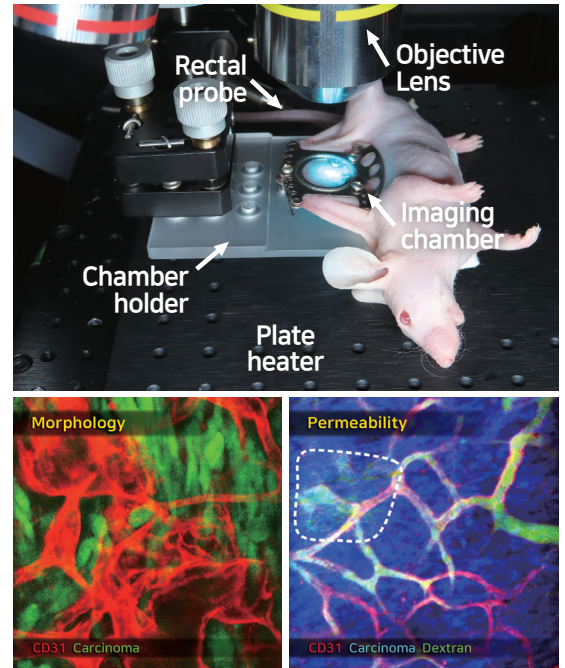


IVM-C (Confocal)

In Vivo Live Cell Imaging Platform

IVIM
TECHNOLOGY



Easy & highly efficient multi-color simultaneous imaging

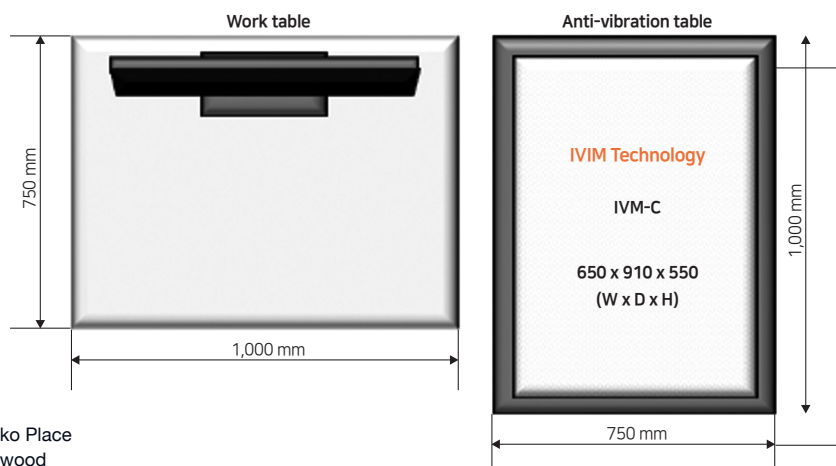
IVM-C is the All-in-One IntraVital Confocal Microscopy System, optimized for in vivo imaging experiments. Especially, because it is equipped with a 4-wavelength laser and 4 high-sensitivity confocal detectors, IVM-C is the optimal system to observe highly diverse, dynamic multi-cellular behaviors in live animals simultaneously with 4 different fluorescence colors.

Key features of IVM-C (Confocal)

- World's 1st all-in-one IntraVital Microscopy for live animal model Fully Integrated In Vivo Maintenance Unit / In Vivo Animal Stage (e.g. Monitoring & Homeostatic Regulation of Animal Vitality)
- Ultra High-speed Imaging (max. 100 fps - 512x512 pixels)
- 4D Animal Motion Compensation (X,Y,Z & Time)
- Customizable design for modifications according to the customer's requests and accommodations for future updates

Specifications

Laser	Confocal Laser Unit	• Max. 4 laser unit (405, 420, 445, 473, 488, 505, 514, 532, 561, 633, 642, 660, 685, 705, 730, 785 nm)
Fluorescence Detector	Confocal Detector	• 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) • 25-2,000 μm variable pinhole (16 steps)
	Variable Emission Filter (optional)	• 6 or 2 emission filters can be mounted on each of four detectors
Scan Head	Scanner	• Polygonal mirror (Fast axis scanning, Max. 66 kHz) • Galvano scanner (Slow axis scanning, Max. 200 $\mu\text{s}/\text{step}$)
Imaging Head	Objectives	• Max. 6 objectives are mountable on S/W controlled motorized turret (1X - 100X) • Compatible for commercial objective
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	• 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
		In vivo <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.)
		Ex vivo In vitro <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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