

**CLEMEX** intelligent microscopy



## *Captiva 6.0*

*Scientific Image Capturing and Measuring*



The background of the entire page is a blue-tinted image of a microscope slide. It features a scale with numbers like 10, 6, 8, 400, 500, 600, 700, 800, and 300. A prominent feature is a target-like pattern consisting of concentric circles and a grid of horizontal lines, which is a common calibration target in microscopy.

**CLEMEX** intelligent microscopy

## **A Commitment to Excellence in Imaging**

For nearly 20 years, Clemex has been providing integrated solutions for Image Analysis in microscopy to meet the specific needs of customers worldwide. This is our expertise and our commitment.

Clemex is known for its reliability, its high-quality products, and its after-sales service. Customer satisfaction is important to us.

Clemex Captiva is the perfect solution to capture, measure, and save scientific images. Clemex Captiva offers a large number of tools that pertain to image quality, device management, and automation more than the average software capture.

Intelligent  
**Clemex Captiva :**

- > Run Configuration
- > Annotate and Measure
- > Easy Image Exporting
- > Quality is the Difference
- > Automatic Exposure
- > Mosaic Feature
- > Multi-Layer Grab Feature
  
- > Create Mosaics and Multi-Layer Grabs Simultaneously
  - . Manual Mode
  - . Automatic Mode
  
- > NIST Traceable Micrometer
  
- > Image Capture Made easy
  
- > Magnifying Glass Tool
  
- > Adjustable Scale Bar

## **Capture, Caption, Captivate - with Clemex Captiva**

When it comes to quality in quantitative microscopy, Clemex Captiva is the tool for you. Clemex Captiva allows users to capture multiple images automatically, to make non-destructive direct measures and annotations, and save or share images and results with colleagues.

> Intelligent software dedicated to scientific imaging

Clemex Captiva fills a need in quantitative microscopy with its intelligent capture and measurement features. Clemex Captiva is ready to use out of the box, and is an entry-level, upgradeable software, that is **the** gateway to a wide range of Clemex image analysis products.

> Automation of image acquisition and measurement processes

The Run Configuration is an automatic function that acquires multiple images for subsequent manual measurements, thus increasing productivity.

> Clemex Captiva manages multiple devices

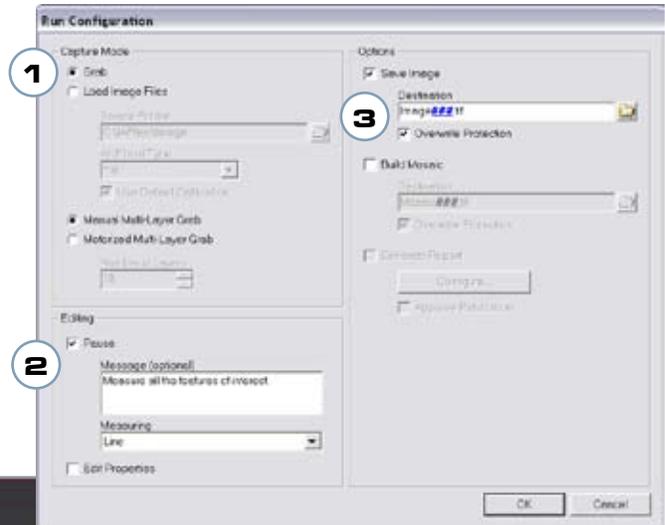
No need to remove the devices you use regularly - Clemex Captiva is designed in such a way that you can easily manage all input devices attached to your computer. Whether it is a microscope with 2 cameras, a stereoscope with one camera and a scanner, or any other configuration, Clemex Captiva can manage all of these.



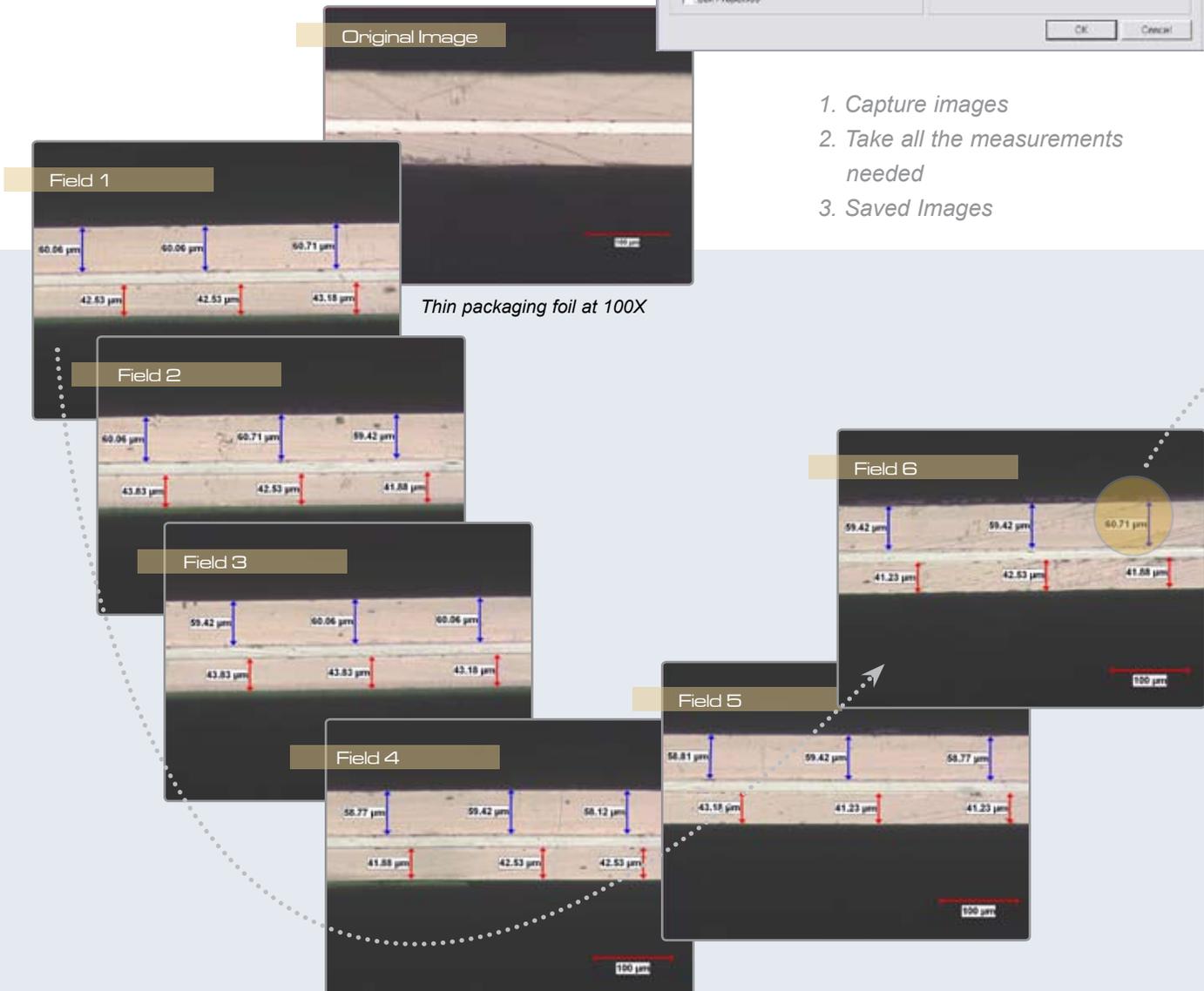
## Run Configuration

*Automated image capture and measurements*

With its easy-to-use interface, Clemex Captiva allows you to capture an unlimited number of images, make measurements, cumulate data, and generate statistics, with results cumulated instantly as you go. Data taken from live or stored images are automatically displayed as histograms, scatter plots, and in the browser after each measurement.

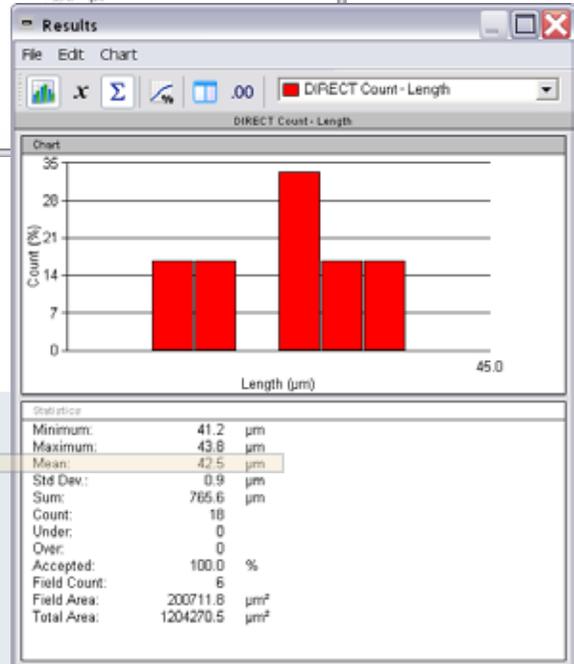
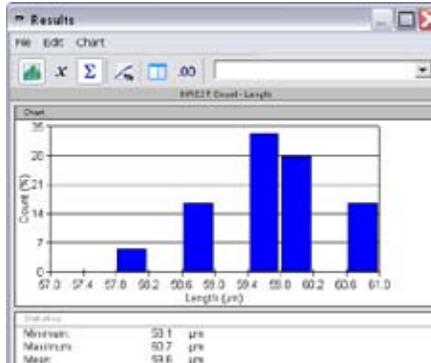


1. Capture images
2. Take all the measurements needed
3. Saved Images

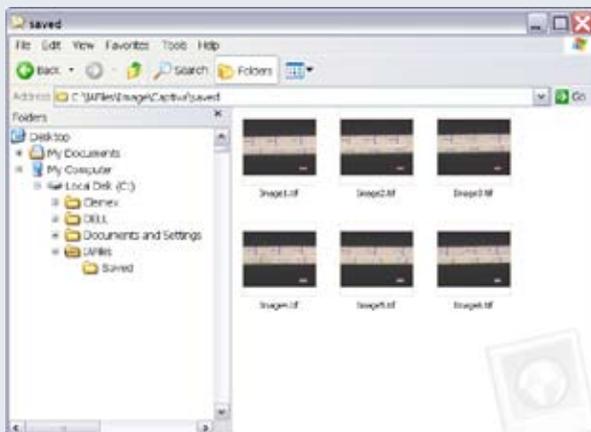


	FidNo	ObjId	Cat	Length	Orientation
1	1	1	13	60.1	90
2	1	2	13	60.1	90
3	1	3	13	60.7	90
4	1	4	14	42.5	90
5	1	5	14	42.5	90
6	1	6	14	43.2	90
7	2	7	13	60.1	90
8	2	8	13	60.7	90
9	2	9	13	59.4	90
10	2	10	14	43.8	90
11	2	11	14	42.5	90
12	2	12	14	41.9	90
13	3	13	13	59.4	90
14	3	14	13	60.1	90
15	3	15	13	60.1	90
16	3	16	14	43.8	90
17	3	17	14	43.8	90
18	3	18	14	43.2	90
19	4	19	13	58.8	90
20	4	20	13	59.4	90
21	4	21	13	50.1	90
22	4	22	14	41.9	90
23	4	23	14	42.5	90
24	4	24	14	42.5	90
25	5	25	13	58.8	90
26	5	26	13	59.4	90
27	5	27	13	58.8	90
28	5	28	14	43.2	90
29	5	29	14	41.2	90
30	5	30	14	41.2	90
31	6	31	13	59.4	90
32	6	32	13	59.4	90
33	6	33	13	60.7	90
34	6	34	14	41.2	90
35	6	35	14	42.5	90
36	6	36	14	41.9	90

Data Browser of all cumulated measurements



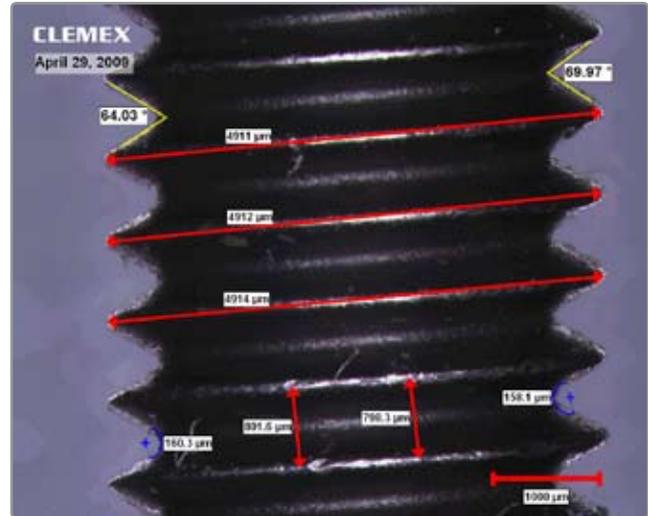
Histogram



Dynamic naming images in a pre-defined folder

## Annotate and Measure

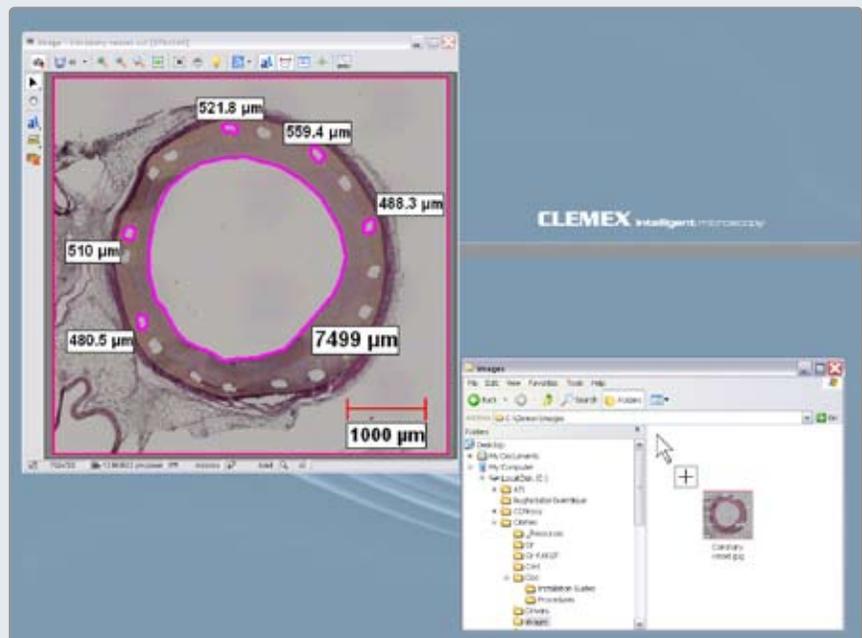
Clemex Captiva's robust annotation and direct measure tool set includes many properties and variables. An image can contain a corporate logo and comments in addition to measurements such as perimeters, areas, or angles. Graphs are automatically generated and data is compiled in a browser. Images and data can be exported to MS Office programs for easy reporting customized to your needs.



Threads on bolt at 25X

## Easy Image Exporting

Exporting to any image format is made easy; a simple drag-and-drop operation from the image window to MS Explorer does the trick. All annotations will be preserved in the transfer. Images can also be saved in all known formats with or without overlays. By saving an annotated file, the image itself is separated from the annotations on a different layer that can be turned on or off.



Mosaic of a cross-section stent artery at 25X

## Quality is the Difference

Uneven illumination is often a source of poor image quality. Clemex Captiva's Shading Corrector eliminates these adverse effects to produce a high quality image. Applied on the live image, the Shading Corrector allows even lighting for every field of the sample ensuring seamless mosaic images.

*Before applying shading corrector*



*Diamonds at 100X*

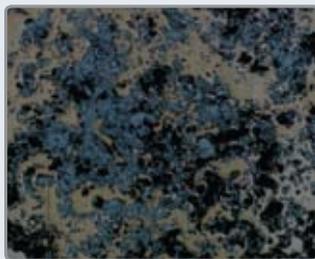
*After applying shading corrector*



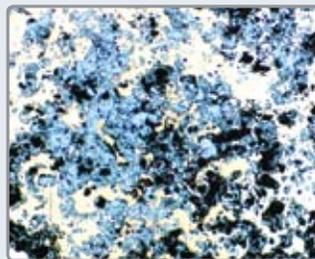
## Automatic Exposure

With our new Auto-Expose feature, no need ever to adjust the shutter speed slider or the illumination. Click on Auto, and voila! Once done, all settings are automatically saved for each objective and you never have to worry about manually adjusting your lighting conditions. Whatever the original illumination, click on Auto-exposure button to automatically adjust for perfect illumination.

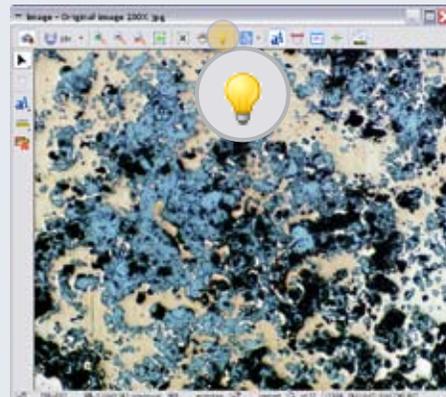
*Underexposed*



*Overexposed*



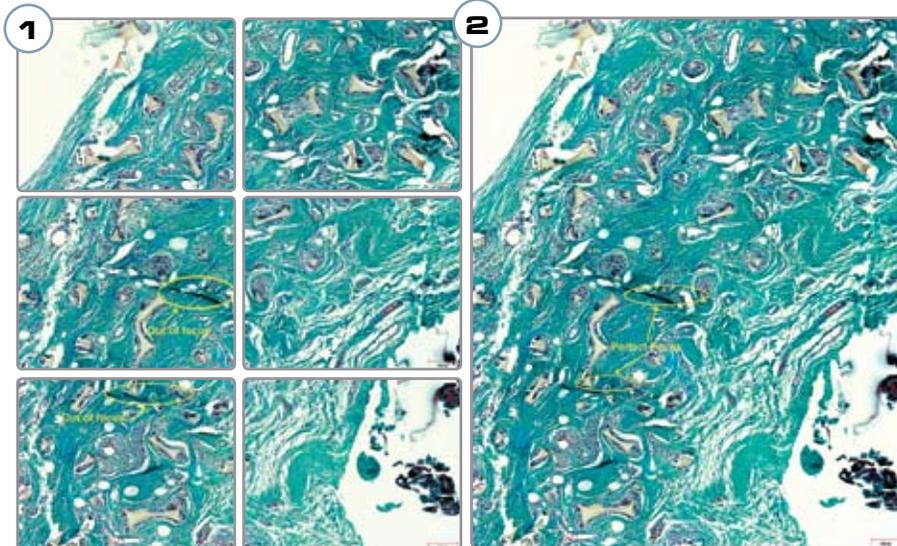
*Perfect illumination after auto-exposure*



*Porosity and oxyde in metal*

## Mosaic Feature

With the Clemex Mosaic feature, Clemex Captiva automatically stitches multiple fields to form a large image of unlimited resolution. This feature can be used either manually or with a motorized stage for added efficiency.



1. Images 1 to 6 captured at 100X
2. Perfect stitching 2x3 composite image. Total file size: 7.89Mb

Silicone particles in tissue at 100X

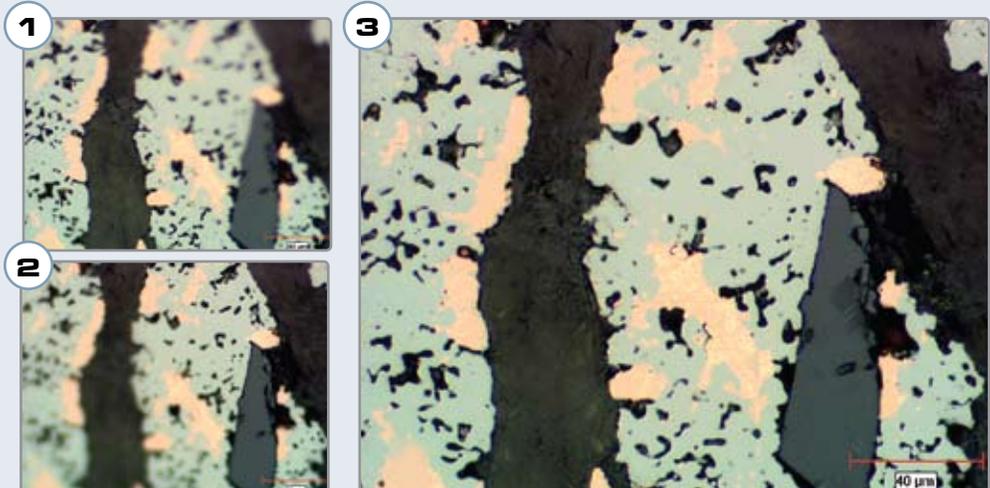
## Multi-Layer Grab Feature

*Extended Depth of Field*

Focusing on uneven surfaces can be troublesome. The Clemex Manual Multi-Layer Grab function generates a sharp composite image based on multiple planes acquired continuously as the user turns the microscope's focus knob. With its Automatic Multi-Layer Grab function, Clemex Captiva slices your image at varying Z-intervals to reconstruct a completely focused image.

1. Layer 1
2. Layer 5
3. Reconstructed final image

\* Note: Focused through image and generate instant reconstructed image in 5 seconds

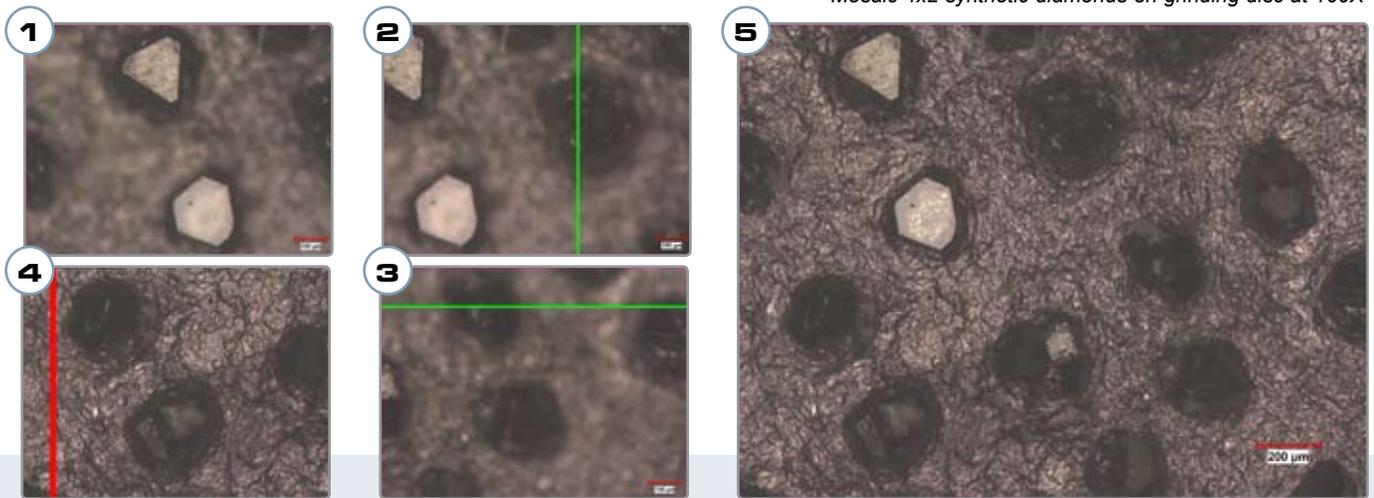


Metallic Brake Shoe Pad at 200X

## Create Mosaics with Multi-Layers Simultaneously

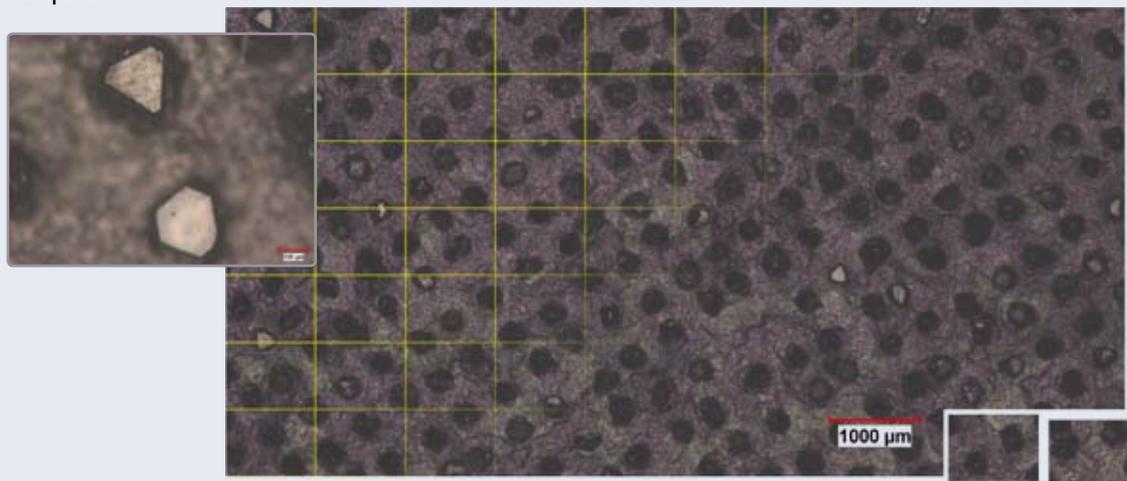
### Manual Mode

The manual mode is used to make small mosaics (i.e. 6 fields). The software tracks the pattern match (green line in images 2 & 3) as the operator moves the stage manually. When the line turns red (image 4), a snapshot is taken before moving to the next field. The image is then stitched together automatically (image 5). Using Multi-Layer Grabs allow for a perfect X, Y, and Z focused image.



### Automatic Mode with Motorized Stage

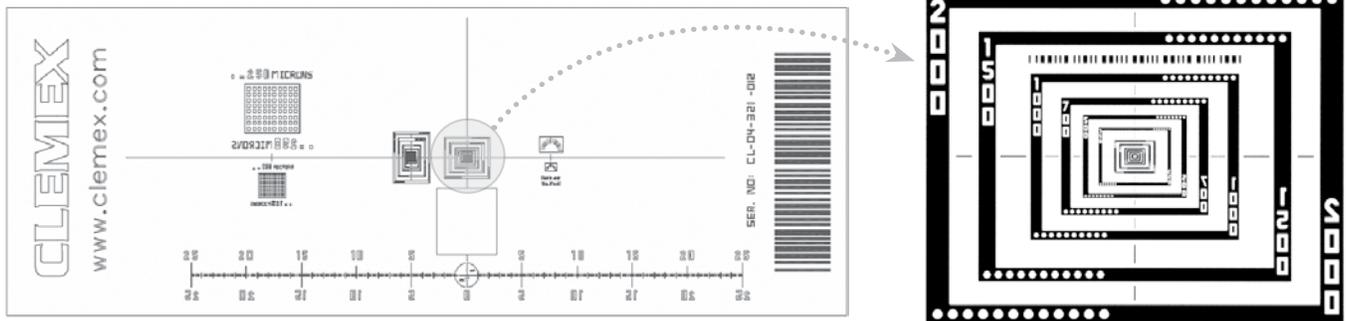
The automatic mode uses the motorized stage to make large Mosaics and Multi-Layer Grabs. The whole operation is mechanized; simply enter the parameters at the outset, click and walk away while the system detects the pattern matches in real time. The Mosaic function and the Multi-Layer Grabs work jointly to provide a sharp image of the sample.



Mosaic 10x7 fields and 18 multi-layer of synthetic diamonds on grinding disc at 100X.  
Final TIF file size is 230 Mb (JPG file 15 Mb)

## NIST Traceable Micrometer (Optional)

Calibration, the process of assigning a size to a pixel, is an essential operation for any image analysis. The Clemex NIST traceable micrometer helps users assign a different calibration setting for each objective. With a motorized stage, simply click on Calibration and follow the instructions when prompted. Without a motorized stage, stretch the caliper over the micrometer and enter the value in the dialog box. It's easy and returns accurate, reproducible, and certified results that can be validated anytime.



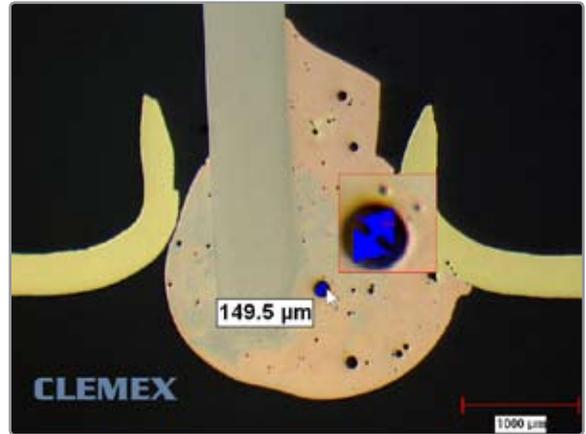
## Image Capture Made Easy

Clemex Captiva can manage several cameras and devices connected to the same PC. All associated device parameters are easily controlled by the software and once your calibration and settings are adjusted the user can switch from one to the other within the Clemex Captiva software.



## Magnifying Glass Tool

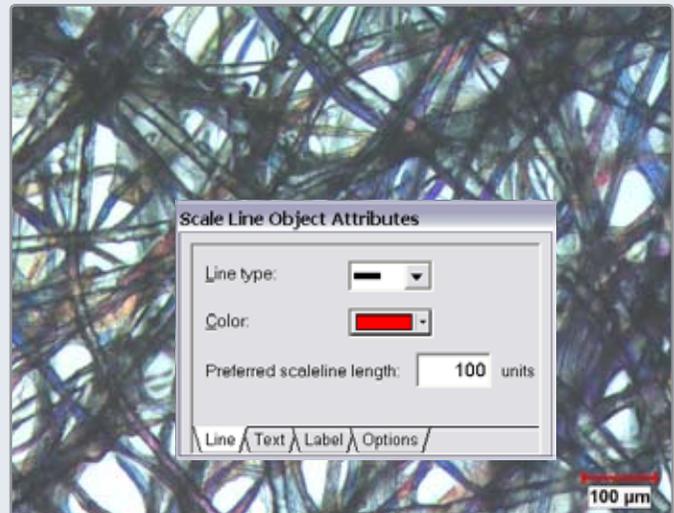
The Magnifying Glass Tool highlights the area at the tip of the mouse to show accurate detail. It is integrated in the image window as a child window, constrained to move with the mouse. With this tool, measurements can be made with unparalleled precision.



*Porosity in solder joint at 25X*

## Adjustable Scale Line

The Scale Line is either linked to the magnification or forced to a specific size by entering a value. It can be positioned anywhere in the image.



*Coffee filter at 200X*



**CLEMEX**

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Printed in Canada

09/06

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