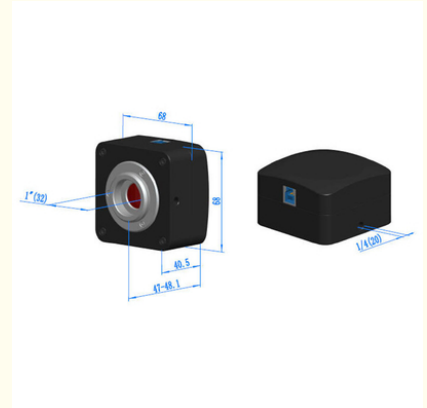




## OPTO EDU A59.2220 USB3.0 CCD Digital Microscope Camera

### Basic Information

- Place of Origin: China
- Brand Name: CNOEC, OPTO-EDU
- Certification: CE, Rohs
- Model Number: A59.2220
- Minimum Order Quantity: 1 pc
- Price: FOB \$1~1000, Depend on Order Quantity
- Packaging Details: Carton Packing, For Export Transportation
- Delivery Time: 5~20 Days
- Payment Terms: T/T, West Union, Paypal
- Supply Ability: 5000 pcs/ Month



### Product Specification

- Applications: Microscope
- Certification: CE|Rohs
- Output: USB 3.0
- Spectral Range: 380-650nm (with IR-filter), For Monochromatic Camera, AR Is Used
- White Balance: ROI White Balance/ Manual Temp-Tint Adjustment
- Recording System: Still Picture And Movie
- Cooling System\*: Natural
- Highlight: **USB3.0 CCD Digital Microscope Camera, OPTO EDU CCD Digital Microscope Camera**



## Product Description



OPTO-EDU (BEIJING) CO., LTD.

OPTO-EDU

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Tel:+8610 88696020 Fax:+8610 88696085

# A59.2220

## USB3.0 CCD Digital Camera



## A59.2220 Features & Sample Pictures

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- Standard C-Mount Camera with SONY ExView HAD CCD II sensors from 1.4M ~ 12M;
- IR-CUT Coated Windows
- Up to 1000s long time exposure;
- USB3.0 5Gbit/second interface ensuring high speed data transmission;
- Ultra-Fine color engine with perfect color reproduction capability;
- With advanced video & image processing application ToupView;
- Windows/Linux/macOS/Android multiple platforms SDK;platform SDK;

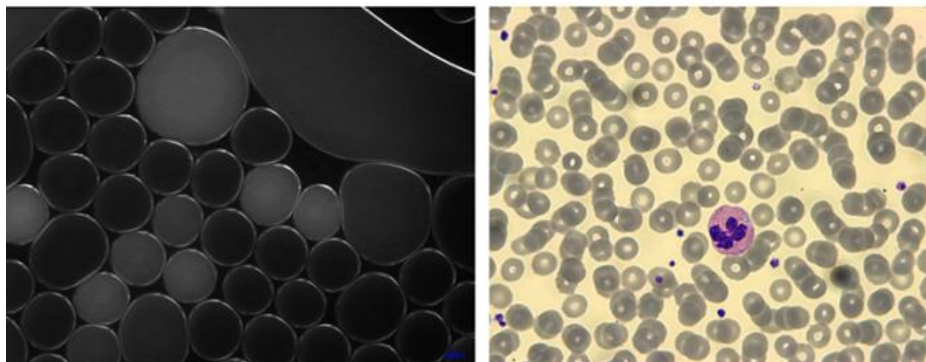
## A59.2220 USB3.0 CCD Digital Camera

ToupTek A59.2220 is an ExView HAD CCD series camera. It adopts Sony ExView HAD CCD sensor as the image-picking device. Sony ExView HAD CCD is a CCD that drastically improves light efficiency by including near infrared light region as a basic structure of HAD (Hole-Accumulation-Diode) sensor. ToupTek uses EXCCD for simplicity. USB3.0 is used as the data transfer interface.

A59.2220 Camera hardware resolutions range from 1.4M to 12M and come with the integrated CNC aluminum alloy compact housing.

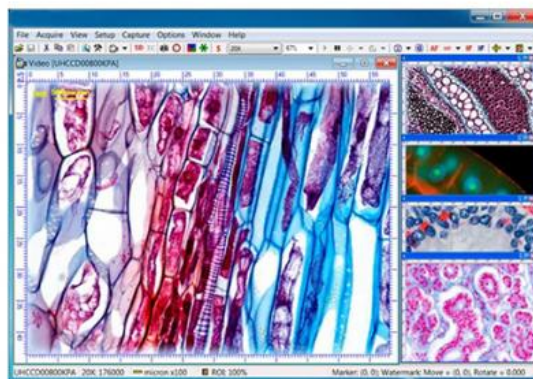
A59.2220 comes with advanced video & image processing application ToupView; Providing Windows/Linux/macOS/Android multiple platform SDK(Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc);

The A59.2220 can be widely used in bright field light environment and microscope image capture and analysis with higher frame rate.

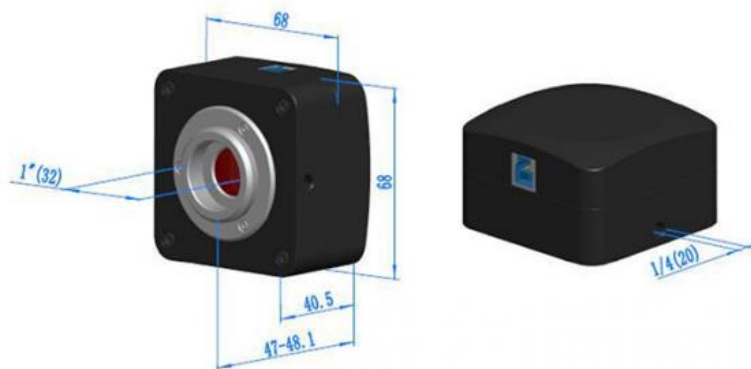


### A59.2220 Specification

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Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
12MPA	12M/ICX834AQG© 1" (13.15x8.77)	3.1x3.1	420mv with 1/30s 15.2mv with 1/30s	3.6@4248x2836 3.6@2124x1418	1x1 2x2	0.06ms~1000s
12MMA	12M/ICX834ALG(M) 1" (13.15x8.77)	3.1x3.1	420mv with 1/30s 12mv with 1/30s(F8.0)	3.6@4248x2836 3.6@2124x1418	1x1 2x2	0.06ms~1000s
9MPA	9.0M/ICX814AQG© 1" (12.47x9.98)	3.69x3.69	580mv with 1/30s 12mv with 1/30s	4.4@3388x2712 4.4@1694x1356	1x1 2x2	0.06ms~1000s
9MMA	9.0M/ICX814ALG(M) 1" (12.47x9.98)	3.69x3.69	660mv with 1/30s 12mv with 1/30s(F8.0)	4.4@3388x2712 4.4@1694x1356	1x1 2x2	0.06ms~1000s
6MPA	6.0M/ICX695AQG© 1" (12.48x9.99)	4.54x4.54	880mv with 1/30s 8mv with 1/30s	7.5@2748x2200 14@2748x1092	1x1	0.06ms~1000s
6MMA	6.0M/ICX695ALG(M) 1" (12.48x9.99)	4.54x4.54	1000mv with 1/30s 8mv with 1/30s	7.5@2748x2200 14@2748x1092	1x1	0.06ms~1000s
2.8MPA	2.8M/ICX674AQG© 2/3" (8.81x6.63)	4.54x4.54	800mv with 1/30s 4mv with 1/30s	15@1938x1460 17@1610x1212 18@1930x1092	1x1	0.05ms~1000s
2.8MMA	2.8M/ICX674ALG(M) 2/3" (8.81x6.63)	4.54x4.54	950mv with 1/30s 4mv with 1/30s	15@1938x1460 17@1610x1212 18@1930x1092	1x1	0.05ms~1000s
1.4MPB	1.4M/ICX825AQA© 2/3" (8.88x6.70)	6.45x6.45	2000mv with 1/30s 4.8mv with 1/30s	25@1376x1040	1x1	0.07ms~1000s



Other Specification	
Spectral Range	380-650nm (with IR-cut Filter)
White Balance	ROI White Balance/ Manual Temp Tint Adjustment/NA for Monochromatic Sensor
Color Technique	Ultra-Fine Color Engine/NA for Monochromatic Sensor
Capture/Control SDK	Windows/Linux/macOS/Android Multiple Platform SDK(Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc)
ADC	8 Bit / 14 Bit
Recording System	Still Picture and Movie
Cooling System*	Natural
Operating Environment	
Operating Temperature(in Centidegree)	-10~ 50
Storage Temperature(in Centidegree)	-20~ 60
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	DC 5V over PC USB Port
Software Environment	
Operating System	Microsoft® Windows® XP / Vista / 7 / 8 /10 /11 (32 & 64 bit) OSx(Mac OS X) Linux
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher Memory: 2GB or More USB Port: USB3.0 High-speed Port Display: 17" or Larger CD-ROM

## A59.2220 Packing List

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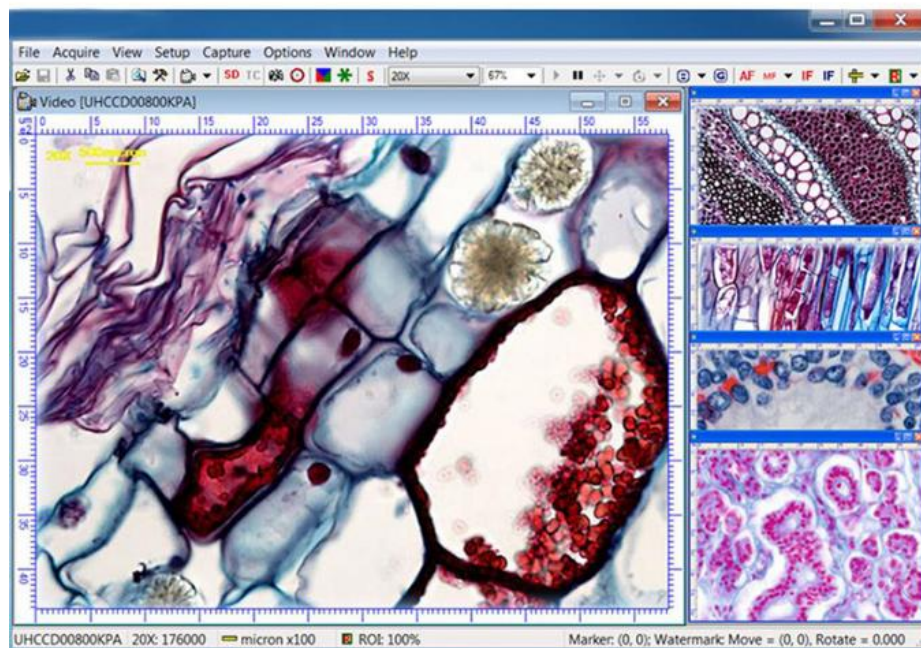
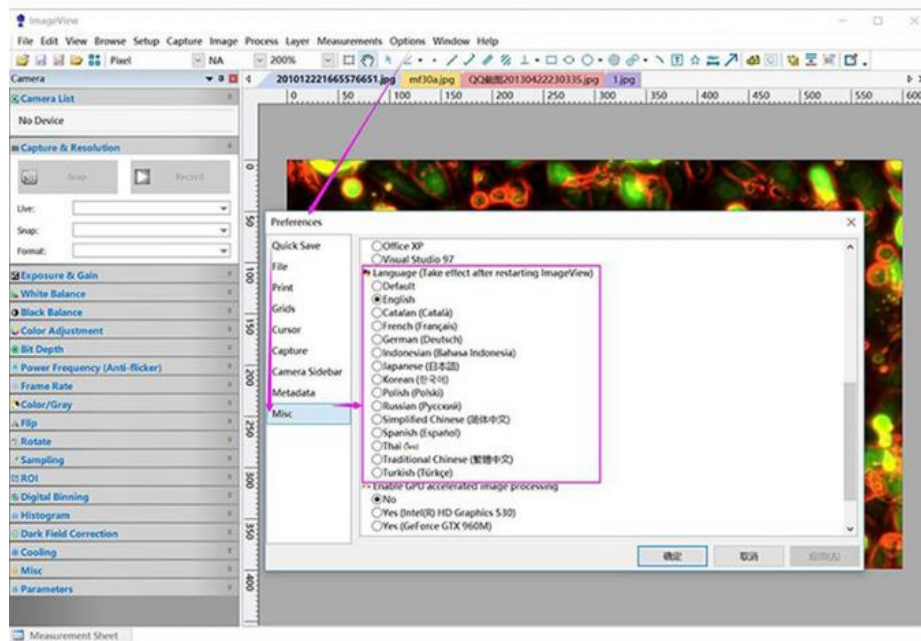
Standard Camera Packing List			
A	Carton L:52cm W:32cm H:33cm (20pcs, 12~17Kg/ carton), not shown in the photo		
B	Gift box L:15cm W:15cm H:10cm (0.7~0.75Kg/ box)		
C	U3CCD series USB3.0 C-mount CMOS camera		
D	High-speed USB3.0 A male to B male gold-plated connectors cable /2.0m		
E	CD (Driver & utilities software, Ø12cm)		
Optional Accessory			
F	Adjustable lens adapter	C-mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)	108001/AMA037 108002/AMA050 108003/AMA075 108004/AMA100

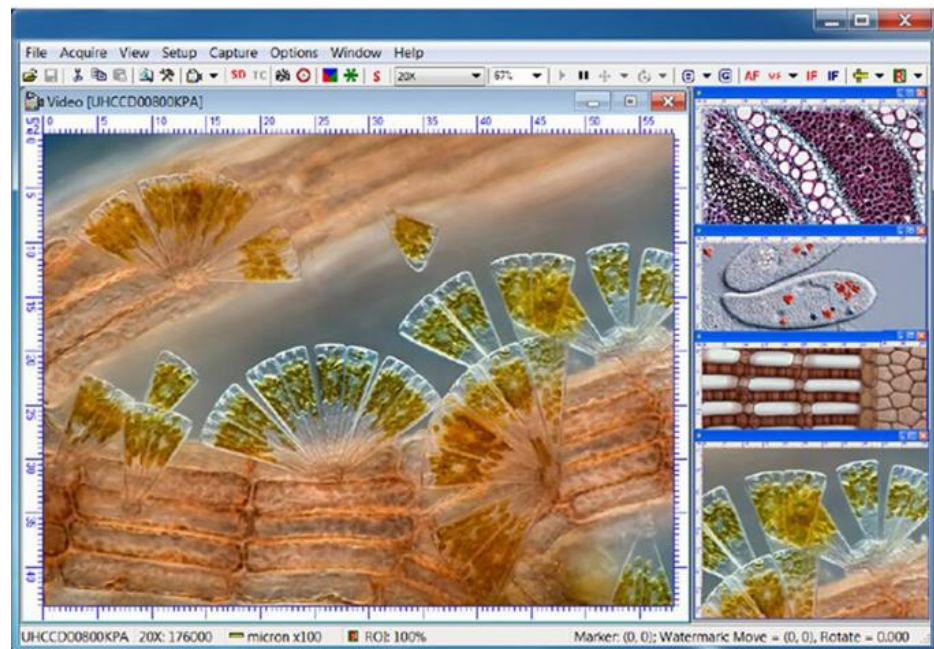
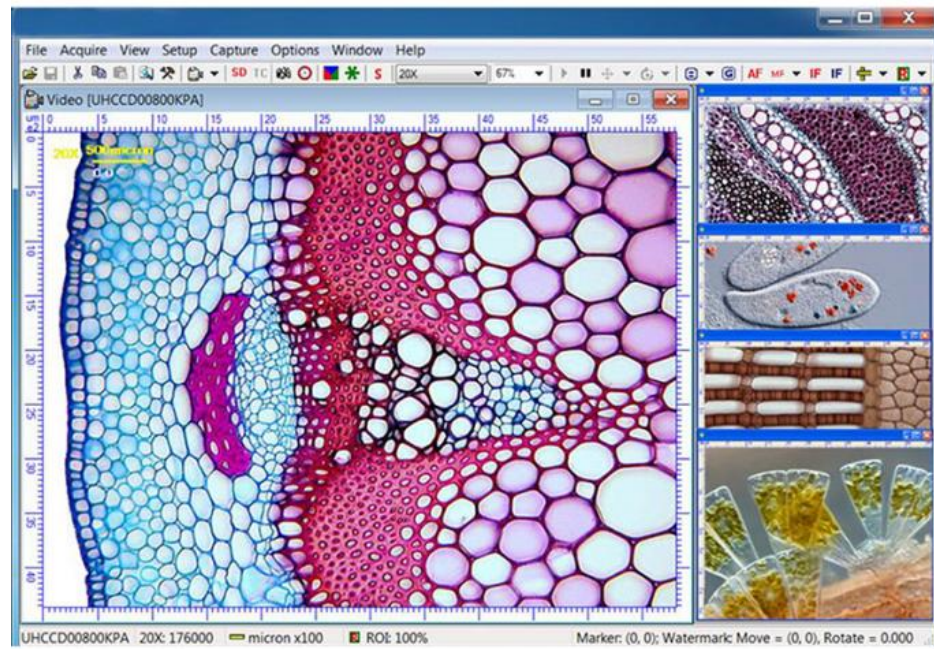


		C-mount to Dia.31.75mm eyepiece tube (Please choose 1 of them for your telescope)	108008/ATA037 108009/ATA050 108010/ATA075 108011/ATA100
G	Fixed lens adapter	C-mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)	108005/FMA037 108006/FMA050 108007/FMA075 108008/FMA100
		C-Mount to Dia.31.75mm eyepiece tube (Please choose 1 of them for your telescope)	108011/FTA037 108012/FTA050 108013/FTA075 108014/FTA100
Note: For F and G optional items, please specify your Camera type(C-mount, microscope camera or telescope camera) , ToupTek engineer will help you to determine the right microscope or telescope Camera adapter for your application;			
H	108015(Dia.23.2mm to 30.0mm ring)/Adapter rings for 30mm eyepiece tube		
I	108016(Dia.23.2mm to 30.5mm ring)/ Adapter rings for 30.5mm eyepiece tube		
J	108017(Dia.23.2mm to 31.75mm Ring)/ Adapter rings for 31.75mm eyepiece tube		
K	Calibration kit	106011/TS-M1(X=0.01mm/100Div.); 106012/TS-M2(X,Y=0.01mm/100Div.); 106013/TS-M7(X=0.01mm/100Div., 0.10mm/100Div.)	

## Image View Software for Windows

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## Camera Connect To Microscope

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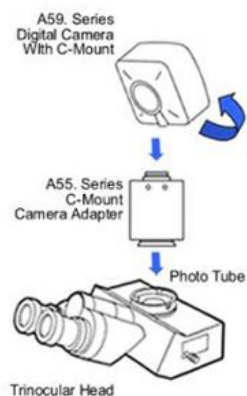
A55.2002  
C-Mount to 23.2mm Adapter  
For Microscope

A55.2004  
C-Mount to 31.75mm Adapter  
For Telescope

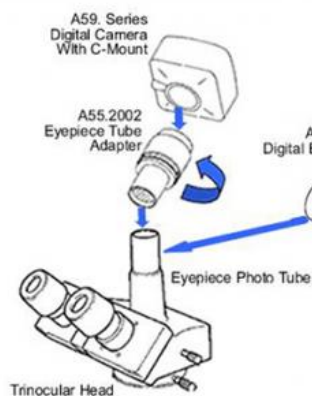
**OPTO-EDU**

## How Camera Connect To Microscope

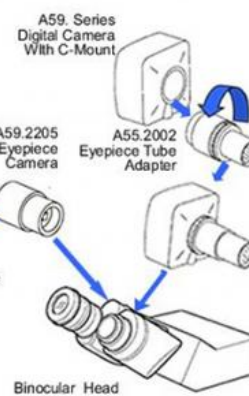
### 1. To Trinocular Microscope On Straight Photo Tube



### 2. To Trinocular Microscope On Eyepiece Photo Tube



### 3. To Binocular Microscope On Eyepiece Tube



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