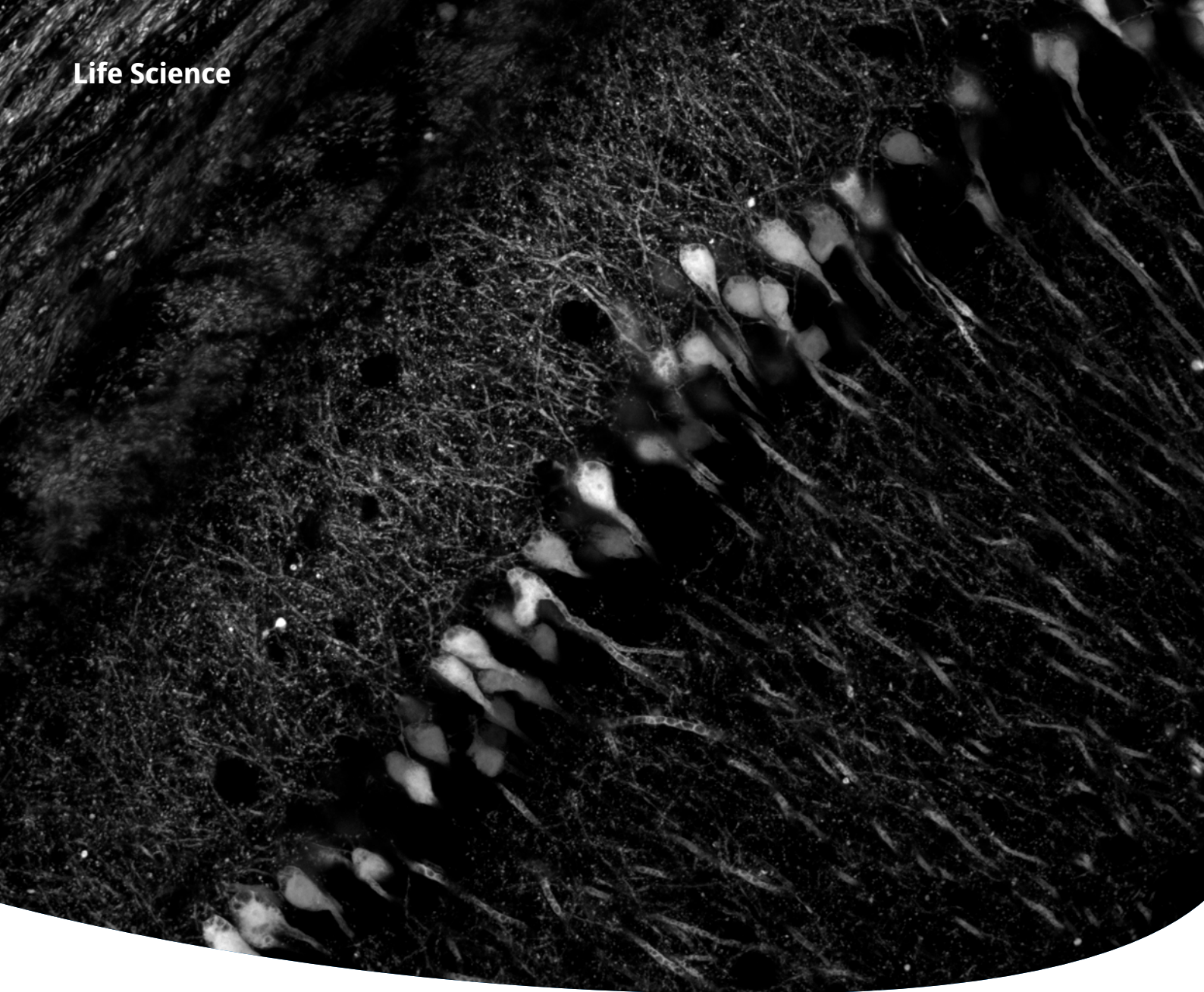


Life Science



# FLUOVIEW™ FV4000MPE

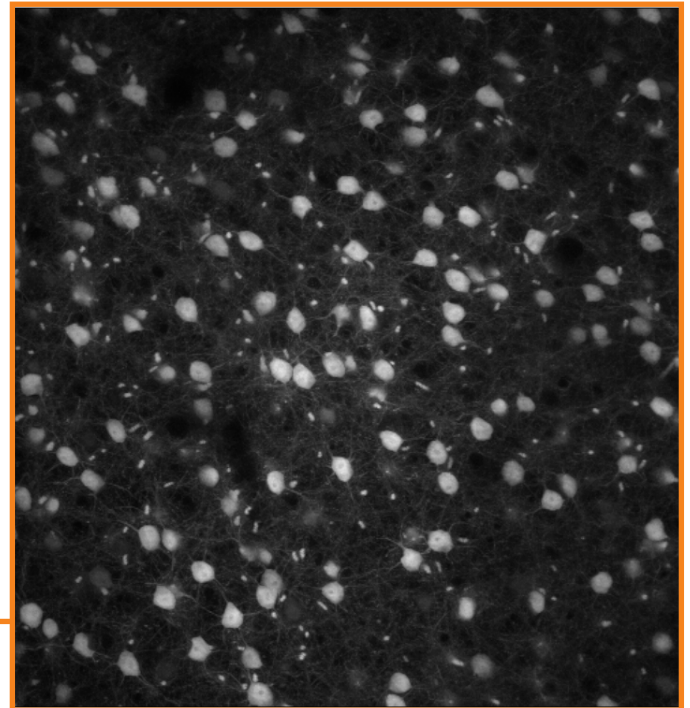
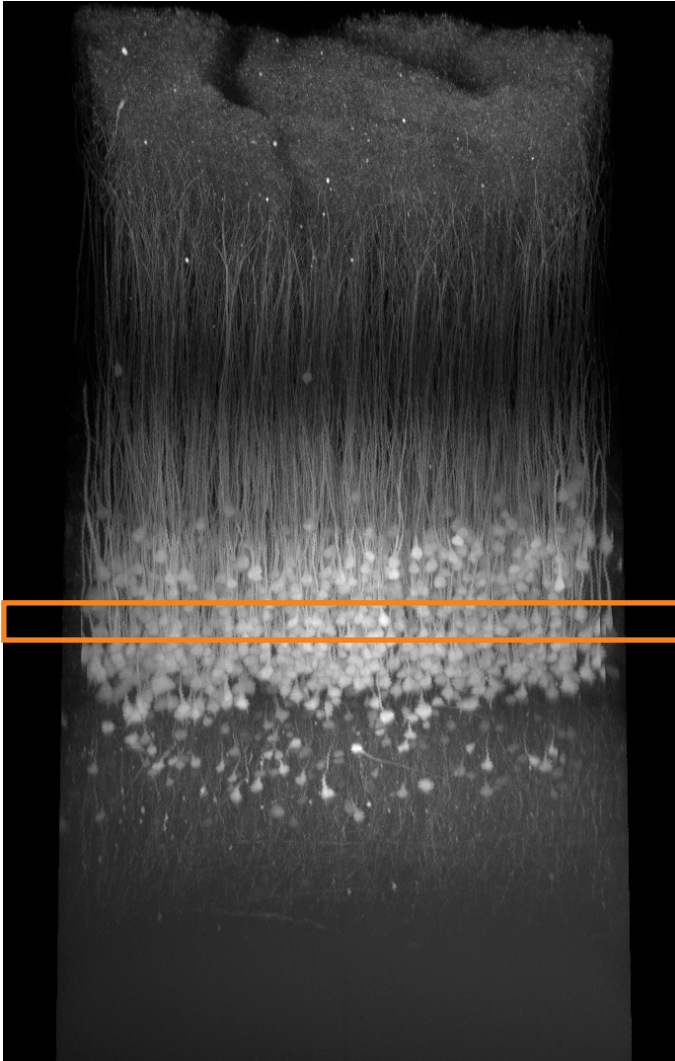
Multiphoton Laser Scanning Microscope

Transforming Precision Imaging

**EVIDENT**

## In-Depth Precision for In Vivo Experiments

Transform your images with the FLUOVIEW™ FV4000MPE multiphoton laser scanning microscope. Advanced imaging technology reveals the details and dynamics of your samples while providing quantitative image data that can enhance your experiments. With our breakthrough SiVIR™ detector at the core of the system, achieve very low noise, higher sensitivity, and improved photon resolving capabilities. Coupled with high speed to capture fast dynamics, the system empowers demanding research applications.



3D image of a live mouse brain from the surface to 900  $\mu\text{m}$  deep using a TruResolution objective. The brighter neural cell body did not saturate thanks to the SiVIR detector's high dynamic range.

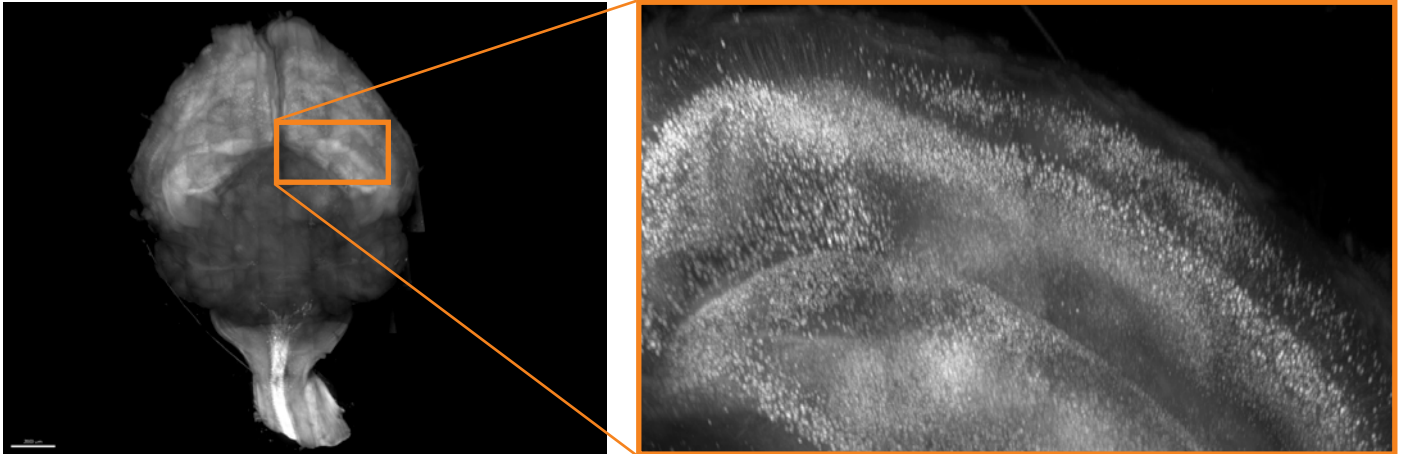
Sample courtesy of: Aoi Gohma and Atsushi Miyawaki, RIKEN CBS-EVIDENT Open Collaboration Center.

## SiVIR Next-Generation Detector Technology

- › Extremely low noise detector enables you to acquire high-quality images, even with weak fluorescence
- › Precisely quantify image intensity by photon number for more reliable data
- › High dynamic range imaging to capture both dim and bright regions without saturation

## Outstanding Images at Depth

- › Deep imaging by minimizing spherical aberration with our TruResolution™ objectives
- › The advanced nondescanned (NDD) SiVIR™ detector with a larger beam diameter to better collect scattered light efficiently

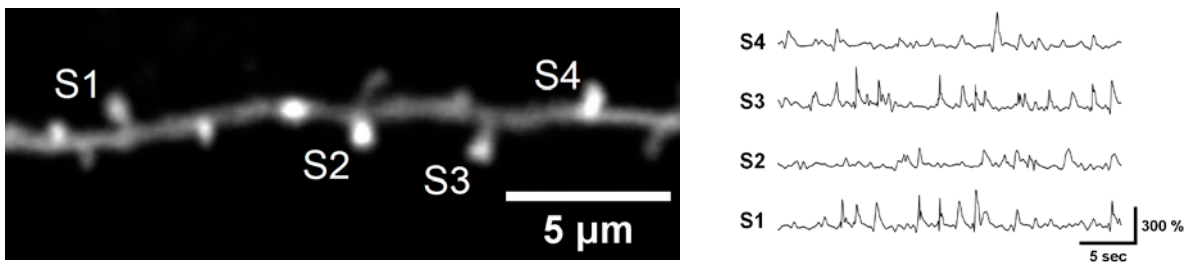


Stitched image of a cleared whole brain captured using a 10X objective lens and resonant scanner (512×512 pixels. Z 501 slices, 225 positions). New resonant scanner can acquire equivalent quality images to a galvo scanner in less than a third of the time.

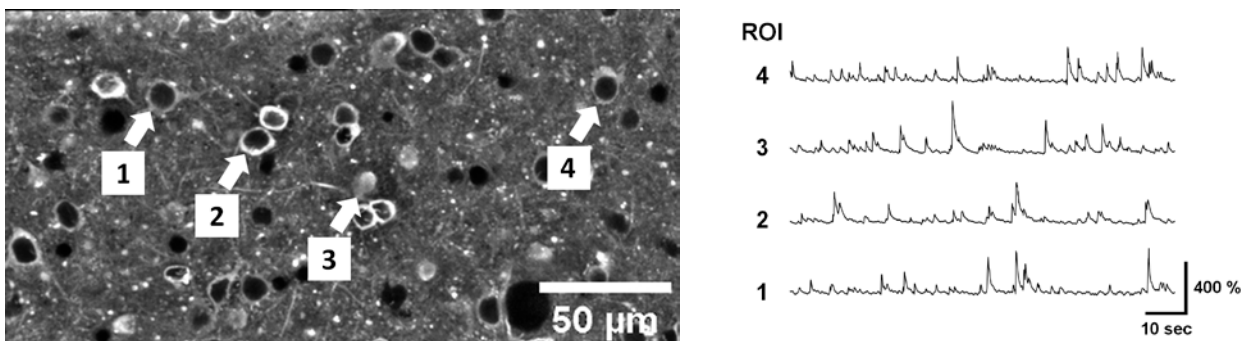
Sample courtesy of: Tetsushi Hoshida and Atsushi Miyawaki, Laboratory for Cell Function Dynamics, RIKEN CBS.

## Gentler, High-Speed Time-Lapse Imaging

- › Upgraded resonant scanner enables you to acquire high-resolution images over a wider area at high speed
- › The SiVIR detector's high sensitivity delivers a better signal-to-noise ratio than other detector types, producing higher-quality images at higher speeds, enabling you to precisely acquire the dynamics of live cells



Visualization of glutamatergic synaptic inputs *in vivo* mouse FrA cortex using iGluSnFR.  
Courtesy of Katsuya Ozawa and Akiko Hayashi-Takagi, Multi-Scale Biological Psychiatry, RIKEN CBS.



*In vivo* Ca<sup>2+</sup> imaging in mouse cortical neurons using jRGECO1a.  
Courtesy of Katsuya Ozawa and Akiko Hayashi-Takagi, Multi-Scale Biological Psychiatry, RIKEN CBS.

## Many Possibilities, One System

Depending on your application, you can choose between upright, gantry, or inverted microscope frames.

The FV4000MPE microscope is engineered to be modular, making it easy for you to configure the system based on your applications and budget. You can start with a standard FV4000MPE and easily upgrade to a combo system by adding the SPE module as your research changes.

Your science is constantly evolving and requires dynamic solutions to meet the changing demands on your imaging systems. Our FV4000/FV4000MPE specialized solutions\* increase the capabilities of our standard systems to meet your research applications and requirements.

\*Not available in some countries or regions.



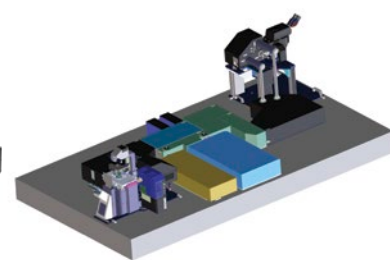
**Upright Microscope System**  
For in vivo and in vitro multiphoton microscopy



**Gantry Microscope System**  
For in vivo observations that require more space



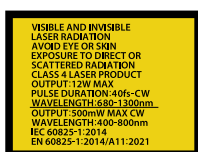
**Inverted Microscope System**  
For in vitro observation of 3D cell (spheroid) and tissue cultures



**IR Laser Sharing System**

### FV4000MPE Specifications

Scanner	Galvanometer scanner	64 × 64–4096 × 4096 pixels, 1 μs/pixel–1000 μs/pixel
	Resonant scanner	512 × 512 pixels, 1024 × 1024 pixels
	Field number	20
Spectral confocal detector	Detector	SiVIR™ detector (cooled SiPM, broad band type/red-shifted type)
	Maximum channels	Six channels
	Spectral method	VPH, detectable wavelength range 400 nm–900 nm
Non-descanned detector	Detector	SiVIR detector (cooled SiPM, broadband type/red-shifted type)
	Maximum channels	Six channels
Laser	VIS laser	405 nm, 445 nm, 488 nm, 514 nm, 561 nm, 594 nm, 640 nm
	NIR laser	685 nm, 730 nm, 785 nm
	IR pulse laser	One laser system, dual laser lines system, twin lasers system Excitation wavelength: 690 nm–1300 nm Four-axis auto alignment, auto beam expander
Image	High dynamic range photon counting (1G cps)	



**EVIDENT**

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• Specifications and appearances are subject to change without any notice or obligation on the part of the manufacturer.  
• Illumination devices for microscope have suggested lifetimes. Periodic inspections are required. Please visit our web site for details.  
• This product is designed for use in industrial environments for the EMC performance. Using it in a residential environment may affect other equipment in the environment.