

VAST FluoroImager

Automated Positioning for Fluorescent Imaging

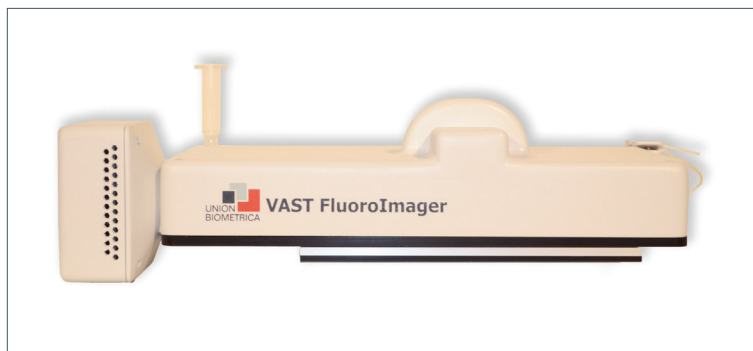


The VAST FluoroImager automates positioning of 2-7 dpf zebrafish larvae. The larvae are oriented accurately and reproducibly within a glass capillary using a set of rotational motors.

Included with the VAST FluoroImager:

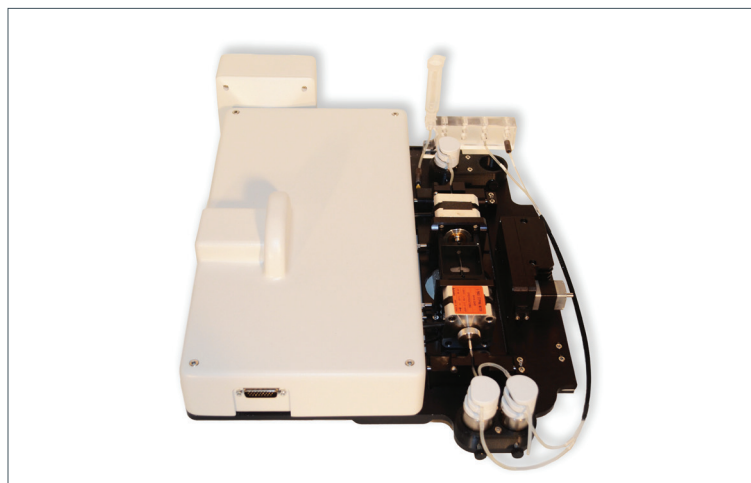
- Ability to load, position, and rotate a larva to a user selected orientation
- On-board 10 μ m resolution camera captures precise images
- 360 $^{\circ}$ imaging consisting of brightfield and 1-3 fluorescent channels
 - Channel LEDs: 385nm (Violet), 470nm (Blue), 565nm (Green)
 - Channel filters: 445nm, 512nm, 615nm
- Ability to generate Optical Projection Tomography (OPT) datasets with the VASTomography software
- Cellular level imaging by mounting to an upright microscope
- Seamless larva ejection and reloading from bulk reservoir

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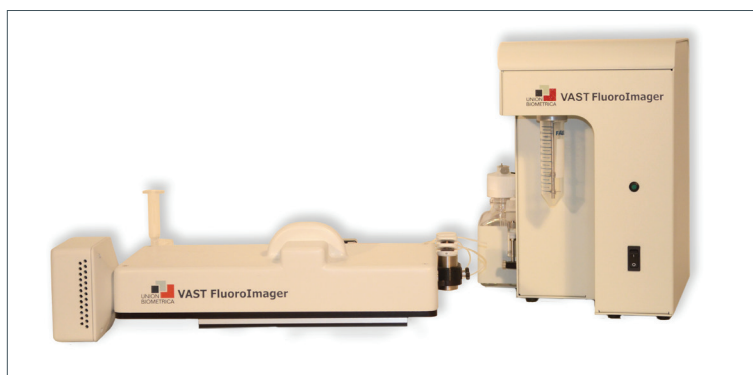
▲ Capillary/fluorescence illumination module

Composed of the capillary unit of the VAST BioImager with the addition of the fluorescence module containing the LEDs and detectors for capturing fluorescence from the larvae.



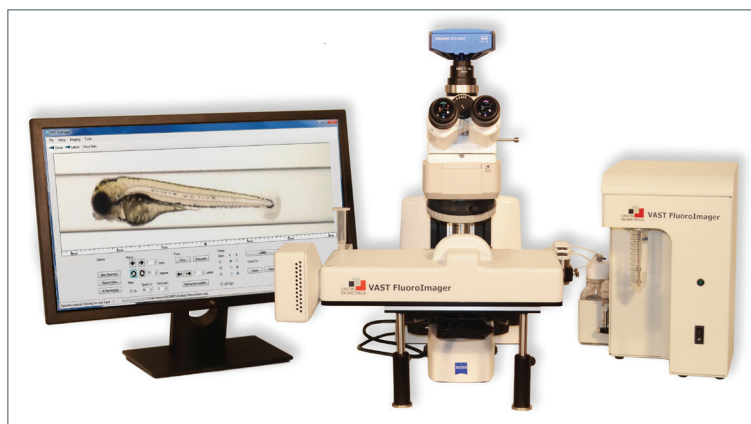
▲ Side View

Shows the capillary module on the right and the fluorescence illumination module to the left.



▲ Capillary/Fluorescence Illumination Module (left) and Control Module (right)

Samples are introduced via a standard 50 ml sample cup with a gentle, suspended stirring mechanism.



▲ FluoroImager mounted on an upright microscope

For cellular level imaging. Many different manufacturers make upright scopes that are compatible with this system.

Instrument Size

Control Module:

30 x 28 x 33 cm (depth x width x height) Weight: 5.9 kg

Capillary/fluorescence illumination Module:

32 x 47 x 12 cm (depth x width x height) Weight: 6 kg