

# Trimble Laser Scanning

## 3D LASER SCANNING APPLICATIONS



## A Scanning Solution For Every Challenge

From routine field operations to highly specialized custom applications, a project is only as good as the data behind it. That's why we hold every Trimble 3D laser scanning system to the highest standards of quality, reliability, and ease of use. With unique capabilities to meet application and budget requirements, choose the Trimble 3D laser scanning solution that meets your needs.

The Trimble® X7, X9 and X12 3D laser scanners support a breadth of applications with speed, range and accuracy options. Driven by Trimble Perspective field software, each scanner provides intuitive registration workflows and full project visibility for users with any level of experience to validate and deliver projects in the field. In addition, the Trimble SX12 long-range scanning total station facilitates large survey projects and integrates with scanning workflows.

Trimble RealWorks™ 3D scanning software and Trimble Business Center survey software provide advanced application-specific tools for registration, analysis and design to enhance deliverables.

With Trimble, you get dependable instruments, comprehensive field workflows and office software you can apply to a vast range of applications.

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, powerlines, signs, vegetations, and more.
- Create as-builts of road corridors, intersections, roadway surfaces, lane stripping, flow lines, manholes, right of ways, overhead power lines, and other features.



# Civil Infrastructure

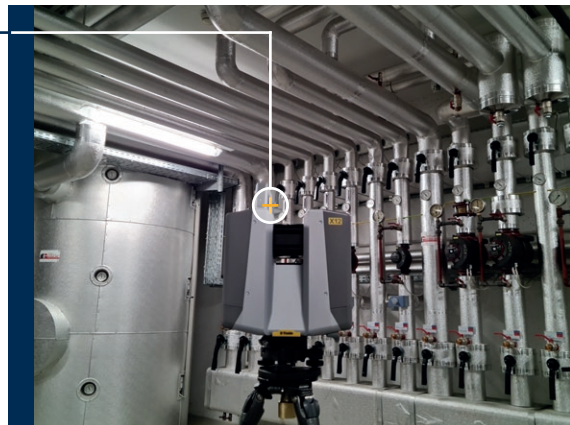
Create as-built documentation for drawings or models for bridges, tunnels, dams and other civil infrastructure with an instrument range that allows for operation from a safe distance and the scan resolution to effectively capture areas of interest. Also use it to:

- Incorporate scan information in clearance calculations, modeling, 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 modeling 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 X12 laser scanning system to generate unmatched high-resolution image quality, even at night, with the LED spotlights.
- Consider the benefits of the X7 and 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 color 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 revisit.

## 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 facades and elevations. Also use it to:

- Optimize commercial building design accessibility.
- Produce colorized 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 drydock, Trimble has the scanning solution to create as-builts for new construction, renovation, and optimization. Also use it to:

- Effectively operate in the confined spaces of ships especially with the Trimble X12 laser scanning system which has the best minimum scan range in the industry of 0.3 meters.
- 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.





# Trimble Laser Scanning

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



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