



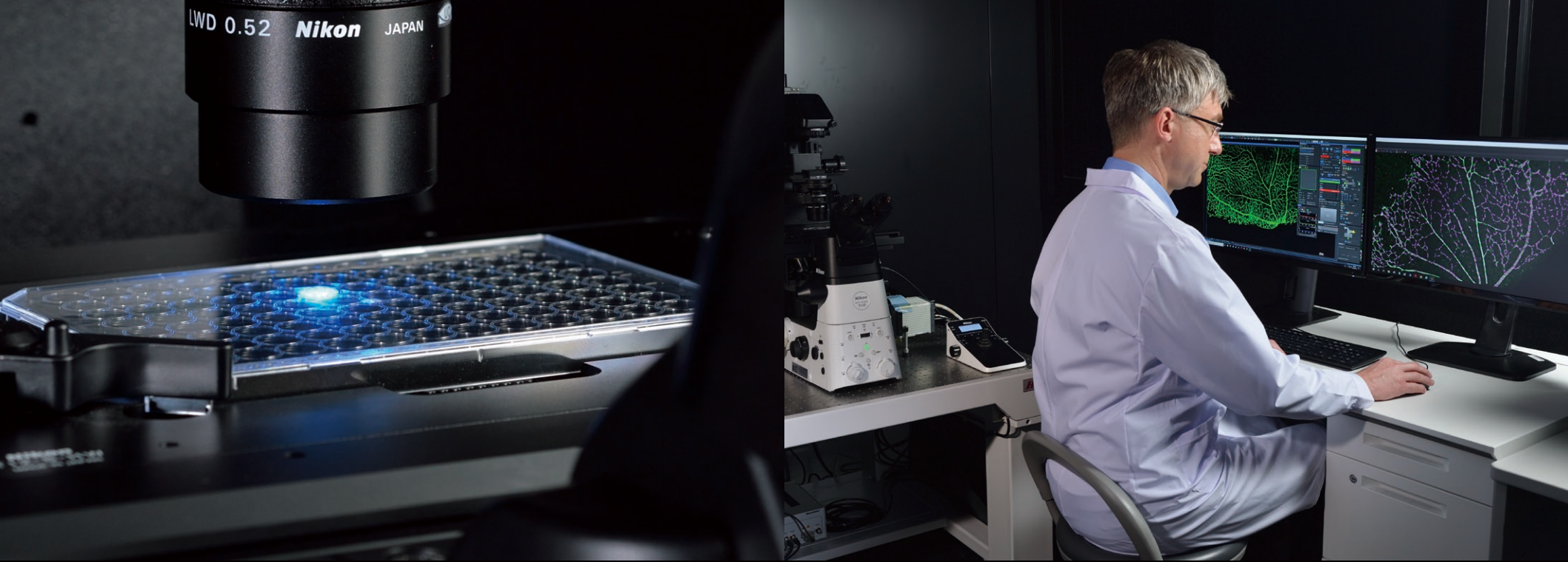
Imaging Software NIS-Elements

The screenshot displays the NIS-Elements software interface. The main window shows a fluorescence microscopy image of a cell with green and red channels. The interface is divided into several panels:

- ND Acquisition:** Contains settings for the experiment, including a time schedule table with columns for Phase, Interval, Duration, and Loops. It also has checkboxes for 'Close Active Shutter when Idle', 'Perform Time Measurement (0 ROb)', and 'Switch Transmitted Illuminator off when Idle (0.01 s)'. There are buttons for 'Load', 'Save', 'Remove', and 'Run now'.
- XYZ Overview:** Shows a 3D coordinate system with X, Y, and Z axes and a 'Move Stage to Selected Point' button.
- AI LFOV Compact GUI:** Features a 'Scan' button, 'Eye Port', 'AG', and 'Step On' controls. It includes a 'Scan Size' of 1024 and a 'Pinhole' of 1.0. There are also 'AU calculated for' values and a 'Z Drive' section with 'Move by step[μm]' and 'Z[μm]' settings.
- OC Panel:** Shows 'General' and 'ONOS' settings, including 'DAPI', 'ICFP', and 'Cherry' channels. It has a 'TO Pad' section with 'Nonresonance' and 'Escape Z' options.
- LUTs:** Displays two graphs showing intensity profiles for different channels, with a 'Hold Shift key to control all channels' instruction.
- Filters:** Includes 'TurnerLo', 'Analyzer Slider', 'Condenser', and 'Polarizer' settings.
- TI2 LAPP Pad:** Shows a diagram of the microscope's optical path with 'TI2' and 'LAPP' components.

The bottom status bar shows 'APO LWD 20x WD NS (L24296 μmobj @ 512 x 512)' and 'XY: [-2.154, -0.490] μm, Z: 483.260 μm, Holo2: 0.860 μm'. The bottom left corner indicates 'Full Screen', 'Docked Controls', 'Measurement', and 'NIS-Elements'.

Shedding New Light On **MICROSCOPY**



NIS-Elements is the total imaging solution for your research

Nikon's universal software platform, NIS-Elements, combines powerful image acquisition, analysis, visualization and data sharing tools. With fully customizable user interfaces and software modules, NIS-Elements can serve as a simple interface for photo-documentation and also power complex, conditional workflows with automated imaging and analysis routines. Graphical programming tools enable users to easily create custom analysis and acquisition workflows.

Triggering


6D Acquisition

Super-Resolution

3D Visualization

Time-Lapse



Confocal	Tracking	
Large Image Stitching	Deconvolution	
Volume Analysis	TIRF	Photostimulation
Digital I/O	Clinical Applications	Ca²⁺ Imaging
High Content Analysis	Multiphoton	Optogenetics

One software platform for all imaging systems

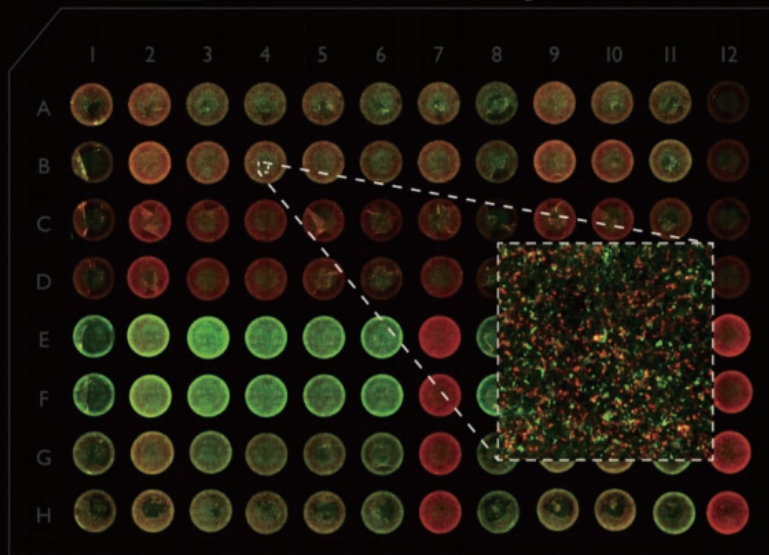
Nikon believes that having a single software platform for all imaging modalities is vital. NIS-Elements provides the same interface, control, workflow, and terminology whether it's used for widefield, confocal, or super resolution imaging. With one platform to learn, users can easily switch between microscope systems when their applications require different imaging modalities. Imaging results from different Nikon systems can also be easily combined and analyzed to expand your research direction.



Total acquisition-to-analysis solution for high-throughput screening assay

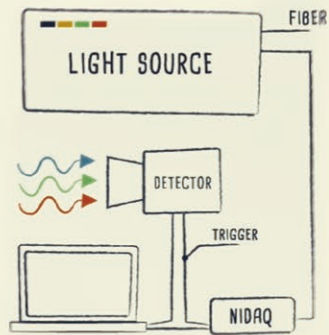
The NIS-Elements HC (High-Content Analysis) provides streamlined high-speed, automated well-plate acquisition, data review, analysis and management for multiple well-plate experiments.

The HC interface simplifies experiment setups using setup wizards. Users can easily define acquisition parameters including well-plate configuration, plate handling, autofocusing, filter switching and detectors.

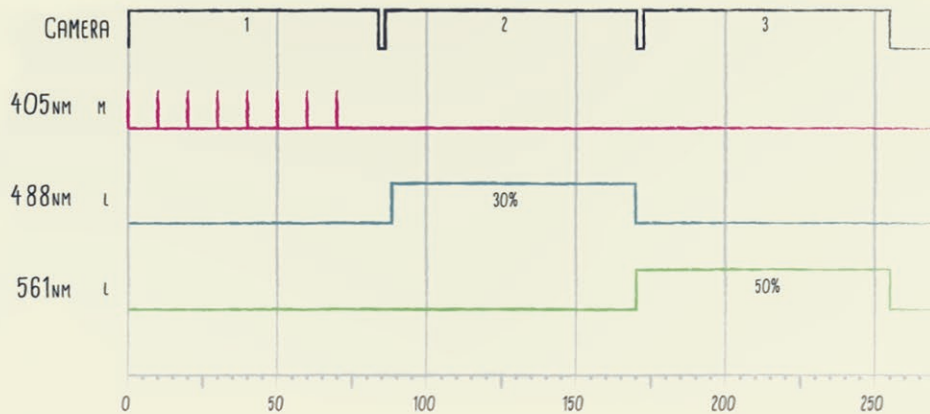


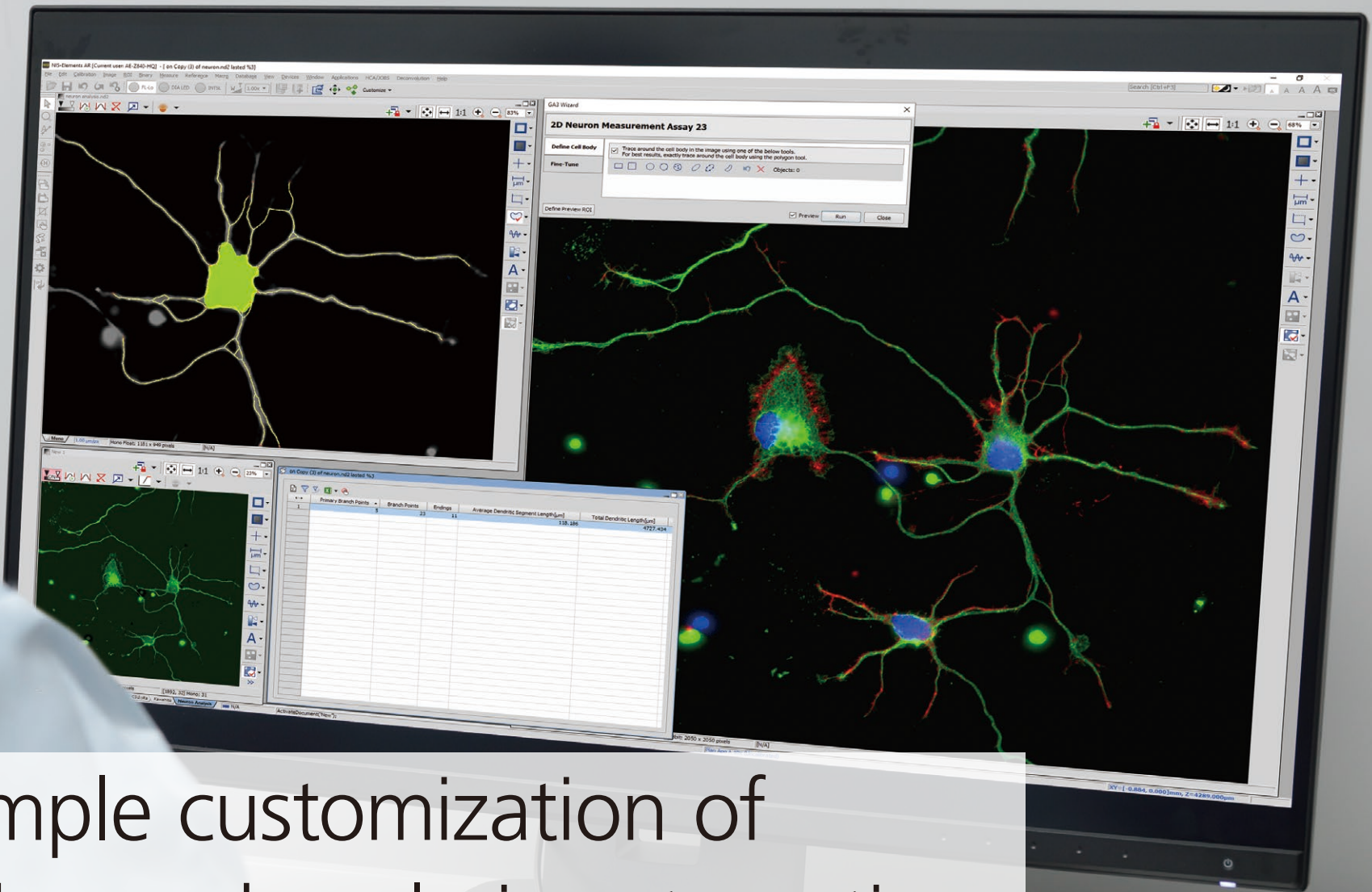
Completely customize to your research

From individual hardware selection and optimization to fine-tuning acquisitions routines and custom multi-channel binary analysis - you are in complete control of tailoring and creating a system built and inspired by your imagination.



LASER LINES	405NM	488NM	
	5%		
		30%	
			GREEN





Simple customization of advanced analysis automation

The NIS-Elements General Analysis (GA) option enables easy customization of complex analysis or statistical flows such as 3D volume and 4D tracking by simply dragging and dropping analysis templates, ensuring accurate and reliable analyses.



Toward increasing intelligence

Nikon continuously and expansively develops the image processing functions of NIS-Elements, allowing high-precision, intelligent processing using cutting-edge AI technology. The advanced processes such as distinguishing sample from noise, which in the past have required a great deal of time and experience, are now carried out automatically, dramatically increasing experiment analysis efficiency and reducing cell damage.



Share your data

NIS-Elements

NIS-Elements is designed to get your data "out". There are many options for file and data export to move files, metadata, and analysis results to other formats, other software platforms and even data sharing between programs to leverage other components of your research routines.

Evolves with your research

The software is on the move, always transforming with the demands of research. With NIS-Elements, you can continue to grow your system over time (e.g. upgrade the detector, add additional detectors, change light sources, add a confocal, add high-throughput functionality, etc.).



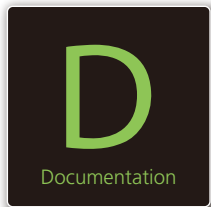
Nikon's flagship NIS-Elements package

Optimized for advanced research applications, Nikon's flagship software package features fully automated image acquisition, advanced device control and powerful analysis and visualization tools.



Standard research application package

Developed for standard research applications such as analysis and photodocumentation of fluorescent imaging, NIS-Elements BR features up to four-dimensional acquisition and advanced device control capabilities.



Photodocumentation/clinical application package

Software package for photo-documentation and clinical applications. Include basic measuring and reporting tools.



Confocal imaging package

Dedicated interface for Nikon's confocal and multiphoton systems, providing easy instrument setup and streamlined operation. Incorporates many of the features of NIS-Elements AR for advanced acquisition, image processing, analysis, visualization and data sharing capability.



Confocal resolution enhancement

Higher resolution confocal images can be easily generated with a single click. The software assesses the captured image and automatically determines processing parameters to achieve enhanced resolution.



High Content Analysis

Total acquisition-to-analysis solution for high-content imaging applications. Seamless workflow from microscope and peripheral device control to data analysis and management.

Package Comparison

CAPTURE		Ar	Br	D	C	ER	HC
Confocal support					✓	✓	option
Multidimensional Imaging	Time Lapse	✓	✓	✓	✓	✓	✓
	Z-Stack*	✓	✓	✓	✓	✓	✓
	Multi Point*	✓	✓	✓	✓	✓	✓
	Multichannel*	✓	✓		✓	✓	✓
	4D with Experimental Preview		option				
	6D with Experimental Preview	option			✓	✓	✓
Acquisition	AVI Acquisition	✓	✓	✓	✓	✓	✓
	JOBS Acquisition	option			option	option	option
	Simultaneous Dual / Triple / Quad Camera	option			option	option	option
	Triggered Device Control	option			option	option	option
	DAQ (TTL/ Analog) Control	option	option		option	option	option
	Incubation	option	option		option	option	option
	Volume Contrast	option			option	option	option

* Note: Drivers for third party device control/automation are required.

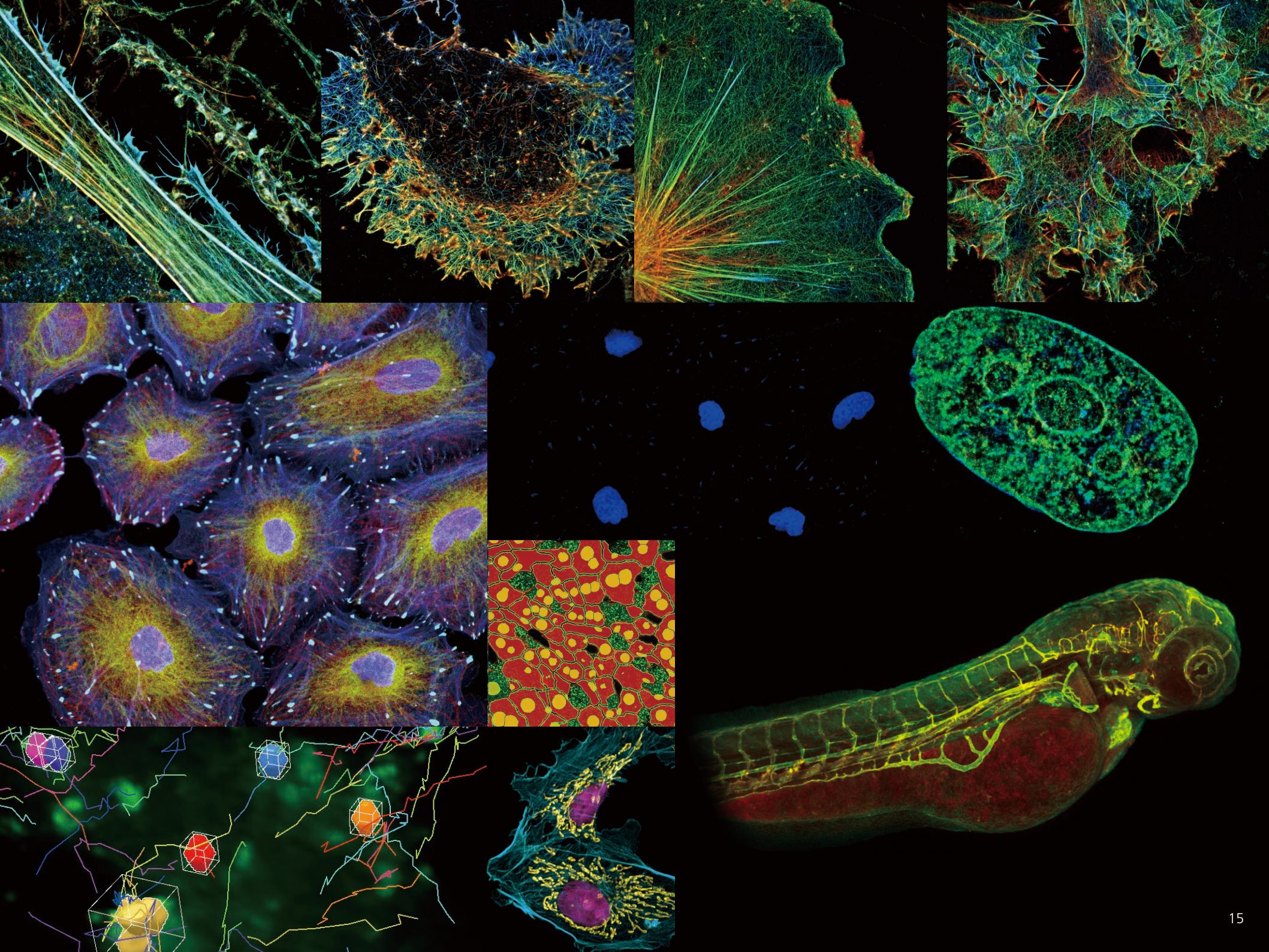
DISPLAY & PROCESSING		Ar	Br	D	C	ER	HC
Image	Annotation	✓	✓	✓	✓	✓	✓
	Image Filters, Morphology	✓			✓	✓	✓
	Image Arithmetic	✓	✓		✓	✓	✓
	Denoise.ai				✓	✓	option

DISPLAY & PROCESSING		Ar	Br	D	C	ER	HC
Image layers	Multi-dimensional image viewer	✓	✓	✓	✓	✓	✓
	Binary Layers	✓	✓	option	✓	✓	✓
2D/3D image creation	Snapshot	✓	✓	✓	✓	✓	✓
	Movie	✓	✓	✓	✓	✓	✓
	Interactive Movie / Volume Rendering	✓	✓		✓	✓	✓
Interactive image display / Image manipulation	Tiling (Montage) View	✓	✓	✓	✓	✓	✓
	Max / Min Projections	✓	✓		✓	✓	✓
	Ratio Viewing and Graphing	✓			✓	✓	✓
	Plate View, Heat Maps, Sample Labeling	option			option	option	✓
	Volume View: 3D ND Crop	✓	✓		✓	✓	✓
	Manual Channel Alignment	✓	✓	✓	✓	✓	✓

CAPTURE, DISPLAY & MULTIFUNCTION		Ar	Br	D	C	ER	HC
Multi functional imaging	Live Compare	✓	option	option	✓	✓	✓
	HDR (High Dynamic Range)	✓	option	option	✓	✓	✓
	EDF / Real Time EDF	option	option	option	option	option	option
	2D Large Image Stitching (Free shape)	✓	✓	✓	✓	✓	✓
	3D Large Image Stitching (Free shape)	✓	✓		✓	✓	✓
	FRET/Custom Equation Editor	option			option	option	option
	Deconvolution (2D Real Time/2D/3D)	option			option	✓	option
Macro	Macro Creation	✓	✓	✓	✓	✓	✓
	Macro Debugger & Variable View	✓	option	option	✓	✓	✓
User management	Multi-User Environment	✓	✓	✓	✓	✓	✓

CAPTURE, DISPLAY & MULTIFUNCTION		Ar	Br	D	C	ER	HC
Database	High Content Database	option			option	option	✓
	Image Database (non HC)	option	option	option	option	option	option
Report	Report Generator	✓	✓	✓	✓	✓	✓

MEASUREMENT		Ar	Br	D	C	ER	HC
General measurement	Segmentation	✓	✓		✓	✓	✓
	Auto-Measurement	✓	✓	option	✓	✓	✓
	ROI(Region of Interest) Tools & Statistics	✓	✓		✓	✓	✓
Multi-dimensional measurement	Time-Measurement	✓	option		✓	✓	✓
	Volume Measurement	✓			✓	✓	✓
	3D Volume Measurements	option			option	option	option
	Z profile & 3D EDF Measurements	option	option	option	option	option	option
	Kymograph	✓			✓	✓	✓
Tracking	2D/3D Object Tracking	option			option	option	option
Classifier	Pixel Classifier	✓	✓	✓	✓	✓	✓
	Object Classifier-Advanced Segmentation	option			option	option	option
	Colocalization	✓			✓	✓	✓
High content	Live/Dead	option			option	option	✓
	High Content Intensity Image	option			option	option	✓
	Cell Counting	option			option	option	✓
	General Analysis (Automated image analysis)	option			option	option	✓
Industrial	Grain Sizing, Cast Iron & Filter Analysis	option	option	option	option	option	option



Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. June 2019
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WARNING

TO ENSURE CORRECT USAGE, READ THE CORRESPONDING MANUALS CAREFULLY BEFORE USING YOUR EQUIPMENT.

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*Products: Hardware and its technical information (including software)

Monitor images are simulated.

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