KoPa View User Manual

Table of Contents

1. Main Operation Interface

Shortcut Panel

Shortcut Tools

⚙	Camera Settings	Click to open the camera property adjustment panel or preference settings panel
◁	Mirror	Mirror the image in the currently selected screen
△	Flip	Flip the image in the currently selected screen
🔒	Freeze	Freeze the currently displayed image
▷	Select and Move	Select annotations, text, measurements, or other objects for further operations (e.g., move, delete). Supports single selection and area selection
🎨	Annotation Settings	Open the color palette to set drawing tools and text color. Adjust font size, line type, and line width
✎	Annotation Tool	Annotate the current image
T	Insert Text	Add text to the current image
Ⲯ	Calibration	Set/calibrate values or select numerical values
↔	Measurement Tools	Perform measurements in the preview window
⊕	Crosshair	Locate the center of the current image
⊞	Grid	Set the number and spacing of grids for the current image
🗑	Delete Selected Objects	Delete the selected "object"
↩	Undo	Undo the last operation performed on an "object"
↪	Redo	After undoing, reapply the operation to restore the previous state

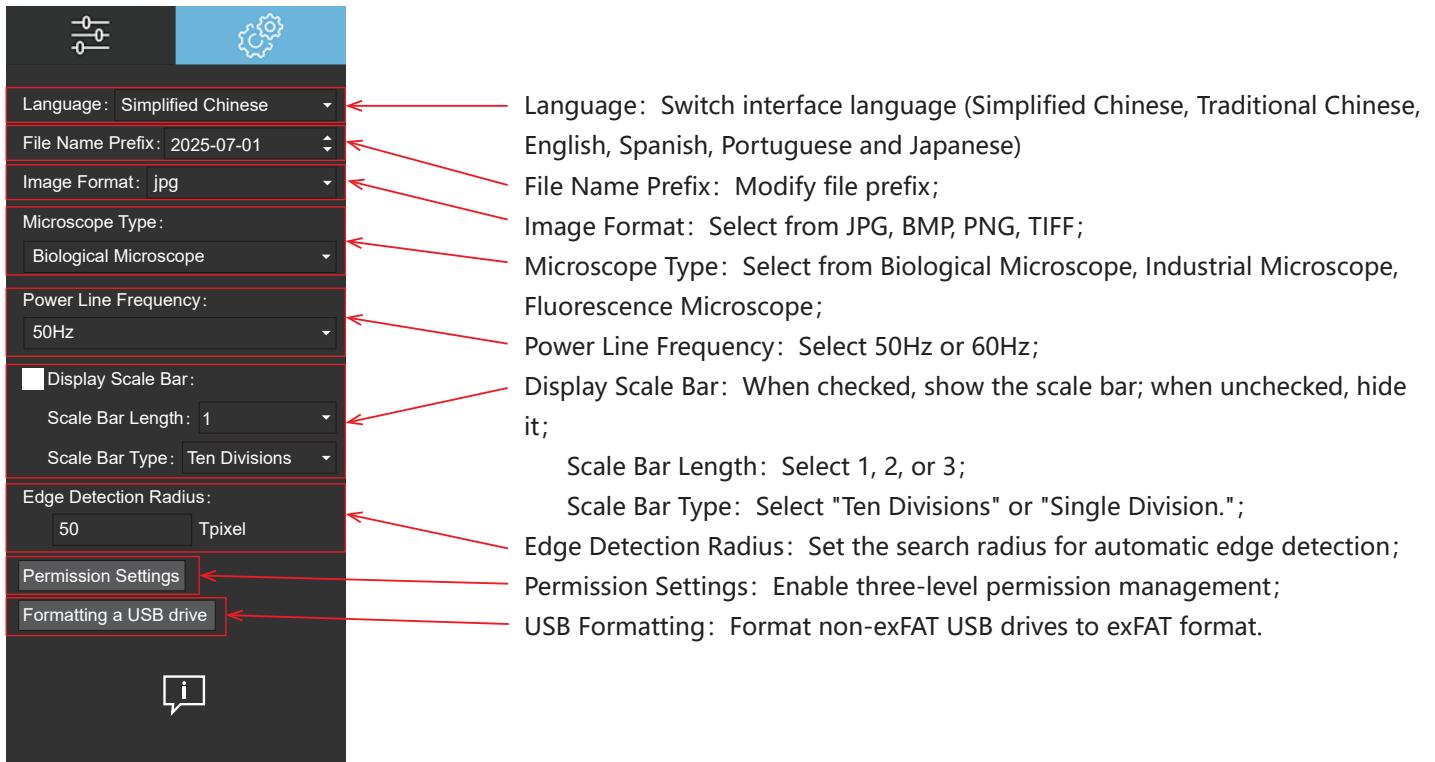|		
[AF]	Focus	Auto Focus (only available for models with a motor)
☀	Illumination Control	Control the light source on/off and adjust its brightness (only available for CE210T series)
≋	EDOF	Automatically extract and merge the clearest areas of the current image. Click 'Snapshot' to save both the pre-fusion and post-fusion images simultaneously.
🔍	Magnifier	Zoom in on parts of the current image
⌨	Soft Keyboard	Keyboard
📷	Snapshot	Capture the current screen (only available when a USB drive is inserted, supports exFAT, FAT32)
📹	Record	Record a video of the current screen in MP4 format (only available when a USB drive is inserted, supports exFAT, FAT32)
📁	File Browser	File Management (only available when a USB drive is inserted, supports exFAT, FAT32)

2. Camera Properties Adjustment

Click the " ⚙ " icon to open the settings panel
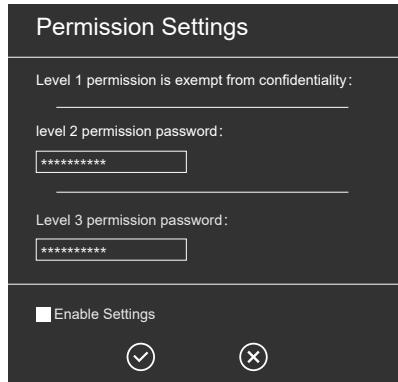

☀	Expected luminance	Drag to adjust target luminance , or click "-" or "+" to fine-tune. Click the "Target luminance " icon to restore the default value. (Only effective in auto-exposure mode.)
[AE]	Auto Exposure	(When checked, the camera automatically adjusts exposure based on the environment. When unchecked, manually adjust "Exposure Time" or "Gain"
◣	Exposure Time	Drag to adjust exposure time, or click "-" or "+" to fine-tune. (Ineffective in auto-exposure mode.)
ISO	ISO Sensitivity	Drag to adjust gain, or click "-" or "+" to fine-tune. (Ineffective in auto-exposure mode.)
[AWB]	Auto White Balance 🟥 White Balance-R 🟦 White Balance-B	When checked, the camera automatically adjusts white balance based on the environment. When unchecked, drag to adjust R and B values, or click "-" or "+" to fine-tune.
◑	Contrast	Drag to adjust contrast, or click "-" or "+" to fine-tune. Click the "Contrast" icon to restore the default value
⁙	Saturation	Drag to adjust saturation, or click "-" or "+" to fine-tune. Click the "Saturation" icon to restore the default value
◕	Hue	Drag to adjust hue, or click "-" or "+" to fine-tune. Click the "Hue" icon to restore the default value.
△	Sharpness	(Drag to adjust sharpness, or click "-" or "+" to fine-tune. Click the "Sharpness" icon to restore the default value
∟	Gamma	Drag to adjust gamma, or click "-" or "+" to fine-tune. Click the "Gamma" icon to restore the default value
💾	Save Camera Settings when Powering off	Save current parameters as default
↺	Reset Camera Settings to Default	Reset all image property parameters to default or current values

3. Preference Settings

Click the " ⚙ " icon to open the Preference Settings panel

Language：Switch interface language (Simplified Chinese, Traditional Chinese, English, Spanish, Portuguese and Japanese)

File Name Prefix：Modify file prefix;

Image Format：Select from JPG, BMP, PNG, TIFF;

Microscope Type：Select from Biological Microscope, Industrial Microscope, Fluorescence Microscope;

Power Line Frequency：Select 50Hz or 60Hz;

Display Scale Bar：When checked, show the scale bar; when unchecked, hide it;

　　Scale Bar Length：Select 1, 2, or 3;

　　Scale Bar Type：Select "Ten Divisions" or "Single Division.";

Edge Detection Radius：Set the search radius for automatic edge detection;

Permission Settings：Enable three-level permission management;

USB Formatting：Format non-exFAT USB drives to exFAT format.

Level 3 Permissions

Click "Permission Settings," enter the password Set123 to access three-level permission management.

Set Permissions： Enter Level 2 or Level 3 password, check "Enable Settings," and click " ✓ " to confirm;

Cancel Settings： Uncheck "Enable Settings" and click " ✓ " to cancel.

Full software functionality, access to Level 3 features, ability to change Level 2 and Level 3 passwords.

Level 1: Do not require a password

Functionality will be restricted. You cannot create, edit, or delete calibration ; cannot adjust image properties; and cannot add, edit, or delete grid.

Level 2 : Functionality will be restricted.

Functionality will be restricted. Unable to create, edit, or delete calibration; however, the Level 2 Permissions password can be changed.

Level 3： Full software functionality, can change Level 2 and Level 3 passwords.

(Click the " ℹ " icon to open the Software Information panel
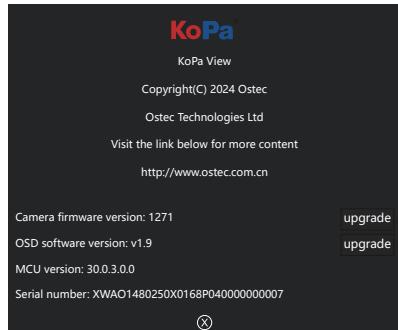
Software/Firmware Upgrade Requirements and Steps:

1.USB drive formatted to exFAT;

2.Store the software and firmware files in the root directory of the USB drive;

3.Software upgrade package format: XW_XXXX.zip. Module firmware version format: IMX-678_P04_V01XX.;

4.Click the "Firmware Upgrade" button on the interface. The screen will turn black for about 10 seconds during the upgrade. The display will resume once the upgrade is complete;

5.Click the "Software Upgrade" button on the interface. The screen will turn black for about 3 seconds during the upgrade. The display will resume once the upgrade is complete.
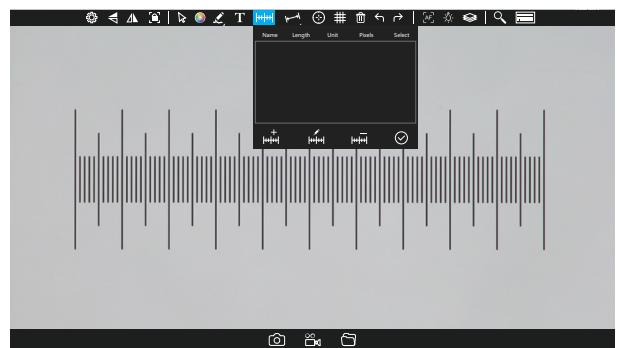
4. Methods of Calibration

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

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

Step 3: Click on " ⊞ " ;

Step 4: 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 "pixels" of the calibration table, as shown in the following figure:
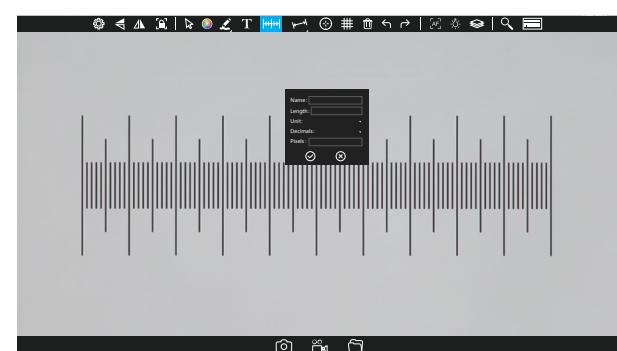

Step 5: Enter a name in the calibration table, such as 10X. In the calibration table, enter the actual length that just drawn on the micrometer, for example, the sample figure is drawn 100 DV, that is, 1mm, or 1000μm, then enter the "actual length" box to fill in the specified 1000, "unit" select "μm". 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.
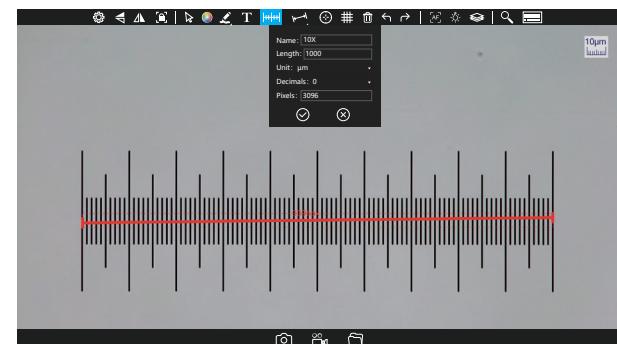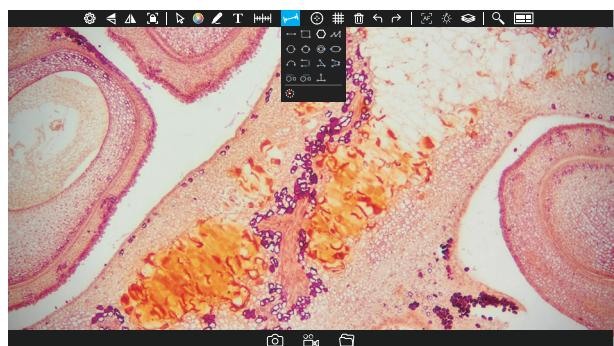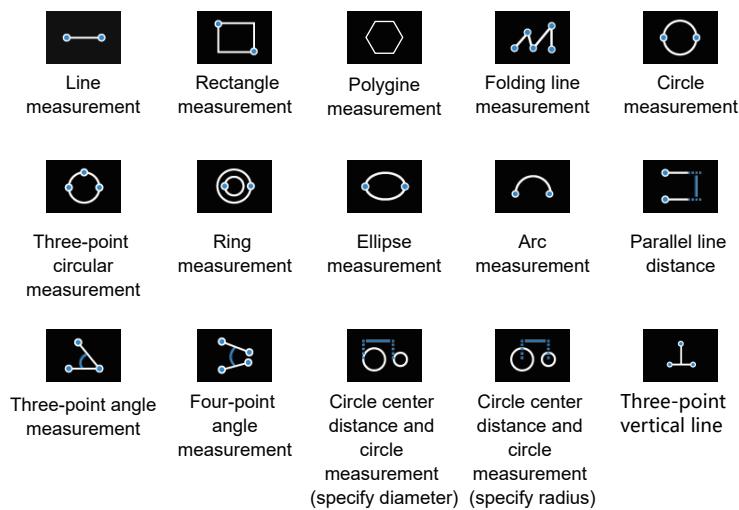
Step 6: Select the measurement tool to measure

First in the calibration table according to the actual use of the objective lens to select the calibration value, selected after clicking "confirm", as shown in the figure:
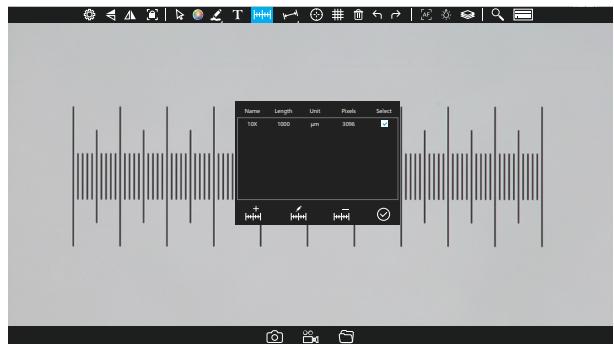

5. Measurement tools

Step 7: Click " ⊢→⊣ " to bring up the measurement tool table, as shown in the figure:

Line measurement	Rectangle measurement	Polygine measurement	Folding line measurement	Circle measurement
Three-point circular measurement	Ring measurement	Ellipse measurement	Arc measurement	Parallel line distance
Three-point angle measurement	Four-point angle measurement	Circle center distance and circle measurement (specify diameter)	Circle center distance and circle measurement (specify radius)	Three-point vertical line

6. Automatic Edge Searching ⟨ƒ⟩

Step 1: Click " ⊢→⊣ " to bring up the measurement tool table, and select the automatic edge detection " ⟨ƒ⟩ ";

Step 2: Choose a measurement tool, such as the parallel line distance measurement " ⊥ ", move the mouse to the measurement position, and it will automatically detect the edge of the measurement location.
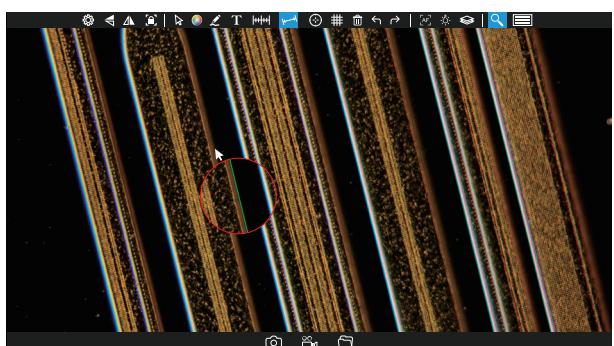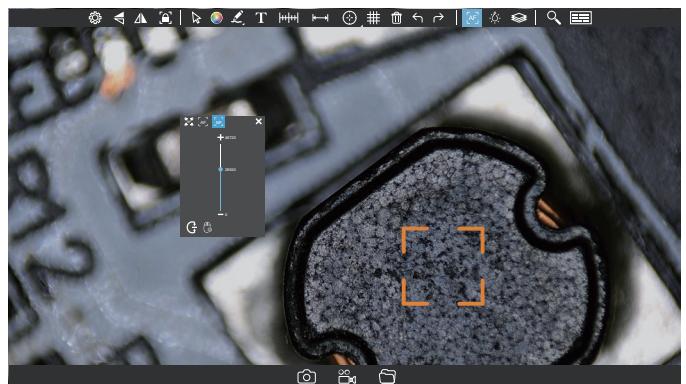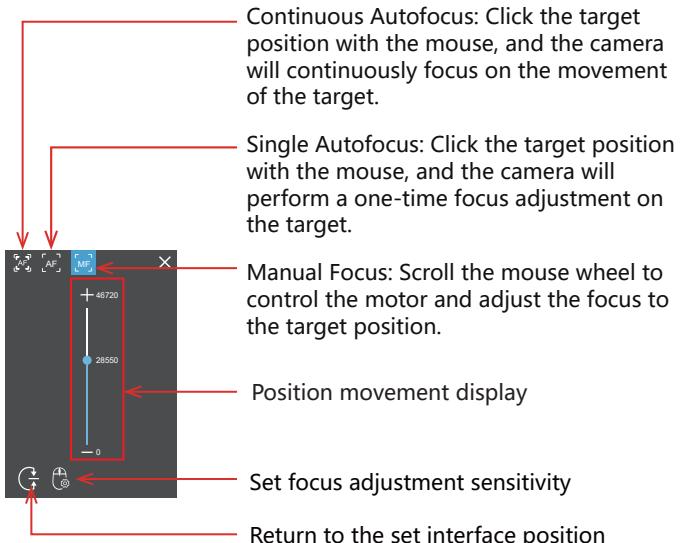
7. Grid ⊞

Grid Measurement Steps:

(1) Click " ⊞ " to bring up the grid settings table;

(2) Set the number of grids (maximum 25), spacing, grid line width, color, etc., and click confirm " ⊘ "; if the target position is not achieved, drag the grid lines to the target position with the mouse.

(3) After completing the measurement, click " ⊗ ", and then click " ⊞ " to cancel the grid measurement.

## 8. Focus (Motorized models only) ⌞AF⌟

Operation Steps:

(1) Click the " ⌞AF⌟ " button to bring up the focus settings window (movable);

(2) Options include continuous autofocus, single autofocus, and manual focus;

Continuous Autofocus: Click the target position with the mouse, and the camera will continuously focus on the movement of the target.

Single Autofocus: Click the target position with the mouse, and the camera will perform a one-time focus adjustment on the target.

Manual Focus: Scroll the mouse wheel to control the motor and adjust the focus to the target position.

Position movement display

Set focus adjustment sensitivity

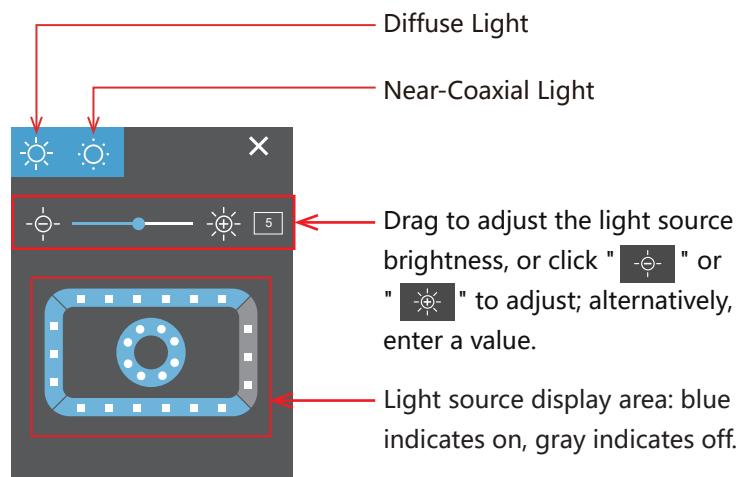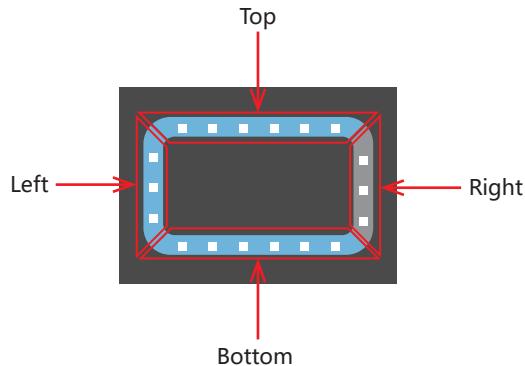Return to the set interface position

9. Illumination Controller(CE210T Series Only) ☼

Operating Steps:

(1) Click " ☼ ", a small light source control window will appear (its position can be moved);

(2) Click " ☼ " to turn on the four-zone diffuse light source. Drag to adjust the brightness, or click " ⊖☼ " or " ☼ " to adjust; alternatively, enter a numerical value (adjustable in 1-30 levels), then click " ☼ " to turn off the light source
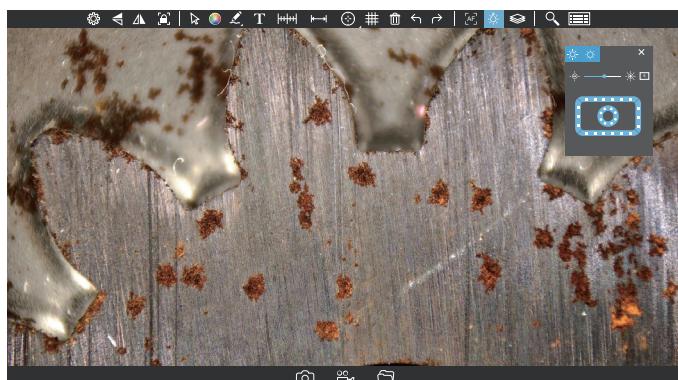
Schematic Diagram of Four-Zone Diffuse Light Source

Top

Left

Right

Bottom

Diffuse Light

Near-Coaxial Light

Drag to adjust the light source brightness, or click " [⊙] " or " [☀] " to adjust; alternatively, enter a value.

Light source display area: blue indicates on, gray indicates off.

(3) Click " [⊙] " or click " [◉] " to turn on the near-co-axial light source. Drag to adjust the brightness, or click " [⊙] " or " [☀] " to adjust; alternatively, enter a numerical value (adjustable in 1-30 levels), then click " [⊙] " to turn off the light source.

10. EDOF (For Motorized Models Only) [⬙]

Operating Steps:

(1) Click the " [⬙] " button to display a dual-screen view. The left screen matches the focal plane under the microscope, while the right screen shows the fusion result.

(2) Select the fusion type: Manual Fusion, 1/3 Travel Fusion, 2/3 Travel Fusion, or Full Travel Fusion;

(3) Click the Start " [▶] " button, and click the End " [◉] " button.

Manual Fusion: Adjust the travel by scrolling the mouse wheel for fusion. 1/3 Travel Fusion, 2/3 Travel Fusion, and Full Travel Fusion: The software automatically performs fusion, and a progress bar is displayed during the process;

(4) Click the Capture " [📷] " button to automatically save images from both the left and right screens. Click the " [📁] " button to exit this function, or click the " [✕] " button to open the file explorer and export the images.
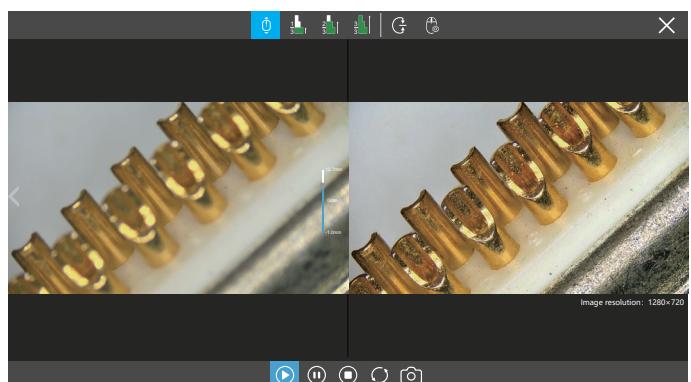
[▶]   [⏸]   [◼]   [↻]
Start EDOF   Pause EDOF   End EDOF   Refresh EDOF
                                       Window

[📷]
Snapshot

Image resolution: 1280×720

[⬙] **Manual Fusion**

Control the travel by scrolling the mouse wheel to scan and fuse the target area.

[⅓] **1/3 Travel Fusion**

Automatically scans and fuses from the initial position to one-third of the physical maximum travel.

[⅔] **2/3 Travel Fusion**

Automatically scans and fuses from the initial position to two-thirds of the physical maximum travel.

[3/3] **Full Travel Fusion**

Automatically scans and fuses the entire physical maximum travel of the camera.
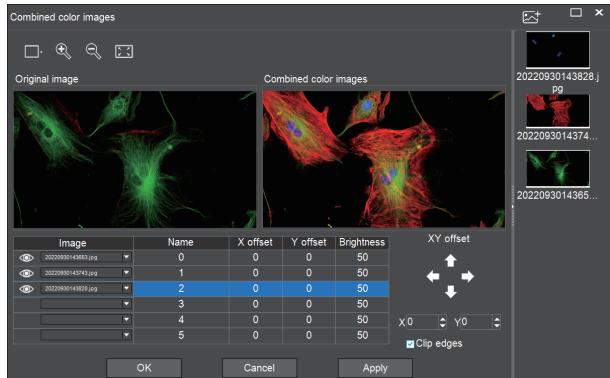
[⟳] **Return to Set Interface Position**

[🖱] **Set Focus Sensitivity**

11. Combined color images(Microscope Type: Fluorescence Microscope only)

Color fluorescent images can be quickly combined.

Note: Please import images with the same resolution, otherwise the image import will fail.

📷	Live image taking
▭	Preview window setting: double window to display original image and combined channel image separately, single window to display combined channels image only
🔍+	Image Zoom
🔍-	Image reduction
⛶	Adapts to screen size
🖼+	Import images

Allows direct input of X, Y, and brightness values for fine adjustment.
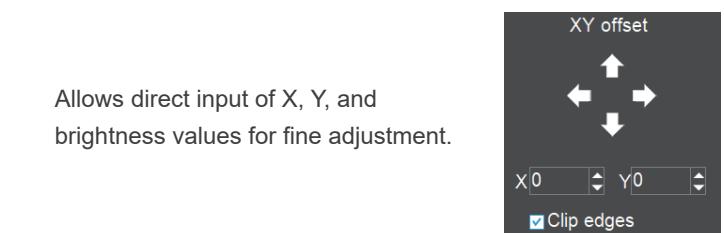
12. Image Browser

Click " 📁 " to enter the image browser. The left panel shows folders in the USB drive（USB drive must be formatted in exFAT），and the right area displays images.
Captured images are automatically saved in the "Pictures" folder.
Captured video are automatically saved in the "video" folder.