

U3CMOS Grunddaten

Die USB-Kameras der Serie U3CMOS haben einen Aptina CMOS Sensor zur Bildaufnahme und nutzen USB 3.0 zur schnellen Datenübertragung und Stromversorgung der Kamera.

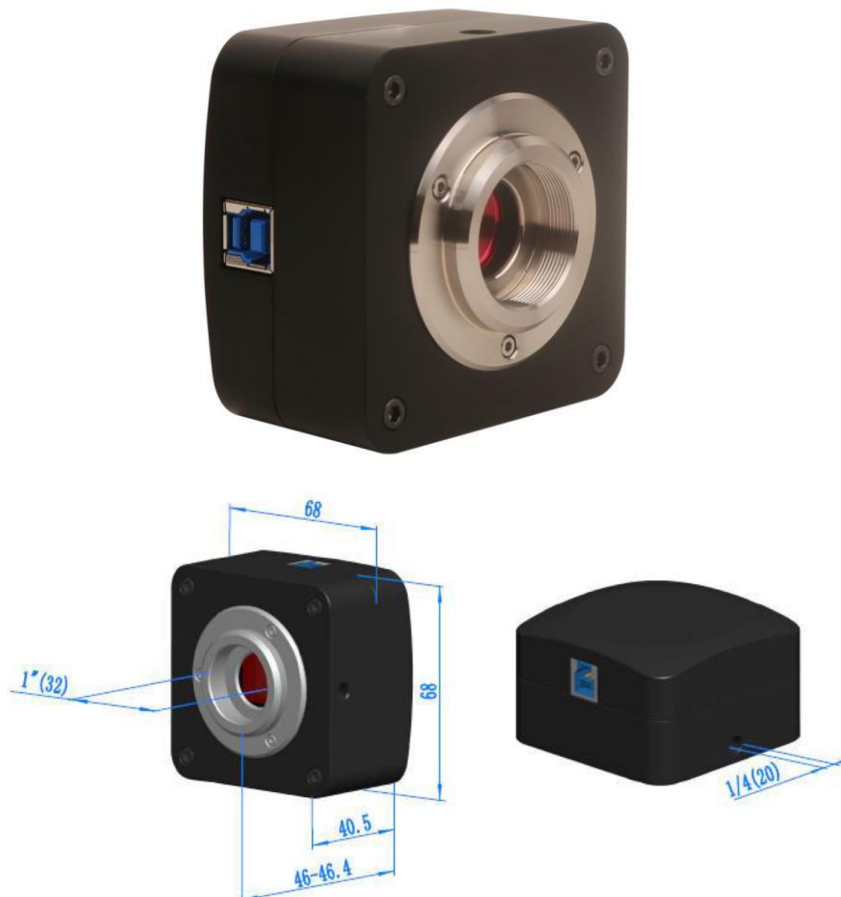
Die U3CMOS Hardware wird in Auflösungen von 3M bis 14M angeboten und wird in einem kompakten Zink-Alu-Gehäuse mit C-Mount Innengewinde geliefert.

Die mitgelieferte Software ToupView ist einfach zu bedienen, (Menüsprache deutsch einstellbar) erlaubt Einzelbild- und Filmaufnahmen, sowie verschiedene Messmöglichkeiten und Bildkommentare. Als Betriebssystem funktionieren Windows/Linux/ OSX, SDK; Native C/C++, C#/VB.NET, Direct Show, Twain Control API.

Die U3CMOS kann mit optionalen Adaptern anstelle eines Okulars am Mikroskop verwendet werden und erweitert somit die analogen Funktionen in die eines modernen Digitalmikroskops.

Die Grundcharakteristika der U3CMOS Kameras sind:

- Aptina CMOS Sensor mit USB3.0 Interface;
- Real-time 8/12/14/16bit Tiefe, schaltbar (sensorabhängig);
- Ultra niedriges Rauschen und niedrigster Energieverbrauch
- Mit Hardware-Auflösungen von 3M bis 14M;
- Rolling Shutter oder Global Shutter;
- Standard C-Mount Anschluss;
- CNC Aluminiumlegierung Gehäuse
- USB3.0,5 Gbps Interface für hohe Bildraten
- Mit umfangreicher Video- und Bildverarbeitungssoftware ToupView;
- Geeignet für Windows/Linux/Mac OS Betriebssysteme
- SDK Native C/C++, C#/VB.Net, DirectShow, Twain, LabView



Lieferbare Versionen:

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

Lieferumfang



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.)	

Optionale Adapter:

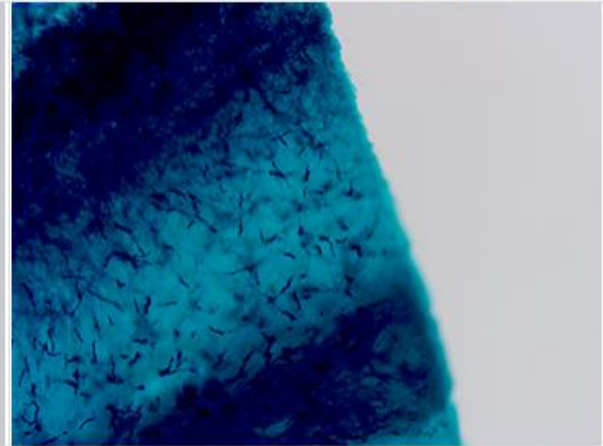


Beispielbilder – Aufgenommen mit U3CMOS Kamera(U3CMOS18000KPA)

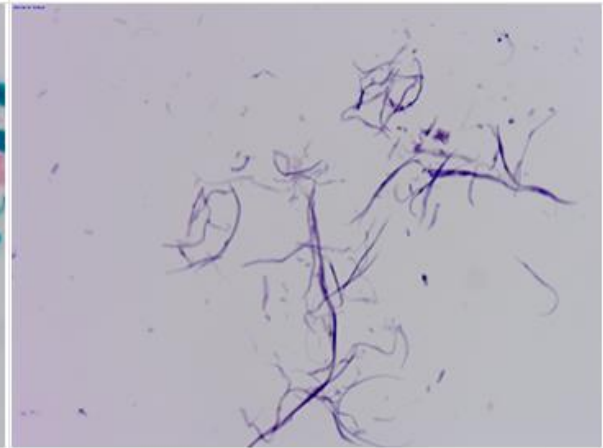
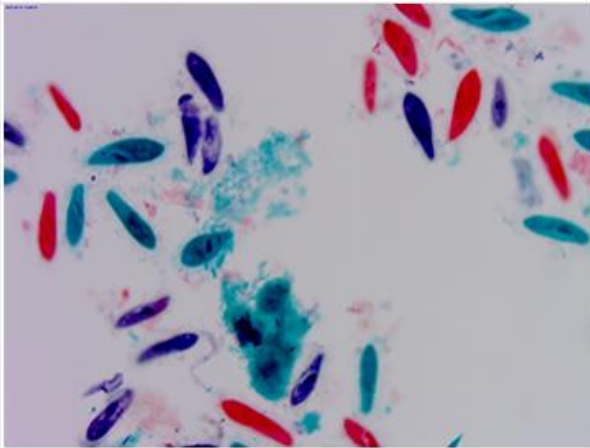
The microscope slide images are captured with TPS006050 slide(01-025) package and with U3CMOS18000KPA camera.



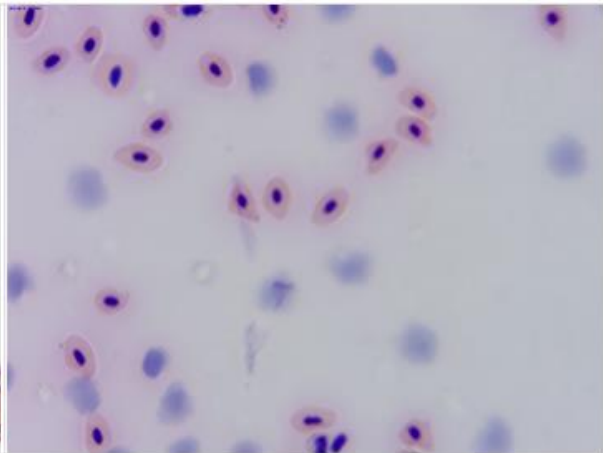
1. Broad Bean Leaf Epidermis W.M



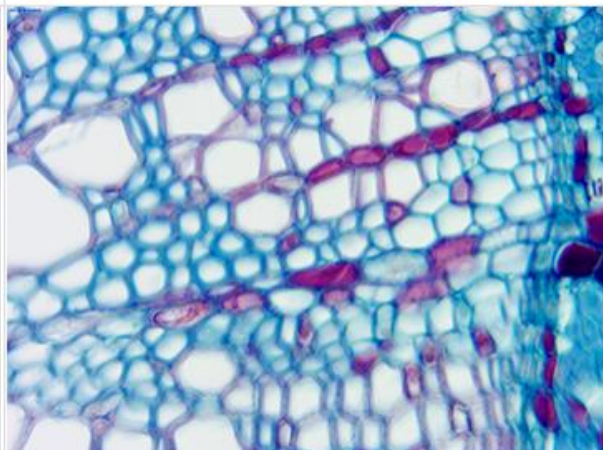
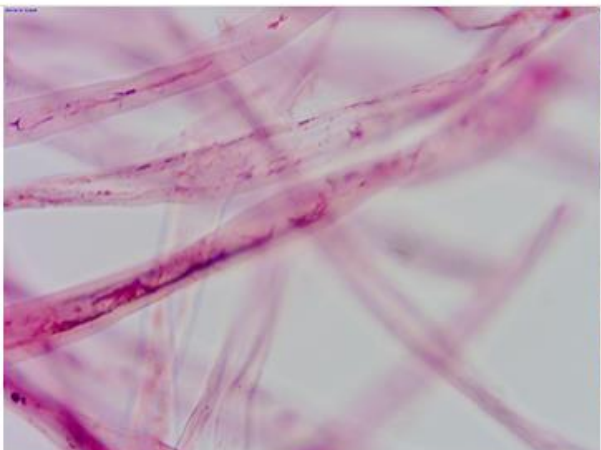
2. Penicillium W.M



17. Housefly Foot W.M



18. Blood of Frog Smear

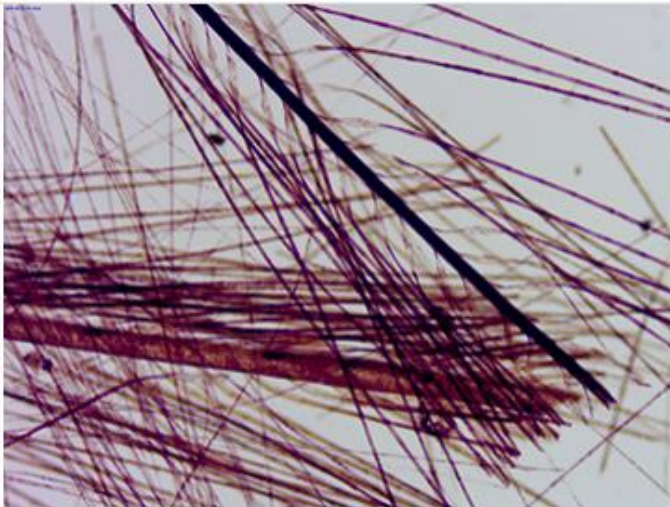




11. Pine Mature Pollen Grain



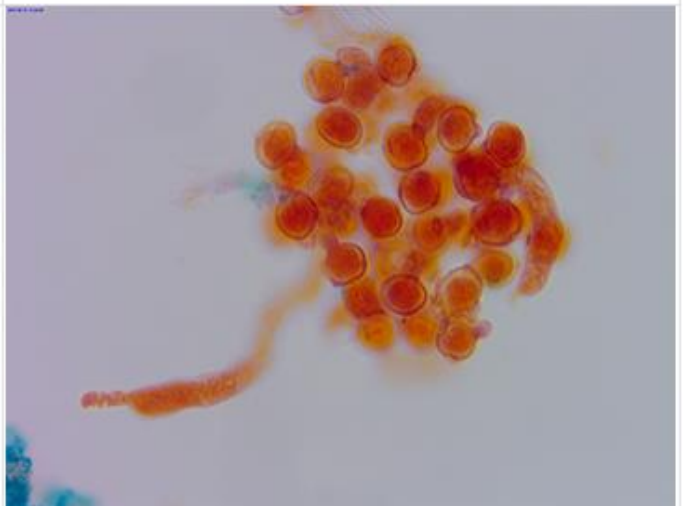
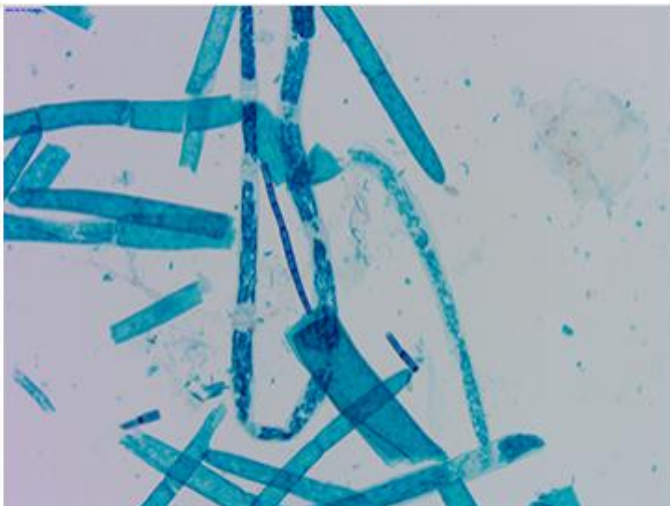
12. Housefly Wing W.M



13. Bird Feather W.M



14 Spirogyra W.M



Alle Aufnahmen gemacht durch ToupTek