

PCE-MM200 User manual
(Apr-26-2011)

Welcome

Thank you for choosing PCE-MM200 USB digital microscope!
The PCE-MM200 USB digital microscope is an exciting new device that let's you view clear many micro-objects with it, and has a wide scope of applications, such as,

- Industrial Inspection
- Computer Parts inspection
- Telecom module inspection
- Scientific teaching tool
- Medical analysis
- School Research tool
- Insect dissection / examination
- Plant dissection / examination
- Skin examination
- Textile Inspection
- Collections / Coin/ Jewelry Inspection
- Printing Inspection
- And more.....

Please read this manual carefully before using PCE-MM200 USB digital microscope!!!

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System Requirement

Minimum System Requirements

- MAC OS X 10.5 or later version
- QuickTime 7.0 or later version


Installation

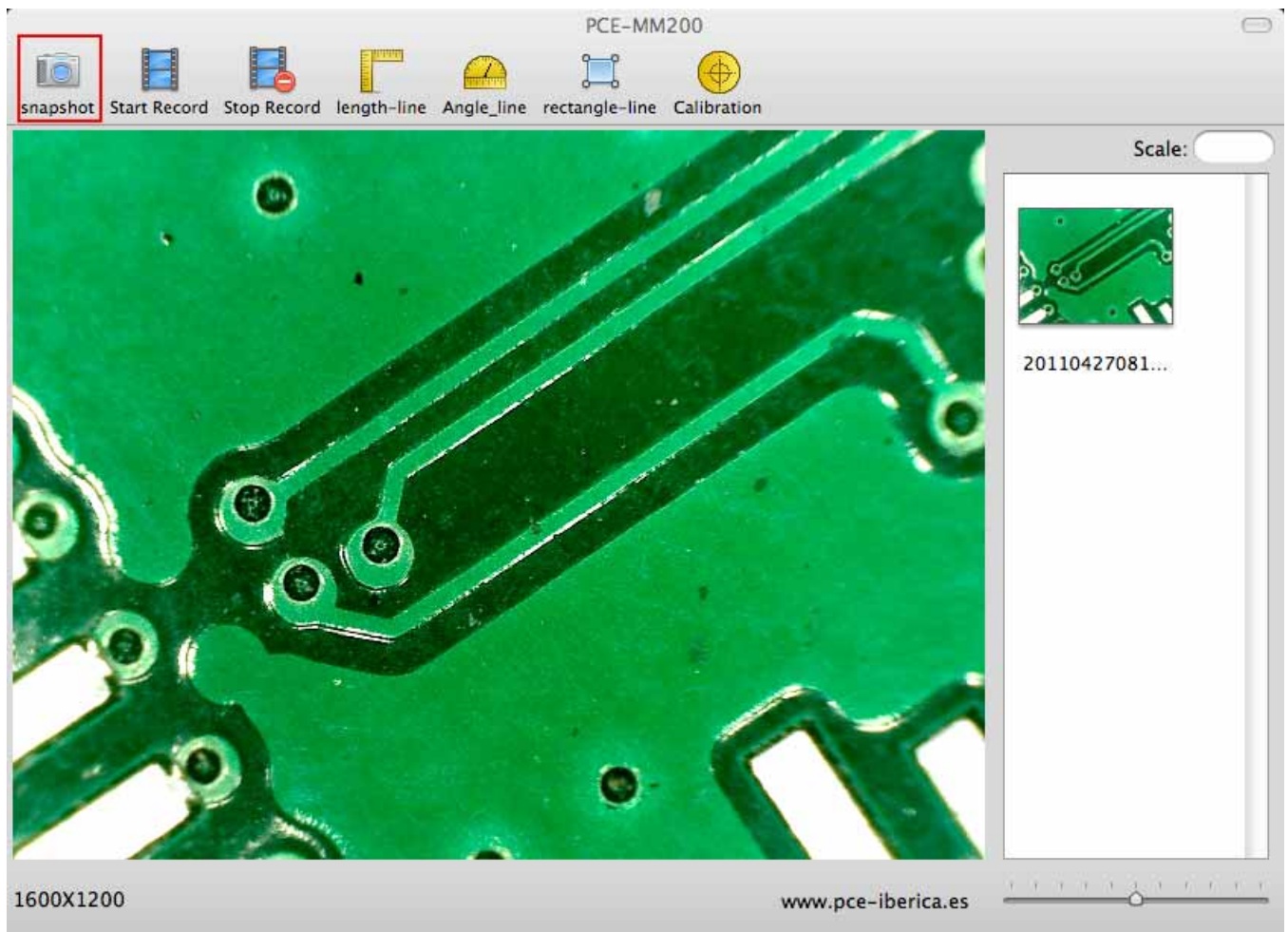
To install PCE-MM200 software, Please double-click PCE-MM200 Installer icon located in the PCE-MM200_MacOSX mounted volume. The PCE-MM200 installer will display the current release notes and guide you through the installation process. The installer will install the PCE-MM200 application into the Application folder one the boot.



After the PCE-MM200 application has been installed, plug the USB Digital Microscope into an available USB port on your Macintosh installed on your Mac OS X Desktop.



Capturing an image

Click the camera icon button in the upper left-hand corner of the main application window. You can also capture an image by selecting the Capture menu item from the Capture menu in the main menu bar. The Captured image will be save in the directory (../users/local user name/PCE-MM200/Image). The filename of the captured image will be a unique time stamp with .jpg appended to the time stamp. The format of the time stamp filename is: YYYYMMDDhhmmss.jpg where YYYY is the year, MM is the month, DD is the day, hh is the hour, mm is the minutes, and ss is the second.

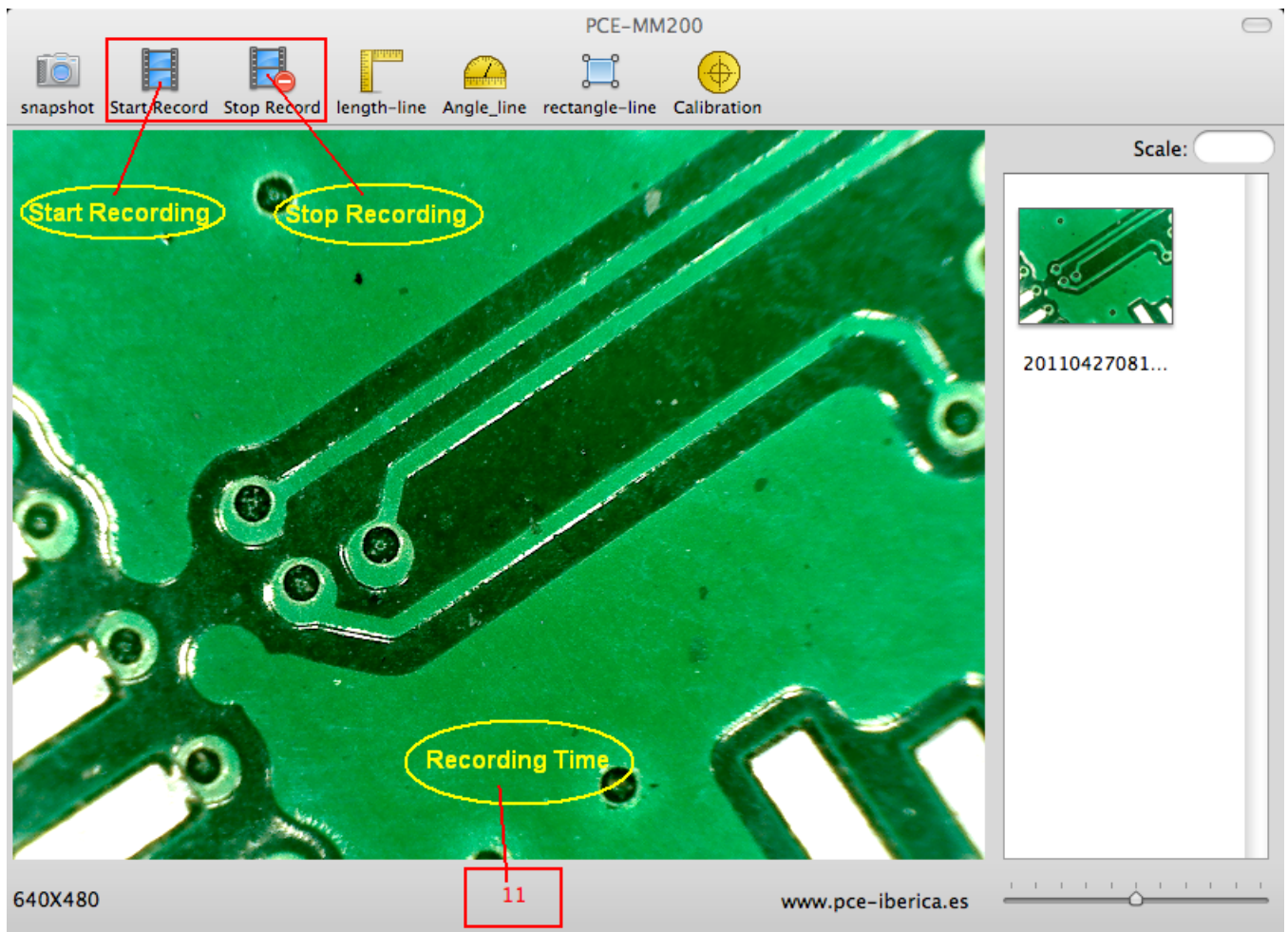


Each captured image will be added to the picture scroll list. In the picture scroll list, double-clicking on a selected image thumbnail will open that image in the measurement window.

Creating a real time movie

Click the  icon button to start recording movie and  icon button to stop recording movie in the upper left-hand corner of the main application window. Or select “start recording” item and “stop recording” item from the capture menu in the main menu bar.

The format of the time stamp filename is YYYYMMDDhhmmss.mov, where YYYY is the year, MM is the month, DD is the day, hh is the hour, mm is the minutes, and ss is the second.




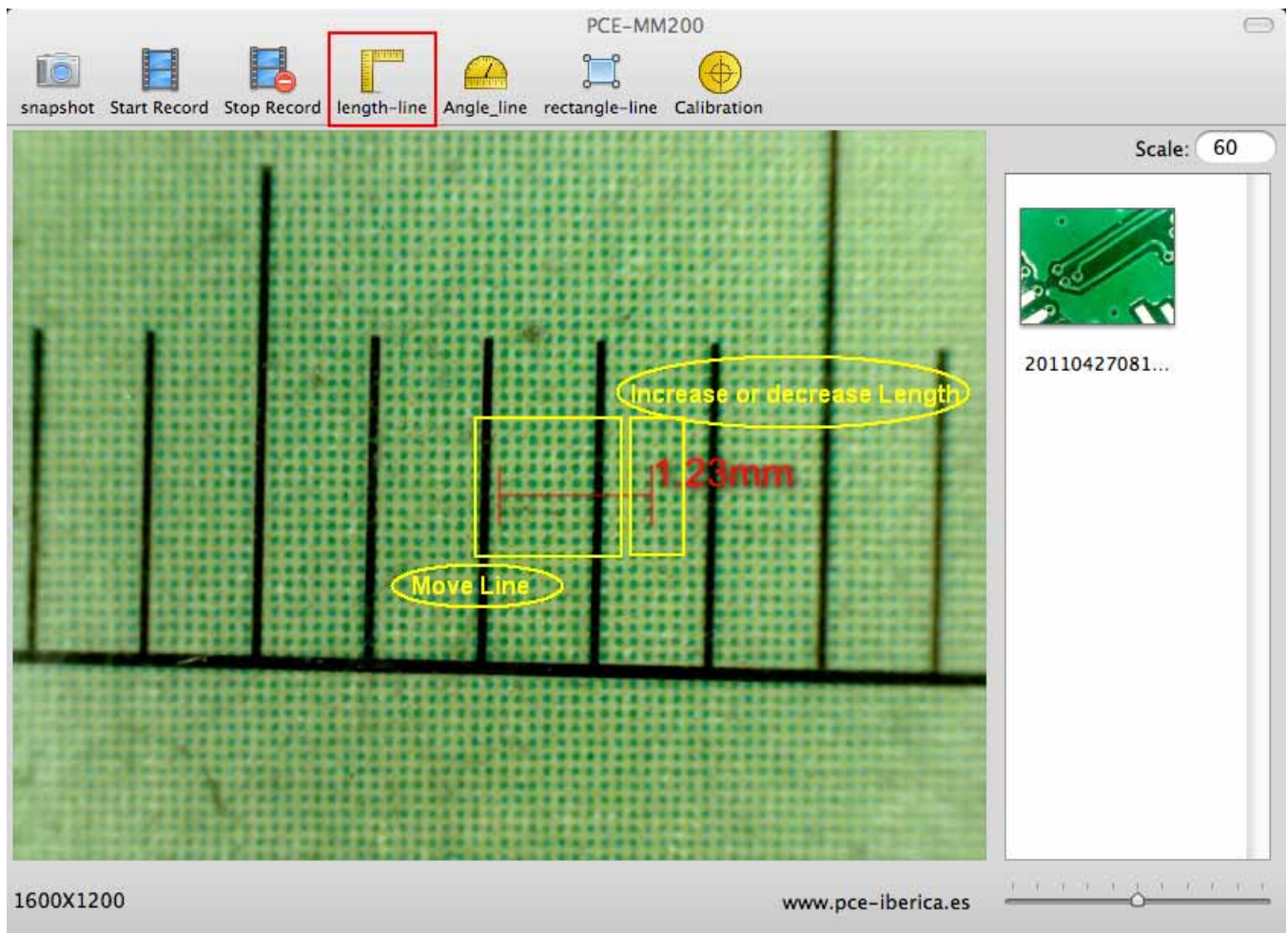
The Captured image will be save in the directory (../users/local user name/PCE-MM200/Video).

Make measurement on video preview


Line measurement

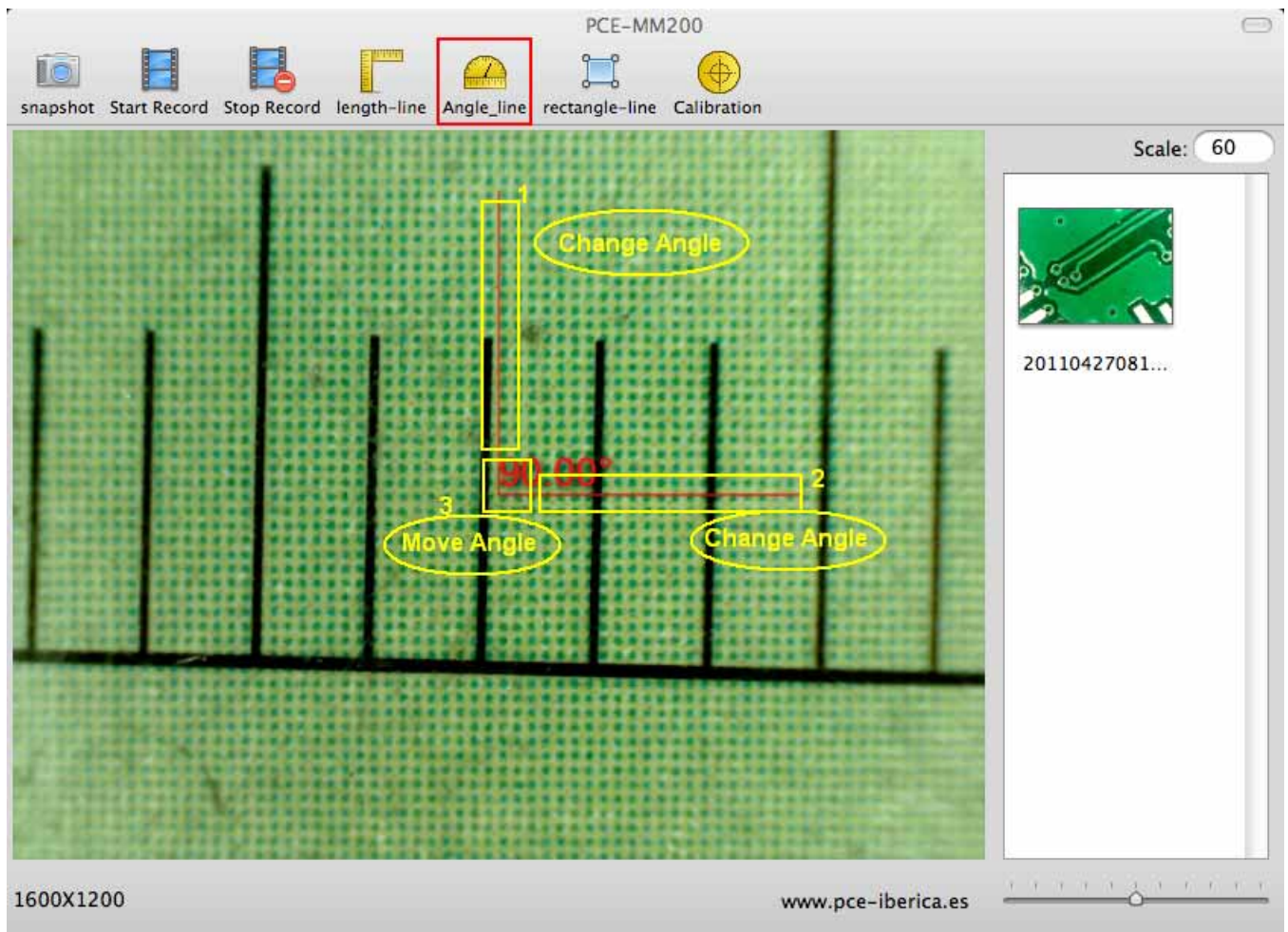
First, please enter the magnification rate in the upper right-hand corner of the main application window. Then

click the  icon button, you will see one line on the video preview window. If you select the left of the line and drag the mouse, you can move the line. Select the right of the line and drag the mouse, you can increase or decrease the length of the line.




Angle Measurement

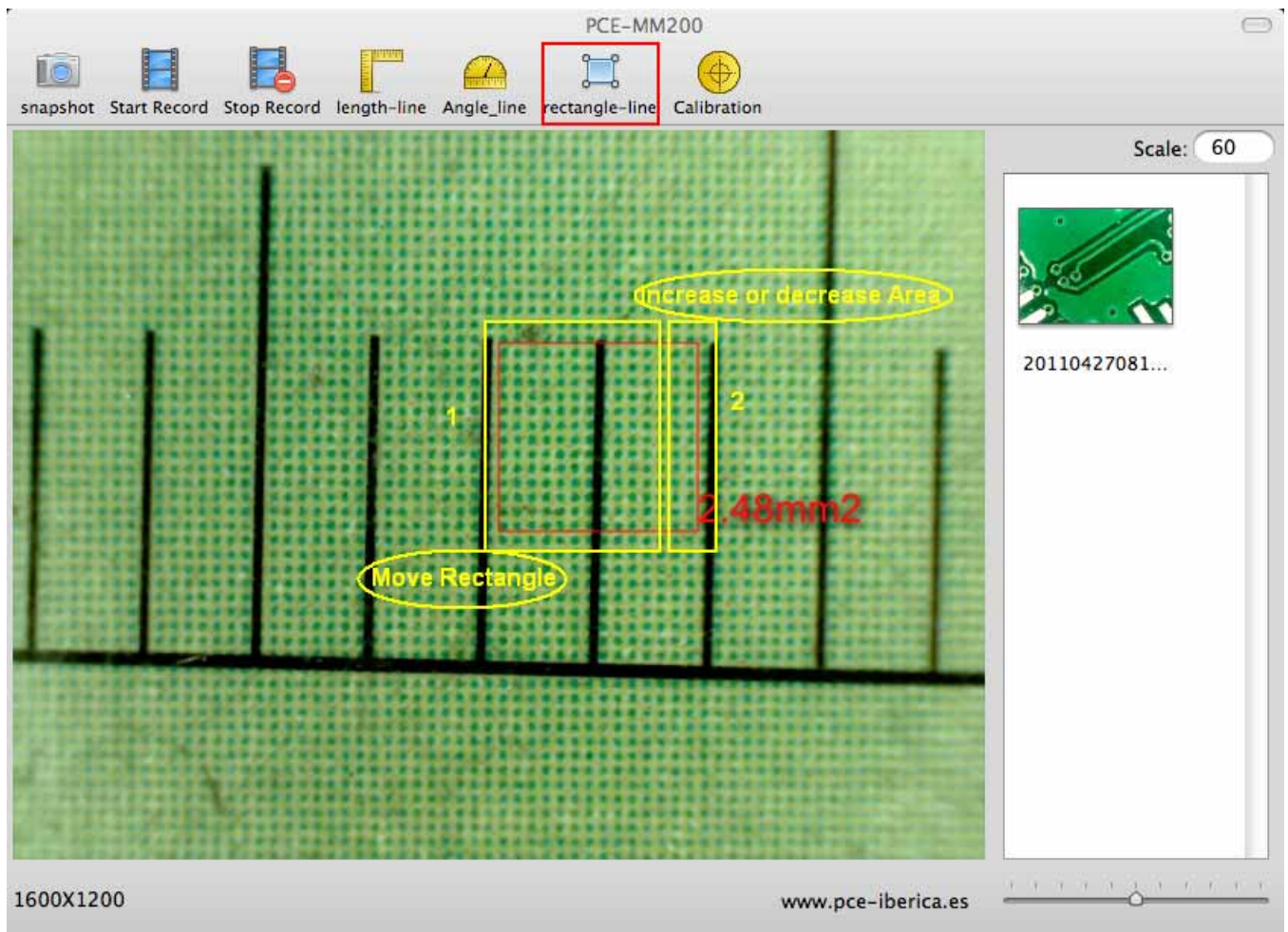
Please click  icon button, the angle will display in the video preview window. Select region 1 and drag the mouse, you can change the angle (the region 2 is same to line 1). Select bottom-right region 3 of the angle and drag the mouse, you can move the angle.




Area Measurement

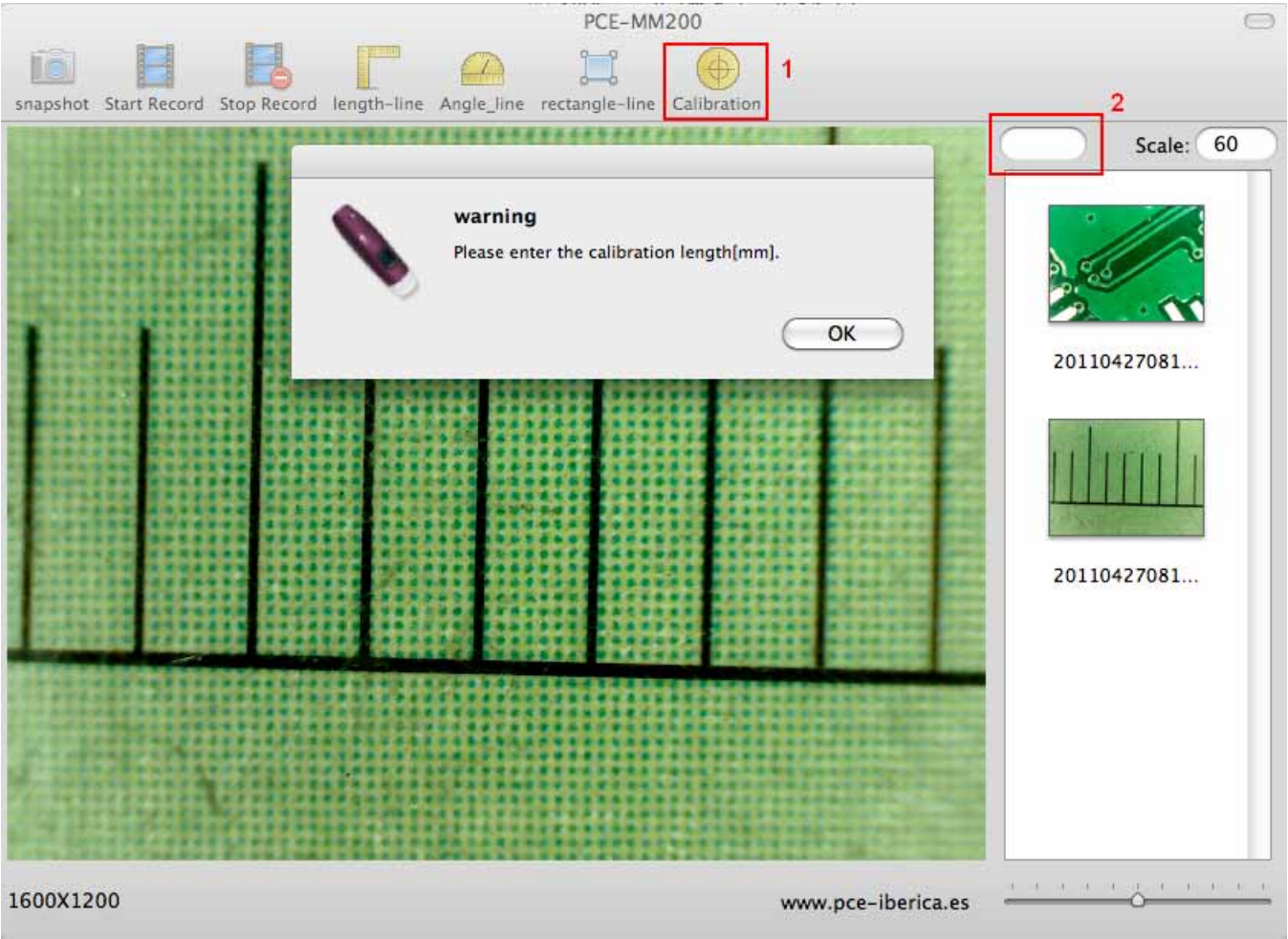
Please click  icon button, the rectangle will display in the video preview window.

Select left region (region 1) of the rectangle and drag the mouse, you can move the rectangle. Select right region (region 2) of the rectangle and drag the mouse, you can change the area of the rectangle.

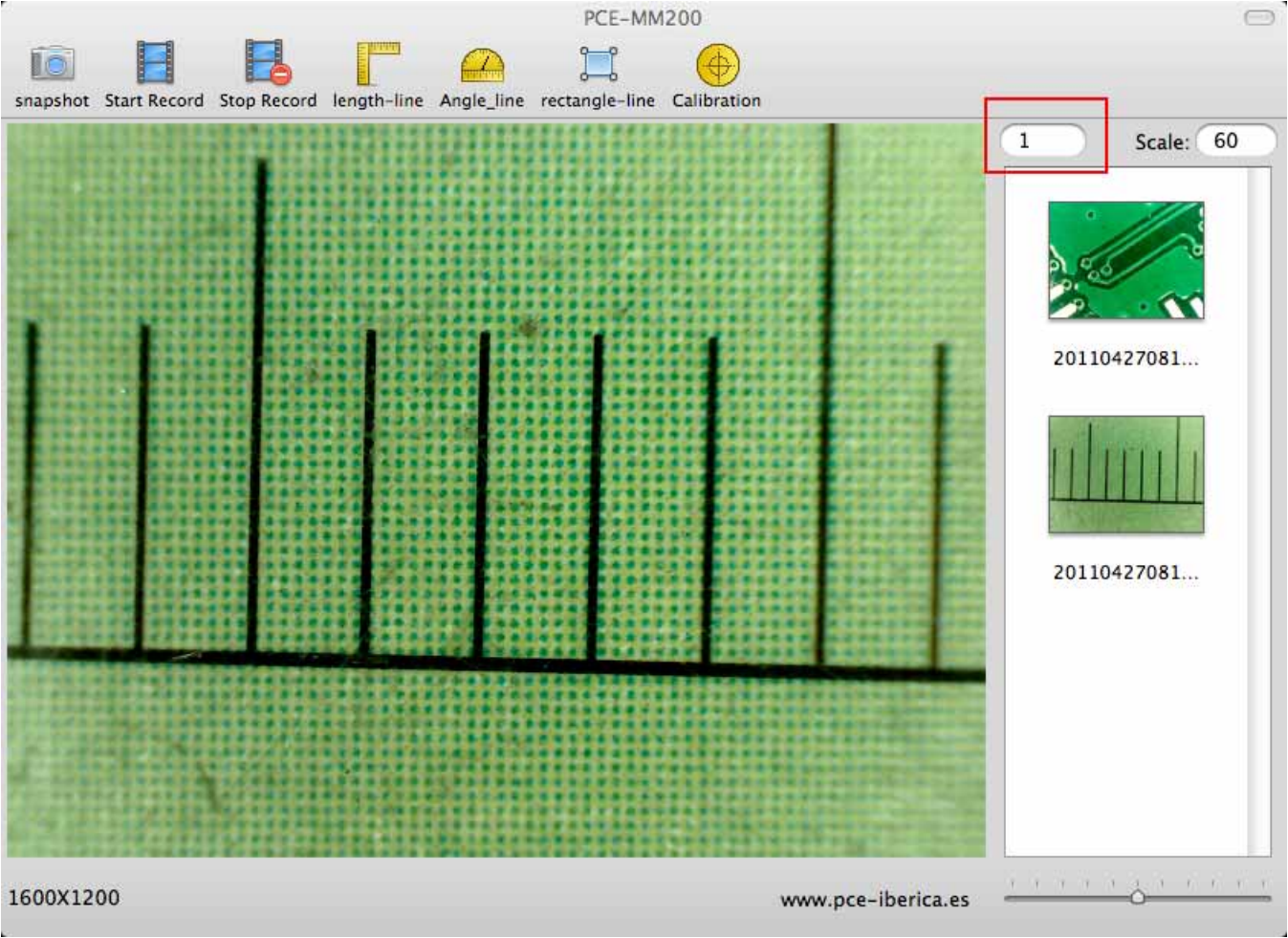



Measurement Calibration

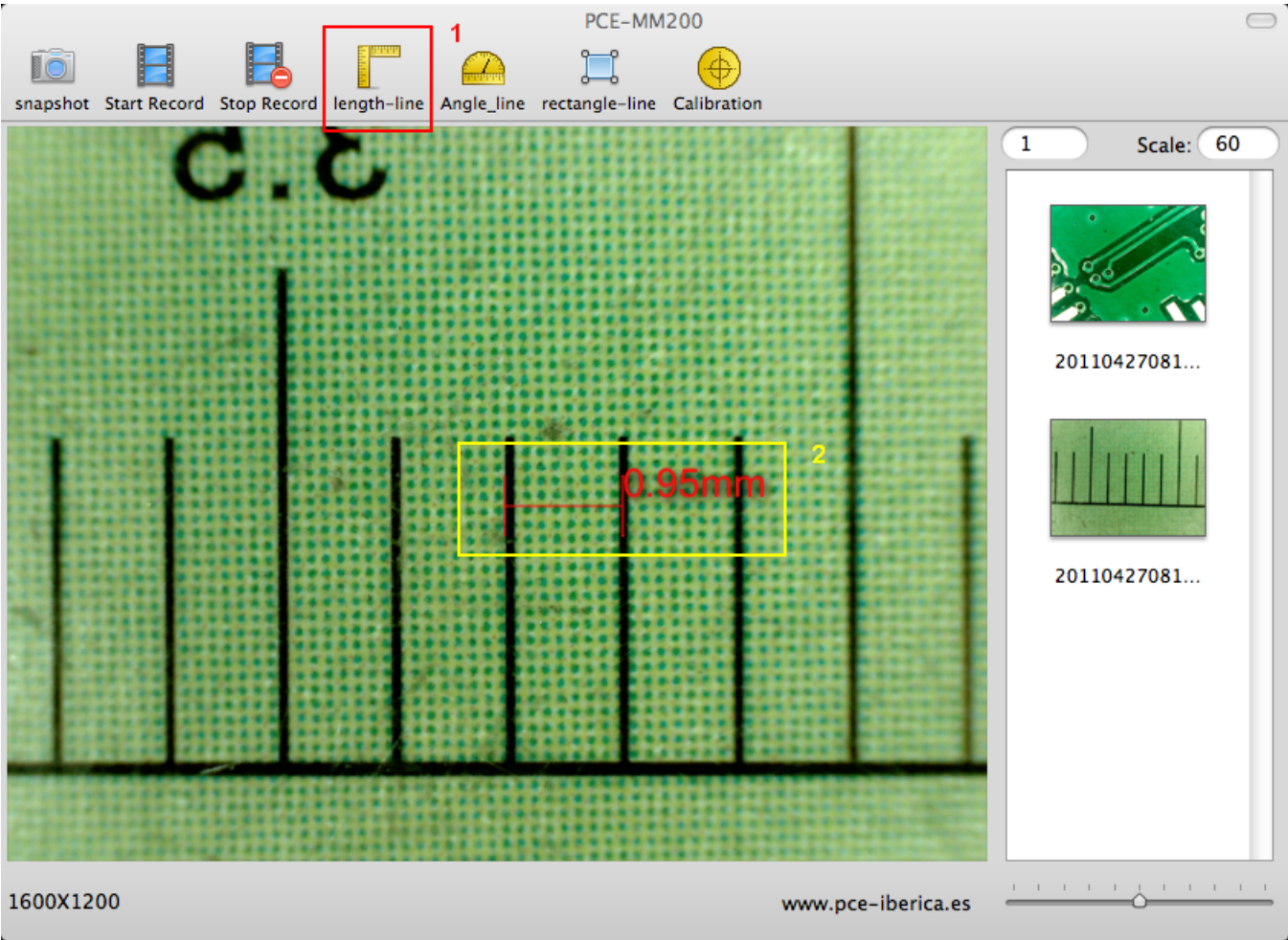
First, please enter the rate in the upper right-hand corner of the main application window. Then click  icon button, pop up a message window and an edit window appear in the upper-right corner of the main window. At the moment, please click "OK" and enter actual length in the edit window. (such as below image) :




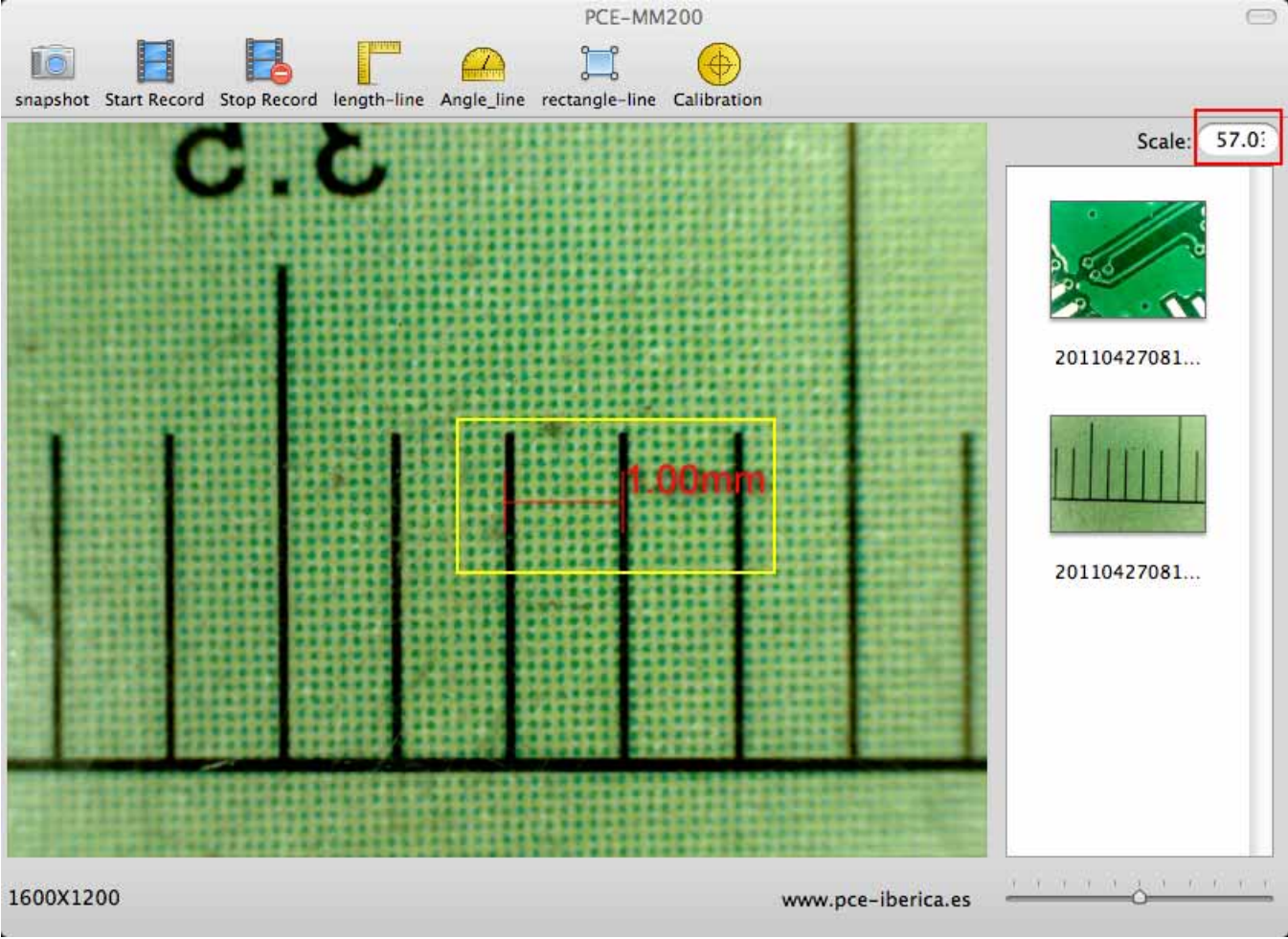
Enter the actual length is 1mm.



Then, click  icon button. Move and adjust the line to 1mm on the video preview window (such as below image).

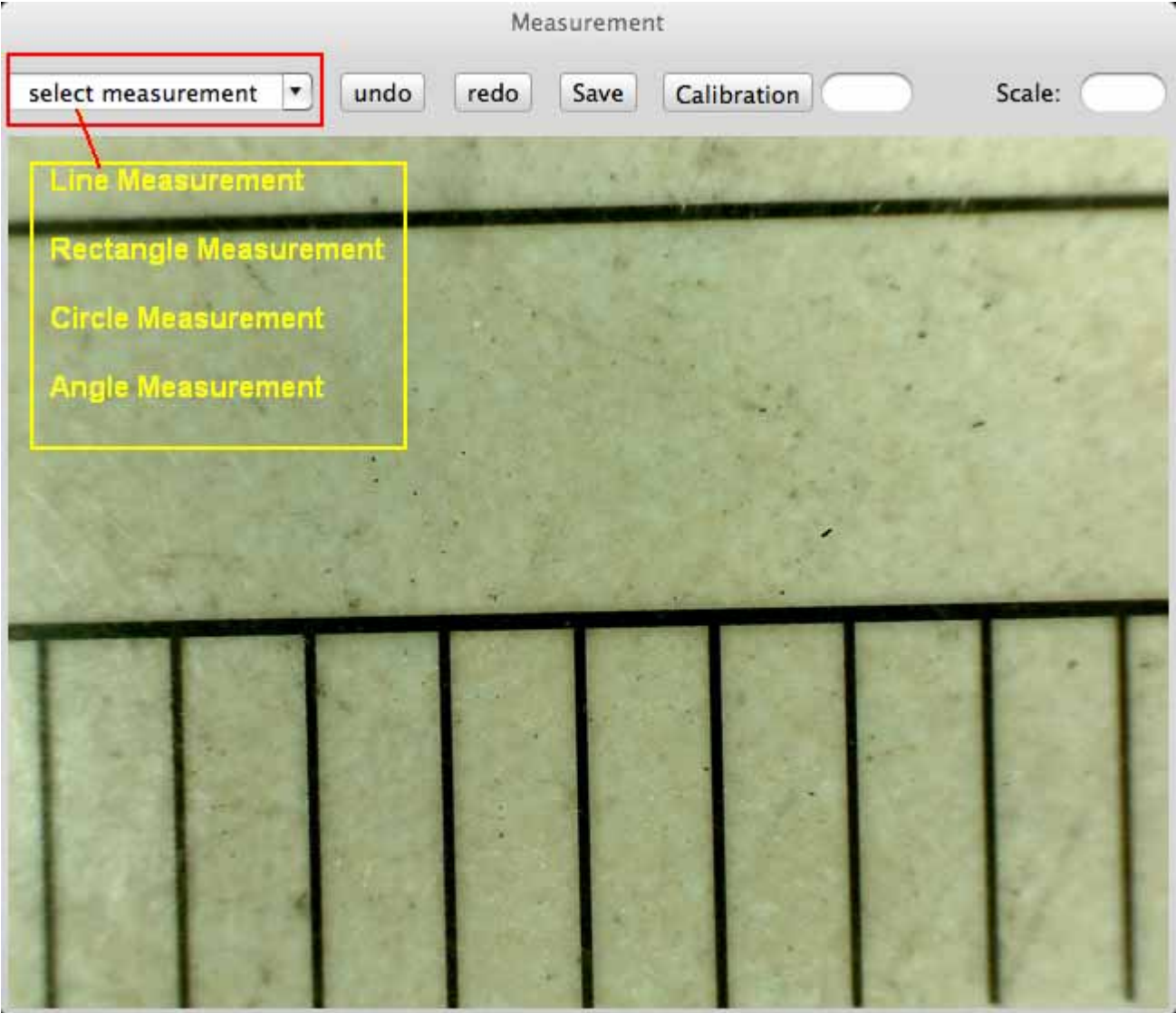


Finally, click  icon button to complete calibration functionality. The calibration magnification will be displayed in the upper-right corner of the main window (such as below image).

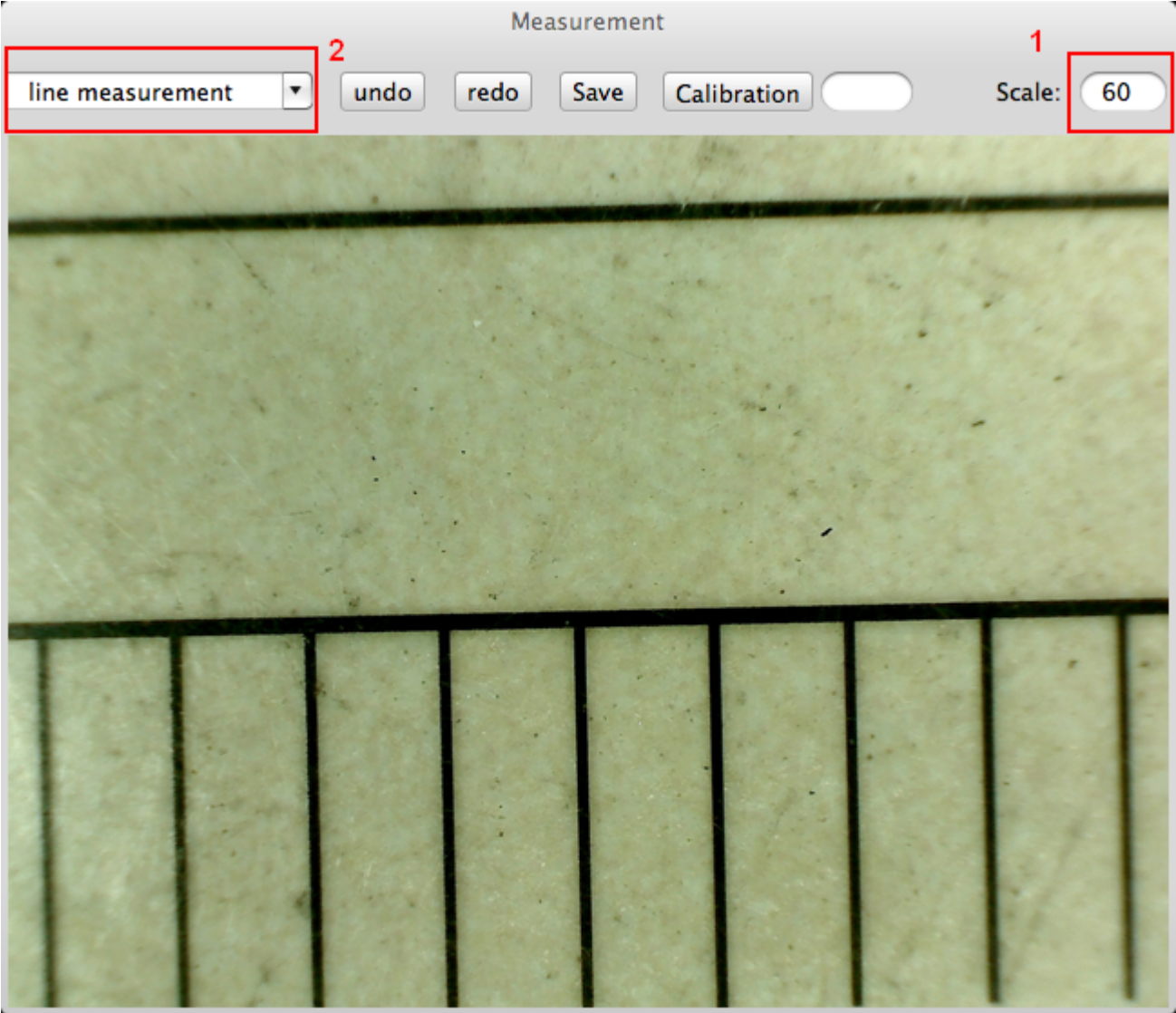


Make measurement on an image

Open an image in the measurement window by double click on the image in the picture scroll list.
In the measurement window, select from the popup menu Line-measurement \ rectangle measurement \ circle-measurement \ angle-measurement.



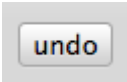
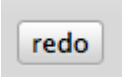
Before making a measurement, enter the magnification rate which the image was captured. The magnification rate can be read from the dial on the microscope.
Line-Measurement: click and drag the mouse across the desired area to be measured.

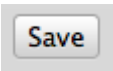


Angle-Measurement: click and drag the mouse to draw the first line of the angle, then click and drag again to draw the second line.

Circle-measurement: click and drag the mouse to draw a circle showing the radius, circumference, and area of the draw circle.

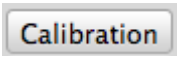
Rectangle-Measurement: click and drag the mouse across the desired area to be measured.

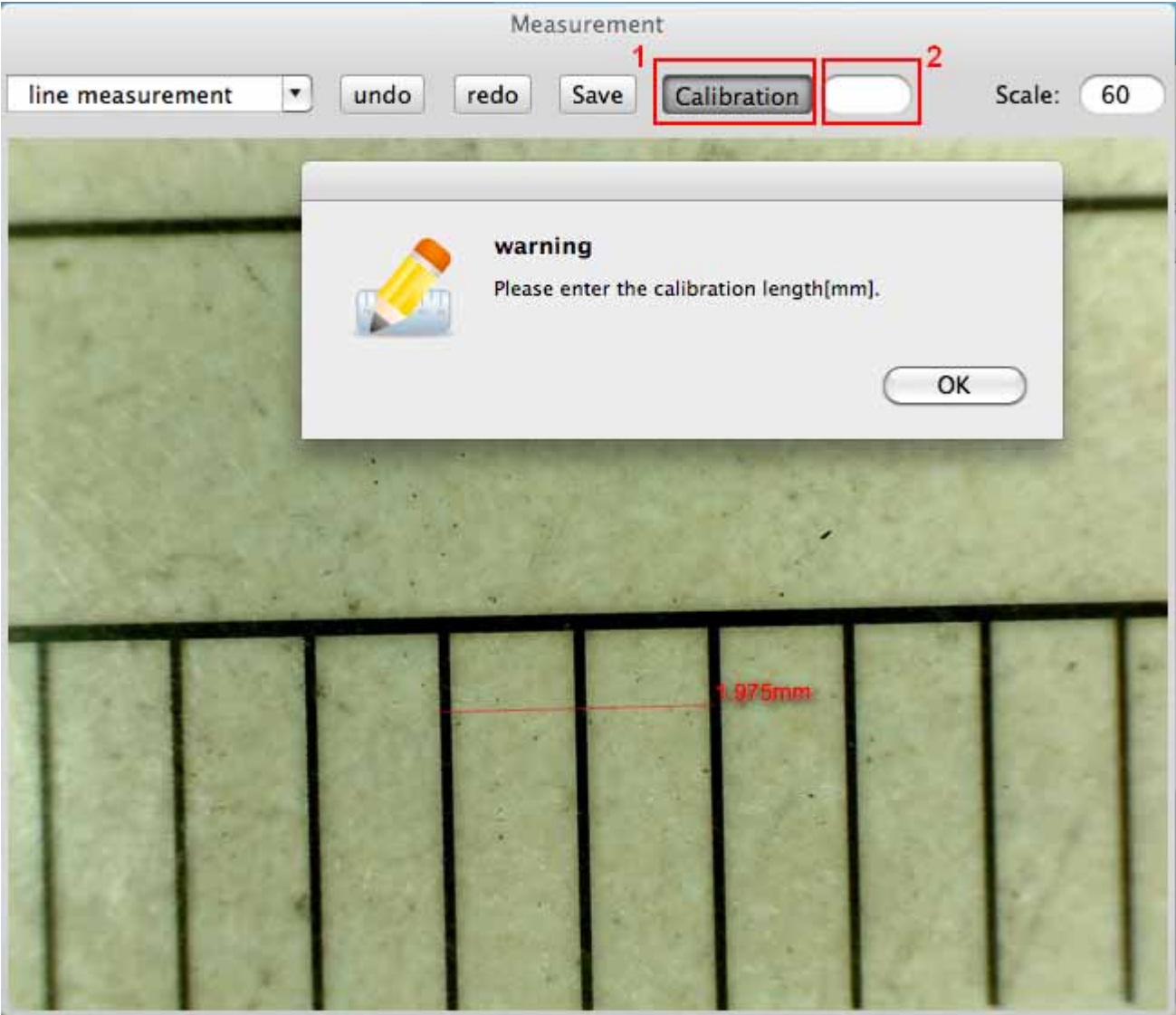
The previous measurement or the entire measurements can be deleted or undelete by clicking  icon button and  icon button.

Your changes to the image can be saved by clicking the  icon button.

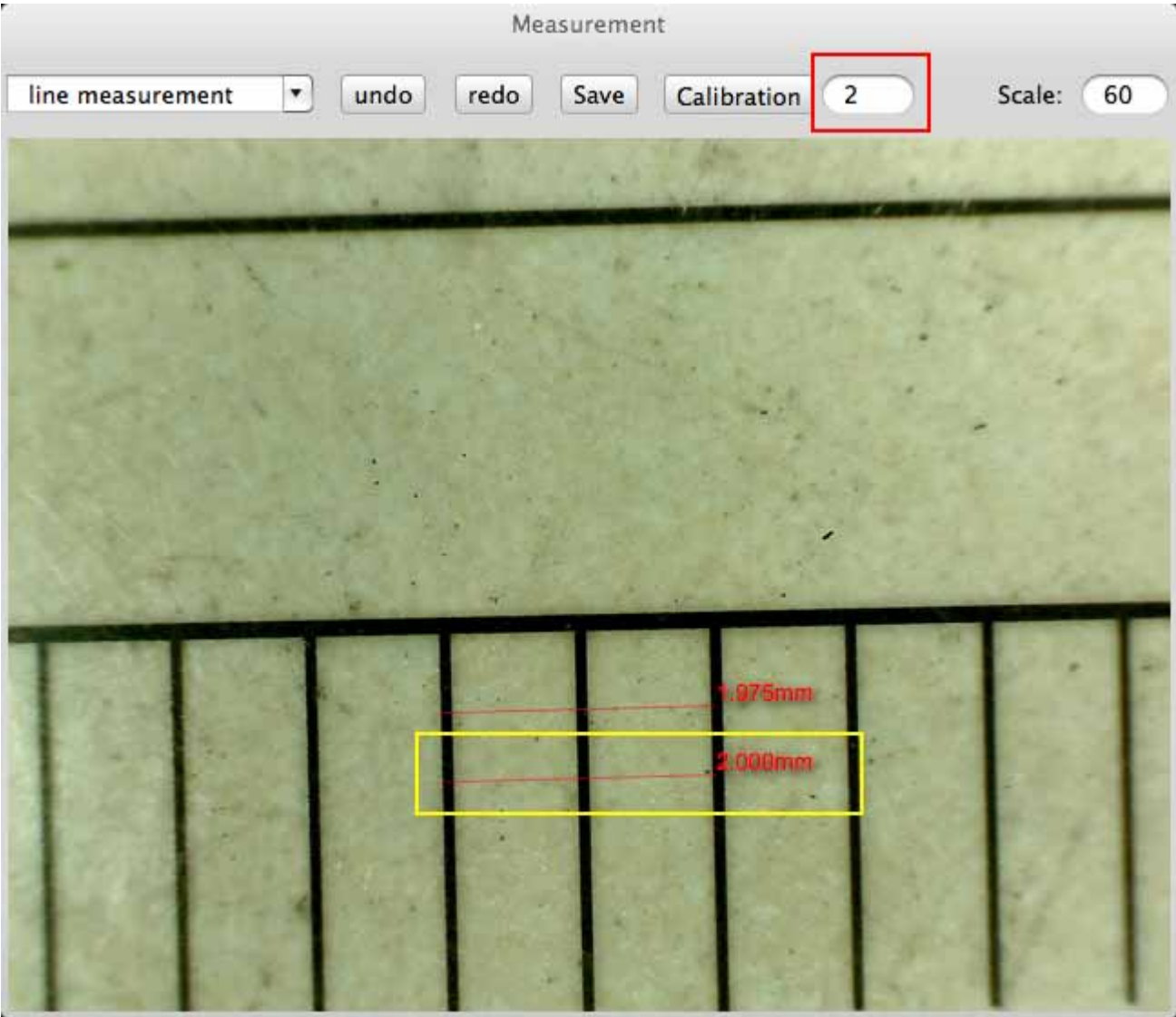
Make measurement calibration

- Step 1.** The opened measurement image file list here under step 1 will be used as the calibration reference image, or you can focus the microscope on a known measurement length and then click the **Capture** button. If you clicked the **capture** button, a picture will be captured from the microscope, then double-click the captured image which will be opened in a new measurement window. This newly captured image will be used as the calibration reference image.
- Step 2** Enter the magnification setting that was used when the calibration reference image was captured. The magnification setting can be read from the magnification dial on the microscope.

Step 3 First Select “line measurement”, then click  icon button, one message window appear, please click “OK”, then enter the actual length that you want to calibration.



Such as below image, we enter 2mm and drag mouse across 2mm on the calibration image.



Legal Information

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