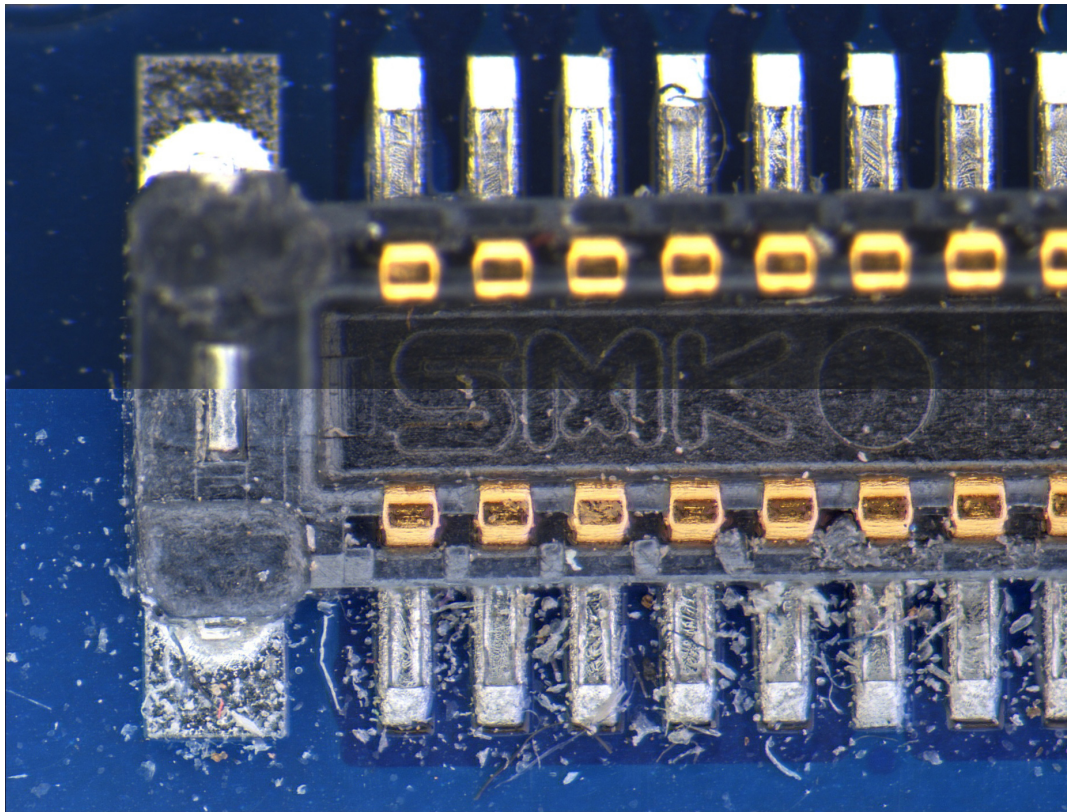# HDR Module

Software Module for High Dynamic Range Imaging

HDR is an additional software module for QuickPHOTO programs intended for creating images with high dynamic range from series of bracketed images (images with different expositions). The module can be used for creation of HDR images of static samples acquired using microscopes, for macro images as well as for standard photography.

Standard Image without HDR

HDR Image with Extended Depth of Field (EDF)

Features Overview:

- Merging of series of bracketed images into an HDR image
- Options of automatic or manual merging method selection. Following adjustments are available: overexposure compensation, underexposure compensation, midtone, brightness, contrast, saturation and hue.
- Interactive preview and histogram
- Works with images from microscopes, macro images and standard photographs.

How It Works:

For some samples, it might be quite difficult to acquire images with correct exposition in standard way. This happens in cases, when brightness range of photographed scene exceeds the range, which the chip is able to capture. In such case the appearance of the photographed scene might not be satisfactory. E.g. when lightest parts of the photographed scene are well exposed, the darkest areas are underexposed and vice versa. For taking photos of such scenes the HDR module is intended.
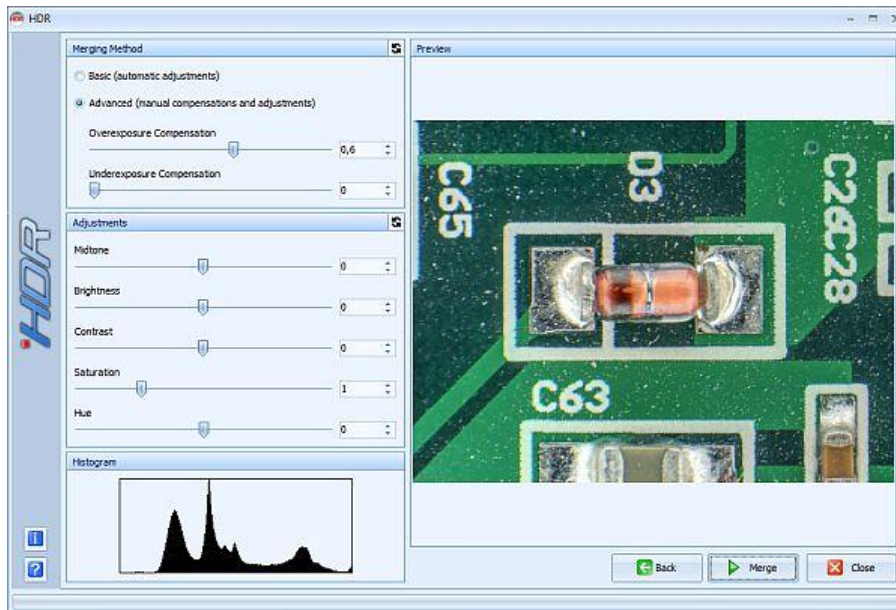
The procedure of creating an HDR image is following:

1. **Acquisition of Series of Bracketed Images**
   First step is the acquisition of series of bracketed images of a static sample (with consecutive change of exposure time).

2. **Loading of Series of Bracketed Images to HDR Module + Adjusting Merging Parameters**
   In second step, the series of bracketed images is loaded to HDR module. After the loading a dialog window with preview of an HDR image with options to user define its appearance shows up. All setting interactively display in preview and histogram.

3. **Creation of HDR Image**
   After clicking the *Merge* button an HDR image is created and automatically displayed in main window of QuickPHOTO program.

HDR Sample Images:

Minimal System Requirements:

- Program QuickPHOTO CAMERA, QuickPHOTO MICRO, QuickPHOTO INDUSTRIAL from version 3.1

Processor	RAM	Operating System	Minimal Monitor Resolution
Single-core 2.4 GHz	2 GB	Microsoft® Windows® Vista/7/8/8.1/10	1024 x 768 pixels