Calibration **INSTRUCTIONS**

CaptaVision

Calibration Instructions For *Excelis* HD

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CaptaVision

Calibration Instructions

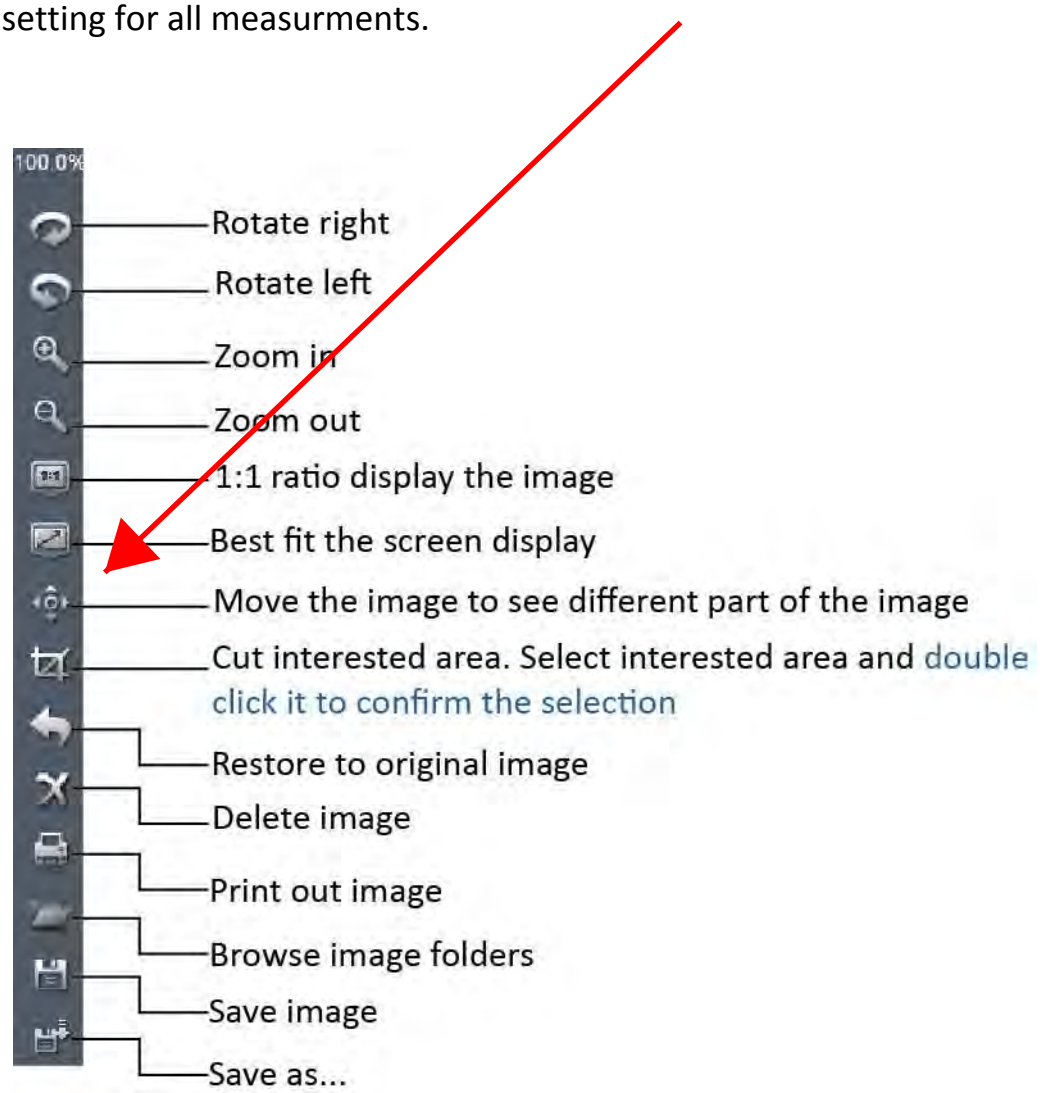
How to Calibrate the Microscope for Measurement Using CaptaVision Software

1. Under CAPTURE tab, place stage micrometer on microscope stage.

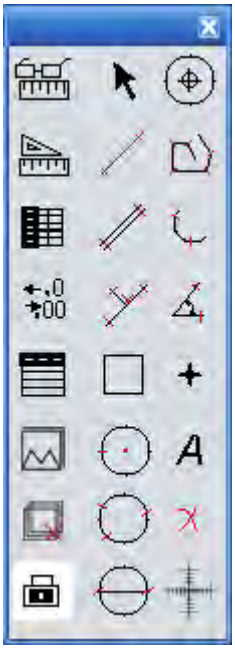
2. Focus and exposure adjust for sharpest image.

3. On far right screen tab, CLICK "Zoom Fit" icon 

Use this setting for all measurments.



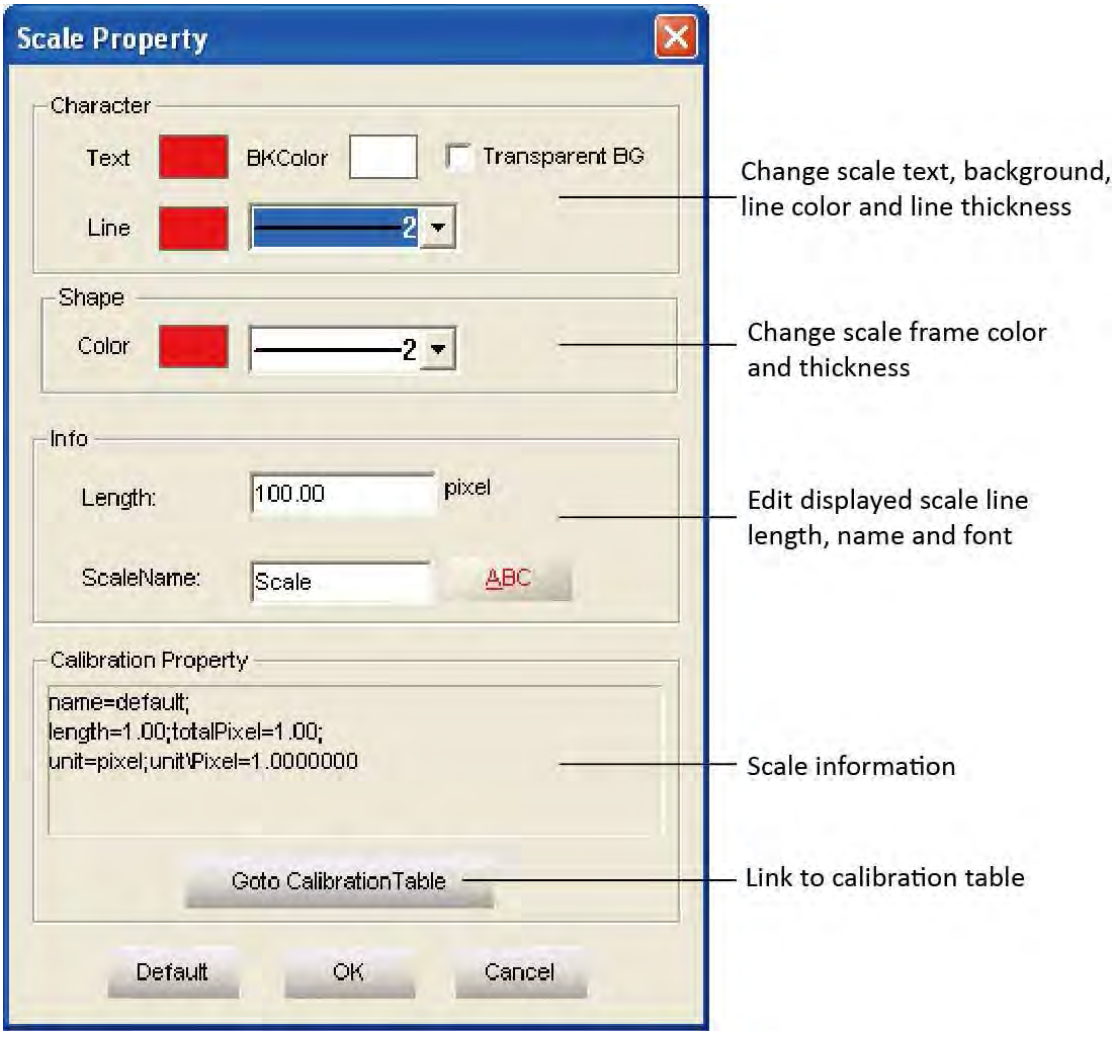
tools



	Show Scale Line	On/off the scale line on the picture
	Calibrate	Create Calibration file
	Calibrate Table	Available calibration file list. Allow to add, edit and delete calibration file.
	Decimal	Set measurement precision. Allowed decimal range is from 0 to 7
	Measurement List	List all the measurement data
	Layer	Create multiple layers to apply measurements and save layer information
	Delete All	Delete all the measurements and layers
/	UnLock/Lock	Unlock/lock the measurement operation. Allow to do same measurement continually when LOCKED. It is locked by DEFAULT.
	Select	Select to change measurement or the measurement data position
	Line	Measure the length
	Parallel	Measure the distance of parallel. Allow to do multiple parallels' distance measurement. Double clicking to end

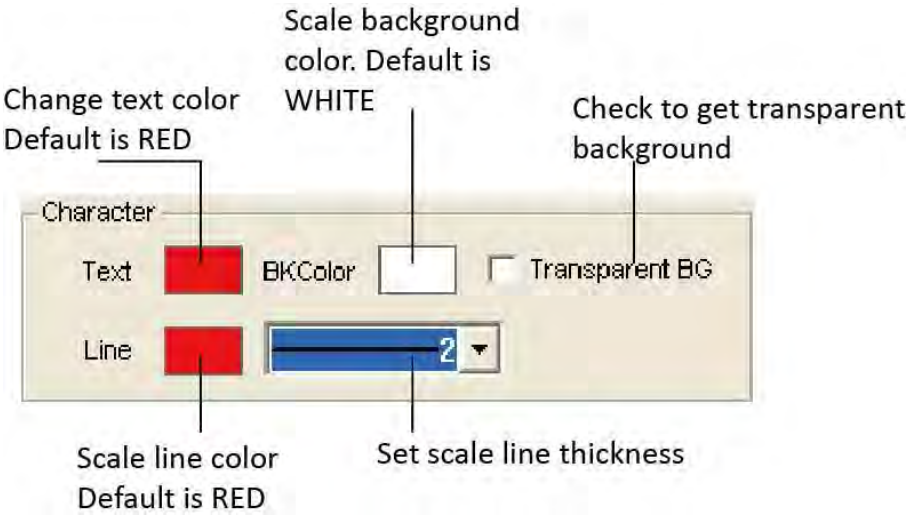
		parallel measurement.
	Perpendicular	Measure the perpendicular length. Allow to do multiple perpendiculars' length measurement. Double clicking to end perpendicular measurement.
	Rectangle	Measure rectangle height, width, area and perimeter.
	2-points Circle	Use center point and point on the circle to draw a circle. Give the radius, area and perimeter of circle
	3-points Circle	Use 3 points on the circle to draw a circle. Give the radius, area and perimeter of circle
	Diameter Circle	Draw a circle according to the diameter. Give the radius, area and perimeter of circle
	Concentric Circle	Use center point and radius to draw concentric circles. Give concentric circles' radius, area and perimeter. Allow to do multiple concentric circles measurement. Double clicking to end concentric circles measurement
	Polygon	Measure polygon area and perimeter.
	Arc	Measure a curve angle, radius and length.
	Angle	Measure the angle
	Point	Counter. Count the quantity.
	Annotate	Add remarks on the images.
	Delete	Delete previous measurement. Select it then click on the measurement to delete the measurement.
	Cross-ruler	On or off cross-ruler on the images. The unit of the ruler depends on the applied calibration file.

Edit Scale Line

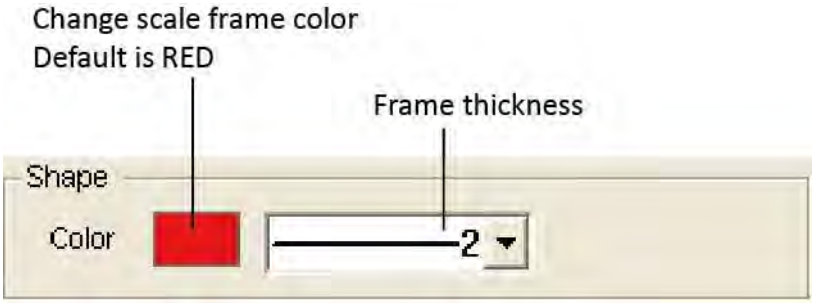


Double click on the scale to get its properties and make changes to it.

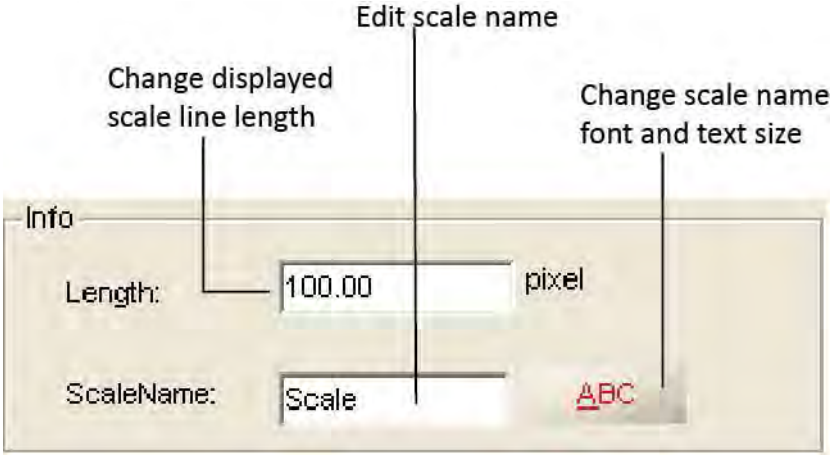
- Edit scale character



- Edit the frame of the scale



- Edit scale line length and name



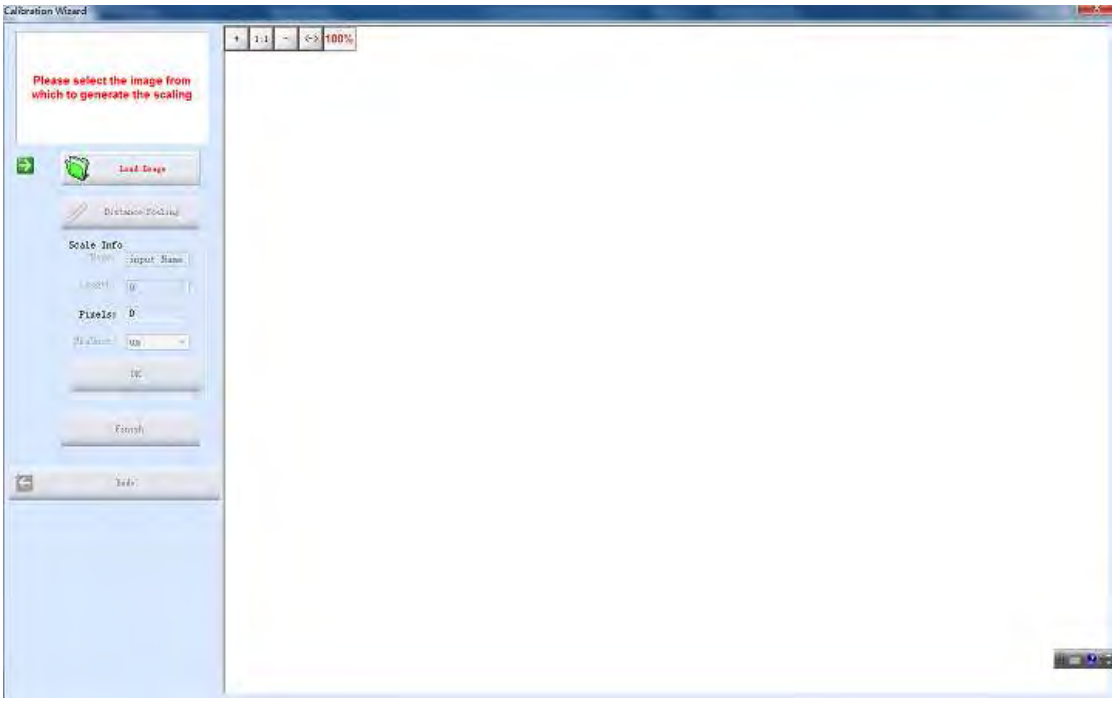
Create Calibration File

To measure the samples real size, the corresponding calibration file needs to be created first.

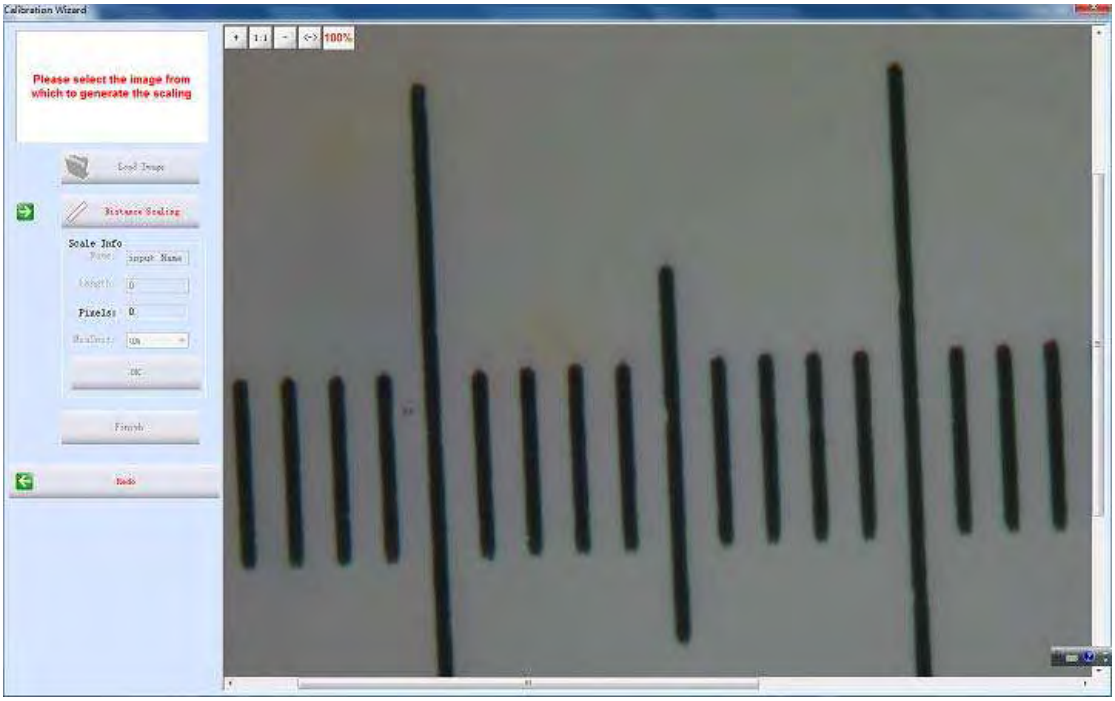
1. Take pictures of the calibration slide in all the required working objectives and resolution (if a reducing lens is also used in your application, it also requires you to take the calibration slide picture with the reduce lens attached).

 If ONLY ONE objective and ONE resolution is used in the application, one calibration slide picture is enough. The calibration slide picture MUST be taken with exactly the same lens or microscope settings as the target image taken.

2. Click  to start to create calibration file.

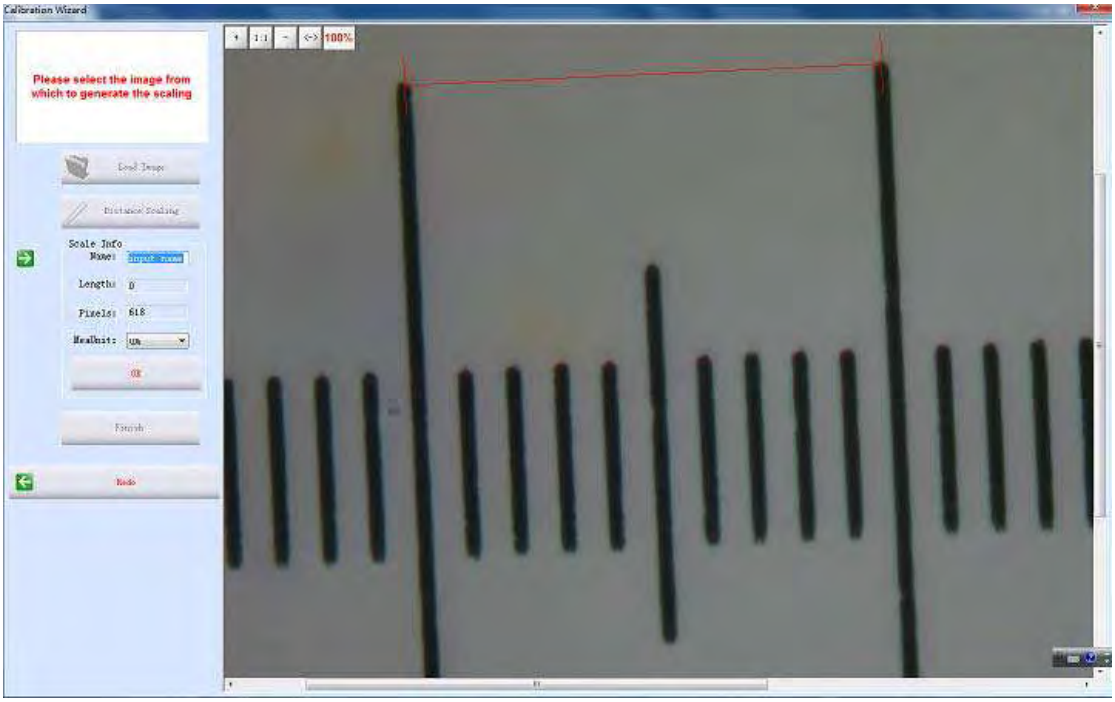


3. Click [Load Image] to load the calibration slide picture taken in Step1.



4. Click [Distance scaling] and move the cursor to the slide image, draw a line to get the reference length.

Using longer length as the reference length will give more accurate measurement results. For example, using 10 scale units as reference length will give more accurate result than using 1 scale unit.



5. Enter the name for the calibration file and the length of the line you draw.

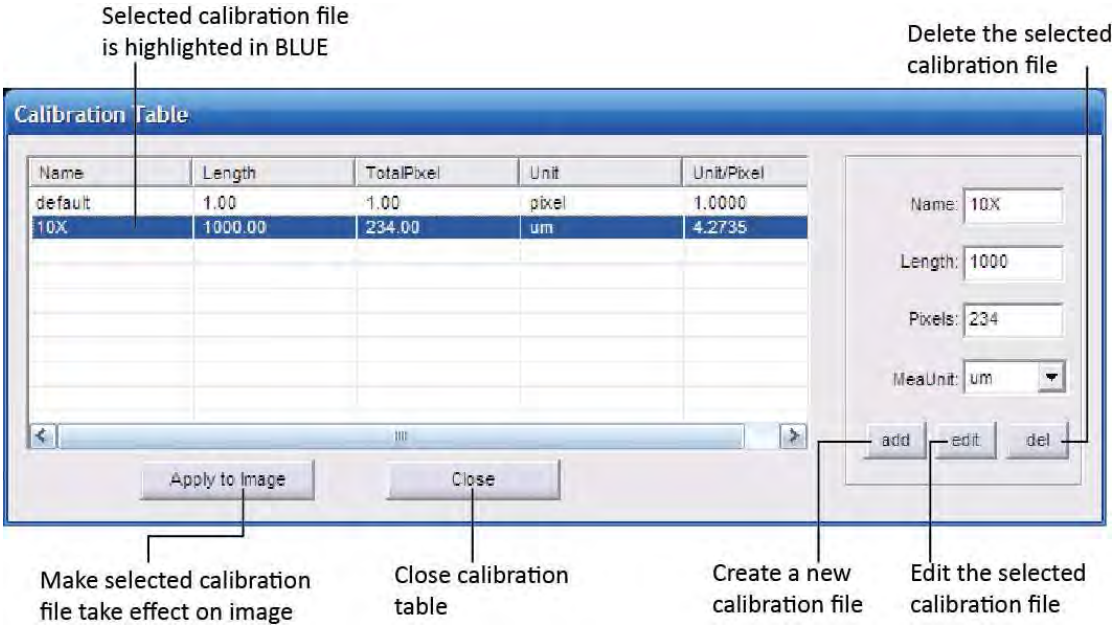
If you need more than one calibration file, using objective+reducing lens(if it is used)+resolution as the name of the calibration file is recommended. This can help to prevent using the wrong file to do the calibration.

When keying in the length, please pay more attention to the calibration scale unit and the Measure Unit used here. For example, the calibration scale unit is 0.1mm; the Measure Unit is selected as μm; and

the reference length is 10 scale units, so the length should be 10 x 0.1mm x 1000 = 1000 µm.

6. Click [OK] to confirm the calibration. The new calibration file named "10X" is created in the [Calibrate Table].

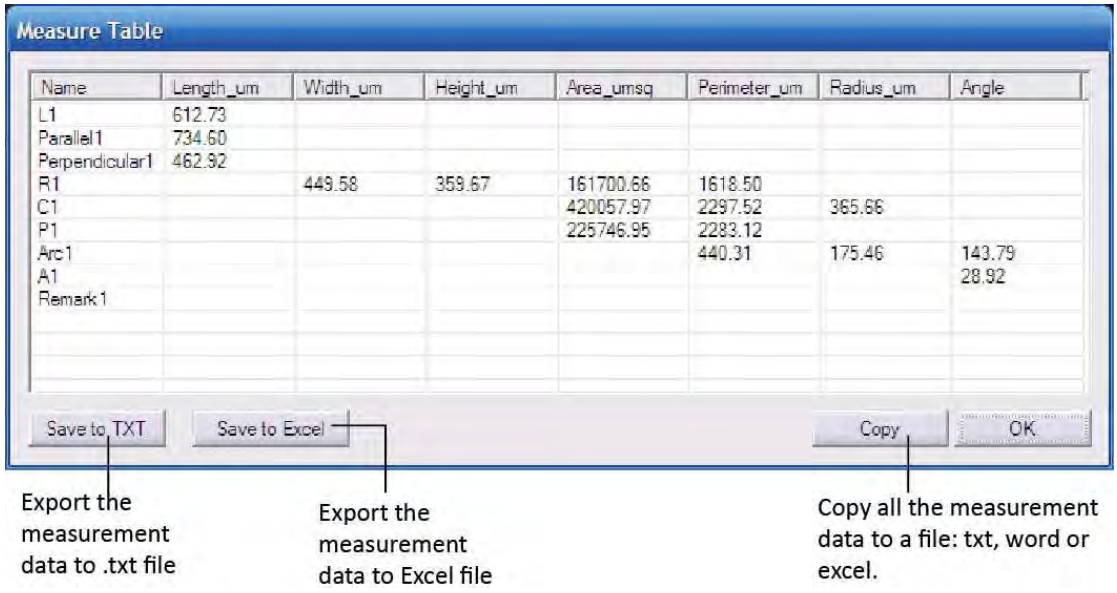
Calibration Table



- Click  [Calibrate Table] to open the calibration table.
- Select the correct calibration file for current image measurement.

 Using the WRONG calibration file will make the measurement result innacurate. Please make sure the calibration file is correctly corresponding to the current image. Hence, it is useful to name the calibration file with the capturing settings or objective name.

Measurement List



All the measurement data is listed in the [Measurement List]. The software allows you to export all the measurement data to TXT or Excel file.