- when it has to be **right**

Leica Geosystems

# Leica Geosystems

# Release Notes

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| **Product** | Leica Infinity |
| **Date** | September 30th 2022 |
| **From** | Kevin Hanson |


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| 1 WELCOME TO INFINITY | |
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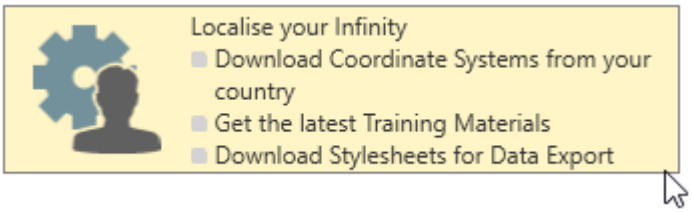
| *INFINITY V4.0.1* | We are pleased to announce a new Infinity version. Each Infinity release contains enhancements and quality improvements throughout the application. Please read the following chapters carefully to learn more about what is new. |
| *OVERVIEW:* | ▪ Coordinate Systems: Leica iCON GRD geoid format file support<br>▪ Import: Leica Zeno jobs using CSCS model<br>▪ Export: DXF, DWG files with configurable precision<br>▪ Services: user defined URL for Bricsys 24/7<br>▪ Improvements and Bug fixes |
| *GETTING STARTED – HELP & SUPPORT* | Getting Started, users have access to information and useful data including Coordinate Systems, Stylesheets, Tutorials and sample data all available from the Localisation Tool.<br>From the **Help** menu, click on the **Localise your Infinity** button to access this data and the tutorials to help you get started with Infinity.<br>  |
| *ORDERING INFINITY* | Infinity can be ordered as either as perpetual license or based on a subscription plan. Contact your local Leica representative to discuss what options are best for meeting your workflow needs. |
| *YOUTUBE VIDEOS* | Check the Leica Infinity YouTube page for what's new and how to videos.<br><br>https://www.youtube.com/playlist?list=PL0td7rOVk_IV_al3ziSKuAYA1VVu6W0rM |

## 2 INSTALLATION DETAILS

*INSTALLATION INFORMATION*

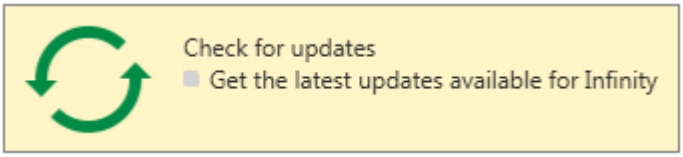
| Leica Infinity v4.0.1 | Build | Maintenance end date: |
|---|---|---|
| | 44036 | April 20th 2022 |
| *Infinity is available as a Windows 64bit only application* | | |

With an active CCP users will be able to update to this new version. Confirm that the maintenance end data is on or after the date listed above before installation.

New users can download the latest version from the Leica Geosystems myWorld support website.

*CHECK FOR UPDATES*

From Help & About choose **Check for updates**. When a new version is available you will be notified that the update can be downloaded from myWorld




*OPERATING SYSTEM REQUIREMENTS*

The following Microsoft® Windows™ operating system editions are supported:

- Windows 8
- Windows 10
- Windows 11

Note: you must have administrative privileges on your computer to successfully install Leica Infinity.

*MINIMUM HARDWARE*

- Display: 1024 * 768
- Input: Keyboard and mouse with wheel
- Processor: Multi-Core 2.4 GHz
- RAM: 8 GB
- Disk storage: 100 GB
- Graphics: DirectX9 compatible

*RECOMMENDED HARDWARE*

- Dual Display: 1920 * 1280
- Input: Keyboard and mouse with wheel
- Processor: Multi-Core 3.5GHz or more
- RAM: 32 GB or more
- Disk storage: SSD 1 TB or more
- Graphics: DirectX11 compatible 4 GB memory or more, CUDA capable

*RECOMMENDED HARDWARE FOR IMAGE PROCESSING*

- Dual Display: 1920 * 1280
- Input: Keyboard and mouse with wheel
- Processor: Multi-Core 3.5GHz or more
- RAM: 64 GB or greater XMP enabled
- Disk storage: SSD 1TB or more
- Graphics: DirectX11 compatible 8 GB memory or more, CUDA capable

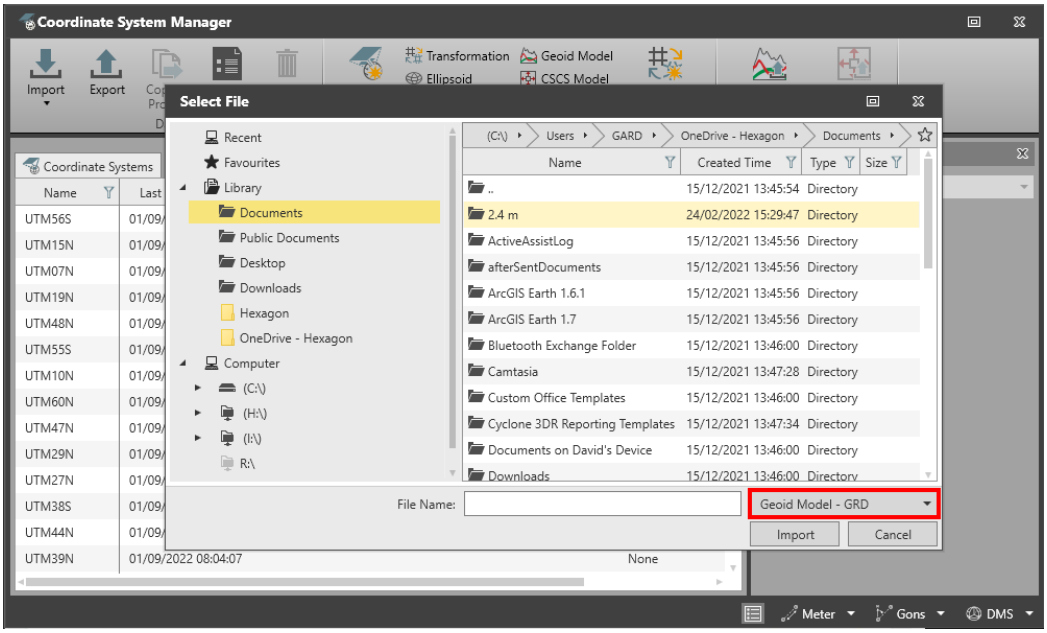
## 3 COORDINATE SYSTEMS: GRD GEOID FILE SUPPORT

*GRD GEOID FORMAT*


Support for geoid files typically used on Leica iCON software.

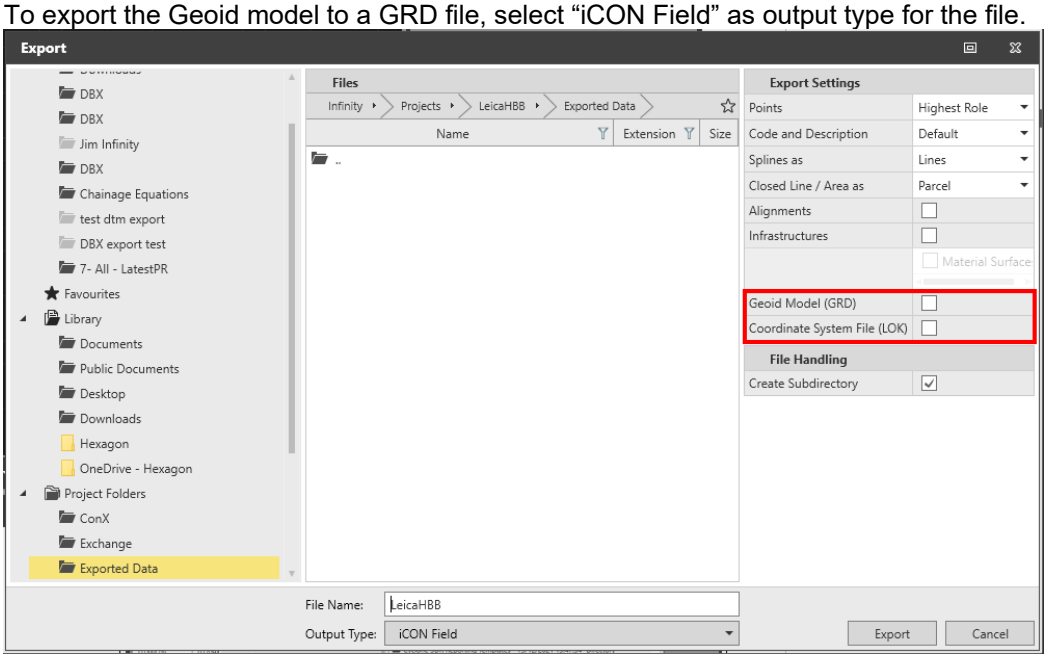
Leica Infinity v4.0.1 allows the user to import GRD files and manage the information contained within these file types in the same way as existing supported GEM geoid files, meaning that orthometric heights will be available for the project coordinate system and that the geoid model can be exported in the form of a Geoid Field file to be used on the iCON software.

To import the GRD file, select GRD file type in the import dialog.




To use the functionality “Create Geoid File” with a GRD file, select the source file and the “Norway” format in the Creation tool.

To export the Geoid model to a GRD file, select “iCON Field” as output type for the file.

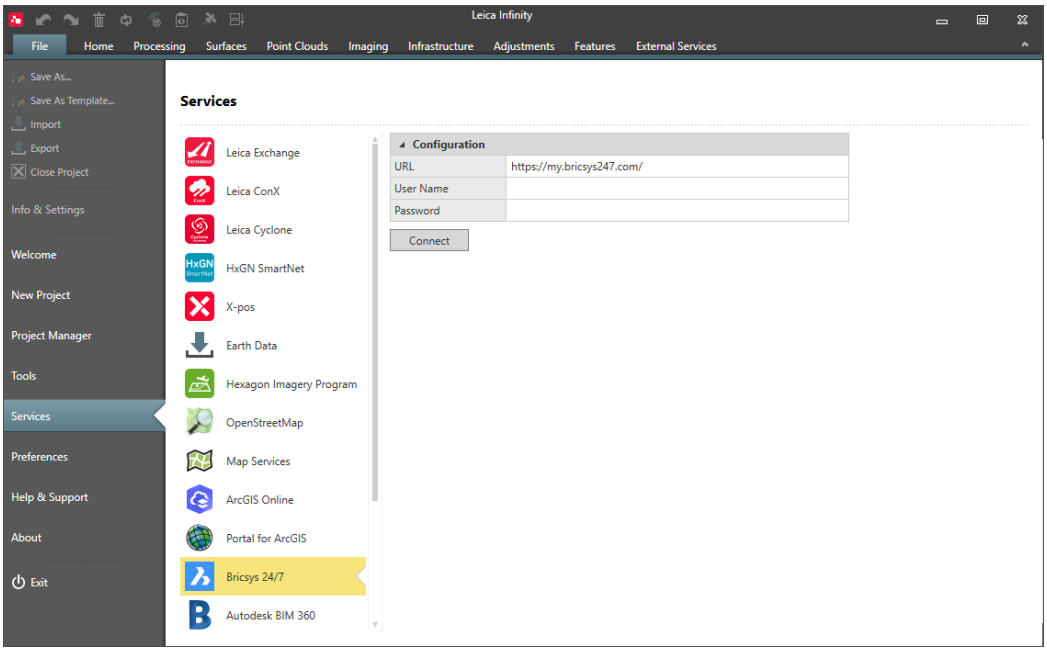



For exporting from the Coordinate System Manager, select to export as Coordinate System – LOK in the export dialog. Note that the GRD file should be linked to the LOK file.

## 4 SERVICES: CONNECTION TO USER DEFINED BRICSYS 24/7 SERVER

*BRICSYS 24/7*

Support for a user defined URL pointing Leica Infinity v4.0.1 to a locally hosted Bricsys server that lets the user upload and download required data direct from an Infinity project.




In case no user defined URL is entered, Leica Infinity v4.0.1 will use the default Bricsys server URL.

This new feature will allow the user to define a different server for their data interchange, such as a Bricsys hosted regional server.

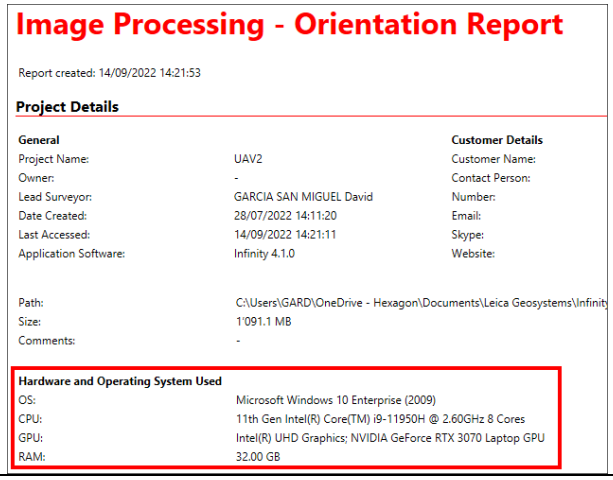
## 5 GENERAL APPLICATION IMPROVEMENTS AND FIXES

*REPORT COMPARISON MAP*

For Comparison Map report, the percentage of points that is included in each defined distance range in a comparison map is now displayed. This will help the user to have a better overview of how the point differences are overall distributed.

*REPORTS IMAGING*

For all the imaging related reports, Leica Infinity 4.0.1 will include a new block named “Hardware and Operating System Used” within the Project Details section where several additional details will be listed.



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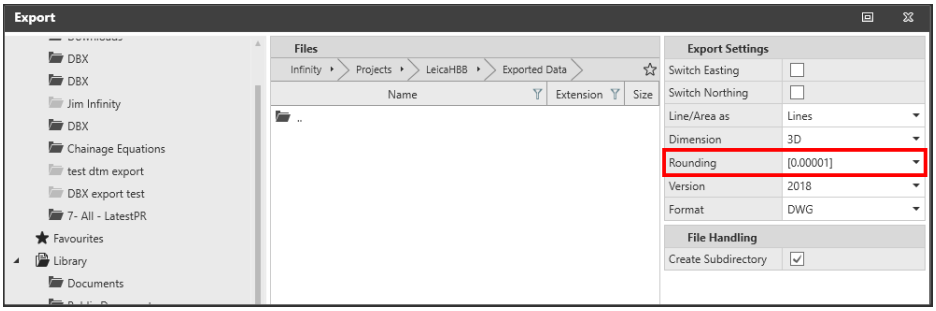
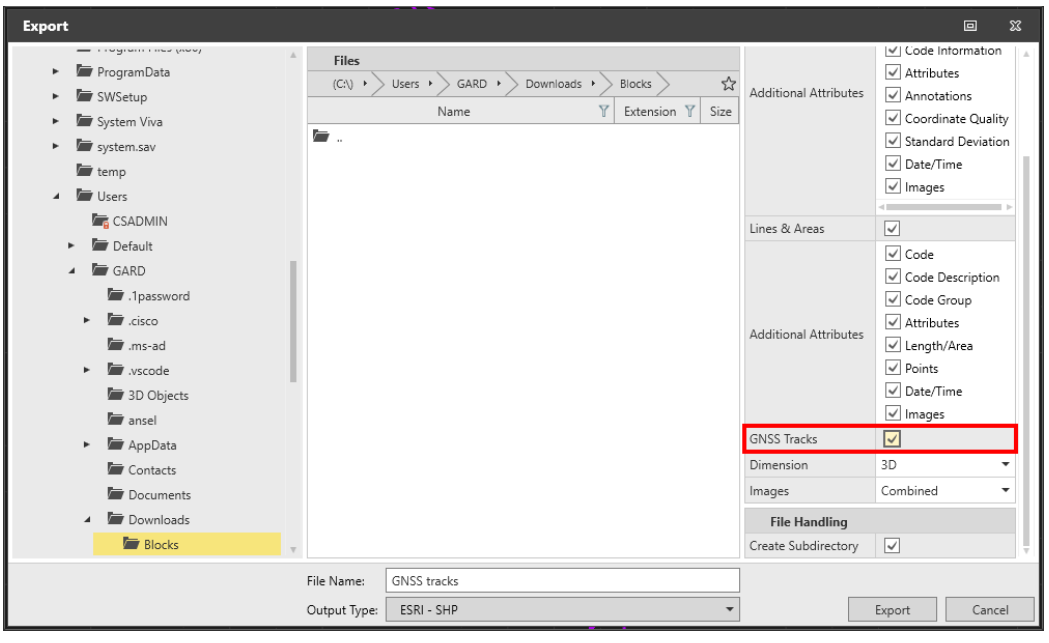
| | This extra information will allow the users to archive their Imaging results with additional valuable details. |
| *Zoom Fitting To Visible Features* | When using the Zoom to All functionality in the View, either from the context menu or by using the middle mouse button, Leica Infinity v4.0.1 will perform a zoom limited to the extension defined by the currently Visible Files/Features.<br><br>This improvement in the Zoom to All will allow the user to focus on their area of interest more effectively. |
| *Zeno Project With Cscs File Import* | When importing a Zeno project to Leica Infinity v4.0.1 that contains a CSCS model linked to the Coordinate System, the CSCS file will be automatically imported and ready to be used within the Infinity project.<br><br>This automated copy will allow the users to fully work with the imported Coordinate System without the need for any manual intermediate step to copy/import the CSCS file. |
| *Export To DXF/DWG With Defined Precision* | When exporting an Infinity project as DXF/DWG output type, Leica Infinity v4.0.1 will allow the user to define the number of decimals for the exported geometries.<br><br>  <br><br>The new feature will allow the users to export their Infinity projects to CAD programs with the same precision as the ASCII export file, so both exported geometries will match. |
| *GNSS Tracks Export To SHP* | When exporting the project as ESRI - SHP, Leica Infinity v4.0.1 will allow the user to export the GNSS tracks as such output format. To do this, select the option within the Export dialog.<br><br>  |

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| | This new option will simplify the dataflow to 3rd party software where shapefiles are required. |
| *GNSS Reference Data Download – NGS & UNAVCO* | Within the GNSS Download Manager the user will now also have access to high rate GNSS data for the NGS and UNAVCO reference stations. The download happens by selecting the station with the indicated data rate.<br><br>This will provide additional information to the users prior to their downloads. |
| *GNSS Reference Data Download – RGP* | Leica Infinity v4.0.1 will provide an extended updated list of RGP Reference Stations (France) to download GNSS reference data.<br><br>This will allow the user to access and download the corrections for their GNSS measurements. |
| *Stake Points Report* | Fix for the Stake Points Report, where points coming from Stake DTM field application were not displaying Cut/Fill values. |
| *Cut Fill Map Report* | Fix for the Cut Fill Map report areas in the results. On some occasions, the sum of the Cut Area 2D and the Fill Area 2D would not match the total Area 2D of the whole Surface. |
| *GNNS Processing Report* | Fix for the Summary/Detail GNSS Processing report where receiver name was missing. This was causing the report not to be generated. |
| *GNNS Processing* | Fix for a problem when using Galileo constellation, where sometimes two different Single Point Positioning solutions were calculated for the same observation. The issue has been fixed to always use the same navigation message, so the same Single Point Positioning solution is calculated. |
| *GNSS Data Display* | Fix in the display of metadata for Instantaneous and Autopoints where the Position Count would be wrongly displayed as 0. Leica Infinity v4.0.1 will display the Point Count value as "-" for these points. |
| *GNSS PreGeo Export* | Fix for the PreGeo format export, where Name and Surname of the Infinity user would be swapped on the output file header. |
| *AVG Contributors* | Fix for the AVG points where on some occasions, editing the contribution and sourcing of the contributing points would cause Infinity to crash.<br><br>This problem has been solved in Leica Infinity v4.0.1 |
| *File Management* | General fix for Project and Data Management, where browsing for data locations in the different Infinity dialogs could lead to a crash due to the existence of virtual folders.<br><br>This problem has been solved in Leica Infinity v4.0.1 |

## 6 What is New in v4

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| *Overview* | ▪ Point Cloud registration: import and register data from BLK360 and RTC360 laser scanners.<br>▪ AP20 AutoPole data support and management<br>▪ Point Clouds from Images: Enhanced Point Cloud Filter Strategies.<br>▪ Measure to Line data from Field application import and management.<br>▪ Coordinate Systems: support for Local Grid to Local Grid transformation.<br>▪ General GNSS enhancements.<br>▪ Services: connection to Cyclone Enterprise, ArcGIS Enterprise and Earth Data.<br>▪ Bug fixes and quality improvements |

## 7 Point Clouds: New Point Cloud Registration Option

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| *Register Tool*<br>  | Bring BLK360 and RTC360 laser scanner data to your surveying and geodetic workflows. A new option can be purchased with Leica Infinity that supports the importing and register of scan setups.<br><br>Use the *Register Tool* to easily integrate scanner data with data from Total Stations, GNSS devices or other instruments, and use imaging workflows to combine point clouds from scanners with your project work.<br><br>The *Register Tool* provides an easy-to-use registration workflow with three steps to easily organize, align and add targets with scan setups to produce a unified point cloud. |
| *Importing Scanner Data* | With the new Point Clouds Registration option, import scan data from the BLK360 and RTC360 to your project work. Data import options support the scan registration workflow including extracting black & white targets and performing AutoCloud which automatically searches to align all scan setups.<br><br>Note that with the Cyclone Field360 application, the pre-registering of scan setups during field collection, will be imported to Leica Infinity and will provide the most efficient workflow for completing scan setup registration. |

## 8 Total Stations: AP20 AutoPole

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| *AP20 Support* | Leica Infinity 4.0 supports the Leica AP20 AutoPole, a productivity-boosting smart system for Leica robotic total stations.<br>Import and easily identify all your tilt-compensated measurements that were used for Survey and Stakeout applications. Know which measurements used the *PoleHeight* functionality from the field or if the height of the pole was entered manually. In the office, Leica Infinity supports the reprocessing of AutoPole measurements. |

## 9 Imaging Option: Enhanced Point Cloud Filter Strategies

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| *Point Clouds from Images* | New dense point cloud filter options allow the user to optimise the quality output of the point clouds generated from images.<br><br>For details about how to use the filter settings, we refer to the *Help and Imaging Dense Point Cloud* settings. |

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|  | Remember that the image acquisition and image overlap are important to consider. It can improve or impact the quality of data output tremendously. |

| **10 GENERAL APPLICATION IMPROVEMENTS AND FIXES** | |
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| IMPORT CAPTIVATE MEASURE TO LINE | Easily view Captivate and SmartWorx Measure to data in your Leica Infinity projects. The *Navigator and Inspector windows also* group the Measure to Reference data. This lets users quickly select data to view properties or to generate reports for complete field measurement transparency. |
| COORDINATE SYSTEMS | Easily transform local grid coordinate data from system a to system b. Do this by choosing the *Transform Local Grid to Local Grid* tool from the Home tab. This allows you to compute a transformation between two sets of local coordinates. Use this as a method to move total station data measured in arbitrary local coordinates to grid coordinates.<br><br>Czech negative projections added. |
| SERVICES | Customers who work with the Cyclone Enterprise services, can define the server configuration settings in the backstage settings. This lets the users push point cloud data from Leica Infinity to Cyclone Enterprise to be used with Cloudworx products.<br><br>Connect with ESRI ArcGIS Enterprise solutions for a complete feature mapping solution. Collect, combine, and process all features with attribute data and publish as ArcGIS Web Map.<br><br>A new data service is available. The service is used for accessing precise ephemeris for GNSS post-processing and downloading height data used with *Terrain Mode* to drape base maps in the graphic view.<br><br>Improved the viewing of attributes when using the Get Features for downloading data. |
| GNSS DATA | Support of GNSS data RINEX v3.05.<br><br>Additional GNSS raw data support for Novatel *.JOB-files and ublox *.UBX-files.<br><br>When importing GNSS data, users can choose to import the track as moving data. This helps in cases where users have collected data while moving but not configured the receiver to kinematic or moving mode.<br><br>When importing data from Captivate, the properties of GNSS points measured with PPP will show the reference frame and epoch information. This information is also shown in GNSS point reports.<br><br>For US customers, export GNSS observations to the NGS GVX format. This provides the users' ability to bring data to OPUS or related NGS online services to complete their GNSS related project work.<br><br>Improved the Merge Intervals functionality when import many RINEX files at the same time.<br><br>Added Quality and Position Count columns in the Inspector GNSS Observations view. |