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.

swiss design and engineering
## System

<table>
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<tr>
<th>Component</th>
<th>Specifications</th>
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</table>
| 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

<table>
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<tbody>
<tr>
<td>Number of Probes</td>
<td>4 miBot™ (BT-14)</td>
</tr>
<tr>
<td>Degrees of freedom</td>
<td>4 independently driven per probe (X, Y, q_z, Z)</td>
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</table>
| 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_z), 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). |