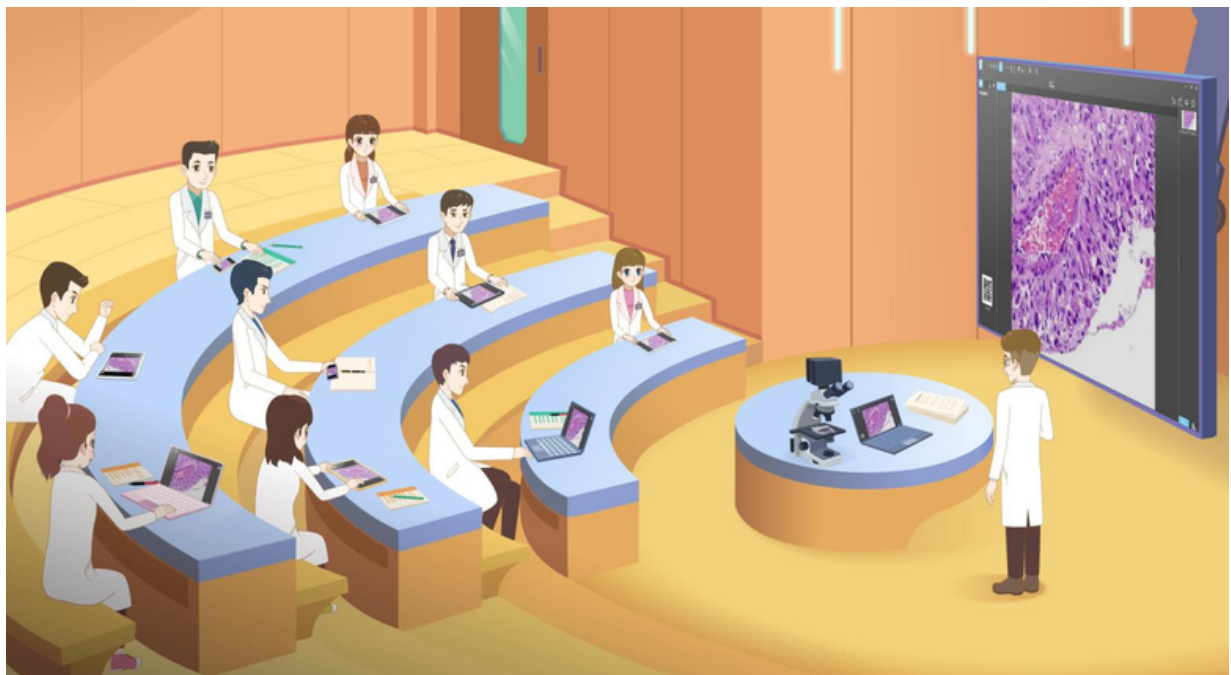


5G WiFi Multi-Viewing Workstation

MV60

User's Manual



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Chapter 1 Software for Windows - KoPa WiFi Lab

1.1 Software Operating Environment Requirements

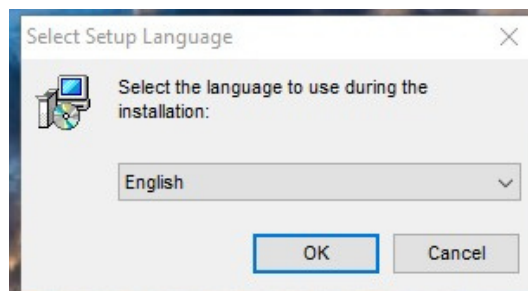
System	CPU	Hard Disk	Memory	Graphics Card	Network Card
Windows 7, 10, 11	i7 8th-generation or later version	512GB or more	16GB or more	Discrete graphics card (NVIDIA GeForce)	10/100/1000M Self-adaptive

Note: Make sure the workstation is powered on and properly connected before running the software.

- Software installation requires registry files, which may be blocked by some anti-virus software, such as the pop-up prompt whether to allow installation, must be allowed and continue.
- The software may be blocked by some anti-virus software during operation, so it can't be used normally. It is recommended to close all anti-virus software first or add this software as a trusted option when using this interactive system.

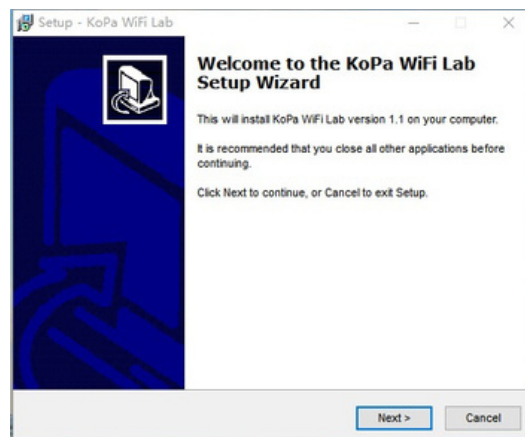
1.2 Software Installation Steps

- Step 1: Start the computer and Prepare the software "KoPa WiFi Lab Install" which to be installed.
- Step 2: Double-click the "KoPa WiFi Lab Install" file. When the following window appears, select the required installation wizard language and press the "OK" button.

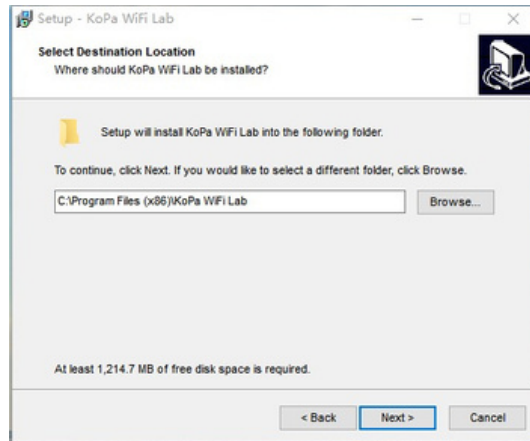


Note: The language of the installation wizard is independent of the language used in the software interface.

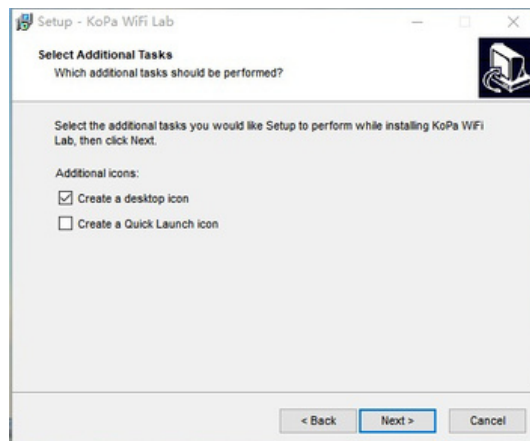
- Step 3: Click the "Next" button when the "Welcome to KoPa WiFi Lab" installation wizard appears.



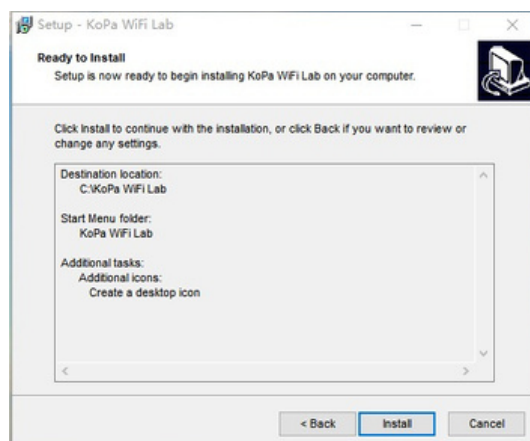
- Step 4: When the "Select Destination Location" window appears, click "Browse" to select the path of the file you want to install, usually you don't need to change it, click "Next".




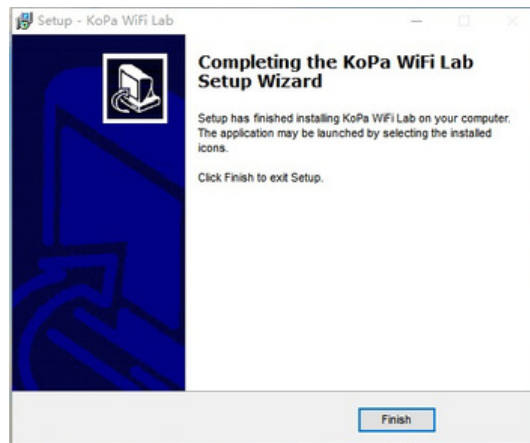
- Step 5: When the screen as shown below appears, select the shortcut you need and click the "Next" button.



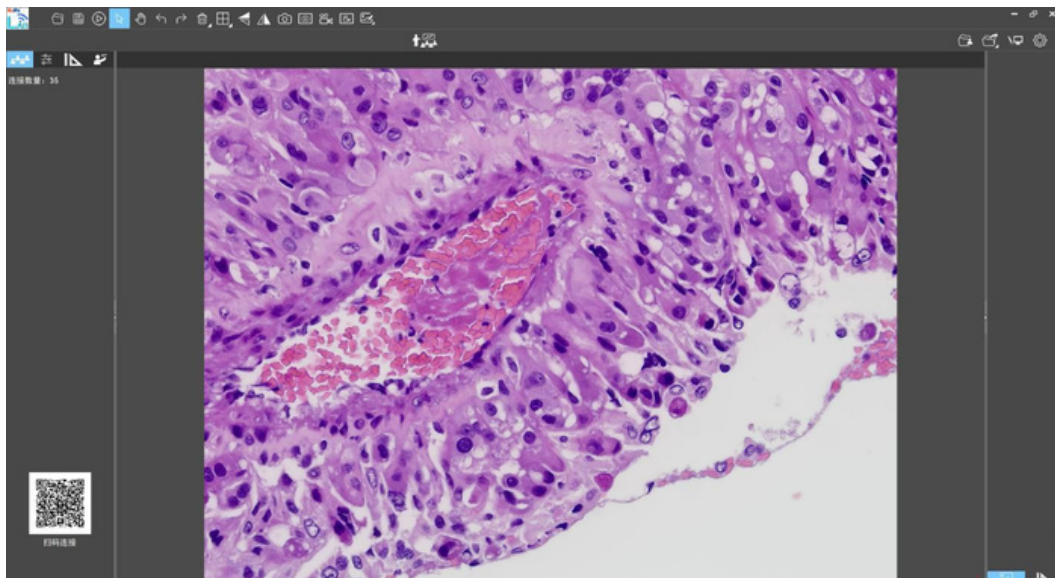
- Step 6: Confirm information such as "Destination location" of the software installation. After confirmation, please click the "Install" button.



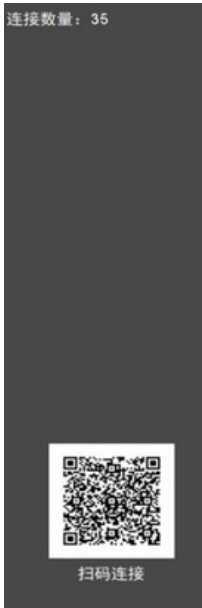
- Step 7: The installation progress bar will appear during the installation process. During the installation process of the software, some necessary library files need to be registered. If it may be blocked by some anti-virus software, such as the pop-up prompt whether to allow installation, it must be allowed and continue to run.
- Step 8: When the following window appears, the software has been installed successfully. Click "Finish" button to complete the installation. After the window closes, check the buttons  on your desktop. If you cannot find it, go from "Start" → "All Programs" to find it.



1.3 Operation Description of Software Interface and Functional Modules



1.3.1 User Number Section



1.3.1.1 Function description:

Quickly scan connections and view the current number of connections to the Multi-Viewing Workstation.

1.3.1.2 Function details:

The smart terminal can scan the connection QR code in the software interface to connect to the Multi-Viewing workstation to observe microscopic images in real time.

The "User Number section" on the left side of KoPa WiFi Lab can view the total number of current connections to the Multi-Viewing workstation (the figure on the left is 35),The system automatically detects the number of refreshed microscopes online, midway join or leave and return can view in real time.

1.3.2 Lecturing Section




1.3.2.1 Function description:

Windows screen or operation process pushed to the smart terminal users simultaneously; Smart terminal users can display microscopic images and computer operation screens under Windows in real time, displaying lesson plans, PPT, videos and other lesson plans in real time for smart terminal users.



1.3.2.2 Electronic whiteboard


















In the lecturing mode, click the "Electronic Whiteboard" button  in the upper right corner of the software to display the tutor's computer desktop to the smart terminal users and make annotations on the computer desktop and other courseware.



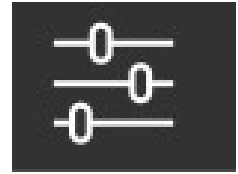
"Electronic Whiteboard" tools, from left to right are: Pen, Arrow, Enter Text, Undo, Redo, Eraser, Delete Object, Line Width, Line Type, Color, Screenshot, Screen Record, Mouse Penetrate (this tool allows to retrieve file from computer disk), and return to the interface of the software. It is helpful to annotate courseware or video displayed on the desktop and display them to all smart terminal users in real time.

1.3.3 Commonly-used Toolbar

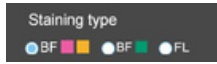


	Open	Retrieve the image from the local disk into the software.
	Save	After annotating the picture and adding text, click "Save" button to save the current annotation and text.
	Preview	When a static image is displayed on the window, clicking this button will restore the window to the dynamic preview
	Select	Select objects to facilitate the next operation,such as moving,deleting. Support single selection and regional selection.
	Move	Use the mouse to drag a static screen
	Undo	Undo the last operation on the "object".
	Redo	Redo the last operation on the "object".
	Delete	Make a one-click deletion or eraser of the selected "object".
	Multi-screens Comparison	Full screen / Home screen / Dual screen comparison / Four screen comparison.
	Mirror	Mirror the image on the currently selected screen.
	Flip	Flips the image in the currently selected screen.
	Take Picture	Take a picture of the screen currently selected.
	Screen Shot	Take screenshot of the entire desktop.
	Record	Video recording of the screen currently selected.
	Screen Record	Video recording of the entire desktop.
	Advanced Image Process	 Combine channels–Images can be assigned color channels quickly and reliably. Combined color images–Easy overlay of fluorescence microscopy images.

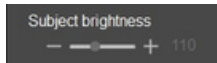
1.3.4 Image Property Adjustment Tool



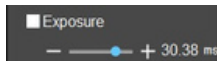
The image properties tool is activated when the software displays only dynamic images of a single window. Depending on your needs, you can adjust the corresponding parameters to achieve the desired preview and scanning effect.



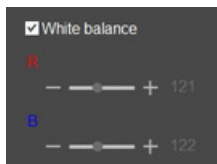
Staining type
The Staining type is chosen according to the actual situation.



Brightness
Manually drag the adjustment bar to adjust the image brightness.



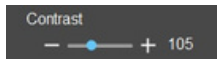
Exposure
When checked, the camera will automatically be exposed according to the environment used. When not checked, manual exposure can be carried out through the adjustment bar, and directly input the value in the box is supported.



White balance
When checked, the camera will automatically white balance according to the use environment. When not checked, manual white balance adjustment can be carried out through the adjustment bar, and directly input the value in the box is supported.



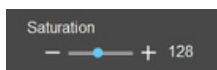
Gain
Manually drag the adjustment bar to adjust the image gain.



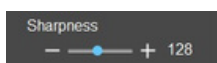
Contrast
Manually drag the adjustment bar to adjust the image contrast.



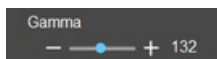
Hue
Manually drag the adjustment bar to adjust the image hue.



Saturation
Manually drag the adjustment bar to adjust the image saturation.



Sharpness
Manually drag the adjustment bar to adjust the image sharpness.



Gamma
Manually drag the adjustment bar to adjust the image gamma.



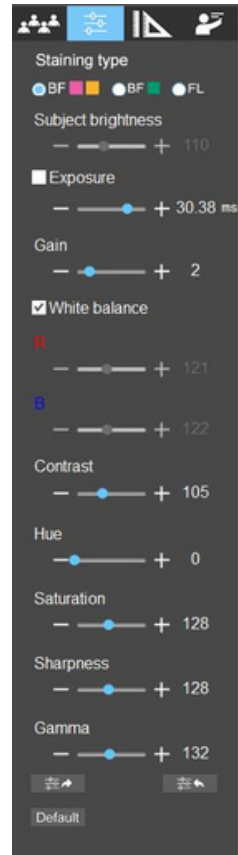
Export image properties
Export the value of the current image property parameter.



Import image properties
Import image property parameter values.



Restore default values
Restore the default value of image properties.

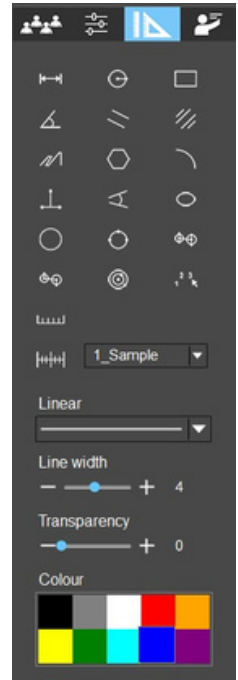
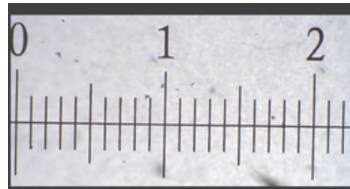


1.3.5 Measuring Tools

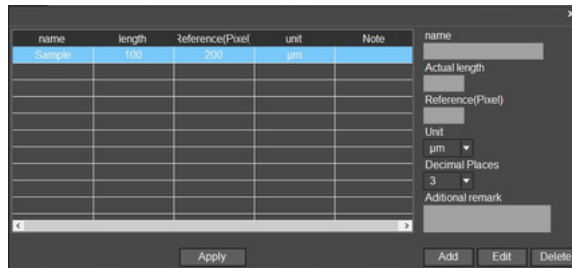
1.3.5.1 Calibration and measurement function operations

Step 1: Acquire benchmark image.

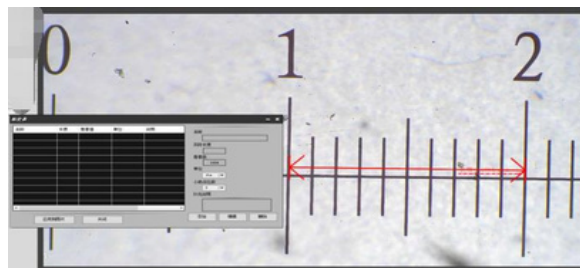
Place a scale ruler in the field of view. Please use the same conditions (i.e. same objective lens, same camera resolution) as the target observation objects. If a magnification reduction lens is used to measure the target observation objects, then a magnification reduction is also needed to measure the scale bar. This is what we called acquire benchmark image. As figure follows:



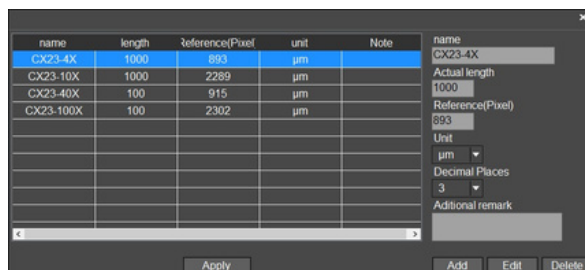
Step 2: Click "Calibration" in the left measurement tools toolbar, calibration table will shown as below figure.



Step 3: Set the scale and draw a straight line with the mouse on the benchmark image. When setting the ruler length, you can get a more accurate result by selecting a longer scale length. If 10 small scale lengths are selected, the accuracy will be higher than that of only 1 scale length. As shown in the figure: (the image value drawn with the mouse will be automatically updated at the "pixel number")



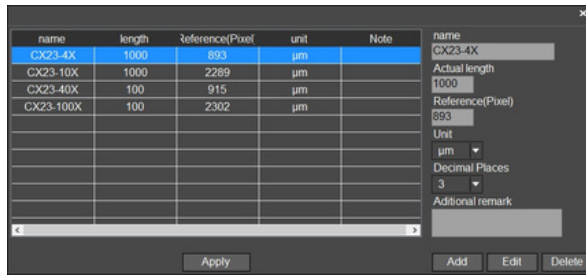
Enter the name of the calibration table created and the selected ruler length (the actual length). Assuming that the unit of dividing scale in the benchmark picture is µm, fill in the corresponding information at the designated place, as shown in the figure below: Click "Add" to add the benchmark defined in the benchmark picture to the calibration table in the software for subsequent operation.



Note:

- **“Add”**: Add the right side calibration information to the list on the left.
- **“Edit”**: Revise or edit selected calibration item on the left.
- **“Delete”**: Delete selected calibration item on the left.
- **“Apply”**: Activate selected calibration item as benchmark for current image.

Step 4: Import the target image to be measured, select the calibration value on the left in the calibration table, click "Apply", and set the baseline saved in the previous step as the baseline of the target image, as shown below:




Step 5: Select the corresponding measurement tool for actual measurement. The measured data will be displayed in the display bar on the right side of the software.

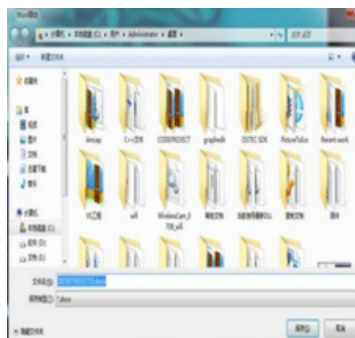
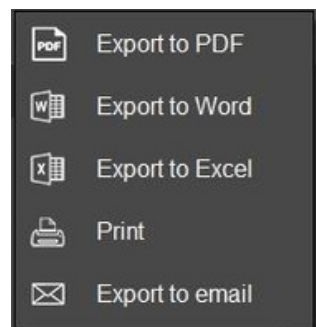
Note: The software provides the following measurement tools:



Step 6: Export the measured results.

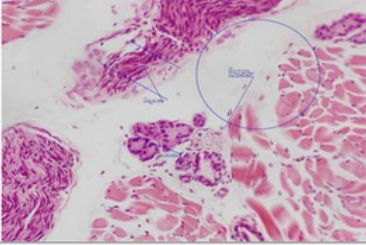
Click the export tool  in the upper right display bar to export data and images to PDF, Word, Excel, printer and mail (Outlook only). Export to PDF, printer and mail functions are only available for static images

Select Export to Word, as shown below: Enter file name, select path, and click Save"

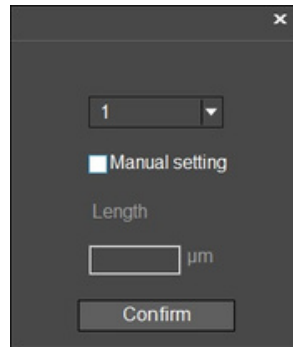


The exported documents are as follows:

Serial No.▶	Measure item▶	Measured value▶
1▶	Parallel line spacing measurement▶	Length=442.066 um▶
2▶	Linear distance measurement▶	Length=562.656 um▶
3▶	Circle radius measurement▶	Radius=741.517 um▶ Perimeter=4659.090 um▶ Area=1727398.000 um ² ▶




1.3.5.1 Scale bar tool

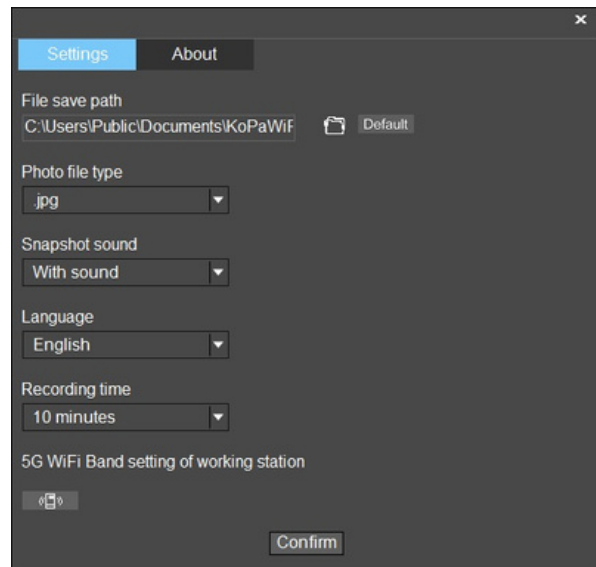


1.3.6 System Settings Section



Click the Settings button  in the upper right corner of the software to enter the system settings.

- Save path
- Photo file type
- Sound of snapshot
- Language
- Recording time



Chapter 2 App for Smart Devices - KoPa WiFi Lab

Note:

- KoPa WiFi Lab is dedicated to smart devices (mobile phones, tablets).
- KoPa WiFi Lab is available for download from official website or the Google play store and APP store by following instructions.
- KoPa WiFi Lab can be downloaded repeatedly from the Google play store or APP store.

2.1 App Operating Environment Requirements

System	System Version	CPU	RAM	ROM	Protocol
Android	5.0 or later version	Dual-core 1.7GHz or later version	3GB or more	32GB or more	5G WiFi IEEE802.11ac
iOS	11.0 or later version	Dual-core 1.8GHz or later version	2GB or more	32GB or more	

Note: Please confirm that the hardware of the smart device must support 5G WiFi IEEE802.11ac protocol, otherwise it will not be able to acquire image correctly.

2.2 APP Download, Install and Connect Microscopic Images

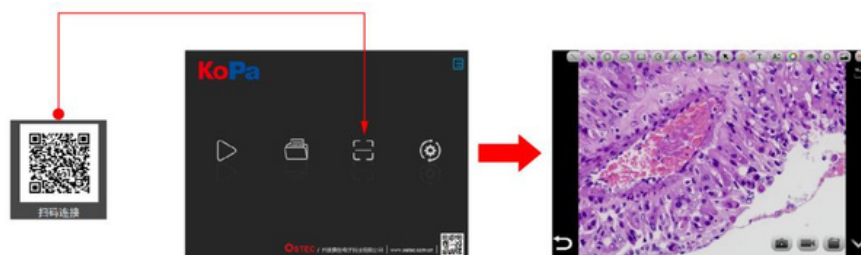
Step 1: Scan the QR code on the right to download and install the APP. (Please use the browser code scanning function to download)

Note: After the APP is downloaded, please follow the instructions to allow the installation and allow all licenses, if you click "No", it will not work.

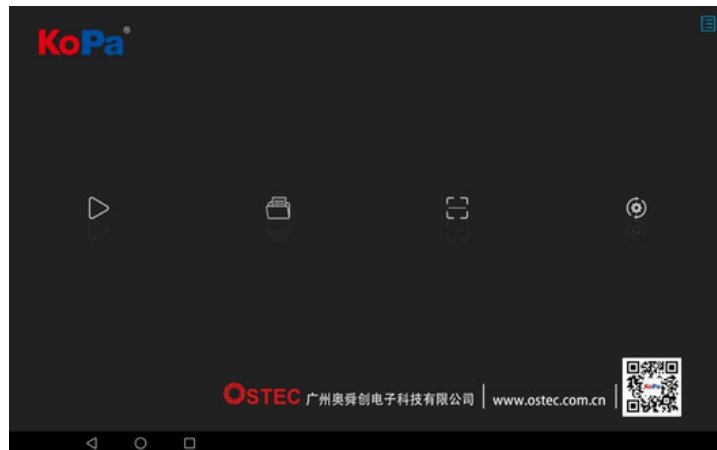


Step 2: Connecting and acquiring images using the APP.

Note: Please run KoPa WiFi Lab for Windows to make sure your PC is getting images properly before using the APP. After the APP is installed, use the built-in QR code scanner of the smart terminal to scan the "Connection QR Code" on the interface of KoPa WiFi Lab for Windows to get the image directly.



2.3 APP Function Introduction



Preview

Click to go to the image preview window.



File Manage

Click to check the photos/videos/assignment folder.



Scan QR Code

Scan the connection QR code of the KoPa WiFi Lab interface for Windows to get an image.



Settings

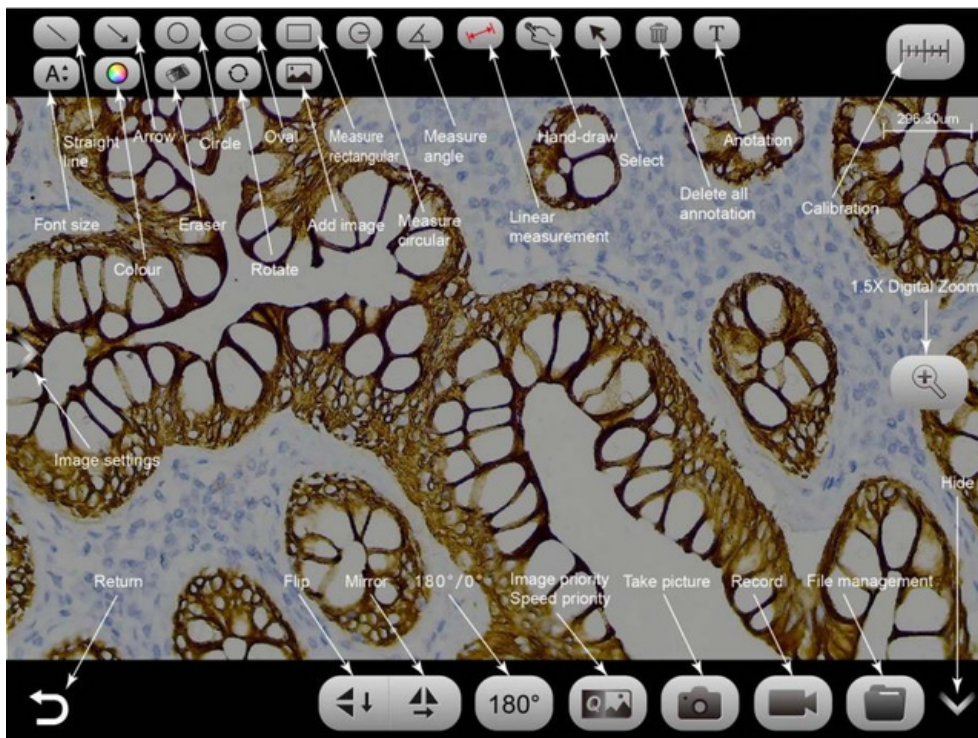
APP settings



Operation Guide (Upper right corner)

Retrieve/hide user instructions.

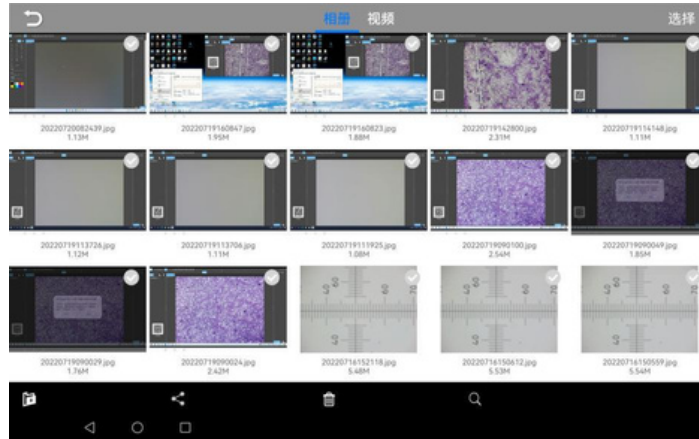
2.4 Screen Live Preview Window Function Buttons Introduction



2.5 File Manager



2.5.1 Photo Folder



2.5.2 Video Folder

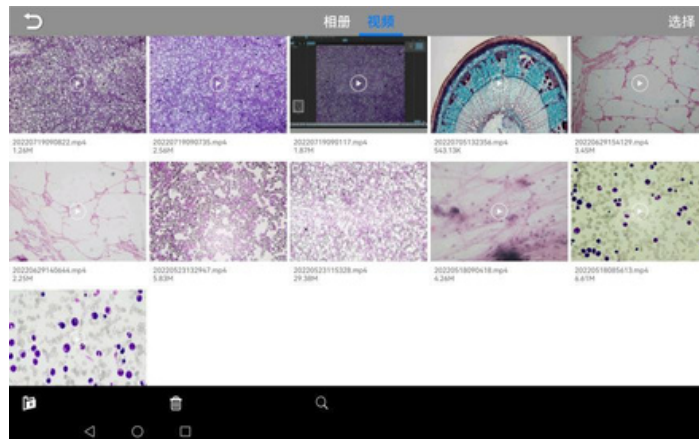
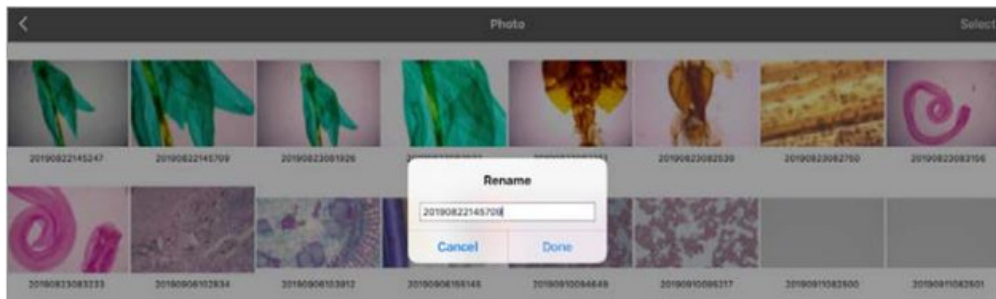
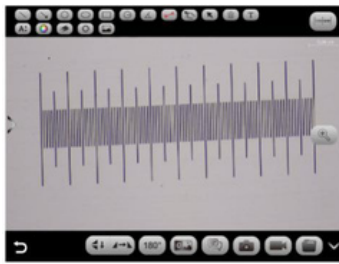


Image and video files can be renamed. Click on the file name to bring up the file renaming dialog box, as follows.

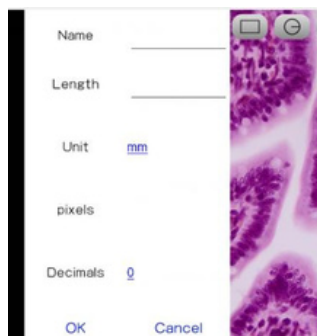


2.5.3 Use APP for Calibration and Measurement

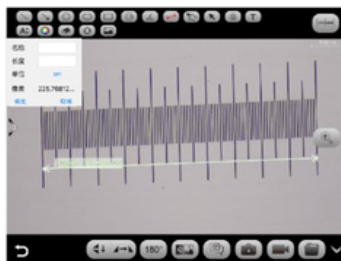
(1) Place the calibration ruler under the microscope.



(2) Click  → Add



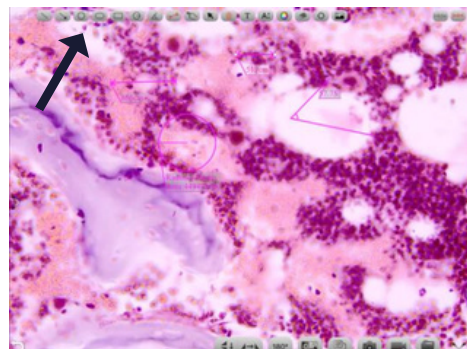
(3) Enter a name, the actual length of the calibration ruler, select a unit, and draw on the ruler, the pixels are automatically entered, as shown below. Click "OK" to complete the calibration.



(4) Select a calibration value.

Name	Length	Unit	Pixels	Selected
sg	180	cm	100	<input checked="" type="checkbox"/>
XZD-10X	1000	μm	2422	<input checked="" type="checkbox"/>
XZD-20X	100	μm	481	<input type="checkbox"/>
XZD-40X	100	μm	969	<input type="checkbox"/>

(5) Use the measurement tool at the top of the window.



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



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