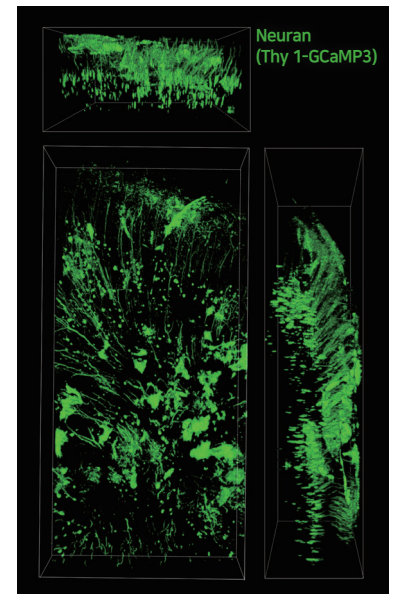
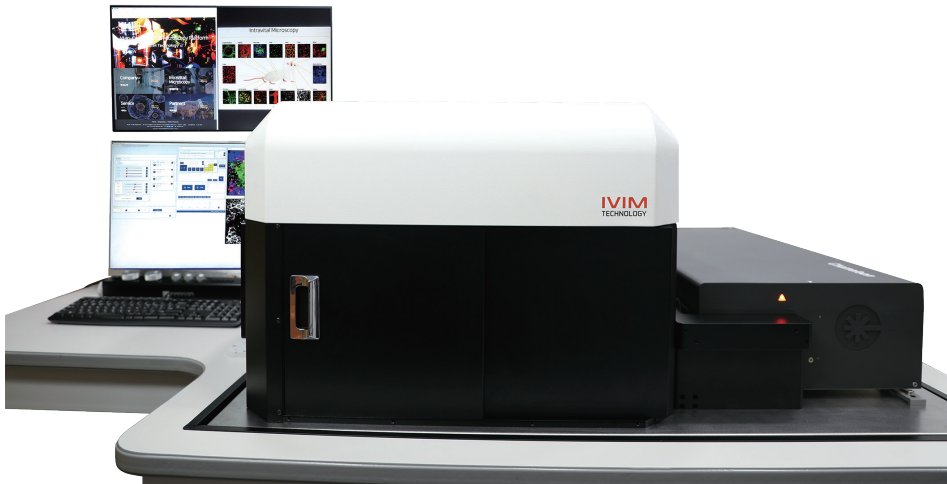


IVM-CM (Confocal & Two-Photon) Dual Mode Imaging Platform

IVIM
TECHNOLOGY



Dual-mode IVM-C (Confocal) / IVM-M (Two-Photon) imaging capability

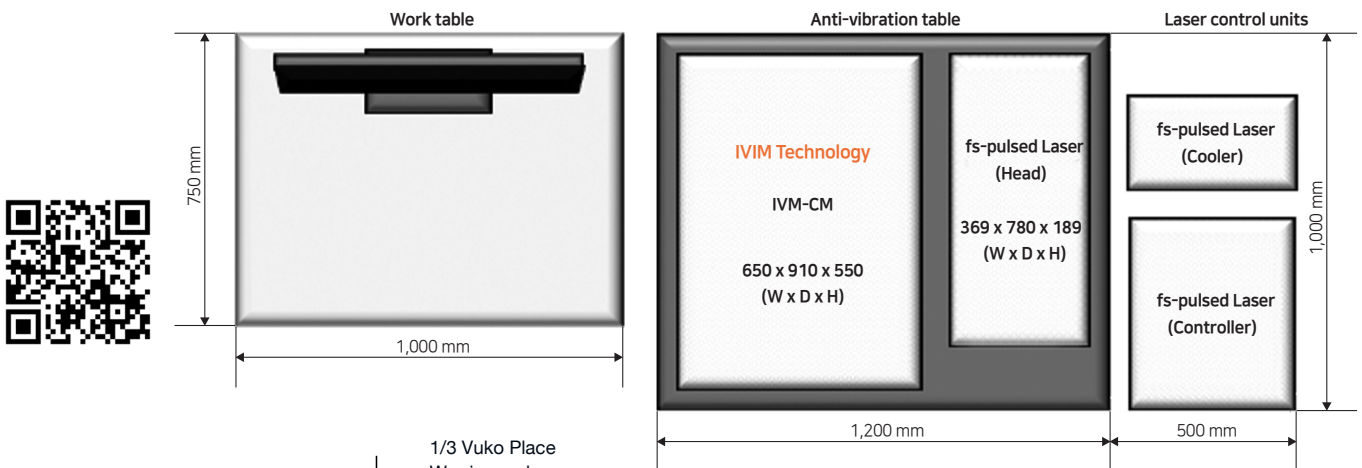
IVM-CM is the All-in-One IntraVital Confocal / Two-Photon Microscopy System, optimized for in vivo imaging experiments. Especially, because both of the confocal and two photon microscopes are integrated into a single-box packaged system, IVM-CM provides the ultimate versatile functionality of the IVM-C and IVM-M in one system.

Key features of IVM-CM (Confocal & Two-Photon)

- World's 1st all-in-one IntraVital Microscopy for live animal model
- 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
- One-click automated transition between Confocal and Two-Photon imaging mode

Specifications

Laser	Confocal Laser Unit	<ul style="list-style-type: none"> • Max. 4 laser unit (405, 420, 445, 473, 488, 505, 514, 532, 561, 633, 642, 660, 685, 705, 730, 785 nm)
	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	Confocal Detector	<ul style="list-style-type: none"> • Wavelength : 185 - 900 nm (DAPI, CFP, GFP, YFP, RFP, Cy5, Cy5.5, etc.) • 4 Ultra-broadband high SNR PMTs (UV to Near IR, Ultra High Sensitivity, Low Dark Current) • 25-2000 μm variable pinhole (16 steps)
	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 eight 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 $\mu\text{s}/\text{step}$)
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	<ul style="list-style-type: none"> • 100 x 100 μm^2 - 10 x 10 mm^2
	Pixel Resolution	<ul style="list-style-type: none"> • Max. 2,048 x 2,048 pixels
	Imaging Speed	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Flexible-design universal in vivo / ex vivo / in vitro specimen holder can be mounted • (optional) Homeothermic warming system, Inhalation anesthesia system, Holders for window chamber
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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