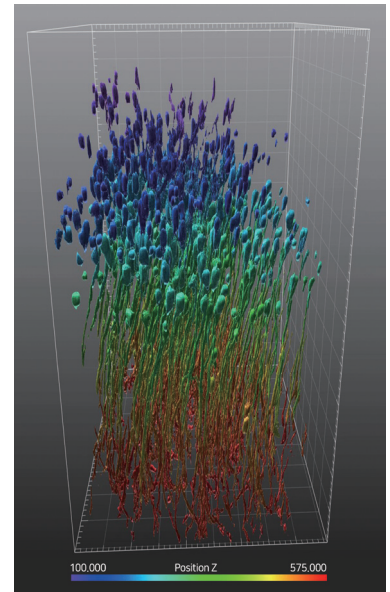


# IVM-MS2 (Two-Photon Smart Ver.2)

## Compact Two-Photon Imaging Platform

**IVIM**  
TECHNOLOGY



### The most compact Two-Photon System in the world

IVM-MS2 is the All-in-One IntraVital Two-Photon Microscopy System, optimized for in vivo imaging experiments and equipped with a new compact high-efficiency fs-pulse laser module. Especially, because it integrates a compact high-stability maintenance-free fs-pulse laser into a single box, the IVM-MS2 is the ideal solution for customers in need of a two-photon microscope with limited resources of space and budget.

### Key features of IVM-MS2 (Two-Photon Smart Ver.2)

- The smallest Two-Photon Microscopy System in the world
- Ultra High-Speed Imaging (max. 100 fps - 512x512 pixels)
- 4D Animal Motion Compensation (X,Y,Z & Time)
- Simple hand-free turn-key operation of 920 nm NIR fs-laser for deeper tissue imaging
- Cost-saving, Space-saving, Hands-free, Maintenance-free

## Specifications

<b>Laser</b>	Compact Two-Photon Laser Unit	<ul style="list-style-type: none"> <li>Air cooled fs-fiber laser system with built-in power control</li> <li>Wavelength : 920 nm, Pulse width &lt;150 fs, Rep. rate : 80 MHz</li> <li>Avg. power &gt;0.8 W, Dispersion compensation : 0 to -22,000 fs<sup>2</sup></li> </ul>
<b>Fluorescence Detector</b>	Two-Photon Detector	<ul style="list-style-type: none"> <li>Wavelength : 185 - 760 nm (DAPI, CFP, GFP, YFP, RFP, Cy5, Cy5.5, etc.)</li> <li>4 High quantum efficiency PMTs (UV to Near IR, Ultra High Sensitivity, Low Dark Current)</li> </ul>
	Variable Emission Filter (Optional)	<ul style="list-style-type: none"> <li>6 or 2 emission filters can be mounted on each of four detectors</li> </ul>
<b>Scan Head</b>	Scanner	<ul style="list-style-type: none"> <li>Polygonal mirror (Fast axis scanning, Max. 66 kHz)</li> <li>Galvano scanner (Slow axis scanning, Max. 200 <math>\mu</math>s/step)</li> </ul>
<b>Imaging Head</b>	Objectives	<ul style="list-style-type: none"> <li>Max. 5 objectives are mountable on S/W controlled motorized turret (1X - 100X)</li> <li>Compatible for commercial objectives</li> </ul>
<b>Image</b>	FOV	<ul style="list-style-type: none"> <li>100 x 100 <math>\mu</math>m<sup>2</sup> - 10 x 10 mm<sup>2</sup></li> </ul>
	Pixel Resolution	<ul style="list-style-type: none"> <li>Max. 2,048 x 2,048 pixels</li> </ul>
	Imaging Speed	<ul style="list-style-type: none"> <li>Standard : 30 fps @ 512 x 512 pixels</li> <li>(Optional) High Speed : 60 fps @ 512 x 512 pixels</li> <li>(Optional) Ultra High Speed : 100 fps @ 512 x 512 pixels</li> </ul>
<b>In Vivo Animal Stage</b>	3D Stage	<ul style="list-style-type: none"> <li>Travel Range : 50,000 x 50,000 x 75,000 <math>\mu</math>m (XYZ)</li> <li>Micromanipulation (Max. 0.2 <math>\mu</math>m resolution)</li> <li>3-axis independent control with Jog Dial &amp; S/W</li> </ul>
<b>Animal Motion Compensation</b>	4D In Vivo Imaging Motion Compensation	<ul style="list-style-type: none"> <li>XY motion compensation : Averaged image acquisition with motion artifact compensation</li> <li>Z motion compensation : Image-based sample Z position adjustment for long-term intravital microscopic imaging &amp; sample tracking (Feedback-loop automatic stage control)</li> <li>T motion compensation : Image-based image XY position adjustment for long-term intravital microscopic imaging &amp; sample tracking (Feedback-loop automatic stage control)</li> <li>Combination of above three compensation for 4D in vivo motion compensation</li> </ul>
<b>Additional In Vivo Modules</b>	Live Animal Maintenance Unit	<ul style="list-style-type: none"> <li>Body Temp. Monitoring &amp; Feedback Heater Control, including tablet PC</li> <li>4CH Rectal Probe, Body Plate Heater, Thermometer Sensor &amp; Cover Glass Heater</li> </ul>
	In Vivo Imaging Chamber SET	<ul style="list-style-type: none"> <li>Standard Dorsal Skinfold Chamber SET</li> <li>Lung Imaging Chamber SET</li> <li>Cranial Window SET</li> <li>Abdominal Imaging Window SET</li> <li>Pancreas Imaging Window SET</li> <li>Mammary Imaging Window SET</li> </ul>
	Inhalation Anesthesia System	<ul style="list-style-type: none"> <li>Rodent Animal Inhalation Anesthesia System</li> </ul>
<b>Engine &amp; Studio Software</b>	Image Display	<ul style="list-style-type: none"> <li>Independent 4 single channel display (RGBA channel)</li> <li>Overlay channel display (Selection among RGBA channel)</li> </ul>
	In Vivo Imaging Mode	<ul style="list-style-type: none"> <li>Mosaic imaging (XY), Z-stack imaging (Z), Time-lapse imaging (T)</li> <li>Time-lapse imaging at Multi-position (T- M),</li> <li>Time-lapse &amp; Z-stack imaging (TZ),</li> <li>Time-lapse &amp; Z-stack imaging at Multi-position (TZ- M)</li> </ul>

