

1. Application

Application:

The FZ0756U series continuous zoom USB interface digital microscope all-in-one machine is shown in Figure 1. It consists of an 8x continuous zoom lens body FZ0756-W100-TV050 (standard configuration), a USB interface camera, and an LED ring light source TFZ0756DRL-NPC (replaceable coaxial light source). The USB interface camera module can directly collect videos and images by connecting to a computer through the USB interface. The lighting source module does not require an external power supply and is directly connected to the USB interface camera module through the main body of the optical continuous zoom objective lens.

The FZ0756U series organically integrates a continuous zoom monocular microscope, a USB interface camera, and an LED lighting source. No selection and installation are required. The FZ0756U series can be used directly by connecting it to the USB interface of a computer.

The FZ0756U series meets the needs of digital imaging observation, inspection and measurement in the fields of modern electronic equipment, semiconductors, lasers, LEDs, LCDs, industrial online detection and biology.

Main Specifications:

Optical parameters	
Optical body	The zoom range is 0.7X-5.6X
working distance	37.5mm-160mm (determined by auxiliary objective lens)
Numerical aperture NA	0.018-0.092 (using W100, 1x auxiliary objective)
Resolution	18.6um-3.65um (using 1x auxiliary objective lens)
Field of view	0.99mm-34.28mm
Optional objective lens	0.5x, 0.75x, 1x, 1.5x, 2.x (can be selected as needed)
Optional other objectives	Optional commercial infinity microscope objectives (both biological microscopy objectives and metallographic microscopy objectives are available)
Body size	188mm x 52mm

Bracket interface	Standard 50mm
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Optical parameters of FZ0756U series optional auxiliary objective lens Wxxx

Auxiliary objective lens	Parameter	TV lens 0.5X (1/3" sensor) TV050	
		Low magnification	High magnification
W100, 1.0X(80mm WD)	Magnification	0.35X~2.80X	
	Line field of view	17.14mm	2.14mm
	NA	0.018	0.092
W050, 0.5X(160mm WD)	Magnification	0.18X~1.40X	
	Line field of view	34.28mm	4.28mm
	NA	0.009	0.046
W075, 0.75X(105mm WD)	Magnification	0.26X~2.10X	
	Line field of view	20.81mm	2.86mm
	NA	0.013	0.069
W150, 1.5X(51.5mm WD)	Magnification	0.53X~4.20X	
	Line field of view	11.43mm	1.43mm
	NA	0.026	0.138
W200, 2.0X(37.5mm WD)	Magnification	0.70X~5.60X	
	Line field of view	8.57mm	1.07mm
	NA	0.035	0.182
Remark	Low magnification may produce vignetting when illuminated with coaxial light. When using an infinity microscope objective as an auxiliary objective (a microscope objective adapter may be required), the magnification, field angle and NA value of FZ0756 are determined by the parameters of the microscope objective.		

FZ0756U series camera module parameters

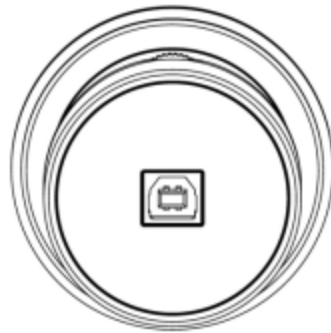


Figure 2 FZ0756U series continuous zoom USB interface digital microscope all-in-one rear panel interface

C: Color camera

Hardware Configuration	
Spectral response range	380-650nm (with infrared cut filter)
white balance	Auto white balance/ROI white balance/manual Temp-Tint adjustment
color restoration technology	Ultra-Fine hardware color processing engine
Capture/Control SDK	Windows/Linux/macOS/Android multi-platform SDK (Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain,
Recording method	Images and videos
camera working environment	
Operating temperature (Celsius)	-10~ 50
Storage temperature (Celsius)	-20~ 60
Working humidity	30~80%RH
Storage humidity	10~60%RH
Power supply	The camera is powered via USB2.0 interface
Software operating environment	
Operating system	Microsoft® Windows®XP/Vista / 7 / 8 /10(32 & 64 位)
Computer configuration	CPU: Intel Core 2 2.8GHz or higher
	Memory: 2GB or more
	USB interface: USB2.0 high-speed interface
	Monitor: 17" or above

	CD-ROM
Lighting module	
Ring light	Brightness-adjustable LED lighting ring light source (wireless) (TFZ0756DRL-NPC)
Circularly polarized light source	Adjustable brightness LED lighting ring polarized light source (wireless), (TFZ0756DRPL-NPC)
Coaxial lighting source	Adjustable brightness LED lighting coaxial light source (wireless), coaxial light adapter TFZ0756CL_NPC
Power supply	Integrated power supply eliminates the trouble of tangled power cords and makes sample observation more comfortable.
Installation method	Quick and snap-on installation in seconds, convenient and simple
Dimming	Through the 3-way multi-function adjustment dial and software interface, hardware and software can be synchronized to adjust the light intensity, allowing you to freely control the light intensity.

FZ0756U series connection method

In addition to the all-in-one machine, users only need a computer and the USB2.0 cable delivered with the all-in-one machine.



Figure 3 Connection between FZ0756U series and computer

19 YEARS

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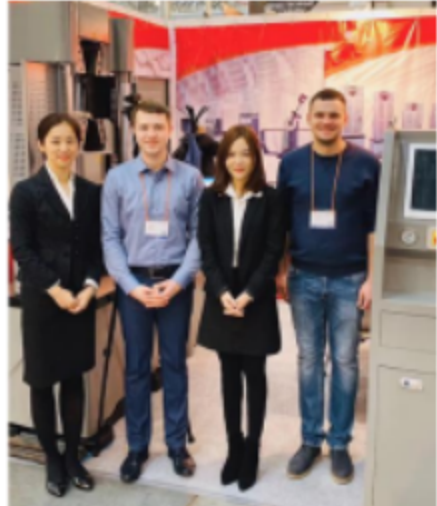
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