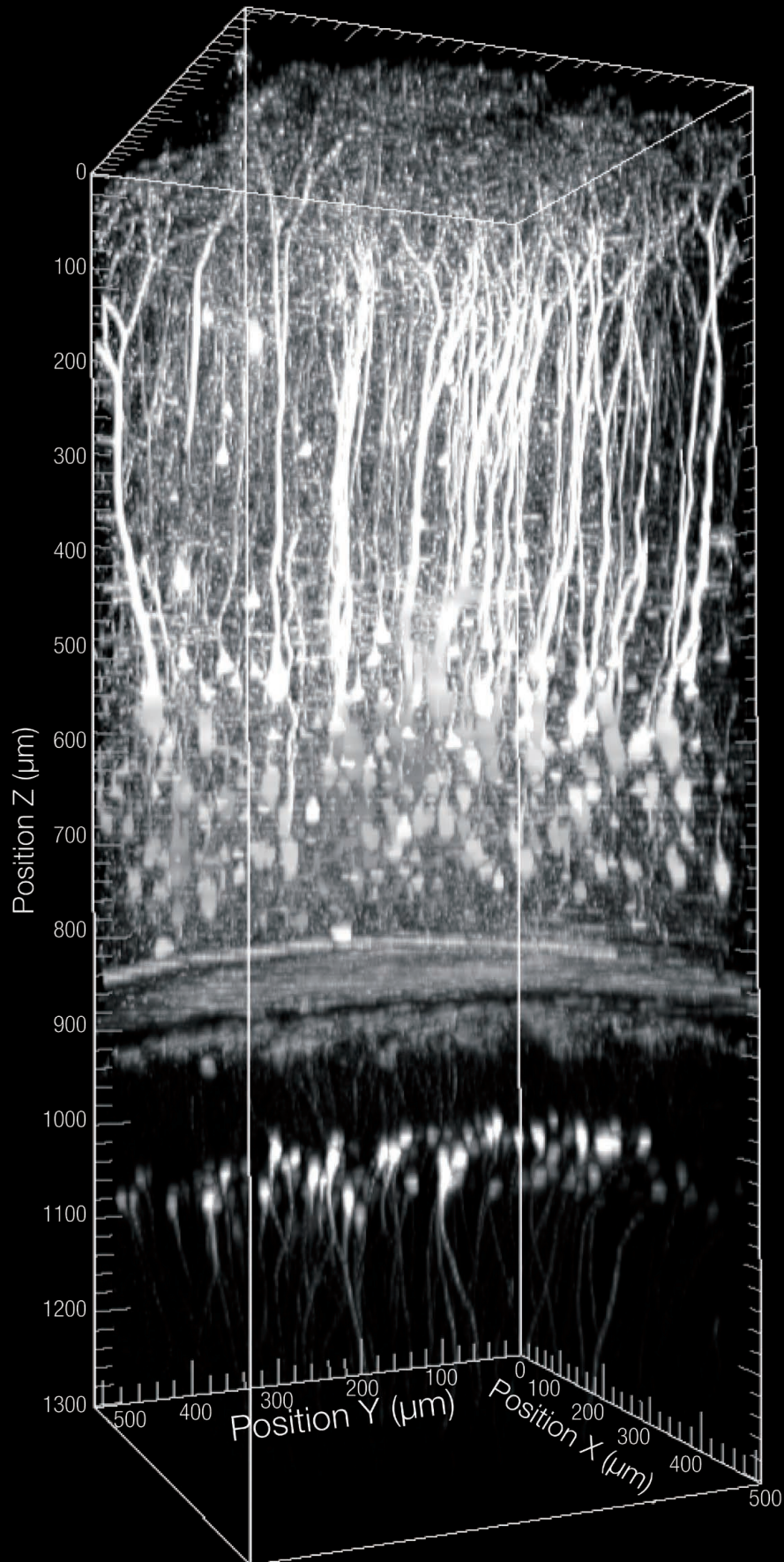


EVIDENT

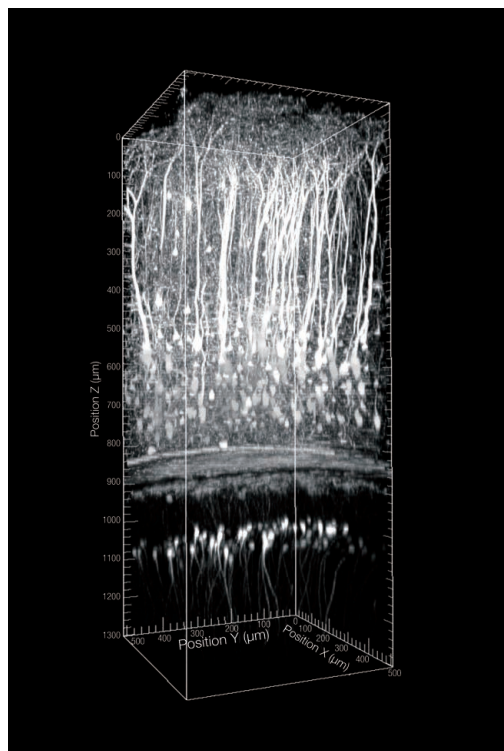


Neuroscience Solutions
Your Science Matters

Advancing Neuroscience Research

Researchers rely on Olympus life science solutions to meet the challenges of neuroscience imaging. Discover deep insights into whole mouse or rat brains, image entire brain sections with high resolution, or focus on dynamic cellular interactions driven by optogenetics and uncaging techniques.

Multiphoton Imaging



FLUOVIEW FVMPE-RS Microscope

High-Speed Resonant Scanning —

Capture fast biological processes at up to 438 frames per second (FPS)

High Sensitivity — Gather more insights with excellent light efficiency and high-sensitivity GaAsP detection

Deep Tissue Imaging — Observe a mouse brain from the surface to the hippocampus and beyond

Red Fluorophore Excitation — Extend your color range with efficient excitation up to 1300 nm

Accurate and Synchronized Stimulations — Multiphoton and visible light laser stimulation with microsecond precision for optogenetics and uncaging applications

Application image: Thy1-YFP H line 8-week-old male
Excitation wavelength: 960 nm
Image data courtesy of Katsuya Ozawa and Hajime Hirase,
Neuron-Glia Circuitry, RIKEN Brain Science Institute, Japan

Centriole

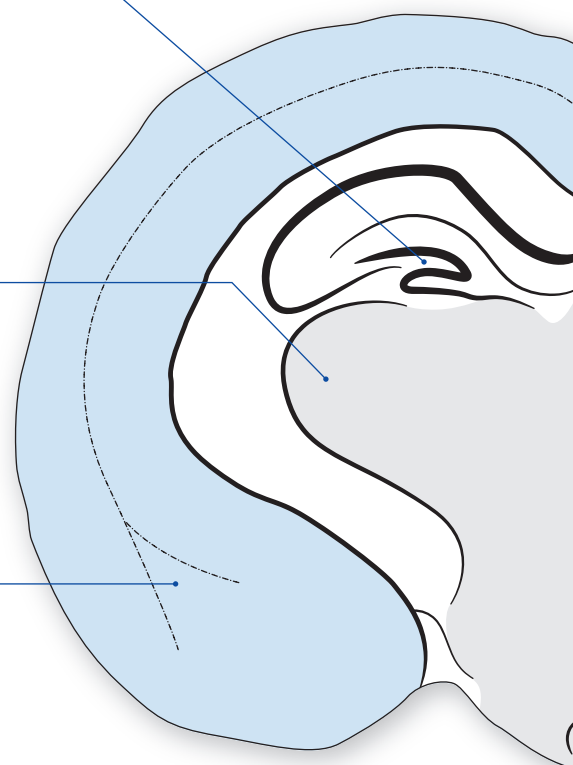
As part of the brain's limbic system, the hippocampus plays an important role in the formation of new memories and is associated with learning and emotions.

Thalamus

The brain's first relay station. Signals from afferent sensory neurons are modulated here and then primarily directed to the cerebral cortex, where the perceptual experience is generated.

Amygdala

Like the hippocampus, the amygdala is part of the limbic system and is responsible for connecting strong emotions like fear or aggression with cognitive experience (emotional learning).



Whole Slide Imaging

SLIDEVIEW VS200 Research Slide Scanner

Multiple Contrast Methods — Digitize and share images using brightfield, darkfield, polarization, phase contrast, and multichannel fluorescence

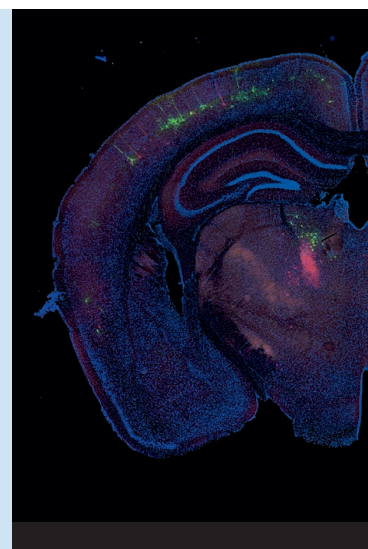
Outstanding Resolution — Get more details at a pixel resolution down to 0.055 µm/pixel

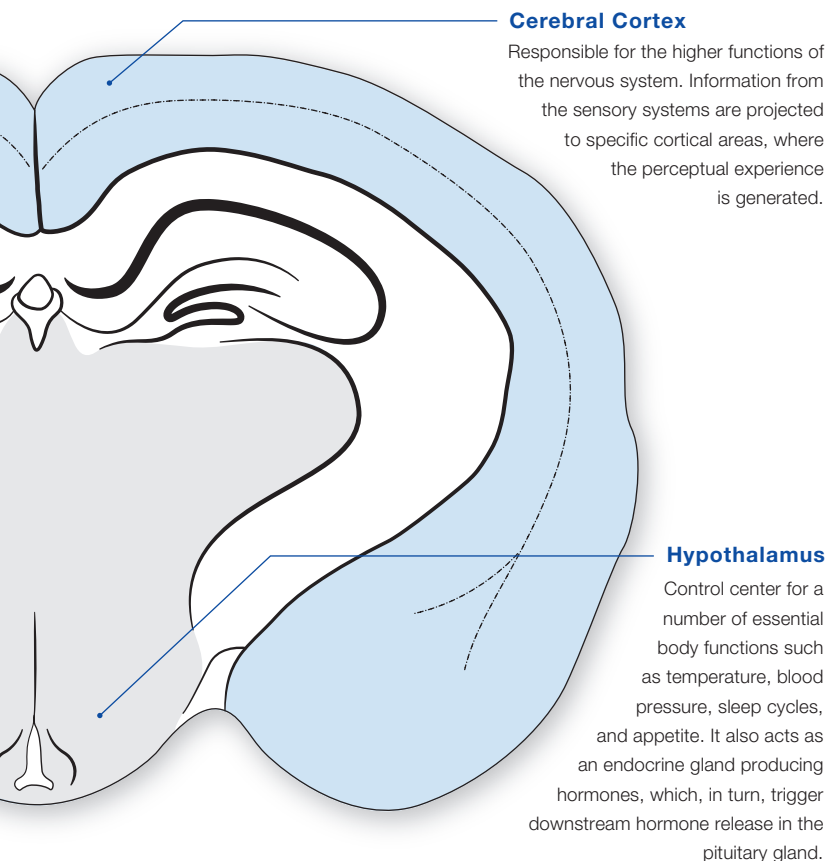
High Throughput — Automated batch scanning with a loader that holds up to 210 26 × 76 mm (1 × 3 in.) slides

Various Slide Sizes — Supports 26 × 76 mm (1 × 3 in.), 52 × 76 mm (2 × 3 in.), 76 × 102 mm (3 × 4 in.), and 102 × 127 mm (4 × 5 in.) slides

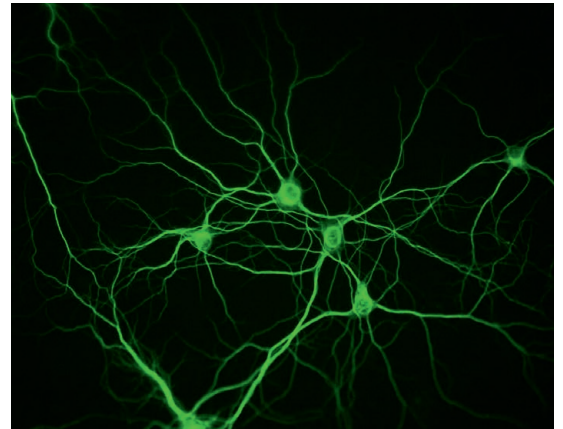
Powerful Data Management with NetImage

Server SQL — Virtual slides are easily found by using keywords through the folder tree





Live Cell Imaging



IXplore Live Imaging System

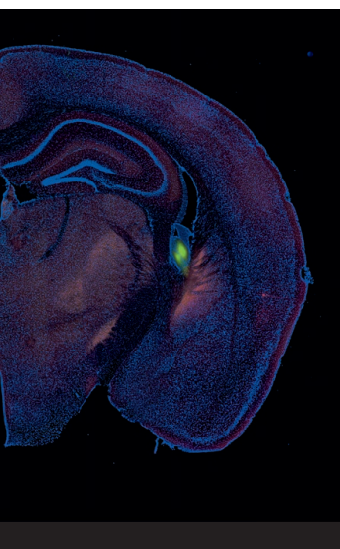
Live Cell Imaging — Achieve high speed with high precision and repeatability through microsecond accuracy in device control

Autofocus — Save time in focusing and automatically maintain the focal position throughout long-term time-lapse experiments

Modular Incubation System — Maintain cell viability and physiological conditions

Dedicated Optics — Capture more fluorescence signal at a better axial resolution using silicone immersion oil

Confocal Imaging

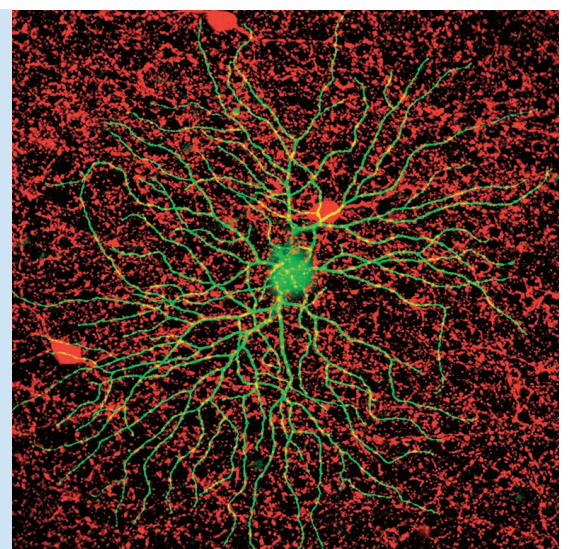


FLUOVIEW FV3000 Microscope

Macro-to-Micro Imaging — From 1.25X to 150X, see your sample in context by combining overview map images with high-magnification confocal imaging

TruSpectral Detection — Simultaneously image bright and dim fluorophores with precise and flexible detection bandwidths from 2 nm to 100 nm

Super Resolution — See your sample in greater detail with Olympus Super Resolution (OSR) technology and experience resolutions down to 120 nm

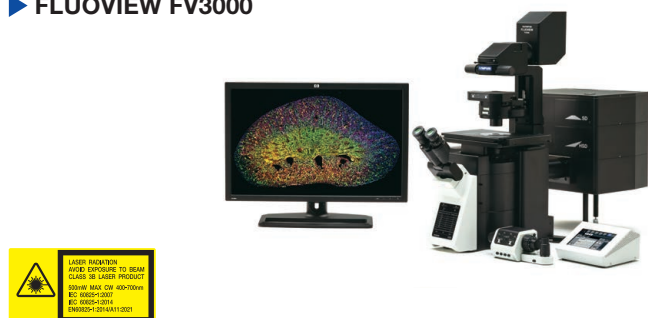


Systems for Neuroscience

Confocal Imaging — Focused on 3D

Confocal imaging creates optical sections of a specimen by scanning a focused laser spot point-by-point over the field of view. A pinhole allows only the light from a small focal volume to pass through to the detectors. The measured signal intensity at each scanning point is then converted to an image, pixel by pixel. Confocal microscopy not only increases optical resolution and contrast but its optical sectioning properties also enable reconstruction of 3D structures from a series of images obtained at different depths.

► FLUOVIEW FV3000



Whole Slide Imaging — Discover the Big Picture

In whole slide imaging, slides are converted into virtual slide images that can be stored, managed, and shared for documentation and analysis. By generating a precise copy of the entire specimen at high resolution, users can view and analyze samples in detail, from single cells to the entire brain, surface, and deep areas, regardless of their proximity to the microscope. Since large slide holders are available, bigger samples that previously had to be divided into multiple slides can now be digitized in a single scan. Virtual slides can be stored on a central server, making simultaneous access possible anywhere in the world.

► SLIDEVIEW VS200



Multiphoton Imaging — See More Detail at Depth

Multiphoton microscopy is an excellent technique for deep imaging in thick specimens, especially during in vivo experiments. Strongly focused near-infrared laser pulses penetrate deeper into biological tissues than visible light as they experience less absorption and scattering. Multiphoton excitation is inherently localized to the focal plane, thus reducing phototoxicity. More importantly, a confocal pinhole is not required for optical sectioning, and more light signal—including scattered fluorescence photons—can be collected. The results are bright, detailed, 3D images from deep within thick specimens.

► FLUOVIEW FVMPE-RS



Live Cell Imaging — Stable and Precise

Studying dynamic processes in living cells poses two main challenges to a microscope system: collecting live cell data with a sufficient signal-to-noise ratio and simultaneously keeping cells alive and healthy. Reliable control and maintenance of temperature, pH, and humidity is vital for successful live cell studies. Microsecond accuracy in device control and the seamless integration of fast filter wheels, shutters, LED light sources, and cameras enable high-speed imaging while reducing photobleaching and phototoxicity. A stable stage and automated focus control enable high-precision, multipoint time-lapse images that are properly aligned and in focus. Matching the refractive index of living tissue, silicone immersion optics enable you to capture more signal and image the real shape of live cells over time.

► IXplore Live



(Cover) 3D reconstruction from the cortical surface to the hippocampal CA1 stratum radiatum of the anesthetized mouse. Animal: Thy1-YFP H-line male mouse (8 weeks). Courtesy of Katsuya Ozawa, RIKEN Brain Science Institute, Japan

- EVIDENT CORPORATION is ISO14001 certified.
- EVIDENT CORPORATION is ISO9001 certified.
- Illumination devices for microscope have suggested lifetimes. Periodic inspections are required. Please visit our website for details.

- All company and product names are registered trademarks and/or trademarks of their respective owners.
- 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.

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EVIDENT CORPORATION
Shinjuku Monolith, 2-3-1 Nishi-Shinjuku, Shinjuku-ku, Tokyo 163-0910, Japan

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