GEDO IMS

FOR HIGHLY PRODUCTIVE ASSET DATA COLLECTION

The Trimble GEDO CE 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 clearance check.
Data collected with the GEDO CE system can be used for GIS purposes, redesign for upgraded lines, during the construction phase and for quality control.

TRIMBLE GEDO CE SYSTEM

Trimble GEDO CE is a suite of tools for measurement, recording and analysis for applications around railway track survey, construction and maintenance. Specially tailored for railway tasks and processes, Trimble GEDO CE streamlines all work in the field and office. The system uses standard techniques and data formats to share information with leading applications for railway track design and maintenance.

SYSTEM FEATURES

The Trimble GEDO IMS system, consisting of a track survey trolley Trimble GEDO CE 2.0 and a high precise IMU (inertial measurement unit), is the basis for running an efficient track survey and asset data collection.
Additional components and sensors can be added to the system to enable the usage of further applications and to guarantee the best performance.

Trimble GEDO Profiler

Within the Trimble GEDO IMS system the Trimble GEDO Profiler is used to measure marked reference points along the track. Based on these measurements the trajectory generated by the Trimble GEDO IMS system gets referenced. The resulting track position can be used for the asset data collection.

Trimble GEDO Scan

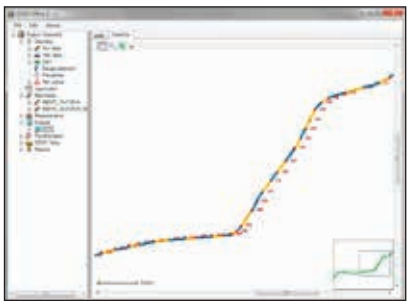
The combination of Trimble GEDO Scan and Trimble GEDO IMS provides a highly productive survey and mapping system for assets close to the track. It produces a dense 3D point cloud with an absolute reference. Out of the point cloud asset data information can be collected and clearance checks can be processed.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

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. Thereby collected data can be used to create a new or modified track design. Reference points can be established and measured during the survey run. This allows the usage of the system for further survey work during the re-construction phase.

Key Benefits:

- Simple and self-contained trolley captures track position, gauge and cant in a single operation
- Measure long portions of track without disruption to normal traffic
- Flexible combination with additional sensors fitting to the application for best performance
- Effortful geodetic station setup with related restrictions no longer needed
- Short initialization time allows rapid on-site use
- Easy to use and clear display of the results
- Continuous high-resolution data collection for flexible analysis
- Internal quality control within the measurement process on site



Trimble

TECHSHEET

FOR HIGHLY PRODUCTIVE ASSET DATA COLLECTION

GENERAL

Application . . . . . Track survey and asset data collection
Relative accuracy . . . . . <+/- 1 mm for standard chord
Absolute accuracy . . . . . +/- 1 mm in vertical and horizontal possible based on external reference, line length and track conditions
Measurement frequency . . . . . 200 Hz
Measurement speed . . . . . up to 5,000 m/h

TRIMBLE TX8 LASERSCANNER

Scanning 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 . . . . . <2 mm from 2 m to 120 m on 18–90% reflectivity in Standard mode
<1 mm from 2 m to 80 m on 18–90% reflectivity in High Precision mode
Scan time per battery . . . . . ~ 2 hours

TRIMBLE GEDO CE 2.0 TRACK MEASURING WITH TRIMBLE GEDO IMU

Description . . . . . Track-mounted trolley with IMU
Gauge . . . . . 1000 mm, 1067 mm, 1435 mm, 1520 mm, 1600 mm, 1668 mm, 1676 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 ±237 mm
Accuracy . . . . . ±0.5 mm (static)

Battery

Type . . . . . Trimble S-Series Li-Ion, rechargeable
Life . . . . . 6 to 8 hours

TRIMBLE PROFILER GEDO CE 2.0

Weight . . . . . 3.5 kg
Measurement range . . . . . 0.3 m to 30 m
Typical accuracy for distance measurement . . . . . ±1.5 mm

TRIMBLE R10 GNSS-SYSTEM

Interfaces . . . . . USB, Bluetooth®, WiFi
Environmental Protection IP67; MIL-STD-810F
Temperature range . . . . . -40°C to +60° C
Weight . . . . . 1.12 kg

Battery

Type . . . . . 3.7 Ah Li-Ion smart
Life . . . . . 5 hours

TRIMBLE TABLET PC

Operating system . . . . . Microsoft Windows® 7 Professional
Operation . . . . . Touchscreen
Interfaces . . . . . HDMI, USB 2.0, Bluetooth® 4.0, WLAN(b/g/h)
Environmental Protection IP65; MIL-STD-810G
Temperature range . . . . . -30 °C to +60 °C
Weight . . . . . 1.4 kg

Specifications subject to change without notice.

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