For further information on the ROMDAS road measurement system please visit www.romdas.com

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ROMDAS
Manufactured by
Data Collection Ltd.
New Zealand

providers of innovative technology for measuring and managing roads

ROMDAS Laser Profilometer

Roughness and optional macro-texture

The ROMDAS Laser Profilometer module is a Class I Inertial Profiler and conforms to ASTM-E950. It uses a laser and accelerometer combination to measure the longitudinal elevation profile of the road with very high degrees of accuracy at highway speeds. The profile is then analysed to calculate International Roughness Index (IRI) values.

The ROMDAS Laser Profilometer is an exceptionally portable system and can be used for; construction control surveys, large scale network surveys or generally whenever high accuracy roughness data is required.

The latest version is extremely lightweight and portable, weighing only 3 kg, and offering exceptional value for money when purchased with the central ROMDAS system. The ROMDAS system with Laser Profilometer module is one of the most cost effective laser based systems for recording and analysing roughness data available in the market. With no periodic calibration required the Laser Profilometer saves time and money when collecting high accuracy roughness data.

Often single point laser profilers use a single axis (vertical) accelerometer. The ROMDAS Laser Profilometer utilizes a three axis accelerometer which helps filter inaccuracies caused during cornering or vehicle wander.

Thanks to ROMDAS' customisable design, the system can be purchased as a single (i.e. measure 1 wheel path) or dual laser setup (i.e. measure 2 wheel paths) depending on customer requirements.

Optional Upgrades

MPD or SMTD Texture Upgrade
ROMDAS Lasers can be upgraded to measure macro-texture in terms of Mean Profile Depth (MPD) or Sensor Measured Texture Depth (SMTD). SMTD texture can be measured using the standard lasers, while the MPD texture upgrade includes replacing the standard Laser unit with a higher speed laser.

Additional Lasers
Additional lasers can be purchased separately to give multiple road profiles.

Features and Benefits:

- Extremely Portable weighing around 3kgs,
- World Bank Class 1 Profiler,
- Modular option available,
- 3 Axis accelerometer,
- Highly competitive pricing,
- Easily customizable to include other modules such as: GPS, Video Logging, Transverse Profiler, Geometry...

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Components

The Laser Profilometer is comprised of the following components:

- A Class 3B 48 kHz Laser and Accelerometer unit,
- All necessary power and communication cables,
- A high resolution DMI for data synchronisation,
- External vehicle mounting,
- Laser configuration cable.

Installation

The Laser Profilometer does not require a specialised vehicle, however it is easier to install if the vehicle has a trailer mounting hitch installed to hold the mounting bar.

Technical Specifications

Scan Rate	48 kHz
Laser Class	Class 3B
PC Interface	Ethernet
Configuration	Laser elevation with integrated Accelerometer Inertial Reference
Standoff	245 mm
Range	500 mm (+/- 250 mm)
Resolution	0.01% of full scale
Resolution IRI	+/- 0.01 m/km
Environment	IP65 (MEMA4)
Power	12 V DC 1 A
Weight	3 kg (excluding mounting beam)
Dimensions	170 mm x 120 mm x106 mm (main enclosure, ex. Mounting beams)
Outputs	International Roughness Index (IRI) & Raw longitudinal profile
Output Format	MS Access .MDB (exportable to excel and most other 3rd party programs), .ERD files (viewable in ProVal for further profile analysis)