

Capture your sample precisely as it is.



ZEISS Axiocam 712 color

Your all-round 12 megapixel microscope camera for true color acquisition of large specimen areas in high resolution.

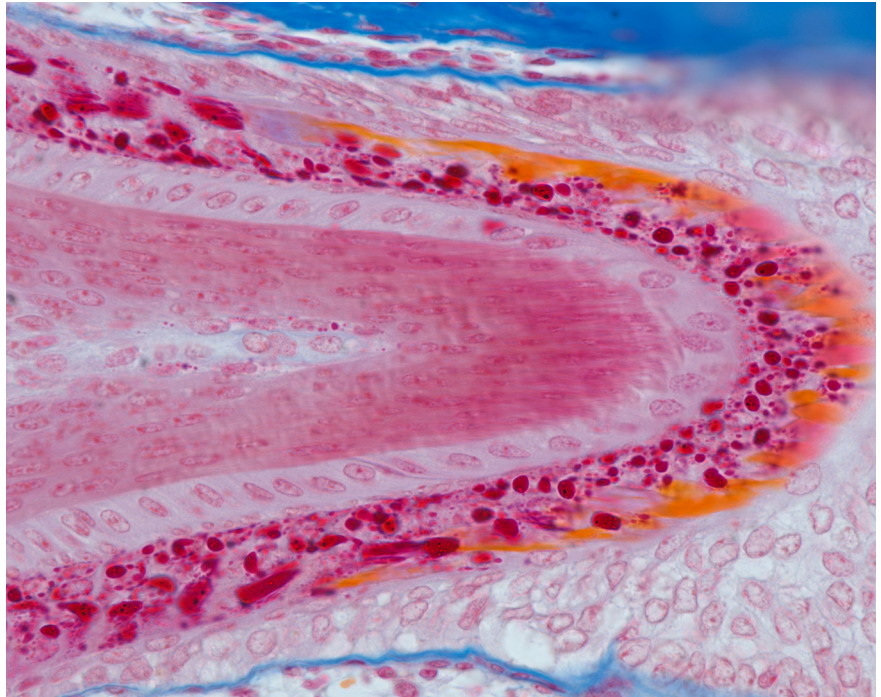
zeiss.com/axiocam712-color



Seeing beyond

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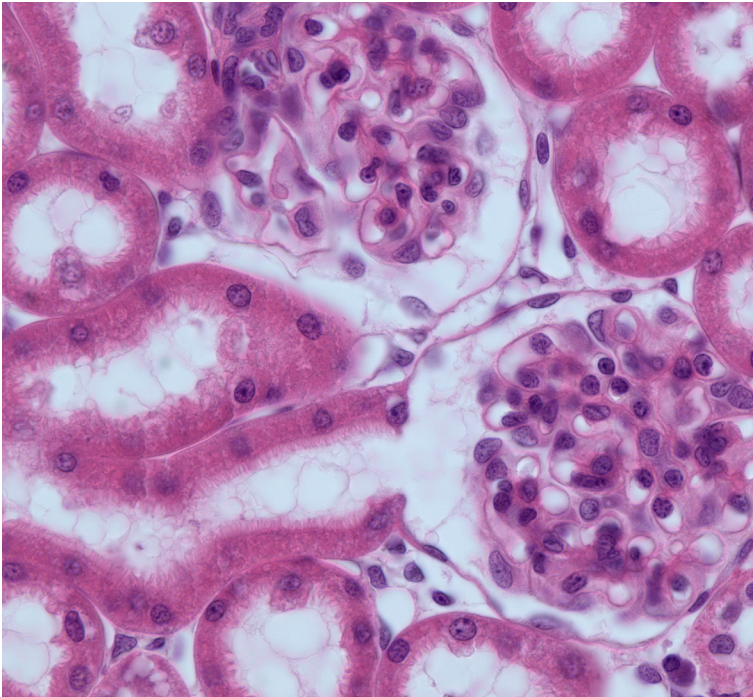
*Mouth region of a mouse embryo section. Azan trichrome staining.
Acquired with ZEISS Plan-Apochromat 63×/1.4 oil immersion objective.*



Your Axiocam 712 color combines a large image sensor, small pixel size, precise color rendition and fast imaging speed in one versatile and flexible color microscope camera. It features a 12 megapixel color CMOS sensor and delivers more than 20 frames per second with a large field of view. You can now acquire large specimen regions quickly and with uncompromised image quality. Global shutter architecture prevents motion artifacts, even when imaging your most dynamic specimens.

The large field of view reduces the number of tiles required to image largest samples, and so drastically

accelerates tiling experiments. Sub-region sensor readout will further accelerate time-lapse imaging speeds —up to hundreds of frames per second. Your Axiocam 712 color features active image sensor cooling to deliver low image noise, stable camera operation and reproducible results over long periods of time. Pixel binning, sensor sub-region readout, low readout noise, a wide range of exposure times and a unique high-dynamic range (HDR) mode are just some of the many scientific camera features that let Axiocam 712 color take on any imaging challenge. It's a true all-rounder among color microscope cameras.



Rat kidney section. HE staining.
 Acquired with ZEISS Plan-Apochromat 63x/1.4 oil immersion objective.

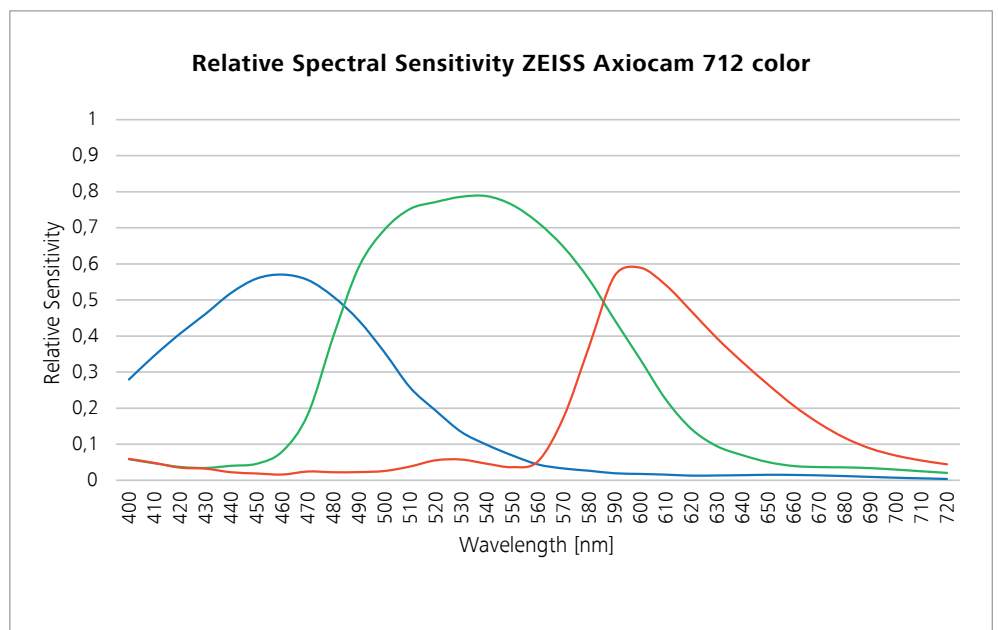
Highlights

- 12-megapixel cooled color CMOS sensor
- Large sensor for extended field of view
- Best-in-class color rendition
- Color and monochrome imaging modes
- 20 frames per second in full 12-megapixel resolution*
- 30 frames per second of the entire field of view in live image mode*
- Exclusive noise inhibition technology for low-light imaging
- Dynamic range of 1:25,000 in high-dynamic range (HDR) mode

Recommended for:

- High-resolution microscopy
- Large region imaging
- Medical imaging
- Material science research
- Macroscopic imaging
- Pathology

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



Technical Specifications

Technical Data			
Sensor type	Sony CMOS image color sensor, global shutter architecture		
Sensor size	Image diagonal 17.5 mm, equivalent to 1.1" sensor format (14.1 mm × 10.4 mm)		
Pixel count	4096 (H) × 3008 (V) = 12 megapixel		
Hardware sensor subsampling	2048 (H) × 1504 (V) = 3 megapixel @ full field of view		
Pixel size	3.45 μm × 3.45 μm		
Bit depth	14 bit, 12 bit or 8 bit		
Exposure 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)	
	4096 × 3008	23	
	2048 × 1504	46 (2×2 subsampling, full field of view)	
	1920 × 1080	63	
	1024 × 1024	66	
	1920 × 256	241	
	1920 × 128	431	
Dynamic range	Read Noise (gain)	Full Well	Dynamic Range
	2.20 e (1x)	11,000 e	1:5,000
	1.74 e (2x)	5,000 e	1:3,100
	1.48 e (4x)	2,700 e	1:1,800
	1.29 e (8x)	1,300 e	1:1,300
	1.15 e (16x)	690 e	1:600
High dynamic range (HDR) mode	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		
Operation 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	426560-9080-000		



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