



High Sensitivity Microscope Camera  
with Advanced Software  
3DCxM20 - 20 Megapixels

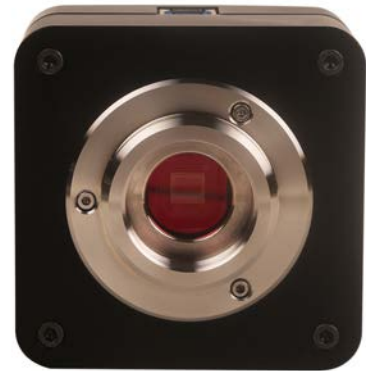
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## High Sensitivity Camera

This microscopy camera was designed with high sensitivity and ultra low noise in mind. The **back illuminated color sensor** allows light to be easily absorbed in the active layer on the sensor, resulting in greater quantum efficiency.

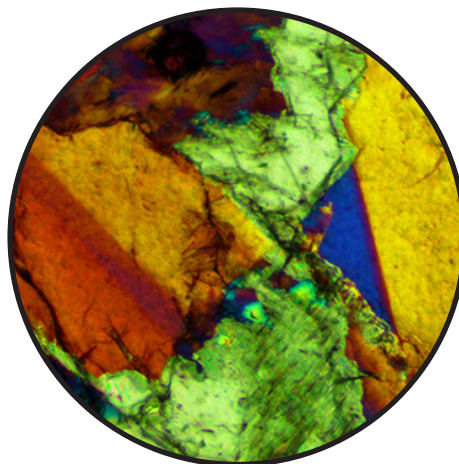
- 20 Megapixels
- High Sensitivity
- Low Noise
- USB 3.0 Fast Output



**C. Elegans**

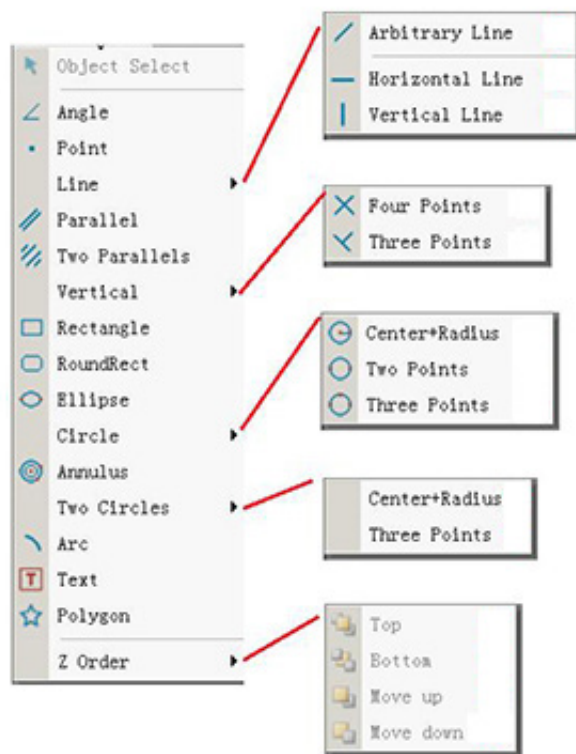
## Applications

- Low Light
- Brightfield Biological
- Darkfield
- Phase Contrast
- Reflective Samples
- Industrial Samples
- Documentation



**Polarization**

## Measurement Options



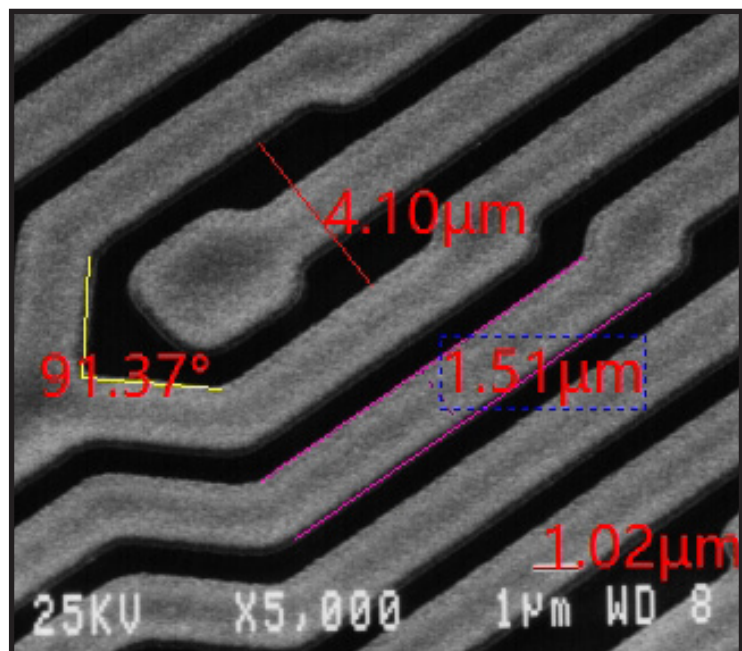
Choose from a large variety of measurement options and tools:

- Angle (3 or 4 points)
- Line
- Parallel
- Two Parallels
- Vertical (3 or 4 points)
- Rectangle
- Ellipse
- Circle
- Annulus
- Arc

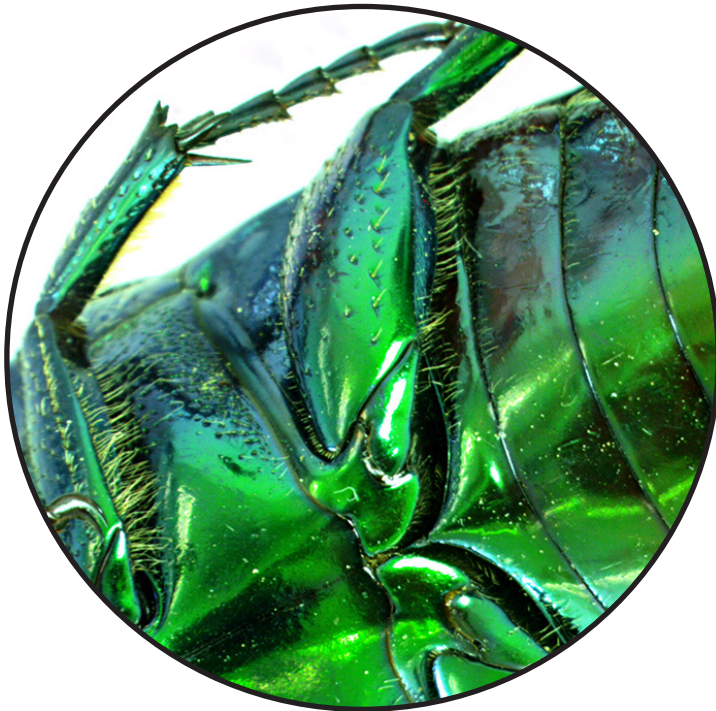
## Calibration

Accurate calibration should be performed on each objective lens with a stage micrometer. If using a stereo microscope click stops are the only way to make accurate, repeatable measurements. Available calibration measurement options include:

- Inches (in)
- Meters (m)
- Centimeters (cm)
- Millimeters (mm)
- Microns ( $\mu\text{m}$ )
- Nanometers (nm)



## Extended Depth of Focus

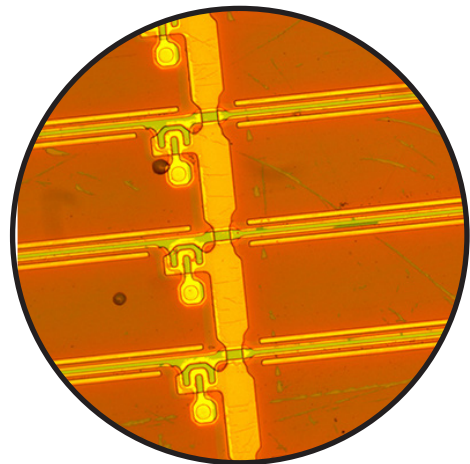


The extended depth of focus feature allows you to capture multiple images at different focal lengths and merge them into a single extended depth of focus image that appears to be three dimensional due to the increased details and crisp focus. This feature is especially useful when trying to capture images that are not flat and may have contours in them. These samples often need refocusing in order to capture the entire image under the microscope in clear focus.

## Basic Settings

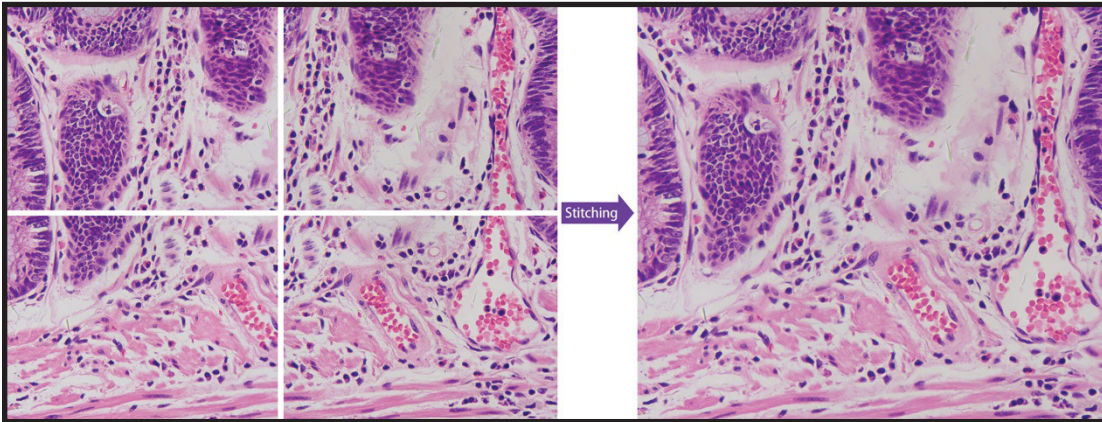
Some of the software's basic features include:

- Exposure, Gain, White Balance
- Saturation, Brightness, Contrast, Gamma
- Color Adjustment
- Power Frequency (anti-flicker)
- Frame Rate Setting
- Image Rotation
- Darkfield Correction
- Image Capture
- Video Capture



**Printed Circuit  
200x, Brightfield**

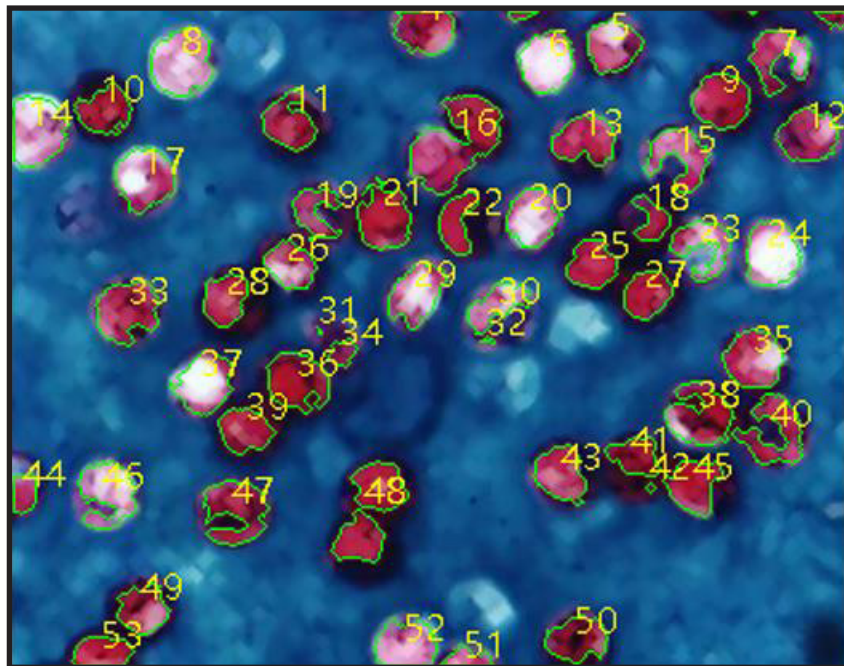
## Image Stitching



If your specimen falls outside the field of view, but you wish to capture all of the sample in a single image, the image stitching option is a simple solution.

## Segmentation for Color and Counting

The software allows for segmentation based on color. Once a sample has been segmented, a count can be performed. This count is a useful tool, but should always be used with a visual count as well since parts of a segment can overlap and only count as one segment. Take a look at number 48 shown below, this sample was counted as one segment, but in reality might be two depending on the test requirements. Therefore, a visual of the software count should always be performed prior to final reporting.



# 3DCxM20 Microscope Camera Specifications

Image Sensor	1" Sony Exmor Back-Illuminated IMX183(C) (13.06 x 8.76) CMOS, USB 3.0
Pixel Size	2.4 x 2.4µm
Resolution	5440 x 3648
Frame Rates	60fps @ 1824 x 1216 15fps @ 5440 x 3648
Binning	1x1, 2x2, 3x3
Exposure	0.1ms~15s
Output	USB 3.0
Spectral Range	380-650nm (with IR-filter)
Power	DC5V over PC USB Port.
USB Controls	White Balance, Auto White Balance
	Capture still images or motion video with software
	USB works with full use of software on PC or Laptop
Software Features	Image capture, still or motion video
	Adjustment of white balance, color, frame rate, exposure, gain, flip, sampling, bit depth, ROI, histogram, darkfield correction.
	Annotation
	Measurement and Calibration: angles, lines, diameter, polygon, etc.
Operating System for Software (USB)	Windows 7, 8, 10, 11 (32 & 64 bit), Linux, Mac OSX. NOTE: with Mac OSX software only provides basic image management, no measurement or extended features.
PC Requirements (USB)	CPU equal or greater than Intel Core2 2.8GHz
	Memory: 4GB or more
	USB3.0 Port
Operating Temp	-10~50°C
Storage Temp	-20~60°C
Operating Humidity	30-80%RH
Storage Humidity	10-60%RH
Size	68mm (2.68") W x 68mm (2.68") D x 40.5mm (1.59") H
Connection	C-Mount Threads

