

RELEASE NOTES

Trimble Positions Mobile extension

These release notes provide important information about the Trimble® Positions™ Mobile extension version 10.2.0.1. Please read these release notes carefully.

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Introduction

Welcome to version 10.2.0.1 of the Trimble® Positions™ Mobile extension. The Trimble Positions software suite adds support for Trimble high-accuracy GNSS receivers using Esri ArcGIS for Windows Mobile technology.

The Trimble Positions Mobile extension is an extension for the Esri ArcGIS for Windows Mobile field data collection application version 10.2.0. The Trimble Positions Mobile extension is used to collect high-accuracy Trimble geometry.

For detailed information on installing, configuring, and using the Trimble Positions Mobile extension, see the *Trimble Positions Mobile Extension Administrator's Guide* and the *Trimble Positions Mobile Extension User Guide*.

New in this release

This section describes what's new in the Trimble Positions Mobile extension version 10.2.0.1.

- **Esri ArcGIS 10.2 support.** The Trimble Positions Mobile extension now supports Esri ArcGIS for Windows Mobile 10.2.0. The mobile cache synchronization geoprocessing (GP) tools can be used with either Esri ArcGIS for Desktop 10.1 or 10.2.

- **Trimble GeoExplorer® Geo 7 series and the Geo 7 rangefinder module support.**
 - The Geo 7 series' orientation sensors are used to rotate the Skyplot, and to show the current heading in the Navigation section, even when stationary.
 - The Geo 7 rangefinder module, together with the orientation sensors, can be used to collect position offsets and record attribute information for distance and angle measurements.
- **Real-time only workflow.** This release introduces the concept of 'workflow type' and you can select between *Real-Time Corrections + Postprocessing* (previously the only option) and *Real-Time Corrections Only*. In this new workflow type, sessions are not created, metadata is populated in the field, and some out-of-box functionality in the mobile application (copy feature, new feature at same location) is restored.
- **Metadata populated in the field.** Regardless of workflow type selected, metadata values for height above ellipsoid and worst horizontal estimated accuracy are transferred to the appropriate fields from within the mobile application. The values represent those available in real-time and are updated again after postprocessing (in the *Update Features* step).
- **Copy feature option.** This version re-introduces the *Another [Feature], Copy All Values* option that is available after saving a feature in the out-of-box Esri ArcGIS for Windows Mobile application. For postprocessed workflows, the geometry (location) and associated metadata values will not be copied.
- **Nested point feature collection.** In this version, you can pause streamed line collection to collect nested point features. This feature is available as a menu option in the *Form View* geometry page. You can select from any of the point layers in the current project.
- **Field-to-office session notes.** Mobile users can now enter descriptive text about the session and this text will be visible to the Positions Desktop add-in user. This functionality is available from the *GNSS Sessions* task and can be used for both the current session and previously saved sessions.
- **Session information display.** Clicking on a previously saved session in the *New Sessions in Cache* list (part of the *GNSS Sessions* task) opens a new *Session Info* page that displays start time, end time, GNSS data size (blob or attachment), notes, and device name.
- **Improved connection handling for Internet-based real-time correction sources.** The new version introduces a fixed number of retries to establish the connection to an NTRIP correction source. This applies when the connection is lost.
- **List of satellites used.** Clicking on the *Satellites:* text on the *GNSS Status* page will expand the area to show a list of satellites used in the solution. Satellites are listed by constellation.
- **Improved usability.** Screen messaging is changed slightly in certain areas to improve the usability of the software. This includes notification when a point/vertex or line offset is applied.
- **Improved diagnostics.** Additional information is now included in the log file to assist in troubleshooting.

Issues addressed

This section describes issues that have been addressed in the Trimble Positions Mobile extension version 10.2.0.1.

- **GNSS receivers: always apply SBAS corrections in field configurations where they have been defined.** The Trimble Positions Mobile extension now allows GNSS receivers to correctly apply and use SBAS real-time corrections as either a primary or secondary source of real-time corrections.
- **Recovered sessions use full-cache extent (may cause spatial index grid problems).** Instead of using the full extent of the cache, the software calculates the extent based on the GNSS positions in the session. This applies only to sessions in the *Sessions not Finished* list of the *GNSS Sessions* task.
- **Satellite count does not increment prior to fix.** Previously, the satellite count on the *GNSS Status* page would only increment when the receiver was in fix.
- **Switching between serial and Internet real-time correction sources is problematic.** Users may have experienced a failure when switching between serial and Internet real-time correction sources. This is now fixed.
- **Metadata (height, accuracy) were transferred in meters instead of map units.** Metadata values for height above ellipsoid and worst horizontal estimated accuracy are now stored in map units instead of meters.

New in previous releases

This section describes what was new in earlier versions of the Trimble Positions Mobile extension.

- **Localization.** The Trimble Positions Mobile extension is now available in the Japanese language, in addition to French, German, Spanish (South American), and Portuguese (Brazilian) languages.
- **Development Team Blog.** The Trimble Positions Software Suite Development Team Blog is now available at <http://positionsblog.trimble.com>. Be sure to visit and sign-up to this blog. It was started by the Trimble Positions product development team as a way to better communicate directly with dealers and customers. Please check back frequently for new content.
- **Simple and complex offset support.** The Trimble Positions Mobile extension now supports feature geometry data collection using simple and complex offsets. This includes support for simple left-/right- offsets alongside a path or perimeter and complex distance-bearing offsets for point features or polyline and polygon vertices.
- **Laser rangefinder support.** The Trimble Positions Mobile extension now supports the Trimble LaserAce™ 1000 laser rangefinder and the LTi 360B laser rangefinder, with built-in electronic compass and Bluetooth® wireless technology.
- **Simple line extension.** The Trimble Positions Mobile extension now allows a polyline feature from the GIS to be extended either from the start or end point.
- **About dialog.** The Trimble Positions Mobile extension now provides the user with information about the version of Trimble Positions Mobile extension installed on the device.
- **Localization.** The Trimble Positions Mobile extension is now available in French, German, Spanish (South American), and Portuguese (Brazilian) languages.
- **Educator license program.** The Trimble Positions Mobile extension is now available within the educator license program.
- **Supported GNSS receivers.** Trimble Positions Mobile extension version 3.1.1 supports Juno 5 series and Geo 5T handhelds.

Installation and configuration

- The Trimble Positions Mobile extension version 10.2.0.1 requires Esri ArcGIS for Windows Mobile 10.2.0. You must install the Esri software before installing the Trimble software.
- If you have installed an earlier version of the Trimble Positions Mobile extension on your device, uninstall it completely before installing the new version.
- This release includes a new version of the *GNSS Server* component: Trimble GNSSServer v2. This should be taken into account when performing manual installations through WMDC/ActiveSync. Because it installs to a different path (\Program Files\GNSSServer2) than the old version, it can in theory be used side-by-side with the old version if other Trimble applications require it.
- Previous versions of the Trimble Positions Mobile extension utilized Microsoft SQL Server CE for the on-device database (\My Documents\Positions\PositionsFieldDB.sdf). The installer included these components although they would have to be specifically included when doing a manual installation through WMDC/ActiveSync. However, the new version of the Trimble Positions Mobile extension uses SQLite instead of SQL CE and thus the SQL CE components are no longer necessary. All necessary SQLite runtime assemblies are included with the Trimble Positions Mobile extension assemblies and do not require separate installation. The name of the field database has also been changed to reflect the different database engine (\My Documents\Positions\PositionsFieldDB.db).

Known issues

This section describes known issues with the Trimble Positions Mobile extension version 10.2.0.1.

Missing arrows in Map view info bar

- Scrolling arrows are sometimes not correctly displayed in the Map view GNSS info bar. To display arrows:
 - on the task list, tap *Tasks / View Map / GPS / Show GPS Info* to disable the info bar
 - tap *Tasks / View Map / GPS / Show GPS Info* again to re-enable the info bar.

Laser rangefinder connection

- When using a GeoExplorer 6000 series handheld, if you connect to a supported laser rangefinder before connecting to the GNSS receiver, the connection is disconnected when the GNSS receiver is connected, and must be re-established. Trimble recommends connecting to the GNSS receiver before connecting to the laser rangefinder.

Real-time spatial reference

- The 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 ArcGIS for Windows Mobile before deployment.

Installation and configuration

- If you are installing Trimble Positions Mobile extension to a mobile device that has two or more drives, it is imperative that you install to the main drive.
- If you are manually installing Trimble Positions Mobile extension to a mobile device using CAB files or Windows Mobile® Device Center or Microsoft® ActiveSync® technology Add/Remove programs, make sure you install both the Trimble Positions Mobile extension and Trimble GNSSServer, as well as the SQL Server Compact 3.5 for Windows Mobile (available from <http://www.microsoft.com/en-us/download/details.aspx?id=12264>), if not previously installed.

Memory usage

- Applications running on supported Microsoft® Windows Mobile and Windows® Embedded Handheld platforms are provided a limited amount of the total run-time memory available on a device.
- The amount of free device memory is adversely affected by large coded value domains.
- As the Esri ArcGIS for Windows Mobile software and the Trimble Positions Mobile extension are both high consumers of memory during run-time, Trimble advises certain steps should be taken to avoid running out of memory:
 - Only include as much data (including background data and raster files) as necessary in your project definitions.
 - Reduce the spatial extent of your project to what is required.
 - Enable feature class attachments rather than BLOB fields to hold binary data, including photographs.
 - Limit GNSS sessions to a couple of hours in duration; manually stop an open session in the *GNSS Sessions* page in the *Select Task* page.
 - Use the WGS-84 coordinate system wherever possible.

Inconsistent behavior

- It has been observed that postprocessed accuracy (PPA) values are sometimes unexpectedly high on some devices. In these circumstances, Trimble recommends turning off the audible logging tones:
 - a. Exit ArcGIS for Windows Mobile.
 - b. Open the Trimble Positions Mobile extension configuration file *PositionsMobileExtension.dll.config*, located in \\program Files\\ArcGIS Mobile\\10.1.1\\ on your mobile device, for editing.
 - c. Locate the line
`<add key="MakeSounds" value="T" />`
and change it to
`<add key="MakeSounds" value="F" />`
 - d. Save the file and restart ArcGIS for Windows Mobile.

Serial cable connections to external GNSS receivers

- If you use a Juno® 5 series handheld with a USB to serial adapter to connect to a Pro 6 series or GPS Pathfinder® ProXRT receiver, the connection is not reliable and may be lost completely.

The following work-arounds are advised:

- Use a Bluetooth connection to connect the Juno 5 series handheld to the Pro 6 or ProXRT receiver.
- If a wired serial connection must be used, use version 10.1.1.3 of the Trimble Positions Mobile extension.

Technical assistance and documentation

If you have problems using the Trimble Positions Mobile extension, the following documentation should be your first point of reference:

- The Trimble Positions Mobile Extension Administrator's Guide.
- The Trimble Positions Mobile Extension 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 November 2013 release (Revision A) of the *Release Notes*. It applies to the Trimble Positions ArcPad extension version 10.2.0.1. For a complete list of all relevant legal notices regarding this product, refer to the Trimble Positions Mobile extension End User License Agreement.