Touptek USB-Camera, Series UA

UA is an ultra-high performance USB 2.0 CMOS camera and it adopts ultra-high performance CMOS sensor as the image-picking device and USB 2.0 is used as the data transfer interface.
UA hardware resolutions range from 1,3M to 16M and come with the integrated zinc aluminum alloy compact housing.
UA comes with advanced video & image processing application ToupView; Providing Windows/Linux/ OSX multiple platforms SDK; Native C/C++, C#/VB.NET, DirectShow, Twain Control API;
The UA can be widely used in bright field light environment and microscope image capture and analysis with higher frame rate.

The basic characteristic of the UA cameras are as follows:

- Standard C-Mount with Aptina/Panasonic CMOS sensor
- With hardware resolution among 1.3M to 16M
- USB2.0 interface ensuring high speed data transmission;
- Ultra-FineTM color engine with perfect color reproduction capability
- With advanced video & image processing application ToupView
- Providing Windows/Linux/Mac OS multiple platforms SDK
- Native C/C++, C#/VB.NET, DirectShow, Twain Control API
- External dedicated on-board buffer to achieve maximum performance of USB2.0
- Compatible with most of the old and new CPU PC;
- Aluminum alloy CNC housing which is the same as that of UCMOS series.
- Standard C-Mount camera with Aptina CMOSsensor;

Sizes
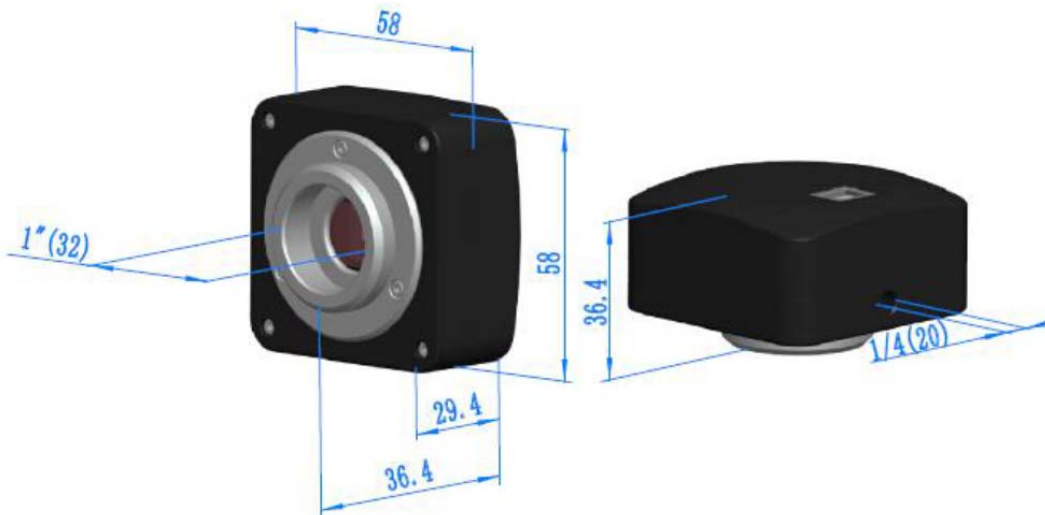
Available versions:

Order Code	Sensor & Size(mm)	Pixel(μm)	G Responsivity Dynamic range SNRmax	FPS/Resolution	Binning	Exposure
UA1600CA(New) UP901600A	16M/MN34120(C) 1/2.33"(6.18x4.66)	1.335x1.335	R: 2453LSB Gr: 2444LSB Gb: 1054LSB B: 996LSB	2@4632x3488 8@2320x1740 11@1536x1160	1x1 2x2 3x3	0.2ms~2000ms
UA1000CA(New) UP901000A	10M/MT9J003(C) 1/2.3" (5.98x4.59)	1.67x1.67	0.31v/lux-sec 65.2dB 34dB	3.3@3584x2748 11@1792x1374 38@896x684	1x1 2x2 4x4	0.4ms~2000ms
UA510CA(New) UP900510A	5.1M/MT9P006(C) 1/2.5" (5.70x4.28)	2.2x2.2	0.53 V/lux-sec 66.5dB 40.5dB	7@2592x1944 27@1280x960 90@640x480	1x1 2x2 4x4	0.294ms~2000ms
UA310CA(New) UP900310A	3.1M/MT9T001(C) 1/2" (6.55x4.92)	3.2x3.2	1.0 V/lux-sec 61dB 43dB	12@2048x1536 32@1024x768 45@680x510	1x1 2x2 3x3	0.244ms~2000ms
UA130CA(New) UP900130A	1.23M/SC1235(C) 1/3" (4.80x3.60)	3.75x3.75	4.5V/lux-sec 74dB 38dB	25@1280x960 25@1280x720	1x1, 1x1	0.1ms~2000ms

C: Color; M: Monochrome;

Other Specification for UA 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 SDK	Windows/Linux/macOS/Android Multiple Platform SDK(Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc)
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:USB2.0 High-speed Port
	Display:17" or Larger
	CD-ROM

Packing information

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 (0.5~0.55Kg/ box)
C	UCMOS series USB2.0 C-mount CMOS camera
D	High-speed USB2.0 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
	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)/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.)	

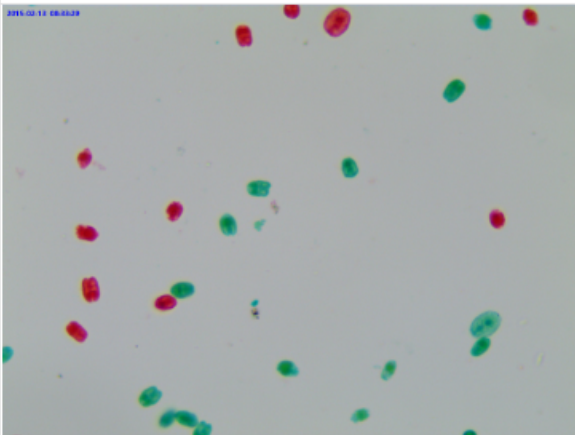Sample images, made by Touptek:

The microscope slide images are captured with TPS005050 slide(01~025) package and with UA310CA camera.
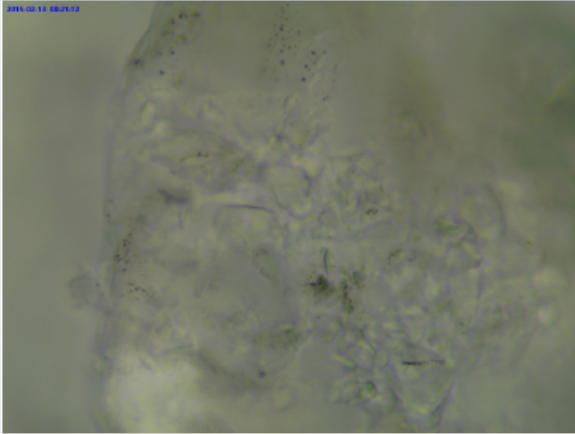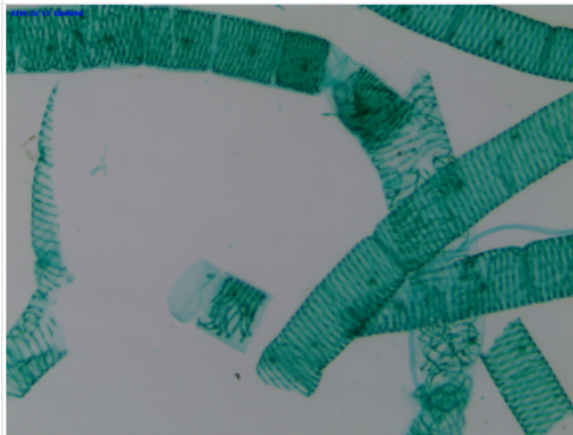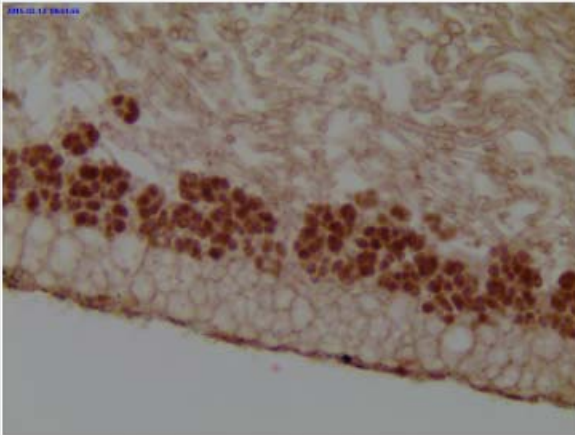

1. Sugar Crystals. W.M.
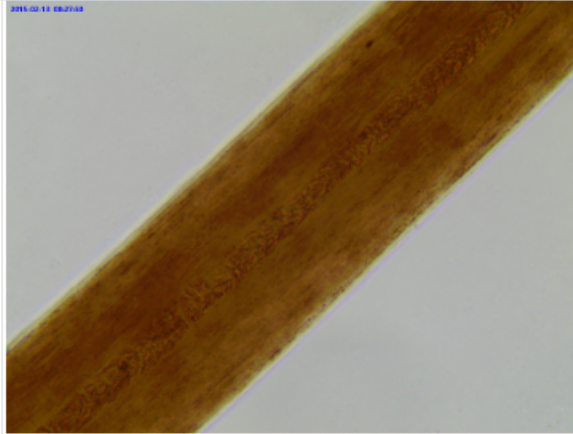
2. Comparative Hairs. Human, Sheep & Cat

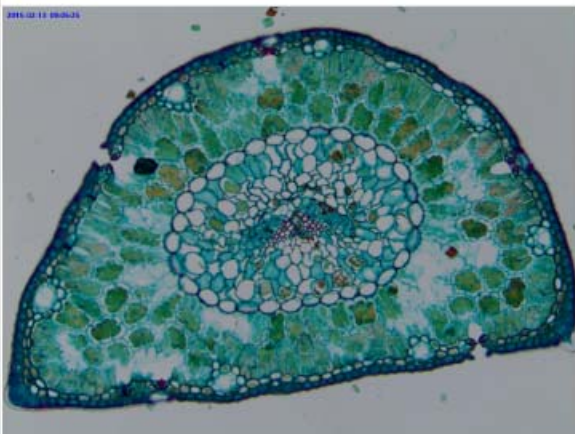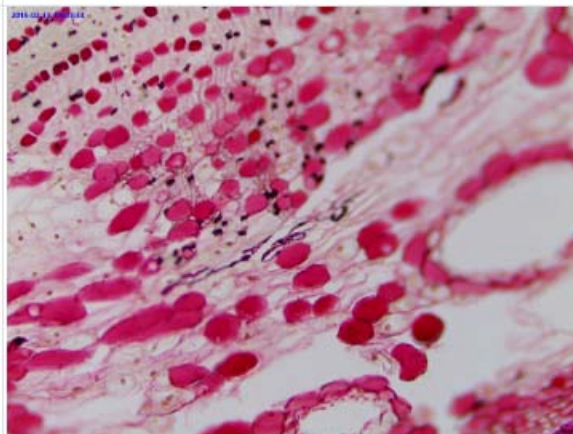3. Chlamydomonas. W.M.

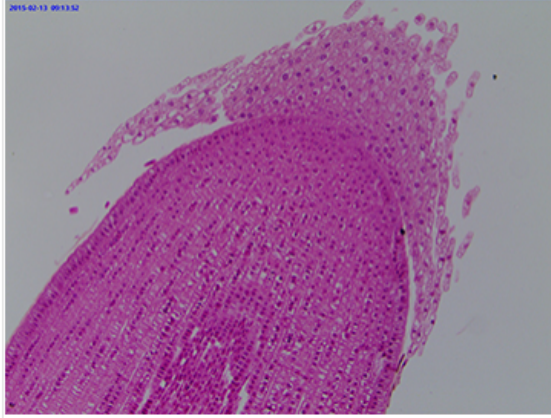4. Spirogyra. W.M.

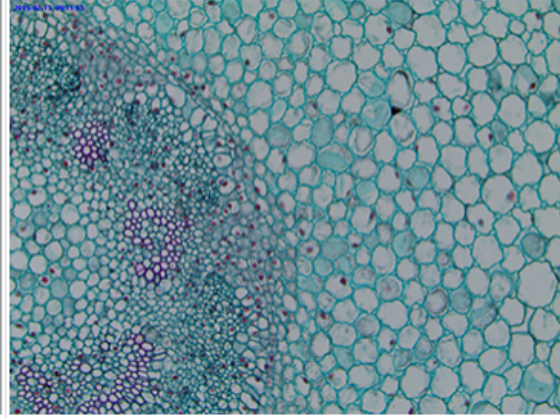5. Lichen. Sec.

6. Fern Leaf. C.S.

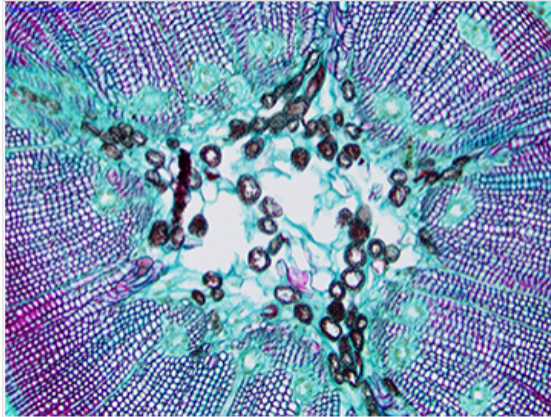7. Pine Leaf. C.S.

8. Ten Year Pine Stem. C.S.

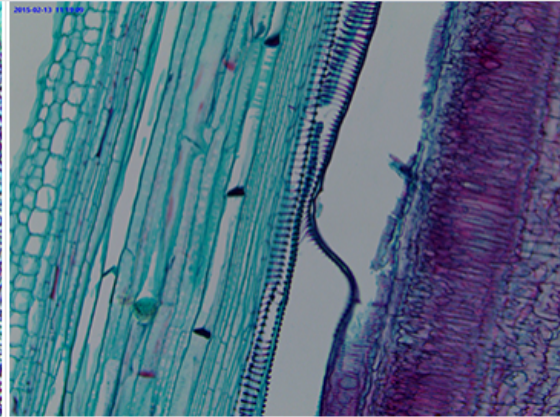The microscope slide images are captured with TPS005050 slide(01~025) package and with UA310CA camera.
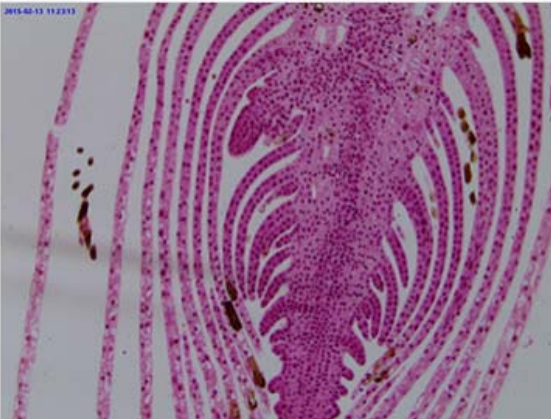
9. Corn Root Tip. L.S.

10.Broad bean Root. C.S.

11. Corn Stem. C.S.

12. Cucurbit Stem. L.S.

13. Top Bud. L.S.
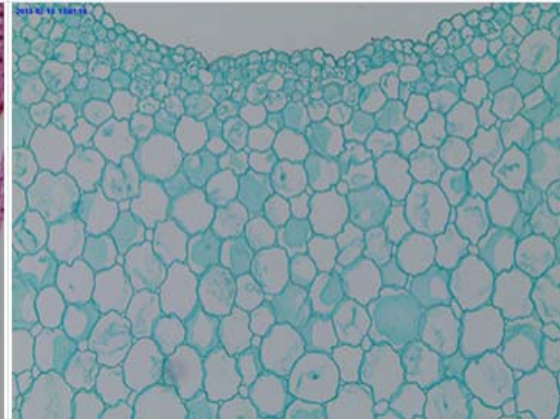
14 Collenchyma. Sec.
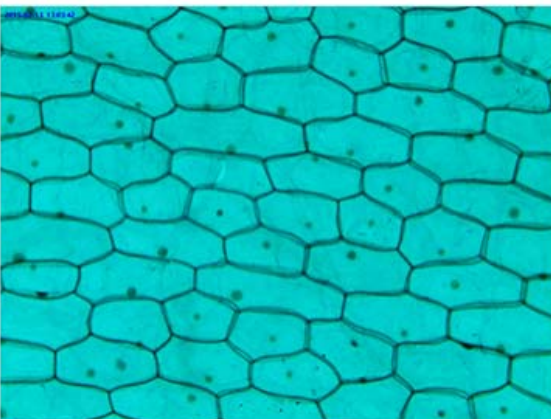
15.Onion Leaf Epidermis. W.M.

16.Corn Leaf. C.S.