

# TRIMBLE SX12 SCANNING TOTAL STATION

The industry's most innovative solution for surveying, engineering and scanning professionals, the **Trimble SX12 Scanning Total Station** continues the Trimble tradition of unrivaled versatility and ease of use. Combining total station functionality with high-speed scanning and best-in-class imaging, it's your total solution for flawless operations in the field and at the office.



## Boundary and Land Title Surveys

Swiftly document every feature of a land title survey with a powerful combination of high-accuracy surveying and 26,000 points-per-second 3D scanning. Capture the location of boundaries, buildings, easements and site improvements in a seamless process. Back in the office, engineers can immediately visualize the site and surrounding context, including right-of-way features, encroaching elements and complex structures. When it comes time for rendering, CAD technicians can easily understand and extract additional site information from scan data and images without costly site revisits.



## Topo, Stakeout, and Surface Inspection

Count on the focused and exceptionally visible laser pointer to stake out points or measure topo points with ease, even at night. Use Trimble® Access™ to easily compare scans to a reference surface such as a horizontal floor, inclined or vertical wall, or cylinder. Reference color-coded point clouds to instantly identify surface irregularities, then mark issues in the field using the laser pointer.



## Underground Mine Surveys

Achieve discrete total station point measurement and 3D scanning with one powerful instrument. Easily stake out mine features using the ultra-bright, high-power laser, then scan to efficiently collect georeferenced point cloud data. Boost accuracy and speed when performing volumetric surveys, including overbreak and underbreak comparisons.



## Roadway and Corridor Surveys

Improve safety and reduce costs by avoiding road closures and keeping surveyors out of harm's way. Efficiently scan road corridors and intersection details such as roadway surfaces, overhead power lines and lane markings. Capture flow-lines, manholes, and right-of-way monumentation with prism observations, then use Trimble Business Center's automated tools to extract point features such as signs and pole attributes and 3D linework for curb and gutter. Incorporating detailed panorama imagery, provide site context like never before to improve deliverable quality and communications between you and your clients.



## Infrastructure Surveys

Capture rich, accurate and complete geometrical and visual documentation of bridges, dams, tunnels, complex structures and more. Work smarter and faster on as-builts, clearance, deformation monitoring and retrofit design projects. With simple framing techniques and 600 m scan ranges, it's easy to collect detailed data, even on large or remote structures.




## Open Pit Mine Surveys

Maintain a safe distance from operating machinery while capturing dense data on high walls or stockpiles. Use Trimble Access for repeatable, efficient data collection, defining targeted areas for scanning and image capture—ideal for underground topographic surveys and 3D capture of adits, stopes, and other mined areas. With streamlined workflows, it's easy to coordinate scans using survey control, eliminating the need for complex scan target registration. The result: flawless, accurate data that's immediately ready for analysis back at the office.



## As-Built and Design Surveys

Leverage survey data, dense scan data, and multiple sensor imagery to instantly capture even the smallest details for your as-built models. Interoperability with CAD packages ensures the data can be quickly utilized for land development, architectural design, as-built verification or BIM/VDC modeling.



## Volumetric Survey/Stockpile Volumes

Quickly scan stockpiles, gravel pits, and excavation areas and instantly calculate volumes in the field using Trimble Access. Use combined scan and survey data to validate design and construction subgrades with speed and confidence. Back in the office, use scan data along with Trimble Business Center's powerful tools to easily define surface boundaries and breaklines for precise volume calculations and cut/fill map creation—all without surveyors ever having to walk the base of an unstable stockpile. Deliver the most accurate volumetric measurements by combining survey controls with density of points to create complete surface and clear delimitation.



## Tunneling Surveys

Apply the high powered laser pointer and Trimble Access Tunnels field software for underground construction surveys, TBM guidance and more. Efficiently stake out key features such as rock bolts, anchors, blast holes, guide roadheaders, drilling jumbos and other construction equipment. Create comprehensive excavation control and overbreak/underbreak reports quickly and easily by scanning to collect tunnel as-built data, then automatically clean and process that data with the Trimble Business Center™ Tunneling module.



## Tank Calibration and Inspection

Leverage Trimble RealWorks® Advanced Tank Edition to rapidly perform storage tank inspections and calibrations. By enabling a combination of high density scan points and traditional measurements, these tools support safer field work and fast, efficient capture of structural information.



## Power Line Inspection/Clearance

Turn your power line data into actionable information with the SX12 and Trimble Business Center. With scans that fully capture power lines, surfaces, and surrounding objects, it's easy to measure vertical, horizontal or 3D clearance measurements using Trimble Business Center point cloud measurement routines. And with new automated Overhead Lines linear feature extraction in Trimble Business Center v5.40, extracting accurate 3D CAD power lines is quick and easy.



## Utility Design Surveys

Harness industry-leading power and versatility, whether you're surveying water, sewer, power or gas. Capture existing site conditions and lay out future improvements, all with the speed and accuracy to drive even the most demanding of projects. Improve communications between teams by adding rich imagery to provide site context, including details of buried assets.



## Forensics/Crash Scene Investigation

Minimize road closures by reducing the time it takes to capture evidence at the scene. Harness the power of a scanner, a total station, and high resolution cameras in a single, easy-to-use tool. Simple, streamlined field and office procedures require minimal training, reducing overall investment cost while enabling your team to easily deliver quality reports.



## Dimensional Control

Combine traditional high-accuracy survey points with 3D scans of critical assets to provide visual and geometrical context to engineering teams. High density point clouds captured on complex shapes allows for accurate surface analysis and inspection workflows, ensuring the highest quality verification. With a best-in-class camera system plus powerful 3D model support in Trimble Access, users can overlay models in a high-quality video feed for ultimate visualization accuracy.

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