

Release Notes

CIVIL CONSTRUCTION

13 JULY, 2022

TRIMBLE SITEWORKS SOFTWARE VERSION 1.44



This document contains late-breaking product information, updates, and troubleshooting tips not covered in the Trimble® Siteworks Software documentation.

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Introduction

Trimble Civil Construction is pleased to announce the release of version 1.44 of Trimble Siteworks Software. Version 1.44 is available, at no charge, to all users under an active software Trimble Protection Plan with an effective date of June 30, 2022 or later. It is a purchasable upgrade for all users without an active software protection plan. Siteworks and its modules are loaded through

<https://community.trimble.com>

Trimble Installation Manager (TIM), which can be downloaded at

<https://trimble.com/installationmanager>

Siteworks and Trimble SCS900 Site Controller Software Licenses from controllers that have an active software Trimble Protection Plan are able to be relinquished and transferred onto new controllers via TIM (note that license transfer is not available from SiteMobile devices or for SCS900 v2). Please contact your SITECH® dealer for license transfers.

Siteworks version 1.44 is available for operation on the following Trimble site controllers running **Windows 10**:

- Trimble TSC7 Controller
- Trimble T7 Tablet
- Trimble T100 Tablet
- Trimble Site Tablet 10
- Trimble T10 Tablet
- Trimble Panasonic Toughpad FZ-M1

Siteworks Mobile v1.44 for Android™ is also supported on the following **Android** Tablets running Android 8.0 (Oreo) or above:

- Trimble TDC600 Controller
- Samsung Galaxy Tab Active Pro
- Samsung Galaxy Tab S4
- Samsung Galaxy S10+ Smartphone
- Trimble TSC5 Controller
- Samsung Galaxy Tab S3
- Samsung Galaxy Tab S7

Installation of Siteworks onto any devices not specifically listed above has not been tested for compatibility or performance and installation is at the user's own risk. Siteworks is not supported on the Trimble TSC3 Controller, Site Tablet, Site Mobile, Windows 7 or Windows CE devices.

Trimble Siteworks Installation

For supported devices, Trimble Installation Manager needs to be installed and run directly on a device connected to the internet. TIM checks which software options were purchased for the specific controller with this serial number and checks for the latest version of the software that the device is entitled to based on its current Software Protection Plan expiration date. Select the Siteworks Icon in TIM to install the latest available version. TIM is available for Windows and Android devices at: <https://trimble.com/installationmanager>

<https://community.trimble.com>

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This release is available in the following Languages:

- English - UK English
- English - US English
- Chinese (Simplified)
- Czech
- Danish
- Dutch
- Finnish
- French
- German
- Italian
- Japanese
- Norwegian
- Polish
- Portuguese
- Russian
- Spanish
- Swedish

Many of the improvements described here were requested by field users. Trimble appreciates this type of feedback and continually improves and evolves the product to meet the needs of contractors in the construction industry. If you have any feature enhancement requests please submit them to your SITECH[®] distributor who will pass them on to Trimble for consideration.

The Siteworks User Guide and prior versions of release notes are available for further information on the Siteworks webpage at:

<https://heavyindustry.trimble.com/en/products/siteworks-positioning-system> under *Siteworks Positioning System Downloads > Siteworks Software Documentation*.

New Features and Functions

Features are available in both Siteworks Standard and Siteworks SE Starter Edition unless noted

LandXML Design Import and Conversion to VCL

Siteworks is now able to import a LandXML file during the design creation process and will convert this to a VCL file for use as a design. Simply select the LandXML file when creating a new design in Siteworks and the conversion will happen automatically. A new design folder with the converted VCL file will be created in the active Project's directory. A copy of the LandXML file will also be placed into the newly created Design folder along with the VCL file.

The LandXML file must be present on the data collector or a connected external drive when importing, as LandXMLs are not sent from WorksManager. The LandXML is only converted to VCL during the new Design creation process; a LandXML file manually placed into a design folder will not be converted. Adding a DXF/DWG to the design folder with the converted VCL file will allow for the display and use of the linework in the DXF/DWG file in addition to any linework in the VCL.

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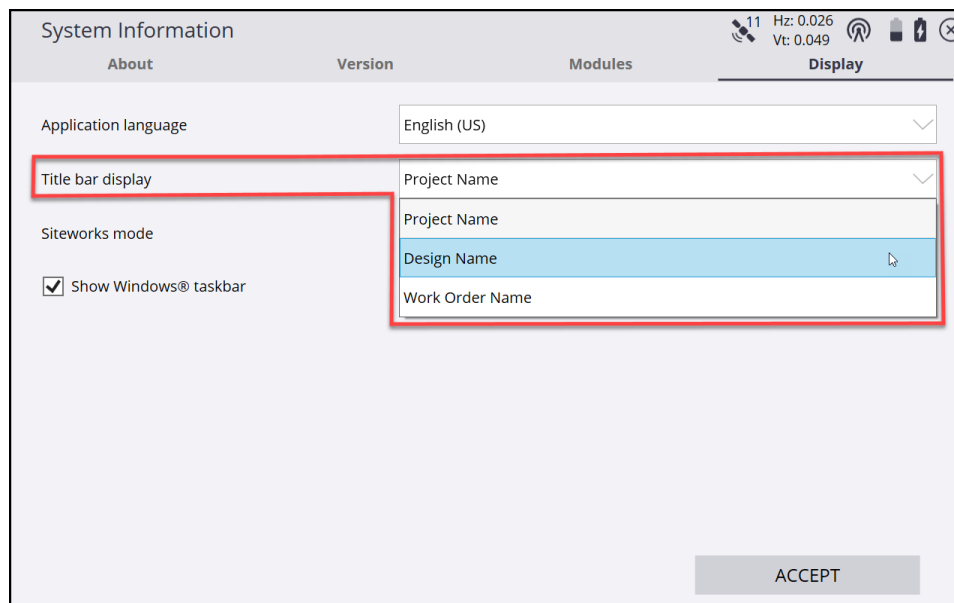
LandXML designs converted to VCL by Siteworks will now be available for export to Trimble Earthworks Machine Control Systems, but not GCS900 systems. This is because Siteworks only copies the converted VCL data to a Trimble Earthworks design, and does not convert the data to SVD/SVL, or DSZ. Therefore the Siteworks Machine Control Export of converted LandXML files is only for those versions of Trimble Earthworks that use VCL files.

There are several known issues to consider when working with specific data types in the LandXML:

- Closed linestrings will lose their name when converted to VCL objects. Closed polylines keep the name.
- 2D points with no elevation value will be converted to 3D points with an elevation of zero.
- Circles exported from Trimble Business Center to LandXML files will lose their radius definition, and will not be displayed in Siteworks. Selecting those circles from the list window will cause Siteworks to crash. Circles produced from other design software packages may work properly; this issue has only been discovered for circles in TBC-produced LandXML files.
- Corridor template surfaces (i.e. corridors with cross sections) will be converted to standard surfaces and lose the template information.

Option to Display Project, Work Order, or Design Name in Title Bar

A new “Title bar display” option has been added to the *Menu > Settings > System Info > Display* tab that allows for the selection of either the Project Name, Design Name or Work Order name to be displayed in the top yellow Title Bar of Siteworks.

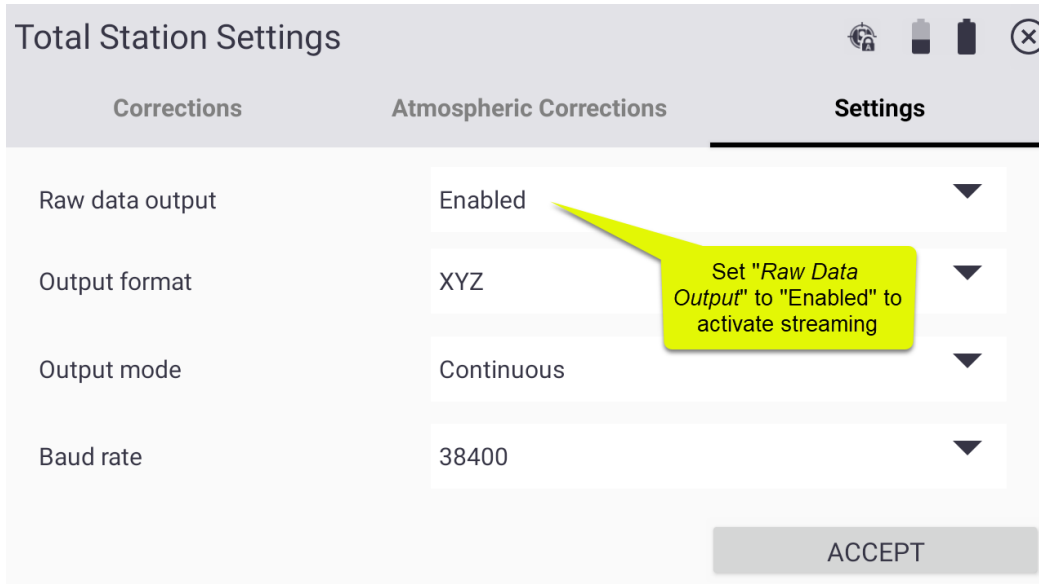


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UTS Raw Data Output Stream via USB to Serial Adapter on Android

Support for streaming of “Raw data output” from Total Stations has been added for Android devices. This output is for the raw total station outputs that are available in the *Menu > Settings > Total Station Settings > Settings* tab. Note that support for general streaming outputs that was added in Siteworks v1.31 for Windows 10 devices is not available on Android at this time; only the **Raw data output** for total stations is presently available on Android.



The serial output functions have been tested with several USB-C to Serial adapters using the PL2303 chipset. Other chipsets are not currently supported. An example of one adapter that has been tested and confirmed to work is: www.tripplite.com/support/u209005c. Other adapters have not been tested, therefore support for other adapter makes and models cannot be guaranteed, especially those not using a PL2303 Chipset.

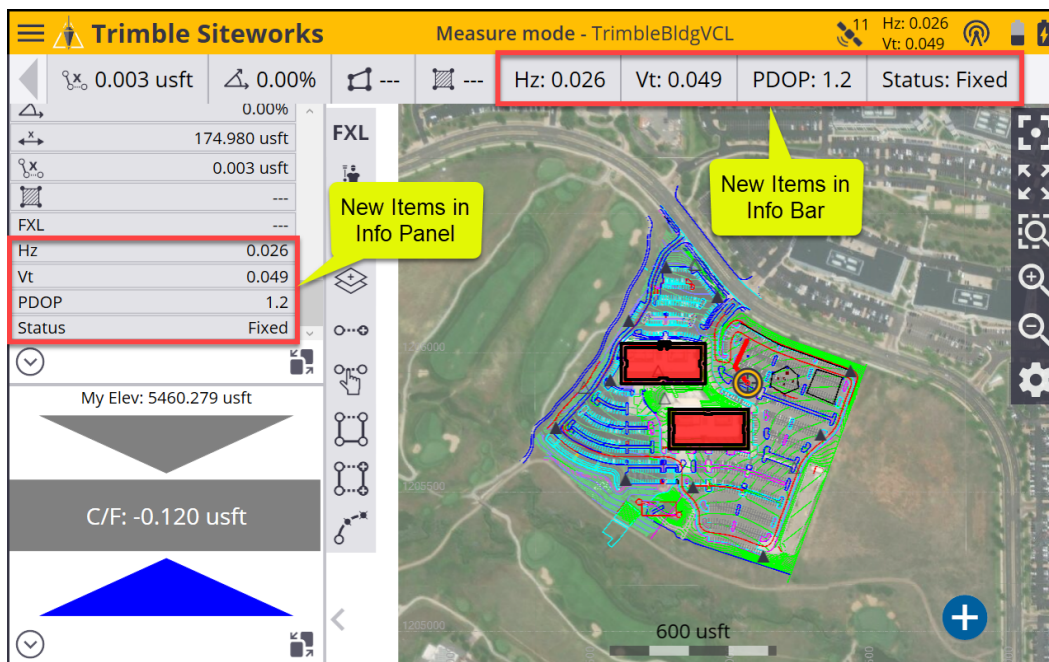
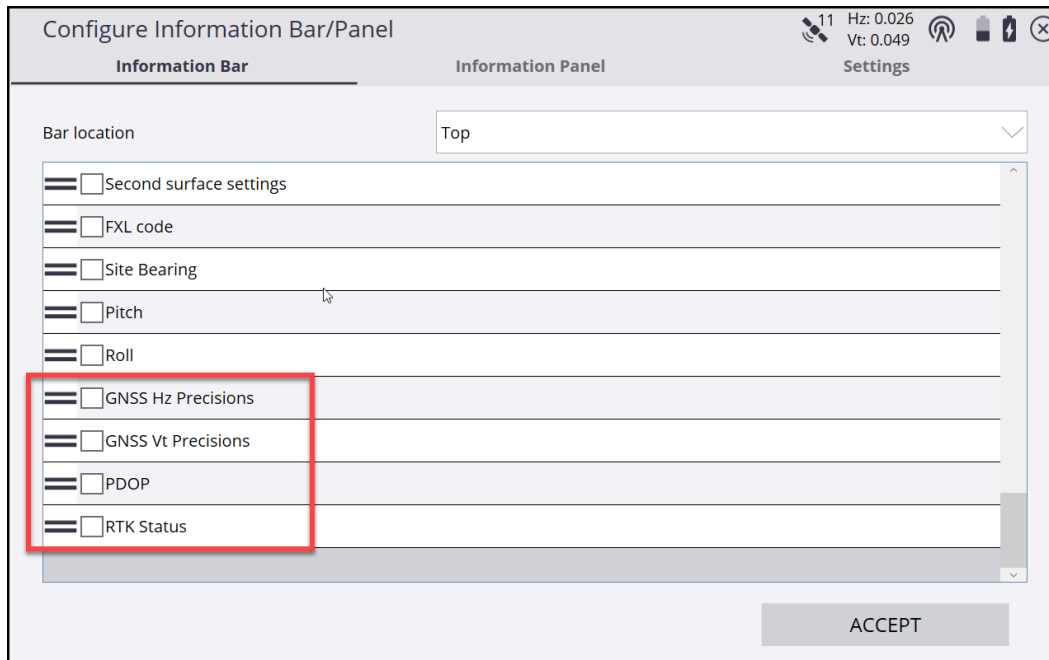
Note this functionality is not available in Siteworks SE Starter Edition, as Siteworks SE does not allow for UTS connections.

GNSS Precision and Status Now Available in Info Bar/Panel

Four new options for displaying the current Horizontal and Vertical GNSS Precisions, PDOP and GNSS Fix Status have been added to the Info Bar/Panel display. These new options are selected via the checkbox and dragged in order of preference as any other Info Bar/Panel item. The number of decimal places displayed will match the setting of all other Info Bar/Panel items set in the Settings

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tab. The RTK status message will replicate what is shown in the “Position” type of the Skyplot window.



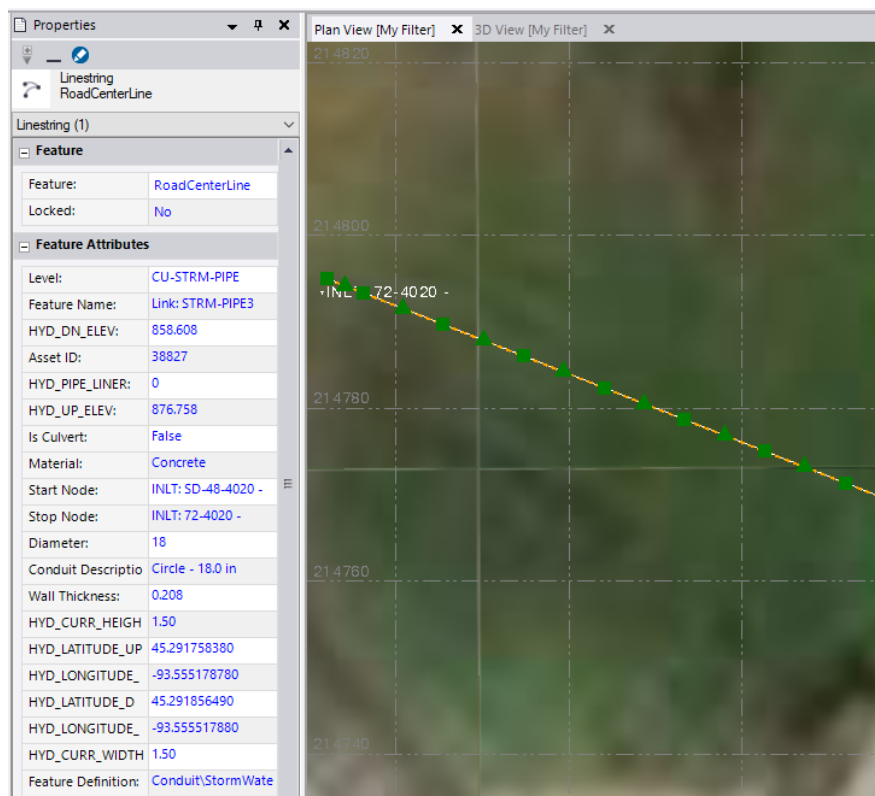
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Pass Attributes from VCL Design Files to Staked Points FXL Attributes

New functionality has been added for full Siteworks Standard users with the Advanced Measurement Module that will extract feature attributes associated with point & line design objects in a VCL file and pre-fill any matching attribute names in a selected feature code from a FXL file when staking an object. This new functionality workflow enables easier and more robust inspection, asset management, and as-builting workflows of design objects, by eliminating the need for manual entry of object attributes into as-staked points.

When selecting a point or line to stake from a VCL file that contains feature attributes, those attributes will be copied into the selected feature code for the stakeout point if the Attribute name matches. For example, if there are attributes of "Diameter" and "Material" assigned to a linestring object in the VCL design file, when that object is selected for staking in Siteworks and a feature code from the FXL is used on the measured stakeout point that also contains "Diameter" and "Material" attribute names, the values of the attributes from the VCL file will be copied into the stakeout point's attributes in Siteworks.

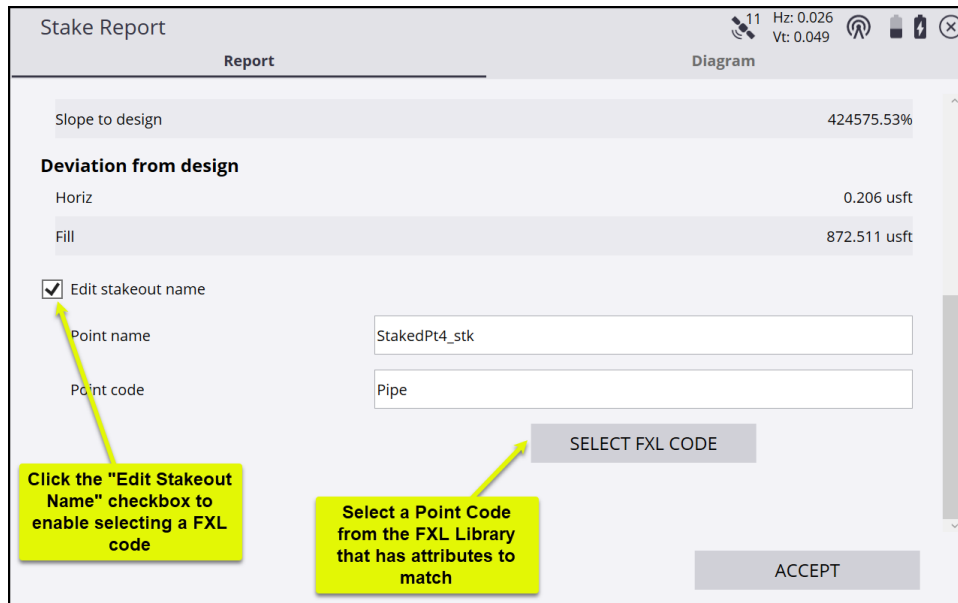
Example attributes on a linestring design object in Trimble Business Center:



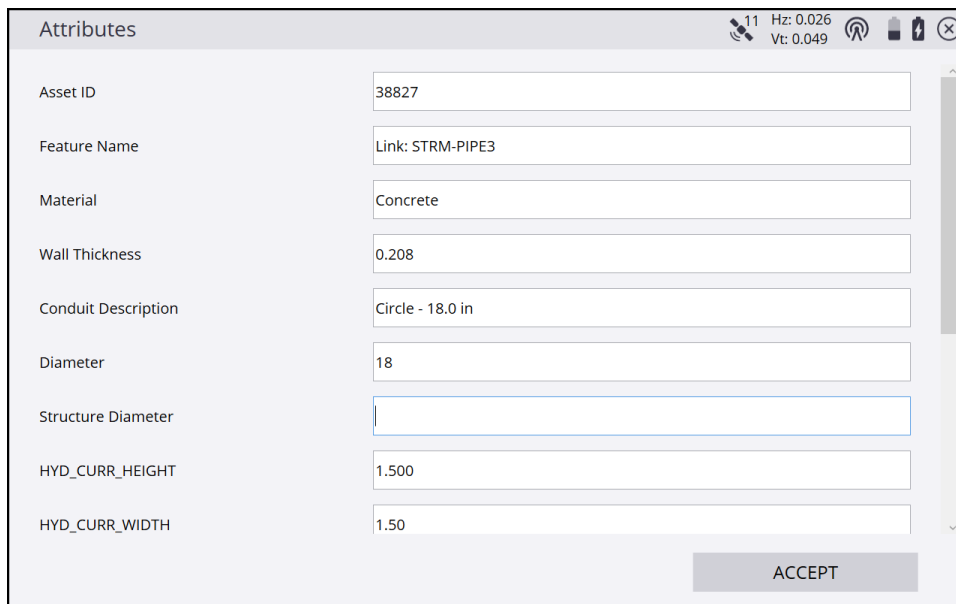
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After staking the point in the Stake Report screen, select the *Edit Stakeout Name* checkbox and select the desired point code containing the attributes to be extracted from the design object.



Attributes with matching names in a given FXL code in Siteworks are then pre-filled from the design object when staking that object:



Attributes can be changed or overwritten as needed in Siteworks. The staked point attributes extracted from the design object will then be available in Trimble Business Center when the Work Orders' SPJ file is imported.

Key in Latitude Longitude Height or Elevation into COGO and Key In Coordinates

It is now possible to type in LLH and LLZ values for coordinates when entering Key-in coordinates and also in the Point Manager. Projects must be either calibrated or have a published coordinate system selected for this functionality to be enabled. There is a new *Coordinate Type* pulldown in any screen where coordinates can be typed in where either NEZ, LLH, or LLZ can be selected.

The screenshot shows a dialog box titled "Add New Point". It contains the following fields and options:

- Type: 3D Control Point
- Point name: [Empty text box]
- Point code: [Empty text box]
- Coordinate type: LLH (with a dropdown menu open showing options: LLH, LLZ, NEZ)
- Latitude: [Empty text box]
- Longitude: [Empty text box]
- Height: 0.000 usft

A "SAVE" button is located at the bottom right of the dialog.

The formats for entering coordinates are DD.MM.SSssss (Degrees, Minutes, Seconds) or DD.dddddddd (decimal degrees). These formats are selected via the small down pointing triangle in the Latitude and Longitude entry fields.

After entering the LLH or LLZ the coordinates will be transformed using the current Project's calibration or coordinate system parameters to Northing, Easting & Elevation values. When selecting a LLZ value, the same options to enter the point's elevation include *Key-in*, *Extract from point*, and *Extract from surface* are available as with any other elevation entry..

Note the difference between “height” and “elevation” is that *Z* or *Elevation* values will not be transformed using the Project's vertical correction settings and are assumed to be at the project's elevation, while the *H* or *height* option will be transformed to the project's elevation based on the parameters in the calibration or published coordinate system. “Height” in this case is the ellipsoidal height presumed to be obtained from a GNSS receiver and does not account for the presence of any Geoid. However, if Height is selected as the input option in Siteworks then the Project's Geoid model will be used in the conversion of Height to Elevation. If no Geoid model is used, then the other vertical adjustments in the DC file will be applied.

When entering 1D (elevation only) control points the option to enter any kind of horizontal coordinates is not available, therefore only project elevations can be entered, not heights.

General Improvements

- Windows 11 has been tested on the T100 and is now supported. Win11 will not be available on the T7, or TSC7 due to screen size limitations in the Win11 operating system. If Siteworks freezes when running on a T100 in full screen mode (i.e., without the taskbar displayed) it

may be necessary to either plug in an external keyboard to access the Windows Task Manager to force quit Siteworks. Alternatively, holding down the power key will reboot the device.

- It is now possible to select external radio as a correction method for the MPS865 GNSS Receiver when setting it up as a base station. As with other GNSS receiver's external radio support, the actual configuration of the radio must be performed outside of Siteworks.
- Improvements made in the Total Station connection process that will now decrease the time before a "Failed to Connect" message is displayed, enabling the user to re-attempt a connection faster.
- Project load times are improved for Projects containing large FXL files, especially those FXL files containing many layer definitions.
- Updated rover and base station antenna height diagrams for consistency and clarity.
- Fixed an issue with Siteworks locking up and potentially crashing if prism target lock was interrupted during an averaging measurement.
- Fixed issue introduced several releases ago where the tracklight remained on when switching to Machine Control Mode. The tracklight will now shut off when entering MC mode.
- Fixed an issue with Siteworks SE Starter Edition where linework would sometimes disappear after loading a Work Order.
- Fixed an issue with importing data from USB drives on Android Devices.
- Fixed several user reported crashes to improve stability and performance.
- Update Trimble Remote Assist Installer for improved performance and reliability.
- Language and translation updates based on dealer and customer feedback.
- Update to Coordinate System Database version 102.

Known Issues

- Siteworks running on Android systems may not interpret file types properly if there are more than two periods used in a file name. For example "ABC.XYZ.VCL" may not get recognized properly as a VCL file and therefore surfaces may not be displayed in the surfaces pulldown on the Open Project screen. If extra periods in filenames cannot be removed, the workaround is to continue loading the design file without a surface selected to get to the main Siteworks map screen, and then return to the Open Project screen where the surfaces will then be selectable.

For more information

For more information contact your local Trimble regional account manager.

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Firmware and Operating System Compatibility

Version 1.44 of the Siteworks software supports the following firmware versions in total stations, GNSS receivers, radios, and operating system versions for handheld computers. Trimble cannot guarantee compatibility or support for a device that is not specifically listed in the table below. Please see prior release notes for details on Siteworks prior to v1.30.

TSC7, T7, Site Tablet 10, T10, T100, Panasonic Toughpad TDC600, TSC5, Samsung Galaxy Active Tab, S7, S4, S3, S10+ Smartphone

	v1.30	v1.31	v1.40	v1.41	v1.42	v1.43	v1.44
Trimble Protection Plan Expiry (Month End)	JUL 2020	NOV 2020	FEB 2021	JUN 2021	OCT 2021	JAN 2022	JUN 2022
SNPCOM Server	R5.0.31.46	R5.0.31.46	R5.0.31.46	R5.0.31.46	R5.0.31.46	R5.0.31.46	R5.0.31.46
Minimum Controller OS	Win10 Pro v1709 or Above Android v8.0	Win10 Pro v1709 or Above Android v8.0	Win10 Pro v1709 or Above Android v8.0	Win10 Pro v1709 or Above Android v8.0	Win10 Pro v1709 or Above Android v8.0	Win10 Pro v1709 or Above Android v8.0	Win10 Pro v1709 or Above Android v8.0
R750	Not Supported	Not Supported	Not Supported	Not Supported	v6.12	v6.13	v6.13
SPS855	v5.48	v5.48	v5.48	v5.50	v5.52	v5.53	v5.53
SPS986	v6.08	v6.08	v6.08	v6.10	v6.12	v6.13	v6.13
SPS785	v3.87	v3.87	v4.20	v4.20	v4.20	v4.20	v4.20
SPS985	v5.48	v5.48	v5.48	v5.50	v5.52	v5.53	v5.53
SPS985L	v5.48	v5.48	v5.48	v5.50	v5.52	v5.53	v5.53
SPS585	v5.48	v5.48	v5.48	v5.48	v5.48	v5.48	v5.48
MPS865	v3.86	v3.86	v4.20	v4.20	v4.20	v4.20	v4.20
SPSx20	M3.8.16	M3.8.16	M3.8.16	M3.9.9	M3.9.9	M3.9.9	M3.11.1
SPSx30	C10.8.16	C10.8.16	C10.8.16	C10.9.8	C10.9.8	C10.9.8	C10.11.1
EM100	v5.46	v5.46	v5.46	v5.47	v5.47	v5.47	v5.47

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Legal Notices

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Release Notice

This is the July 2022 release of the Trimble Siteworks Site Controller Software Release Notes. It applies to Version 1.44 of the Trimble Siteworks Site Controller software.

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