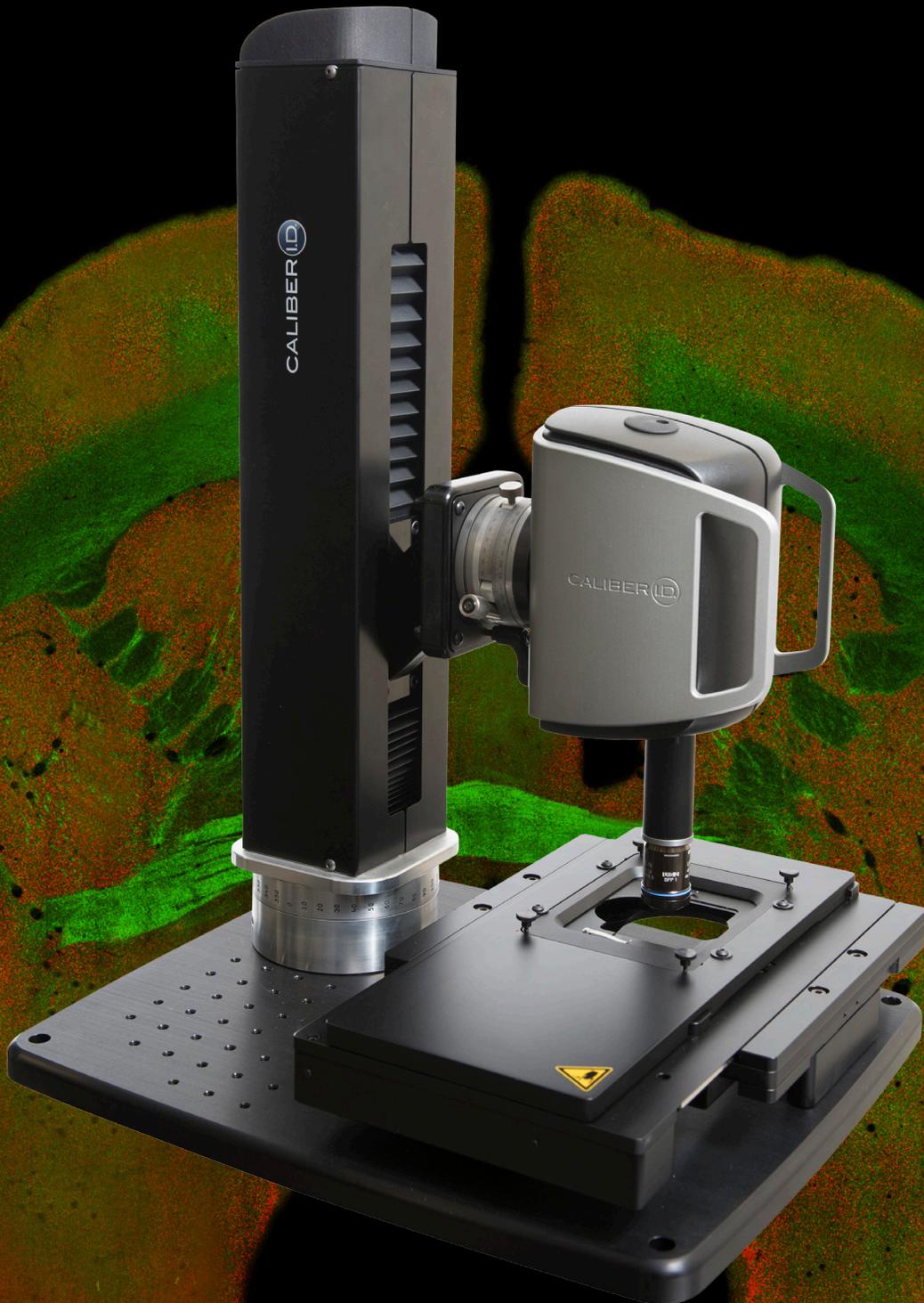


CALIBER ID RS-G4

CONFOCAL IMAGING SOLUTIONS



CALIBER I.D.

Experience Unprecedented Speed, Flexibility and Precision

The global leader in imaging innovation, Caliber I.D. introduces its latest breakthrough in confocal microscopy, the RS-G4. With applications in neuroscience, developmental biology, pathology and translational research, this high-performing system was developed exclusively for the research scientist.

The RS-G4 provides your lab the ultimate in efficiency, slashing image acquisition time while delivering unprecedented capabilities in scanning flexibility and image clarity.

Applications

Neuroscience

Quickly scan large, fixed brain sections and store them for analysis or review of regions of interest.

Developmental Biology

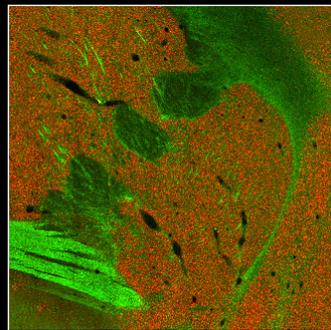
Acquire clear confocal images in animal development, from a few cells to juvenile adult. It's also capable of micro- and macro-imaging.

Pathology

Experience advanced ex-vivo tissue-scanning capabilities that provide confocal details in reflectance and fluorescence.

Translational Research

View with exacting precision everything from micron cellular activity to millimeter views of macro details.

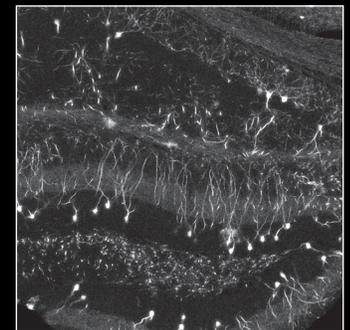
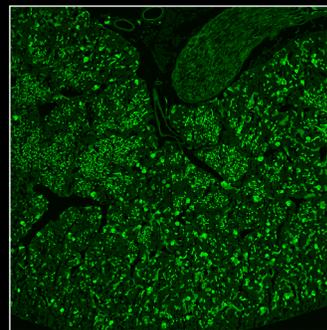


1

Improve lab efficiency

Enhance your lab's performance by capturing more samples in less time using the RS-G4. With its high-speed resonance scanner and scanning stage, the RS-G4 **substantially cuts image-acquisition** compared to conventional confocal imaging systems – with no compromise in quality.

Caliber's proprietary image-stitching algorithms enhance the RS-G4's capabilities even further. You'll acquire and assemble large-format, high-resolution mosaic images at unparalleled speeds.



2

Capture images with critical precision

With **360-degree rotation capability**, the RS-G4's compact high-speed scan head makes it easy to find the precise angle for imaging – an essential feature for larger tissue and embryonic samples. This flexible scan head can also be used for both scanning and fixed stages, depending on your needs.

This flexibility allows in-vivo small animal imaging, providing confocal detail at a cellular level with both reflectance and fluorescence excitation.

Perfect image clarity and accuracy

The combination of the RS-G4 system's hardware and software provides images of outstanding clarity and accuracy. Your strip mosaics are collected and matched with Caliber I.D.'s proprietary **image-stitching technology** that uses a pixel-level algorithm to stitch multiple fields of view into perfectly aligned images with seamless frame-to-frame clarity.

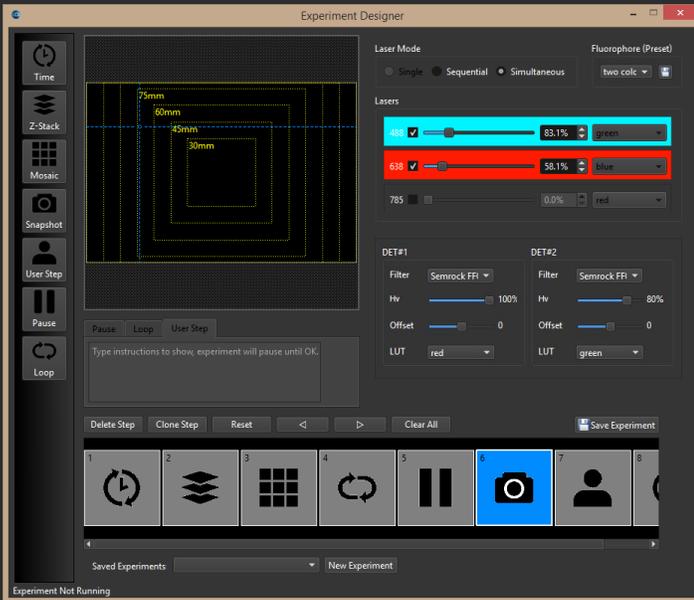
¹ Marmoset Brain – Coronal section of marmoset brain, stained for rabies virus in green and neuronal sonata in red, 20 x 20 mm area scan. Capture time for simultaneous imaging of both 488 and 635 nm channels equaled 4 minutes. Image courtesy of University of Pittsburgh Center for Biologic Imaging - A. Rose, P. Strick and S. Watkins.

² Mouse Brain – Neurons activated during stress test. Image courtesy of Boston Children's Hospital – D. Ehlinger and K. Commons.

RS-G4 Software Suite

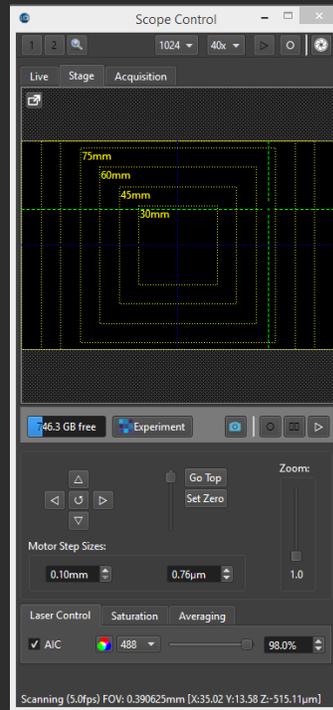
Featuring Caliber I.D.'s proprietary technology for high-precision image stitching, this multi-dimensional imaging software makes it easy to capture exactly what you need from your specimen – in less time.

Using a Windows®-based storage structure, the RS-G4's powerful software maximizes workflow while offering robust acquisition tools to capture and store acquired images.



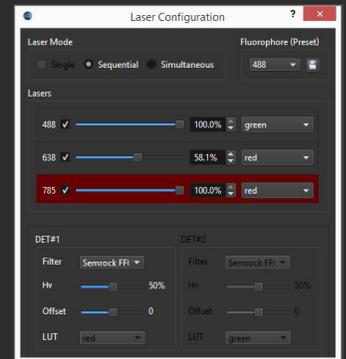
Experimental Mode

Allows user to customize acquisition parameters to experiment utilizing all available scope controls (time, wavelength, x-y position, z stack, multi-point).



Scope Control

Complete control over all microscope functionality for fine tuning acquisition settings before running a longer experiment.



Multi-Channel Image Capture

Offers single channel, sequential and simultaneous capture based on the fluorophore requirements.

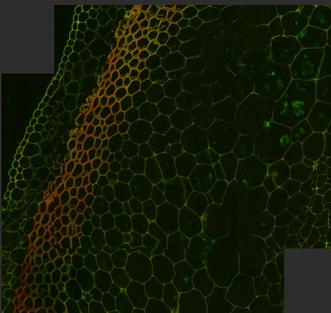
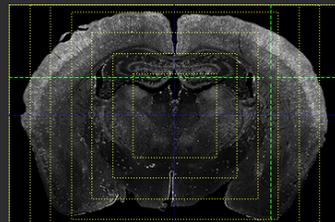


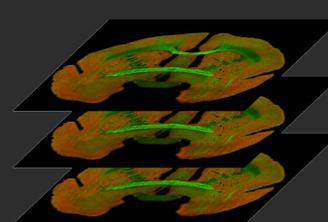
Image Stitching

Seamless stitching of mosaic images with pixel-level algorithm calculating optimal match of adjacent frames.



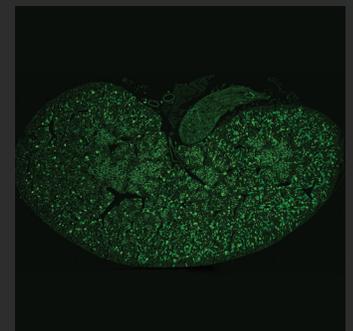
Multi-point Imaging

With scanning stage, the system will record user-defined, field-of-view snapshots, simultaneous or sequential imaging.



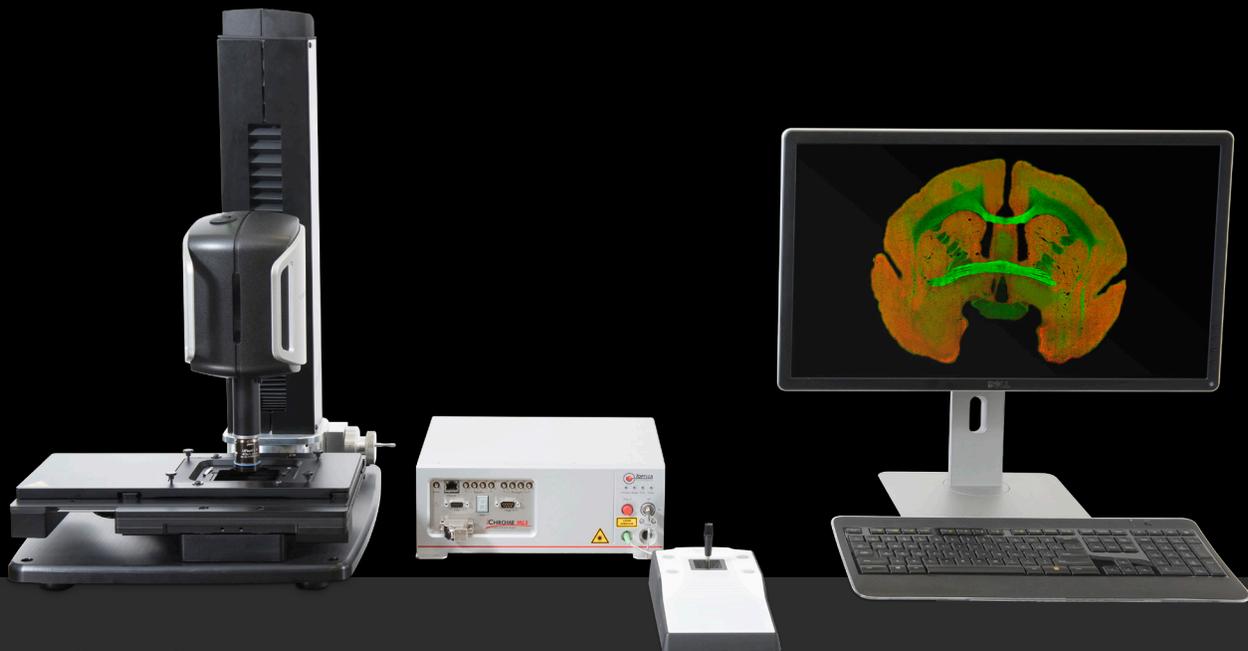
Z-Series

Fast accurate Z-stacks in both single field of view and also mosaic (macro) stacks available.



Large area scan

High-speed mosaic imaging from a few adjacent fields to full stage area of 120 x 80 mm.



Product Specifications

Operating Wavelength/ Laser Operating Power	405 nm – 100 mW 488 nm – 100 mW 561 nm – 100 mW 640 nm – 70 mW 785 nm – 90 mW
Frame Rate	Variable (5–25 fps)
Minimum X, Y and Z Step Size	x-y min is 0.5 μm , z-step 0.76 μm
Precision of Steps	+/- 0.1 μm for x-y, 0.38 μm for z
Detectors	Two PMTs
Wavelength Range	400–850 nm
Zoom (Optical)	Continuous 1 to 4x
Depth of Imaging	200 μm (40x oil/1.3)*
Single Frame FOV	325 μm x 325 μm (40x oil/1.3)
Mapped Field	120 x 80 mm
Z-Stack Range	Up to 6 mm (objective dependent)
Image Digitization	8 bit displayed; 16 bit stored
Displayed Image Resolution	1024 x 1024 pixels
Monitor	27 in, 2560 x 1440 pixels (WQHD) 16:9

Software/Workstation Requirements Caliber ID Research Software – Windows® 8 workstation

Computer Windows® 8 Pro 64-bit, Intel® Quad Core™ i5 Mid tower PC

Software - OS Requirements Microsoft® Windows® 8 workstation. Computer must be purchased with system - NOT user supplied.

Electrical Requirements 110–230 VAC, 50–60 Hz.

Operating Temperature 55°F to 85°F (13°C to 30°C)

Operating Humidity Non-condensing

Physical Dimensions

	Scan Head Only	
Length	18.08 in	6.32 in
Width	15.35 in	5.13 in
Height	22 in	11.55 in
Weight	58 lbs	4.3 lbs

*Contingent upon opacity of sample

Caliber Imaging & Diagnostics, Inc.
100 Burt Road, Suite 203 Andover, MA
01810 USA
Tel: (+1) 585-239-9800
www.caliberid.com

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