

Trimble Laser Scanning

3D SCANNING APPLICATIONS



Scanning solutions built for every challenge

Crafted specifically for the demands of the surveyor, the Trimble® X9 3D laser scanner, powered by Trimble Perspective software, stands out as the go-to tool for any survey work. Designed to align seamlessly with the way things really work in the field, the X9 brings an unprecedented level of accuracy, efficiency, and insight to your everyday tasks.

Whether you're capturing highly detailed facilities, mapping vast topography, or driving design work, the X9 and Perspective offer a user-friendly experience that helps you get accurate, reliable results the first time, every time.

Trimble RealWorks™ 3D scanning office software provides focused tools for registration, analysis, and design to help you produce quality deliverables and share insights across a variety of stakeholders.

With Trimble, you get dependable instruments, construction-ready workflows and office software that can help take the guesswork out of your projects.

Find out more at:

[geospatial.trimble.com](https://www.geospatial.trimble.com)



Topographic & general surveys

Quickly capture features for land title surveys, buildings, roads, intersections, site improvements, encroaching elements and complex structures. Also use it to:

- Document and highlight features or items of interest using annotations with pictures.
- Assign labels to each scan to create logical scan groups and add annotations and measurements while continuing to scan.
- Use auto-classification tools to extract data corresponding to the ground, buildings, power lines, signs, vegetation, and more.
- Create as-builts of road corridors, intersections, roadway surfaces, lane stripping, flow lines, manholes, rights-of-way, overhead power lines, and other features.



Civil infrastructure

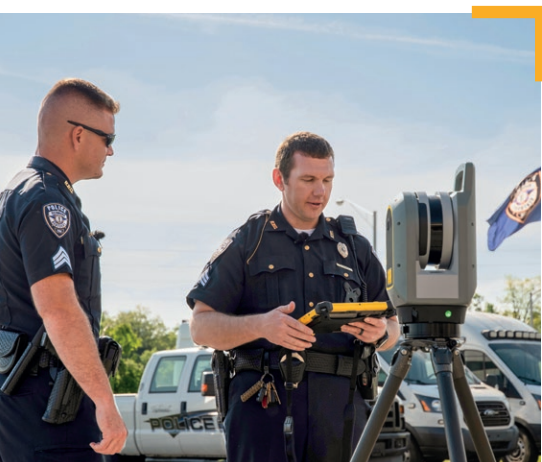
Create as-built documentation for drawings or models for bridges, tunnels, dams and other civil infrastructure with an instrument range that allows for operation from a safe distance and the scan resolution to effectively capture areas of interest. Also use it to:

- Incorporate scan information in clearance calculations, modelling, inspections, renovations, and expansion work.
- Leverage high-speed data capture and quickly capture area scans to reduce downtime for critical infrastructure projects.
- Benefit from HDR image quality for visual inspection and sharing of information.
- Register in the field to verify scan data is complete before importing to Trimble Business Center or Trimble RealWorks at the office.

Industrial survey

Create accurate as-builts of complex industrial facilities for modelling and revamp designs. Also use it to:

- Take high-resolution area scans for more detail on points of interest and safely capture inaccessible areas from a distance.
- View details of existing conditions for critical decisions.
- Enhance in-field documentation with annotations and pictures of tie-in locations inside Trimble Perspective.
- Georeference scans to plant coordinate systems using Trimble RealWorks target-based registration and survey control for export-to-plant design software to do piping layouts, check fabrication spools, and detect interferences with CAD models.



Forensics

Use high-speed scanning and imaging to capture information at crime scenes and vehicular accidents and minimize road closures, even in extreme weather conditions. Also use it to:

- Add annotations with pictures to points of interest and take measurements in the field.
- Consider the Trimble X9 laser scanning system to generate unmatched high-resolution image quality, even at night, with the LED spotlights.
- Consider the benefits of the X9 laser scanning system automatic field calibration for court documentation.
- Register in the field to verify complete data capture before leaving the scene.
- Export data to Trimble Forensics Reveal software for creation of 2D/3D diagrams and animations for investigation and reconstruction.



Cultural heritage

Plan restoration efforts or simply capture history. Historic preservation projects require great detail to inspect or monitor surface deterioration as well as high-resolution imagery for documentation, analysis and restoration. Also use it to:

- Retain important details with high-resolution area scans on points of interest and safely capture inaccessible areas from a distance.
- Digitally preserve fragile artifacts for re-creation.
- Document and share the site with high-resolution panoramas and clear colour imagery.
- Add annotations in the field with images to highlight areas of interest back in the office.
- Check data quality before leaving the site to eliminate costly and time-consuming field revisits.

Digital twin

Safely and effectively create as-built models for scan-to-BIM and renovations and provide clarity for adaptive reuse, building extensions and inspection of façades and elevations. Also use it to:

- Optimise commercial building design accessibility.
- Produce colourised point clouds and panoramas to clearly view the project off-site.
- Register in the field to eliminate the risk of return visits, especially where access permits are difficult to obtain.
- Transfer data to Trimble Business Center, Trimble RealWorks or other CAD software for final analysis and design.



Tank—Calibration & inspection

Quickly and safely produce accurate data for precise storage tank analysis, saving time and money. Also use it to:

- Reduce downtime with high-speed scanning for reliable operation in extreme conditions.
- Efficiently capture precise details of storage tanks and surrounding containment areas to document verticality, roundness, and integrity.
- Easily capture and verify data in the field before importing into Trimble RealWorks Storage Tank module.
- Calculate tank volume filling tables and secondary containment volumes, perform deformation analysis for tank repairs, and create reports meeting API 653 standards.

Shipbuilding surveys

Whether your ship is at port or in dry dock, Trimble has the scanning solution to create as-builts for new construction, renovation, and optimisation. Also use it to:

- Effectively operate in the confined spaces of ships.
- Capture data of the hull, on deck or in holds with high resolution at sufficient range.
- Quickly scan ballast tanks in preparation for water treatment systems for retrofit to comply with IMO mandates.
- Obtain the level of detail needed by the naval architect before the ship leaves port.



The power to do more, on your terms

Each project requires the right tools—whether you're delivering scan data of as-built conditions, capturing comprehensive details for topographic surveys, or creating a model based on an existing structure. Trimble X9 3D scanning solutions will help you to meet these challenges and quickly capture, analyse, model and produce precise deliverables.

Trimble X9 Core

Never rent again

Perfect for those looking to break into reality capture, but weary of the risks associated with large up-front investments. The Trimble X9 Core helps you take the first steps in your laser scanning journey without all the hassle. Whether you're looking to expand your offerings to more detailed deliverables, or looking to answer the questions you don't even know you have yet, the X9 Core is the perfect solution to get started with.

Trimble X9 Premium

For those who survey it all

Being a surveyor means no two days are the same. With so much diversity in your work, you need a solution that can rise to any challenge you throw at it. The Trimble X9 Premium is engineered to do exactly that. Built to measure farther, faster, and finer, the X9 Premium is a scanning powerhouse, helping you capture large areas in a single setup, never missing a detail. Purposely designed to go anywhere you do, the X9 Premium is the perfect kit for any survey that comes your way.

Find the right solution for you



CORE	500 k pts/s	0.6 m–80 m range	 In-field registration
	1 M pts/s	0.6 m–150 m range	 Perspective Powerful field software
PREMIUM			 Auto calibration

With Trimble, you get laser scanning solutions you can apply to a vast range of applications to capture complex real-world data with the confidence of getting it right the first time.

Find out more at:
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