

Ambient 4-Probe Surface Measurement System

UP2000-4P

This system enables various kinds of "micron-order" to "nano-order" surface electricity measurements and manipulation in the atmosphere.

Main Applications

- Micro to nano-manipulation of samples
- Measurements of various kinds of electric properties of sample surfaces by multi-probing



4-probe stage and optical microscope



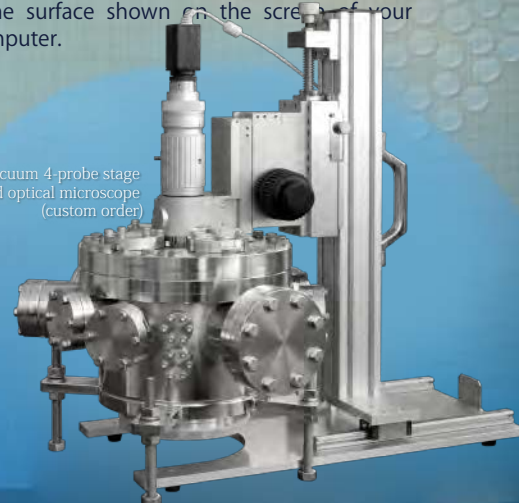
Control Unit



Notebook PC

- You can control the positions of each of the four probes individually along the three axes, X, Y, and Z, using a personal computer and a remote control, while observing the sample surface under an optical microscope.
- No need to make troublesome sample position adjustments. The sample stage can be moved independently in X and Y directions.
- This system can also be used to heat samples.
- You can manipulate samples easily and intuitively while observing the surface shown on the screen of your personal computer.

High vacuum 4-probe stage
and optical microscope
(custom order)



We can also manufacture high-vacuum systems for probing and surface measurements in a vacuum. Please feel free to ask us any questions you may have.

Instrumental components are subject to change without prior notice for improvement in performance.

Ambient 4-probe Surface Measurement System

UP2000-4P



Configuration

4-probe stage main body (with an optical microscope)	1
4-probe controller (with a remote control)	1
Notebook PC for control and observation (with a control program)	1
PtIr Probes	1 set

Specifications

Optical Microscope and CCD Camera

Minimum Resolution	2 μ m ~ 13 μ m (when the standard lens is used)
	Equipped with a zoom function as standard
	CCD camera 2 million pixels
	Maximum display size 1600 x 1200
	Equipped with an illumination source and fiber as standard

4-probe Stage

Size	140mm x 140mm
Inner Diameter of Stage Case	(Option) 200mm dia.
Maximum Travel Distance	XY: 5mm, Z: 3mm
Fine Positioning Travel Distance	1 μ m
Driving Method	Pulse control and linear control modes

Sample Stage

Maximum Travel Range	X axis: 10mm
	Y axis: 5mm
	Driving method: Pulse control

*The heating and cooling stages are available as options.

Sample Holder

Maximum Sample Size	10mm x 10mm
	2 Contacts for Applying the Current for Heating

*5 contact terminals are available for users.

Probes

Probe Tip Diameter	0.5mm to 0.3mm
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*Other probes are available as options.
*We offer PtIr and tungsten probes.
*Each probe tip is provided as a measurement terminal.

Control Unit

Dedicated 4-probe Controller

Input Voltage	100 to 115 VAC (50/60Hz)
	200VA (Max.)
Input	Dedicated control terminal
Output	Dedicated 4-probe terminals (4 outputs)
Display Function	LED to indicate the pulse-control movements in the X, Y, and Z directions

Dedicated Stage Controller

Input Voltage	100 to 115VAC (50/60Hz)
	100VA (Max.)
Output Terminal	Stage control terminal
	X and Y axes (manually switched)
Input Terminal	Dedicated external remote control terminal
	Equipped with a remote control as standard

Control PC

	Notebook PC (compatible with Windows XP and Windows Vista), Pre-installed with the dedicated control software, Equipped with a dedicated remote control as standard.
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*Electric property measurement circuits and other necessary items should be prepared by the user.

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