


# Camera

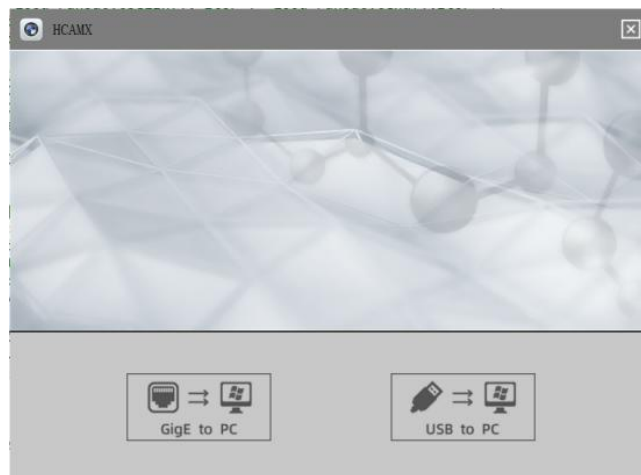
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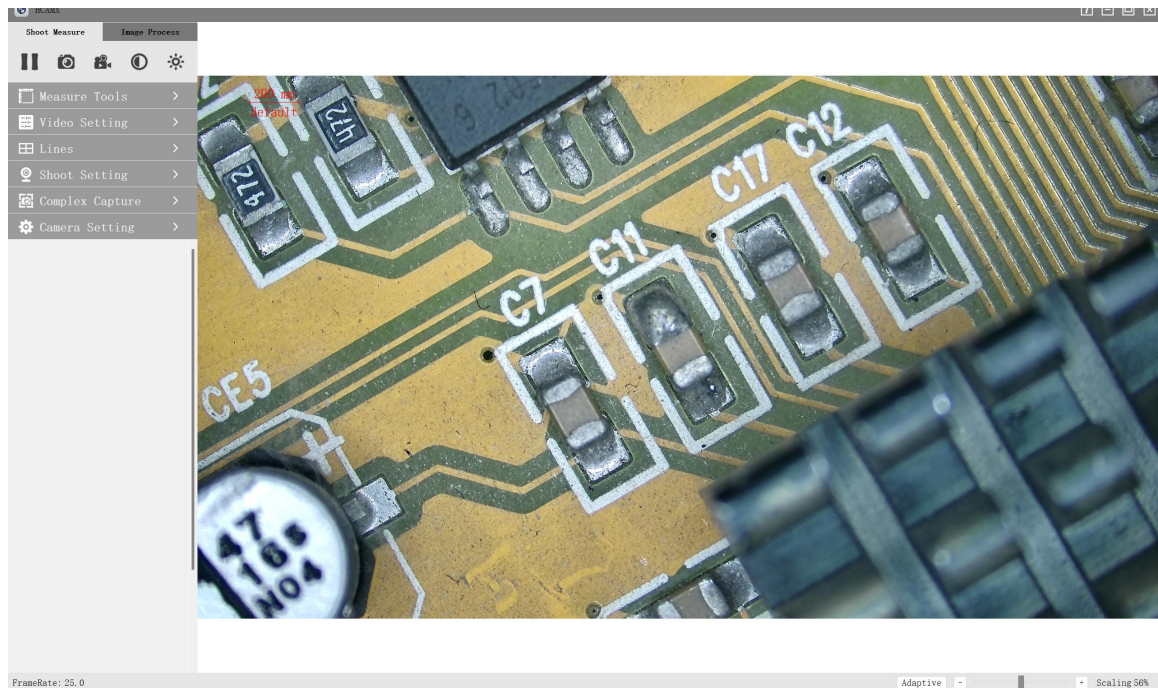
# 1. Software content introduction

## 1 PC software interface

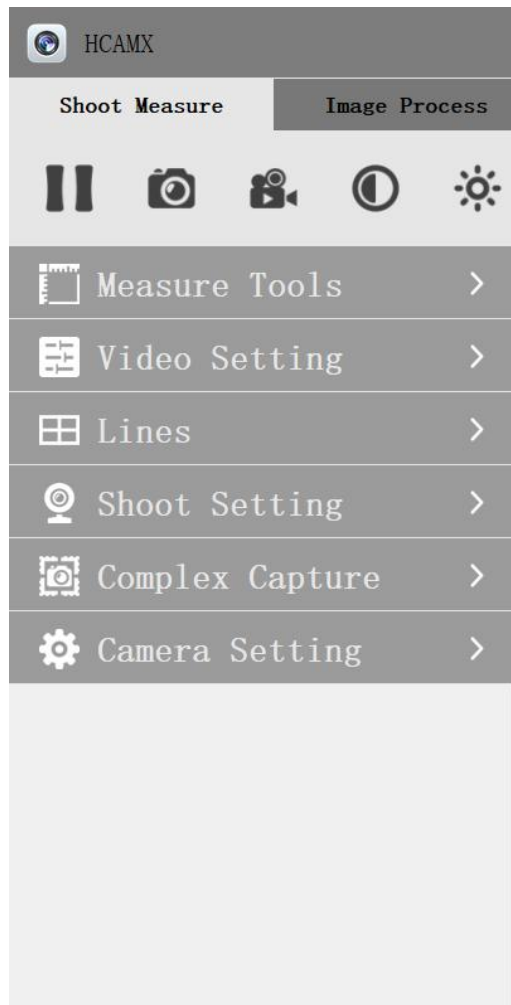
1. Double-click the software  to enter the interface selection page, connect the camera according to the network port or USB, and select different interface options.



2. After successfully being connected to the computer, enter the PC terminal software



## 2 Toolbar on the left



### 2.1 Top operation

#### 2.1.1 Start Preview / Pause preview



Click "Pause Preview" to freeze in the current screen, where you can use the photography function and measure the elements.

Click "Start Preview" to restore the current camera image to normal

### 2.1.2 Taking photos



Click the button to perform a photo taking operation.

The photo icon will be displayed in the upper right corner, and the icon will disappear. The photo is taken.

### 2.1.3 Video recording



Click the button to perform video recording operations.

The recording icon and recording duration will be displayed in the upper right corner, and the icon will disappear to complete the recording.

### 2.1.4 White balance



When the video is turned on, click the "White Balance" button and the video will enter automatic white balance mode. At the same time, a "White Balance" pattern will appear in the upper right corner of the camera. When the appropriate value is reached, the white balance will stop. Note: White balance must be done towards the white area

### 2.1.5 Automatic exposure



In video mode, click "Automatic Exposure" to enter real-time auto exposure mode. The camera will automatically adjust the exposure value in real time according to the changes in ambient brightness, making it conform to the optimal brightness value setting.

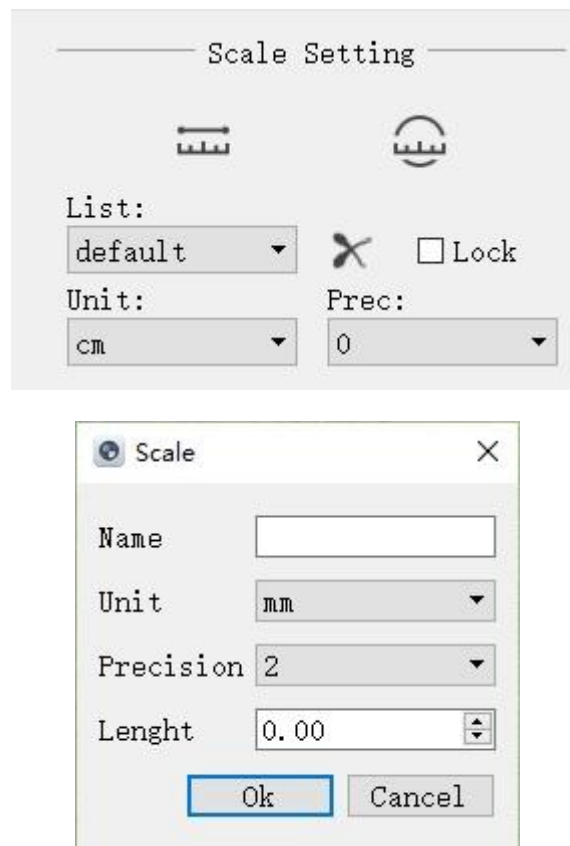
The optimal brightness value can be adjusted in "2.3 Parameter

Adjustment", and click again to turn off the automatic exposure state.

### 3 Measurement tools

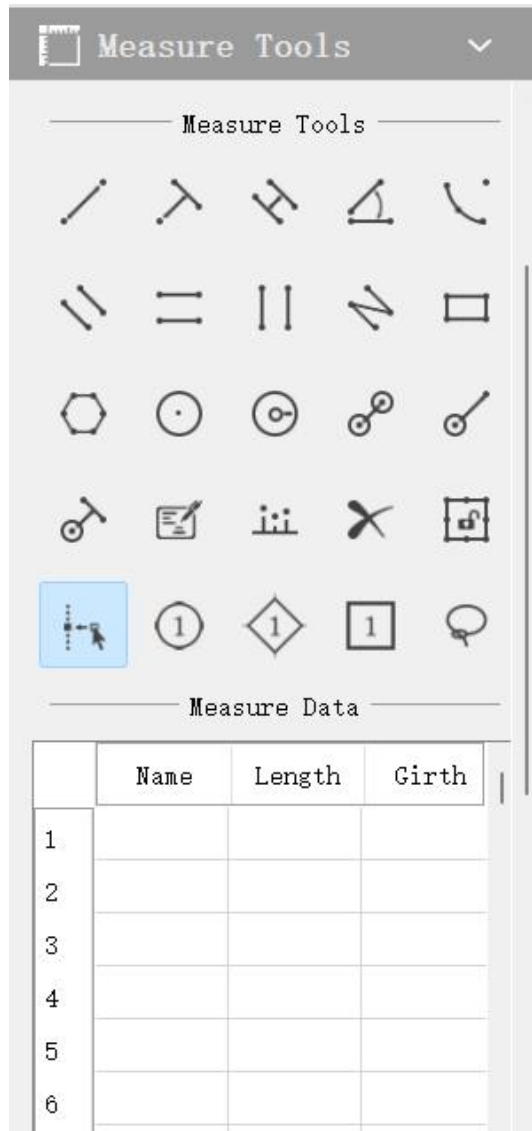
#### 3.1 Calibration settings

In video mode, click "calibration" to enter the calibration drawing state. There are two types of calibration styles: line calibration and circle calibration. After drawing the calibration, set the calibration information as shown in the figure.



After confirmation, the calibration setting information parameters can be saved, and adjustable parameter changes can be deleted. Unable to adjust calibration parameters after locking. The calibration settings are displayed in the upper left corner of the video interface.

### 3.2 Measure tools



(1) After selecting the element, the mouse changes to a crosshair cursor in the video area and enters the drawing state. Left click the mouse to draw.


(2) After the drawing execution is completed, the mouse does not exit the current measurement or drawing working state. Clicking the right

mouse button can exit this state.

(3) During the measurement element drawing process, right-click to cancel the current element drawing operation. In a non drawing state, right-click and select the element (except for keypoints) to change to a shape. Drag the mouse, and the element will turn yellow and follow the movement. Right click to select the key point of the element, turn it into a shape, drag the mouse, the element will turn yellow and follow to modify its position.

(4) Double click on the element with the right mouse button, and a "Delete Element" prompt box will pop up, indicating whether to delete the current element. Click the "Delete" button to delete it, and click the "Cancel" button to cancel the operation.

### 3.3 Annotations


Click on the icon“  ”, left click and drag the mouse to the desired annotation location on the screen. An arrow will appear, click twice to confirm the position of the arrow and pop up the annotation window

( The colors of arrows and annotation text change with the changes in advanced settings, measurement settings, and font color ) Users can input content using either a soft keyboard or a physical keyboard in the annotation window, and click the "OK" button after completion.


### 3.4 Delete

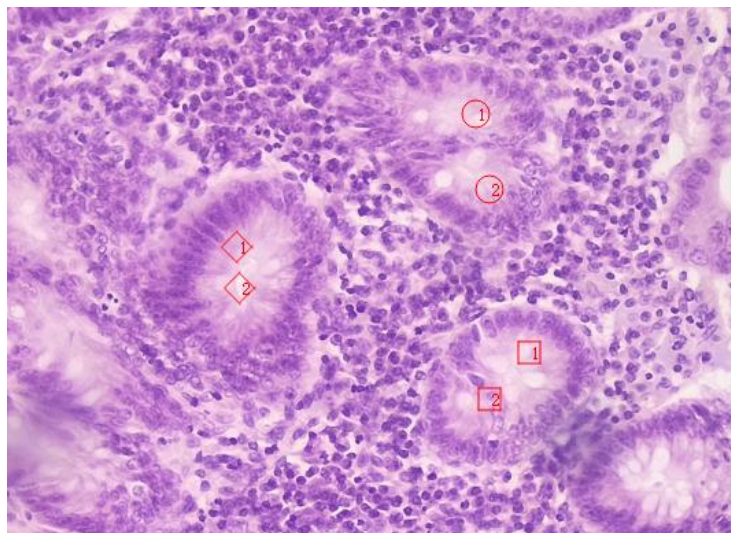
Clicking on the icon “✕” will bring up a dialog box for deleting elements, prompting whether to delete all element information. Clicking the "Delete" button will delete all elements on the current display.

### 3.5 Locking


Click on the icon , and all elements on the screen cannot be moved.

### 3.6 Marking

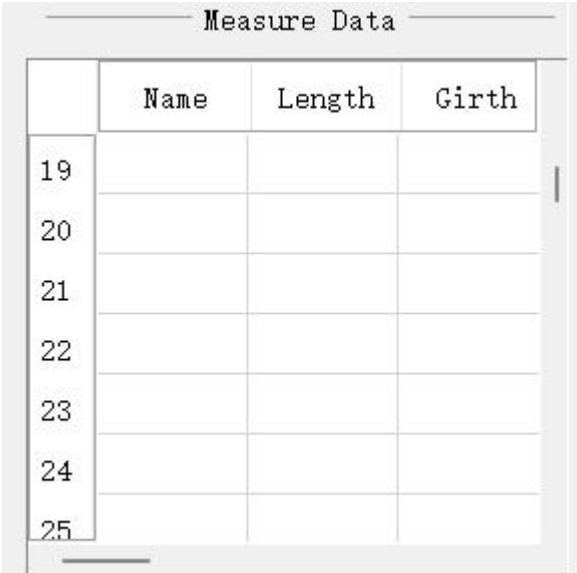
Click the icon , you can mark the number on the image, the number can be superimposed



### 3.7 Lasso

Click on the icon”  ”, select the lasso tool to measure the element drawing, continuously press the left mouse button to draw the lasso element, click the right mouse button to cancel the current element drawing work.

### 3.8 Measurement Data

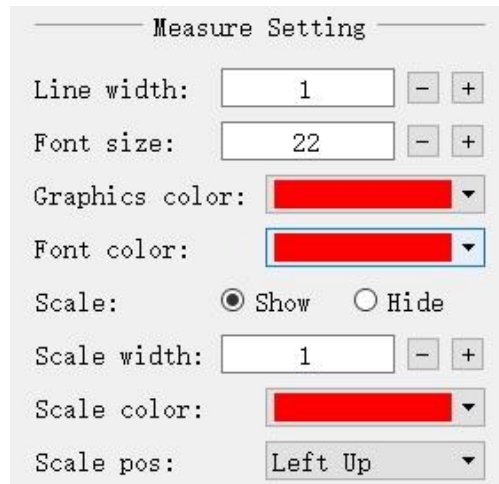


	Name	Length	Girth
19			
20			
21			
22			
23			
24			
25			

This table displays the details of the elements drawn in the video area. Click any set of data in the information bar, and the corresponding elements in the video area are in a yellow state. The data in the information bar can be modified by double-clicking with the mouse. Right-click the elements in the video area, and the data table will locate the metadata accordingly and focus on the current metadata line. Pull

the slider bar up and down, left and right to view all the data in the data table. Note: Angle, fold, polygon, lasso data cannot be modified

### 3.9 Measurement settings



(1) You can modify the color of measurement elements and fonts, with six color options available. Font display size and measurement line thickness. The width of the measurement line is divided into three levels, and the higher the level, the thicker the measurement line. The font size adjustment range is 15-30, and the larger the number, the larger the font.

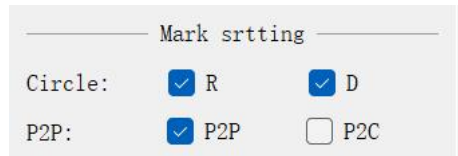
(2) The setting of the scale bar can control whether the current length of the scale bar is displayed in the upper left corner of the screen.

(3) The scale bar line width can be adjusted

(4) The color of the scale bar can be modified

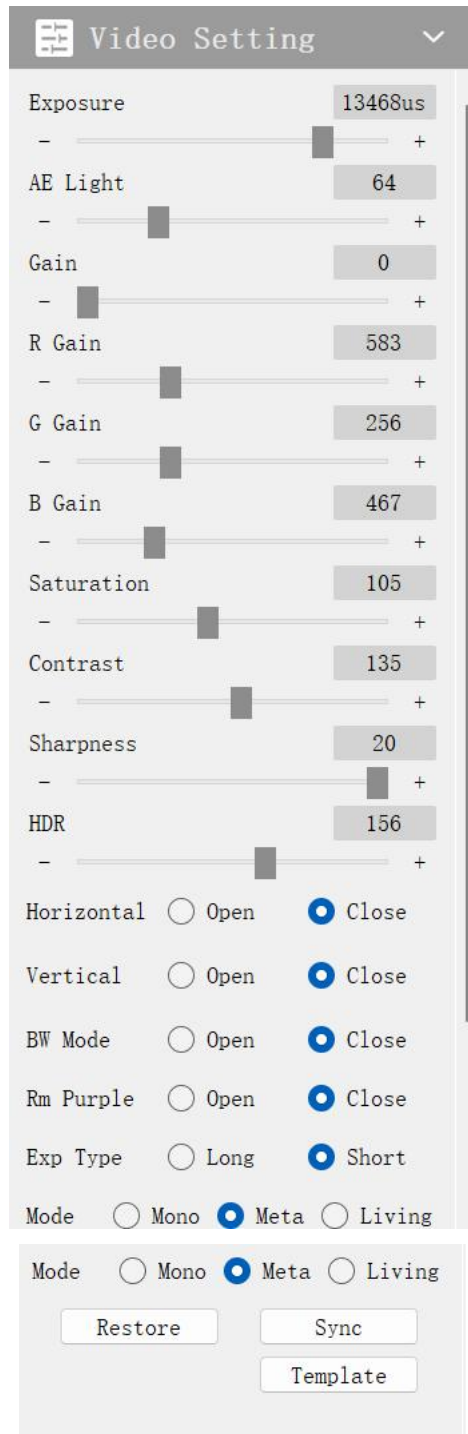
(5) The position of the scale bar can be set to four positions: top left, bottom left, top right, and bottom right

### 3.10 Annotation Settings



When drawing a circular primitive, the annotation of the circle can control whether the primitive displays radius and diameter.

## 4 Video Setting



Used for detailed parameter settings, including horizontal and vertical image flipping, exposure mode, and restoring factory settings. There are default values for parameters that can be adjusted according to needs, and parameters can also be saved through parameter

templates.

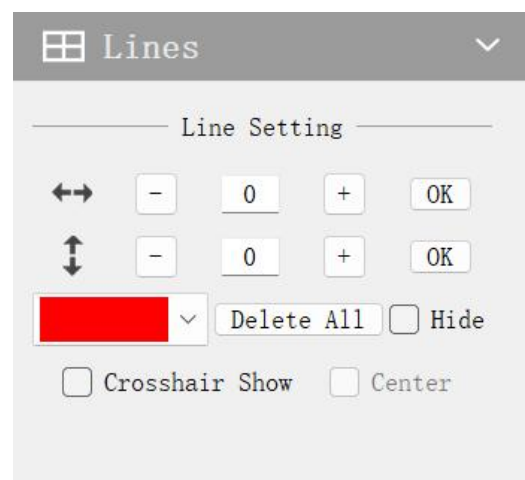
pay attention to:

1、 When the long exposure is switched to the short exposure, click the "-" number next to the exposure value to restore the image brightness.

2、 According to the customer use scenarios, optical equipment, can switch the camera mode, the three modes of different parameters.

- ① Single cylinder camera choose single cylinder mode
- ② can choose single cylinder mode and metallographic mode
- ③ shooting biological mode

## 5 lines



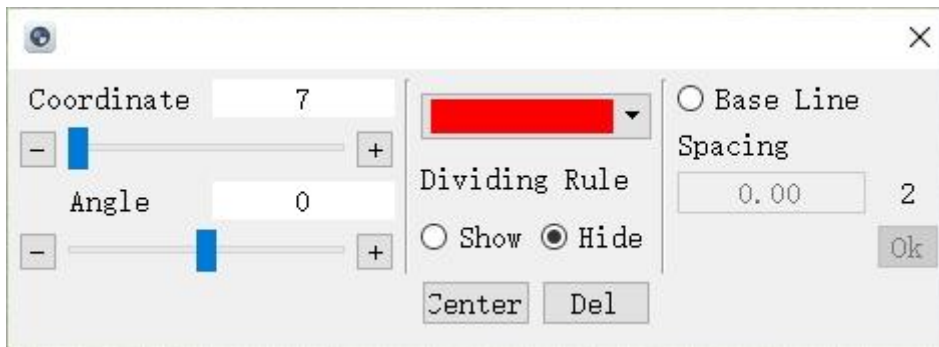
The scale lines are divided into 100 horizontal and 100 vertical.

Method of adjusting the scale line:

(1) Adjust the number of horizontal and vertical tick marks to be added using "+" and "-" respectively, and click the "OK" button to display the corresponding number of tick marks in the video box.

(2) If the current number of tick marks is fixed, only "+" can be used. It is not supported to reduce the tick marks on the screen by using "-" in the current crosshair state. However, you can edit and delete or use the "delete all" function to delete by right clicking on the crosshair to enter the editing box.

(3) Right click on the tick mark to pop up an edit box, where you can delete the current tick mark or adjust its position, angle, color, ruler display, and baseline settings. As shown in the figure



(4) Adjustment completed, click on the "X" in the upper right corner of the editing box to close it.

(5) Right click the mouse to select any tick mark, the tick mark will turn yellow, and the mouse will be in a state to move the position of the tick mark.

(6) When the number of tick marks is set and displayed in the video box,

to add a tick mark, simply click the "+" button to increase the number and click "OK" to display the added tick mark in the video box.

(7) The current color displayed in the display box is the color of the newly added tick mark.

(8) Click "Delete All" to delete all current tick marks.

(9) Add a set of cross line rulers, which can be right-click and dragged. Check the center option to center the rulers.

(10) Select the "Hide" button to hide the current tick mark, uncheck to display it.

## **6 Shoot setting**

Shoot Setting
▼

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Shoot Setting

Auto img\_
 Manual

Photo Path:

Save Graphics
 Yes
  No

Size
 ▼

Image Type
 ▼

Gun Mode

Continuous
 Sum  ▼
Second  ▼

Time Sign
  ▼
 ▼

---

Video Setting

Auto video\_
 Manual

Photo Path:

## 6.1 Shooting Settings

- (1) Photography can be named automatically or manually.
- (2) The automatic naming rule for camera photography is "img\_ time of the day", which is saved in the specified directory. (3) If the "manual" naming rule is selected, it can be set by oneself.
- (4) You can customize the image storage path.
- (5) You can choose whether to save the elements when taking photos.

Save the element and display the element information on the photo after taking a photo. Do not save the elements, take pictures normally.

(6) You can choose four image formats to save images: JPG, BMP, PNG, and TIFF.

(7) Scan Code Gun Mode: Connect the scan code gun, check the scan code gun mode, and you can take photos by scanning the code.

(8) Continuous shooting mode: You can customize the number of consecutive photos (up to 20) and the time interval for each photo (up to 5 seconds)

(9) Picture size: a variety of resolutions are available

## **6.2 Video recording settings**

(1) The recording can be automatically and manually named.

(2) The automatic naming convention for recordings is "video\_time of the day" and is saved in the specified directory.

(3) By selecting the "Manual" naming convention, you can set it yourself.

(4) You can customize the recording storage path. (Do not choose paths with Chinese characters)

## 7 Complex Capture



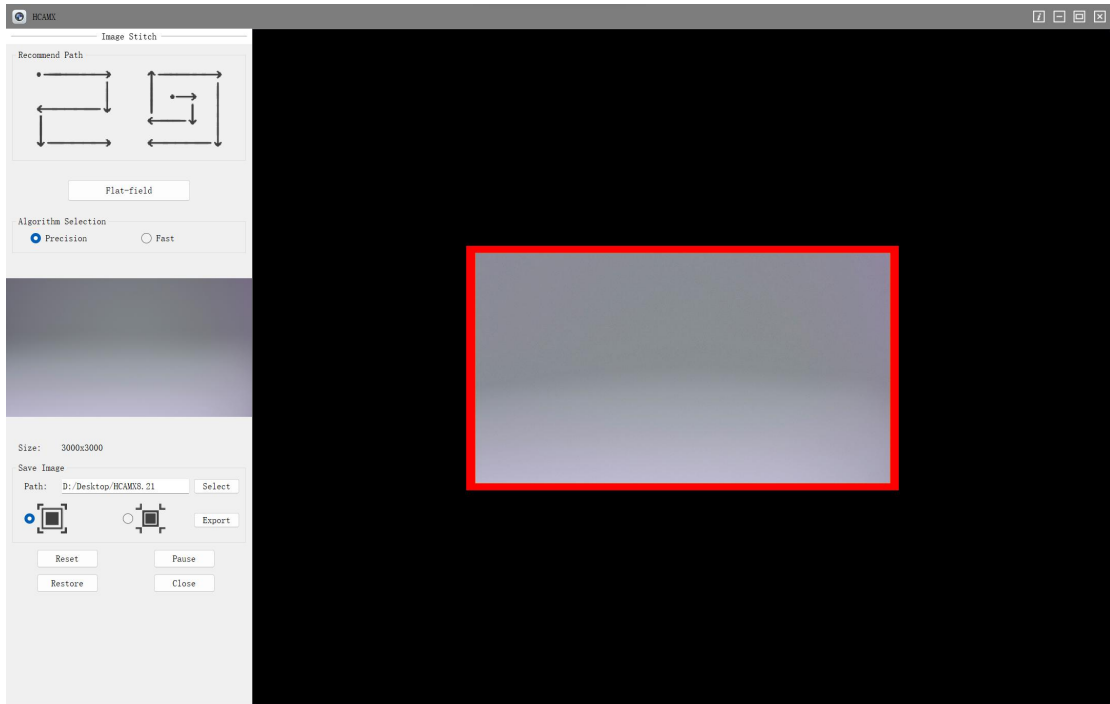
Note:

1. For the better image effect, it is recommended to do white balance before entering the splicing
2. Deep of field fusion to be developed

### 7.1 Stitch

(1) Find the pure white position to make the white balance, adjust the image effect, click the large picture splicing to enter the splicing page, the image in the pure white background, please be sure to click the flat field correction, the flat field correction is completed



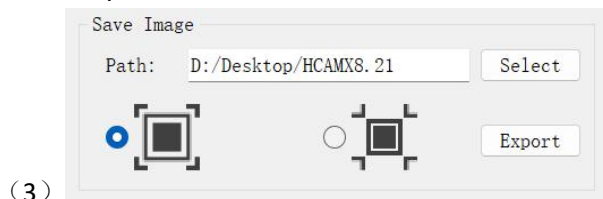


(2) The image moves to the image to be stitched together, click and reset the image and start to move the microscope, the movement range should not be too large, support zoom in, shrink, move the stitching good image, can choose accurate algorithm and fast algorithm.

① Accurate algorithm: better clarity, no trace of splicing, but need to move slowly

② Fast algorithm: faster, but the clarity is less than the accurate algorithm, the fast algorithm is twice the size of the accurate algorithm.

Splice maximum size limit of 20000 \* 20000.



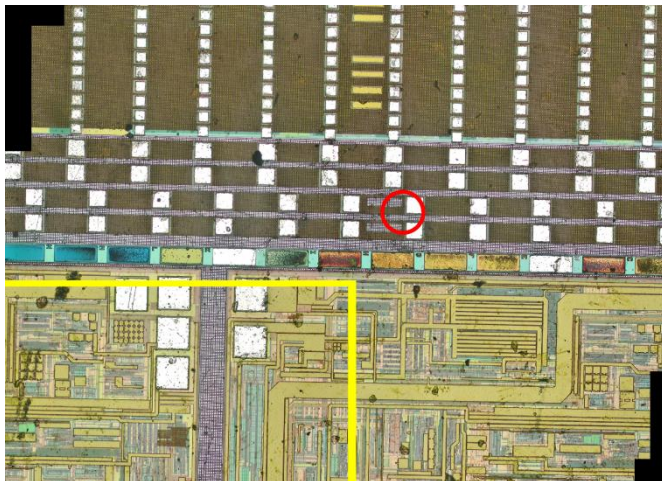
Select the image export path, export way the former is the full graph export, the latter is the black side export.



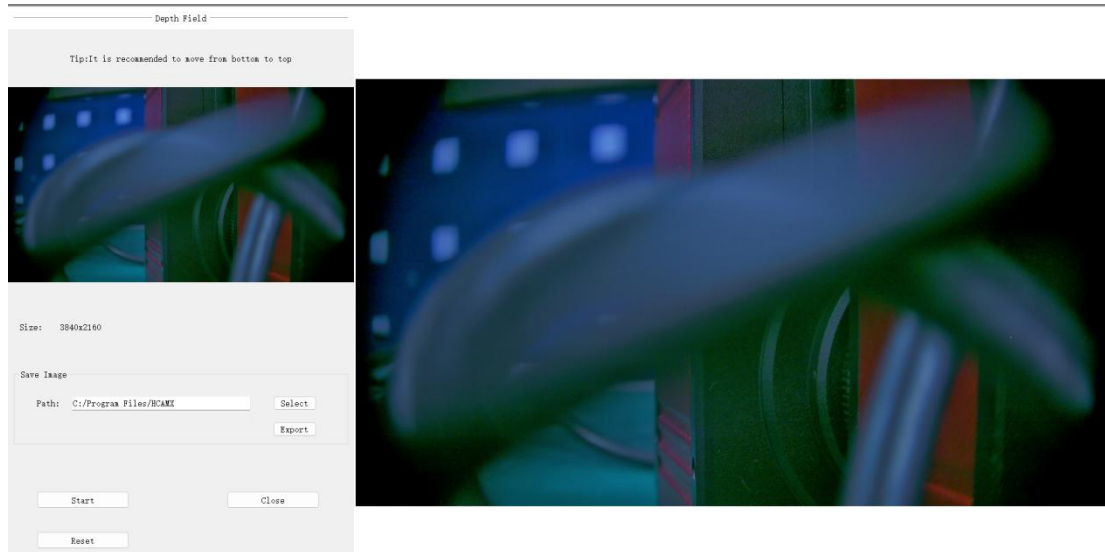
Click to reset to reset the splicing image; click to pause to pause the splicing image, move the image, click the restore scene to directly return to the splicing scene, exit the splicing and click the exit button.

pay attention to:

1. Click "reset" to reset the splicing image, reset irrevocable, please click carefully.
2. If there is a problem in the image in the stitching, double click the image at the problem with the left mouse button, a red circle appears, and you can manually move back to this position according to the positioning for stitching again.



## 7.2 Depth Field



The image is moved to the image of depth of field fusion, click on the moving microscope, the microscope moves from bottom to bottom, the movement range should not be too large, and the depth of field fusion effect will be clear than the ordinary effect.

pay attention to: Because the picture will appear from the top to the bottom, so it is recommended to move from the bottom up.

## 8 Camera Setting

Camera Setting

Export Setting

Export Name  Auto  Manual

Add Image  Yes  No

Excel Path:  
D:/video

Word Temp default

Excel Temp default

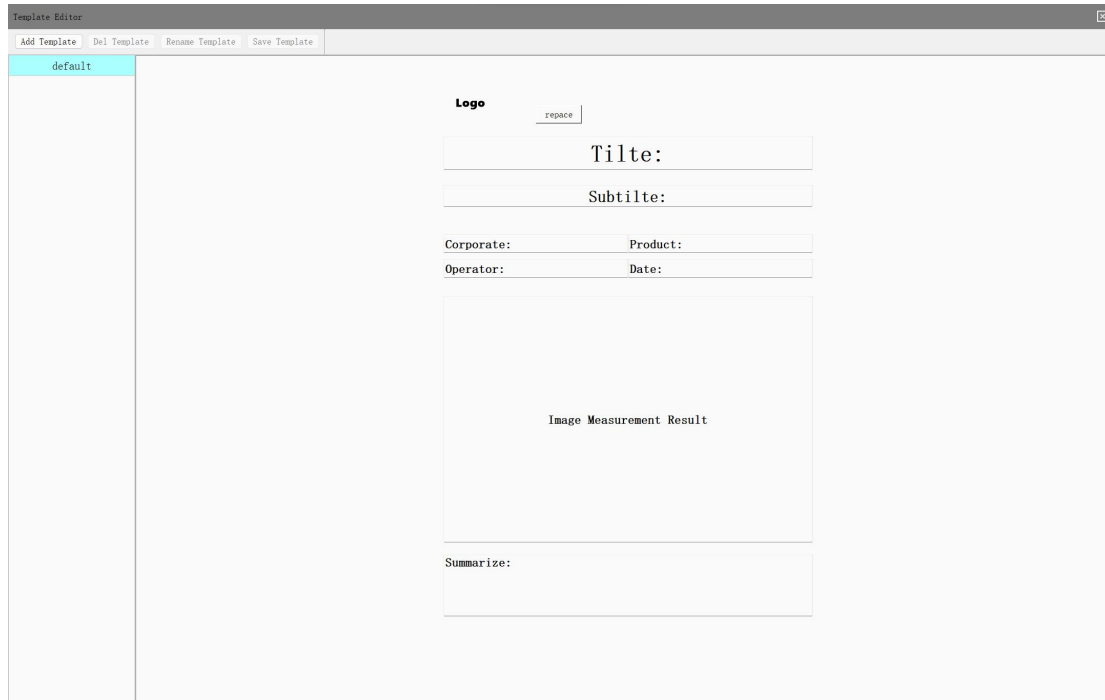
Other Setting

Language:  
En

### 8.1 Export Settings

- (1) When exporting, it can be automatically named (the export name is the current time) or manually named.
- (2) You can choose to import images or not.
- (3) You can customize the file export path. (Do not choose paths with Chinese characters)
- (4) Export templates support custom templates. (Click the edit button)

# Export Word



Step 1: Click "Edit" to add the template.

Step 2: Click on the new template and edit the page

Step 3: Logo support replacement (image resolution is 100pix \* 50pix)

Step 4: Editable main and subheadings, able to change all template content

Step 5: Save the template.

(For unwanted templates, select them on the left and click to delete them; for templates that you want to rename, select them on the left and click to rename them)

Step 6: Close the editing template and select Custom New Template

Step 7: Export Word

Logo

XXX

XXX

Corporate:XXX

Product:XXX

Operator:XXX

Date:XXX



## Export to Excel

Template Editor

Add Template Del Template Rename Template Save Template Add Chart Clear Chart Add Time Stamp Clear Time Stamp

	1	2	3	4	5	6	7	8	9	10	11	12
default												
1	Corporate:					Product:						
template_2	2	Operator:				Date:	2024-09-03					
3												
4												
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27												

Step 1: Add a template.

Step 2: If you want to customize the chart, click Clear Chart.

Step 3: Find the custom location, click on the table, and it will be selected. Click to add a chart.

Step 4: If you want to change the location of the time, click to clear the

timestamp.

Step 5: Find the custom location, click on the table, and it will be selected. Click to add a timestamp.

(Other names can be selected and deleted by double clicking, or customized and added by double clicking anywhere)

Step 6: Save the template.

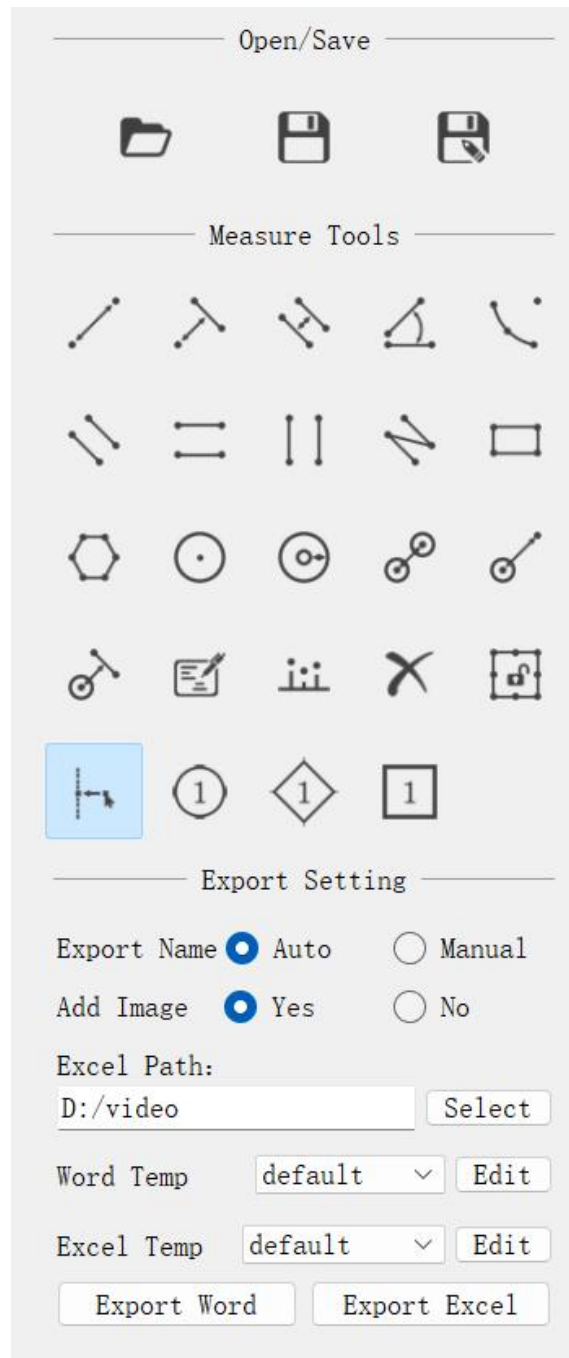
(For unwanted templates, select them on the left and click to delete them; for templates that you want to rename, select them on the left and click to rename them)

## **8.2 Other Settings**


(1) Language switching is divided into Chinese (simple), English (EN) and Chinese (complex).

(2) Click on the fast mode to switch between the frame rate and the window ratio.


## 9 Image processing



### 9.1 Open/Save

You can click  to open the captured image, use measurement



tools to draw, and then click  save to save the element, or click

save as  (you can save the image to a specified location)

## 9.2 Measurement tools


(1) After selecting the element, the mouse changes to a crosshair cursor in the video area and enters the drawing state. Left click the mouse to draw.

(2) After the drawing execution is completed, the mouse does not exit the current measurement or drawing working state. Clicking the right mouse button can exit this state.

(3) During the measurement element drawing process, right-click to cancel the current element drawing operation. In a non drawing state, right-click and select the element (except for keypoints) to become an  shape. Drag the mouse, and the element will turn yellow and follow the movement. Right click to select the key point of the element, turn it into an  shape, drag the mouse, the element will turn yellow and follow to modify its position.

(4) Double click on the element with the right mouse button, and a "Delete Element" prompt box will pop up, indicating whether to delete the current element. Click the "Delete" button to delete it, and click the "Cancel" button to cancel the operation.


### 9.3 Annotations

Click on the  icon, left click and drag the mouse at the desired annotation location on the screen. An arrow will appear, click the second time to confirm the position of the arrow and pop up a annotation window (the color of the arrow and annotation text will change according to the advanced settings measurement settings font color change). Users can input content in the annotation window using the soft keyboard or physical keyboard, and click the "OK" button after completion.

### 9.4 Delete

Clicking the "" icon will bring up a dialog box for deleting elements, prompting whether to delete all element information. Clicking the "Delete" button will delete all elements on the current display.

### 9.5 Locking

Click the icon , and all elements on the screen cannot be moved.

### 9.6 Export Settings

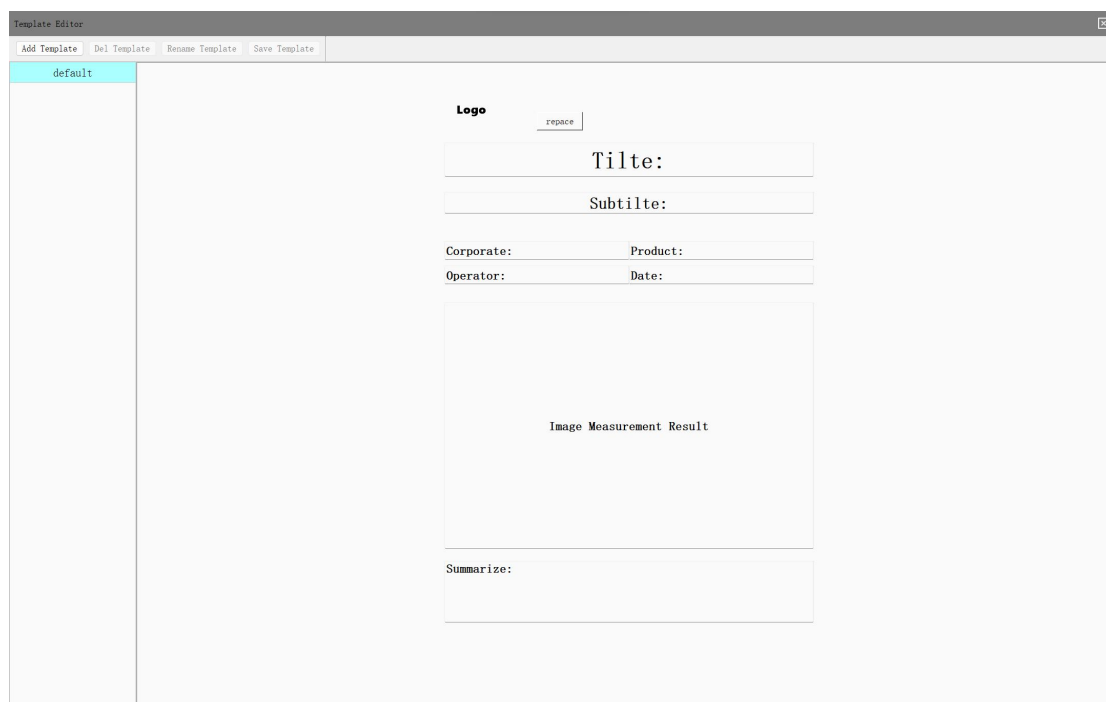
(1) When exporting, it can be automatically named (the export name is the current time) or manually named.

(2) You can choose to import images or not.

(3) You can customize the file export path. (Do not choose paths with Chinese characters)

(4) Export templates support custom templates. (Click the edit button)

## Export Word



Step 1: Click "Edit" to add the template.

Step 2: Click on the new template and edit the page

Step 3: Logo support replacement (image resolution is 100pix \* 50pix)

Step 4: Editable main and subheadings, able to change all template content

Step 5: Save the template.

(For unwanted templates, select them on the left and click to delete)

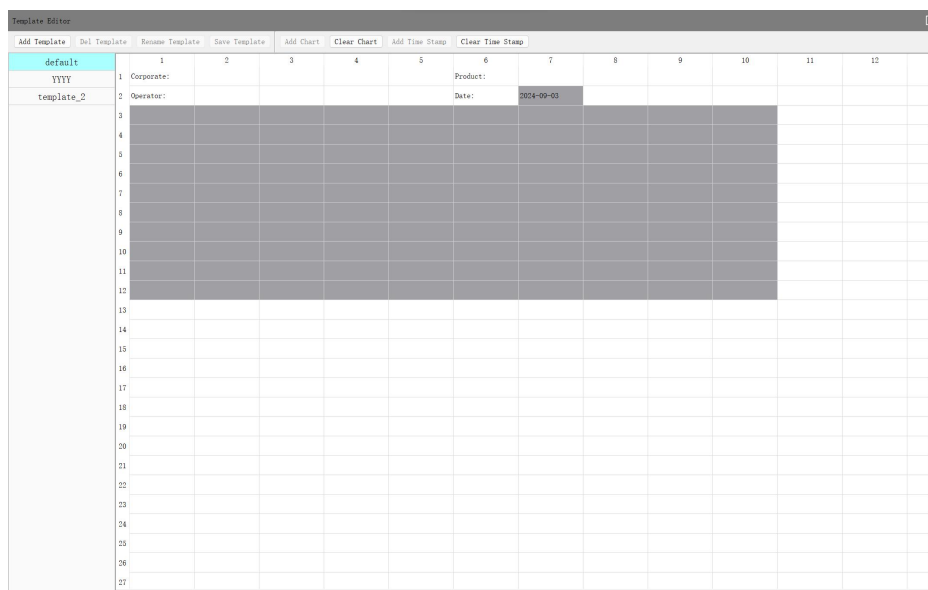
them; for templates that you want to rename, select them on the left and click to rename them)

Step 6: Close the editing template and select Custom New Template



Step 7: Export Word

## Export to Excel



Step 1: Add a template.

Step 2: If you want to customize the chart, click Clear Chart.

Step 3: Find the custom location, click on the table, and it will be selected. Click to add a chart.

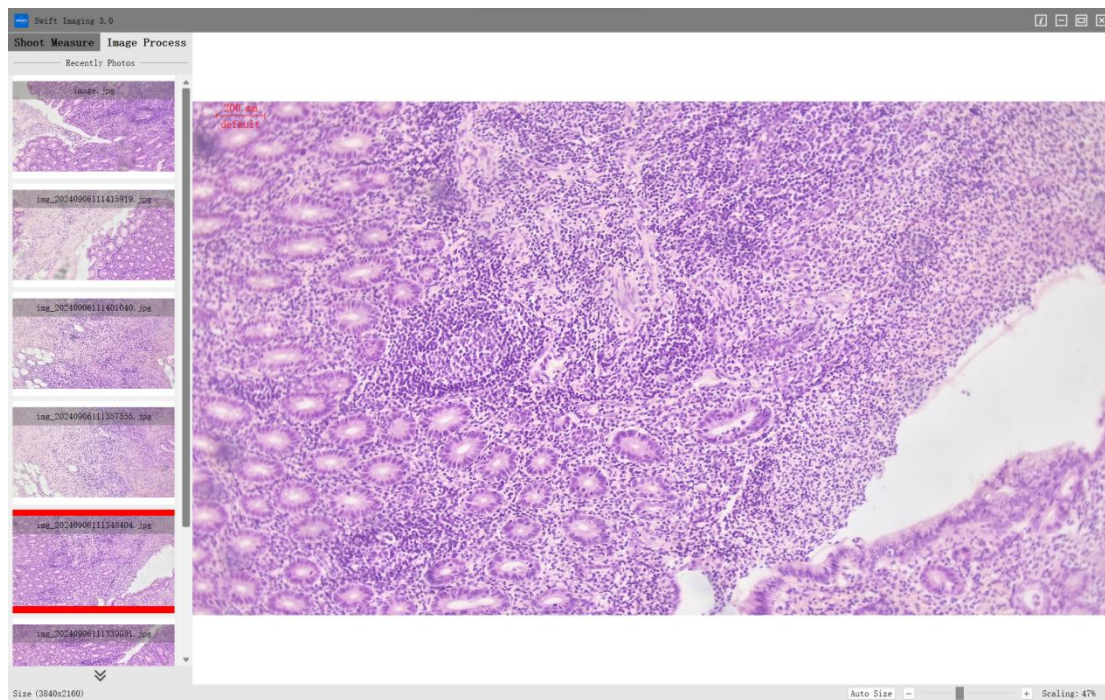
Step 4: If you want to change the location of the time, click to clear the timestamp.

Step 5: Find the custom location, click on the table, and it will be selected. Click to add a timestamp.

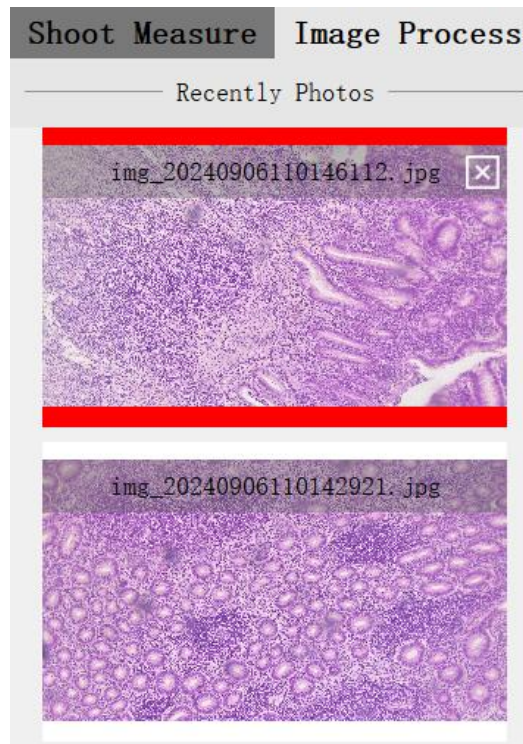
(Other names can be selected and deleted by double clicking, or customized and added by double clicking anywhere)

Step 6: Save the template.(For unwanted templates, select them on the left and click to delete them; for templates that you want to rename, select them on the left and click to rename them)

## 9.7 Recent shoots



You can echo the newly captured image and click "X" to delete it from the folder where the image is stored.



## 2 . pay attention to:

1. Installation package cannot be installed on some computers or install an error

Now found that the software package in some computers installed rising anti-virus / jinshan antivirus and other anti-virus software, the software can not install the poison behavior, belong to the situation of manslaughter, need to exit the anti-virus software, installation or operation, if there are problems, you need the computer to uninstall the anti-virus software.

Anti-virus software if during the use, there is a computer poisoning behavior, anti-virus software will enter the C disk write protection mode,

control the C disk rights, the software can not run normally, this time you need to uninstall the anti-virus software, or put the software installed on the non-C disk.

2. Export the recommended version: WPS latest version / office2020 years later