

Trimble 4D Control

SOFTWARE, VERSION 6.0

This document contains summary information on new features, late-breaking product information, updates as well as installation and upgrade procedures not covered in the Trimble® 4D Control™ documentation.

Introduction

Trimble 4D Control is a fully-scalable software solution for monitoring applications.

Options range from simple manual monitoring operations to complete automated 24/7 real-time monitoring systems that combine data from optical total stations, GNSS receivers and geotechnical sensors.

The software manages total stations, GNSS receivers, and geotechnical sensor devices, processes and stores data from all connected sensors, performs analysis for motion, and generates reports and alerts.

New Product Structure

Software Editions

Trimble 4D Control (T4D) introduces three-tiered edition options, tailored to addressing different project requirements needed by specialized monitoring consultants, land surveyors, construction companies, dam and mining operators:

- **T4D Field**

Enables to easily integrate into a third-party system of record by

- efficient total station setup support for automated monitoring,
- data processing of total station measurements, and
- output of processed coordinates

- **T4D Intermediate**

In addition to the total station processing capability available in T4D Field, this edition allows for

- manual total station data processing,
- network adjustment of total station data,
- processing of GNSS receiver data,

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- integrated processing of total station and GNSS receiver data,
- data management (administrative web application), and
- data storage in a Microsoft SQL database

The intermediate edition is ideal for customers looking to leverage T4D for GNSS and optical data management and using the third-party visualization and project management tools.

- **T4D Advanced**

This edition includes the feature sets of both T4D Field and Intermediate editions, offering the full range of the Trimble 4D Control platform capability to be used as the integral monitoring software solution for automated real-time monitoring projects. T4D Advanced adds support for:

- geotechnical sensor management,
- front-end web interface for
 - project management,
 - data visualization,
 - reporting and alarming

Term Licensing

In addition to perpetual licenses Trimble 4D Control version 6.0 introduces three- and 12-month subscriptions allowing monitoring service providers the flexibility to choose the appropriate subscription model based on the project duration.

The new subscription levels can enable project stakeholders of critical transportation infrastructure, dams and mines, natural hazards and buildings surrounding construction sites to leverage real-time monitoring services by reducing upfront cost. This update also makes T4D ideal for companies looking to control expenses via the operating-expense (OPEX) model on a recurring basis.

New Key Features

Coordinate Exporter

A new coordinate exporter enables users to easily make information available to e.g. external systems for an efficient integration with third party products. Reduced coordinates can be output via FTP upload in a scheduled and automated way.

Settop M1 Diagnostics

The integration with the Settop M1 monitoring controller, which enhances the operation of a Trimble total station, has been improved by adding diagnostic tools to allow remote system troubleshooting and minimize monitoring project downtime. The diagnostics feature increases the reliability of the system and solution quality by allowing remote health checks of the Settop M1 at any time.

Video Stream at Custom View

In addition to the last observations, optionally charts and scatter plots, the custom view of the T4D web application is now complemented by supporting video streams. A live video stream combined with sensor data provides enhanced context visualization for easier data interpretation.

Enhancements

Geotechnical Gateway Integration/Support

The following enhancements further streamline the integration of geotechnical data in monitoring projects, increasing level of confidence in the final deliverables.

- **Calculation Sensor supports Geotechnical Gateway Sensors**

The calculation sensor of Trimble 4D Control can now compute additional information e.g. tilt values or distances by using geotechnical gateway sensors as input sensors.

- **Senceive Sensor Types**

Trimble 4D Control further enhances the geotechnical gateway sensor data integration by adding support for all sensor types from Senceive (<http://senceive.com>).

- **Worldsensing LAN Connectivity**

A new connection type allows for streaming data from Worldsensing gateway devices that are connected to Trimble 4D Control via a local area network (LAN) (<https://www.worldsensing.com/product/loadsensing/>).

Large Dataset Chart

For analysis charts with a lot of data it is now possible to switch to a large dataset chart type that is optimized for better performance on large datasets with unlimited number of visualized epochs.

Zoom Level at Maps Page

The zoom level at the maps page is increased from 17 to 20 for the layers Microsoft Bing and Google Maps. The increased zoom level provides the ability to see more details with better resolution.

IPI Chart

The IPI (In Place Inclinometer) section at the web application is now incorporated into the charts area and provides a more streamlined workflow.

Unit per mille

The addition of another unit (per mille) allows users to easier comply with local standards and project requirements.

Peak Alarm Evaluation

The peak alarm evaluation feature now works on all sensor types. Peak alarm evaluators can be used to reliably trigger alarms on transient threshold breaches in environments where the sensor data rates are higher than the alarm evaluation frequency.

Support of Survey Receivers

Trimble 4D Control now supports the R10 and R12 GNSS receivers. The newly added survey receiver types can also be used with the RTK and Post Processing engine.

Resolved Issues

- Fixed issue preventing tool tips from working for certain chart types embedded into a composite view
- Fixed issue with Heatmap Analysis colour interpolation
- Fix of Google Maps layer which was broken due to a new Google api version
- Fixed issue with vibrating wire sensors on newer Loadsensing firmware version

Supported Operating Systems

Trimble 4D Control version 6.0 supports the following operating systems:

- Windows 10
- Windows Server 2016 (September 2016)
- Windows Server 2019 (October 2018)

Supported SQL Servers

Trimble 4D Control version 6.0 supports the following Microsoft SQL servers:

- SQL Server 2016
- SQL Server 2017
- SQL Server 2019 RC
- Azure SQL Server

Note – Trimble highly recommends using a full Microsoft SQL edition that is not subject to limits in memory capacity. This is in particular critical for monitoring systems with multiple sensors and processing engines.

Installation

Trimble 4D Control version 6.0 introduces a new installer that reflects the changes of the product structure.

- It is a single installer for all three software editions of Trimble 4D Control (Field, Intermediate, Advanced).
- Depending on the selection the installer downloads the required installation files for the respective software edition.
- The installer offers a “Download Media” to download the entire set of installation files for all three software editions for an offline installation at a later stage.

To install Trimble 4D Control version 6.0 on a server with an internet connection, please perform the following steps:

1. Run the new installer.
2. Select the software edition you would like to install.
3. Wait for the installation files to be downloaded.
4. Follow the instructions of the installation wizard.

Note – If you are installing T4D Intermediate or T4D Advanced, ensure you have your database credentials available during the software installation process.

Upgrade Procedure

Trimble 4D Control version 6.0 discontinues support for certain software features. Make sure you review the following list of discontinued functionality before you start the upgrade process.

- Report Generator
- Accelerometer Manager
- RTX Engine
- RTX-PP Engine
- SeismoGeodetic
- Webcam Service
- High Rise
- Control Room

To update the software from a previous version to version 6.0, do the following:

1. Read through the section “Removed Features” further above.
2. Ensure that your installation of the software runs on version 5.0 and includes the latest available software updates.
3. Back up all Trimble 4D Control configuration files (*.tde) as well as the Microsoft SQL Server database content (*.bak).
4. Run the installation of Trimble 4D Control version 6.0. The installer automatically detects the installed version 5.0 and first uninstalls the existing software. During uninstallation you will be prompted to keep the existing databases. Select **Yes**. The latest version of the Trimble 4D Control is then automatically installed.

For more information, contact monsol_support@trimble.com.

Legal notices

Trimble Inc.
5475 Kellenburger Road
Dayton, Ohio 45424-1099
USA

800-538-7800 (toll free in USA)
+1-937-245-5600 Phone
+1-937-233-9004 Fax
www.trimble.com

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Release notice

This is the July 2020 release (Revision A) of the *Trimble 4D Control Software Release Notes*. It applies to version 6.0 of the software.