Leica Zeno GIS series

Release Notes

Last Update: 20.01.2014

Easy Out

Easy In

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1 About these Release Notes

Welcome and thank you for choosing Leica Zeno GIS, the mobile mapping series from Leica Geosystems AG.

With Leica Zeno GIS, Leica Geosystems introduces a complete new range of products using GNSS (Global Navigation Satellite System) for GIS data collection, mapping and maintenance. Leica Zeno GIS provides the easiest way to use mapping products, including GNSS handhelds, Tablet PCs, GNSS Smart Antennas, field and office software.

2 ABOUT ZENO OFFICE V3.2, ZENO OFFICE ON ARCGIS V3.2, ZENO FIELD V3.2 AND ZENO CONNECT V2.1

The following chapter documents all new features, enhancements and changes included in the Zeno Office v3.2, Zeno Office on ArcGIS v3.2, Zeno Field v3.2 and Zeno Connect 2.1 releases.

Version:

- Zeno Field v3.2 Build: 545 (Release Date: 24.01.2014)
- Zeno Connect v2.1 Build: 545 (Release Date: 24.01.2014)
- Zeno Office v3.2 Build: 788 (Release Date: 24.01.2014)
- Zeno Office on ArcGIS v3.2 Build: 788 (Release Date: 24.01.2014)

For detailed information on using any Zeno Field, Zeno Connect and Zeno Office feature, please refer to Quick Start Tutorials and/or videos.

2.1 ABOUT THIS RELEASE

This release contains following mayor features:

- Post Processing of data measured on a Zeno 5 is now possible.
- Support of BeiDou satellite system.
- Cloud Feature synchronization between Zeno Field and Zeno Office via ArcGIS Online.
- Zeno Office onArcGIS supports now ArcGIS 10.2 in addition to the already supported ArcGIS 10.0 and 10.1.
- Zeno Office now runs on Windows 8 and Windows 8.1.
- Improved L1 Post Processing.
- New CS25 L1 GNSS Post Processing and CS25 L1 GNSS DGPS certificate are available.
- LandXML Export in Zeno Office.
- The DigiCAT transfer tool is now available for the CS25 in addition to the already supported Zeno 5 and Zeno 10/15.
- Zeno Office OEM is now fully available in the following languages: English, German, Chinese, Spanish and Japanese.

2.2 Zeno products are JRC Certified

Two new Zeno products are now certified to be suited for area measurement of land parcels according to COMMISSION Regulation (EC) No 1122/2009, of 30 November 2009. The following table shows the Zeno devices, its achieved accuracy and the fulfilled class.

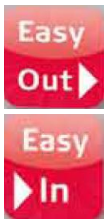
Device	GNSS Mode	Avg. Buffer Width	Class
CS25 GNSS + Helix	DGNSS, L1	0.35 m ± 0.04 m	Class 5 (<0.50m)
CS25 GNSS + Helix	Post-Processing, L1, GNSS	0.42 m ± 0.06 m	Class 5 (<0.50m)

2.3 List of improvements and Quality Improvement

2.3.1 Leica Zeno Office v3.2

- The new version is available in myWorld for download.
- Zeno Office on ArcGIS now **supports Esri ArcGIS 10.0, 10.1 and 10.2.**
- Zeno Office OEM supports Windows 8 and Windows 8.1.
- Zeno Office onArcGIS based on ArcGIS 10.2 now supports Windows 8 and Windows 8.1.
- Post-processing
    - Significant **post-processing accuracy improvements especially for L1.**
    - Post Processing kernel optimized for Sirf raw data.
    - **Post Processing of observations measured with a Zeno 5**
        - Post Processing of Zeno 5 data is recommended **only** for points measured in **good** conditions.
        - As the Sirf chip in the Zeno 5 is optimized for providing satisfying results in bad conditions (it calculates positions in addition to various onboard sensors), it's not recommended to post process data measured with heavy obstructions.
        - It's recommended to measure a point at least 180 seconds. This will be set automatically when Sirf is selected as antenna and raw data logging is enabled. More details can be found in section 2.3.2

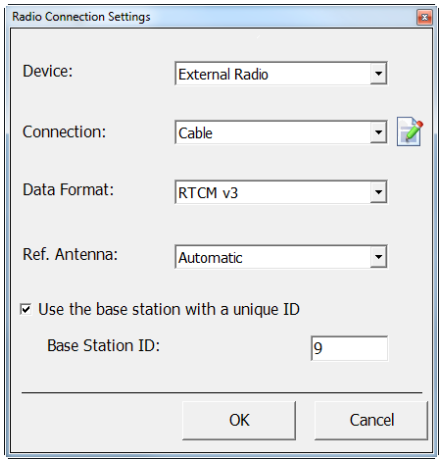
- Zeno Office now also supports CSCS files based on ellipsoidal coordinate systems.
- Zeno Office onArcGIS 10.1 and 10.2 is ready for feature synchronization with Zeno Field 3.2 via ArcGIS Online. More details can be found in section 2.3.2.
- Survey Data export in LandXML format:
    - Information on used transformation and projection parameters
    - Information on used rover
    - Information on used base station
    - Survey Point information (standard deviation, easting, northing, elevation, projected coordinates in meters only)
    - Observation Details (covariance matrix, RMS, coordinates, antenna height)
- EasyIn can be done now from a user account without administrative rights. This was not possible due to read and write restrictions on a required folder.
- Zeno Office now works with field projects, Geoid and CSCS files stored on network locations.
- Zeno Tools toolbox available in ArcToolbox for administrating ArcGIS Online workflow.
- Microsoft's Bing Maps won't be available anymore.
- Quality improvements:
    - Corrected height values in the case of using different units for the XY coordinate system and the Z coordinate system.
    - EasyIn runs successful even when data is outside of the Geoid extent.
- Zeno Office on ArcGIS is available in following languages:
    - English, German, Russian, Chinese (simplified), Spanish, Polish, Japanese
- Zeno Office is available in following languages:
    - English, German, Chinese (simplified), Spanish, Japanese, French (ArcGIS part only), Russian (a few Esri dialogues remain in English), Polish (Zeno Office part only)



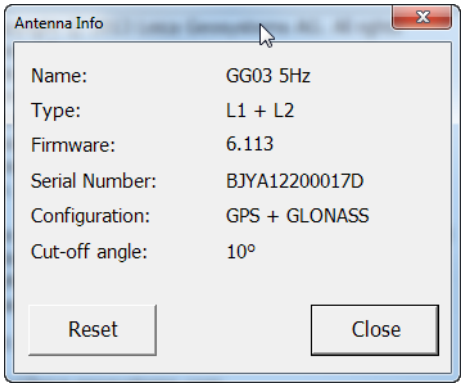
2.3.2 Leica Zeno Field v3.2

- Leica Zeno Field v3.2 is available in myWorld for download.
- Leica Zeno Field bases now on the latest ArcPad version 10.2.
- The DigiCAT transfer tool is now available for the CS25 in addition to the already supported Zeno 5 and Zeno 10/15.
- Support of Beidou satellite systems for GG03 and CS25 GNSS. For tracking Beidou satellites in Zeno Field, a Beidou ready firmware has to be installed on the sensor.
- Raw data logging of Sirf data for post processing is now possible on Zeno 5 devices.
    - Post Processing of Zeno 5 data is recommended only for points measured in **good conditions**.
    - It's recommended to measure a point at least **180 seconds**. The number of positions to average in GPS preferences is set to 180 seconds automatically when Sirf is selected as antenna and raw data logging is enabled. This should be changed only if post processing of the data is **not** intended.
    - Please note the SirfStarIV GPS chip delivers an optimized and best solution in a navigated mode in obstructed areas, as the SirfStarIV also utilizes other sensors (e.g. Accelerometer) for positioning computing. In post-processing, the Zeno GNSS kernel utilizes only GNSS observations, which can result in a less optimized result for obstructed areas – compared to the navigated solution. Longer observation times can help to improve this.
- Feature synchronization between Zeno Field/Zeno Office and ArcGIS Online:
    - Works for Zeno Field on CS25 and Zeno Field on Zeno 5 only.
    - Feature services can be used and generated with Zeno Office on ArcGIS based on ArcGIS 10.1 and 10.2 only.
    - Hosted feature services and connections to ArcGIS Online are supported.
    - Projects uploaded to ArcGIS Online can be opened directly in Zeno Field.
    - Zeno Field Templates can be downloaded in Zeno Field, and Zeno Field Projects created from them. These Zeno Field Projects can then be uploaded to ArcGIS Online.
    - Synchronize workflow between Zeno Field and Zeno Office via ArcGIS Online. Measure features in Zeno Field and transmit them in real-time to Zeno Office over the air via ArcGIS Online.
- Quick Fields:
    - Choose to populate feature attributes in your map with automatic content (GPS data, user information, self-defined content).
    - Define custom functions and attributes in the Expression Builder.
    - More information can be found in the latest Quick Start Tutorial.

- Radio profiles now support **Reference Station IDs** to separate between multiple reference stations sending correction data on the same channel. The Reference Station ID setting is available when using a Leica GG03 or GG02 plus SmartAntenna. It is not supported using a Zeno 10/15 (GS05/06 GNSS cap on a CS10/15 GIS controller).



- The Antenna dialog inside of the Zeno Field About dialog now contains a reset button to reset the connected GNSS sensor to factory default.



- It is now possible to establish a RTK connection using a user account without administrator rights on a CS25 or CS25 GNSS. This was not possible due to read and write restrictions on a required Program Data folder.
- Microsoft's Bing Maps won't be available in Zeno Field any more. This changed because of new terms of a license.
- Zeno Field now also support CSCS files based on ellipsoidal coordinate systems.
- Zeno Field on Zeno 5: If Sirf is selected, only SBAS profile will be shown and it's not possible to generate, modify or delete profiles. For enabling all real time profile options you have to select GG03 or GG02 plus.
- Survey points are now 3D when measuring lines or polygons in streaming mode.

- Creating a new RTK connection now works, even though an active internet connection already exists. The active connection will be closed.
- Zeno Field now supports VIVAX VlocPro. Full strings which come from the device are split up and filled into specific attribute fields. This can be also easily modified to fit the customer's data model.
- Quality improvements:
    - Bug fix for estimated accuracy displayed in the Statusbar especially in combination with CS25 GNSS L1.
    - Zeno Tools installed on Win 7:
        - Wrong shortcuts (shortcut 1, shortcut 2...) after having installed a localized ZC/ZF version will be eliminated.
        - Improvement of Firmware Loader GGox and GNSS Upgrade Key Tool when connecting via Bluetooth to the sensor. Now the correct Bluetooth COM-ports will show up.
        - In some cases, invalid AuthCodes could be loaded on a GG02 or GG03 plus. This got resolved.
- Zeno Field is based on following ArcPad OEM versions:
    - Zeno Field for CS10/15: ArcPad 10.0.2
    - Zeno Field for CS25: ArcPad 10.2
    - Zeno Field for Zeno 5: ArcPad 10.2
- Zeno Field is available in following languages:
    - English, German, Spanish, Portuguese, Italian, Danish, Chinese (Simplified), Chinese (Traditional), Russian, Polish, Slovak, Swedish, Korean, Finnish, Japanese, Hungarian.

Licensing model

- Zeno Field on CS10/15 requires a license key and can only be installed on CS10 GIS, and CS15 GIS.
- Zeno Field on CS25 requires a license key and can only be installed on a CS25.
- Zeno Field on Zeno 5 requires a license key and can only be installed on a Zeno 5.

2.3.3 Leica Zeno Connect v2.1

- New custom coordinate systems defined by Leica Geosystems:
    - Czech
    - Slovak

- Support of BeiDou satellite systems for GG03 and CS25 GNSS. For tracking Beidou satellites in Zeno Field, a Beidou ready firmware has to be installed on the sensor.
- Sirf chip of Zeno 5 can now be utilized in Zeno Connect for Zeno 5.
- Zeno Connect on Zeno 5: If Sirf is selected, only SBAS profile will be shown and it's not possible to generate, modify or delete profiles. For enabling all real time profile options you have to select GG03 or GG02 plus.
- Zeno Connect now also support CSCS files based on ellipsoidal coordinate systems.
- Creating a new RTK connection now works, even though an active internet connection already exists. The active connection will be closed.
- The NMEA is streamed from Zeno Connect even when a quality gate is not matched. In this case we deliver a GGA message without a position and the GPS Quality Indicator is flagged as "Fix not available or invalid". Reason for this change: Stopping NMEA stream in case of non-matching quality gates caused problems in some 3rd party programs.
- GGQ message contains WGS84 ellipsoidal height when no Geoid is selected in the Coordinate System tab. In case of a selected Geoid, the orthometric height according to the Geoid in use is streamed.
- The antenna height displayed in Zeno Connect is always zero. That's the reason why we removed the antenna height out of the GNSS Status bar. When raw data logging is done, the used antenna height will affect raw data logging only. NMEA streamed to a port will still base on an antenna height of zero.
- GST message is streamed now three-digit. The former version with two-digit caused problems in some third-party programs.
- Quality improvement:
    - Geoid separation is now applied in GGQ message even when LLQ message is switched off.
    - Touchscreen keyboard used for Zeno Connect on Zeno 5 hided the Zeno Connect UI from time to time. This is now solved.
    - Zeno Connect on CS25: Stability improvement for long-term raw data logging.
    - Improved estimated accuracy especially on CS25 GNSS L1. This was estimated far too pessimistic before.
    - Zeno Tools installed on Win 7:
        - Wrong shortcuts (shortcut 1, shortcut 2...) after having installed a localized ZC/ZF version will be eliminated.
        - Improvement of Firmware Loader GGox and GNSS Upgrade Key Tool when connecting via Bluetooth to the sensor. Now the correct Bluetooth COM-ports will show up.

- In some cases, invalid AuthCodes could be loaded on a GG02 or GG03 plus. This got resolved.

- Zeno Connect is available in following **languages**:
  - English, German, Spanish, Portuguese, Italian, Danish, Chinese (Simplified), Chinese (Traditional), Russian, Polish, Slovak, Swedish, Korean, Finnish, **Japanese, Hungarian.**

Licensing model

- Zeno Connect on CS10/15 requires a license key and can only be installed on CS10 GIS, and CS15 GIS.
- Zeno Connect on CS25 requires a license key and can only be installed on a CS25.
- Zeno Field on Zeno 5 requires a license key and can only be installed on a Zeno 5.

2.4 Installation Steps

2.4.1 How to install Zeno Office 3.2

System Requirements

The following are the minimum system requirements apply to **Leica Zeno Office**:

Intel Pentium 1.6 GHz recommended or higher
2 GB RAM or higher
At least 2.4 GB free space on hard disk
USB port
DVD-ROM drive is required to install the application

For **Leica Zeno Office on ArcGIS**, please check the ESRI ArcGIS 10 10.1 or 10.2 minimum system requirements.

Installation

The following Microsoft® Windows™ operating systems are supported with **Leica Zeno Office, Zeno Office on ArcGIS** and **Zeno Field Deployment Manager**:

Operating System	Min. Version	Max. Version
Windows 8 (32-bit/64-bit)*	SP2	SP2
Windows 7 (32-bit & 64-bit)	-	SP1
Windows Vista (32-bit & 64-bit)	SP2	SP2
Windows XP (32-bit)	SP3	SP3
Windows XP (64-bit)	SP2	SP2

Zeno Office OEM and Zeno Office onArcGIS based on ArcGIS 10.2 only

Using the Leica Zeno GIS 3.2 Software DVD

- Zeno Office on ArcGIS v3.2 requires an existing installation of ArcGIS 10.0, 10.1 or 10.2. We recommend using the latest ArcGIS Service Pack from Esri.

- Leica Zeno Office and Leica Zeno Office on ArcGIS can only be installed and licensed successfully if the user is logged in as Administrator or with Administrator rights.

1. Uninstall any old installation of Zeno Office.

2. Place the Zeno GIS Software DVD into the DVD drive of your computer.

3. Click Install Software.

4. Select either Zeno Office or Zeno Office on ArcGIS (10.0, 10.1 or 10.2), depending on which one you have purchased.

5. Select the language you want to install.

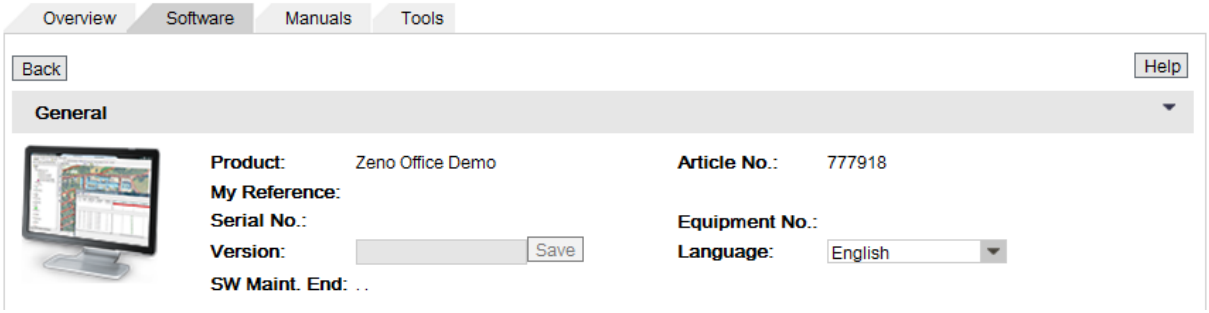
6. When Setup starts, follow the instructions on your screen.

Using the Zeno Office installer from Leica myWorld

1. Uninstall any old installation of Zeno Office.

2. Please go to myWorld, go to your registered Zeno Office product. https://myworld.leica-geosystems.com/irj/portal

3. Go to the Software tab.



4. In the Offline Software Update section, you can download the latest Zeno Office version. Download the appropriate installer -Zeno Office or Zeno Office on ArcGIS in your language.

5. Unzip the installer.

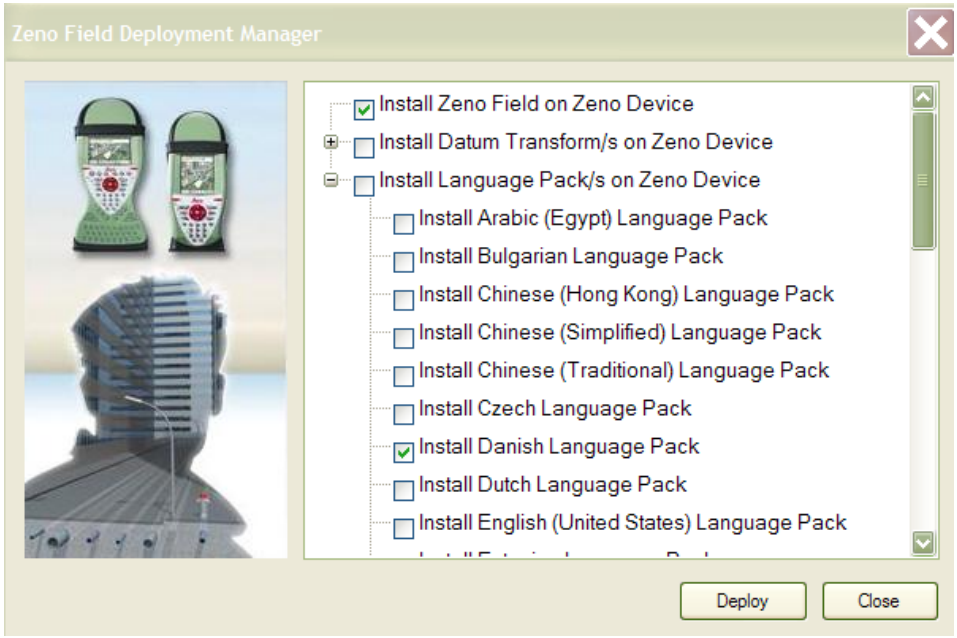
6. Double-click the desired exe file to start the installation process.

7. When Setup starts, follow the instructions on your screen.

2.4.2 How to install Zeno Field on Zeno 10/15

- Zeno 10/15 will be delivered from now on with Zeno Field v3.2 pre-installed.
- Leica Zeno Field is designed to run on the Leica Zeno 10 and Zeno 15 or CS10/15 GIS only.
- During the installation or afterwards, Zeno Field on CS10/15 must be licensed. Please refer to the Quick Start Tutorial: *Leica Zeno GIS.pdf*.

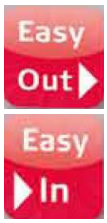
You can either install Zeno Field via the Zeno Deployment Manager, or directly on the device. To install it via the Deployment Manager, please install Leica Zeno Field from the Zeno GIS DVD on your desktop. You don't need a Zeno Field license for Zeno Field on your PC to use the Deployment Manager. Then start the Zeno Field Deployment Manager, connect via USB your Zeno 10/15 to your desktop computer, select 'Install Zeno Field' and start Deploy.



Please note, you need to have installed the USB drivers for the Zeno 10/15 prior to be able to install Zeno Field on the mobile device via the Deployment Manager. The driver can be found on the Leica Zeno GIS DVD in the folder \Common\CS Driver. Please select the components to get installed and follow the installation steps. Once installed, you have to license Zeno Field via the Zeno License Manager in Zeno Tools.

Alternatively you can also install Zeno Field directly on the device:

1. Uninstall any old installation of Zeno Field.
2. Please go to Leica myWorld, go to your registered Zeno product.
   https://myworld.leica-geosystems.com/irj/portal
3. Go to the Software tab.
4. In the Offline Software Update section, you can download the latest Zeno Field version.
5. Download the required Zeno Field language (optional).
6. Copy the installer on your CS10/15 GIS.
7. Install Zeno Field by double-click on the cab file (Leica Zeno Field 3.2.ARM_en.CAB).
8. When Setup starts, follow the instructions on your screen.



9. Install the Zeno Field Language by double-click on the cab file (Leica Zeno Field 3.2.ARM.Update_xx.CAB) (optional).

10. When Setup starts, follow the instructions on your screen.

2.4.3 How to install Zeno Field on CS25

- Leica Zeno Field on CS25 is designed to run on the Leica CS25 only.
- During the installation or afterwards, Zeno Field on CS25 must be licensed. Please refer to the Quick Start Tutorial: ***Leica Zeno GIS.pdf.***

1. Uninstall any old installation of Zeno Field.

2. Please go to Leica myWorld, go to your registered Zeno product. https://myworld.leica-geosystems.com/irj/portal

3. Go to the Software tab.

4. In the Offline Software Update section, you can download the latest Zeno Field version. Download the appropriate installer in your language.

5. Copy the installer on your CS25.

6. Install Zeno Field by double-click on the exe file (Leica Zeno Field 3.2 Setup_xx.exe).

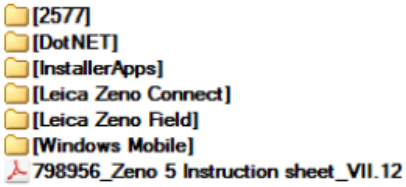
7. When Setup starts, follow the instructions on your screen.

2.4.4 How to install Zeno Field, Zeno Connect, Windows Embedded Handheld on Zeno 5

- Every Zeno 5 package comes already with a Leica Zeno USB Memory Stick for installing Zeno Field and Zeno Connect. The following steps are only required if:
    - No original Leica Zeno USB Memory Stick is available (e.g. when Zeno Field / Zeno Connect for Zeno 5 is downloaded from myWorld)
    - A new version of Zeno Field or Zeno Connect for Zeno 5 is available on myWorld. In this case you can use your Leica Zeno USB Memory Stick and update the installer.

The following steps show how to set up an USB flash drive for installing Zeno Field / Zeno Connect on a Zeno 5.

1. Download the latest Zeno Field/Zeno Connect installer for Zeno 5 from Leica myWorld.
2. Be sure that your USB drive has a capacity of at least 1 GB.
3. Download the installation zip file from myWorld (Leica Zeno Field / Zeno Connect on Zeno 5).
4. Unzip the downloaded zip file to an empty folder on your PC. Be sure that the entire structure of the zip file will be preserved (This option should be enabled per default in most zip programs).
5. Copy the whole content of the unzipped data to the root directory of your USB flash drive. Following structure must be copied to the root of the USB drive:



- To install Windows Embedded Handheld 6.5.3, Zeno Field or Zeno Connect on a Leica Zeno 5 proceed as follows:

1. Fully charge the battery first!
2. Attach the SnapOn module to the Zeno 5.
3. Plug in the 'micro USB to USB adaptor'.
4. Turn on the Zeno 5.
5. After boot up, plug in the Leica Zeno USB Memory Stick.
6. A screen with country selection appears. Select your country.
7. Subsequently, the installation menu is displayed.
8. To start the installation, select either:
    - **Windows Embedded Handheld 6.5.3** to re-install the operating system. Only select this option to change the OS language (as Windows Embedded Handheld 6.5.3 Release is already preinstalled)
    - **Zeno Field 3.2** to install the Zeno Field Release 3.2

- **Zeno Connect 2.1** to install the Zeno Connect Release 2.1

Follow the instructions on the screen.

9. **Be careful:** During the installation of Windows Mobile 6.5.3, the Zeno 5 will reboot several times. Please **don't interrupt** the installation process.

10. To enter the USB Program Loader menu again, simply plug in the USB drive.

2.4.5 How to install Zeno Connect on Zeno 10/15

- Leica Zeno Connect on Zeno 10/15 is designed to run on the Leica Zeno 10 and Zeno 15 or CS10/15 GIS only.
- During the installation or afterwards, Zeno Connect on CS10/15 must be licensed. Please refer to the Quick Start Tutorial: *Leica Zeno GIS.pdf*.

1. Uninstall any old installation of Zeno Connect.

2. Please go to Leica myWorld, go to your registered Zeno product. https://myworld.leica-geosystems.com/irj/portal

3. Go to the Software tab.

4. In the Offline Software Update section, you can download the latest Zeno Connect version.

5. Download the required Zeno Connect language (optional).

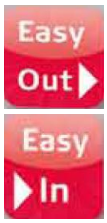
6. Copy both installers on your CS10/15 GIS.

7. Install Zeno Connect by double-click on the cab file (Leica Zeno Connect 2.1.ARM_en.cab).

8. When Setup starts, follow the instructions on your screen.

9. Install the Zeno Connect Language by double-click on the cab file (Leica Zeno Connect 2.1_xx.ARM.CAB) (optional).

10. When Setup starts, follow the instructions on your screen.



2.4.6 How to install Zeno Connect on CS25

- Leica Zeno Connect on CS25 is designed to run on the Leica CS25 only.
- During the installation or afterwards, Zeno Connect on CS25 must be licensed. Please refer to the Quick Start Tutorial: ***Leica Zeno GIS.pdf***.

1. Uninstall any old installation of Zeno Connect.
2. Please go to Leica myWorld, go to your registered Zeno product. https://myworld.leica-geosystems.com/irj/portal
3. Go to the Software tab.
4. In the Offline Software Update section, you can download the latest Zeno Connect version. Download the appropriate installer in your language.
5. Copy the installer on your CS25.
6. Install Zeno Connect by double-click on the exe file (Leica Zeno Connect 2.1 Set-up_xx.exe).
7. When Setup starts, follow the instructions on your screen.

2.5 Active Customer Care

A powerful and competent worldwide service and support network backs up Leica Zeno GIS series.

Leica Geosystems customers benefit from our service and support that spans time zones and geography.

All customers having a valid CCP will benefit from a free upgrade to the latest version for your Zeno.

2.6 Website

Comprehensive information about Zeno GIS can be found on the Leica Geosystems website: http://www.leica-geosystems.com/Zeno

2.7 Comments

Please read carefully the following comments.

The following restrictions are in Leica Zeno GIS:

- Leica Zeno GIS requires the following Firmware versions:
  - Zeno 10, Zeno 15, CS10 and CS15: FW v4.5 or FW v4.6
  - GS05 and GS06: FW 1.13
  - GG02 plus: FW 6.113
  - GG03: FW 6.113
- Zeno Office does not support ArcGIS versions prior to ArcGIS 10.0
- When working with RTCM 2.x, or CMR/CMR+, then the reference station receiver should be a Leica receiver, else GLONASS will not taken into account when fixing the position. This is due to the fact, that GLONASS biases are not transmitted via these messages.
- The Deployment Manager will work only properly when the "Deployment Manager Updater.bat" file is run. Workflow:
  - Install Zeno Field on your CS25/PC from the Leica Zeno USB Memory Stick
  - Run Deployment Manager Updater.bat from the Zeno Field folder on the Leica Zeno USB Memory Stick
  - Run the Deployment Manager to deploy Zeno Field to your mobile device
- Some hints for customers using feet coordinate systems:
  - When the Project Wizard is used for creating a database, simply select your desired feet coordinate system and all coordinates x,y,z will be in feet.
  - There are some things that have to be considered in case of generating a new feature class in the Catalog window or in ArcCatalog.
    - Select a XY coordinate system in the wizard.
    - If no Z coordinate system is selected in the next page, the height value will be from the same unit as the XY coordinate system.
    - If a vertical coordinate system is selected, make sure not to choose a system in meters by accident as most of them are defined in meters.

- Points measured in a Z coordinate system defined in meters by mistake can't be recalculated back to feet.

3 About Zeno Office v3.1, Zeno Office on ArcGIS v3.1, Zeno Field v3.11 and Zeno Connect v1.31

The following chapter documents all new features, enhancements and changes included in the Zeno Office v3.1, Zeno Office on ArcGIS v3.1, Zeno Field v3.11 and Zeno Connect 1.31 releases.

Version:

- Zeno Field v3.11 Build: 438 (Release Date: 30.04.2012)
- Zeno Connect v1.31 Build: 438 (Release Date: 30.04.2012)
- Zeno Office v3.1 Build 705 (Release Date: 20.01.2013)
- Zeno Office on ArcGIS v3.1 Build 705 (Release Date: 20.01.2013)

For detailed information on using any Zeno Field and Office feature, please refer to the user manual and/or Quick Start Tutorials.

3.1 About this release

This release contains following mayor features:

- Support of the CS25 GNSS – a high-accuracy tablet computer
- Zeno Office on ArcGIS now supports Esri ArcGIS 10.0 or 10.1.
- Significant post-processing improvements.
- Position quality management in Zeno Connect

3.2 Zeno products are JRC Certified

The Zeno products are now certified to be suited for area measurement of land parcels according to COMMISSION Regulation (EC) No 1122/2009, of 30 November 2009. The following table shows the Zeno devices, its achieved accuracy and the fulfilled class.

Device	GNSS Mode	Avg. Buffer Width	Class
CS25 GNSS + Helix	DGNSS, L1	0.04m ± 0.01m	Class 5 (<0.50m)
CS25 GNSS + HELIX	Post-process, L1	0.02m ± 0.01m	Class 5 (<0.50m)

3.3 List of improvements and bug fixes

3.3.1 Leica Zeno Office v3.1

- The new version is available in myWorld for download.
- Zeno Office OEM is now based on Esri ArcGIS 10.0 SP5.
- Zeno Office on ArcGIS now **supports Esri ArcGIS 10.0 and 10.1.**
- **Post-processing**
  - Significant **post-processing accuracy improvements.**
  - Post processing is now supported using **file geodatabases**
  - **Automatic position update rules**
    - The real-time coordinate will only be updated after post-processing, if the post-processing result leads to a higher accuracy. This is the case if the post-processing results in a position status which is better like in real-time. E.g.:
      - A real-time code solution will be updated, if post-processing is able to compute a phase fix solution.
      - A real-time phase fixed solution will not be updated if post-processing is able to compute a code solution only.
- Geoid and CSCS files are now supported without the use of a transformation. This allows using Geoid and CSCS files with projections based on WGS84 such as UTM which don't use a transformation.
- **Zeno Office on ArcGIS is available in following languages:**

- English, German, Russian, Chinese (simplified), Spanish, Polish

- **Zeno Office is available in following languages:**
  - English, German, Chinese (simplified), Spanish

3.3.2 Leica Zeno Field v3.11

- Leica Zeno Field v3.11 is available in myWorld for download
- **Support of the Leica CS25 GNSS** high-accuracy tablet computer
- The **function buttons on CS25** can now be configured as a shortcut to trigger a GNSS measurement.
- Geodetic Geoid models with height scaling are now supported.
- Bug fix: Bing background maps where sometimes not working on Zeno 5
- Zeno Field is **based on following ArcPad OEM versions**:
  - Zeno Field for CS10/15: ArcPad 10.0.2
  - Zeno Field for CS25: ArcPad 10.0.2
  - Zeno Field for Zeno 5: ArcPad 10.0.3
- Zeno Field on CS10/15 now supports WinCE FW 4.5 and 4.6
- Zeno Field is available in following **languages**:
  - English, German, Spanish, Portuguese, Italian, Danish, Chinese (Simplified), Chinese (Traditional), Russian, Polish, Slovak, Swedish, Korean, Finnish

Licensing model

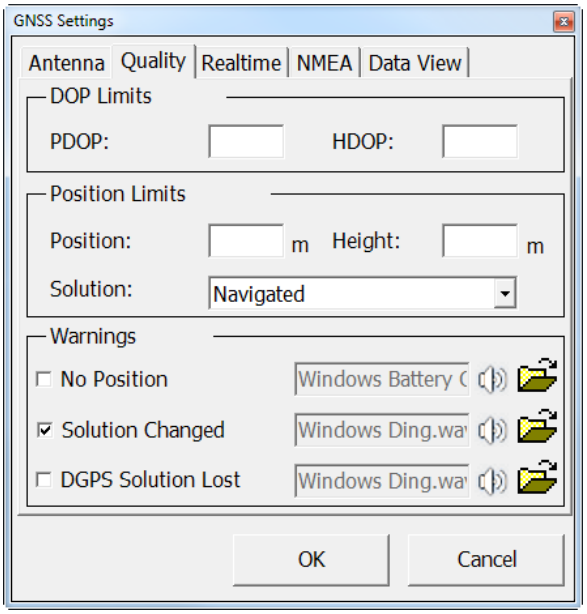
- Zeno Field on CS10/15 requires a license key and can only be installed on CS10 GIS, and CS15 GIS.
- Zeno Field on CS25 requires a license key and can only be installed on a CS25.

3.3.3 Leica Zeno Connect v1.31

- Leica Zeno Connect v1.31 is available in myWorld for download
- **Support of the Leica CS25 GNSS** high-accuracy tablet computer
- The GNSS settings now have a **Quality tab to define quality limits** based on PDOP, HDOP, position accuracy, height accuracy, and solution type. The GGA and GSA NMEA sentences indicate exceeded quality gates like following:
  - GGA: GPS Quality Indicator = 0 (Fix not available or invalid)

- GSA: Mode = 1 (Fix not available)

- **Acoustic warnings** can be defined for following cases:
  - No Position: Warning if the GNSS sensor cannot compute a position.
  - Solution Changed: Warning as soon as the position status changes. It works for both, when changing to a less accurate position status or when changing to a more accurate position status. E.g. from phase fixed to code or from navigated to code.
  - DPGS Solution lost: Warning as soon as the position status changes to to a less accurate position status. E.g. from phase fixed to code or from code to navigated.



- Zeno Connect is available in following **languages**:
  - English, German, Spanish, Portuguese, Italian, Danish, Chinese (Simplified), Chinese (Traditional), Russian, Polish, Slovak, Swedish, Korean, Finnish

Licensing model

- Zeno Connect on CS10/15 requires a license key and can only be installed on CS10 GIS, and CS15 GIS.
- Zeno Connect on CS25 requires a license key and can only be installed on a CS25.

3.3.4 New Leica CS25 GNSS

The CS25 GNSS is a worldwide unique product, that combines a rugged Windows 7 tablet computer, with an integrated high-accuracy GNSS. The CS25 GNSS doesn't require a backpack or a pole mount, or any additional batteries. A compact high accuracy antenna is mounted on the CS25 GNSS as standard and it can also connect with an external pole mounted GNSS Antenna.

3.3.5 GG03

The new firmware version 6.113 is available in myWorld for download. Please load it using the 'Firmware Loader GGoX' app in Zeno Tools.

3.3.6 GG02 plus

The new firmware version 6.113 is available in myWorld for download. Please load it using the 'Firmware Loader GGoX' app in Zeno Tools. Please note, that the GG02 plus is not longer available for purchase, as it got replaced by the GG03. Nevertheless the GG02 plus gets further maintained.

3.4 Installation Steps

3.4.1 How to install Zeno Office 3.1

System Requirements

The following are the minimum system requirements apply to **Leica Zeno Office**:

Intel Pentium 1.6 GHz recommended or higher
2 GB RAM or higher
At least 2.4 GB free space on hard disk
USB port
DVD-ROM drive is required to install the application

For **Leica Zeno Office on ArcGIS**, please check the ESRI ArcGIS 10 or 10.1 minimum system requirements.

Easy Out

Easy In

Installation

The following Microsoft® Windows™ operating systems are supported with **Leica Zeno Office, Zeno Office on ArcGIS** and **Zeno Field Deployment Manager**:

Operating System	Min. Version	Max. Version
Windows 7 (32-bit & 64-bit)	-	SP1
Windows Vista (32-bit & 64-bit)	SP2	SP2
Windows XP (32-bit)	SP3	SP3
Windows XP (64-bit)	SP2	SP2

Using the Leica Zeno GIS 3.1 Software DVD

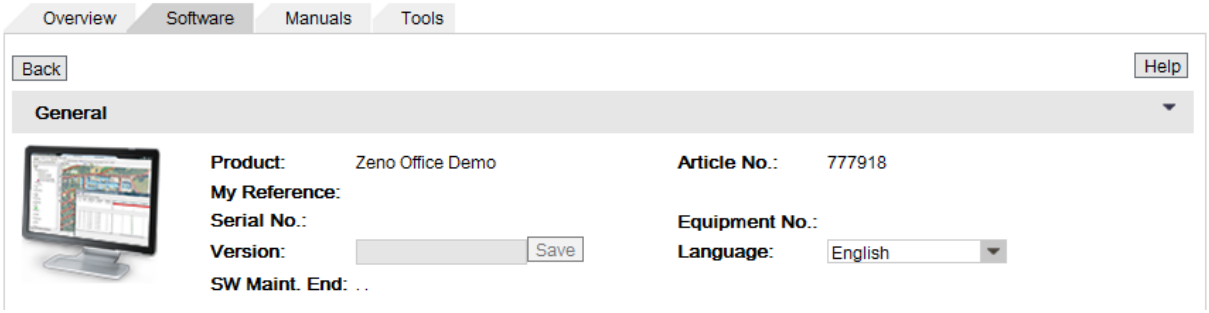
- Zeno Office on ArcGIS v3.1 requires an existing installation of ArcGIS 10 or 10.1. We recommend using the latest ArcGIS Service Pack from Esri.
- Leica Zeno Office and Leica Zeno Office on ArcGIS can only be installed and licensed successfully if the user is logged in as Administrator or with Administrator rights.

7. Uninstall any old installation of Zeno Office.
8. Place the Zeno GIS Software DVD into the DVD drive of your computer.
9. Click Install Software.
10. Select either Zeno Office or Zeno Office on ArcGIS (10.0 or 10.1), depending on which one you have purchased.
11. Select the language you want to install.
12. When Setup starts, follow the instructions on your screen.

Using the Zeno Office installer from Leica myWorld

8. Uninstall any old installation of Zeno Office.
9. Please go to myWorld, go to your registered Zeno Office product. https://myworld.leica-geosystems.com/irj/portal

10. Go to the Software tab.



11. In the Offline Software Update section, you can download the latest Zeno Office version. Download the appropriate installer -Zeno Office or Zeno Office on ArcGIS in your language.

12. Unzip the installer.

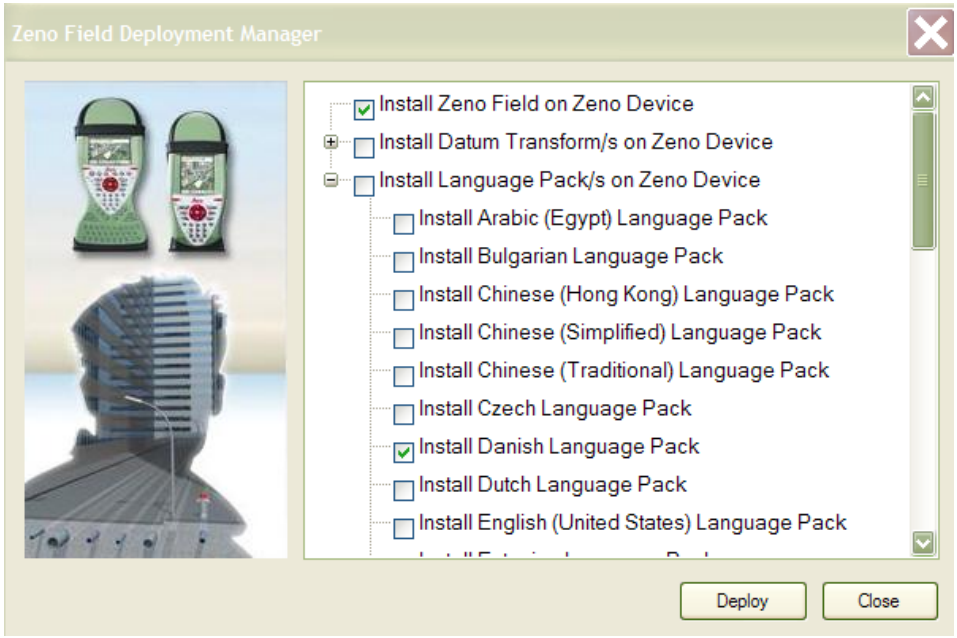
13. Double-click the desired exe file to start the installation process.

14. When Setup starts, follow the instructions on your screen.

3.4.2 How to install the Zeno Field on Zeno 10/15

- Zeno 10/15 will be delivered from now on with Zeno Field v3.11 pre-installed.
- Leica Zeno Field is designed to run on the Leica Zeno 10 and Zeno 15 or CS10/15 GIS only.
- During the installation or afterwards, Zeno Field on CS10/15 must be licensed. Please refer to the Quick Start Tutorial: *Leica Zeno GIS.pdf*.

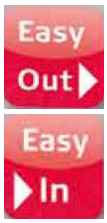
You can either install Zeno Field via the Zeno Deployment Manager, or directly on the device. To install it via the Deployment Manager, please install Leica Zeno Field from the Zeno GIS DVD on your desktop. You don't need a Zeno Field license for Zeno Field on your PC to use the Deployment Manager. Then start the Zeno Field Deployment Manager, connect via USB your Zeno 10/15 to your desktop computer, select 'Install Zeno Field' and start Deploy.



Please note, you need to have installed the USB drivers for the Zeno 10/15 prior to be able to install Zeno Field on the mobile device via the Deployment Manager. The driver can be found on the Leica Zeno GIS DVD in the folder \Common\CS Driver. Please select the components to get installed and follow the installation steps. Once installed, you have to license Zeno Field via the Zeno License Manager in Zeno Tools.

Alternatively you can also install Zeno Field directly on the device:

11. Uninstall any old installation of Zeno Field.
12. Please go to Leica myWorld, go to your registered Zeno product. https://myworld.leica-geosystems.com/irj/portal
13. Go to the Software tab.
14. In the Offline Software Update section, you can download the latest Zeno Field version.
15. Download the required Zeno Field language (optional).
16. Copy the installer on your CS10/15 GIS.
17. Install Zeno Field by double-click on the cab file (Leica Zeno Field 3.11.ARM_en.CAB).
18. When Setup starts, follow the instructions on your screen.



19. Install the Zeno Field Language by double-click on the cab file (Leica Zeno Field 3.11.ARM.Update_xx.CAB) (optional).

20. When Setup starts, follow the instructions on your screen.

3.4.3 How to install Zeno Field on CS25

- Leica Zeno Field on CS25 is designed to run on the Leica CS25 only.
- During the installation or afterwards, Zeno Field on CS25 must be licensed. Please refer to the Quick Start Tutorial: ***Leica Zeno GIS.pdf.***

8. Uninstall any old installation of Zeno Field.

9. Please go to Leica myWorld, go to your registered Zeno product. https://myworld.leica-geosystems.com/irj/portal

10. Go to the Software tab.

11. In the Offline Software Update section, you can download the latest Zeno Field version. Download the appropriate installer in your language.

12. Copy the installer on your CS25.

13. Install Zeno Field by double-click on the exe file (Leica Zeno Field 3.11 Setup_xx.exe).

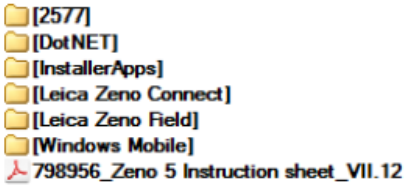
14. When Setup starts, follow the instructions on your screen.

3.4.4 How to install Zeno Field, Zeno Connect, Windows Embedded Handheld on Zeno 5

- **Every Zeno 5 package comes already with a Leica Zeno USB Memory Stick for installing Zeno Field and Zeno Connect. The following steps are only required if:**
    - No original Leica Zeno USB Memory Stick is available (e.g. when Zeno Field / Zeno Connect for Zeno 5 is downloaded from myWorld)
    - A new version of Zeno Field or Zeno Connect for Zeno 5 is available on myWorld. In this case you can use your Leica Zeno USB Memory Stick and update the installer.

The following steps show how to set up an USB flash drive for installing Zeno Field / Zeno Connect on a Zeno 5.

6. Download the latest Zeno Field/Zeno Connect installer for Zeno 5 from Leica myWorld.
7. Be sure that your USB drive has a capacity of at least 1 GB.
8. Download the installation zip file from myWorld (Leica Zeno Field / Zeno Connect on Zeno 5).
9. Unzip the downloaded zip file to an empty folder on your PC. Be sure that the entire structure of the zip file will be preserved (This option should be enabled per default in most zip programs).
10. Copy the whole content of the unzipped data to the root directory of your USB flash drive. Following structure must be copied to the root of the USB drive:



- **To install Windows Embedded Handheld 6.5.3, Zeno Field or Zeno Connect on a Leica Zeno 5 proceed as follows:**

11. Fully charge the battery first!
12. Attach the SnapOn module to the Zeno 5.
13. Plug in the 'micro USB to USB adaptor'.
14. Turn on the Zeno 5.
15. After boot up, plug in the Leica Zeno USB Memory Stick.
16. A screen with country selection appears. Select your country.
17. Subsequently, the installation menu is displayed.
18. To start the installation, select either:
    - **Windows Embedded Handheld 6.5.3** to re-install the operating system. Only select this option to change the OS language (as Windows Embedded Handheld 6.5.3 Release is already preinstalled)
    - **Zeno Field 3.11** to install the Zeno Field Release 3.11

- **Zeno Connect 1.31** to install the Zeno Connect Release 1.31

Follow the instructions on the screen.

19. **Be careful:** During the installation of Windows Mobile 6.5.3, the Zeno 5 will reboot several times. Please **don't interrupt** the installation process.

20. To enter the USB Program Loader menu again, simply plug in the USB drive.

3.4.5 How to install the Zeno Connect on Zeno 10/15

- Leica Zeno Connect on Zeno 10/15 is designed to run on the Leica Zeno 10 and Zeno 15 or CS10/15 GIS only.
- During the installation or afterwards, Zeno Connect on CS10/15 must be licensed. Please refer to the Quick Start Tutorial: *Leica Zeno GIS.pdf*.

11. Uninstall any old installation of Zeno Connect.

12. Please go to Leica myWorld, go to your registered Zeno product. https://myworld.leica-geosystems.com/irj/portal

13. Go to the Software tab.

14. In the Offline Software Update section, you can download the latest Zeno Connect version.

15. Download the required Zeno Connect language (optional).

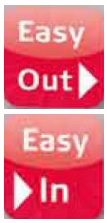
16. Copy both installers on your CS10/15 GIS.

17. Install Zeno Connect by double-click on the cab file (Leica Zeno Connect 1.31.ARM_en.cab).

18. When Setup starts, follow the instructions on your screen.

19. Install the Zeno Connect Language by double-click on the cab file (Leica Zeno Connect 1.31_xx.ARM.CAB) (optional).

20. When Setup starts, follow the instructions on your screen.



3.4.6 How to install Zeno Connect on CS25

- Leica Zeno Connect on CS25 is designed to run on the Leica CS25 only.
- During the installation or afterwards, Zeno Connect on CS25 must be licensed. Please refer to the Quick Start Tutorial: ***Leica Zeno GIS.pdf***.

8. Uninstall any old installation of Zeno Connect.
9. Please go to Leica myWorld, go to your registered Zeno product. https://myworld.leica-geosystems.com/irj/portal
10. Go to the Software tab.
11. In the Offline Software Update section, you can download the latest Zeno Connect version. Download the appropriate installer in your language.
12. Copy the installer on your CS25.
13. Install Zeno Connect by double-click on the exe file (Leica Zeno Connect 1.31 Set-up_xx.exe).
14. When Setup starts, follow the instructions on your screen.

3.5 Active Customer Care

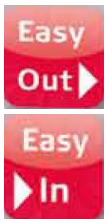
A powerful and competent worldwide service and support network backs up Leica Zeno GIS series.

Leica Geosystems customers benefit from our service and support that spans time zones and geography.

All customers having a valid CCP will benefit from a free upgrade to the latest version for your Zeno.

3.6 Website

Comprehensive information about Zeno GIS can be found on the Leica Geosystems website: http://www.leica-geosystems.com/Zeno



3.7 Comments

Please read carefully the following comments.

The following restrictions are in Leica Zeno GIS v3.1:

- Leica Zeno GIS requires the following Firmware versions:
  - Zeno 10, Zeno 15, CS10 and CS15: FW v4.5 or FW v4.6
  - GS05 and GS06: FW 1.13
  - GG02 plus: FW 6.112 or higher
  - GG03: FW 6.112 or higher
- Zeno Office does not support ArcGIS versions prior to ArcGIS 10.0
- When working with RTCM 2.x, or CMR/CMR+, then the reference station receiver should be a Leica receiver, else GLONASS will not taken into account when fixing the position. This is due to the fact, that GLONASS biases are not transmitted via these messages.

4 About Zeno Office v3.0 SP1, Zeno Office on ArcGIS v3.0 SP1, Zeno Field v3.1 and Zeno Connect v1.3

The following chapter documents all new features, enhancements and changes included in the Zeno Office v3.0 SP1, Zeno Office on ArcGIS v3.0 SP1, Zeno Field v3.1 and Zeno Connect 1.3 releases.

Version:

- Zeno Field v3.1 Build: 406
- Zeno Connect v1.3 Build: 406
- Zeno Office v3.0 SP1
- Zeno Office on ArcGIS v3.0 SP1
- Release Date: 30.04.2012

For detailed information on using any Zeno Field and Office feature, please refer to the user manual and/or Quick Start Tutorials.

4.1 About this release

This release contains following mayor features:

- Support of the new Leica Zeno 5 entry level GPS handheld
- Support of the new Leica Zeno GG03 SmartAntenna

4.2 Zeno products are JRC Certified

The Zeno products are now certified to be suited for area measurement of land parcels according to COMMISSION Regulation (EC) No 1122/2009, of 30 November 2009. The following table shows the Zeno devices, its achieved accuracy and the fulfilled class.

Device	GNSS Mode	Avg. Buffer Width	Class
Zeno 10 3.5G	DGPS, L1	0.37m ± 0.05m	Class 5 (<0.50m)
Zeno 10	EGNOS, L1	0.60m ± 0.08m	Class 4 (<0.75m)
Zeno 10 3.5G + AS05	DGPS, L1	0.21m ± 0.03m	Class 5 (<0.50m)
Zeno 15 3.5G + AS05	DGPS, L1	0.18m ± 0.02m	Class 5 (<0.50m)
GG02 plus	RTK, L1/L2	0.011m ± 0.001m	Class 5 (<0.50m)
GG03	RTK, L1	0.24m ± 0.03m	Class 5 (<0.50m)

4.3 List of improvements and bug fixes

4.3.1 Leica Zeno Office v3.0 SP1

- The Service Pack 1 is available in myWorld for download. SP1 is mandatory for working with GG03.
- Support of GG03
  - GG03 GNSS observations can be imported and post-processed.
- Support of the Leica CS25 GNSS high-accuracy tablet computer
  - CS25 GNSS observations can be imported and post-processed.
- Improved EasyOut workflows
  - EasyOut allows the selection of the data source, if the map contains data from different sources.
  - EasyOut now allows to check out a mix of 2D and 3D feature classes.
  - EasyOut allows the selection of the spatial reference, if the map contains data with different spatial references.
- Picture transfer
  - Pictures transferred with EasyIn will be stored in the path of the defined hyperlink base of the map document. Per default this is a folder called 'Project

name'.idb located in the project location. To use Hyperlinks to the pictures in Zeno Office, the Hyperlink setting in the Display tab of the Layer Properties has to be set to the picture field.

- **Zeno Office on ArcGIS is now available in following languages:**
  - English, German, Russian, Chinese (simplified), Spanish, Polish

4.3.2 Leica Zeno Field v3.1

- Leica Zeno Field v3.1 is available in myWorld for download
- Zeno Field v3.1 **supports the new GG03** in DGNSS, RTK and post-processed work-flows.
- New Zeno Field on Zeno 5 version **to support the new Zeno 5** entry-level GPS handheld running Windows Embedded Handheld 6.5.3 Operating System.
- Zeno Field on CS10/15 has **major improvements in working with the internal camera** of the CS10/15
- Zeno Field is **based on following ArcPad OEM versions**:
  - Zeno Field for CS10/15: ArcPad 10.0.2
  - Zeno Field for CS25: ArcPad 10.0.2
  - Zeno Field for Zeno 5: ArcPad 10.0.3
- Zeno Field on CS10/15 now supports WinCE FW 4.5
- New CLM Administrator version 1.2 included in Zeno Field on CS25.
- Zeno Field is available in following **languages**:
  - English
  - German
  - Spanish
  - Portuguese
  - Italian
  - Danish
  - Chinese (Simplified)
  - Chinese (Traditional)
  - Russian
  - Polish
  - Slovak
  - Swedish - **New!**

- Korean - **New!**
- Finnish - **New!**

Licensing model

- Zeno Field on CS10/15 requires a license key and can only be installed on CS10 GIS, and CS15 GIS.
- Zeno Field on CS25 requires a license key and can only be installed on a CS25.

4.3.3 Leica Zeno Connect v1.3

- Leica Zeno Connect v1.3 is available in myWorld for download.
- Zeno Connect v1.3 **supports the new GG03** in DGNSS, RTK and post-processed workflows.
- **New Zeno Connect on Zeno 5** version to support the new Zeno 5 entry-level GPS handheld running Windows Embedded Handheld 6.5.3 Operating System.
- Zeno Connect on CS10/15 now supports WinCE FW 4.5
- New CLM Administrator version 1.2 included in Zeno Connect on CS25.
- Zeno Connect is now available in following **languages**:
  - English
  - German
  - Spanish
  - Portuguese
  - Italian
  - Danish
  - Chinese (Simplified)
  - Chinese (Traditional)
  - Russian
  - Polish
  - Slovak
  - Swedish - **New!**
  - Korean - **New!**
  - Finnish - **New!**

Licensing model

- Zeno Connect on CS10/15 requires a license key and can only be installed on CS10 GIS, and CS15 GIS.
- Zeno Connect on CS25 requires a license key and can only be installed on a CS25.

4.3.4 Phase-out of Leica GG02 plus

The Leica Zeno GG03 replaces the GG02 plus SmartAntennas which will be phased-out.

4.3.5 New Leica GG03

The Leica Zeno GG03 is an upgradable GNSS SmartAntenna for organizations that require a compact and lightweight device for accurate and reliable positioning. The GG03 connects to all Zeno handheld and tablet devices including the new Leica Zeno 5.

Because accuracy is relative and many customers have different needs or a project requires different accuracy level at different project stages, Leica provides a truly scalable solution that enables a customer to choose a solution that matches his needs. The GG03 can be upgraded from sub-meter to cm accuracy – all directly at the customer level.

The new Leica Zeno GG03 has been designed and engineered to offer a weight optimised form-factor to deliver unmatched GNSS tracking performance in even the toughest environments while users can trust the reliability of the observations.

The modular Leica Zeno GG03 SmartAntenna gives users the flexibility to match their working requirements and style:

- The GG03 offers a seamless upgrade path, from an L1 only/GPS only/1Hz (40 cm accuracy in DGNSS) and upgrade later up to L1/L2, GNSS, 5Hz (cm in RTK or post-processed).
- DGNSS, Real-time or post-processed GIS workflows, fully integrated into ArcGISTM from Esri
- Supports 3rd party software applications via Leica Zeno Connect
- Fully optimized for use with data collection devices such as the Leica CS10/15, Zeno 5, or the CS25 tablet computer

- Fully rugged design able to work in extreme temperatures with an exchangeable all day battery
- Simplest GNSS and RTK configurations and the well known EasyIn/Out dataflow concept – all designed to meet the demanding requirements of the GIS data collection market.

4.3.6 New Leica Zeno 5

The Leica Zeno 5 is designed for the field; it supports field workers by combining a mobile phone with asset collection and management capabilities. And together with our Zeno Field and Zeno Connect applications, the Zeno GIS family continues to grow and further ideally addresses all the mobile GIS market segments, ranging from utilities and natural resources to municipalities.

The new Zeno 5 provides a complete, integrated package of positioning, imaging and communications tools:

- 48 channel, high-sensitivity GPS receiver (SirfStarIV)
- GSM HSPA+ and CDMA with full phone capabilities, Wi-Fi and Bluetooth
- Texas Instruments' latest high performance processor, the Sitara 3715 (OMAP3) at 800 MHz
- Large 3.7" full VGA transflective display
- An open Windows Embedded Handheld 6.5.3 Operating System
- Rechargeable and hot-swappable all-day battery (10 hours +)
- Full range of interactive sensors including camera, digital compass, gyroscope, light sensor, proximity sensor and accelerometer.

4.4 Installation Steps

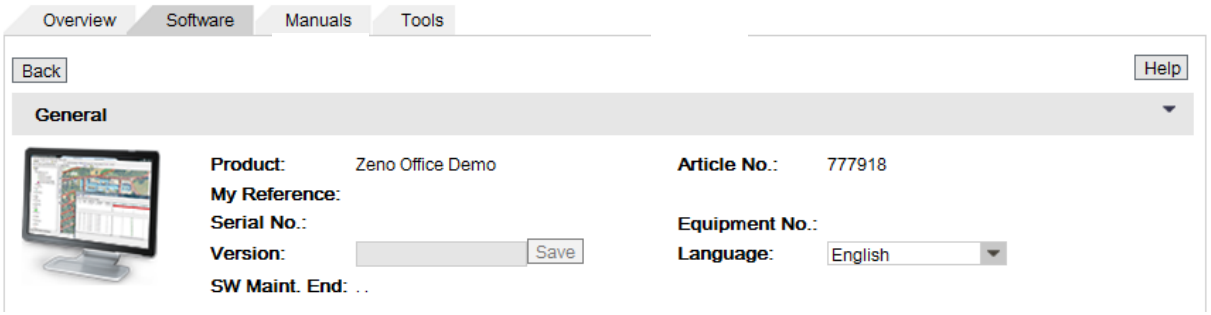
4.4.1 How to install Zeno Office 3.0 SP1

Using the Zeno Office Service Pack installer from Leica myWorld

15. Ensure, that you have an existing installation of Zeno Office 3.0 or Zeno Office on ArcGIS 3.0 installation.

16. Please go to myWorld, go to your registered Zeno Office product.
https://myworld.leica-geosystems.com/irj/portal

17. Go to the Software tab.



18. In the Offline Software Update section, you can download the latest Zeno Office version and service pack. Download the appropriate installer -Zeno Office or Zeno Office on ArcGIS in your language.

19. Unzip the installer.

20. Double-click the exe file to start the installation process.

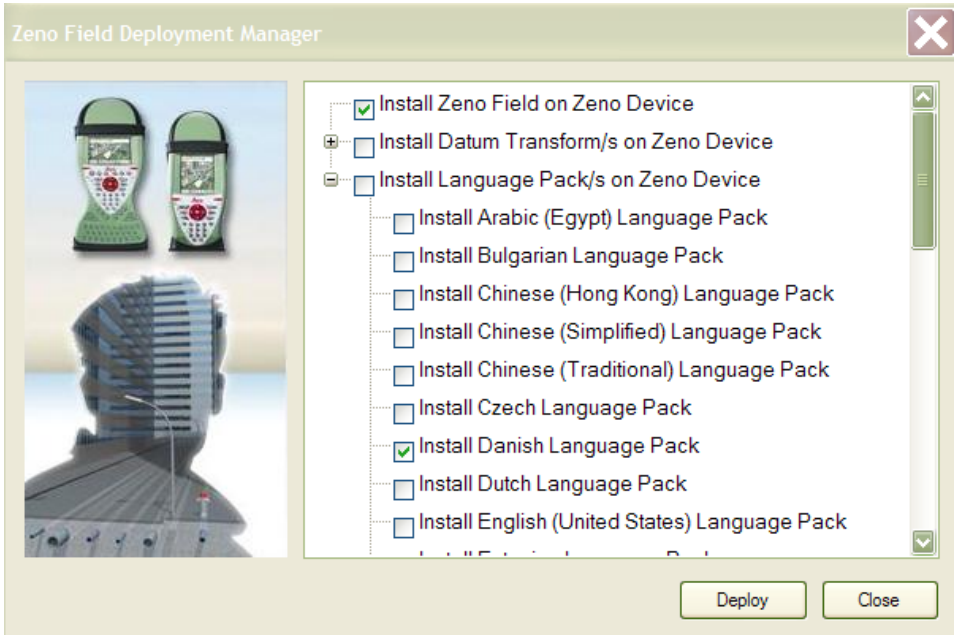
21. When Setup starts, follow the instructions on your screen.

4.4.2 How to install the Zeno Field on Zeno 10/15

- Zeno 10/15 will be delivered from now on with Zeno Field v3.1 pre-installed.
- Leica Zeno Field is designed to run on the Leica Zeno 10 and Zeno 15 or CS10/15 GIS only.
- During the installation or afterwards, Zeno Field on CS10/15 must be licensed. Please refer to the Quick Start Tutorial: *Leica Zeno GIS.pdf*.

You can either install Zeno Field via the Zeno Deployment Manager, or directly on the device. To install it via the Deployment Manager, please install Leica Zeno Field from the Zeno GIS

DVD on your desktop. You don't need a Zeno Field license for Zeno Field on your PC to use the Deployment Manager. Then start the Zeno Field Deployment Manager, connect via USB your Zeno 10/15 to your desktop computer, select 'Install Zeno Field' and start Deploy.



Please note, you need to have installed the USB drivers for the Zeno 10/15 prior to be able to install Zeno Field on the mobile device via the Deployment Manager. The driver can be found on the Leica Zeno GIS DVD in the folder \Common\CS Driver. Please select the components to get installed and follow the installation steps. Once installed, you have to license Zeno Field via the Zeno License Manager in Zeno Tools.

Alternatively you can also install Zeno Field directly on the device:

21. Uninstall any old installation of Zeno Field.

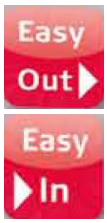
22. Please go to Leica myWorld, go to your registered Zeno product.
    https://myworld.leica-geosystems.com/irj/portal

23. Go to the Software tab.

24. In the Offline Software Update section, you can download the latest Zeno Field version.

25. Download the required Zeno Field language (optional).

26. Copy the installer on your CS10/15 GIS.



27. Install Zeno Field by double-click on the cab file (Leica Zeno Field 3.1.ARM_en.CAB).

28. When Setup starts, follow the instructions on your screen.

29. Install the Zeno Field Language by double-click on the cab file (Leica Zeno Field 3.1.ARM.Update_xx.CAB) (optional).

30. When Setup starts, follow the instructions on your screen.

4.4.3 How to install Zeno Field on CS25

- Leica Zeno Field on CS25 is designed to run on the Leica CS25 only.
- During the installation or afterwards, Zeno Field on CS25 must be licensed. Please refer to the Quick Start Tutorial: ***Leica Zeno GIS.pdf.***

15. Uninstall any old installation of Zeno Field.

16. Please go to Leica myWorld, go to your registered Zeno product.
https://myworld.leica-geosystems.com/irj/portal

17. Go to the Software tab.

18. In the Offline Software Update section, you can download the latest Zeno Field version. Download the appropriate installer in your language.

19. Copy the installer on your CS25.

20. Install Zeno Field by double-click on the exe file (Leica Zeno Field 3.1 Setup_xx.exe).

21. When Setup starts, follow the instructions on your screen.

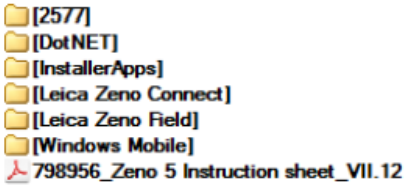
4.4.4 How to install Zeno Field, Zeno Connect, Windows Embedded Handheld on Zeno 5

- **Every Zeno 5 package comes already with a Leica Zeno USB Memory Stick for installing Zeno Field and Zeno Connect. The following steps are only required if:**
    - No original Leica Zeno USB Memory Stick is available (e.g. when Zeno Field / Zeno Connect for Zeno 5 is downloaded from myWorld)

- A new version of Zeno Field or Zeno Connect for Zeno 5 is available on myWorld. In this case you can use your Leica Zeno USB Memory Stick and update the installer.

The following steps show how to set up an USB flash drive for installing Zeno Field / Zeno Connect on a Zeno 5.

11. Download the latest Zeno Field/Zeno Connect installer for Zeno 5 from Leica myWorld.
12. Be sure that your USB drive has a capacity of at least 1 GB.
13. Download the installation zip file from myWorld (Leica Zeno Field / Zeno Connect on Zeno 5).
14. Unzip the downloaded zip file to an empty folder on your PC. Be sure that the entire structure of the zip file will be preserved (This option should be enabled per default in most zip programs).
15. Copy the whole content of the unzipped data to the root directory of your USB flash drive. Following structure must be copied to the root of the USB drive:



- **To install Windows Embedded Handheld 6.5, Zeno Field or Zeno Connect on a Leica Zeno 5 proceed as follows:**

21. Fully charge the battery first!
22. Attach the SnapOn module to the Zeno 5.
23. Plug in the 'microUSB to USB adaptor'.
24. Turn on the Zeno 5.
25. After boot up, plug in the Leica Zeno USB Memory Stick.
26. A screen with country selection appears. Select your country.
27. Subsequently, the installation menu is displayed.
28. To start the installation, select either:

- **Windows Embedded Handheld 6.5.3** to re-install the operating system. Only select this option to change the OS language (as Windows Embedded Handheld 6.5.3 Release is already preinstalled)
- **Zeno Field 3.1** to install the Zeno Field Release 3.1
- **Zeno Connect 1.3** to install the Zeno Connect Release 1.3

Follow the instructions on the screen.

29. **Be careful:** During the installation of Windows Mobile 6.5, the Zeno 5 will reboot several times. Please **don't interrupt** the installation process.

30. To enter the USB Program Loader menu again, simply plug in the USB drive.

4.4.5 How to install the Zeno Connect on Zeno 10/15

- Leica Zeno Connect on Zeno 10/15 is designed to run on the Leica Zeno 10 and Zeno 15 or CS10/15 GIS only.
- During the installation or afterwards, Zeno Connect on CS10/15 must be licensed. Please refer to the Quick Start Tutorial: *Leica Zeno GIS.pdf*.

21. Uninstall any old installation of Zeno Connect.

22. Please go to Leica myWorld, go to your registered Zeno product.
https://myworld.leica-geosystems.com/irj/portal

23. Go to the Software tab.

24. In the Offline Software Update section, you can download the latest Zeno Connect version.

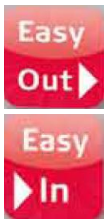
25. Download the required Zeno Connect language (optional).

26. Copy both installers on your CS10/15 GIS.

27. Install Zeno Connect by double-click on the cab file (Leica Zeno Connect 1.3.ARM_en.cab).

28. When Setup starts, follow the instructions on your screen.

29. Install the Zeno Connect Language by double-click on the cab file (Leica Zeno Connect 1.3_xx.ARM.CAB) (optional).



30. When Setup starts, follow the instructions on your screen.

4.4.6 How to install Zeno Connect on CS25

- Leica Zeno Connect on CS25 is designed to run on the Leica CS25 only.
- During the installation or afterwards, Zeno Connect on CS25 must be licensed. Please refer to the Quick Start Tutorial: ***Leica Zeno GIS.pdf***.

15. Uninstall any old installation of Zeno Connect.
16. Please go to Leica myWorld, go to your registered Zeno product. https://myworld.leica-geosystems.com/irj/portal
17. Go to the Software tab.
18. In the Offline Software Update section, you can download the latest Zeno Connect version. Download the appropriate installer in your language.
19. Copy the installer on your CS25.
20. Install Zeno Connect by double-click on the exe file (Leica Zeno Connect 1.3 Set-up_xx.exe).
21. When Setup starts, follow the instructions on your screen.

4.5 Active Customer Care

A powerful and competent worldwide service and support network backs up Leica Zeno GIS series.

Leica Geosystems customers benefit from our service and support that spans time zones and geography.

All customers having a valid CCP will benefit from a free upgrade to the latest version for your Zeno.

4.6 Website

Comprehensive information about Zeno GIS can be found on the Leica Geosystems website: http://www.leica-geosystems.com/Zeno

4.7 Comments

Please read carefully the following comments.

The following restrictions are in Leica Zeno GIS v3.0:

- Leica Zeno GIS requires the following Firmware versions:
  - Zeno 10, Zeno 15, CS10 and CS15: FW v4.5 or FW v4.51
  - GS05 and GS06: FW 1.13
  - GG02 plus: FW 6.112
  - GG03: FW 6.112
- Currently, only an English user interface language is available for Leica Zeno Office.
- Zeno Office does not support ArcGIS versions prior to ArcGIS 10.0.
- When working with RTCM 2.x, or CMR/CMR+, then the reference station receiver should be a Leica receiver, else GLONASS will not taken into account when fixing the position. This is due to the fact, that GLONASS biases are not transmitted via these messages.

5 About Zeno Office v3.0, Zeno Office on ArcGIS v3.0, Zeno Field v3.0 and Zeno Connect v1.2

The following chapter documents all new features, enhancements and changes included in the Zeno Office v3.0, Zeno Office on ArcGIS v3.0, Zeno Field v3.0 and Zeno Connect 1.2 releases.

Version:

- Zeno Field v3.0 Build: 343
- Zeno Connect v1.2 Build: 343
- Zeno Office v3.0 Build: 675
- Zeno Office on ArcGIS v3.0 Build: 675
- Release Date: 30.04.2012

For detailed information on using any Zeno Field and Office feature, please refer to the user manual and/or Quick Start Tutorials.

5.1 About this release

This release contains new features in Zeno GIS to further strengthen following fields:

- Highest accurate GIS in the market by supporting Geoid and Grid files (unique)
- Based on latest GIS technology by supporting Esri ArcGIS 10
- Ease-of-Use by synchronizing coordinate system settings between Zeno Office and Zeno Field

5.2 Zeno products are JRC Certified

The Zeno products are now certified to be suited for area measurement of land parcels according to COMMISSION Regulation (EC) No 1122/2009, of 30 November 2009. The following table shows the Zeno devices, its achieved accuracy and the fulfilled class.

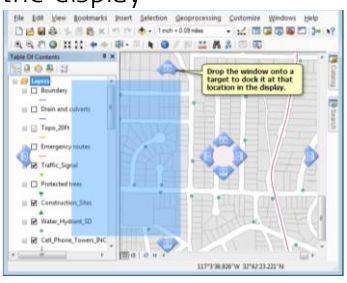
Device	GNSS Mode	Avg. Buffer Width	Class
Zeno 10 3.5G	DGPS, L1	0.37m ± 0.05m	Class 5 (<0.50m)
Zeno 10	EGNOS, L1	0.60m ± 0.08m	Class 4 (<0.75m)
Zeno 10 3.5G + AS05	DGPS, L1	0.21m ± 0.03m	Class 5 (<0.50m)
Zeno 15 3.5G + AS05	DGPS, L1	0.18m ± 0.02m	Class 5 (<0.50m)
GG02 plus	RTK, L1/L2	0.011m ± 0.001m	Class 5 (<0.50m)

5.3 List of improvements and bug fixes

5.3.1 Zeno Office v3.0

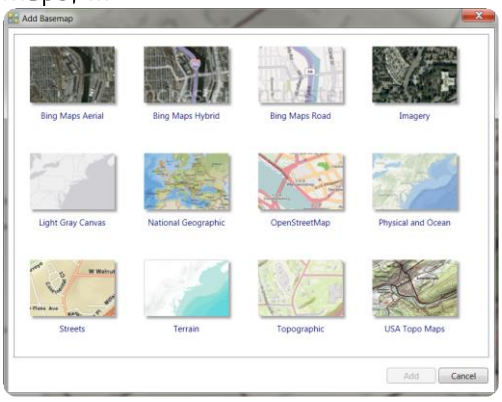
Improvements

- Esri ArcGIS 10 support
  - Zeno Office OEM is now based on Esri ArcGIS 10.0 SP4.
  - Zeno Office on ArcGIS now supports Esri ArcGIS 10.
    It is not compatible with former versions of ArcGIS anymore.
  - Main features are:
    - New dockable window controls make it easy to arrange and organize the display



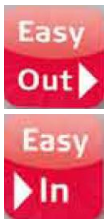
    - A new and simplified snapping environment

- A new range of base maps is available including World Imagery, Bing Maps, ...



- New map display and navigation options
- And many more other improvements. For more information: http://help.arcgis.com/en/arcgisdesktop/10.0/pdf/whats_new_in_arcgis_10.pdf

- **New supported database formats**
  - **Personal Geodatabases**
    - Used for single user working with smaller GIS datasets
    - Maximum file size of 2 GB
  - **File Geodatabases** – **New!**
    - Used for single user working with small- to medium-sized GIS datasets
    - Stored in a file system without size limit (1 TB per table (default))
    - Better performance than Personal Geodatabases
    - Recommended for users who will be starting new GIS projects for their own local use
  - **Server Managed Geodatabases** – **New!**
    - Supported using Zeno Office on ArcGIS with an ArcEditor license only.
- **New Transformation functionality:**
  - EasyOut now configures the coordinate system of the Zeno Field project completely automatic.
    - All required information like transformation parameters, Geoid file and Grid file get automatically transferred to the mobile device during EasyOut.
    - This allows the user to use coordinates corrected by Geoid and Grid files directly in the field.



- Zeno Office and Zeno Field now support following transformation methods:
  - Leica Bursa-Wolf (7 parameter)
  - Leica Molodensky-Badekas (10 parameter)
- All customers who have used either Coordinate Frame, Position Vector or Geocentric Translation transformation methods, now have to use 'Leica Bursa-Wolf' transformations.
- Transformations in existing projects will be automatically converted to 'Leica Bursa-Wolf' and will output exactly the same results.

- **GNSS sensor information** are now stored with every GNSS observation.
  These are: sensor type, serial number, firmware version, and manufacturer.
- New **Zeno GIS Quick Start Tutorial** available
- The Project Wizard now contains a new – more intuitive - file browser to comfortably select a project path.
- Zeno Office on ArcGIS is now available in following **languages**:
  - German
  - Russian
  - Chinese (Simplified)
  - Spanish
  - Polish

5.3.2 Zeno Field v3.0

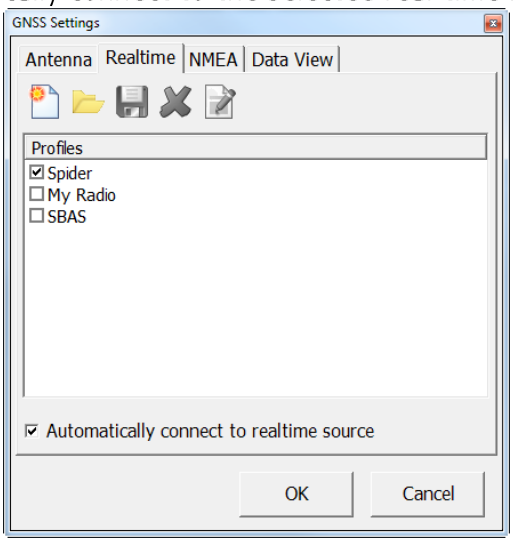
Improvements

- **New Transformation functionality:**
  - Zeno Field now supports following transformation methods:
    - **Leica Bursa-Wolf** - New!
    - **Leica Molodensky-Badekas** - New!
    - Position Vector
    - Coordinate Frame
    - Geocentric Translation
    - Molodensky
    - Molodensky-Abridged

- HARN
- NADCON

  - Zeno Field now supports **Geoid files**
    (using Leica Bursa-Wolf and Leica Molodensky-Badekas transformation only)
  - Zeno Field now supports **Grid files (CSCS)**
    (using Leica Bursa-Wolf and Leica Molodensky-Badekas transformation only)
  - For customers in the UK:
    The OSTN02 Transform Extension is not required anymore. The required components for this coordinate system can now be defined directly using a Grid file and Geoid file.

- **CGR10 and CGR15 radio cap** is now supported in Zeno Field.
  (WinCE firmware version 4.0 required)
  - Attached to the CS10 GIS or CS15 GIS handheld and together with the GG02 plus this setup creates a light-weight and powerful GNSS/GIS rover receiving correction data via radio modem.
- New camera driver to **support the internal camera of the CS25.**
- Zeno Field now supports the **Leica DigiCAT i550 and i650 cable locators** using the DigiCATtransfer tool.
- New **auto-connect RTK** function. With this function enabled, Zeno Field will automatically connect to the selected real-time source when activating the GPS.



- Zeno Field now supports Windows 7 64 bit.
- The GNSS Status bar shows the antenna height with two decimal places when using a GG02 plus.
- Zeno Field now allows defining the network type in the real-time configuration.

- EasyIn is now possible with feature classes containing special characters in the feature class name.
- Zeno Field on CS25 doesn't require an administrator user anymore.
- Fixed: Specific APL files didn't got applied during EasyOut.
- Zeno Field is now available in following **languages**:
    - English
    - German
    - Spanish
    - Portuguese
    - Italian
    - Danish
    - Chinese (Simplified)
    - Chinese (Traditional)
    - Russian
    - Polish
    - Slovak

Licensing model

- Zeno Field on CS10/15 requires a license key and can only be installed on CS10 GIS, and CS15 GIS.
- Zeno Field on CS25 requires a license key and can only be installed on a CS25.

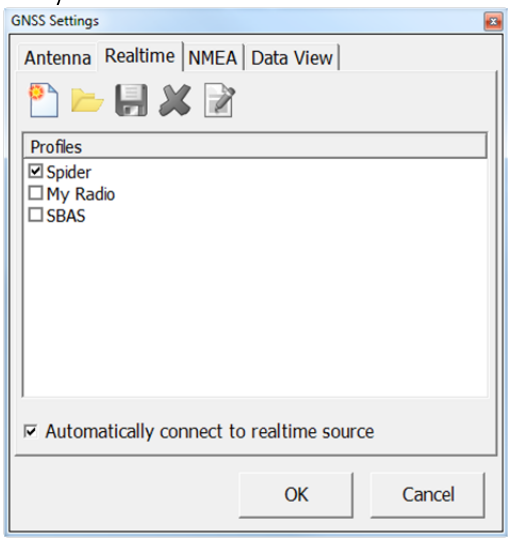
5.3.3 Leica Zeno Connect v1.2

Improvements

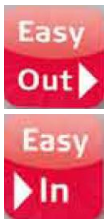
- **CGR10 and CGR15 radio cap** is now supported in Zeno Connect.
  (WinCE firmware version 4.0 required)
    - Attached to the CS10 GIS or CS15 GIS handheld and together with the GG02 plus this setup creates a light-weight and powerful GNSS/GIS rover receiving correction data via radio modem.
- Zeno Connect can now stream following NMEA 0183 message types:
    - GGA - Global Positioning System Fix Data
    - GSA - GNSS DOP and Active Satellites
    - GSV – GNSS Satellites in View

- GLL – Geographic Position – Latitude/Longitude
- RMC – Recommended Minimum Specific GNSS Data
- GGQ – Leica Geographic Position with CQ
- **GST – GNSS Pseudorange Error Statistics (2D + 1D quality)** - New!
- **VTG - Course Over Ground & Ground Speed** - New!

- New **auto-connect RTK function**. With this function enabled, Zeno Field will automatically connect to the selected real-time source when activating the GPS.



- Zeno Connect now allows to set the elevation mask when using a GG02 plus. This setting is available in the SDK as well.
- Zeno Connect SDK now allows configuring real-time profiles.
- Zeno Connect is now available in following **languages**:
  - English
  - German
  - Spanish
  - Portuguese
  - Italian
  - Danish
  - Chinese (Simplified)
  - Chinese (Traditional)
  - Russian
  - Polish
  - Slovak



Licensing model

- Zeno Connect on CS10/15 requires a license key and can only be installed on CS10 GIS, and CS15 GIS.
- Zeno Connect on CS25 requires a license key and can only be installed on a CS25.

5.3.4 GG02 plus

A new 5 Hz option is now available for the Leica GG02 plus (Art.No.: 796057). This option increases the position update rate from 1 Hz to 5 Hz. Users which require high accuracy and update rates can benefit from this.

5.4 Installation Steps

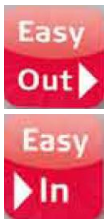
5.4.1 How to install Zeno Office

System Requirements

The following are the minimum system requirements apply to **Leica Zeno Office**:

Intel Pentium 1.6 GHz recommended or higher
2 GB RAM or higher
At least 2.4 GB free space on hard disk
USB port
DVD-ROM drive is required to install the application.

For **Leica Zeno Office on ArcGIS**, please check the ESRI ArcGIS 10 minimum system requirements.



Installation

The following Microsoft® Windows™ operating systems are supported with **Leica Zeno Office, Zeno Office on ArcGIS** and **Zeno Field Deployment Manager**:

Operating System	Min. Version	Max. Version
Windows XP (32-bit & 64-bit)	SP3	SP3
Windows Vista SP1 (32-bit & 64-bit)	SP2	SP2
Windows 7 (32-bit & 64-bit)	-	-

Using the Leica Zeno GIS 3.0 Software DVD

- Zeno Office on ArcGIS v3.0 requires an existing installation of ArcGIS 10. We recommend using the latest ArcGIS Service Pack from Esri.
- Leica Zeno Office and Leica Zeno Office on ArcGIS can only be installed and licensed successfully if the user is logged in as Administrator or with Administrator rights.

13. Uninstall any old installation of Zeno Office.
14. Place the Zeno GIS Software DVD into the DVD drive of your computer.
15. Click Install Software.
16. Select either Zeno Office or Zeno Office on ArcGIS, depending on which one you have purchased.
17. Select the language you want to install.
18. When Setup starts, follow the instructions on your screen.
19. Zeno Office 3.0 requires new license files. The new license file can be downloaded from the Leica myWorld website. Just go to your registered Zeno Office product in myProducts and click 'Download License'.
    Note: No new license is required for Zeno Office on ArcGIS.

Easy Out

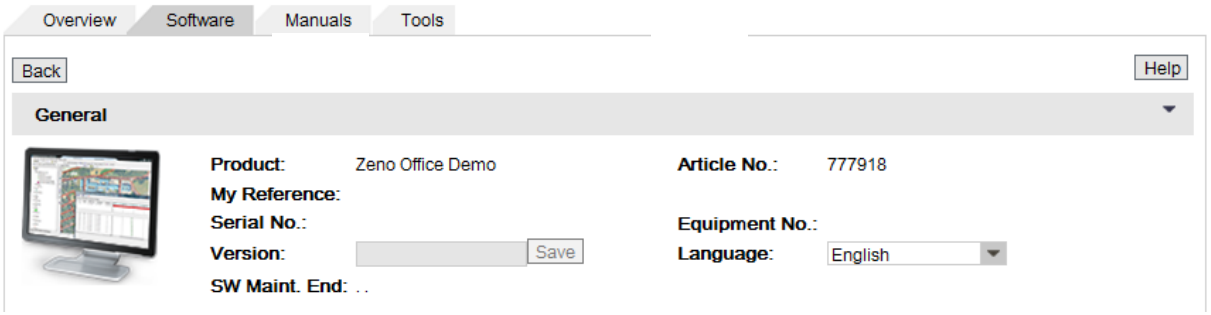
Easy In

Using the Zeno Office installer from Leica myWorld

22. Uninstall any old installation of Zeno Office.

23. Please go to myWorld, go to your registered Zeno Office product.
https://myworld.leica-geosystems.com/irj/portal

24. Go to the Software tab.



25. In the Offline Software Update section, you can download the latest Zeno Office version. Download the appropriate installer -Zeno Office or Zeno Office on ArcGIS in your language.

26. Unzip the installer.

27. Double-click the exe file (*Zeno Office 3.0 Setup.xx.exe or Zeno Office OnArcGIS 3.0 Setup.xx.exe*) to start the installation process.

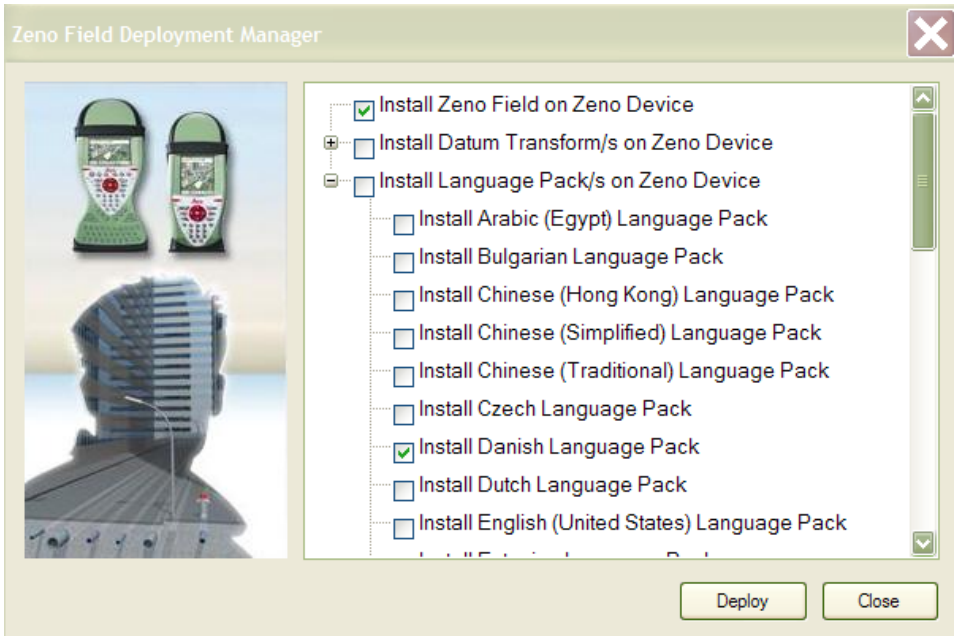
28. When Setup starts, follow the instructions on your screen.

29. Zeno Office 3.0 requires new license files. The new license file can be downloaded from the Leica myWorld website. Just go to your registered Zeno Office product in myProducts and click 'Download License'.
Note: No new license is required for Zeno Office on ArcGIS.

5.4.2 How to install the Zeno Field on Zeno 10/15

- Zeno 10/15 will be delivered from now on with Zeno Field v3.0 pre-installed.
- Leica Zeno Field is designed to run on the Leica Zeno 10 and Zeno 15 or CS10/15 GIS only.
- During the installation or afterwards, Zeno Field on CS10/15 must be licensed. Please refer to the Quick Start Tutorial: ***Leica Zeno GIS.pdf***.

You can either install Zeno Field via the Zeno Deployment Manager, or directly on the device. To install it via the Deployment Manager, please install Leica Zeno Field from the Zeno GIS DVD on your desktop. You don't need a Zeno Field license for Zeno Field on your PC to use the Deployment Manager. Then start the Zeno Field Deployment Manager, connect via USB your Zeno 10/15 to your desktop computer, select 'Install Zeno Field' and start Deploy.



Please note, you need to have installed the USB drivers for the Zeno 10/15 prior to be able to install Zeno Field on the mobile device via the Deployment Manager. The driver can be found on the Leica Zeno GIS DVD in the folder \Common\CS Driver. Please select the components to get installed and follow the installation steps. Once installed, you have to license Zeno Field via the Zeno License Manager in Zeno Tools.

Alternatively you can also install Zeno Field directly on the device:

31. Uninstall any old installation of Zeno Field.

32. Please go to Leica myWorld, go to your registered Zeno product.
    https://myworld.leica-geosystems.com/irj/portal

33. Go to the Software tab.

34. In the Offline Software Update section, you can download the latest Zeno Field version.

35. Download the required Zeno Field language (optional).

36. Copy the installer on your CS10/15 GIS.

37. Install Zeno Field by double-click on the cab file (Leica Zeno Field 3.0.ARM_en.CAB).

38. When Setup starts, follow the instructions on your screen.

39. Install the Zeno Field Language by double-click on the cab file (Leica Zeno Field 3.0.ARM.Update_xx.CAB) (optional).

40. When Setup starts, follow the instructions on your screen.

5.4.3 How to install Zeno Field on CS25

- Leica Zeno Field on CS25 is designed to run on the Leica CS25 only.
- During the installation or afterwards, Zeno Field on CS25 must be licensed. Please refer to the Quick Start Tutorial: *Leica Zeno GIS.pdf*.

31. Uninstall any old installation of Zeno Field.

32. Please go to Leica myWorld, go to your registered Zeno product. https://myworld.leica-geosystems.com/irj/portal

33. Go to the Software tab.

34. In the Offline Software Update section, you can download the latest Zeno Field version. Download the appropriate installer in your language.

35. Copy the installer on your CS25.

36. Install Zeno Field by double-click on the exe file (Leica Zeno Field 3.0 Setup_xx.exe).

37. When Setup starts, follow the instructions on your screen.

5.4.4 How to install the Zeno Connect on Zeno 10/15

- Leica Zeno Connect on Zeno 10/15 is designed to run on the Leica Zeno 10 and Zeno 15 or CS10/15 GIS only.
- During the installation or afterwards, Zeno Connect on CS10/15 must be licensed. Please refer to the Quick Start Tutorial: *Leica Zeno GIS.pdf*.

31. Uninstall any old installation of Zeno Connect.

32. Please go to Leica myWorld, go to your registered Zeno product. https://myworld.leica-geosystems.com/irj/portal

33. Go to the Software tab.

34. In the Offline Software Update section, you can download the latest Zeno Connect version.

35. Download the required Zeno Connect language (optional).

36. Copy both installers on your CS10/15 GIS.

37. Install Zeno Connect by double-click on the cab file (Leica Zeno Connect 1.2.ARM_en.cab).

38. When Setup starts, follow the instructions on your screen.

39. Install the Zeno Connect Language by double-click on the cab file (Leica Zeno Connect 1.2.0.343_xx.ARM.CAB) (optional).

40. When Setup starts, follow the instructions on your screen.

5.4.5 How to install Zeno Connect on CS25

- Leica Zeno Connect on CS25 is designed to run on the Leica CS25 only.
- During the installation or afterwards, Zeno Connect on CS25 must be licensed. Please refer to the Quick Start Tutorial: *Leica Zeno GIS.pdf*.

22. Uninstall any old installation of Zeno Connect.

23. Please go to Leica myWorld, go to your registered Zeno product. https://myworld.leica-geosystems.com/irj/portal

24. Go to the Software tab.

25. In the Offline Software Update section, you can download the latest Zeno Connect version. Download the appropriate installer in your language.

26. Copy the installer on your CS25.

27. Install Zeno Connect by double-click on the exe file (Leica Zeno Connect 1.2 Set-up_xx.exe).

28. When Setup starts, follow the instructions on your screen.

5.5 Active Customer Care

A powerful and competent worldwide service and support network backs up Leica Zeno GIS series.

Leica Geosystems customers benefit from our service and support that spans time zones and geography.

All customers having a valid CCP will benefit from a free upgrade to the latest version for your Zeno.

5.6 Website

Comprehensive information about Zeno GIS can be found on the Leica Geosystems website: http://www.leica-geosystems.com/Zeno

5.7 Comments

Please read carefully the following comments.

The following restrictions are in Leica Zeno GIS v3.0:

- Leica Zeno GIS requires the following Firmware versions:
  - Zeno 10, Zeno 15, CS10 and CS15: FW v3.5 or FW v4.0
  - GS05 and GS06: FW 1.13
  - GG02 plus: FW 6.10
- Currently, only an English user interface language is available for Leica Zeno Office.
- Zeno Office does not support ArcGIS versions older than ArcGIS 10
- When working with RTCM 2.x, or CMR/CMR+, then the reference station receiver should be a Leica receiver, else GLONASS will not taken into account when fixing the position. This is due to the fact, that GLONASS biases are not transmitted via these messages.

6 About Zeno Office v2.0 SP1, Zeno Office on ArcGIS v2.0 SP1, Zeno Field v2.1 and Zeno Connect v1.1

The following chapter documents all new features, enhancements and changes included in the Zeno Office v1.1, Zeno Office on ArcGIS v1.1 and Zeno Field v1.1 releases.

Version:

- Zeno Field v2.1 Build: xxx
- Zeno Connect v1.1 Build: xxx
- Zeno Office v2.0 SP1 Build: xxx
- Zeno Office on ArcGIS v2.0 SP1 Build: xxx
- Release Date: 30.05.2011

For detailed information on using any Zeno Field and Office feature, please refer to the user manual (choose "User Manual" from Zeno Help menu) and/or Quick Start Tutorials.

6.1 The Advantages of a lightweight rugged Tablet Computer in the field

The new Leica CS25 rugged tablet computer is a lightweight and durable alternative to the traditional laptop, large form factor tablet or handheld computing device. With all the functionality of a PC, including the complete Microsoft Windows 7 Ultimate operating system, the CS25 is the ideal solution for field applications such as data collection and data maintenance task. They are also used for in-field office-related tasks such as field report generation, post-processing or data preparation tasks. Having real time access to final data or to the office generates an enormous productivity gain for field crews. And not to forget the comfort for field crews working with a large screen tablet thus lightweight and still rugged, and the superior processor performance to support even office software directly in the field.

Standardizing operations with the CS25 rugged tablet technology will give your employees access to critical information and provides the tools they need - in the field - to work smarter and faster.

The new Leica CS25 features include:

- Standard Windows 7 Ultimate OS to support full software applications that run on standard operating systems
- Military specifications to protect the important data against drop, shock, water resistance, dust and temperature extremes
- Lightweight (1.3 kg) and equipped with all day batteries (> 8h field operation)

- handheld or pole setup
- Secure wireless LAN and WWAN connectivity to connect to networked reference station services or to the office.

6.2 List of improvements and bug fixes

6.2.1 Zeno Field v2.1

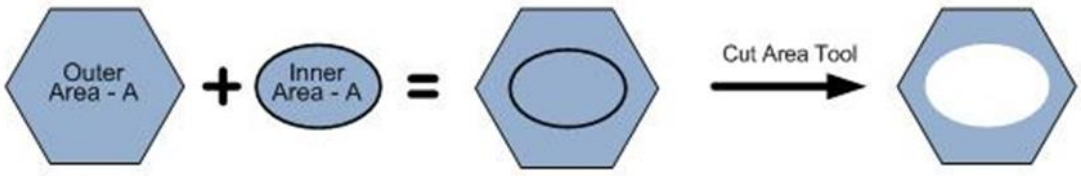
Improvements

- Zeno Field is now available in 2 editions
  - Zeno Field on CS10/15
  - Zeno Field on CS25
- Both editions offer the same functionality, but differ in terms of installation and software protection.
- The following languages are now supported in Zeno Field: English, German, Russian, Chinese, Italian, Portuguese and Polish.
- Cut Area tool - The Cut Area Tool provides an intelligent way to cut holes and reshape polygons. For example, a farmer wants to measure the area of his field. To calculate the correct area a small lake which does not belong to his field must be excluded.

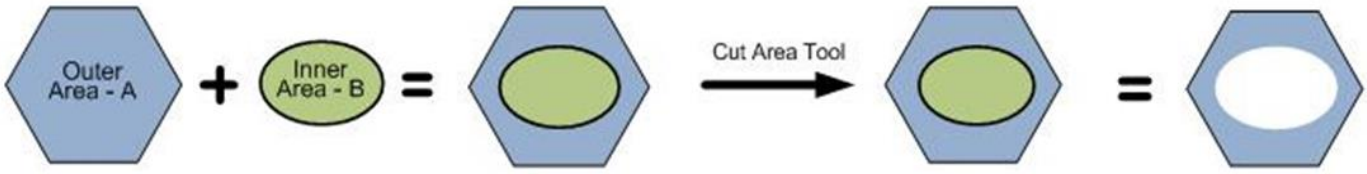
- <u>What can you do with the Cut Area Tool?</u>

  There are 2 different scenarios for working with the Cut Area Tool:

  1. Exclude an area from an existing polygon



  2. Create a new polygon inside of an existing one



For more details, please see the Zeno Field help.

Working with Zeno Field and Zeno Office on the CS25

The new Leica CS25 offers the possibility to have the field and office Software installed on the same device. This gives the user to directly make an EasyOut and EasyIn on the CS25 – the device were his data collection software is also installed. Thus now transfer of data between different devices is required anymore.

6.2.2 Zeno Office v2.0 SP1

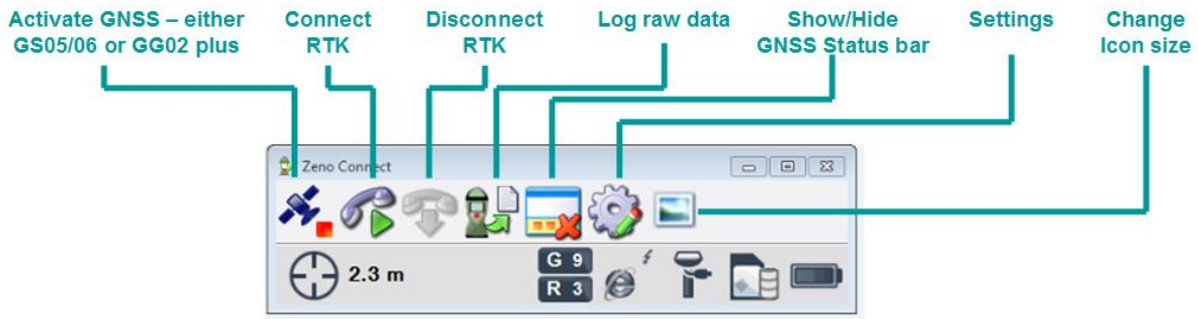
Improvements

- Localisation is supported. The following languages are supported: English, German, Russian, Chinese, and Polish.
- Bug-fixes
  - Survey Data Reports are now supporting a 'user' account user.
  - DBX import improvements when importing TPS data with local coordinates
  - GNSS Computation User Interface: Not processed points are no longer shown in processed points section

6.2.3 Leica Zeno Connect v1.1

Leica Zeno Connect now also supports the new Leica CS25 rugged Tablet Computer. A new edition of Zeno Connect is available to get it installed on a CS25.

Leica Zeno Connect is an app for 3rd party software applications to manage and configure the Zeno GNSS sensors (GS05, GS06 and GG02 plus) and at the same time to send NMEA messages from the Zeno GNSS sensors to the 3rd party application. Zeno Connect includes full GNSS receiver status, setup of RTK and NMEA message streaming, and management of RTK sources.



Zeno Connect on CS10/15 will require a license key and can only be installed on CS10 GIS, and CS15 GIS.

Zeno Connect on CS10/15 will require a license key and can only be installed on a CS25.

6.3 Installation Steps

The new Zeno Field and Zeno Connect release requires a un-installation of the previously installed Zeno Field/Zeno Connect version prior to installation.

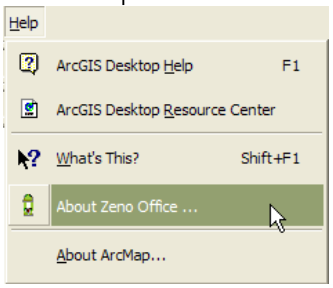
The Zeno Office v2.0 SP1 and Zeno Office on ArcGIS v2.0 SP1 **can be installed on Zeno Office v2.0 and Zeno Office on ArcGIS v2.0.** Leica Zeno Office v2.0 or Zeno Office on ArcGIS v2.0 must be installed before you can install this Service Pack.

Zeno 10/15 will be delivered from now on with Zeno Field v2.1 installed.

6.3.1 How to identify which Service Pack is installed

To find out what Zeno Office products are currently installed on your machine, please do the following:

1. Start Zeno Office or ArcMap.
2. Go to Help > About Zeno Office.

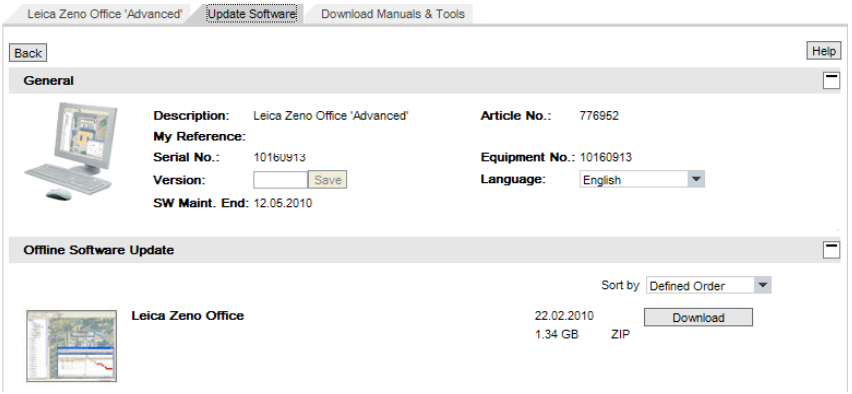


3. In "Installed Products" you can see which version of Zeno is installed.

6.3.2 How to install the Zeno Office Service Pack

29. Make sure you have Administrator rights on your computer, write access to your Zeno Office and Zeno Office ArcGIS installation location, and that no one is accessing it.

30. Please go to myWorld, go to your registered Zeno Office product and click Update Software.



31. In the Offline Software Update section, you can download the Service Pack.

32. Download the appropriate file (*Zeno Office 2.0 SP1.msi*) from myWorld to a location other than the installation folder.

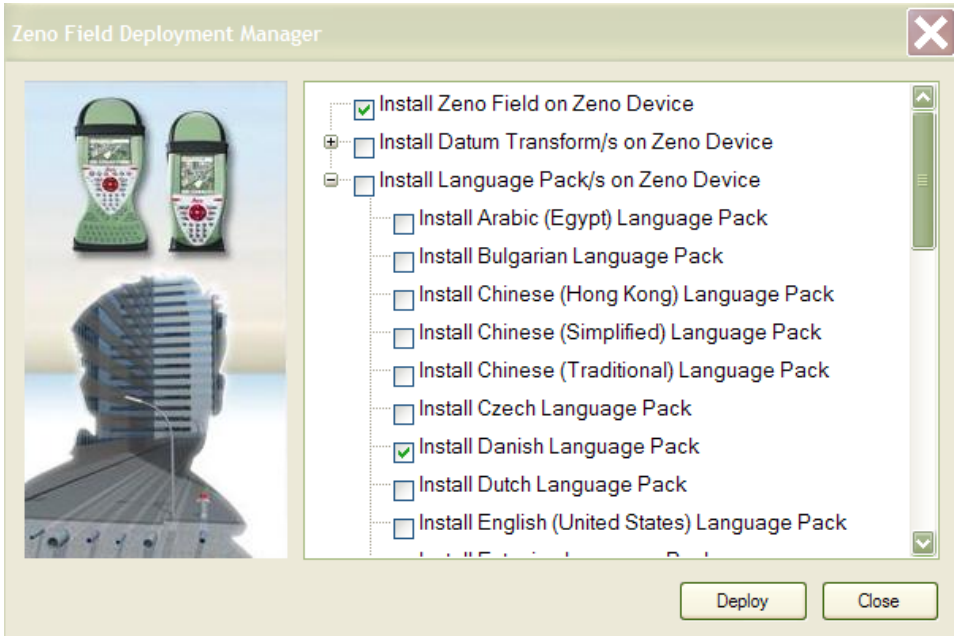
33. Then double-click the msi file (*Zeno Office 2.0 SP1.msi*) to start the install process.

34. When Setup starts, follow the instructions on your screen.

Please note, that this SP will not be installed when installing Zeno Office and Zeno Office on ArcGIS from the Leica Zeno GIS DVD.

6.3.3 How to install the Zeno Field on Zeno 10/15

You can either install Zeno Field via the Zeno Deployment Manager, or directly on the device. To install it via the Deployment Manager, please install Leica Zeno Field from the Zeno GIS DVD on your desktop. Then start the Zeno Field Deployment Manager, connect via USB your Zeno 10/15 to your desktop computer, select 'Install Zeno Field' and start Deploy.



Please note, you need to have installed the USB drivers for the Zeno 10/15 prior to be able to install Zeno Field on the mobile device via the Deployment Manager. Please select the components to get installed and then follow the installation steps. Once installed, you have to license Zeno Field via the Zeno Device Manager.

Alternatively you can also install Zeno Field directly on the device. For this you have to copy the file 'Leica Zeno Field.ARM.CAB' from the device to the Program Files folder of the Zeno 10/15 and then double click the file.

ActiveSync/Mobile Device Centre for Zeno 10/15:

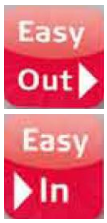
To connect the Zeno 10/15 to your desktop, you have to install the CS/Zeno driver. The driver can be found on the Leica Zeno GIS DVD, shipped with your equipment (e.g. D:\Common\CS Driver). Please select the suited driver for your operating system (Windows XP, Windows Vista, or Windows 7) and install, prior to connecting the Zeno 10/15 to your desktop.

Please check the Zeno 10/Zeno 15 User Manual for detailed steps on installing the USB drivers.

6.3.4 How to install the Zeno Field on CS25

To install Zeno Field on a CS25, please connect your CS25 to the internet, go to myWorld and download the latest version of **Zeno Field on CS25**.

After downloading, please run the Leica Zeno Field 2.1 Setup.exe.



After installing, Zeno Field on CS25 must be licensed. Please refer to the QuickStart Tutorial: *Activate Zeno Field and Zeno Connect with CLM.pdf*.

6.4 Active Customer Care

A powerful and competent worldwide service and support network backs up Leica Zeno GIS series.

Leica Geosystems customers benefit from our service and support that spans time zones and geography.

All customers having a valid CCP will benefit from a free upgrade to the latest version for your Zeno.

6.5 Installation

The following Microsoft® Windows™ operating systems are supported with **Leica Zeno Office, Zeno Office on ArcGIS** and **Zeno Field Deployment Manager**:

Operating System	Min. Version	Max. Version
Windows XP (32-bit & 64-bit)	SP2	SP3
Windows Vista SP1 (32-bit & 64-bit)	SP1	SP2
Windows 7 (32-bit & 64-bit)	-	-

Important Notes:

- Leica Zeno Office and Leica Zeno Office on ArcGIS can only be installed and licensed successfully if the user is logged in as Administrator or with Administrator rights.
- Leica Zeno Office on ArcGIS supports ArcGIS 9.3 and ArcGIS 9.3.1.

6.6 System Requirements

The following are the minimum system requirements apply to **Leica Zeno Office**:

Intel Pentium 1.6 GHz recommended or higher
1 GB minimum, 2 GB recommended or higher

At least 2.4 GB free space on hard disk
USB port
DVD-ROM drive is required to install the application.

For **Leica Zeno Office on ArcGIS**, please check the ESRI ArcGIS 9.3 minimum system requirements.

Leica Zeno Field is designed to run purely on the Leica Zeno 10 and Zeno 15 or CS10/15 GIS.

6.7 Website

Comprehensive information about Zeno GIS can be found on the Leica Geosystems website: http://www.leica-geosystems.com/Zeno

6.8 Comments

Please read carefully the following comments.

The following restrictions are in Leica Zeno GIS v2.0:

- File-based Geodatabases are not supported in Zeno Office on ArcGIS
- Leica Zeno GIS requires the following Firmware versions:
  - Zeno 10, Zeno 15, CS10 and CS15: FW v1.22
  - GS05 and GS06: FW 1.13
  - GG02 plus: FW 6.0100SN0020
- Only an English user interface language is available for Leica Zeno Office.
- Zeno Office does not support ArcGIS 10
- When working with RTCM 2.x, or CMR/CMR+, then the reference station receiver should be a Leica receiver, else GLONASS will not taken into account when fixing the position. This is due to the fact, that GLONASS biasis are not transmitted via these messages.

7 About Zeno Office v2.0, Zeno Office on ArcGIS v2.0, Zeno Field v2.0 and Zeno Connect

The following chapter documents all new features, enhancements and changes included in the Zeno Office v1.1, Zeno Office on ArcGIS v1.1 and Zeno Field v1.1 releases.

Version:

- Zeno Field v2.0 Build: 241
- Zeno Connect v1.0 Build: 241
- Zeno Office v2.0 Build: 600
- Zeno Office on ArcGIS v2.0 Build: 600
- Release Date: 30.05.2011

For detailed information on using any Zeno Field and Office feature, please refer to the user manual (choose "User Manual" from Zeno Help menu) and/or Quick Start Tutorials.

7.1 Why High-Accuracy GIS really matters

There is an ever-increasing demand for more reliable information to help prevent tragedies like this from occurring, users have to focus on improving their confidence in infrastructure information. These include:

1. **Positional Accuracy** – making sure the geographic positions of features represented on digital maps are close enough to the real world to make correct judgments about the relationships with other features in the real world, or on other maps.
2. **Completeness** – using validation and cross-check techniques to discover and correct places where information is available but missing in the infrastructure data. The bed-rock for this is comparison with new field inventory data.

There is a natural migration in GIS toward survey-grade accuracy data collection. This began with handheld devices in the sub-meter range, followed by the first devices, capable to deliver 30/50 cm accuracy in real time (such as the Zeno 10). Now, with the new Leica Zeno Rover (a Zeno 10 connected to a GG02 Plus) the GIS user is able to collect data with cm level accuracy, which was once only possible with survey-grade instruments. Another drawback of using survey instruments with cm level positional accuracy was the data must be collected using software created for surveyors, not GIS professionals updating their database. Complex data models created in the office were simplified to match the “codelist creation” method used in survey software. Once data was collected (often with less attributes than required and no

topological awareness), then it was a challenge to export the data from a "survey office software", and migrate this to the GIS.

7.2 List of improvements and bug fixes

Zeno Device Manager is now called Zeno Tools.

In addition to the bug fixes and improvements included in v1.0 SP1 and v1.0 SP2, the following improvements and bug fixes have been addressed.

7.2.1 Zeno Field v2.0

Improvements

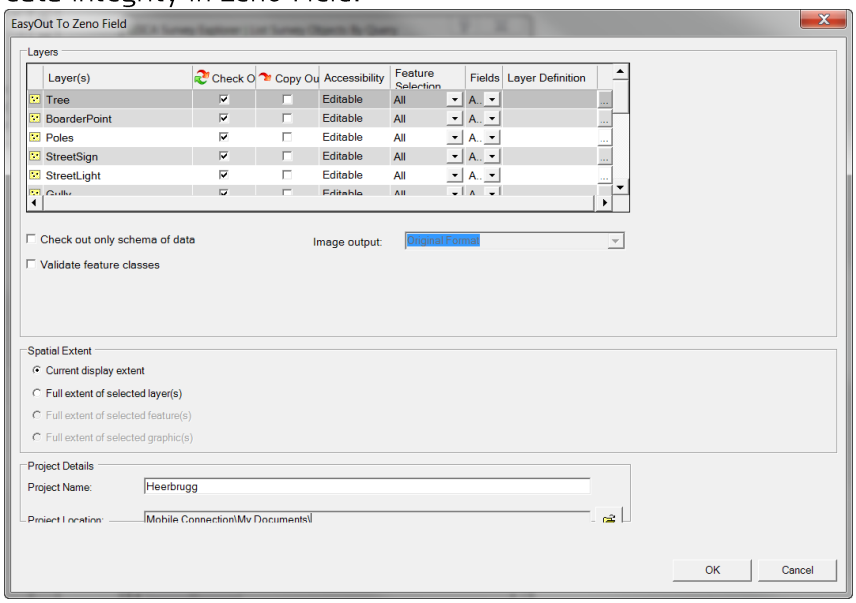
- Zeno Field is now based on Esri ArcPad 10, with several new features and improvements, e.g. the new QuickCapture toolbar allows to simply collecting new features.
- Custom templates are supported. The new templates supported in Zeno Field v2.0 is a great alternative to the existing EasyOut/In process and allows a customer to grab a Zeno 10 and immediately begin collecting features, attributes and images without having to first check out the data from an office database or using existing shapefiles.

- Zeno Field supports the new Leica GG02 plus GPS/GIS SmartAntenna. With the support of the GG02 plus some additional functionality has been introduced to Zeno Field and the GNSS Settings, in order to achieve a cm accurate solution, e.g. antenna management.
- Fully integrated support of the internal camera of a Zeno 10/15, incl. transfer of the images from field to office via EasyIn.
- SIM Cards with no PIN set, or 4-6 digit pins are now supported.
- Skyplot now shows also Glonass satellites
- New icons in GNSS Status bar
    - GS05/06 icon to show that user connected to Zeno caps
    - Antenna height symbol, with used antenna height. With this information the Zeno

7.2.2 Zeno Office v2.0

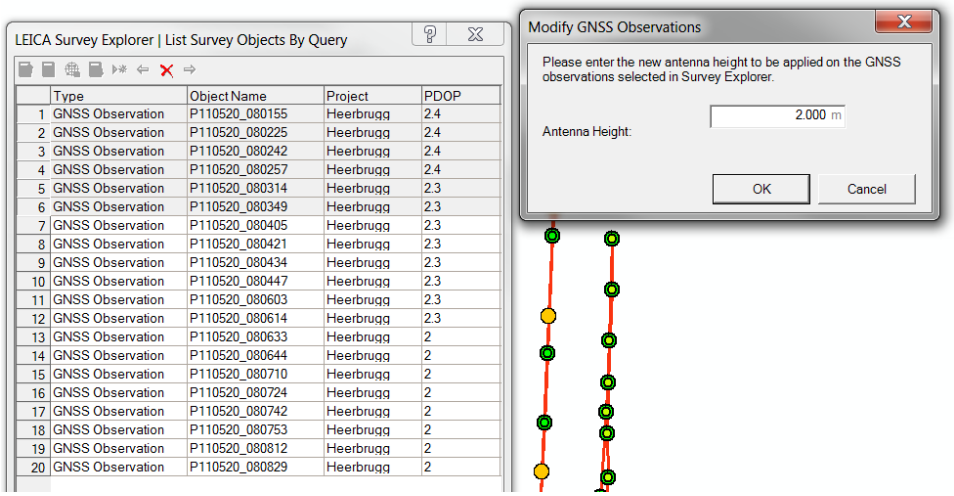
Improvements

- Automatic image transfer from Zeno Field to Zeno Office using EasyIn.
- Offset computations get created for offset points, e.g. measured with Laser Rangefinder. This allows automatic re-computation of offset points after post-processing reference points. Additionally it is possible to review, modify, and re-compute offset point computations in Zeno Office.
- Redesign of the EasyOut dialog to simplify and also enhance the workflow possibilities.
    - EasyOut now also supports to copy out data read-only or editable.
    - EasyOut now supports the automatic feature validation to ensure data integrity in Zeno Field.



- Improved survey data import. Now it is possible to set the imported coordinate as current coordinate e.g. when importing survey points from an external adjustment package.
- Update selected GNSS observations with a new antenna height. With this command, the user can simply change the antenna height to a selected set of

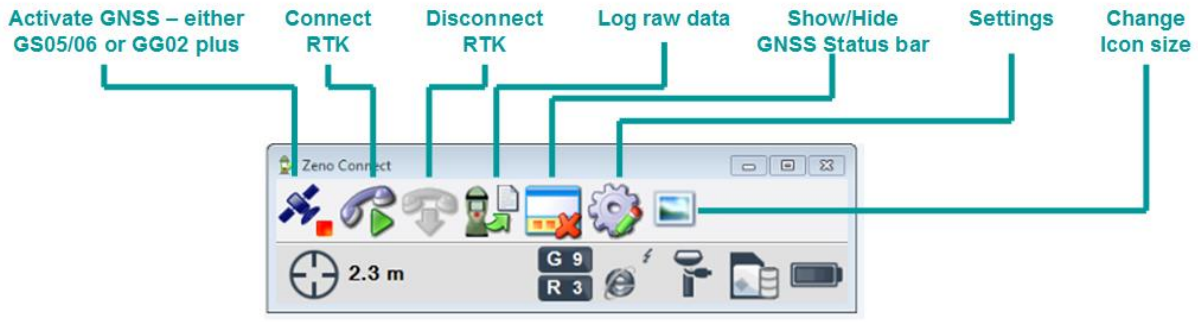
GNSS observations



7.2.3 Leica Zeno Connect

Leica Zeno Connect is newly released and ensures 3rd party applications to easily interact with Zeno 10/15/GG02 plus.

Leica Zeno Connect is an app for 3rd party software applications to manage and configure the Zeno GNSS sensors (GS05, GS06 and GG02 plus) and at the same time to send NMEA messages from the Zeno GNSS sensors to the 3rd party application. Zeno Connect includes full GNSS receiver status, setup of RTK and NMEA message streaming, and management of RTK sources.



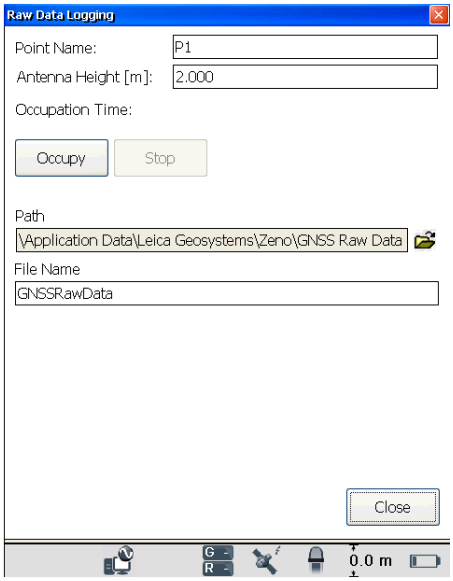
By pressing Active/De-Activate, Zeno Connect starts the connection to a Zeno GIS GNSS receiver, either GS05/06 or GG02 plus. Zeno Connect also connect automatically via Bluetooth to the sensor.

By pressing Connect, Zeno Connect establishes a connection to the – in Settings - selected RTK source.

By pressing Disconnect, Zeno Connect disconnects the connection to the connected RTK source.

By pressing Log Raw data, the Raw Data dialog appears. In there, the user can log raw data, e.g. if the Zeno acts as a base station.

By pressing Log Raw data, the Raw Data dialog appears. In there, the user can log raw data, e.g. if the Zeno acts as a base station.



By pressing Show/Hide GNSS Status Bar, the GNSS Status Bar gets visible and always remains in the foreground of every window.

By pressing Settings button, the GNSS Settings dialog appears. In here the user can select the used GNSS receiver (GS05/06 or GG02 plus), configure RTK sources and also define the streamed NMEA messages.

Zeno Connect will require a license key and can only be installed on CS10 GIS, and CS15 GIS.

7.3 Installation Steps

This new release requires a un-installation of the previously installed Zeno Office, Zeno Office on ArcGIS and/or Zeno Field version prior to installation.

Zeno 10/15 will be delivered from now on with Zeno Field v2.0 installed.

7.4 Active Customer Care

A powerful and competent worldwide service and support network backs up Leica Zeno GIS series.

Leica Geosystems customers benefit from our service and support that spans time zones and geography.

All customers having a valid CCP will benefit from a free upgrade to the latest version for your Zeno.

7.5 Installation

The following Microsoft® Windows™ operating systems are supported with **Leica Zeno Office, Zeno Office on ArcGIS** and **Zeno Field Deployment Manager**:

Operating System	Min. Version	Max. Version
Windows XP (32-bit & 64-bit)	SP2	SP3
Windows Vista SP1 (32-bit & 64-bit)	SP1	SP2
Windows 7 (32-bit & 64-bit)	-	-

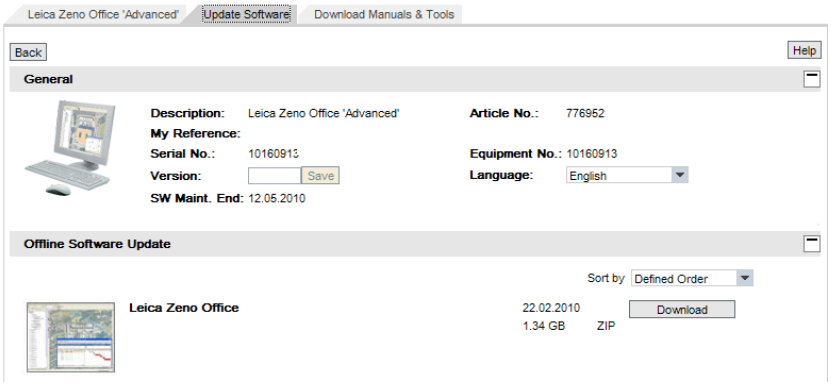
Important Notes:

- Leica Zeno Office and Leica Zeno Office on ArcGIS can only be installed and licensed successfully if the user is logged in as Administrator or with Administrator rights.
- Leica Zeno Office on ArcGIS supports ArcGIS 9.3 and ArcGIS 9.3.1.

Comments on Installation and Licensing of Zeno Office and Zeno Office on ArcGIS

1. Make sure you have Administrator rights on your computer, write access to your Zeno Office and Zeno Office ArcGIS installation location, and that no one is accessing it.

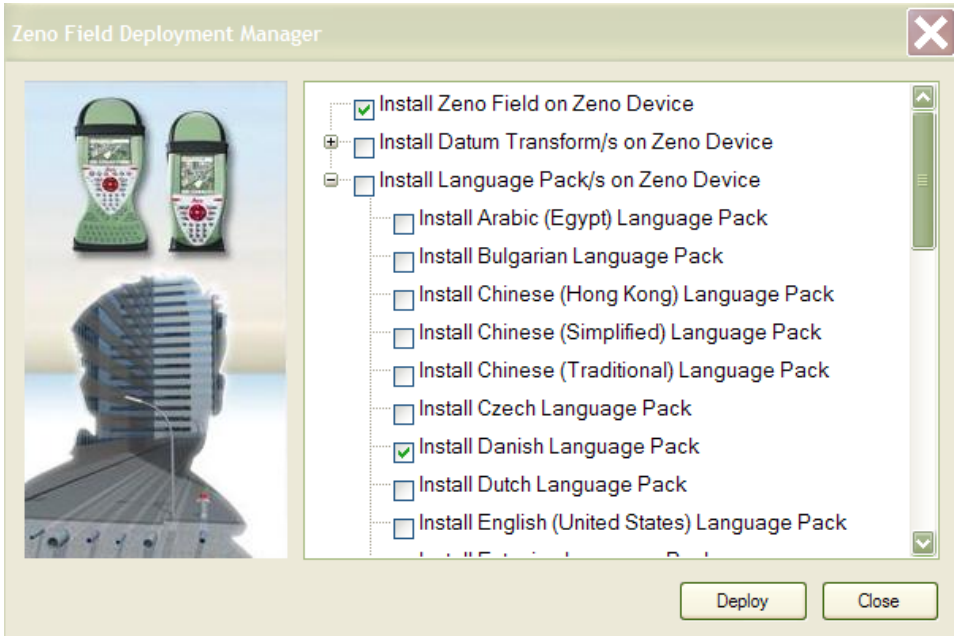
2. Please go to myWorld, go to your registered Zeno Office product and click Update Software.



3. In the Offline Software Update section, you can download the new version of Zeno.
4. Download the appropriate file from myWorld to a location other than the installation folder (as alternative you can also get a Zeno DVD from your local Leica Representative).
5. Uninstall Leica Zeno Office on your desktop computer, as well as Zeno Field on your Zeno 10/15. Both applications can be uninstalled in Add/Remove Programs.
6. Then double-click the installer to start the install process.
7. When Setup starts, follow the instructions on your screen.

Installation of Zeno Field

You can either install Zeno Field via the Zeno Deployment Manager, or directly on the device. To install it via the Deployment Manager, please install Leica Zeno Field from the Zeno GIS DVD on your desktop. Then start the Zeno Field Deployment Manager, connect via USB your Zeno 10/15 to your desktop computer, select 'Install Zeno Field' and start Deploy.



Please note, you need to have installed the USB drivers for the Zeno 10/15 prior to be able to install Zeno Field on the mobile device via the Deployment Manager. Please select the components to get installed and then follow the installation steps. Once installed, you have to license Zeno Field via the Zeno Device Manager.

Alternatively you can also install Zeno Field directly on the device. For this you have to copy the file 'Leica Zeno Field.ARM.CAB' from the device to the Program Files folder of the Zeno 10/15 and then double click the file.

ActiveSync/Mobile Device Centre for Zeno 10/15:

To connect the Zeno 10/15 to your desktop, you have to install the CS/Zeno driver. The driver can be found on the Leica Zeno GIS DVD, shipped with your equipment (e.g. D:\Common\CS Driver). Please select the suited driver for your operating system (Windows XP, Windows Vista, or Windows 7) and install, prior to connecting the Zeno 10/15 to your desktop.

Please check the Zeno 10/Zeno 15 User Manual for detailed steps on installing the USB drivers.

7.6 System Requirements

The following are the minimum system requirements apply to **Leica Zeno Office**:

Intel Pentium 1.6 GHz recommended or higher

1 GB minimum, 2 GB recommended or higher
At least 2.4 GB free space on hard disk
USB port
DVD-ROM drive is required to install the application.

For **Leica Zeno Office on ArcGIS**, please check the ESRI ArcGIS 9.3 minimum system requirements.

Leica Zeno Field is designed to run purely on the Leica Zeno 10 and Zeno 15 or CS10/15 GIS.

7.7 Website

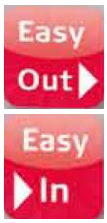
Comprehensive information about Zeno GIS can be found on the Leica Geosystems website: http://www.leica-geosystems.com/Zeno

7.8 Comments

Please read carefully the following comments.

The following restrictions are in Leica Zeno GIS v2.0:

- File-based Geodatabases are not supported in Zeno Office on ArcGIS
- Leica Zeno GIS requires the following Firmware versions:
  - Zeno 10, Zeno 15, CS10 and CS15: FW v1.22
  - GS05 and GS06: FW 1.13
  - GG02 plus: FW 6.0100SN0020
- Only an English user interface language is available for Leica Zeno Office.
- Leica Zeno Field is available in > 30 languages. However, the GNSS Settings dialog may only be available in English.
- Zeno Office does not support ArcGIS 10
- When working with RTCM 2.x, or CMR/CMR+, then the reference station receiver should be a Leica receiver, else GLONASS will not taken into account when fixing the position. This is due to the fact, that GLONASS biasis are not transmitted via these messages.



7.9 Closing remark

The new Zeno GIS Rover, together with the powerful Zeno Field and Office, enables accurate positioning and a GIS–centric approach. It puts high accuracy into the hands of field crew collecting data to update a GIS, and allows it to be collected in a format compatible with the office database. This results in improving the accuracy of spatial data, and saves time getting the information back in the office where it's required. The Zeno GIS Rover is simply more accurate then any other GPS/GIS handheld in the market, and is also equipped with a sensitive GNSS receiver that is reliably tracking GNSS signals in difficult conditions. The device itself is easy to use and fully integrated into a GIS workflow. It is designed to be used by any person required to collect spatial data, not just by highly trained survey professionals.
The new Leica GG02 Plus (in combination with Leica Zeno Field), ensures that any critical features are identified. There is no doubt that oil pipelines, gas line, electric cables, and other features including cadastral and public works, require highly accurate (positional and attribute) data. Data better then 10-20 cm is necessary to ensure that any time the location of a feature is precisely known.

8 About Zeno Office v1.1, Zeno Office on ArcGIS v1.1 & Zeno Field v1.1

The following chapter documents all new features, enhancements and changes included in the Zeno Office v1.1, Zeno Office on ArcGIS v1.1 and Zeno Field v1.1 releases.

Version:

- Zeno Field v1.1 Build: 94
- Zeno Office v1.1 Build: 557
- Zeno Office on ArcGIS v1.1 Build: 557
- Release Date: 24.08.2010

For detailed information on using any Zeno Field and Office feature, please refer to the user manual (choose "User Manual" from Zeno Help menu) and/or Quick Start Tutorials.

8.1 List of improvements and bug fixes

In addition to the bug fixes and improvements included in v1.0 SP1 and v1.0 SP2, the following improvements and bug fixes have been addressed:

8.1.1 Zeno Office v1.1

Improvements

1. Zeno Office is now based on ArcGIS 9.3.1
2. Zeno Office supports 64 bit operating systems:
    a. Microsoft Windows XP (32/64 bit)
    b. Microsoft Windows Vista (32/64 bit)
    c. Microsoft Windows 7 (32/64 bit)
3. Several improvements in using RINEX files and other reference data file formats have been made:
    a. Zeno Office now supports post-processing of 30 sec RINEX files e.g. downloaded from IGS Servers.
    b. RINEX import doesn't have a RINEX file size limitation anymore.
    c. GNSS reference data gets downloaded and imported only once when used in multiple computations.
    d. Multiple reference data files are now merged if there are no gaps in the observations.
4. For Zeno Office on ArcGIS users, SQL Express databases are now supported.

5. Survey Network navigation improvements:
    a. Possibility to navigate from a GNSS observation to its post-processing computation
    b. Possibility to navigate from a GNSS observation to its survey point
6. Zeno Office projects can now be started by a double-click on the map file (mxd) in Windows Explorer.
7. Zeno Office can now be started by a double-click on the map document (mxd).
8. The normal.mxt map template is automatically installed for Zeno Office (not Zeno Office on ArcGIS). This ensures that all required tools and toolbars are visible.
9. EasyIn live data viewer now shows the correct path for the office project, if it was moved from the original data path.
10. EasyIn button was always disabled, even if the Leica Survey Editor toolbar was not an active toolbar. Now the EasyIn button is always enabled and the user is notified to add the Survey Editor toolbar if it is not already available. The Survey Editor toolbar is required in order to define into which Survey Project the data should be imported.
11. The GNSS Observations SQL Query builder now allows to query for different processing states (such as processed, failed to process, navigated, ...)

Main Bug Fixes

1. In some cases, it could happened that the Height Accuracy after post-processing was better then the horizontal accuracy.
2. Import GNSS raw data failed when doing a double-click shortly after the EasyIn process has been started.
3. In certain circumstances, an invalid ionospheric model could have caused post-processing to fail. This is now fixed in v1.1.
4. EasyIn dialog now shows the feature classes to be checked-in if the project path has been changed.
5. In certain circumstances EasyOut failed when having an apl layer definition file added to a feature class.
6. In certain circumstances after EasyIn, features are not linked to survey points and therefore the position could not be updated.
7. In rare cases, the Live Data Viewer showed wrong/unrealistic numbers (percentage) in accuracy levels.

8. In EasyIn, when importing reference files from a down IGS server, EasyIn hangs.

8.1.2 Zeno Field v1.1

Improvements

1. In order to offer customers in remote areas where no GSM coverage and/or Reference Station Networks are available, Zeno Field now supports receiving real-time corrections via radio. Leica tested and recommends the Satel 321 model to send and receive radio corrections from a base station.
2. To better support CDMA phone markets such as US and Canada, CDMA phones are now supported in Zeno Field.
3. Leica Zeno Field is now fully available in Italian.
4. In Zeno Field Deployment Manager, UK specific transformations (OSTN02 extension) can be easily added to Zeno Field.

Main Bug Fixes

1. Calling ISDN lines are now working properly.
2. In the RTK connection wizard, possible issues in resolving specific IP addresses (downloading the mount point tables) are fixed.
3. In certain circumstances it could happen that the Datum Configuration Tool was not installed properly.
4. GNSS channel configuration was sometimes not retained after a restart of Zeno Field.

8.2 Installation Steps

This new release requires a un-installation of the previously installed Zeno Office, Zeno Office on ArcGIS and/or Zeno Field version prior to installation.

Zeno 10/15 will be delivered from now on with Zeno Field v1.1 installed.

8.3 Active Customer Care

A powerful and competent worldwide service and support network backs up Leica Zeno GIS series.

Leica Geosystems customers benefit from our service and support that spans time zones and geography.

All customers having a valid CCP will benefit from a free upgrade to the latest version for your Zeno.

8.4 Installation

The following Microsoft® Windows™ operating systems are supported with **Leica Zeno Office, Zeno Office on ArcGIS** and **Zeno Field Deployment Manager**:

Operating System	Min. Version	Max. Version
Windows XP (32-bit & 64-bit)	SP2	SP3
Windows Vista SP1 (32-bit & 64-bit)	SP1	SP2
Windows 7 (32-bit & 64-bit)	-	-

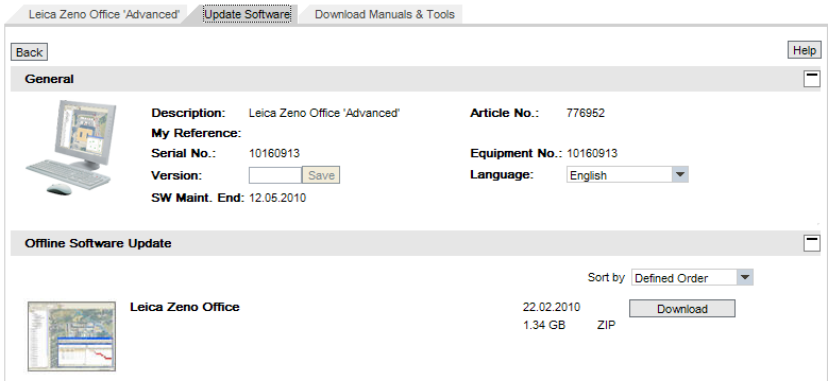
Important Notes:

- Leica Zeno Office and Leica Zeno Office on ArcGIS can only be installed and licensed successfully if the user is logged in as Administrator or with Administrator rights.
- Leica Zeno Office on ArcGIS supports ArcGIS 9.3 and ArcGIS 9.3.1.

Comments on Installation and Licensing of Zeno Office and Zeno Office on ArcGIS

35. Make sure you have Administrator rights on your computer, write access to your Zeno Office and Zeno Office ArcGIS installation location, and that no one is accessing it.

36. Please go to myWorld, go to your registered Zeno Office product and click Update Software.



37. In the Offline Software Update section, you can download the new version of Zeno.

38. Download the appropriate file from myWorld to a location other than the installation folder (as alternative you can also get a Zeno DVD from your local Leica Representative).

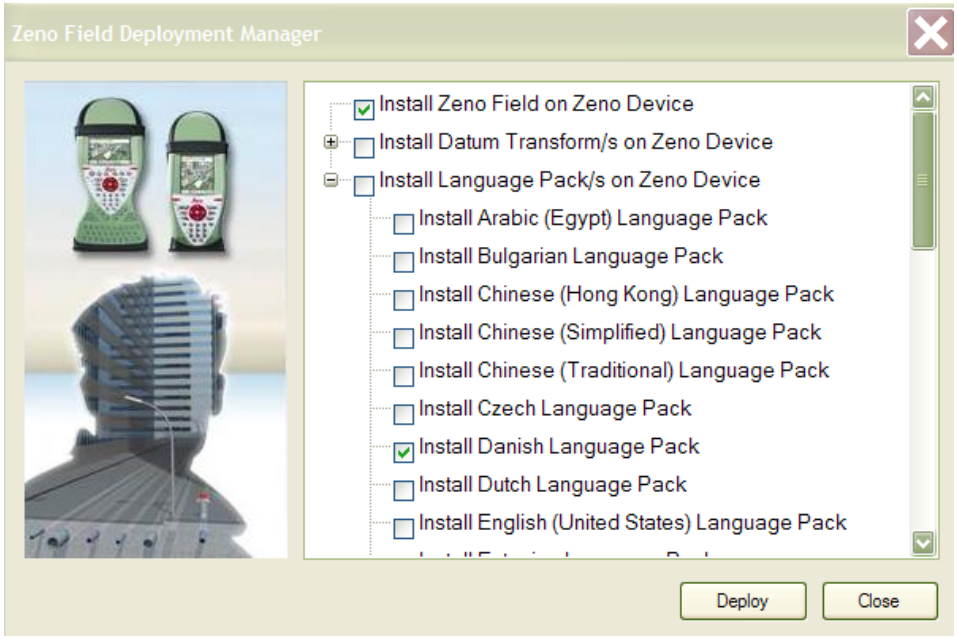
39. Uninstall Leica Zeno Office on your desktop computer, as well as Zeno Field on your Zeno 10/15. Both applications can be uninstalled in Add/Remove Programs.

40. Then double-click the installer to start the install process.

41. When Setup starts, follow the instructions on your screen.

Installation of Zeno Field

You can either install Zeno Field via the Zeno Deployment Manager, or directly on the device. To install it via the Deployment Manager, please install Leica Zeno Field from the Zeno GIS DVD on your desktop. Then start the Zeno Field Deployment Manager, connect via USB your Zeno 10/15 to your desktop computer, select 'Install Zeno Field' and start Deploy.



Please note, you need to have installed the USB drivers for the Zeno 10/15 prior to be able to install Zeno Field on the mobile device via the Deployment Manager. Please select the components to get installed and then follow the installation steps. Once installed, you have to license Zeno Field via the Zeno Device Manager.

Alternatively you can also install Zeno Field directly on the device. For this you have to copy the file 'Leica Zeno Field.ARM.CAB' from the device to the Program Files folder of the Zeno 10/15 and then double click the file.

ActiveSync/Mobile Device Centre for Zeno 10/15:

To connect the Zeno 10/15 to your desktop, you have to install the CS/Zeno driver. The driver can be found on the Leica Zeno GIS DVD, shipped with your equipment (e.g. D:\Common\CS Driver). Please select the suited driver for your operating system (Windows XP, Windows Vista, or Windows 7) and install, prior to connecting the Zeno 10/15 to your desktop.

Please check the Zeno 10/Zeno 15 User Manual for detailed steps on installing the USB drivers.

8.5 System Requirements

The following are the minimum system requirements apply to **Leica Zeno Office**:

Intel Pentium 1.6 GHz recommended or higher
1 GB minimum, 2 GB recommended or higher
At least 2.4 GB free space on hard disk
USB port
DVD-ROM drive is required to install the application.

For **Leica Zeno Office on ArcGIS**, please check the ESRI ArcGIS 9.3 minimum system requirements.

Leica Zeno Field is designed to run purely on the Leica Zeno 10 and Zeno 15.

8.6 Website

Comprehensive information about Zeno GIS can be found on the Leica Geosystems website: http://www.leica-geosystems.com/Zeno

8.7 Comments

Please read carefully the following comments. The following limitations are in Leica Zeno GIS v1.0:

- File-based Geodatabases are not supported in Zeno Office on ArcGIS
- Leica Zeno GIS requires the following Firmware versions:
    - Zeno 10, Zeno 15, CS10 and CS15: FW v1.22
    - GS05 and GS06: FW 1.000S42
- Only an English user interface language is available for Leica Zeno Office.
- Leica Zeno Field is available in > 30 languages. However, the GNSS Settings dialog may only be available in English.
- Zeno integrated camera is not directly supported in the picture dialog. A picture has to be attached to a feature manually. Please see help for more details.

8.8 Closing remark

Leica Zeno v1.1 introduces major usability improvements and bug-fixes. Please utilize these improvements in the field and office and install the latest versions at your earliest convenience.

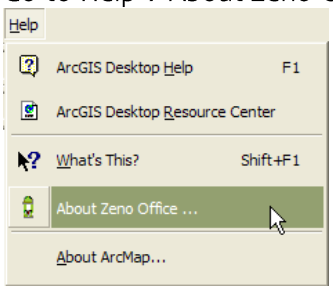
9 About Zeno Office 1.0 SP2 and Zeno Office on ArcGIS v1.10 SP2

Another service pack is released to address the must urgent customer requests and issues. This service packs addresses issues fixed in SP1 as well as new improvements.

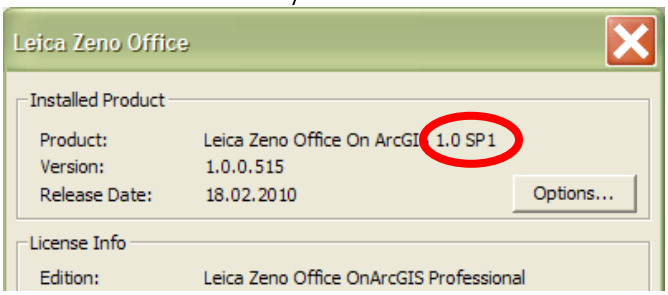
9.1 How to identify which Service Pack is installed

To find out what Zeno Office products are currently installed on your machine, please do the following:

4. Start Zeno Office or ArcMap.
5. Go to Help > About Zeno Office.



6. In "Installed Products" you can see which version of Zeno is installed.



The Service Pack 2 for Zeno Office v1.0 and Zeno Office on ArcGIS v1.0 contains new features, and bug fixes. The SP is recommended for Zeno Office (Basic, Advanced, Professional) and Zeno Office on ArcGIS (Basic, Advanced, Professional).

9.2 List of improvements and bug fixes

In addition to bug fixes and improvements from v1.0 SP1, the following improvements were addressed:

Improvements

- An Identify tool is now available in Zeno Office. When you want information about a feature displayed in ArcMap, you can use the Identify tool on the Tools toolbar.

The Identify tool allows you to see the attributes of your data and is an easy way to learn something about a location in a map.

- During survey data import (dbx, GSI, ...), additional metadata Information (file name, user name and import date) is added to all the features while importing.

Bug Fixes

- The default extent for high precision spatial reference is now set 'unlimited' when using the New Project Wizard
- In some cases it might be that post - processing accuracies were wrong
- In rare cases it happened, that the EasyIn summary showed an impossible percentage (e.g. 837.6%) in accuracy ratio. This is now fixed.
- The default transformation was not persisted when the user changed it
- Transformation during EasyIn was wrong when using a Position Vector transformation defined in the GeoTransformation.xml
- Problem with regional settings in Transformations ',' fixed. After the user changed the transformation all values have been truncated in the GeoTransformationSet.xml
- Several improvements when using the dbx import:
    - Now possible to import DBX with special characters (;:-()&{}. etc.) used in field names.
    - Now possible to import Polyline/Polygon features with Z-Coordinates as well as arcs
    - If there was a raw data file (.m**) in a folder without .XCF file then only .m** files are shown to user.
    - Now possible to import codes with a "Space" in a Field Name. During import, these spaces are replaced by "_".

Please download and install this required Service Pack at your earliest convenience.

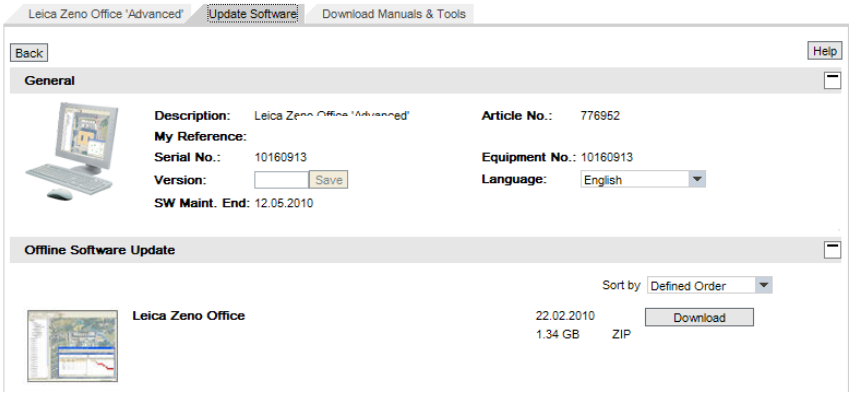
9.3 Installation Steps

This service pack can be installed on Zeno Office v1.0 and Zeno Office on ArcGIS v1.0. Leica Zeno Office v1.0 or Zeno Office on ArcGIS v1.0 must be installed before you can install this Service Pack.

To Install:

1. Make sure you have Administrator rights on your computer, write access to your Zeno Office and Zeno Office ArcGIS installation location, and that no one is accessing it.

2. Please go to myWorld, go to your registered Zeno Office product and click Update Software.



3. In the Offline Software Update section, you can download the Service Pack.

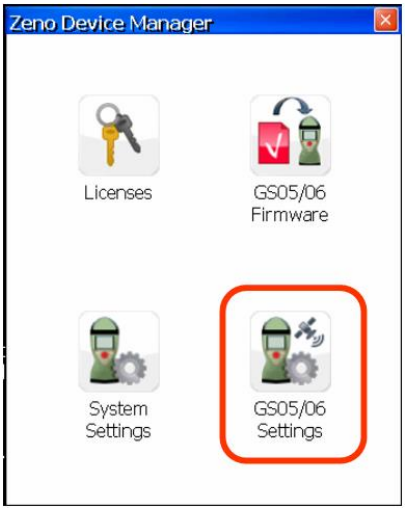
4. Download the appropriate file (*Zeno Office 1.0 SP2.msi*) from myWorld to a location other than the installation folder.

5. Then double-click the msi file (*Zeno Office 1.0 SP2.msi*) to start the install process.

6. When Setup starts, follow the instructions on your screen.

Please note, that this SP will not be installed when installing Zeno Office and Zeno Office on ArcGIS from the Leica Zeno GIS DVD.

10 About Zeno Device Manager v1.1



A major enhancement is made to the new Zeno Device Manager. In addition to the existing functionality of the Device Manager:

- Add new license keys (such as a new maintenance key, Glonass key for the GS05/06, etc.),
- Upload a new Firmware for the GS05/06 caps,
- Change the System Settings, e.g. font size,

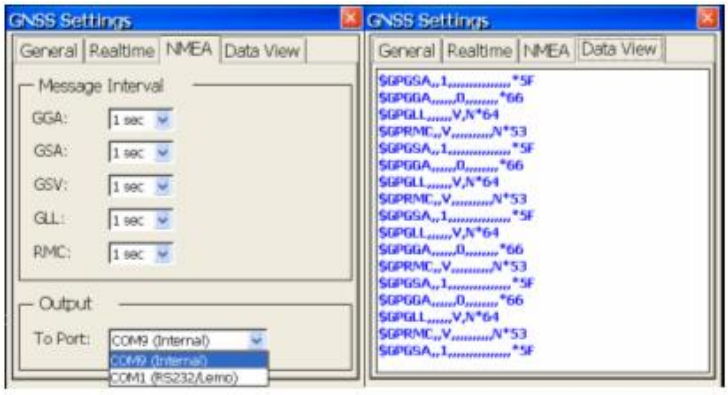
it is possible for 3rd party applications to connect to the GS05/06 caps and receive NMEA messages, as well as connect and configure real-time sources.

The connection to the cap, NMEA streaming settings and Real-Time configuration and connection to the cap can be defined in the GS05/06 Settings.

Zeno Device Manager streams the following NMEA 0183 version 2.0 or higher sentences:

Sentence	Description
$GPGGA	GPS fix data
$GPGLL	Geographic position, latitude and longitude
$GPGSA	GPS Dilution of Precision (DOP) and active satellites
$GPGSV	GPS satellites in view
$GPRMC	Recommend minimum specific GPS/TRANSIT data

In Zeno Device Manager you can also define the output interval (1 sec, 2 sec, 5 sec, and 10 sec) as well as the **To Port** (COM9, COM1). When defining COM9, a 3rd party application installed on the Zeno 10/15 can use NMEA messages. When using COM1, NMEA is streamed out via Serial or Lemo port to another PC, such as a TabletPC. Then other applications, like MobileMatriX, can use these messages to get positions from the



Zeno 10/15.

Please note, it is recommended to use the Lemo connector module, when streaming NMEA data to another PC. The cable used for this should be the **Leica GEV218** cable.

For further details and how to use the Zeno Device Manager, please read the QuickStart Tutorial: *Leica Zeno Device Manager v1.1 - Quick Start Tutorial*

11 About Zeno Office 1.0 SP1 and Zeno Office on ArcGIS v1.10 SP1

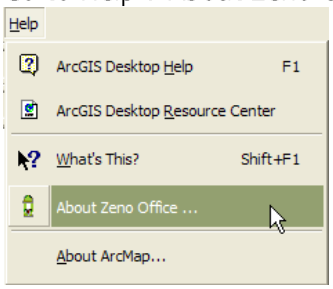
After the release of Zeno Office, we have been in contact with many customers and received feedback about missing functionalities and issues. As we want to address these issues as soon as possible, a service pack is now available.

We recommend that all Zeno Office v1.0 and Zeno Office on ArcGIS v1.0 customers download and install this Service Pack, at their earliest convenience, to ensure the highest quality experience when working with Leica Zeno Office and Zeno Office on ArcGIS.

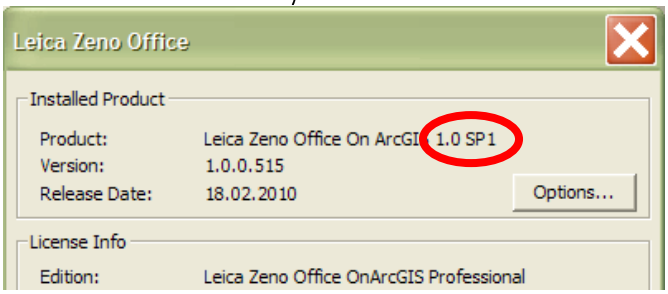
11.1 How to identify which Service Pack is installed

To find out what Zeno Office products are currently installed on your machine, please do the following:

7. Start Zeno Office or ArcMap.
8. Go to Help > About Zeno Office.



9. In "Installed Products" you can see which version of Zeno is installed.



11.2 List of improvements and bug fixes

This Service Pack contains performance improvements and maintenance fixes. The SP is recommended for Zeno Office (Basic, Advanced, Professional) and Zeno Office on ArcGIS (Basic, Advanced, Professional).

Please download and install this required Service Pack at your earliest convenience. The following improvements were addressed:

Bug fixes

- EasyIn now supports Non-English operating systems. This Service Pack is required for all Non-English Operating Systems users.
- EasyIn: If more than 300 observations have been checked-in, then the EasyIn process struggled. Now an unlimited number of observations can be checked in and post-processed.
- Glonass satellites with a negative frequency number can now be post-processed.
- Importing the data schema from a shapefile in the "New Project Wizard" doesnot cause anymore mandatory attribute fields.
- Zeno Office showed "Evaluation Edition" text in the map window even when using a full Zeno Office license.
- The baseline geometry was created from rover to reference instead of reference to rover.

Improvements

- The DBX (Viva/System1200) import now supports the import of point features as well.
- GNSS Observation View now also shows the solution type.
- Improvements in user notifications during EasyIn. The Live Data Viewer informs the user about the original path of the geodatabase when the database has been moved between EasyOut/EasyIn.
- About Dialog now shows the installed Service Pack.

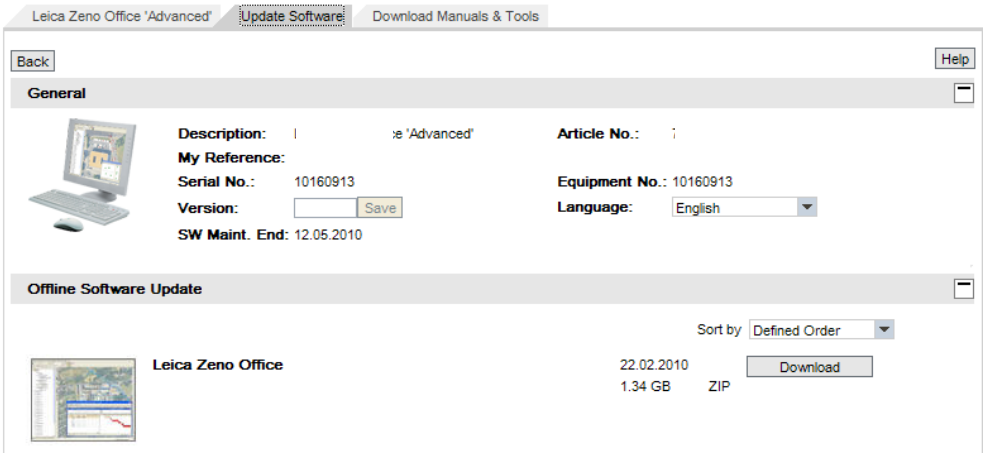
11.3 Installation Steps

This service pack can be installed on Zeno Office v1.0 and Zeno Office on ArcGIS v1.0. Leica Zeno Office v1.0 or Zeno Office on ArcGIS v1.0 must be installed before you can install this Service Pack.

To Install:

7. Make sure you have Administrator rights on your computer, write access to your Zeno Office and Zeno Office ArcGIS installation location, and that no one is accessing it.

8. Please go to myWorld, go to your registered Zeno Office product and click Update Software.



9. In the Offline Software Update section, you can download the Service Pack.

10. Download the appropriate file (*Zeno Office 1.0 SP1.msi*) from myWorld to a location other than the installation folder.

11. Then double-click the msi file (*Zeno Office 1.0 SP1.msi*) to start the install process.

12. When Setup starts, follow the instructions on your screen.

Please note, that this SP will not be installed when installing Zeno Office and Zeno Office on ArcGIS from the Leica Zeno GIS DVD.

12 About release 1.0

Can you imagine starting at a jobsite in a city that is excavating soil and not having solid and reliable information about the city digital data that identifies precisely where pipelines, telecom and water mains are located? In such an example, the reliable data needs to be collected beforehand. The source of the data, the mapping techniques, the accuracy and up-to-dateness of the collected data are essential and without them real dangers exist. And for sure, any mobile mapping solution should be easy for anyone to understand, eliminate errors, provide an automated workflow and make a novice also feel like an expert.

Therefore, as a world's first, the Leica Zeno GIS family guarantees ultimate ease-of-use without compromises. Managing and maintaining assets, inspecting infrastructure, responding to emergencies and as-built and incident mapping – the Leica Zeno GIS series offers you the best in its class soft- and hardware solution for your needs. You get exactly what you want and expect from an easy mobile GIS solution. Leica Zeno GIS consist of two GNSS/GIS handhelds (Leica Zeno 10 and Leica Zeno 15), Field (Leica Zeno Field) and Office Software (Leica Zeno Office and Leica Zeno Office on ArcGIS).

Leica Zeno 10

Leica Zeno 15

Leica Zeno Office & Field Software

With Leica Zeno GIS you benefit from:

- A product family - integrated into the new Viva series - with unmatched flexibility to up/down-sell to exactly match customer requirements.
- A competitive range of products that set new standards in ruggedness and performance.
- Easy-to-use mobile GIS software that requires minimal training to successfully sell, deploy and support.

Leica Zeno GIS can simply be described in 3 words: **Easy. Versatile. Automated.**

- GNSS (**GPS**, **Glonass** and **SBAS**) technology ensures enough satellites are visible even you are working in extreme conditions. For the GIS user, the Leica Zeno GIS series simplifies the GNSS complexity with easy to understand wizards.
- The Leica Zeno GIS series is a fully **GIS integrated** solution, highly accurate, featuring the most robust and reliable devices, and offers the simplest automated workflow to bring mapped data from the field into the office.
- Leica Zeno GIS series introduces the new **EasyIn** dataflow; a streamlined and automated workflow ensures a boost in your mobile productivity. The one-click wizard brings GIS data directly from the device into the GIS database, without having the need to first copy it from the mobile device, and post-process the data **while** downloading feature and GNSS data from the device.

Leica is the most known brand for reliable and accurate surveying technology – and now brings you **surveying technology** adapted **for** the **GIS user**.

Easy Out

Easy In

12.1 Features of Leica Zeno GIS v1.0 at a glance

12.1.1The New GNSS/GIS handhelds

The most rugged and versatile GNSS/GIS Handhelds in the market

- IP67, and 1.2m drop
- Industry leading operating temperature range: -30 to +60°C
- Replaceable & rechargeable battery, operating time of 8-9h, charging time in just 2 hours

High-Performance sub-meter GNSS/GIS Handhelds

- From Sub-meter to decimeter accuracy
- GPS, GLONASS and SBAS

Packed with power for outstanding performance

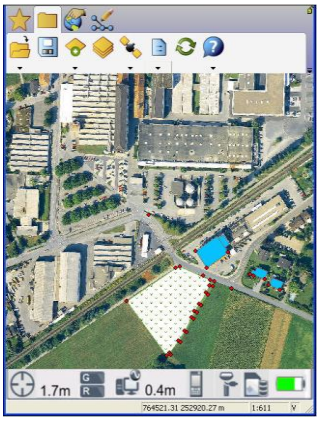
- The optional docking station ensures quick, direct and easy access to data measured in the field. Just plug-in, and field data is downloaded, post-processed and updated in Zeno Office, with just one simple click.

Features of the GNSS/GIS handhelds

- Sunlight readable VGA screen (portrait – Zeno 10 - or landscape – Zeno 15)
- 2MPixel integrated camera
- QWERTY keypad (Zeno 15) or Numeric keypad (Zeno 10)

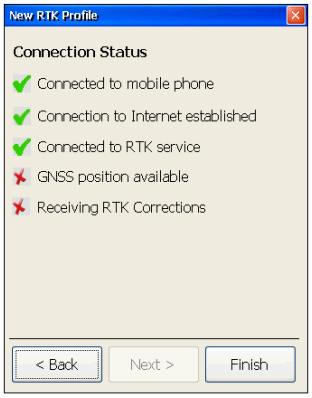
12.1.2Leica Zeno Field

The Leica Zeno GIS series offers an ideal set of tools for anyone who needs more accurate data in a GIS database. All GNSS post-processing is automated; GIS and GNSS technologies are seamlessly combined in one easy solution.



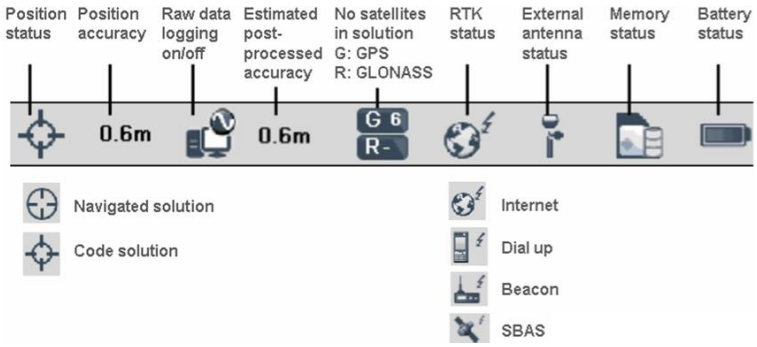
Leica Zeno Field is an OEM version of ArcPad 8 SP3 and provides in addition to the well known ArcPad™ functionality:

- State-of-the-Art mapping tools to perform reliable, accurate, and validated field data collection
- Zeno Field enables high-quality mapping by supporting symbology and style sheets defined in Zeno Office.
- GNSS raw data logging – for later processing in Zeno Office or in Zeno Office on ArcGIS,
- Easy handling of GNSS configurations (such as DGPS settings), surveying technology made available to the GIS user. Leica Zeno Field ensures the simplest configuration of Real-Time sources, incl. Bluetooth® pairing with mobile phones and radio devices (such as Beacons); supported connections are: **Dial-up, Internet, and Ra-**



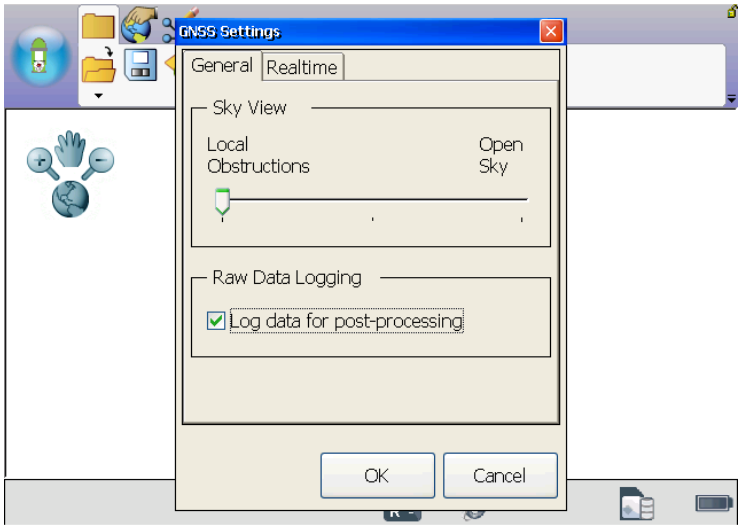
dio/Beacon

- The following Real-Time correction services are supported:
  - RTCM 2.x, RTCM 3.0, Leica, CMR, CMR+ via Dial-up or Internet connection
  - Beacon
  - SBAS (WAAS, EGNOS; MSAS and GAGAN)
  - OMNISTAR corrections via Ntrip. OmniSTAR is a GPS correction services that improves the accuracy of a GPS. With Leica Zeno, submeter accuracy can be achieved.
- Automated re-dial to real-time source in case the connection is interrupted.
- Simple to understand real-time Connection information
- Feature accuracy management
- An informative GNSS Status bar provides all GNSS information in one location, e.g. GNSS Solution type, tracked satellites etc.



Leica Zeno Field is available in the following languages: Arabic, Bulgarian, Chinese, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Swedish, Hebrew, Hungarian, Italian, Japanese, Korean, Lithuanian, Latvian, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish, Thai, Turkish and Ukrainian.

Leica Zeno GIS is optimised to get the best performance under all conditions. In Zeno Field there is a setting that ensures the best tracking performance under free skies as well as under obstructions such as trees. If you measure under trees or in urban canyons, move the slider to local obstructions. Zeno GIS will then provide a filtered position and velocity solution, based on assumed vehicle or human dynamics. This solution optimizes the absolute positioning accuracy of the GPS code observation and allows a solution to be generated for short periods when fewer than 4 satellites are visible using what observations are available and assumptions about vehicle dynamics.

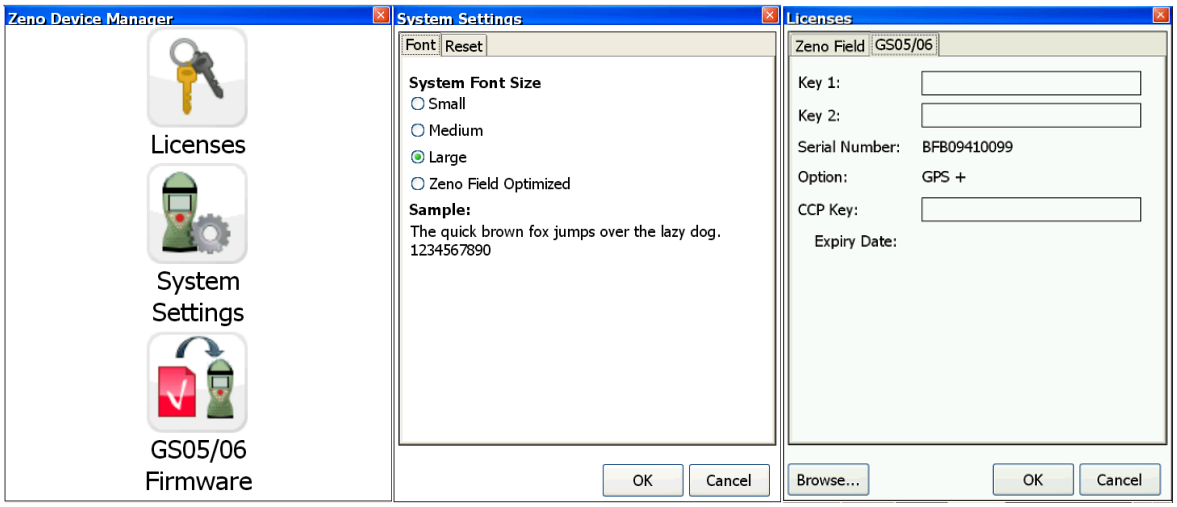


But please keep in mind, it will not provide a solution in all conditions. In conditions where satellite signals are completely blocked for extended periods, such as in a tunnel or severe urban settings, this setting will have the same problems as all satellite based navigation systems and a solution will not be possible.

Check out the help for more details. The Zeno Field Help is located on the DVD or is installed when the Zeno Field Deployment Manager is installed on your desktop.

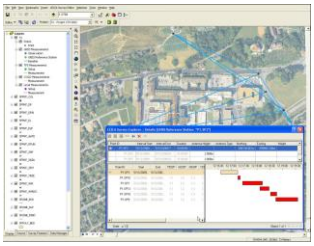
12.1.3Leica Zeno Device Manager

Together with Zeno Field, the Zeno Device Manager is also installed on the Zeno 10/15. With the Device Manager, you can license Zeno, enter a new CCP key, upgrade the GS05/06 Firmware and change the Font Sizes of the Zeno 10/15.



12.1.4 Leica Zeno Office and Leica Zeno Office on ArcGIS

To fit best with customer needs, Leica Zeno Office is available as two independent versions: Leica Zeno Office and Leica Zeno Office on ArcGIS – an extension to ArcGIS Desktop.

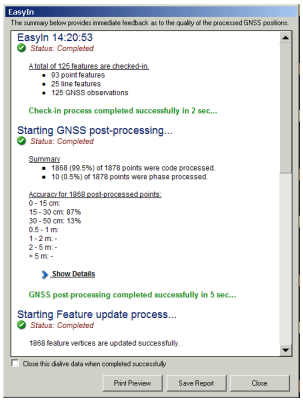


Leica Zeno Office

Leica Zeno Office is a software package to maintain, manage and post-process GIS, GNSS and surveying data.

Zeno Office also provides an easy interface between the field and CAD/GIS applications such as Zeno Field, MobileMatriX, AutoCAD, ArcGIS, Microstation or many other GIS application.

- Post-Process your GNSS raw observations (code & phase)
- Maintain your GIS data
  - Finalize, edit, layout and print
  - Display Raster and Vector data (> 40 formats)
  - Store detailed GNSS quality information



Leica Zeno Office on ArcGIS

Leica Zeno Office on ArcGIS™ is an extension to ArcGIS from ESRI and provides a set of tools for managing and processing GNSS and surveying data directly within the ArcGIS environment, one you are familiar with.

EasyIn and EasyOut

Leica Zeno GIS introduces the new EasyIn/EasyOut workflows, to

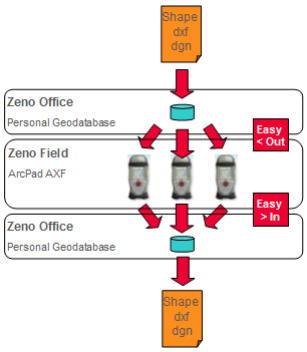
simultaneously:

- Check-in feature and GNSS raw data
- Automated download of Reference Data (from internet server or your local machine)
- Post-Process and
- Update feature vertices

... in one automated process with a Live DataViewer to see the progress and save the results. Please note, you can also post-process any data which was measured with Real-Time corrections in the field, while using EasyIn.

Furthermore, the EasyOut and EasyIn process ensures that GNSS data is collected in the format of the GIS or CAD data model, transferring the data into the GIS/CAD is quick and easy and transcription errors are eliminated.

In addition, both Zeno Office and Zeno Office on ArcGIS have a **Multi-User Support**

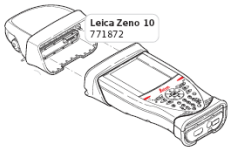


- An 'unlimited' number of field crews are supported
- Zeno Office manages multiple check-ins and then can write one common dxf, shape or dgn
- Check-out once and you can always continuously check in at any time.
- Easy Administration by Real-Time Profile handling. Simply distribute your defined Real-Time profiles to multiple devices.
- Also data from multiple Survey sensors can be imported and CAD files can be directly put in the map background of Zeno Field via the new EasyOut process.

In addition, Zeno Office works with Leica Total Stations & GNSS sensors

- Import Leica Total Station and GNSS measurements (via dbx import/export) – including feature codes & attributes collected with Leica SmartWorx.

12.1.5GNSS Caps - GS05 GIS and GS06 GIS



The GNSS caps for the Zeno 10 and Zeno 15 are also available separately. Therefore, any CS10 and CS15 can be upgraded to a GNSS/GIS handheld.

This ensures the most versatile survey and GIS system in the market.

12.1.6 Battery Concept and Accessories

Lithium-Ion Battery

Latest-technology small, light, high capacity Lithium-Ion batteries power all Viva and Zeno GIS handhelds for hours and hours.

Benefits:

- Same accessories as Viva Controllers
- Long life and low maintenance
- Fast charging time (2 hours)
- Long operation time (up to 9 hours)

Leica Zeno GIS supports Leica Viva accessories, such as data transfer cables, Docking Station, Stylus, SD Card etc. Customers can buy once and use it for multiple purposes.

12.1.7Supported Data Formats

Leica Zeno Field is based on ArcPad 8 OEM from ESRI and works with ArcGIS and other GIS information technologies. This integration lets Leica Zeno Field leverage existing investments in mapping, data, GIS software, and databases. Leica Zeno Field supports vector map and raster image display, which includes direct read and write of ArcGIS geodatabases, shape - and CAD files (dxf, dwg, dgn), as well raster data such as Lizard Tech's MrSID® imaging language formats. Leica Zeno Field works in high performance with Raster images in the background.

Data collected in the field can easily be uploaded into the master database in the office. The data transfer (EasyOut and EasyIn) of Leica Zeno Field into Leica Zeno Office is one of the key features of the Leica solution.

Simply add a CAD file into Zeno Office, and the EasyOut process ensures that this CAD data is copied out into Zeno Field for background reference.

12.2 Activate your Software in myWorld

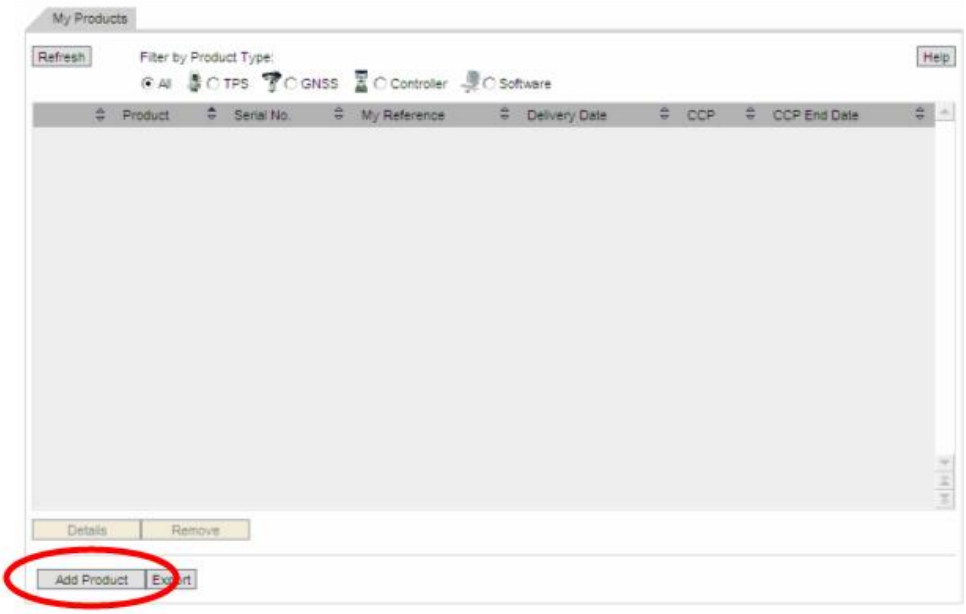
To activate Zeno Office or Zeno Office on ArcGIS you have to register in MyWorld.

How to register your product?

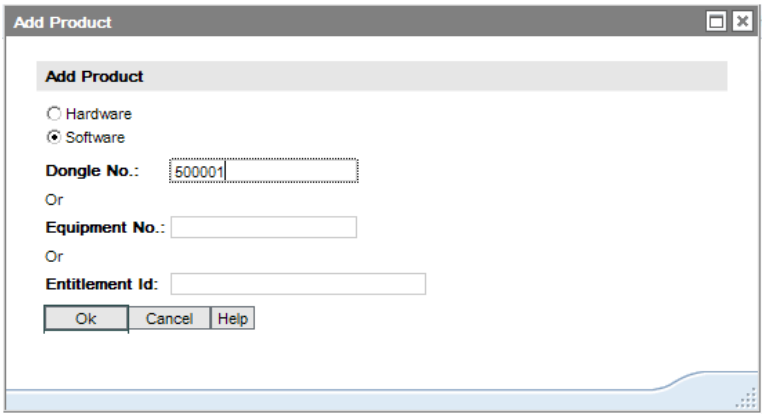
Easy Out

Easy In

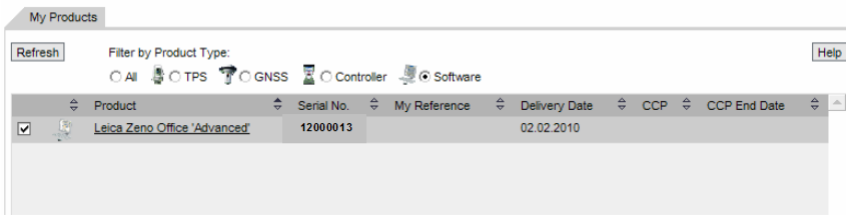
1. After registering, go to myProducts, where you can 'Add a new Product'.



2. In the Add product dialog select Software and enter your dongle or equipment number, then press OK.

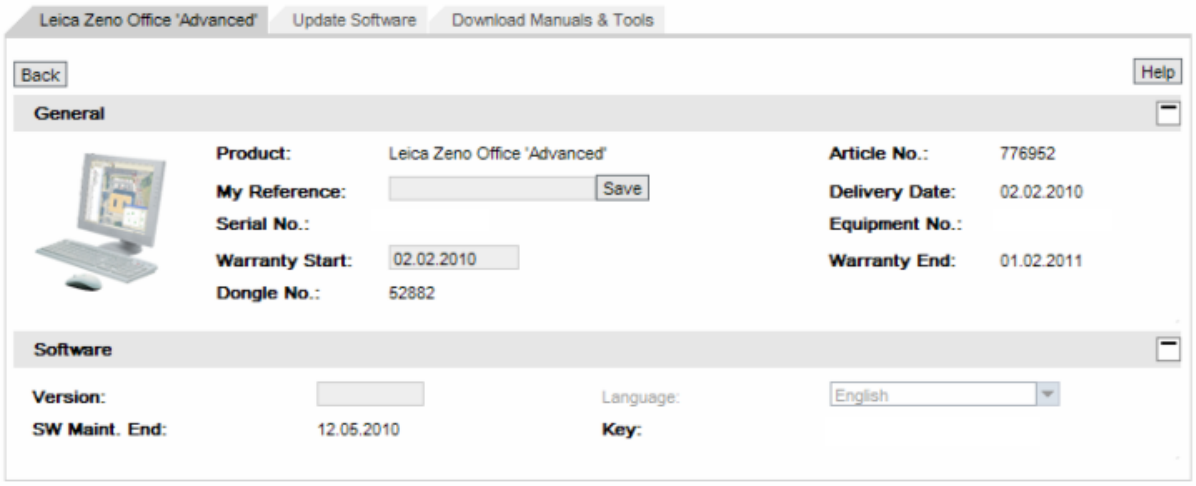


3. Your products are now listed.



4. To download your license key, please click the product.

5. Now you can see your product, the actual Software Maintenance Key (or CCP key), and you can download your license file.



6. Now start the Zeno Office License Manager and browse for the downloaded Zeno Office license file.

12.3 Active Customer Care

A powerful and competent worldwide service and support network backs up Leica Zeno GIS series.

Leica Geosystems customers benefit from our service and support that spans time zones and geography. Our Active Customer Care program provides customer packages to suit your needs, whether you use our simplest distance measuring device or the most sophisticated integrated solution. Active Customer Care is a true partnership, and it's our commitment to provide the highest level of support and collaboration that our customers have come to expect when you put your trust in Leica Geosystems.

12.4 Installation

The following Microsoft® Windows™ operating systems are supported with **Leica Zeno Office** and **Zeno Office on ArcGIS**:

Operating System	Min. Version	Max. Version
Windows XP (32-bit)	SP2	SP3
Windows Vista SP1 (32-bit)	SP1	SP2

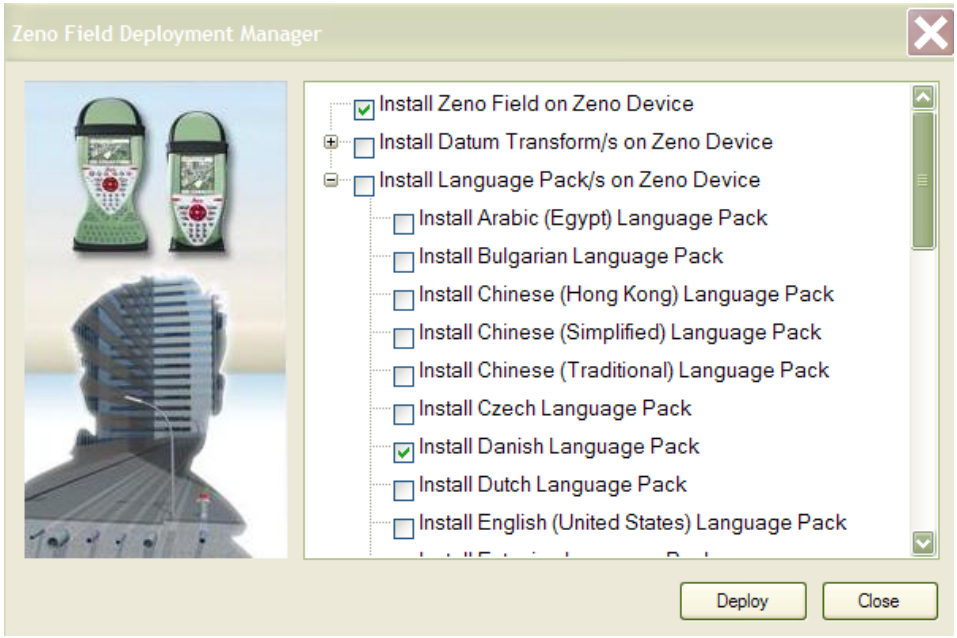
Windows 7 (32-bit)	-	-

Important Notes:

- Leica Zeno Office and Leica Zeno Office on ArcGIS can only be installed and licensed successfully if the user is logged in as Administrator or with Administrator rights.
- Leica Zeno Office on ArcGIS supports ArcGIS 9.3 and ArcGIS 9.3.1.
- For Windows Server 2008, the 'Desktop Experience Component' has to be installed.
- To work with the recommended Zeno Office map customization, please copy, after installation, the normal.mxt map template into following folder to utilize the customized map. Please note, that this is a hidden folder and gets created at the first startup of Zeno Office:
  c:\Documents and Settings\User name\Application Data\ESRI\ArcMap\ Templates
  The normal.mxt can be found on your Leica Zeno GIS DVD:
  \Common\Map template\normal.mxt

Installation of Zeno Field

You can either install Zeno Field via the Zeno Deployment Manager, or directly on the device. To install it via the Deployment Manager, please install Leica Zeno Field from the Zeno GIS DVD on your desktop. Then start the Zeno Field Deployment Manager, connect via USB your Zeno 10/15 to your desktop computer, select 'Install Zeno Field' and start Deploy.



Please note, you need to have installed the USB drivers for the Zeno 10/15 prior to be able to install Zeno Field on the mobile device via the Deployment Manager. Please select the components to get installed and then follow the installation steps. Once installed, you have to license Zeno Field via the Zeno Device Manager.

Alternatively you can also install Zeno Field directly on the device. For this you have to copy the file 'Leica Zeno Field.ARM.CAB' from the device to the Program Files folder of the Zeno 10/15 and then double click the file.

ActiveSync/Mobile Device Centre for Zeno 10/15:

To connect the Zeno 10/15 to your desktop, you have to install the CS/Zeno driver. The driver can be found on the Leica Zeno GIS DVD, shipped with your equipment (e.g. D:\Common\CS Driver). Please select the suited driver for your operating system (Windows XP, Windows Vista, or Windows 7) and install, prior to connect the Zeno 10/15 to your desktop.

Please check the Zeno 10/Zeno 15 user manual for detailed steps on installing the USB drivers.

12.5 System Requirements

The following are the minimum system requirements apply to **Leica Zeno Office**:

Intel Pentium 1.6 GHz recommended or higher

1 GB minimum, 2 GB recommended or higher
At least 2.4 GB free space on hard disk
USB port
DVD-ROM drive is required to install the application.

For **Leica Zeno Office on ArcGIS**, please check the ESRI ArcGIS 9.3 minimum system requirements.

Leica Zeno Field is designed to run purely on the Leica Zeno 10 and Zeno 15.

12.6 Website

Comprehensive information about Zeno GIS can be found on the Leica Geosystems website: http://www.leica-geosystems.com/Zeno

12.7 Comments

Please read carefully the following comments. The following limitations are in Leica Zeno GIS v1.0:

- CDMA phones are not supported
- No Bluetooth connection to Laser Rangefinder supported, connection via RS232 cable is supported.
- File-based Geodatabases are not supported in Zeno Office and Zeno Office on ArcGIS
- Leica Zeno GIS requires the following Firmware versions:
  - Zeno 10, Zeno 15, CS10 and CS15: FW v1.22
  - GS05 and GS06: FW 1.000S42
- Leica Zeno Office, only English User Interface language available
- Leica Zeno Field is available in > 30 languages. However, the GNSS Settings dialog is only available in English.
- Zeno integrated camera not directly supported in the picture dialog. Picture has to be attached to a feature manually.

- The DBX import doesn't support the import point features.

12.8 Closing remark

Leica Zeno GIS introduces a new workflow for GNSS/GIS users allowing them an automated workflow between the field and office. It removes any complexity in transferring the data and the post-processing the data back in the office. Even if someone wants to process his GNSS data later, at any time the GIS features could be updated and the accuracy improved. Therefore data integration between field crews and GIS database, CAD files and raster data has become extremely simple. Leica Zeno GIS was designed to fill this gap and to provide a smoother workflow between the field and office.

GNSS/GIS data collection must be both, a simple and reliable method to collect and maintain up-to-date, accurate GIS/CAD data in the field. Leica Zeno GIS ensures that the key success factors: the workflow between field and office, reliability and accuracy of the data is ensured. A fully automated dataflow from data acquisition in the field to the GIS geodatabase or CAD files is fully supported with the automated workflow concepts EasyIn and EasyOut. EasyIn and EasyOut saves time, reduces error sources, reduces user interaction when importing from multiple devices, automates post-processing of GNSS raw data and at the end gives the perfect tool in the hand to share data between field and office.

Despite the fact that Leica Zeno GIS makes the data collection and data transfer process more effective and easier to use, data management tools in Leica Zeno Office and Zeno Files ensure the control of the data quality.

Leica Zeno GIS is the best-in-class application for GNSS/GIS data collection on the market today. Paired with the superior performance, Leica Geosystems is setting new standards for mobile mapping applications.

Easy Out

Easy In

Whether you want to map the location of a power pole, the run of a pipeline, the area of a building or a farm; whether you are downtown or out in the country; whether you want to collect new features, or update and maintain the data from your Enterprise or Geographic Information System: For collecting, verifying and updating geographic data or an as-built of civil infrastructure models, Leica Geosystems offers the right solution – with seamless data exchange between field and office, for GIS or CAD workflow.
When the data really counts, Leica Geosystems offers the right combination of hardware and software: Field-proven sensors use up-to-date technologies including terrestrial and satellite data collection and navigation, distance measurement devices, scanners and airborne sensors. Our wide range of software solutions for field and office usage is compatible, scalable and flexible, with the accuracy and reliability that you need.
When it has to be right.

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