# GEDO CE 2.0:
# TRIMBLE GEDO SCAN SYSTEM

The Trimble GEDO Scan System is a modern, efficient tool to collect detailed information about track and surrounding features. With Trimble GEDO Scan you can quickly gather precise, high-resolution data for use in track clearance assessments and facilities management.

## KEY FEATURES

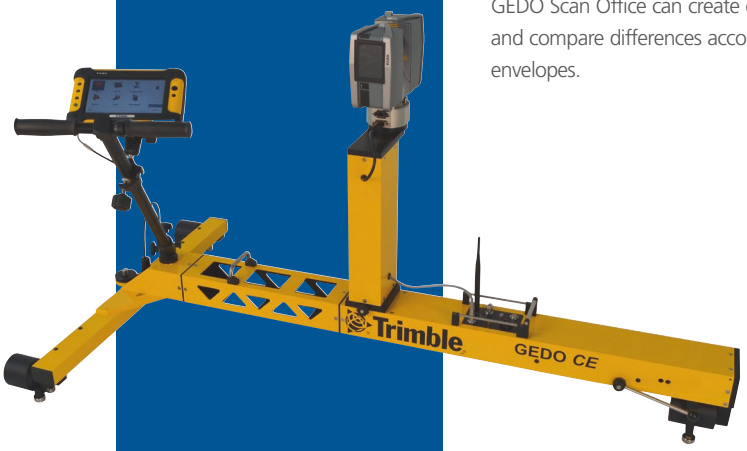
Simple, self-contained trolley used for Trimble GEDO Scan and other track measuring applications

Helical scanning mode captures ceilings and walls to produce accurate 3D models of tunnels and overpasses

GEDO Scan Field software runs on the Trimble Tablet rugged PC controller. The software controls scanning operations and data collection from the scanner and trolley

Modular system lets you use the Trimble TX5 scanner for other survey and facility needs

Workflow and user interface are consistent with other GEDO systems to reduce training and increase system productivity




## THE TRIMBLE GEDO SOLUTION

Trimble GEDO is an integrated suite of tools for measurement, recording, analysis and applications for railway track location, design, construction and maintenance. Specially tailored for railway tasks and processes, Trimble GEDO hardware and software streamline work in both the field and office. The system uses standard techniques and data formats to share information with leading applications for railway track design and maintenance.

## THE TRIMBLE GEDO SCAN SYSTEM

The Trimble GEDO Scan system utilizes a Trimble TX5 laser scanner to collect high-resolution datasets of 3-dimensional points. The scanner is mounted on a GEDO trolley, which collects location, gauge and cant information as it is moved along the track. The combined data produce detailed 3D models of tunnels, overpasses, stations and other facilities where precise information is needed for railcar clearance and asset management.

The Trimble GEDO Scan Office software combines data from the GEDO Scan and Rec field operations to produce a 3D point cloud. These 3D data can be shared with Trimble RealWorks and other design systems.

Trimble GEDO Scan can operate in two modes. The Local mode for track clearance analysis captures information based on the offset from the rail to nearby objects.

In Absolute mode, the system can create 3D point clouds and tie objects to the rail as well as defined coordinate systems.

For railway specific 3D visualization and analysis, Trimble GEDO Scan Office uses clearance envelopes and 3D models to simulate the movement of a railcar through an existing facility or stretch of track. The system can automatically detect locations where clearance encroachments may occur. For detailed analysis, Trimble GEDO Scan Office can create cross section drawings and compare differences according to given profiles or envelopes.

## APPLICATIONS FOR THE TRIMBLE GEDO SCAN SYSTEM

**Design**

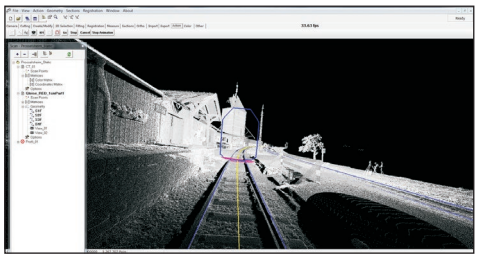
- Document existing conditions with high resolution.
- Analyze potential clearance encroachments against existing and design profiles.
- Create clearance databases to optimize design processes.

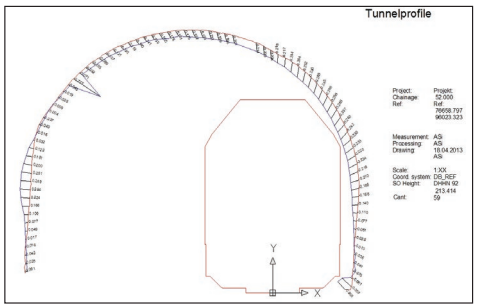
**Construction**

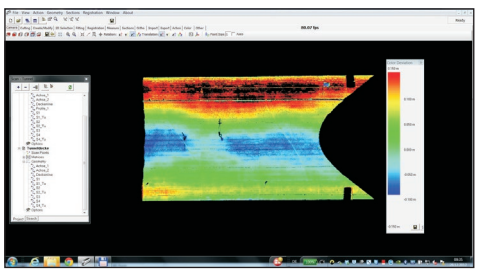
- 3D scanning to support construction processes.
- Post-construction check for track clearance.

**Operations and Maintenance**

- Clearance and conflict testing.
- Support a track clearance database for international and heavy-load operations.





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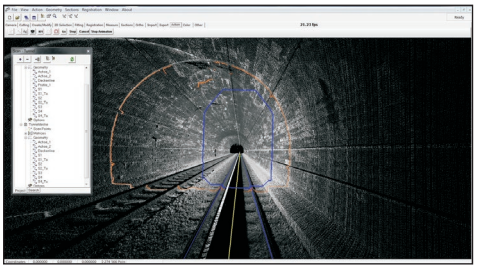
**TECHSHEET**

## GENERAL

Applications . . . . . Documentation of existing track and nearby objects; Design analysis for upgrades and retrofits; 3D modeling; Clearance encroachment analysis; Construction quality control; Clearance database management

## TRIMBLE GEDO SCAN SYSTEM

Relative Accuracy . . . . . < 5 mm at 7 m
Absolute Accuracy (depending on track survey) . . . . . typ. < 20 mm at 7 m
Weight (Trolley, Scanner, Controller) . . . . . 27.2 kg




## TRIMBLE GEDO CE 2.0 TRACK MEASURING TROLLEY

Description . . . . . Track-mounted trolley
Supports Trimble GNSS, S-Series Total Stations, TX5 Scanner
Gauge . . . . . 1000 mm, 1067 mm, 1435 mm, 1520 mm, 1600 mm, 1668 mm, 1676 mm , other gauges on request
Gauge Measurement
- Range . . . . . –20 mm to +60 mm
- Accuracy . . . . . ±0.3 mm

Cant Measurement
- Range . . . . . ±10° or ±265 mm
- Accuracy . . . . . ±0.5 mm (static)

Weight . . . . . 16.8 kg
Power . . . . . Self-contained, in-field replaceable
- Battery Typ . . . . . Trimble S-Series Li-Ion, rechargeable
- Life . . . . . 6 - 8 hours

## TRIMBLE TABLET RUGGED PC CONTROLLER

Operating System . . . . . Genuine Windows® 7 Professional
Display . . . . . 7 inch color sunlight readable touch screen
Memory . . . . . 1 GB DRAM, expandable via SDIO memory card
Storage . . . . . 80 GB solid state hard drive
Interfaces . . . . . USB 2.0, RS232, Bluetooth® 2.1, WiFi (802.11b/g)
Camera . . . . . 2Mpx front-facing autofocus video and photo
Environmental Protection . . . . . IP67; MIL-STD-810F
Temperature Range . . . . . -30 °C to +60 °C operating range
Weight . . . . . 1.4 kg

## TRIMBLE TX5 3D LASER SCANNER

Scanning Range . . . . . 0.6 m to 120 m
Indoor or outdoor with low ambient light and normal incident to a 90% reflective surface
Scanning Speed . . . . . Up to 976,000 points per second, selectable
Ranging Error . . . . . ±2 mm at 10 m and 25 m, each at 90% and 10% reflectivity
Battery Life . . . . . Up to 5 hours



Specifications subject to change without notice.

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