

New Development: VisiFRAP-Ablation with VisiTIRF

Combining High Resolution TIRF with Laser Ablation & Uncaging

Our new VisiFRAP/TIRF UV Combo answers the requests of several scientists to include UV ablation or uncaging capability in our systems. Now, researchers can combine fast confocal imaging with FRAP, optogenetics or ablation/uncaging in one compact and cost-efficient system.

Building on our experience in combined TIRF and photomanipulation imaging, our engineers have managed to fully motorize all movable parts in the device, such as optional path switches or ablation laser intensity control. Besides achieving maximum reproducibility, this allows for flexibility and ease of use.



VisiScope 4Elements System including Confocal, FRAP, TIRF and UV Ablation

Key Applications

- TIRF Imaging of membrane proteins or surface-bound molecules
- Molecular diffusion, binding and exchange studies
- Optogenetics, photoactivation and photoconversion
- DNA damage induction
- Laser microcutting

Arbitrary region FRAP

The 2D-VisiFRAP System is based on a pair of galvanometer-driven scan mirrors directly computer controlled by the VisiView imaging software. The Scan head is mounted and coupled to the FL-excitation port of the microscope, where it directly manipulate the specimen

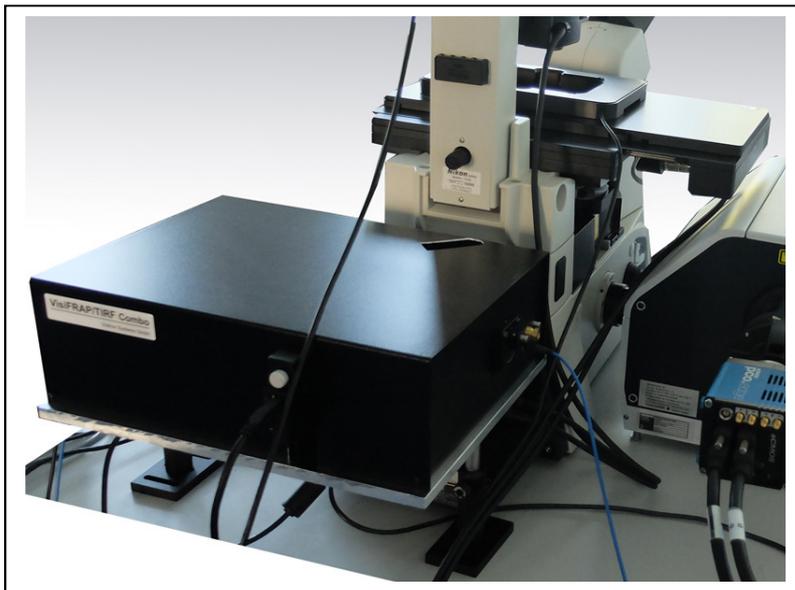
FRAP on the fly

The optimized system components allow simultaneous FRAP and imaging at single mouse click on any position in the live image. This new feature in the VisiView FRAP software is minimising any loss of temporal information and by taking advantage of the flexibility and high speed positioning of the VS-FRAP scanner. The unique “FRAP on the fly” solves perfectly the major demand for photo-manipulation experiments.

VisiFRAP/TIRF UV Combo Specification

- Wavelength range 355 nm – 640 nm
- Dimensions (WxDxH) 360mmx300mmx150mm
- Supported Microscope Models Nikon Ti-E, others upon request

- E.g. UV-355nm laser with programmable intensity control
- Moveable selector between Ablation/FRAP/TIRF and Ablation/FRAP
- Monolithic optical system – no separate FL condenser required



Flexible Combinations:

Model VS-2D VisiFRAP\TIRF-UV355PULSED
Model VS-2D VisiFRAP\TIRF-UV355PULSED-VIS
Model VS-2D VisiFRAP\TIRF-UV375CW
Model VS-2D VisiFRAP\TIRF-UV375CW-VIS