3D calibration software microCal

M2C calibration software *microCal* is recommended for a successful 3D calibration. It is developed especially for an automated and easy 3D calibration with M2C calibration structures. By using a marker based calibration technology, it provides **improved measurement accuracy** and has the following advantages:

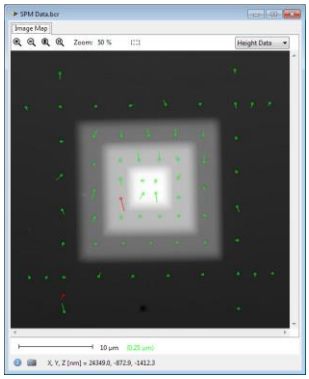
- **One Step**: Simultaneous processing of lateral and vertical calibration parameters (scale, shear)
- **One Model**: For the first time, determination of coupling between vertical and lateral axes is possible
- **One Click**: Due to advanced image processing and statistical methods, calibration is extremely efficient and accurate
- **One Reference**: Software and calibration structures are suitable for different measurement devices

M2C *microCal* allows an easy and automated calibration of your microscope. 3D measurement data of M2C calibration structures are automatically analysed and compared to the provided reference data.

microCal calculates 6 linear calibration parameters: three scale factors for the co-ordinate axes, and three coupling factors for coupling between all co-ordinate axes (orthogonal deviation). In addition, it provides tools for 3D data manipulation, especially for 3D data correction based on the calibration results.

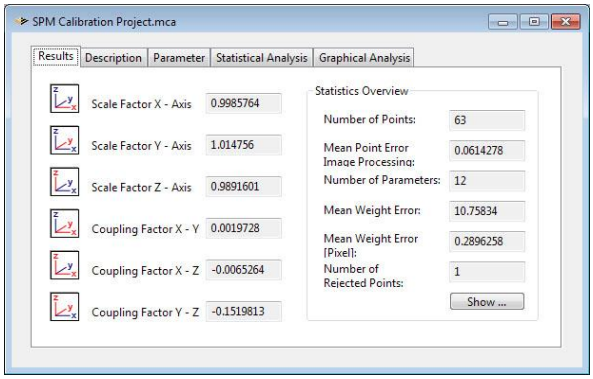
M2C *microCal* includes the following features:

- Automated calibration due to advanced image processing algorithms, including detection of sample orientation and sub-pixel co-ordinate measurement
- Reliable processing of calibration parameters due to advanced statistical methods (including least-squares methods and outlier detection)
- Mathematical and graphical accuracy analysis
- Results and settings are saved into a project file
- Integrated export functions for PDF protocol files or for ASCII data (for further use)
- Calibration parameters are saved for data correction of all further measurements performed by the customer's microscope
- Software installation includes 3D data manipulation and correction software *microShape*
- Different SPM file formats and import filters for ASCII and image data files are included



Graphical analyses of calibration results: Scaled error vectors of the marker co-ordinates show the accuracy of the calibration. Red vector: Outlier detection.

Results window: Scale and shear are calculated in all three spatial axes. The overall error gives an overview of the achieved accuracy.



This software is compliant with VDI/VDE Guideline 2656 "Determination of geometrical quantities by using of Scanning Probe Microscopes – Calibration of measurement systems".

System requirements: PC with Windows XP / 7 / 10. The software uses complex image processing algorithms. We therefore recommend a PC with a fast CPU.

point electronic GmbH

Erich Neuß Weg 15
D-06120 Halle
Germany

fon +49 345 1201190
fax +49 345 1201223
info@pointelectronic.de

m2c
a brand by point electronic

www.m2c-calibration.com