



SPECTROLAB

Spectrolab in Optical Microscopy

USB Digital Cameras

CAT 701110

WCAM Series WIFI Camera

1 Product Description

The T-Tek WCAM series camera is a C-mount digital camera that attaches to the eyepiece of a microscope, telescope or spotting scope. The camera will work as an AP(access point) and users can access the camera by WIFI connection via WIFI-enabled devices, such as smart cell phones, pads, laptop and computers. Apps on a versatile platform are supported, including IOS, Android, Windows are now available. Up to 10 devices could interface to the camera simultaneously. The camera has dedicated on-board color processing DSP for color rendering techniques. Using ToupView technology, users can have full control of the camera including the exposure (auto & manual), gain, white balance (one push only), color adjustment, antiflicker function and so on. It has the popular H.264 encodec stream to ensure the best quality. Users can also enjoy other benefits of ToupView, such as supporting measurements, image stitching, image stacking, multifocus image composition and so on

2 Product Features

- C-mount camera attaches to the eyepiece of a microscope, telescope or spotting scope
- Sends H.264 encodec high-resolution images from a microscope to WiFi enabled smartphones, computers, and tablets with iOS, Android, and Windows operating systems
- Streams images to up to 10 devices simultaneously(for WCAM0300A)
- Available with ToupView imaging software for quantifying, measuring, and annotating images which is downloadable from an app store for viewing, capturing, and editing images

3 Typical Specifications

Other camera options also available

3.1 WCAM1080PA-MT9P031

1080P WIFI P/N: WP601080A

HARDWARE CONFIGURATION

Image Pickup Device	Aptina MT9P031 CMOS(Color)
Scan Mode	Progressive
Max. Resolution	1920 x 1080 (Approx.920,000 Pixels)
Sensor Size (Diagonal)	1/2.5" (5.70mm(H) x 4.28mm(V), Diagonal 7.13mm)
Pixel Size	2.2 μ m x 2.2 μ m
G Sensitivity	0.53v/lux-sec(550nm)
Dynamic Range	66.5dB
A/D Converter	12-bit
SN Ratio	40.5dB
Spectral Range	380-650nm (with IR-cut Filter)
Video Format & Frame Rate	25fps @1920 x 1080
Binning	2 x 2
Exposure	0.21ms~2000ms
White Balance	White Balance/ Manual Temp Tint Adjustment
Color Rendering Technique	Ultra-Fine™ Color Engine (Embedded on Board)
Peak Quantum Efficiency	N/A
Readout Noise	N/A
Extinction Ratio	N/A
Smear	N/A
Capture/Control API	Native C/C++, C# for Windows Operating System
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	USB Charger or over PC USB Port

SOFTWARE ENVIRONMENT

Operating System	Microsoft® Windows® XP / Vista / 7 / 8 (32 & 64 bit) IOS, Android
Device Requirements	WIFI Adapter with DHCP Enabled Ability to Play 1080P H264 Format Video Smoothly

3.2 WCAM0720PA-MT9P031

720P WIFI P/N: WP600720A

HARDWARE CONFIGURATION

Image Pickup Device	Aptina MT9P031 CMOS(Color)
Scan Mode	Progressive
Max. Resolution	1280 x 720 (Approx.920,000 Pixels)
Sensor Size (Diagonal)	1/2.5" (5.70mm(H) x 4.28mm(V), Diagonal 7.13mm)
Pixel Size	2.2 μ m x 2.2 μ m
G Sensitivity	0.53v/lux-sec(550nm)
Dynamic Range	66.5dB
A/D Converter	12-bit
SN Ratio	40.5dB
Spectral Range	380-650nm (with IR-cut Filter)
Video Format & Frame Rate	30fps @1280 x 720
Binning	2 x 2
Exposure	0.21ms~2000ms
White Balance	White Balance/ Manual Temp Tint Adjustment
Color Rendering Technique	Ultra-Fine™ Color Engine (Embedded on Board)
Peak Quantum Efficiency	N/A
Readout Noise	N/A
Extinction Ratio	N/A
Smear	N/A
Capture/Control API	Native C/C++, C# for Windows Operating System
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	USB Charger or over PC USB Port

SOFTWARE ENVIRONMENT

Operating System	Microsoft® Windows® XP / Vista / 7 / 8 (32 & 64 bit) IOS, Android
Device Requirements	WIFI Adapter with DHCP Enabled Ability to Play 720P H264 Format Video Smoothly

3.3 WCAM0300K-MT9V011

300K WIFI P/N: WP600300A

HARDWARE CONFIGURATION

Image Pickup Device	Aptina MT9V011 CMOS(Color)
Scan Mode	Progressive
Max. Resolution	640 x 480 (Approx.300,000 Pixels)
Sensor Size (Diagonal)	1/4" (3.58mm(H) x 2.69mm(V), Diagonal 4.48mm)
Pixel Size	5.6μm x 5.6μm
G Sensitivity	1.9v/lux-sec(550nm)
Dynamic Range	60dB
A/D Converter	10-bit Parallel
SN Ratio	45dB
Spectral Range	380-650nm (with IR-cut Filter)
Video Format & Frame Rate	25fps @640 x 480
Binning	1 x 1
Exposure	Auto Exposure
White Balance	Auto White Balance
Color Rendering Technique	Ultra-Fine™ Color Engine (Embedded on Board)
Peak Quantum Efficiency	N/A
Readout Noise	N/A
Extinction Ratio	N/A
Smear	N/A
Capture/Control API	Native C/C++, C# for Windows Operating System
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	USB Charger or over PC USB Port

SOFTWARE ENVIRONMENT

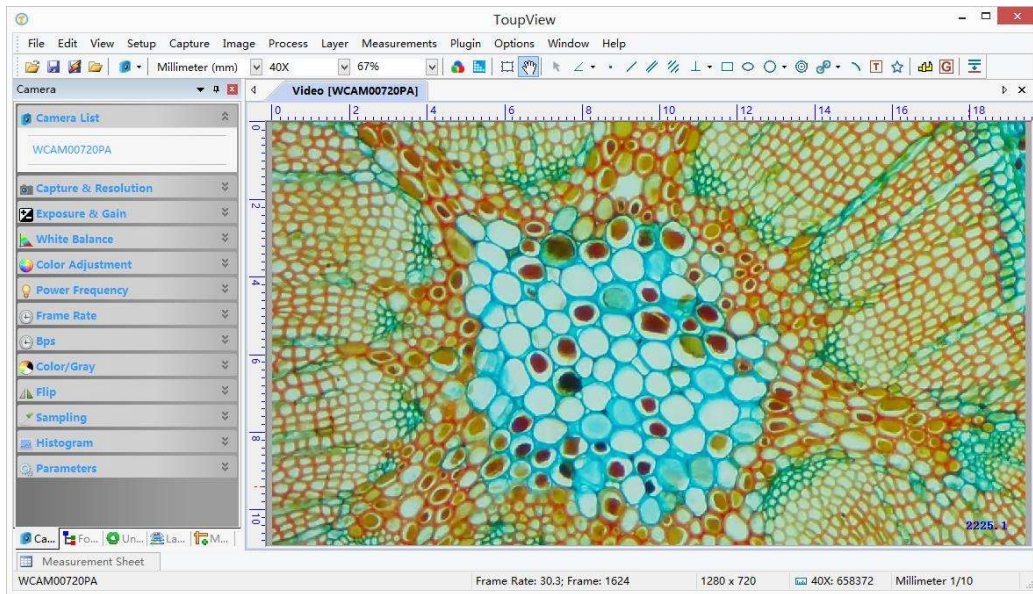
Operating System	Microsoft® Windows® XP / Vista / 7 / 8 (32 & 64 bit) IOS, Android
Device Requirements	WIFI Adapter with DHCP Enabled Ability to Play 0.3M MJPEG Format Video Smoothly

4 WCAM camera and Microscope

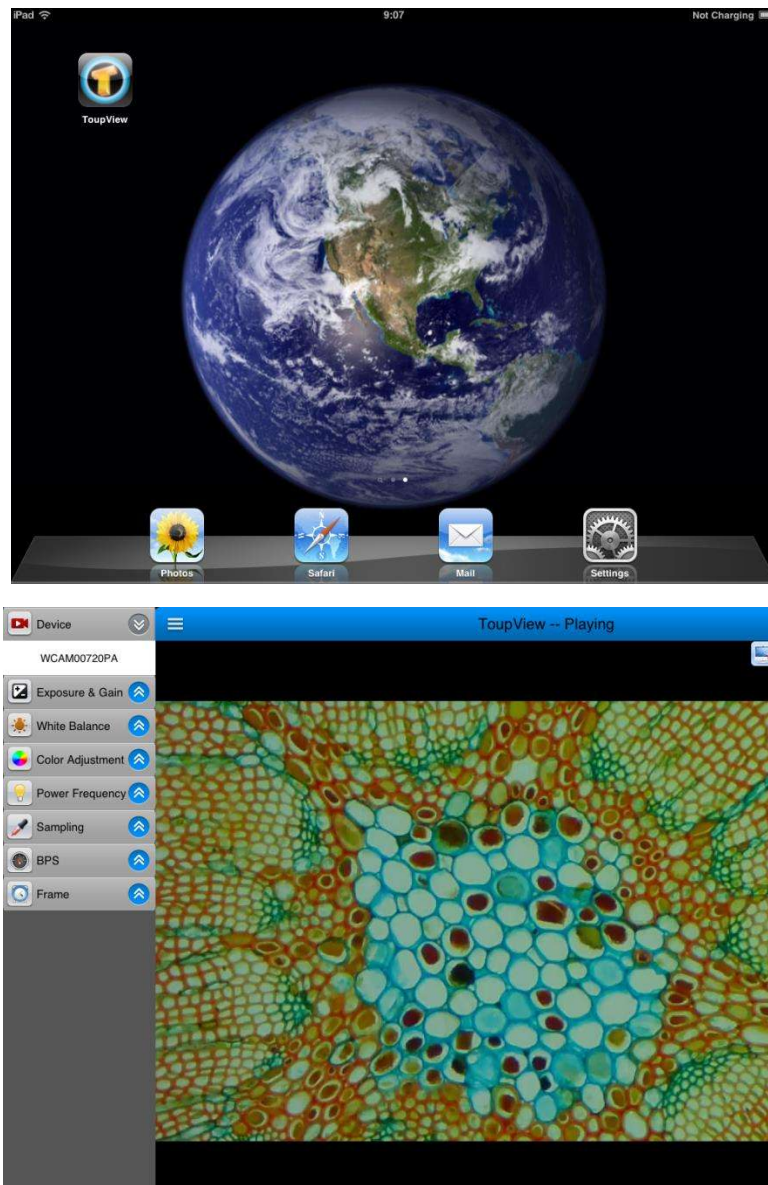


WCAM camera and microscope

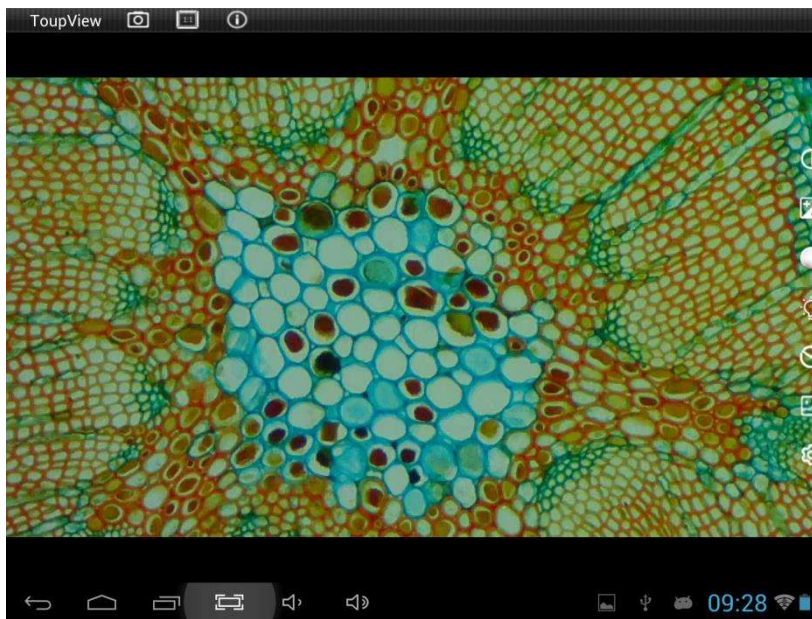
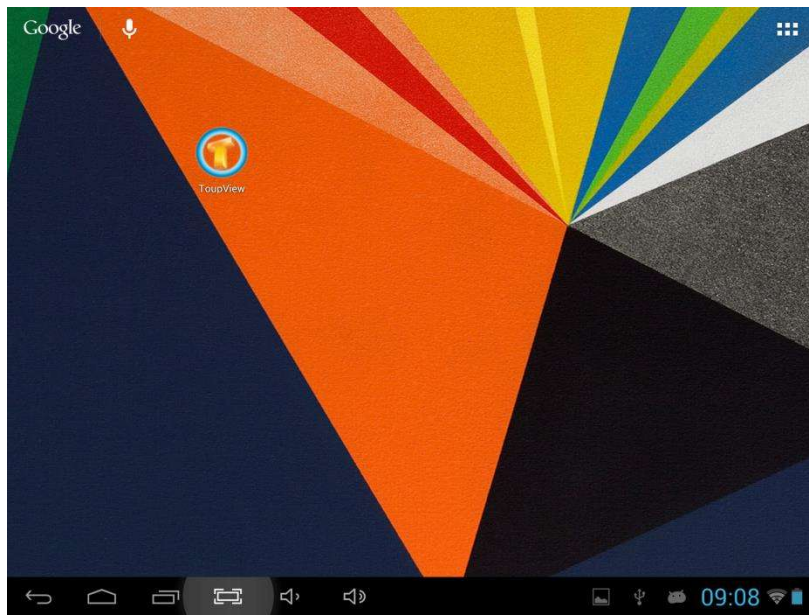
5 Application UI for Different OS



ToupView UI for Windows 8 operating system



UI of IOS and ToupView



UI of PAD (Android) and ToupView

6 Standard Camera Packaging List

A: Packing box Size & Weight: L:15.5cm W:15.5cm H:8.5cm (0.8~1.0Kg/ box)

(Carton Size & Weight : L:44cm W:33cm H:33cm / 0.048m³ (12~18Kg/ carton / 16 or 20 pcs))

B: Camera Body(C-Mount)

C: CD (Driver & Utilities Software, Ø12cm)

D: 1.5m USB2.0 cable for switching power adapter

E: 0.5A USB Integrated switching power adapter

F: Manual(For environmental protection, some models may use the PDF documents instead of printed papers)

7 Optional Accessories

F: Calibration kit: TS-M1(X=0.01mm/100Div.) ; TS-M2(X,Y=0.01mm/100Div.);

TS-M7(X=0.01mm/100Div, 0.10mm/100Div.)

G: Fixed lens Adapter: FMA037(0.37X), FMA050(0.50X), FMA075(0.75X) for Dia.23.2mm eyepiece tube use to extended the camera into microscope eyepiece camera

H: Adjustable lens Adapter: AMA037(0.37X), AMA050(0.50X), AMA075(0.75X) for Dia.23.2mm eyepiece tube use to extended the camera into microscope eyepiece camera

J: Adapter rings for stereo microscope : 108015(Dia.23.2mm to 30.0mm Ring), 108016(Dia.23.2mm to 30.5mm Ring)

K:Adapter rings for telescope : 108017(Dia.23.2mm to 31.75mm Ring)



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