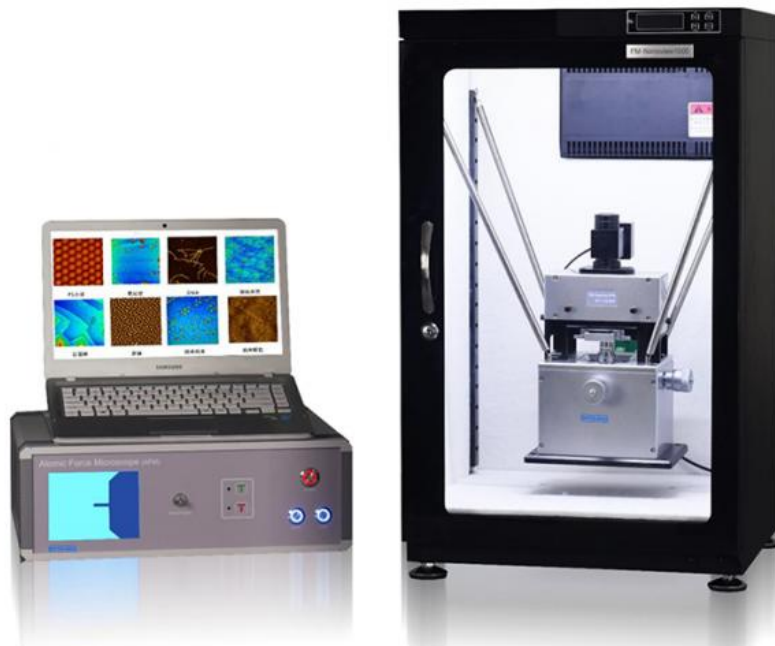


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A62.4501

Basic Level Atomic Force Microscope (AFM)



Product Details

Key Features

The laser detection head and sample scanning stage are integrated for maximum stability and interference resistance

Precision probe positioning device for easy laser spot alignment adjustment

Single-axis drive sample automatically approaches probe vertically for perpendicular needle tip alignment

Motor-controlled pressurized piezoelectric ceramic automatic detection protects both probe and sample

High-precision, wide-range piezoelectric ceramic scanners available for selection

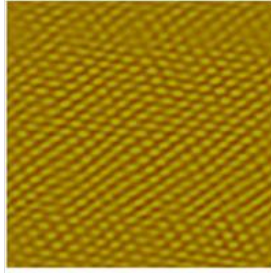
High-magnification objective lens with automatic optical positioning - no focusing required

Spring suspension shockproof design provides excellent vibration damping

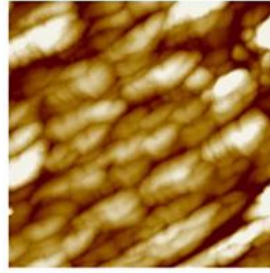
Metal shielded soundproof box with built-in temperature and humidity sensors

Integrated scanner nonlinear correction user editor with nanometer characterization accuracy better than 98%

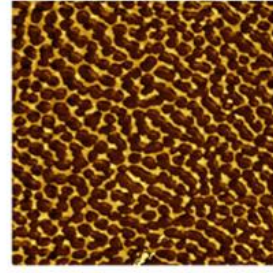
Application Case



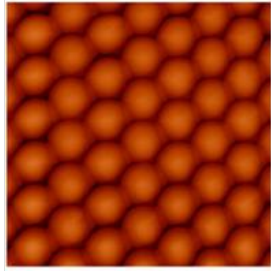
High-order graphite/scanning range 5nm×5nm



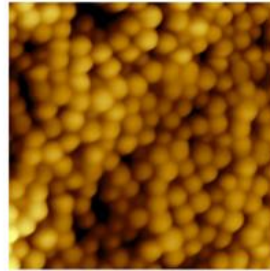
Gold clusters/scanning range 0.5μm×0.5μm



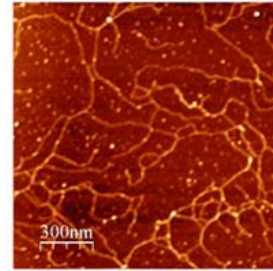
Polysaccharide 10x10um



Polystyrene ball 10x10um



Polystyrene ball 5x5um



Polysaccharide 1.5x1.5um

Specification



Technical Specifications

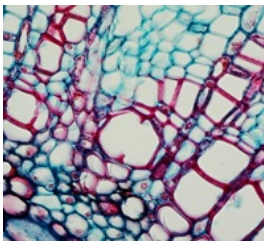
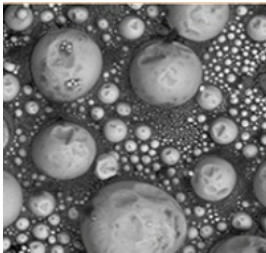
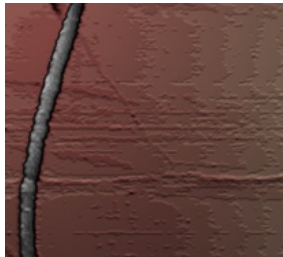
Specification	A62.4500	A62.4501	A62.4503	A62.4505
Work Mode	Tapping Mode 【Optional】 Contact Mode Friction Mode Phase Mode Magnetic Mode Electrostatic Mode	Contact Mode Tapping Mode 【Optional】 Friction Mode Phase Mode Magnetic Mode Electrostatic Mode	Contact Mode Tapping Mode 【Optional】 Friction Mode Phase Mode Magnetic Mode Electrostatic Mode	Contact Mode Tapping Mode 【Optional】 Friction Mode Phase Mode Magnetic Mode Electrostatic Mode
Current Spectrum Curve	RMS-Z Curve 【Optional】 F-Z Force Curve	RMS-Z Curve F-Z Force Curve	RMS-Z Curve F-Z Force Curve	RMS-Z Curve F-Z Force Curve
XY Scan Range	20×20μm	20×20μm	50×50μm	50×50μm
XY Scan Resolution	0.2nm	0.2nm	0.2nm	0.2nm
Z Scan Range	2.5μm	2.5μm	5μm	5μm
Y Scan Resolution	0.05nm	0.05nm	0.05nm	0.05nm
Scan Speed	0.6Hz~30Hz	0.6Hz~30Hz	0.6Hz~30Hz	0.6Hz~30Hz
Scan Angle	0~360°	0~360°	0~360°	0~360°
Sample Size	Φ≤90mm H≤20mm	Φ≤90mm H≤20mm	Φ≤90mm H≤20mm	Φ≤90mm H≤20mm
XY Stage Moving	15×15mm	15×15mm	25×25μm	25×25μm

Shock-Absorbing Design	Spring Suspension	Spring Suspension Metal Shielding Box	Spring Suspension Metal Shielding Box	-
Optical System	4x Objective Resolution 2.5μm	4x Objective Resolution 2.5μm	4x Objective Resolution 2.5μm	Eyepiece 10x Infinity Plan LWD APO 5x10x20x50x 5.0M Digital Camera 10" LCD Monitor, With Measuring LED Kohler Illumination Coaxial Coarse & Fine Focusing
Output	USB2.0/3.0	USB2.0/3.0	USB2.0/3.0	USB2.0/3.0
Software	Win XP/7/8/10	Win XP/7/8/10	Win XP/7/8/10	Win XP/7/8/10

Optical Microscope, SEM, SPM Comparison

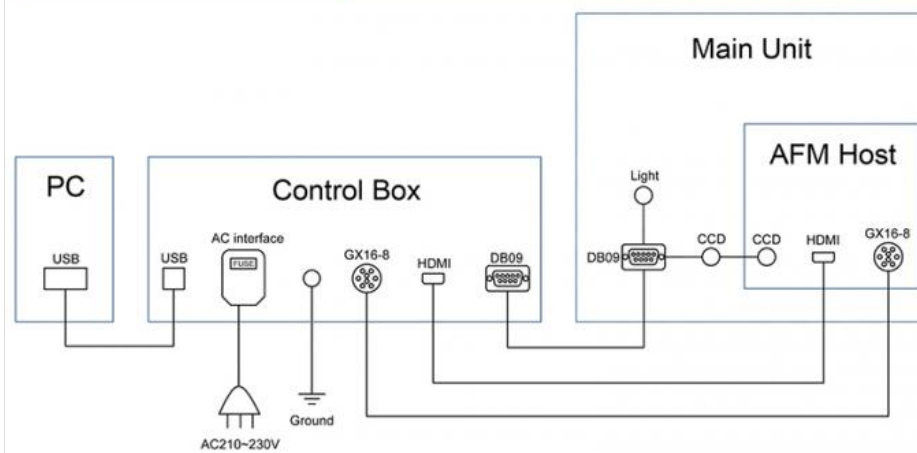
Microscope Technology Comparison

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

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

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

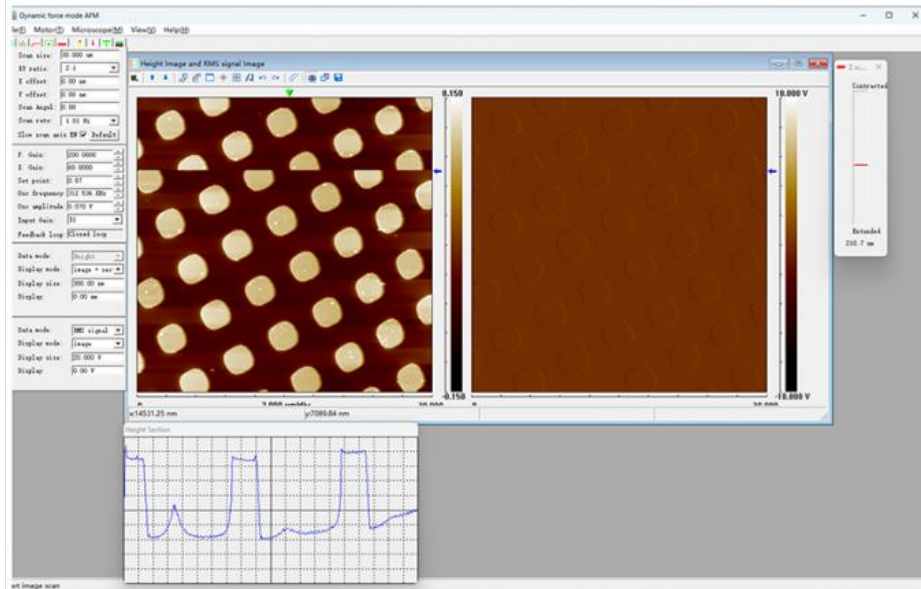
Cable Connection



System Diagram



Software & Accessories



More Pictures



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