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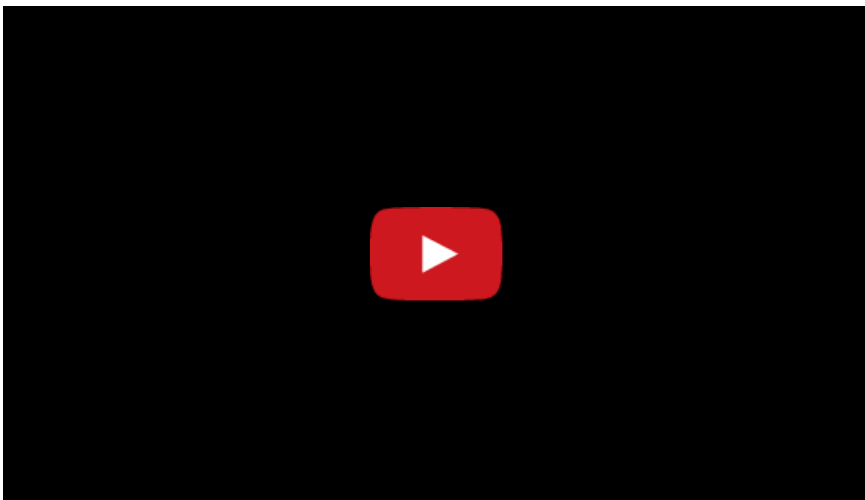
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### 3D Laser Scanning (LiDAR)



PDM's Mobile Mapping System is one of the most versatile LiDAR system on the market today for the delivery of high density point clouds and colour geo-referenced imagery. PDM's Mobile Mapping System's versatility is in its capability of easily being fitted to either a standard road vehicle, All Terrain Vehicle (ATV), Train, Boat or Aerial platform which truly stands it out from other mobile units. PDM additionally have the flexibility to either front or rear mount PDM's Mobile Mapping System on both a standard vehicle or ATV. This provides for fast and safe collection of LiDAR data in all environments. Mobile mapping on gravel environments (gravel roads, mine sites, quarries etc) with vehicles setup with rear mounted mobile mapping system's produce poor data coverage due to dust clouds from the rear wheels blocking coverage whereas front mounting mitigates this issue. Further versatility is provided with the PDM Mobile Mapping System having the capability to provide static scanning by quickly removing the Faro Focus 3D scanner and assembling it on to a set of survey tripod legs. This delivers to our clients unparalleled flexibility of both mobile and static scanning solutions.



PDM's Mobile Mapping System collects and post processes features into a high order geo-referenced 3D point cloud. The system is comprised of 6 essential components.; a Faro Focus 3D scanner, a Velodyne 32 scanner, GPS Receiver, an Inertial Management Unit (IMU), 7 POD HD Video Cameras and System software. The absolute accuracy of GNSS positioning and the stability of the IMU's gyro and accelerometer measurements are tightly coupled to provide an exceptional 3D navigation solution that is stable and continuously available, even through periods when satellite signals are blocked from vegetation and or structures. The PDM Mobile Mapping system includes two LiDAR scanning head's; the Velodyne 32 scanner contains 32 lasers and is excellent for mapping/asset collection applications due to its wide angle field of view. The FARO Focus 3D scanner is a highly accurate survey/engineer quality scanner and contains a single laser. Both scanners are oriented to

### Our Services

- ▶ 3D Laser Scanning (LiDAR)
▶ Project Management
▶ Project Delivery

### Our Projects

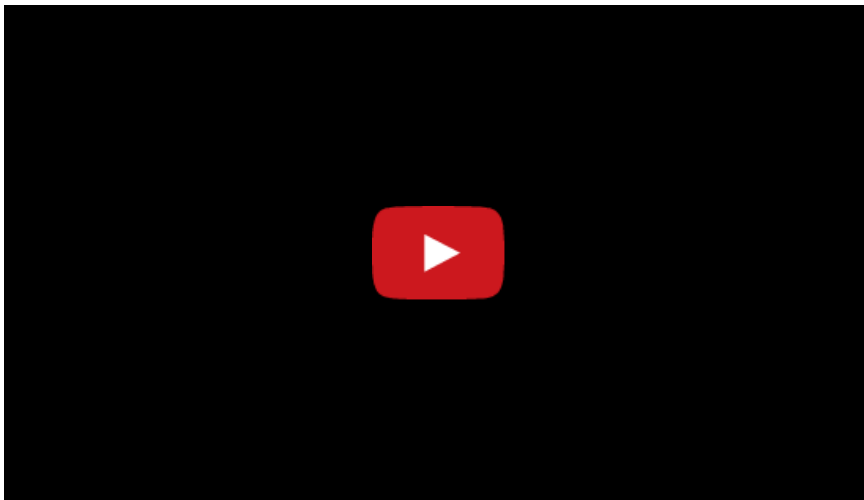
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cover roadside features with a radius up to 100m. High Definition digital cameras provide 360 degree coloured video and still imagery at either fixed distance intervals or video formats. Coloured imagery is GPS time and date stamped and with further post processing can be located to a high order mm x, y, and z accuracy.

NovAtel's Inertial Explorer (IE) processing software is utilised to combine the mobile GPS and IMU data from the scanner to compute the best fit trajectory (POSE). The post-processing of the geo-referenced LiDAR and coloured digital imaging accurately produces a 3D image representative of real time viewing. This data can then be exported to industry standard GIS and CAD formats. Base stations can be added to give the post processed GNSS data a higher order accuracy. DM are able to review geo-referenced point cloud and geo-tagged coloured imagery for asset management collection, take dimensions and measure quantities. PDM's Mobile Mapping System is just that, a safe, fast, flexible, mobile mapping system that provides highly accurate 3D point cloud data with time and date stamped geo-tagged coloured imagery for all applications. The mobile vehiclemounted system can collect data at standard travel speeds for road pavement condition assessments and road furniture asset capture audits. Safety is increased by removing traffic management from the carriage way with scanning staff within the scanning vehicle.

## Mobile Laser Scanning Highlights



## LiDAR Point Cloud Modelling Highlights

