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# MAXCOPE M13.5850

Research 3D Full Auto Super Depth of Field  
Upright Metallurgical Microscope, T/R  
BF+DF+PL+DIC, Semi-APO





**A12.0910 Upgrade to M12.5850**  
Research Scientific Laboratory Microscope,  
Semi-APO, Upgrade BF+DF+PL+PH+FL+DIC



A59.2225 Cooling Digital Camera



A54.5801 XYZ Motorized Stage



**A13.0910 Upgrade to M13.5850**  
Upright Metallurgical Microscope, Semi-  
APO, BF+DF+PL+DIC

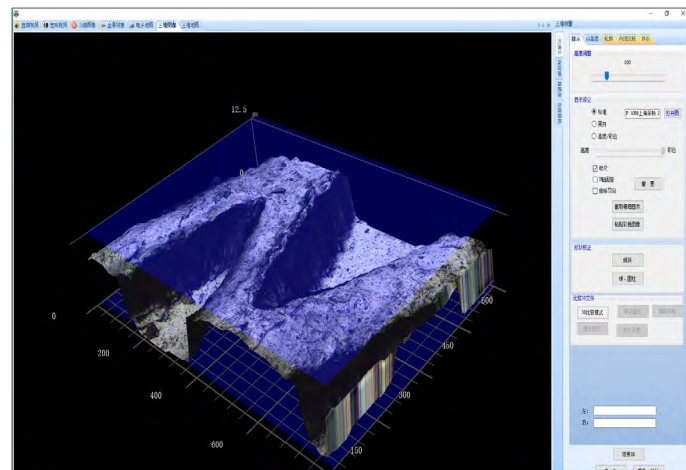


**A16.0910 Upgrade to M16.5850**  
Research Fluorescence Microscope,  
Semi-APO, Upgrade BF+DF+PL+PH+FL+DIC


**M13.5850**

## MAXCOP 3D Full Auto Upright Metallurgical Microscope

The new M13.5850 Research-grade Metallurgical Microscope has upgraded to XYZ motorized working stage model, combined with the powerful Maxscope 2D/3D software, which integrates a number of firsts. From appearance to performance, it closely follows the international leading design trend. MAXCOPE will continue to provide customers with complete 3D industrial inspection solutions.



# M13.5850 Metallurgical Microscope



## Viewing Head with Multi-splitting Ratio

A13.0910 viewing head is designed of multiple options for splitting ratio. With wide beam imaging system, 26.5mm super wide field of view is available. Trinocular head with erect image makes moving direction of samples is as the same as observed. , splitting ratio switchable between E100:P0 or E0:P100.

Trinocular head with inverted image, splitting ratio E100:P0 or E20:P80 or E0:P100. Except for concentrating 100% light to eyepiece tube or camera tube, there is another option with 20% light to eyepiece tube and 80% to camera tube, so that eyepiece observation and image output can be available at the same time.

## Polarization System

The polarizer and analyzer in polarization system contribute to eliminate the stray light in semiconductor and PCB detection, image with clear detail is achievable. There are fixed analyzer and rotatable analyzer for option. The sample can be observed at different polarizing angles with 360° rotatable analyzer. Besides, this polarization system can be upgraded to Nomarski differential interference contrast system after installing a new developed DIC attachment.

## Nomarski Differential Interference Contrast (DIC)

The weeny asperities on the surface which can not be found in bright field, is able to be detected by using U-DICR attachment to create high contrast background. It is widely used for testing the conductive particle of LCD, surface scratch of precision disk.

## Linkage Between Neutral Density Filter & Switch For BF/DF

The lever in front of illuminator is used to switch between bright field and dark field, and it is in tandem with a neutral density filter (ND50). When you switch from DF to BF, the built-in ND50 filter takes the role to decay the light intensity. More scientific and more comfortable.

## Ergonomic Design

- The intensity can be flexibly adjusted by the dimming device which is located on the right side of frame. The voltage change all-digital displays. Adjusting intensity and coaxial focusing at the same time, improves the work efficiency.

- Reflected or transmitted illumination can be switched by the button on the digital dimming display. Using the RE-SET button to keep the light intensity at around 8V (with a camera mark on the dimming display) which is an optimal voltage for photomicrography.

- Four built-in filter holders with three standard filters, one empty holder for optional filter. All the filters can be moved out the optical path by pulling out the lever.

- Low position coaxial focusing system with tension adjustment. The coarse range is 25mm and the fine precision is 0.001mm. The height of a tiny sample, such as solder ball, can be measured.

## Erect Image Head

30° Inclined Image Infinity Gemel Trinocular Head,  
Interpupillary Distance 50~76mm, Light Splitting  
Ratio Switch E100:P0/E0:P100

C-Mount Adapter 0.5X

Light Splitting Ratio Switch  
E100:P0/E0:P100

EYE  
PHOTO

## BF/DF Reflect Illumination

Epi Illumination System With Iris Diaphragm, Aperture  
Diaphragm, Both Center Adjustable, With BF/DF  
Switch, With Polarizer & Analyzer Slot, Filter Slot



A close-up photograph of the nosepiece of a microscope. The nosepiece is black and has six holes for objective lenses. Three objective lenses are visible, each with a silver barrel and black text. The text on the lenses includes '80 BD DIC', 'WD1.0', 'anFL', '20x', and 'WD9.0'. The nosepiece is mounted on a black base.

## BF/DF 6 Holes Nosepiece

6 Holes Nosepiece For Both Bright Field & Dark Field, With Socket For DIC Slide & Polarizing Analyzer Slide, For Metallurgical. 5 Holes Optional



A photograph of the microscope stage. The stage is black and has a large, clear glass plate in the center. The stage is mounted on a black base. The stage is labeled '4" Large Working Stage'.

## 4" Large Working Stage

4" Three Layer Mechanical Stage, For Transmit & Reflect Light Moving Range 102\*105mm, Low Position X/Y Moving Handle, With Glass Plate For RT Model, With Metal Plate For R Model



## Digital Dimming Illumination

12V100W Halogen Illumination with Iris Diaphragm, With Light Indicator, Digital Dimming System Have Brightness Set & Reset Function. One Key Switch Reflect / Transmit Light Source



## Transmit Filters

Built-In Transmit Filters LBD/ND6/ND25



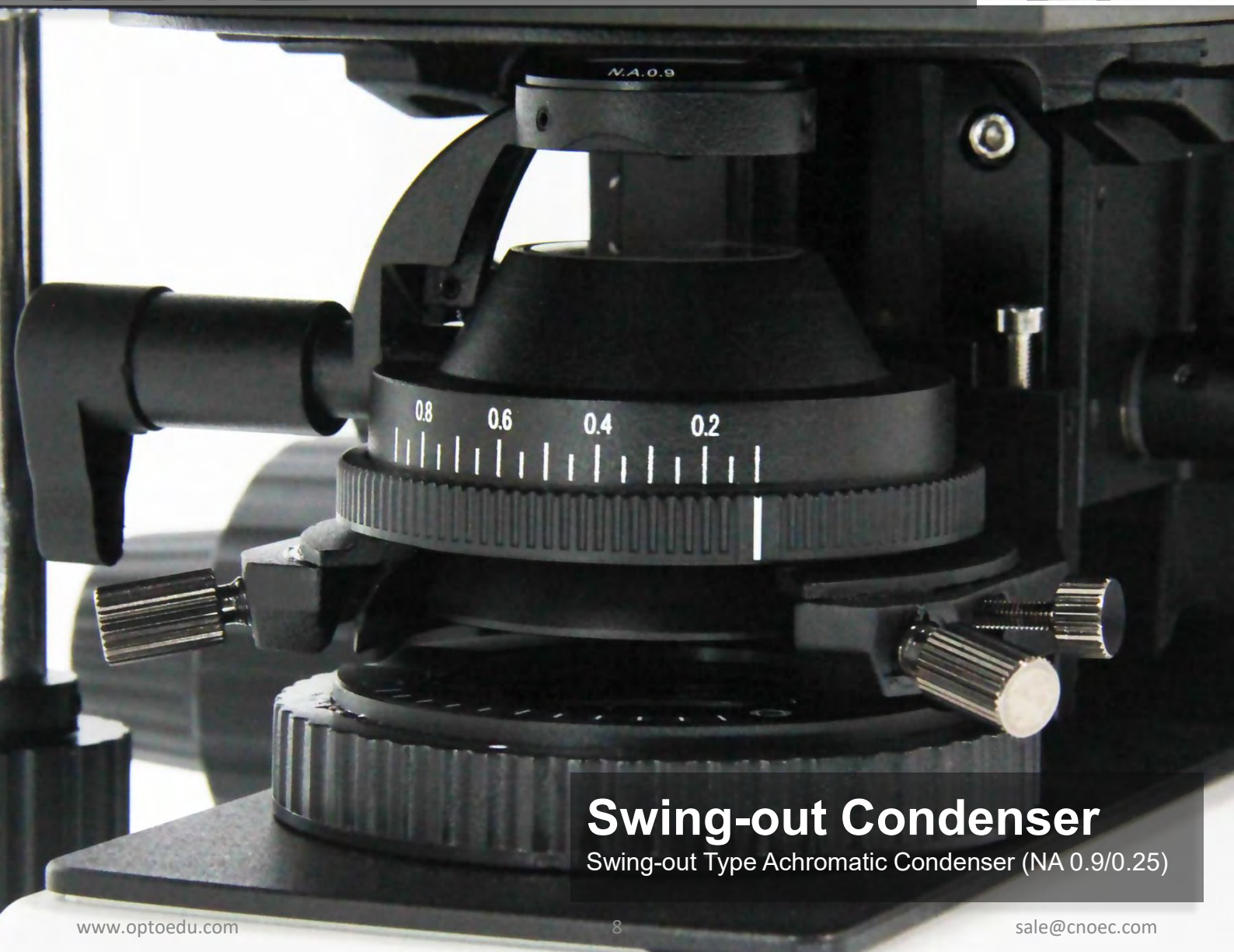
## Coaxial Focusing

Ergonomic Low-Position Coaxial Coarse & Fine Adjustment With Coarse Adjustment Stop And Tightness Adjustment.



## 12V100W Halogen Light Source

12V 100W Halogen Lamp House For Both Reflection And Transmission Illumination, Bulb Center Adjustable, Built-in Reflect Mirror Center Adjustable.



## Swing-out Condenser

Swing-out Type Achromatic Condenser (NA 0.9/0.25)



	Mag.	N.A.	W.D.	Cover (mm)	Confocal (mm)	Conjugate (mm)
BF Semi-APO Metallurgical Objective	5x	0.15	13.50	-	45	$\infty$
	10x	0.30	9.00	-		
	20x	0.50	2.50	0		
	50x	0.80	1.00	0		
	100x	0.90	1.00	0		
	Mag.	N.A.	W.D.	Cover (mm)	Confocal (mm)	Conjugate (mm)
BF/DF Semi-APO Metallurgical Objective	5x	0.15	19.50	-	45	$\infty$
	10x	0.30	10.80	-		
	20x	0.50	3.20	0		
	50x	0.80	1.20	0		
	100x	0.90	1.00	0		



## BF/DF DIC Semi-APO Objective

Professional LWD Infinity Plan Metallurgical BF/DF DIC Semi-APO Objective 5x, 10x, 20x, 50x, 100x, Enable Bright Field, Dark Field View, DIC View and Polarizing View in Same Objective,

### Accessories



A5M.0952 DIC Slide



A54.0930-RM5BD  
BF/DF 5Holes



A54.0930-R7  
BF 7Holes



A54.0930-RM6BD  
BF/DF 6Holes



A56.0934-R  
Swing-out Condenser



A5F.0930-1  
Centering Objective



Built-In Transmit Filters ND6/ND25



A55.0930-65  
0.65x C-Mount



A55.0930-05  
0.5x C-Mount



A55.0930-10  
1.0x C-Mount

## Filters For Reflect Light

A5M.0953 Interference Filter, For Reflect Light (For A13.0910-R & RT)



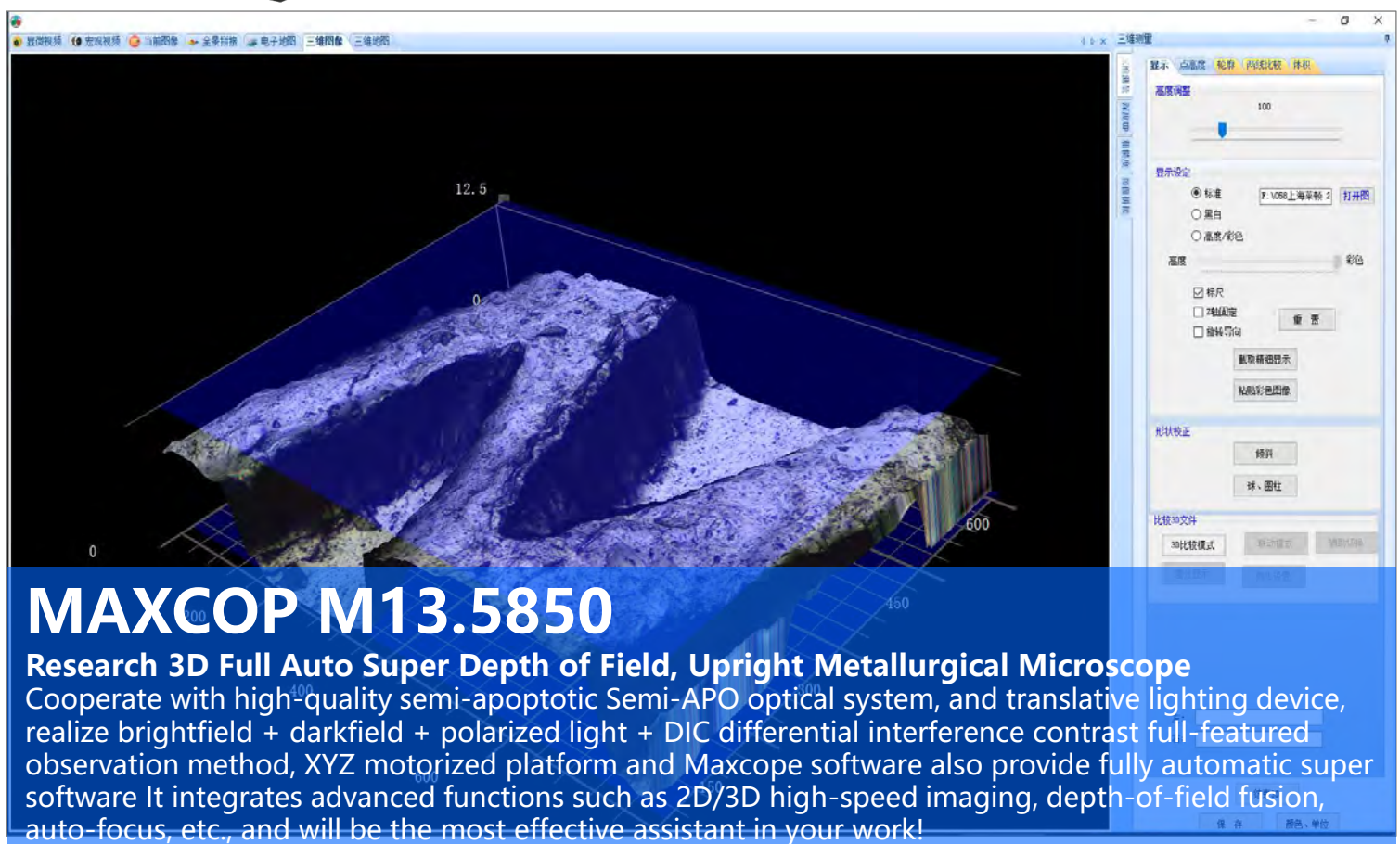
## Filters For Transmit Light

Built-in Stand Filters, LBD, ND6, ND25 (For A13.0910-RT)

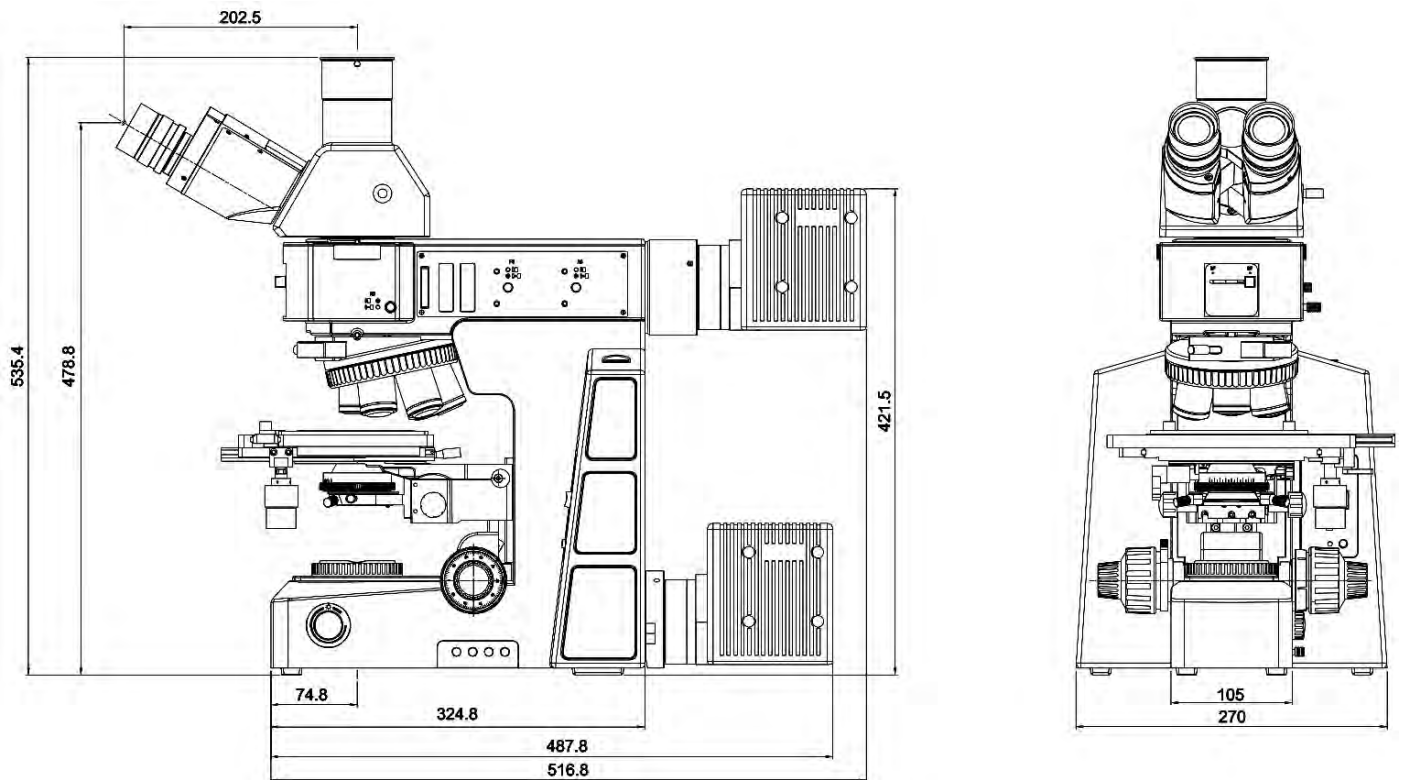




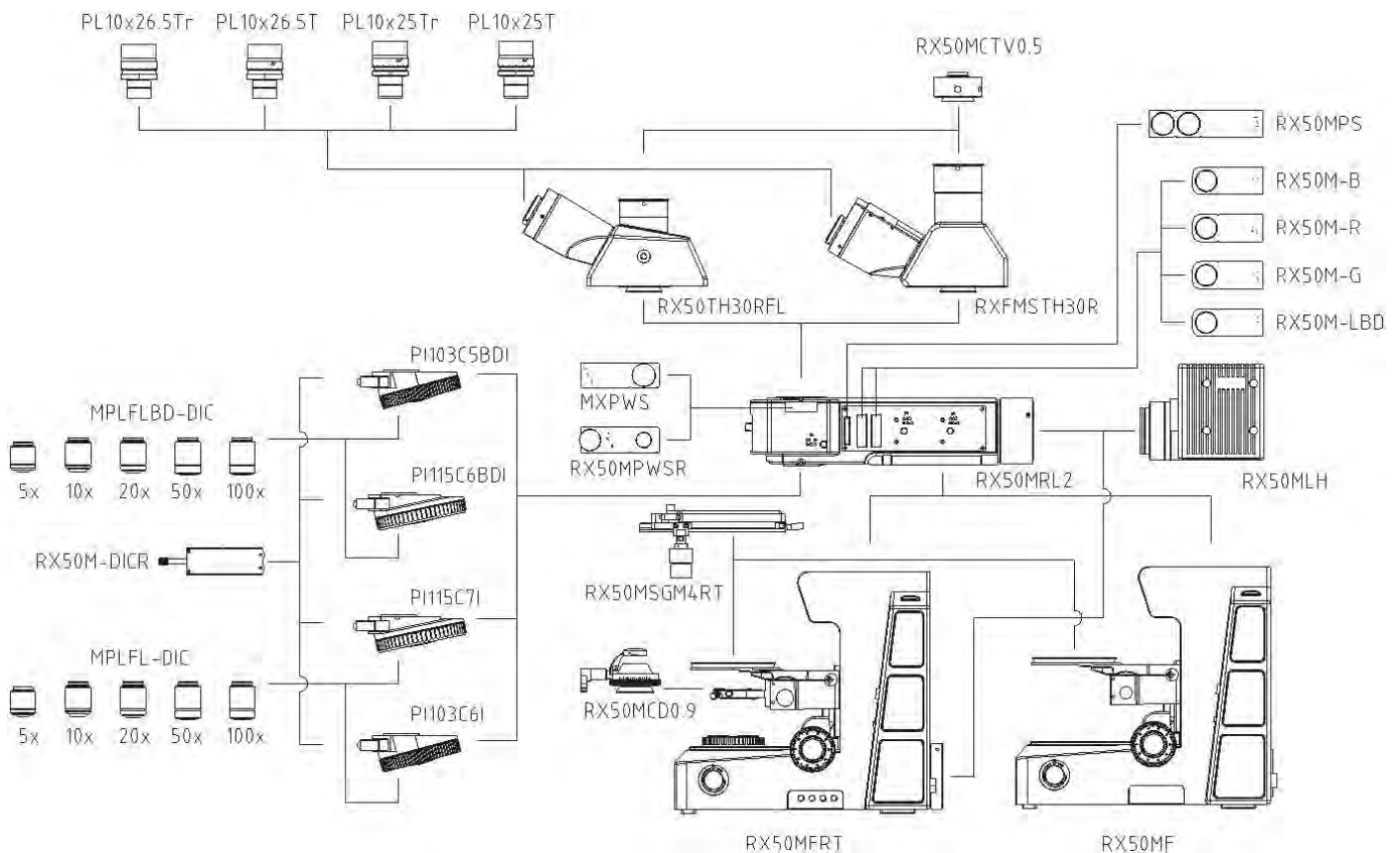
M13.5850



## System Size: mm

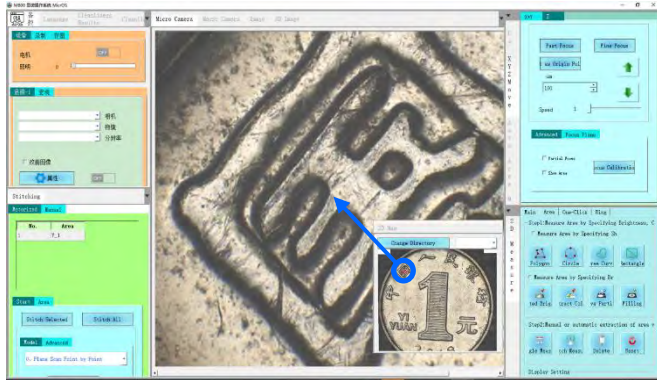


## System Diaphragm



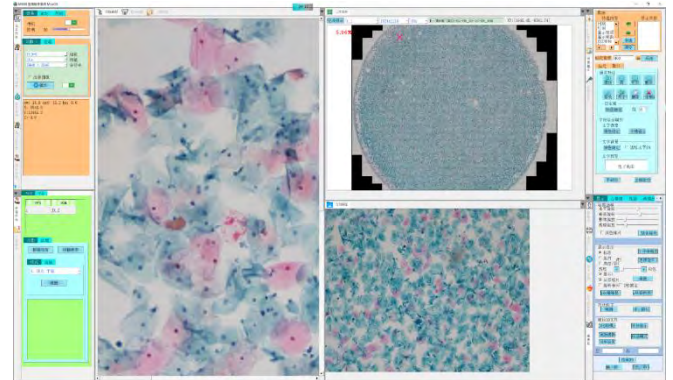
## Full Auto Microscope Scanning Software

According to surface condition of the sample and the specific requirements of customers, Maxcope has 4 versions and more customized functions provided, which are suitable for the complex automatic microscopic scanning splicing work of the motorized microscope in medical, teaching, industrial, wafer processing and other fields.



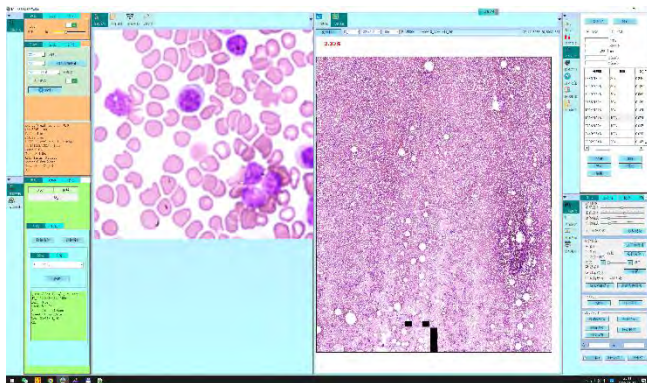
### A30.5801-2D

2D Version, Maxcope Series Standard Software  
 --Plane PXP Scan, Plane Fly Scan  
 --For XY Stage Model + 2C Computer  
 --For Plane Smooth Surface Or Low Magnification Samples, No Autofocus Needed  
 --Single Focal Plane Scan, XY Stage Direct Scan And Stitch 2D Image



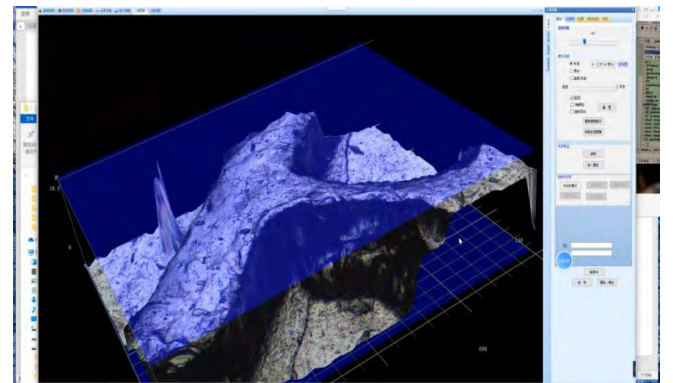
### A30.5801-2DB

2DB Version, Maxcope Series Optional Software  
 --Including All 2D Function, Add:  
 --Bevel PXP Scan, Bevel Fly Scan  
 --For XYZ Stage Model +2C Computer  
 --For Bevel Smooth Surface Or High Magnification Observation Of Thick Samples  
 --Auto Acquisition Height Of Multi-focal Planes, After Modeling, Scan And Stitch 2D Image



### A30.5801-2DF

2DF Version, Maxcope Series Optional Software  
 --Including All 2DB Function, Add:  
 --Up/Down Fast, Middle, Fine, Fusion Scan  
 --For XYZ Stage Model +3C Computer  
 --For Plane/Bevel/Uneven Surface  
 --Auto Focus On Multi-focal Planes, Scan And Stitch 2D Image

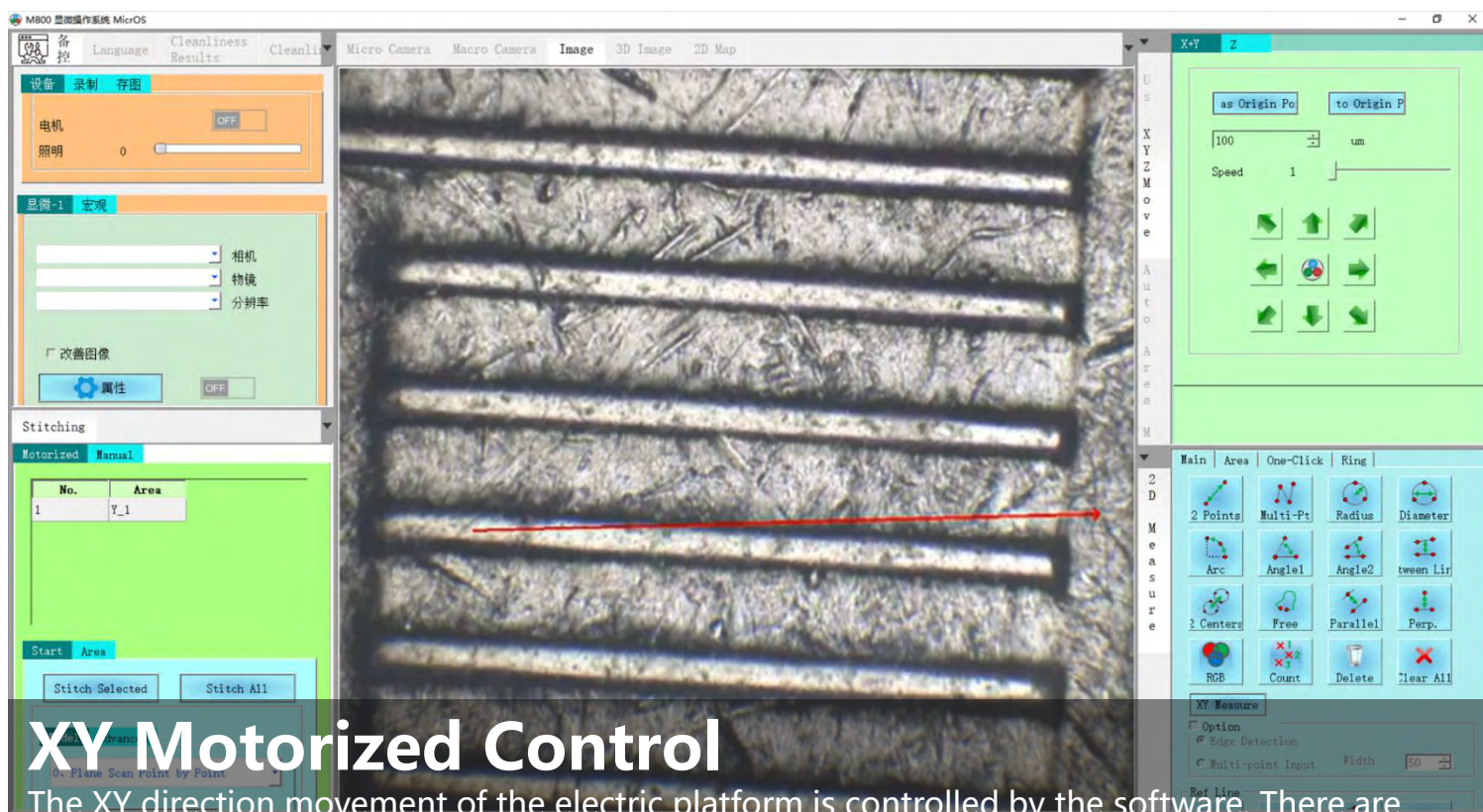


### A30.5801-3D

3D Version, Maxcope Series Optional Software  
 --Including All 2DF Function, Add:  
 --3D Scan, 3D Measure  
 --For XYZ Stage Model +3C Computer  
 --For Plane/Bevel/Uneven Surface  
 --Auto Focus On Multi-focal Planes, 3D Scanning And Stitching After Depth Fusion

## More Depth Customization Functions

HDR Observation Function, DIC Detection Analysis, Professional Metallographic Analysis, Grain Size Analysis, Cleanliness Analysis, Hardness Tester Analysis and other customized solutions for various industries, which can be deeply customized according to the specific needs of different customers to fully meet the complex work needs



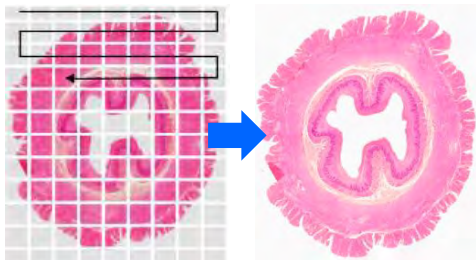
## XY Motorized Control

The XY direction movement of the electric platform is controlled by the software. There are various control methods. You can directly drag the window to move the platform manually, or you can double-click any point of the image, to move stage to interesting point quickly.



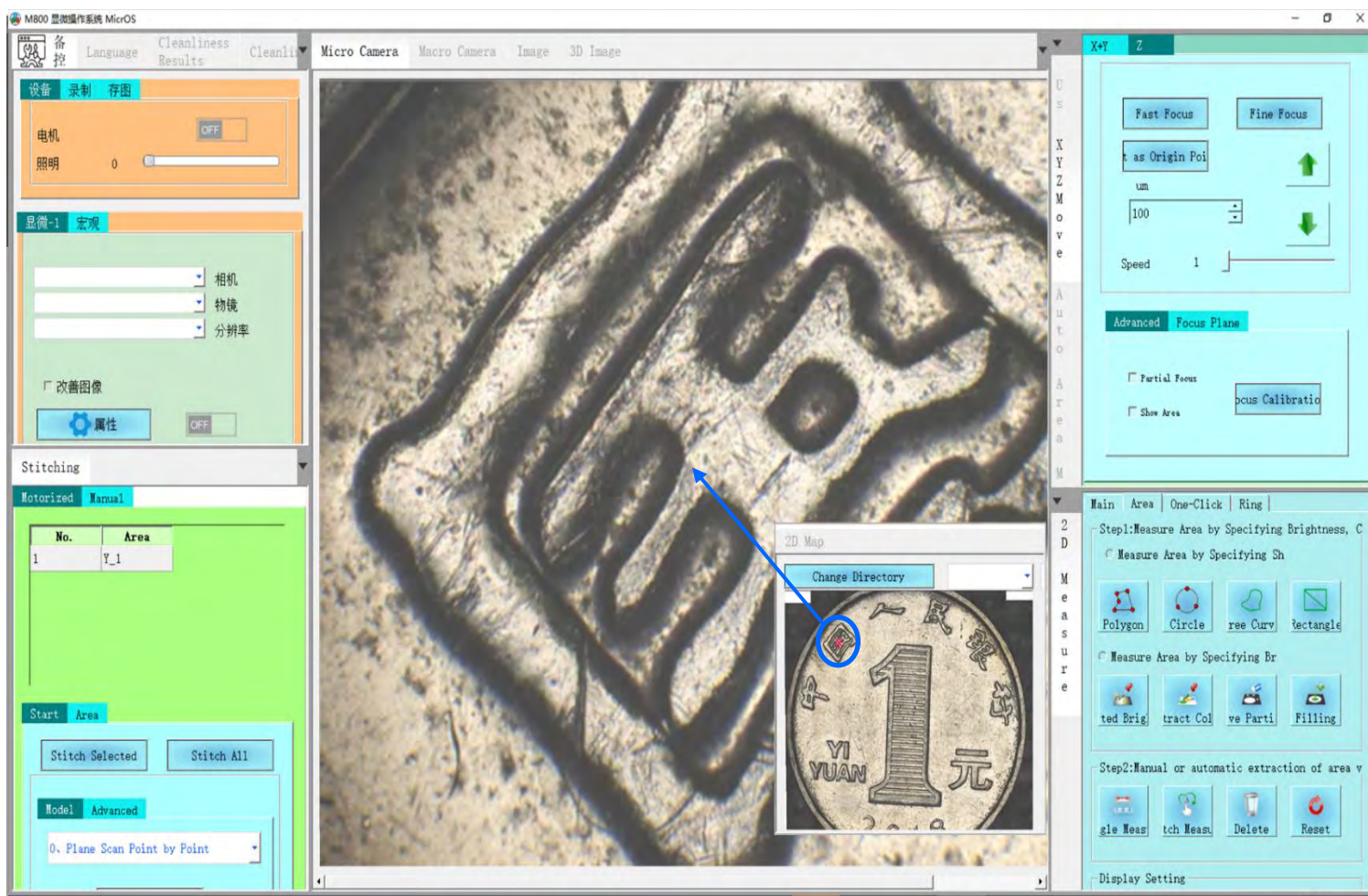
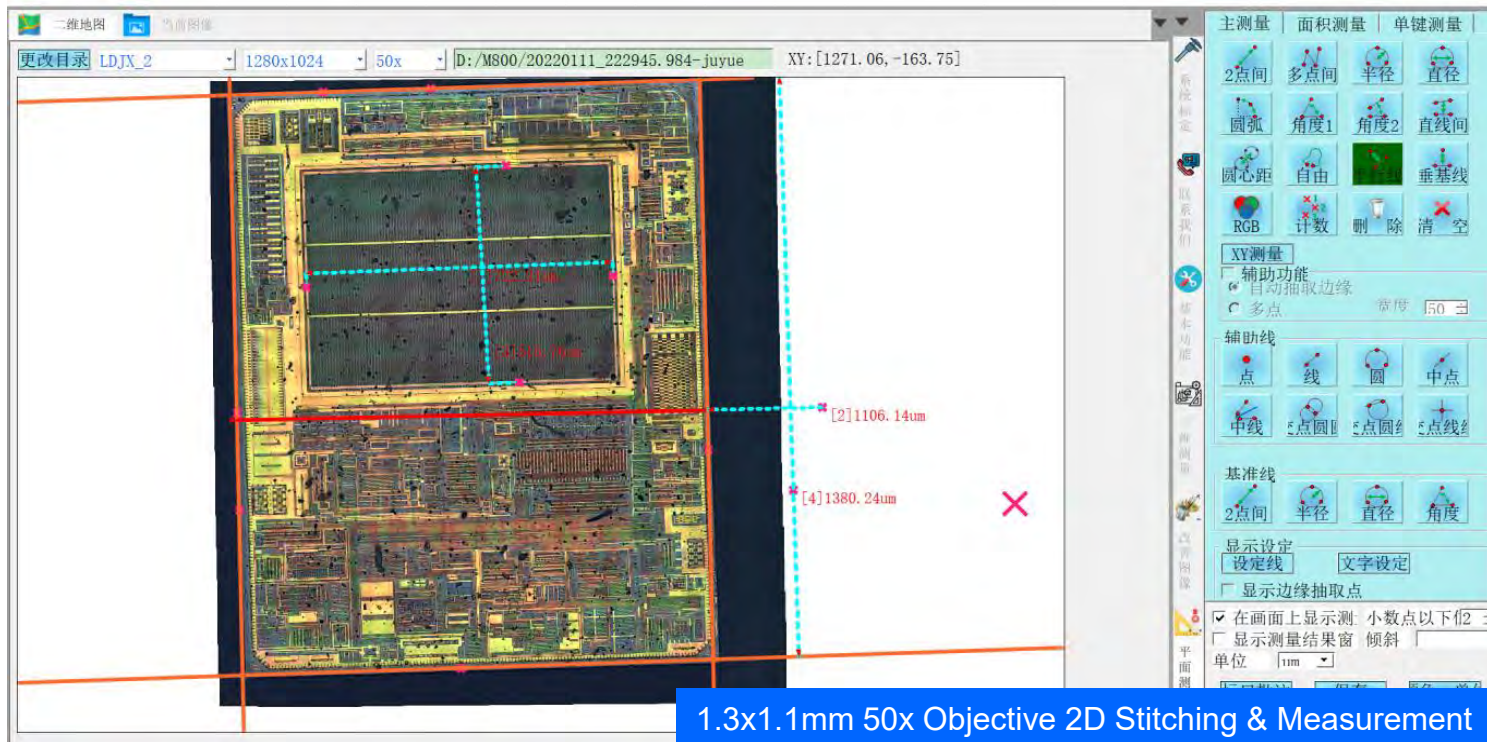
## Z Motorized Control

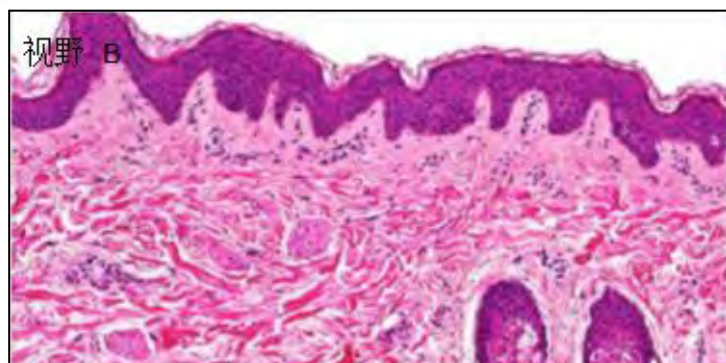
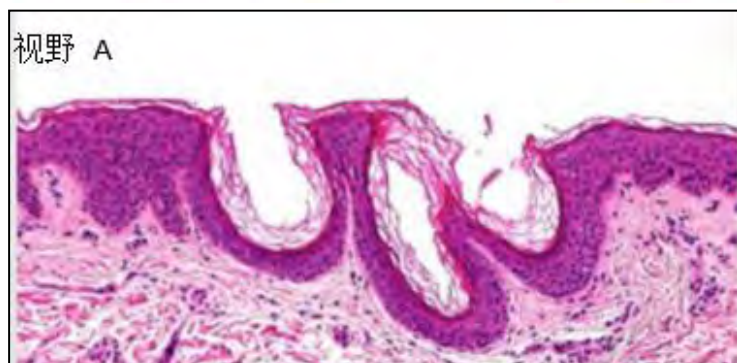
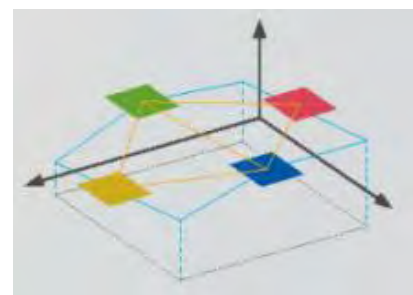
The software controls the Z-axis electric lift, to accomplish professional functions such as manual focus/auto focus/super depth of field fusion. One-button autofocus, focusing speed accuracy can be selected.



## 2D Stitching

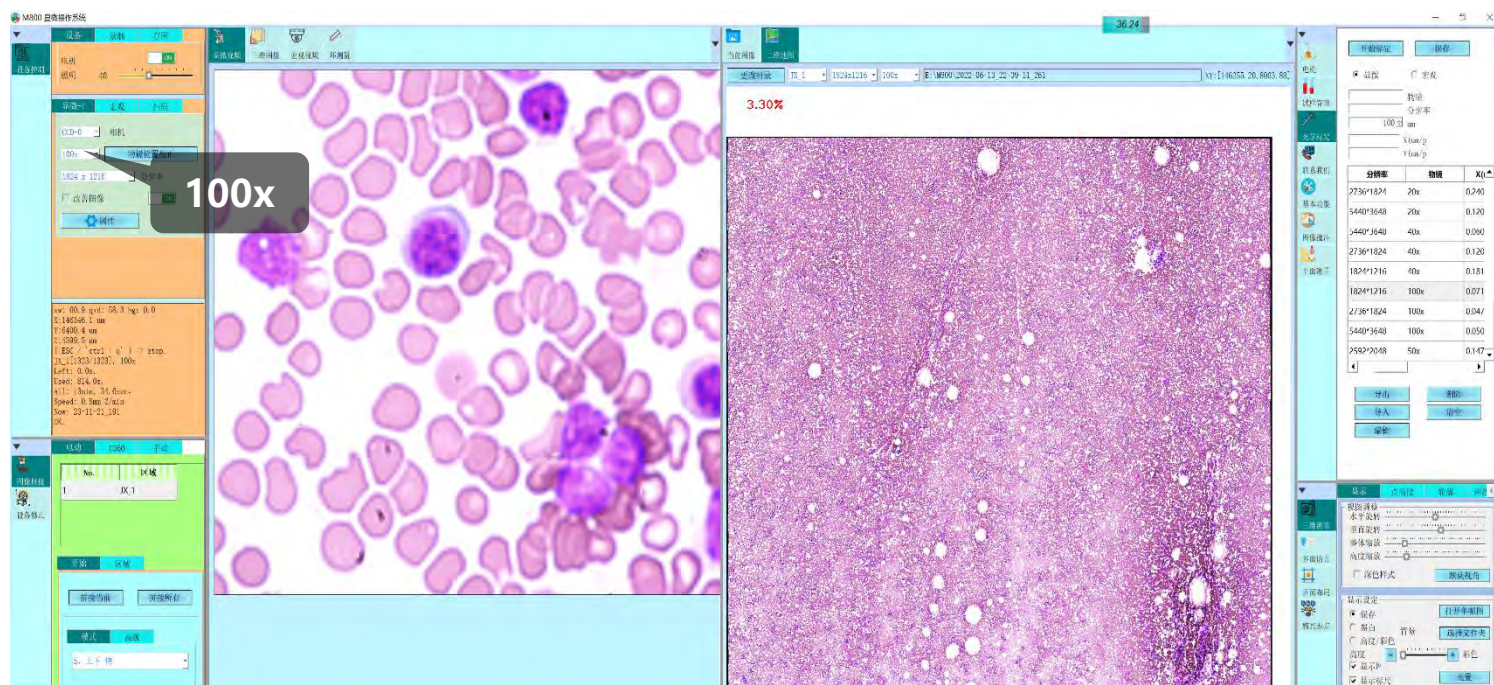
Supports auto scanning and stitching of 2D images of any tilt plane or concave and convex surface. 2 Standard 2D Stitching Modes, 7 Advanced 2D Stitching Modes can scan & stitch at different scanning accuracy and speed as your need.





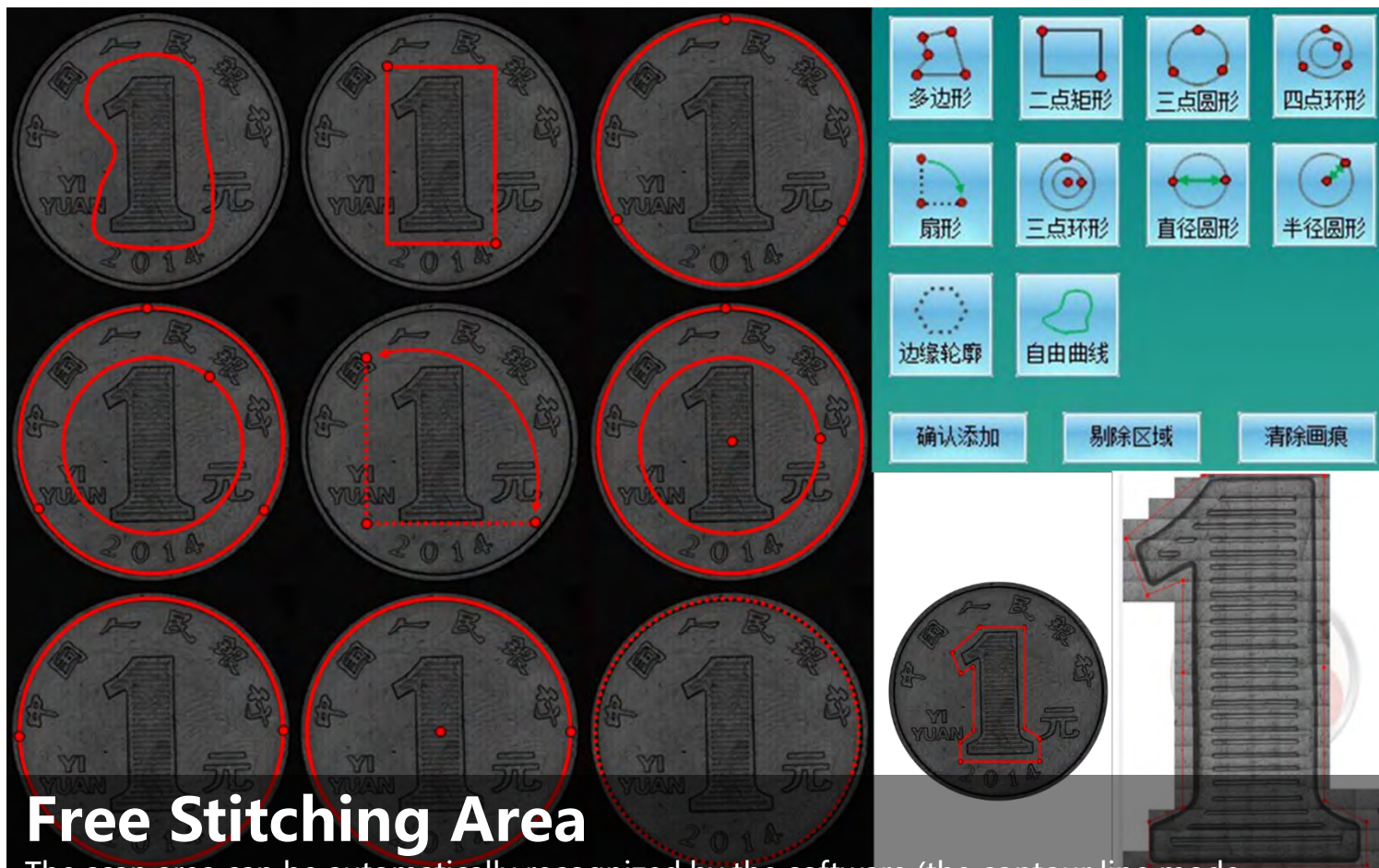
## High Speed – Fly Scan Mode

After setting the scanning range of bevel or uneven surface, the software will automatically select 9 acquisition points, automatically focus and record the height respectively, and establish a height model. Then fly scan can move Z axis according to height model and take photos quickly and stitch 2D panoramic scan images at high speed.



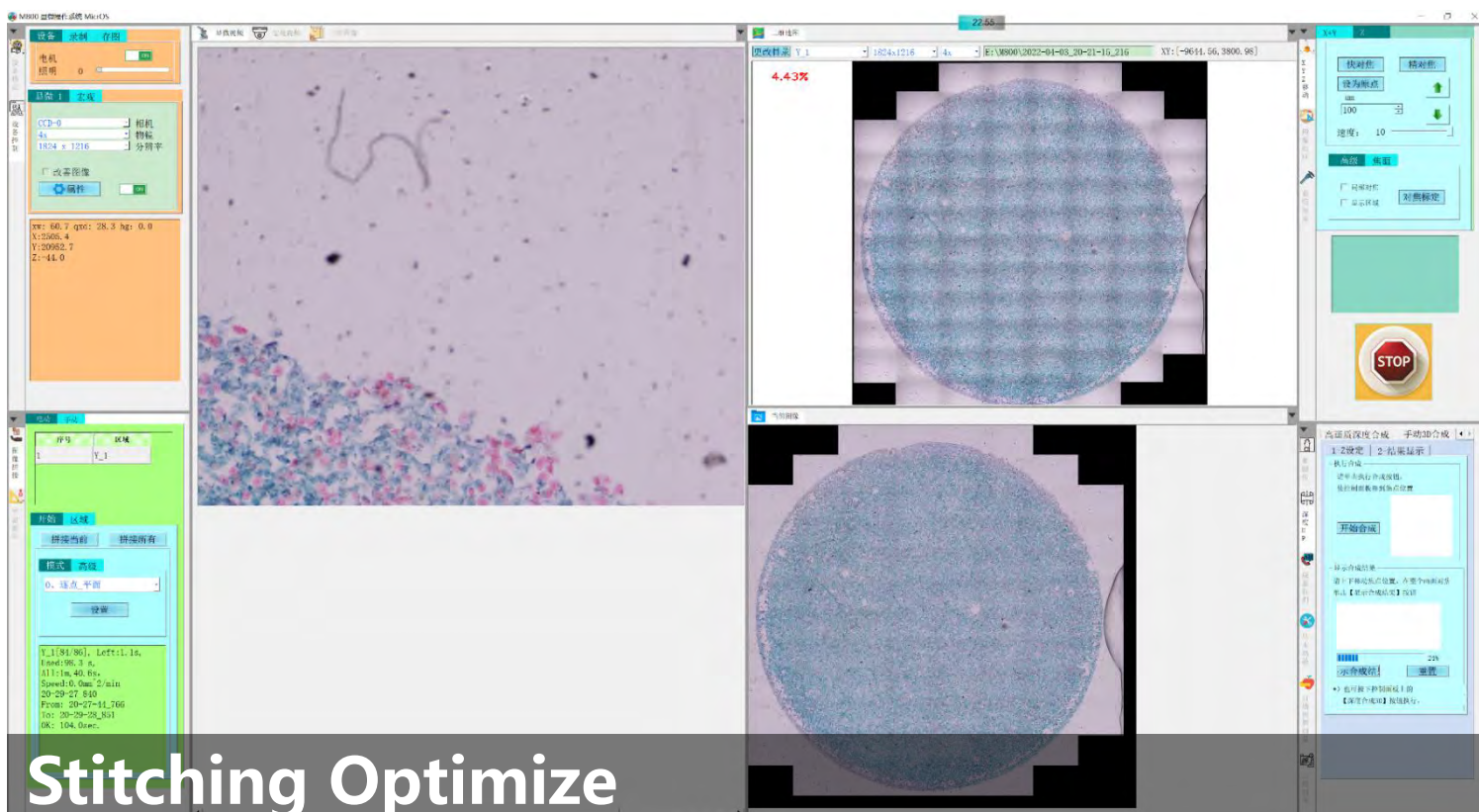
## High Resolution – Scan Under 40x, 100x

In addition to the basic XY motorized scanning and stitching, the advanced 2D scanning mode can simultaneously perform continuous scanning along the Z axis until the focus is found or depth of field fusion is made, and then panoramic stitching is performed. Even for industrial samples with uneven surfaces, or biological slices with uneven thickness under high magnification 40x or 100x, high-resolution 2D or 3D scan images with clear focus in all areas can be obtained.



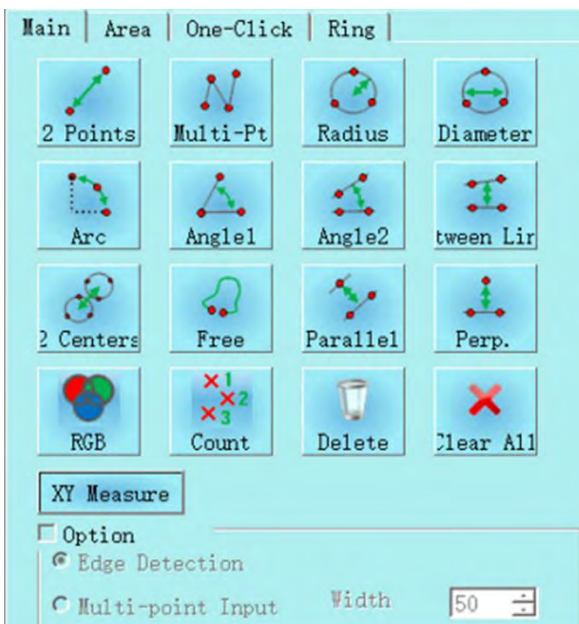
## Free Stitching Area

The scan area can be automatically recognized by the software (the contour line mode automatically detects the edge contour of the object). Software also provides a variety of manual selection scan area modes, free curve mode can draw any shape as splicing area



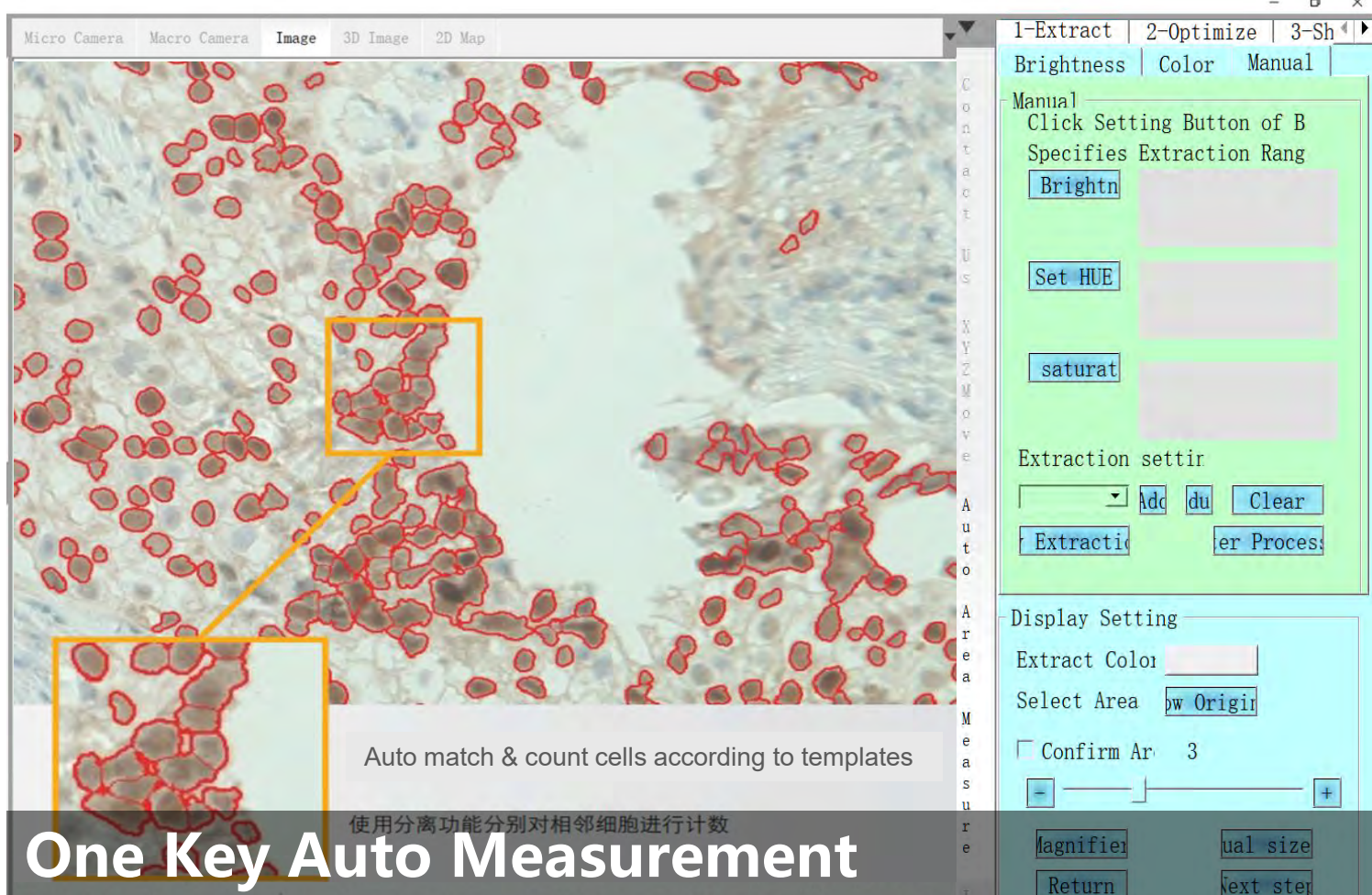
## Stitching Optimize

The built-in advanced algorithm can intelligently optimize and correct the grid phenomenon and shadow phenomenon caused by lens aberration, uneven lighting and other factors when scanning and stitching, so that the stitched image will be one high-definition, no offset, no grid, no shadow.



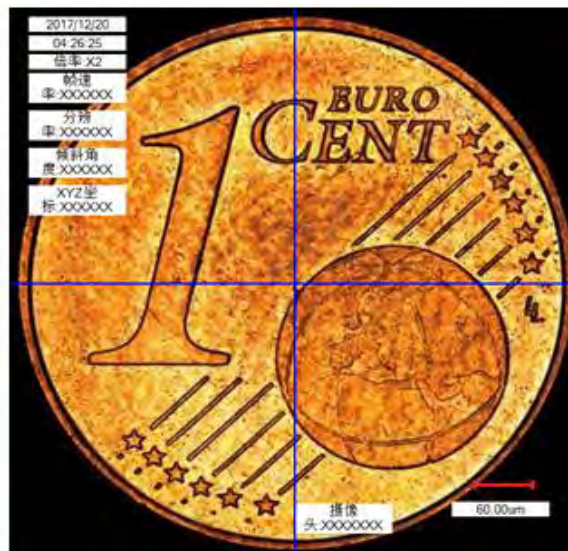
## All Kind 2D Measurement

2D plane measurement function, length, angle, radius, diameter, free-form curve length, parallel line distance, point-line distance, 2-point distance, multi-point distance, radius, diameter, arc length, RGB measurement, counting and other 10 kinds of measurements mode, and provides a variety of auxiliary lines, reference line tools, free coordination can achieve various complex measurements



## One Key Auto Measurement

Multiple measurement items can be saved as templates, the software intelligently matches similar shapes, removes redundant targets or separates overlapping targets, and automatically performs unified measurement, counting and analysis for multiple targets with one key.



## Freely Remark And Output Reports

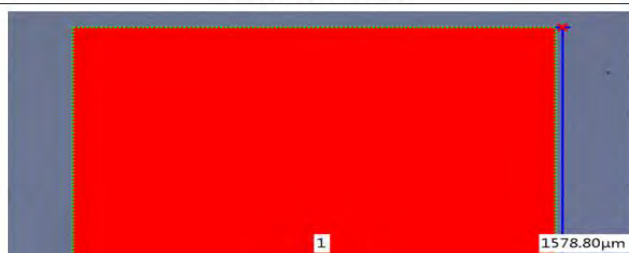
Remark information can be freely inserted and displayed in the microscope video window and 2D map window. The annotation content, ruler, color, line, etc. can be freely set, and output to the experimental report along with the image



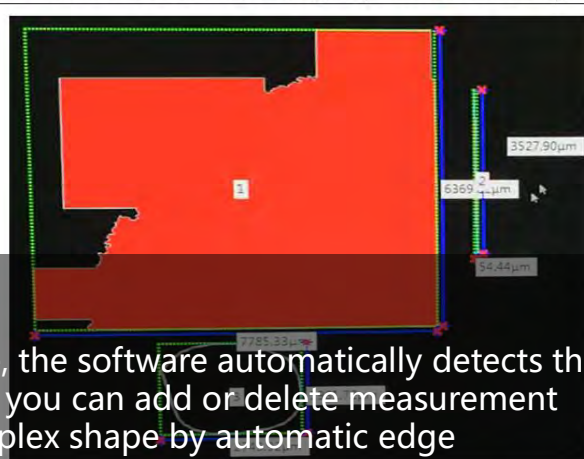
Max/Min Diameter



Circumscribed Rectangle (Minimum Area)



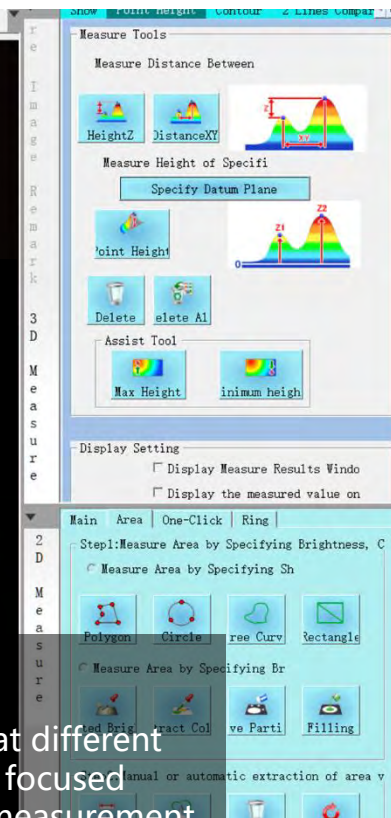
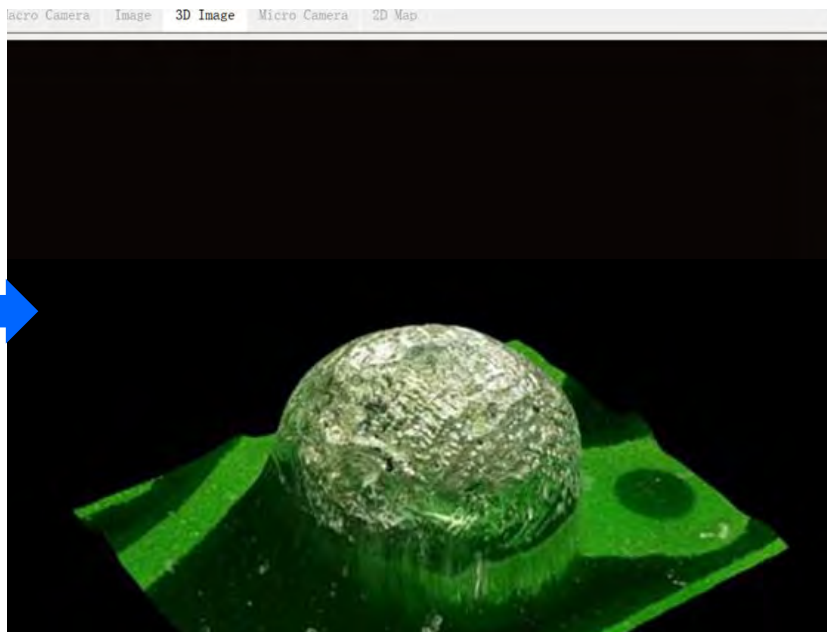
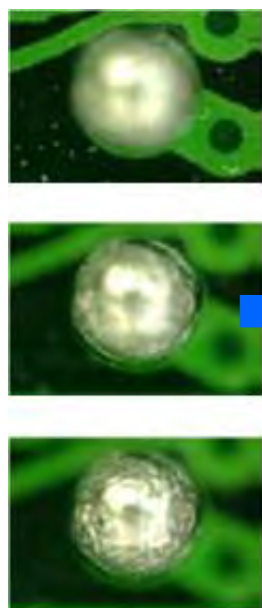
Circumscribed Rectangle (Ferret's Diameter)



Circumscribed Rectangle (Arbitrarily Specified)

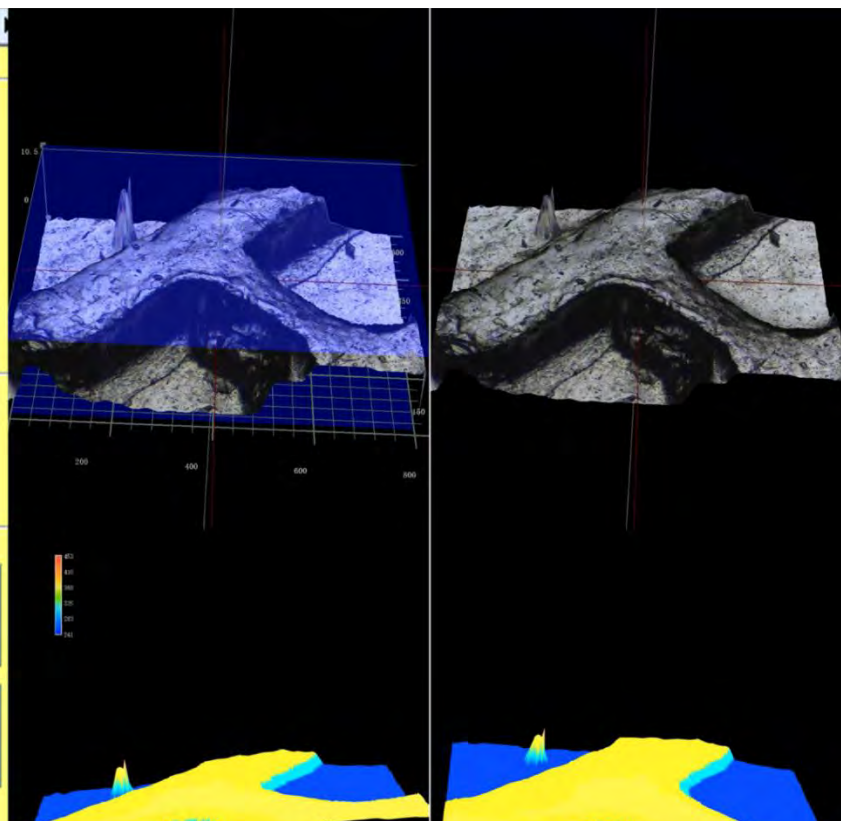
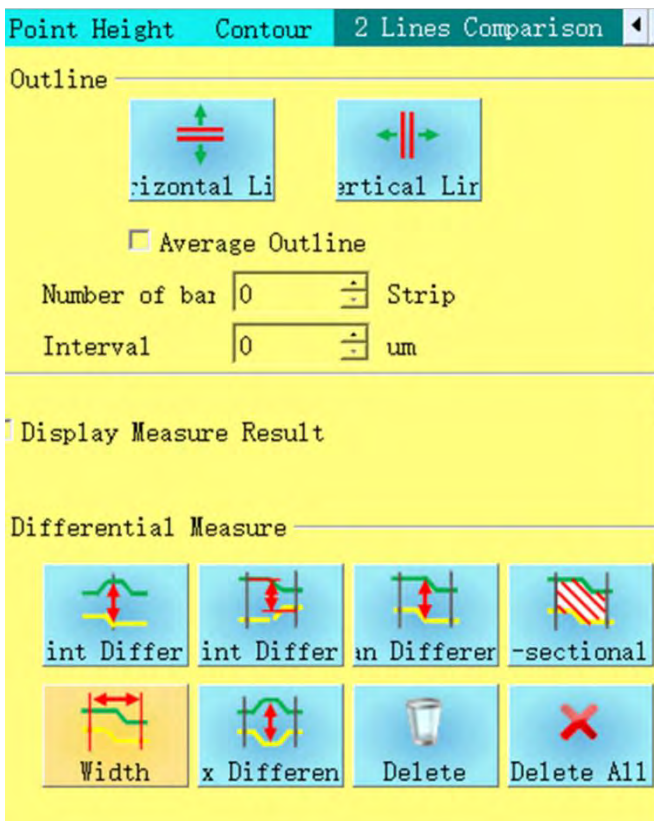
## Max Area Measurement

Just use the mouse to specify the measurement range, the software automatically detects the edge of the object and selects the measurement area, you can add or delete measurement areas at will, and measure the largest area of any complex shape by automatic edge recognition instead of manual precise positioning



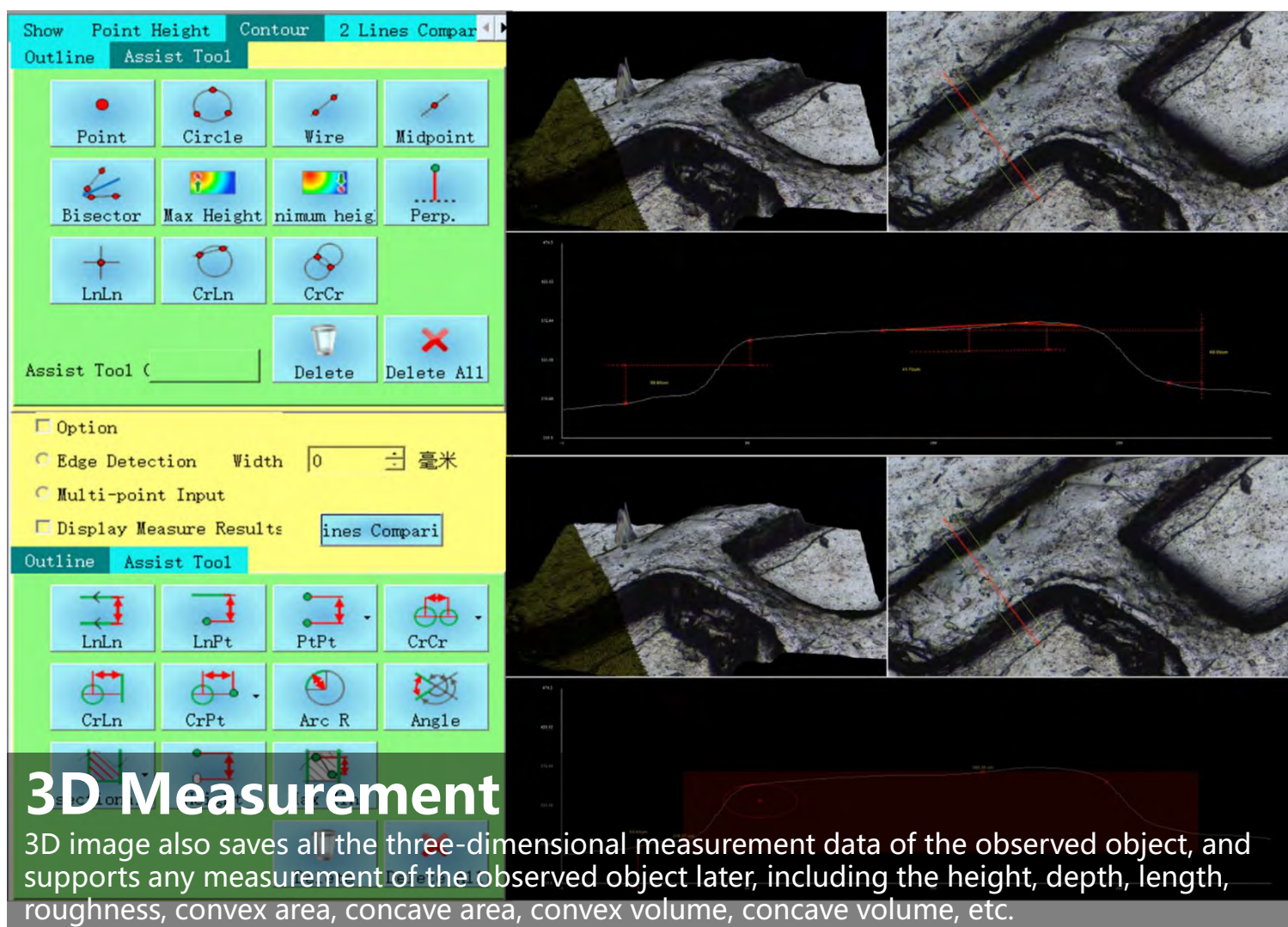
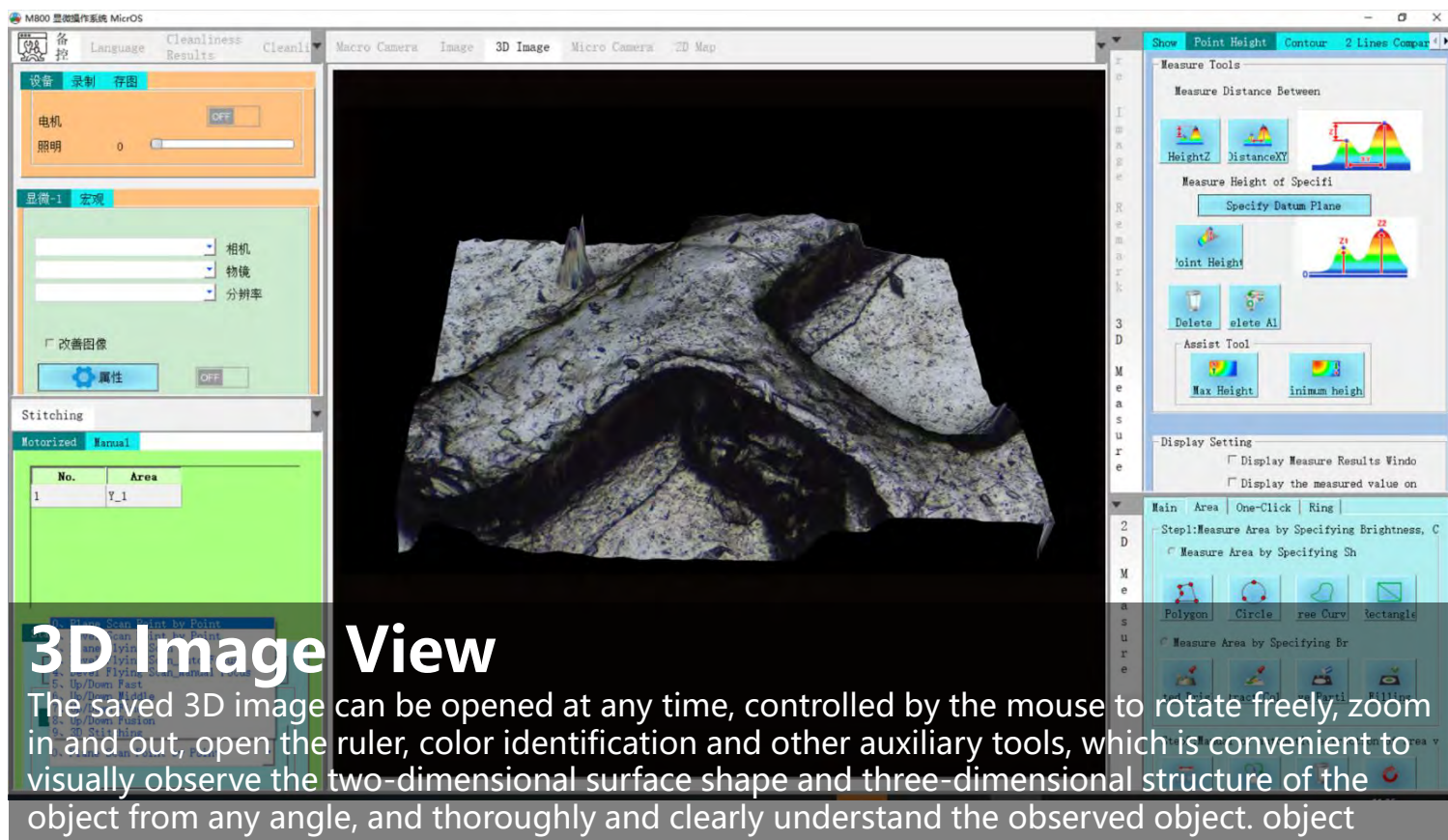
## 3D Stitching

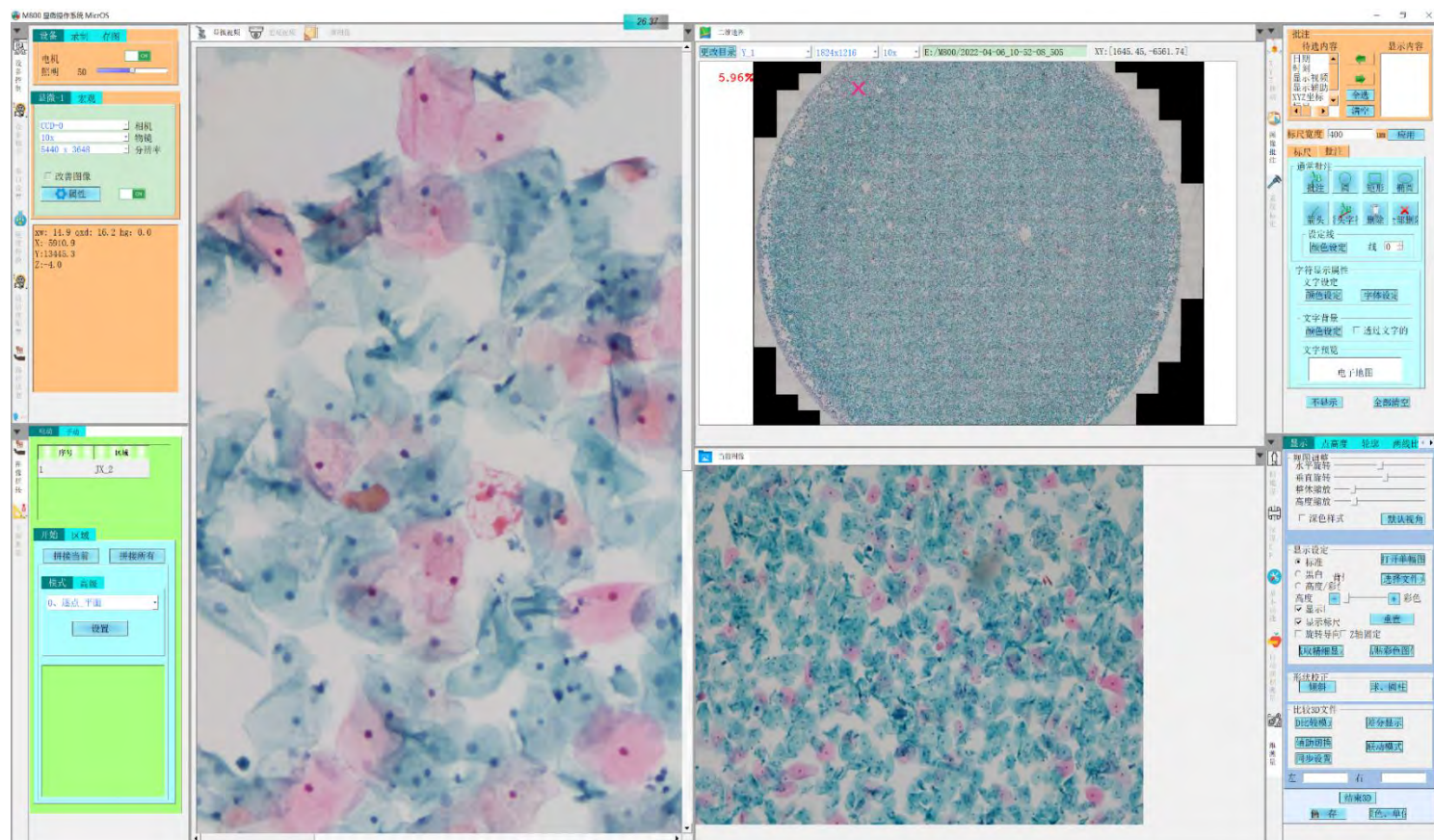
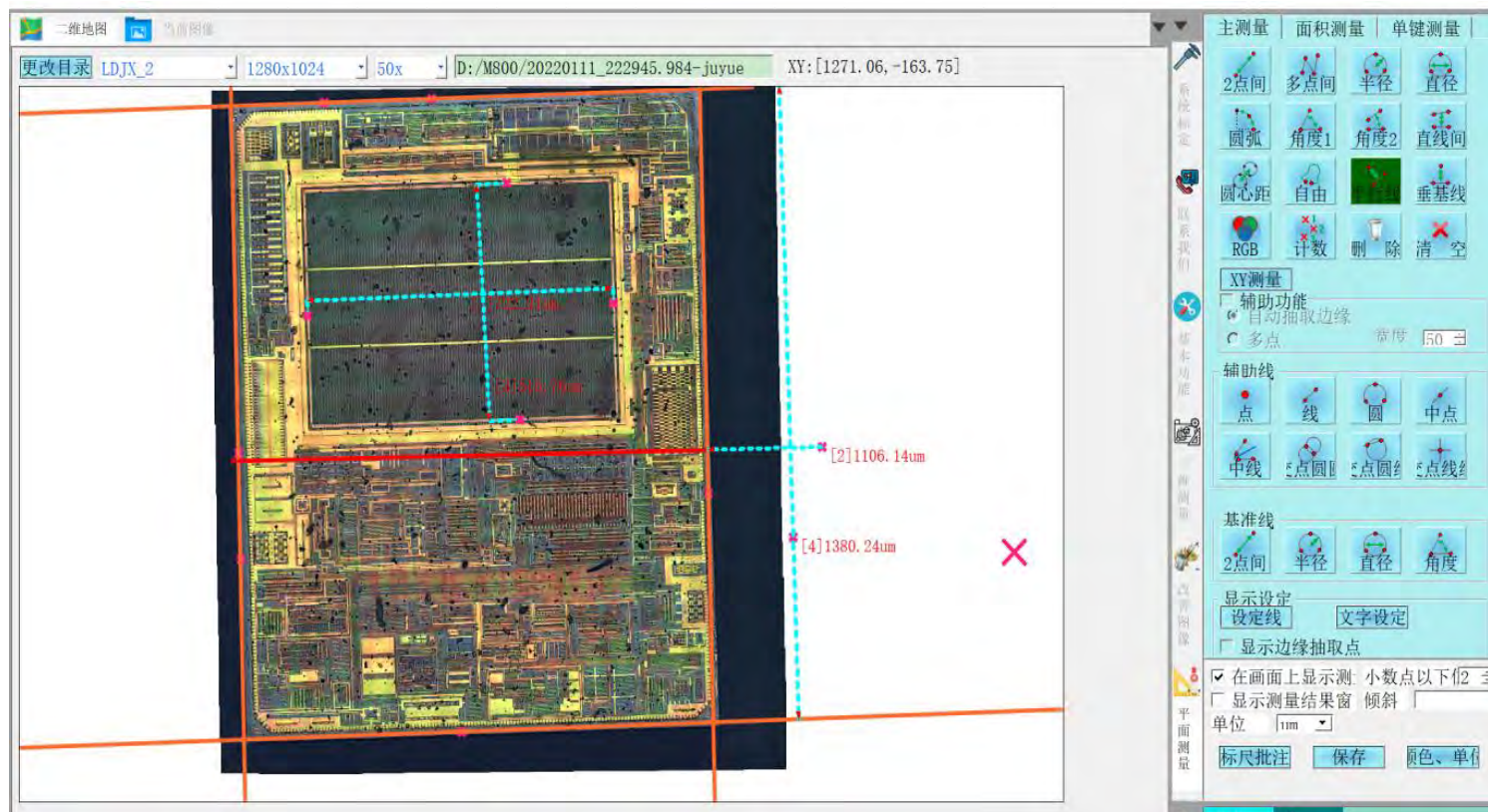
It can take pictures of uneven observation objects after auto-focusing at different heights, obtain a full-frame clear 2D image synthesized from all clearly focused images, and stitch together to form a 3D image, and retain all the 3D measurement data of the observed object for later observation and analysis. Measurement. Super powerful algorithm can achieve 200-500 layers of fusion.



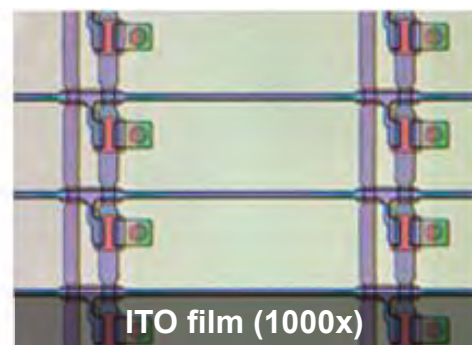
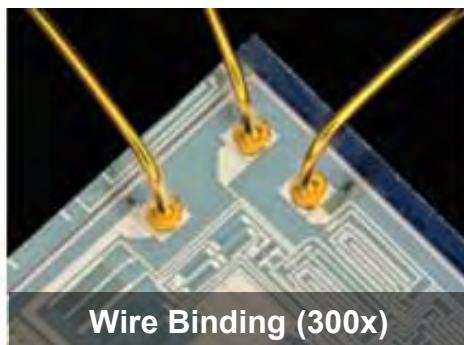
## 3D Image Comparison

Two 3D images can be opened at the same time, synchronously rotated, zoomed in and out, compared and analyzed, and the comparison results such as height difference and shape difference can be automatically displayed through color identification

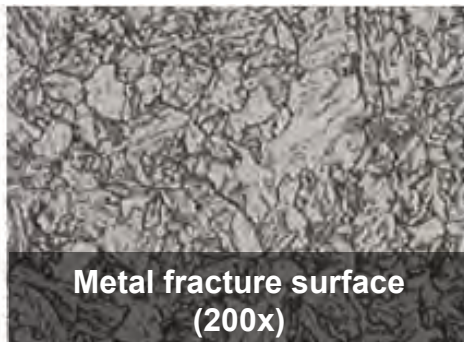
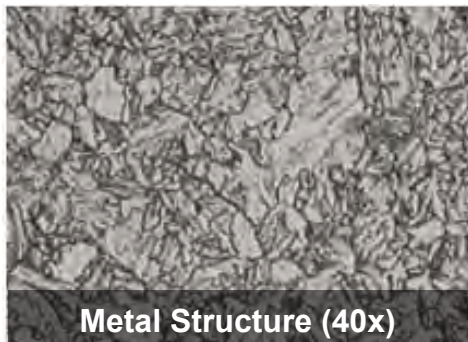




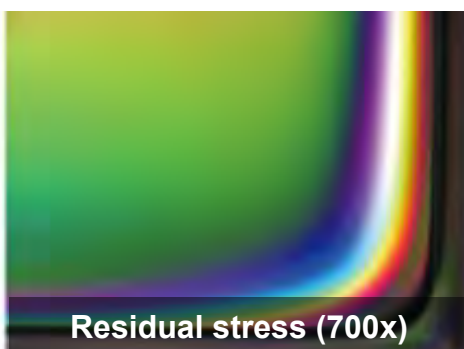
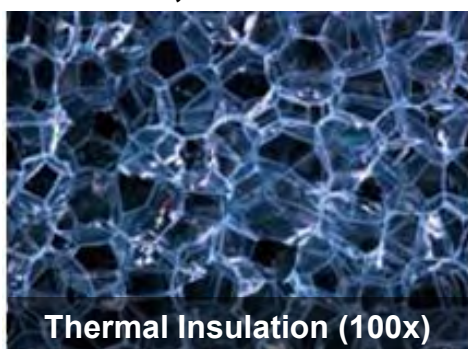
## Semiconductor Industry



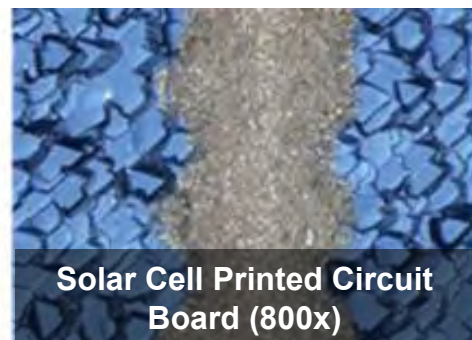
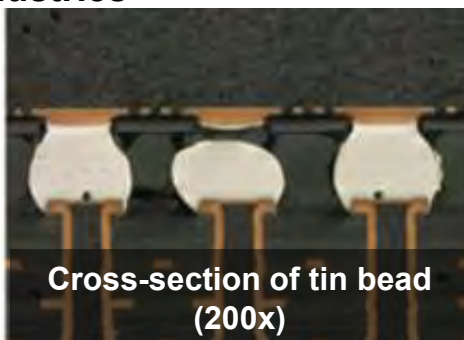
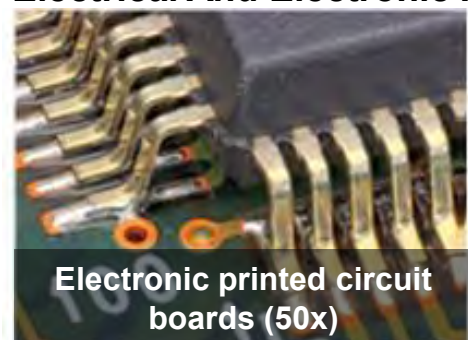
## Automotive And Metal Industries



## Materials, Chemical Industry



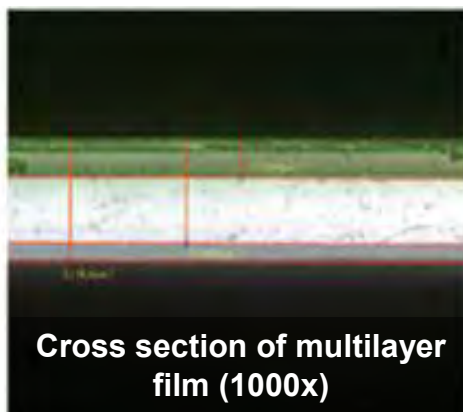
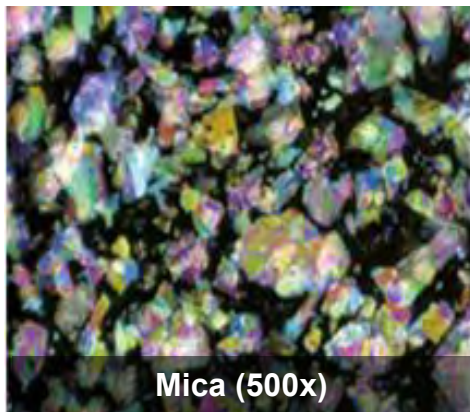
## Electrical And Electronic Industries



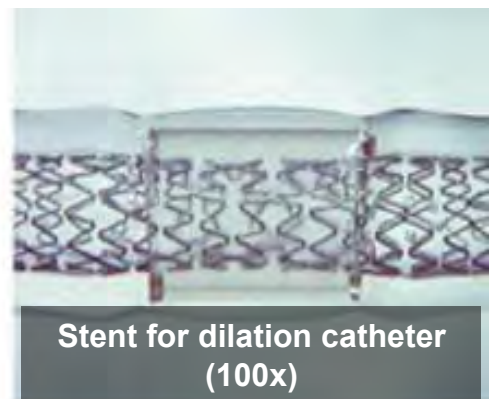
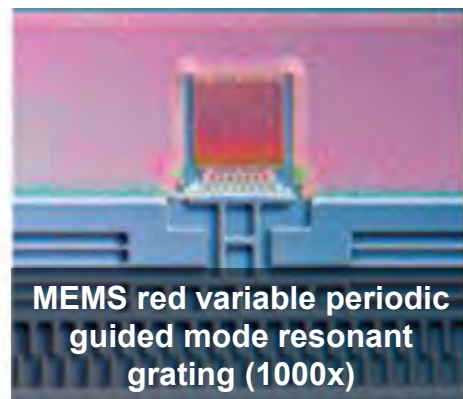
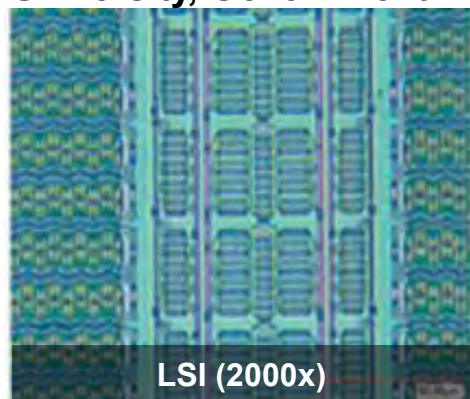
## Medicine, Medicine And Food Industry



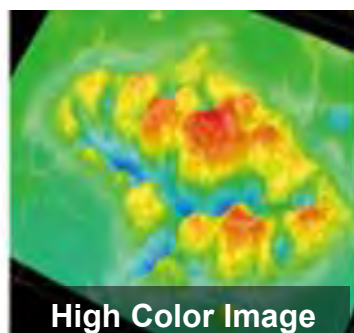
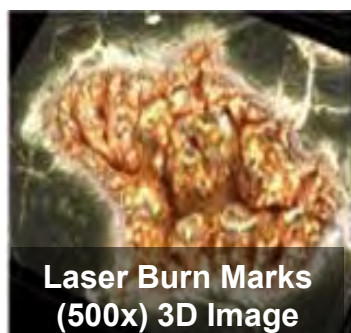
## Other



## University, Government




## Advanced Functional Use



M13.5850 3D Full Auto Super Depth of Field Upright Metallurgical Microscope			Cata. No.
Optical System	BF/DF, Bright Field/Dark Field, Transmit & Reflect Light	●	
	PL, Polarizing	●	
	DIC, Different Interference Contrast	○	
Head	30° Inclined Erect Image Infinity Gemel Trinocular Head, Interpupillary Distance 50~76mm, Light Splitting Ratio Switch E100:P0/E0:P100,	●	A53.0913-T30E
	30° Inclined, Invert Image Infinity Gemel Trinocular Head, Interpupillary Distance 50~76mm; Light Splitting Ratio Switch E100:P0 /E20:8E0 /E0:P100	○	A53.0913-T30
	5-35° Tilttable, Inverted Image, Infinity Gemel Trinocular Head, Interpupillary Distance 50~76mm; Light Splitting Ratio E50:E50 or E100:P0 or E0:P100	○	A53.0913-T535
CCD Adapter	0.5x C-Mount, For 1/2"CCD, Focus Adjustable	●	A55.0930-05
	0.35x C-Mount, For 1/2"CCD, Focus Adjustable	○	A55.0930-35
	0.65x C-Mount, For 1/2"CCD, Focus Adjustable	○	A55.0930-65
	1.0x C-Mount, For 1"CCD, Focus Adjustable	○	A55.0930-10
Digital Camera	7.0M USB3.0 CMOS Cooling GS Shutter Digital Camera, For Fluorescent Imaging,, 1.1" CMOS, FPS 12@3200x2200, 33@1600x1100, Semi-Conductor Cooling Range -42° C, Anti-Frog, One Hour Exposure, G Sensitivity Dark Signal 2058mv with 1/30s	●	A59.2225-7MPA
Eyepiece	High Eyepoint Plan PL10x/25mm, Diopter Adjustable	●●	A51.0904-1025T
	High Eyepoint Plan PL10x/26.5mm, Diopter Adjustable	○	A51.0904-10265T
	High Eyepoint Plan PL10x/25mm, Diopter Adjustable, With Reticle	○	A51.0905-1025T
	High Eyepoint Plan PL10x/26.5mm, Diopter Adjustable, With Reticle	○	A51.0905-10265T
Objective	Infinity Plan <b>Semi-APO</b> LWD Metallurgical <b>BF/DF</b> DIC Objective		
	5x/0.15, W.D.=13.5mm	●	A5M.0941-5
	10x/0.30, W.D.=9mm	●	A5M.0941-10
	20x/0.50, W.D.=2.5mm	●	A5M.0941-20
	20x/0.40, W.D.=8.5mm	○	A5M.0941-20A
	50x/0.80, W.D.=1.0mm	●	A5M.0941-50
	100x/0.90, W.D.=1.0mm	●	A5M.0941-100
	Infinity Plan <b>Semi-APO</b> LWD Metallurgical <b>BF</b> DIC Objective		
	5x/0.15, W.D.=19.5mm	○	A5M.0942-5
	10x/0.30, W.D.=10.9mm	○	A5M.0942-10
	20x/0.50, W.D.=3.20mm	○	A5M.0942-20
	50x/0.80, W.D.=1.20mm	○	A5M.0942-50
	100x/0.90, W.D.=1.0mm	○	A5M.0942-100
	Semi-APO Objective With Correcting Ring 50X/0.70, WD=2.3~2.9mm	○	A5M.0945-50
Nosepiece	BF/DF 6 Holes, With Socket For DIC Slide & Polarizing Analyzer Slide, For Metallurgical Coded & Motorized Control by Software	●	A54.0930-RM6BD
DIC	DIC Attachment, Apply For BD Objective	○	A5M.0952
Focusing	Low-Position Coaxial Coarse & Fine Adjustment, Coarse Adjustment Distance: 25mm; Fine Precision: 0.001Mm. With Coarse Adjustment Stop And Tightness Adjustment.	●	
Main Body	Reflected/Transmitted Body, Digital Dimming System With Light Indicator, Brightness Set & Reset Function, With Condenser Holder	●	
Transmit Light	12V100W Halogen Lamp House, Pre-Centered	●	A56.0915-LH
	12V100W Halogen Bulb (Philps 7724)	●	A56.0923-12100
	Swing-out Type Achromatic Condenser, N.A.0.9/0.25	●	A56.0934-R
	Built-In Transmit Filters LBD/ND6/ND25	●	
Reflect Light	BF/DF Reflect Illuminator, With Iris Field Diaphragm and Aperture Diaphragm, Both Central Adjustable, With Filter Slot and Polarizing Slot, With BF/DF Switch	●	A56.0915-RL
	12V100W Halogen Lamp House, Pre-Centered	●	A56.0915-LH
	12V100W Halogen Bulb (Philps 7724)	●	A56.0923-12100
	Interference Filter, For Reflect Light, Neutral White	●	A5M.0953-LBD
	Interference Filter, For Reflect Light, Blue, <480nm	○	A5M.0953-B
	Interference Filter, For Reflect Light, Green, 520~570nm	○	A5M.0953-G
	Interference Filter, For Reflect Light, Red, 630~750nm	○	A5M.0953-R
Polarizing For Reflect	Fixed Polarizer Flashboard	●	A5P.0924-RP
	360° Rotatable Analyzer Flashboard	●	A5P.0924-RA360
	Fixed Analyzer Flashboard	○	A5P.0924-RA
Power	Built-In 100-240V Wide Voltage Transformer, Double-Way Power Output.	●	
Other	Allen Key M3, M4	●	
	Specimen Presser	○	A5M.0920

Remark: '●' Means Standard Outfit, '○' Means Optional

## Motorized Working Stage, Computer & Software

Motorized Working Stage	XYZ Motorized Working Stage, 2-Phase Stepping Motor, High Precision Module, Aluminum Alloy Material, Surface Anodized, Anti-Corrosion And Scratch-Resistant --For Biological Transmit Light Source, With 6 Slides Holder --For Metallurgical Reflect Light Source, With Metal Plate	●		A54.5806
Size	255x210mm			
XYZ Moving	85x70x42mm			
Resolution	<0.05um			
Repeatability	≤20um			
Maxcope Software	2D, Plane Scan, For XY or XYZ Stage+2C Computer	●		A30.5801-2D
	2DB, Add Bevel Scan, For XYZ Stage+2C Computer	○		A30.5801-2DB
	2DF, Add Up/Down Fusion Scan, For XYZ Stage+3C Computer	○		A30.5801-2DF
	3D, Add 3D Scan, For XYZ Stage+3C Computer	○		A30.5801-3D
	Customized Function, Detail See Maxcope Software Version Table	○		A30.5801-CF
Computer	Dell i5 64G 256G+1T, 2G Graphic, 27" 4K, Pre-Installed Maxcope Software.	●		A30.5801-2C
	Standard Computer For 2D, 2DB Version Software			
	Dell Xeon W-2265 12 Core 3.5GHz, 128G+1T NVMe 4T, RTX4000-8G, 27" 4K, Pre-Installed Maxcope Software.	○		A30.5801-3C
	Standard Computer For 2DF, 3D Version Software			

## Maxcope Software Version Table

### 2D Version

#### (Standard Version, For XY or XYZ Stage + 2C Computer)

XY Motorized Control	Control the motorized stage through software, support one-click set/return to origin point, three ways control methods: • Click the 8-direction arrow with the mouse to manually control the stage movement, and the step distance and move speed can be freely adjusted • Long press the mouse and drag in the camera preview window, to move the working stage to the corresponding direction • Double-click the mouse at any point in the preview window, the point will be set as center of the window, the stage will move accordingly
2D Plane Scan	2 kinds plane scan modes, no need auto or manual focus during stitching, for plane smooth surface or low magnification view, XY stage will direct scan single focal plane and stitch the 2D image • Plane PXP Scan, point by point, high precision, slow speed • Plane Fly Scan, line by line, low precision, high speed Supports automatic scanning and stitching of 2D images at any magnification, with optional scanning accuracy and speed.
Free Stitching Area	Provides 6 stitching area modes, which can quickly set stitching areas of any shape: Polygon, 2-point rectangle, 3-point circle, 4-point ring, outline, free curve. • Outline mode can automatically detect the edge contour of the object as the stitching area. • Free curve mode can freely draw any shape as the stitching area.
2D Stitching Optimize	The built-in advanced algorithm can intelligently optimize and correct the grid phenomenon and shadow phenomenon caused by lens aberration, uneven lighting and other factors when scanning and stitching, so that the stitched image will be one high-definition, no offset, no grid, no shadow.
Calibration	It can do the necessary calibration before measurement, for different camera & objective lenses, user can add, delete, and manage the calibration list at any time
2D Measurement	2D plane measurement 10+ functions, including length, angle, radius, diameter, free curve length, parallel line distance, point-line distance, 2-point distance, multi-point distance, radius, diameter, arc length, RGB measurement, counting, etc. and a variety of auxiliary lines and reference line tools are provided. Combined with these tools, various complex measurements can be achieved, and various measurable information of planar images can be obtained more efficiently.
2D Map Guide	After scanning and stitching to generate a panoramic image, it can be used as an electronic 2D map for navigation. Click the 2D map to control the motorized stage to quickly locate the specified position for high-magnification observation, avoiding the confusion of difficult positioning in traditional high-magnification observation.
Point of Interest	Click the mouse to freely set and save multiple points of interest on the image, you can select and quickly return to the point of interest at any time for repeated focus observation
Marco Camera Guide	The model with optional macro camera, the panoramic image previewed in real time can be used as an electronic 2D map for navigation function, one click can reach the point of interest for high-power observation
Motorized Nosepiece	Optional motorized nose wheel models, you can select different objective lenses in the software, and switch the magnification with one click

Full Parameter Record	While taking pictures and videos, software can automatically records comprehensive information such as shooting date, objective lens, magnification, stage position, etc., which is convenient for outputting to experimental reports or for reproducing observation results later.
Extra Long Video Record	The longest 1 hour, the fastest 50PFS video recording, can comprehensively record the experimental detection process, or the long-term change process of the observed object, subtle movements and other information. The video results can be fast-forwarded or played frame by frame, and still images can be extracted and saved.
Customized Report	Freely set Word and Excel report templates, including images and comprehensive shooting parameters, which is convenient for quickly outputting a complete inspection report in the later stage
Free Interface	The software interface and each submenu can be freely settled by dragging and dropping with the mouse, and can be saved, exported, and imported into the customized interface layout, and the default simple interface can also be restored easily by hot key Ctrl + G.
Multi Language	The software supports Simplify Chinese, Traditional Chinese, English, Russian, Korean, Japanese, Iranian, Dutch, French, German, Italian, and other language versions can be customized.
<b>2DB Version</b> <b>(2D + Below Functions, For XYZ Stage + 2C Computer)</b>	
Z Motorized Control	<p>The software controls the Z-axis motorized lift, support professional functions such as manual focus/auto focus/super depth of field fusion</p> <ul style="list-style-type: none"> <li>• Click the up and down arrows with the mouse to manually control the Z-axis lift and focus</li> <li>• One-click autofocus, focusing speed &amp; accuracy can be selected</li> </ul>
2D Bevel Scan	<p>3 kinds Bevel Scan modes, can auto acquisition height of multi-focal planes, after modeling, scan and stitch 2d image, especially suitable for bevel smooth surface,</p> <ul style="list-style-type: none"> <li>• Bevel PXP Scan, Point by Point</li> <li>• Bevel Fly Scan. Manual Focus</li> <li>• Bevel Fly Scan Auto Focus</li> </ul>
Auto Focus	One click autofocus, as quick as 0.3-2 seconds for each focus, focusing accuracy and speed are optional
<b>2DF Version</b> <b>(2DB + Below Functions, For XYZ Stage + 3C Computer)</b>	
2D Fusion Scan	<p>4 kinds of auto focus stitching modes up and down, with Z-axis motorized, you can focus on the inclined plane and the concave-convex surface layer by layer along the Z axis to find the correct focal plane, or after the depth of field fusion of multi-layer images, then scan and stitch into a clear full frame 2D images, especially suitable for complex industrial inspection, special slice observation and other fields</p> <ul style="list-style-type: none"> <li>• Up/Down Scan, Fast</li> <li>• Up/Down Scan, Middle</li> <li>• Up/Down Scan, Fine</li> <li>• Up/Down Scan, Fusion</li> </ul>
Depth Fusion	The innovative design of high-quality depth synthesis can easily do 200~500 layers of super depth of field superposition and fusion in a short period of time. The software makes intelligent judgment on abnormal high and low points, scans with full coverage, and obtains full-frame clear focus pictures
Auto Edge Selection	When the measurement point manually selected by the mouse is deviated on the screen, the software can automatically detect the edge of the target and automatically correct the measurement point to the edge to eliminate human error and improve the efficiency of measurement range selection
<b>3D Version</b> <b>(2DF + Below Functions, For XYZ Stage + 3C Computer)</b>	
3D Scan	<p>3D stitching mode, which can automatically focus on uneven objects, take pictures at different heights, obtain a full-frame clear 2D image composed of all clearly focused images, and stitch all focused image together to form a 3D image, and retain all the 3D measurement data of the observed object.</p> <ul style="list-style-type: none"> <li>• 3D Stitching</li> </ul>
3D Image View	The saved 3D image can be opened at any time, controlled by the mouse to rotate freely, zoom in and out, open the ruler, color identification and other auxiliary tools, which is convenient to visually observe the 2D surface shape and 3D structure of the object from any angle, and thoroughly and clearly understand the observed object
3D Measurement	The 3D image also saves all the three-dimensional measurement data of the observed object, and supports any measurement of the observed object later, including the height, depth, length, roughness, convex area, concave area, convex volume, concave volume, etc.

3D Image Comparision	Two 3D images can be opened at the same time, synchronously rotated, zoomed in and out, compared and analyzed, and the comparison results such as height difference and shape difference can be automatically displayed through color identification
3D Manual Stitching	Support manual stage models, only need to manually lift the stage, the software automatically scans and takes pictures and stitches to form 3D images, upgrade manual stage model to do semi-automatic 3D scanning and stitching work.
Multi Files Comparison	Multiple files can be opened at once for cross-section, volume, area, flatness, roughness measurements, and more. Even if there are multiple evaluation samples, analysis can be performed instantaneously under the same conditions. It is possible to see at a glance where and what differences exist, such as changes in shape due to prototypes with different manufacturing conditions or wear. Not only can measurement work be significantly reduced, but evaluation errors caused by deviations in measurement conditions can also be prevented.。
<b>CF Version</b> <b>Customized Function Module For Special Observation</b>	
HDR	Acquires multiple ultra-clear images using a single wavelength of light and images with different shutter speeds, and turns them into 1 image with high grayscale data. Achieved unprecedented high-definition, high-contrast observation
DIC	The automatic turret of the six-hole objective lens, combined with the adjustment of the DIC prism, can make the height difference of the objective lens surface produce obvious relief effect, greatly improve the contrast of the image, and facilitate the user to analyze efficiently and accurately. Combined with polarized light observation, DIC can reflect the smallest surface morphology differences as brightness differences, and can display perfect images even for low-contrast, multi-phase samples and reflective materials.
Cell Count & Analysis	Through the automatic focusing acquisition method, high-definition scanning and splicing images of multiple areas are simultaneously obtained, and the number, concentration, diameter, and area of cells are statistically analyzed. The speed is fast and the identification is accurate.
Metallurgical Analysis	Using automatic image stitching, the image is analyzed through image enhancement, contrast adjustment, scratch processing, image correction, multi-region image segmentation, morphological processing, image annotation, and layer merging processing methods. It is easy to use and concise, and the measurement is accurate and reliable.
Cleanliness Analysis	Cleanliness analysis can be performed according to standards such as ISO Standard 16232, VDA 19.1-2015, ISO 16232, ISO4406 and ISO 4407. At the same time, it supports user-defined rating standard rules. Divide a large area into multiple areas to shoot and analyze them individually, and you can deal with a wide range of cleanliness analysis. The number of particles extracted and the cleanliness class can be displayed for each largest diameter class (B to K). Also provides height information for selected particles.
Vickers/Knoo Hardness Test Auto Analysis	Efficient and fast panorama scanning, diversified path planning, automatic continuous loading, focusing, and measurement are convenient for users to obtain accurate measurement results and greatly improve work efficiency.
Brinell Hardness Tester Analysis	One-Click automatic identification function is significantly ahead of the existing mainstream Brinell hardness tester software products.
Porosity Measurement	The system complies with VW50097, VW50093, VDG_P202 standards, and the whole image is obtained by panoramic stitching for analysis, so that the porosity measurement can obtain more reliable results in the entire analysis area.
Grain Size Analysis	According to JIS standard G0551 or ASTM standard E1382, the measurement line can select [vertical line], [horizontal line], [diagonal line], [multiple circles] to measure the crystals on test line.
One Click Auto Measurement	Multiple measurement items can be saved as templates, the software intelligently matches similar shapes, removes redundant targets or separates overlapping targets, and automatically performs unified measurement, counting and analysis for multiple targets with one click
Max Area Measurement	Just use the mouse to specify the measurement range, the software automatically detects the edge of the object and selects the measurement area, you can add or delete measurement areas at will, and measure the largest area of any complex shape by automatic edge recognition instead of manual precise positioning

## Maxcope Series Model



**M12.5850**



**M12.5810**



**M11.5805**



**M16.5850**



**M16.5810**



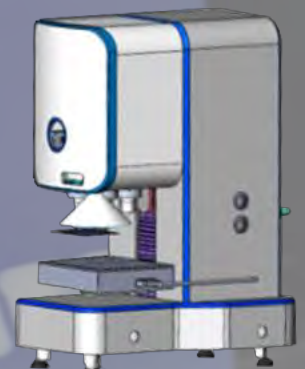
**M11.5810**



**M13.5850**



**M30.5810**



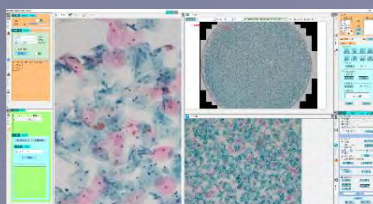
**M20.5850**

## Maxcope Software Versions



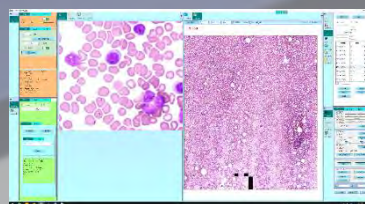
**2D**

X/Y Motorized  
2D Plane Scan



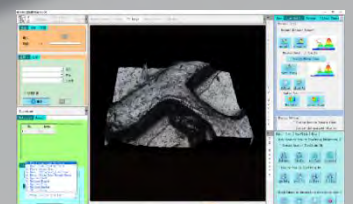
**2DB**

X/Y/Z Motorized  
2D Bevel Scan



**2DF**

X/Y/Z Motorized  
2D Fusion Scan



**3D**

X/Y/Z Motorized  
3D Scan

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