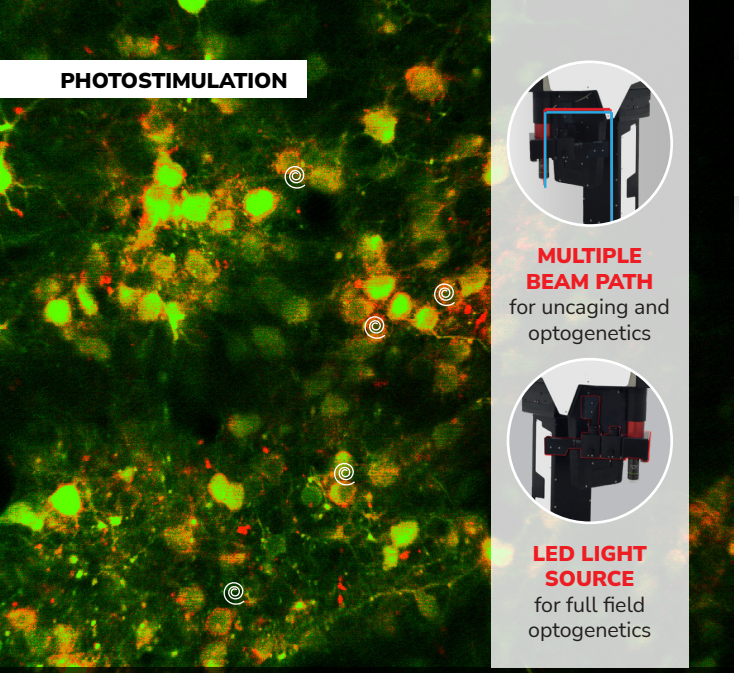
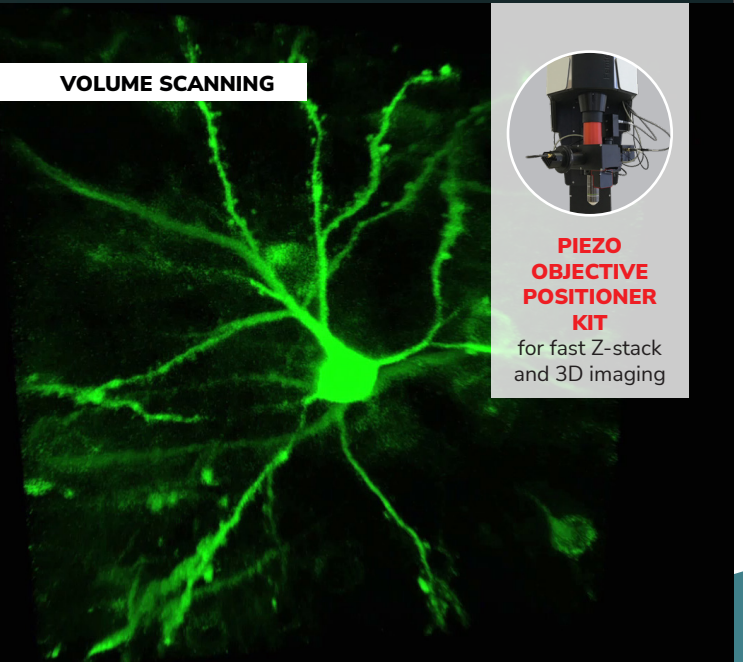


PHOTOSTIMULATION

MULTIPLE BEAM PATH
for uncaging and optogenetics

LED LIGHT SOURCE
for full field optogenetics

Photostimulation of mRuby and GCaMP labelled cells from the primary visual cortex of a mouse model.
Imaged by a **FEMTOSMART DUAL** equipped with a LED light source operating at 570 nm.

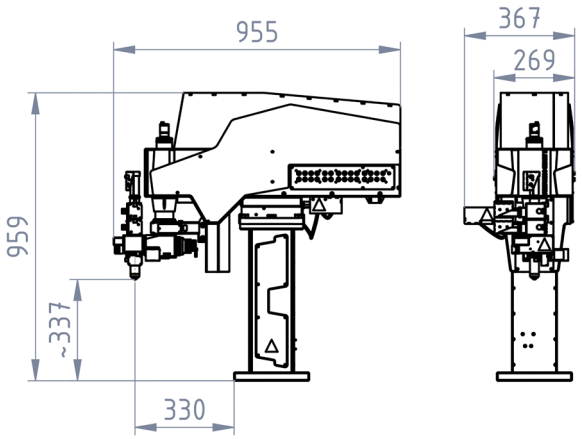


VOLUME SCANNING

PIEZO OBJECTIVE POSITIONER KIT
for fast Z-stack and 3D imaging

Volume scanning for recording neural activity from the primary visual cortex of a mouse model. Imaged by a **FEMTOSMART DUAL** equipped with a piezo objective positioner.

FEMTOSMART



HIGHLIGHTS FROM FEMTOSMART MULTIPHOTON MICROSCOPES:

- Elevated body to create ample space under the objective for even larger samples
- XYZ positioning with micron-scale precision within a ± 25 mm range
- Optimized for in vivo functional imaging in deep tissues
- High level of modularity; installed setups are upgradable with additional features
- Flexible scanning methods: galvanometric, resonant, or combined scanning
- Incorporates patented imaging technologies, including a traveling detector system

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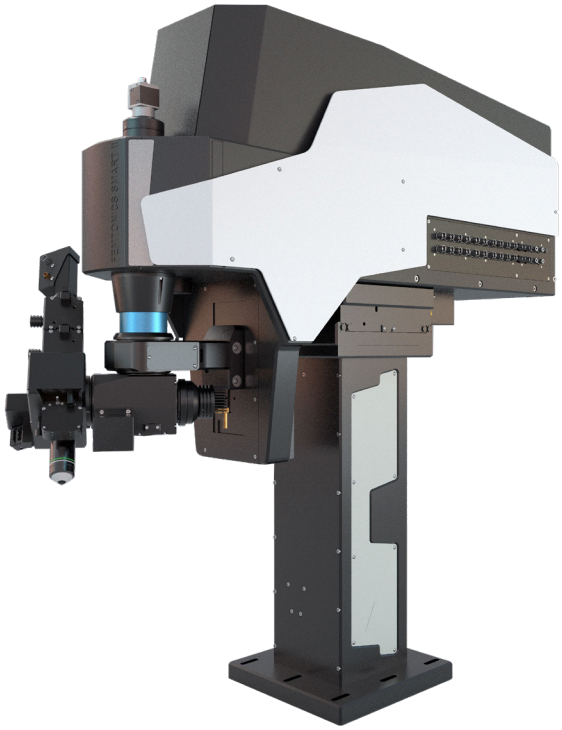
FEMTO SMART

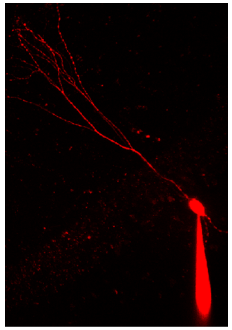
THE SMART SOLUTION
with high level flexibility



THINKING AHEAD
FEMTONICS
MICROSCOPY

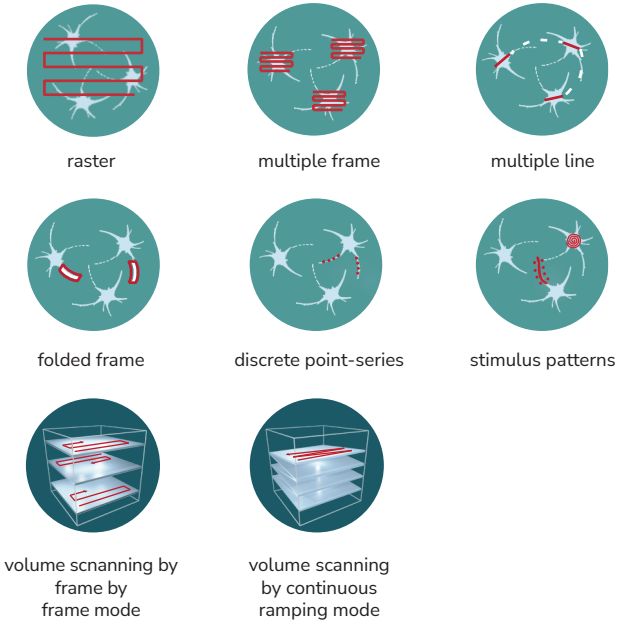
FEMTO SMART Dual

The **FEMTOSMART DUAL** microscope is the combination of FemtoSmart Galvo and Resonant microscopes providing all advantages of the two imaging technologies. The galvo scanner directs the laser precisely and selectively to the cells or subcellular components of the user's choice, subsequently, with the resonant scanner, the user can follow events, collecting data simultaneously at a high scanning rate, even from surrounding areas.

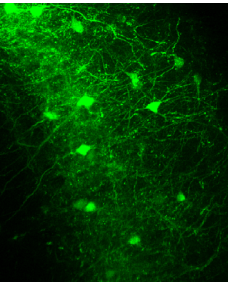


Suitable for photostimulation and other advanced imaging applications.

SCANNING METHODS



FEMTO SMART Galvo



The **GALVO** microscope allows users to scan along various patterns covering regions of interest (ROI), enabling faster recording and a high SNR by eliminating background noise.

- Flexible imaging modes, patented solutions for fast imaging in ROIs with high SNR
- A wide range of measurement and analysis functions
- Each soma, axon, dendrite and spine can be measured separately

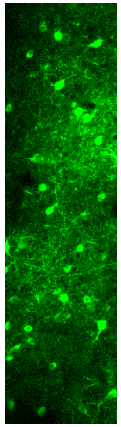
800×800 µm² FOV	4.1 fps 512×512 px 700×700 µm²	200 µs/point	40 lines/5 ms straight and curved lines

With 16x Nikon objective

FEMTO SMART Resonant

The **RESONANT** microscope acquires images of the entire field-of-view ~5 times faster than galvo scanning, it is therefore the most appropriate choice for fast frame or volume scanning.

- Rapid image acquisition in a wide field of view with 31 fps
- No time constraint on the recordings and automated measurement control
- Time-lapse imaging and long-term measurements
- 3D volume scanning upgrade



600×600 µm² FOV	31 fps 512×512 px 600×600 µm²	500 fps 32×512 px

With 16x Nikon objective

MOTORIZED TILTING OBJECTIVE UNIT

FEMTOSMART microscopes equipped with a motorized tilting module provide a higher level of freedom to reach the sample from different angles by rotating the objective.

- Wide angular subtense rotations around the horizontal and vertical axes
- Additional and fast Z movement with piezo
- High precision, stable in all positions
- Ergonomic 3D navigation using a 3 axis handwheel
- Close coupled detectors, transmission over 80%

180° horizontal rotation	100° vertical rotation	4°/sec rotational speed	2 µm unidirectional repeatability	400 µm Z movement with Piezo

The exact parameters may differ depending on the customized configuration and use.