

## uPiX UCV-Series USB2.0 CMOS Camera UVC Class Camera

Compact size



## Plug & Play - USB video class

### Features:

- USB2.0 easy connection- No external power required
- Excellence color reproduction
- Excellence image quality
- Optimized for High Frame Rate
- On board hardware image signal processor
- Directshow WDM driver
- And many other features

### Applications:

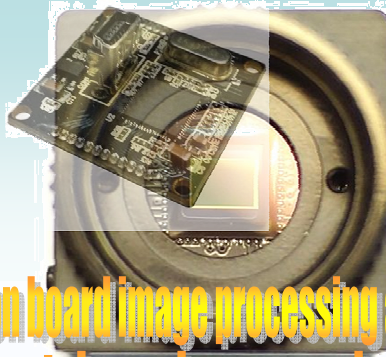
- Microscopy
- Machine Vision
- Medical Imaging
- Visual Inspection
- Security
- 2D Barcode & OCR Reading
- Other digital imaging applications



Bundled with Image  
Measurement Software  
VIS Plus v3.50 !



(\* Lens not Included)



**By combining the on board image processing and new imager technology uPix-UCV camera takes microscopy imaging to another level**

UCV Series consists of high-performance low cost digital cameras with ISP on board provides unique combinations of speed, resolution, image quality and sensitivity to satisfy the demands of today's imaging applications. UCV series camera is a UVC device, USB video device class (also USB video class or UVC), a USB device class that describes devices capable of streaming video.

- Various models with different imager characteristic and camera mode for different applications.
- Plug & Play – Driverless for Windows (XP & above) and Linux (2.6.26 & above).
- Simple & Easy one USB2.0 cable provides power, video and camera controls
- Unique optimized on board processing design for faster frame rate (high quality MJPEG)
- High sensitivity are achieved through the adoption of Aptina DigitalClarity® sensors and it's on board hardware ISP (Image Signal Processor) produces high dynamic range and sharper image besides increasing the frame rate by output high quality MJPEG at 5MP 15FPS on USB2.0, which can only realize by USB3.0.

**Each UCV model is designed with special feature and characteristic:**

**UCV5000**

**High Quality Image**

**High Dynamic Range**

**Fast Frame Rate**

**UCV500F**

**Auto Focus**

**UCV1000**

**Super Wide Dynamic Range**

**UCV2000**

**High Sensitivity**

**HDC3500**

**Direct VGA & USB2.0 Output**

**HDC3500**

**Direct-HDMI & USB2.0 Output**



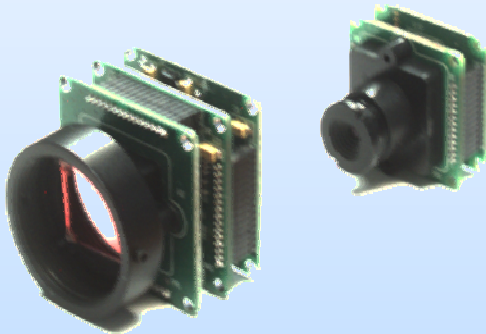
CMOS Sensor	UCV1000	UCV2000	UCV5000	UCV50AF	HDC3500	HDM3500		
Image Sensor	Aptina AR130	Aptina AR330	Aptina MT9P001	Aptina MT9P001	Aptina MT9D111	Aptina MT9D111		
Special Features	Wide Dynamic Range	High Sensitivity& Frame rate	High quality & Frame rate	Auto Focus	Multi Output with direct VGA, SD& USB	Multi Output with direct HDMI, SD & USB		
Sensor Size	1/3"	1/3"	1/2.5"	1/2.5"	1/3"	1/3"		
Effective pixel (MP)	1.0	2.00 (Full HD)	5.0	5.0	2.00	2.00		
Resolution	1280x720	1920x1080	2592x1944	2592x1944				
FPS at Full Resolution	30	30	15 (MJPEG)	15 (MJPEG)				
FPS at Sub-Sample			30 (XGA)					
Shutter	Rolling	Rolling	Half Global	Half Global	Rolling	Rolling		
Output Format	YUY2 / MJPEG	YUY2 / MJPEG	YUY2 / MJPEG		YUY2 / MJPEG	YUY2 / MJPEG		
Exposure Time (Freerun & Trigger)			0.07 - 207ms	YUY2 / MJPEG				
Sensor D/R Level			67.4dB					
Pixel Size (μm)			2.2x2.2					
Imaging Area (mm)			5.70x4.28					
Sub-Sampling Modes (Binning or Skipping)			2048x1536 1024x768 640x480					
ROI / Binning	30 x 30.5 x 32 mm							
Dynamic Range	ADC:10bits ; Output: 8bits per Channel							
USB Version	USB2.0							
Lens Mount	C / CS Mount							
Power Supply	<1.5 Watt	<1.5 Watt	<1.5 Watt	<1.5 Watt	<2.0 Watt	<2.0 Watt		
Operation Temperature	0° - 60° Celsius							
Operating Humidity	80 % non-condensing							



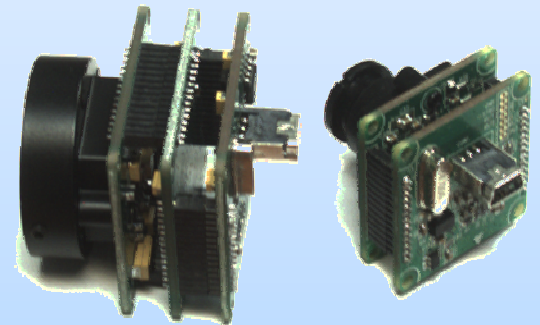
**Ultra Compact Size Design**  
with Mini USB (CMOS version: 30 x 30.5 x 32mm)

Super Light Weight : ~50g (CMOS)

## Board Level & Custom Cameras Available



Custom digital camera design based on CCD sensors from Sony or Sharp, CMOS sensors from Aptina or Omnivision. Please contact us.



## Camera Features

- High-speed USB 2.0 (480 Mbits/sec)
- On board image signal processor
- High quality hardware MJPEG fast compression for high FPS
- Simplified cabling – video/full camera control over a single USB cable
- DirectShow WDM Driver compatible
- Simply plug & play on Windows XP, Windows Vista, Windows 7 and Windows 8 (32 & 64bits) – Auto driver installation by Windows or Linux
- Controls over most of the camera parameters: Exposure, White Balance, Brightness, Contrast, Gamma, Sharpness, Saturation, Hue etc., thru the standard Windows UVC WDM control interface which can be access by any 3<sup>rd</sup> party software (supports directshow).

## Accessories

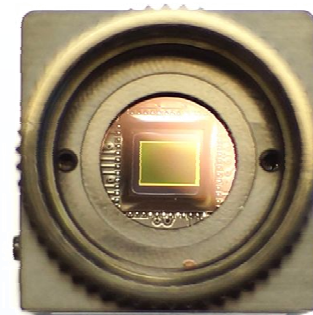
- Image/Video Viewer and Capture Application Software for Windows
- USB Cable (Mini USB 2.0 Type): 2.0 Or 3.0 Meter
- IR-Cut Filter Attached (Color Model Only) : 0.5mm Thickness
- Lens: (optional Hi-Res. C-Mount 8mm, 25mm and 50mm)
- Lighting : (optional LED ring light and USB Lighting Controller)



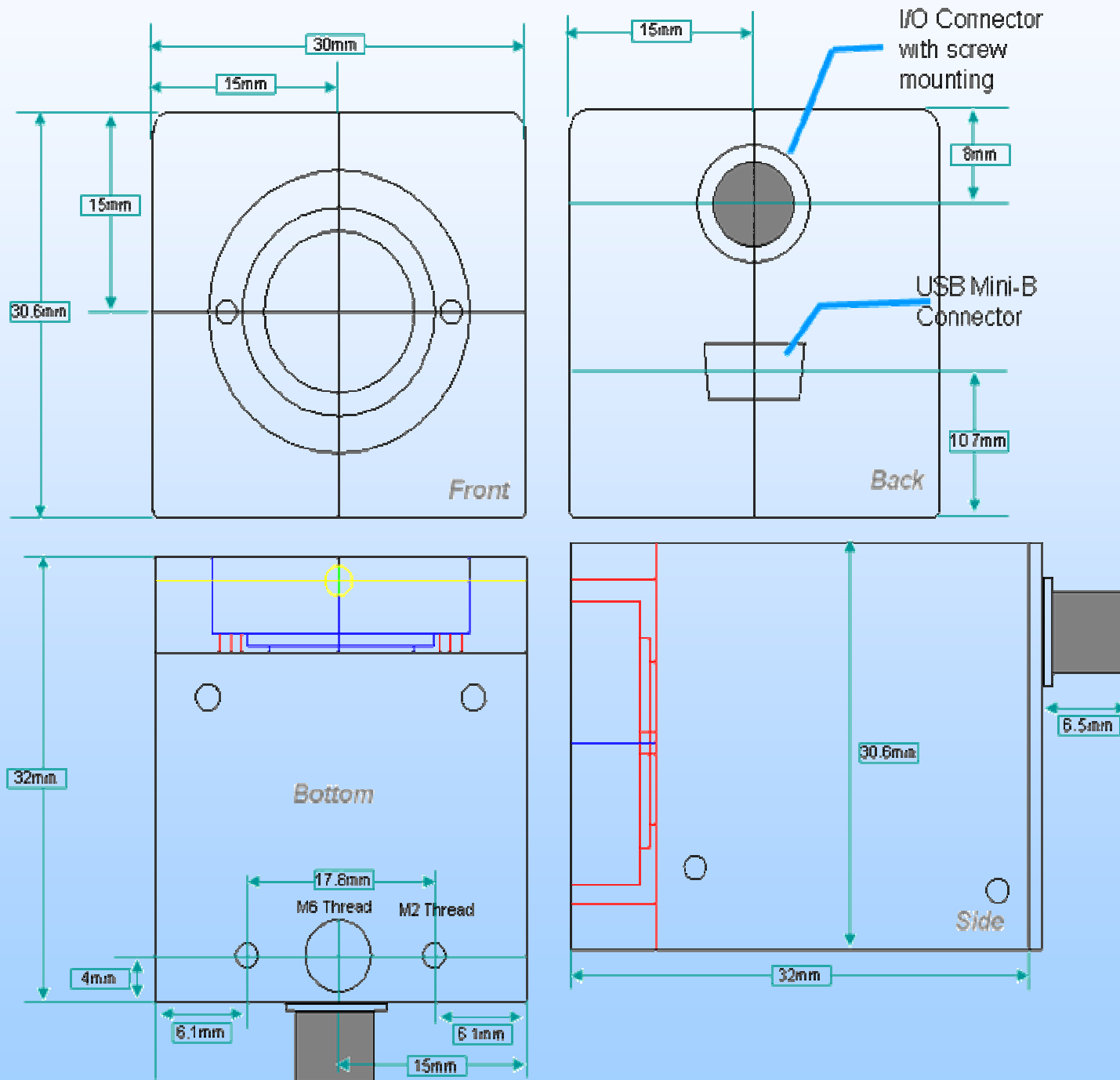
Optional Image  
Analysis &  
Measurement Software  
VIS PRO ver3.00

# Camera dimension

With I/O connector



## uPix Camera Series with CMOS sensor



# Camera Board dimension

With I/O connector

*uPix Camera Series  
with CMOS sensor*

