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Moticam 1080 (N)

Camera on-board software

Manual Instructions

1. How to connect and use the MOTICAM 1080 (N) camera

The MOTICAM 1080 (N) is quite flexible and can be used in 2 main ways, with each different application requiring different accessories.

1.1 MOTICAM 1080 (N) camera with built-in XCamView software works independently, controlled by the mouse and displayed on the HDMI monitor.

This application requires a MOTICAM 1080 (N) camera, HDMI interface monitor, HDMI cable, USB mouse. The setup steps are as follows:

- Connect the MOTICAM 1080 (N) camera to a monitor equipped with an HDMI port using the supplied HDMI cable.
- Connect the supplied USB mouse to the USB Video port on the MOTICAM 1080 (N) camera.
- Insert a microSD card into the MOTICAM 1080 (N) camera.
- Turn on the MOTICAM 1080 (N) camera's power switch by plugging the supplied power supply into the power connector.
- Turn on the monitor to view the camera's live video in the XCamView software.

The camera control screen can be called up by moving the mouse to the right, top and bottom of the screen. By moving the mouse to the right, top and bottom of the screen, different interfaces for camera control can be called up and different operations can be performed on the camera.

1.2 MOTICAM 1080 (N) camera connected to a PC device via USB cable, used with Motic Images Plus 3.1 software

This application requires a MOTICAM 1080 (N) camera, a PC device (with Motic Images Plus 3.1), and a USB cable. The setup steps are as follows:

Install Motic Images Plus 3.1 on your PC device.

Plug one end of the USB cable into the USB Video port of your MOTICAM 1080 (N) camera and the other end into the USB port of your PC.

Turn on the HDMI camera's power switch by plugging the supplied power supply into the power connector.

Launch Motic Images Plus 3.1. Normally, the PC-based software automatically recognizes the MOTICAM 1080 (N) camera. In Motic Images Plus 3.1, start the Motic Dynamic Program module to select the MOTICAM 1080 (N) camera by clicking on the camera name in the **video device**.

2. MOTICAM 1080 (N) camera software interface and function brief introduction

2.1 XCamView Interface

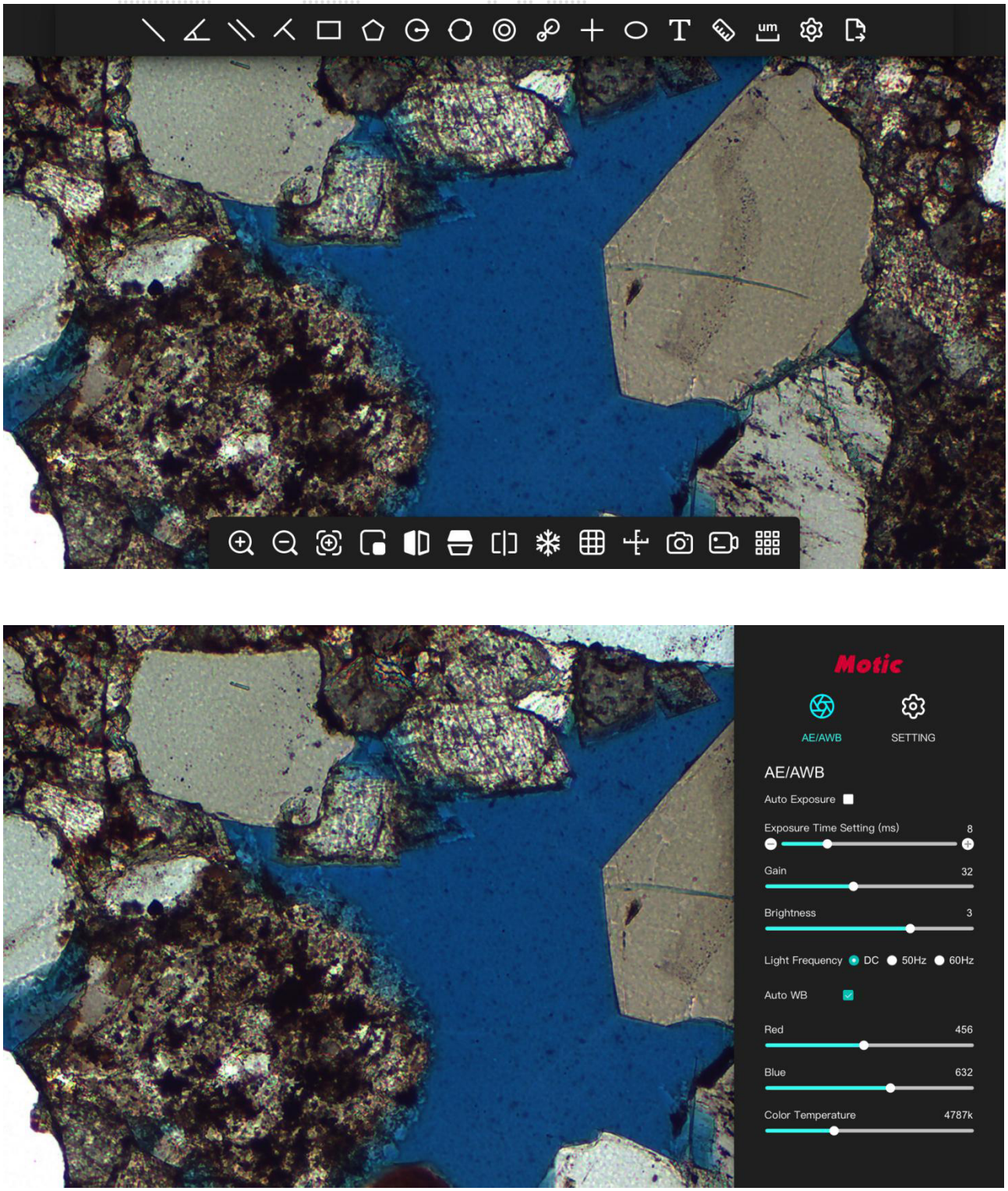
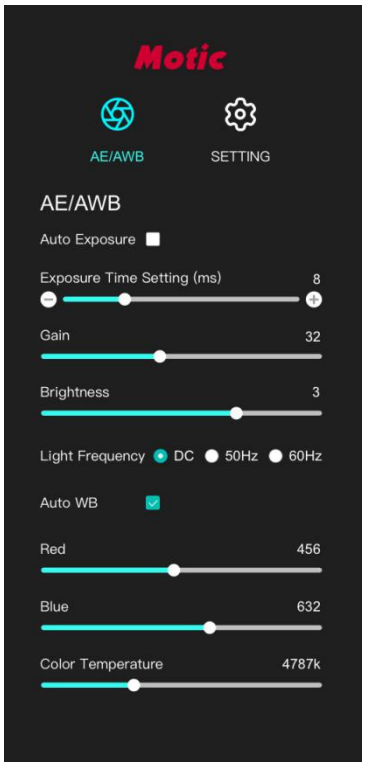


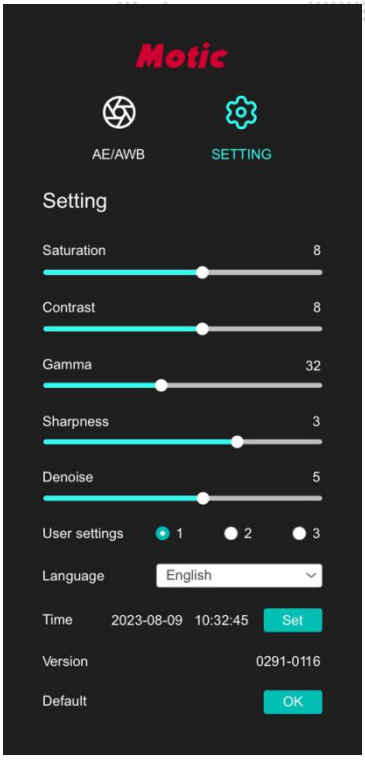
Figure 2.1 Camera integrated control interface

The **MOTICAM 1080 (N)** Integrated Camera Control screen in Figure 2.1 consists of the **Camera Control Panel** on the right side of the video window, the **Measurement Toolbar** at the top of the video window, and the **Camera Integrated Control Toolbar** at the bottom of the video window. Camera Integrated Control Toolbar" at the bottom of the video window.

Take note of:	
1	When the user moves the mouse to the right side of the video window, the "**Camera Control Panel**" will pop up automatically;
2	When the user moves the mouse to the bottom of the video window, the "**Camera Integrated Control Toolbar**" will pop up automatically;
3	The "**Measurement Toolbar**" pops up automatically when the user moves the mouse to the top of the video window. When the user enters the measurement mode, the "**Camera Integrated Control Toolbar**" will not pop up automatically, and the "**Camera Integrated Control Toolbar**" can only be operated when the user exits the current measurement mode here, the exit mode operation is to move the mouse to the bottom of the video window, and the "**Camera Integrated Control Toolbar**" will pop up. (In this case, to exit the mode, move the mouse to the bottom of the video window, and the pop-up will show the operations of return, undo, resume, clear screen and take photo in the measurement mode, and then click return to exit the measurement mode.)

2.2 Camera Control Panel" on the right side of the video window

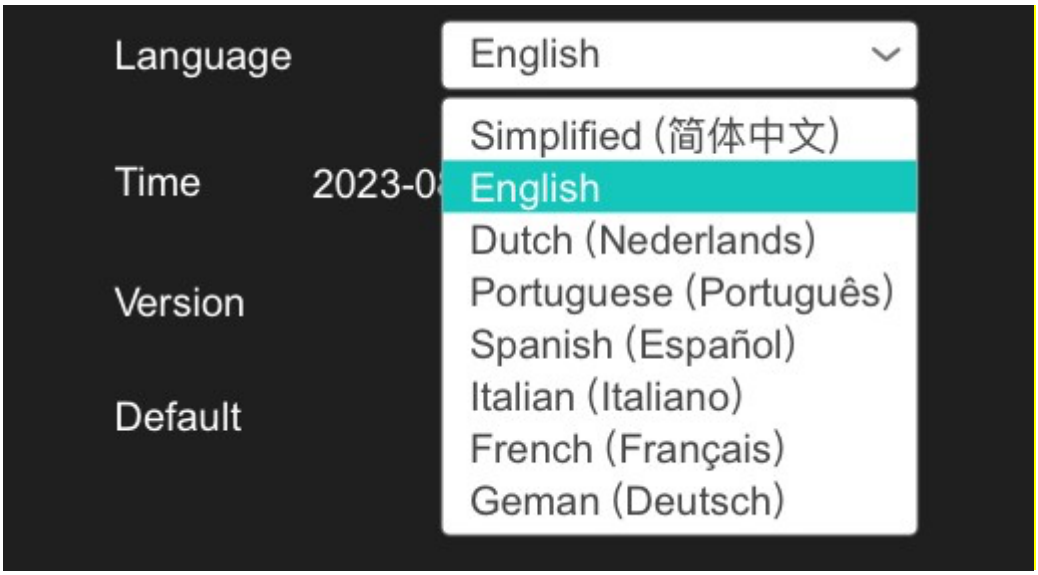
Camera Control Panel	Functionality	Functional Description
	**Automatic Exposure**	Select Auto Exposure and the system will automatically adjust the exposure time.
	Exposure Time Setting (ms)	Effective when Auto Exposure is unselected, dragging left and right decreases and increases the exposure time and decreases or increases the image brightness.
	Gain	Adjusting the analog gain of the sensor to reduce or increase the brightness of the video while noise is reduced or increased.
	Brightness	Drag the slider to the right to increase the brightness, to the left to decrease it.
	Light Frequency	To eliminate the 50Hz, 60Hz light source caused by image banding or flicker; direct current (DC) light source, there is no light ups and downs, so there is no need to compensate for light source flicker.
	Auto WB	A single click will calculate and adjust the white balance of the video.
	Red	Dragging left or right decreases or increases the red component in the video.
	Blue	Dragging left or right decreases or increases the blue component in the video.
	Color Temperature	Drag the slider to the right to increase the color temperature and to the left to decrease it.



Saturation	Decrease or increase the saturation of the current video.
Contrast	Drag the slider to the right to increase contrast, to the left to decrease contrast.
Gamma	Adjust the gamma of the video; drag the slider to the right to increase the gamma, to the left to decrease it.
Sharpness	Sharpen the current video.
Denoise	Dragging left or right decreases or increases the hardware's noise reduction level.
User settings	With three templates, you can set up different template parameters, to choose to switch the current parameters.
Language	Setting the language of the camera software.
Time	Show the current time of the camera software, you can set to correct the camera time.
Version	Viewing camera version information.
Default	Restore all settings in the imager's control panel to the imager's factory defaults.

The "**Camera Control Panel**" is used to control the camera to get the best video for the situation, and automatically pops up when the mouse is moved to the right of the video window.

2.2.1 The language setting function is described in detail below:



2.2 Camera language setting screen

Simplified(简体中文)	Set the current language of the entire software to Simplified Chinese.
English	Set the current language of the entire software to English.
Dutch (Nederlands)	Set the current language of the entire software to Dutch.
Portuguese (Português)	Set the current language of the entire software to Portuguese.
Spanish (Español)	Set the current language of the entire software to Spanish.
Italian (Italiano)	Set the current language of the entire software to Italian.
French (Français)	Sets the current language of the entire software to French.
German (Deutsch)	Sets the current language of the entire software to German.

2.2.2 The time function is described in detail below:

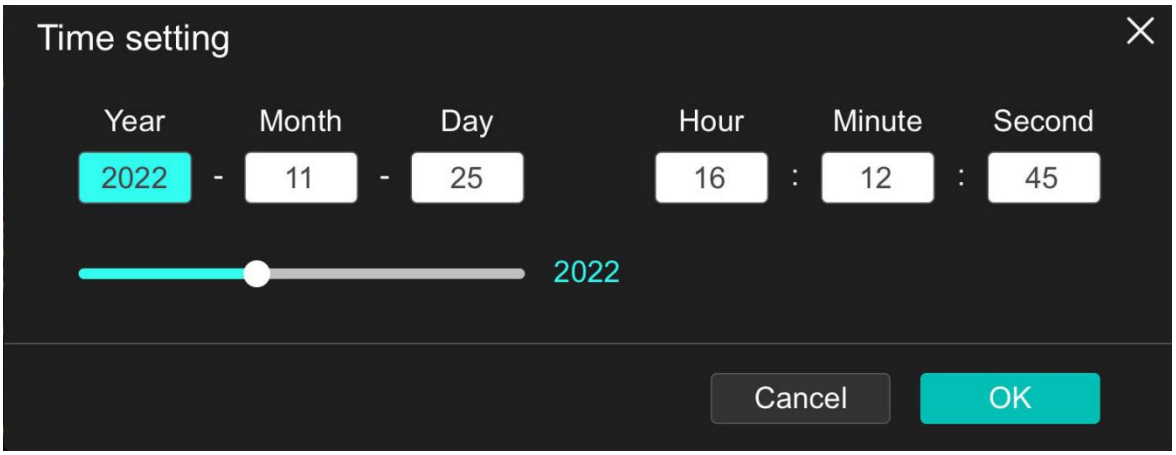


Figure 2.3 Camera Time Settings Screen

Open the time setting, mouse click on each time unit, the user can adjust the slider under each clock parameter year: month: day: hour: minute: second: to set the exact clock parameters.

Year	Adjust the slider to change the current year time.
Month	Adjust the slider to change the current month time.
Day	Adjust the slider to change the current date and time.
Hour	Adjust the slider to change the current clock time.
Minute	Adjust the slider to change the current minute time.
Seconds	Adjust the slider to change the current second time.

2.3 The "Measurement Toolbar" in the upper part of the video window

Move the mouse to any point near the top centre of the current video window to display **the Measurement Toolbar**. The commands are explained below:

Icon	Functionality	Icon	Functionality
	Drawing arbitrary lines		Drawing double circles and their center distance
	Measuring Angle		Marking crosshairs and their coordinates
	Drawing parallel lines		Drawing Ellipses
	Measuring point-line distances		text markup
	Drawing Rectangles		Perform image data calibration
	Drawing polygons		Click on it to display the ruler in the video window, click on it again and it will not be displayed
	Circle Drawing		Measurement parameter setting
	three-point circles		Export of measurement results
	Drawing Concentric Circles		

Attention：

1) When the user enters the measurement mode by clicking on the Measurement Toolbar, the Camera Integration Toolbar will not automatically pop up even if the mouse is moved to the bottom of the video window. Only when the user selects the Back button on the Measurement Control Button at the bottom of the video in Test Mode to exit the current Measurement Mode can the Camera Integrated Control Toolbar be operated.
2) During the measurement process, the "Measurement Control Button"  will pop up automatically when the mouse is moved to the bottom of the video window, which can be used to return, undo, restore, clear the screen and take photos of the current measurement results.

3) The scale function needs to be turned on in non-test mode.

The calibration function is described in detail below:

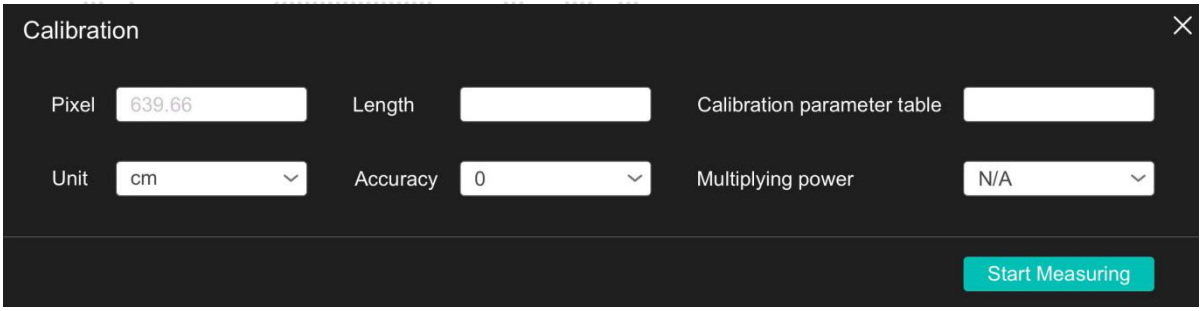


Figure 2.4 Camera Calibration Settings Screen

Pixels	Displays the pixel units of the length of the line drawn when the record was calibrated.
Work unit	Select the unit of length used for calibration data in cm, mm, un, nm, inch, and mil.
Lengths	Fill in the length of the actual calibrated item and fill in the appropriate value according to the unit selection.
Accurate	Set the measurement data to be accurate to a few decimal places.
Calibration parameters	Sets the name of the data standard for this calibration.
Magnification	Selects the objective magnification of the microscope for the current calibration situation.

Attention：

Calibration cannot be performed in the measurement mode, and you need to exit the measurement mode to perform calibration.

The setting function is described in detail below:

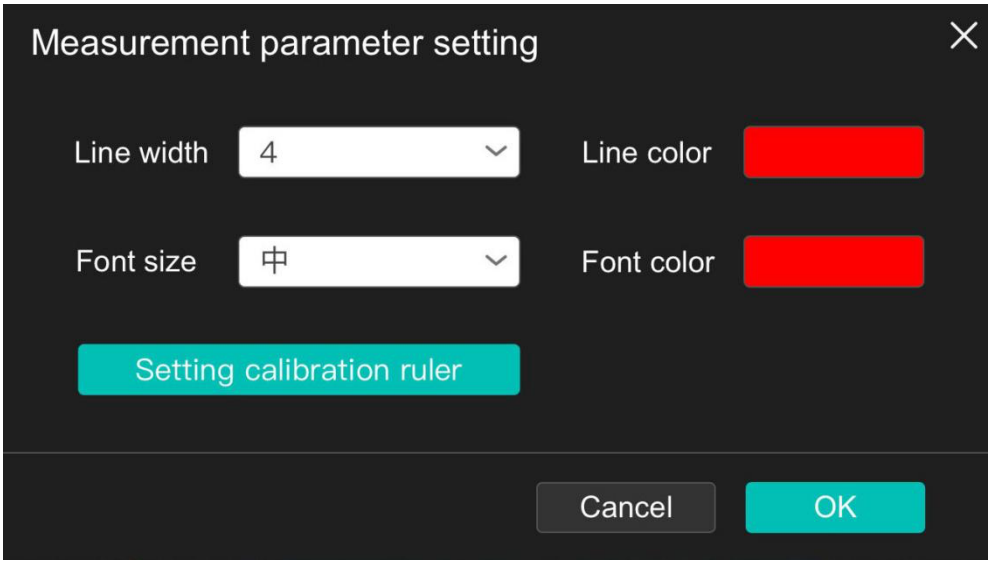


Figure 2.5 Camera Measurement Parameter Setting Screen

Line width	Defines the width of the line used to measure the calibration.
Colour of thread	Defines the colour of the line used for measurement calibration.
Font size	Defines the size of the font used for measurement calibration.
Font colour	Defines the colour of the font used for measurement calibration.
Setting the Standard Ruler	Used to select different calibration data standards or delete unwanted calibration data standards.

The export function is described in detail below:

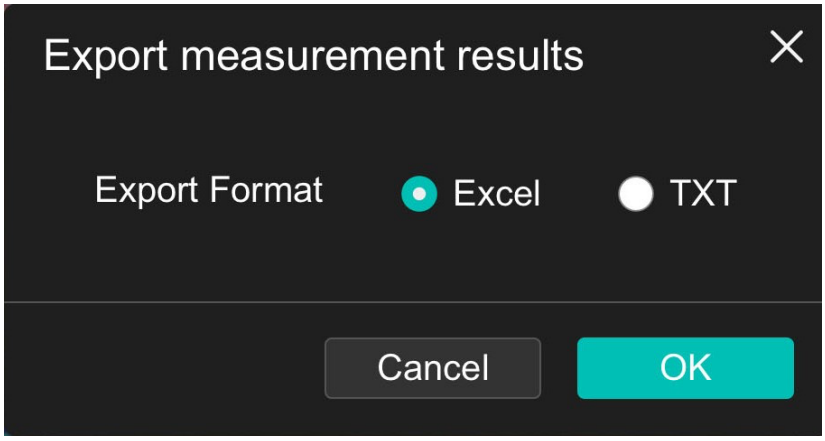


Figure 2.6 Imager Measurement Data Export Screen

EXCEL	Measurement data is exported in **EXCEL** format and saved in a TF card;
TXT	Measurement data is exported in **TXT** format and saved in a TF card.

Attention：
When exporting measurement data, the video interface does not require exiting the measurement mode. Exiting the measurement mode will empty the measurement data.

2.4 Integrated Camera Control Toolbar" at the bottom of the video window

Icon	Functionality	Icon	Functionality
	4X Video window magnification up to 4X		Video Live Image Freeze
	1X Video window reduction up to 1X		Grid lines superimposed on the live video image
	Intercept video real-time image local area to zoom in		Scale superimposed on video live image
	Select a photo album image and zoom the live video screen to display it in a window in any corner of the monitor against the photo album image.		Take video photos
	Horizontal mirroring effect		Record live image video
	Vertical mirroring effect		Browse images or videos on the SD card
	Comparison of live video images with pictures saved on SD card		

The playback function is described in detail below:

The main screen of the album:

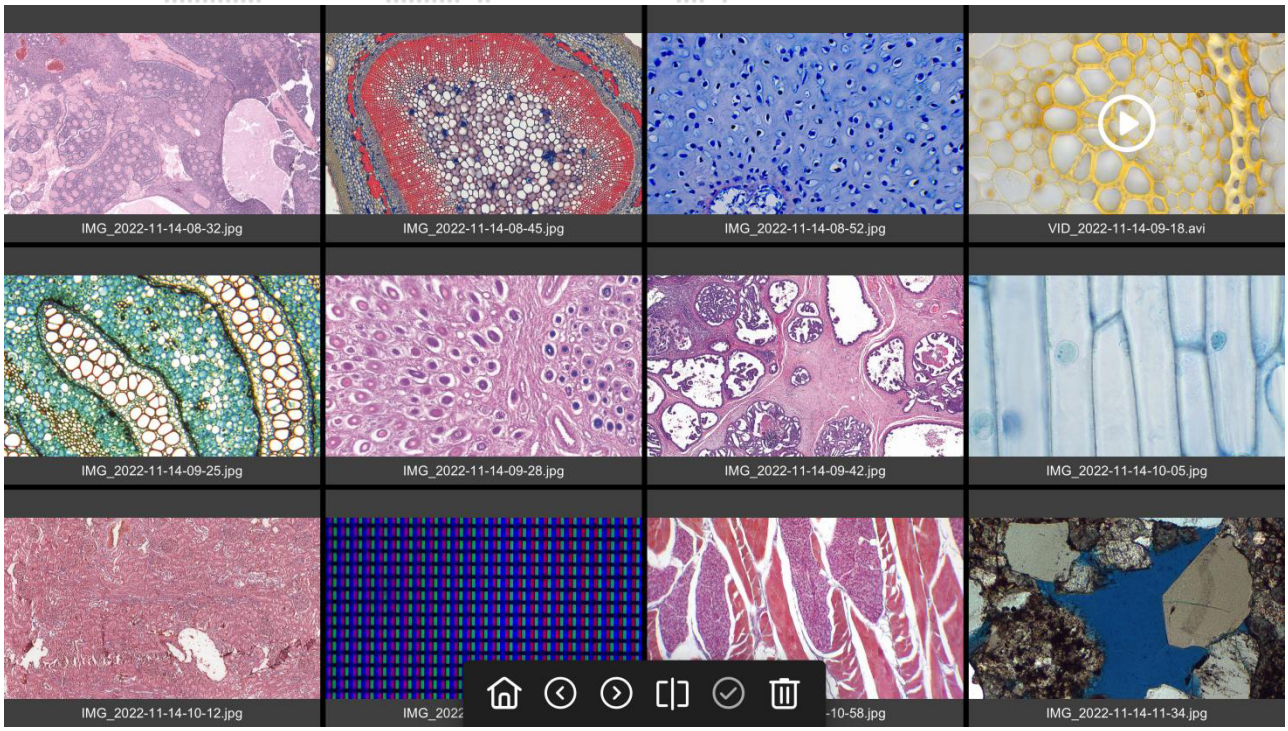


Figure 2.7 Camera Album screen

Icon	Name	Functionality
	homepage	Return to the main video screen
	preceding page	Album page up
	next page	Album page down
	comparison	Select two different images to compare
	unanimous	Select all images on that page of the album
	removing	Delete selected album images

Image view page:

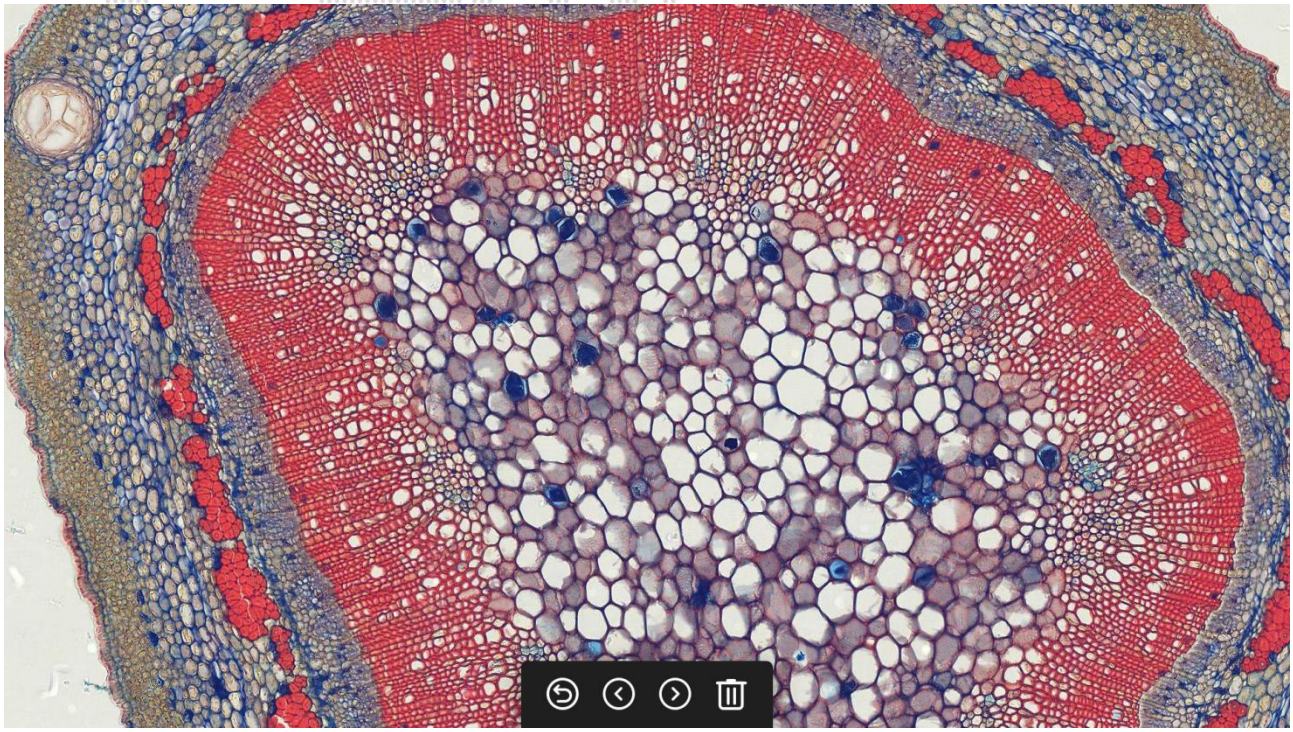


Figure 2.8 Camera Picture Browsing Interface

Icon	Name	Functionality
	Come back	Return to the main album screen
	Preceding page	Previous Image
	Next page	Next picture
	Removing	Delete the current picture

Video Viewing Page:

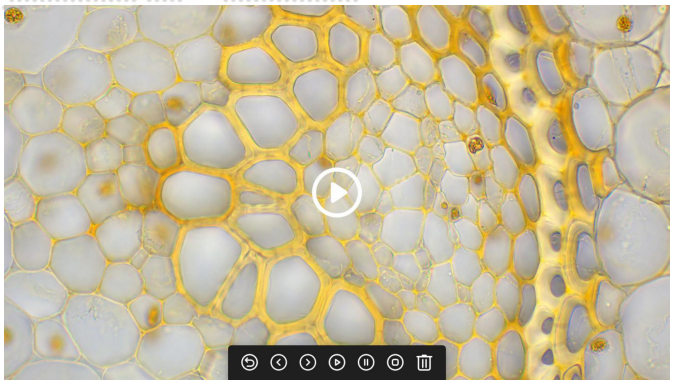


Figure 2.9 Camera Video Browsing Interface

Icon	Name	Functionality
	Come back	Return to the main album screen
	Preceding page	Previous Video
	Next page	Next video
	Playable	Play the current video
	Pause	Pause the current video and keep the playback progress bar
	Cessation	Stop playing the current video and reset the progress bar
	Removing	Delete the current video