

# Capture your sample precisely as it is.



## **ZEISS Axiocam 705 color**

Your fast 5 megapixel microscope camera for true color image acquisition in high resolution.

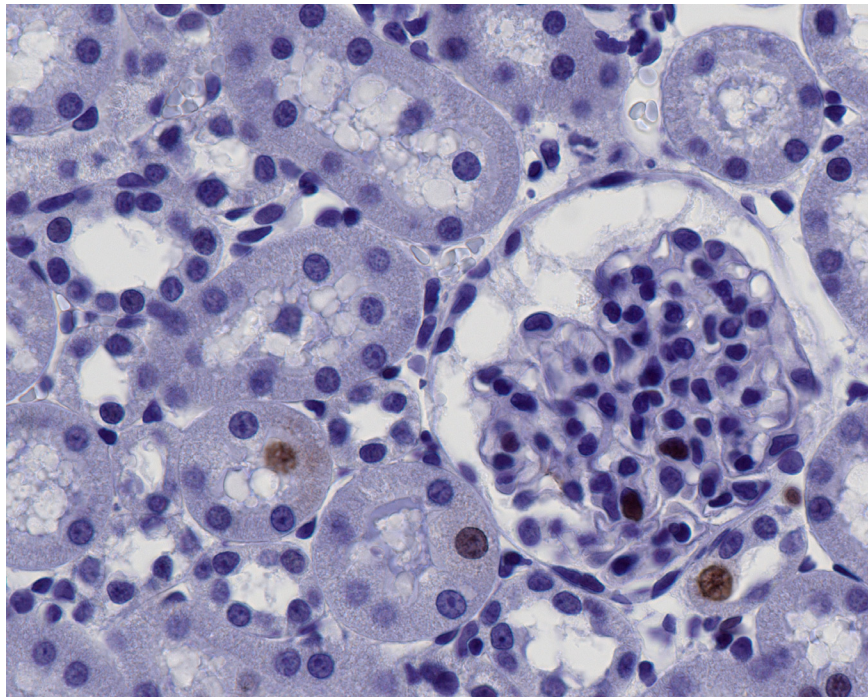
[zeiss.com/axiocam705-color](https://zeiss.com/axiocam705-color)



Seeing beyond

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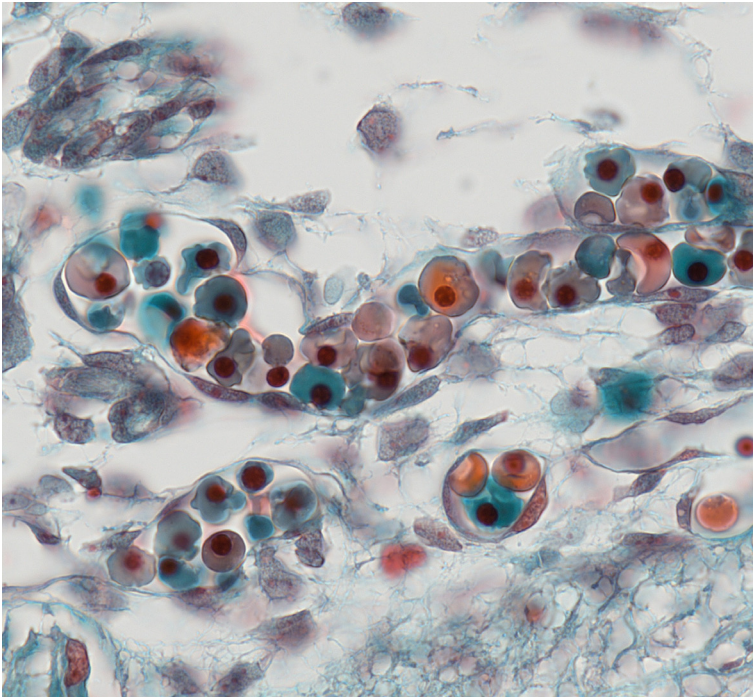


*Rat kidney section. Ki-67 staining.  
Imaged with ZEISS Plan-Apochromat 40x/1.4 oil immersion objective.*



Axiocam 705 color is your flexible 5 megapixel color camera for those demanding microscopy applications. Its sensor strikes the perfect balance of speed and resolution. Delivering more than 60 frames per second at full 5 megapixel resolution, this camera will capture even the most dynamic processes without compromising the image resolution. Subsampling or sub-region readout accelerates your acquisition speed to hundreds of frames per second. The camera's global shutter architecture makes sure your images always stay free of motion artefacts.

Axiocam 705 color comes complete with pixel binning, sensor sub-region readout, hardware triggering, uncompressed data transfer, perfect signal linearity and a wide range of exposure times. You can enhance the camera's excellent dynamic range even further via an exclusive high-dynamic range (HDR) imaging mode that lets you capture extreme intensity variations in a single image. The camera sensor is actively cooled to provide stable performance and low image noise. Use your Axiocam 705 color for a broad range of microscopy applications, from pathology and cytology to biomedical research and material sciences—and given its superb sensitivity and low noise, even for fluorescence imaging.



Rat embryonic tissue section. Crossmon's stain.  
Imaged with ZEISS Plan-Apochromat 63x/1.4 oil immersion objective.

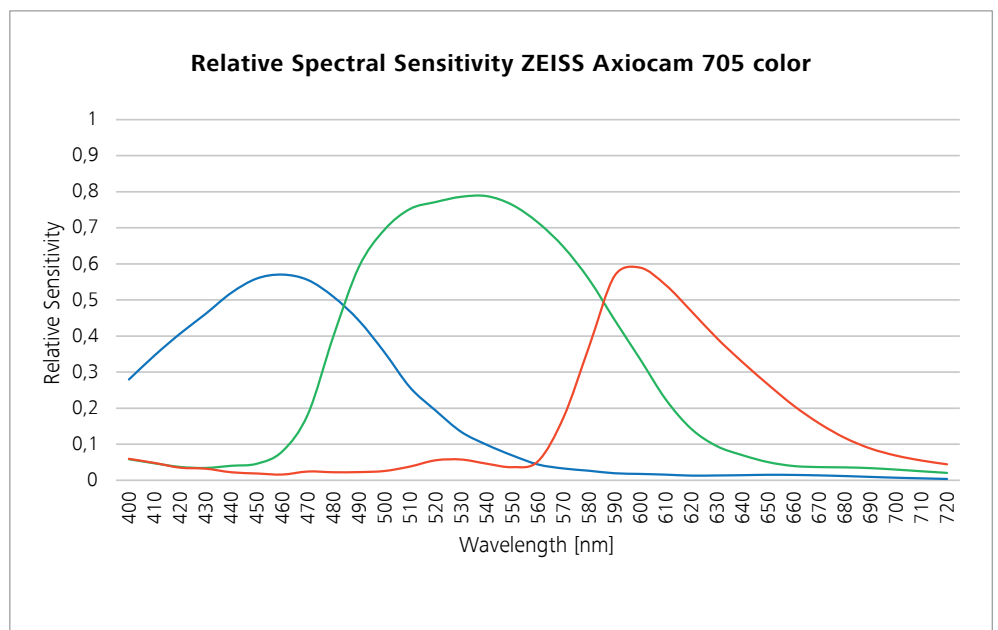
### Highlights

- 5-megapixel cooled color CMOS sensor
- 62 frames per second in full 5-megapixel resolution\*
- Best-in-class color rendition
- Color and monochrome imaging modes
- Exclusive noise inhibition technology for low-light imaging
- Dynamic range of 1:25,000 in high-dynamic range (HDR) mode
- Combined analogue and digital pixel binning
- Small 3.45  $\mu\text{m}$  pixels for high-resolution imaging
- Hardware triggering

### Recommended for:

- High-resolution microscopy
- High-framerate imaging
- Research
- Documentation
- Industrial applications
- Materials research
- Quality control
- Medical microscopy
- Pathology
- Cytology

\* specified framerate assumes a sufficiently performant computer and a short camera exposure time



# Technical Specifications

Technical Data			
Sensor type	Sony CMOS color image sensor, global shutter architecture		
Sensor size	Image diagonal 11.1 mm, equivalent to $\frac{2}{3}$ " sensor format (8.5 mm × 7.1 mm)		
Pixel count	2464 (H) × 2056 (V) = 5.07 megapixel		
Hardware sensor subsampling	2×2: 1232 (H) × 1028 (V) = 1.25 megapixel @ full field of view		
Pixel size	3.45 $\mu\text{m}$ × 3.45 $\mu\text{m}$		
Bit depth	14 bit, 12 bit or 8 bit		
Exposure time range	from 0.1 ms to 60 s		
Gain	1x, 2x, 4x, 8x, 16x		
Binning	1×1, 2×2, 3×3, 4×4, 5×5 (combined analog and digital binning)		
Dark current signal	< 0,5 e/pixel/s at sensor temperature 18 °C		
Frame rate	30 fps live image		
	H	× V (ROI)	Frame Rate (fps)
	2464	× 2056	60
	1920	× 1080	115
	1232	× 1028	173 (2×2 subsampling, full field of view)
	1024	× 1024	121
Dynamic range	Read Noise (gain)	Full Well	Dynamic Range
	2.20 e (1×)	11,000 e	1:5,000
	1.74 e (2×)	5,000 e	1:3,100
	1.48 e (4×)	2,700 e	1:1,800
	1.29 e (8×)	1,300 e	1:1,300
High dynamic range (HDR) mode	1.15 e (16×)	690 e	1:600
	Extended dynamic range 1:25.000		
Cooling system	Active thermoelectric cooling, regulated sensor temperature 18 °C		
Spectral sensitivity	Approx. 400 nm – 720 nm, anti-reflection coated infrared (IR) filter		
Interfaces	USB 3.0 (data & power) and USB 2.0 (power only)		
Trigger ports	Trigger-in, trigger-out, status readout		
Power supply	From PC through USB connections, max. power consumption: 7 W		
Operating system	Windows 10 Pro / Ultimate		
Software	ZEN 3.1 (blue edition) or newer, ZEN core 2.7 or newer		
Image enhancement functions	Denoise, unsharp mask, shading correction, dark current compensation, blemish removal		
Automatic features	Automatic exposure time optimization		
Optical/mechanical interface	C-Mount		
Dimensions and weight	10.8 cm × 7.8 cm × 4.3 cm (2.3" × 3.2" × 1.7"), 580 g		
Order number	426560-9050-000		



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