



GEDO IMS-Scan

CLEARANCE & HIGHLY PRODUCTIVE ASSET DATA COLLECTION

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

The collected data provides the basis for BIM-compliant planning, as-built documentation for GIS or the final inspection after completion of a construction project. In addition, clearance control can be carried out based on the current track position or a new design.

TRIMBLE GEDO SYSTEMS

Trimble GEDO systems can be used for various applications to measure, record and analyze track position and quality, as well as for construction and maintenance work. Trimble GEDO instruments and software are designed specifically for various surveying tasks on railway lines, simplifying work procedures in the field and in the office. Using standard data formats, information can be exchanged with leading track design software products and track maintenance equipment.

As-built documentation with Trimble GEDO IMS-Scan

The Trimble GEDO IMS-Scan system combines the Trimble GEDO CE 2.0 track measuring device with the Trimble GEDO IMU and a laser scanner.

The Trimble GEDO IMU is a high-precision multi-sensor system based on inner measurement accuracy. This guarantees a very high internal accuracy of the measurement. Based on the data of the laser scanner, the georeferencing is done using reference points along the track. This results in a high-resolution survey, combining an absolute 3D referenced point cloud and the as-built track position in one single measurement.

Basis for BIM-compliant planning

The generated 3D point cloud forms the basis for the modelling of a BIM-compliant planning. This can be done either directly with Trimble Realworks analysis software or via corresponding interfaces with other program systems (i.e. SketchUp).

Asset data collection

Object information can be obtained from the collected data for transfer and updating into a Geographical Information System (GIS).

If the system is used after all construction work has been completed, the data serves as a basis for the as-built documentation and for comparison with the original planning.

Clearance inspection

The 3D point cloud and track trajectory serves as basis for checking the clearance. The inspection for any kind of infringement along the track can be performed either with static clearance envelopes or 3D wagon profiles. For the track reference, both the as-built track position and a new track design can be used.

Key Benefits:

- ▶ Fully integrated solution for track recording and high-resolution asset data collection along the railway corridor
- ▶ Consistent recording of track position, gauge and cant in combination with laser scanner data
- ▶ Use of a universal track measuring device with modular expansion options
- ▶ Short initialization time enables rapid on-site deployment
- ▶ Time consuming geodetic station setup with related restrictions no longer required
- ▶ Easy to use and clear display of the results
- ▶ High productivity and flexibility leads to lower costs and reduced staff expenses
- ▶ Georeferencing with reference points along the track
- ▶ System enhancement with GNSS for absolute referencing without existing control points



CLEARANCE & HIGHLY PRODUCTIVE ASSET DATA COLLECTION

GENERAL

Applications Track survey and asset data collection
 Clearance analysis

Relative accuracy track <+/- 1 mm for typical chord length
 Relative accuracy scan points < 5 mm in 7 m distance
 Absolute accuracy (depending on ref. points) typ. < 20 mm in 7 m distance
 Initialization time 5 minutes
 Measurement rate 200 Hz
 Measurement speed up to 5,000 m/h
 Total weight 39.1 kg¹

TRIMBLE GEDO CE 2.0 TRACK MEASUREMENT TROLLEY

Description Track-mounted trolley
 Gauges 1000 mm, 1067 mm, 1435 mm, 1520 mm, 1524 mm, 1600 mm, 1668 mm other gauges on request
 Weight 16.8 kg

Gauge measurement
 Range -20 mm to + 60 mm
 Accuracy ±0.3 mm

Cant measurement
 Range ±9° or ±235 mm at 1.435 mm gauge
 Accuracy ±0.5 mm (static)

Battery
 Type Trimble S-Series Li-Ion, rechargeable
 Life 8 to 10 hours

TRIMBLE GEDO GX50 LASERSCANNER

Maximum range 0.6 m up to 80 m
 Accuracy / Precision 2 mm / 2.5 mm @ 30 m
 Measurement rate 500 kHz / 1 MHz
 Scanning speed 120 Hz / 240 Hz
 Visibility range 345° / 360°

Battery
 Life ~ 4,5 h for Single Head / ~ 3 h for Dual Head

TRIMBLE TX8 LASERSCANNER

Maximum range 0.6 m to 120 m on most surfaces
 0.6 m to 340 m with optional upgrade
 Scanning speed Up to 1,000,000 points per second
 Accuracy on 18-90% reflectivity
 Standard mode: <2 mm from 2 m to 120 m
 High Precision mode: <1 mm from 2 m to 80 m

Battery
 Life ~ 2 hours

TRIMBLE TSC7 CONTROLLER

Operating system Windows® Microsoft 10 Pro
 Operation Touchscreen, Keyboard
 Interfaces USB, RS232, Bluetooth®, WLAN (802.11a/b/g/n)
 Environmental protection IP68; MIL-STD-810G
 Temperature range -20 °C to +60 °C
 Weight 1.6 kg

TRIMBLE R12 GNSS SYSTEM

Interfaces USB, Bluetooth®, WiFi
 Environmental protection IP67; MIL-STD-810F, FIG.514 5C-1
 Weight 1.12 kg

Battery
 Life up to 6,5 hours



¹ with a Trimble GX50 Dual Head laser scanner and a Trimble TSC7 control unit
 Specifications subject to change without notice.



TRIMTEC AB
 Finlandsgatan 14
 164 74 Kista
 info@trimtec.se
 www.trimtec.se

TRIMBLE authorized distribution partner

NORTH AMERICA
 Trimble Inc.
 10368 Westmoor Dr
 Westminster CO 80021
 USA

EUROPE
 Trimble Railway GmbH
 Korbacherstraße 15
 97353 Wiesentheid
 GERMANY
 gedo.trimble.com

ASIA & SOUTH-PACIFIC
 Trimble Navigation
 Singapore PTE Limited
 3 HarbourFront Place
 #3-02, HarbourFront
 Tower Two
 Singapore 099254
 SINGAPORE