

U3CMOS Basic Characteristic

U3CMOS is an ultra-high performance USB3.0 CMOS camera and it adopts ultra-high performance CMOS sensor as the image-picking device and USB3.0 is used as the data transfer interface.

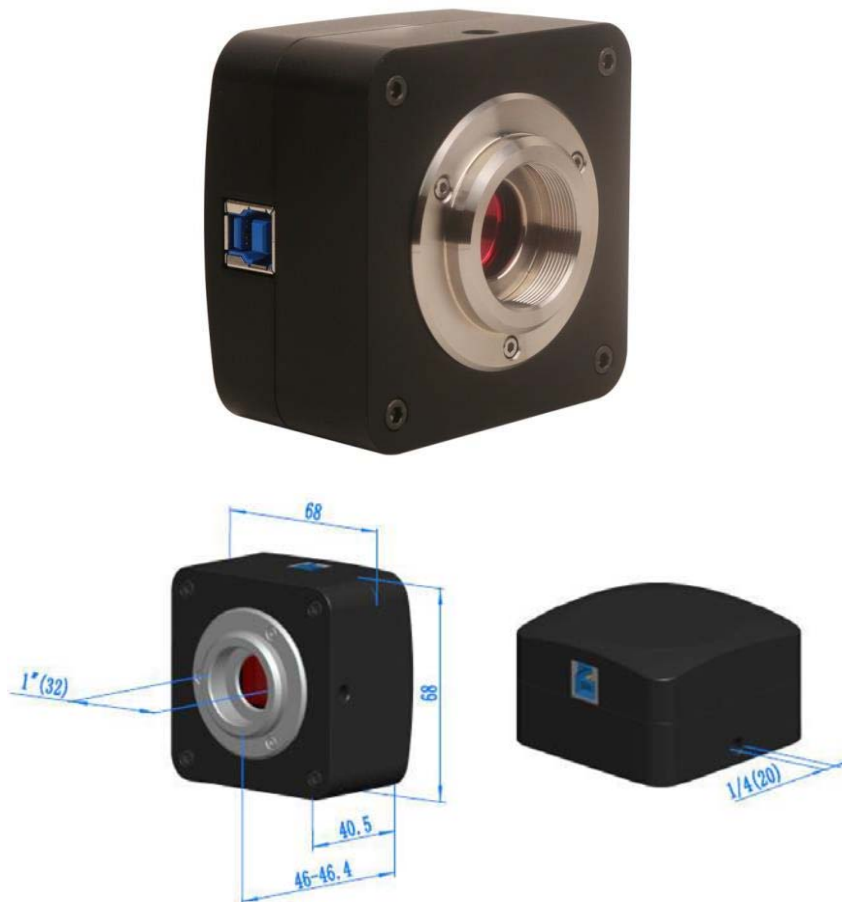
U3CMOS hardware resolutions range from 3.0M to 14M and come with the integrated zinc aluminum alloy compact housing.

U3CMOS comes with advanced video & image processing application TouView; Providing Windows/Linux/ OS X multiple platforms SDK; Native C/C++, C#/VB.NET, DirectShow, Twain Control API;

The U3CMOS can be widely used in bright field light environment and microscope image capture and analysis with higher frame rate.

The basic characteristic of the U3CMOS cameras are as follows:

- Standard C-Mount camera with Aptina CMOS sensor;
- With hardware resolution among 3.0M to 18M;
- Integrated zinc aluminum alloy housing;
- USB3.0 Gbps interface ensuring high frame rate;
- With advanced video & image processing application TouView;
- Providing Windows/Linux/Mac OS multiple platforms SDK;
- Native C/C++, C#/VB.NET, DirectShow, Twain Control API;



Available Versions:

Order Code	Sensor & Size	Pixel(μm)	G Responsivity Dynamic range SNRmax	FPS/Resolution	Binning	Exposure
U3CMOS18000KPA TP118000A (New)	18M/AR1820(C) 1/2.3"(6.14x4.61)	1.25x1.25	0.62 V/lux-sec 65.8dB 36.3	5.6@4912x3684 18.1@2456x1842 32.2@1228x922	1x1,2x2,4x4	0.1ms~2000ms
U3CMOS16000KPA TP116000A (New)	16M/MN34120(C) 1/2.33"(6.18x4.66)	1.335x1.335	R: 2453LSB Gr: 2444LSB Gb: 1054LSB B: 996LSB	6.0@4632x3488 15.0@2320x1740 26.0@1536x1160	1x1, 2x2,3x3	0.2ms~2000ms
U3CMOS16000KPB TP116000B (New)	16M/MN34230PLJ(C) 4/3" (17.60x13.30)	3.8x3.8	R: 1315LSB Gr: 2413LSB Gb: 2413LSB B: 1042LSB (Gain = 0dB)	6.0@4648x3506 15.0@2304x1750 30.0@1536x1168	1x1,2x2,3x3	0.06ms~15s
U3CMOS16000KMB TM116000B (New)	16M/MN34230ALJ(M) 4/3" (17.60x13.30)	3.8x3.8	A: 2650LSB B: 2650LSB C: 2650LSB D: 2650LSB (Gain = 0dB)	22@4640x3506 36@3840x2160 43@2304x1750 43@1920x1080 49@1536x1168	1x1, 1x1, 2x2, 2x2, 3x3	0.224ms~15s
U3CMOS14000KPA TP114000A	14M/MT9F002(C) 1/2.3"(5.73x4.60)	1.4x1.4	0.724v/lux-sec 65.3dB 35.5dB	6.2@4096x3286 20.8@2048x1644 53.3@1024x822	1x1, 2x2,	0.224ms~2000ms
U3CMOS10000KPA TP110000A	10M/MT9J003(C) 1/2.3" (5.98x4.58)	1.67x1.67	0.31v/lux-sec 65.2dB 34dB	7.2@3584x2746 24.5@1792x1372	1x1,2x2,4x4	0.4ms~2000ms
U3CMOS10000KMA TM110000A	10M/MT9J003(M) 1/2.3"(5.98x4.58)	1.67x1.67	0.4v/lux-sec 65.2dB 34dB	7.2@3584x2746 24.5@1792x1372	1x1,2x2,4x4	0.4ms~2000ms
U3CMOS08500KPA TP108500A	8.5M/Special(C) 1/2.4"(5.56x4.26)	1.67x1.67	0.31v/lux-sec 65.2dB 34dB	8.3@3328x2548 26.2@1664x1272	1x1,2x2,4x4	0.1ms~2000ms
U3CMOS05100KPA TP105100A	5.1M/MT9P006(C) 1/2.5" (5.70x4.28)	2.2x2.2	1.76v/lux-sec 67.74dB 38.5dB	14.2@2560x1922 38.3@1280x960 101.2@640x480	1x1,2x2,4x4	0.1ms~2000ms
U3CMOS03100KPA TP103100A	3.1M/AR0330(C) 1/3" (4.51x3.38)	2.2x2.2	1.9v/lux-sec 100dB 39dB	27.3@2048x1534 53.3@1024x770	1x1, 2x2	0.1ms~2000ms

C: Color; M: Monochrome;

Other Specification for U3CMOS Camera

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 API	Native C/C++, C#/VB.NET, DirectShow, Twain and Labview
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 (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

Packaging Details



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 (0.67~0.7Kg/ box)
C	U3CMOS 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
		C-mount to Dia.31.75mm eyepiece tube (Please choose 1 of them for your telescope)	108008/ATA037 108009/ATA050 108010/ATA075
G	Fixed lens adaptor	C-mount to Dia.23.2mm eyepiece tube (Please choose 1 of them for your microscope)	108005/FMA037 108006/FMA050 108007/FMA075
		C-Mount to Dia.31.75mm Eyepiece Tube (Please choose 1 of them for your telescope)	108011/FTA037 108012/FTA050 108013/FTA075
<p>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;</p>			
H	108015(Dia.23.2mm to 30.0mm Ring)/Adaptor rings for 30mm eyepiece tube		
I	108016(Dia.23.2mm to 30.5mm Ring)/ Adaptor rings for 30.5mm eyepiece tube		
J	108017(Dia.23.2mm to 31.75mm Ring)/ Adaptor 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.)	

Optional Adapters

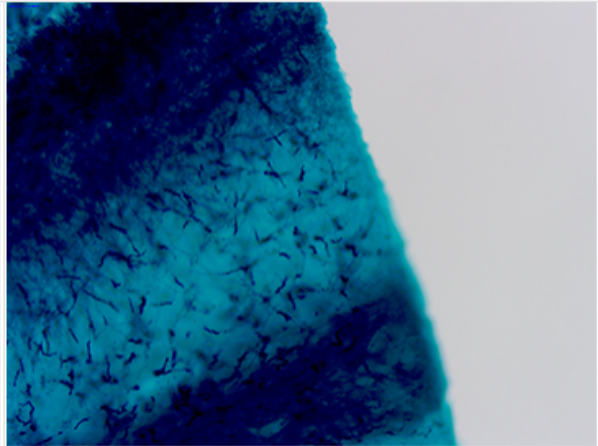


Sample Images - Captured with U3CMOS Camera(U3CMOS18000KPA)

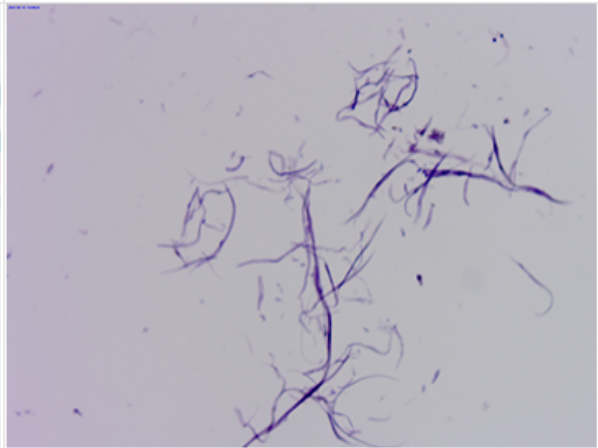
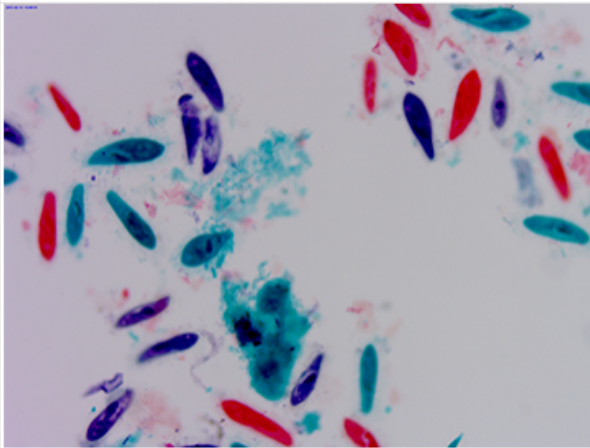
The microscope slide images are captured with TPS006050 slide(01-025) package and with U3CMOS18000KPA camera.



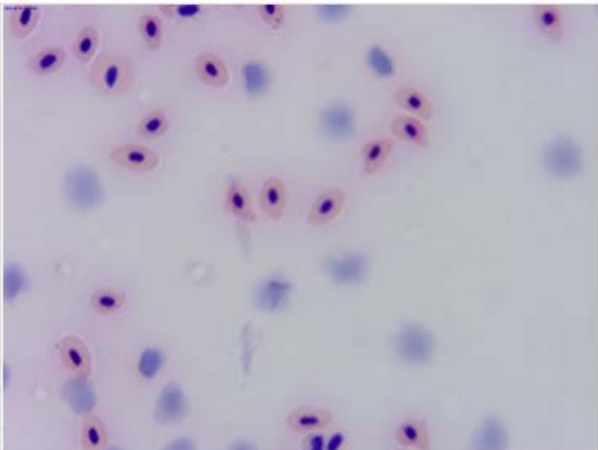
1. Broad Bean Leaf Epidermis W.M



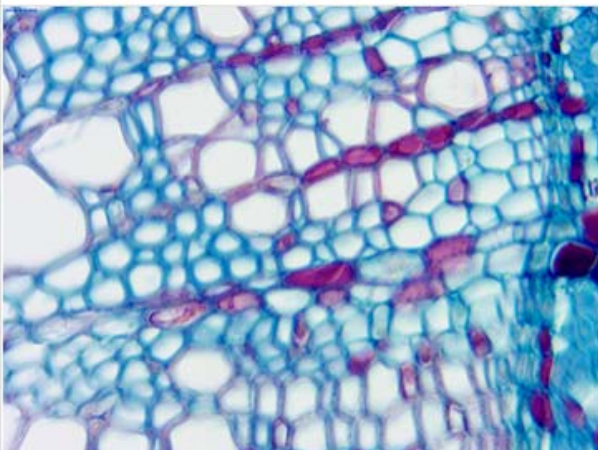
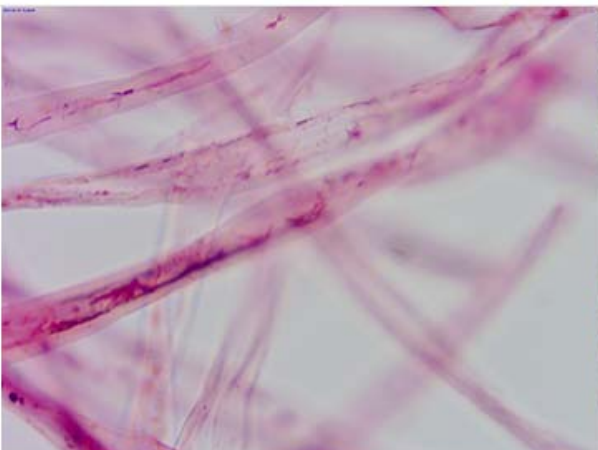
2. Penicillium W.M



17. Housefly Foot W.M



18. Blood of Frog Smear

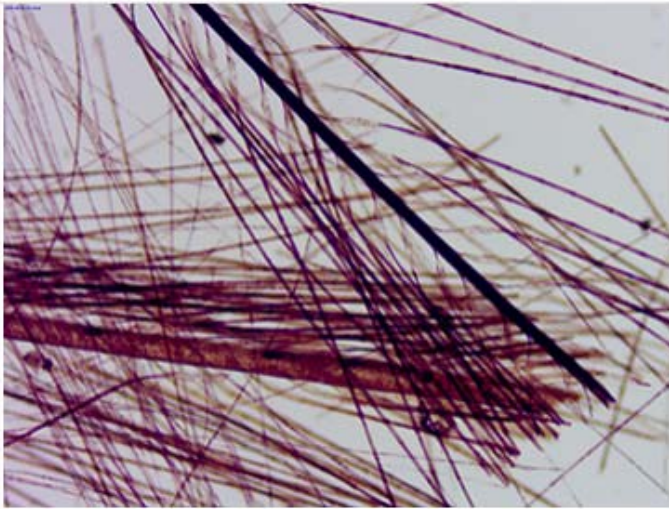




11. Pine Mature Pollen Grain



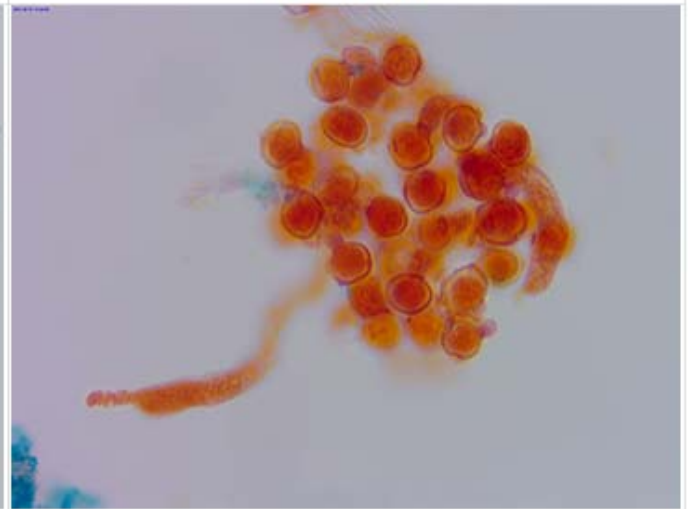
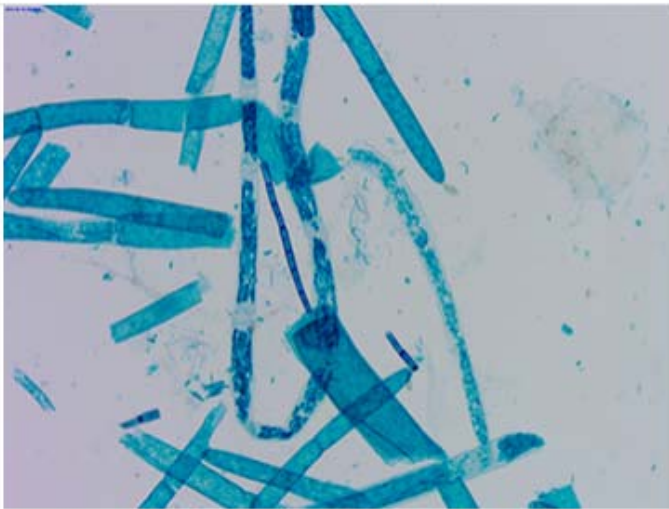
12. Housefly Wing W.M



13. Bird Feather W.M



14 Spirogyra W.M



All Images made by touptek