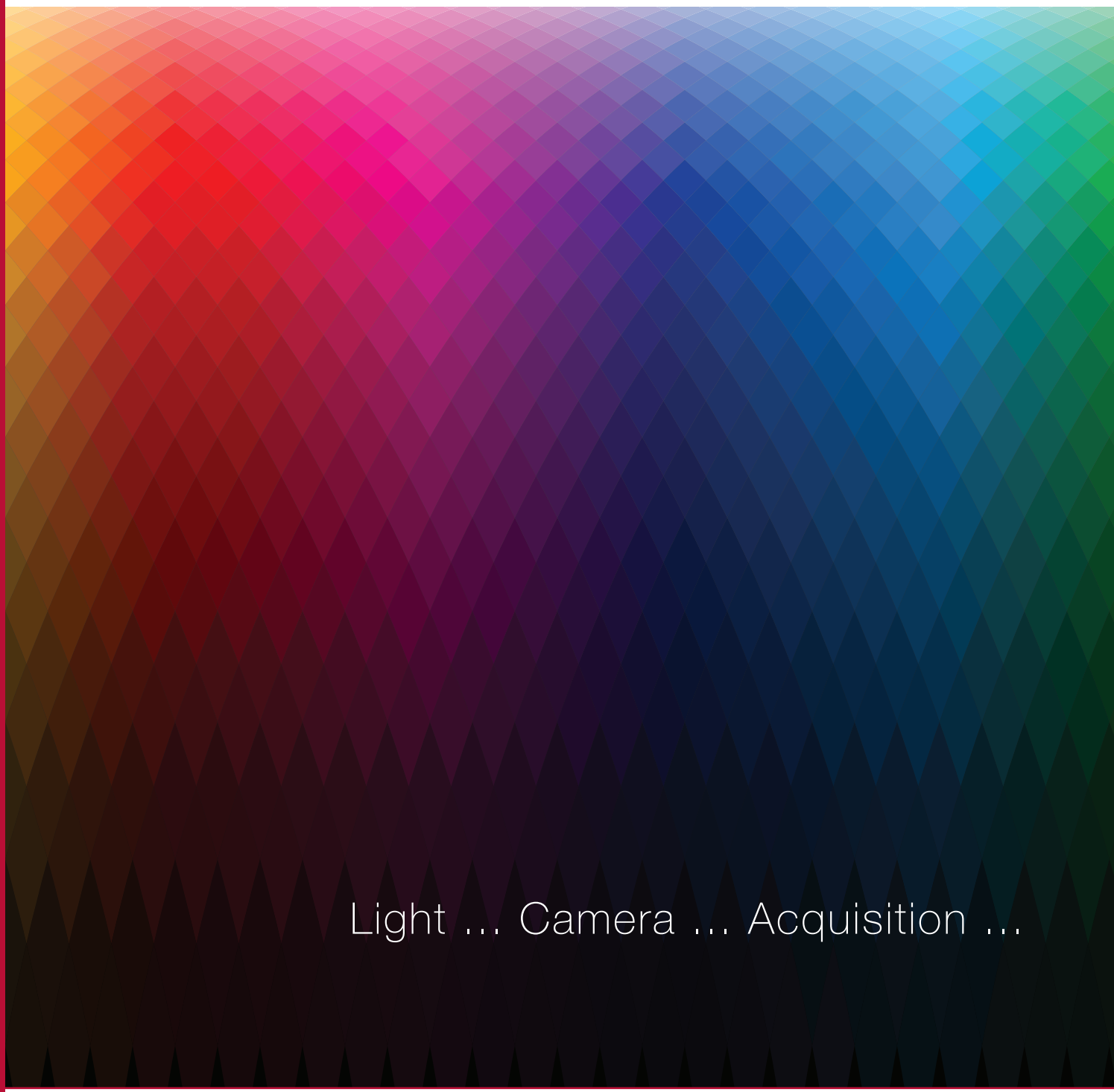
HCImage

Image Acquisition and Analysis Software



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HCImage Analysis

HCImage Analysis provides comprehensive control of Hamamatsu cameras, microscopes, stages and other peripheral devices, giving you the ability to perform multidimensional imaging with ease-of-use and flexibility.
Choose from an extensive range of image processing tools that can be used during live image capture or post acquisition analysis. Data are saved in a hierarchical file structure, allowing dynamic interaction with images and measured data that can be easily displayed in a variety of graphical formats or exported to Excel®.

HCImage DIA

HCImage Dynamic Intensity Analysis (DIA) is optimized for high-speed processing and intensity analysis over time, including live viewing of images and data simultaneously. The updated interface was designed to reduce the number of steps required to set up and run an intensity analysis experiment, while providing the necessary tools to get the job done. A simple interface allows for quick setup of complex multiple channel, multi-site XYZ scans.

HCImage IPA

HCImage Image Processing and Analysis (IPA) provides an extensive selection of image processing and image analysis tools to enable quantitative analysis on a wide range of complex image sequences. Imaging tools are selected using customized icons to derive workfiles (macros), which are saved and can be used multiple times. Images are saved with measured data allowing dynamic interaction between images, objects, graphs, and tables to provide instant user feedback.

HCImage Live

HCImage Live is a basic imaging application that is included with the purchase of a Hamamatsu camera. It provides comprehensive control of Hamamatsu cameras using the DCAM-API driver. HCImage Live includes the necessary tools for basic image acquisition, processing and analysis, all in a flexible, easy-to-use application.

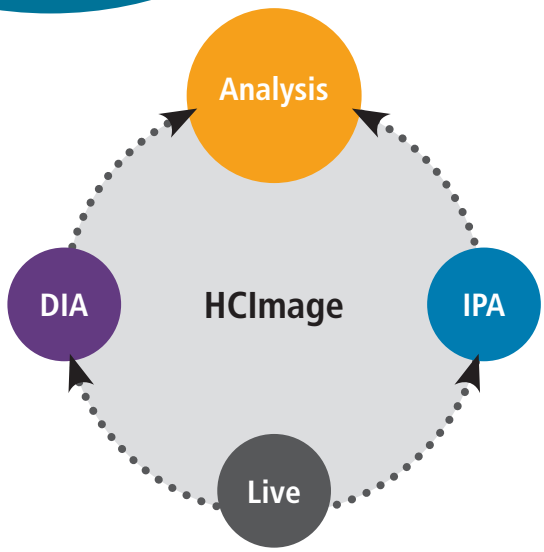
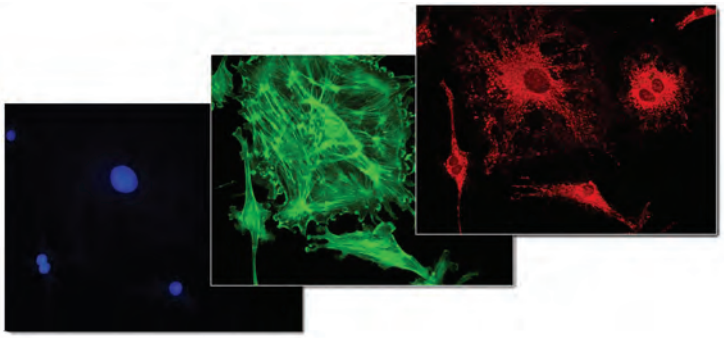
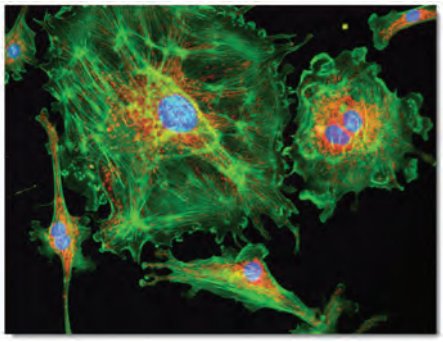


Image Acquisition

Multichannel

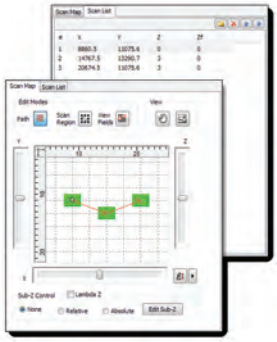
Acquire multicolor images and data sets with independent controls combining multiple wavelengths and observation methods (DIC, phase contrast, etc.).





Automated Multidimensional Acquisition

Advanced control of microscopes and hardware devices allow for easy setup and repeatability of complex multidimensional experiments.



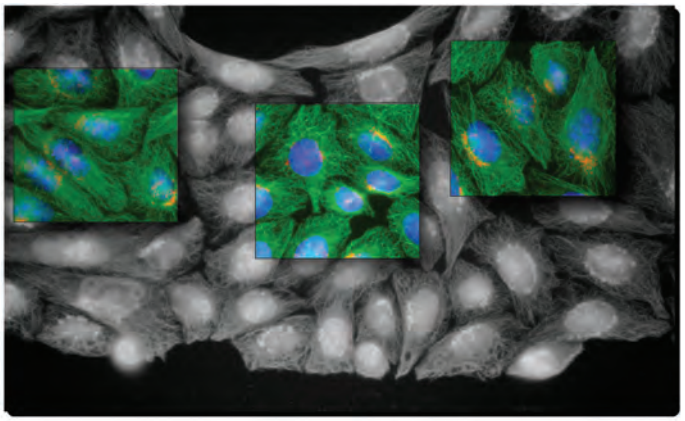
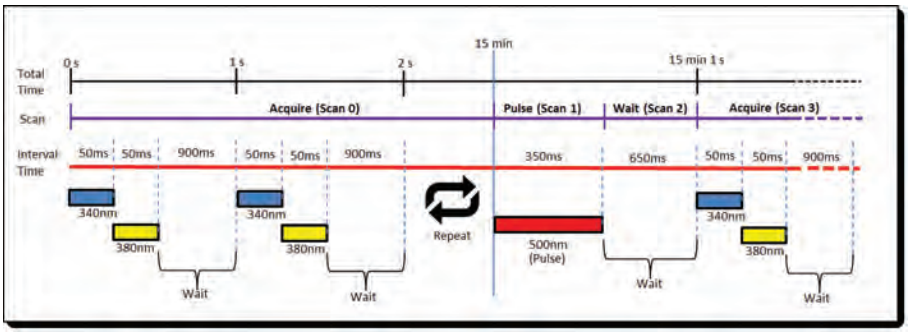


Image Streaming

Acquire images at the maximum frame rate of the camera, with the option to review the acquired sequence and define the images to be stored.

Scheduler

Design custom time-lapse experiments with variable events such as triggering options for simultaneous photo activation.



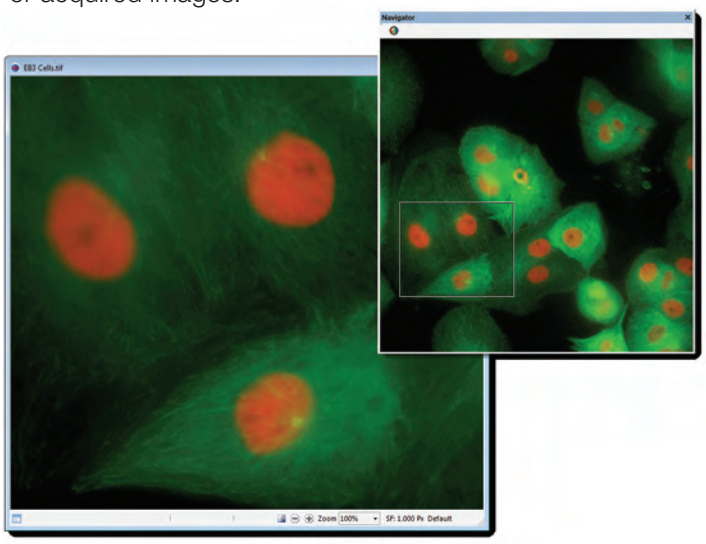
Display and Processing

Image Stitching

Create a single high resolution montage image by stitching multiple adjacent images acquired from a multiple site scan.

Image Navigator

Navigate high resolution images without getting lost in the process. Use the zoom and pan controls on live or acquired images.



Histogram

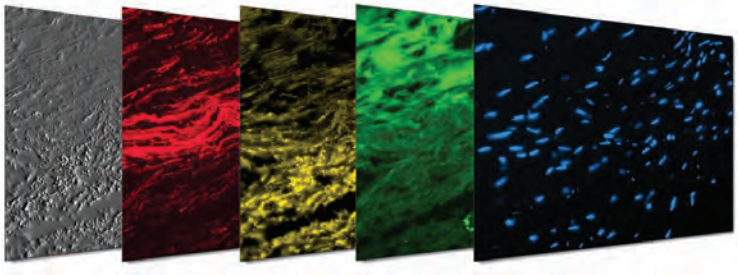
Displays the intensity distribution of pixel values of an image or a region of interest. Measured statistics including mean, minimum, maximum, and standard deviation are displayed in the histogram.

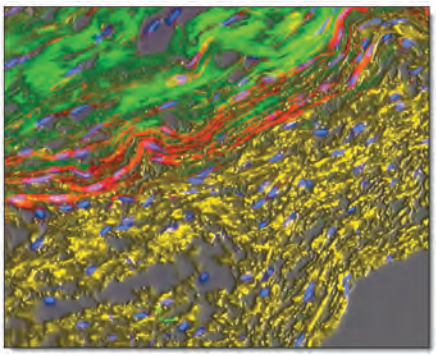
Image Processing

Enhance image details for feature extraction using spatial filters, edge detection, and image arithmetic operations.

Image Overlay

Merge multiple monochrome images acquired at different wavelengths or observation methods to create a single image.

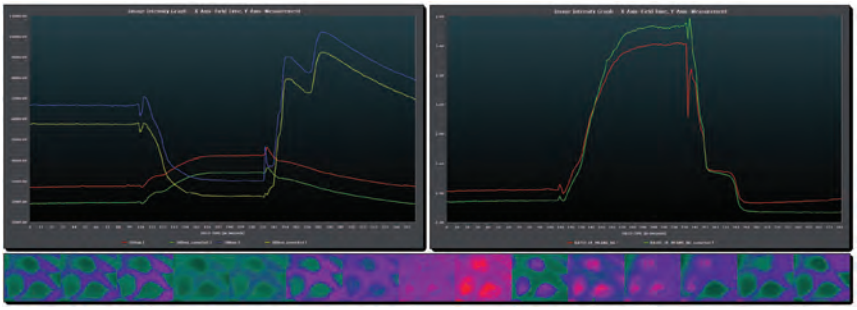




Measure and Analyze

Intensity Analysis

HCImage DIA is optimized for high-speed processing and intensity analysis over time, including live viewing images and data simultaneously. Plot individual, multiple or average measurements over time including correcting for background fluorescence.



Measuring and plotting of data is available during or post-acquisition. Image sequences saved in a data document can be reviewed, measured and exported. Measured data can be presented as a list, statistics, spreadsheet or graphically.

Automated Measure

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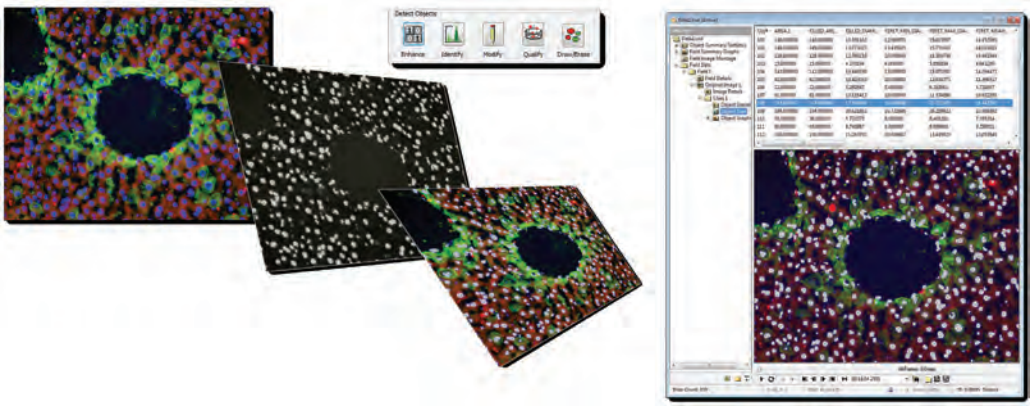
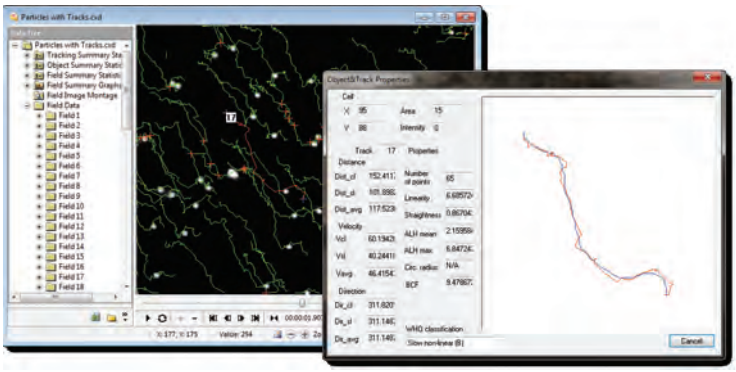


Motion Tracking

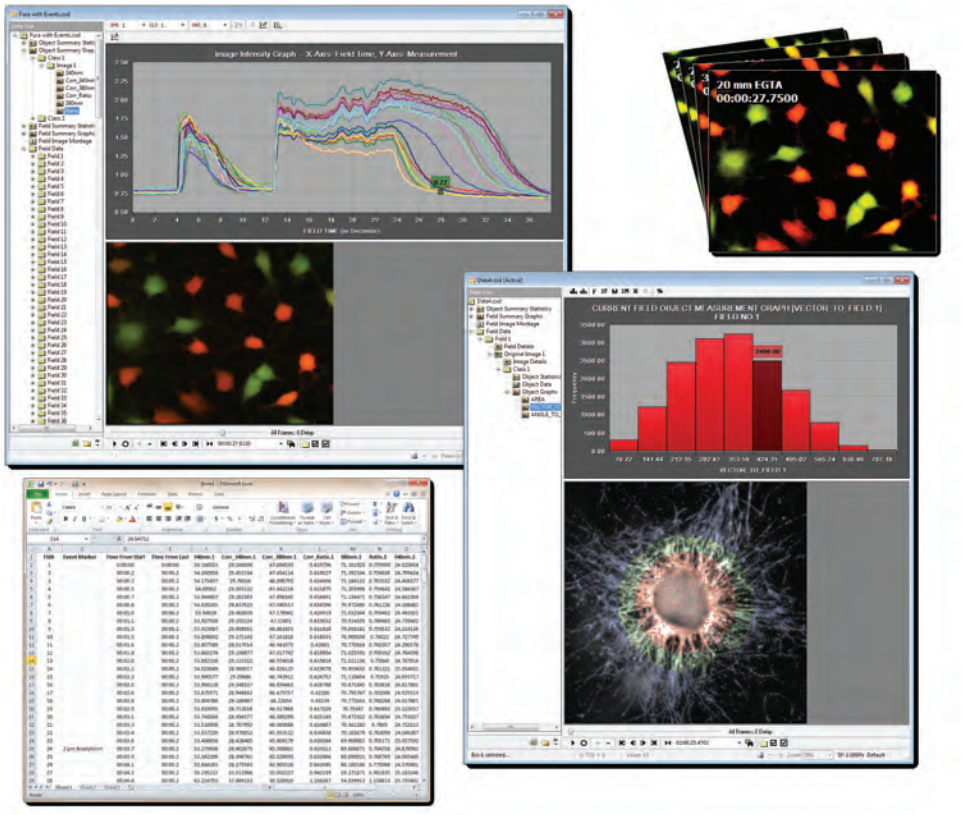
Rapid tracking of multiple objects across acquired image sequences. Determine object velocity and view individual object's trajectory.



Viewing the Data

Dynamic Interaction

Data are saved in a hierarchical file structure, allowing dynamic interaction with images and measured data that can be easily displayed in a variety of graphical formats or exported to Excel®.

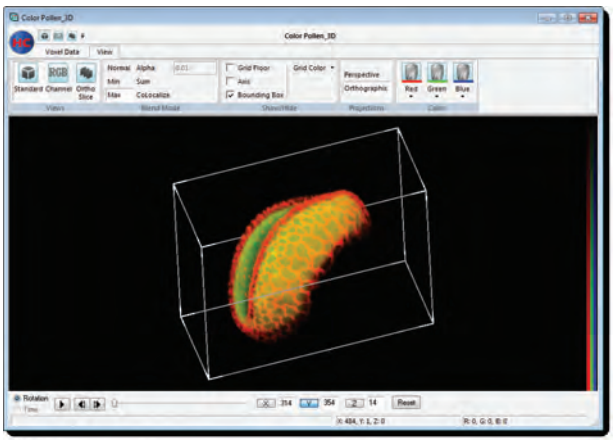


Batch Exporting

This time saving feature provides an easy way to convert acquired data into commonly used image formats, including: data documents (.cxd), movie files (.avi), and image files (.tiff).

3-D Visualization

The Visualizer reconstructs and renders a multidimensional data set for interactive 3-D viewing. The new interface provides easy access to the interactive controls providing instant feedback when working with rendered images.



Feature Comparison

	Live	DIA	IPA	Analysis
Windows® 7 and Windows® 8 Compatible	✓	✓	✓	✓
Full DCAM-API Support	✓	✓	✓	✓
Dual Cameras	–	✓	✓	✓
TTL I/O	–	✓	✓	✓
Filter and Shutter Control via Parallel Port I/O	✓	✓	✓	✓
Automated Filter and Shutter Devices Support	–	✓	✓	✓
Motorized X, Y, Z Stage Support	–	✓	✓	✓
Automated Microscope Support	–	✓	✓	✓
High-speed Streaming to Memory or Disk	✓	✓	✓	✓
Time-lapse Scheduler	–	✓	✓	✓
Multidimensional Scans	–	✓	✓	✓
Live Image Processing	✓	✓	✓	✓
Batch Exporting	✓	✓	✓	✓
Normalized Stitching Algorithm of Images in a Montage	–	✓	✓	✓
Dynamic Intensity & Ratio Plotting	–	✓	–	✓
Basic Image Analysis (area, count, intensity, length, etc.)	✓	✓	✓	✓
Full Range of Morphological Measurements	–	✓	✓	✓
Macro Building using Workfiles for Image Processing and Analysis	–	–	✓	✓
Automated Tracking of Multiple Objects	–	–	✓	✓
3-D Visualization on Image Sequences	–	✓	✓	✓

Minimum System Requirements

OS	Windows® 8 (32- and 64-bit) Professional Windows® 7 (32- and 64-bit) Professional SP1	**RAM**	2 GB or more for 32-bit operating system 4 GB or more for 64-bit operating system
CPU	Dual core or better	**Display**	256 MB Video Card or better
HDD	500 GB or more	**Drive**	DVD-ROM

Technical Support

Please contact us at **(1) 724-935-3600** or at **hcsupport@hamamatsu.com**.

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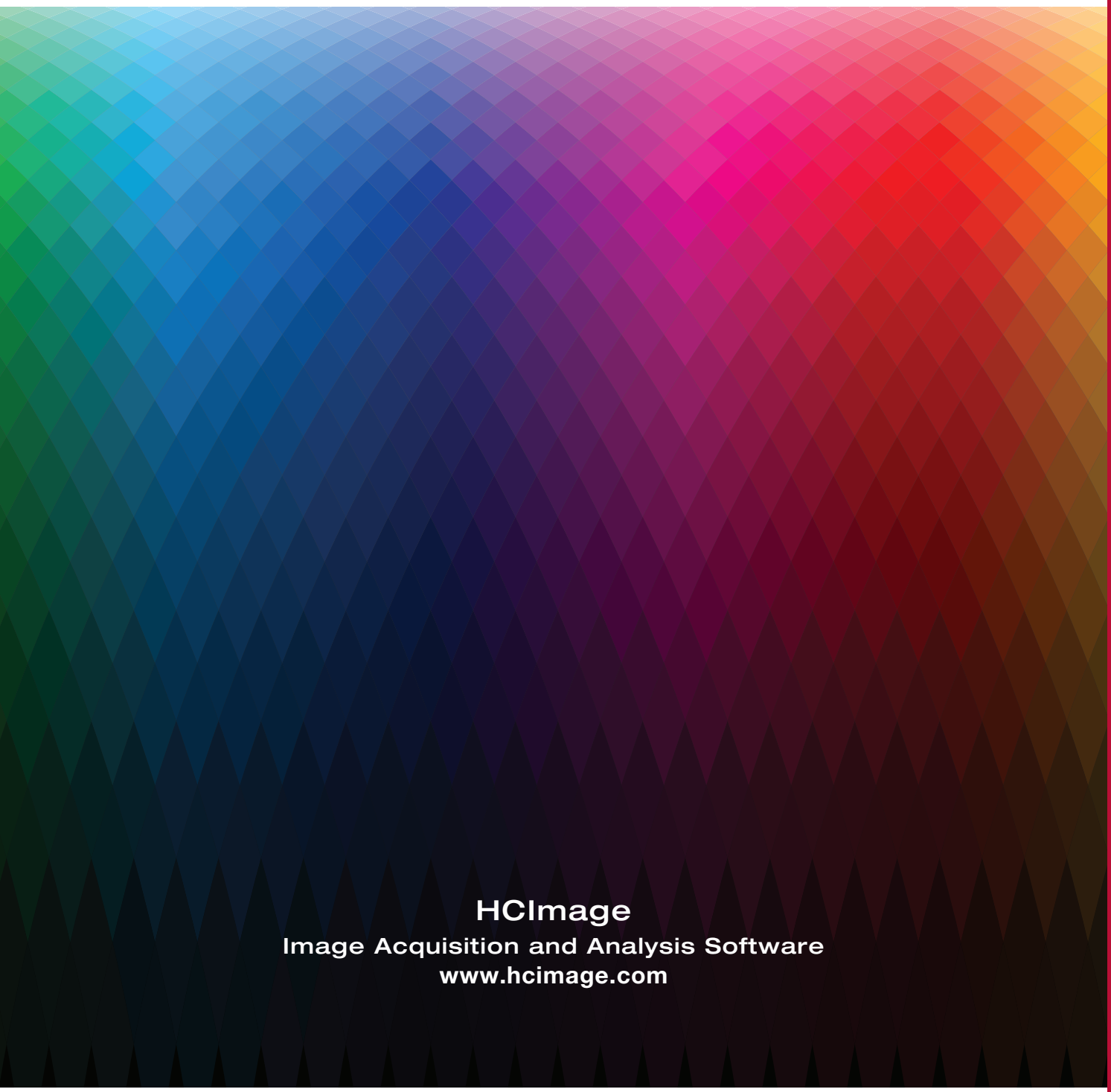

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www.hcimage.com