

# OLYMPUS

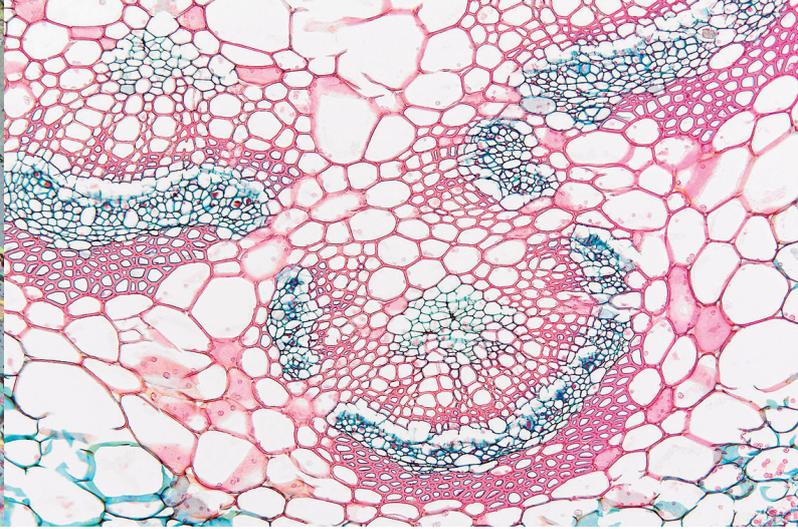
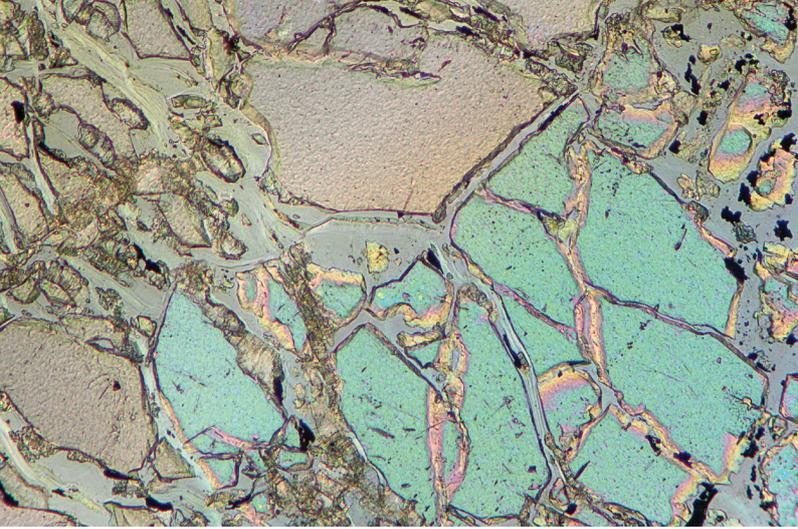
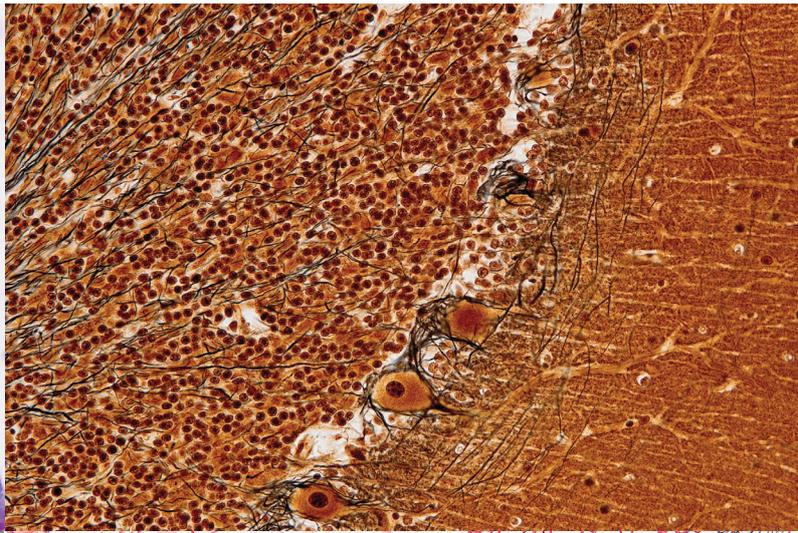
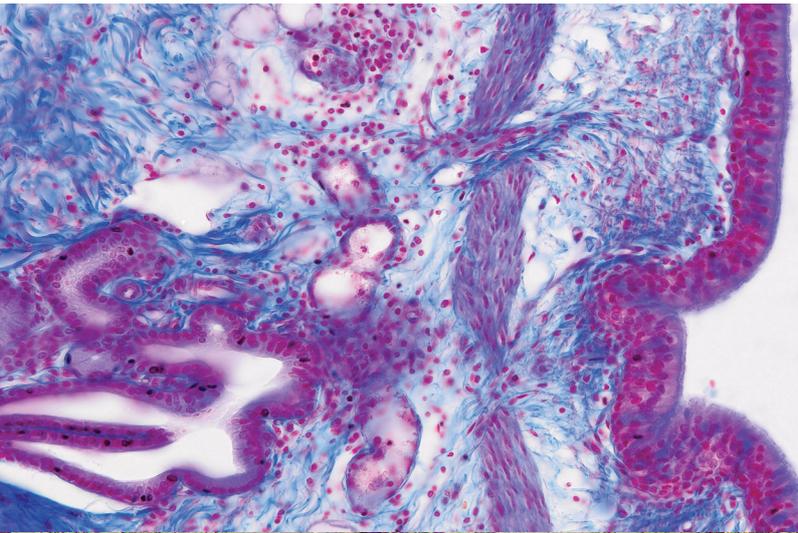
Your Vision, Our Future

Microscope Digital Camera

## UC90

One Camera for Brightfield and 4K UHD Imaging

**NEW**



Not for clinical diagnostic use.

# A Real All-Rounder

See More.

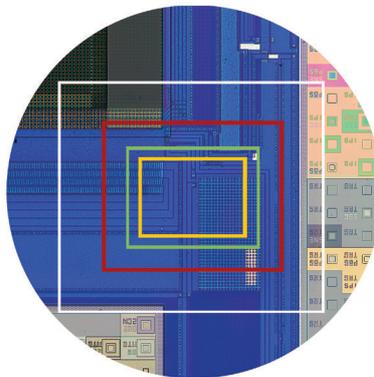


The 9-megapixel UC90 camera captures it all: Brightfield images of superior quality, and up to 4K UHD imaging. Whatever your imaging needs are, expect no less than exceptional results in image quality, sensitivity, dynamic range, and color fidelity. Working with the UC90 is easy. Simply switch between different observation modes with just a single click. The large field of view makes it easier than ever before to capture samples with full resolution and to take full advantage of your Olympus optics. In combination with its high frame rate, the UC90 offers fluid sample navigation and focusing, making it effortless and convenient to locate regions of interest right on your screen. See all the details and not the noise with OSIA, the exclusive Olympus noise reduction technology. Excellent microscope imaging has never been as easy and versatile as with the UC90.

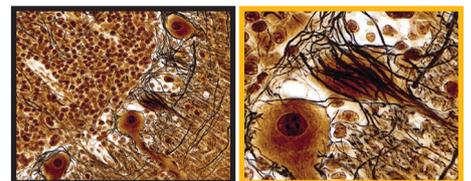
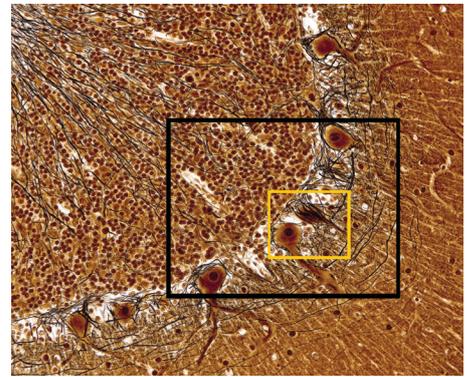
## Discover Your Sample.

### Maximum Image Information

The 1-inch high-definition CCD sensor of the UC90 covers almost the full C-mount image area. This translates into an unparalleled large field of view, which allows you to capture more of your sample with each single shot while exploiting the full resolution of your objective lenses. Equipped with a high-performance 9-megapixel CCD the UC90 captures vivid images with high resolution and exceptional clarity. Award-winning color reproduction technology working in real time and advanced integrated raw data shading correction offer additional benefits to get every detail out of the images. Unwanted color casts are already automatically removed during live image acquisition via the integrated automatic white balance (AWB). The results are images with always perfectly balanced colors whatever the illumination conditions.



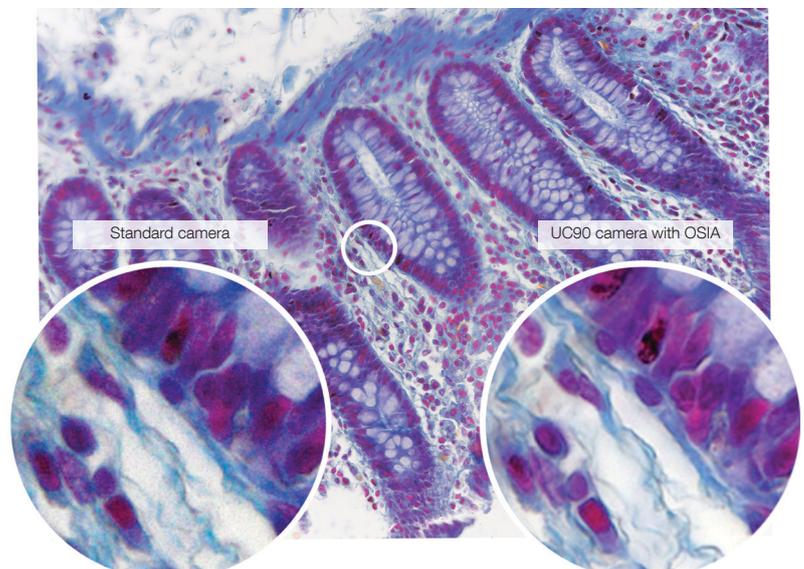
Comparison of sensor sizes: White: 1 inch sensor (UC90); red: 2/3 inch sensor; green: 1/1.8 inch sensor; and orange: 1/2.5 inch sensor. The 1 inch sensor of the UC90 covers nearly the same field of view that can be seen through the oculars. There's no need to switch to a lower magnification and to sacrifice resolution to capture the sample as you see it in the microscope. (Specimen: CCD sensor)



The noise-free high-resolution images of the 9-megapixel sensor allow you to zoom deep into your sample, revealing all of its structures. (Specimen: Brain section)

### Noise-Free Images

The UC90 features OSIA (Olympus Smart Image Averaging), the exclusive Olympus active noise reduction technology. Using OSIA you can easily acquire clean and virtually noise-free images. OSIA works in live mode without reducing the frame rate or introducing artifacts, and without the need of active sensor cooling. This powerful technology helps to always capture all the details of your sample regardless of imaging conditions and makes the camera suitable for a broad array of applications that traditionally were the domain of cooled cameras. In combination with the camera's 14-bit depth, OSIA allows you to use the UC90's extraordinary dynamic range to its full potential.



See the details, not the noise. The active noise reduction of the UC90 makes it possible to capture details of your sample that would otherwise be blurred by noise. (Specimen: Human colon)

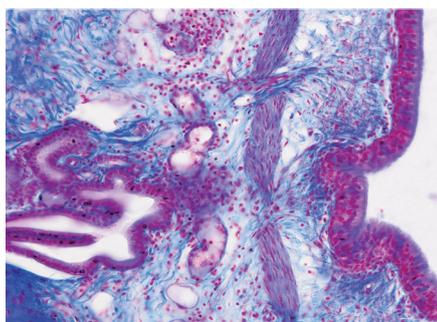
## One Camera, Multiple Applications.

### One Camera captures it all

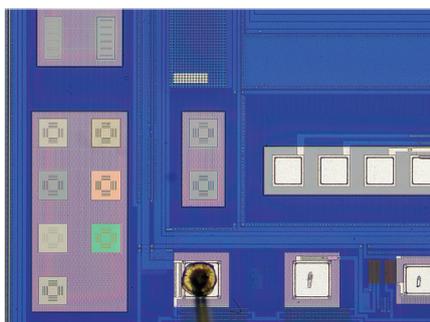
The various acquisition modes of the UC90 offer full flexibility. With just one click you can switch between the different modes. Thanks to the Quad-Tap Readout technology used in the UC90, the camera achieves fast frame rates of up to 19.5 frames per second (fps) at full resolution. Various binning modes give you the ability to increase the frame rates even further, making observation and focusing fast and easy with up to 57 fps in 4x binning allowing the capturing of fast processes.

### 4K UHD: Ready for the Digital Future

The UC90 offers additional Full HD and 4K UHD modes for both images and video capture. Make use of every pixel of modern 4K UHD monitors and video projectors to evaluate and present your sample in full detail without the otherwise necessary downscaling on standard lower-resolution displays and devices.



Brightfield image of a lung section captured in color mode.



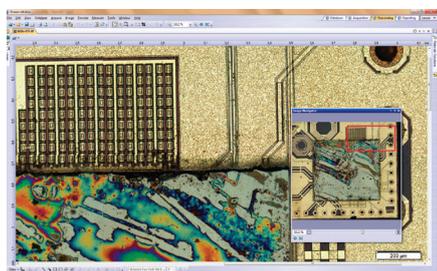
Brightfield image of a CCD sensor captured in color mode.



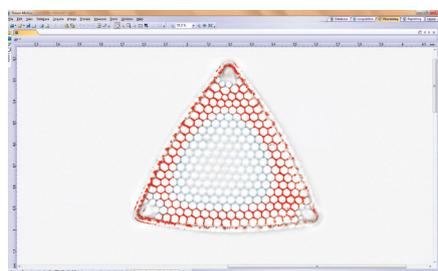
## Work Quickly and Conveniently.

### Fast Live, Focus Peaking, and Faithful Panoramic Imaging

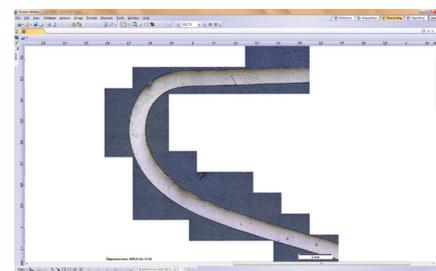
Dedicated new features make working with the UC90 even more convenient. The Fast Live function keeps the frame rate up whatever the exposure. This makes fluid sample navigation and precise focusing easier than ever before, even in low light levels. Two user-selectable and customizable Focus Peaking modes directly highlight all focused areas in the live image, making it really simple to acquire images with best possible sharpness and quality. With automatic and manual image stitching and thanks to the large field of view, images from multiple sample regions can be quickly combined into a single high-quality brightfield panoramic image.



The Image Navigator function gives you an overview of the acquired image and helps to switch between different areas of interest.



Directly see what's in focus with the easy-to-use Focus Peaking function.



Capture and document large samples with the powerful automatic or manual image stitching function.

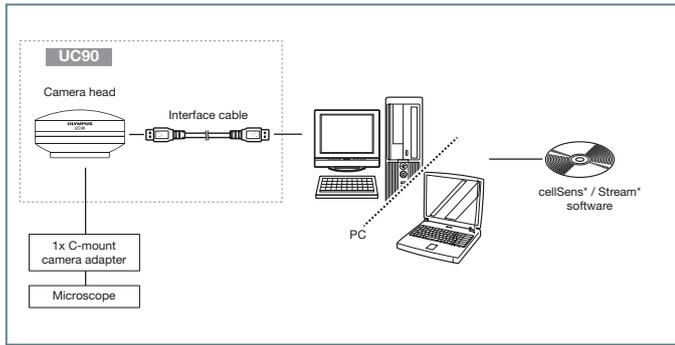
### Efficient and Intuitive Operation

The UC90 is fully operated using the OLYMPUS cellSens and OLYMPUS Stream imaging software, making it quick and easy to reach the camera's full capabilities while always ensuring intuitive operation – from image acquisition to image processing, report generation, data export, and the global networking of images and reports.

### Easy Installation and Fast Data Transfer

The UC90 features a state-of-the-art USB 3.0 interface for best possible performance, fast image transfer, and easy connection to compatible computers with just a single cable.

## UC90 PC System Configuration Diagram



\* cellSens and Stream are not for clinical diagnostic use.

## UC90 Specifications

<b>Image Sensor</b>	Color CCD
<b>Sensor Type</b>	SONY ICX814AQQ
<b>Sensor Size</b>	1 inch (14.6 mm x 12.8 mm)
<b>Resolution (max.)</b>	3384 x 2708 pixels (5:4)
	3840 x 2160 pixels (4K Ultra HD 16:9) 1920 x 1080 pixels (Full HD 16:9)
<b>Pixel Size</b>	3.69 x 3.69 µm
<b>Binning</b>	2x (monochrome only), 4x (monochrome only)
<b>A/D Converter (Bit Depth)</b>	14-bit
<b>Exposure Time</b>	From 100 µs to 10 s
<b>Live Frame Rates</b>	Up to 19.5 fps at 3384 x 2708 pixels (5:4)
	Up to 35 fps at 1688 x 1354 pixels (5:4)
	Up to 57 fps at 840 x 674 pixels (5:4)
	Up to 26 fps at 3840 x 2160 pixels (4K Ultra HD 16:9) Up to 26 fps at 1920 x 1080 pixels (Full HD 16:9) Up to 44 fps at 1688 x 952 pixels (16:9) Up to 61 fps at 840 x 742 pixels (16:9)
<b>Cooling System</b>	Passively cooled
<b>External Trigger</b>	n/a
<b>Data Transfer</b>	USB 3.0
<b>Color Profiles</b>	Olympus real-time color profiles
<b>Partial Readout</b>	In software
<b>Operating System</b>	AWB - Automatic White Balance (automatic correction of color casts)
	USB 3.0 interface (fast frame rate at full resolution)
	4K UHD and Full HD support, 16:9 aspect ratio
	Focus Peaking (visual assistant for manual focus)
<b>Dimensions</b>	OSIA - Olympus Smart Image Averaging (active noise reduction)
	Fast Live (fast live image in low light conditions)
<b>Weight</b>	Windows 8/8.1 64-bit
	Windows 7 64-bit
<b>Mount</b>	86 mm (Ø) x 47 mm (H)
	approx. 530 g
	C-mount

[www.olympus-lifescience.com](http://www.olympus-lifescience.com)

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- OLYMPUS CORPORATION is FM553994/ISO9001 certified.
- OLYMPUS CORPORATION is MD540624/ISO13485 certified.
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- Images on the PC monitors are simulated.
- Specifications and appearances are subject to change without any notice or obligation on the part of the manufacturer.