

## Deep Focus 3.1

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### Software Module for Creating Images with Extreme Depth of Focus

Deep Focus 3.1 module is an additional software module for QuickPHOTO CAMERA, MICRO, Industrial programs that creates images with depth of focus much higher than is the depth of focus of optical microscopes. It can be used with stereo microscopes as well as with other types of optical microscopes for observation in transmitted or reflected light. Deep Focus in version 3.1 uses new improved faster algorithm which produces composed images of excellent quality.



The image with extreme depth of focus composed by Deep Focus 3.1 module

The procedure of creating images with extreme depth of focus consists of:

**1. Capturing of "slices" intended for composition**

First the "slices" - images with different plane of focus are captured. Every image contains different parts of a specimen well focused.

**2. Composition by the Deep Focus 3.1 module**

Only the well focused area is used from each of the "slices" by the Deep Focus 3.1 module. The resulting completely focused image is composed from these well focused areas. Possible shift of a specimen in the field of camera view and small changes in scale are compensated automatically.

**Possibility of Automation:**

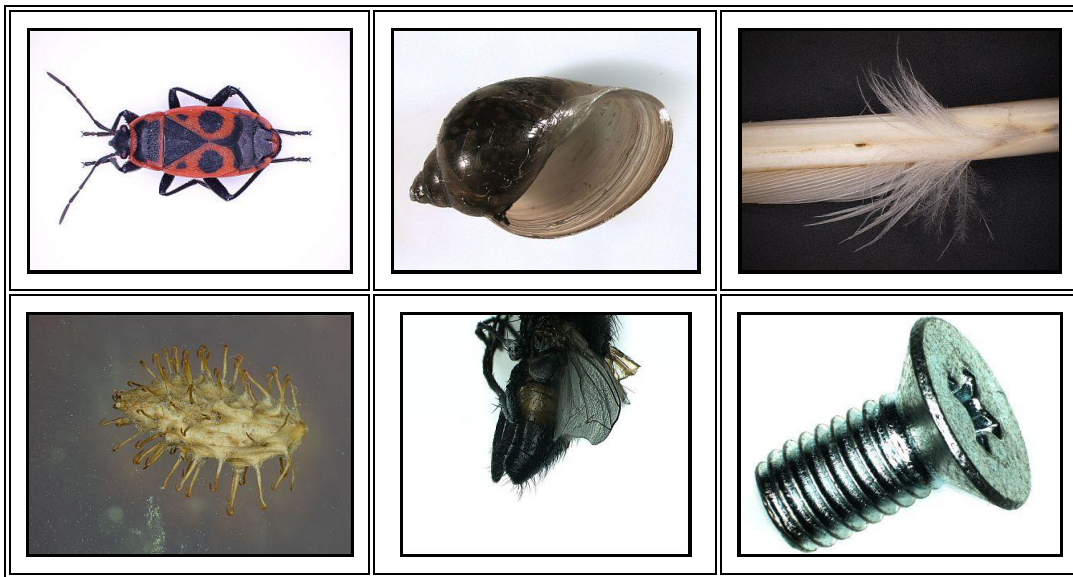
The whole process of capturing the slices and image composing can be automated using a module for motorized focusing or a motorized microscope. The procedure is following:

First, focus the microscope to the bottom part of the specimen and set the lower limit of a range. Then focus the microscope to the highest part of the specimen and set the upper limit. Then just set the required number of slices or step between slices, press the Start button and wait for the resulting completely focused image.

**Supported Motorized Devices:**

- **CB-ZM** - module for motorized focus control of optical microscopes
- several types of motorized microscopes

**Examples of Composed Images:**



**Minimal System Requirements** (for use with 1.3 megapixel camera):

- Processor : 1.4 GHz
- Operating memory : 512 MB
- Operating system : Microsoft® Windows® Vista/XP/2000/7
- QuickPHOTO : CAMERA, MICRO, Industrial 2.3 or higher

The system requirements depend on the resolution of composed images.  
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