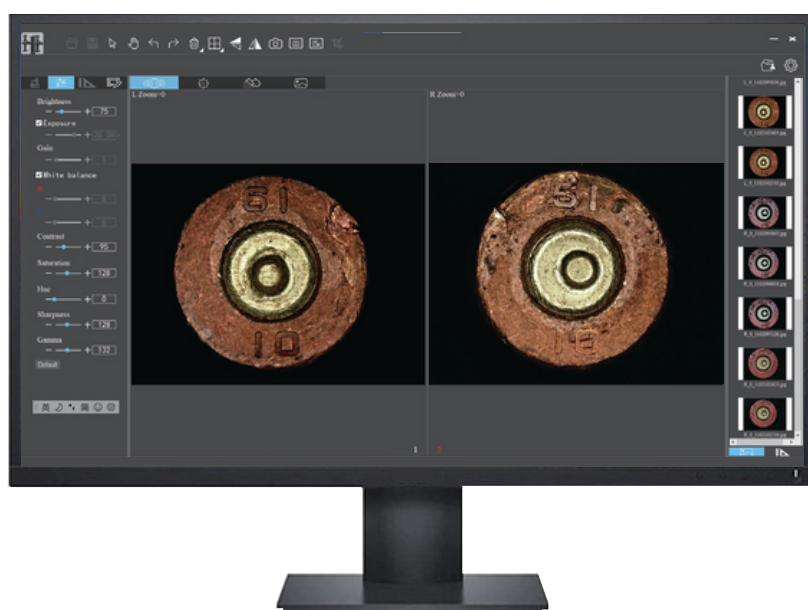


KoPa DB Capture Software

User's Manual



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Chapter 1. Software Installation

1.1 Software installation environment requirements

- CPU type: i5 10th Generation or later version
- Memory capacity \geq 16GB or more
- Hard drive capacity \geq 512GB or more
- System: Genuine Microsoft Windows 10 (64 bit) or later version Graphics card: Recommend Nuclear display.

Note:

Some functions in the software require the computer with:

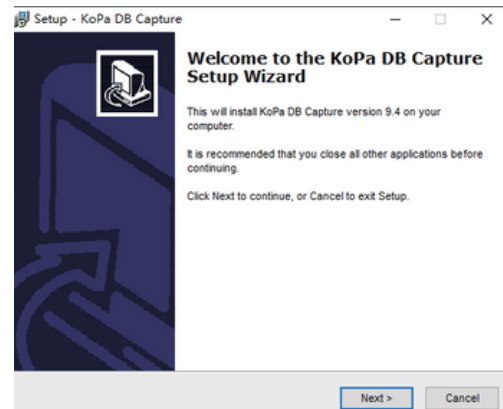
- Microsoft Word 2003 or later version (for output measurement results to Microsoft Word function)
- Microsoft Excel 2003 or later version (for output measurement results to Microsoft Excel function)
- Microsoft Outlook 2003 or later version (for sending pictures via email function)

1.2 Installation Steps

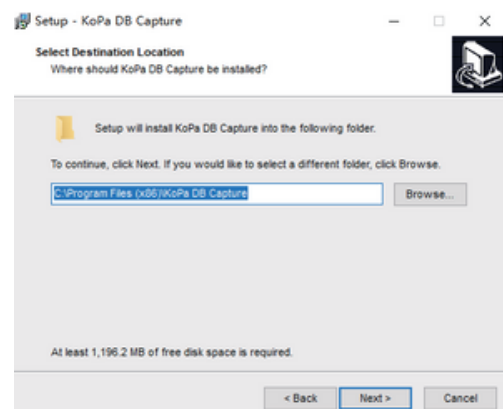
Step 1: Run the "KoPa DB Capture Install" ,select the desired installation wizard language .

Note: The language of the installation wizard is not related to the language of the software interface. If you want to change the language of the software interface, select the "Language" function in the "Settings" menu to modify it.

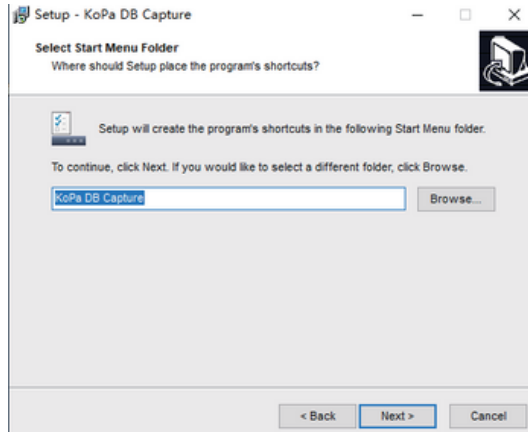
Step 2: Click the "Next" button.



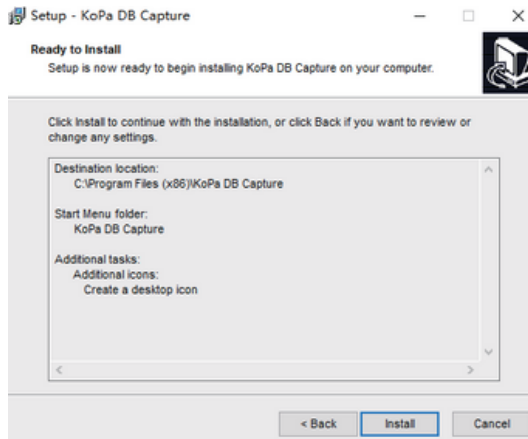
Step 3: Select the path you want to install, usually you do not need to modify it, click "Next " to continue.




Step 4: Select the shortcut you want and click the "Next" button.



Step 5: Click the "Next" button.



Step 6: The installation progress bar will appear during the installation process, the software needs to register some necessary libraries during the installation process, which may be intercepted by some anti-virus software, if a message appears, please allow the program to continue to run.

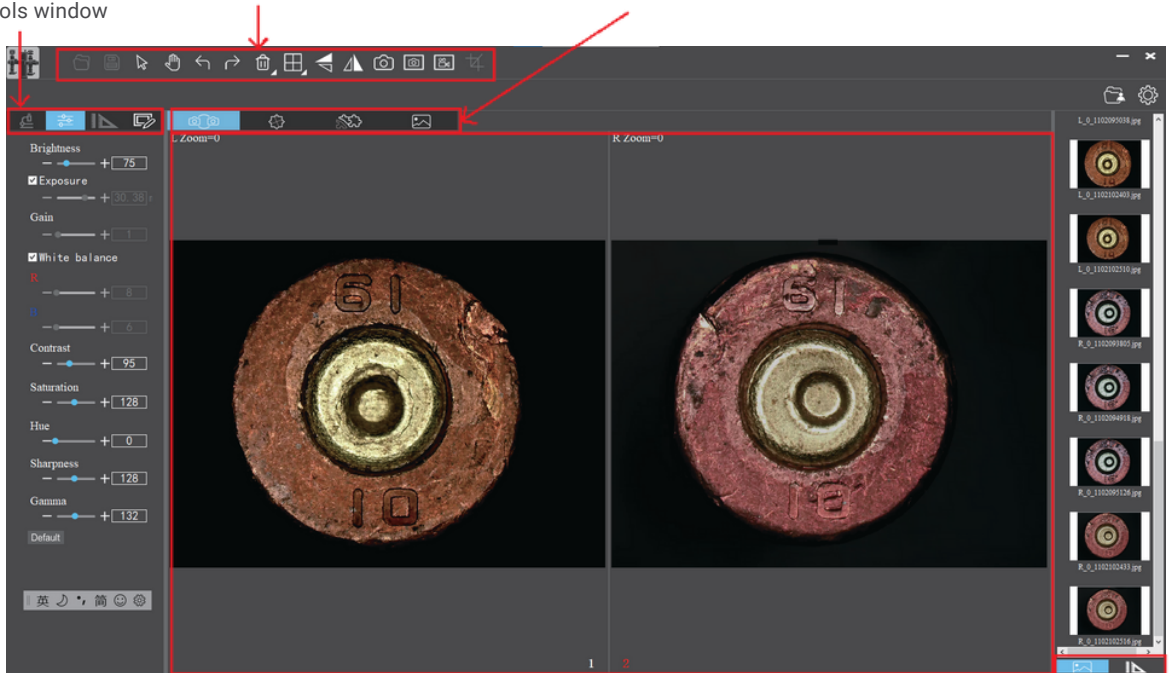
Step 7: The installation progress bar will appear during the installation process. When the following window appears, the software has been installed successfully. Click the "Finish" button to complete installation. After the window closes, check the shortcut  on your desktop. If you can't find it, please look for it from Start → All Programs.



Chapter 2. Software Use

2.1 Operation Interface

Camera list bar
Camera properties control
Measurement tools window Shortcut tools Image Calibration / Similarity Comparison / Trace Stitching / Static image window
Drawing tools window



Preview Window

Thumbnail/measurement results window

2.2 Main functions

2.2.1 Shortcut Tools

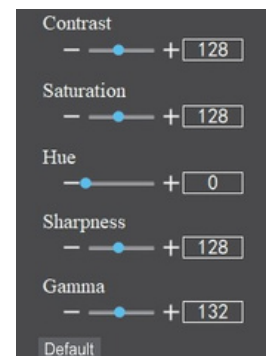
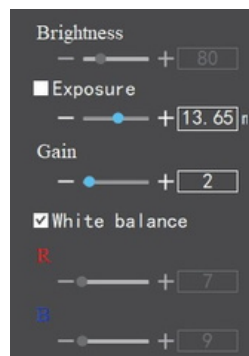


	Open	Retrieve images from the local disk to the software.
	Save	After annotating and adding text, etc., click the "Save" button to save the current annotation, text, etc.
	Select object	Select "objects" such as annotations, text, measurements, etc. for the next step, such as moving, deleting, etc. Support single selection or select them by drawing a big box around them.
	Move	Use the mouse for drag a still image.
	Undo	Undoing the last operation on an "object".
	Redo	Redoing the last operation on an "object".
	Delete	Delete or erase the selected "object" with a single click.
	Compare with multiple windows	Options of Full screen / Home screen / Dual screen comparison / Four screen comparison.
	Flip	Flip the image on the selected window.
	Mirror	Mirror the image on the selected window.
	Snapshot	Snapshot the image on the selected window.
	Screen capture	Screen capture on the entire desktop.
	Screen record	Screen record on the entire desktop.
	Equally proportional cutting	Equally proportional cutting image.

2.2.2 Camera Property Control



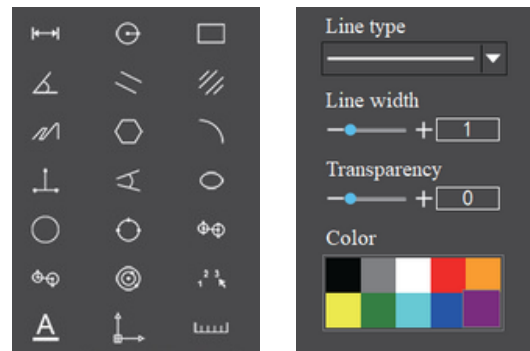
Provides calibration function as well as measurement function for dynamic or still image in the preview window.



Brightness	Manually drag the adjustment bar to adjust the image brightness.
Exposure	When checked, the camera will automatically expose according to the environment used. When unchecked, manual exposure can be performed through the adjustment bar, supporting direct input of values in the box.
White Balance	Manual white balance adjustment can be made through the adjustment bar. Supporting direct input of values in the box. Click on "R" will restore the default value of R channel alone. Click "B" will restore the default value of B channel alone.
Contrast	Manually drag the adjustment bar to adjust the image contrast. Support for entering values directly in the box. Click on "Contrast" will restore the default value of contrast alone.
Saturation	Manual dragging to adjust the saturation of the image. Support for entering values directly in the box. Click on "Saturation" will restore the saturation default value alone.
Chroma	Manual dragging to adjust the chroma of the image. Support for entering values directly in the box. Click on "Chroma" will restore the chroma default value alone.
Sharpness	Manual dragging to adjust the sharpness of the image. Support for entering values directly in the box. Click on "Sharpness" will restore the sharpness default value alone.
Gama	Manual dragging to adjust the Gama of the image. Support for entering values directly in the box. Click on "Gama" will restore the Gama default value alone.
Restore default values	Click button "Default" to restore all image property values to default at once

2.2.3 Measurement tools


Provides calibration function as well as measurement function for dynamic or still image in the preview window.

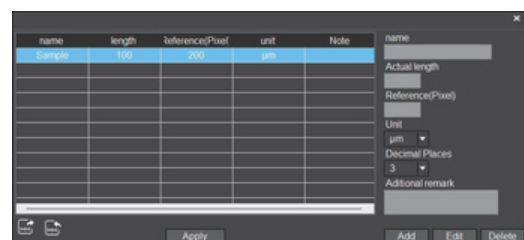


Calibration

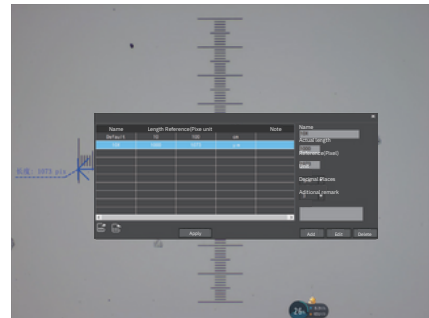
Step 1: Please place a micrometer under the microscope, the example below uses a micrometer with 1DV = 0.01mm.



Step 2: Click on "  " to bring up the calibration table as shown below.

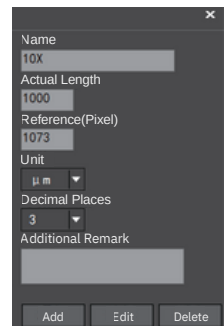


Step 3: When using the mouse to draw a straight line on the micrometer image and setting the scale length, selecting a longer scale length will give more accurate results. For example, selecting 10 small scale lengths will give you more accuracy than selecting only 1 scale length. After releasing the mouse, the image value of the line drawn with the mouse will be automatically updated in the "Benchmark" of the calibration table, as shown in the following figure.



Step 4: Enter a name in the calibration table, such as 10X.

In the calibration table, enter the actual length that just drawn on the micrometer, for example, the sample figure is drawn 10 DV, that is, 0.1mm, or 1000 μ m, then enter the "actual length" box to fill in the specified 1000, "unit" select " μ m". Then click "Add" to add this calibration value to the calibration table to be used. Add the calibration value for other objectives of different magnifications in this way.

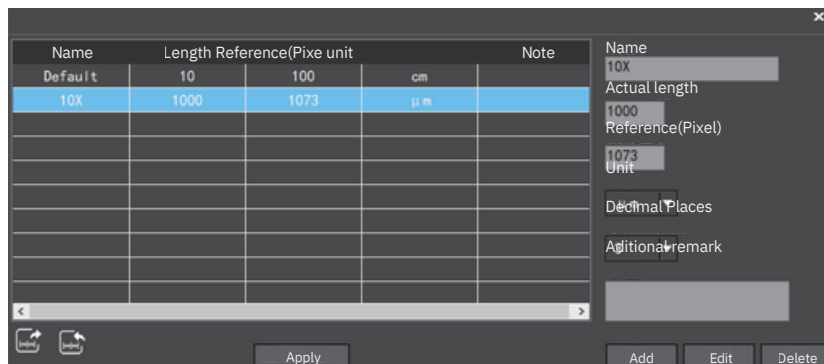


Notes:

- ① "Add": The information in the right box will be added to the list on the left.
- ② "Edit": The calibration value selected in the left list will be modified.
- ③ "Delete": The calibration value selected in the left list will be deleted.
- ④ "Apply": The calibration value selected in the left list will be called.


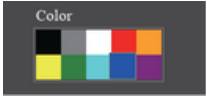
Start to Measure

Firstly, select the calibration value according to the actual objective used in the calibration table and click on "Apply". The following figure shows.



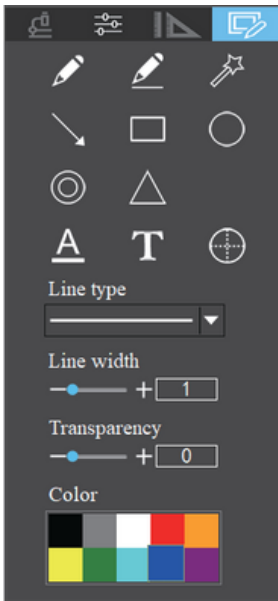
The measurement tools are as follows.















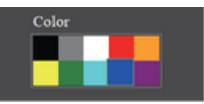
	Straight line measurement
	Circular measurement
	Rectangular measurement
	Angle measurement
	Parallel line distance
	Double parallel line center distance
	Folding line measurement
	Polygon measurement
	Curvature measurement
	Three-point vertical line measurement
	Four-point angle measurement
	Ellipse measurement
	Drawing a circle with radius
	Three point drawing circle measurement
	Concentric circle measurement
	Concentric radius circle distance drawing circle measurement
	Circle measurement
	Scale bar
	Scale lines
	Select line type
	Set the measurement tool line width

	Set the transparency of the measurement tool
	Set the measurement tool color

The results of each measurement will be displayed on the right side of the software.

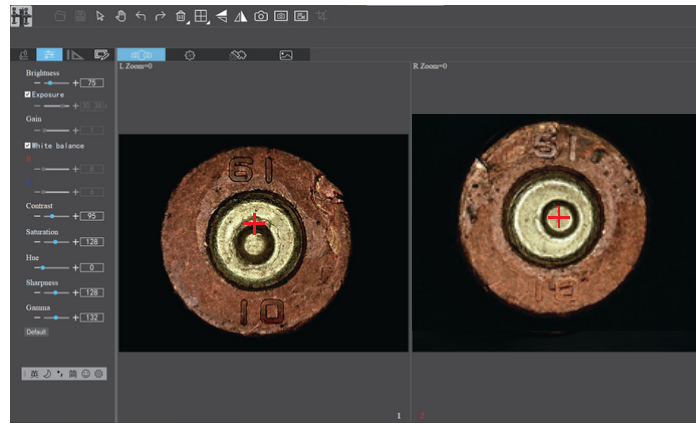
2.2.4 Drawing Tools 




	Pencil
	Straight line
	Highlighter
	Single arrow straight line
	Rectangle
	Oval
	Concentric circle
	Isosceles triangle
	Set Font
	Insert text
	Add crosshair
	Line type
	Set line width
	Set transparency
	Color

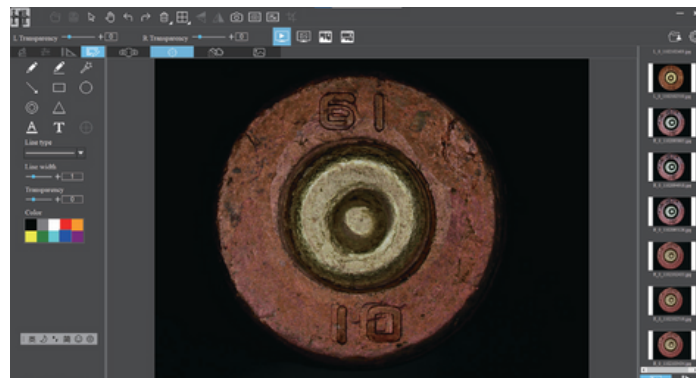
2.2.5 Image Calibration

Adjust the magnification of a group of two objectives to the same, use the XYZ moving table and fixture of the comparison microscope to place the two objects that need "Similarity Comparison" or "Trace Stitching" at the right position, the left image 1 is L image, the right image 2 is R image. Click on any image, the number 1 or 2 will turn red, that is, the current selected state, at this time you can operate the selected image alone image properties control, snapshot, etc.




2.2.6 Similarity Comparison

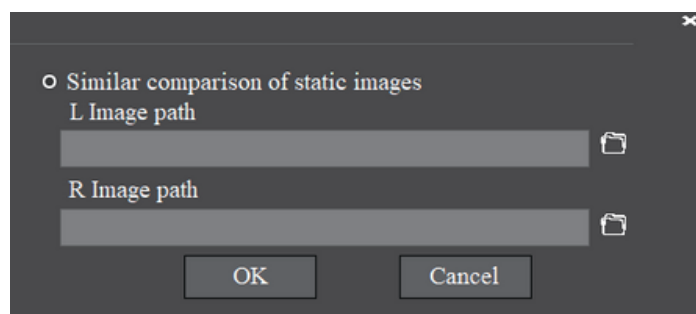
Click on the  button and the two images will overlap and enter the "Dynamic Similarity Comparison" state.



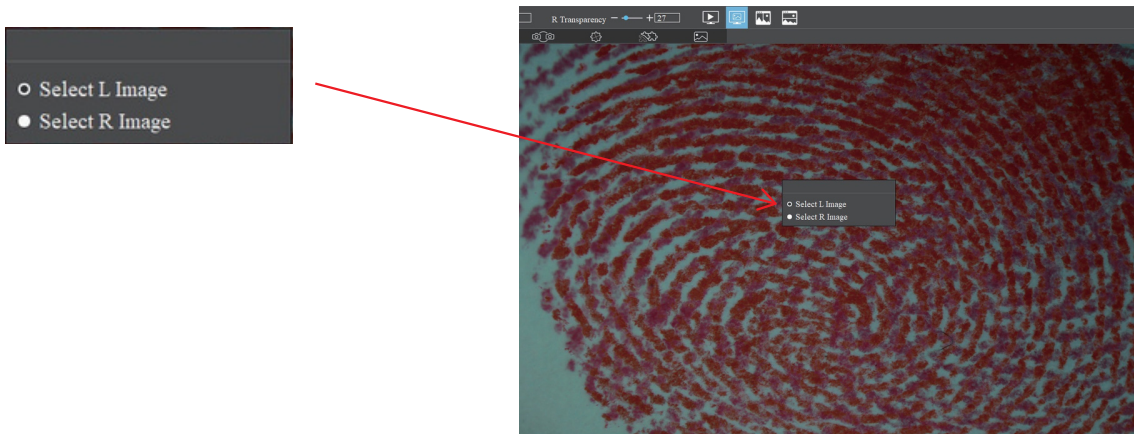
L/R image transparency can be adjusted individually via the toolbar, by pulling the adjustment bar left and right, or by entering the value directly.





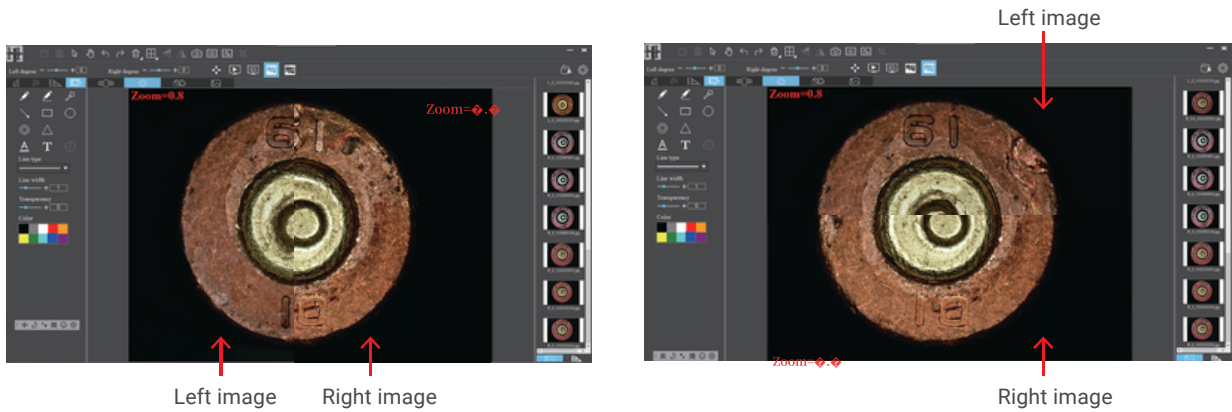
Click "Static Similarity Comparison  " to retrieve images from local disk to the software for similarity comparison.



Support click to select individual moving static L or R image for compare similar features.




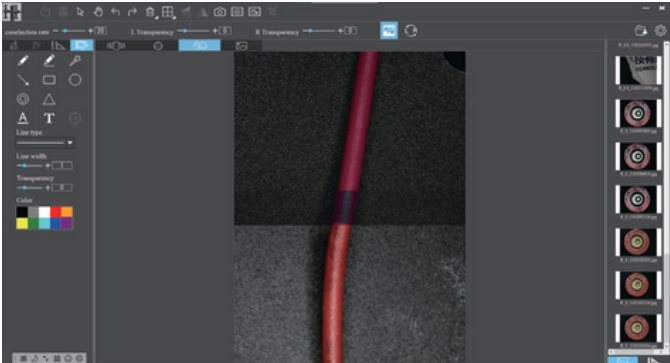
Click "Horizontal Cut"  or "Horizontal Cut"  to cut the layers of two images, and pull the split line by mouse to show the similarity of features in the same position.


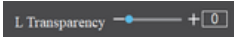
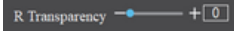




- Support fine-tuning the position of the L-image/R-image separately
- Support moving images to the left/right/up/down
- Support to restore the default position of the image
- Support manual setting of movement range (1~5)


2.2.7 Trace Stitching


Click the "" button to stitch the traces after doing the "Image Calibration".



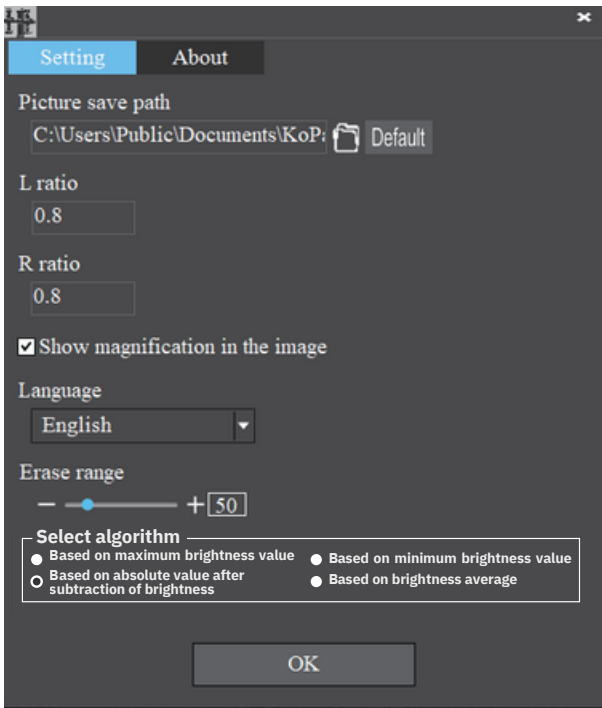
	Set the overlap ratio of the two images
	Set L image transparency
	Set R image transparency
	Switching up and down/left and right stitching method
	Switching L and R image display windows

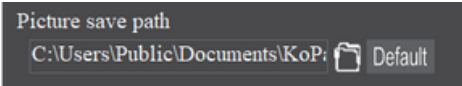
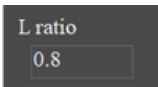

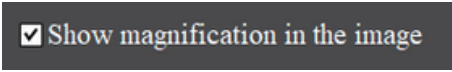
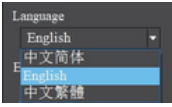
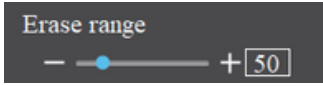

2.2.8 Static Image Window

Click "" to enter the still image window

	Supports clockwise or counterclockwise rotation of the selected image, and the angle of single rotation can be set.
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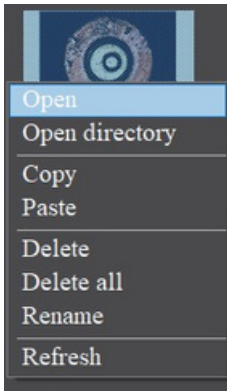
2.3 Software Setup



	<p>Support access/modify/restore default file save path.</p>
	<p>Manual input L image objective magnification.</p>
	<p>Manual input R image objective magnification</p>
	<p>Support to show/hide magnification information on images</p>
	<p>Support for switching software interface language</p>
	<p>Support setting erasing range</p>
	<p>Support switching image display brightness algorithm</p>

2.4 Thumbnail Toolbar

Right-clicking on a thumbnail will display the action menu as shown in the figure below.



- Open:** Open the image in the software default way.
- Open directory:** Open the directory where the selected image is located.
- Copy:** Copy the currently selected image.
- Paste:** Paste the image that has been copied. (Note: Paste can only be done within the thumbnail toolbar.)
- Delete:** Delete the currently selected image, you can restore the file from the recycle bin. **Delete all:** Delete all images, you can restore files from the recycle bin.
- Rename:** Rename the selected image.
- Refresh:** Refresh the current image thumbnail area.

Specifications are subject to change without any obligation on the part of the manufacturer.



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