

## Product specification

**DME 2650**

### Introduction :

DME's well-known DualScope™ scanners are designed as standard microscope objectives with built-in *Atomic Force Microscope (AFM)*. When the scanners are fitted into the nosepiece of a standard, infinitely corrected *Optical Microscope (OM)*, you will benefit from the combination of the AFM and the OM plus the facilities offered by the two instrument types, respectively. This combination hence provides the additional possibility of generating *Scanning Probe Microscope (SPM)* images with an extremely high resolution in 3D - hereby offering the possibility of characterizing details down to the low end of the micrometer scale.

### AFM with built-in optical microscope :

In many cases, however, a separate and dedicated SPM equipment set-up may be required. Such cases include the demand for combining an initial optical investigation of samples for details, selected by means of an optical objective (like in the optical microscope) followed by further investigations by means of the SPM equipment with AFM-mode.

This requirement is solved by DME's "stand alone" system, **DualScope™ Compact Stage DS M95** equipment, consisting of :

- S Granite Scanner and sample stage
- S Stage platform with X-Y table
- S CCD camera [DME 2329]
- S LCD TFT Monitor [DME 2337]
- S CCD Camera PSU [DME 2350] with illumination control for reflected light as well as transmitted light (for transparent samples).

### The Scanner options :

The DualScope™ Compact Stage DS M95 is designed and dimensioned especially to fit the DualScope™ scanners DS 95-200 [DME 2370] and the DualScope™ scanners DS 95-50 [DME 2452]. But all other DME Probe Scanners will fit.

### The complete, operational system :

With a stage equipped with scanner, DualScope™ C-21 Control system [DME 2365], image software



DualScope™ Compact Stage DS M95

[DME 2355], and PC, you have a *fully operational* DualScope™ Microscope, providing the possibility of placing and studying objects of up to Ø 50 mm on the manual X-Y table, which allows a movement of 16 mm. (Large object table available on request)

### The flexibility of the DualScope™ Compact Stage DS M95:

The stage platform is equipped with rubber vibration dampers. When the DualScope™ Stage is placed on a solid table in an almost vibration free location, extremely good, reproducible measuring results can be obtained by the DualScope™ Manual Stage DS M95 - with details (in the x,y,z directions), including 3D imaging.

A scanner stage equipped with CCD camera and a suitable DualScope™ scanner can be used directly as a microscope, by placing it above the sample - or on top of it, if allowed.

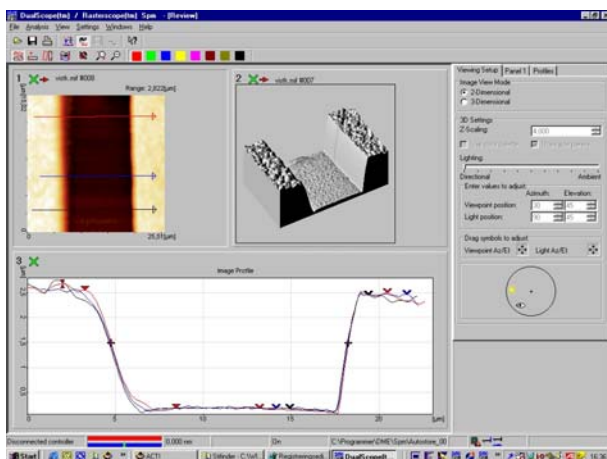
Many options are available on request. The stage can be equipped with pc controlled motorized x-y table as well as closed loop control.

### The combined analytical features obtained :

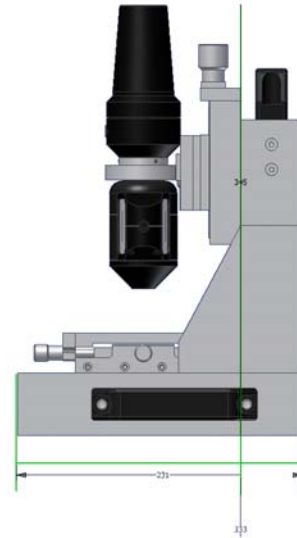
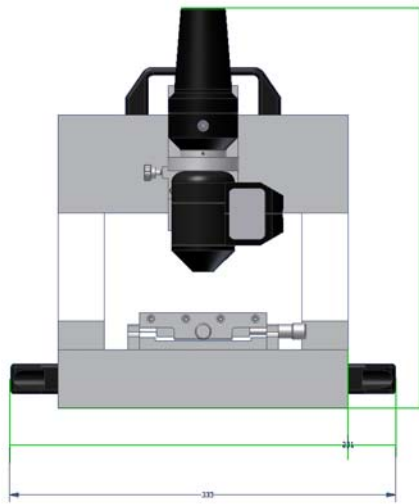
The DualScope™ Microscope solution provides all the basic facilities required such as *optical microscope image to allow selection of the relevant location on the surface - plus the unique analytical AFM-facilities combined in one instrument.*

### The supplementary specifications :

The above description solely concerns the DualScope™ Compact Stage DS M95 equipment. Regarding the scanners, controller, and image software reference is made to their individual Product specifications.



The DualScope™ Compact Stage DS M95 has the following main data:



**DualScope™ Compact Stage [DME 2650] :**

Height × Width × Depth:	345 × 333 × 231 mm
Weight:	20 kg
Max height adjustment w. micrometer screws:	50 mm
For DME scanner:	All DME Probe Scanners
Illumination through window in the middle.	
Light source:	LED.
Manual X-Y table movement:	16 mm.

**DualScope™ CCD Camera and Optics [DME 2329] :**

Height × Width × Depth:	126 × 58 × 58 mm
Semi automatic colour CCD:	537(H) × 597(V) pixels.
Image type:	PAL.
Standard video signal:	± 1 Volt pp, 75 Ohm
Min. illumination:	8 lux

**LCD TFT Monitor [DME 2337] :**

Standard Size:	17 inch
Weight:	3 kg
LCD TFT Colour monitor, 17", industrial quality	
Main power:	100 - 240 V AC, 50 - 60 Hz, 80 W.

**CCD Camera PSU [DME 2350] :**

Height × Width × Depth:	60 × 150 × 115 mm.
Weight:	450 g
Main power:	100 - 240 V AC, 50 - 60 Hz, 20 W
Monitor/frame grabber:	BNC

Local representative

**DME - Danish Micro Engineering A/S**

Transformervej 12 ADK-2730 Herlev ADenmark

Phone: +45 4484 9211 AFax: +45 4484 9197

e-mail: [sales@dme-spm.dk](mailto:sales@dme-spm.dk)

web-site: [www.dme-spm.com](http://www.dme-spm.com)

*Manufacturer of Scanning Probe Microscopes  
DualScope™ and Rasterscope™ are trademarks of DME*