



Data Collection Limited

A Moog Inc. Company

Company Profile





Overview:

Data Collection Ltd. (DCL), a Moog Inc. company, specializes in developing and manufacturing tools for measuring and managing roads that is marketed under the brand name 'ROMDAS' (ROad Measurement Data Acquisition System).

ROMDAS is the premiere technology used for collecting data on road condition. Since its inception in the 1990s, the company has provided ROMDAS equipment in over 60 different countries across.

Mission Statement

"Providing engineers and researchers with innovative technology for measuring and managing roads, which is cost-effective, efficient, reliable, and well supported, while at all times being an ethical business"

The aim of our business is to provide road measurement equipment and software which is innovative, cost-effective, reliable, and better in terms of performance and/or price than any other available products. Our team focuses on understanding our customers' needs and providing recommendations that satisfy their specifications in the most cost effective manner possible.

We value and maintain ethical principles and strive to establish ROMDAS as a brand with honest and reliable business practices. Overwhelmed with the wide range of road data collection equipment available, ROMDAS customers know that our team is capable of securing the equipment they require and their road management system is cost-effective and sustainable for the long term.

History

ROad Management Data Acquisition System (ROMDAS) was developed in 1989 by Dr. Christopher R. Bennett who led the technical development of the system until 2003 when he sold the company in order to take up a position with the World Bank. The company was purchased by two employees then; Paul Hunter and Raj Mallela, who have taken over the management of ROMDAS while keeping to the philosophies with which the company was founded.

Today, Data Collection Limited (DCL) and the ROMDAS brand product line are part of Moog Inc., the US-based company, when it was acquired in October 2023.

Moog is a worldwide designer, manufacturer, and systems integrator of high-performance precision motion and fluid controls and controls systems. Moog's high-performance systems control military and commercial aircraft, satellites, and space vehicles, launch vehicles, defense systems, missiles, automated industrial machinery, marine and medical equipment.

DCL and ROMDAS are now operated as a part of Moog's Military Aircraft Group's Mission Systems Division.



Flagship Products :

The ROMDAS System: ROMDAS is a modular system that combines hardware sensors and integration software used to collect a variety of road data at high-speed. The modular design allows customers to include specific modules to collect the specific data type and accuracy they require.

ROMDAS Modules: ROMDAS modules are the hardware components in the ROMDAS system that collect specific road data. These modules are selected according to the customer's specifications and manufactured/integrated into a complete ROMDAS system. Below are the ROMDAS modules available:

- ◆ **Bump Integrator:** The original ROMDAS module, the BI measures road roughness in very tough conditions. It has been routinely updated to utilize newer technologies to become increasingly more practical and user friendly.
- ◆ **Laser Profilometers (Roughness & Macro-texture):** The ROMDAS Laser Profilometer is a Class I inertial profilometer. It uses a combination of a laser and accelerometer to measure a high precision longitudinal profile at highway speeds. Longitudinal profiles are then analysed using industry accepted ASTM standards to calculate Roughness (IRI) and Macrotexture (MPD).
- ◆ **Transverse Profile Logger (TPL):** The ROMDAS Transverse Profile Logger (TPL) is used to measure the transverse profile (across the lane) of a pavement surface and calculate rut depth data using a 2m theoretical straight-edge method. Equipped with 15-point full lasers or 9-point lasers, TPL's defining features are its robustness and price competitiveness.
- ◆ **Laser Crack Measurement System (LCMS):** Industry standard scanning lasers used for creating high-accuracy 3D profiles for the road surface. This multifunctional device outputs; Automated crack and defect detection, macro-texture (MPD), 4000+ point transverse profiles and wheel path rutting data, water pooling, concrete joint/faulting, lane tracking, geotagged pavement images, ravelling, sealed cracks.
- ◆ **Right-of-Way (ROW), Pavement View & 360 Video Logging Camera:** The ROMDAS Video System is used to take a video log of the road ROW, pavement surface or 360 degree images. Post processing software is also available to extract detailed asset and condition data from videos, including the ability to calculate measurements and GPS coordinates of events and add them directly to GIS map layers.
- ◆ **INS-Geometry Upgrade:** The ROMDAS Geometry Upgrade to the GPS-INS is used to measure the road's Gradient, Radius of Curvature and Cross-slope.
- ◆ **GPS Receivers:** GPS is used to establish the location of the vehicle using GPS satellites. The data can be used to establish the road centreline or linked to other data like the position of roadside events.
- ◆ **Visual Inventory and Condition (Rating Keyboards):** A dedicated keyboard which is used for keyboard rating. With either 20 or 60 keys, they can be programmed by the user to define individual distresses (e.g. cracking, ravelling) or assets (e.g. signs, bridges) of different severities.
- ◆ **High Resolution Distance Measurement Instrument (HRDMI):** The high resolution distance measurement instrument (HRDMI) is used in situations where extremely accurate (< 0.1 m) distance measurements are required.

miniROMDAS: The miniROMDAS system has been designed as a streamlined version of the full ROMDAS system. miniROMDAS is used for roughness surveys with optional GPS. In contrast to the full ROMDAS system, miniROMDAS now runs on an Android mobile device to collect longitudinal and transverse profile.

Standalone Products: DCL also offers a variety of standalone products which do not require a central ROMDAS/miniROMDAS system. These include:

- ◆ **Z-250 Profilometer:** A class 1 profilometer designed for accurate measurement of longitudinal road profile. The Z-250 is used to measure the road profile for the purposes of either validating/calibrating a roughness meter to IRI or for obtaining a very accurate measure.
- ◆ **Falling Weight Deflectometers (FWD):** A device performing dynamic plate loading tests with a falling weight as force generator, in accordance with international standards such as ASTM D4694, IRC115 and IRC117 (India), and TRVMB 114 (Sweden).
- ◆ **Light Weight Deflectometers (LWD):** Accredited compaction tester in accordance with international specification ASTM 2835E-11, German standards TP BF StB, part B 8.3 and RIL 836.

Services :

Pavement maintenance budgets today are under intense pressure. Whether it's main arterials, back country access roads, runways or ports the goal is to do more with less; and this trend is likely to continue. Accurate data has become an essential tool to prioritize and manage maintenance activities on these networks.

Our Survey division specializes in surveying roads, airports, ports, railways and providing data & information on the assets surface and sub-surface condition. We operate a fleet of survey vehicles in New Zealand dedicated to collecting accurate, reliable and relevant data used in making sound engineering judgments

Pavement condition data is critical in understanding how the pavement is performing. Traffic speed surveys provide a relatively quick tool to determine network performance, construction compliance as well as the location and condition of surface defects and assets.

Our current surveying fleet of vehicles range from our top of the range ROMDAS Elite to a cost-effective ROMDAS Roughness Profiler. Because our systems are modular we can configure a vehicle depending on the outputs you require. As all data collection has a cost, this helps keep survey pricing down

The survey vehicle will be selected based on your requirements; typical requirements asked for include

- ◆ Roughness Compliance Testing
- ◆ High Speed Data (HSD) Survey
 - ⇒ Roughness
 - ⇒ Rutting
 - ⇒ Texture
- ◆ Road Geometry
- ◆ GIS Information
- ◆ Video Logging
- ◆ RAMM Condition Rating (Surface Defects)
- ◆ Asset Inventory
- ◆ Structural Testing
 - ⇒ Falling or Heavy Weight Deflectometer (FWD/HWD) Testing
 - ⇒ Deflection and curvature results to target geotechnical testing
 - ⇒ Structural Number (SNP)
 - ⇒ Layer moduli results based on pavement layer information.
 - ⇒ Sub-grade CBR
 - ⇒ Remaining life and pavement designs based on traffic count data.



To see a full list of our current surveying fleet capabilities and outputs please [click here](#).

To find the best option that meets your needs, please [contact us](#).

"Working closely with the ROMDAS Manufacturing Division ensures the survey equipment meets client requirements and any problems are rectified in-house, quickly and with negligible impact on the project deadline."

- Diana Scruby, Survey Division Manager

Software :

DCL or its subsidiaries or associates have also developed several software products, including:

ROMDAS: ROMDAS Data Acquisition software is used with the ROMDAS system in the survey vehicle for data collection and in the office for processing data into Microsoft Access files.

DATAVIEW: DataView is an advanced data integration and processing program - specifically for engineers or survey managers responsible for handling and processing road data into visual reports for clients or decision makers.

PROMAN: The Project Management System (PROMAN) is an off the shelf web based, integrated Project/Contract Management, Monitoring and Evaluation system. It is designed and developed on the concept of multi- tier distributed and enables the authorities to manage the contracts for Civil Works, Goods and Consultancy Services.

HIMS Asset Management: HIMS is a powerful asset management and analytical system software with in-built GIS and Reporting platforms. HIMS is designed to meet the needs of consultants and road agencies and is capable of storing data on any type of asset-from pavements through bridges to traffic and managing the data to prepare files for analysis.

Contact us :

Data Collection Limited, manufacturers of ROMDAS will work to develop and deliver road data collection equipment customized to your specific requirements. For further inquiries and to arrange a competitive quotation, please contact us at info@romdas.com. You can find more information on us and our products from our website www.romdas.com.

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