

## A new way to visualize fluorescence imaging for any microscope

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Hamamatsu Photonics Europe

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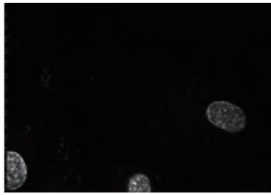


Hamamatsu Photonics has released a new multi-channel confocal unit called MAICO<sup>®</sup>. This MEMS\* confocal unit can easily be attached to any microscope to achieve confocal fluorescence microscopy. This plug and play, compact unit is an affordable and complementary option to high-end confocal microscopes. It is everything you may expect from a classical confocal set-up including a pinhole, filters, a laser source and a detector, yet its compact size is designed to be used right from a researcher's lab desk.

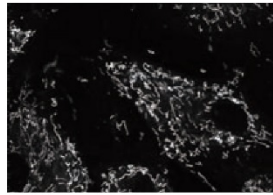
MAICO<sup>®</sup> has a unique subunit structure that contains all the necessary components for each fluorescence band excitation and detection in a single unit. It supports single channel observation as well as up to four multi-channel (405 nm, 488 nm, 561 nm, and 638 nm) simultaneous excitation and observation.

Vital for the research of biological systems, confocal microscopes are not always accessible to laboratories. Their high-resolving power and their ability to capture images in the depth direction are essential to accurately observe samples. MAICO<sup>®</sup> was specifically developed for this purpose, to offer an affordable alternative without compromising on high-quality features.

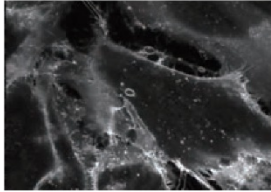
It offers high speed, high sensitivity and a compact design that is capable of simultaneous multiband observation without bleed-through. As MAICO<sup>®</sup> utilizes our most sensitive detectors and signal processing know-how, we were able to successfully reduce the laser power to a Class 3R. Therefore, it can be used in a normal laboratory environment, without the need for a laser-controlled area.



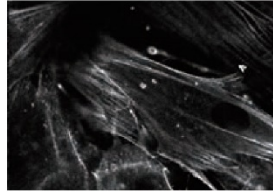
Wavelength 405 nm: Cell nucleus  
(HCS NuclearMask)



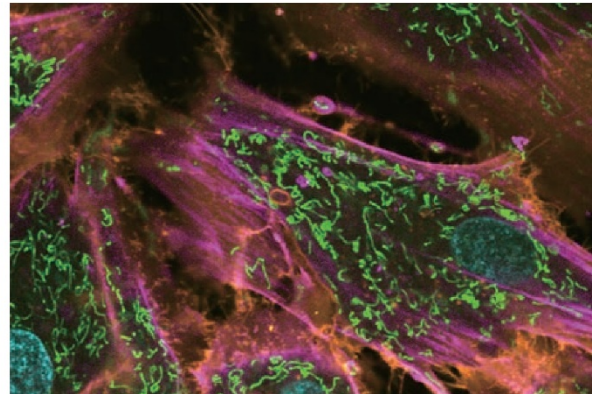
Wavelength 488 nm: Mitochondria  
(MitoTracker)



Wavelength 561 nm: Cell membrane  
(CellMask)



Wavelength 638 nm: Actin (SiR-Actin)



Superimposed four-color fluorescence image. (Image is shown in pseudo-color.)

Confocal imaging of cell nucleus, mitochondria, cell membrane, and actin filament with different dyes and channels. Sample: H9c2 cell line, objective lens: 60x, number of scan lines: 960, laser wavelength: 405 nm, 488 nm, 561 nm, 638 nm.

For further information, please [view the brochure](#) or [contact us](#).

\*Micro-Electro-Mechanical Systems

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### About Hamamatsu Photonics

We offer a highly sophisticated product range of sources, detectors and imaging products designed to cover the entire optical spectrum. Present since 1953 and driven by Japanese excellence, our capabilities are rooted in photonics technology including optics, electronics, mechanics and software. Supporting the advancement of scientific research and new discoveries, we work with our customers to make the impossible possible.

[www.hamamatsu.com](http://www.hamamatsu.com)

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**Key words:** fluorescence imaging, confocal microscopy, MEMS, biological imaging  
**Market:** Academic research, life sciences & biology

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