

Image large fields of view efficiently



ZEISS Axiocam 807 color

Your Fast, 7 Megapixel Microscope Camera for True Color Imaging of Large Fields of View

zeiss.com/axiocam807-color

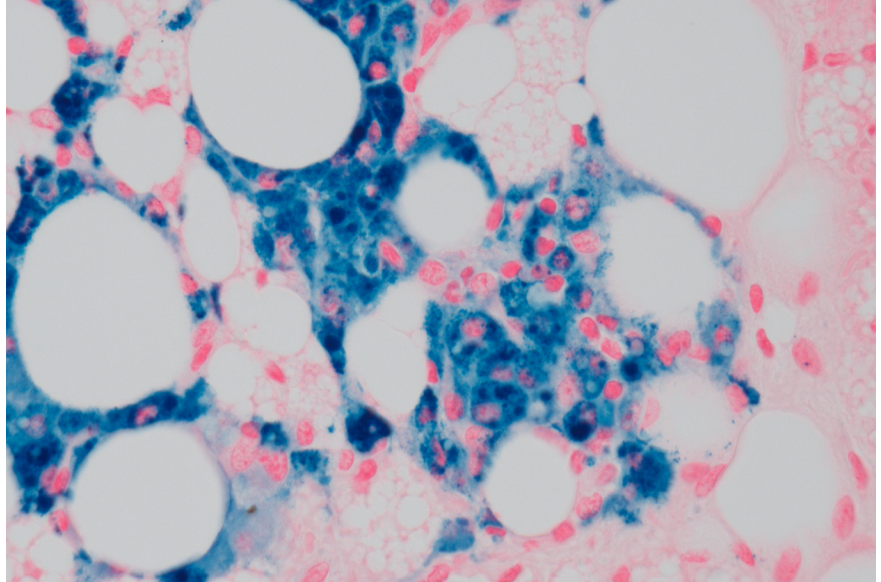


Seeing beyond

ZEISS Axiocam 807 color

Your Fast, 7 Megapixel Microscope Camera for True Color Imaging of Large Fields of View

The ZEISS Axiocam 807 color microscope camera combines a high pixel count and a large, state-of-the-art CMOS sensor for the highest frame rates. The high quantum efficiency of up to 78% and the optimized electronics with low readout noise allow recordings of 73 frames per second in full sensor resolution with high signal-to-noise ratios. By using a sub-array of the sensor, the frame rate can be increased even further. In combination with its global shutter architecture, even the fastest processes can be imaged without distortions.



Prussian blue staining for hemosiderin (iron deposition) in brown adipose tissue of mice. Sample courtesy: A. Feuchtinger, Helmholtz Zentrum München, Germany

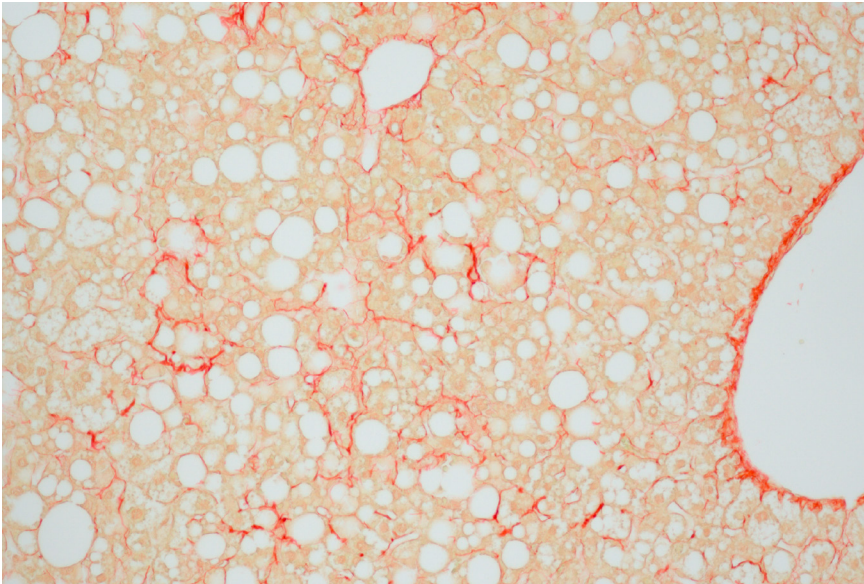


When imaging large sample areas, the sensor with 17.6 mm diagonal and 7 megapixels captures large fields of view with more details without compromising the resolution. Tile scans of your sample are completed faster by reducing the number of tiles required. And when acquiring a times series or high-magnification region of interest, the large field of view can also capture surrounding environment to add context to the experiment.

The active cooling of the camera ensures stable sensor conditions for reliable results directly after starting the microscope. And with its triggering capabilities, ZEISS Axiocam 807 supports even complex setups with many accessories. With its seamless integration in ZEISS ZEN software, ZEISS Axiocam 807 color can be used for a broad range of applications ranging from pathology, cytology to materials research or geoscience.



ZEISS Axiocam 807 color features a very fast dual-USB3.0 interface providing a robust, standardized interface without the need for proprietary cables or interface cards. The excellent dynamic range of the camera can be further improved by using the low noise mode to capture both the brightest and dimmest parts of your sample in one image.



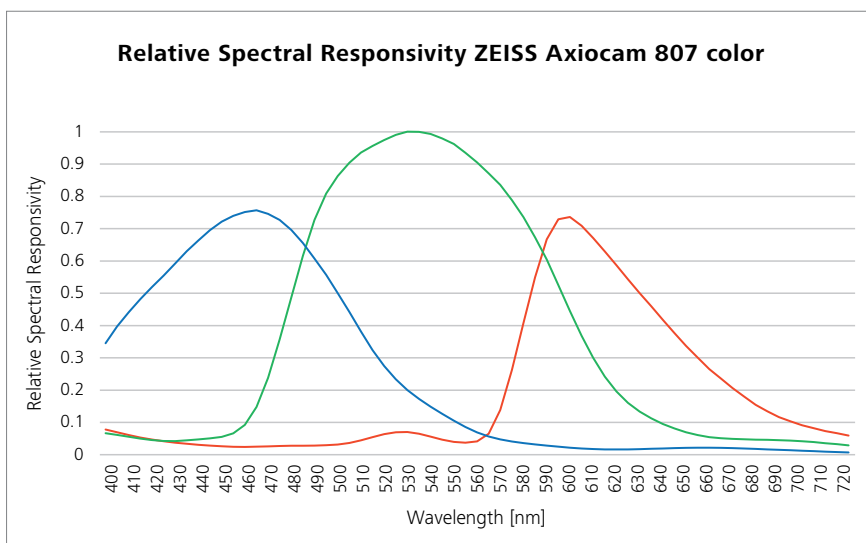
NASH mouse liver with connective collagenous tissue stained in red. Sample courtesy: A. Feuchtinger, Helmholtz Zentrum München, Germany

Recommended for:

- Color imaging applications in a broad range of fields from life sciences to materials research and geoscience
- Co-observation with fast high resolution live image in high quality color with a very large field of view
- Imaging of large pathology, cytology, and materials samples
- Fast tile scanning applications
- Samples with a broad range of intensities and exposure times

Simpler. More intelligent. More integrated.

- 7 megapixel CMOS sensor with 17.6 mm image diagonal
- 73 full-resolution color images per second
- 30 fps live image in ZEN imaging software
- 4.5 micron pixels for optimal resolution
- Fast global shutter architecture for distortion-free images
- Best-in-class color rendition
- Color and monochrome imaging modes
- Reproducible image quality due to active thermal stabilization of the sensor
- Robust, very fast and easy-to-use dual USB 3.0 connection
- Low Noise mode with improved sensitivity and dynamic range
- Hardware triggering



Technical Data and Conformity

Feature	Value
Sensor Type	Sony CMOS image color sensor, global shutter architecture
Sensor Size	Image Diagonal 17.6 mm, equivalent to 1.1" Sensor Format Image Field (14.5 mm × 9.9 mm)
Sensor Pixel Count	3216 (H) × 2208 (V) = 7.1 Megapixel
HW Subsampling 2x	1608 (H) × 1104 (V) = 1.8 Megapixel, high speed full view mode
Pixel Size	4.5 μm × 4.5 μm
Bit Depth	14 bit/12 bit or 8 bit/pixel
Exposure Range	0.1 ms up 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	0.3e ⁻ /p/s at 25 °C sensor temperature
HDR	Reduced readout noise at Gain 1x for best combination of sensitivity and high intensity levels in one frame
Cooling System	Active cooling, regulated sensor temperature 25 °C
Spectral Sensitivity	Approx. 400 nm – 720 nm, IR filter (coated)
Interfaces	Dual USB 3.0
Trigger Port	Connector for trigger cable: Trigger-in, trigger-out, ready
Power Supply	By USB 3.0 connections, power consumption 7 W max.
Operation System	Win 10 ×64 Enterprise
Software	ZEN 3.6 (blue edition) and higher, ZEN core 3.5 and higher
Image Enhancement Functions	Denoising, sharpening, shading correction, dark current compensation
Automatic Feature	Optional automatic exposure time adaption
Optical Interface	C-Mount
Dimensions and Weight	10.8 cm × 7.8 cm × 6.1 cm / 580 g
Order Number	ZEISS Axiocam 807 color: 426560-9150-000

Frame Rate	FPS
Live Image	> 30
3216 × 2208	73
1602 × 1104	260 (2 × 2 subsampling)
1920 × 1080	145
1024 × 1024	151
512 × 512	282
1920 × 256	487
1920 × 128	506

Read Noise (gain)	Full Well Capacity	Dynamic Range
5.7 e ⁻ (1x)	25,000 e ⁻	4,420:1
< 4.6 e ⁻ (2x)	12,500 e ⁻	2,730:1
< 3.9 e ⁻ (4x)	6,250 e ⁻	1,610:1
< 3.4 e ⁻ (8x)	3,125 e ⁻	930:1
2.9 e ⁻ (2.9x)	1,560 e ⁻	530:1
4.0 e ⁻ (HDR mode)	25,000 e ⁻	6,230:1



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