Living Image 4.0 software delivers more than just a pretty picture.

Living Image 4.0 software simplifies even the most advanced optical imaging protocol to facilitate success the first time and every time. The software’s new design creates an intuitive, seamless workflow to streamline acquisition through analysis. Living Image 4.0 software provides powerful new features such as wizard guidance for both acquisition parameter setup to post processing. New quantitative 3D Fluorescence (FLIT4) and 3D Bioluminescence (DLIT4) toolsets enable determination pmol of a fluorochrome or number of cells expressing fluorescence or bioluminescence. Co-registration with other imaging modalities or the digital “mouse atlas” provides anatomical context to reconstructed optical data. The result is easy to use, high throughput and enables accurate quantitative data measurements. Living Image 4.0 software operates all IVIS imaging systems with analysis versions compatible with both Windows® and Mac® platforms.

The Ultimate User Experience

Whether you are an experienced imager or just beginning, Living Image 4.0 has the features to insure success. The imaging wizard will help guide you in choosing optimal acquisition settings to post processing parameters in a seamless manner. Monitor instrument usage amongst multiple users with Living Image 4.0’s new auditing tools. User preferences are automatically stored for each user.

Living Image 4.0 software delivers more than just a pretty picture.
Enhanced Fluorescence

Living Image 4.0 will open more solutions available to you in fluorescent optical imaging. Filter selections have been optimized for over 40 different fluorescent proteins and dyes. Alternatively, characterize your dye of choice by performing emission and excitation scans to customize your acquisition settings. New fluorescent scalings are also available for determining efficiencies, cell number or pmol of fluorescent protein or dye. Experience a whole new spectral unmixing (SPUM) interface with tools that reduce cross-talk, allow real color rendering with photographic or X-ray overlay on composite SPUM images. Living Image 4.0 allows total flexibility in image adjustments to extract the best image from your detected signal.

Quantitative 3D Imaging

Living Image 4.0 introduces a whole new way of reconstructing and quantitating optical signals for both bioluminescent (DLIT4) and fluorescent (FLIT4) sources. Get clear signal location, 3D visualization and quantitation in terms of cell number of cells expressing bioluminescent or fluorescent protein or pmols of a fluorescent compound. Harnessing IVIS Spectrum’s unique transillumination feature, images are acquired at multiple transillumination points to scan a source intensity. The source is then reconstructed using Caliper’s unique reconstruction algorithms for Fluorescence Image Tomography for 4.0 (FLIT4). In combination with a surface topography scanning, the reconstruction can be co-registered with CT, MRI, PET or the organ atlas for anatomical context. 3D Diffuse Luminescence Image Tomography (DLIT4), like fluorescence imaging, uses light scattering and absorption to determine depth and intensity of signal. However, images are acquired at several different wavelengths to improve localization of the source position. Living Image 4.0 enables you to monitor both DLIT and FLIT together with multi 3D overlays. Calibrate your cell lines or fluorochomes within well plates to determine absolute cell number or pmols. Keep a library of calibrated models for future use!
## Hardware & Software Requirements

For optimum performance, the Living Image 4.0 software requires hardware and software that meet or exceed the following minimum requirements.

<table>
<thead>
<tr>
<th>Minimum Hardware Requirements</th>
<th>PC</th>
<th>Macintosh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>Core 2 Duo CPU</td>
<td>2 GHz</td>
</tr>
<tr>
<td>RAM Recommended</td>
<td>2 GB or greater</td>
<td>2 GB or greater</td>
</tr>
<tr>
<td>Virtual Memory</td>
<td>2 - 4 GB</td>
<td>2 - 4 GB</td>
</tr>
<tr>
<td>Hard drive available space</td>
<td>75MB, Recommended: 500 MB to 1 GB</td>
<td>75MB, Recommended: 500 MB to 1 GB</td>
</tr>
<tr>
<td>Graphics card</td>
<td>128 MB RAM, OpenGL 1.5 or later</td>
<td>128 MB RAM, OpenGL 1.5 or later</td>
</tr>
<tr>
<td>Display</td>
<td>17 inch or larger</td>
<td>17 inch or larger</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minimum Software Requirements</th>
<th>PC</th>
<th>Macintosh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating system</td>
<td>Windows 2000/Windows XP, Windows Vista, Windows 2003 Server or later</td>
<td>Mac OS 10.4 or later</td>
</tr>
</tbody>
</table>

NOTE: The Living Image software only supports English operating systems.

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### Complete toolset for 2D Bioluminescent and Fluorescent Imaging
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Spectral unmixing of bioluminescence, auto fluorescence and multiple fluorochromes from one another
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Quantify the depth, point location, and brightness of an optical source using Planar Spectral Imaging
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Instrument control and image acquisition controls the IVIS Imaging System and acquires images
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Automatically calibrate photon flux to NIST standards
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Automatically archive camera information and user-specified annotations with each image
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Automatically draw ROIs and compute photon flux
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Imaging Wizard User Guidance
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### User Auditing
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Real time fast imaging including sequential mode imaging and accumulation mode
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Automated X-Ray overlay to photographic, fluorescent and bioluminescent images
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Quantify the depth, geometry, and brightness of an optical source in 3-dimensional space using DLIT4 or FLIT4 tomography
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Quantify cell number or pmol of fluorescence compound using DLIT4 or FLIT4 tomography and well plate calibration tools
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Co-register organs from the Digital Mouse Atlas with a 3D image
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Import and co-register CT or MRI information with a 3D image
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II

### Export an image to 2D DICOM-compliant format
- √ IVIS Spectrum
- √ IVIS Lumina XR
- √ IVIS Kinetic
- √ IVIS Lumina II