

OLYMPUS
MicroSuite™
Software for Imaging Applications

ScopeView

Microscope Control Software



OLYMPUS

Digital Solutions for Imaging and Microscopy
Soft Imaging System



ScopeView

Microscope Control Software

An invaluable extension to MicroSuite™ B3 and M3

ScopeView enables full computer control of all motorized components of your Olympus microscope (BX61, IX81, AX70)

- Handswitch and microscope frame buttons can be programmed for functions other than the default functions, depending on your needs.
- Microscope settings can be linked; for example, you can program a handswitch button to select an objective and automatically adjust the condenser top lens, aperture stop, and lamp voltage.
- Individual users can set up their own microscope configurations and log in to have those settings take effect immediately.
- All Olympus microscope settings are stored with your recorded images. Configure your Olympus microscope simply by loading an optimized image.
- **ScopeView** automatically reads the objective magnification and ensures a properly calibrated image with an appropriately sized scale bar.



This state of the art module provides a variety of features to make your tasks at the microscope more labor-saving.

ScopeView can be used to control motorized stages



- Specify stage positions and recall them later
- Record images of fixed sample points or random areas with an overview image on which to navigate
- Automatically collect an **Extended Focus Image (EFI)** and use the resulting height map to produce a 3D surface reconstruction of the specimen
- Automatically collect and assemble a large high-resolution image from a series of adjacent images using the **Multiple Image Alignment (MIA)** module

ScopeView can be used to control Olympus filter wheels and shutters:

- Automatically collect multicolor fluorescent images with the **multiple Fluorescence Information Processing module (mFIP)**; no need to be prompted to open the shutter and insert filters manually
- Automatically collect a series of images over time, without worrying about fading of fluorescence.



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■ Motorized parts

The dialog for configuring your microscope is rapidly intuitive. The Hardware Wizard allows you to define all of the motorized parts, objectives, and filters connected to the microscope. Standard Olympus objectives, filters, mirror cubes, and condenser inserts are programmed into the software; you just select your hardware from the picklists. The Key Configuration dialog box allows you to define the handswitch, frame buttons and keys the way you want them, simply with a click of the mouse.

■ Frame button configuration

Tired of turning between the microscope and the PC? Tired of reaching for the mouse? Then this is for you! The BX61 and IX81 microscopes were ergonomically designed to allow you to concentrate on your work and keep your eyes on the most important thing of all—your sample. Execute the functions you need by pressing the frame buttons: increase the lamp voltage or change a filter cube... snap an image and save

it in the database... capture an extended focus image series with infinite sharpness... Unbelievable, but true.

■ Handswitch configuration

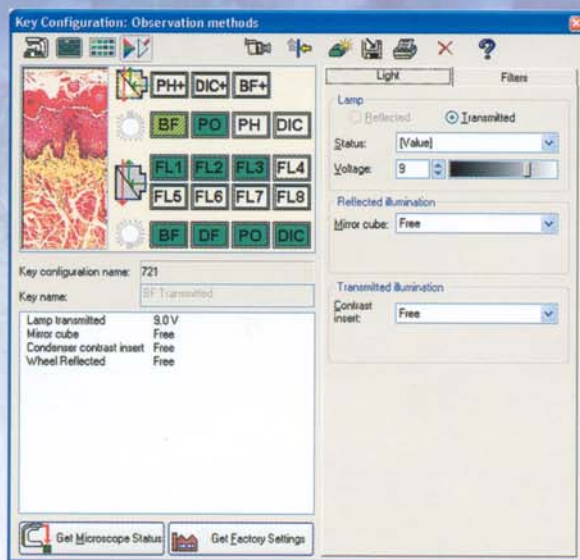
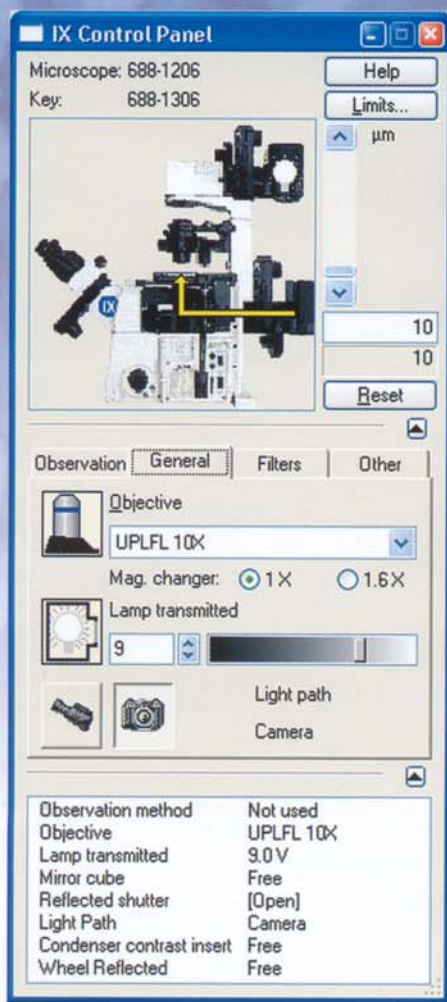
The handswitch has 16 buttons that can be programmed with the functions and settings you want! No programming skills? Don't worry, it's all done by clicking. The software allows for both toggle (on/off; in/out) and non-toggle functions.

Even in a multi-user facility, the handswitch functions the way you configure it.

■ Perfect microscope setup for various modes of observation

The **ScopeView** module allows you to store the optimum settings for each observation method (transmitted brightfield and darkfield, phase contrast, polarized light, DIC, reflected brightfield, and fluorescence). The light conditions, condenser, filters, and focus are automatically





adjusted to fit the corresponding objective. We even go one step further by offering a factory setting—a predefined setting recommended by the Olympus experts for each type of observation.

The observation methods allow the ultimate convenience in microscopy.

■ Intelligent objectives

Parfocal correction is integrated into the **ScopeView** module. Select an objective, focus your sample, and store the focus value for each objective. Every time you choose an objective, that focus value will automatically be applied. Convenient isn't it? To adjust for different sample thicknesses, refocus for one objective and press the button 'Adjust Center'. The focus will be readjusted and applied for the rest of the objectives.

■ Control panel

The Control Panel shows an image of the microscope, with mouseover function that reveals the status of each motorized component. A click of the mouse moves that component. The extended dialog box permits adjustment of every setting of the microscope, while the large information window constantly updates the status of the microscope.

■ User configurations

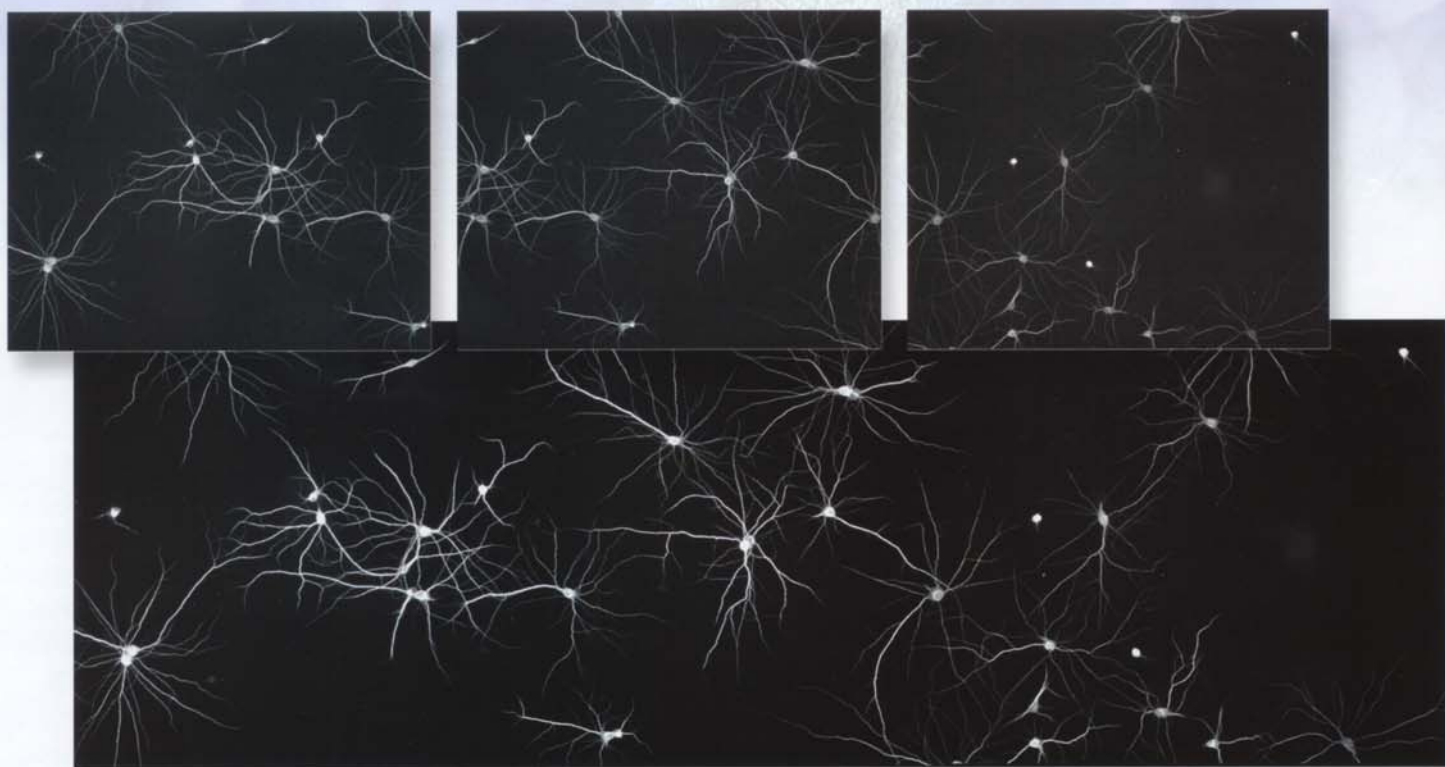
Are you in a multi-user facility with varying microscopy needs? Each user can define personal configuration settings and log on with those settings. Password protection ensures that your settings will not be changed by someone else. Levels of user access (trainee, standard, advanced, and administrator) ensure that inexperienced users will not modify configurations.



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Applications



■ MIA with autofocus

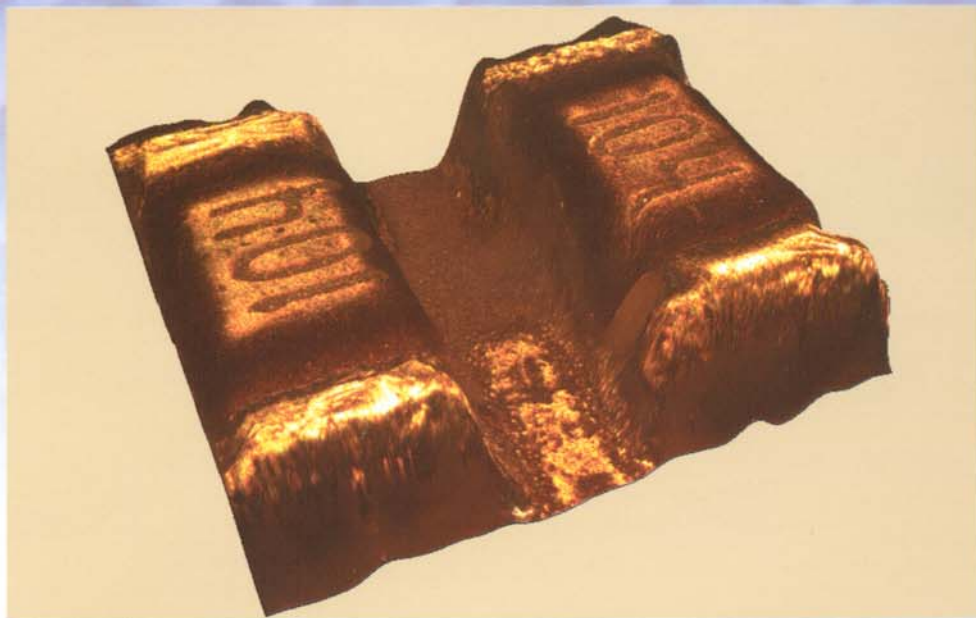
The **Multiple Image Alignment module (MIA)** automatically creates a montage of a series of adjacent high-resolution images. This is especially useful if you need to acquire an image of a large area at high resolution, and your camera cannot provide that resolution, or the microscope can only display a portion of the area at the required resolution.

The built-in Z-drive of the Olympus BX61 and IX81 microscopes can be combined with a motorized XY stage and controlled as an XYZ stage. The MIA acquisition process can then be combined with a software or hardware autofocus to ensure focused images throughout the overview area.



■ **EFI**

The **Extended Focal Imaging (EFI)** module captures images at different focal planes and extracts the sharpest pixels to create a single in-focus image. The **EFI** module and Olympus microscopes work together seamlessly to record images at user-defined z-increments. The z-distance information can be used to create a height map and a three-dimensional representation of the surface of a specimen.



■ **mFIP**

In connection with the **ScopeView** module, the **Multiple Fluorescence Information Processing (mFIP)** module automates the acquisition of several fluorescent image planes and an optional transmitted light overlay (e.g. DIC, phase-contrast, brightfield, or darkfield). The motorized microscope, camera, and software work together efficiently as the shutter, filter cubes, lamp, and condenser automatically adjust to pre-defined settings. Individual image planes can be adjusted for brightness, contrast, intensity, and pixel registration. Colocalization analysis allows the user to determine the percentage of pixels of one color plane that overlap with pixels of another color plane.



OLYMPUS[®]

MicroSuite[™]

Software for Imaging Applications

The perfect blend of high quality microscopes from Olympus and superb imaging software from Soft Imaging System, tailored to fit the needs of today's microscopists. Powered by the best of two worlds, Olympus and Soft Imaging System give you a leading edge in your work.

Specifications

The MicroSuite[™] ScopeView package includes the following:

- User-defined microscope configurations
- User-defined key configurations for various modes of observation
- Programmable frame and handswitch buttons
- Automatic recognition of objective magnification and application of calibrated scale bar
- Automatic Z-adjustment for parfocality
- Automatic collection of images for EFI, MIA and mFIP
- Automatic stage and shutter control
- Operable through the handswitch buttons, frame buttons, PC, and/or manual adjustments

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