Clemex **Captiva**

Simple **Capturing**
and **Measuring** for Microscopy

CLEMEX
www.clemex.com

Printed in Canada
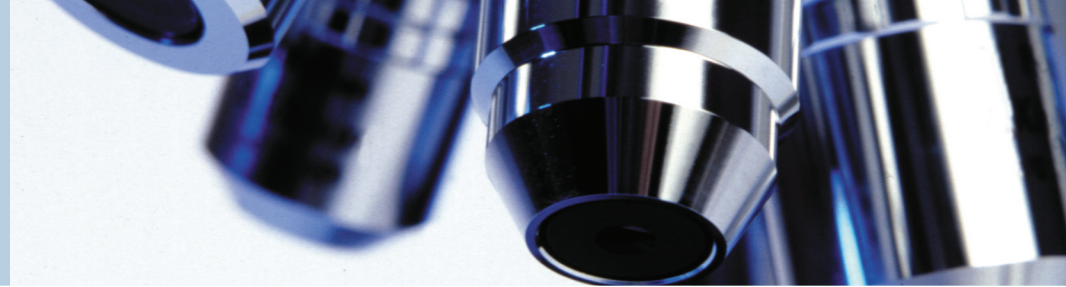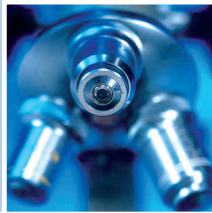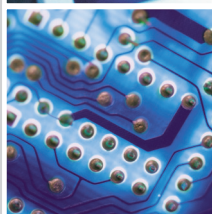
Acquire, Annotate and Measure
with Clemex Captiva

CLEMEX
A Commitment to **Excellence in Imaging**

Acquire images from a camera within Clemex Captiva and get an entry-level software application with a robust set of tools specifically made for the microscopist's unique requirements. From image calibration to annotations, to direct measures, to report generation and archiving, Clemex Captiva is an intuitive package ready to use from day one.

Choosing an imaging system can be a time consuming and often difficult process. Here are some key benefits you can count on when making Clemex your preferred system provider:

Reputation: As a result of the company's highly focused efforts in building the best digital imaging systems, Clemex acquired a position of leader as provider of innovative solutions in image analysis.

Experience: Management along with a highly specialized staff have decades of combined experience in the digital imaging industry.

Ease-of-use: The intuitive nature of our systems allows users to get up and running surprisingly quickly.

Support: Our dedicated staff of engineers and technicians are ready to provide you with fast, reliable assistance.

Commitment: With the majority of employees retaining shares in the company, Clemex is highly committed to its continued development. Our track record of sustainable growth demonstrates that Clemex is a stable company, ready to serve your needs for years to come.

Leadership: Since the company's inception, Clemex has succeeded in maintaining a competitive lead based on its superior technology. To remain the leader, Clemex continues to reinvest large portions of its revenues in R&D each year.

> Product Line

Clemex Vision PE < Complete Image analysis >

This image analysis software application is the complete solution for your needs. Clemex Vision is an intuitive software program that empowers you to easily develop custom image analysis macros without writing a single line of code! Typical applications include grain size analysis, particle sizing, crystal characterization, layer thickness, porosity analysis and many more...

Clemex Vision Lite < Analyze with Pre-built Imaging Routines >

Clemex Vision Lite is a flexible yet affordable software solution that enables you to acquire, measure and even analyze your images using optional pre-built imaging routines. From carrying out basic image acquisition, to adding non-destructive annotations, to performing manual and automated measures, Clemex Vision Lite is the right choice if you do not require advanced toolsets for developing complex image analysis routines.

Clemex CMT < Microhardness Testing >

Clemex CMT line of microhardness testing solutions offer field-proven systems with unparalleled capabilities and are fully ASTM E-384 and DIN/ISO 6507 compliant.

Clemex CIR < Inclusion Rating >

Used in conjunction with Clemex digital imaging system, Clemex CIR (computerized Inclusion Rating) software allows laboratories to improve productivity for rapid and reliable inclusion analysis.

Clemex PS³ < Particle Size and Shape Image Analysis >

The new PS³ workstation allows you to obtain real-time particle characterization information rapidly and with complete detailed and flexible result output.

NIST Traceable Micrometer

The Clemex NIST Traceable Stage Micrometer can be used to calibrate the system within Clemex software.
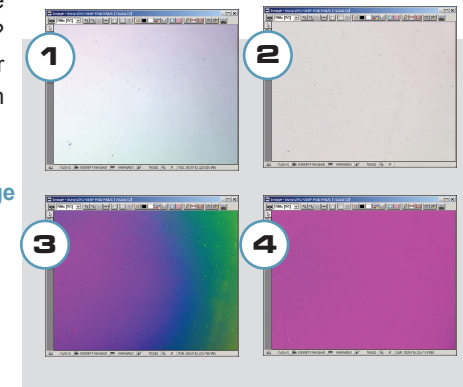
> Visit Clemex Website for More Information

www.clemex.com

> Even Lighting Made Simple

Ever experienced situations where images were not evenly illuminated? With Captiva's unique shading corrector feature, images are uniformly lit from corner to corner.
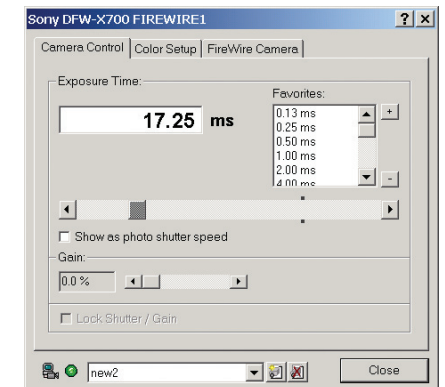
Real correction on full size LIVE image
1. Before applying shading corrector
2. After applying shading corrector
3. Image displayed in pseudo-color, before shading
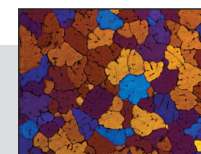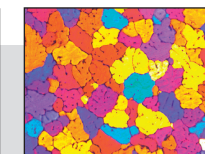4. Image displayed in pseudo-color, after shading

> Camera Control

Calibrating each magnification (objective) with the built-in Camera Control interface allows camera setting adjustments such as color balance, intensity, gain, white balance and other parameters. Camera settings are automatically saved, eliminating the need to adjust lighting conditions manually.
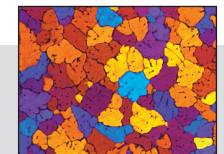
Images on the right demonstrate various exposure time settings:

Underexposed Exposure Time: 7.92 ms

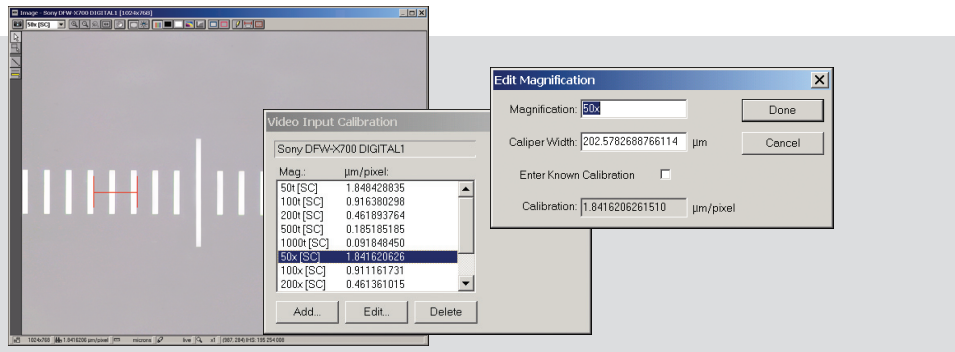**Overexposed** Exposure Time: 27.38 ms

Correct Exposure Time: 17.25 ms
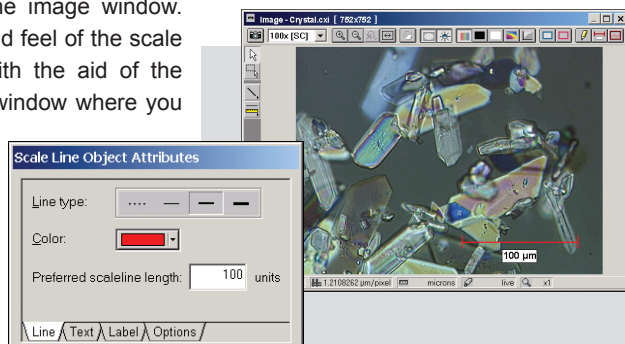
> Multiple Calibration Settings

Clemex Captiva's intelligent calibration feature allows to associate a different calibration setting for each magnification (objective) or camera lens. An unlimited number of calibration settings can be stored. Set it up once and never worry about calibration unless camera or optics are changed.

Calibration within Clemex software can be done using a certified scale, such as the Clemex NIST Traceable Stage Micrometer, or by manually entering known calibration factors.

> Multiple Image Processing

For processing of multiple images, the direct measurement data will be compiled in the Data Browser. Result histogram and/or scatter plots are generated when analysis is complete.

Manual Run Status Window

Run Configuration Window

1. Multi-layer Grab Option
2. Edit Options
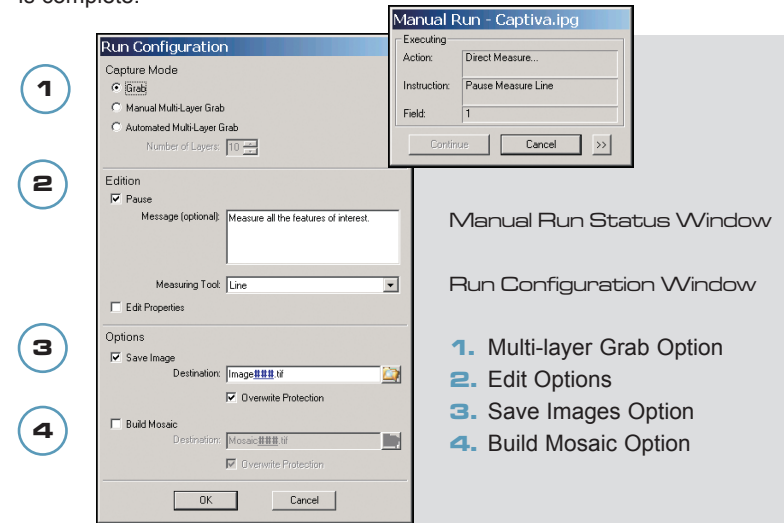**3.** Save Images Option
4. Build Mosaic Option

> Controlling the Scale Line

Captiva's smart scale line instantly displays the correct settings based on the chosen magnification from the drop-down menu box in the image window. Controlling the look and feel of the scale line is easily done with the aid of the scale line annotation window where you can set the interval, color, and thickness of the line.

> Autofocus and Motorized Stage Control (optional)

An intuitive Clemex ST-2000 stage control interface in all of Clemex's software applications allows you to easily set-up and save multiple stage patterns.
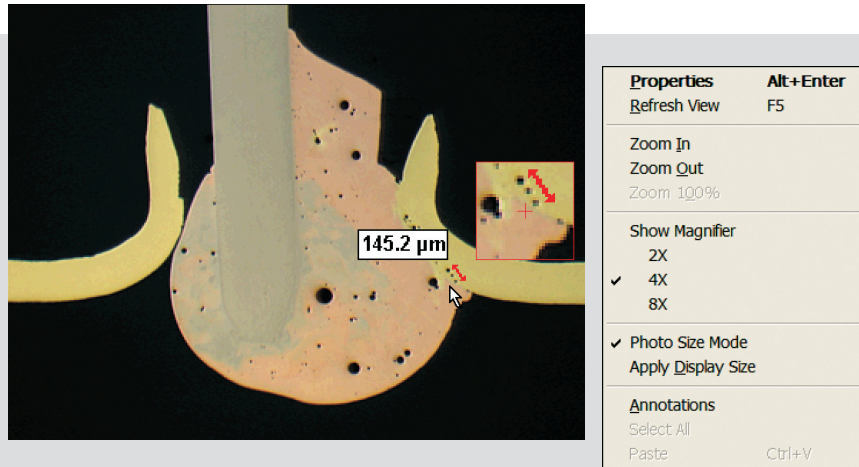
Adaptable to all major microscope brands, you can significantly increase your productivity while taking advantage of some key Clemex software features such as image stitching, 3D image reconstruction, 3D rendering, and object tracking.
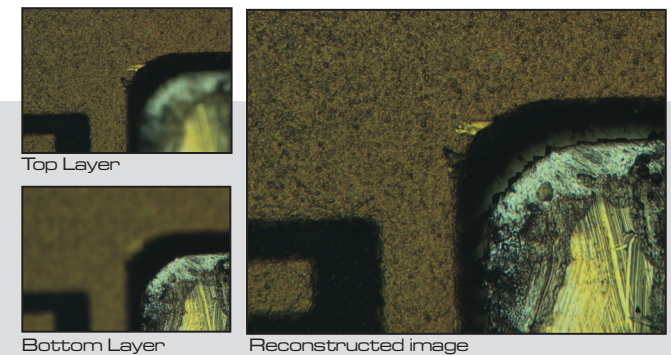
> Magnifying Glass Tool

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.

Properties	Alt+Enter
Refresh View	F5
Zoom In	
Zoom Out	
Zoom 100%	
Show Magnifier	
2X	
✓ 4X	
8X	
✓ Photo Size Mode	
Apply Display Size	
Annotations	
Select All	
Paste	Ctrl+V

> Standard Picture Size Mode

True magnification of standard Polaroid-style print (4 x 5 inches or 3.25 x 4.25) inches is available for printing and copying. Settings are done in the Preferences Menu.

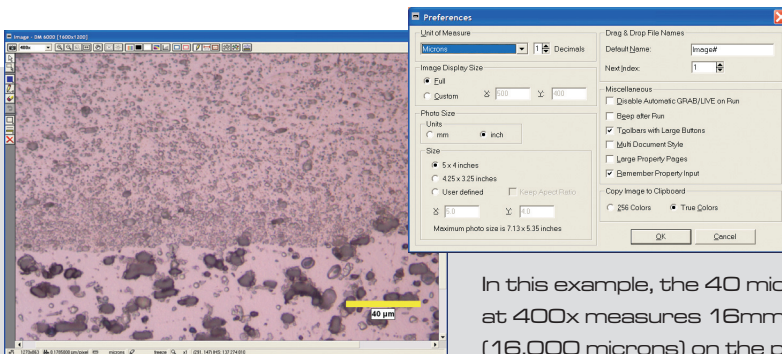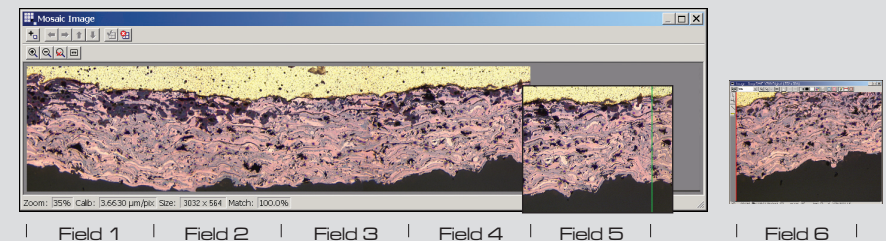In this example, the 40 microns at 400x measures 16mm (16,000 microns) on the print

> Manual Multi-Layer Grab

Focusing on uneven surfaces can be troublesome. With the manual multi-layer grab function, intelligent software slices the image at varying z-intervals and reconstructs a focused image. Below is an example of a semiconductor chip magnified at 200x with fifteen layers sliced and reconstructed.

Top Layer

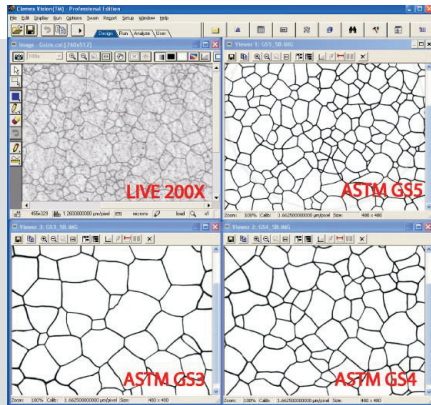Bottom Layer   Reconstructed image

> Interactive Image Stitching

With the image stitching feature, multiple images are stitched easily with pattern matching technology, to form one composite image. Color guidelines allow easy positioning of images, even with a manual stage.

Field 1   Field 2   Field 3   Field 4   Field 5   Field 6
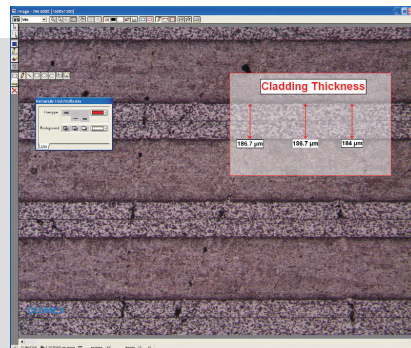
> Multiple Viewers

Viewer windows make it possible for up to 20 images to be open at the same time, allowing direct comparison of images with reference standards. Viewers are a valuable tool for printing several images, whether full-scale or in reduced format, for inclusion in reports.

Images can be moved from the main image window to a viewer by a simple drag and drop action. Any annotations or direct measures made in the image window will be kept as a separate layer when transferred to a viewer.
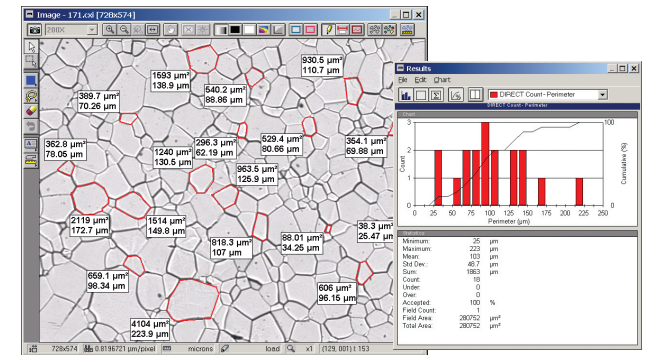
> Non-Destructive Annotations

Text boxes, ellipses, squares, lines, polygons, arcs or even company logos can be added as non-destructive layers. Properties including line thickness, background color and opaqueness, font and text positioning can easily be controlled with each entity's annotation pop-up box. Images can then be saved in industry standard TIFF format with a non-destructive layer where annotations can be turned on or off.

> Direct Point-to-Point Measures

Captiva's robust direct measure tool set include measurement parameters such as perimeters, areas, lines, angles, curve radii or any other feature within your images. Variable decimal places, flag location or even color of lines can intuitively be controlled within the property box of the software's direct measures. Graphs are automatically generated and data is compiled in a browser. Data can be exported to MS Office programs. Images and result viewers can be conveniently drag and dropped in any MS Office programs for production of reports.

> Measurements are graphically displayed in configurable histogram formats.

> The data browser lists raw data for automatic and manual measures. Just one click allows for the easy tracking of specific measures. Select a measure in the data browser and the actual measure is highlighted in the image window.