

# AoKit

## Bio

**BUILD YOUR OWN**  
ADAPTIVE OPTICS MICROSCOPE

**CONTROL THE PSF**  
OF YOUR OPTICAL SETUP

**CAN BE INSTALLED**  
ON ANY MICROSCOPE

**INTUITIVE SOFTWARE**  
PERSONALIZED FOR YOUR NEEDS



**BUILD AN ADAPTATIVE OPTICS MICROSCOPE BEST SUITED TO YOUR NEEDS**

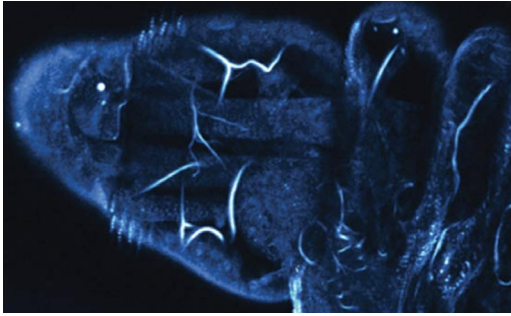
## A UNIQUE SET OF ADVANTAGES

- $\pm 50 \mu\text{m}$  stroke (tilt p/v)
- $\lambda/100$  RMS absolute accuracy over  $400 \lambda$  dynamic range
- Custom wavelenth calibration in the 400 - 1100 nm range
- 99 Hz acquisition rate at full resolution
- Exceptional surface quality (10 nm RMS active flat)
- User friendly and intuitive GUI
- Closed - loop and open-loop wavefront manipulation
- 3N image-based sensorless aberration detection method
- Available plugins for NIS-Elements™,  $\mu$ Manager™ and Metamorph™

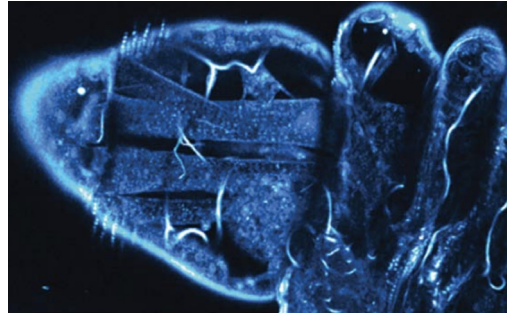
Contact us for more details: [contact@imagine-optic.com](mailto:contact@imagine-optic.com) or +33 (0) 1 64 86 15 60

Available in a variety of configurations for open and closed-loop use, the AOKit Bio is the solution for researchers who want to incorporate adaptive optics into their custom-built imaging system. At its core is Mirao 52e deformable mirror that provides unrivalled stroke to correct for the complex aberrations found in microscopy. When combined with the precision of our HASO™ wavefront sensors and our easy-to-use software, the AOKit Bio is your key to successful imaging.

Original image



Corrected with adaptive optics

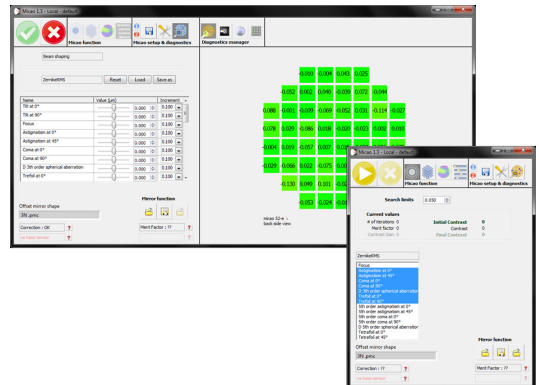


Third harmonic generation images before and after correction of aberrations in drosophila larva.

*Courtesy of Drs. Beaurepaire, Débarre & Olivier, Ecole Polytechnique, LOB, France.*

## Adaptive optics software

MicAO™ software is specifically designed for applications in microscopy. With a simple user interface, this program controls all the functions of the wavefront sensor and deformable mirror, both in closed and open-loop modes. It also contains iterative algorithms (genetic, 3N) for the improvement of the image quality. In order to preserve the biological sample, these algorithms are optimized to use the minimum number of acquisitions to provide the highest-resolution results.



## Specifications

<b>MIRAO 52 E</b>	<b>Number of actuators</b>	52
	<b>Maximum generated wavefront (PV)</b>	± 50 μm
	<b>Effective diameter</b>	15 mm
	<b>Linearity</b>	> 95 %
	<b>Dimensions / Weight</b>	64 x 64 x 23 mm / 490 g*
	<b>Aperture dimension</b>	3.6 x 4.5 mm <sup>2</sup>
	<b>Wavefront measurement accuracy in absolute mode (RMS)</b>	λ/100
	<b>Maximum acquisition rate</b>	99 Hz
	<b>Wavelength range</b>	400-1100 nm
	<b>Dimensions / Weight</b>	46 x 57 x 57 mm / 150 g

**HASO4 FIRST**

\*Mirror unit only