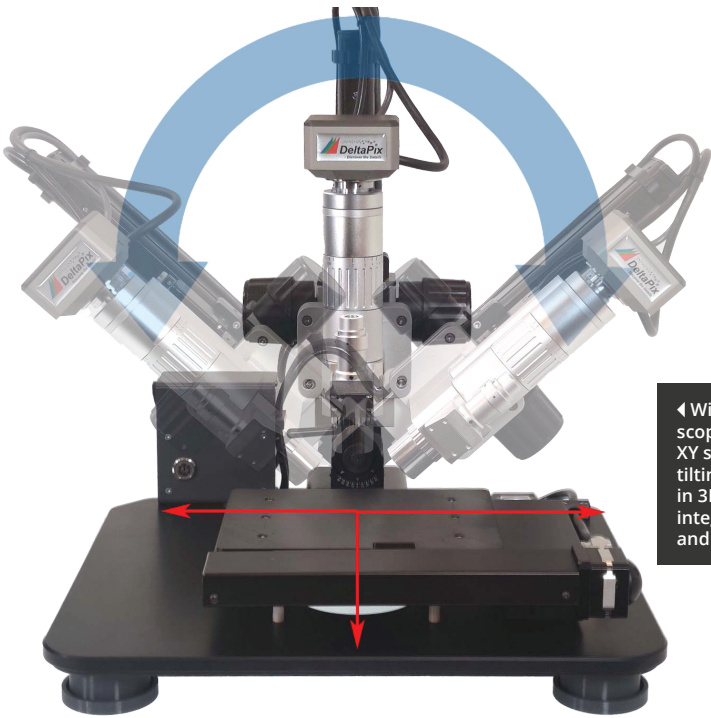


VISION

# Precise Measurement and Analysis of the Smallest Details

Diverse 2D/3D machine vision in macro- and microscopy



Super depth of field through focus stacking with up to 250 focus positions combined to a 2D/3D image provides a very extensive expansion of analysis options compared to classic 2D machine vision.

DeltaPix's modular inspection systems and the new DeltaPix Insight 7.5 software offer ease of use for a wide range of micro- and macroscopic applications. High image quality increases the speed and accuracy of inspections, analyses, measurements and detailed visual documentations. The

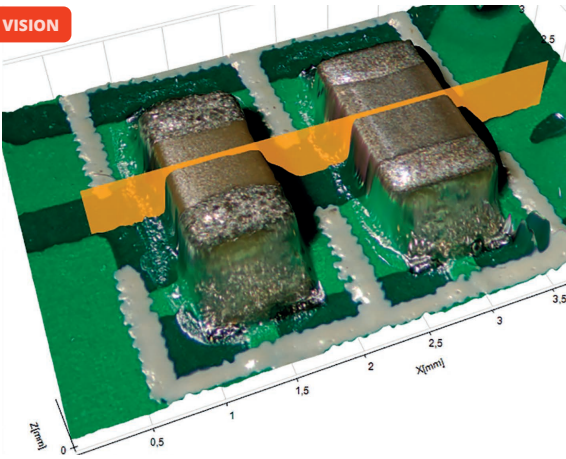
Such a digital microscope is used, for example, in industrial quality laboratories, but also in medical or biological applications. Typical measurement tasks relate to the measurement of lengths, distances, diameters and angles as well as to step heights, volumes and surface texture.

The microscope software suite for precise measurement, analysis and control of microscopes, cameras, motorized stages and other connected devices comes with a modern and intuitive user interface which is easy to operate. It comprises a basic package which is included free of charge with most DeltaPix cameras and many optional modules. These modules provide extensive functionality for specific applications. The measurements and analyses can be easily documented using individual

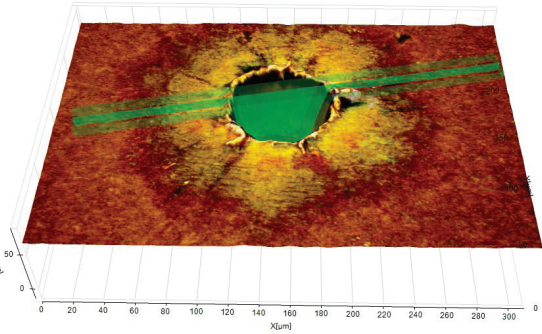
◀ With the new stand for digital microscopes and the very precisely controlled XY stage, plus the function of precise tilting, there are many more possibilities in 3D topography. In addition, there is an integrated controller for easy installation and anti-vibration feet.

fully automatic 3D stitching option with motorized XYZ axes allows for large stitching and precise capturing of height information with an accuracy of less than one micron.

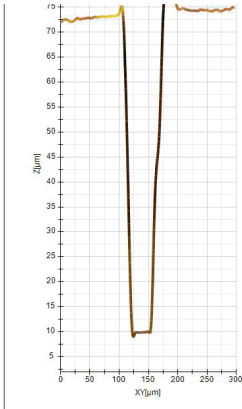
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With the limited depth of field of only one image in classical machine vision, important features can only be extracted to a limited extent. In the super depth of field of the true-color images with focus stacking, a lot of information can also be generated for exact 2D/3D analyses.



The particularly high-quality digital microscopes offer extremely reliable 2D and 3D measurements as well as information on surface roughness (ISO 25178-2:2012) for many industries and research laboratories.



reports in both Excel and PDF format or exported as images and CSV files.

This software allows for the calibration of multiple cameras and microscopes individually. Settings such as the exposure time and depth of field can be defined for each objective individually which makes the handling of different setups very fast and simple. The software suite is optimized for DeltaPix cameras which cover a wide range of microscopy applications (up to 20 MP, standard, SWIR and UV) but also supports some third-party cameras.

**The most important modules are:**

**Insight Basic Plus:** Extended focus and exposure functions and much more

**3D topography:** Allows for 3D measurement and 2D profile extraction to measure height, depth, angles and distances

**3D stitching:** Stitching of images for seamless extension of the 3D view up to a size of 16,000 x 16,000 pixels

**Roughness measurement:** Accurate quantification of surface texture, both areal and profile, in accordance with the latest ISO standards ISO 25178 and ISO 21920

**Video recording:** Capturing and documentation of processes in both real time or time lapse

**Segmentation, counting and multi-phase analysis:** Advanced metallographic tools such as particle segmentation and counting combined with reporting and automated batch handling of multiple samples

**Automation:** Comprehensive control of the microscope, lighting systems and motorized stages

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