Micro Probe Station

Perform electrical characterization of samples and test devices at micron scale with an easy-to-use computer assisted probing system.

Fast, precise and stable
Imina Technologies Compact Solution Packages (PC15-4B) feature 4 ultra-small size miBot™, our piezo-actuated mobile robots, to independently position electrical probes over millimeters with sub-micron resolution.

Versatile and portable
Components of the solution have been designed to minimize their footprint on experimental setups and get seamlessly installed under upright and inverted light microscopes, vacuum chambers, probe stations, AFM, optical breadboards, etc.

Turnkey
Integrated with Imina Technologies Microscopy Kit (MK18-MAN-4B), the system becomes a turnkey solution for electrical testing and characterization of micron size samples and devices.

Intuitive and safe
The miBot™ are intuitively parametrized and moved with a control pad from Precisio™ software application, making the experiment at micron scale a breeze and reducing the risk of damaging sensitive samples.

Fully integrated
Precisio™ software microscopy module provides common hardware settings like brightness, gain and zoom and functionalities like image snapshot and annotation, dimensional measuring, and video recording.
# System

| Microscope                          | Optical resolution: 1.1 µm  
|                                    | Overall magnification: 2.8x to 35x adjusted with motorized zoom (objective mag: 10x)  
|                                    | Working distance: 33.5 mm  
|                                    | Coaxial illumination (LED) with adjustable intensity  
|                                    | Camera: 1920 x 1200 pixels, USB 3.0  
|                                    | Focus adjustment at micrometer level (range: 28 mm)  
| Sample Positioning                 | Manual X-Y stage with travel range: 10 mm x 10 mm  
|                                    | Resolution: 0.5 mm/rev  
| Sample Size                        | Ø 25.4 mm (1")  
| Electrical Probing                 | Interface: 4 coaxial (BNC) connectors  
|                                    | Current range: 1pA – 100mA  
|                                    | Resistance: approx. 2 Ω from probe tip to BNC connectors  
| Dimensions & Weight                | Width: 400 mm, Depth: 346 mm, Height: 662 mm  
|                                    | Weight: 10 kg  
|                                    | Dimensions without cables and control electronics.  
| User Interface                     | Precisio™ software application (Microsoft® Windows) with microscopy module and control pad  

## Motorized Probes

| Number of Probes | 4 miBot™ (BT-14)  
| Degrees of freedom | 4 independently driven per probe (X, Y, q, Z)  
| Motion           | Piezo mode: stepping  
|                  | Max. speed: 2.5 mm/s (X,Y), 150 mrad/s (Z)  
|                  | Range: 20 x 20 mm² (X,Y), ± 180° (q), 42° (Z)  
|                  | Positioning resolution: 50 nm (X, Y), 120 nm (Z)  
|                  | Measured at robot end-effector.  
| Probe tips       | Compatible with probe tips with 0.51 mm (0.020") shank diameter and various tip radii (5 nm - 10 um).  

Precisio™ software microscope window with controls for imaging parameters, tools for recording, annotation, and dimensional measuring.