

Eert Camera User Manual 5.2.0



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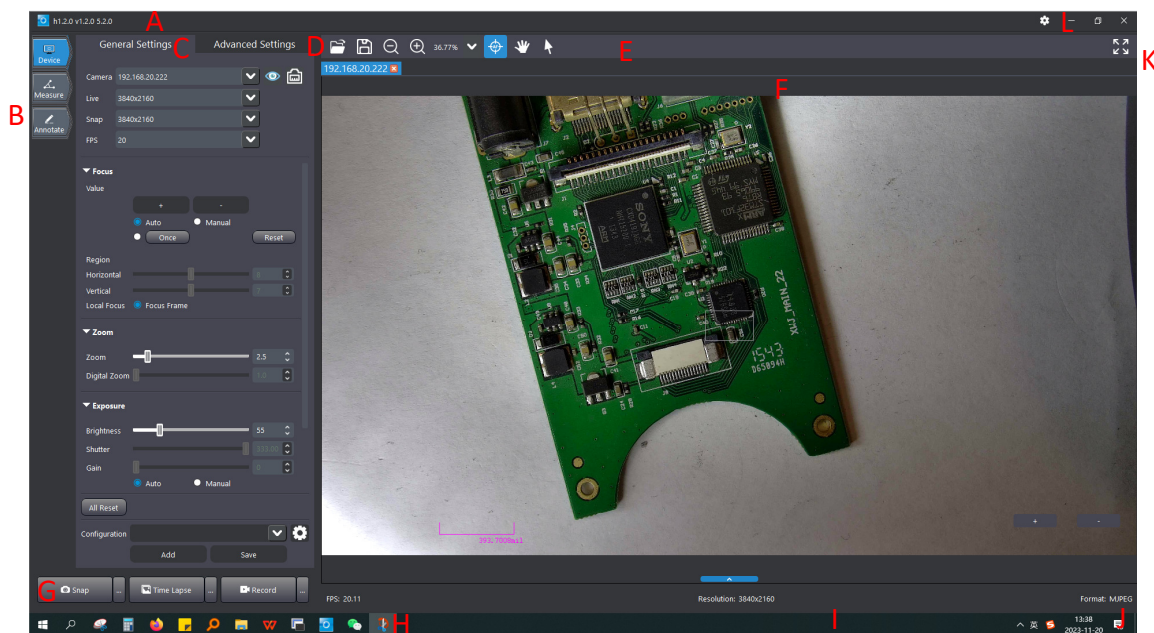


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1 Installation Precautions

1. Please disable all antivirus programs when installing the software, or pass the alarm issued by the antivirus program when you open the software for the first time after installation. Our software will not steal any of your personal information.
2. The software is compatible with Windows 10 and above, CPU requirement intel3 generation and above, RAM 4G and above.
3. Some features are included in advanced settings and are encrypted when turned on, please enter 123456 to unlock them.

2 Main Interface

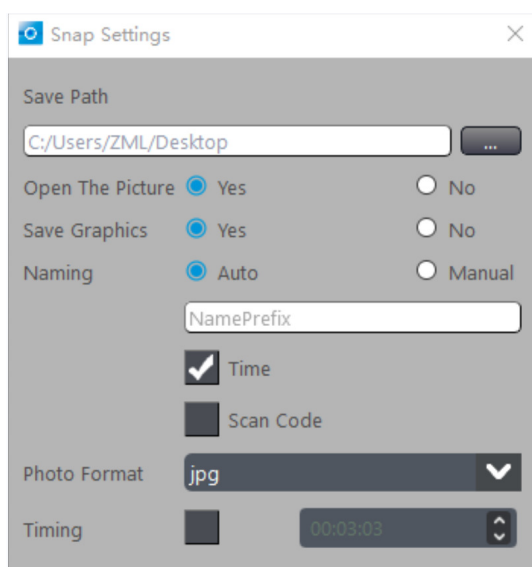



serial number	Function
A	Camera version number, software version number
B	navigation bar
C	General Settings screen
D	Advanced Settings Screen
E	shortcut bar
F	Camera screen, picture preview screen
G	shooting bar
H	frame rate
I	resolution (of a photo)
J	Screen Transfer Format
K	full screen key
L	Language and mouse wheel settings

3 Capture

3.1 Snap

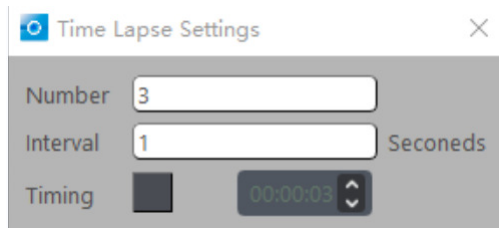
Tap **Snap** of the current screen; tap... Set the path for taking the picture.



1. Select the path where you want to save your photos, and click ... to select the folder where you want to save them.
2. After selecting **opening the picture**, the screen will automatically jump to the current picture after clicking **Snap**, and you need to click the **Save** button  at the top of the screen again to save and name the picture in manual/automatic way.
3. When you select the **Save Graphics**, measurements and other operations performed on the screen after taking the picture will be saved in the picture.
4. After selecting the automatic naming method, the photos taken will be automatically named in the form of time/swipe gun. After selecting the manual naming method, the software will automatically jump to the save interface after clicking the photo button.
5. Photos are saved in a total of three formats: jpg; bmp; tiff.
6. Selecting **Timing Photo** allows you to take a picture with a time delay after pressing the photo button.

3.2 Time Lapse

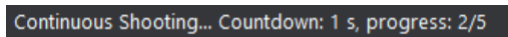
After clicking [Time Lapse](#), the software will take pictures with the set number of shots and interval, and the pictures will be automatically saved under the save path of the photo setting. Click... to set the number and interval of consecutive shots.




The number of consecutive shots is set to an upper limit of 1-999999999, and the photo interval is set to an interval of 1-214748364 seconds. Both data can only be set as integers.

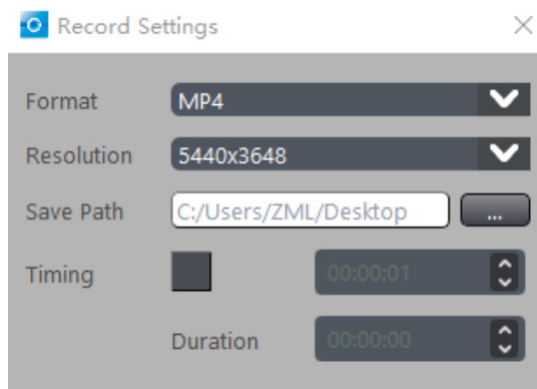
The bottom of the software displays the current shooting progress and the waiting time while shooting.

Selecting the timer function allows you to take a time-lapse shot after the photo button is pressed.



3.3 Recording

After clicking [Recording](#), the software starts recording. During recording, a [red dot](#)  flashes in the lower right corner of the screen. Click [Record](#) again to stop recording. Click... You can set the recording function.



The only video format available is MP4 format.


The recording resolution changes according to the current camera resolution.

Click... Select the path to save the video file.


Selecting the timer function allows you to delay recording after the video button is pressed.

4 shortcut bar

4.1 Opening pictures

By clicking on the **Open Picture** button  you can view the picture that has been taken and can carry out measurement and calibration work on the opened picture. After finishing the measurement you can save the picture elements by clicking on the Save button again.

4.2 Preservation

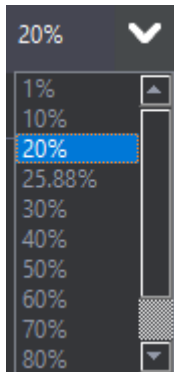
You can click on the **Save** button  to save the image while you are taking and viewing it.

4.3 Zoom in/out

Click on the **Zoom In**  and **Zoom Out**  buttons to zoom in and out of the


current screen (Note: This function is only an electronic zoom of the screen).

The current screen magnification can be selected directly by clicking the [dropdown icon](#).




4.4 Modalities


1. Focus mode

When the camera is turned on for the first time, the screen automatically enters the focus mode. When the camera has entered the [Trace mode](#) or [Measurement mode](#), it is necessary to click the [Focus Mode](#) button  to enter the focus mode, otherwise the camera will automatically be in the manual focus state.


2. tracking mode

Click the [Trace Mode](#) button  to enter Trace Mode. You can drag and drop the enlarged screen with the mouse.


3. measurement mode

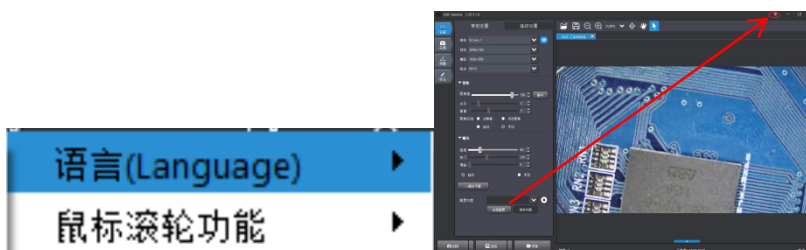
After using the measurement tool the software will automatically enter the [measurement mode](#). At this point you can use the mouse to select the current plot element and other functions. It is also possible to enter the measurement mode by clicking on the [measurement mode](#) button  in other modes.

4. full screen mode

Click the [full screen button](#)  to display the current screen in full screen; press esc to exit the full screen interface.

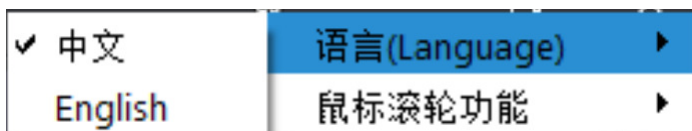
5 Settings

Click on the **Settings** button  to open the settings screen in the upper right corner

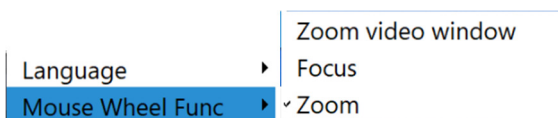


5.1 Language


Chinese and English languages can be selected.

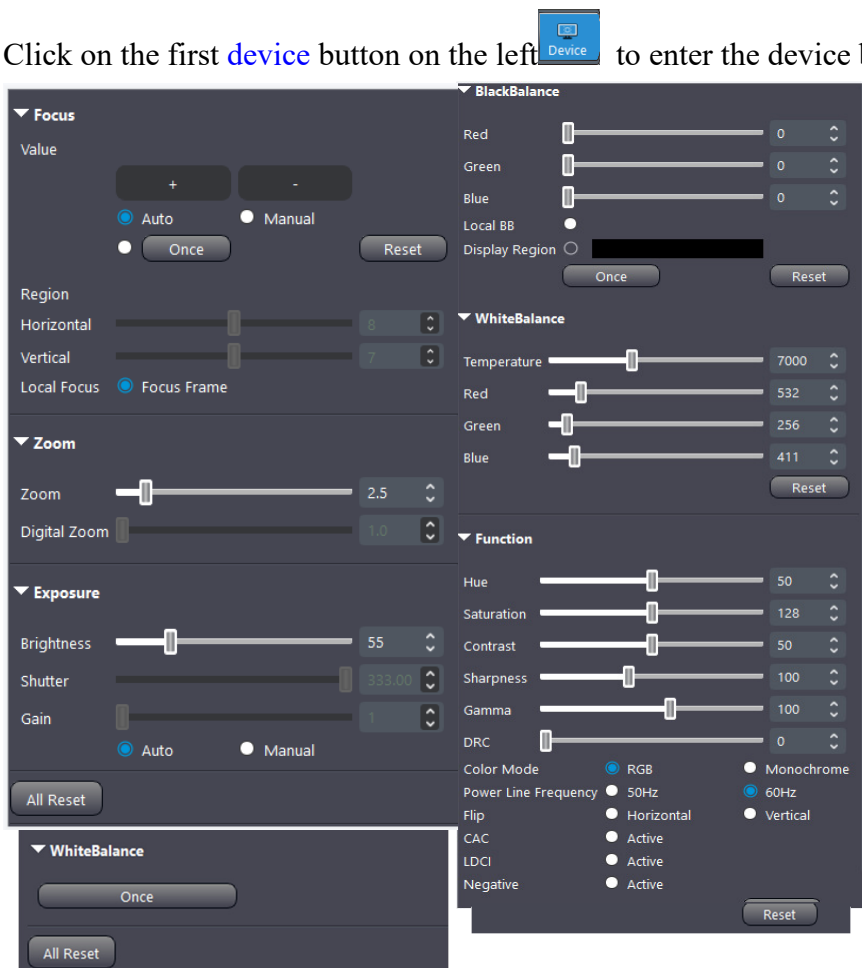


5.2 Mouse wheel function




6 Equipment column


Click on the first **device** button on the left  to enter the device bar screen

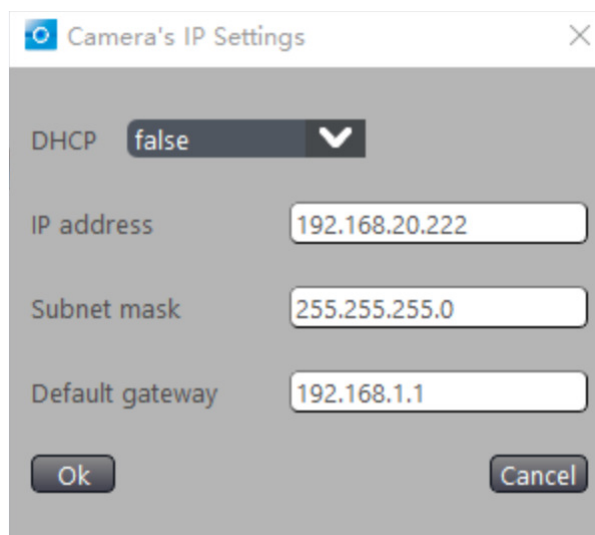


6.1 General Settings

6.1.1 Camera selection

Pull down the camera list, select the desired camera and click the **open** button on the right side  to open the camera, click the **open** button again to close the camera (the software only supports single channel video preview, please make sure the current camera is closed before switching cameras).

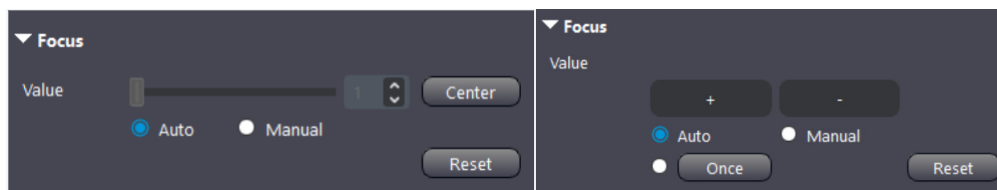
If you are accessing the host computer through the network port output, you can click the **ip setting** button  on the right to set the network ip parameters of the imager.



6.1.2 Screen parameter setting

Scroll down to select the frame preview resolution and shooting capture resolution. Connecting the camera via USB allows you to select the picture output format; connecting the camera via the network allows you to select the frame rate. The output format, frame rate, and resolution are different for different camera models.

6.1.3 Focus



USB Camera

Network Port Camera

In USB output mode, when **Auto** is checked, the focus mode is switched to auto focus, at which time the camera can automatically focus on the image within the focus range. When **manual** is checked, the focus mode switches to manual focus, at which time you can manually focus by dragging the focus value or clicking - and + (0-400 adjustable).

After clicking the **one-touch button**, the camera will automatically focus once and then stop changing the focus value, if you want to focus again, you can click the **one-touch button** again.

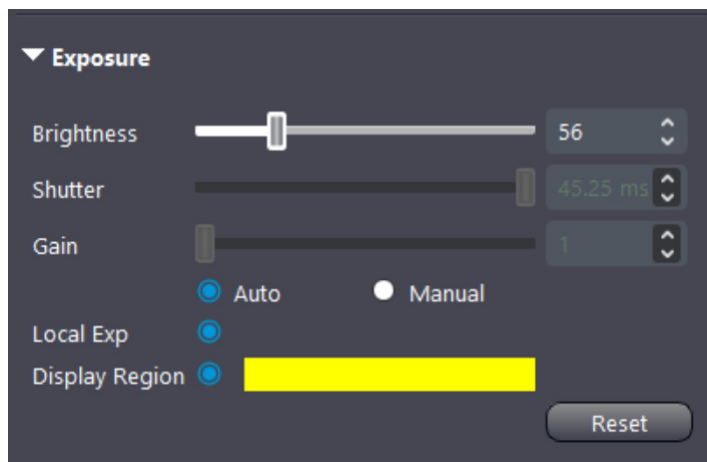
Clicking **Center** adjusts the focus value to 200 and switches to manual focus mode.

Click **Reset** to change the camera back to autofocus mode.

When you click the mouse on the screen after checking the box to focus, it will focus on the area where the focus box is located, and the horizontal and vertical data indicate the relative position of the mouse; if you do not check the box, the function will be canceled.

After checking **the focus frame**, it will automatically select an area around the mouse click in the screen to indicate the focus area judged by the camera; unchecked, it will hide the focus frame. C304 and C302 cameras can adjust the size of the focus area. Note: This feature is only available for the C31X series and the C302 and C304 cameras.

6.1.4 Exposure



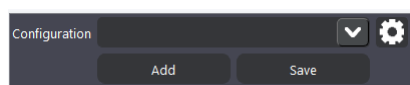
When [Auto Exposure](#) is checked, you can pull the [brightness](#) progress bar to adjust the brightness, which is adjustable from 0-250;

When you check [the manual exposure](#), you can pull the [shutter](#) progress bar to adjust the shutter, which is adjustable from 0-333;

[The gain](#) progress bar can be pulled to adjust the gain, which is adjustable from 0-33.

Clicking the [area exposure](#) function allows you to automatically expose the image in the area as a reference.

6.1.5 Configuration options

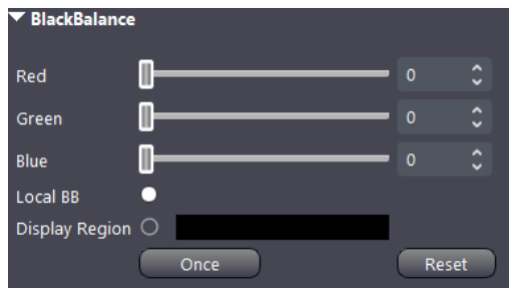


First click [Add Program](#) and enter the program name; adjust the camera parameters and click [Save Program](#) to save the configuration.. Click the [drop-down](#) arrow to select the desired configuration plan. Click on the [Settings](#) button to select a profile to delete.

6.2 Advanced Settings

Click [Advanced Settings](#) and enter the password: **123456** to open the Advanced Settings screen.

6.2.1 Black balance

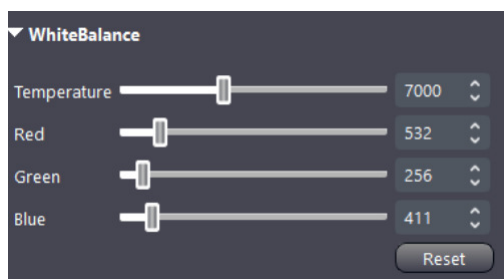


Display Region: Black balance the whole image with the state of the image in the selected area.

Once: performs an area black balance.

Reset: resets the white balance function to its default state.

6.2.2 White balance

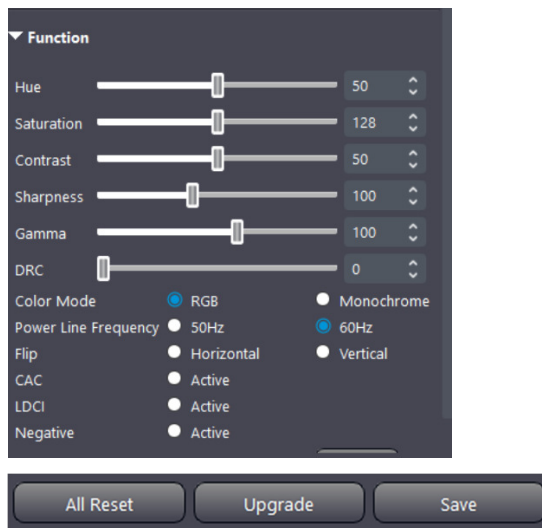


Auto White Balance: Automatic white balance under different color temperature conditions;

Manual white balance: You can pull the "red, green and blue" progress bar to adjust the "red, green and blue" color value.

Reset: resets the white balance function to its default state.

6.2.3 Functions



Hue: 1-100 values adjustable, reset default value 50;

Saturation: 1-100 values are adjustable, reset the default value of 50;

Contrast: 1-100 values are adjustable, reset the default value of 50;

Sharpness: 0-15 adjustable, reset default value 8;

Digital zoom, optical zoom: first zoom in with optical zoom, the maximum adjustable to 14, when the optical zoom maximum can be zoomed in with digital zoom, the maximum adjustable to 6, the overall maximum magnification is $14 * 6 = 84$ times. Reset default value is 1.

Gamma: 0-10 adjustable, reset default value 6;

Color Mode: Image display area black and white/color switching;

Anti-screen flicker: Check the box to achieve the effect of anti-screen flicker.

Flip: Flip the screen horizontally or vertically after checking the box.

Defogging: Turn on or off the algorithm's own defogging function.

Purple edge elimination: Eliminate purple edges caused by excessive contrast

Contrast Enhancement: Increases the color contrast effect.

Reset: Adjusts all settings to the default state.

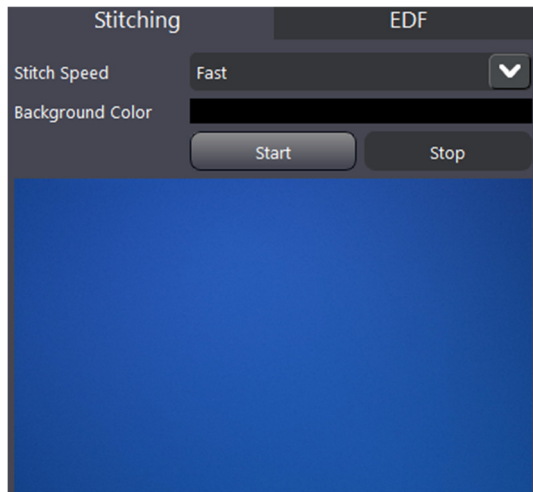
Upgrade: Click and select the upgrade file to upgrade online.

Note: The functions included in different cameras with different connection methods are different, please refer to the actual situation.

7 Acquire

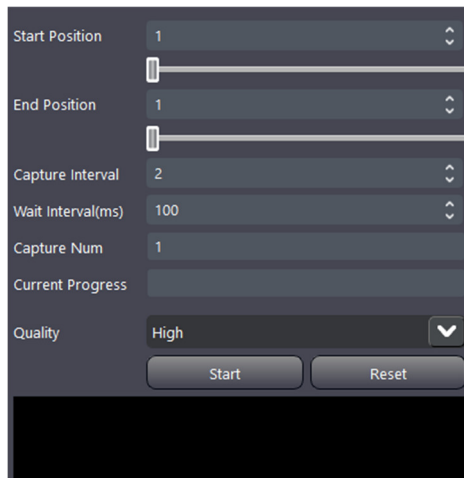
Note: This function is only available for C302, C304, C31X series and U series.

7.1 Stitching




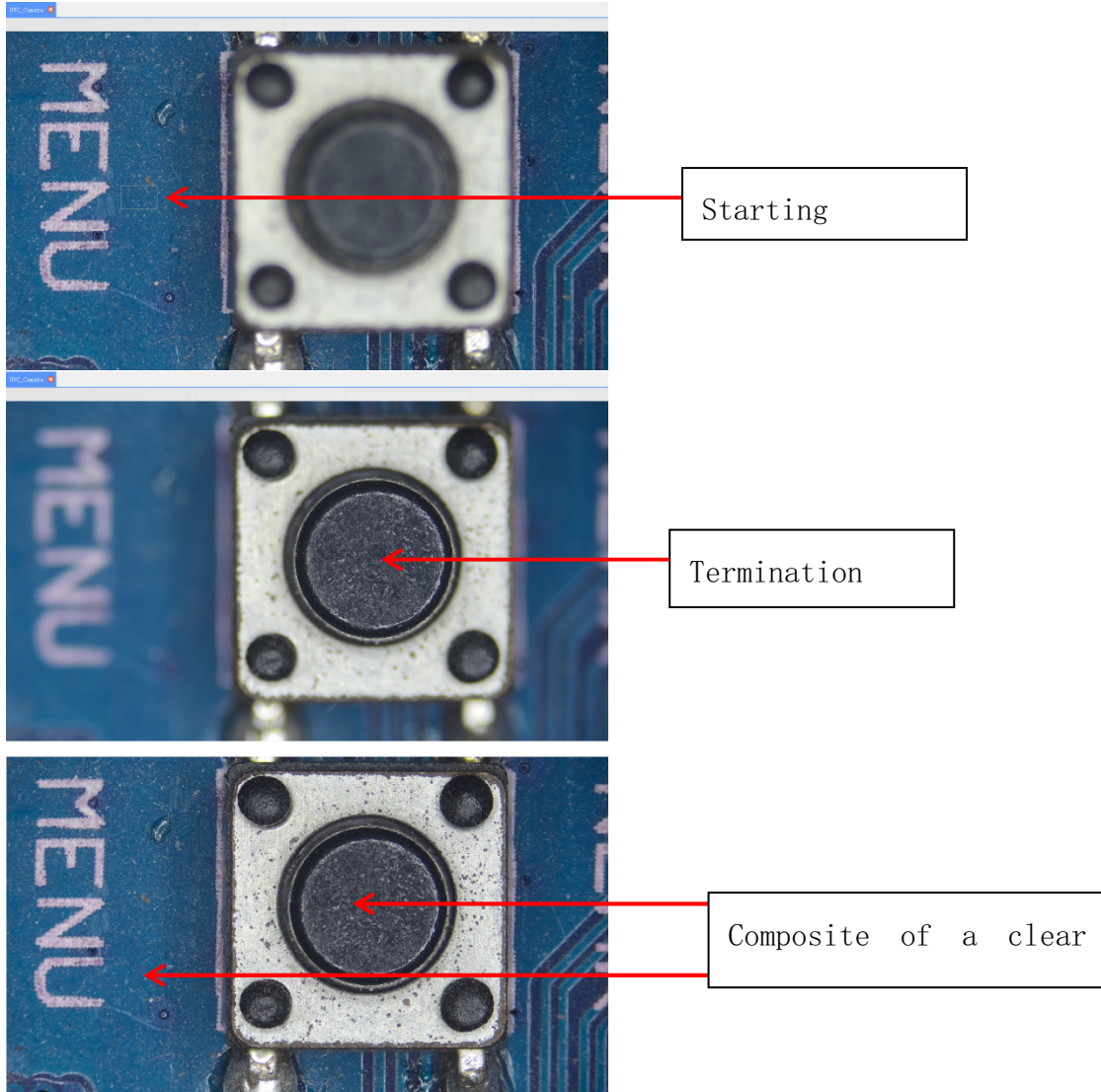
1. First, set the white balance and exposure to manual exposure mode, adjust the brightness of the light source so that the exposure is adjusted to the appropriate value to avoid overexposure during stitching.
2. Select splicing, adjust the splicing speed, the speed of 20-500 can be selected; click 'Start' splicing image, the moving speed should be maintained at a uniform speed, can not be too fast, otherwise the synthesized image will be blurred, the direction of the image forward to basically keep the horizontal and vertical direction of movement, otherwise the effect is not very good, click 'Stop' to complete the image splicing. Click 'Stop' to finish the image stitching.
3. The small image on the left is the current camera frame; the large image on the right is the overall stitched image.

7.2 EDF



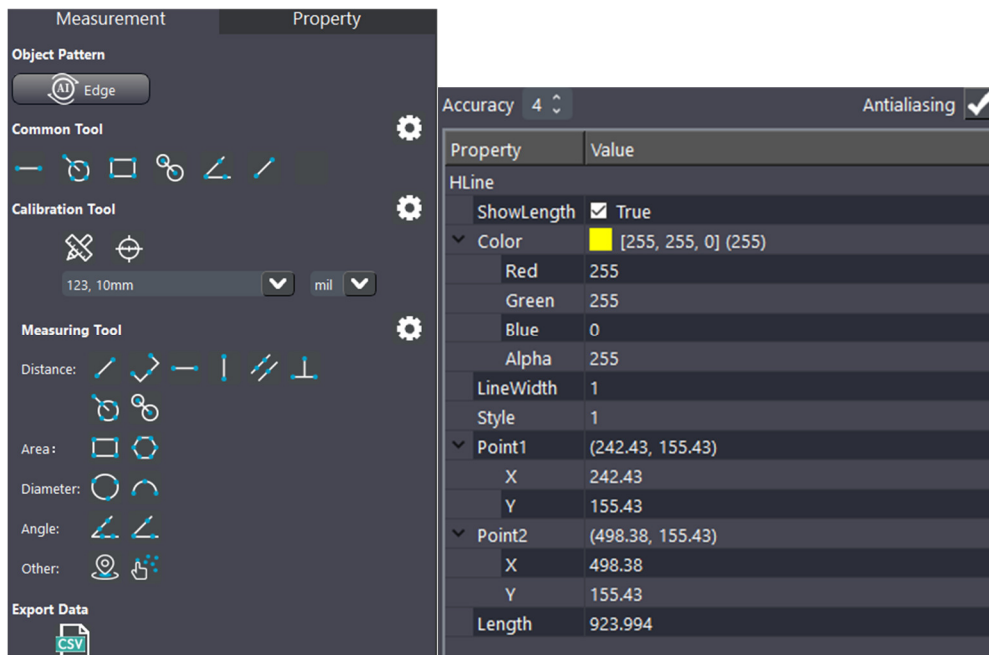
This function can replace the unclear part with the clearer part of the image of different focal planes, so as to get a clear picture with a large depth of field, and the direction of the measured object must not be moved during the process of image fusion, so as to avoid the phenomenon of misalignment after the image is synthesized.

1. Click on the [Depth of Field Fusion](#) tool and mouse click on the different focal planes in the image display area to set the start position and end position respectively;
2. Set the capture interval, the larger the value of the capture interval, the fewer the number of captures;
3. Sets the crawl wait interval in ms;
4. Click [Start](#), when the value of the current progress is the same as the value of the number of snapshots, the interface displays a picture, and there is a prompt to complete the synthesis and finish the depth of field synthesis.
5. Save the synthesized picture: the screen displays the synthesized picture, and then click the "Take Picture" icon in the menu,  specify the path and name, and then click OK.
6. Clicking the [Reset](#) button resets all setup parameters.



7. Operate the Depth of Field Synthesis function, the focus mode will be automatically switched to manual mode, the image display area shows the current synthesized image: e.g. Tab2*, click the Save button to save the current image.

8 Measurement

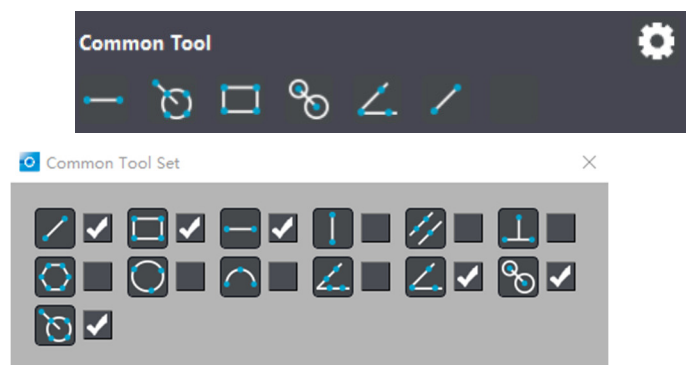


8.1 The Object Model

The measurement graph will realize the automatic edge seeking function when the edge detection mode is turned on.

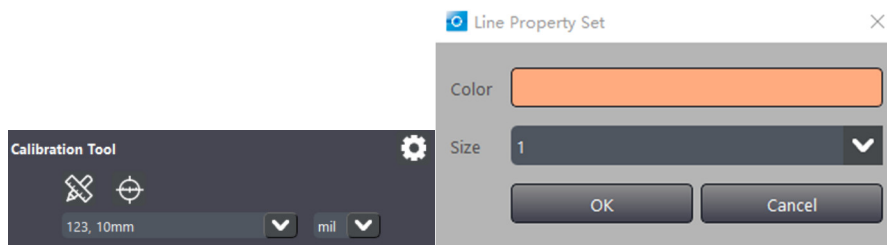
8.2 Commonly used tools

Select a commonly used measurement tool for measurement. Click the Setup button on the right to set the displayed measurement tools.



8.3 Calibration tools

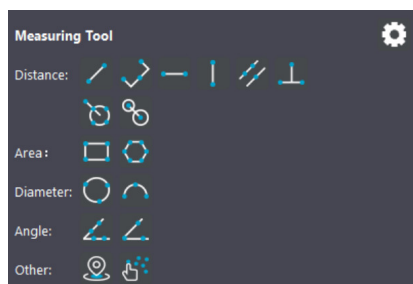
Select Line Calibration or Circle Calibration to calibrate on the screen. Enter the name and actual size to complete the calibration.



Pulling down the record bar gives you the option to delete the calibration data. Pulling down the right unit bar allows you to set the unit of the measurement data on the screen, with pixl, um, mm, and mil units available.

Click the Setup button to set the color and size of the calibration line.

8.4 Measuring tools




Select the desired tool to measure.

Click on the Settings button to set the specific style of the measurement tool.

Number	Name	Length	Distance	Perimeter	Area	Angle	Radian	Width	Height	Radius	Diameter	Position	SerialNum
1	HLine	923.9940mil											
2	HLine	851.9826mil											

Click on the blue arrow at the bottom of the screen to view the current measurement data

8.5 Exporting data

Click on the export button  to export the data to your computer in csv format.

8.6 Properties

Property	Value
Accuracy 4 <input type="text"/>	
Antialiasing <input checked="" type="checkbox"/>	
HLine	
ShowLength	<input checked="" type="checkbox"/> True
Color	<input type="color" value="#ffff00"/> [255, 255, 0] (255)
Red	255
Green	255
Blue	0
Alpha	255
LineWidth	1
Style	1
Point1	(242.43, 155.43)
X	242.43
Y	155.43
Point2	(498.38, 155.43)
X	498.38
Y	155.43
Length	923.994

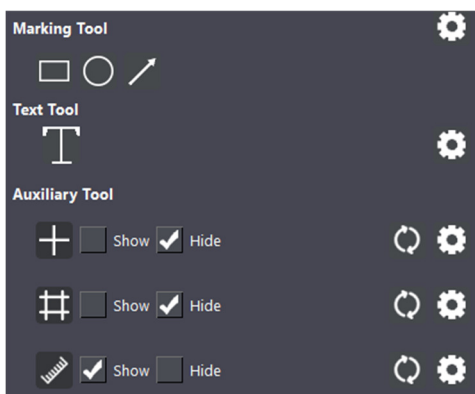
Click on the Properties button to access the Properties Bar.

Select the number of decimal display digits for screen data, 0-4 digits adjustable.

Choose whether to turn on anti-aliasing

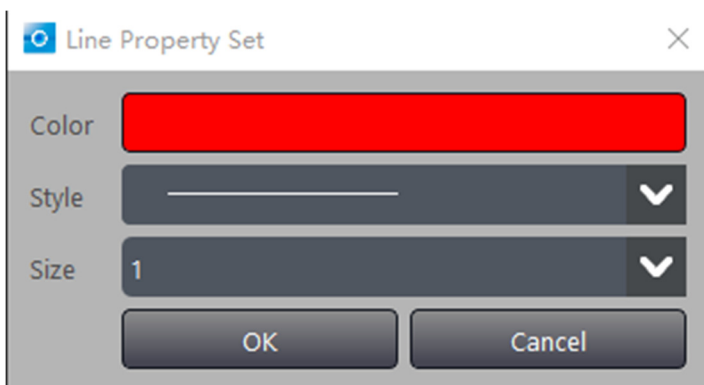
The data column shows the details of the current measurement data.

9 Annotate




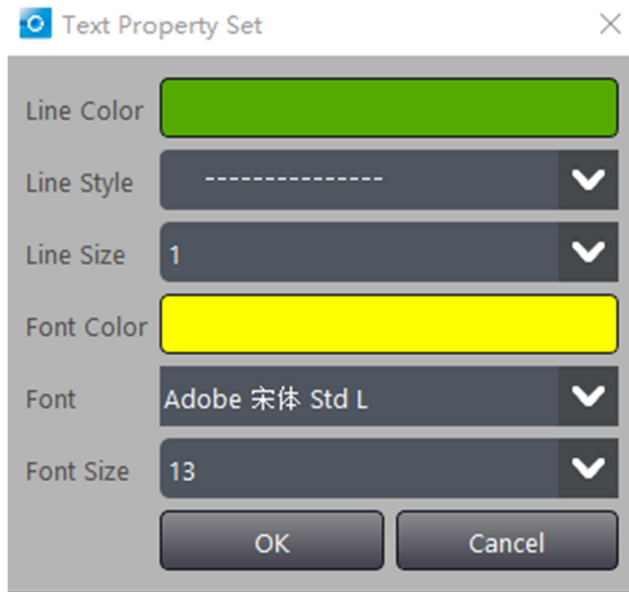
9.1 Marking tools

Select Rectangle or Circle to mark the image; click the [Set](#) button to set the line properties.



9.2 Text Tools

Clicking on the "Text"  icon, you can annotate the measured content. The left mouse button allows you to drag the arrows and annotations to change their position. Click on the [settings](#) button to select text and arrow properties.



9.3 Auxiliary Line Tool

Select to display crosshairs, gridlines, or scale for display. Only one type of crosshairs and gridlines can be selected for display. Click the [Setup](#) button to set the crosshairs and gridlines.

