Leica Application Suite

Multifocus

Leica
MICROSYSTEMS

Brilliant Depth of Focus!

Automatic Image Acquisition

The LAS Multifocus module is designed to acquire extended depth of field images from Leica motorised microscopes. Exposure, gain, shading and all other camera parameters can be individually set to optimise the quality of image acquisition.
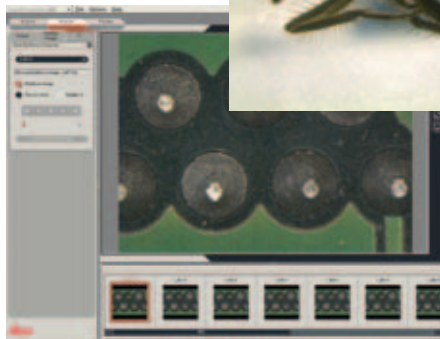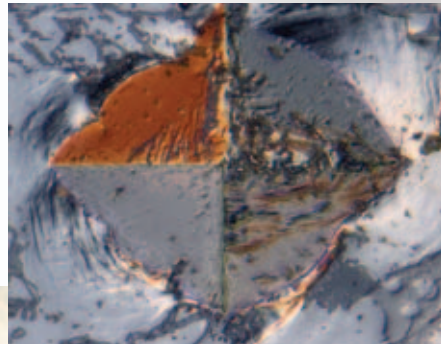
Other benefits include:

- Comprehensive digital camera control functions including the ability to adjust focus position on live image display.

- Fully integrated control of motorised focus on Leica Stereomicroscopes, Leica Macroscopes and Leica Compound microscopes, both upright and inverted.

- Simplified operations by automatically adjusting step size and the number of images to microscope magnification, aperture and camera resolution.

- Automatic Z-stack image capture for routine operation. Different configurations can be stored for later recall, allowing immediate use with standard specimens.

- Manual operation for when motorised focus is not available.

Create Multifocus

Once digital images have been collected at different Z-positions they are intelligently combined into one single sharp composite image that massively extends the depth of focus.

- Further enhancements can be applied such as contrast, brightness and gamma adjustment to optimise image display.

- A small region of interest may be selected from the whole image to identify an area of significance and view it in detail.

- Images from microscopes with non-telecentric optics can be resized and aligned using auto correlation.

Setup   Acquire

Magnificent Visualisation!

Visualisation

A gallery of the Z-Stack is available from which individual images can be immediately selected and displayed in the main image window. This means that specific images can be located and viewed quickly and easily.
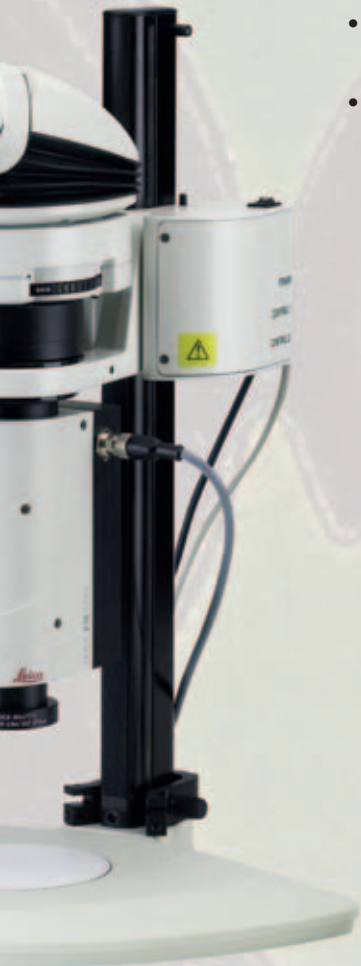
Other features include:

- An image display which adapts automatically to the resolution of the acquired or imported image including the ultra high resolutions provided by Leica Digital FireWire Cameras.

- Zoom and pan so that images can be viewed in detail.

- Images can be saved to a named folder that contains the entire Z-stack, the Multifocus image and configuration details, making it an easy task to reload with the same conditions.

Annotation

The annotation facilities make the LAS Multifocus Module a perfect solution for creating data rich presentations and reports:

- Images can be annotated with calibration markers for a visual guide to image size.

- Further annotations can be added such as the image name, date of acquisition and description.

- Annotations can be merged into an image for a permanent record.

LAS is based on Windows PCs and provides a cost-effective and uniform environment, compatible across the Leica range of microscopes and cameras. Furthermore, images may be exported for additional processing.

Monitor Image: Detail from circuit board taken with a Leica Z16 APO A motorized macroscope with a Leica digital camera

LAS Multifocus

The Leica Application Suite Multifocus module easily acquires extended depth of field images by providing fully integrated control of microscopes with motorised focus. The automatic acquisition of Z-Stack images, combined with intelligent image combination algorithms, makes the capture and storage of sharply focused images an undemanding process. As use is automated it means that there is minimal need for operator intervention however, settings can be easily modified to suit a wide range of sample types in fields such as material science, forensics, bioscience, and earth sciences.

The Leica Application Suite Multifocus module provides:

- A workflow orientated User Interface with simple interactive means for defining the Z range to scan.

- Total microscope and digital camera control in a fully integrated manner.

- Automatic acquisition of extended depth of field images from Leica motorised microscopes.

- A gallery of Z-Stack images directly visible so that focus changes can be easily visualised.

- Alignment of images from microscopes where images are displaced by focus position.

Order number

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