Trimble Positions
Desktop add-in
Introduction

These release notes provide important information about the Trimble Positions™ Desktop add-in version 10.7.1.1. Please read these release notes carefully.

- Introduction
- New in this release
- Issues addressed
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Welcome to version 10.7.1.1 of the Trimble Positions™ Desktop add-in. The Trimble Positions software suite provides deeper Esri integration for users of Trimble TerraFlex™ software and Trimble TerraSync™ software, and adds support for Trimble high-accuracy GNSS receivers using Esri ArcPad technology.

An add-in for the Esri ArcGIS Desktop 10.1 - 10.7 application, the Trimble Positions™ Desktop add-in is used to set up the required projects, devices, and correction settings, and for the day-to-day management of data collected through the Trimble TerraFlex or TerraSync software, or the Trimble Positions ArcPad extension.

For detailed information on installing, configuring, and using the Trimble Positions™ Desktop add-in, see the Trimble Positions Desktop add-in Administrator’s Guide and the Trimble Positions Desktop add-in User Guide.
New in this release

This section describes what's new in the Trimble Positions™ Desktop add-in version 10.7.1.1.

The following table shows which issues affect which workflows:

<table>
<thead>
<tr>
<th>Software...</th>
<th>...affected by issue numbers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TerraSync workflows</td>
<td>1, 3, 4</td>
</tr>
<tr>
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<td>1, 2, 3, 4, 5</td>
</tr>
<tr>
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</tbody>
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1. **Support for ArcGIS Desktop 10.7 and 10.7.1.** The installer now properly supports ArcGIS Desktop 10.7 and 10.7.1.

2. **Support for TerraFlex with Offline Data Transfer and Postprocessing workflows.** The add-in now supports an offline workflow for TerraFlex whereby projects can be created through the add-in and data can be checked-out for manual file transfer to TerraFlex. Returning data can be checked in and postprocessed with QA/QC for supported receiver configurations. Local field configurations can also be included in a project.

3. **Easier configuration for common metadata and auto-fill fields.** Improvements have been made to the Layer Settings page of the project wizard to make metadata field configuration easier. You now have the option to ‘add all (common)’ fields in a single click.

4. **Accuracy reporting setting now visible everywhere accuracies are reported.** In the dockable window, feature and position accuracies have always been reported in the configured accuracy reporting setting (“68% RMS” or “95% 2DRMS”). This is now labeled in the table column headers and is also made available as transferrable metadata.

5. **Improved real-time correction datum configuration.** Previously, the field configuration wizard always used an Esri coordinate system selection tool for setting the coordinate system of the real-time correction source. This made sense for Esri field workflows but did not make sense for Trimble field workflows that utilize the Trimble Coordinate System Database (CSD). Field configurations created as part of the project wizard for TerraFlex Offline and TerraFlex on Connect workflows will now use a Trimble coordinate system selection user experience.
Issues addressed

This section describes issues that have been addressed in the Trimble Positions™ Desktop add-in version 10.7.1.1.

The following table shows which issues affect which workflows:

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1. **Feature and position accuracy outlines did not always display properly.** Accuracy outlines for line and polygon features did not display properly. This has been resolved. In addition, the accuracy outlines for point features (and positions) has been improved to account for the map projection.

2. **Error when trying to publish a TerraFlex project when the name ends with a space or a period.** The add-in would be unable to publish a project if the project name ended with a space or a period. This has been resolved to trim trailing spaces and to validate that the name does not end in a period prior to saving.

3. **Unhelpful error messages when loading an incorrect user_list.csv.** Error messaging has been improved in this area.

4. **Errors when trying to access NTRIP source table from add-in.** When creating a field configuration, the wizard will try to access the NTRIP sourcetable to list the mount points. This would often fail (unable to connect) if the computer you were using was NOT behind a firewall due to non-standard HTTP headers in the NTRIP messages. This has been resolved to always retrieve the NTRIP sourcetable.

5. **Loading new cbs_list data could cause problems for base stations that have multiple URL templates.** For base stations that have multiple navigation URL templates, the update process would add new URL entries and not clear the old ones. This has been resolved.

6. **Error message displayed when downloading from particular base stations (Coordinate does not have a Z value).** This error message was a result of the attempted calculation of base station distance from session centroid and has been resolved.
7. **Unhelpful error message when workspace can’t be opened.** This has been improved with better messaging.

8. **Failure to import SSF file with CLOCK_DATA records.** In certain SSF files, the presence of CLOCK_DATA records would prevent it from being used in Trimble Positions. This has been resolved.

9. **Installer would include some records from a dummy user_list.xml file.** The installer would previously include several base station entries in a user_list.xml file. These sample entries have been removed and only a template is provided to avoid custom base station entries in the database as a starting point.

## New in previous releases

This section describes what was new in earlier versions of the Trimble Positions™ Desktop add-in.

### Version 10.6.1.1

- **Support for ArcGIS Desktop 10.5.1, 10.6, and 10.6.1.** The installer now properly supports ArcGIS Desktop 10.5.1, 10.6 and 10.6.1.

- **Additional metadata is available for TerraSync and ArcPad workflows.** The complete list of metadata options is now: horizontal accuracy (worst), vertical accuracy (worst), feature height (point), feature height – first vertex (line/polygon), feature height – last vertex (line/polygon), X coordinate in current map coordinate system (point), Y coordinate in current map coordinate system (point), project name, session name, receiver type, PDOP, HDOP, created timestamp (local), correction status (most common in solution), and device name.

- **Handling for non-GNSS edits in an SSF file (TerraSync).** The check-in functionality for SSFs has been improved to handle edits to features outside of a GNSS session. Features edited prior to the start of a session will be included in the first session. You will be prompted to import features edited after the end of a session, or from an SSF with no session information. This will include attribute-only feature edits.

- **Manage default data transfer folders for the bundled Data Transfer utility in the TerraSync workflow.** New functionality is available in the Trimble Positions Desktop Configuration utility that allows you to manage the default folders used by the Data Transfer utility.
• **Support for photo URL stored to a string field.** The name of a string field can now be specified for the storage of a single photo URL for TerraFlex forms (for example, to allow for use with Esri ArcGIS Desktop Basic).

• **Select All checkbox added to the Layers page of the project wizard.** The long sought-after **Select all** checkbox has been added to the Layers page of the project creation wizard.

**Version 10.6.0.1**

• Support for ArcGIS Desktop 10.5.1, 10.6, and 10.6.1. The installer now properly supports ArcGIS Desktop 10.5.1, 10.6 and 10.6.1.

• Additional metadata is available for TerraSync and ArcPad workflows. The complete list of metadata options is now: horizontal accuracy (worst), vertical accuracy (worst), feature height (point), feature height – first vertex (line/polygon), feature height – last vertex (line/polygon), X coordinate in current map coordinate system (point), Y coordinate in current map coordinate system (point), project name, session name, receiver type, PDOP, HDOP, created timestamp (local), correction status (most common in solution), and device name.

• Handling for non-GNSS edits in an SSF file (TerraSync). The check-in functionality for SSFs has been improved to handle edits to features outside of a GNSS session. Features edited prior to the start of a session will be included in the first session. You will be prompted to import features edited after the end of a session, or from an SSF with no session information. This will include attribute-only feature edits.

• Manage default data transfer folders for the bundled Data Transfer utility in the TerraSync workflow. New functionality is available in the Trimble Positions Desktop Configuration utility that allows you to manage the default folders used by the Data Transfer utility.

• Support for photo URL stored to a string field. The name of a string field can now be specified for the storage of a single photo URL for TerraFlex forms (for example, to allow for use with Esri ArcGIS Desktop Basic).

• **Select All checkbox added to the Layers page of the project wizard.** The long sought-after **Select all** checkbox has been added to the Layers page of the project creation wizard.

**Version 10.5.0.2**

• Create waypoint files: You can generate waypoint files for TerraSync from features in your GIS.
Create SSF background files: You can generate SSF background files for TerraSync from layers in your GIS.

Support for multiple images per feature: You can set up multiple image fields per feature in their TerraSync DDF, and all captured images will be stored using Attachments in the GIS.

A new version of Trimble Positions TerraSync Tools (previously Trimble Positions Pathfinder Office Tools) is also available. The TerraSync Configuration Manager is now included and .DDF files will now open in the Data Dictionary Editor correctly.

**Version 10.5.0.1**

- Performance improvements when downloading large numbers of forms collected with the Trimble TerraFlex software.
- Support for collecting and editing features in geometric networks. Trimble Positions Desktop add-in can now check in newly collected features (for example pipes or valves) into a geometric network. It also enables updating features which participate in a geometric network without breaking network connectivity.
- Support for Esri ArcGIS Desktop 10.5.
- Feature type library. The feature type library will speed up project creation for users who create multiple projects from the same feature classes in their GIS. Users can store their metadata fields, accuracy requirements and TerraSync data dictionary settings in the library, then automatically load them during new project creation.
- Support for handhelds and GNSS receivers with centimeter accuracy. Trimble Positions Desktop add-in can now postprocess data collected in the Trimble TerraSync software, the Trimble Positions ArcPad extension and Positions Mobile extension with centimeter configurations of the Trimble Geo7X handheld and Trimble R2 GNSS receiver.
- Additional per-position GNSS metadata available. An extended set of per-position GNSS metadata is now available, including horizontal and vertical accuracies, position solution information and DOP values. Access to an expanded set of metadata. Additional metadata options for the TerraSync software and Esri ArcPad workflows are now available.

**Version 10.4.0.1**

- Enhanced support for the Trimble TerraSync software. The Data Dictionary Editor and Data Transfer utilities from the Trimble GPS Pathfinder® Office software can be installed with the Trimble Positions™ Desktop add-in. This enables the full TerraSync software workflow with Trimble Positions™ Desktop add-in without needing the GPS.
Pathfinder Office software installed.

- Enables the creation of a TerraSync project from DDF or SSF. TerraSync software users are able to create a project within the Trimble Positions™ Desktop add-in from an existing DDF or SSF file.
- Improved postprocessing options. Trimble Positions™ Desktop add-in users have additional controls when postprocessing data which allows them to re-correct positions that were corrected in real-time, choose either the best postprocessing result or the last postprocessing result, and to restore sessions and positions to their original status.
- Increased device support. The Trimble Positions™ Desktop add-in now supports the Trimble R2 GNSS receiver and Trimble Nomad® 1050 handheld. Additionally, support for Trimble FieldPoint RTX correction service and 5 minute RTX convergence has been added for the Trimble Geo 7X handheld and R2 GNSS receiver.
- Enhanced TerraFlex support. The Trimble Positions™ Desktop add-in includes the latest enhancements to the Trimble TerraFlex workflow that were included in version 3.5 of the TerraFlex plugin for Esri ArcMap, released in January 2016.
- Database management improvements. The Trimble Positions™ Desktop add-in can be configured to use a SQLLite database. This offers a more scalable option for users who were experiencing limits with JET databases. Additionally, the Trimble Positions™ Desktop add-in can be configured using DSN-less connection strings.
- Additional troubleshooting tools. These include the ability to copy projects to a new SQLLite database, to see additional information about a session (satellite count, average SNR), and a new tool which provides better control over downloading sessions from a geodatabase for ArcGIS for Windows Mobile workflows.
- Support for ArcGIS Desktop 10.3.1 and 10.4.

Installation and configuration

- At version 10.5.0.1, the schema for the Trimble Positions database changed. To upgrade your schema, run the Trimble Positions Desktop Configuration tool and click Test current configuration. All existing data and settings will be preserved. This must be done prior to running the Trimble Positions Desktop add-in and cannot be undone without support from Trimble.

  It is highly recommended to make a backup of your existing database should you need to revert back to an earlier version of the Trimble Positions Desktop add-in.
• This version of the Trimble Positions Desktop add-in supports Esri ArcGIS Desktop versions 10.1 - 10.6.1. You must install the Esri software before installing the Trimble software.

• If you have installed an earlier version of the Trimble Positions Desktop add-in on your system, uninstall it completely before installing the new version.

• The settings folders where the configuration files and Jet databases are stored have not changed in this release. They continue to use the 10.1 name in the folder tree.

Known issues

This section describes known issues with the Trimble Positions™ Desktop add-in version 10.7.1.1.

Features extended after SSF is closed and re-opened (TerraSync)

• TerraSync supports a workflow of starting feature collection, closing the SSF file, reopening the SSF file, and continuing collection of the same feature. These SSF files are not currently supported in the Trimble Positions Desktop add-in. This will be re-evaluated for a future release.

Features extended after SSF is closed and re-opened (TerraSync)

• The TerraSync software supports a workflow of starting feature collection, closing the SSF file, reopening the SSF file, and continuing collection of the same feature. These SSF files are not currently supported in Trimble Positions Desktop add-in. This will be re-evaluated for a future release.

NTRIP source table retrieval

• In some network configurations, the Trimble Positions™ Desktop add-in may fail to retrieve the NTRIP source table in the field configuration wizard. The first step in trying to resolve this is to add a section to the ArcMap.exe.config file as described here: http://positionsblog.trimble.com/?p=229

If that fails to resolve the issue, enter the NTRIP address (server + port) in a browser and copy the resulting text (starting with SOURCETABLE and ending with ENDSOURCETABLE) into a new text file. In the field configuration wizard, instead of a simple left-click on the “…” button next to the NTRIP Source: text box on the Internet Settings dialog, hold down the Control key and then click the button. This opens a file browse dialog; use this to select the text file saved earlier. You should then be able to select a mount point and continue with the configuration.
Installation and configuration

- If you uninstall the Trimble Positions Desktop add-in when the Esri ArcGIS Desktop software is running, the add-in successfully uninstalls, but some files that are used during operation may be left in the file system. Trimble recommends that you exit the Esri ArcGIS Desktop software before you uninstall the Trimble Positions Desktop add-in.

- If you disable and re-enable the Trimble Positions Desktop add-in, Trimble recommends exiting and restarting the Esri ArcGIS Desktop software.

- If the Trimble Positions Desktop add-in is not accessible on your computer after installation and activation/licensing, make sure the Trimble Positions Desktop add-in is allowed to be loaded:
  a. Start Esri ArcGIS Desktop, click Customize / Add-In Manager…, click the Options tab, and then select Require Add-Ins to be digitally signed by a trusted publisher. Click Close.
  b. Click Customize / Add-In Manager…, and then click the Add-Ins tab. The Trimble Positions Desktop add-in should now appear in the list. Click Close.
  c. Click Customize / Extensions… and select Trimble Positions Desktop to enable it for use. Click Close.

Floating License Manager

- Requirement for Microsoft Chart Controls for Microsoft .NET: The Trimble Positions License Manager requires both Microsoft .NET Framework 3.5 and Microsoft Chart Controls for Microsoft .NET Framework 3.5 to be available on the target computer.


- Occasionally, the Floating License Manager appears to not be available. This can be caused by the Trimble Positions License Service failing to start on the server due to lack of resources. If you encounter this problem often, do the following:
  1. Click Start, right-click Computer and then click Manage.
  2. In the Computer Management utility, select Services and Applications / Services.
  3. Locate the Trimble Positions License Service entry, right click and then select Properties.
  4. On the General tab, if Startup type is not already set to Automatic, select Automatic and then click Apply.
5. Select the **Recovery** tab, and make sure that **First failure**, **Second failure**, and **Subsequent failures** are set to Restart the Service. Click **Apply** and then click **OK**.

**Trimble Positions Desktop add-in database**

- Transient database connection problems may affect the Trimble Positions Desktop add-in. If you experience such a problem, close and re-open Esri ArcGIS Desktop. Avoid leaving Esri ArcGIS Desktop inactive for long periods of time.

**Differential correction**

- When setting up the Trimble Positions Desktop add-in for the first time, populating the Community Base Station list (CBS list) of base stations may take some time, during which the software appears to not be responding and the dialog may flicker.
- When using base stations that require a separate GLONASS navigation file to be downloaded, you must first make a copy of the base station and add the GLONASS navigation file as an additional navigation file address. If GLONASS navigation files are not available, the GLONASS ephemeris data from the receiver is used instead (if available).
- Trimble Positions Desktop add-in does not support multiple base station groups for sessions collected using Trimble H-Star™ receivers.
- If the differential correction process is cancelled during a lengthy base station data download, it is best to close and restart the application before reattempting differential correction.

**Map and layer projections**

- For proper spatial integration of feature layers and Trimble Positions GNSS positions, all editable feature layers in a specific coordinate system in a map should have the same datum transformation method defined.

**Real-time spatial reference**

- The Esri ArcGIS for Windows Mobile application ships with a reduced set of spatial references. Make sure that any spatial reference defined in a field configuration exists in Esri ArcGIS for Windows Mobile before deployment. See the relevant Esri documentation for further information.

**Checking-in ArcPad files from network drives**

- Trimble Positions Desktop add-in may fail to make a backup copy of an AXF file if the backup folder is located on a network drive. If this situation occurs, a record is added to the log file but the user is not notified.
Counter-clockwise polygon features

- Polygon features collected in a counter-clockwise direction will not properly import to an enterprise geodatabase. You must import directly into a file geodatabase and then import the file geodatabase into the enterprise geodatabase.

Technical assistance and documentation

If you have problems using the Trimble Positions™ Desktop add-in, the following documentation should be your first point of reference:

- The Trimble Positions Desktop Add-in Administrator’s Guide.
- The Trimble Positions Desktop Add-in User Guide.

If you still cannot find a solution to the problem, contact your Trimble reseller.

Legal Notices

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Release Notice

This is the August 2019 release (Revision A) of the Release Notes. It applies to version 10.7.1.1 of the Trimble Positions™ Desktop add-in.

For a complete list of all relevant legal notices regarding this product, refer to the Trimble Positions Desktop add-in End User License Agreement.