

## KS-SZM-W Computerized Continuous Zoom Stereo



# 19 YEARS

Development Base of Advanced Testing Machine Of China

**Application:**

SZM-W computer stereo microscope is a trinocular continuously variable magnification stereo microscope. The classic design of the machine makes the body more stable, excellent optical performance, complete accessories, and diverse combination configurations to meet the needs of modern biology, medicine, scientific research, and online testing in modern electronics industry.

**High quality optical system**

Optical components coated with special coatings create a high-quality optical system.



**Wider magnification range**

It adopts a continuous zoom objective lens from 0.7X to 4.5X (6.4:1), with a standard magnification range of 7X to 45X; optional eyepieces and auxiliary objective lenses can achieve 3.5-90X magnification.

**Extra long effective working distance**

The effective standard working distance reaches 100mm. With the optional auxiliary objective lens, the working distance will be extended to 26 mm ~ 287mm, creating enough space for use.



**Main Specifications:**

Configuration		Model
Part	Specification	SZM
Observation tube	Trinocular viewing tube. 45° tilt	·
eyepiece	High eye point and large field of view eyepiece WF10X/20mm	·
objective lens	0.7X-4.5X/100mm, achieving total magnification: 7-45X	·
Auxiliary objective lens	0.5X/165mm: Achieve total magnification 3.5-45X	○
	2X/30mm. : Achieve total magnification 7-90X	○
Viewable range	Under 0.7X objective lens: field of view 28.6mm	·

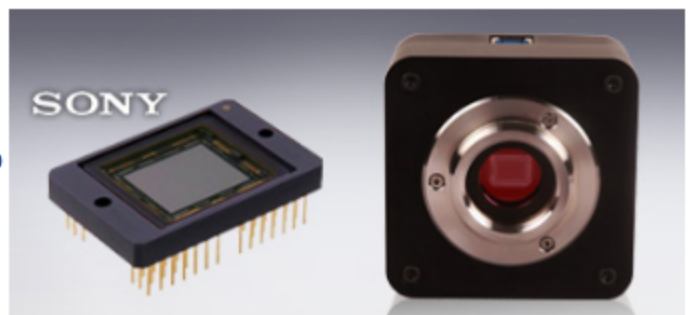
Standard focus lens frame	Optional 0.5X auxiliary objective lens can achieve 57.1mm.	.
Base	SZMA1 focusing frame, steel ball guide rack focusing mechanism, adjustable focus handwheel, lifting range 50mm, bracket stroke: 48.5mm, lens body aperture: 76mm; center distance: 155mm.	.
External light source	B5 column type large flat base, column height 260mm, column diameter $\phi 32\text{mm}$ , (can be matched with all focus lens frames). Base size: (L) 230* (W) 180mm.	.
camera device	56 LED ring lights, adjustable brightness	.
	FEC2 5MP Sony chip camera device	
	0.5X adapter mirror interface	
Micrometer	High-precision micrometer (grid value 0.01mm)	○
Computer	Brand business machine	○

**Note:** ". " is the standard configuration; " O " is the option

### FEC2 series metallographic microscopic image digital camera

#### Overview:

The FEC2 series camera is a compact high-performance microscopic digital color CMOS camera launched by our company. It uses Sony CMOS sensor as the image pickup device. The ideal metallographic microscope camera for high-quality brightfield imaging for materials science applications.



#### Features:

- Standard C-type camera with Sony CMOS sensor;
- The resolution ranges from 5 million to 12 million;
- With hardware resolution from 2.10MP to 12MP;
- High-performance MJPEG compression algorithm ensures the highest frame rate of USB2.0 cameras in the industry;

- 5MP and 8MP FPS can reach up to 30FPS; 12MP FPS can reach up to 15FPS;
- Integrated large-capacity memory chip to ensure synchronous data transmission, low latency, high frame rate and stability;
- Built-in ultra-fine hardware ISP engine to ensure high color reproduction;

#### Technical specifications:

Model	Sensor model/size	Pixel( $\mu\text{m}$ )	G light sensitivity Dynamic Range signal-to-noise ratio	FPS/Resolution	Merge model	Exposure time
FEC21200	12M/IMX577(C) 1/2.3" (5.95x4.71)	1.55x1.55	250LSB 70dB 43dB	20@3840x3040 20@1920x1520 20@960x760	1x1 1x1 1x1	0.1-2000 ms
FEC2500	5.1M/IMX335(C) 1/2.8" (5.18x3.89)	2.0x2.0	505mV 70dB 43dB	26@2592x1944 26@1280x960 26@640x480	1x1 1x1 1x1	0.1-2000 ms

#### Overview of image measurement software FCL-RS:

FCL-RS image measurement software is the basic version of the image measurement software launched by Fengzhi Company. It supports multiple international languages. In addition to basic capture and measurement functions, it also includes automatic image panoramic stitching, video EDF depth of field expansion, and video overlay time. Accurate layer fusion of scales, measurement data and images, saving in a variety of image file formats, and more.

#### Features:

- Real-time static image capture, capture static images according to user requirements;
- You can save images in JPG, BMP, PNG and TIF formats;
- Quick and intuitive software calibration method, using scale lines for calibration;
- Provides a variety of image processing methods, which can perform image processing on the entire image or a

region;

- Advanced measurement functions, including calculation of circumference, width, radius, circle and angle;
- Real-time dynamic splicing enables panoramic shooting of specimens and increases the visual field of view.
- Merge images captured at different depths of field into one clear image;
- Especially effective for images with deep depth of field, large area under the microscope and cannot be completely parfocal;
- Still images in JPG or BMP format are easy to save, email or print.
- Cameras are available in 20 million, 12 million, 5 million and other pixel sizes;
- Multiple language versions:



## Basic functions:

### 1. Take pictures:

Real-time static image capture can provide users with JPG, BMP, PNG and TIF image formats to meet the needs of different users.

### 2. Geometric measurement:

The software provides a variety of measurement tools such as distance, rectangle, circle, polygon, polyline length, angle, straight line angle, radian, point to circle center measurement, etc. to satisfy users' basic geometric measurement functions and obtain relevant measurement data.

The measured data can be automatically integrated with the picture to intuitively and clearly display the accuracy of the measured part.

### 3. Dynamic splicing:

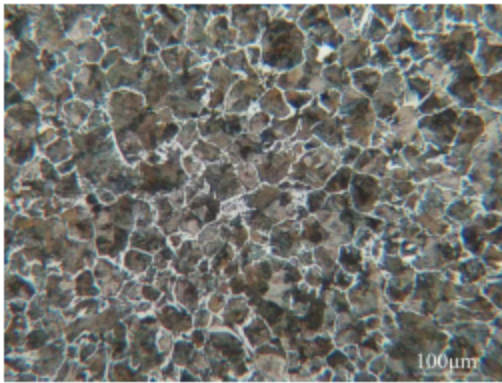
For customers who need to detect larger field of view requirements, the software provides an image stitching function. Users can achieve the need for larger field of view image shooting by moving the X-Y platform direction of the microscope, which solves the problem of being unable to shoot due to insufficient field of view of the microscope. The awkwardness of the picture.

#### 4. Dynamic EDF depth of field shooting:

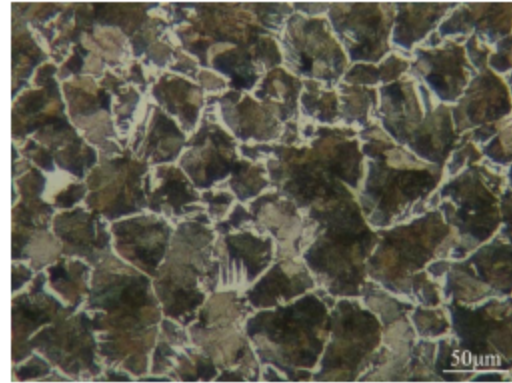
For samples that are unevenly prepared and cannot be par-focus, the software provides a dynamic EDF depth-of-field shooting function. By adjusting the Z-axis micro-focusing handwheel of the microscope, clear details in the sample will be continuously added to the dynamic EDF display window for dynamic updates. , the software automatically records clear images under different depths of field and merges them into one clear image.

#### Feature example image: Application:

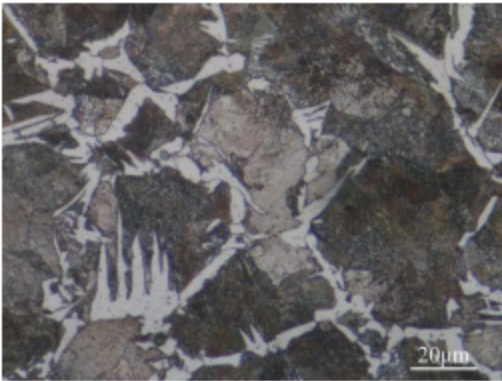
Sample image: bright field image (taken using FEC2500 camera, FCM5000 metallographic microscope, 0.65x C-mount)



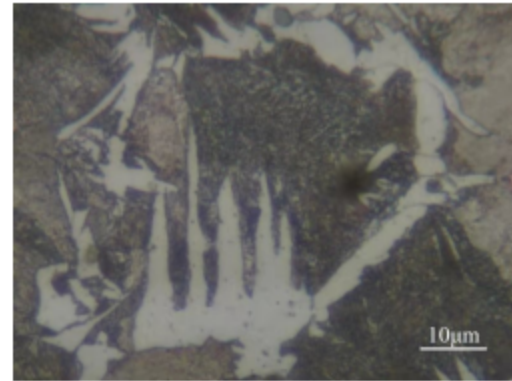
100X



200X



500X



1000X

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Professional focused on testing equipment

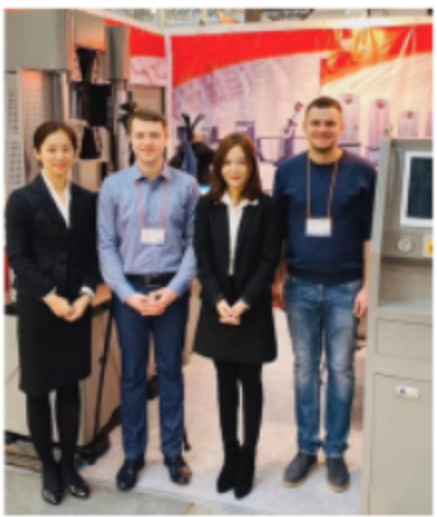
KASON is established in 2003,owns more than 8000 square meters factory.has a professional sales teams, modern enter prise technology center,scientific and technological research and development team.

Machines passed the European CE authentication,American FDA certificate and and ISO 9001.

Products sold to USA, Canada, Australia, Europe, Africa etc,more than 130 countries and supply OEM service for many customers

## PROFESSIONAL TEAM

KASON has a professional sales teams, modern enter prise technology center,scientific and technological research and development team.



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