



# RELEASE NOTES

## TRIMBLE<sup>®</sup> ACCESS<sup>™</sup> SOFTWARE

Version 2014.20  
Revision A  
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## **Legal Information**

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# Trimble Access Software Version 2014.20

These Release Notes contain information about the Trimble® Access™ software version 2014.20.

The Trimble Access software provides a collection of survey tools for use in the field, and web-based services for the office and in the field. These applications may be installed on the controller, the office computer, or on servers hosted by Trimble, depending on the parts you have purchased.

## Installing the software and licenses on the controller

### Operating system installation

With a new Trimble Tablet, the operating system is not installed. Turn on the Tablet to install the Windows® operating system and then apply Windows updates.

With all other new controllers, the operating system is already installed.

### Software and license installation

Before you use your controller, you must install the applications and licenses using the Trimble Access Installation Manager. If you have:

- not installed the Trimble Access Installation Manager before, go to [www.trimble.com/taim](http://www.trimble.com/taim) for installation information.
- previously installed the Trimble Access Installation Manager, you do not need to reinstall it because it updates itself automatically. Select *Start / All Programs / Trimble Access Installation Manager* to start the Installation Manager.

For further information on how to install or update your software and license file, refer to the Help file in the Trimble Access Installation Manager.

*For Trimble CU controllers, Trimble Access version 2013.00 and later can be installed only on the Trimble CU model 3 (S/N 950xxxxx). Trimble CU models 1 and 2 have insufficient memory to run later versions of Trimble Access.*

### Am I entitled to this version?

To install and run Trimble Access software version 2014.20, you must have a warranty agreement valid up to 1 October 2014.

When you upgrade to version 2014.20 using the Trimble Access Installation Manager, a new license file is downloaded to your device.

### Updating office software

When you upgrade to version 2014.20, you must also update your office software. These updates are required if you need to import your General Survey jobs into Trimble office software such as Trimble Business Center.

When you upgrade the controller using the Trimble Access Installation Manager, the office software on the computer that has the Trimble Access Installation Manager installed is also upgraded. To upgrade other computers that were not used to update the controller, do one of the following:

- Install the Trimble Access Installation Manager onto each computer and then run Office updates.
- Run the Trimble Update Office Software packages for the Trimble Access software from [www.trimble.com/support\\_trl.aspx?Nav=Collection-84862](http://www.trimble.com/support_trl.aspx?Nav=Collection-84862).
- Use the Trimble Data Transfer utility:
  - You must have version 1.51 or later installed. You can install the Data Transfer utility from [www.trimble.com/datatransfer.shtml](http://www.trimble.com/datatransfer.shtml).
  - If you have version 1.51, you do not need to update to a later version of the Data Transfer utility; you can run one of the Trimble Update Office Software packages from [www.trimble.com/support\\_trl.aspx?Nav=Collection-84862](http://www.trimble.com/support_trl.aspx?Nav=Collection-84862).
- If you only need to update the latest version of the Trimble Business Center software, you do not need to run the Trimble Access Installation Manager to update the office software. The required converters are now available on the controllers running the Trimble Access software and, if required, they are copied from the controller to the computer by the Trimble Business Center software.

## Trimble Solution Improvement Program

The Trimble Solution Improvement Program collects information about how you use Trimble programs and about some of the problems you may encounter. Trimble uses this information to improve the products and features you use most often, to help you to solve problems, and to better meet your needs. Participation in the program is strictly voluntary.

If you participate, a software program is installed on your computer. Every time that you connect your controller to this computer using ActiveSync® technology or the Windows Mobile® Device Center, the Trimble Access software generates a log file that is automatically sent to the Trimble server. The file includes data on what the Trimble equipment is being used for, what software functions are popular in specific geographical regions, and how often problems occur in Trimble products that Trimble can correct.

At any time, you can uninstall the Trimble Solution Improvement Program. If you no longer wish to participate in the Trimble Solution Improvement Program go to *Add or Remove programs* on your computer and remove the software.

## Documentation

Trimble Access Help is "context-sensitive." To access the Help, tap ? at the top of the screen.

A list of Help topics appears, with the relevant topic highlighted. To open the topic, tap its title.

Go to <http://apps.trimbleaccess.com/help> to download a PDF file of the Help. A separate PDF file is provided for each application.

# Trimble Access

## New hardware supported

### Trimble Active Track 360 target

The new Trimble Active Track 360 target is lighter, smaller, and more accurate than other Trimble targets, allowing your total station to track your target with greater ease and efficiency.

*If you use an Active Track 360 target with the:*

- *Trimble VX Spatial Station or Trimble S8 or S6 total station, you must upgrade the instrument to firmware version R12.5.44 or later.*
- *Trimble S3 total station, you must upgrade the instrument to firmware version M2.2.18 or later.*

*The instrument firmware is available on [www.trimble.com](http://www.trimble.com).*

For more information, refer to the [General Survey Help](#).

### Trimble NetR9 Geospatial receiver

The Trimble NetR9 Geospatial receiver supports a range of high accuracy positioning applications, including as an RTK and/or RTX rover receiver, mobile field base station, and postprocessed data collection. With advanced receiver technologies including HD-GNSS, Trimble 360, Trimble xFill, and support for the Trimble Centerpoint RTX service, the NetR9 Geospatial is a modern receiver with the flexibility to suit any geospatial workflow.

### Trimble GeoExplorer Geo7X with Trimble Access

The Trimble GeoExplorer® Geo7X with Trimble Access is part of the next-generation GeoExplorer family.

## General Survey

### New features

#### Enhancements to Trimble V10 imaging rover support

Trimble Access version 2014.20 provides the following enhancements when performing a survey using the Trimble V10 imaging rover:

- You can now use the V10 imaging rover with the following equipment:
  - Trimble TSC3 controller
  - Trimble GNSS receivers, such as a Trimble R4, R6, or R8, that connect to a TSC3 controller, Trimble Tablet, or supported non-Trimble Tablet running the Trimble Access software
  - Any prism supported by the Trimble Access software
- Support for the use of an extension adapter between the V10 and a receiver or prism.

- High Dynamic Range (HDR) image processing.

With HDR turned on, the V10 captures three images rather than one image, each with different exposure settings. During HDR processing the three images are combined to produce a composite image that has better tonal range to show more detail than any of the individual images.

*To provide HDR, the V10 imaging rover must have firmware version E1.0.xx or later.*

- You can now view photo station coverage areas in the map. Previously, you could view these only in the 3D map on the Trimble Tablet.

To support these changes, the icons showing the V10 connected to an R10 receiver or a prism no longer appear in the status bar. Instead, the V10 icon appears in the status bar whenever the V10 imaging rover is in use.

For more information, refer to the chapter "Survey – Imaging" in the [General Survey Help](#).

## Enhancements to Trimble CenterPoint RTX service support

Trimble Access version 2014.20 provides the following enhancements when doing a survey using the Trimble RTX service:

- **Combine RTK and RTX in the same job**

Trimble Access now supports RTK data and RTX data in the same job. This enables you to store and use both RTX survey data and RTK survey data in the same job in the reference frame of the RTK data. This is done by using an RTX-RTK offset. These offsets are computed from a precise RTK point and a precise RTX point in the same physical location, and that difference is applied to all measured RTX points to bring them into terms with the RTK data in the job. The precision estimates of the RTX points reduced into the RTK reference frame depends on the precision of the computed offset.

For more information, refer to the topic "RTX" in the [General Survey Help](#).

- **Trimble CenterPoint RTX service corrections via Internet**

As well as supporting Trimble CenterPoint RTX service corrections delivered by satellite, Trimble Access now supports corrections delivered by Internet.

To set up your RTX survey, select *RTX (Internet)* in the *Broadcast format* field for your survey style. Configure a connection to the Internet by setting up a GNSS contact to the Trimble CenterPoint RTX service. For more information, refer to the topic "Creating a GNSS Contact for an Internet Data Link" in the [General Survey Help](#). For more information about the Trimble CenterPoint RTX service, go to [www.trimble.com/positioning-services](http://www.trimble.com/positioning-services).

To view the RTX status during an RTX Internet survey, from the *Instrument* screen tap *RTX status*. To measure an RTX QuickStart point, tap *QStart* in the *RTX status* screen.

- **Countdown timer for RTX subscriptions purchased as blocks of hours**

Trimble Access provides a countdown of the hours and minutes of unused data for Trimble CenterPoint RTX service subscriptions that have been purchased as blocks of hours.

*These subscriptions operate within a validity window, which is the start date and end date between which the number of hours/minutes purchased must be used.*

## Reset RTK for Trimble R10 receiver

For Trimble R10 receivers, the new *Reset RTK* method enables you to reset RTK tracking only, rather than resetting all SV tracking. This method is especially useful when under canopy.

To reset RTK:

1. From the *Measure* menu, tap *RTK initialization*.
2. Set the *Method* field to *Reset RTK* and then tap *Reset*.

## Adding receive frequencies to the rover receiver

You can now add a receive frequency for the connected rover receiver. To do this, connect to the receiver radio. From the list of available frequencies, tap *Add Frq*. Enter the new frequency and tap *Enter*. To use the new frequency you need to select it from the list of available frequencies.

## Measuring Rapid points is faster

In previous versions of Trimble Access, measuring a Rapid point would give similar warning dialogs as when measuring a Topo point. This resulted in both point measurement types taking a similar amount of time and key presses. To speed up the Rapid point measurement, any necessary warnings are given in the status line, and point storage is prevented if out of tolerance conditions exist. This makes measuring rapid points much faster.

## Improved reporting of adverse conditions during GNSS point measurement

When measuring points during a GNSS survey, the Trimble Access software now shows the *Continue and store point* screen when a point that has adverse conditions is measured. This screen lists all adverse conditions that occurred during point measurement that result in any of the tolerances being exceeded and prevent the point being stored. From the *Continue and store point* screen, you can choose not to store, store, or re-measure the point.

## Improved reporting of time remaining when measuring points during a GNSS survey

When measuring points during a GNSS survey the counter in the *Measure point* screen now displays either the *Epochs remaining* or the *Time to go*, depending on which will take the longest time to complete. Counter resets or poor measurements may cause which of these fields is shown to change.

The required number of epochs as well as the required occupation time must be met before the point can be stored.

## Improved Reset counters dialog

When precisions go out of tolerance and the *Reset counters* dialog warns that the occupation timer will reset, the dialog now shows:

- the current poor precisions as well as the precisions of the last good position.
- the number of epochs measured out of the number of epochs required.

Tap *Yes* to store the last good position. Tap *No* to reset the timer and continue measuring the point.



## Position compromised warning

The *Position compromised* warning now appears in real-time surveys when the receiver is in static mode measuring a point and the new GNSS position update is different from the immediately previous GNSS position by more than the current 3-sigma precision estimates. This warning appears only when the difference in position is larger than the current precision tolerances, and if the GNSS receiver does not produce excess movement warnings of its own during the occupation. The position compromised warning can occur in severely marginal GNSS environments where there is a lot of multipath or signal attenuation.

## Auto abandon setting for topo points

You can now set the Trimble Access software to automatically abandon measuring a topo point during a postprocessed kinematic (PPK) survey if excess tilt is detected. To do this, select the *Auto abandon* check box in the *Rover options* screen of the survey style.

## Confirmation dialog when an Observed Control Point is automatically abandoned

The "Point abandoned" message now appears if an Observed Control Point has been automatically abandoned during a GNSS survey due to excess movement, excess tilt, or compromised position.

## More stakeout display options when staking out during a GNSS survey

When staking out during a GNSS survey, you can now stake out relative to the sun.

You can also now configure the display of deltas to give you "Go forward/back" and "Go left/right" distances when navigating to a point.

## Staking out a line by azimuth

When staking out a line, in addition to staking a keyed-in line or staking a line defined from two points, you can now select to stake a line defined by a start point and azimuth.

## Smooth Curve control code feature codes

There are two new control codes for features: Start smooth curve and End smooth curve. When using line features in conjunction with smooth curves, the General Survey software can now display the feature-coded linework so that smooth curves pass through the points in the Map.

Trimble Business Center version 2.99 (32-bit) or 3.30 (64-bit) or later supports the display of these new smooth curve control codes.

Smooth Curve codes are only available for new feature code libraries created using Trimble Access version 2014.20 or the Feature Definition Manager available with Trimble Business Center version 2.99 (32-bit) or 3.30 (64-bit) or later.

## Default settings for Job properties fields

A JobDetails.scprf profile file is now installed with the Trimble Access software. You can use this file to set default values for the *Reference*, *Description*, *Operator*, or *Notes* fields in the *Properties of Job* screen, or to set these fields as "required" so that values must be entered in these fields. For more information, refer to the topic "Properties of Job" in the [General Survey Help](#).

## Improved message when job has missing grid files

If a job uses grid files that cannot be found on the device, (for example, geoid, datum grid, etc.) Trimble Access now shows the name of the missing file(s) when you open the job.

## More information shown for GNSS files


When listing GNSS files in the *Job properties* screen or the *Review job / Postprocess* screen, the size and date the file was last modified is now shown as well as the name of the file.

## User interface improvements for battery status

The following improvements have been made to the user interface for showing battery status:


- The new *Battery status* screen shows the status of all batteries in all connected devices, including the controller.

To view the *Battery status* screen, do one of the following:

- From the *Instruments* menu, tap *Battery status*.
- Tap the new Stacked Battery icon  35% in the status bar.

To view more information about a connected battery, tap the appropriate battery icon in the *Battery status* screen.

For more information, refer to the topic "Battery status" in the [General Survey Help](#).

- The new Stacked Battery icon  35% appears in the status bar when multiple devices or one device with multiple batteries are connected to the controller. The percentage shown and the battery icon at the front of the "stack" indicate the power level of the connected battery that has the lowest power level.
- The battery level is now shown to the nearest 1%. This applies to the controller as well as other connected devices.

## User interface improvements for connected correction source

The term "data link" replaces the term "radio" when referring to the device used to connect to a real-time correction source. The term data link better reflects the range of devices and connection types used to obtain real-time observations. For example, the *Rover radio* and *Base radio* settings screens have been replaced by the *Rover data link* and *Base data link* screens.

The workflow for setting up the data link connection has also been modified. You now select the type of connection you want to use first, then specify the device to use to make this connection, which makes it easier to set up the data link.

The following types of data link can be configured:

Select	If you are using	For more information, see the help topic
Radio	An internal or external radio	"Configuring a Radio Data Link"
Dial-up	An external modem dial-in connection or a Trimble GSM/mobile Internet module with a dial-in survey	"Configuring a Dial-up Data Link"

Select	If you are using	For more information, see the help topic
Internet connection	An external modem Internet connection, or a Trimble GSM/mobile Internet module with an Internet survey	"Configuring an Internet Data Link"

### User interface for Joystick improved

Improvements have been made to the user interface for the Joystick. The inner arrows allow for more accurate positioning.

### Refreshed Trimble keyboard layout for the Trimble Tablet

Improvements have been made to the Trimble keyboard, which is installed with Trimble Access on a Trimble Tablet or supported non-Trimble Windows computer running the Trimble Access software. The new keyboard has a numeric keypad permanently accessible on the right hand side and the layout of the symbol keys is now more consistent with the alphanumeric key layout.

### Overwrite duplicate point during conventional survey

When measuring points in a conventional survey, if you re-measure a point of the same name and it is out of tolerance, you can now choose to overwrite all earlier observations in the *Duplicate observation - Out of tolerance* screen.

### Store and reorient after a Resection or Station setup plus

You can use the *Check backsight* function to check that the orientation of the total station has not "drifted" (due to uneven thermal expansion of the tripod, or other environmental causes). You can now store and reorient to the first measured backsight after a Resection or Station setup plus.

### Access the GeoXR camera from the Instrument menu

You can now access the GeoXR camera from the *Instrument* menu in General Survey.

### Trimble R10 receiver transmit power level

You can now modify the R10 receiver transmit power level using Trimble Access if the receiver is running firmware version 4.90 or later and the receiver has the 2W transmit power level option installed. To do this, from the main *General Survey* screen, tap *Instrument / GNSS functions / Data link*.

### Rover and base softkeys for external radio connections

The *>Rover* and *>Base* softkeys now appear when appropriate for external radios connected to receivers. Previously these softkeys have only appeared for receiver internal radios. Use these softkeys to configure connection settings for the rover receiver and, if appropriate, the base receiver.

### Updated radio names for Base radio mode

When you connect to the internal radio of a Trimble GNSS receiver or to a Trimble radio, the choices listed in the *Base radio mode* field in the *Radio configuration* screen have been updated. For

example, the *TT450S* mode is now the *TRIMTALK v1* mode. For more information, refer to the [Trimble Survey GNSS Firmware Version 4.90 Release Notes](#).

## M2M SIM card support

The APN for Trimble VRSNow/Telekom users in Germany has been updated to support M2M version 2.0 SIM cards.

## Coordinate system database updates

- New coordinate system zones have been added for Canada.
- The zone definitions for Turkey have been updated by assigning a new datum.
- The following geoid model references have been added:
  - NN2000 (Norway14)
  - Pl-geoid-2011 (Poland)
  - Canada CGG2013 (NAD83)

## Documentation updates

The Help files and PDF files available with this version of the software include the following updates and changes:

- *General Survey Help* restructured  
The "Instruments" chapter of the *General Survey Help* is now split into two new chapters: a "Conventional Survey Instruments" chapter and a "GNSS Survey Instruments" chapter. The new structure should make it simpler for users who are using either conventional or GNSS to find the information they need, and provide a clearer distinction between the instruments available for the type of survey being carried out. If you are performing an integrated survey, refer to the relevant topics in both chapters.
- Echo sounder customization information  
Information has been added to the help on customizing an ESD file and adding support for a different model of echo sounder than the echo sounders supported as standard by the Trimble Access software. To view this information, refer to the "Echo Sounders" topic in the "Survey Settings" chapter of the [General Survey Help](#). Trimble also has some ESD files for other devices available for download. To see if a definition already exists for your device, go to [www.trimble.com/access](http://www.trimble.com/access) and click *Downloads* and then click *Echo Sounder Protocol Description Files*.
- QC1, QC2, and QC3 documentation  
A description of the different types of quality control information that can be stored with each point measurement during a GNSS survey has been added to the "Measurement Method Options" topic in the "GNSS Survey – Setup" chapter.
- GPS Search  
The "GPS Search" topic in the "Conventional Survey – Instruments" chapter has been updated to make it clearer how to configure GPS Search before it is ready to use.

## Resolved issues

- **TSC3 controller images saved to current project folder:** An issue where, when running General Survey, images captured using the TSC3 controller's internal camera were not copied to the current project folder when the camera was accessed by pressing the Fn + 1 keys is now resolved. The TSC3 is now consistent with the way images are stored on other controllers, provided that My Pictures remains the default location for images.
- **Maximum number of files on TSC3:** An issue where the camera application on the TSC3 is limited to storing a maximum of 999 similarly-named files in a folder, and this limitation affected photos taken using General Survey, is now resolved.
- **Selecting points using the *Filter* softkey:** An issue where selecting points from a list and then using the *Filter* softkey did not work correctly is now resolved. Now if you tap *Esc* in the *Filter* screen, the *Filter* screen closes but the original collection of points remain selected. If you tap *Accept* in the *Filter* screen, the selection you made in the *Filter* screen is applied to the collection of points you had selected when you opened the *Filter* screen.
- **Timestamps for notes:** When modifying job records where a note is added automatically when the record is deleted or modified, the timestamp for the note is now in UTC if the job unit settings are set to UTC, otherwise the timestamp uses local time. In previous versions of Trimble Access, note timestamps always used local time regardless of the job unit settings.
- **DXF display in the map:** An issue where some arcs in DXF files were not drawn properly in the map is now resolved.
- **Duplicate points in the map:** An issue where duplicate points appeared on the map is now resolved. Now only the best point appears on the map. This issue was introduced in Trimble Access version 2014.00.
- **Stakeout deltas:** An issue where incorrect stakeout deltas were displayed when staking out a DXF line with a conventional instrument in a job with a projection but no datum is now resolved.
- **LaserLock:** Issues where LaserLock or the laser did not behave as expected when performing a Resection, Station setup plus, or when measuring rounds are now resolved.
- **DR mode not set correctly:** An issue where DR mode was not correctly set when starting Measure rounds and connected to the total station via radio is now resolved.
- **Unable to set DR mode:** In previous versions of Trimble Access it was possible to get into a state where the software was unable to set an instrument into DR mode. This issue is now resolved.
- **No target during averaged observation:** Issues where, after reporting "No target" during an averaged observation, the software did not behave as expected are now resolved.
- **Station scale factor:** An issue where it was possible to calculate and store an invalid station scale factor, which would then not import into Trimble Business Center, is now resolved.
- **Excess movement warning:** An issue where the software sometimes stopped reporting "Excess movement" in the status line is now resolved. This was an issue only for Trimble R10 receivers with GNSS firmware v4.90 or greater.
- **Incorrect receiver hardware version reported:** An issue where the *Receiver settings* screen showed the incorrect hardware version is now resolved.

- **Confirmation messages appearing when auto-abandon is set:** An issue where Trimble Access occasionally showed "Excess tilt" or "Excess movement" messages that required user confirmation when auto-abandon is set, instead of automatically abandoning points that exceed tilt and movement tolerances, is now resolved.
- **Auto-measure:** An issue where the as-staked code was not properly set when Auto-Measure is enabled is now resolved.
- **Store uninitialized solution message:** An issue where you were twice asked for confirmation to store an uninitialized solution is now resolved.
- **Compensated points:** An issue where "Excess movement" was incorrectly reported while measuring compensated points using receiver firmware 4.90 or 4.91 is now resolved.
- **RTX:** The following issues are now resolved when using the Trimble CenterPoint RTX service:
  - Tectonic plate selection is now faster when starting an RTX survey.
  - The status line would occasionally show blank values for RTK precisions or momentarily suggest that the system was waiting for satellites when in fact this was not the case.
- **OmniSTAR VBS subscription status:** An issue where the status "Expired" for the OmniSTAR VBS subscription was incorrectly shown is now resolved. The expiry date shown was correct.
- **Antenna height limit for CMRx:** An issue where the *Antenna Height* field in the *Start Base* screen enabled you to enter any height when using CMRx is now resolved. Because CMRx only supports antenna heights up to 4.0 m corrected to APC, the *Antenna Height* field is now limited to 4.0 m, which matches the settings in the survey style.
- **Internet configuration:** An issue where the Internet Setup wizard did not allow a network connection using an external CDMA Bluetooth modem to be created is now resolved.
- **Radio port configuration:** An issue where the port information displayed when trying to connect to a receiver was sometimes incorrect is now resolved.
- **Rover radio configuration:** An issue with the operation of the radio configuration screens, where confusing information was sometimes displayed when trying to connect to radios is now resolved.
- **Changing radio settings:** An issue where saving changes made to the radio configuration was not always possible in situations where a connection had been dropped and then regained is now resolved.
- **Configuring base radio settings:** The following issues are now resolved when configuring base radio settings:
  - You are now able to configure base radio settings when in the *Start base* screen.
  - Trimble Access now warns if the base is transmitting data when you attempt to configure base radio settings.
- **Starting a base survey:** The connection to the base receiver is no longer dropped if Trimble Access fails to start the base survey.
- **Network base antenna:** The correct base antenna name is now shown in the job. Previously, if an antenna was not recognized the antenna name was shown as "AdV Null Antenna".

- **Uploading base data to an NTRIP server from receiver:** An issue where uploading base data from the receiver to an NTRIP server did not work is now resolved. This issue was introduced in Trimble Access version 2014.10.
- **Base point transformation during cogo transformation:** An issue is now resolved where the software transformed the base point during cogo transformation with a job containing a base point, despite you selecting not to transform the base point.
- **Initialize softkey in RTK Initialization screen:** An issue where the *Init* (Initialization) softkey did not appear in the *RTK Initialization* screen when surveying using an RTK-Float solution is now resolved. This issue was introduced in Trimble Access version 2014.10.
- **GeoXR satellite tracking options:** An issue where satellite tracking options that are not supported by the GeoXR receiver appeared in the *Rover options* screen of the survey style is now resolved.
- **Pseudo-NMEA data output:** An issue where bogus ">0" characters appeared in pseudo-NMEA data output is now resolved.
- **Measure codes:** The following issues are now resolved for Measure codes:
  - *Measure codes* did not appear in the *Measure* menu unless a GNSS receiver was connected.
  - The default number of elements for template pickup for a group was larger than the number of elements in the group.  
*For the fix to take effect on an existing .fxl file on the controller, you must delete the corresponding .MCD file from the Trimble Data\System Files folder.*
- **Measuring calibration points:** The following issues are now resolved when measuring calibration points:
  - An issue where the calibration point name does not get populated automatically when measuring the calibration point from the Map.
  - An issue where after choosing the "Calibration point" method, then the point names for existing points created using other methods become null.
- **Points on a plane:** An issue where in a network of conventional observations, storing a point as a "Point on a plane" as a point that has been used as a backsight could cause the coordinates of the entire network to become null is now resolved.
- **Comms timeout:** Trimble Access now reports fewer "false alarm" comms timeout messages.
- **Equipment manager:** An issue where the *Login to Server* window occasionally appeared is now resolved.
- **3D map:** The following issues are now resolved for the 3D map:
  - An issue where the 3D map is slow to pan when the map has a background with a large file size.
  - An issue where some background files did not appear.
  - An issue where you were unable to change the direction of a line or arc by clicking on it.
  - An issue where the direction of lines was reversed.

- An issue where fixed objects on the map, such as the NE direction icon, did not update if you changed the coordinate system while the map was open.
- A display issue where 2D points in the map did not update to lie on the ground plane after the ground plane elevation was changed.
- **Tablet keyboard:** An issue where the Tablet keyboard sometimes obscured fields in some screens is now resolved.
- **eBubble text in German:** An issue where the message "No tilt data available" appeared but the word "No/Keine" was not visible is now resolved.
- **Application errors:** You should no longer see occasional application errors when you do any of the following:
  - Start a panorama immediately after keying in coordinates in the *V10 panorama* screen.
  - Disconnect the receiver while ending a survey or while shutting down General Survey.
  - Stake out from the map when another stake out is in progress.
  - Delete a point from the 3D map when the point is part of a line or arc that is currently selected.

## Pipelines

The new Trimble Access Pipelines module is designed for surveyors working on the installation of new oil and gas pipelines.

The Pipelines software is designed to simplify the process of collecting pipe attribute information before the pipeline is installed and to enable easy updating of these attributes when measuring welds and other features on the as-built pipeline. Pre-recording all the attributes electronically reduces the stress and time pressure on the surveyor to survey the installed pipe as the trench is being backfilled. This enables the surveyor to focus on measuring points along the pipeline and checking the pre-recorded attributes, rather than entering a lot of new attribute information.

In addition, the Pipeline application includes techniques to automate cover calculations, simplify the process of surveying and reporting on pipeline crossings, as well as other calculations such as deflection angle computations.

The key features of the Pipelines software enable you to:

- Complete a pipeline tally after the pipes (commonly referred to as "joints") are delivered to the job site.  
The details of each joint are stored in a .csv file for use later in the project.
- Complete a joint map once the joints are welded together.  
Each weld ID or Xray ID/number is associated with the joint ahead and the joint behind. The information is stored in a .map CSV file for use later in the project. Bends and loose ends can also be recorded in the joint map.
- Record timestamps and positions with the tally and joint map.



- Measure the as-built pipeline using conventional survey or GNSS survey equipment to measure the position of each weld, associate the details of the joint and to calculate the depth of cover. By simply entering the weld ID when measuring the weld, the joint IDs from the joint mapping file and all the details for those joints from the tally .csv file are automatically copied and saved with the point in the job file and can be viewed and edited if required.

The software includes additional functionality specific to pipeline surveys:

- Compute intersection angles.
- Compute deflection angles.
- Generate reports on tally progress, joint mapping progress, and as-built survey progress.
- Exclusion zone support – recording and reporting when exclusion zones (areas you should not go) are entered and exited, or points are stored.
- Inclusion zone support – reporting if a measured point is outside the pipeline corridor.
- Automatically detecting if the length of a joint recorded in the tally is not the same as the distance computed between two measured welds.
- Automatic prompting to create a partial unit of pipe (PUP) when the joint length is edited.
- Create additional points from a centerline topo out to the width of the corridor to enable a simple surface to be created, from which cover can be calculated.

For more information, refer to the [Pipelines Help](#).

## Roads

### New features

#### 3D drive through of the road on a Tablet

If you are using a Trimble Tablet or supported Windows Tablet, you can now view an automated 3D drive through of the road. This enables you to dynamically view the road and get a better feel for what the road will be like when it is completed. Controls are provided enabling you to pause and re-start the drive through. To view the 3D drive through, select *Define / Review*.

*The 3D option is not available on the first generation Trimble Tablet.*

#### 3D review for GENIO roads on a Tablet

If you are using a Trimble Tablet or supported Windows Tablet, then reviewing a GENIO road can now be done in 3D. This view includes all the review functionality previously provided but with the following improvements:

- You can view the whole road in 3D, rotate the road, and view and check the design from different views.
- You no longer need to browse to see the details of the selected position as this information is now displayed at the top of the screen.
- The road surface can be presented as a:

- shaded model
- color gradient
- color gradient with surface triangles
- surface triangles only
- When viewing the cross section, you can display each cross section so that it fills the screen, providing the best view of the cross section. Alternatively, you can choose to display each cross section with the scale fixed so that the widest cross section fills the screen. This option enables the cross sections to be viewed relative to each other.

*Reviewing roads in 3D is not available on the first generation Trimble Tablet.*

## **Review a GENIO road from plan view**

You can now review a GENIO road from a plan view, to confirm the road definition. Previously you could only review a road from a cross section view and could not confirm the coordinates for a selected position. Now, from the new plan view, you can tap a position to select it and see its station value, string name and offset and check its northing, easting and elevation values. You can also tap and hold on the screen to select a station or string from a list or, depending on your controller, use the arrow keys or use the available softkeys to select a station or string. The previous cross section view, available when defining a road, is now available from the new *Review* option. To access the *Review* option, in the plan view tap the arrow or press the Shift key to access the second row of softkeys and then tap *Review*.

## **Workflow improvements**

The following workflow improvements have been made to the Roads software:

- You can now access the map directly from the *Define* menu and *Survey* menus using the *Map* softkey at the *Select a file* screen. This enables you to define a road from the map by selecting points, lines, or arcs or by selecting line work contained in DXF, SHP, or LandXML files.

*A road defined from the map when accessed from the Define menu can be stored. A road defined from the map when accessed from the Survey menu cannot be stored and is only available for the current survey session.*

- The last used road in a GENIO file is now remembered when selecting a road at the *Define* and *Survey* menus.

## **User interface improvements**

The following improvements have been made to screens in the Roads software:

- To make it clear that you are measuring your position relative to the road, the text *Relative to road* has been added to the top of the selection and stakeout screens.
- The coordinates for the current position, along with the values defining the line preceding the position, are now displayed at the top of the screen when reviewing a road on any controller. You no longer have to browse to see these values. Previously this was only available from the 3D Review option on a Trimble Tablet.

- The construction offset values are now displayed at the top of the selection and stakeout screens providing, at any time during the survey process, quick confirmation that the correct values have been specified.
- When staking a side slope, the design slope, slope value, and elevation defined by your current position is now always displayed. The design slope is shown as a red question mark if there is no side slope defined for your current position. Previously, when there was only one slope value defined and there was no side slope for your current position, no values were displayed.
- When you apply a *Calculated* construction offset the delta prompt now reads *Dist to Align* to better reflect that the value is to the horizontal alignment which may or may not be the centerline of the road. Previously it was *Dist to centerline*. This delta is displayed when you are measuring your position relative to a string (except by the *Measure nearest string* option) or staking a station on a string, and only for Trimble and LandXML roads.
- There has been a change to how an alignment defined in General Survey is edited in the Roads application. Now, when you select an alignment only three road components are available: *Horizontal alignment*, *Vertical alignment* and *Station equations*. To add templates (including positioning the templates and applying superelevation and widening records) and additional points, tap *Options* and select the *Enable templates and additional points* check box. Previously all road components were automatically available for an alignment. This change has been made to simplify the display for users who are only working with alignments.

## Resolved issues

- **Surveying additional points:** An issue where additional points were not displayed in the cross section view at the graphical selection screen when surveying a road is now resolved.
- **Reviewing additional points:** An issue where additional points were not displayed in the cross section view when reviewing a road is now resolved.
- **Selecting a string or station on a string to stake:** Now, when having selected a string or a station on a string to stake and then deselecting it by tapping in clear space you no longer have to tap twice to re-select the string or station on string.
- **Staking a line:** When staking a line from the map, the specified start station is now used. Previously it always defaulted to zero.
- **Roads display with increase North-West coordinate setting:** An issue that occurred when the *Grid coordinate* field is set to *Increase North-West*, where the road was not displayed in the correct position at the review and survey selection screen is now resolved. This display issue did not effect the stakeout of the road.
- **Defining a template string:** An issue where the cursor kept returning to the *String name* field after you entered the values defining the string is now resolved.
- **Graphical selection:** The following issues when using the graphical selection screen to survey a Trimble or LandXML road are now resolved:
  - When you have selected an additional point at the graphical selection screen you can now use the **Tab** key (where available on your controller) to switch between the plan and cross section screens.
  - An issue when staking a Trimble or LandXML road where the *Measure nearest string* option was unavailable when a station on a string was selected.

- **LandXML roads:** An issue where incorrect templates were being generated is now resolved. This was an issue only when a cross section surface point in the LandXML file was close to but not on the centerline.
- **3D Review:** A number of performance issues when reviewing a Trimble or LandXML road in 3D, or issues where the 3D review did not behave as expected, are now resolved.
- **Application errors:** You will no longer see occasional application errors when you do any of the following:
  - Review a road in 3D that consists of only:
    - a vertical alignment.
    - a horizontal alignment that comprises only a Start point.
    - a template.

## Tunnels

### New features

#### Workflow improvements when defining a tunnel from the map

You can now access the map directly from the *Define* menu using the *Map* softkey at the *Select a file* screen. This enables you to define a tunnel from the map by selecting points, lines, or arcs or by selecting line work contained in DXF, SHP, or LandXML files.

## Trimble Access Installation Manager

### New features

The user interface of the Trimble Access Installation Manager has been redesigned to provide:

- A navigation bar on the left of the window which provides single-click access to [www.trimble.com](http://www.trimble.com), the TAIM Help, and the *About* dialog.
- A product bar for selecting the product to install to the connected controller. Select Trimble Access or Aerial Imaging.
- A resizable window.

## AccessSync

### New features

#### Controlling file synchronization behavior on the controller

When transferring files from the office to the field, the default behavior is that if a file of the same name already exists on the controller, the new file has "(1)" appended to the filename to ensure that changes are not overwritten.

You can now change the way duplicate files are managed on the controller by creating a File Synchronization Options XML file and placing it in the same folder as the files to be copied to the field. The File Synchronization Options enable you to replace some or all existing files on the controller rather than duplicating files, and to control the display of alerts when files are downloaded.

For more information, refer to the topic "AccessSync Overview" in the [Trimble Access Services Help](#).

## Software and Hardware Requirements

Trimble Access software version 2014.20 communicates best with the software and hardware products shown below. The software can also communicate with any version later than that shown.

Trimble software	Version
Trimble Business Center (32-bit)	2.99
Trimble Business Center (64-bit)	3.30

Trimble receiver	Version
Trimble R10	4.92
Trimble R8-4, R8-3	4.92
Trimble R6-4, R6-3	4.92
Trimble R4-3, R4-2	4.92
Trimble R7	4.92
Trimble R5	4.92
Trimble NetR9 Geospatial	4.92
Trimble Geo7X	4.92
Trimble GeoXR	4.55
Trimble R8-2, R6-2, R4-1	4.64
5800	4.64
5700 II	4.64

Trimble Instrument	Version
Trimble V10 imaging rover	E1.0.xx
Trimble VX Spatial Station	R12.5.44
Trimble S8 total station	R12.5.44
Trimble S6 total station	R12.5.44
Trimble S3 total station	M2.2.18
Trimble M3 total station	1.30 2.10

For the latest software and firmware versions, see also

<http://trl.trimble.com/dscgi/ds.py/Get/File-93082/Survey%20Software%20and%20Firmware.pdf>.

### **Controller operating system support**

Trimble TSC3 controllers with Microsoft Windows Mobile Version 6.5 Professional can run Trimble Access software version 1.8.0 to version 2011.10.

Trimble TSC3 controllers with Microsoft Windows Mobile Embedded Handheld 6.5 must have Trimble Access version 2012.00 or later.