

OLYMPUS

Your Vision, Our Future

Digital Imaging Solutions

cell^{FL}/cell^{EB}

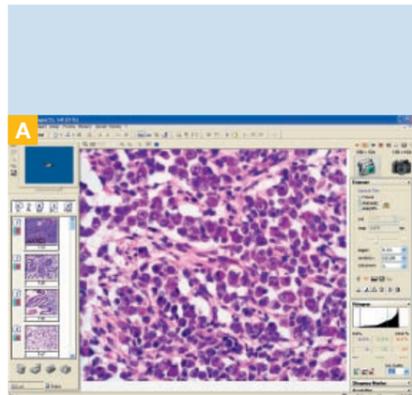
cell* Family

Image Acquisition and Documentation Systems for Life Science Applications



ACQUISITION AND DOCUMENTATION SYSTEMS FOR LIFE SCIENCE APPLICATIONS

The Olympus cell* family comprises a comprehensive series of mutually compatible imaging systems, combining excellent performance with user-friendly operation. The first two members of the family, cell[®] and cell[®], are entry-level software packages for image acquisition, reporting and archiving for standard life-science-related applications.



cell[®] – acquisition software for taking the first steps into digital imaging microscopy

cell[®] is the ideal stepping stone into digital image acquisition in routine and research microscopy.

Graphical user interface

A Olympus cell[®] provides a well-structured and ergonomic alignment of functionally independent windows. The ViewPort is the primary working window, which can display either a single image, or a group of several images. Interpretation of the image is simplified by the ability to view the same image document simultaneously in multiple ViewPorts. This synchronisation makes it possible to compare images directly on the PC screen. Olympus cell[®] offers a generous selection of file formats and labelling options, even when working with the live image.

Hardware and experiment control

B Olympus IX2, BX2 and SZX2 series motorised microscopes can be controlled by cell[®], along with the latest generation of Olympus high-resolution and high-sensitivity cameras (colour and monochrome). A number of other hardware solutions can also be integrated via the cell[®], which reads out and records all device parameters during acquisition to ensure that the same parameters can be used repeatedly.

Olympus Camera Control OCC

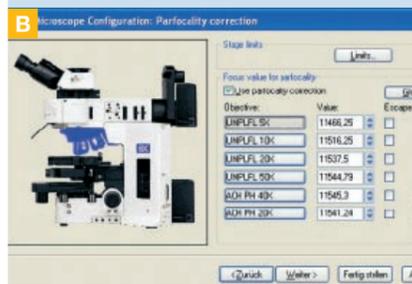
The intuitive camera control window in cell[®] ensures that live image display and acquisition are very efficient and easy. All available functions for the respective camera are supported by the application. The Olympus camera control is modular in structure and the extended functionality can be displayed or hidden as desired. Numerous online functions are available for use during image acquisition, including shading correction, contrast enhancement and live overlays. Automatic exposure control, live histogram displays and the overexposure indicator make it simple to exploit the camera's entire dynamic range, while avoiding blooming or glare. A sharpness indicator aids the user in generating an optimally focused image. The live image can subsequently be directly linked with LUTs (Look-Up Tables), which can be used during live imaging for visualising saturation effects, or for generating false colour.

Handling multidimensional images

Olympus cell[®] is able to handle multidimensional images with great ease. Navigating from one dimension to another is highly intuitive and can be easily animated.

Manual time-lapse

A snapshot series of images can be acquired, stored as AVI-format movies and visualised in standard media players. All the tools required to load, visualise and animate AVIs are available directly in the cell[®] navigation tools.



cell[®] – basic image documentation software

cell[®] is a well-balanced imaging system for documentation and archiving in today's life science field. cell[®] encompasses all of the functions of cell[®] as well as offering the following additional features:

Panorama function

C Many microscope applications require a high resolution with the largest field of view possible. The magnification and resolution of the objective and field of view of most cameras are usually inadequate for these applications. With the panorama function incorporated into cell[®], images can be acquired with overlapping edges, either manually or automatically via a motor stage, at neighbouring positions. Pattern recognition is used to stitch the individual images together into a single, large, high-resolution image.

Measurements

cell[®] features unique functions for interactive measurement tasks and dimensioning. Measurement results can be presented as diagrams or spreadsheets and what is more, mean values, extremes and standard deviations are calculated with great ease.

Archiving

D The powerful and integrated image archiving system handles both the images and data generated during image processing and documentation. Images can be stored along with text, tables and graphics, providing complete documentation of tasks and processing steps. The database structure can be adapted easily to suit individual workflow requirements. Customisation of the database masks ensures that repetitive data input is much easier and reduces the possibility of errors. The database has been designed to make access fast, while keeping network capacity requirements low.

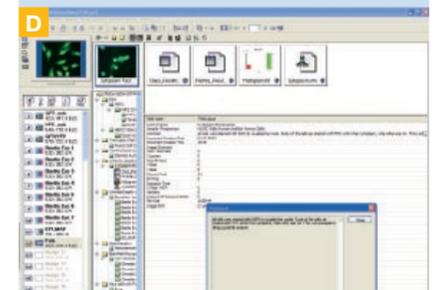
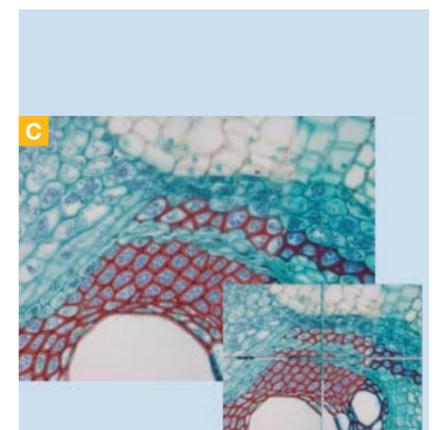
Generating reports

E The report generator makes creating standard-compliant reports quick, easy and convenient. It supports graphical elements such as images, spreadsheets and diagrams as well as offering a user-friendly text input function. Placeholders are automatically filled out with the content of various fields, taken from the archive or analytical results. The report generator enables users to simply drag and drop images or data to generate complex reports within seconds. For extra convenience, optional predefined report templates are available.

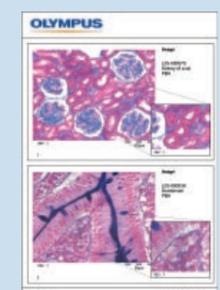
Upgradeability

cell[®] and cell[®] can be upgraded to all packages of the Olympus cell* series:

- cell[®] – advanced documentation and imaging
- cell[®] – fluorescence imaging
- cell[®] – professional research imaging
- cell[®] – modular live cell imaging station
- cell[®] – real-time imaging station



E Reporting



Specifications

cell^A

cell^B

	cell ^A	cell ^B
Graphical user interface		
Import of all common image formats	X	X
Handling of multidimensional images (animate, combine, extract)	X	X
Automatic image calibration	X	X
Annotations and overlays	X	X
Multiple ViewPort	X	X
OCC Olympus Camera Control	X	X
Navigator	X	X
Automatically adjusted scale bar	X	X
Send via e-mail	X	X
Workspace management	X	X
Hardware and experiment control		
Supports motorised components of microscopes	X	X
Complete microscope control via intuitive software interface	X	X
Camera support of various monochrome and colour CCD cameras	X	X
Supports precisExcite coolLED and X-Cite 120XL light sources	X	X
Advanced live image acquisition		
Digital live processing during image acquisition	X	X
Automated exposure optimisation (intelligent exposure)	X	X
Live overlays	X	X
Live display (saturation, false colours, etc.)	X	X
Acquisition of image series	X	X
Support of all European and US video standards	X	X
Panorama image acquisition (manual/automatic)	X	X
Manual acquisition of time-lapse series	X	X
Image processing		
Measurements – basic	X	X
Measurements – standard		X
Filter – basic	X	X
Filter – standard		X
RGB colour management	X	X
Archiving		
Clearly structured data management of image files, sheets, diagrams, reports and other files		X
Exceptional flexibility, ease of use and rapid access to data		X
User-definable structure		X
Database assistant for set-up		X
Predefined and individual fields and categories		X
Fast, high-performance query functions with logical connections		X
Data backup and access		X
Networkable		X
Report generation		
Reporting solution with integrated word processing, database connection and image support		X
User-definable templates		X
Support of record fields, images, sheets and diagrams		X
Special functions such as detail zoom, autotext or different magnification types		X
Compatible with Microsoft Word		X
Predefined templates for different applications		X
Upgrade to higher packages possible	X	X

The manufacturer reserves the right to make technical changes without prior notice.

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OLYMPUS

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