Opto Edu Research Level Atomic Force Microscope with 360 Angle 50×50um XY Scan Range and 0.2nm Resolution

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: OPTO-EDU
- Certification: CE, Rohs
- Model Number: A62.4503
- 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: 50×50um
- XY Scan Resolution: 0.2nm
- Z Scan Range: 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 Syestem: "10x Objective Resolution 1um"
- Output: USB2.0/3.0
- Software: Win XP/7/8/10
- Highlight: 360 angle atomic force microscope

Our Product Introduction

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Product Description

Opto Edu A62.4503 Atomic Force Microscope Research Level 360 Angle

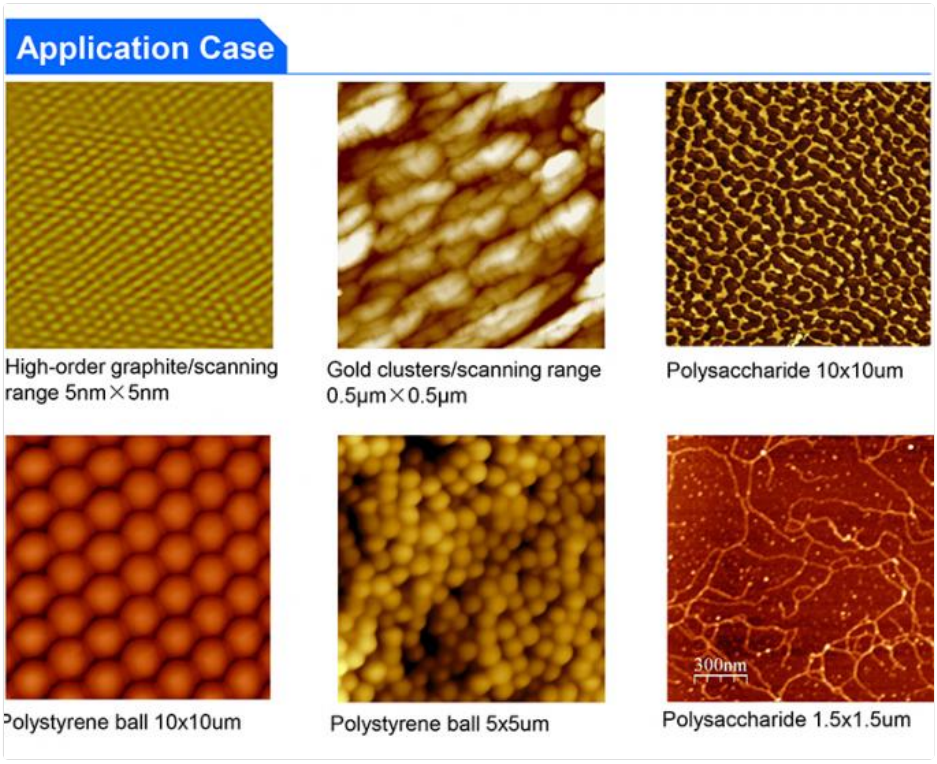
The Opto Edu A62.4503 Atomic Force Microscope offers advanced research capabilities with 360° scan angle, featuring both Contact Mode and Tapping Mode operation. With exceptional scan resolution (XY 0.2nm, Z 0.05nm) and a wide scan range (XY 50×50μm, Z 5μm), this instrument delivers precise nanometer-scale measurements for demanding research applications.

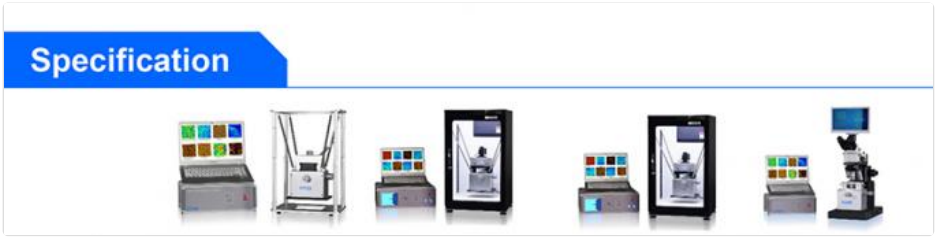
Product Details

Key Features

- Integrated laser detection head and sample scanning stage for maximum stability and interference resistance
- Precision probe positioning device with easy laser spot alignment adjustment
- Single-axis drive sample automatically approaches probe vertically for optimal alignment
- Motor-controlled pressurized piezoelectric ceramic automatic detection for safe needle feeding

- High-precision, wide-range piezoelectric ceramic scanners available for selection
- High-magnification objective lens with automatic optical positioning for real-time observation
- Spring suspension shockproof system for effective vibration damping
- Metal shielded soundproof box with built-in temperature and humidity monitoring
- Integrated scanner nonlinear correction editor with >98% measurement accuracy





Technical Specifications

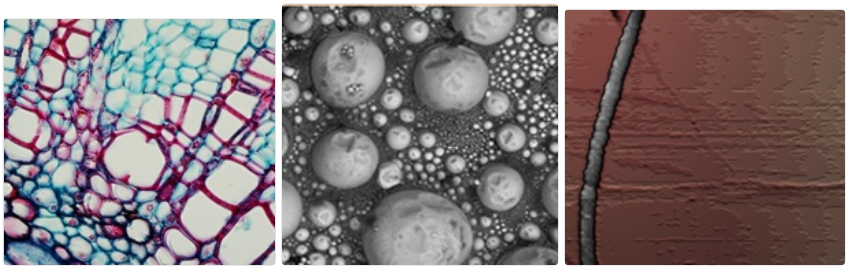
Specification	A62.4500	A62.4501	A62.4503	A62.4505
Work Mode	Tapping Mode【Optional】Contact Mode, Friction Mode, Phase Mode, Magnetic Mode, Electrostatic Mode	Contact Mode, Tapping Mode【Optional】Friction Mode, Phase Mode, Magnetic Mode, Electrostatic Mode	Contact Mode, Tapping Mode【Optional】Friction Mode, 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

Specification	A62.4500	A62.4501	A62.4503	A62.4505
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 Sped	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 Syst em	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
Softwar e	Win XP/7/8/10	Win XP/7/8/10	Win XP/7/8/10	Win XP/7/8/10

Optical Microscope, SEM, SPM Comparation

Microscope Technology Comparison

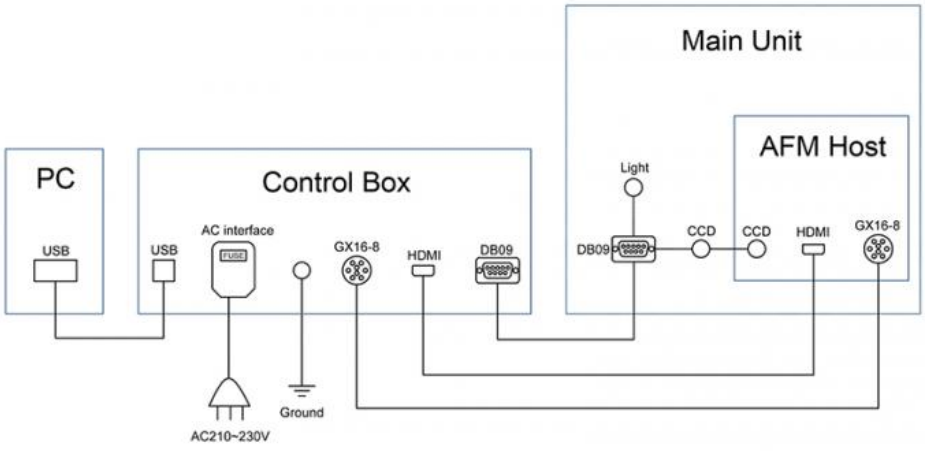
Resolution	Working Condition	Working Temperature	Damage to Sample	Inspection Depth	
SPM	Atom Level 0.1nm	Normal, Liquid, Vacuum	Room or Low Temperature	None	1~2 Atom Level
TEM	Point 0.3-0.5nm, Lattice 0.1-0.2nm	High Vacuum	Room Temperature	Small	Usually <100nm
SEM	6-10nm	High Vacuum	Room Temperature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



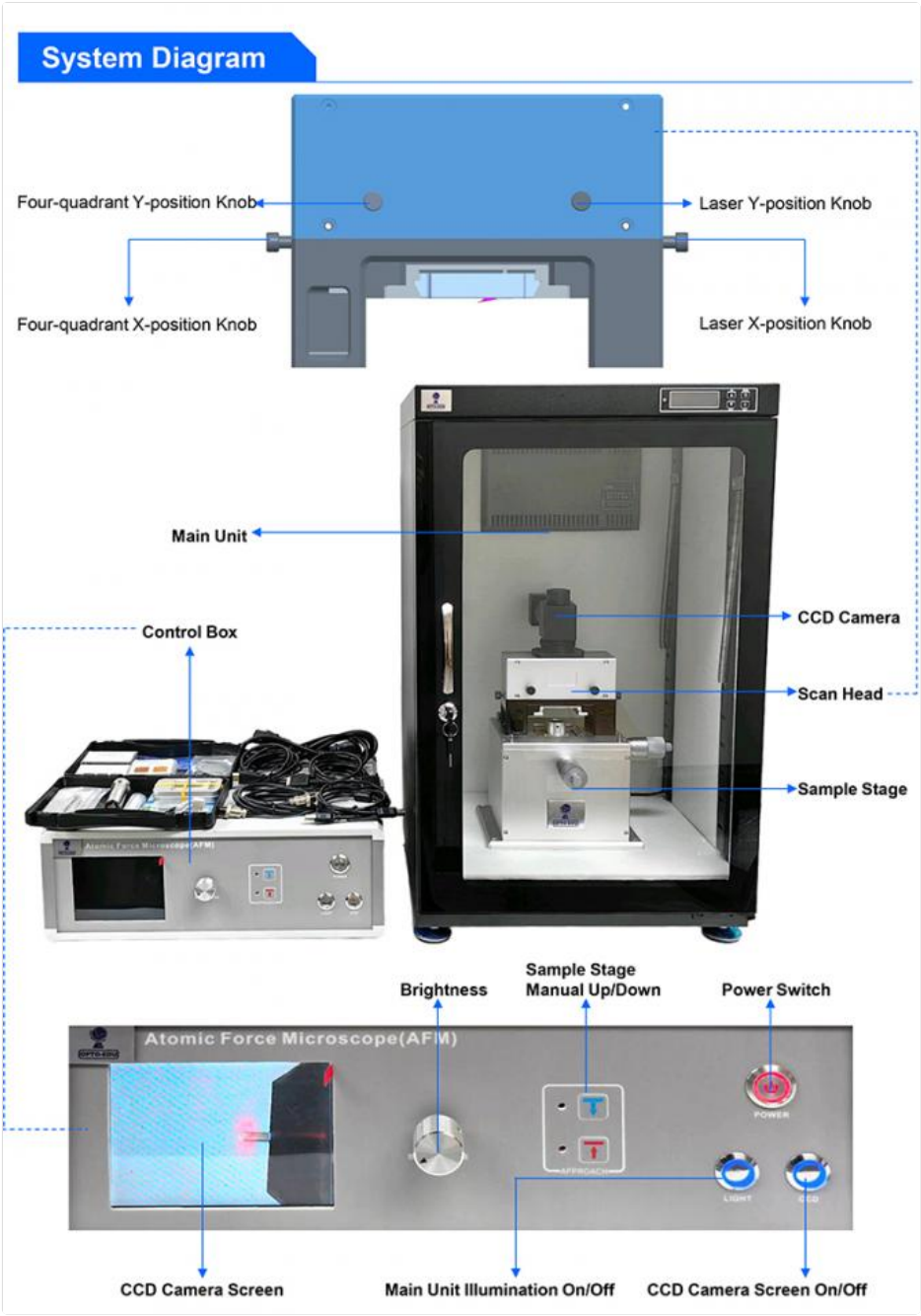
Probe-Sample Interaction Analysis

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

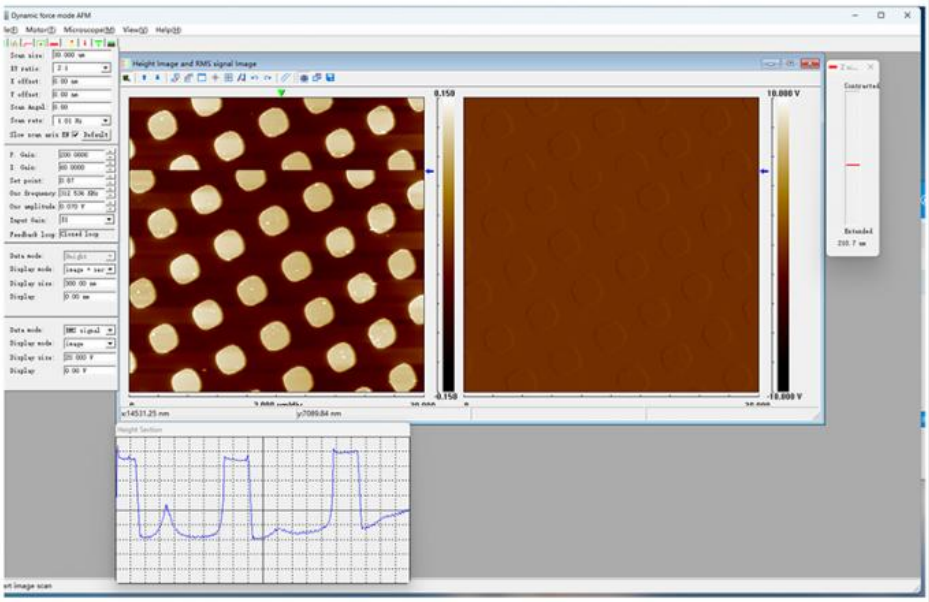
Cable Connection



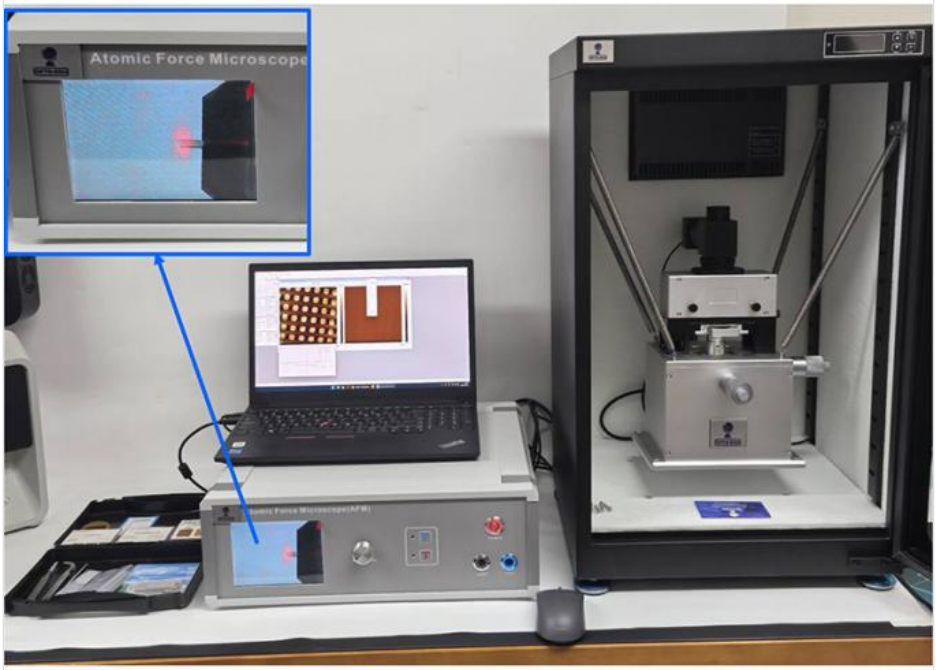
System Diagram



Software & Accessories



More Pictures



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