10.5" LCD Digital Microscope, 8.0M, Android Pad

Instruction Manual

To ensure the safety and obtain satisfactory performance, please study this instruction manual thoroughly before start to use your instrument.

I. Introduction

Thank you for choosing Biological Microscope. To ensure safety and obtain optimum performance and familiarize yourself with the use of this microscope, we recommend that you read this manual thoroughly before operating the microscope. Retain this instruction manual in an easily accessible place near the microscope for further reference.

II. ⚠ Caution

● Attention

Biological Microscope can only be used inside the room. Place microscope on a stable plane and keep it in balance. Power line must be retained in an easily accessible place to prevent any unnecessary accident.

● Working Environment

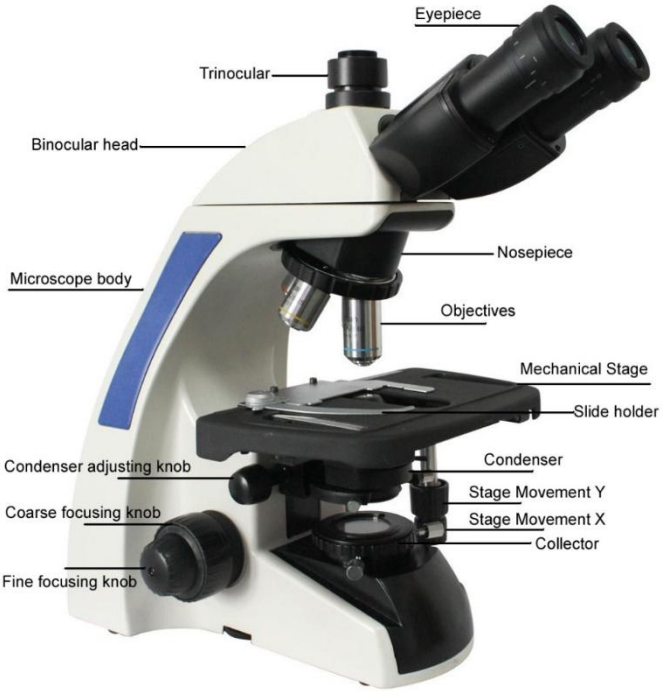
As microscope is a precision instrument, improper using will make it unworkable or reduce its precision.

1. Do not expose the microscope in the sun directly
2. Temperature range is +10℃- +40℃， and the max. humidity is 85%
3. Avoid high temperature and humidification. Otherwise there will be fog or mold on the lens.
4. Avoid violent vibration as the vibration will reduce the images quality.
5. Do not place microscope in moist room to avoid short circuit. Please turn off the power supply as soon as water drop in the microscope. If there are other things unsafe come into the microscope which may cause short circuit too, please stop using and contact with manufacturer

● Non-designated Application

1. Improper operation & usage may cause damage to both instrument & users. Please read instruction manual carefully before using the instrument.
2. Pay attention to the voltage. Do not use other kinds of power line unless there is specific description. Do not take the microscope apart.

Instrument & accessories described in this manual have passed the safety & potential risk test.



III. Structure

See Picture

IV. Technical Specification

TT-1502 LCD 9.7" LCD Digital Biological Microscope	
Head	Trinocular Head, 30° Inclined, Interpupillary Distance 48-75mm, Both Eyepiece Tube Diopter Adjustable
Eyepiece	WF10x/20mm, Diopter Adjustable, Dia. 30mm
Objective	High Contrast Chromatic Free 4x, 10x, 40x(S), 100x(Oil, S)
Focus Knob	Coaxial Coarse & Fine Focusing, Fine Division 0.002mm, Coarse Stroke 37.7mm/Rotation, Focusing Range 24mm
Nosepiece	Quadruple, Backward With Click Stops
Stage	Double Layer Mechanical Stage 142x132mm, Graphite Surface, Moving Range 75x50mm
Condenser	Abbe Condenser N.A.1.25, Center Adjustable
Light Source	3W LED Brightness Adjustable
Adapter	C-Mount 1.0x
Package	53*32.5*53.5cm/11.5Kg, 1 Set/Carton

10.5“ Touch Screen Android Pad Digital Camera, 8.0M (A59.3521) Newly Update 2022!		
Spec.	Model	A59.3521 All-in-One Android Tablet Digital Camera
	Sensor	1/1.8” CMOS Sensor
	Resolution	8M, 4K, 3840*2158@30FPS
	Pixel size	2.0um*2.0um
	Screen	10.5” High-Definition Touch Screen
	Memory	Built-in RAM 2G, ROM 16G
	System	Android 11 Tablet, Pre-Installed Measure Software S-Eye
	WIFI	2.4GHz/5GHz Dual-band WIFI, Support WIFI6
	Bluetooth	Bluetooth 5.0
	Output	HDMI to Monitor USB3.0*2, to U Disk, or OTG to Computer For File Copy Gigabit LAN Port to Computer USB2.0*1, to Mouse & Keyboard
	Power	Output DC 12V/2A, Input 110~220V Wide Range
Function	Measure Software	S-Eye 2.0 Measure Software, For All Kinds Measure Function
	Image Adjustment	Brightness, Contrast, Saturation, Color Temperature
	Camera Function	Mirror, Flip, Freeze, Black and White
	Control	USB Mouse & Keyboard, Or Touch Screen Operation
	Photo	8.0M Image Capture
	Video	1080P Video
	Storage	Photo And Video Store to Built-in 16G Memory, or to USB Disk
	Marking	Point Coordinates, Crosshairs, Coordinate System, Text Annotations
	Length Measure	Straight Line, Folded Line, Curve Length, Parallel Line Distance, Point Line Distance
	Geometric Measure	Line Segment Length, Radius Fixed Circle, 2 Point Fixed Circle, 3 Point Fixed Circle, Concentric Circle, Radius Fixed Circle
	Area Measure	Polygon, Rectangle
	Languages	Android System Support 90 Languages
	Manual	Built-in Instruction Manual For Quick View

Preparation Before Use

● Assemble the Binocular Head

1. Loosen the fixing screw on the top of the microscope body.
2. Put the binocular head on the body properly, then tighten the fixing screw.

● Insert the Eyepiece

1. Standard gemel binocular head. Special-processed ring is fixed in the observation tube to tighten the eyepiece.
2. Insert the eyepiece properly.

● Assemble the objectives

1. Assemble the objectives clockwise. Make the magnification become bigger when assembling in clockwise direction.
2. Condenser has been mounted, focused & pre-centered well in the microscope before shipment. There is no need to do any adjustment.

VI. Usage of the Microscope

● Illumination

1. Connect the power line to the microscope.
2. Turn on the power supply, then the light will be on. Brightness can be adjusted by turning the adjusting knob.

● Iris diaphragm is designed & configured on condenser. Adjusting the iris diaphragm to match the different N.A of different objectives.

1. Open/Close the iris diaphragm by adjusting knob.
2. When the knob is on the right, that means the iris diaphragm is fully opened.

● Placing the Specimen

1. Put the specimen in the stage and make the cover glass on it. Make the clips clamp them entirely. Two slides can be put in the stage in the same time.
2. Make the specimen under the objective by adjusting X & Y axis.

● Focusing

1. Turn the nosepiece to observe through the lowest magnification.
2. Adjust the stage to the top by turning the coarse focusing knob.
3. Observe through the eyepiece and turn the coarse focusing knob slowly to let the stage down and down till there is a image
4. Turn the fine focusing knob to get sharp image.

● Adjusting of the Binocular Observation Head

1. Adjust the observation tube to make sure that view field in the right & left eyepiece is consistent.
2. Adjust the diopter of the eyepiece to “0” first. Then adjust the eyepiece according to

users' own situation to get sharp image.

● Oil Immersion

1. When observing through 100X objective, oil immersion is required. Low down the stage to the bottom. Drop the oil supplied by the manufacturer on the observation area.
2. Turn the 100X objective on its working position.
3. Raise the stage by turning the coarse focusing knob till the front of the objective can touch the oil.
4. Swing back and forth of the nosepiece to get rid of the air bubble in the oil. Then fix the objective. Make sure that oil should be filled between objective and specimen.

VII. Maintenance of Microscope

● When not in Use

1. Handle the microscope with two hands stably, and put the instrument on a stable plane. Cover it up with dust cover. Store the instrument in a dry place.
2. It is highly recommended that objectives & eyepiece should be kept in a separate container.

● Cleaning

1. Keep all the optics clean. It is very important to maintain optical performance of the instrument.
2. If dust, or dirt is covered on the surface of the lens. Have a try of air blower before cleaning the lens.
3. It is recommended that gauze, or lens tissue moistened with methyl alcohol should be used to clean the lens. Ethyl alcohol is forbidden.
4. When cleaning the low magnification objective, lens tissue or cotton moistened with methyl alcohol can be used. Pay much more attention when cleaning the high magnification objective. Dry the methyl alcohol first. Do not clean so hard. Do not use ethyl alcohol.
5. When microscope body has to be taken apart, make sure that do not touch the lens of the objective, or else it will reduce the image quality.
6. Periodical inspection

To maintain the performance of the microscope, periodical inspection is recommended.

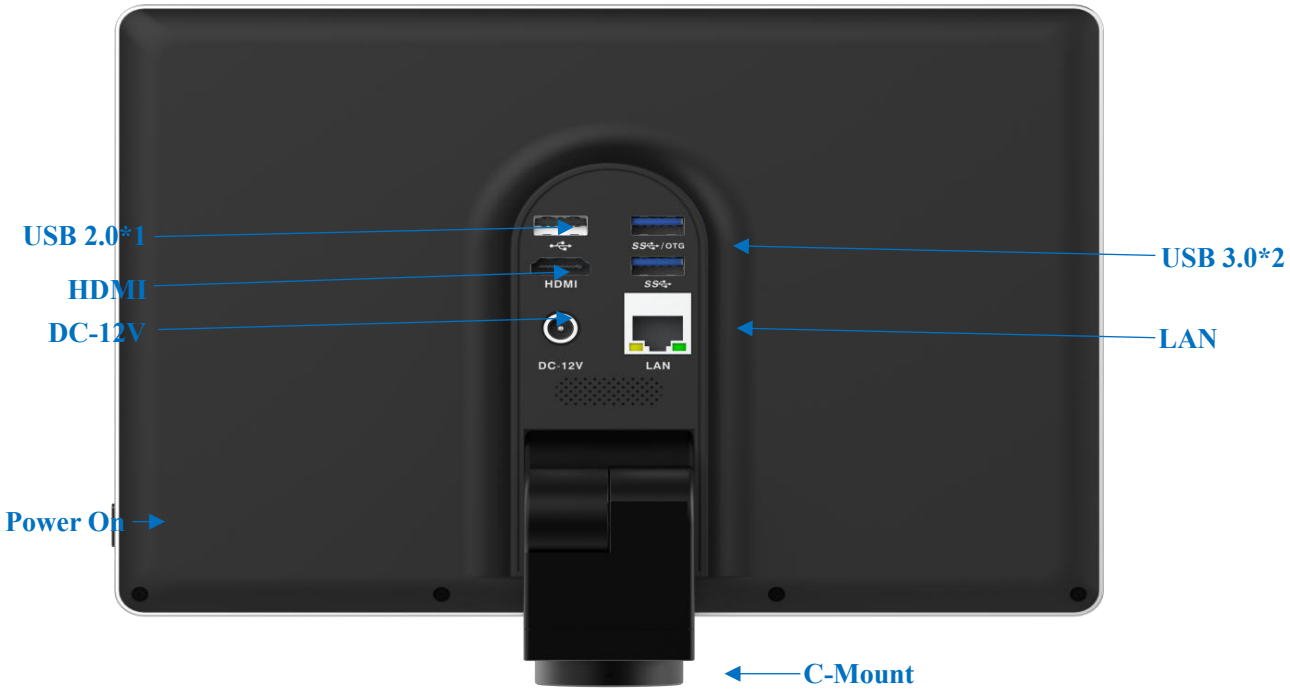
● Changing of Bulb

Series biological microscope is configured with LED illumination. There is no need to change bulb if there is no certain situation.

10.5" Touch Screen Android Pad
Digital Camera, 8.0M

Instruction Manual

Please read this manual carefully before use microscope & digital camera!

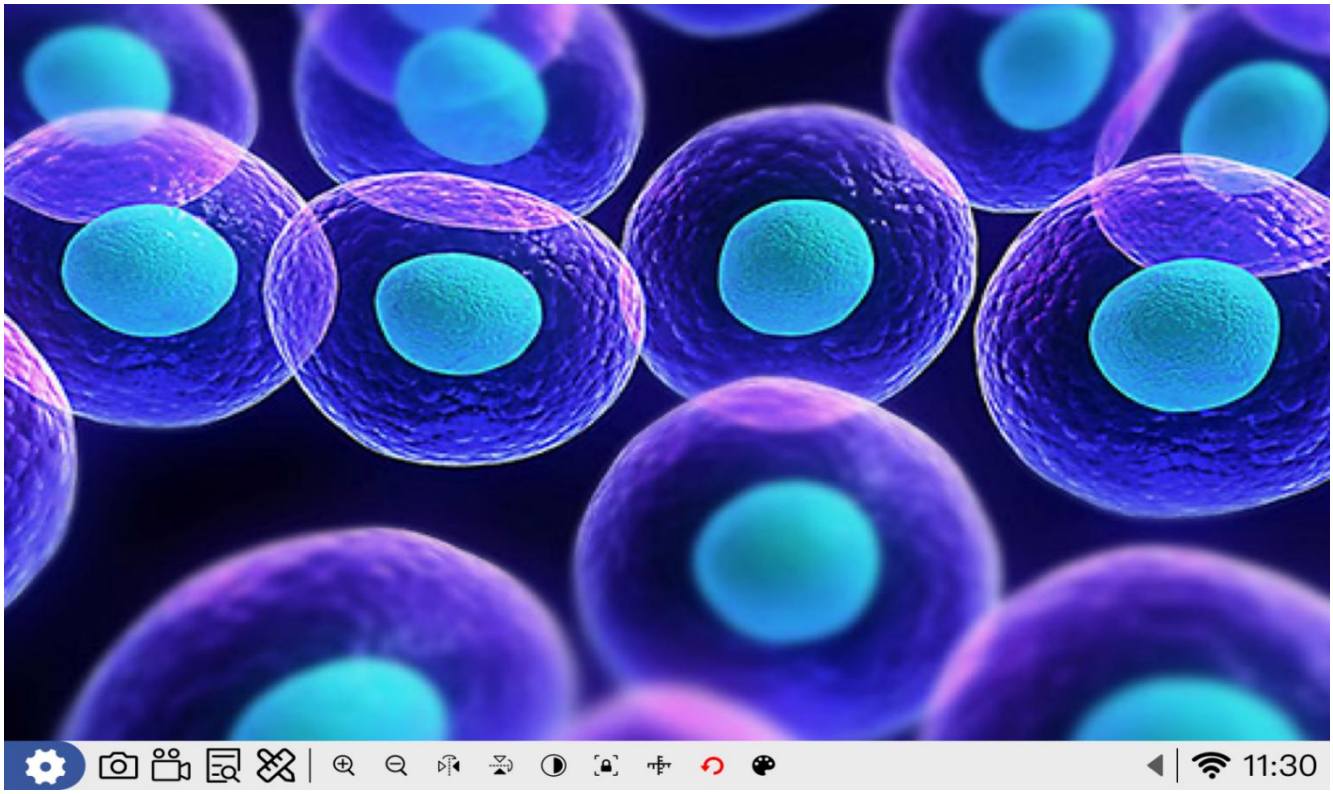


Operation

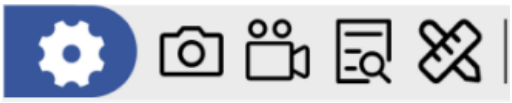
1. First, connect the tablet to DC-12V power adapter
2. Then connect the tablet to microscope by standard C-Mount.
   (See how to connect digital camera to microscope at end of this manual.)
3. After connecting the power, long press the Power On button, the blue light stays on
4. After power on, the system directly starts into the microscope image preview interface
5. The tablet can be connected to other large monitor screen through HDMI port, to show sync real time image of microscope camera.
6. The tablet has Android 11 system & measure software installed, no need to install any other software.
   Under measure mode, click button to capture screenshot and save measure result.
7. The tablet has touch screen, can take photo, record video, measure image, or adjust all parameters directly by touch.
8. The USB mouse & keyboard can be connected to USB 2.0 port to control tablet directly
9. There is 16G memory built-in to store photos and videos taken by digital camera.
10. The USB disk can be connected to USB 3.0 port to copy the photos and videos recorded.
    Under main interface, click button to explore, copy, paste files to USB disk.
11. The tablet can be connected to PC through USB 3.0 port or LAN port to copy files.

S-Eye Software Introduction

Main Interface



The camera & tablet will enter the main interface directly after power on, and you can click the shortcut buttons on the bottom of screen to set, take photo, record video, review, measure, zoom in/out, mirror image, flip image, etc. as needed.



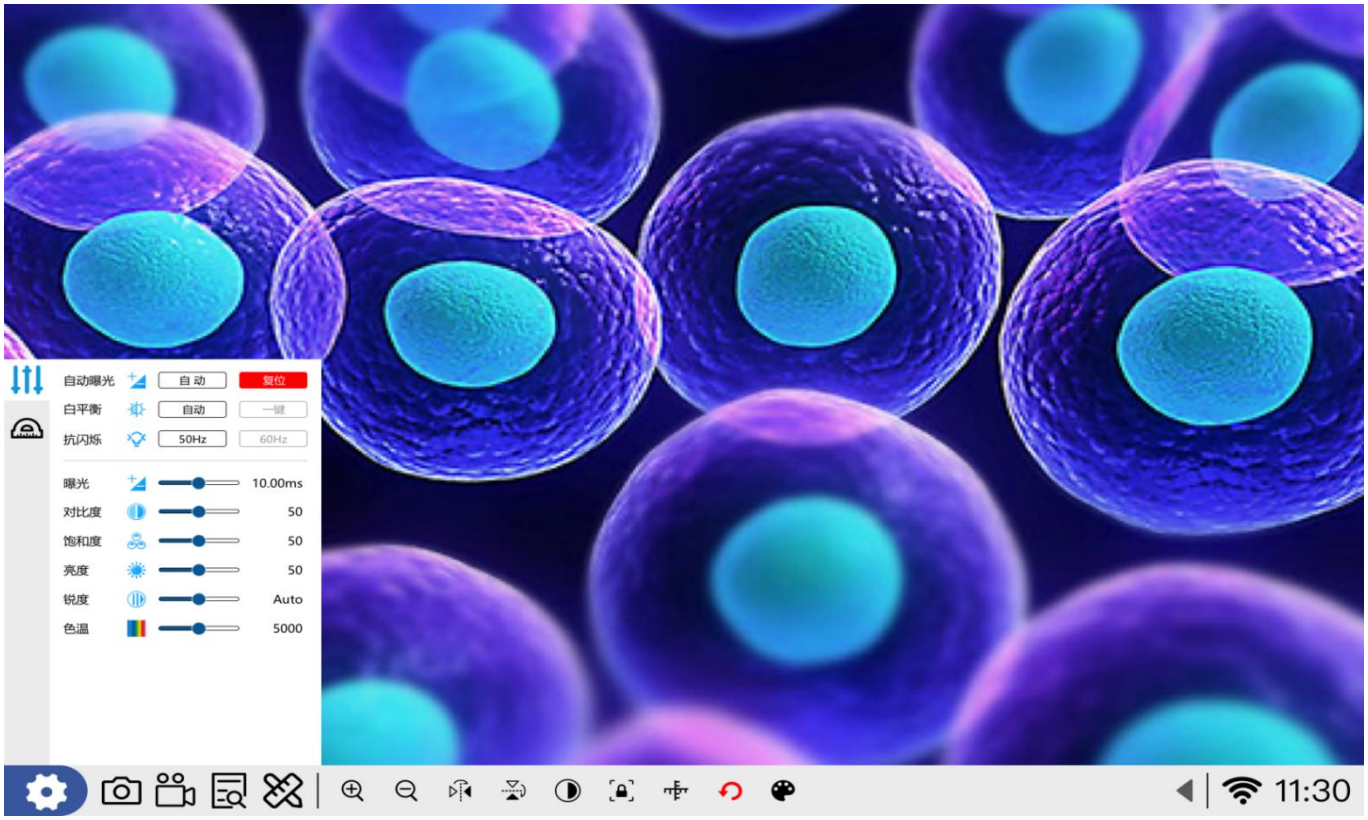
Setting, Photo Capture, Video Record, Preview, Measurement.

Digital Zoom In/Out (1x~16x), Mirror Image, Flip Image

Black/White Mode, Image Freeze, Scale Switch, Parameter Reset, Color & Size Adjust

Click arrow to show more settings:
Sound, Brightness, IE Brower, **Explorer (USB Disk)**, Lan, WIFI, Time Set

Setting Mode



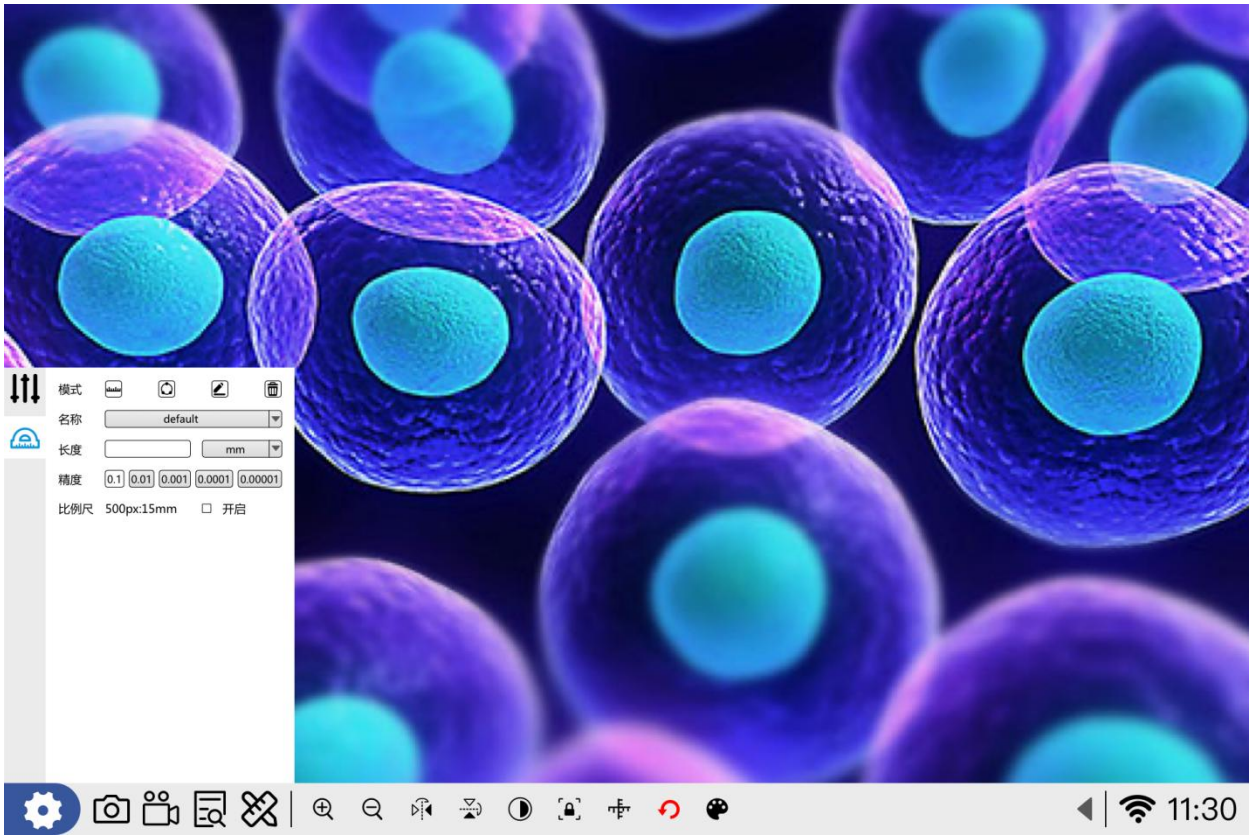
1, After the camera is turned on directly into the screen as shown

2, Click button  to pop up the setting menu as above picture

3, Set the image parameters according to demand

(1) Auto Exposure: Manual Setting and Auto Setting (Default).
(2) White Balance: Automatic (Default) and One-touch Set.
Under the standard color temperature, click one-touch button when lens is facing standard light or white paper, the camera will automatically load parameters according to the current condition, to achieve the correct white balance.
(3) Anti-Flicker: The system provides 50HZ and 60HZ optional.
(4) Exposure: Adjust the exposure time of the camera as needed
(5) Contrast: Adjust the image contrast as needed
(6) Saturation: Adjust the image saturation as needed
(7) Brightness: Adjust the image brightness as needed
(8) Sharpness: Adjust the image sharpness as needed
(9) Color Temperature: adjust the image color temperature as needed

Calibration Setting



Click  to choose the button  to enter measure calibration mode.

1. mode: providing calibration mode, line calibration and circle calibration are available to be selected. After clicking the line calibration icon, the preview interface will directly display the line segment, according to the location and length of the calibration scale, the mouse will move the line segment to the top of the calibration scale to overlap with the corresponding scale. Please set the name, unit, accuracy, and finally click the save icon to complete the calibration

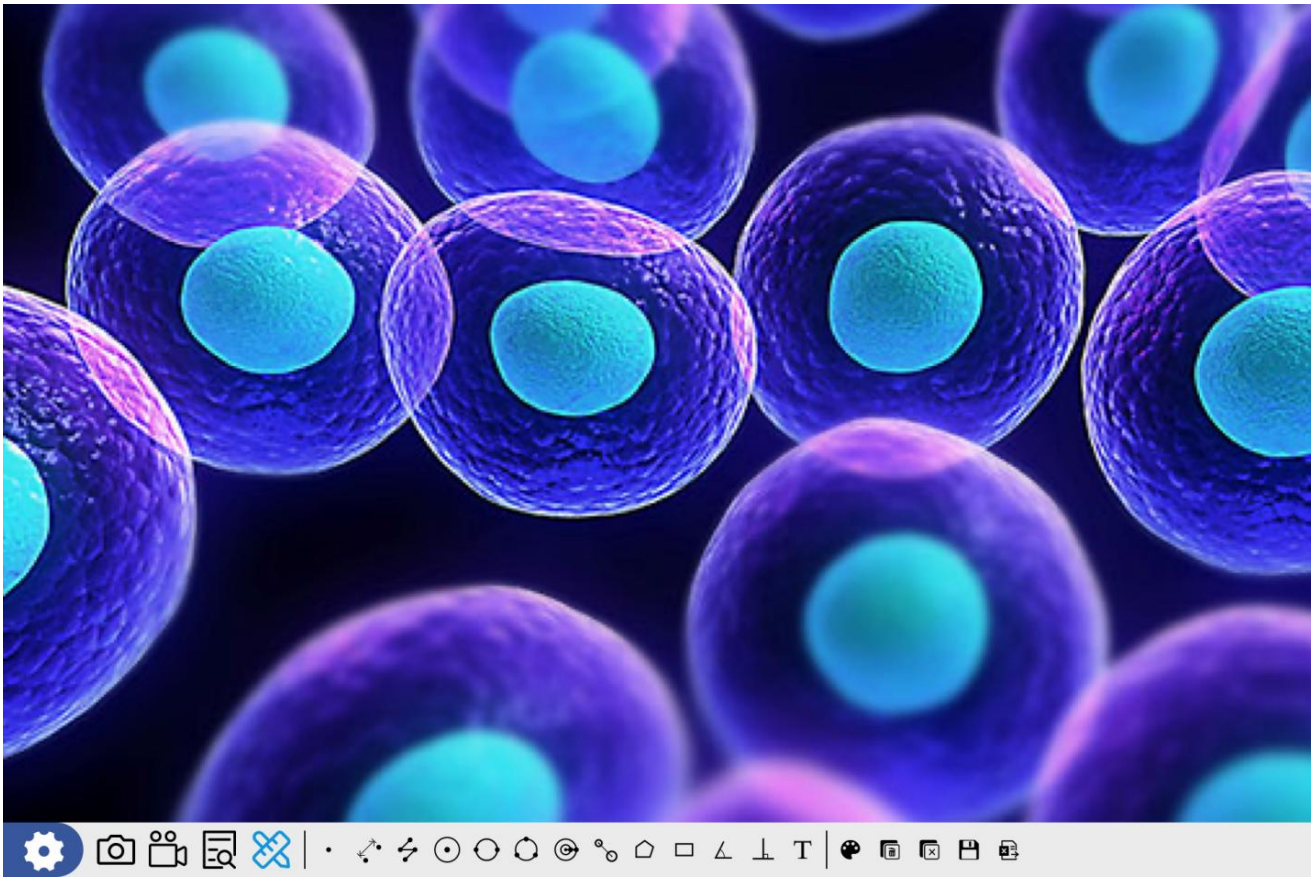
2. Click  to delete unwanted calibration information after clicking the delete icon

3. Name: after drawing the line segment cursor, directly defaults in this position. Enter the corresponding name and then select the unit after confirming, the cursor jump to the next window

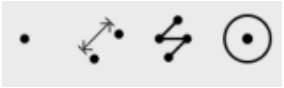
4. Accuracy: After setting the name and unit, you need to set the corresponding number of decimals to ensure the measurement accuracy

5. Scale: provides the option to turn the scale on or off

Measure Mode



Click  to enter measure mode, you can measure the objects, capture screenshot for report.



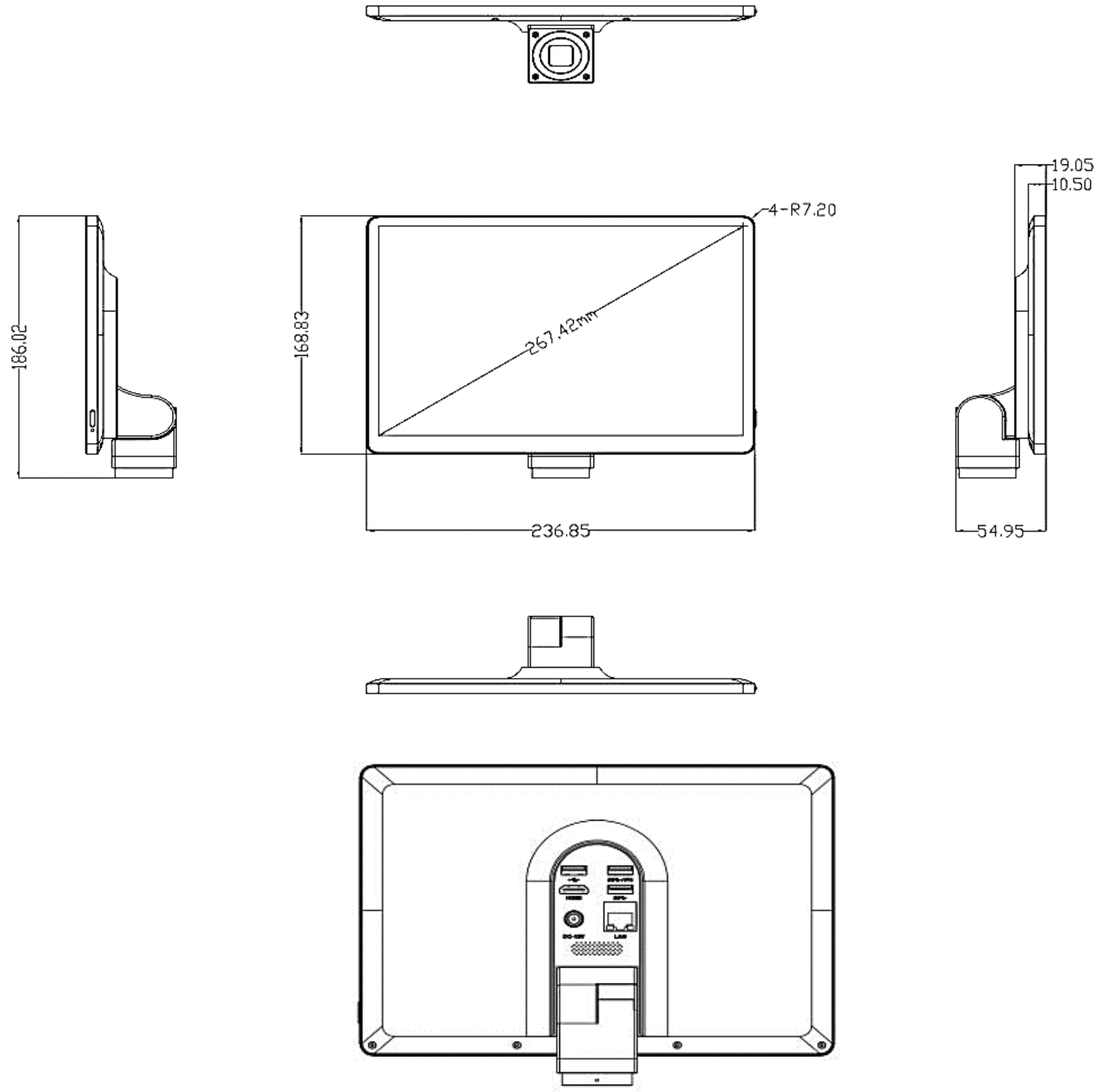
Point coordinates, straight line, dashes (end of right mouse button), drawing circle etc.

2 Points Circle, 3 Points Circle, Concentric Circles, Circle Center Distance.

Polygon, Rectangle, Angle, Point-Line Distance, Text Mark

Set Graph Color & Thickness, Delete One, Delete All, **Save Screenshot**, Export Measure Result

Size & Diaphragm



Note: No additional notice for changes on the specification or appearance due to upgrade.