

PCE-MM200 User Manual for Mac

Welcome

Thank you for choosing the PCE-MM200 digital microscope!

The PCE-MM200 digital microscope is an exciting new device that gives you a magnified view of any micro-object, small part or surface, and has a wide array of applications, including:

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 digital microscope!!!

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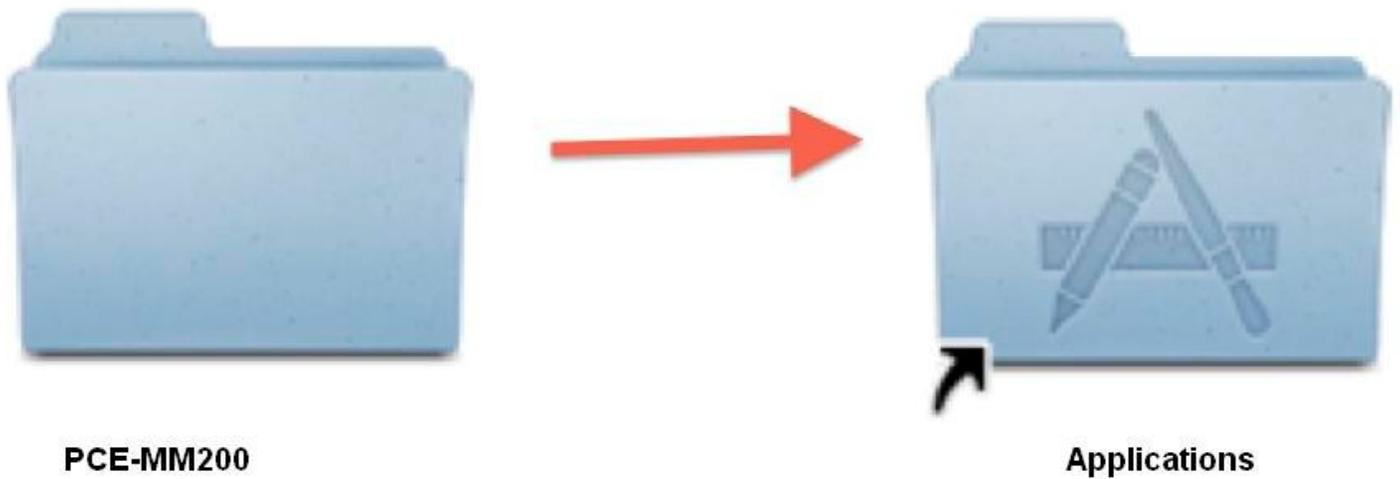
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System Requirements

- I MAC OS X 10.6 or later version
- I QuickTime 7.0 or later version

PCE-MM200.app Software Installation

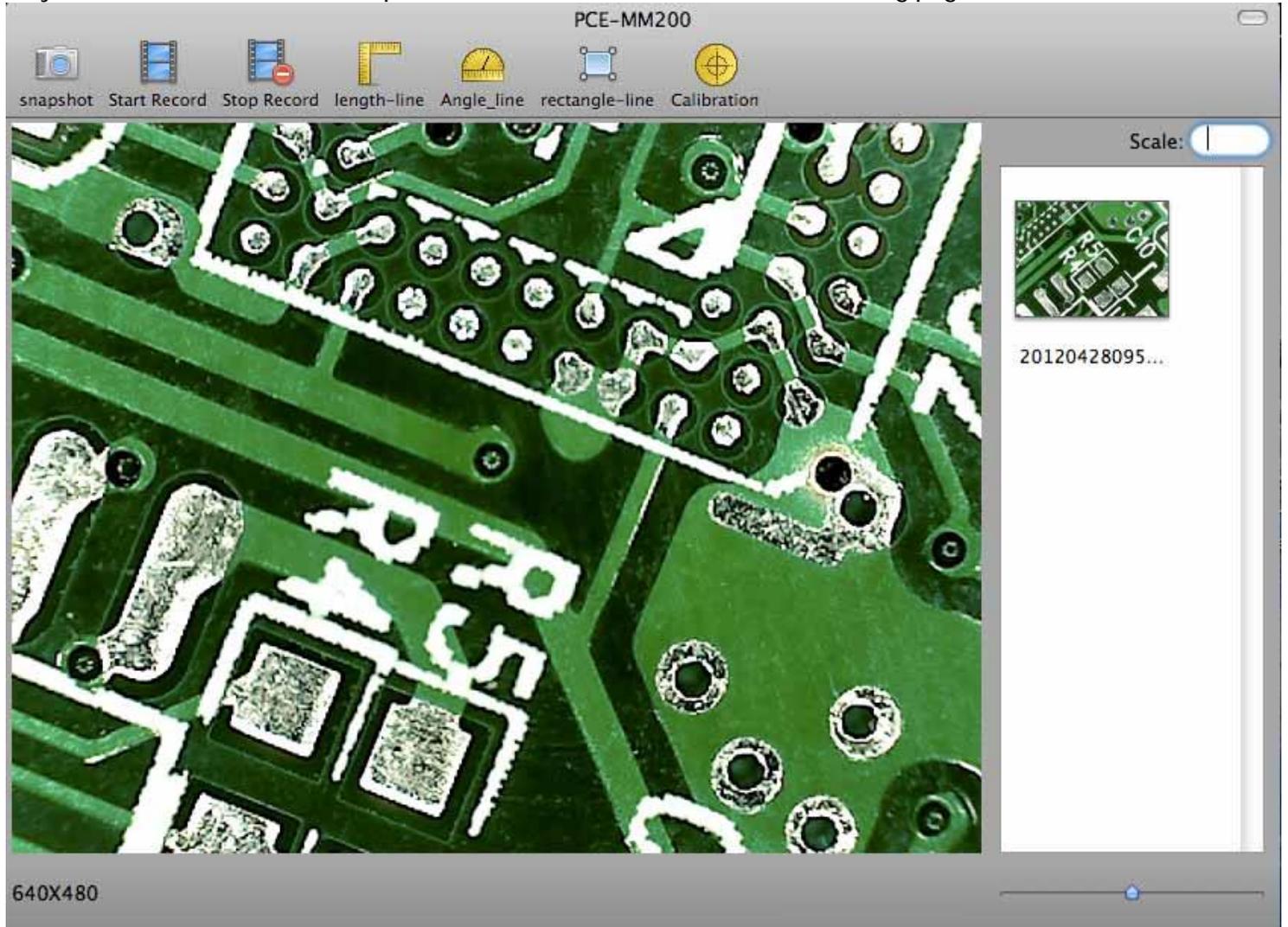
To install the "PCE-MM200.app" application, please double-click "PCE-MM200.dmg" located in "CD-ROM->Mac Software." and then display below window:



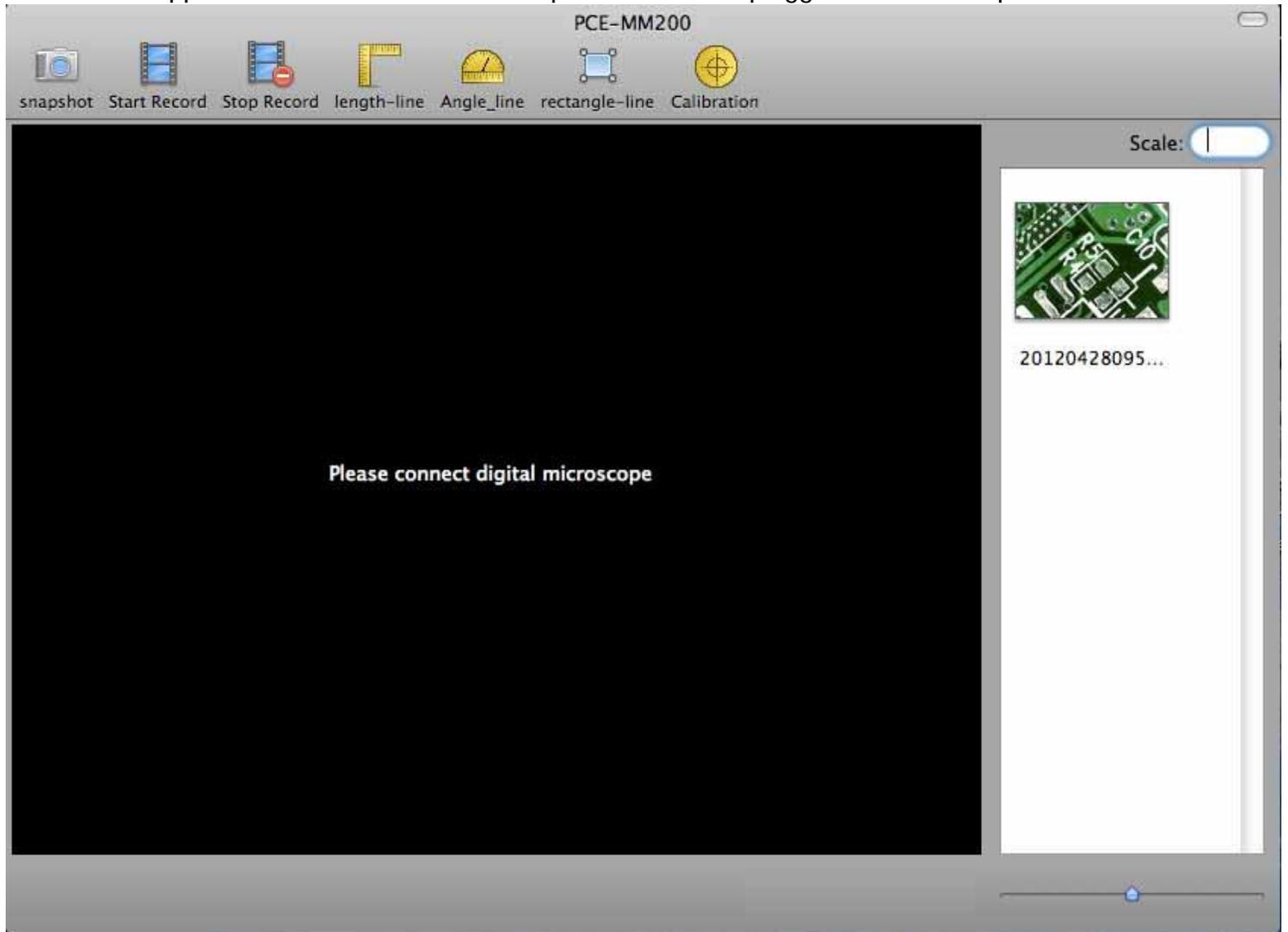
Please drag "PCE-MM200" Folder to "Applications" Folder to complete installation.

The "PCE-MM200.app" application is installed in "Applications" folder, you can make alias by dragging "PCE-MM200.app" to dock from "Applications/PCE-MM200" folder.

Once the PCE-MM200 installation is completed, please plug the microscope into an available USB port on your Mac OSX PC, and turn the microscope on with the dial on the side. The system will automatically search and install the driver. The software installation is completed, and you may see a transmission from the microscope on your screen as below. If not, please follow the instructions on the following page.



If images from the microscope camera are not being transmitted and your display is still showing the “connect” screen, the next step is to change settings in QuickTime, the video and media player for the Mac. Close the PCE-MM200 application, but leave the microscope turned on and plugged into the USB port.

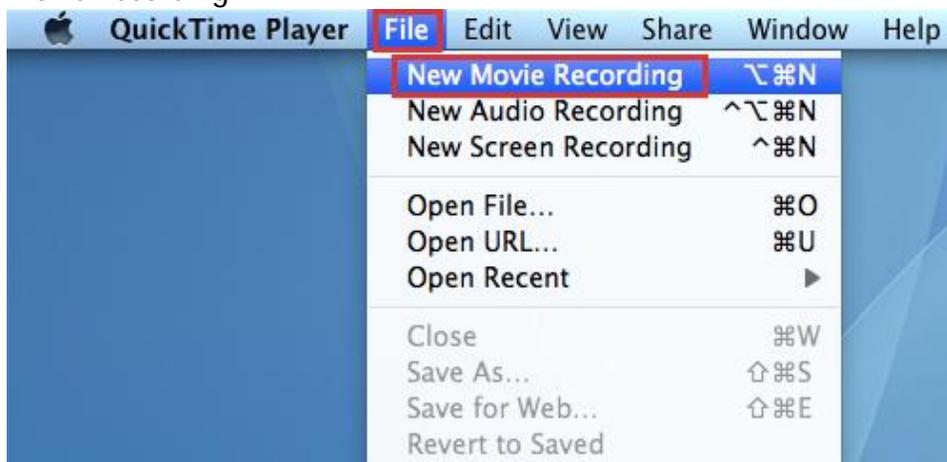


If you don't already have QuickTime in your dock at the bottom of the Mac display, look in your Mac application

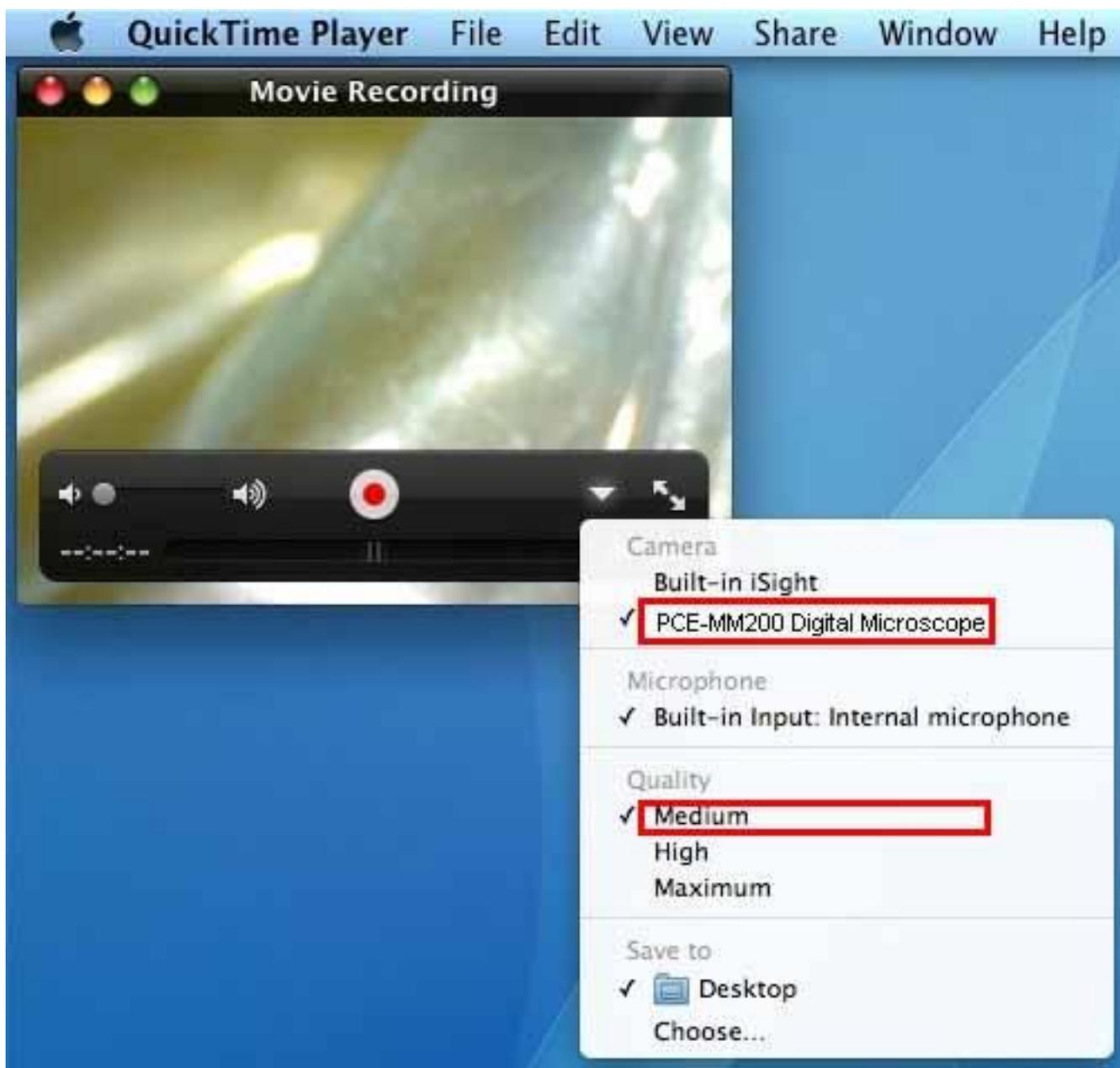


folder and click on QuickTime. The icon looks like this:

Once you've opened QuickTime, click on the QuickTime File menu at the top of the screen and select “New Movie Recording.”



Click on the dropdown arrow at the bottom right of the “New Movie Recording” window. Make sure the Digital Microscope is the selected Camera and that Quality is set to Medium, as shown here.



Now when you reopen PCE-MM200, you should be seeing images from the camera on your screen.

PCE-MM200 Application Software

Note: When you are planning to use the microscope in the future, be sure to plug it in and turn it on before



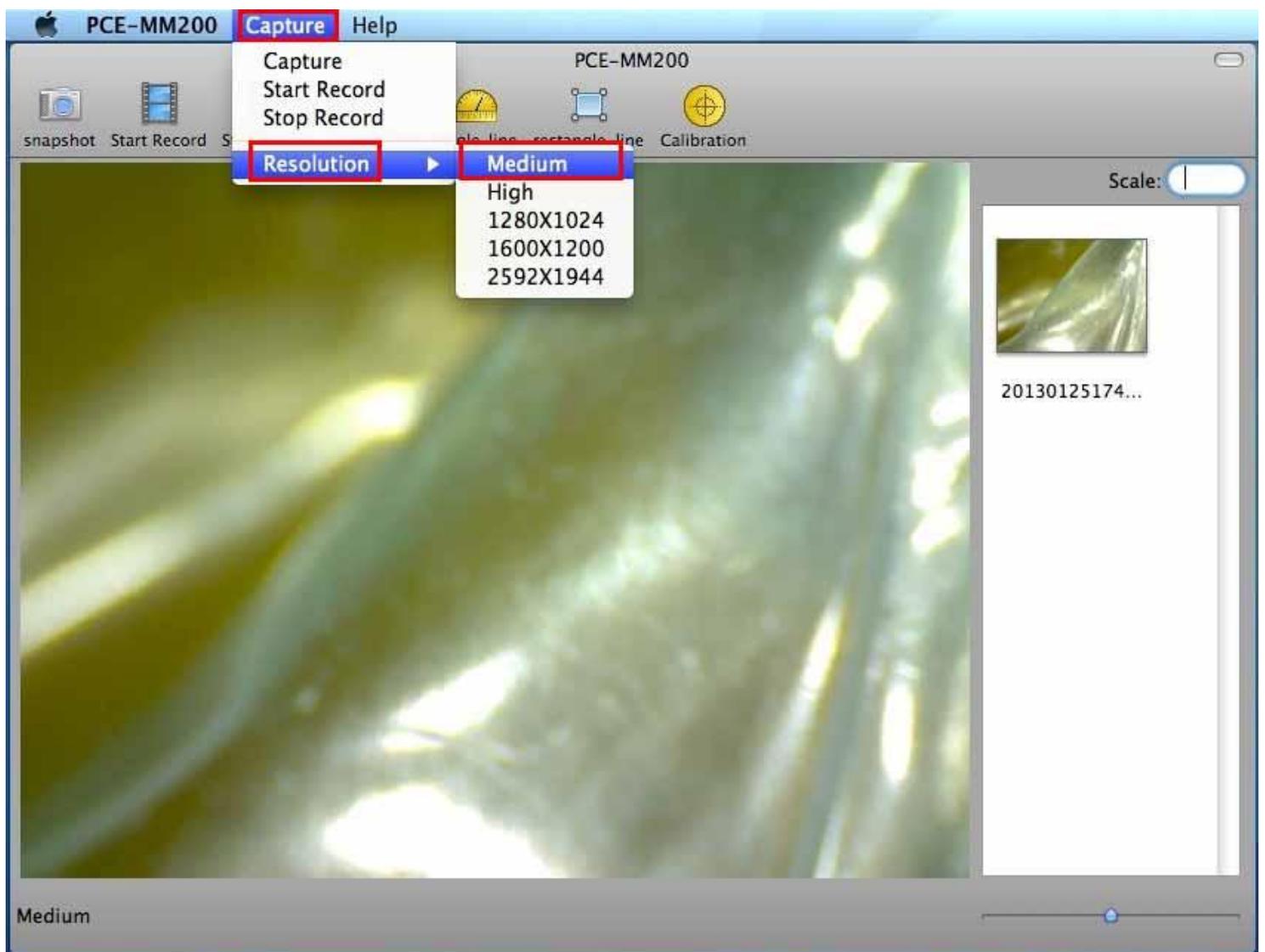
opening PCE-MM200. Click the PCE-MM200

icon on dock to open. If the icon is not on dock, look in your applications folder.

If for some reason the program opens without displaying images from the microscope, make sure the microscope is plugged into a USB port on your Mac and check that it is turned on. If you are still not seeing images, check your settings in QuickTime per the instructions starting on page 4. Then close and re-open PCE-MM200.

Video Resolution Setting

Click "Captrue->Resolution" to select your desired resolution as below screen. The default resolution is Medium. If your PCE-MM200 screen freezes on an image, it may be because capture resolution has been set too high. Set it back to Medium and the video display will return.

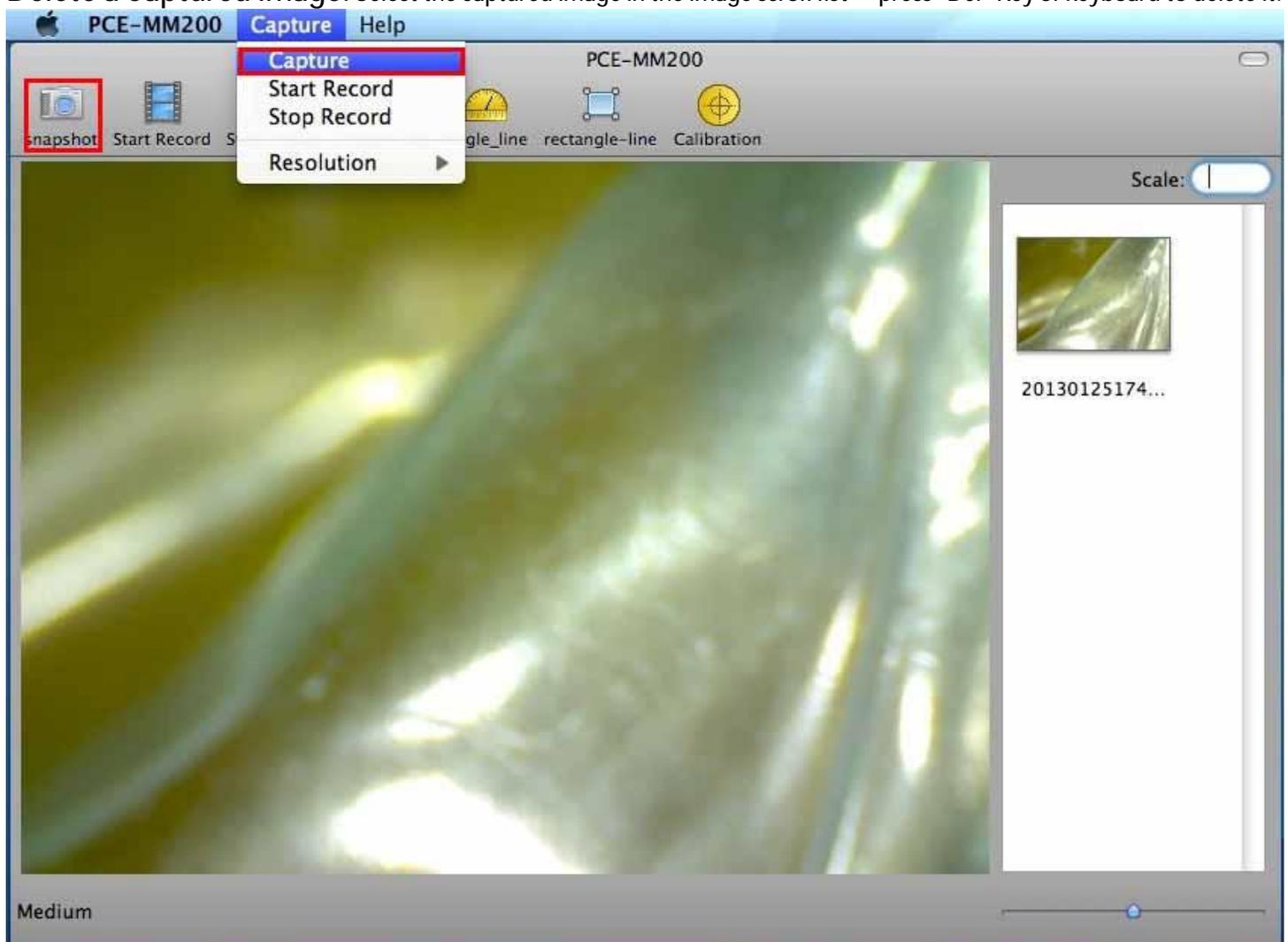


Capturing Image

Click the  icon button on the Tool bar of the main screen or "Capture" on System Menu bar as below to capture an image. The Captured image will be save in the folder (./users/local user name/PCE-MM200/Image). The filename of the captured image is a unique time stamp with .jpg file. The format of the time stamp filename is: YYYYMMDDhhmmss.jpg : YYYY is the year, MM is month, DD is date, hh is hour, mm is minutes, and ss is second.

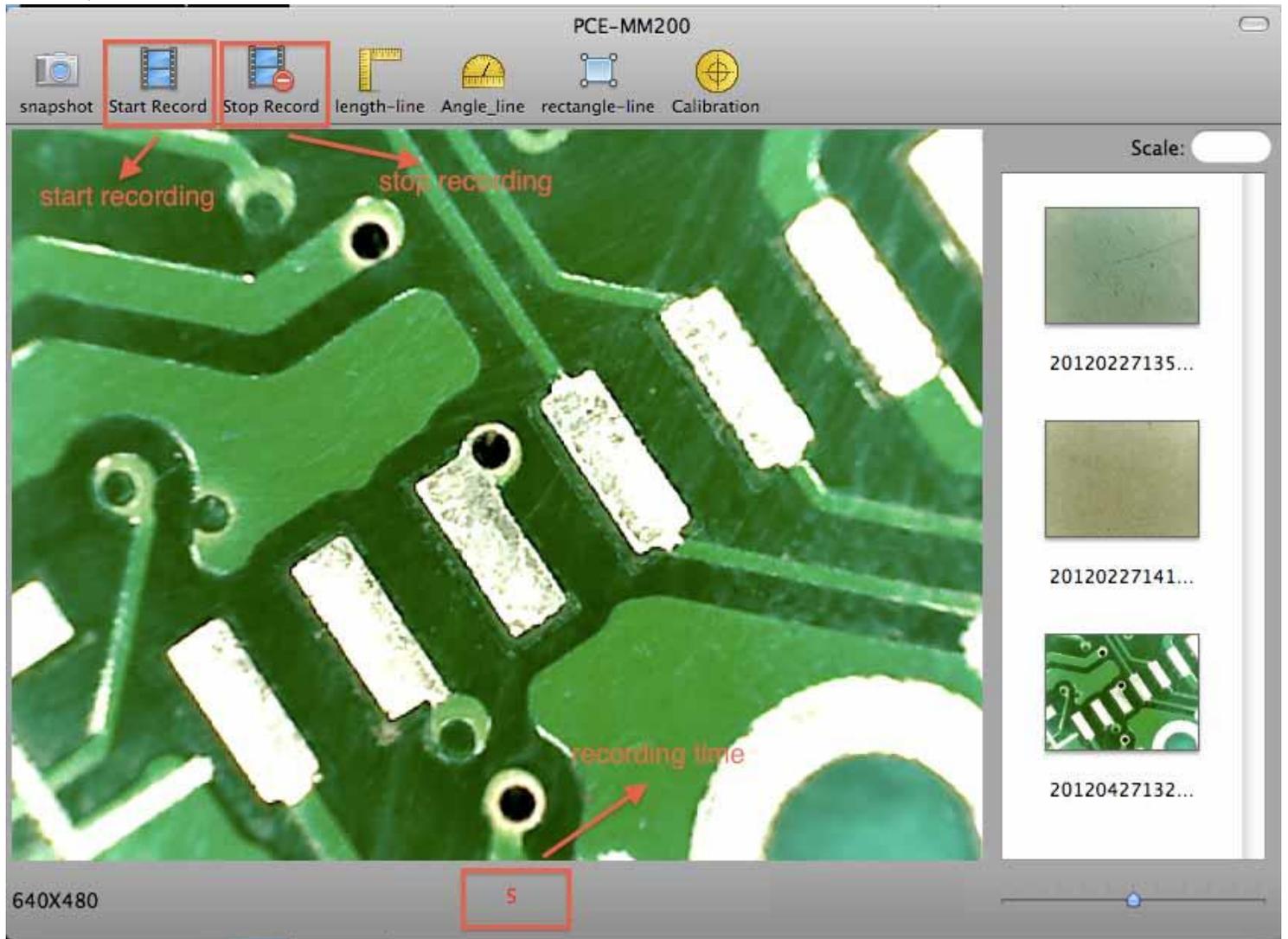
Each captured image will be added to the image scroll list. Double-click a selected image thumbnail in the image scroll list to open the image for measurement feature.

Delete a Captured image: Select the captured image in the image scroll list -> press "Del" Key of keyboard to delete it.



Creating Video

Click the  icon button to start recording video and the  icon button to stop recording video on the Tool bar of the main screen as below. Or click "Start Record" and "Stop Record" on the System capture menu. The Video filename of the time stamp is YYYYMMDDhhmmss.mov: YYYY is Year, MM is Month, DD is Date, hh is Hour, mm is Minutes, and ss is Second.



The Created Video is saved in the folder (../users/local user name/PCE-MM200/Video). Double-click a selected Video for display or press "Del" key to delete it

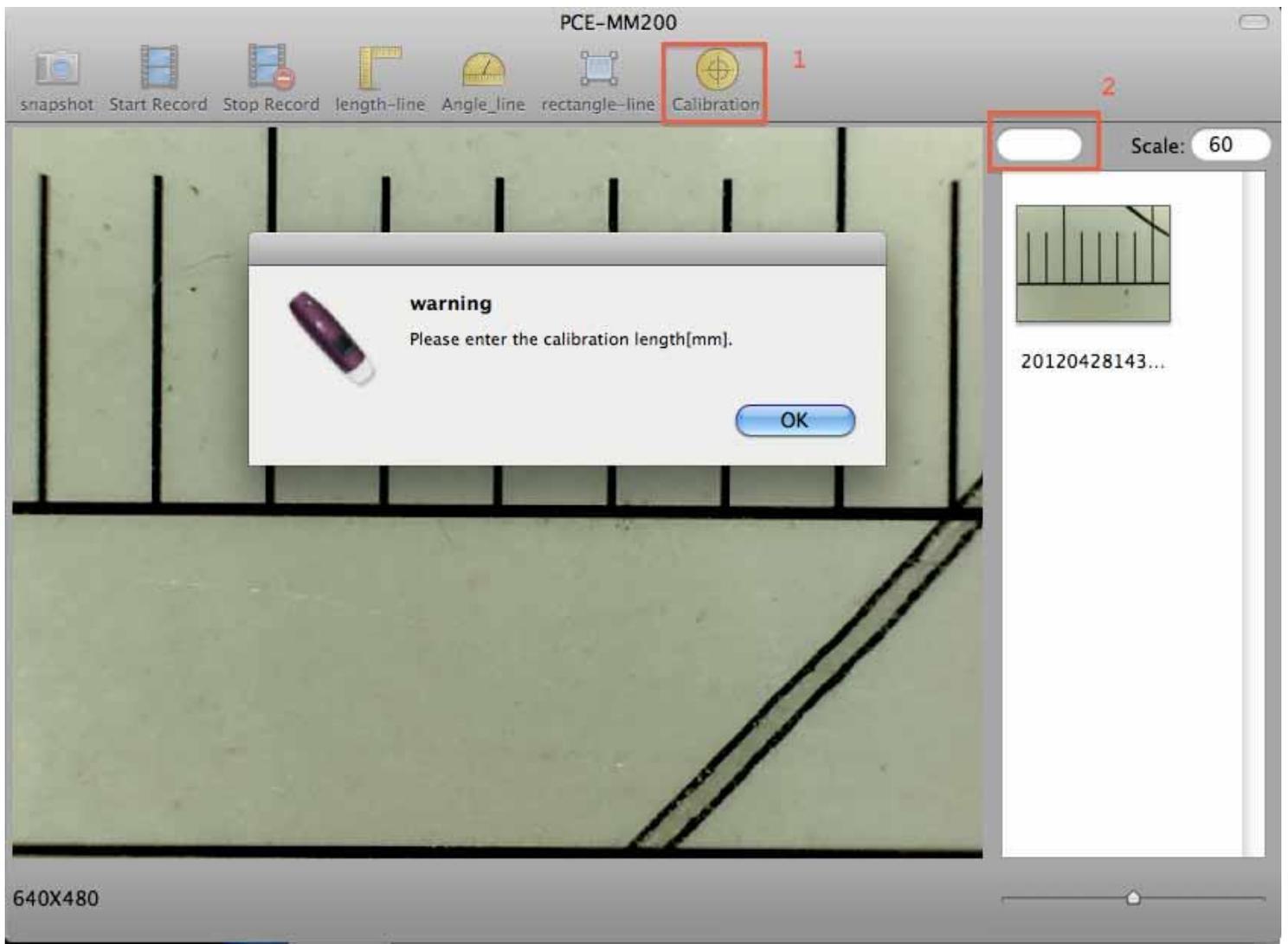
Measurement On Video

To obtain more accurate the measurement data, please make firstly calibration before any measurement functions.

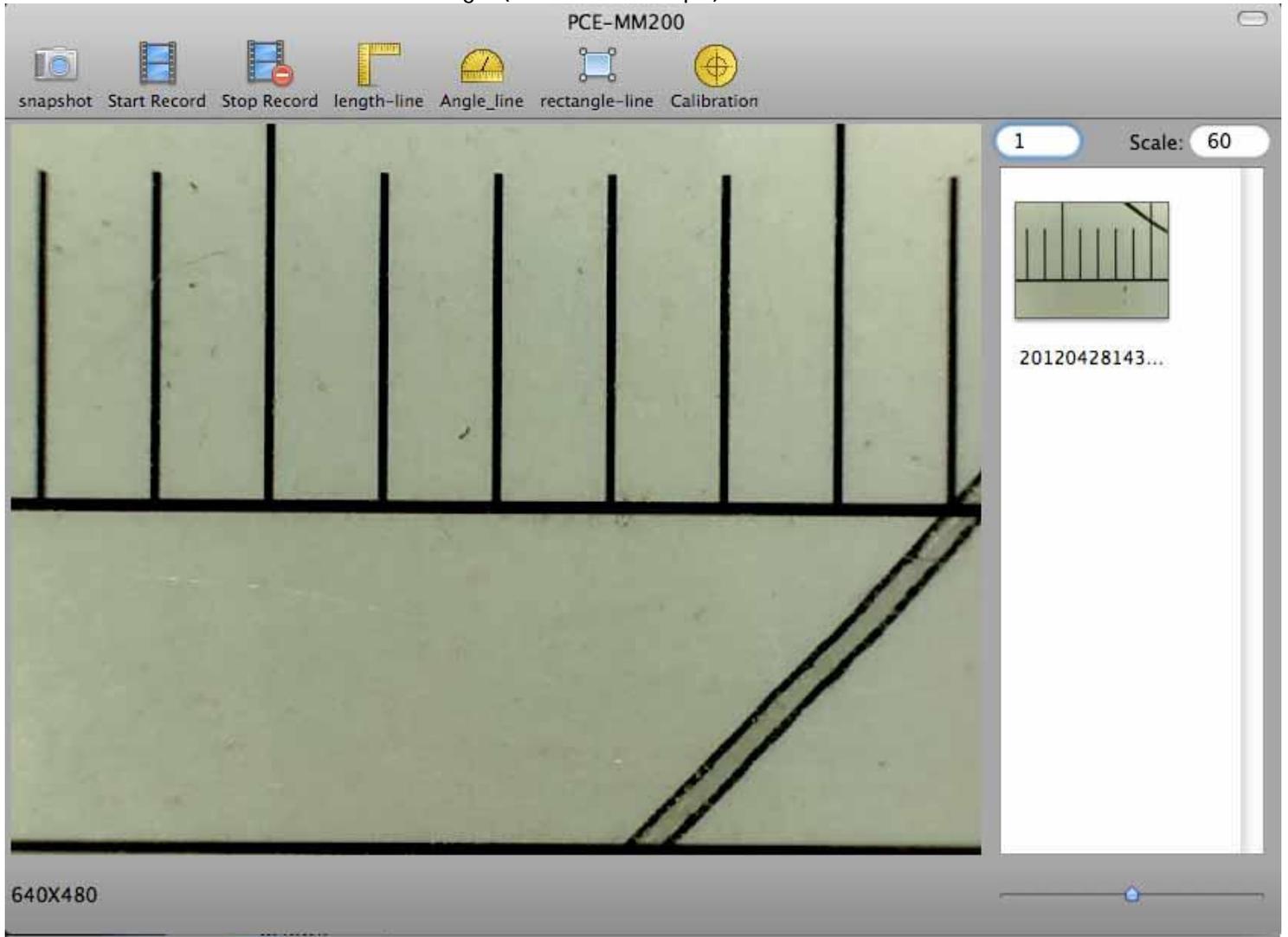
Calibration on Video

1. Select a known measurement standard as the target object, such as a ruler, to be used for calibration. Bring the image of the selected ruler into focus by turning the "Focus & Magnification adjustment wheel", and determine the magnification by taking a reading from the scale on the focus dial. Enter the scale value (The below example is 60) below in the "Scale" box in

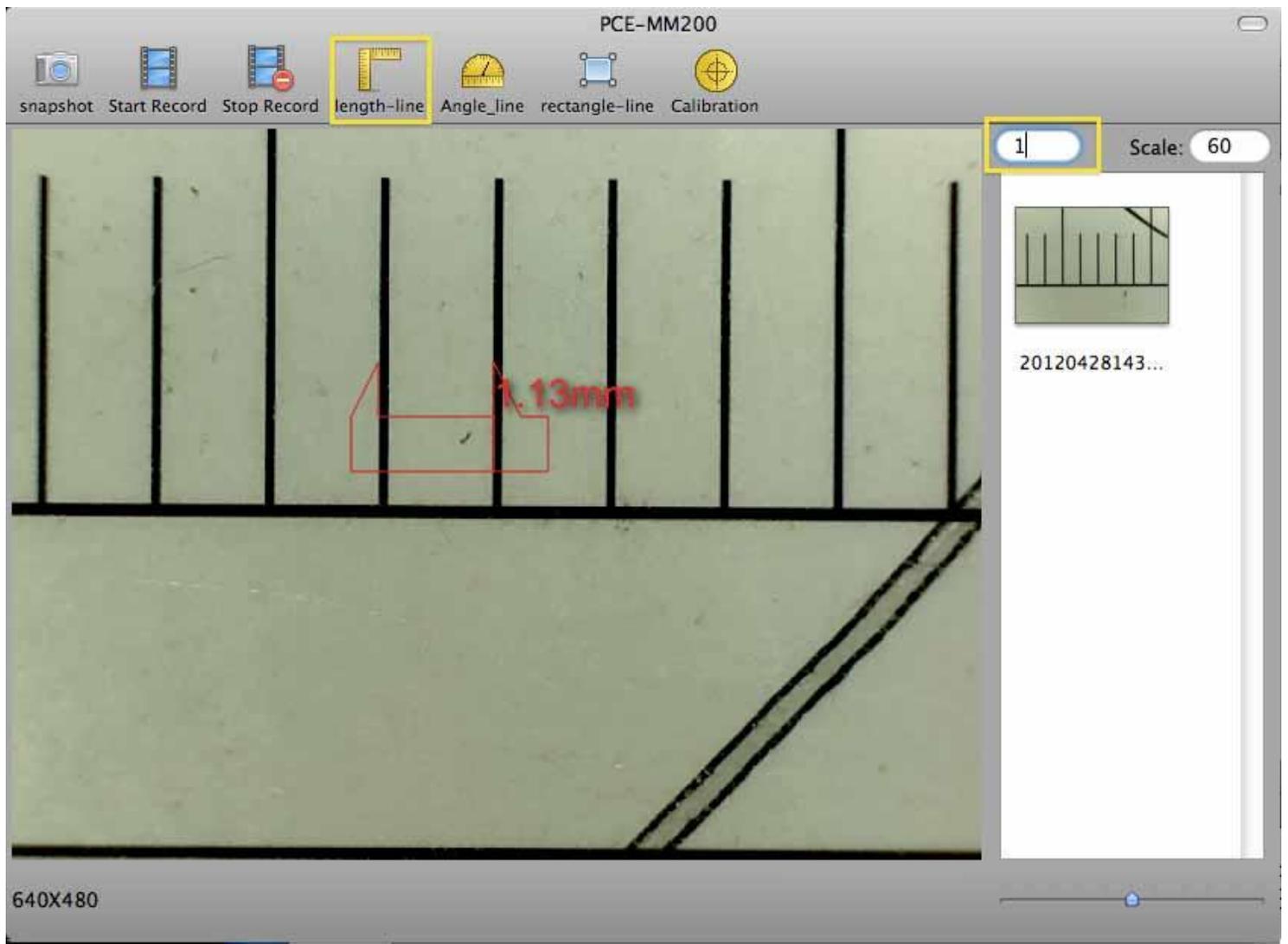
the upper right of the screen. Click  icon button, pop-up a warning message screen, and appears a blank box (2) in the right-upper of the main window.



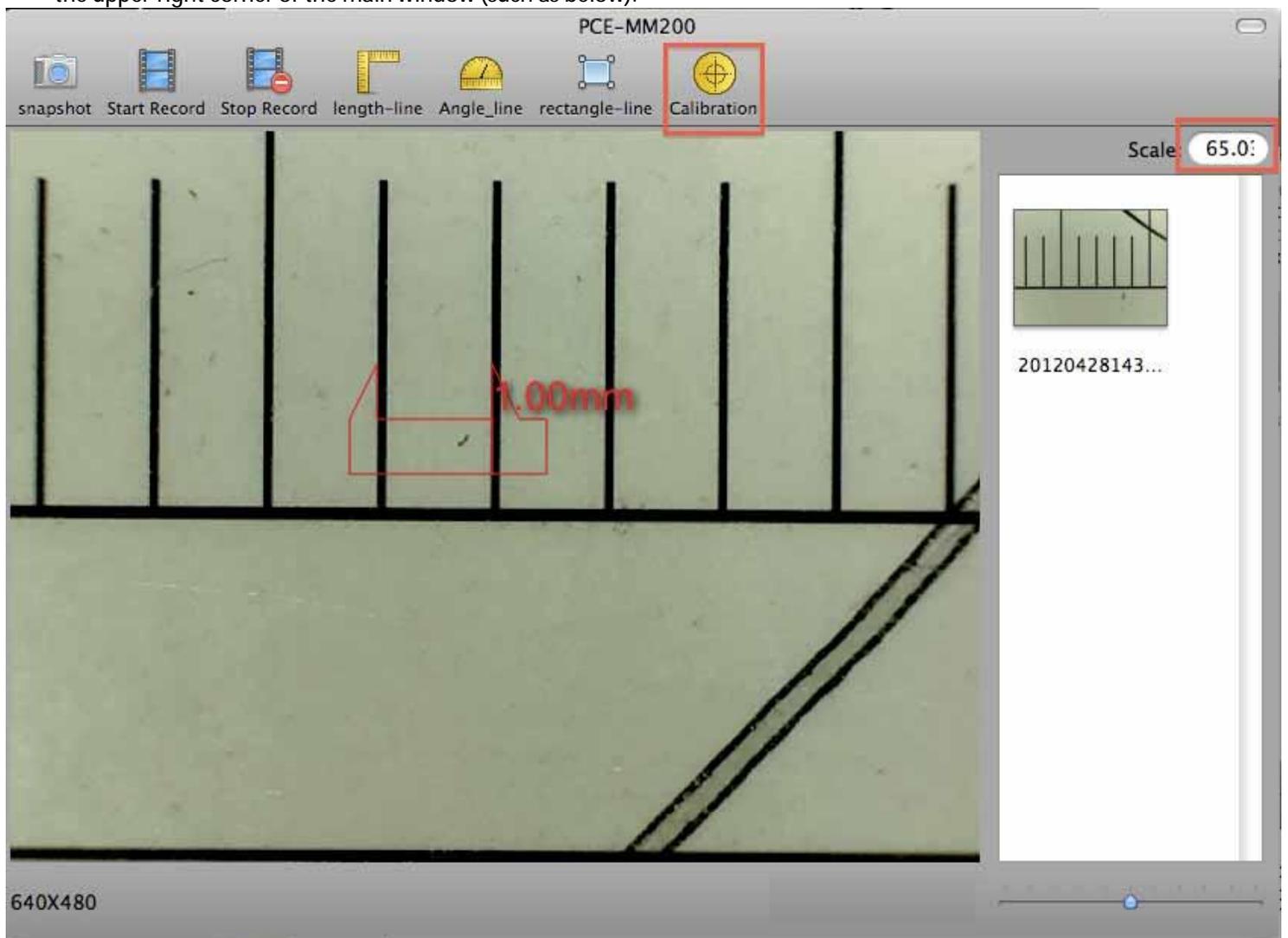
2. Please click "OK" and enter the actual length (1mm as the example) as below:



3. And then click  icon button. Move and adjust the line to 1mm on the video preview window (such as below).



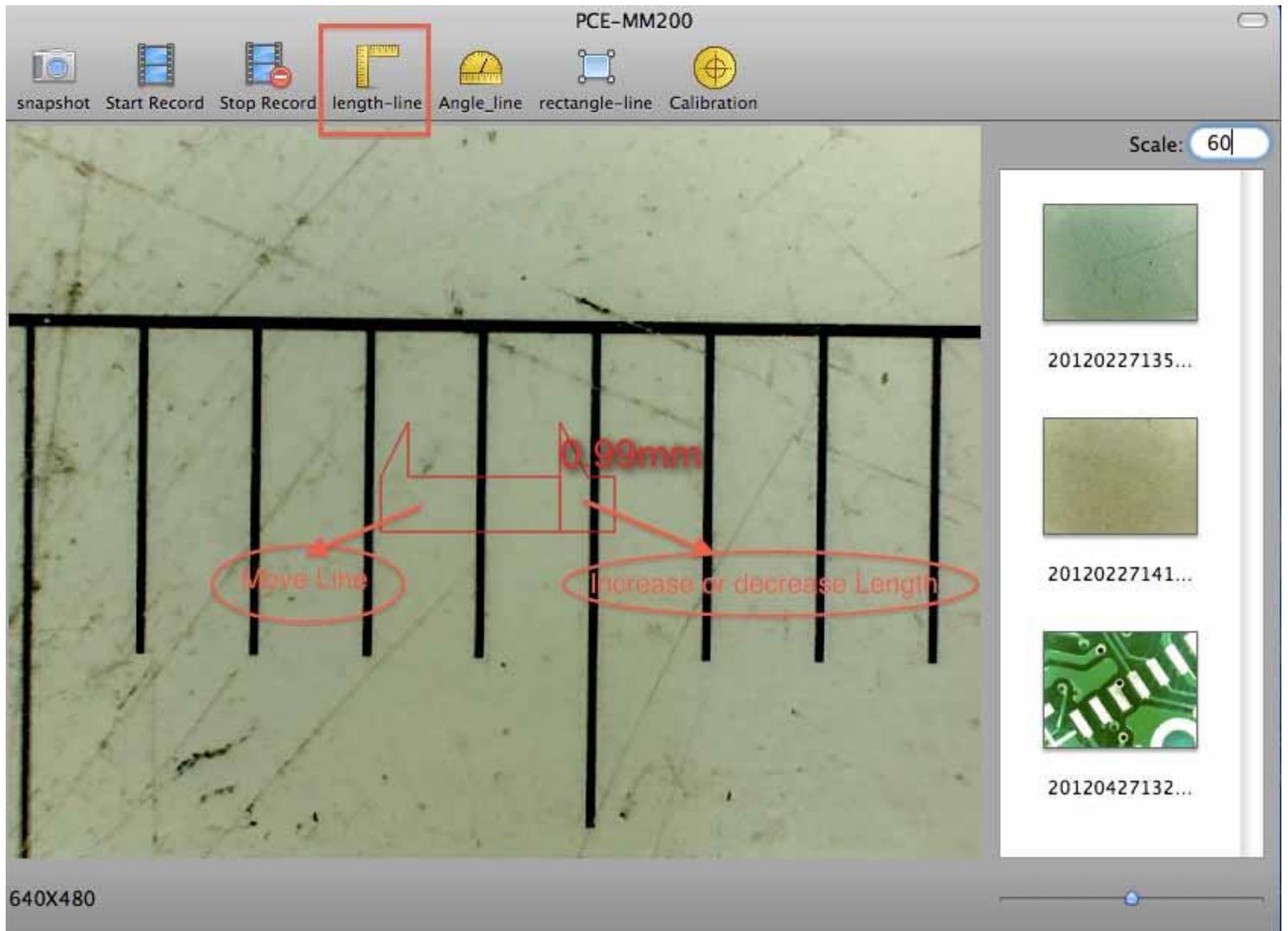
- Click  icon button to complete calibration function. The software will automatically calibrate the scale of magnification and will show the calibrated scale of magnification at the right-hand box of the calibration button. It will also automatically adjust the scale of main program on this focus point. The calibration magnification will be displayed in the upper-right corner of the main window (such as below).



- Now the PCE-MM200 application software is ready for new targets Video measurement with the calibrated magnification at this focal point (Don't adjust the "Focus & Magnification adjustment wheel"). The measurement for new target's Video or these captured images after magnification calibration will be very accurate and the error rate of measurement will be under 2%.

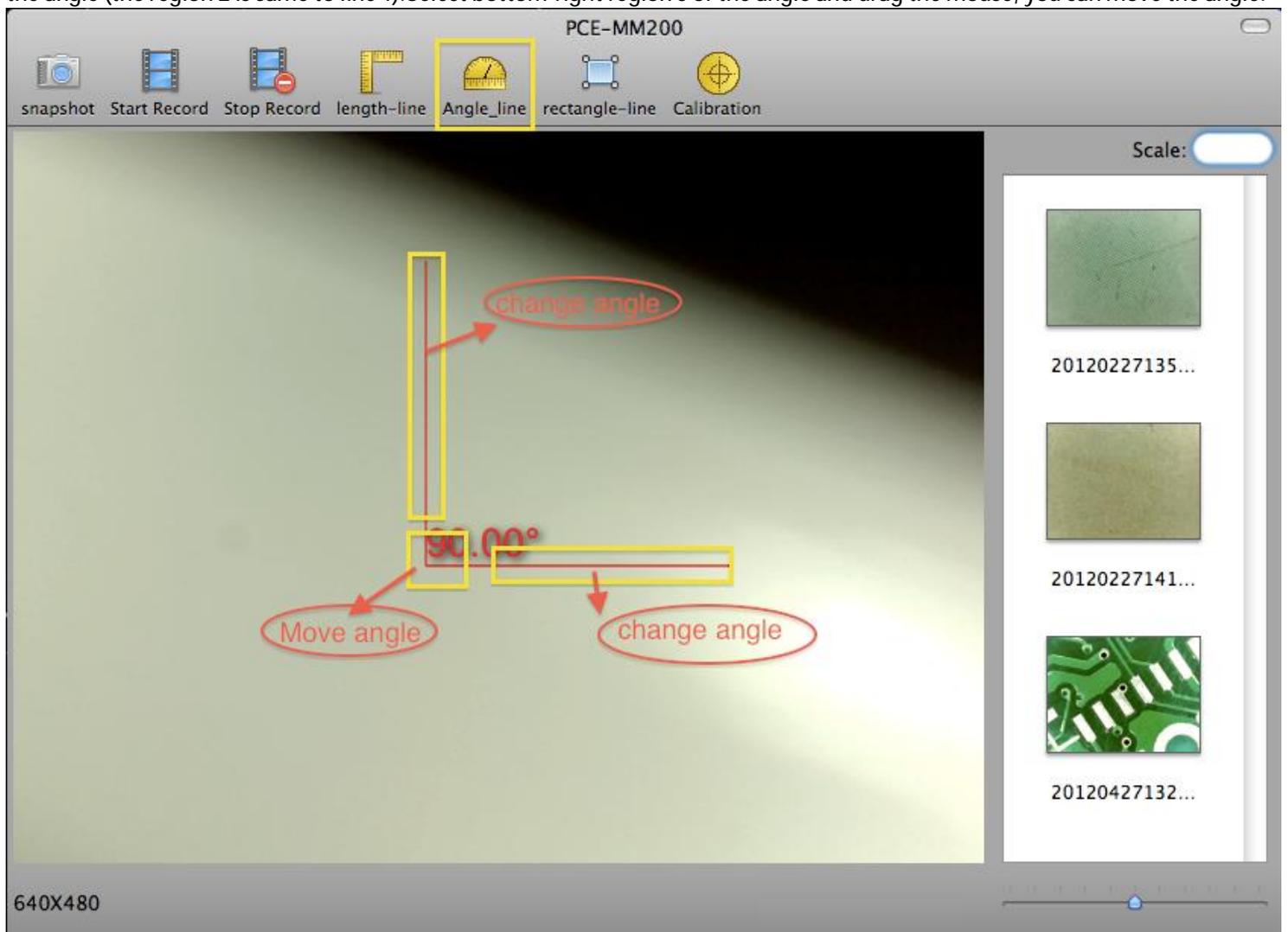
Line Measurement On Video

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.



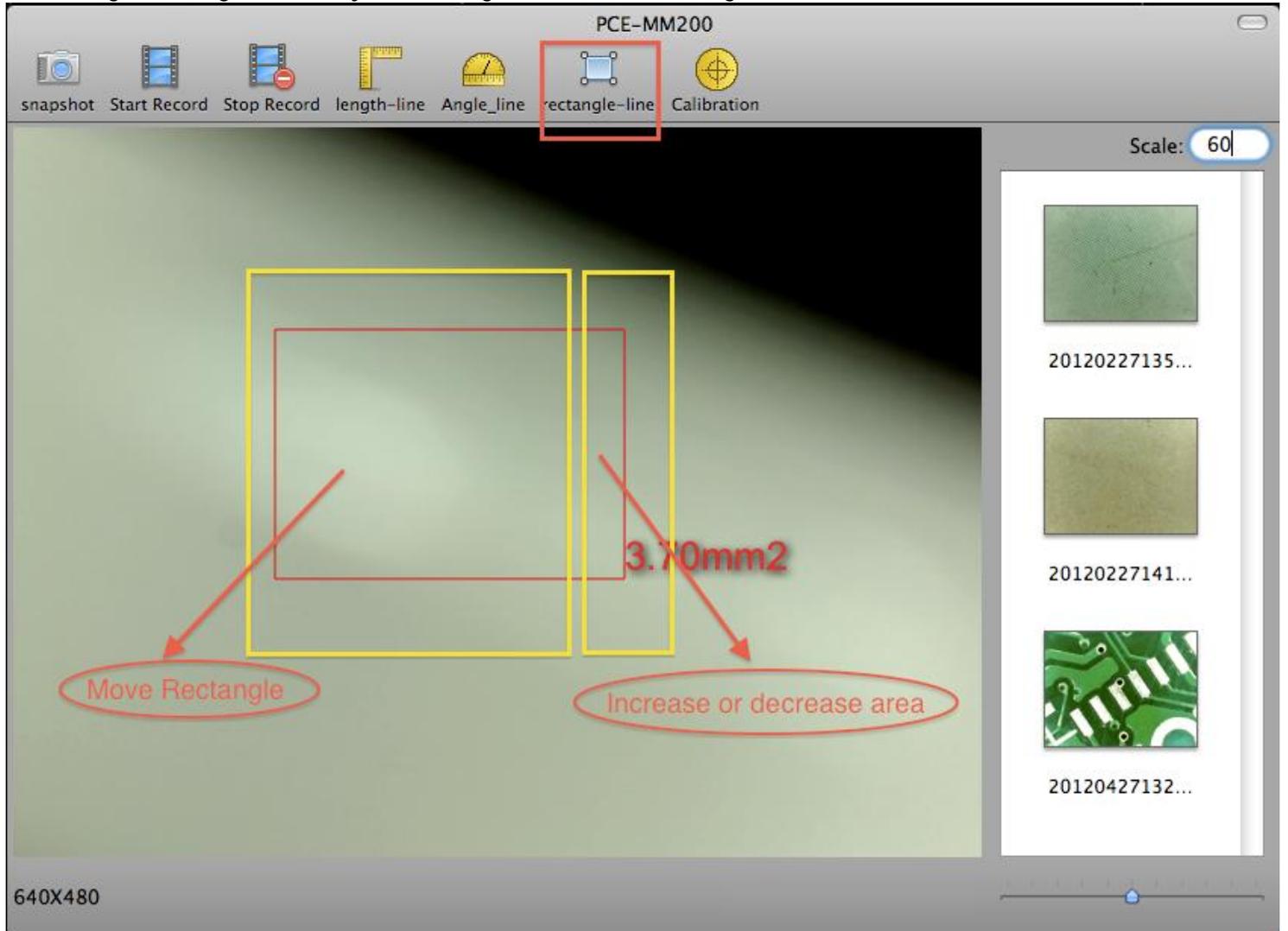
Angle Measurement On Video

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.



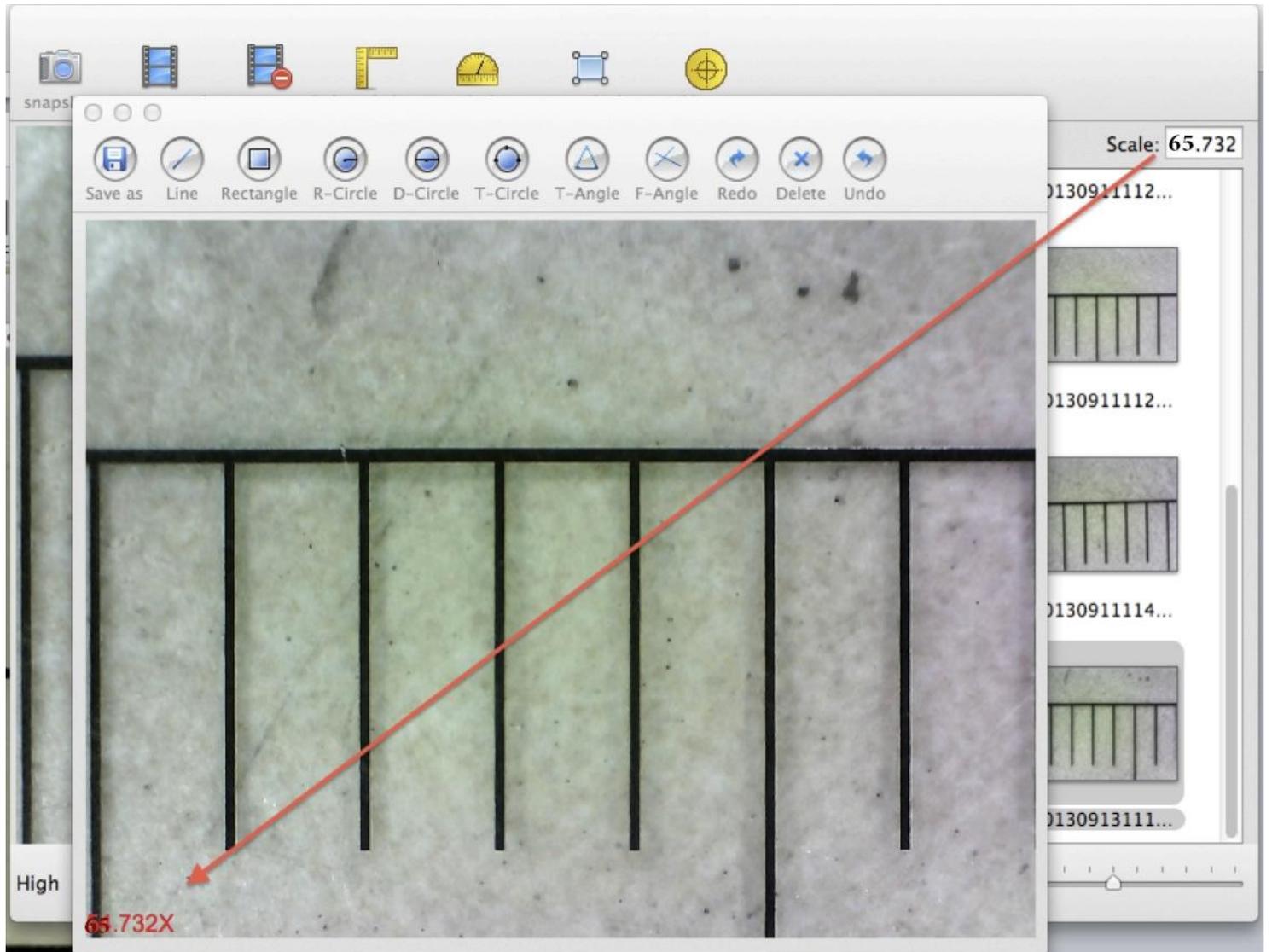
Area Measurement On Video

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 On Image

If these images were taken after you finished Calibration on Video, please double-click an image in the image scroll list to obtain the below measurement screen.





Save as: Rename the file and save in different path.



Measurement Line: The line measurement allows you to measure the linear distance between two points. Simply left click and drag to the desired length, and click again to finish.



Measurement rectangle: The radius of circle measurement allows you to measure the width, height, and area of a rectangle.



Measurement Radius Circle: The radius of circle measurement allows you to measure the circumference, area, and radius of a circle. Simply click and extend out to the desired radius.



Measurement Diameter Circle: The diameter of a circle measurement allows you to measure the circumference, area, and radius of a circle. Simply click and extend out to the desired diameter.



Measurement Three Points Circle: The three point circle measurement allows the measurement of the circumference, area, and radius of a circle. Simply click on any three points on the circle you wish to measure.



Measurement Three Points Angle: The three point angle measurement allows the measurement of an angle. Start at the pivot point and extend out to start measuring an angle.



Measurement Four Points Angle: The four point angle measurement allows the measurement of an angle by selecting four points. Simply select two points from one line segment and another two points from another line segment to complete the angle measurement.



Undo: Undo the last action.



Delete: Delete all measurement.



Redo: Redo the previous action.

Legal Information

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