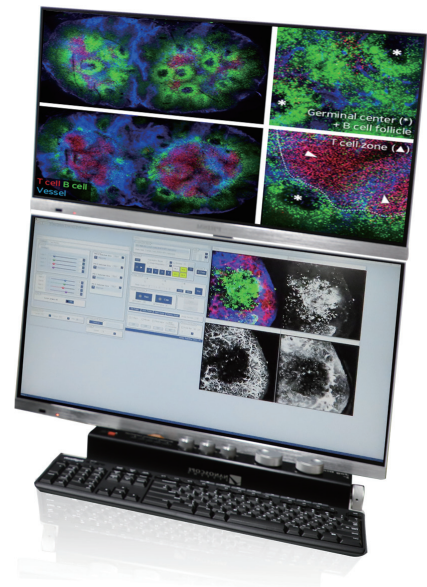
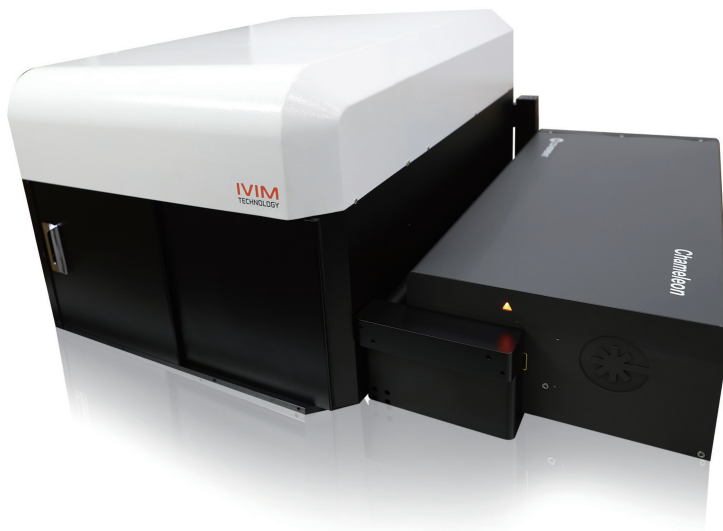


IVM-M (Two-Photon)

Deep Tissue Imaging Platform

IVIM
TECHNOLOGY



Optimal system for users who need to conduct deeper-tissue imaging using less-scattering NIR wavelength

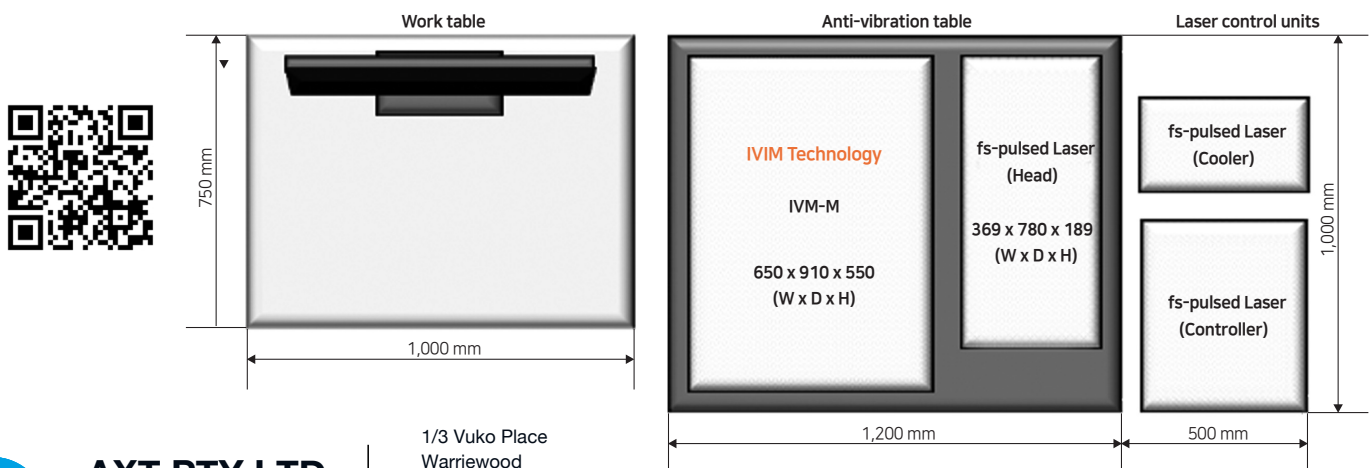
IVM-M is the All-in-One IntraVital Two-Photon Microscopy System, optimized for in vivo imaging experiments. Especially, because it is equipped with a fully-automated tunable fs-pulse NIR laser system, IVM-M is the optimal system for users who need to conduct deeper-tissue imaging using less-scattering NIR wavelength. Full control functionality of the fs-laser system is integrated in the two-photon imaging software for user convenience with various automation algorithms.

Key features of IVM-M (Two-Photon)

- World's 1st all-in-one IntraVital Microscopy for live animal model Fully Integrated In Vivo Maintenance Unit / In Vivo Animal Stage
- Ultra High-speed Imaging (max. 100 fps - 512x512 pixels)
- 4D Animal Motion Compensation (X,Y,Z & Time)
- Laser wavelength tuning for optimal two-photon excitation of a wide-range of fluorescence agents
- Deeper tissue imaging with a longer-wavelength NIR fs-laser system

Specifications

Laser	Tunable Two-Photon Laser Unit	<ul style="list-style-type: none"> • Ti : Sapphire laser • Wavelength : 690-1050 nm, Pulse width < 75 fs, Rep. rate : 80 MHz • Avg. Power > 2.5 W, Dispersion compensation : 0 to -49,000 fs²
Fluorescence Detector	Two Photon Detector	<ul style="list-style-type: none"> • Wavelength : 185 - 760 nm (DAPI, CFP, GFP, YFP, RFP, Cy5, Cy5.5, etc.) • 4 High quantum efficiency PMTs (UV to Near IR, Ultra High Sensitivity, Low Dark Current)
	Variable Emission Filter (optional)	<ul style="list-style-type: none"> • 6 or 2 emission filters can be mounted on each of four detectors
Scan Head	Scanner	<ul style="list-style-type: none"> • Polygonal mirror (Fast axis scanning, Max. 66 kHz) • Galvano scanner (Slow axis scanning, Max. 200 µs/step)
Imaging Head	Objectives	<ul style="list-style-type: none"> • Max. 6 objectives are mountable on S/W controlled motorized turret (1X - 100X) • Compatible for commercial objectives
Image	FOV	• 100 x 100 µm ² - 10 x 10 mm ²
	Pixel Resolution	• Max. 2,048 x 2,048 pixels
	Imaging Speed	• 30 fps @ 512 x 512 pixels (Max. 100 fps), 15 fps @ 1,024 x 1,024 pixels (Max. 50 fps)
Sample Stage	3D Stage	<ul style="list-style-type: none"> • Travel Range : 50,000 x 50,000 x 75,000 µm (XYZ) • Micromanipulation (Max. 0.2 µm resolution) • 3-axis independent control with Jog Dial & S/W
	Specimen Holder	• Flexible-design universal specimen holder can be mounted
		<div>In vivo</div> <ul style="list-style-type: none"> • U-shape window bracket for skins and inner organs • (optional) Homeothermic warming system with heating pad and body temperature probe • (optional) Small animal inhalation anesthesia system • (optional) Long term imaging holders for transplanted window chamber (e.g. Cranial window, Abdominal imaging window, Dorsal skinfold chamber, etc.)
		<div>Ex vivo In vitro</div> <ul style="list-style-type: none"> • A single glass slide or culture dishes
Motion Correction	4-D In Vivo Imaging Motion Compensation & Tracking	<ul style="list-style-type: none"> • XY motion compensation : Averaged image acquisition with motion artifact compensation • Z motion compensation : Image-based sample Z position adjustment for long-term intravital microscopic imaging & sample tracking (Feedback-loop automatic stage control) • T motion compensation : Image-based image XY position adjustment for long-term intravital microscopic imaging & sample tracking (Feedback-loop automatic stage control) • Combination of above three compensation for 4D in vivo motion compensation
Studio Software	Image Display	<ul style="list-style-type: none"> • Independent 4 single channel display (RGBA channel) • Overlay channel display (Selection among RGBA channel)
	In Vivo Imaging Mode	<ul style="list-style-type: none"> • Mosaic imaging (XY), Z-stack imaging (Z), Time-lapse imaging (T) • Time-lapse imaging at Multi-position (T- M), • Time-lapse & Z-stack imaging (TZ), • Time-lapse & Z-stack imaging at Multi-position (TZ- M)



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