Installation Guide

ZEN 2 (blue edition)

We make it visible.

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1 System requirements

1.1 ZEN lite

Minimum System Requirements
Intel® Core™ i5-4670 4-Core 3.0 GHz
Intel® Q87 chipset
4 GB DDR3-RAM
Graphics adapter 1920 x 1200 resolution, 32-bit true color,128 MB RAM, DirectX 8.0 or higher
Monitor 20" TFT 1600 x 1200
Hard disk 250 GB SATA 3.0 Gbit/s DVD-ROM drive
1 x FireWire IEEE 1394a interface
2 x USB 2.0, 2 x USB 3.0 interface
Microsoft® Windows® 7 Ultimate SP1 x64 (Multilanguage) No special customer adapted versions
The user must be logged on as a member of the local "User" group
For the software installation procedure local administrator rights are required
The hardware requirements of modules can be higher

1.2 ZEN system

Minimum System Requirements	Recommended System Requirements
Intel® Xeon® E5-2643 4-Core 3.0 GHz	
Intel® C602 chipset	
16 GB DDR3-RAM	64 GB DDR3-RAM
Graphics interface PCIe Express x16	
Graphics adapter AMD FirePro 2560 x 1600 resolution, 32-bit true color, DirectX 8.0 or higher	

Minimum System Requirements	Recommended System Requirements
Monitor 24" TFT 1920 x 1200	Monitor 30" TFT
Hard disk 1 x 128 GB SSD and 2 x 2 TB SATA 3.0 Gbit/s (configured as 2 TB RAID 1 hard drive) DVD-ROM drive	Hard disk 1 x x 256 GB SSD and 4 x 2 TB SATA2 (configured as 4 TB RAID 10 hard drive)
2x free PCI Express x8 Gen2	
Trigger-Board and Signal Distribution Box	
1 x FireWire IEEE 1394a interface	2 x FireWire IEEE 1394a interface
2 x serial interface (COM1 – COM2)	
4 x USB 2.0, 2 x USB 3.0 interfaces	
Microsoft® Windows® 7 Ultimate SP1 x64 (Multilanguage),no special customer adapted versions	
The user must be logged on as a member of the local "User" group	
For the software installation procedure local administrator rights are required	
The hardware requirements of modules can be higher	

1.3 ZEN pro/desk

Minimum System Requirements	Recommended System Requirements
Intel® Core™ i5-4670 4-Core 3.0 GHz	Intel® Xeon® E5-2643 4-Core 3.0 GHz
Intel® Q87 Chipset	Intel® C602 Chipset
8 GB DDR3-RAM	16 GB DDR3-RAM
Graphics interface PCIe x16	
Graphics adapter 1920 x 1200 resolution, 32 bit true color, DirectX 8.0 or higher	AMD FirePro Graphics adapter 2560 x 1600 resolution, 32 bit true color, 1024 MB RAM, DirectX 8.0 or higher

Minimum System Requirements	Recommended System Requirements
Monitor 24" TFT 1920 x 1200	
Hard disk 250 GB SATA 3.0 Gbit/s DVD-ROM drive	Hard disk 1 x 128 GB SSD and 2 x 2TB SATA2 (configured as 2 TB RAID 1 hard drive)
1x free PCI Express x8 Gen2	2x free PCI Express x8 Gen2
2x FireWire IEEE 1394a interface card	
2 x serial interface (COM1 and COM2)	
2 x USB 2.0, 2 x USB 3.0 interface	4 x USB 2.0, 2 x USB 3.0 interface
Microsoft® Windows® 7 x64 Ultimate (Multilanguage) No special customer adapted versions	
The user must be logged on as a member of the local "User" group	
For the software installation procedure local administrator rights are required	
The hardware requirements of modules can be higher	

2 Configure security software

The following section explains how to configure your security software for installation and optimum operation of ZEN 2 properly.

i Info

The term security software combines all programs which protect your computer from viruses, unwanted interventions, etc.. This includes virus scanners, firewalls and intrusion detection systems. If you don`t adapt the security settings there can be problems while installing or running ZEN 2. The following topics will show you how to avoid problems with the security software and adapt the settings correctly.

2.1 Before installation

To ensure correct installation, we recommend to perform the following settings:

- **Lower security rules**

  Set the security rules from "high" to "low". How you set the security rules, refer to the respective operating instructions of your security software.

- **Disable security software**

  In rare cases, you may need to disable the security software completely. Make sure that you enable the security software after installation. How to disable or enable the security software, refer to the respective operating instructions of your security software.

2.2 After installation

To ensure the optimal operation on Windows, we recommend you to perform the following settings after the installation:

- **Exclude ZEN program files from virus scanning**

  Exclude the files **ZEN.exe**, **ZENService.exe** and **ZISProtocolServer.exe** from virus scanning. How to exclude files from virus scanning, refer to the respective operating instructions of your security software.

- **Exclude ZEN specific file extensions from virus scanning**
  Exclude files with the file extensions***.czi**, ***.zvi**, ***.zishm** from virus scanning. How to exclude file extensions from virus scanning, refer to the respective operating instructions of your security software.

- **Exclude ZEN specific folders from virus scanning**
  Under **Help | About ZEN** ... | **Show ZEN Information| Folders** you can see the program specific folders. How to exclude folders from virus scanning, refer to the respective operating instructions of your security software.

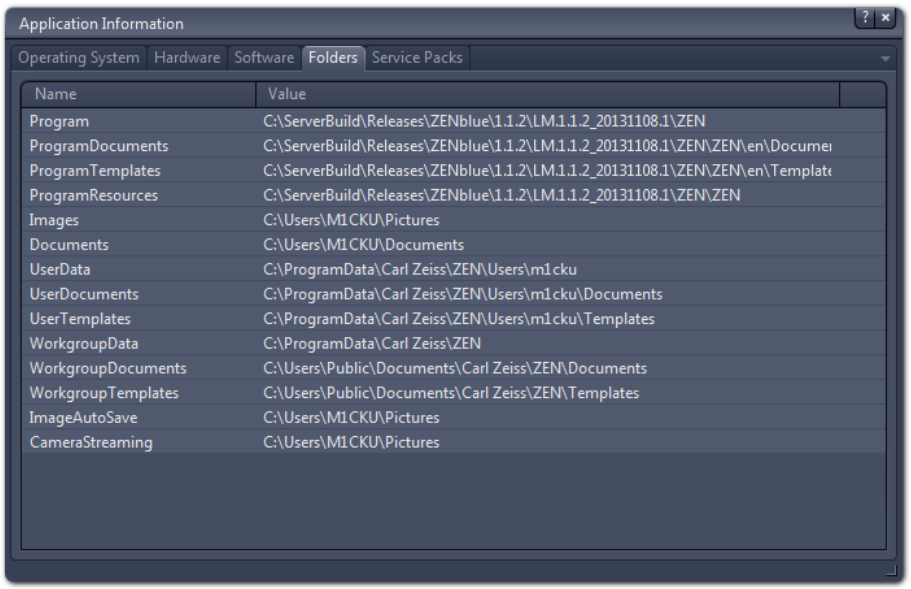


Illustration 1: Program specific folders

2.2.1 Default folders

In the following table you can see the folders in which the captured images will be stored in ZEN 2 per default.

Operating system	Folder / path
Windows 7:	**My Pictures** and **%USERPROFILE%\My Pictures** and **C:\Users\{user name}\My Pictures**

Change default ZEN image folder

Under **File** | **Export/Import** | **Export** or under **File** | **Save as** change the folder you want to store your images into.

Change default folder for automatic image storage and continuous image acquisition (camera streaming)

Under **Tools** | **Options** | **Saving** | **Auto Save Path** set your desired path/folder..

Change default folder for images on your operating system

- In Windows 7 in the context menu of **My pictures**.

2.2.2 Temporary files

Operating system	Folder / path
Windows 7:	**%TEMP%** or **%LOCALAPPDATA%\temp** or **C:\Users\{user name}\AppData\Local\Temp**

Change default folder for temp files

- First, define an appropriate path for the TEMP environment variable (user context).
- Then define the environment variable SWAP indicating a corresponding path.

For Windows 7 (engllish) this has the following paths or folders that you must exclude from virus scanning:

- **C:\Users\{user name}\My Pictures**
- **C:\Users\{user name}\AppData\Local\Temp**
- **%TEMP%**
- **%SWAP%**

2.2.3 System specific folders

If you are using a ZEISS PC system, the location of your images is predefined. The tables show the PC system specific folders.

High End image analysis work station

QuadCore Intel XEON Workstation 2,66 GHz (ZEISS 35A FSC CELSIUS R650) (Art. Nr.:410203-9903-000, 410203-9905-000)

Operating system	Folder / path
Windows XP (English)	**D:\User_Data\{user name}\My Documents\My Pictures** **Notice:** For Windows XP (english) the folder **My Documents** was moved to: **D:\User_Data\{user name}\My Documents**

Operating system	Folder / path

High End Bildanalyse Workstation

SixCore Intel XEON Workstation 2,66 GHz (ZEISS 45A hp Z800)
(Art. Nr.:410203-9906-000)

Operating system	Folder / path
Windows XP (English)	**D:\Users\{user name}\My Documents\My pictures** **Notice:** For Windows XP (english) the folder **C:\Documents and Settings** was moved to: **D:\Users**
Windows 7	**D:\Users\{user name}}\Pictures** **Notice:** For Windows 7 the folder **C:\Users** was moved to **D:\Users** by using a symbolic link („junction“)

Microscopy High-End, Mid-Range and Compact work stations

- QuadCore Intel XEON Workstation 2,66 GHz (ZEISS 50A hp Z820)
  (Art. Nr.:410203-9907-000, 410202-0000-000)
- QuadCore Intel Core i5 (ZEISS 558C FTS Esprimo P920)
  (Art. Nr.:410201-9908-000)

Operating system	Folder / path
Windows 7	**D:\Users\{user name}}\Pictures** **Notice:** For Windows 7 the folder **C:\Users** was moved to **D:\Users** by changing the registry keys: HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\ProfileList\ProfilesDirectory **Default**: %SystemDrive%\Users **Modified**: D:\Users

2.3 Summary

To ensure correct operation of ZEN 2 it is necessary to ensure that the security software on your computer is not blocking the program. For full functionality you should have made the following settings:

- You have disabled the security software during installation or reduced the security settings.
- You have excluded the entire application, the defined paths or relevant files from virus scanning.

3 Installing ZEN

Info

Do not install an old ZEN version over a new ZEN version. If a version of ZEN is already installed on your PC, this version will be transformed in the current release during the installation.

Prerequisites

- You have read the chapter Configure security software [▶ 7] attentivley.
- If you have inserted the product DVD into the DVD drive, the installation will start automatically. When automatic playback has been deactivated on your computer, perform the following steps to start the installation:

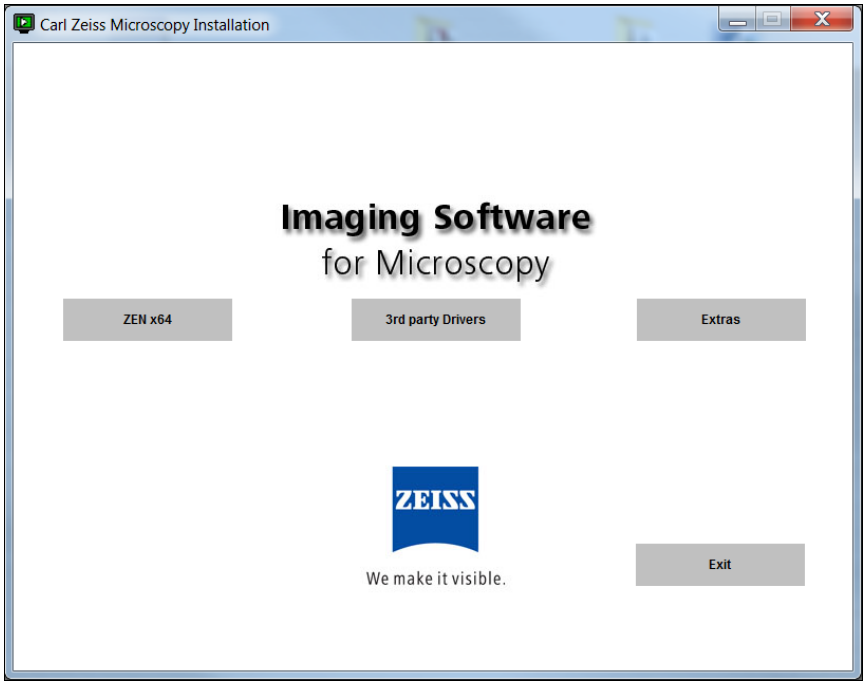
Procedure

1. Click on **Computer** in the Windows start menu.
2. Double-click on the **DVD-RW drive** in the **Devices with Removable Media** section.

   You will see folders and contents of the product DVD.
3. Double-click on the **Setup.exe** entry.

   Depending on the security settings on your computer several warning messages could appear. Ignore the messages or confirm with **Ok**.

   After a short while you will see the installation dialog with the overview of all products available. Continue with the installation of the desired product.

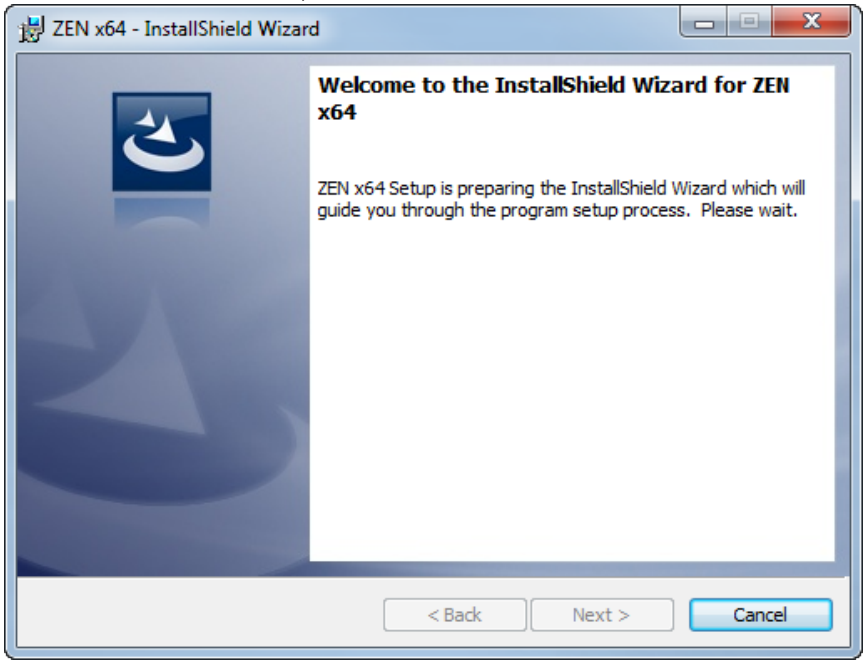


4. Click on the **ZEN** (x64) tab.

   The language selection dialog window is displayed.

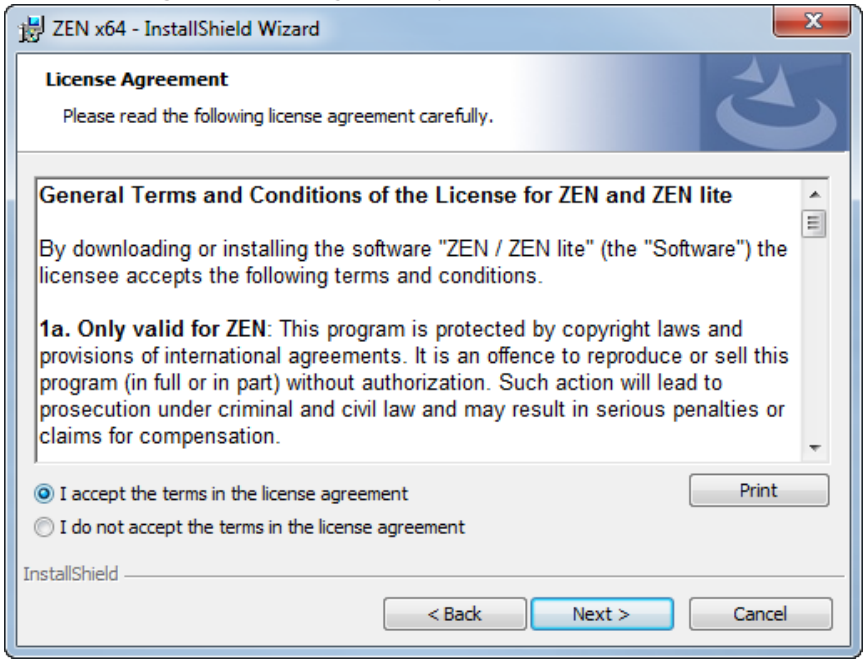
5 Select the language in which you want to run the installation program from the dropdown list and click **OK**.

The **InstallShield Wizard** opens.



6 Click on **Next** button to start with the installation.

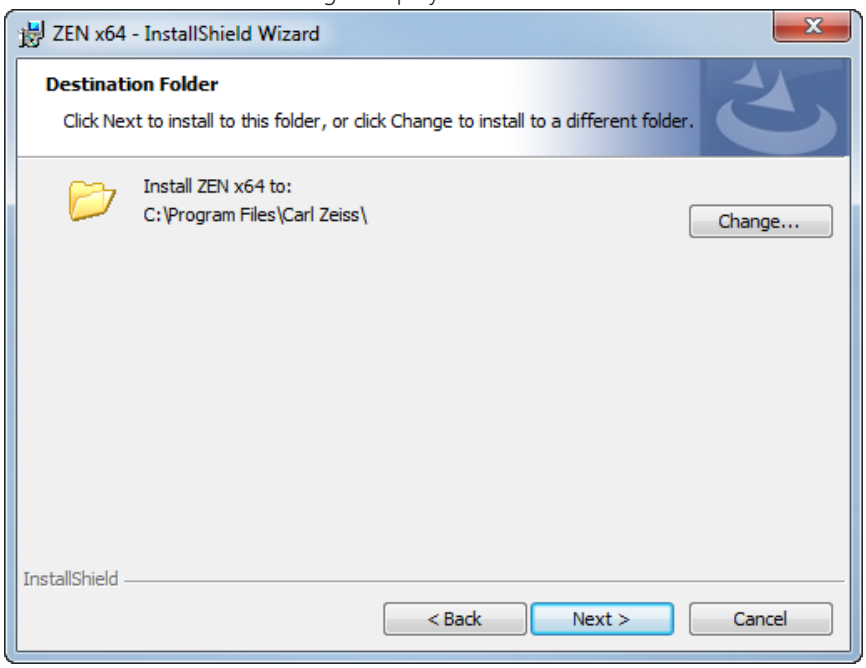
The **License Agreement** dialog is displayed.



7 Select the **I accept the terms in the license agreement** radio button.

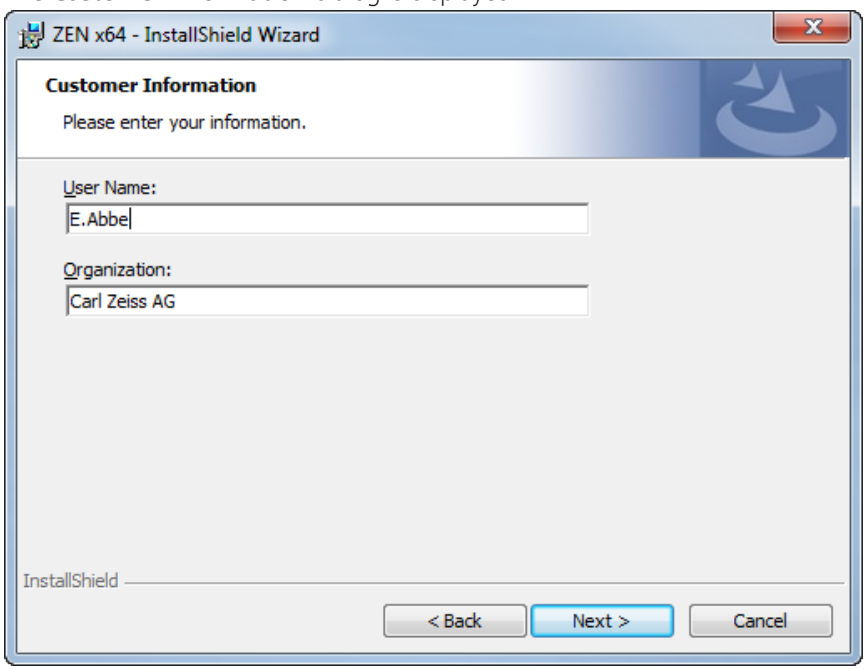
8 Click on **Next** button.

The **Destination Folder** dialog is displayed.



9 Click on **Next** button to install to default folder or click on **Change** button to select a different folder.

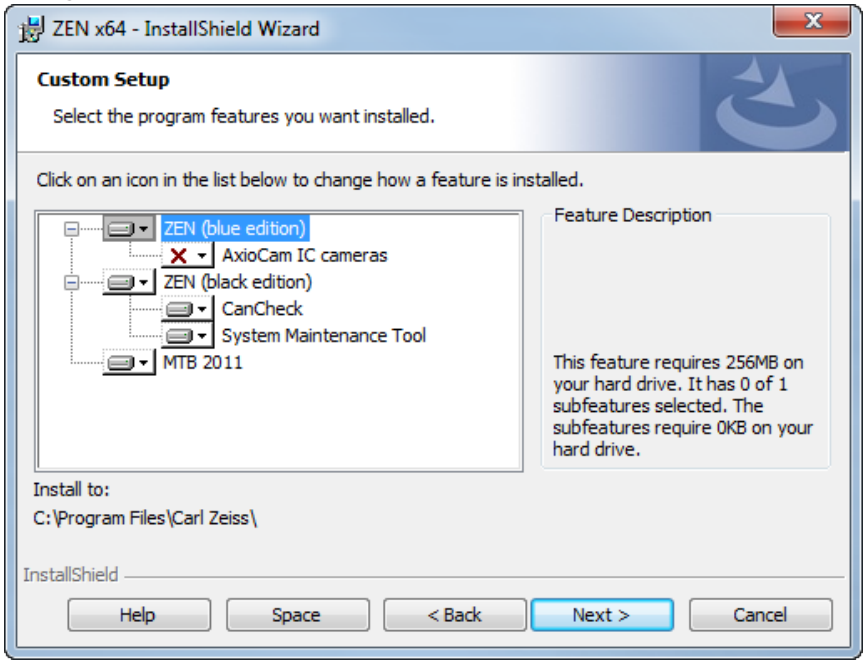
The **Customer Information** dialog is displayed.



10 Enter a user name and the company name in the **User Name** and **Organization** input fields.

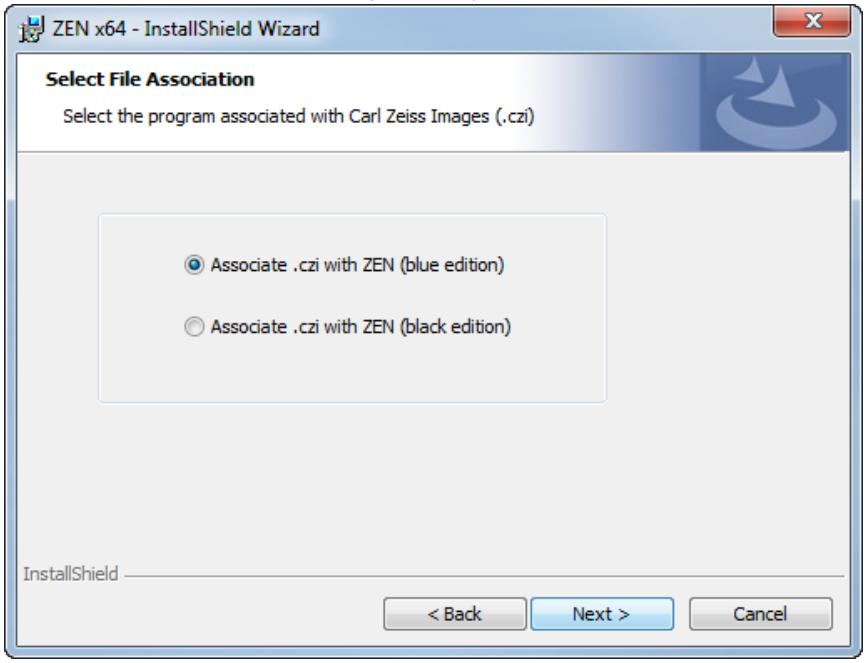
11 Click on the **Next** button.

The **Custom Setup** dialog window is displayed. You can leave it by the default settings.



12 Click on the **Next** button.

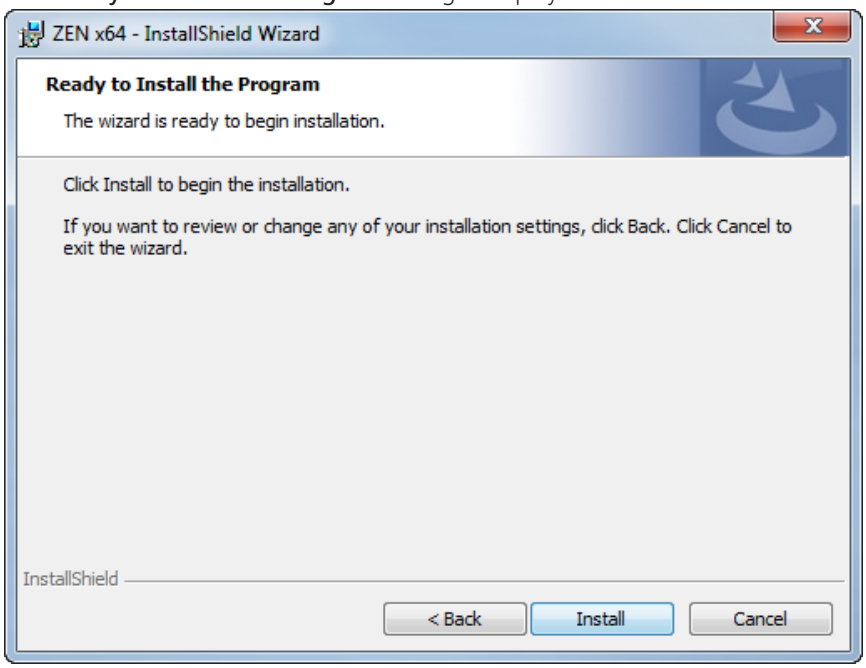
13 The **Select File Association** dialog is displayed.



Decide if you want to associate CZI files with ZEN blue or ZEN black.

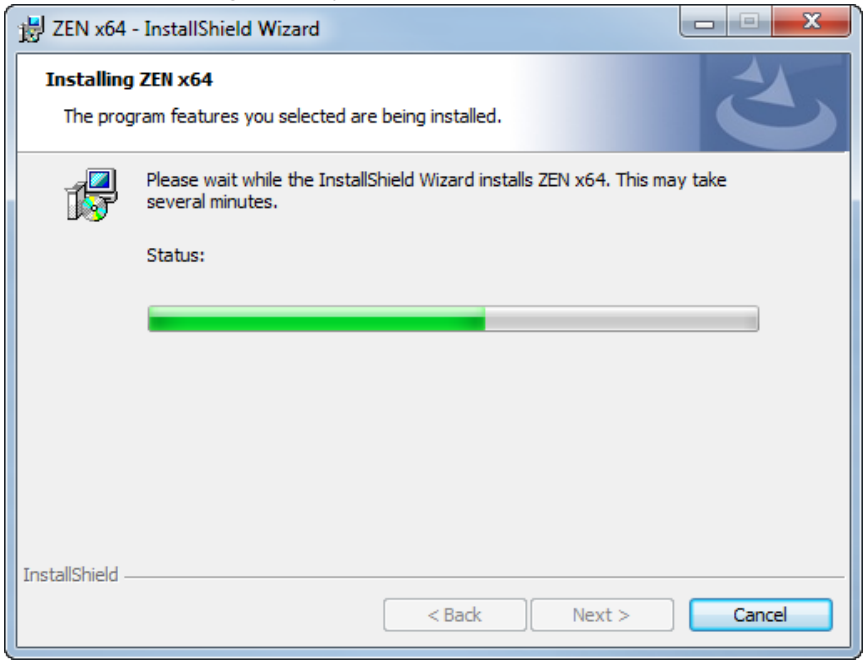
14 Click on the **Next** button.

The **Ready to Install the Program** dialog is displayed.

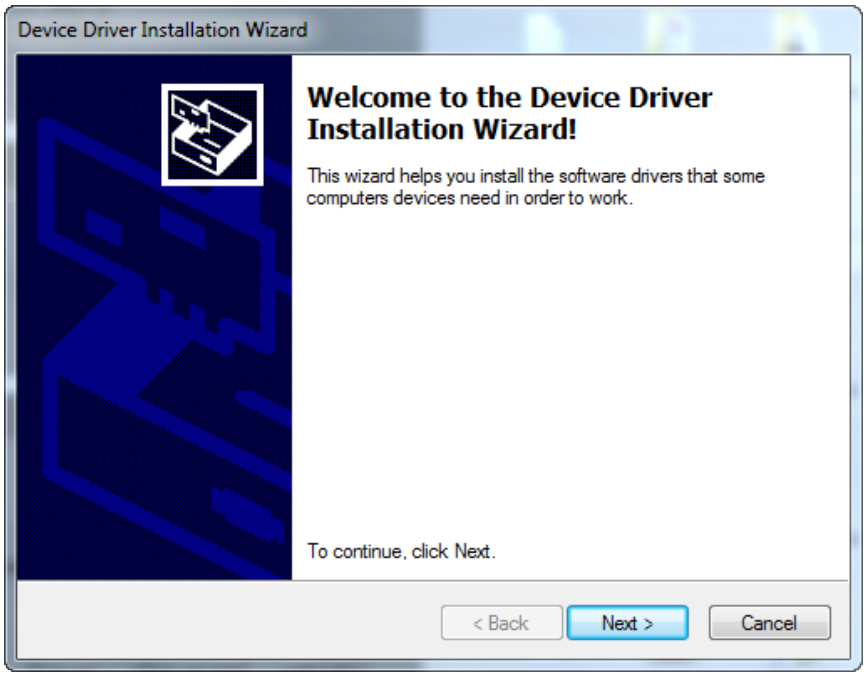


15 Click on the **Install** button.

The installation dialog is displayed. The software will be installed now.

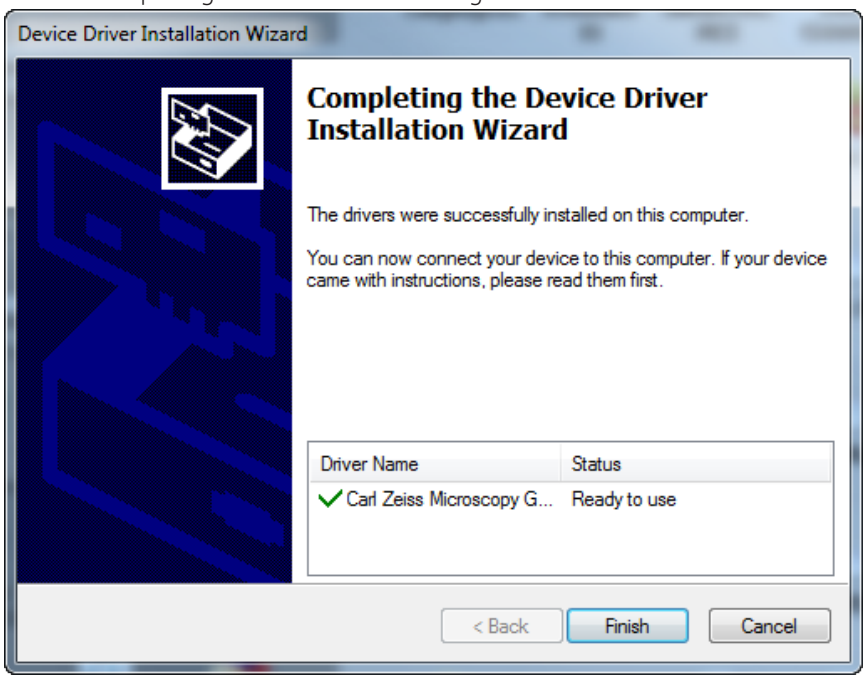


The **Device Driver Installation Wizard** will be started after a while.



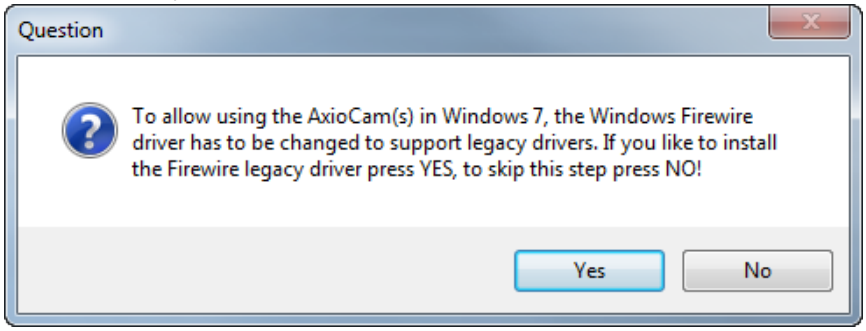
16 Click on the **Next** button.

The device driver installation wizard will be executed several times now because some drivers have to be installed separately. Accept the installation of the drivers by clicking on **Next**. After the driver installation is complete you will see the Completing Driver Installation dialog.



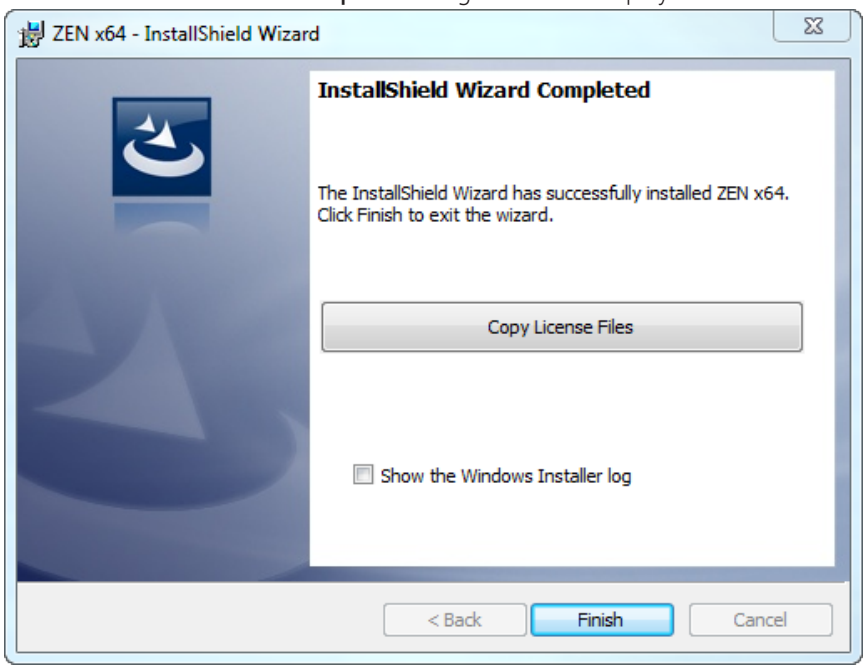
17 Click on the **Finish** button.

The question for changing **Windows Firewire driver** to **support legacy drivers** is displayed.



18 Click on the **Yes** button if you want to allow it. This will install the **Firewire legacy driver**. This is necessary if you want to use Axiocams with your system.

The **InstallShield Wizard Complete** dialog window is displayed.



19 Click on the **Copy License Files** button to copy the license files from the supplied removable medium to your computer.

20 Click on the **Finish** button.

You have successfully installed ZEN 2 on your computer. Start the software by clicking on the ZEN blue icon on your desktop.

4 Changes on the operating system

Info

Installation of software, hardware drivers, changes to operating system settings or other system interference beyond the actions needed to operate ZEN 2 are always in the responsibility of the customer, because the potential impact can not be estimated.

The following modifications have, in our experience, no effects on the functionality of the PC system:

- Network integration possible
- Installation of security software / antivirus software (highly recommend if your PC is attached to a network)
- Logon as Domain Users in an Active Directory environment (possibly with local administrator privileges if user needs to install software)
- Installation of standard software (e.g. Microsoft Office)
- Installation of printers
- Windows automatic updates and third-party software updates (Windows Service Packs are to be considered different).
  Recommended settings:
  Allow option "Check for updates but let me choose whether to download and install them". That prevents, for example, aborting time series experiments if an automatic restart is performed after an automatic update.
- Information about allowed Windows service packs can be found under System requirements [▶ 4].

Effects of following modifications can`t be estimated:

- Modifications in the Windows operating system
- Implementation of group policies and scripts
- Installation of third-party software with hardware support.
- Installation of third-party software for generating large data rates (such as backup software) due to possible performance problems of the simultaneous operation of Fast Acquisition Systems
- Storage of data on network drives by redirecting folder structures (e.g. there can occur performance problems in case of Fast Acquisition systems or limitation of the available data storage capacity (disk quota))

If problems occur, the system can be restored to the state of delivery by a ZEISS service technician.

5 Compatible cameras

The table below reveals, which cameras are compatible to the ZEN 2 Software.

Compatible ZEISS Axiocams

Camera	Connection
Axiocam 503 color	USB 3.0
Axiocam 503 mono	USB 3.0
Axiocam 506 color	USB 3.0
Axiocam 506 mono	USB 3.0
AxioCam MRm Rev. 3	FireWire A
AxioCam MRc Rev. 3	FireWire A
AxioCam MRc5	FireWire A
AxioCam HRm Rev. 3	FireWire A
AxioCam HRc Rev. 3	FireWire A
AxioCam HSc	FireWire A
AxioCam HSm	FireWire A
AxioCam ICc1	FireWire B
AxioCam ICm1	FireWire B
AxioCam ICc3	FireWire A
AxioCam ICc5	FireWire B
Axiocam ERc5s	USB 2.0
Axiocam 105 color	USB 3.0

Other, compatible cameras

Camera	Connection
Hamamatsu Orca R2	FireWire B
Hamamatsu Image EM 9100-13	Camera Link
Hamamatsu Image EM 9100-14	Camera Link
Hamamatsu Orca Flash 4.0	Camera Link

Camera	Connection
Hamamatsu Orca Flash 4.0 V2	Camera Link
Photometrics QuantEM 512	FireWire A
Photometrics eVolve 512	FireWire A
Photometrics CoolSnap MYO	FireWire A
Photometrics CoolSnap KINO	FireWire A
Photometrics eVolve Delta	FireWire A
Photometrics Rolera Emc^2	FireWire B
iXon3 885 = DU-885E-CS0-#VP	PCI Card
iXon3 897 = DU-897E-CS0-#BV	PCI Card
iXon3 897 Ultra = DU-897U-CS0-#BV	USB 2.0
iXon3 888 = DU-888E-C00-#BV	PCI Card
PCO.edge	Camera Link

6 Install 3rd Party Drivers

Prerequisites

- You see the installation dialog with the overview of all products available.

Procedure

1. Click on the **3rd Party Drivers** button.

   The **3rd Party Drivers** dialog opens. You see the overview with all 3rd party drivers available.

2. Click on the driver you want to install.

   The installation routine of the specific driver starts automatically. Confirm occuring messages with **OK**.

You have successfully installed the driver. The following drivers are available:

Manufacterer	Description
PVCam	camera driver
QImaging	camera driver, only for Rolera EMC²
Hamamatsu Phoenix	camera driver
Hamamatsu FireWire	camera driver
Andor	camera driver
Matrox Solios	camera driver, only for AxioScan Z.1
PCO SDK PCO Silicon Interface	camera driver
BMC Fast Acquisition	Trigger board driver

Table 2: 3rd party drivers available

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