



ROMDAS Laser Profilometer



ROMDAS System Overview

ROMDAS® (ROad Measurement Data Acquisition System) has been developed by Data Collection Ltd. (DCL) as a comprehensive, cost effective and modular system for collecting asset and pavement information. Implemented in over 60 countries, it's flexible design allows for installation on locally sourced vehicles and meets widely accepted international standards.

Depending on your needs, a ROMDAS system can be easily customized with a variety of add-on modules to suit the specifications and budget of any project.

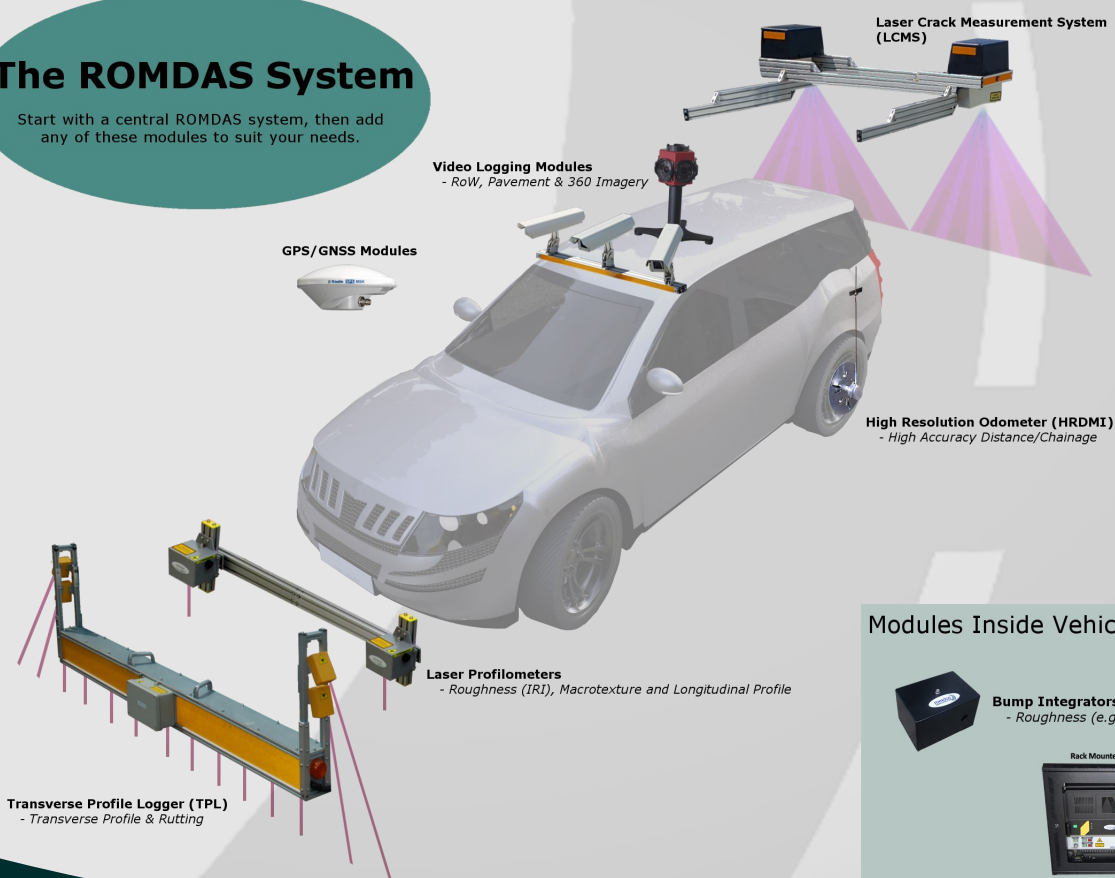
Whether a private consultant, government department or research institution, ROMDAS offers great reliability, flexibility and ease of use for anyone who needs to quickly and accurately collect asset data.

ROMDAS CAN BE USED FOR...

- ✓ High-speed network level or project specific road surveying
- ✓ Road roughness surveys
- ✓ Transverse profile/rutting surveys
- ✓ Macro-texture (MPD)
- ✓ Visual condition, environment or event rating
- ✓ Automatic crack and surface defect inspections
- ✓ Location referencing (spatial GPS/GNSS data or linear LRP data)
- ✓ GIS mapping of condition data and road alignment
- ✓ Video logging surveys (right of way, 360 and pavement view)
- ✓ Mobile mapping of roadside assets & inventory
- ✓ Road geometry surveying
- ✓ Travel time and congestion surveys
- ✓ iRAP road safety surveys

The ROMDAS System

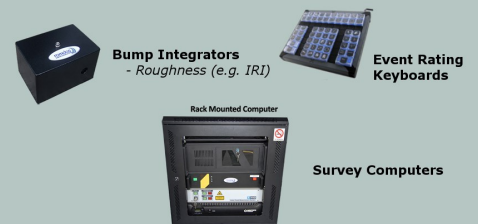
Start with a central ROMDAS system, then add any of these modules to suit your needs.



Software Solutions



Modules Inside Vehicle



ROMDAS Module:

Laser Profilometer

SPECIAL POINTS OF INTEREST:

- Measure high accuracy roughness (IRI) and macro-texture (MPD) data
- Highly competitive purchase price and low maintenance costs
- Extremely portable, weighing less than 4.5kgs (excluding mount)
- Meets international standards
 - ⇒ World Bank Class 1 Profiler,
 - ⇒ ASTM E950
 - ⇒ ASTM E1926
 - ⇒ ISO 13473
 - ⇒ ASTM E1845
- Vehicle mounted modular design allows for easy expansion
- 3 axis accelerometer
- Easily customizable to include GPS
- Video Logging, Transverse Profiler, Geometry
- Single or dual wheel path configurations available
- No annual factory calibration required

The ROMDAS Laser Profilometer is a add-on module for recording high accuracy longitudinal road profiles. It uses a combination of laser and accelerometer sensors to measure the road profile at highway speeds. The raw profile is then analyzed to calculate International Roughness Index (IRI) and/or macro-texture (MPD) in compliance with international standards.

APPLICATIONS

- Post-construction quality surveys
- Network level surveys
- Routine surveying for maintenance planning
- Generally whenever high accuracy roughness data is required

PORTABLE & COST-EFFECTIVE

The latest version is extremely lightweight and portable, weighing only 4.5 kg, and is exceptional value for money. A ROMDAS system with Laser Profilometer module is one of the most cost effective laser systems for road roughness available in the market. With no periodic factory calibration required, the ROMDAS Laser Profilometer also saves on ongoing maintenance costs.

SCALABILITY

Depending on the specific needs of your projects, this module can be purchased as a single or dual wheel path configuration. It can also be combined with other ROMDAS modules to collect even more types of data in a single run. Combining the laser profiler with GPS and a Right Of Way (ROW) camera, enables users to also record and map asset, inventory and visual condition data.

For added accuracy during cornering and braking, the ROMDAS Laser Profilometer utilizes a three axis accelerometer to help filter sideways forces and reduce inaccuracies.



ROMDAS Module:

Laser Profilometer



COMPONENTS

The Laser Profilometer is comprised of the following components:

- Laser Profilometer unit with internal accelerometer and 32 kHz laser.
- All necessary power and communication cables
- External vehicle mounting
- Laser configuration cable

Specifications

Laser Frequency	32 kHz
Laser Beam Class	Class 3B
PC Interface	Ethernet and USB
Configuration	Laser elevation with integrated Accelerometer Inertial Profiler
Mounting Height	300 mm
Operating Range	500 mm (+/- 250 mm)
Elevation Resolution	0.01 mm
Resolution IRI	+/- 0.01 m/km
Environment	IP65 (MEMA4)
Power	12 V DC 1 A
Weight	4.5 kg (excluding mounting beam)
Outputs	International Roughness Index (IRI) & Longitudinal profile, Optional: Macrotecture (MPD)
Output Format	MS Access .MDB (exportable to excel and most other 3rd party programs), .ERD files (viewable in ProVal for further profile analysis)