OLYMPUS®

Your Vision, Our Future

Intuitive Operation. Seamless Workflow.

Simplified Experiment Design—More Time for Research

Olympus cellSens software simplifies your workflow:

-Intuitive user interface.

-User-specified configurations to fit your application.

-Seamless functionality from image capture through report creation.

Spend less time with your imaging software and make faster progress toward your research goals.
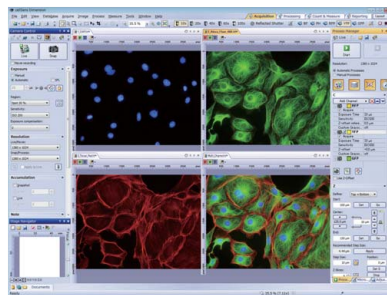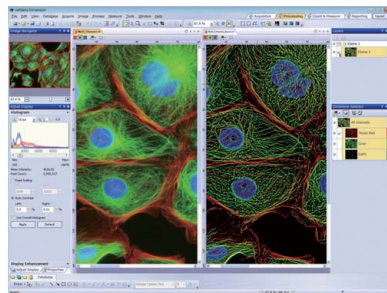
Image

Image Capture

The Process Manager and Experiment Manager make multidimensional imaging simple. Capture multicolor, time-lapse, and z-stack images with ease. Select the appropriate capture button, add relevant parameters, and click "Start."
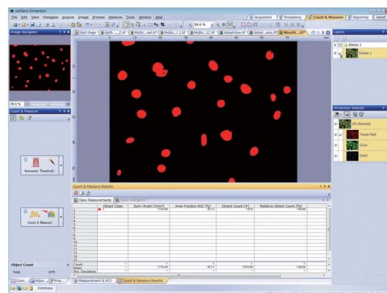
Process

Viewing and Processing

View your data in the layout that works well for you. Take advantage of advanced image processing functions, such as stitching, extended focus, deconvolution, and unmixing to prepare your data for analysis.

Analyze

Measurement and Analysis

cellSens features region of interest, phase analysis, and cell counting capabilities. Export raw measurement data to MS Excel or a cellSens workbook with a single click.

Report
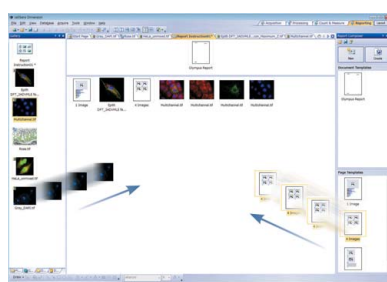
Collaboration and Communication

Customizable database and reporting solutions enable active collaboration with colleagues and coworkers. These functions make it simple to manage, share, and distribute images and analysis.

CellSens Software Improves Productivity

cellSens Dimension software provides seamless operation from image acquisition with high-end devices through report creation, Standard provides simple operation with the necessary function for experiment, and Entry provides image snap/movie acquisition with the minimum functions. All tools can be optimized according to your needs.
Create your customized workflow without stress.

Solutions

Each cellSens software package can be expanded for specific applications by adding the available "Solutions" noted below.

Dimension

Multiposition	Count & Measure	CI Deconvolution	Well Plate Navigator	Ratio/FRET
Photo Manipulation	Database Core	Database Client	NetCam	Life Sciense Analysis

Standard

Multiposition	Count & Measure	Manual Process	Database Core	Database Client
Confluency Checker	NetCam			

Entry

Manual Process	Interactive Measurement	Encoded Device	Database Client

cellSens functions

✓ : included functions /   : optional solutions

Category	Function	DIMENSION	STANDARD	ENTRY
Layout	User experience customization	✓	✓	
View	Overlay multiple images	✓	✓	
	Document groups for side-by-side image comparison	✓	✓	✓
	Movie playback	✓	✓	✓
	Tile view (multiple images in a single data set shown side-by-side)	✓	✓	✓
	Slice view for orthogonal plane viewing of 3D or time-lapse data sets	✓		
	Voxel viewer for isosurface and volumetric rendering of 3D and 4D data sets	✓		
Image Acquisition	Snap/movie acquisition	✓	✓	✓
	Time-lapse at specified interval	✓	✓	
	Automated multi-wavelength	✓	✓	
	Z-stack	✓		
	Multi-dimensional (XYZT and wavelength)	✓		
	Graphical Experiment Manager	✓		
	Manual panoramic imaging (Instant MIA and Manual MIA)	✓	Manual Process	Manual Process
	Multiposition visitation and stage navigator	Multiposition	Multiposition	
	Automated panoramic imaging (auto MIA, requires motorized stage)	Multiposition	Multiposition	
	Instantly create EFI image (manual or motorized Z)	✓	Manual Process	Manual Process
	Simultaneous Multi-Color Imaging (requires two identical cameras** or image splitter)	✓		
	Live deblurring	✓		
	High Dynamic Range Imaging (HDRI)	✓		
	Multi-Well Plate Acquisition	Well Plate Navigator and Multiposition		
Image Processing	Geometry/combine/filter processing	✓	✓	
	Fluorescence unmixing	✓		
	Brightfield unmixing	Count & Measure		
	Deblurring (No/Nearest Neighbor, Wiener Filter)	✓		
	Kymograph	✓		
	2D deconvolution	✓		
	3D deconvolution (constrained iterative deconvolution with GPU processing)	CI Deconvolution		
Image Analysis	Region and line measurements	✓	✓	
	Phase analysis	✓		
	Object analysis and classification	Count & Measure	Count & Measure	
	Interactive measurement	✓	✓	✓*
	Intensity plot over time/z	✓		
	Colocalization	✓		
	Object counting (Manual)	✓	✓	
	Object tracking	Tracking and Count & Measure		
	Online ratio and kinetics	Ratio/FRET		
	Ratio analysis (off-line)	✓		
	FRET analysis	Ratio/FRET or Life Science Analysis		
	FRAP analysis	Photo Manipulation or Life Science Analysis		
	Cell count and confluency measurements	✓	Confluency Checker	
Documentation and Collaboration	Automatically compose MS Word reports	✓		
	Database image and data management solution for microscopy	Database Core	Database Core	
	Open database and load records/documents from database	Database Client	Database Client	Database Client
Remoting	Remote live image viewing	NetCam	NetCam	

* Three points angle, four points angle, arbitrary line, closed polygon, polyline and perpendicular line only. Interactive measurement option is needed to add other measurement tools and make exporting Excel possible.
**Following cameras are supported: iXon3 897, Zyla5.5(USB3.0), Zyla4.2(USB3.0/CamLink), Neo, iXon Ultra 888, ImagEM X2, Orca Flash 4.0 (V2/V3)

Products with confirmed functionality

Company	Type	Products	DIMENSION	STANDARD	ENTRY
Olympus	Camera	DP21, DP22, DP26, DP27, DP73*1, DP74*3, DP80*1	✓	✓	✓
	Microscope	BX43, BX53, BX63, BX61, BX61WI, IX83, IX73, IX81, SZX16A	✓	✓	
		IX81-ZDC, IX81-ZDC2, IX3-ZDC, IX3-ZDC2	✓		
	Peripherals	BX-DSU, IX3-DSU, IX2-DSU, U-CBF	✓		
	Motorized XY stage	BX3-SSU, IX3-SSU	Multiposition	Multiposition	
Olympus Soft Imaging Solutions	Camera	XM10, XC10, XC30, XC50, UC30, UC50, UC90*2, LC20, LC30, SC30, SC50, SC100, SC180	✓	✓	✓
	Peripherals	cellTIRF (multi-line, single line), MT20, USB-ODB converter, Real Time Controller (U-RTC and U-RTCE), U-FCB, U-STC	✓		
Hamamatsu	Camera	ORCA R2, ORCA 03, ORCA 05, ORCA ERG, ORCA-Flash 2.8, ORCA-spark, ImagEM, ImagEMX2, ORCA-Flash 4.0 V2, ORCA-Flash 4.0 V3, ORCA-Flash 4.0 LT, ORCA-Flash 4.0 LT PLUS	✓		
	Image Splitter	W-View Gemini	✓		
Q-Imaging	Camera	MicroPublisher 3.3 RTV, MicroPublisher 5 RTV		✓	
		Monochrome: EXi Blue/Aqua, QIClick	✓		
		Retiga Exi/SRV/2000R/2000RV/4000R/4000RV/6000	✓		
		Color : EXi Aqua	✓		
		OptiMOS, Rolera Thunder	✓		
Photometrics	Camera	CoolSNAP HQ2	✓		
		Evolve 512 Delta, Prime (PCI-Express), Prime 95B	✓		
	Image Splitter	Dual View DV2 / QuadView QV2	✓		
Andor	Camera	iXon X3 897, iXon Ultra 897, iXon Ultra 888, Zyla4.2/Zyla4.2 PLUS (Camera-link, USB3.0), Zyla5.5 (Camera-link 10tap, USB3.0), Neo	✓		
Jenoptik	Camera	ProgRes C3, ProgRes C5	✓	✓	
Vincent Associates	Shutter	Uniblitz shutter (VCM-D1, VMM-D1, VMM-D3)	✓	✓	
CoolLED	Light Source	pE-1, pE-2, pE4000	✓		
Excelitas	Light Source	X-Cite 120 PC, X-Cite exacte, X-Cite XLED1, X-Cite110LED, X-Cite120LED	✓		
	6-channel LED light source	X-Cite TURBO	✓		
Lumencor	Light Source	SOLA SEII, SEII 365, Spectra X	✓		
Sutter	Light Source	Lambda DG4	✓		
	Shutter, FW, Z-drive	Lambda 10-3/10-B	✓		
Prior	Motorized XY stage	ProScan (I, II, III) , Optiscan II, III	Multiposition		
	Shutter, FW, Z-drive	ProScan (I, II, III) , Optiscan II, III	✓		
	Piezo Z (control via Real Time Controller)	NanoScanZ NZ100	✓		
Ludl	Motorized XY stage	Mac 6000	Multiposition		
	Shutter, FW, Z-drive	Mac 6000	✓		
Objective Imaging	Motorized XY stage controller	Oasis 4i	Multiposition		
	Z-drive controller	Oasis 4i	✓		
Märzhäuser	Motorized XY stage	Tango, Pilot Stage	Multiposition		
	Z-drive controller	Tango	✓		
Physik Instrumente	Piezo Z (control via Real Time controller)	PIFOC P-721	✓		
Applied Scientific Instrumetation	Motorized XY stage	MS-2000	Multiposition		
	Z-drive controller	MS-2000	✓		
National Instruments	Digital TTL device	NI USB-6501	✓		
Yokogawa	CSU	CSU-X1, CSU-W1	✓		

*1 DP73/80 supports only Windows 7/8.1/10 64-bit. *2 UC90 is not available in some areas. *3 DP74 does not support Windows 8.1/10 32-bit.

Compatible image formats

Read and write	JPEG, JPEG2000, TIFF, BMP, AVI, PNG, VSI, PSD (Adobe Photoshop), Big TIFF, OIR (FLUOVIEW format)
Read only	GIF, OIF/OIB (FLUOVIEW format), Cell, STK (MetaMorph), MRC (Medical Research Council)

System requirements

OS*	Microsoft Windows 10 Pro (32-bit/64-bit) Microsoft Windows 8.1 Pro (32-bit/64-bit) Microsoft Windows 7 Ultimate/Professional (32-bit/64-bit) with SP1
OS Language	English, Simplified Chinese, Japanese, German, Russian (Entry and Standard) and Italian (Entry and Standard)
CPU	Intel Core i5, Intel Core i7, Intel Xeon Recommended for high speed image acquisition: QuadCore
RAM	4GB for general applications, 8GB or more is recommended for high-speed image acquisition
Graphic card	1280 x 1024 (min. 1024 x 768) monitor resolution with 32 bit video card with separate graphics memory (no integrated graphics processor with shared memory)
Port	USB 2.0 port to connect devices to the system FireWire A to connect devices to the system (BX61, IX81, SZX2-MDCU, IX3-DSU etc...) Serial (RS232) to connect devices to the system (BX61, IX81, SZX2-MDCU etc...) Additional PCI/PCIe slots as necessary to connect third party peripherals (principally third party cameras) with proprietary interface cards
HDD	1 GB for installation Recommended for high speed image acquisition: Solid State Drive (SSD)
Drive	DVD drive (Read: DVD-R DL)
Web Browser	Recommended: Microsoft Internet Explorer 11

*cellSens Dimension and Dimension Desktop are only compatible with the 64-bit OS.

Software version update

Version update is available for 1 year following software activation and revision update is always available.
Update licenses are available and provide access to the latest version of cellSens regardless of installation date.

Image data courtesy of:
Hiroo Ueno, Ph.D. Department of Stem Cell Pathology, Kansai Medical University
(cover page)

www.olympus-lifescience.com

OLYMPUS CORPORATION
Shinjuku Monolith, 2-3-1 Nishi-Shinjuku, Shinjuku-ku, Tokyo 163-0914, Japan