

#### **SITECH**

#### Company profile

The experienced construction professionals at SITECH® will show you how to leverage Trimble® construction technology solutions, including:

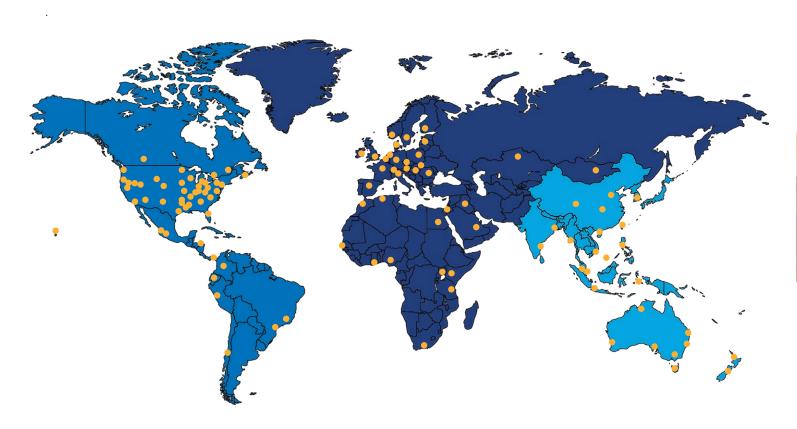
- Machine control
- Site positioning systems
- Construction software

Discover how easy it is to utilize construction technology that makes significant improvements in project workflow, dramatically increases your production, improves your accuracy and lowers your operating costs through reduced survey costs, moving dirt right the first time, improved material yields, increased fuel savings and reduced operating time. With the addition of Trimble solutions to your construction projects, you're in a more powerful competitive position in the marketplace. Whether you choose to start small or go big, the expanded capability will enable you to earn the bid and be more profitable, project after project.

#### Global reach + local support

SITECH is a global distribution network for Trimble solutions—the most reliable and rugged construction technology systems available to the heavy civil construction contractor. You get stability and experience of a local partner combined with the best construction technology available from Trimble. The experienced construction professionals at SITECH provide:

- Local customer service and sales
- Installation services
- Personalized training
- Technical support





#### Connected site solutions

Improve efficiency and productivity while minimizing waste and expense throughout the life of the project with Trimble® Connected Site® solutions for earthworks. Create a 3D constructible model, use it to plan the most cost-effective schedule and then use the same model to track project progress.

#### **Survey the site**

Collect survey data, grade check and as-built data from the field and send it to the office in real-time to build an accurate 3D constructible model for takeoff estimating, data preparation and reporting. Or take advantage of fast and safe aerial data collection with Trimble® Stratus software to replace ground surveys and provide more data at shorter intervals for lower overall cost.

With field software designed specifically for construction workflows and seamless integration with other Trimble software solutions, job site delays and rework are significantly reduced. Easy-to use and learn field software means you spend less time training and preparing data, and more time getting the job done.

#### **Build a 3D constructible model**

Combining current field conditions from multiple sources with design information provides the foundation for the 3D constructible model. Validate and improve the site operations plan with a 3D constructible model, so you know what to build and where to build it before costly construction begins. Adding intelligence to the model, such as how dirt will be moved, and updating the model with up-to-date field information makes the constructible model a powerful tool to plan, manage and construct projects.

#### Sync real-time data wirelessly

The 3D constructible model is used to automatically sync design files and work orders between the office and the field in real-time so everyone is working with the latest files.

When up-to-date design information can be sent to the field crews or machine operators without leaving the office, you get 100% less drive time and 100% less rework, 100% of the time.



#### **Support and train remotely**

Get real-time technical support for field crew personnel or earthworks machine operators, without the time and cost of waiting for a technician to drive to the construction site. Both the field crews and the support team see the same picture, eliminating costly delays, downtime and drive time.

#### **Track and report progress**

Intelligently combining as-constructed information from across the project allows for advanced, near real-time reporting for progress payments.

As-built progress can be monitored as the machines move dirt, and QA reporting and stakeout results can be generated. By combining both

survey and machine data, contractors get the best overall picture of the current state of the project. In addition, soil compaction operations can be monitored to ensure compaction requirements are being met.

#### **Collaborate effectively**

All your important files for the whole team are now located and backed up securely in the cloud. Overlay designs and cut/fill maps onto Google Maps or digital imagery, so everyone can see what's happening. Even site inspections and routine site visits are easily recorded and uploaded — including photos.

#### **Machine control**

**Benefits** 

#### \*\*Trimble | READY

Trimble has worked with many machine manufacturers to reduce the time spent on installation of Trimble machine control. Trimble Ready® machines ship from the factory ready for installation of Trimble components, which can significantly reduce the cost and complexity of the installation for the contractor. By making it faster and less expensive to install Trimble technology, contractors can now realize an even quicker return on investment from their Trimble equipment. Ask your local heavy equipment dealer if the Trimble Ready option is available for your new machine.



Goodfellow Bros Maui has had the privilege of partnering with SITECH Hawai'i, and the experience has been nothing short of exceptional. Their unwavering support in installing, supporting, and providing training on Trimble's Machine Control equipment and office software has been instrumental to our success. The SITECH Hawai'i team is remarkably knowledgeable and reliable, making them an indispensable part of our operations. Our Trimble equipment is not only phenomenally accurate but also incredibly user-friendly. From greenhorns to seasoned machine and rover operators, Trimble offers solutions that cater to our specific needs, making us more productive and competitive in a highly competitive industry. In an era where profit margins are slim, Trimble equipment gives us the edge to be more aggressive with our bids and secure more work. Trimble is a full solution for us, seamlessly connecting the office to the field. We are deeply grateful to have SITECH Hawai'i as not just our dealer, but also as our valued colleagues and friends.

HELMER REYES, ACT ENGINEER, - GOODFELLOW BROS



#### **Proven components**

The right fit for every job

#### Trimble SNM941 Connected Site Gateway

Connect your machine with rugged hardware from Trimble. Featuring both Wi-Fi® and cellular connectivity, the Trimble® SNM941 Connected Site® Gateway enables wireless data transfer of design files and GNSS corrections, and fleet, asset and site productivity information.



#### Trimble CB460 Control Box

Designed for use in harsh construction environments, the Trimble® CB460 Control Box is part of the Trimble® GCS900 Grade Control System and gives the operator a full-color graphical display for easy viewing and guidance to grade.



#### Trimble SNR On-Machine Radios

Rugged Trimble® SNR On-Machine Radios offer a modernized platform for communicating with Trimble universal total stations or with a fixed GNSS base station. Available in:



- Single-band 450 MHz, 900 MHz, and 2.4 GHz
- Dual-band 900 MHz + 2.4 GHz and 450 MHz + 2.4 GHz

#### Trimble MT900 Machine Target

The Trimble® MT900 Machine Target is designed specifically for fine grading applications with the Trimble Universal Total Stations. It uses a 360° ring of infrared LED's to enable reliable tracking from any horizontal direction and up to 1:1 or 100% slope. The LED's emit one of 16 programmable ID's that allow the instrument to lock-on and track the correct target every time. Rugged design endures vibration and temperature extremes to guarantee long-life usage in even the toughest conditions.



#### Trimble LR410 Laser Receiver

The Trimble® LR410 Laser Receiver is mounted to an electric mast on the blade and connected to the machine hydraulics to control lift to an accuracy of 0.01 to 0.02 feet (3-6 millimeters).



#### Trimble ST400 Sonic Tracer

The Trimble® ST400 Sonic Tracer is mounted to the blade and uses a physical reference such as curb and gutter, stringline, existing or previous pass as an elevation reference.



#### Trimble TD510 and TD540 Displays

The 10-inch (25.4 cm) TD540 and 7-inch (17.78 cm) TD510 Displays ensure the best user experience with the Trimble® Earthworks Grade Control Platform. With a specialized



combination of anti-glare, powerful backlighting and advanced optical bonding techniques, these rugged displays combine at-a-glance sunlight readability with an easy-to-use, multi-touch interface. Built on top of a powerful 3D graphics engine and processing platform, the Android operating system allows you to install additional applications without upgrading hardware or adding an additional display.

#### Trimble MS996 GNSS Smart Antenna

The Trimble® MS996 GNSS Smart Antenna contains an integrated GNSS receiver, antenna, and isolation system all in a single, durable housing. It uses the advanced Trimble RTK engine for faster initialization times when satellite lock is lost and enhances performance near obstructions.



#### Trimble MS976 GNSS Smart Antenna

The Trimble® MS976 GNSS Smart Antenna offers a cost-effective alternative for contractors who need a highly accurate GNSS receiver at a lower price point. It is optimized for cab or machine body mount only.



#### Trimble MS956 GNSS Modular Receiver

The Trimble® MS956 GNSS Modular Receiver is a positioning receiver intended for use with a Trimble® Zephyr® Rugged Antenna. It is specially designed and tuned to operate through the shock and vibration forces experienced on heavy equipment.



#### Trimble Zephyr 3 Rugged Antenna

The Trimble Zephyr 3 Rugged Antenna offers full support for current and near-future GNSS signals including GPS, GLONASS, Galileo, BeiDou, OmniSTAR®, Trimble RTX®, and SABS. Combined with rugged durability, it is a long-term investment.



#### Trimble universal total stations

Trimble SPS Series universal total stations (UTS) can be used for even greater accuracy when performing fine or finished grading, with blade guidance to 0.007 to 0.016 feet (2-5 millimeters).



#### **Trimble Earthworks**

Control the future

The Trimble Earthworks Grade Control Platform offers groundbreaking features. It is designed to help you do more in less time. State-of-the-art software and hardware give operators of all skill levels the ability to work faster and more productively than ever before.

#### Integrates with Trimble WorksManager and Trimble WorksOS software

Trimble® WorksManager is a mobile-friendly software that easily manages data and technology assets across project sites. It allows you to transfer data files to or from the office wirelessly, automatically ensuring everyone is operating from the latest design. Trimble® WorksOS Software monitors live earthmoving and compaction volume metrics, so you can see exactly how much work has been completed, and how much remains. Stay on schedule and work more efficiently with Trimble software solutions, designed to make construction management easier on and off the job site.

#### **Trimble Earthworks Assistant App**

The Trimble Earthworks Assistant App\* is a stand-alone app that consolidates and simplifies access to training guides and videos inside and outside of the cab. It makes it easy to learn and troubleshoot using an Android cell phone, even from remote sites. The user has access to critical Trimble Earthworks learning material and documentation, allowing for a shorter learning curve and less downtime for operators.

\*Available on the Google Play™ Store





#### **Machine control redefined**

#### **Intuitive software**

The Trimble Earthworks software was created in collaboration with construction equipment operators around the world, so the interface is optimized for ease-of-use and productivity.

- Colorful graphics, natural interactions and gestures, and self-discovery features make Trimble Earthworks intuitive and easy to learn
- Each operator can personalize the interface to match their workflow using a variety of configurable views
- Files can be transferred to or from the office wirelessly and automatically so you've always got the latest design







#### **Subscribe now**

Ask your SITECH dealer: all Trimble Earthworks technology is available as a subscription, reducing your upfront investment in earthmoving technology.

#### **Trimble TD510 and TD540 Displays**

- 10-inch (25.4 cm) or 7-inch (17.78 cm) touch color-display
- Gorilla® Glass
- Best visibility even in bright sunlight
- Android operating system
- Powerful octa-core processor platform with dedicated graphics processor
- Integrated Bluetooth® and Wi-Fi for wireless connectivity
- Quick release RAM mounting for daily theft protection removal
- Front facing USB for easy firmware updates and synchronization of design and productivity data

#### **Trimble® EC520 Electronic Controller**

- The processing unit is separated from the display and is permanently installed on the machine
- Integrated Inertial Measurement Unit (IMU) body sensor with 6 degrees of freedom
- Optional integrated Wi-Fi for on-machine wireless connectivity to displays, laptops, hot spots or mobile devices
- 4 GB internal memory for machine data and designs

#### Trimble® GS520 Grade Sensor

- Six degrees of freedom inertial measurement unit, based on the latest inertial sensor technology and particularly responsive
- 100Hz, 3x axle pitch, 3x axle acceleration
- Compact form factor: mount in any orientation
- Excavator bucket, dozer and grader blades
- Precision locating feature for positioning and re-positioning



#### **Trimble Earthworks for excavators**

#### Introducing undertime

Trimble Earthworks for excavators was the first aftermarket semi-automatic bucket and boom control system and gives your operation many competitive advantages so you can finish on-time and on-budget.

#### **Augmented reality**

With the augmented reality feature available in Trimble Earthworks for excavators, operators can view 3D models in a real-world environment at a true-life scale, in the context of existing surroundings. Augmented reality simplifies complex concepts by allowing users to work faster and safer using a blend of digital content and real-world environments.

#### **Tiltrotator support**

Trimble Earthworks works with tilt automatics on engcon®, Rototilt®, and Steelwrist® attachments. The system controls the boom and bucket of the excavator as well as the tilt angle of the attachment, while the operator controls the stick of the excavator and rotation of the tiltrotator.

#### Payload management integration

Trimble Earthworks has the option to display grade control and accurate payload data on one screen. Increase your mass haul productivity and efficiency by preventing underloading, and improving safety by avoiding overloading. Track productivity with the optional Bluetooth printer and web-based reporting.





#### **Various configurations**

#### According to your needs

**2D configuration for height and slope** - Flexible starter solution for excavation, canal and trench construction, grading and profile work — the start of productivity.

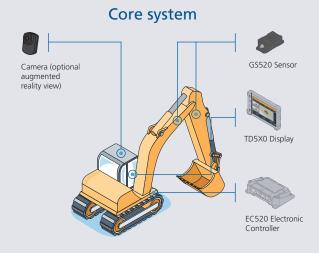
**3D single or dual GNSS or UTS configuration** - Powerful 3D control system to measure the exact position of the bucket for more complex grading and excavation tasks.

**Automatic guidance** - Available for a broad range of machine brands and models, the automatic system controls the hydraulics of the machine and achieves high precision in flat or inclined surfaces.

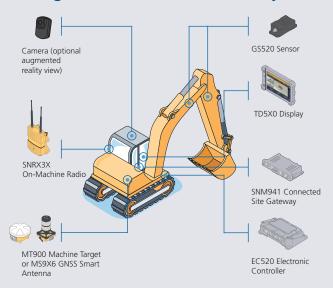
The benefits of automatic functionality increase the productivity of your machine up to 40%.

#### How it works:

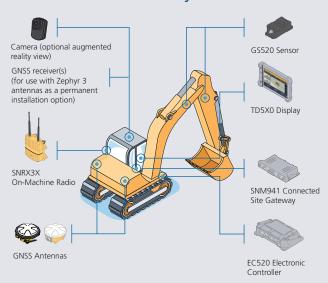
- 1. The excavator is placed in auto mode
- 2. The operator controls the stick
- 3. Trimble Earthworks controls the boom and bucket
- 4. Stay on grade, reduce overcut and increase production



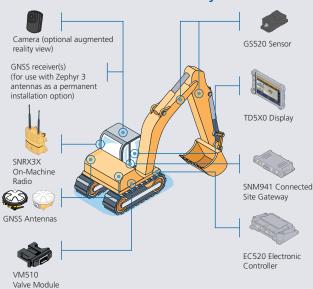
#### Single GNSS or 3D total station system



#### **Dual GNSS system**



#### **Automatics GNSS systems**



#### **Trimble Earthworks for dozers**

Control the future





#### **Machine control redefined**

#### **Focus on grade**

Horizontal steering control for dozers automatically controls the machine to follow any horizontal alignment such as a back of a curb, breakline, roadway centerline or bottom of slope, without operator assistance. Operators can also manually set up offsets from selected alignments that the machine can follow.

Horizontal steering control allows the operator to focus on the grade, machine productivity and safety rather than worrying about steering, which reduces operator fatigue and errors. It enables the machine to follow the horizontal guidance from the 3D model, providing operators increased awareness of their surroundings, better accuracy and improved productivity—with decreased overlap and fewer passes.

#### **Blade-mount dual GNSS support**

The blade-mount dual GNSS configuration allows for a broader range of supported dozer models. This enables older machine models in the fleet to have Trimble Earthworks guidance and control for the operator. The blade-mount GNSS only supports Dual GNSS.

#### **Cab-mounted portability**

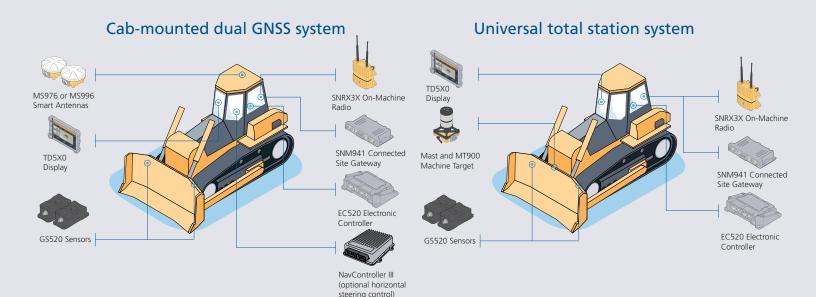
Trimble Earthworks for dozers mounts dual GNSS receivers on top of the cab to eliminate masts and cables traditionally located on the blade. The dual GNSS receivers are ideal for steep slope work and complex designs with tight tolerances.

This configuration allows you to easily move the receivers to other machines, to maximize your investment and keep your machines working. Cab-mounting receivers is more convenient and can save you time by reducing the need to reinstall them each day.



#### **Universal total station system**

For supported cab-mount GNSS models, the high-precision blade-mount options for laser and UTS expand machine control capabilities, both for seamless operation in GNSS obstructed environments and for tasks requiring higher precision than a GNSS-quided solution alone.



#### **Trimble Earthworks for graders**

Running on time





#### Leave a finished grade

The first time, every time

#### Single/ dual GNSS accuracy

Dual GNSS provides real-time position and heading of the machine for guidance of the motor grader blade in 3D, enabling faster reaction times and enhanced performance. The IMU-based system offers even better GNSS performance, for more accuracy and stability. The platform supports multiple correction services, including VRS and Internet Base Station Service (IBSS). And when a correction source is temporarily unavailable, the Trimble® xFill® feature will fill in the gaps to maximise up-time.

#### **Mastless flexibility**

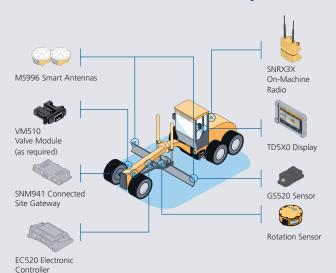
Trimble Earthworks for motor graders enables a mastless GNSS configuration for supported Cat® motor grader models. This mounts one GNSS receiver on the cab and the second GNSS on the gooseneck of the

machine to eliminate masts and cables traditionally located on the blade. The mastless GNSS configuration is ideal for applications to enable the blade's maximum range of motion such as steep slope work and complex designs that need to be built to tight tolerances. It also decreases risk of damage to the machine and reduces the time needed to remove and reinstall GNSS receivers each day.

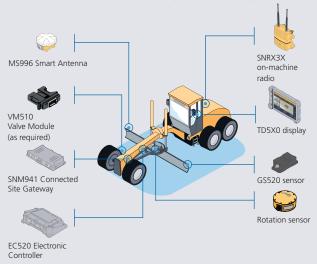
#### **Legendary precision with UTS**

Trimble Earthworks for motor graders with Trimble universal total stations is THE configuration for finish grading with fewer passes. Contractors can place finished grade materials more accurately and in a shorter time period, keeping material costs to a minimum and improving productivity.

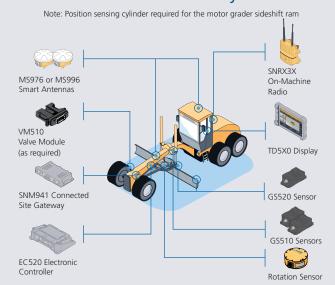
#### Blade-mounted dual GNSS system



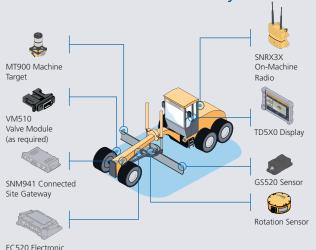
#### Blade-mounted single GNSS system



#### Mastless dual GNSS system



#### Universal total station system



#### **Trimble Earthworks**

Grade control platform for soil compactors





#### For a perfect finish

#### **Intelligent compaction**

Trimble Earthworks for soil compactors enables contractors to accurately control the compaction process, while reducing unnecessary passes that result in over compaction. The system achieves the compaction target faster, more accurately and with less rework.

- Compact surface material to the desired compaction stiffness target and monitor site volumes simultaneously, in real-time
- Soil and sub-surface material compaction measurement for single smooth drum and pad foot rollers
- Achieve increased durability, stability and load-bearing capacity

#### **Horizontal steering control**

steering control)

The horizontal steering control feature automatically controls the machine to follow any horizontal alignment such as a back of a curb, breakline, roadway centerline or bottom of slope, without operator assistance. Operators can also manually set up offsets from selected alignments that the machine can follow.

It enables the machine to follow the horizontal guidance from the 3D model, providing operators increased awareness of their surroundings, better accuracy and improved productivity with decreased overlap and fewer passes.

#### **Actionable data**

Supervisors and quality control managers can monitor compaction activities in real-time, and operators can immediately identify the areas that require further compaction using Trimble WorksOS software and Trimble Earthworks.

- Collect and document comprehensive, real-time compaction data
- Analyze data in the office to generate detailed reports and documentation to meet project specifications
- Continuously monitor pass counts and compaction measurement values (CMV) over the entire area
- Improve testing success, reduce rework and lower ongoing maintenance costs
- Reduce over-compaction to optimize fuel use and machine time, such as work previously completed versus work completed that day

#### **Dual/single GNSS systems** Universal total station system SNM941 Connected MS976 or MS996 SNM941 Connected MT900 Machine Target Site Gateway Site Gateway Smart Antennas TD5X0 Display SNRX3X SNRX3X TD5X0 Display On-Machine Radio On-Machine Radio CM3X0 Compaction Sensor EC520 EC520 CM3X0 Electronic Electronic Compaction Sensor Controller Controller NavControler III (optional horizontal

### **Trimble Earthworks for compact machines**

Trimble Earthworks is also available for compact grading attachments with single/dual GNSS, single/dual laser, single/dual sonic and total station guidance options. It provides a tailored 3D solution for applications such as site projects where full size grading machines are unable to operate in the confined environment or for the contractor looking to expand opportunities for 3D machine control jobs.

The operator user interface remains consistent with larger machines:

- Compact loader and attachment icons for the brand of grading attachment
- Supports TD5X0 display and your own device
- Office and in-field design support

Dedicated software license options and alternative hardware configurations allow for easier installation at lower expense.







#### **Small machines, big potential**

#### Made for your small machines

Trimble Earthworks for compact machines delivers on the needs of your small machines.

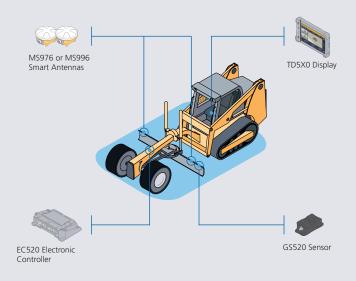
Offering a wireless connection to the machine display for maximum flexibility, as well as compact machine-specific interface elements, Trimble's latest offerings will help you maximize the productivity of your small equipment.

#### Options to get the job done right

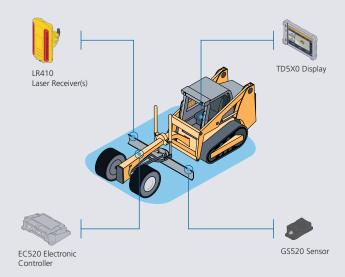
Trimble Earthworks for compact machines gives you a variety of sensor options to meet the needs of your next job.

Offering GNSS based systems, as well as universal total station and laser options, we have what you need whether flexibility or the ultimate level of precision is your goal.

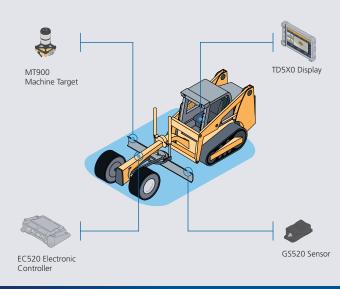
#### Blade-mounted dual/single GNSS system



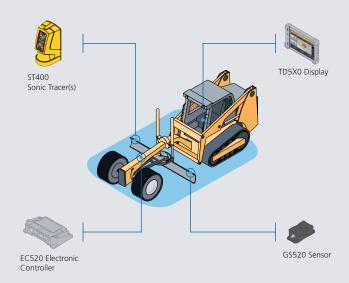
#### Dual/single laser system



#### Universal total station system



#### Dual/single sonic system



#### **Trimble Earthworks GO! 2.0**

#### 2D grade control system for compact grading attachments

Trimble Earthworks GO! 2.0 is the next generation of compact machine control, designed to enable system expandability and upgrades so your investment remains valuable and updated over time. Trimble Earthworks GO! 2.0 provides high-accuracy grading capability while reducing capital expense. This user installable, low-cost solution is the ideal first step into machine control for small contractors and owner operators. Compact, easy-to-use and highly portable, the system can quickly be moved from attachment-to-attachment for increased utilization and fast return on investment.

#### **System features**

- iOS and Android<sup>™</sup> compatibility allows operators to use their smart device as the primary machine interface
- Trimble technology enables full sensing technology with no mounting hardware required
- Simple harnessing provides a low-profile, easy to maintain solution
- 2D automatic grade control
- Integrated installation and calibration tutorials that make setup easy
- Proven laser-guided technology enables high precision grading in less time
- Slope control with no laser to easily grade without any setup required
- Save machine profiles to enable one-time setup

#### **Unparalleled portability**

Trimble Earthworks GO! proprietary Trimble GO! 2.0 Box technology lets contractors quickly swap the system between machines to take care of the job at hand. Save machine profiles to the GO! 2.0 Box to ensure you only have to set up your machines once, so you can pick up right where you left off.

Ultra-portable and intuitive, Trimble Earthworks GO! provides high accuracy performance in all common grading applications such as pads, parking lots, sports fields, landscaping and more. It also works across the entire fleet of attachments for compact track and skid steer loaders.





#### Easy-to-use, portable platform



#### Smart device user interface

- Designed for visibility in bright daylight
- Intuitive software design for unmatched ease of use
- Integrated setup tutorials to get up and running faster than ever



#### Trimble GO! 2.0 Boxes

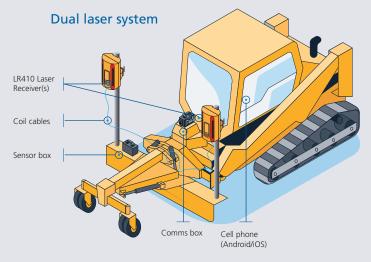
- Fully portable with magnetic mounts
- Ruggedized for construction environments and exposure to the elements
- Trimble Comms Box contains a Bluetooth communications device
- Trimble Sensor Box contains the system IMU

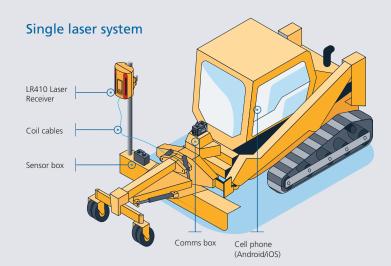


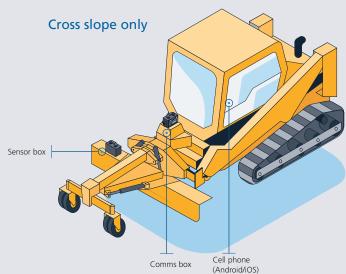
#### Trimble LR410 Laser Receivers

- 9 inch (23 cm) detection window for maximum working range
- Can work with OEM masts or Trimble manual masts
- Perfect for high precision grading needs









#### **Trimble GCS900**

#### **Grade Control System**

Trimble machine control systems are flexible enough to let you equip your entire fleet—excavators, dozers, scrapers, graders, trimmers, milling machines, compactors, pavers and more—with fully upgradeable technology. Start where you need to, and add as needed. Select the best option for the machine and application: sonic, angle sensors, laser, GNSS or total station.

#### **2D entry-level machine control systems**

Trimble entry-level 2D machine control systems are ideal for smaller projects—from initial site prep through to finished grading and paving, and leveraging a range of fully portable components. All components are easy to move from machine-to-machine, easy-to-use, quick to set up and extremely durable to ensure the highest uptime and longest life possible in job site conditions. Additionally, these systems can be operated in manual or auto mode in auto mode, the blade is automatically moved to the correct position.

	Configuration	Target machines	Description	Key components
	Cross-slope only	dozers, graders, compact grading attachments	Cross-slope control system to be used on motor graders for fine grading work for road maintenance, ditches and slope work	2 angle sensors, rotation sensor, control box, SNM941
	Single elevation plus cross-slope	dozers, graders, compact grading attachments	Single control system uses a laser or sonic receiver to control the lift of the machine blade and the cross-slope for flat, slope work, and finished grading	laser, laser receiver or sonic tracer, rotation sensor, 2 angle sensors, control box, SNM941
	Dual elevation	dozers, graders, compact grading attachments	Dual control system that uses two laser or sonic receivers for higher accuracy lift control; blade edge can be controlled independently or linked	laser, 2 laser receivers or 2 sonic tracers, control box SNM941
	Depth, slope, and elevation control	excavators	Highly flexible system for excavation, trenching, grading and profile work	angle sensors, laser catcher, control box, SNM941

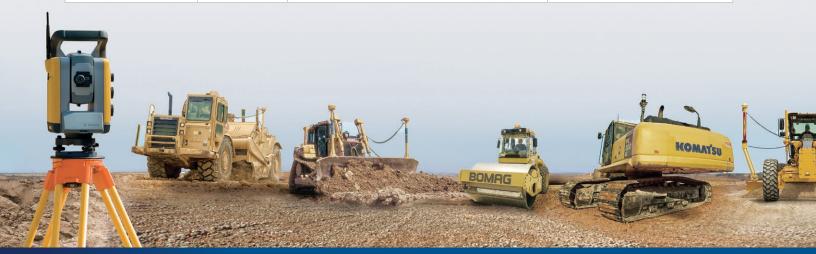






Trimble machine control systems are the most versatile grading technologies available and can be used on a wide range of machine types, including excavators, dozers, motor graders, compactors, milling machines, trimmers, pavers and more. By putting design surfaces, grades and alignments inside the cab, the system gives operators unprecedented control over grading, excavating, compaction and paving applications, significantly reducing material overages and dramatically improving productivity and profitability. The 3D systems can be operated in manual or auto mode, offering a range of components that are fully portable and can be easily moved from machine to machine.

	Configuration	nachines	Description	Key components
5	Single GNSS	dozers, graders, scrapers, excavators, compact grading attachments	Measures the position and slope of the blade and compares that to design data for grading and mass excavation on complex design surfaces	angle and rotation sensors, single GNSS smart antenna, control box, rugged on-machine radio and SNM941
l systems	Dual GNSS	dozers, graders, scrapers, excavators, compact grading attachments	Measures the exact position, cross slope and heading of the blade, bucket, drum for rough grading and mass excavation on steep slopes and complex design surfaces	dual GNSS smart antennas, control box, rugged on-machine radio and SNM941
ontro	Cab-mounted single GNSS	dozers, wheel loaders	Measures the position of the blade on the ground, comparing that to the 3D design for rough grading applications	single GNSS smart antenna, control box, rugged on-machine radio and SNM941
3D machine control	Single or dual GNSS with laser augmentation	dozers, graders	Single and dual GNSS systems enhanced with laser augmentation to improve vertical accuracy for high accuracy guidance for complex design surfaces such as super-elevation grading for rough through finished grade work	single or dual GNSS smart antenna(s), laser receiver, control box, rugged on-machine radio and SNM941
3D m	Universal total station	dozers, graders, excavators, soil compactors, compact grading attachments	Total station-based system for high accuracy lift and layer control, material placement and monitoring, or for jobs where GNSS is not the ideal solution because of overhead obstructions	single on-machine active target, control box, universal total station, rugged on-machine radio and SNM941
	3D + sonic	graders, compact grading attachments	Uses 3D control on one blade tip and a sonic tracer on the other blade tip to match an existing structure, feature or the last machine pass	on-machine active target or GNSS smart antenna(s), sonic tracer, control box, rugged on-machine radio and SNM941



#### **Trimble Roadworks**

#### For mills and cold planers

With Trimble® Roadworks Paving Control Platform for mills and cold planers, you can mill at variable depth and slope, eliminating undulations and preparing a smoother sub-surface for new asphalt. The 3D design is displayed to the machine operator showing areas that are on, above or below ideal grade. Comparing the actual drum position and slope with the digital design, Roadworks automatically guides the milling drum to cut the ideal depth and slope without string lines or manual adjustments.

Eliminate guesswork and improve safety with the most accurate and reliable milling system on the market. Keep up as projects continue to become more demanding, and get complex designs such as transitions, superelevations and drainages right the first time.







#### Mill out the waves

Surpass your milling specifications

#### Finish faster with less material

Beat completion deadlines and deliver the highest quality surface at minimal cost. Mill more efficiently and accurately to reduce lane shutdowns and overall construction time. By only milling to the exact depth required, machines burn less fuel and experience less drum teeth wear, fewer trucks are required to remove waste material and less asphalt is required for the final surface.

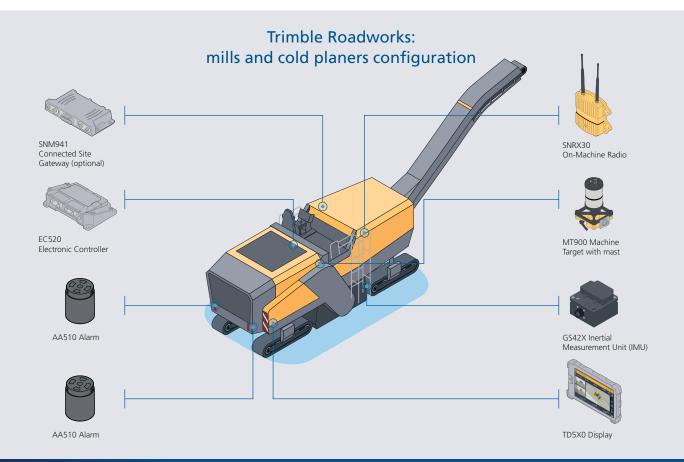
#### Office-to-field connectivity

Reduce waste and over-cutting with efficient communication and data transfer with Trimble WorksManager software—a mobile-friendly application that easily manages data and technology equipment across jobsites. With the Trimble SNM941 Connected Site® Gateway, transfer 3D designs from the office to the machine wirelessly and automatically so that the operator is always using the latest design. Productivity data collected from the machine can automatically sync back to the office to track and monitor progress with Trimble WorksOS software.

Create optimized 3D milling plans in Trimble® Business Center, then generate comprehensive quality and production reports. With Trimble technology, both time and accuracy are on your side.







#### **Trimble Roadworks**

#### For asphalt pavers

The Trimble Roadworks 3D Paving Control Platform for asphalt pavers is a highly accurate, automatic 3D screed control system that can significantly improve paving productivity and rideability by directly referencing the design rather than a surface or string line to minimize asphalt usage, reduce waste and overruns and finish projects on time and under budget.

When used with a traditional asphalt paving machine with a tractor and hydraulically controlled floating screed with a supported 2D system, Roadworks can be used to place any variety of materials, including hot asphalt, cold recycled asphalt, road base, gravel, concrete treated base, sand or any other paving material.



#### The horizontal steering control and automatic screed width controls

on Vögele Navitronic asphalt pavers automatically steer and control the screed width for linear paving and radius paving according to 3D design. This ensures that pavement is placed accurately horizontally and vertically, all without operator intervention.

Horizontal steering and automatic screed width controls allow for a higher quality surface, and for faster, more accurate paving and with substantially less operator fatigue than with traditional asphalt paving methods.





#### For excellent rideability results

3D asphalt paving

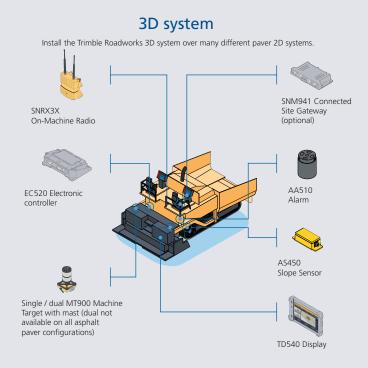
#### **Productive and precise paving**

- Achieve smoothness and accuracy up to the finished surface
- Minimize the use of expensive material by paving within a tighter tolerance and getting closer to the minimal asphalt thickness specification early in the process
- Improved sensor mobility to easily swap sensors based on application, such as cross-slope to joint matching configurations
- Monitor the measured and target values of the cross slope and mat thickness simultaneously
- Rugged and durable components for tough construction conditions, rated to protect against dust and water
- Reduce labor costs by controlling the screed with one operator
- Increase efficiency by eliminating the need to pick up the mechanical averaging beam when going over hot asphalt, storm drains or other obstructions
- In 2D applications, contractors can easily change sensor values and operate the system in the field with the combined touchscreen display and tactile keypads
- In 3D applications, eliminate any complications involving stringlines: human error, costly setup, maneuvering hazards, etc.





# SD510 Switch VM510 Valve Module EC 520 Electronic Controller TD510 Displays with keypads A5200 Angle Sensor



#### **Trimble Roadworks**

#### For asphalt compactors

Trimble Roadworks Paving Control Platform for asphalt compactors is the next generation intelligent asphalt compaction (IC) system designed to help operators of all levels improve the speed, accuracy and ease of asphalt compaction.

The intuitive Android interface on a large, user-friendly touch screen enables you to easily view real-time temperature mapping, compaction progress, pass counts and optional display and recording of the compacted asphalt density.

For asphalt and hot mix asphalt compaction applications, Trimble Roadworks is ideal for operations where the specification calls for a target density, pass count and asphalt temperature control such as highway and railway construction, residential pads, commercial site construction, parking lots and sports fields.



#### **Intelligent compaction**

The asphalt compactor is the last machine to pass over your paving project, and mistakes during this phase can be very costly to fix.

Roadworks enables contractors to accurately control the compaction process, while reducing unnecessary passes that result in over compaction. The system achieves compaction target faster, more accurately and with less rework.

- Compact surface material to the desired density and monitor site volumes simultaneously, in real-time
- Ensure optimal compaction within the target temperature range, avoiding under and/or over compaction with real-time temperature map monitoring
- Achieve increased durability, stability and load-bearing capacity
- Easily meet Department of Transportation (DOT) or private job specifications





#### For a perfect finish

#### **Actionable data**

Supervisors and quality control managers can monitor compaction activities in real-time, and operators can immediately identify the areas that require further compaction.

Office-only licenses offer extended functionality.

- Collect and document comprehensive, real-time compaction data to improve layer management
- Analyze data in the office to generate detailed reports and documentation to meet project specifications
- Continuously monitor pass counts and compaction measurement values (CMV) over the entire area to take corrective action as needed
- Improve testing success, reduce rework and operator hours and lower ongoing machine maintenance costs
- Reduce over-compaction to optimize fuel use and machine time

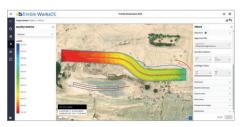
- Better understand work previously completed versus work completed that day
- Field data files can be directly imported into the Veta software platform to increase work opportunities and to gain a competitive advantage at the bidding process

#### Office-to-field connectivity

Reduce waste and overruns with efficient communication and data transfer with Trimble WorksManager and Trimble WorksOS—mobile-friendly software that easily manages data and technology assets across job sites.

With the Trimble SNM941 transfer 3D designs from the office to the machine wirelessly and automatically so that the operator is always using the latest design. Productivity data collected from the machine can automatically sync back to the office.

Universal total station system



Trimble WorksOS software



#### Single GNSS system

## SNM941 Connected Site Gateway SNRX3X On-Machine Radio TD5x0 Display IS310 Thermal Sensor CM310 Compaction Sensor CM310 Compaction Sensor CM310 Compaction Sensor CM310 Compaction Sensor

#### **Trimble paving solutions**

3D slipform paving

#### No string, no delays

String line delays your pour, it costs too much, and it's just too hard for your haul trucks to drive around. Every time it breaks, you have to stop the machine. Every time it sags, your surface suffers and so does your bonus.

Once you start paving with the Trimble® PCS900 Paving Control System for slipform pavers, you'll wonder how you could ever use string in the first place. You'll start working faster every day. Your haul trucks can pull up and dump without driving around stakes. You'll stop less often, grind fewer problem spots and blow away your target IRI (International roughness index) number.





#### **Concrete paver guidance**

Stringless and precise

#### More control, less waste

The system uses automatic steering and 6-way control of the pan to keep the paver exactly on the target alignment, grade and slope. The result is a more consistent concrete surface with better rideability and a bigger bonus — without the time and cost of string.

You'll see efficiency improvements through:

- Improved site logistics and safety
- On time delivery of mix
- Better yield
- Increased smoothness

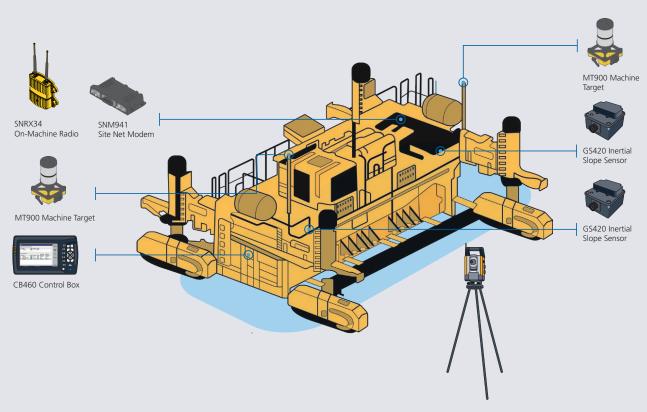
#### One integrated workflow

The cost of concrete rework is too high to be working with multiple manufacturers and file formats. Using one integrated workflow from Trimble, you can be confident of the quality of your work, and stake your reputation on the results.

Pave to the 3D design, and your grade checker can work from the screed using a Trimble rover, the same 3D design model and total stations to verify the as-poured surface.

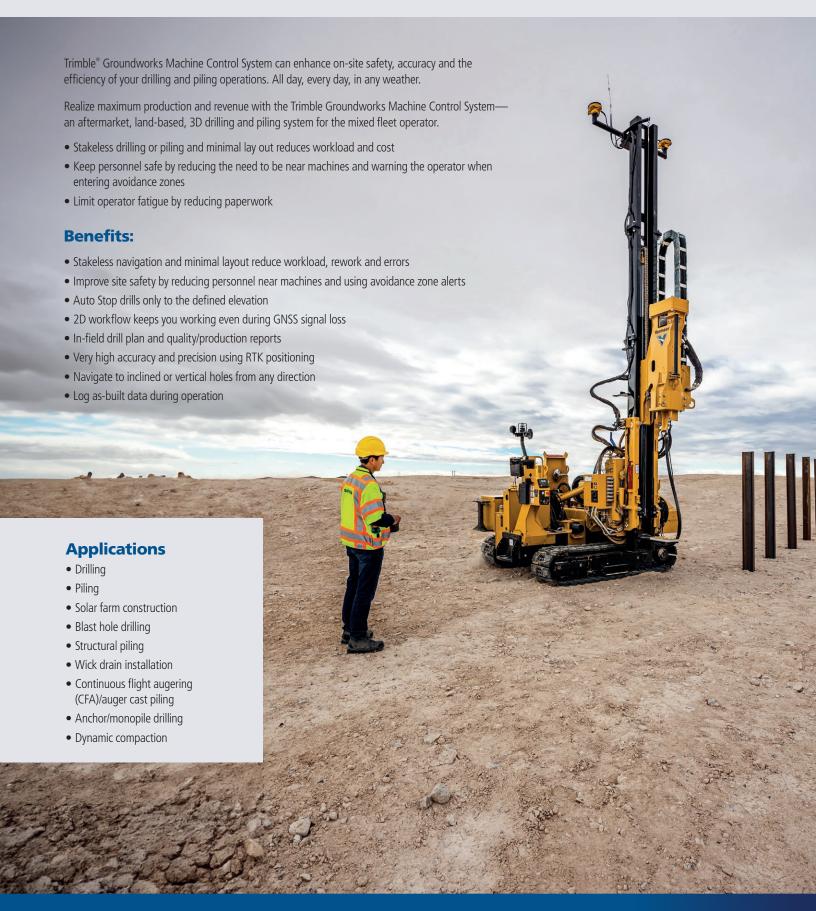
Plus, training and support from your local SITECH Technology Distributor means you are never working alone.

#### Universal total station system



#### **Trimble Groundworks**

Machine control system for drilling, piling and compaction





#### **Optimize production and revenue**

#### **Trimble VERSO 12 Display**

#### Keep your machines working—not waiting

Your machines can be up and running 24/7 with the rugged and fully connected Trimble® VERSO 12 Display and Trimble Groundworks. The easy-to-read touchscreen makes navigation simple and guick.

- Rugged VERSO 12 display
- Clearly see avoidance zones for safer sites
- Configurable views
- Easy-to-use, intuitive interface
- Modern, colorful graphics

Part of the Trimble Connected Site portfolio, Groundworks is an integrated solution that brings the office and the field together to give you less rework, more productivity, and best of all—more profitability.

- Trimble Business Center creates and manages design data to avoid costly mistakes
- Connected Community allows design data to be shared in the cloud and ensures operators are always working with the most recent information
- Groundworks gathers as-built data so Trimble Business Center can run accurate quality, production, and utilization reports

Trimble WorksManager software makes it easy to manage up-to-date



#### **Trimble Business Center**

#### Optimal drill plans, optimal results

Rapidly create optimized 3D drill or pile plans with Trimble Business Center software, then generate comprehensive quality and production reports. With Trimble Business Center and Trimble Groundworks, more profits are at your fingertips.



#### **Civil Bid to Build**

**B2W** software solutions





#### **B2W Estimate**<sup>™</sup>

#### Win more bids at better margins

- Bid faster and more accurately with centralised resource databases, templates and cost structures
- Leverage powerful review and analysis features
- Integrate easily with accounting software and operations systems

#### **B2W Schedule**<sup>™</sup>

#### Manage resources with real-time visibility

- Schedule and dispatch employees, equipment, materials and trucking
- View and manage assignments, needs and orders with Customizable views
- Works on desktop or iOS/Android tablets

#### **B2W Track**<sup>™</sup> & **B2W Employee app**<sup>™</sup>

#### Keep jobs on track with daily field reporting

- Customizable field logs and work logs
- Measure performance to plan daily
- Streamline approval workflows
- Integrate with accounting software for job costing and payroll efficiency

#### **B2W Maintain**<sup>™</sup>

#### Cut equipment costs, increase uptime

- Manage inspections, repair requests, work orders & parts more efficiently
- Automate preventive maintenance
- Centralise equipment maintenance data for better decision making

#### **B2W inform**<sup>™</sup>

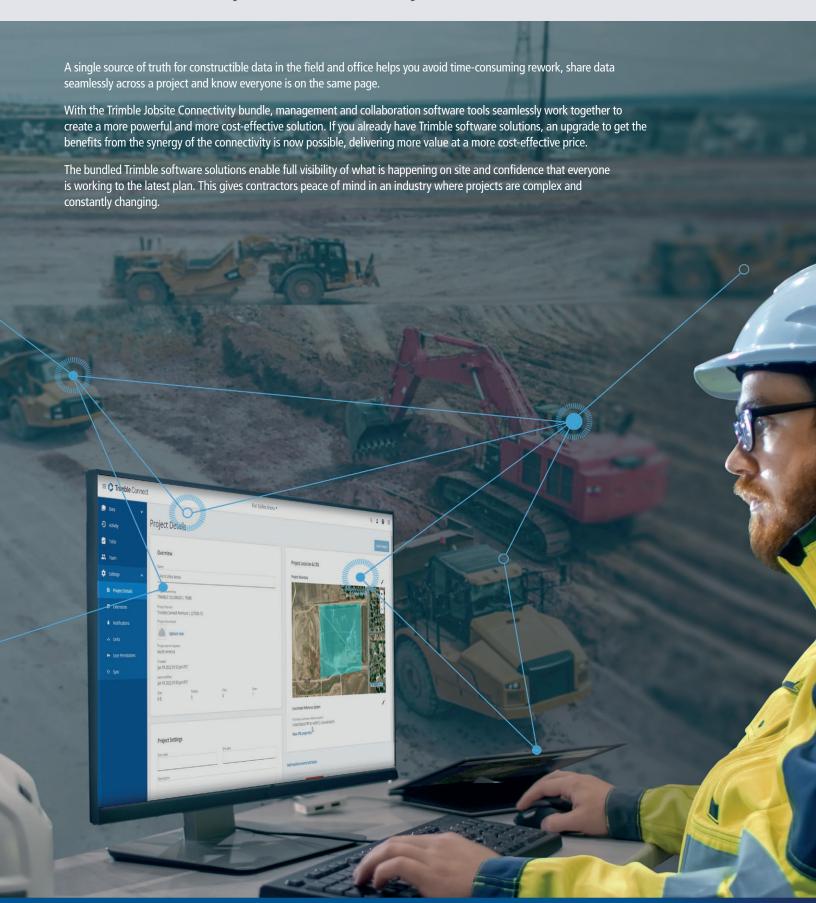
#### Paperless data capture and reporting

- Create custom e-forms in minutes with a drag-and-drop UI
- Access and submit forms using any device onboard reports, analytics and notifications
- Works online and offline



#### **Connect your jobsite**

With the Trimble jobsite connectivity bundle





#### **Projects and data**

#### Connected from office-to-field



#### **Trimble Connect**

Trimble<sup>®</sup> Connect<sup>®</sup> is a cloud-based collaboration platform where project stakeholders can share, review, coordinate and comment on construction models, schedules and other project information.



#### **Trimble Business Center**

Takeoff and modeling software that can be used to calculate earthwork and material quantities for bids, build constructible 3D models for construction surveying and machine control, and more.



#### **Trimble WorksManager software**

A cloud-based application that remotely sends construction-ready models to machines and construction surveyors in the field, so operators are always working with the latest designs.



#### **Trimble WorksOS software**

Integrate design data from the office with machine control as-built data to provide real-time jobsite progress and productivity updates.

#### Simplified pre-construction

Connecting construction operations can pay off even before the project begins. Accurate information at your fingertips allows for better planning, scheduling and bidding.

- Quickly and easily confirm designs without expert-level skills
- Avoid time-consuming file formatting and opportunities for error

#### Compatible with a wide range of solutions

- Connect all stages of the construction project
- Standardized data allows for wider use across the project
- Support for third-party solutions increases business opportunities
- Transfer files between different field systems operating on the same site
- Leverage the Trimble Connect Software Developer Kit (SDK) to integrate third-party tools with Trimble civil construction software
- Supports LandXML-based data exchange

#### **Avoid rework**

Quickly modify plans and coordinate with field operations from anywhere in the world, avoiding costly mistakes from an outdated design or incorrect coordinate system.

- More efficient and faster file transferring to reduce risks of mistakes
- Cleaner handoffs from engineers make sure everyone is working from the same design with less effort
- Provide transparency across the entire organization so you're always looking at the latest information
- Settings flow throughout projects, and projects flow throughout systems





#### **Trimble WorksOS**

Real-time productivity data from your job sites

Trimble WorksOS software is a cloud-based solution delivering 3D productivity and real-time progress for site supervisors and project managers to plan and maximize job site efficiency. WorksOS enables multi-user collaboration and communication, giving stakeholders immediate access to the latest information, workflows and project status to empower better decision making. The software performs real-time calculations efficiently and consistently to make it easier to understand real work progress and pro-actively make adjustments to stay on budget and on schedule. **3** 



## Flexible technology solution

To fit your business

### **Benefits**

- View the progress to plan for each project in a single dashboard
- Real-time cut, fill, volume, and compaction data for increased visibility of machine and job site productivity
- Drive your machine activity from a central site design for real-time progress versus plan updates from the field
- Effortlessly track the progress of multiple working zones and activities for validation of work performed
- Remote access saves time on unnecessary job site visits, frequent check-ins and surveys

## **Key features**

#### Connected construction

- Upload designs, topographical and drone surveyed surfaces, and machine as-built data
- Integrated designs from Trimble Business Center
- Interoperability with Trimble Connect and Trimble WorksManager software for project, design and asset management
- Utilize machine productivity data from Trimble machine control systems

### 3D productivity monitoring

- Real-time cut, fill, volume and compaction data
- Adjust daily work targets to stay on schedule
- Visibility into which machine is working
- 2D cut/fill maps for material movement
- Pass count maps for compaction
- Filtering capabilities based on machines, geofences and lifts
- Progressive volume charts to show cumulative total over time

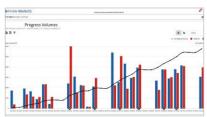
#### Activity workflow advantage

- Define the start/end, quantity and design targets of an activity
- Track progress and productivity to optimize bidding, scheduling and estimating
- Intuitive interface enables users to easily monitor job site metrics without having to understand and setup complex filter settings
- Key metrics and completion status of activities in a summary report dashboard for convenient monitoring and reporting
- Identify when progress is behind schedule to make resource corrections and get back on track

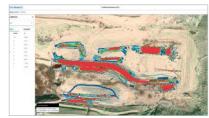








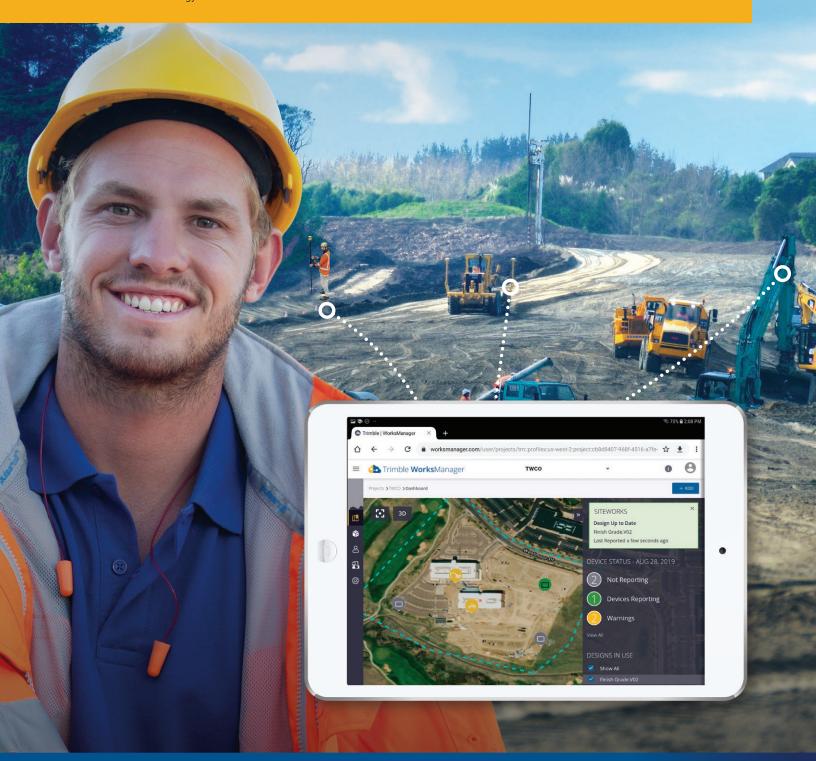




# **Trimble WorksManager**

Now you can be everywhere at once

Trimble WorksManager software allows users to wirelessly transfer data such as 3D designs to the construction site, increasing efficiency and saving drive time and money. Supervisors and data managers will be sure that the right machines or data collectors are always using the current design. A practical dashboard shows managers an overview of their sites. Contractors can prevent costly mistakes and rework by seeing their construction technology in the field in real-time.





## Easily manage your data and assets

Without leaving the office

### Seamlessly connect the office and the site to improve a variety of workflows

For example:

- WorksManager enables foremen to supervise and coordinate multiple crews and multiple projects from one location
- Site supervisors can trust that the correct design is being used in the field
- Share device data from various accounts into a single project for more efficient project management and device monitoring
- WorksManager gives data-prep professionals the confidence that their changes are being communicated and applied at the site
- WorksManager can extend the range of existing base station corrections so GPS and survey managers can send crews out over a larger area

### Always connected and up-to-date

- Easy-to-use workflows keep current information at your fingertips
- Mobile friendly, data is available when and where you need it
- Integrates with Trimble Earthworks, Trimble Siteworks Positioning Systems and Trimble Business Center
- Up-to-the-minute, actionable data empowers you to run your business more confidently and profitably
- Limit the risk of miscommunication to and from the field with automatic data transfer

#### **Seamless transfer**

- · Easily transfer data to and from devices over the internet
- Stream corrections to your devices

### Job site visibility

- · Keep track of the location of your devices and machines with detailed activity information
- Intuitive dashboard shows an at-a-glance view of your digital assets and design information wherever you are
- Monitor operations to keep the job on track and keep costs down

#### **Remote assistance**

- Troubleshoot issues in the field from the office
- Efficiently support the team in the field from wherever you are, react quickly when things go wrong and get everyone back to work faster



## **Trimble Business Center**

Increase efficiency in the office and on the job site

### **Out-bid and out-perform**

Trimble Business Center is your complete office software solution to out-bid and out-perform your competition. Manage data and accomplish tasks throughout the project lifecycle for civil construction job sites, highways and marine applications in a single software package. Make better decisions, decrease costly mistakes, and increase efficiency in the office and on the job site.

With Trimble Business Center, you can efficiently calculate earthwork and material quantities for bids, prepare data for construction stakeout, build 3D models to optimize machine operation, track productivity and understand how profitable you are on any given project.

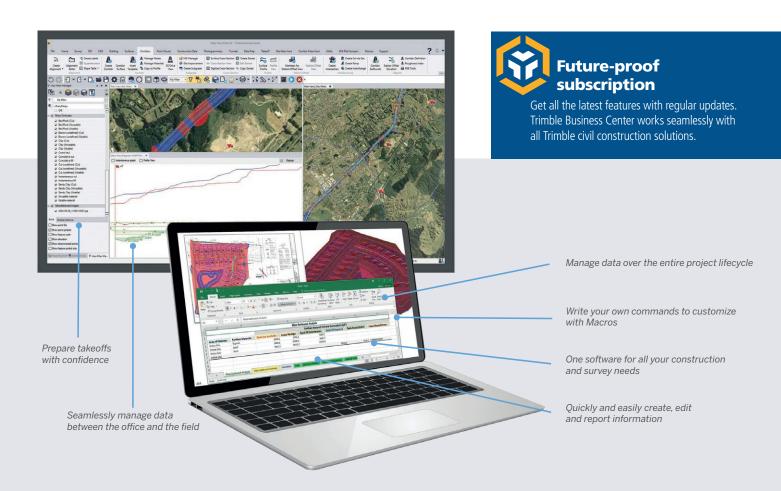
#### From bid to build

Win more bids by preparing 3D earthwork and construction takeoffs quickly and accurately with enhanced levels of detail. Use Trimble Business Center's CAD tools, surface to surface comparisons and material management to accurately estimate projects and take full control over data throughout the project lifecycle.

Easily prepare data for field devices and seamlessly manage the data flow between the office and the field. Reduce rework by ensuring data is clean, up-to-date and delivered in the right format to get the job done. Deliver the highest quality results which can be displayed in a variety of reports and models.

#### **Connect more data**

Leverage the power of survey and construction data in a single, robust software environment to confidently deliver project after project with Trimble Business Center. Connect more data without the hassle of switching between software platforms, lowering operational costs and increasing productivity. Combine raw measurements from GNSS, total stations, and levels—then, add in data from unmanned aerial vehicles (UAVs), mobile mapping systems, and terrestrial laser scanners—all of which is scaled to your survey data. No need to import and export between multiple software packages. No need for training, renewals, or support for different applications from different providers.





## For your projects

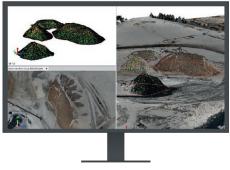
## From the start to the end



Digitize plan sets from PDF into 3D linework and models



Calculate earthwork, material and cost data



Compute precise surfaces and volume stockpile quantities

### **Supported workflows**

#### Data prep

Make sure your data is clean, up-to-date, and delivered in the right format to get the job done. With Trimble Business Center, you can easily organize all your data and digitize plans into 3D models, saving time and allowing you to focus on getting the job done.

#### Takeoff and mass haul

Calculate earthwork and material quantities of a construction project and generate takeoff mass haul reports. Optimize site and corridor earthworks to increase profits.

#### Surfaces and volumes

Create, process, and deliver complex surface models for field devices, machine control systems and third-party export. Generate quick and accurate volume reports from surface comparisons, stockpile/depression and corridor surfaces to quantify progress on your projects and see how much work is left to do.

## Alignments and corridors

Model and manipulate alignments and parametrically-designed corridors. Handle complex roadway projects, design corridor features and generate reports in minutes.

## **CAD** and drafting

CAD tools make it easy to produce your final survey linework, construction models and roadway design plots with ease.

### Aerial photogrammetry

Fly virtually any UAV to obtain data that you can adjust, measure and model. Simply drag and drop your drone data to import and then create industry leading, highly accurate deliverables in an easy-to-use three step workflow.

### Scanning and point clouds

View, manipulate and extract information from terrestrial, mobile and aerial point cloud data.

## **Utility modeling**

Create pipe and utility networks for takeoff and visualization applications.

## Drilling, piling and dynamic compaction

Prepare work plans and reports for boring and drilling, foundation and infrastructure piling and dynamic compaction, and connect to the Trimble Groundworks Machine Control System.

## **Trimble Stratus**

Drone data platform for construction

Trimble® Stratus Software powered by Propeller helps civil contractors use drones to map, measure and share accurate information about their worksites and assets. With Stratus, you can make quicker decisions, avoid mistakes and grow profits by always having the right information on hand.

## **Confidently plan and estimate**

Know what you're quoting: Conduct your own site surveys before the job begins, and whenever changes occur.

## Survey frequently and faster

Get accurate, up-to-date topographic surveys whenever you need.

### **Communicate effectively**

A visual timeline keeps everyone on the same page. Track site changes, avoid crossed wires and resolve disputes quickly.

#### **Take control**

Save money and avoid information bottlenecks. Get answers to questions yourself with an intuitive, web-based tool.

#### **How it works**

Place ground control



Fly drone over site



























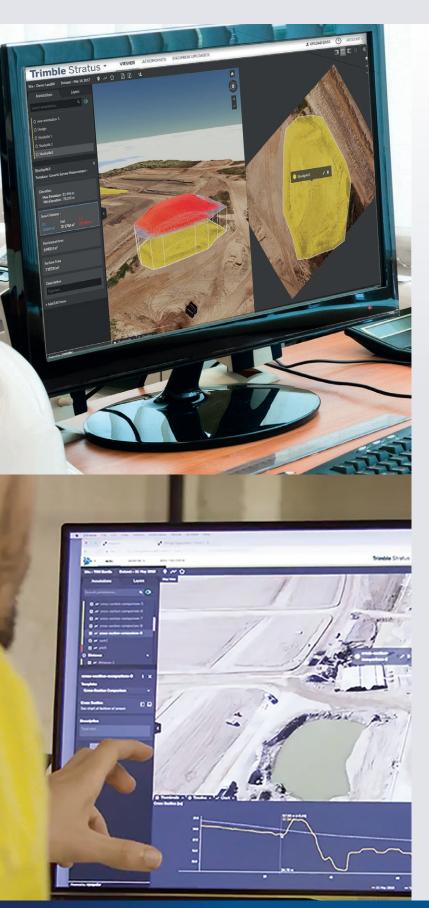
**Upload** ground control



Upload drone images



## **Drone data analytics**



#### **Site volumes**

• Calculate overall material volumes added or removed from pits, stockpiles, cells, drainage channels, etc.

#### **Design checks**

- Upload design file to compare actual surface to design surface and track progress
- Easily measure distances, slopes and heights to compare with site measurements

#### **Subcontractor management**

- Perform quick volume calculations of material moved for progress payments
- See proof of site changes via a visual timeline
- Fewer disputes as your portal can be shared with subcontractors so everyone is on the same page

### **Road and traffic management**

- Measure road grades, cross-slopes, road widths and window heights with one click. Optimize traffic plans with a complete, up-to-date site map, and easily direct personnel to where they need to be
- Reduce cycle times and optimize mobile plant efficiency by tracking haul road design conformance

### **Safety**

- Reduce people-to-machine interactions by surveying inaccessible or hazardous areas safely using a drone
- Get overall site images for inspection works, without sending personnel on-site
- Track changes in slope angles to better manage slips

## **Environmental responsibilities**

 Get frequent, detailed images of site boundaries and protected areas to easily demonstrate conformance with regulatory requirements

## **Project efficiency**

- Trimble Stratus integrates with Trimble Business Center and Trimble
   Site Positioning Systems for consistent local coordinate definition
- Conduct your own site surveys for more accurate estimates
- Tighter plans and budgets as a result of more frequent and accurate volume data
- Fewer site visits needed when people can track progress and inspect work remotely
- No more information silos or unnecessary hold-ups when everyone can work from the same current survey data

## **Trimble SiteVision**

Augment your reality

Trimble° SiteVision° software is a user-friendly augmented reality system that brings your data to life in real-world environments so that cut/fill maps, pass count maps, density and more become visible, right from your mobile device.

With centimeter-level accuracy, this user-friendly tool with intuitive user interface is easy to use and accessible to anyone. With simple tools for measurement, volume calculations and 3D scanning, you can empower your team to perform estimates and make decisions in the field without a comprehensive survey. Don't waste time waiting for surveyors when anyone on the team can use SiteVision for accurate and timely information.





## **Bring your data to life**

#### **Key features**

- Accurately place and displays 2D/3D data in real-world context from any angle at true-to-life scale
- Precisely locate and reveal hidden assets
- Automatically transforms complex 2D designs into visual 3D models
- Switch between 2D and 3D views
- Provide Trimble cloud-based data hosting and reporting tools
- Enable collaboration and communication of designs on the job site
- Seamlessly integrate with your data from Trimble Business Center, SketchUp, Trimble® Novapoint, AutoCAD and more
- Lightweight, portable handheld or pole-mounted unit
- NEW: Capture 3D data on LiDAR-equipped devices\* in a fraction of the time it takes to set up and move expensive laser scanners. Work faster by scanning on the move with the precision of GNSS, and obtain accurately georeferenced points that are exported directly to Trimble Connect

\*3D scanning is only available with certain LiDAR-equipped devices.



## **Applications**

- SiteVision enables users to easily understand new designs, existing underground services and how future landscapes will look over time without the need to interpret complex 2D plans.
- Plan and visualize on-site progress, inspect completed work, complete quality management and identify issues early to reduce costs and time
- Check finished grade and laid material thickness against design elevations and tolerances
- Confirm designs and avoid issues by identifying the location of utilities in the context of the real world
- Monitor and conduct quality control for earthworks and paving operations
- Synchronize design and field data
- Share, communicate and collectively interact in real-time with easy-to-understand visualizations for efficient collaboration with people of all skill levels
- Improve communications between the field and office by connecting more people on and off the job site
- Take photos, measurements and notes in the field for accurate and up-to-date reporting, create tasks and assign them to team members
- Use sub-surface mapping information to improve plans by visualizing the location, size and attributes of underground infrastructure such as water, power, gas and telecommunications
- NEW: Perform agile 3D scans or supplement laser scanner and drone data to create as-builts as you work

## **Trimble Siteworks Software**

For construction surveyors and supervisors





# Made for the way you work

## A comprehensive solution for construction surveying, with options based on the tools you need.









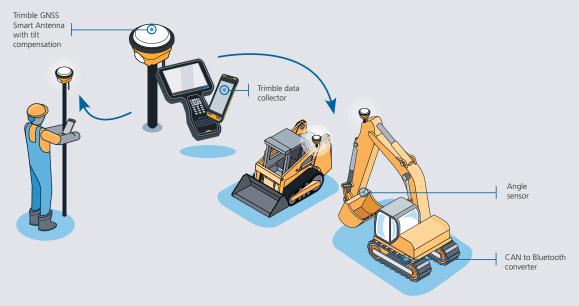
**Roading Module** supports road and highway projects by incorporating full alignment geometry, station equations, width transitions and multiple roadways within a selected road job. The Roading Module provides a single solution to all road staking needs—from roadway features to catch points to custom subgrades. In addition, the grade checking functions allow contractors to easily perform as-built checks and quality control.

**Advanced Measurement Module** improves "field-to-finish" as-built workflows with time-saving features such as point and line offsets, line closure, curved line measurement and continuing existing lines. The Advanced Measurement module enhances Siteworks functionality with streaming data outputs, total station traverse measurements and the ability to connect to utility locators. Improve informed decision-making by capturing additional information with each measured point: photos, dimensions, conditions and material type add valuable information about a feature in addition to its position. Collect even more detail by connecting to the Trimble® SX12 Scanning Total Station to capture the entire site through point clouds.

**Siteworks SE Starter Edition Software** is a simplified version of Siteworks, intended for users who do not require a full feature set and are interested in a lower-cost version to connect to GNSS only. Similar to the standard version, Siteworks SE supports PDF reporting, tilt compensation and vehicle mode measurements. Featuring full compatibility, seamlessly upgrade to Siteworks as your needs expand.

**Siteworks Machine Guidance Module** enables contractors to perform a variety of tasks on the job site, both on and off machines. Trimble® R780 GNSS Smart Antenna with tilt compensation, a machine kit and any data collector that supports Trimble Siteworks is all the hardware you need. Use it first as a rover to measure up projects and create in-field designs, then hook it up to your machine to carry out the work—building exactly to design. Go from grade checking and layout to machine operation and back again, moving between sites and machines for a system that is always fully utilized.

#### **Trimble Siteworks Machine Guidance Module**









## **Trimble smarter receivers**

For construction surveying or machine control applications

#### **Trimble R580 GNSS Smart Antenna**

The R580 is a precise GNSS receiver that you can depend on to deliver greater productivity and reliable accuracy in more places. It is priced as a cost-effective option to add additional receivers to your portfolio or to begin your journey into construction surveying.

#### **Trimble R780 GNSS Smart Antenna**

The R780 is engineered to stand up to the most dynamic and rugged job site measurement applications. Full GNSS tilt compensation makes Siteworks easier to learn for beginners and saves significant time for more experienced surveyors. Using the R780, construction surveyors can capture accurate points without leveling the pole while standing, walking or driving the site in a vehicle. Tilt compensation in vehicle mode is designed to capture higher accuracy measurements on steeper slopes from a moving vehicle, and more accurate volume measurements to save time and money on material planning.

- Easily and safely survey hard to reach areas (corners, traffic lanes, utility lines)
- Faster measurements
- More efficient stakeouts
- Minimal magnetic interference







# **Trimble Site Positioning Systems**

#### **Trimble DA2 GNSS Smart Antenna**

The lightweight and compact DA2 is a high performing software-based digital GNSS antenna, featuring proven Trimble quality. The DA2 works with Siteworks and SiteVision software on a subscription based service model to deliver centimeter accuracy. The subscription option provides access to reliable, highly accurate internet or satellite-delivered corrections to suit your business needs, all for a low fixed monthly price and negating a large upfront expense.

- Paired with Trimble Siteworks software, the DA2 is a budget-friendly option to quickly grade check, navigate to points, easily execute simple positioning tasks and record features with attributes, pictures and volumes to be more efficient in the field.
- Combined with Trimble SiteVision software, an augmented reality solution, the DA2 allows you to visualize your site. Collect data and bring it to life, see the design in the field throughout all stages of the construction lifecycle.



#### **Trimble R750 GNSS Modular Receiver**

Whether you need a reliable GNSS base station or a rugged rover, the R750 gives you the connectivity, flexibility and scalability to meet the exact needs of your GNSS-based workflow. As a permanent or semi-permanent base station, it provides GNSS corrections for site measurements and machine control. As a vehicle-mounted rover, it can be used for fast, effective grade checking and surface mapping. The R750 receiver can access all available satellite signals and provides improved performance and reliability in challenging GNSS conditions using constellation-agnostic Trimble ProPoint® technology.

Reliably transfer data from the field to the office to keep everyone on the same page. The fully upgradable R750 can be configured in a variety of ways to suit your job site requirements in a wide variety of civil and marine construction applications. Simply purchase the receiver that you need today, and upgrade as your needs change:

- As a precise RTK base station only
- As a precise rover only
- As a flexible precise base or rover with Precision RTK accuracy



1 year free
RTX subscription included

#### **GNSS** radios

Trimble radios offer flexible configuration options and rugged reliability for efficient use of GNSS on the construction site.

- Easy setup and configuration, even in the field
- Reduces unnecessary inventory—do more with less
- Provides more flexible operation
- Streamlines field configuration and troubleshooting for maximum productivity
- Access to diagnostic data in the field
- Modify power as conditions require—dialing up the power for longer baselines and when the work area is smaller, a lower-power output extends battery life
- Built to endure the stresses of daily use in harsh construction conditions
- Fully sealed against dust, rain, splash and spray for optimal reliability in all weather conditions to minimize downtime and lower overall operating costs



## **Trimble total stations**

Full range of robotic and universal total stations

### Keep it accurate, but keep it simple

The **Trimble SPS620 and SPS720 Robotic total stations** are perfect for one-person operation on smaller site operations and work on structures such as bridges or culverts, offering very high accuracy and reliability for construction site positioning, stakeout and measurement.

Trimble SPS Robotic total stations are well suited for use on:

- Smaller construction sites or combined with GNSS on larger sites
- Tasks where the accuracy requirements are tight
- Measuring dangerous or inaccessible locations

No matter what job you are doing, Trimble robotic total stations will deliver unmatched user experience, all-around capability and incredible results, priced for a quick return on investment.





#### **Universal total station**

The **Trimble SPS730 and SPS930 Universal total stations** can tackle any measurement, stakeout or machine control task on the job site — all from the same instrument.

**Trimble MultiTrack**<sup>™</sup> **technology** locks on and tracks passive prisms for monitoring or control measurements and active targets for dynamic measurement, stakeout and grade control. Active targets guarantee to lock to the correct target, especially in dusty construction site conditions. Up to 16 unique channels of target identification can be used to differentiate survey crews and grade checkers from machines, eliminating downtime caused by unnecessary interference.

**Trimble's patented MagDrive™ servo** technology utilizes magnetic levitation to eliminate friction. Fast response time and fast servos allow the instrument to change direction, and track more reliably. Trimble Universal total stations can provide highly accurate machine guidance for excavation, grading, compaction, milling, and paving projects. Using the same Trimble total station, your machines can work to tight construction tolerances, save expensive materials, avoid rework and get to grade faster.



# **Trimble SX12 Scanning Total Station**

The all-in-one survey total station and scanner





## Save time, maximize efficiency

#### A robotic total station, and more

Achieve high accuracy and reliability for construction site positioning, stakeout and measurement without the need for a separate device on site. This powerful combination of high accuracy surveying and 26,600 points-per-second 3D scanning is a game changer.

#### Reach the inaccessible

Rapidly collect millions of points and dozens of photos to effectively capture reality for accurate as-builts in inaccessible locations. A great option for safer surveying and avoiding the hassle and time involved in gathering data from dangerous or difficult to reach locations.

## Vivid, eye-safe laser pointer

The green laser pointer is exceptionally small, bright, and still eye safe—with auto focus functionality.



### With the SX12 you can:

- Collect millions of points rapidly
- Perform site surveying measurements
- Conduct grade checking for inspection and monitoring
- Safely and efficiently scan road surfaces, intersections, embankments and other structures
- Capture rich, accurate and complete geometrical and visual documentation of as-builts



## **Capture reality**

With the video enabled workflow, it is much easier and faster to find yourself if you lose tracking and to zoom in and aim at different points for DR shots. The four built-in, high quality cameras with extensive zoom allow you to capture a range of imagery.

- Capture reality with point clouds for accurate as-builts in inaccessible locations
- Geo-reference images of the site to record conditions in real-time
- Live site footage for remote control and monitoring on construction sites
- Eliminate the need for a separate camera on site



## **Marine construction**

## Dredge, construct and survey with precision

Trimble Marine Construction systems improve the efficiency and safety of your dredging, placement and hydrographic survey workflows. Simple-to-use systems keep your operations working all day - and through the night.

Multiple monitors with independent layouts can be tailored to the needs of the operator. Realize maximum productivity with highly accurate systems that empower operators to work smarter, more accurately and avoid rework. Real-time 3D visualization provides accurate guidance and safer situational awareness, enabling marine contractors to work with greater precision.

Trimble's robust and reliable solutions include hardware, software and GNSS correction services, and can be integrated into third-party systems:

- Add sonar imaging for real-time as-building verification
- Add third-party sensors for non-vertical cable tracking and block orientation





## **Eyes below the waterline**

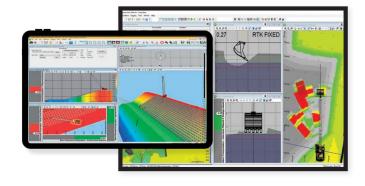
Accurate real-time visualization and positioning

#### **Real-time visualization**

Empower operators with graphics they can rely on to understand their progress in real-time. 3D plan and profile views enable at-a-glance comparison between surveyed and design surfaces along with a color-coded digital terrain model (DTM) view that highlights the high and low spots relative to design. A variety of visuals help the operator to avoid rework and track progress of the project.

#### **Customizable interface**

Multiple monitors with independent layouts can be tailored to the needs of the operator.



500 faster dredging

# Machine guidance for dredging

Improve operational efficiency by dredging with more accuracy. Easily visualize the tool angle and position when using backhoe excavators, clamshell cranes, cutter suction, bucket and trailing suction hopper dredges.





## Machine guidance for placement

Easily place material and blocks to deliver projects on time and with sub inch (centimeter-level) horizontal and vertical accuracy. Maximize productivity with faster spotting time and reduce the need for divers to check work in dangerous conditions. faster material placement

Customers report

vertical survey accuracy

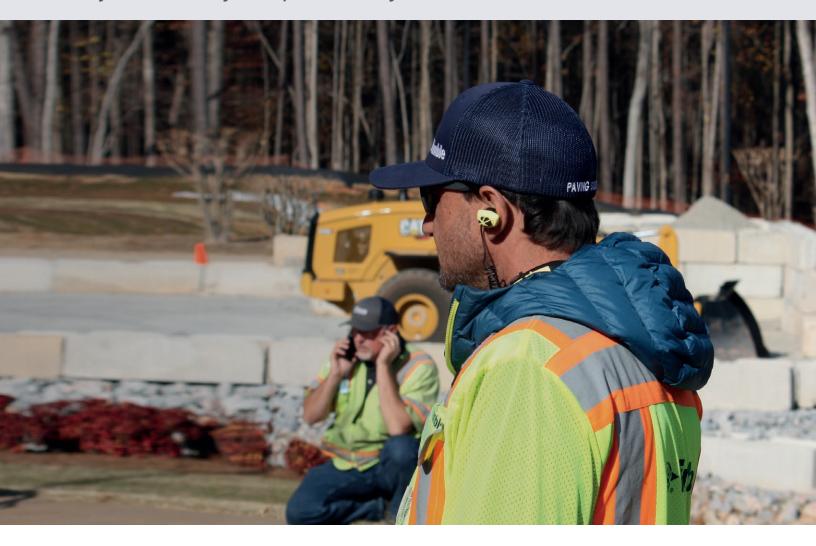
# Hydrographic surveying

Confidently conduct your own pre- and post-construction single beam hydrographic surveys with precision and accuracy. Accelerate your surveying and reporting with simple data acquisition, editing, plotting and dredge volume calculations. Reduce rework, increase productivity and improve site safety with a better understanding of the underwater environment.



## **Clear 360 Pro headset**

For job site safety and productivity



Clear 360 Pro features superior hearing protection from loud sounds, both continuous and transient, extraordinary 360° auditory situational awareness, and simultaneous Bluetooth communication capabilities. Patented voice frequency processing improves speech intelligibility in high noise environments to improve communications and production.

The Clear 360 Pro's patented sound processing places emphasis on enhancing human speech (voice frequencies) so conversations, communications and warnings are now possible in loud environments.

#### **Benefits:**

- Protect the user's hearing from sustained excessive sound levels like a jack hammer or construction machinery, and dangerous impact sounds like dropped steel on concrete
- Reduce construction site "struck-by" injuries and fatalities caused by a lack of hearing.
  This device provides the user with 360° auditory situational awareness; the user knows
  the direction of all sound so they can hear and avoid known dangers such as a truck
  approaching from behind, backup alarms, verbal warnings, etc.





# Safety first

#### **How it works:**

- Passive protection: the foam tips provide hearing protection by reducing all sound by approximately 24dB (NIOH safe level 85db, OSHA safe level is 90dB)
- Real-world sounds are presented naturally and at a safe volume level: the microphone, processor and speaker transmit the same real-world sounds that would be heard without protection, but at safe dB level
- 360 auditory situational awareness: provides the ability to clearly and accurately locate the direction that sounds are coming from
- Bluetooth connections: cell phones / radios allow key personnel to communicate clearly and safely in harsh sound environments
- Custom listening modes: four user selectable profiles plus mute optimize safety and communication in different noise environments

IP-64 Water &

**Dust Resistant** 

**24 NRR** 

**Protection** 



## **Additional features:**

• 16-hour battery, fast recharge

16-hour

- 2.5-ounce total weight
- · Choice of yellow or gray
- Rugged storage case
- 2-year warranty

#### **Accessories included:**

- AC charging block and cable
- Foam tips small, medium and large
- Ear wing small, medium and large
- Wind screen replacement
- User manual



## **Trimble Works Plus Subscription**

## **Connected construction for a low monthly price**

Trimble® Works Plus subscription is an all-inclusive connected construction solution with a low, fixed monthly price including installation, hard-\* and software upgrades, repairs and world class service and support from SITECH.

With a low fixed monthly price and local SITECH installation and support, Works Plus will help you quickly optimize your construction technology program. Upgrade to the latest hardware\* and software for the duration of your agreement, including a full factory warranty and repair or replacement of accidentally damaged hardware.



### The advantages are clear:

- Modernize your fleet without a large initial investment—obtain the machine control technology you need without affecting your cash flow
- Works Plus ensures the latest technology and software versions
- More accurate bids as the technology cost is fixed and known
- Soft entry into the digital world, data management and utilization is included (productivity, usage, maintenance, etc.) depending on the software chosen
- No more responsibility for product failure or maintenance your hardware and software is always covered
- The first and only construction technology subscription of its kind that allows you to forever-proof your business on your terms

#### Conventional purchase vs. Works Plus comparison:

Purchase option	Purchase	Works Plus subscription
System	Machine – Base / Rover	Machine – Base / Rover
Warranty – Field Service	1 Year included	included
Accidental Damage – includes cables	optional	included
New component upgrades	no	yes*
Data plan	optional	included
Hardware owned	yes	yes
Software / codes owned	yes	subscription

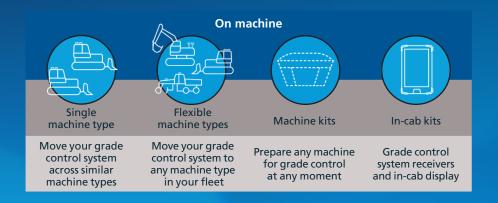
<sup>\*</sup> Once per device per term.

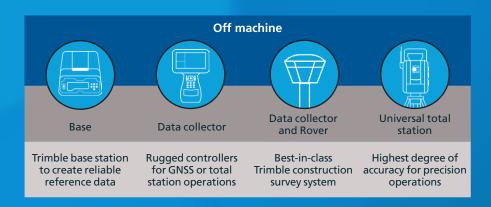


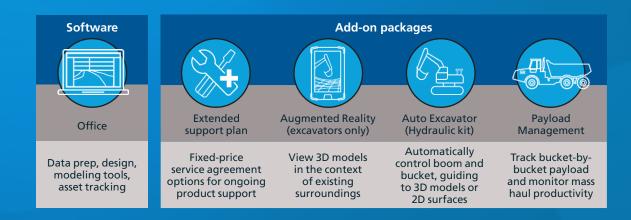
# Flexible technology solution

To fit your business

## Based on your needs, choose any combination of bundles:







## **Trimble protection plans**

Premium or Plus

You buy Trimble construction hardware and software because you know you can count on Trimble Solutions to get the job done. Your Trimble equipment comes with a factory warranty; it's our promise to you that we stand behind our Trimble products. Because we understand that you may want to continue to use your Trimble equipment beyond the warranty period, Trimble offers additional coverage with Trimble Protected Premium\* and Trimble Protected Plus protection plans. These protection plans make good business sense and are an excellent way to protect your cash flow and minimize the risk of doing business.





#### **Trimble Protected Premium\***

### FIVE FULL Years of coverage plus Accidental Damage\*

Trimble Protected Premium is a multiyear plan that supplements the factory warranty to provide you with FIVE YEARS of coverage for drops, falls, liquid spills, broken screens, and similar types of damage resulting from an accident. The Accidental Damage\* coverage is in addition to instrument failures. Whether you need a warranty-type repair, your instrument broke as the result of an accident or you just want to buy coverage once and then be worry-free for five years, Trimble has you covered!

Available for purchase only at the product point of sale, Trimble Protected Premium coverage begins immediately and runs concurrently with the factory warranty and throughout the protection plan period. Trimble will either repair the instrument OR replace the instrument with a new or like new instrument if the unexpected should happen.

Trimble Protected Premium is available on Trimble Earthworks, Trimble Roadworks and Trimble Site Positioning Systems. Trimble Protected Premium also includes firmware updates for GNSS receivers, Siteworks Software for SPS data collectors and tablets, and cables and connectors for Trimble Earthworks systems.

### Value add features of both plans

Our protection plans' value comes in the additional features and benefits available to you as long as you own the coverage. Our protection plans' value-add features include:

- Preventative maintenance (adjustments and calibrations see your distributor for details)
- Protection against wear and tear from repetitive use that causes your equipment to not function to specification. For example:
- If the part can no longer perform the function to which it was designed solely because of its condition (due to usage), it's covered by wear and tear
- Cosmetic damage that does not affect the functioning of the unit is excluded from wear and tear coverage
- Equipment damage protection from surges when using Trimble power supplies
- Protection from environmental damage from dust, heat, humidity and salt air when used in accordance with intended equipment specifications
- \* On select hardware only. Not available in all countries or regions. See your Trimble Protected protection plans distributor for availability.



## **Protect your investment**

From the hazards of everyday work

#### **Trimble Protected Plus**

### Enhance and sustain your entire ownership experience

A Trimble Protected Plus protection plan covers everything that is covered in your original Trimble hardware factory warranty and includes our value-add features. If the unexpected happens and your equipment is damaged, that's no problem! Your protection plan ensures that you pay nothing out of pocket for parts and labor on covered repairs. There's also no deductible or fee associated with covered repairs.

When you sign up today for a Trimble Protected Plus protection plan, you can look forward to lapse-free coverage after your factory warranty has expired. If your equipment is not covered by a factory warranty or a protection plan now, you can bring that equipment back under coverage with a Trimble Protected Plus Reinstatement protection plan.

## Overall benefits of the Trimble protected plans:

- An annual protection plan generally costs less than the average repair
- Our Trimble Protected coverage entitles you to a new piece of equipment with comparable features if yours can't be fixed, or if it simply makes more sense to replace it
- Our plans are backed by Trimble's quality parts and quality repair service; a value you can trust. Trimble wants to keep you as a satisfied protection plan customer for life so we guarantee to stand behind you and your product for as long as you own your coverage
- Repairs are typically completed faster because there's no need for your distributor to generate an estimate and get your approval before starting work
- Protection plans are money and time savers
- Locks in tomorrow's repair costs at today's prices
- A protection plan keeps you running, minimizes unnecessary downtime and improves your overall efficiency



## SITECH services

## Your local partner



#### **Service center**

As a Trimble Authorized Service Provider, we offer a wide range of technical services, all conducted by highly qualified technicians utilizing professional tools and highly precise equipment. Unforeseen repair and service costs and downtime can be significantly reduced through periodic calibration and preventive maintenance, and you benefit from equipment that is always in top condition. The broad service offering includes certification services, repairs and product upgrades.



### **Training**

Trimble construction technology is a game changer – and to benefit from all its power, you want to make sure to take advantage of SITECH's expert professional training.

Whether you and your crew are new to machine automation, you need a refresher or there are team members who have recently joined, let's talk and get everyone up to speed.



## **SITECH support**

Our support team is dedicated to making sure your downtime is kept to a minimum. We have office based staff, just a phone call away 24/7. Many issues can be resolved over the phone or with Trimble Remote Connect.



#### **Rental**

Get what you need, when you need it. Take advantage of our various rental programs to dip your toes — you'll get the job done right and you'll experience the benefits of the newest state of the art technology, while you take your time to make the final decision.

If you decide during your rental period that you don't want to give up your newly discovered value, a convenient rental conversion may be the solution for you.







Serving the following locations: Hawaiian Islands, American Samoa, Guam, and Saipan.

#### **SITECH Hawai'i**

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