OLYMPUS®

Installation Manual

LCmicro

IMAGE ANALYSIS SOFTWARE

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1 The LCmicro documentation

The documentation for the LCmicro software consists of this installation manual and the user manual. Additionally, the camera from OLYMPUS Soft Imaging Solutions that is used for image acquisition is also supplied with an installation manual.

In this **installation manual**, you can learn how to install, configure, and uninstall LCmicro. You can also find information on the system requirements.

In the **user manual**, you can find both an introduction to the product and an explanation of the user interface. With the help of step-by-step instructions, you can quickly learn the most important procedures for using your software. You can find the user manual saved as a PDF file in the software's installation directory.
When the LCmicro software is open, you can also use the Help > Manuals command to open the manual in the language you want.

2 System requirements

The following system requirements are necessary to install and to run the LCmicro software. Depending on the camera used, there may be additional or more extensive system requirements. Therefore, also check the system requirements for the camera you want to use before installing LCmicro.

CPU	Intel Core i5, i7 (recommended) Intel Core 2Duo (minimum)
Operating system	Microsoft Windows 10 Pro (32 bit / 64 bit) Microsoft Windows 8.1 Pro (32 bit / 64 bit) Microsoft Windows 7 Ultimate / Professional SP1(32 bit / 64 bit)
RAM	8 GB (recommended) 3 GB (minimum)
Graphics card	2048 MB RAM (recommended) 512 MB RAM (minimum)
Screen resolution	1280x1024 with a 32-bit graphics card
Free storage space on your hard disk	You need to have 2.4 GB of free hard disc drive space in order to install the software. If the PC where LCmicro is installed is also intended to be used for storing the data created by LCmicro, you will need a correspondingly larger hard disk (at least 50 GB).
Ports	Dual Layer DVD drive (if the software is installed from a DVD).
Microsoft .NET Framework	Version 4.5.2 or higher Version 4.5.2 of Microsoft .NET Framework is automatically installed during LCmicro setup if an earlier version (or no version at all) of Microsoft .NET Framework is installed on your PC. If a later version of Microsoft .NET Framework is already available on your PC, this isn't changed by the LCmicro setup.

3 Software installation

When installing the camera and the software, it is important to follow the order below:

1) If a USB PCI Express card was delivered together with the camera:
   Install this card into your PC. Please note that, as a rule, a USB 3.0 PCI express card can also be used for USB 2.0 cameras. When inserting the PCI express card, please follow the instructions given by the manufacturer.
2) Install USB PCI express card driver. The CD that contains the driver was supplied with the USB PCI express card.
   - This step is only necessary when you use the MS-Windows 7 operating system. With the MS-Windows 8.1 operating system, the driver for the USB PCI express card is automatically installed.
   - A step-by-step instruction on how to install the driver is part of the LC30 camera manual.
   - Should you use a different camera from OLYMPUS Soft Imaging Solutions for image acquisition, we will be happy to provide you with this step-by-step instruction. In this case, please send an e-mail to our customer service address **support.osis@olympus-sis.com** or call (+49) 251-79800-6444.
3) Then install LCmicro.
4) Finally, connect the camera to the PC.

3-1 Installing the software

1) Make sure you are logged on to your PC as administrator.
2) Close any and all running application programs.
3) Browse to the directory where the setup for the LCmicro software was saved.
4) Double click the Setup.exe file.
   - An installation wizard guides you through the entire software installation.
5) Follow the instructions of the installation wizard and click the Next button to continue.
   - At the end of the installation you receive a message telling you that the installation is complete.
6) Click the Finish button to close the dialog box.

3-2 Connecting the camera

1) Plug one end of the provided USB cable into the camera port.
2) Plug the other end into a port of the newly installed PCI Express board on your PC.
   - Normally, the camera driver will then be automatically installed.
   - Further information about connecting your camera can be found in your camera manual.

4 Starting and configuring your software

To start the software, doubleclick on this icon located on the MS-Windows desktop.

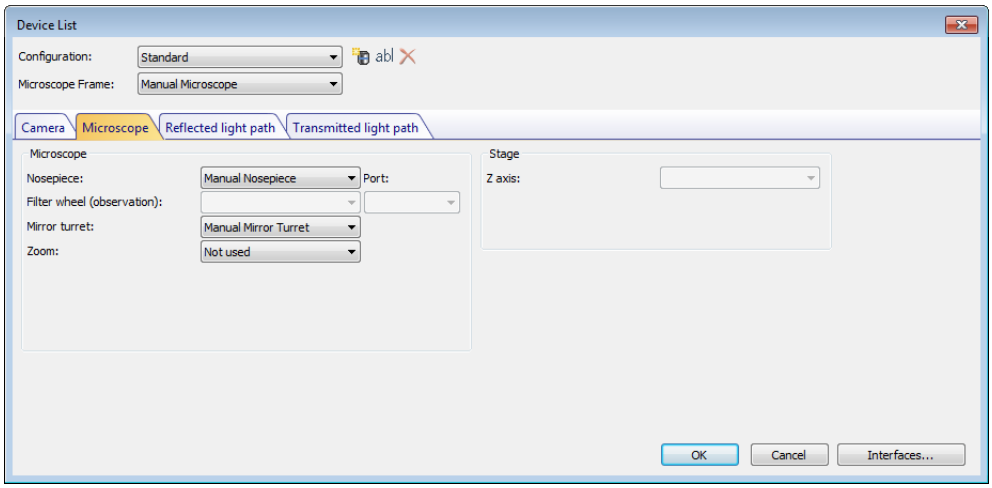
When you start LCmicro for the first time, you are asked to configure and calibrate the software. LCmicro needs this information for a correct calibration of the acquired images.

4-1 Configuring the software

You can only configure the system if you are logged on to the software with the user rights Administrator or Power User. If you have installed LCmicro yourself, you automatically have administrator rights.

Specifying which hardware is available

When starting the software for the first time, the Device List dialog box opens automatically. If you closed it, you can reopen it with the Acquire > Device List command. In this dialog box, select the hardware that you use.



If you use the camera together with a microscope, select the Manual Microscope entry in the Microscope Frame field. Alternatively, if you use a stereo microscope, select the Manual Stereo Microscope entry. If you use the camera together with a macro stand, select the No Microscope entry in the Microscope Frame field.

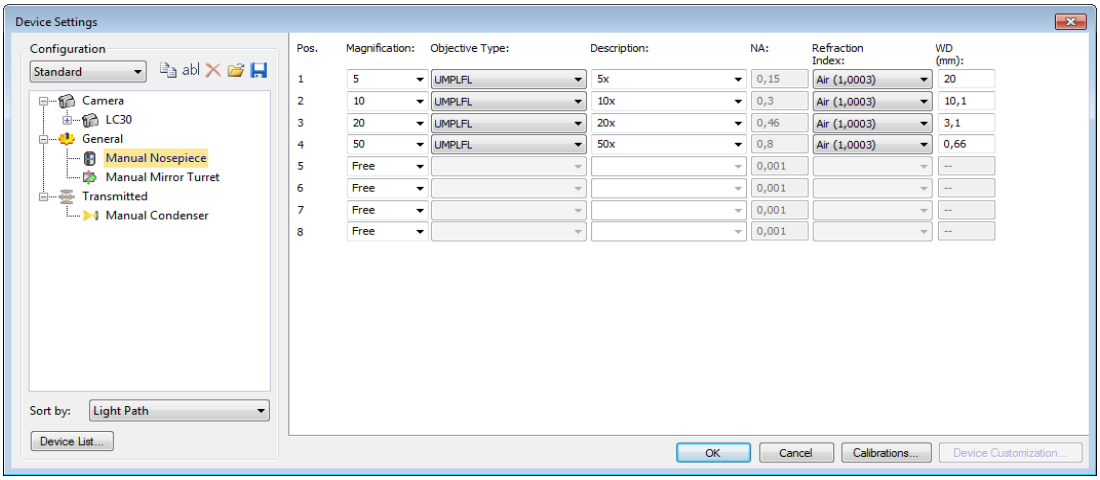
Then, on the Camera tab, select the camera you use. Finally, check if the default settings on the other tabs are correct for your system or not. If necessary, make the required changes.

Configuring the specified hardware

After choosing all necessary entries and confirming the selection with OK, the Device Settings dialog box is shown.

In this dialog box, you can make further specifications about the hardware that is used. If you use a manual nosepiece, specify which objectives can be found at which position on the nosepiece.

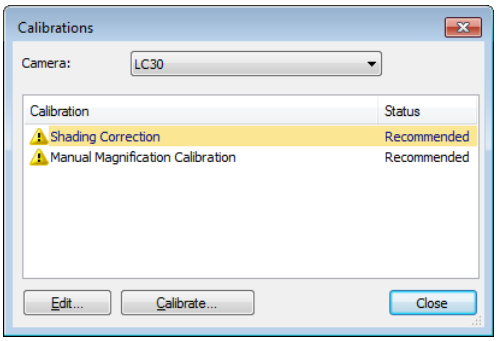
Only the objectives that you specified here can be selected before acquiring an image. Your software needs to know which objective is used during image acquisition in order to calibrate the images correctly.



Calibrating the system

Your software offers a calibration wizard to execute several calibration processes. You can only work optimally with the system when all of the calibration processes have been performed.

Click the Calibrations... button in the Device Settings dialog box to start the calibration wizard. If you don't want to calibrate the system right now but at a later time, use the Acquire > Calibrations... command then.



4-2 Acquiring your first images

After configuring and calibrating your software, you can acquire images. Do the following:

1) On the Microscope Control toolbar, click the button with the objective that you use for the image acquisition. The information about which objective has been used is necessary for the correct image calibration.

2) Rotate the objective manually into the light path.
   - Note: When working with manual microscopes, it can be a good idea to display the Image Calibration dialog box after each image acquisition. To enable this function, select the Confirm magnification after acquisition check box in the Acquisition Settings > Acquisition > General dialog box.

3) In the Camera Control tool window, click the Live button.

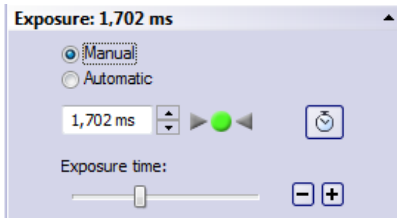
   - The live image is displayed.

4) Go to the required sample position in the live-image. To do so, move the stage.

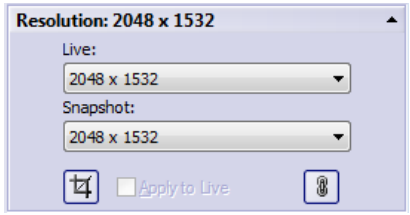
5) Bring the sample into focus.

6) Check the color reproduction. If necessary, carry out a white balance. To do so, click the White Balance on ROI button.
   You can find this button on the Camera Control tool window's toolbar.

7) Check the exposure time. You can either automatically determine the exposure time or enter the time manually.



8) Select the resolution you want, in the Resolution group.



9) In the Camera Control tool window, click the Snap button.
   ► The acquired image is shown in the document group.
10) Use the File > Save As... command to save the image. Use the recommended TIF file format.

5 Uninstalling the software

To uninstall LCmicro, log on to your PC as administrator.

1) Use your operating system's functionality to uninstall the software.
2) To do so, open the control panel and select the Programs > Uninstall a program command.
   ► Depending on the operating system you use, the way how to open the control panel may be different. Therefore, use your operating system's online help if you need information on how to open the control panel.

OLYMPUS SOFT IMAGING SOLUTIONS GMBH
Johann-Krane-Weg 39, 48149 Münster, Germany
Phone: +49 (251) 798 00-0, Fax: +49 (251) 798 00-6060, info.osis@olympus-sis.com