

Dynascan

LAND VEHICLE & MARINE VESSEL LIDAR



world leading laser measurement technology



Dynascan

LAND VEHICLE & MARINE VESSEL LiDAR



Survey vessel mount

The ability to collect data whilst on the move enables huge savings in time and personnel when surveying large areas or conducting regular updates of as-built information. Only one equipment installation is required and the survey is then conducted dynamically from comfort and safety of your vehicle or vessel. All data is processed in real-time, with a single, geo-referenced dataset being output from each survey, ready for cleaning and analysis.

The Dynascan 'plug and play' LiDAR system contains a seamlessly integrated INS, RTK GNSS system and high speed laser scanner. The system is lightweight, highly portable and may be mounted on vehicles or vessels to acquire 3D data of topography, urban developments, quarries, open pit mines, overhead utility cables, bridges, dams, harbours, beaches and river banks.



Vehicle mount

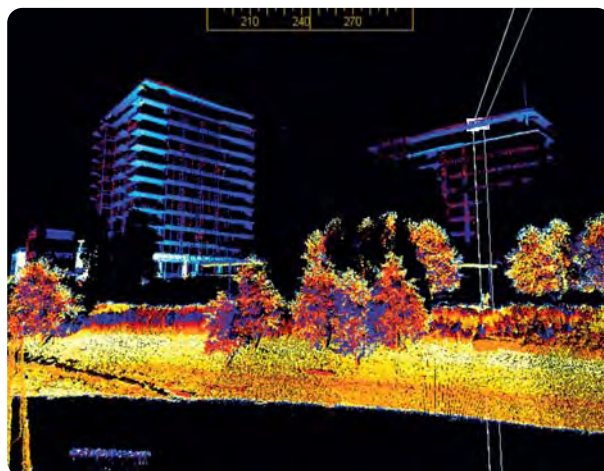
By fully integrating the sensors in one package, MDL has eliminated the need for in-field sensor calibrations and offset measurements. This helps to minimise systematic errors and reduces system mobilisation time to minutes.

A Dynascan system comes complete with advanced, customised data-acquisition and post-processing software. On-line displays allow detailed analysis and QC of the data during the survey. Recorded data may be exported to most 3D modelling and processing software packages.

The INS sensor is also part of the Dynascan package and enables the Dynascan to continue recording high quality data even when the GNSS experiences short drop-outs from bridges or overhead foliage. The RTK GNSS gives centimetre -level positioning accuracy. Real Time Differential Correction Data can be received from a local Reference Station via UHF radio, Internet based Real Time Networks or Satellite correction services.



Riverside actual

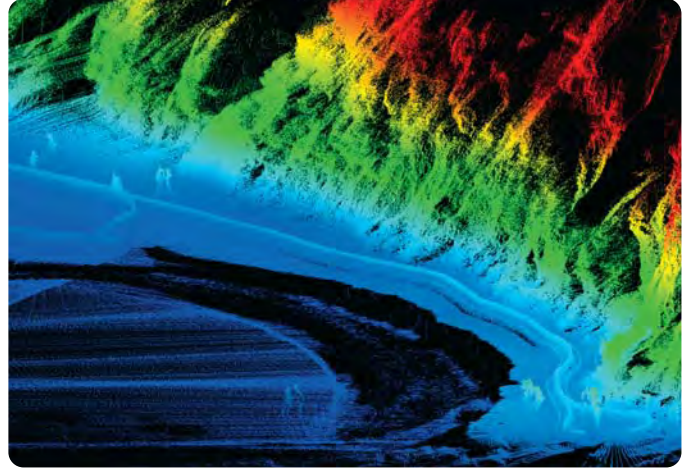


Riverside Dynascan Point Cloud

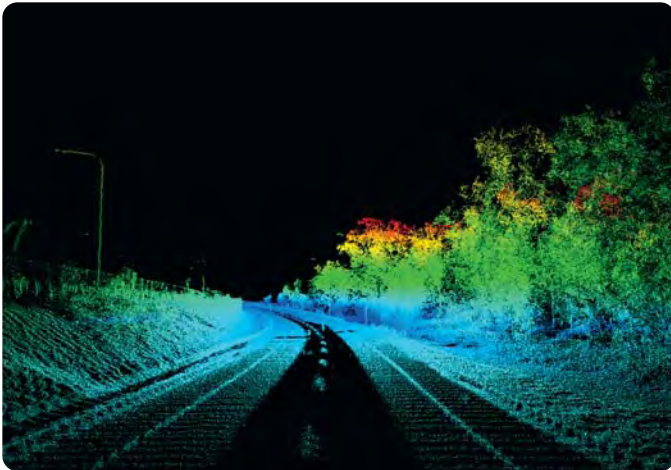
AN INTEGRATED MOBILE MAPPING SYSTEM FOR LAND AND SEA A LASER SCANNER, GNSS RECEIVER AND INERTIAL NAVIGATION



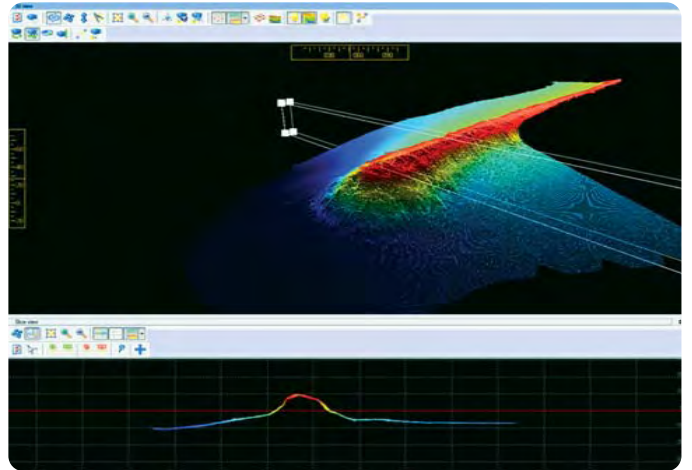
Lighthouse Dynascan Point Cloud from open sea



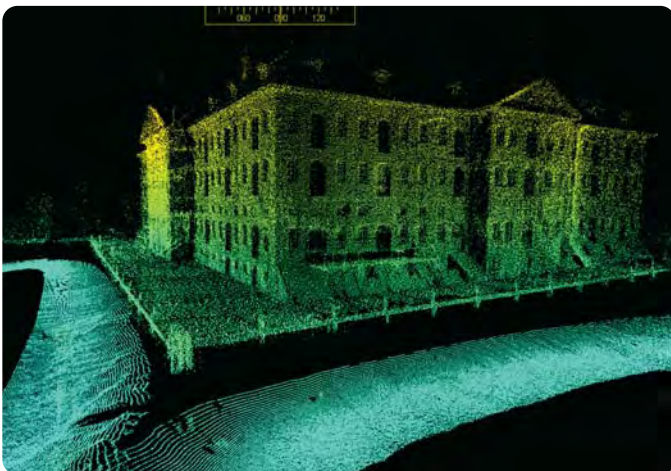
Estuary Dynascan Point Cloud



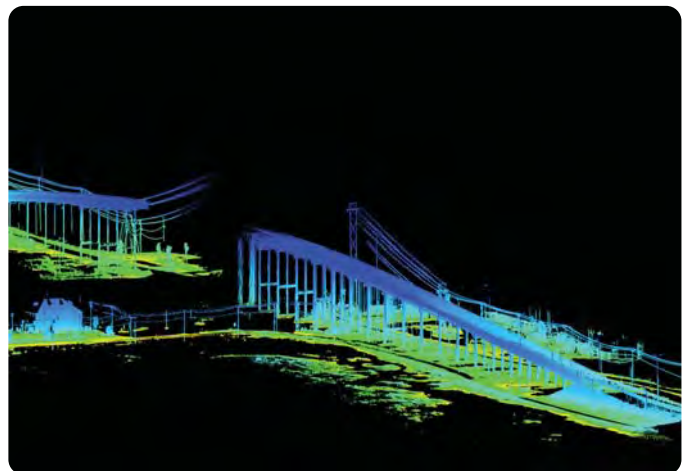
Road Dynascan Point Cloud



Combined Point Cloud from Dynascan and Sonar of



Combined Point Cloud from Dynascan and Sonar of Dock



Intercoastal Dynascan Point Cloud

ON-ROAD AND MARINE APPLICATIONS, COMBINING NAVIGATION SENSOR IN ONE POD.

Benefits

- Price performance
- Ease of use
- Rugged
- Easy to mobilise
- Portability
- Simple to install
- Self contained - weatherproof
- Factory calibrated
- Low power consumption
- Ethernet interface
- Upgrade packages

Applications

- 3D topographic mapping
- Volumetric surveys
- Regular surveys of quarries and open pits
- Pre and post blast comparisons
- Beach profiling
- Port and harbour surveys
- Dam, canal and riverbank profiling
- LiDAR infill surveys

The modular internal arrangement of the Dynascan means that there is maximum flexibility in the available components and upgrades. An x plane version provides twice the data, with better coverage of the built environment. An integrated camera and a long range (500m) version are also available to expand the functionality and range of the unit.

The Vessel mounted Dynascan seamlessly integrates to most swath Sonar systems for 'Real Time' 360 degree Laser and Sonar scanning.

Dynascan is highly affordable and represents a significant 'price-performance' advantage, unmatched by any existing manufacturer. This has opened up the benefits of 3D LiDAR to many more applications and end-users.

Dynascan is sold and supported worldwide by MDL and our network of resellers and service centres. A pool of rental systems are also available and complete surveys can be undertaken by MDL and our fully trained partners.



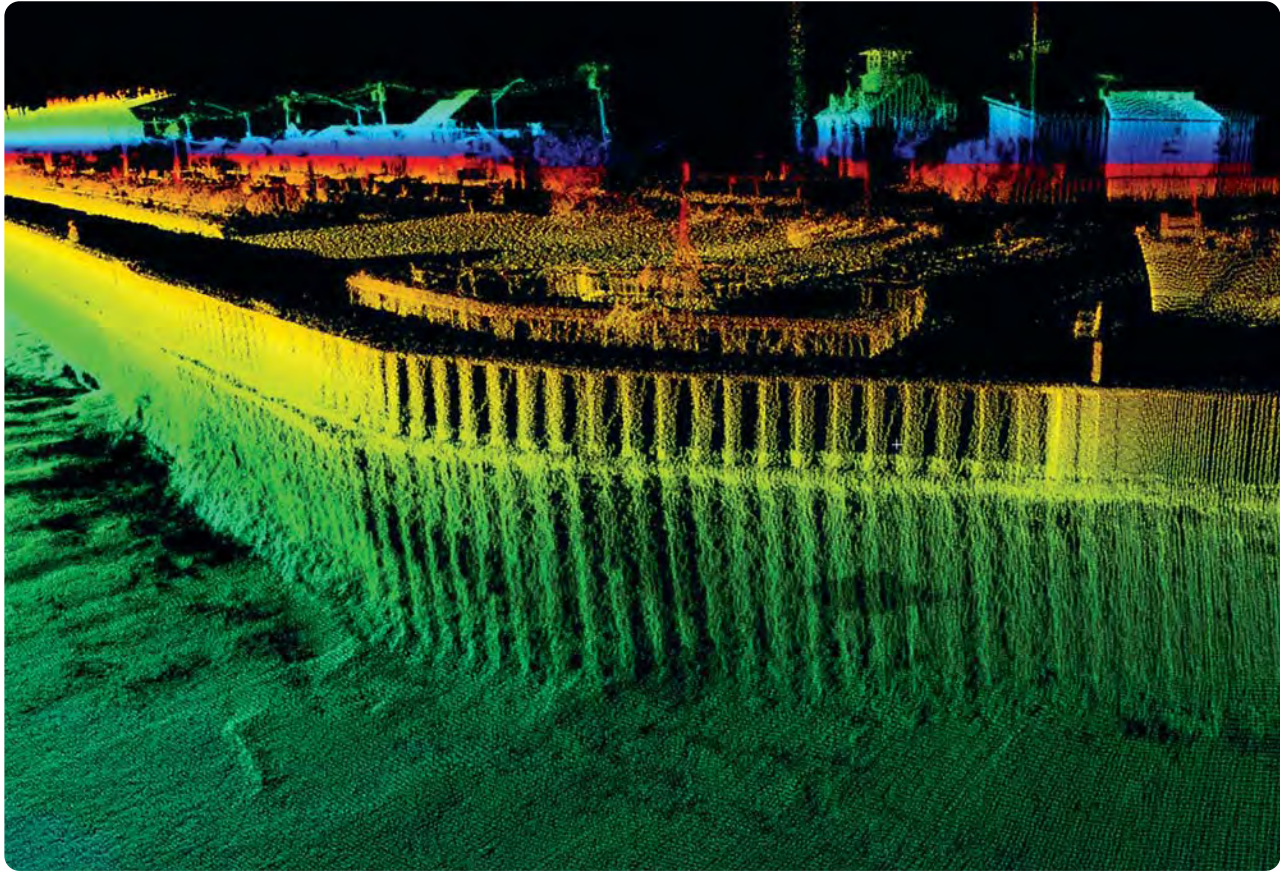
X-Plane Dynascan



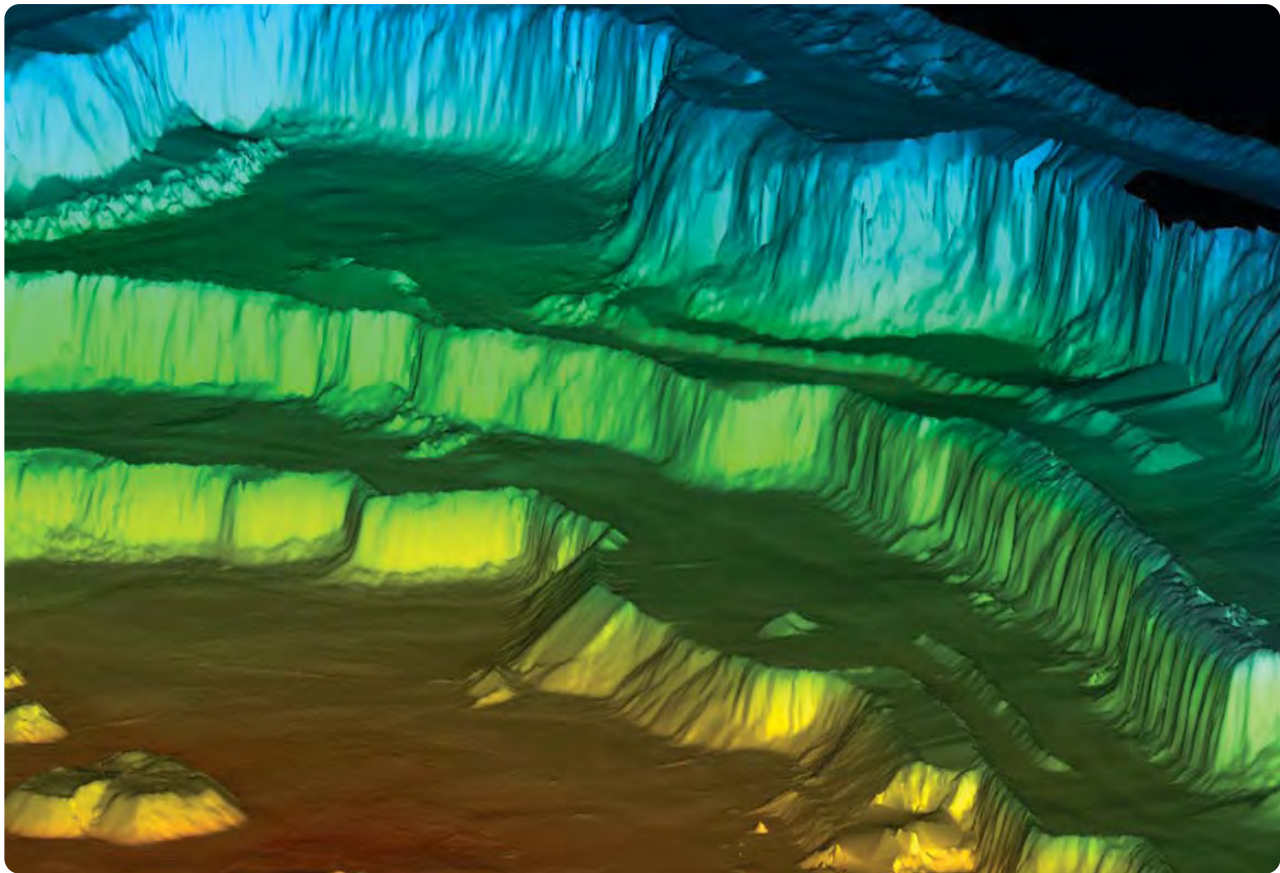
Quad survey



Ethernet connection convenience



Combined Sonar and Dynascan Point Cloud



Dynascan quarry model

Technical Specifications

Laser Scanner

- Class 1 (FDA/ IEC) (Class 2 with red dot pointer)
- Range up to 500m (1640')
- Accuracy: ± 5 cm (2.0")
- Range resolution: 1 cm (0.4")
- Scanner field of view: 360°
- Scanner angle resolution: 0.01°
- Scan rate: up to 30 Hz (1800 rpm)
- Pulse Measurement rate: 36 KHz
- Number of scanners per system: up to 10

Environmental

- Operating temperature: -20°C to +60°C (-4°F to 140°F)
- Storage temperature: -20°C to 70°C (-4°F to 158°F)
- Water and dust resistant to IP 65

Power and Dimensions

- Power: 12 to 17 volts DC 30W
- Weight: 11 kgs (25 lbs)
- Size: L595mm x W240mm x H255mm (L23" x W9.5" x H 10")

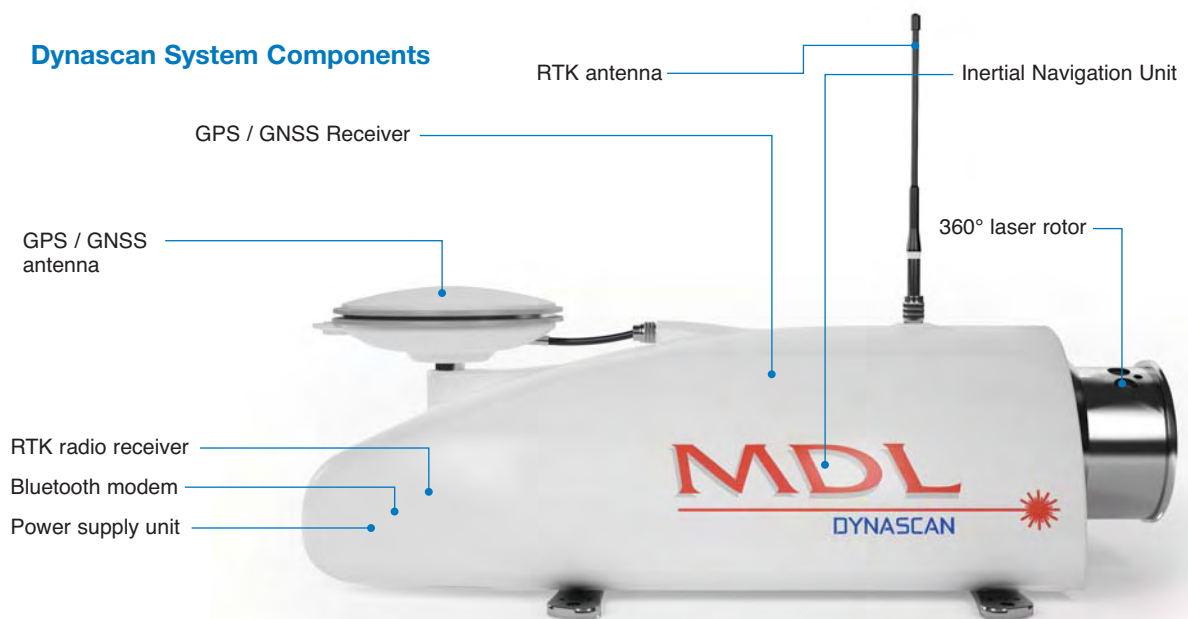
Attitude Accuracy

- Azimuth: 0.1°
- Roll: 0.05°
- Pitch: 0.05°

Horizontal Position Accuracy (RMS)

- Choice of GNSS receivers
- RTK accuracy up to 1cm (horizontal)
- Options to take corrections from various sources

Dynascan System Components



For more information on Dynascan:

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