

→ Benefits

- Complete roadside inventories, extracted from specially-calibrated digital videolog images.
- Compilation of inventories encompassing asset type, location, condition, measurements and unique identifiers.
- High-accuracy condition rating from the TV quality video images.
- Data output can be formatted for subsequent import into a GIS or road asset management software environment.

→ Road Geometry

The ARAN Smart Geometrics subsystem uses a patented control algorithm and a combination of gyroscopes and software, to measure the crossfall, transverse profile, vertical alignment (grade) and horizontal alignment (curve radius) of the roadway.

→ Characteristics

- High definition digital images
- Measurement of transverse profiles (rutting) up to 4 metres wide
- Multiple data sets collected in one pass
- High precision positioning system
- Capture of curvature, gradient, crossfall, slope, texture and road profile data
- Mapping of road/lane travelled path centreline for use in GIS
- Map-friendly outputs



AUTOMATED ROAD ANALYSER (ARAN) LRMS

To meet the demand for data accuracy, particularly in assessment of rutting, the ARAN LRMS (Laser Rut Measurement System) collects up to 1280 data points across a 4 metre width. The LRMS is a network of tightly-integrated subsystems, which synchronously collect accurate and reliable data for roadway infrastructure management applications.

Advanced Platform for Pavement Condition Data

ARAN is one of the most advanced platforms available, for collecting pavement condition and road asset data. It provides a safe, accurate, reliable and cost effective method to build a detailed picture of the condition of your infrastructure.

ARAN Allows:

- Complete roadside inventories, extracted from specially-calibrated digital videolog images;
- High-accuracy condition rating, derived from the TV-quality video images; and
- Asset inventories including type, location, condition, measurements and unique identifiers.

AUTOMATED ROAD ANALYSER (ARAN) LRMS

➔ Contact us

hello@pavement.com.au
Perth: +61 (0) 8 6168 1643
Sydney: +61 (0) 2 9674 9488
Sunshine Coast: +61 (0) 7 5357 9841

➔ GPS

The location coordinates of roadway features are provided by the onboard GPS. This data is used to create maps using CAD or a GIS (Geographic Information System). The ARAN GPS is integrated with other subsystems, so that if a receiver cannot lock onto a sufficient number of satellites to confirm its position, or a satellite lock is lost, then the ARAN DMI (Distance Measuring Instrument) and the ARAN Inertial Reference System (SmartGeometrics or POS LVTM) will fill in the gaps.



➔ Digital Video

The ARAN is fitted with HDTV cameras, which capture right-of-way and pavement images. HDTV cameras can handle changes in white balance and brightness, which are encountered during network surveys. You can view these images from an office computer. ARAN allows the video images to be correlated with road condition data and geometry information, to produce a complete picture of your road asset, for input into asset management and decision making.

➔ Rutting

(Laser Rut Measurement System) is mounted on the vehicle and uses dual scanning lasers to accurately measure transverse profiles, up to 4 metres wide. The transverse profile is measured in order to calculate the depth of roadway rutting.

➔ Roughness

The Laser SDP is a longitudinal profile measurement system, which provides road profile data capture and real time roughness index calculations, using a combination of high-speed lasers and accelerometers, collected in each wheel path and centre of lane.

➔ Texture

The Laser SDP samples at 12.5 mm intervals and measures bumps as short as 100 mm, at variable speeds of up to 100 km/h, without loss of accuracy (Type 1 Profiler). 64 kHz lasers are used to define mean profile depth, which can in turn be used to determine Estimated Texture Depth or Equivalent Sand Patch Texture Depth.

