

# MuVi SPIM

## PURE LIVE IMAGING

### MuVi SPIM – THE MULTIPLE-VIEW LIGHT-SHEET MICROSCOPE

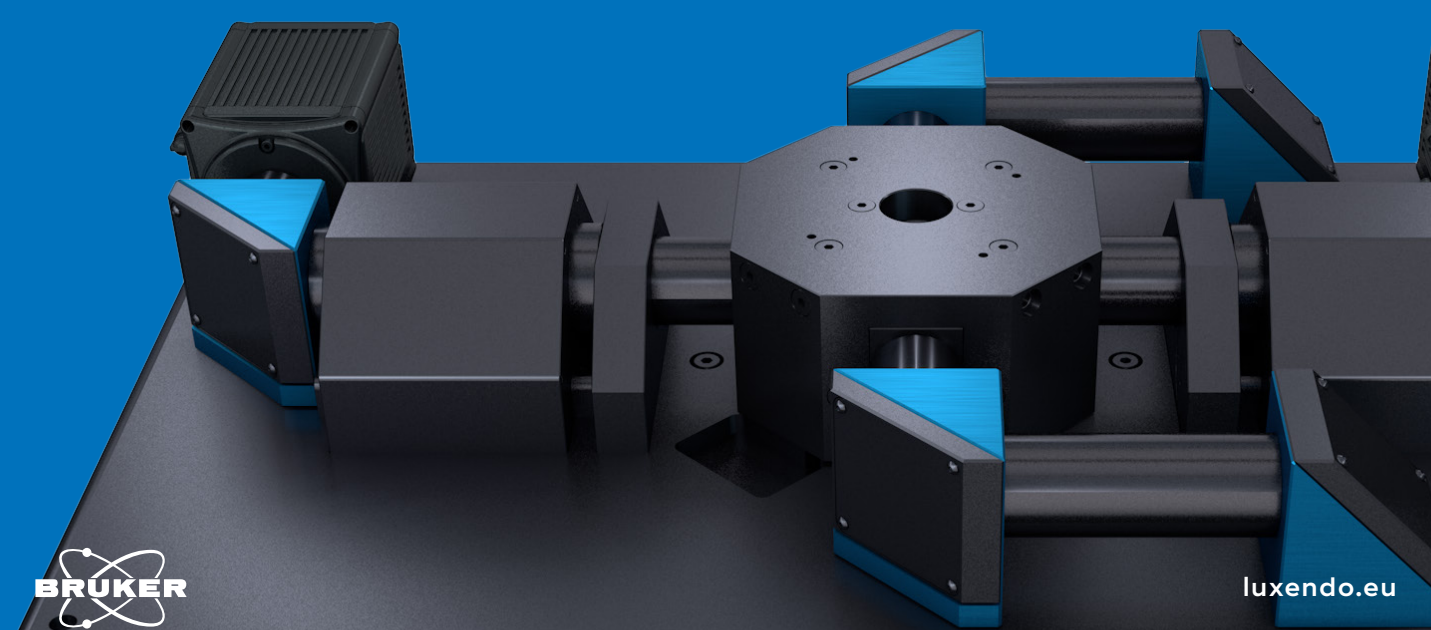
Luxendo's multiple-view light-sheet microscope is the fastest multi-angle view SPIM on the market for analyzing dynamic processes. The unique 4-axis concept enables four orthogonal views of the sample without the need for rotation. This feature and the sample mount supported from below allow maximized acquisition speed and high precision of data fusion while preserving long-term stability and integrity of the sample. Gentle sample handling, 3D imaging of large specimen and low phototoxicity are the great advantages that make the **MuVi** SPIM stand out. The modular software concept facilitates a flexible design of complex experimental layouts.

The **MuVi** SPIM is suited for a large field of applications, including:

- › Developmental biology
- › Embryonic development
- › Marine biology
- › Neurobiology and neuro-development
- › Functional imaging
- › Long time-lapse imaging
- › Large specimen
- › Cleared samples
- › Photomanipulation: two-photon ablation, optogenetics, photoactivation, etc.

The optical concept and performance of the **MuVi** SPIM enable

- › Large field of view
- › Close-to-confocal resolution
- › Remarkably high imaging speed
- › Highest sensitivity and minimal noise
- › Isotropic resolution



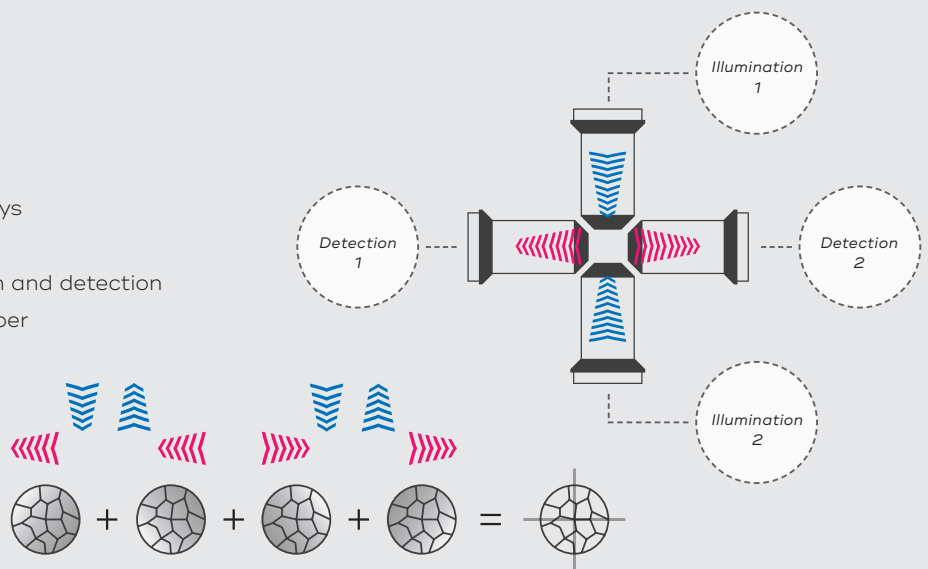
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## SPECIFICATIONS

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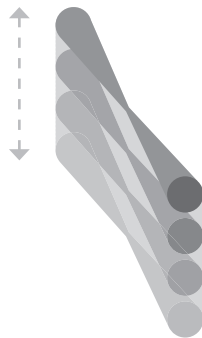
### MULTIVIEW IMAGING OF LARGE SAMPLES

- › Four orthogonal views
- › No need for sample rotation
- › Long term stability, time series over days
- › Unprecedented imaging speed
- › Octagon: core unit carrying illumination and detection objective lenses and the sample chamber
- › **Illumination objectives:**  
**10 × W @ 0.3 NA**, water immersion
- › **Detection objectives:**  
**20 × W @ 1.0 NA**, water immersion or  
**16 × W @ 0.8 NA**, water immersion



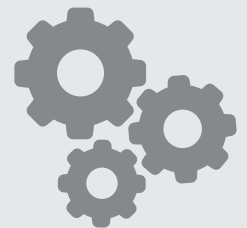
### SCANNED

- › Scanned light sheet
- › Adjustable light-sheet thickness
- › Flexible light-sheet area
- › Robust aberration tolerance even in complex samples
- › Line illumination for improved background suppression



### FLEXIBLE

- › Customizable laser combiner, up to 6 positions:  
 405/445/488/515/561/594/642/685 nm @ 40 mW
- › Robust image registration
- › Real-time data fusion, compression and visualization
- › Upgradable: Cleared-sample octagon, Photomanipulation



### PHOTOMANIPULATION

- › Coupled into detection objective lens
- › Diffraction-limited illumination spot
- › 3D positioning of illumination spot in the sample
- › Flexible ROI generation (point, straight line, freeform line and square)
- › **Available lasers:**
  - Pulsed IR laser for photoablation
  - CW diode lasers for photoactivation, photobleaching, optogenetics
  - CW or pulsed laser for photoactivation, optogenetics

### CLEARED SAMPLE SOLUTION

- › Imaging of large cleared samples
- › Exchangeable cleared-sample octagon
- › Compatible with a broad range of clearing methods and solutions
- › Flexible configurations

