Release Notes

TRIMBLE SITEWORKS SOFTWARE VERSION 1.41

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

- Introduction
- New features and functions
- General improvements

- Known Issues
- Firmware and operating system compatibility
- Legal notices

Introduction

Trimble Civil Construction is pleased to announce the release of version 1.41 of Trimble® Siteworks Software. Version 1.41 is available, at no charge, to all users under an active software protection plan with an effective date of June 30, 2021 or later. It is a purchasable upgrade for all users without an active software protection plan. Licenses from controllers that have an active software protection plan are able to be relinquished and transferred onto new controllers (note license transfer is not available from SiteMobile devices or for SCS900 v2). The software and its modules can be loaded through Trimble Installation Manager (TIM), which can be downloaded from http://www.trimble.com/installationmanager/.

https://community.trimble.com

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Siteworks version 1.41 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 v1.41 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 users own risk. Siteworks is not supported on the TSC3, 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.

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® dealer 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 *Technical Information > Siteworks Software Documentation*.

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New Features and Functions

VCL Design File Functionality Improvements

Siteworks v1.41 contains several enhancements and improvements when using VCL files produced by Trimble Business Center. Improvements include:

Support for Linestrings with VPI definitions. Siteworks will now properly utilize the elevation of Linestrings that contain Vertical Point of Intersection (VPI) elevation definitions. Linestrings with VPIs were previously treated as 2D objects. This support is currently enabled for "no curve" VPI types as defined in the Trimble Business Center Vertical Linestring editing tab. Linestrings with an arc or parabola curve definition will trigger a warning message indicating that the elevation along the linestring is not available. In this case the linestring will then be treated as a 2D line.

The Elevations of the line strings are supported whether the elevation information is entered in as the elevation in the Horizontal tab at a node, or as a no curve elevation in the Vertical tab of the Edit Linestring window in TBC.   Siteworks will project the elevation of the linestring beyond the start/end of the linestring based on the segment slope from the end point to the next available elevation definition along the linestring. In other words, SIteworks simply projects the end vertical segment slope of the linestring beyond the start/end point of the linestring.

Note that in certain COGO features when using Linestrings with defined VPIs that the linestrings will still be treated as 2D lines if the Linestring contains VPI definitions. Linestrings containing only node elevations and no VPI definitions will be treated as 3D lines. Siteworks will alert the user if the Linestring in COGO will be treated as a 2D line.

Support for Multiple Vertical Alignments (VALs) along a Horizontal Alignment (HAL). Alignments that contain multiple overlapping and/or non-overlapping VALs are now supported. Siteworks will now prompt for the specific VAL to use for elevation data along that portion of the HAL where the VAL overlies when selecting an Alignment to stake that contains multiple VALs. Siteworks now draws the entire length of the alignment in the Plan View and when the HAL is selected as a reference line. In older versions of Siteworks only that portion of the alignment where the HAL had an overlapping VAL were plotted. Now in v1.41 the entire length of the alignment will be plotted. When the alignment is selected for staking the portion containing the selected VAL will be highlighted with the standard red directional arrows. Selecting a different VAL will then highlight the interval that the new VAL exists over. Reference Station and Offset are available along the whole HAL.

When staking an Alignment with multiple VALs the entire HAL will be displayed, but the start station for the staking action will be the first station where the VAL overlaps the HAL. If the user has a Corridor Template Surface selected as the active surface then the start station for the alignment will be the first station where the HAL, VAL and corridor templates overlap.

Note that Multi-VAL support is only available in full versions of Siteworks Standard. The default VAL will always be used for the selected Alignment when in Navigate mode in Siteworks SE Starter Edition. The default VAL is set and can be changed in TBC.

Support for "Clean" VCL Design Files Exported to WorksManager from Trimble Business Center v5.50. TBC 5.50 introduced the ability to create and send VCL design files via the WorksManager design creation workflow that do not contain dependent objects. This generally results in smaller VCL files and can improve performance on the field systems. Siteworks v1.41 now supports these "clean" VCL files. Note that in some instances TBC may not

properly include all corridor template data in the clean VCL file, in which case the VCL should be re-exported with the "Cleanup VCL File" option set to No.

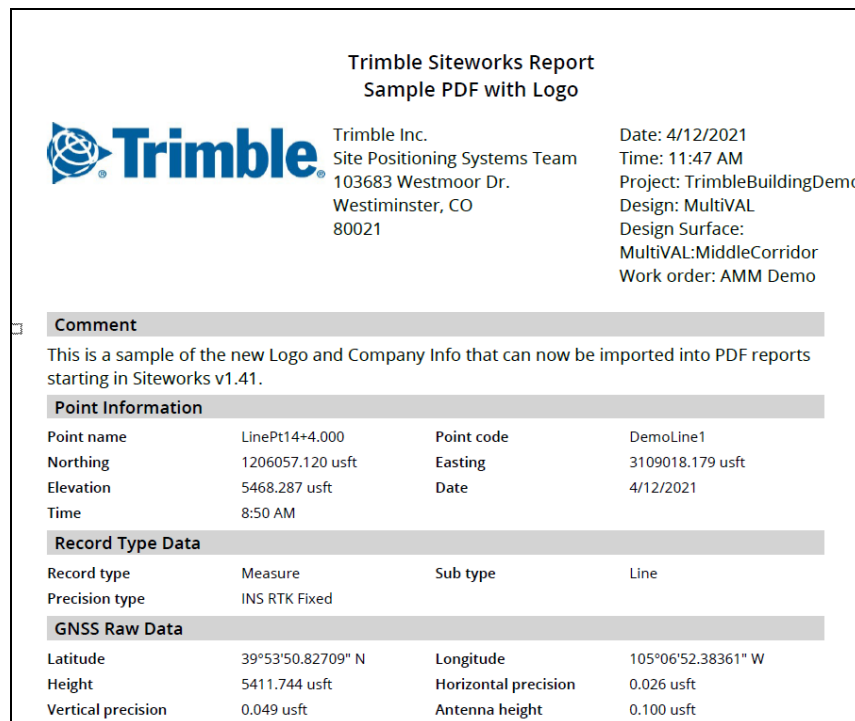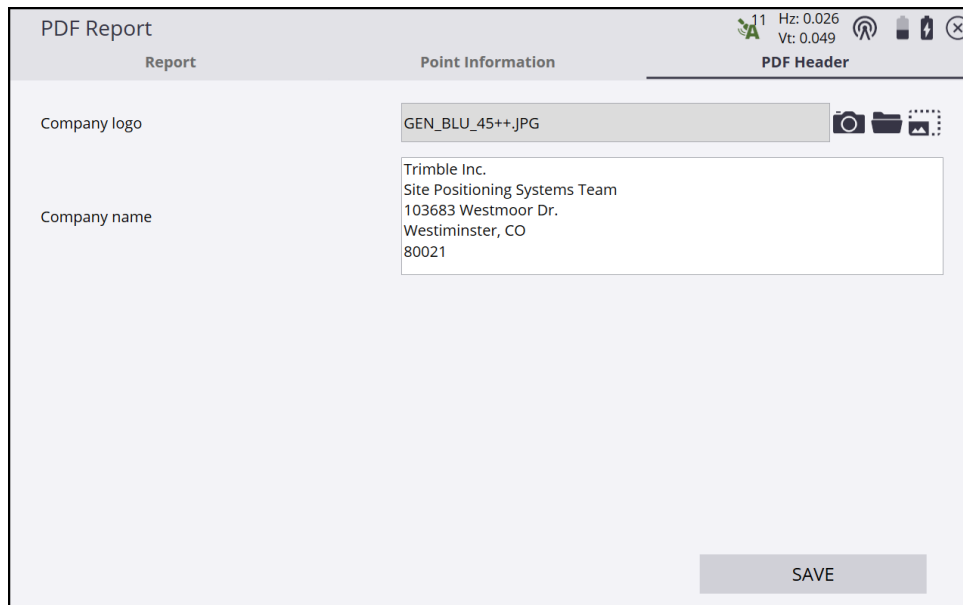**Option for Random or Fixed Stationing as Default when Staking Lines and Alignments**

A new "Default Station Mode" option has been added to the *Menu>Settings>Stakeout* allowing for the selection of Random or Fixed stationing when staking a line or alignment. This setting is an AllSites.xml setting and will be applied to all projects opened in Siteworks. The default value is set to Random. Each time the stake workflow is entered or a new stakeout object is selected the default setting will apply, regardless of if the setting was changed in the map screen by tapping the Fixed ⯆⯆⯆ or Random ⯆⯆⯆ stake button in the toolbar.
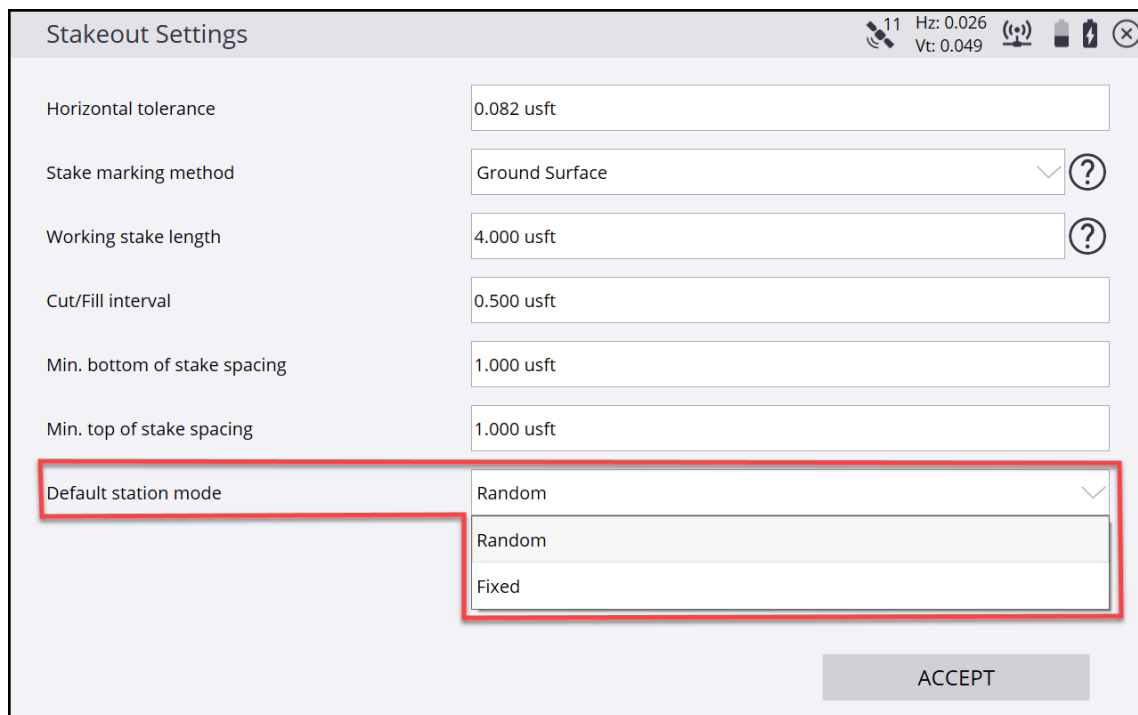
Customize PDF Reports with an Image/Logo and Company Information

It is now possible to add a custom image and text field to the header of a PDF report. This new functionality is accessed via a new "PDF Header" tab in the PDF report creation window. Tapping on the tab allows you to select an image/logo and enter in "Company Name" text that will be displayed at the top center of the PDF report. The image/logo must be in a JPEG format. A copy of the logo file will be placed in the "SCS900 Data Folder" at the AllSites level and will be selected by default for every PDF report created on the collector. To remove a logo from new PDF reports you must delete or move the logo file from the SCS900 Data folder.

PDF Report

Report	**Point Information**	**PDF Header**

Company logo — GEN_BLU_45++.JPG

Company name —
Trimble Inc.
Site Positioning Systems Team
103683 Westmoor Dr.
Westiminster, CO
80021

SAVE

Trimble Siteworks Report
Sample PDF with Logo

Trimble Inc.
Site Positioning Systems Team
103683 Westmoor Dr.
Westiminster, CO
80021

Date: 4/12/2021
Time: 11:47 AM
Project: TrimbleBuildingDemo
Design: MultiVAL
Design Surface:
MultiVAL:MiddleCorridor
Work order: AMM Demo

Comment
This is a sample of the new Logo and Company Info that can now be imported into PDF reports starting in Siteworks v1.41.

Point Information

Point name	LinePt14+4.000	Point code	DemoLine1
Northing	1206057.120 usft	Easting	3109018.179 usft
Elevation	5468.287 usft	Date	4/12/2021
Time	8:50 AM		

Record Type Data

Record type	Measure	Sub type	Line
Precision type	INS RTK Fixed		

GNSS Raw Data

Latitude	39°53'50.82709" N	Longitude	105°06'52.38361" W
Height	5411.744 usft	Horizontal precision	0.026 usft
Vertical precision	0.049 usft	Antenna height	0.100 usft

Machine Control Data Export to USB Drives on Android Devices

Siteworks now can export Machine Control Data directly to a USB thumb drive on Android devices. A new "File Location" pulldown menu prompting for the location of the export location of *USB Drive* or *Device* has been added. This setting is saved at the Project level and is defaulted to USB. If *Device* is selected as the storage location the Machine Control data will be saved to *Internal Storage/TrimbleSync/Siteworks/MCData*, the same location it is saved to now in older versions of Siteworks. No changes have been made on Windows devices, which still require a USB drive to export Machine Control data.

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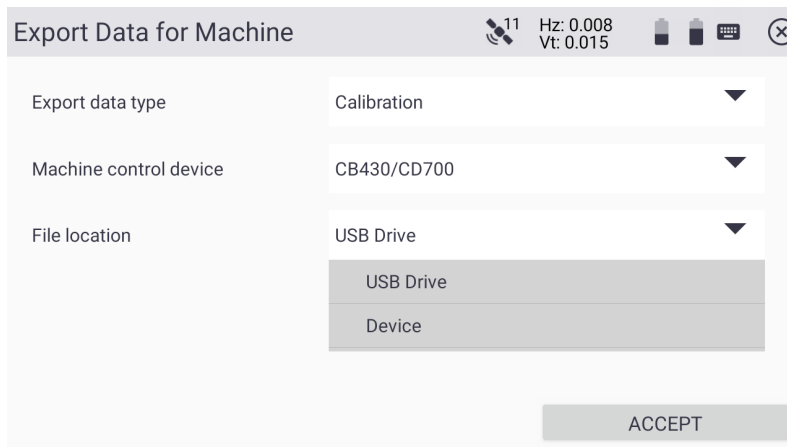
When using a USB drive for the first time the user must select it in an Android OS screen that will appear. Find the drive by tapping on the Hamburger menu in the upper left on the OS screen, and then tapping on the name of the USB drive. Then tap the "ALLOW ACCESS", "USE THIS FOLDER" or "SELECT" blue bar at the bottom of the screen. The text in the blue bar may vary depending on the device and Android version. Note that <u>only the root directory of the USB stick must be selected</u>, and not any individual folders on the drive, i.e. do NOT select any individual folders on the drive. If the user selects any folder other than the root, the user will be returned to the USB selection screen in the Android OS where only the root or home folder of the drive should be picked.

After choosing the drive, grant system permission to access the drive. Once permission is granted to a particular USB drive that device will be remembered and you will not have to select the drive in the OS again. Exports of other non-machine data types, such as DXFs of measured linework, CSV point files or Record.txt files will still be stored in the Internal Storage of the Device and must be copied onto the USB via the Android OS file management system.

Updates to Available 450MHz Base Station Transmit Modes

Siteworks v1.41 has modified the list of available transmit modes for 450Mhz base station radios. Now only TrimTalk v1 transmit modes at a variety of baud rates will be available for selection. Note that for all GNSS receivers in *Rover* mode Siteworks lists those modes that the radio on the receiver supports. The available modes are affected by the country setting, (e.g. US or ROW) and the channel spacing of 12.5kHz or 25kHz.

Security Upgrades for Status Messaging to WorksManager

Siteworks v1.41 contains important required updates to the authentication system used in Trimble Cloud servers to send Dot on the Map and Status messaging to WorksManager. All Siteworks systems utilizing these features within WorksManager will need to upgrade to Siteworks v1.41 by August 31, 2021 to maintain the ability for WorksManager to receive and update device location and design information via the status messaging. Note that data syncing to/from WorksManager or TCC and Trimble Remote Assist within WorksManager for Siteworks devices is **not** impacted. Only Dot on the Map and Status message functionality in WorksManager will be affected, it will still be possible to send designs to devices from WorksManager.

30 Day Siteworks Demonstration Licenses for Windows now Available in Trimble Installation Manager

It is now possible to obtain a 30 day demonstration license for Siteworks directly in Trimble Installation Manager. The demo license is only available on Windows 10 Systems; it is not available for Android. The demo license is fully functional, includes Roading and Advanced Measurement Modules and allows for connections to GNSS receivers and UTS instruments. This demo license can be installed on any Windows 10 device for testing and

demonstration purposes. It is not possible to obtain a demo of the Roading or Advanced Measurement modules on a device that already has a paid Siteworks license installed, but the demo license does include the Roading and AMM.

There is a new "Create demo licenses" tab available in TIM for devices that do not have a Siteworks license. If the device has any other Trimble software licensed you must check the "Show all" checkbox at the bottom left of the screen to get the Siteworks icon to appear. Creating a demo license requires the user to sign in with or create a new Trimble Identity (TID). After signing in and installing Siteworks in TIM, Siteworks will be licensed for 30 days. Siteworks will revert to emulator mode at the end of 30 days where connections to GNSS and UTS are disabled but all other functionality remains. A countdown timer will appear starting at five (5) days before demo license expiration warning the user of the remaining days before the license expires and Siteworks transitions to emulator mode.
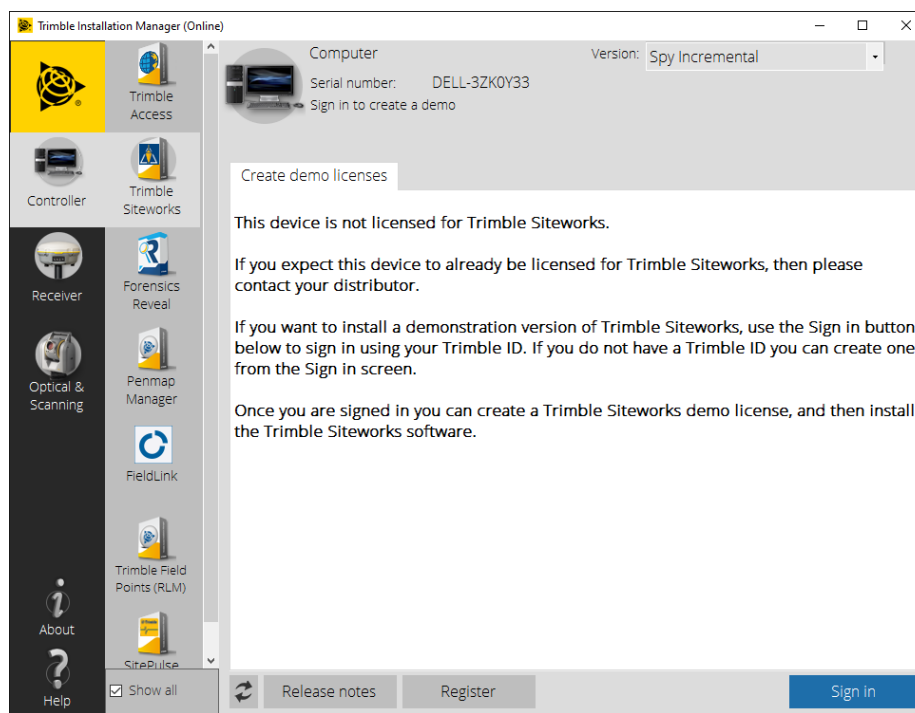
General Improvements

- Fixed multiple reported crashes on Android devices for improved performance and stability.
- Language and Translation Updates including the addition of Czech as a supported language.
- Android 11 is now supported in Siteworks v1.41
- Official support for the Samsung Galaxy Tab S7 Tablet
- Update Coordinate System Database to version 97
- TPaaS license support for Android devices has been added
- A bug was fixed in the BaseAnywhere "Update Base Position" workflow when using modular receivers with an external antenna that could have resulted in an incorrect APC offset being used in the updated base position.
- Siteworks with a TPaaS license can now be switched into Siteworks SE Starter Edition mode.

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- Fixed bug in stockpile scanning with SPS620 total stations where the same point was repeatedly measured.
- A change has been made to allow exporting of Machine Control data to GCS900 systems where a coordinate system is not present in the CoordSystemDatabase.xml.
- Fixed an issue with opening some DXF files that had block definitions at original insert locations with large negative coordinate values.
- Bug fixed that would cause photos taken in portrait mode to be rotated incorrectly in PDF reports.
- Fixed an issue that can prevent all available VRS Mountpoints from appearing in the Source Table.
- Improved SPS785 and TDC600 connections to reduce erroneous "New Base Station Detected" messages.

Known Issues

- Certain COGO created points may not be elevated properly when doing a point offset command on a linestring with a VPI definition.

More Information

For more information, please contact your Trimble regional account representative.

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Firmware and Operating System Compatibility

Version 1.41 of the Siteworks software supports the following firmware versions in total stations, GNSS receivers, radios, and operating system versions for handheld computers. Please ensure that all equipment that will be used with this version is upgraded to the correct firmware/operating system before use. Trimble cannot guarantee compatibility or support for that device if a device is not specifically listed in the table below. Please see prior release notes for details relating to Siteworks v1.10 and below.

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

	V1.10.19201.376	V1.11	V1.20	v1.30	v1.31	v1.40	v1.41
Software Protection Plan Expiry (Month End)	JUN 2019	OCT 2019	MAR 2020	JUL 2020	NOV 2020	FEB 2021	JUN 2021
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
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
SPS855	v5.41	v5.43	v5.45	v5.48	v5.48	v5.48	v5.50
SPS882	v5.32	v5.32	No longer supported	No longer supported	No longer supported	No longer supported	No longer supported
SPS986	v6.02	v6.03	v6.05	v6.08	v6.08	v6.08	v6.10
SPS785	v3.81	v3.83	v3.87	v3.87	v3.87	v4.20	v4.20
SPS985	v5.41	v5.43	v5.45	v5.48	v5.48	v5.48	v5.50
SPS985L	v5.41	v5.43	v5.45	v5.48	v5.48	v5.48	v5.50
SPS585	v5.41	v5.43	v5.45	v5.48	v5.48	v5.48	v5.48
MPS865	-	v3.86	v3.86	v3.86	v3.86	v4.20	v4.20
SPSx10	C10.6.10	C10.6.10	No Longer Supported	No Longer Supported	No Longer Supported	No Longer Supported	No Longer Supported
SPSx20	M3.6.10	M3.6.10	M3.6.10	M3.8.16	M3.8.16	M3.8.16	M3.9.9
SPSx30	C10.6.10	C10.6.10	C10.6.10	C10.8.16	C10.8.16	C10.8.16	C10.9.8
EM100	Not Supported	Not Supported	Not Supported	v5.46	v5.46	v5.46	v5.47

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Contact Information

Trimble Inc., Civil Engineering and Construction Division
10368 Westmoor Drive
Westminster, Colorado 80021 USA
800-361-1249 (toll free in USA)
+1-937-245-5154 Phone
+1-937-233-9441 Fax

www.trimble.com

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Release Notice

This is the July 2021 release of the Trimble Siteworks Site Controller Software Release Notes. It applies to Version 1.41 of the Siteworks Site Controller software.

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