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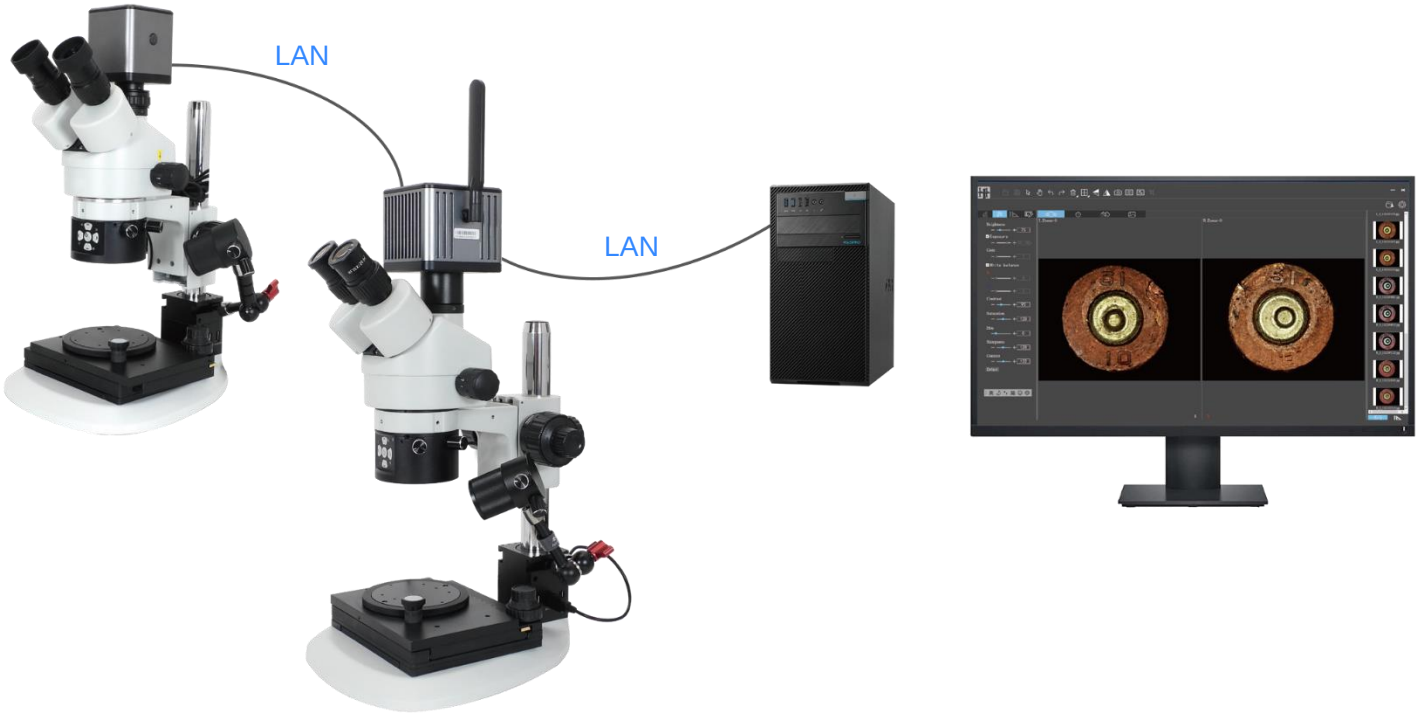
A18.4903

Digital Stereo Comparison Microscope



Optical Performance

The microscope is featured with 7X-45X continuous zoom (freeze), full par-focal HD optical lens, good achromatic effect, resulting in a clear, bright and flat image. Its base can be individually adjusted X, Y, and R axis, which can be adjusted in time according to the characteristics of usage habits, usage scenarios and observation objects, and the opera- tion is more user-friendly.

▶ Unique and Clever Lighting System

This illumination system is an innovative combination of near-coaxial falling light , four-zone lamps and six-color oblique illumination, which can evenly illuminate glossy flat surfaces, enhance scratched, recessed or embossed features, highlight indicated unevenness, overcome interference caused by surface reflection, improve microscope reproducibility, and highlight more details that cannot be displayed by pure optical microscopes.

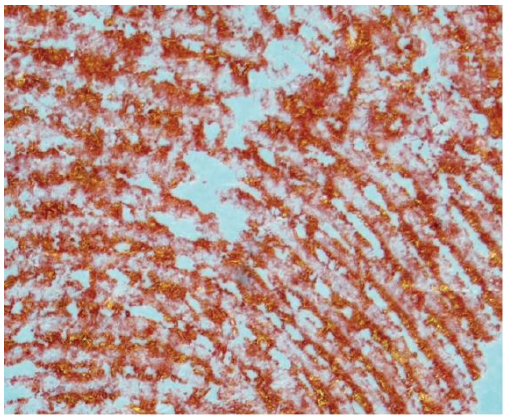
▶ Near-coaxial Falling Light

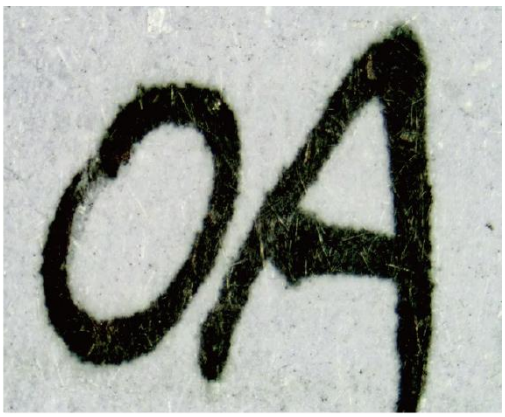
Evenly illuminate flat, shiny surfaces and enhance scratched, recessed or embossed features. Highlight object surface unevenness, overcome interference caused by surface reflection, improve microscope reproducibility, and highlight more details that cannot be displayed by conven- tional microscopes.

Near-coaxial Falling Light

Brightness Control Knob

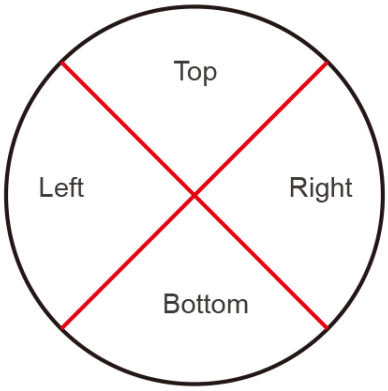
Near-coaxial Light Switch





▶ Four-zone Diffuse Reflection Lamps

The four-zone diffuse reflection lamps is an LED ring design, containing 72 high-brightness lamp beads, and the four zones of top, bottom, left and right can be freely controlled.



Diffuse Lamp Partition Diagram

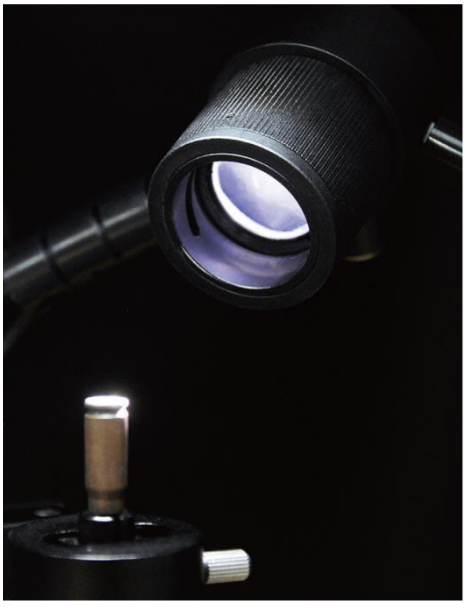
Four-zone Diffuse Reflection Lamps

Turn on/off , Partition Control Buttons

Brightness Control

▶ Six-color Oblique Illumination

Unique six-color oblique illumination, with low voltage, low energy consumption, safety and stability, long life, high brightness and low light decay and other characteristics.
Users can choose different wavelengths of light to observe according to different observation characteristics or applications, easily capable of traces, signatures, seals observation and other needs.



Focus Adjustment Ring：
Rotate clockwise to make the light spreads； Rotate counterclockwise to make the light gathers.

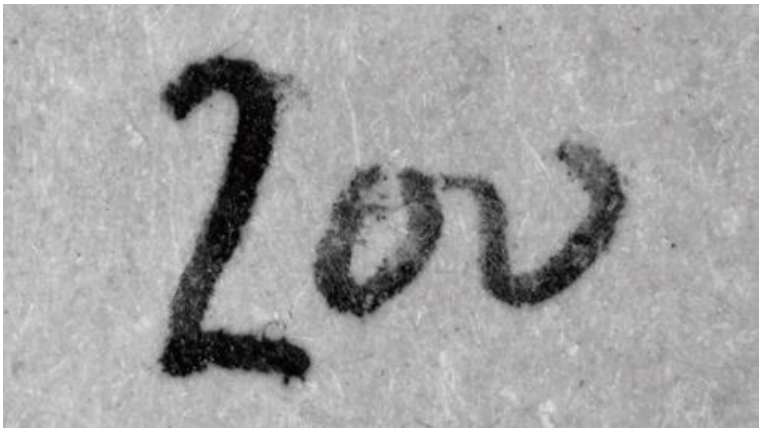
Brightness Adjustment Knob：
Rotate clockwise to turn on the light source and increase the brightness； Rotate counterclockwise to reduce brightness or turn off.

Light Switch Knob：
Each time a gear is rotated, the color of the light is switched once; Cyclic switching is supported

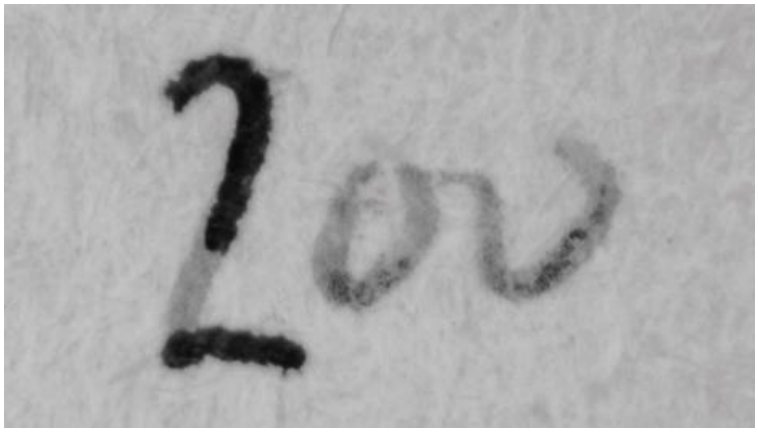
Adjusting Knob：
Loosen, can swing the position of the support in a certain rang； Tighten to secure the current position of the holder.

Articulating Arm：
It consists of multiple sets of movable joints; after loosening the adjustment knob, the position of the light source can be arbitrarily oscillated.

Handwriting Identification: Original Number 100



Near-coaxial+ Four-zone Diffuse Reflection Lamps



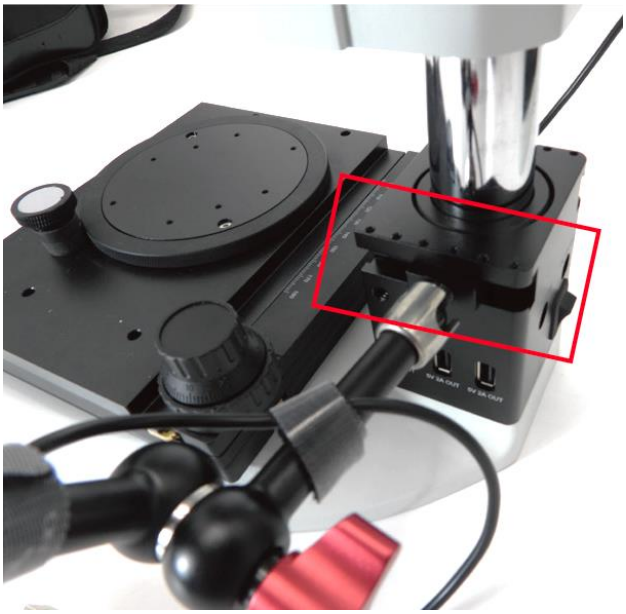
Six-color Lamp: Blue Light

Handwriting Identification: Original Number 162

Near-coaxial + Quadrant Light

Six-color Lamp: Purple Light

The six-color oblique illumination can be mounted on the left or right side of the microscope accord- ing to the observation needs, without complicated installation steps, and can be easily fixed with only one hand-screw.



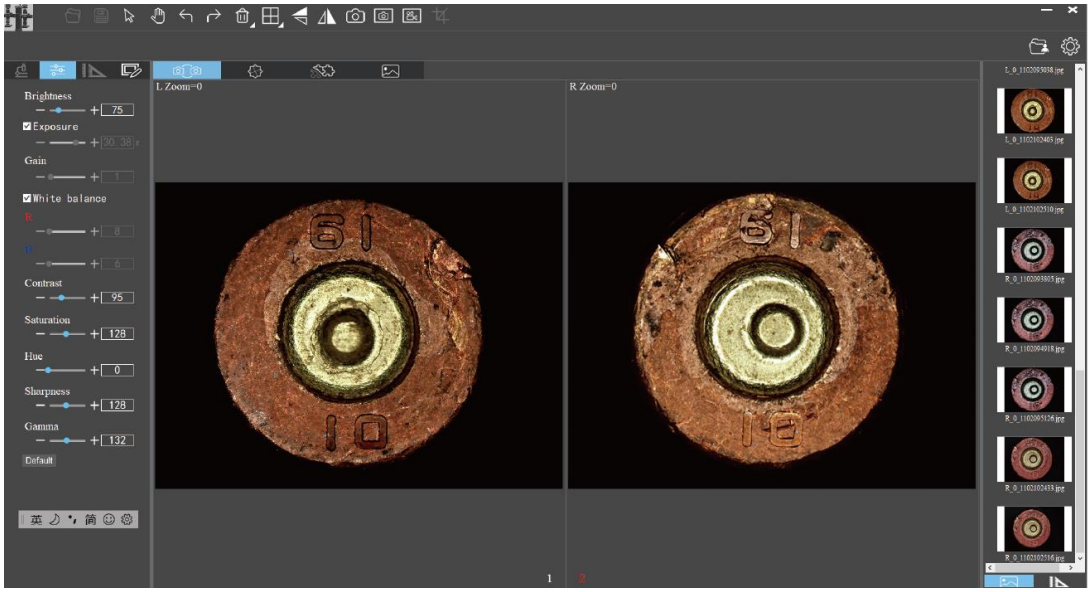
▶ Embedded Centralized Power Supply

The built-in centralized power outlet design only needs a power cord to simultaneously power near-coaxial lamps, four-zone lamps,, six-color oblique lamps and cameras, making the desktop clean and net.

Power input: DC 12V 5A, Power output: three 5V 2A, Power output: two 12V 1A

▶ Advantages

- Horizontal comparison of each pair of pixels, the results are qualitative and quantitative to avoid human interference.
- Full field of view displayed on double-screen can be arbitrarily overlapped, cut, and arbitrarily setting transparency, which is intuitive for everyone.
- Support history image comparison, dynamic and static image contrast, comparison.
- Dual screen can be freely and independently adjusting parameter settings, including white balance, exposure, brightness, contrast, saturation and more.



▶ Common Functions

Open, Save, Preview, Select, Move, Undo, Redo, Delete, Screen, Flip, Mirror

Capture, Screenshot, Record, Screen Record, Equally Proportional Cutting

The built-in centralized power outlet design only needs a power cord to simultaneously power near-coaxial lamps, four-zone lamps,, six-color oblique lamps and cameras, making the desktop clean and net.

▶ Annotation Functions

Pencil, Straight Line, Highlighter, Single Arrow Straight Line, Rectangle, Oval, Concentric Circle, Isosceles Triangle, Font, Add Text

▶ Measurement Functions

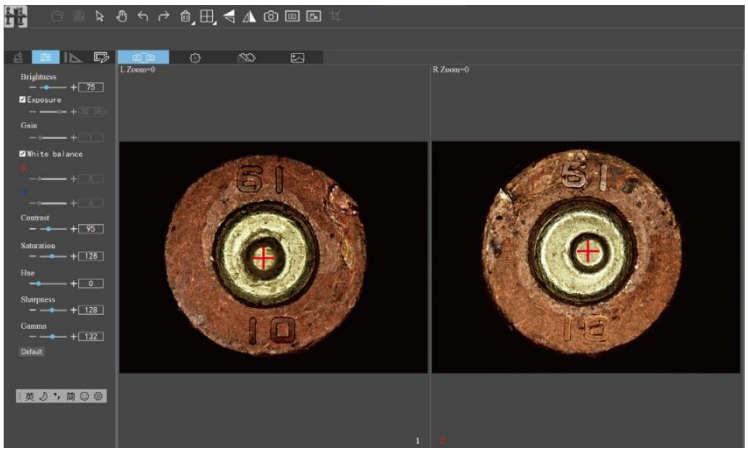
Software provides commonly used measurement tools and scales and supports the generation of reports from measurements and images in PDF, Word or Excel formats.

Linear Distance | Circular | Rectangle | Three-point angle | Parallel Line spacing | Center Distance of double parallel lines | Polyline | Polygon | Arc | Three-point vertical line | Four-point angle

Ellipse | Circle radius | Three-point Drawing circle | Concentric circle | Concentric Radius Circle Center Distance Drawing Circle | Ring | Manual count | Font | Scale mark | Scale bar | Calibration

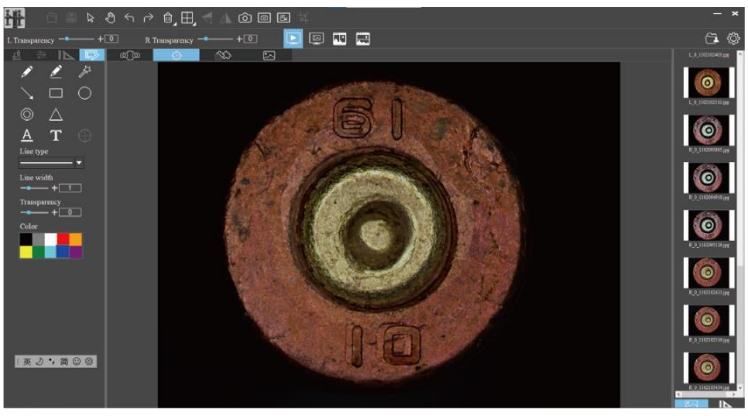
▶ Image Calibration Function

The X, Y, and R mobile tables and fixtures of the comparison microscope are used to place two objects that need to be compared or trace stitched in a suitable position, and the selected images can be individually manipulated to control image attributes and take pictures.

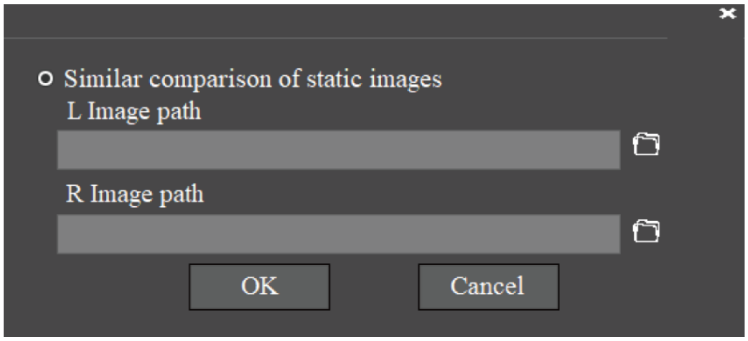


▶ Similarity Com parison Function

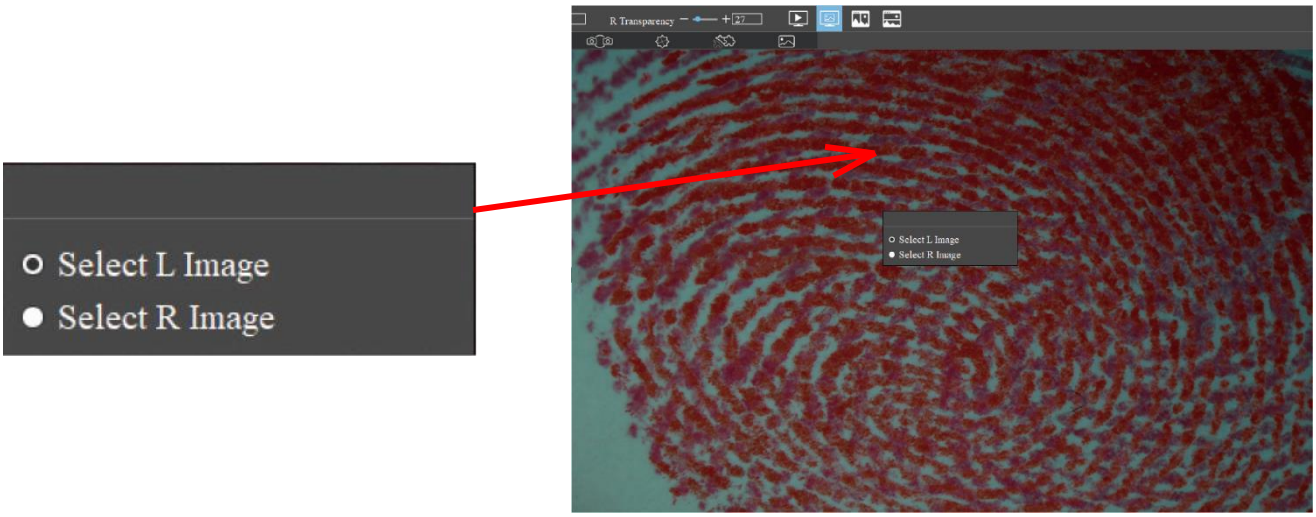
Support two images overlap and enter the "Dynamic Similarity Comparison" state.



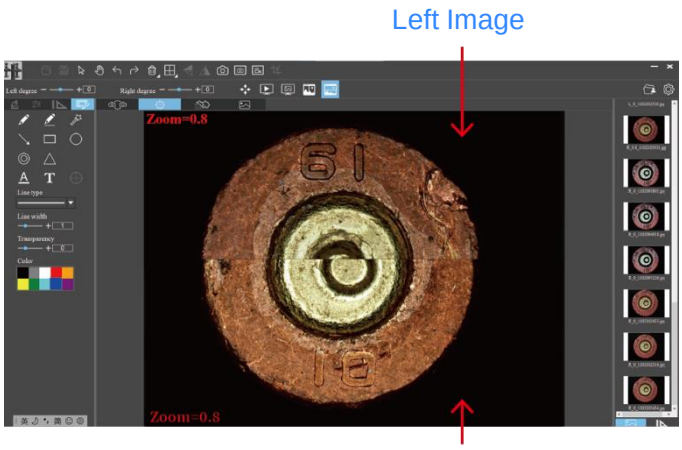
Support retrieve images from local disk to the software for similarity comparison..



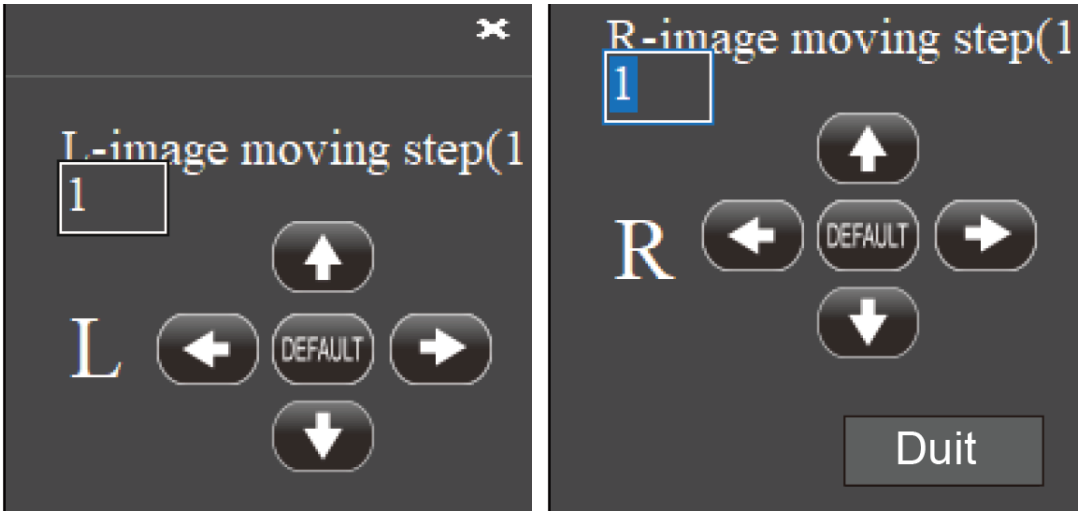
Support click to select individual moving static L or R image for compare similar features.



Click "Vertical Cut"  or "Horizontal Cut"  to cut the layers of two images and pull the split line by mouse to show the similarity of features in the same position.

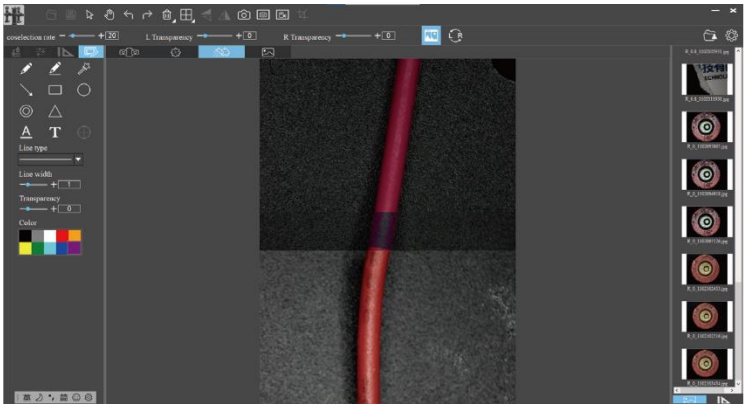


Support fine-tuning the position of the L-image/R-im- age separately
Support moving images to the left/right/up/down Support to restore the default position of the image Support manual setting of movement range (1~5)



▶ Trace Stitching Function

The X, Y, and R mobile tables and fixtures of the comparison microscope are used to place two objects that need to be compared or trace stitched in a suitable position, and the selected images can be individually manipulated to control image attributes and take pictures.

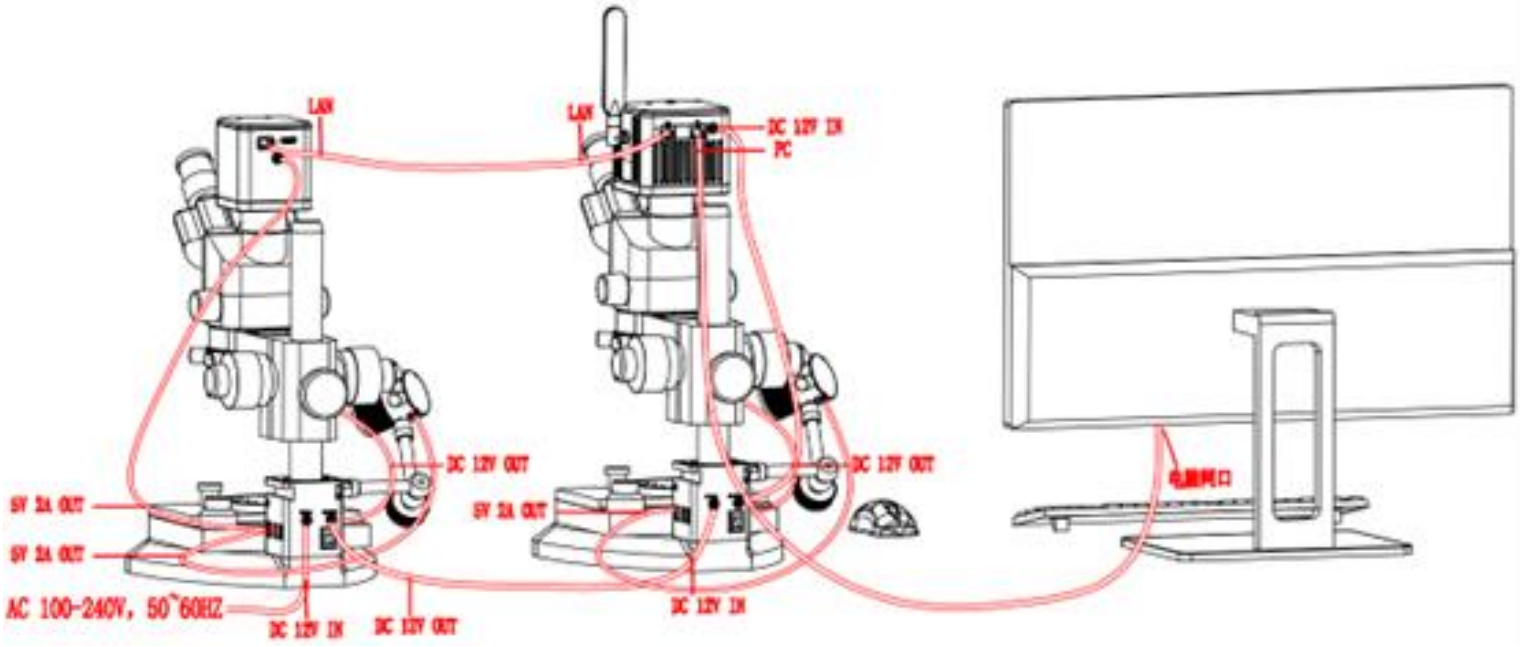


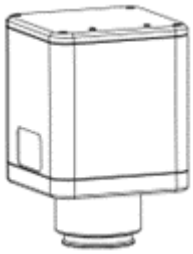
coselection rate 20	Set the overlap ratio of the two images
L Transparency 0	Set L image transparency
R Transparency 0	Set R image transparency
	Switching up and down/left and right stitching method
L R	Switching L and R image display windows

▶ Static Image Editing Function

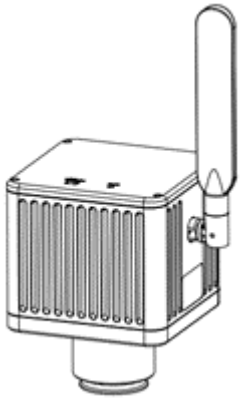
Supports clockwise or counterclockwise rotation of the selected image, and the angle of single rotation can be set.

A18.4903 Digital Stereo Comparison Microscope Specification		
Stereo Microscope (2 pcs)		
Microscope	Main Microscope Marked “L”, Secondary Microscope Marked “R”	
Working Distance	65-75mm	
Magnification	7x-45x, Optional Eyepiece Extension 7x-125x, Support Continuous Zoom (Freeze)	
Eyepiece Field of View Range	The Diameter of The Field of View at 7x Magnification Is 26mm The Diameter of The Field of View at 45x Magnification Is 4.3mm	
Camera Field of View Range	The Field of View at 0.7x Is 13.3x10mm The Field of View at 4.5x Is 2.14x1.6mm	
Eyepiece	WF10x/20mm，Large Field of View, Wide Angle, High Eye Point	
Observation Tube	45° Tilt, 360° Rotation, Pupil Distance 54-76mm; Bilateral Visual Adjustment (±5); Hinged Trinocular, 50:50 Beam Splitting Ratio	
Objective Lens	0.7x-4.5x Continuous Zoom (Freeze)，Objective Zoom Ratio 6.4:1	
Focusing Bracket	Vertical Arm Focus Bracket, Hand Wheel Adjustable, Lift Range 45mm, Fine Tuning Accuracy: 0.002mm	
Base Dimensions	Base Dimensions：285x238x25mm	
Mobile Stage	Dimension : 180x155x26mm, Moving Range: 25mm (Horizontal), 5mm (Longitudinal), 360° Round Table	
Trinocular Interface	0.63x Optical Adapter (Integrated Design With Camera)	
Camera (2 pcs)		
Physical Resolution	12.0MP, Secondary Camera, Marked “R”	20.0MP, Main Camera, Marked “L”
Output	USB, Lan, HDMI	USB, Lan, WIFI
Image Sensor	SONY IMX412 CMOS	SONY IMX147 CMOS
Exposure Mode	Rolling Shutter	Rolling Shutter
Maximum Resolution	4000x3000 (12,000,000Pixels)	5184x3888 (20,155,392 Pixels)
ISO Sensitivity	Equivalent to 100-12800	Equivalent to 100-12800
Sensor Size	1/2.3"	1/2.3"
Pixel Size	1.55μmx1.55μm	1.2μmx1.2μm
Spectral Response	380-650nm	380-650nm
Exposure Capability	Real-time Auto and Manual Adjustment	Real-time Auto and Manual Adjustment
Exposure Time	10μs-333ms	10μs-333ms
White Balance	Real-time Auto and Manual RB Adjustment	Real-time Auto and Manual RB Adjustment
Preview Resolution	4000x3000@30fps，3840x2160@30fps	5184x3888@10fps，3840x2160@15fps
Power Supply	DC 12V 5A	DC 12V 5A
WiFi Protocol	--	5G WiFi IEEE802.11ac
A/D Convertsion Bit Depth	12bit	12bit
Software and App	Professional Comparison Software DB Capture for Windows	
Near-coaxial Falling Light (2 pcs)		
Power	3W LED	
Input Voltage	DC 12V	
Dimming Method	0~100% Linear Adjustment	
Center Brightness	≥15000LX(Height 75mm)	
Number of LEDs	24 Small Angle Highlighting Beads	
Color Temperature	5500K~7000K	
Adjustment Method	Button + Knob Control	
4-Zone Diffuse Reflection Ring Light (2 pcs)		
Power	5W LED	
Input Voltage	DC 12V	
Dimming Method	Linear Adjustment	
Center Brightness	≥46000LX(Height 75mm)	
Number of LEDs	72 Small Angle Highlighting Beads	
Color Temperature	5500K~7000K	
Adjustment Method	Button + Knob Control	
6 Colors Oblique Light (2 pcs)		
Power	3W LED	
Input Voltage	DC 5V	
Dimming Method	0~100% Linear Adjustment	
LED Wavelength	Red:620~625 nm	
	Yellow:590~595 nm	
	Green:520~525 nm	
	Blue:460~465 nm	
	Purple:390~400 nm	
	White:6000K	

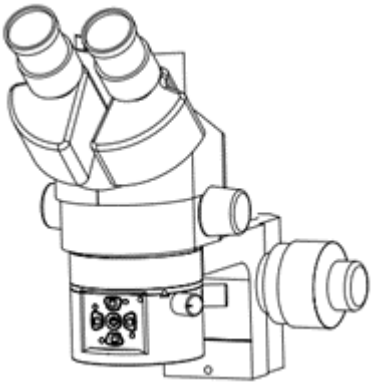




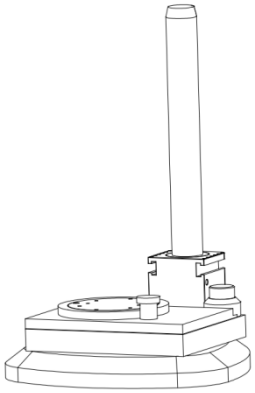
Sub camera x1



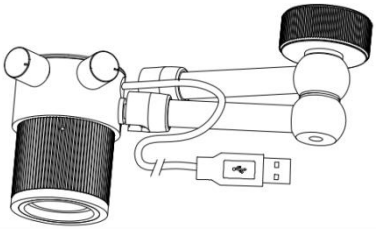
Main camera x1



Microscope body x2



Microscope base x2

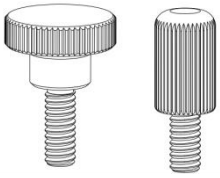


Six-color oblique illumination x2

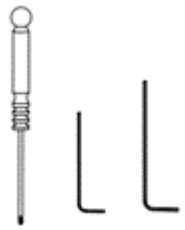
Power adapter x1

Cable(Ethernet cable and USB-DC cable）x2

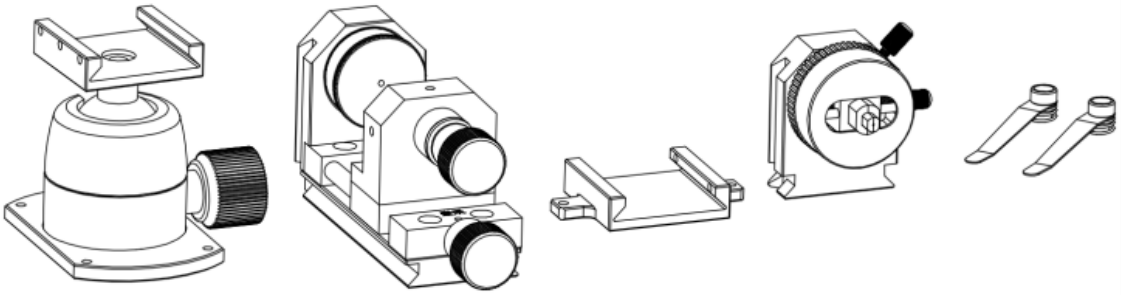
Fixtures box x2



Hand screws x8

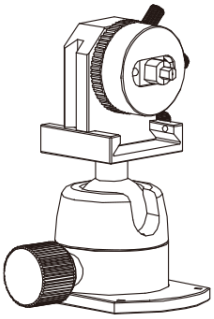


Installation tools x2

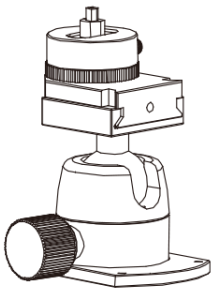


Fixtures x2

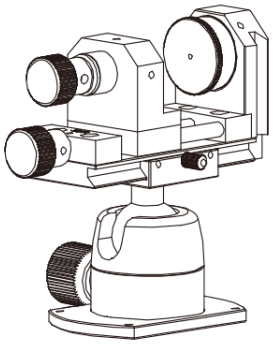
Installation Diagram Of The Fixture Combinations



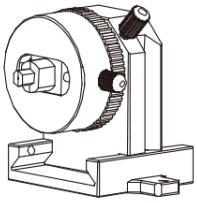
A+C Combination



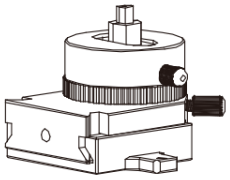
A+C Combination



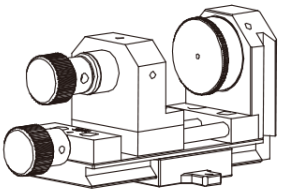
A+D Combination



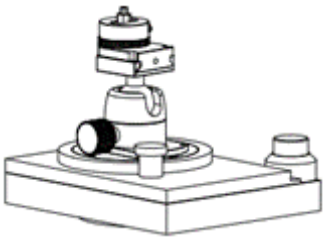
B+C Combination

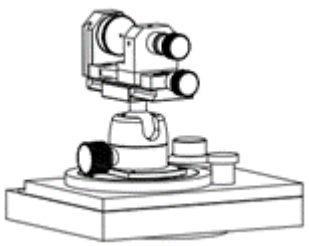


B+C Combination

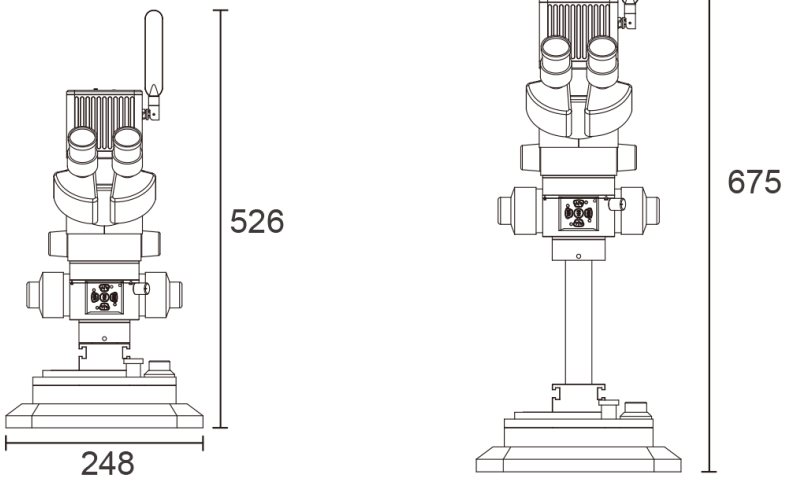


B+D Combination

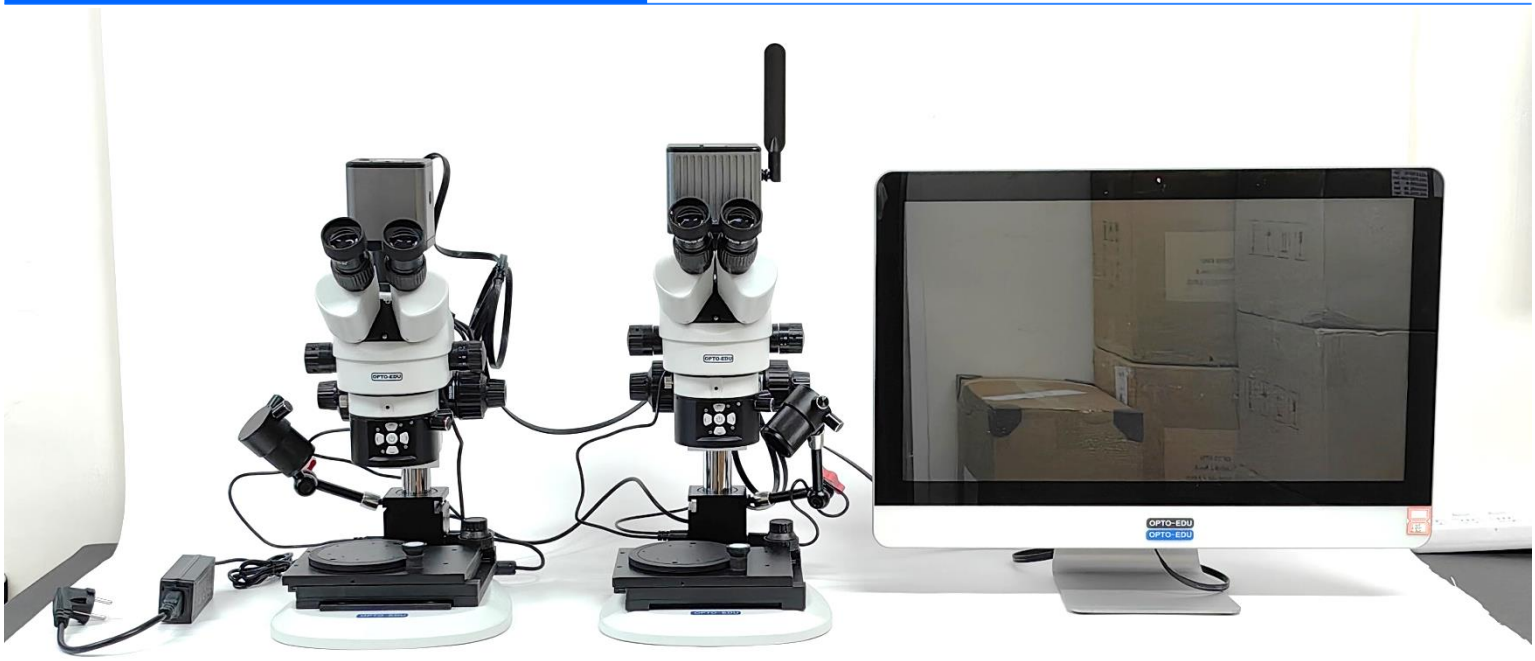


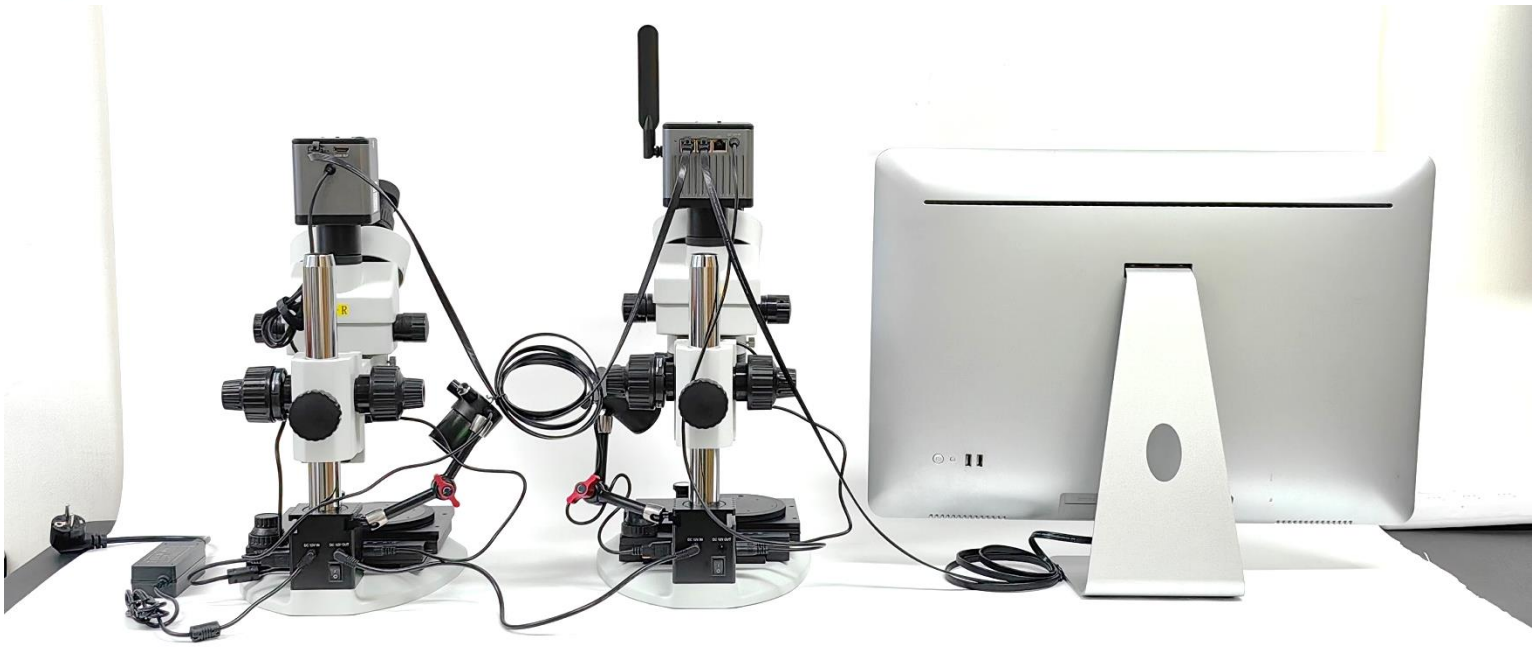


A18.4903 Dimensions (Unit: mm)



A18.4903 More Pictures






213
11.7kg
FRAGILE
OPTO-EDU
10.6kg
FRAGILE
OPTO-EDU


LAN
WAN
PC
DC 12V IN
4PR/26AWG STRANDED
2 – L


HDMI OUT
2 – R


OPTO-EDU


D
A


OPTO-EDU
A
A
B
B
C
C
D

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