

GEDO IMS

HIGHLY PRODUCTIVE TRACK SURVEY

The Trimble GEDO track measurement system is a fast and efficient tool to measure, record and document detailed information about existing tracks and tracks under construction. By adding additional sensors, the system can be used for asset data collection and to perform clearance checks. Data collected with this system can be used for GIS purposes, redesign for upgraded lines, during the construction phase and for quality control purposes.

TRIMBLE GEDO SYSTEMS

Trimble GEDO systems can be used for various applications to measure, record and analyze the track position and quality, as well as for construction and maintenance work. Trimble GEDO instruments and software are designed specifically for the diverse surveying tasks on railway lines, simplifying work procedure 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.

SYSTEM CONFIGURATION

The Trimble GEDO IMS system, consisting of the Trimble GEDO CE 2.0 track measurement trolley and a high-precision IMU (inertial measurement unit), forms the basis for performing an efficient track survey and asset data collection. This can be combined with various components in order to be able to perform the tasks optimally for the different applications.

Trimble GEDO Profiler

With the help of the profiler, the trajectory measured by the Trimble GEDO IMS system is referenced via reference points along the track. The resulting track position can be used for as-built surveys. As an alternative to the profiler, a Trimble S-Series total station can also be used.

Trimble GEDO Scan

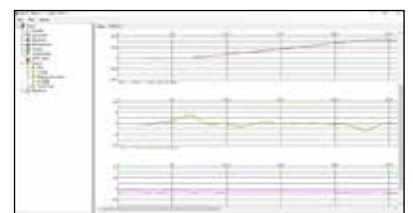
The combination of Trimble GEDO Scan and Trimble GEDO IMS provides a highly productive survey and mapping system for assets close to the track. It produces a dense 3D point cloud with an absolute reference. Out of the point cloud asset data information can be collected and clearance checks can be processed. The data can be used as an as-built survey before, during and after construction within a BIM project as well.

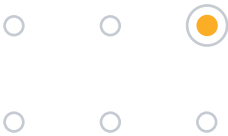
Trimble GEDO GNSS

Combining the Trimble GEDO IMS system with Trimble GNSS technology enables track survey without reference points based on a given GNSS reference system. Collected data can be used to create a new or modified track design. Reference points can be established and measured during the measurement run. This allows the usage of the system for further survey work during the track re-construction phase.

Key Benefits

- ▶ Simple and self-contained track measurement trolley captures track position, gauge and cant in a single operation
- ▶ Measurement of long sections of track without disruption of rail revenue services
- ▶ Flexible combination with additional sensors fitting to the application for best performance
- ▶ Effortful geodetic station setup with related restrictions are no longer needed
- ▶ Short initialization time allows rapid on-site use
- ▶ Easy to use and clear presentation of results in dedicated field user interface
- ▶ Continuous, high-resolution data collection for flexible analysis
- ▶ Internal quality control within the measurement process directly in the field





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GENERAL	
APPLICATIONS	
	Track survey Asset data collection
PERFORMANCE	
Relative accuracy	0,3 mm for standard chord length (20 m)
Absolute accuracy	+/- 1 mm horizontal and vertical achievable depending on external reference, line length and track conditions
Initialisation time	5 minutes
Measurement frequency	200 Hz
Measurement speed	up to 5.000 m/h
SYSTEM REQUIREMENTS	
Supported instruments	Trimble S-series total stations (i.e. S7, S9) Trimble GNSS systems (i.e. R10, R12, R12i) Trimble GEDO GX50 Laser Scanner Trimble TX6/TX8 Laser Scanner Trimble GEDO Profiler
Controllers	Trimble TSC7, T7 and T100 controllers (Windows® OS)
CONFORMITY	
EN 13977	Portable trolleys for rail applications
EN 13848-4	Measurement of relative track geometry

TRIMBLE GEDO CE 2.0 WITH TRIMBLE GEDO IMU	
Description	Track-mounted trolley with IMU (Extensions are possible)
Gauges	1.000 mm, 1.067 mm, 1.435 mm, 1.520 mm 1.524 mm, 1.600 mm, 1.668 mm, 1.676 mm (other gauges on request)
Weight	24,5 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	6 - 8 h (hot-swappable)
COMMUNICATION	
Connection to control unit	Bluetooth®
IMU	WLAN
TRIMBLE GEDO PROFILER	
Weight	3,5 kg
Range	0,3 m to 30 m
Accuracy (typical)	±1,5 mm



Specifications are subject to change without notice.

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