



Carl Zeiss AG  
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# Manual

## ZEISS Lens Data Viewer for CP.3 XD and Supreme Prime Lenses

### **! CAUTION !**

For using the ZEISS Lens Data Viewer a special connection kit is needed consisting of the lens connector, a DC power supply, the RS232 plug and a USB /RS232 converter. This kit is available at the Carl Zeiss Service stations and can be ordered from the ZEISS Customer Care Center.

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## Table of Contents

|   |           |
|---|-----------|
| <b>Introduction</b>                                     | <b>3</b>  |
| <b>Explanation of Symbols</b>                           | <b>3</b>  |
| <b>Equipment needed</b>                                 | <b>4</b>  |
| <b>Preparing the Connection Kit</b>                     | <b>5</b>  |
| <b>Setup of the computer</b>                            | <b>5</b>  |
| <b>Loading the most recent software on the computer</b> | <b>6</b>  |
| <b>Installing Zeiss Lens Data Viewer</b>                | <b>7</b>  |
| <b>Using the Zeiss Lens Data Viewer</b>                 | <b>9</b>  |
| <b>Troubleshooting</b>                                  | <b>13</b> |
| <b>Appendix</b>   | <b>14</b> |

## Introduction

This document describes how to use the ZEISS Lens Data Viewer with the Zeiss CP.3 XD and Supreme Prime lenses.

You can download the latest version of the ZEISS Lens Data Viewer from [www.zeiss.com/camera-lenses/int/service/download-center.html](http://www.zeiss.com/camera-lenses/int/service/download-center.html). The necessary installation file and a brief description of the new version are stored in a .zip file.

For the ZEISS Lens Data Viewer a special connection kit is needed consisting of the lens connector, a DC power supply, the RS232 plug and a USB /RS232 converter. This kit is available at the Carl Zeiss Service stations and can be ordered from the Zeiss Customer Care Center.

## Explanation of Symbols

**INFO**

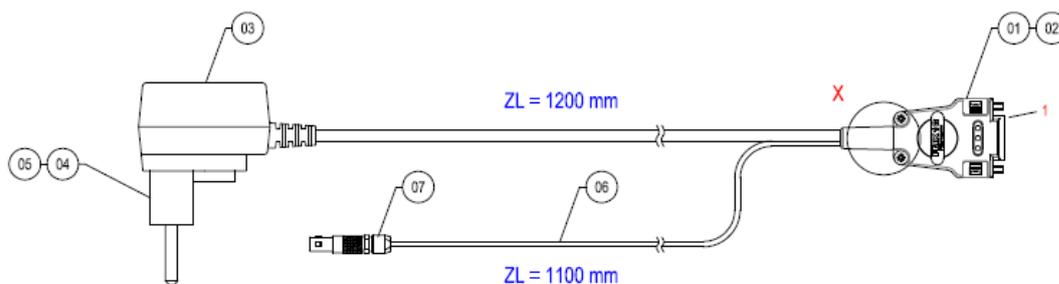
The information symbol indicates additional information, which is useful for the context.

**RESULT**

The result symbol indicates information about the obtained result of a step.

## Equipment needed

- Computer
  - Installed OS: Windows 7 or later
  - At least 1 free USB port
- Connection Kit eXtended Data available at ZEISS, see below drawing. The kit consists of:
  - Digitus® USB – RS232 Converter including driver CD
  - Cable with 9 pin D-Sub female plug and 4pin male plug for lens XD connector
  - International power plug adapter  
The adapter can operate with AC power from 100VAC to 240VAC, adapters for US or Euro AC main sockets are enclosed in the cable set.

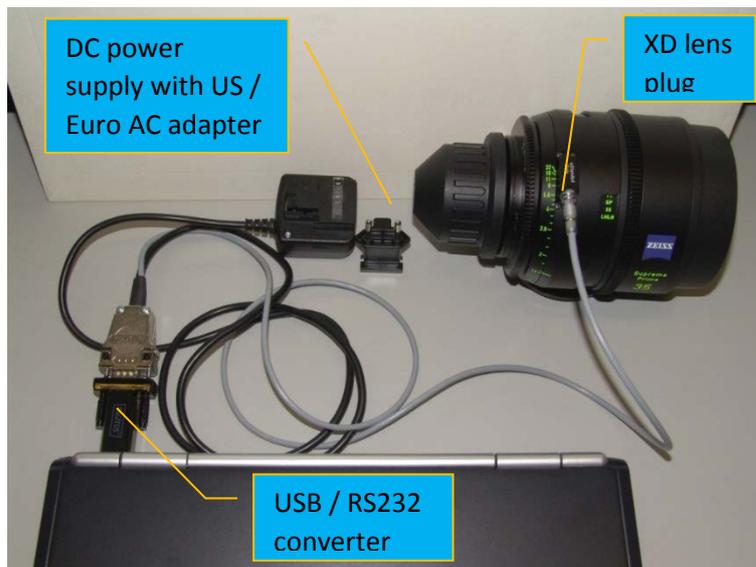


### INFO

The drivers for the Digitus® USB – RS232 converter must be installed on the computer. For additional information see troubleshooting section.

## Preparing the Connection Kit

- Attach the US or Euro power adapter to the power supply.
- Plug the power supply into an AC main power socket.
- Connect the USB / RS232 converter to a free USB port of the computer.
- Connect the 9 pin D-Sub female plug to the USB / RS232 converter.
- Finally connect the XD plug to the lens.



## Setup of the computer

Start your computer.

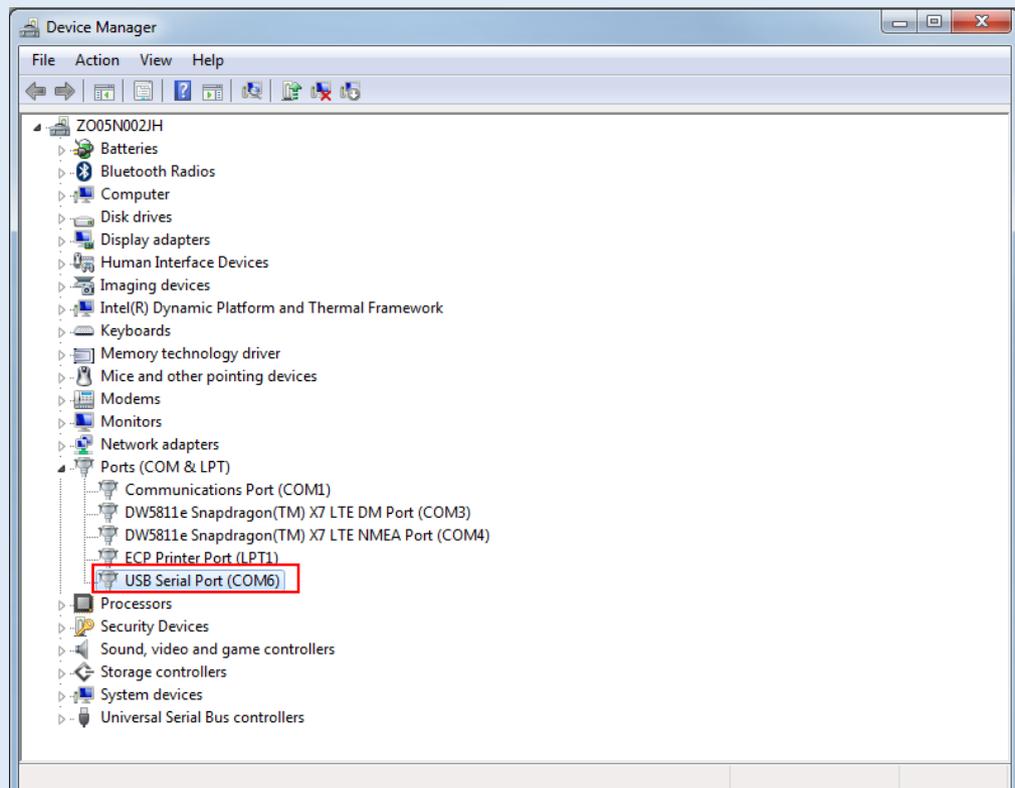
### INFO

A window should pop up reading that drivers have been installed and your device is ready to use.

Identify the COM port (COM#) the computer is using for the Connection Kit.

### INFO

You'll find the COM port in the **Device Manager** under **Ports (COM & LPT)>USB Serial Port**. To get to the Device Manager, press the **WINDOWS** key and type in "Device Manager".



In this example the identified COM port would be **COM6**.

## Loading the most recent software on the computer

You can download the latest version of the ZEISS Lens Data Viewer from the Zeiss homepage. The necessary installation file and a brief description of the new Version are stored in a .zip file.

Download the most recent ZEISS Lens Data Viewer and un – zip it.

### INFO

You can find the download section here:  
[www.zeiss.com/camera-lenses/int/service/download-center.html](http://www.zeiss.com/camera-lenses/int/service/download-center.html).

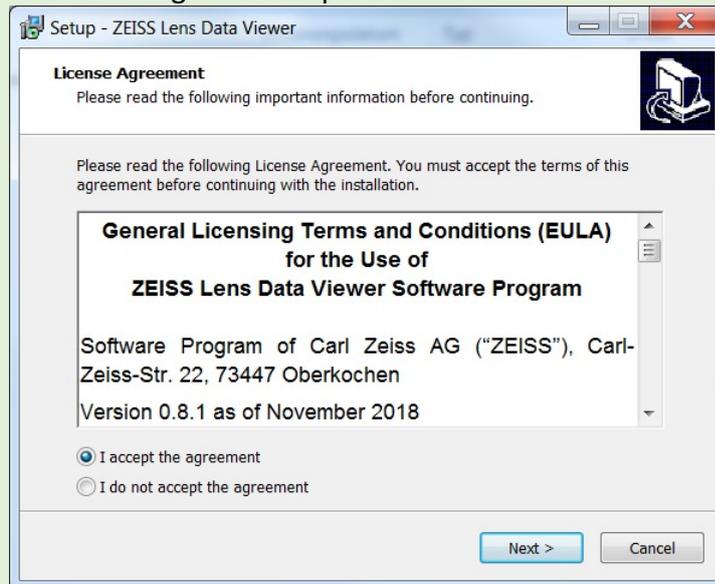
## Installing Zeiss Lens Data Viewer

Start the installer program “ZEISS Lens Data Viewer n.n.n.exe”.

The installer displays the license agreement. Please read these info’s carefully and accept the agreement.

### RESULT

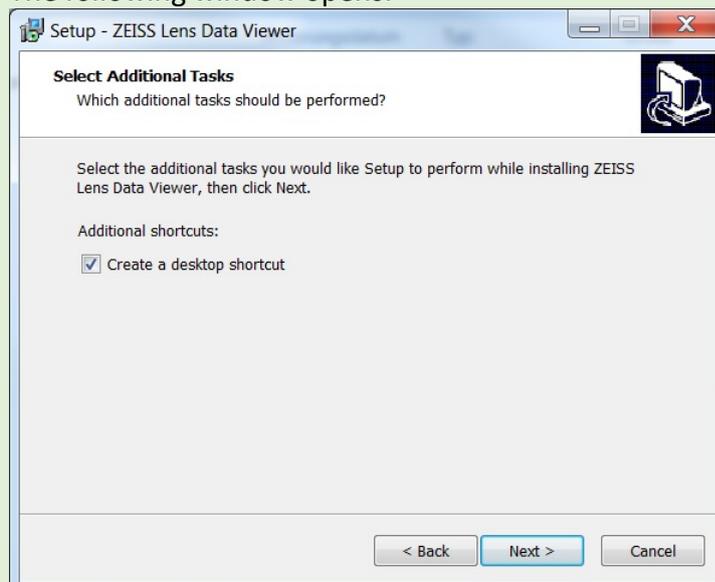
The following window opens:



### Select additional tasks

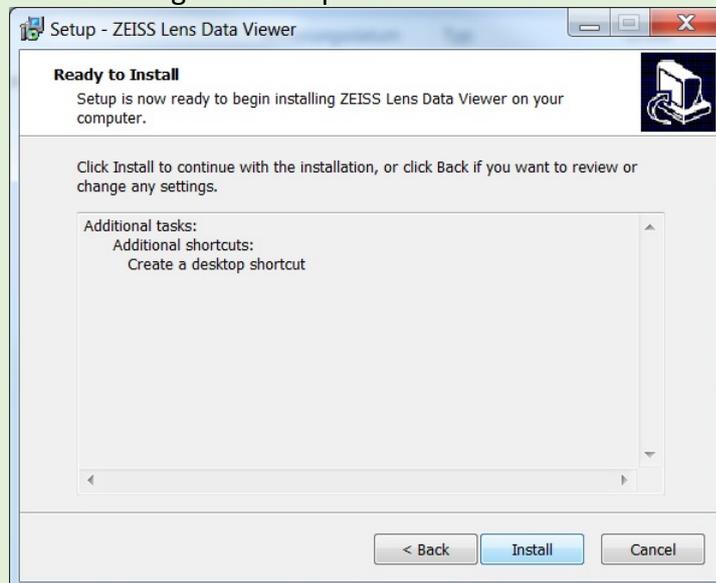
### RESULT

The following window opens:



Start installation by clicking the Install button

**RESULT** The following window opens:



Completing the installation by clicking the Finish button

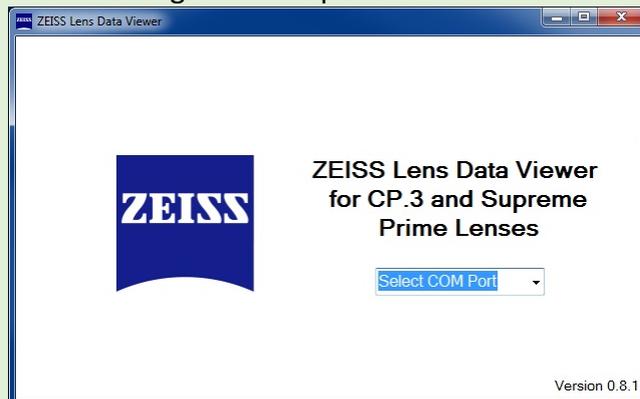
**RESULT** The following window opens:



## Using the Zeiss Lens Data Viewer

Select the USB serial port as identified in the previous paragraph to enable the communication between PC and lens.

**RESULT** The following window opens:



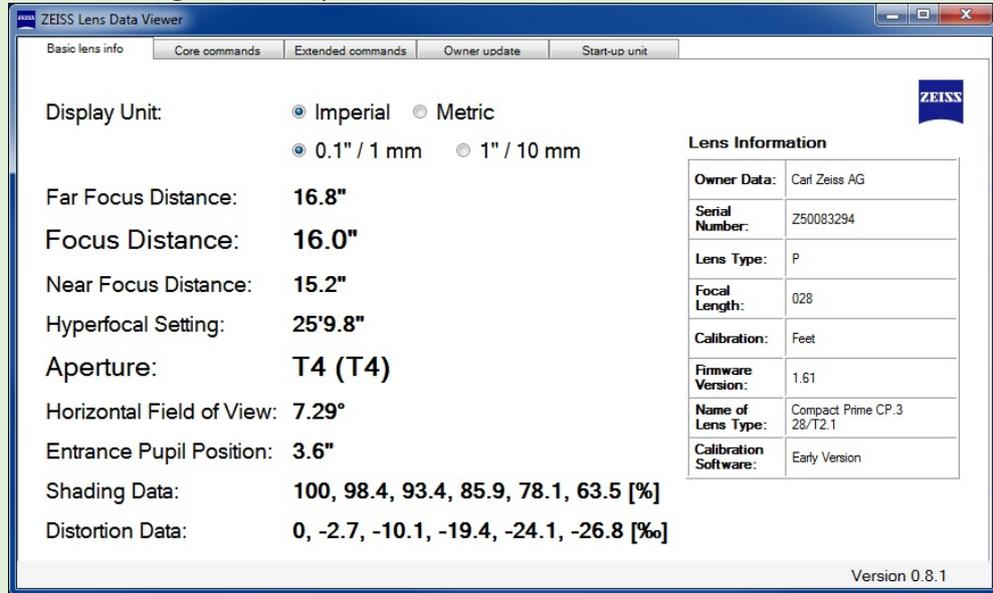
**INFO** If a wrong COM port is chosen, the following window opens:



## ZEISS Lens Data Viewer CP.3 XD / Supreme Prime Lenses

The Zeiss Lens Data Viewer display basic lens informations, when connection to a CP.3 XD or a Supreme Prime lens exists. If you rotate on focus- or aperture ring, you will see the changes in data on these basic lens info tab.

### RESULT The following window opens:



**Display Unit:**  Imperial  Metric  
 0.1" / 1 mm  1" / 10 mm

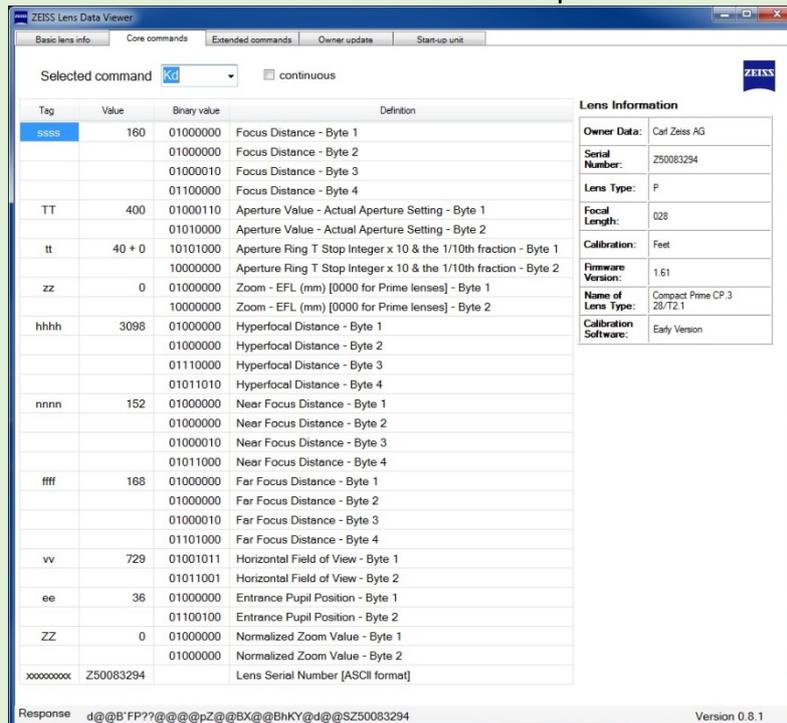
**Far Focus Distance:** 16.8"  
**Focus Distance:** 16.0"  
**Near Focus Distance:** 15.2"  
**Hyperfocal Setting:** 25'9.8"  
**Aperture:** T4 (T4)  
**Horizontal Field of View:** 7.29°  
**Entrance Pupil Position:** 3.6"  
**Shading Data:** 100, 98.4, 93.4, 85.9, 78.1, 63.5 [%]  
**Distortion Data:** 0, -2.7, -10.1, -19.4, -24.1, -26.8 [%]

| Lens Information      |                            |
|-----------------------|----------------------------|
| Owner Data:           | Carl Zeiss AG              |
| Serial Number:        | Z50083294                  |
| Lens Type:            | P                          |
| Focal Length:         | 028                        |
| Calibration:          | Feet                       |
| Firmware Version:     | 1.61                       |
| Name of Lens Type:    | Compact Prime CP.3 28/T2.1 |
| Calibration Software: | Early Version              |

Version 0.8.1

With the Core commands tab you can send a Cooke/i core command to the lens separately and check the answer from the lens.

### RESULT Core Commands tab with command example Kd :



Selected command: **Kd**  continuous

| Tag      | Value     | Binary value | Definition   |
|----------|-----------|--------------|--|
| sssss    | 160       | 01000000     | Focus Distance - Byte 1  |
|          |           | 01000000     | Focus Distance - Byte 2  |
|          |           | 01000010     | Focus Distance - Byte 3  |
|          |           | 01100000     | Focus Distance - Byte 4  |
| TT       | 400       | 01000110     | Aperture Value - Actual Aperture Setting - Byte 1                |
|          |           | 01010000     | Aperture Value - Actual Aperture Setting - Byte 2                |
| tt       | 40 + 0    | 10101000     | Aperture Ring T Stop Integer x 10 & the 1/10th fraction - Byte 1 |
|          |           | 10000000     | Aperture Ring T Stop Integer x 10 & the 1/10th fraction - Byte 2 |
| zz       | 0         | 01000000     | Zoom - EFL (mm) [0000 for Prime lenses] - Byte 1                 |
|          |           | 10000000     | Zoom - EFL (mm) [0000 for Prime lenses] - Byte 2                 |
| hhhh     | 3098      | 01000000     | Hyperfocal Distance - Byte 1                                     |
|          |           | 01000000     | Hyperfocal Distance - Byte 2                                     |
|          |           | 01110000     | Hyperfocal Distance - Byte 3                                     |
|          |           | 01011010     | Hyperfocal Distance - Byte 4                                     |
| nnnn     | 152       | 01000000     | Near Focus Distance - Byte 1                                     |
|          |           | 01000000     | Near Focus Distance - Byte 2                                     |
|          |           | 01000010     | Near Focus Distance - Byte 3                                     |
|          |           | 01011000     | Near Focus Distance - Byte 4                                     |
| ffff     | 168       | 01000000     | Far Focus Distance - Byte 1                                      |
|          |           | 01000000     | Far Focus Distance - Byte 2                                      |
|          |           | 01000010     | Far Focus Distance - Byte 3                                      |
|          |           | 01101000     | Far Focus Distance - Byte 4                                      |
| vv       | 729       | 01001011     | Horizontal Field of View - Byte 1                                |
|          |           | 01011001     | Horizontal Field of View - Byte 2                                |
| ee       | 36        | 01000000     | Entrance Pupil Position - Byte 1                                 |
|          |           | 01100100     | Entrance Pupil Position - Byte 2                                 |
| ZZ       | 0         | 01000000     | Normalized Zoom Value - Byte 1                                   |
|          |           | 01000000     | Normalized Zoom Value - Byte 2                                   |
| xxxxxxxx | Z50083294 |              | Lens Serial Number [ASCII format]                                |

Response: d@@B'FP?@@@pZ@@@BX@@BhKY@d@@@SZ50083294

Version 0.8.1

# ZEISS Lens Data Viewer CP.3 XD / Supreme Prime Lenses

With the Extended commands tab you can send a XD command to the lens separately and check the answer from the lens. You can also visualize the data for shading and distortion in this tab.

## RESULT

### Extended Commands tab with command example Zd :

The screenshot shows the 'Extended commands' tab in the ZEISS Lens Data Viewer. The 'Selected command' is 'Zd'. Below the command list, there are two visualization windows:

- Shading:** A line graph showing Shading (%) on the y-axis (0 to 100) versus Image Height (mm) on the x-axis (0 to 20). The curve starts at 100% at 0mm and decreases to approximately 65% at 20mm.
- Distortion:** A line graph showing Distortion (μm) on the y-axis (-50 to 50) versus Image Height (mm) on the x-axis (0 to 20). The curve starts at 0μm at 0mm and decreases to approximately -35μm at 20mm.

The 'Lens Information' panel on the right displays the following data:

|                       |                            |
|-----------------------|----------------------------|
| Owner Data:           | Carl Zeiss AG              |
| Serial Number:        | Z50083294                  |
| Lens Type:            | P                          |
| Focal Length:         | 028                        |
| Calibration:          | Feet                       |
| Firmware Version:     | 1.61                       |
| Name of Lens Type:    | Compact Prime CP.3 28/T2.1 |
| Calibration Software: | Early Version              |

On the Owner Update tab you can update the owner of the connected lens. If you click the Update button, you will see the update of the owner on Lens Information on the right side.

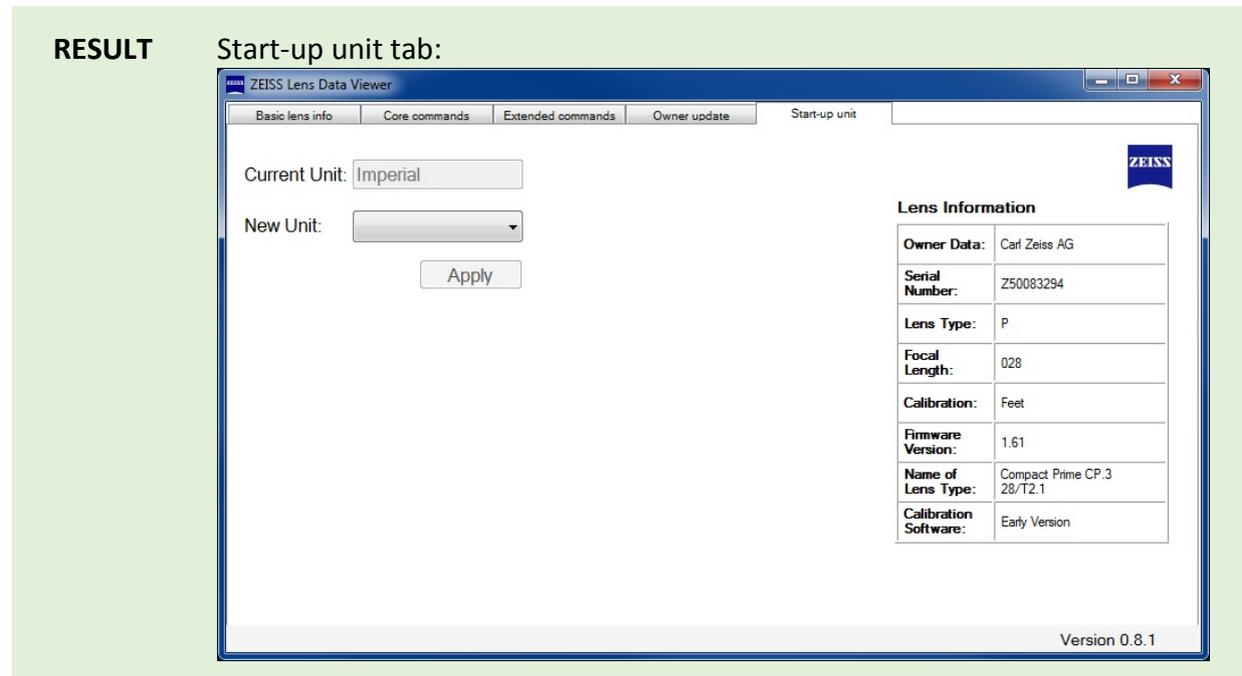
## RESULT

### Owner update tab:

The screenshot shows the 'Owner update' tab in the ZEISS Lens Data Viewer. It features two input fields: 'Current Owner' (containing 'Carl Zeiss AG') and 'New Owner' (empty). An 'Update' button is located below these fields. The 'Lens Information' panel on the right shows the updated owner data:

|                       |                            |
|-----------------------|----------------------------|
| Owner Data:           | Carl Zeiss AG              |
| Serial Number:        | Z50083294                  |
| Lens Type:            | P                          |
| Focal Length:         | 028                        |
| Calibration:          | Feet                       |
| Firmware Version:     | 1.61                       |
| Name of Lens Type:    | Compact Prime CP.3 28/T2.1 |
| Calibration Software: | Early Version              |

On the Start-up unit tab you can permanently define the start-up units of the lens. You will need this function , if you change the focusing of a Supreme Prime lens from meter to feet or reverse.



You can close the ZEISS Lens Data Viewer by the red X in the top right corner.

Finally plug out the XD cable from the lens.

## Troubleshooting

|   |  |
|---|--|
| I can't find USB Serial Port under the Ports (COM & LPT) tab in the Device Manager. | Reason: Drivers are not installed properly.  |
|   | Install the drivers from the enclosed CD.  |
|   | <b>INFO</b> If you can't find the CD, you can download the drivers from the manufacturers <a href="#">website</a> .      |
|   | <b>RESULT</b> The <b>USB Serial Port</b> is now listed under <b>Ports (COM &amp; LPT)</b> in the <b>Device Manager</b> . |

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## Appendix

| <b>Accessories</b>           | <b>ZEISS Identification Number</b> |
|------------------------------|------------------------------------|
| Connection Kit eXtended Data | 2217-107                           |

**Document subject to change!**

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