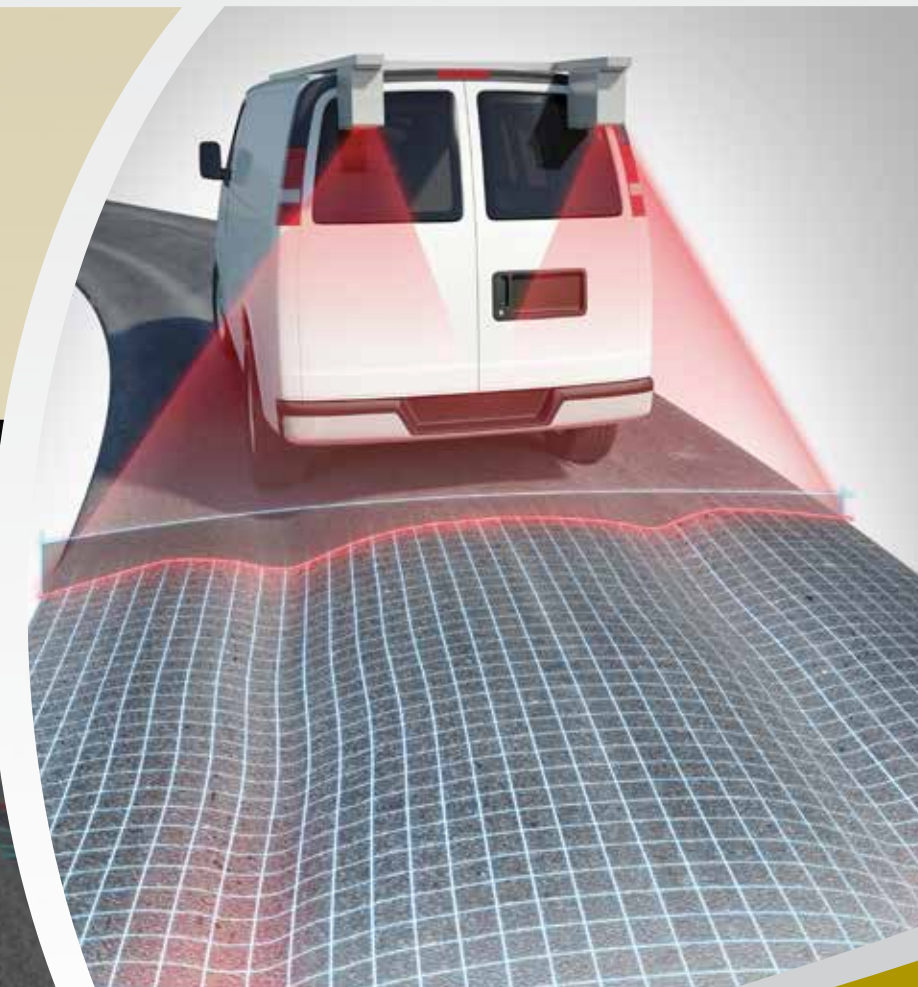
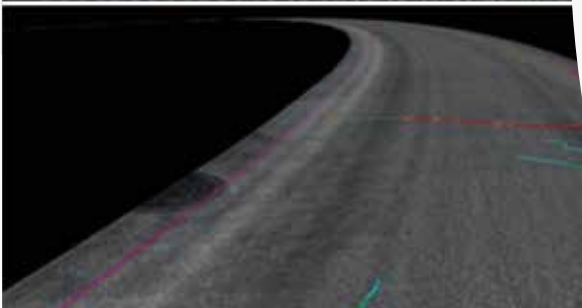
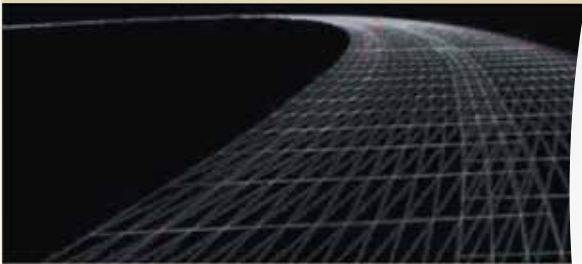


Laser Digital Terrain Mapping System (LDTM)

KEY FEATURES

- Millimeter accuracy digital terrain models
- 45 MHz system (2D and 3D data)
- Automatic generation of breaklines
- Detection of road edges, lane markings, curbs
- Day and night operation
- Low power consumption
- High resolution (1 mm) downward images
- Slope, curvature and crossfall



Laser Digital Terrain Mapping System (LDTM)

The Laser Digital Terrain Mapping system (LDTM) uses laser line projectors, high speed cameras and advanced optics to acquire high resolution 3D profiles of the road. This unique 3D vision technology is integrated with GPS and inertial measurement units (IMUs) that compensate for any vehicle motion and allows for the mapping of road surfaces with unprecedented accuracy and resolution. The LDTM acquires road surface data with 1 mm resolution over a 4 m lane width at survey speeds up to 100 km/h. Both 2D image and 3D data are simultaneously acquired at a rate of up to 45 million points per second and are seamlessly merged together into a high accuracy digital terrain map.

LDTM data is acquired and compressed in real time in the survey vehicle so as to minimize storage needs (approx. 1Gb per km). The collected data can then be analyzed using Pavemetric's data processing tools that will automatically generate break lines and detect lane markings, road edges, curbs, measure dropoff of unpaved shoulders, road profile, curvature, slope and crossfall. Inertial corrected LDTM data of 1mm resolution can be imported into CAD and civil and road engineering design software. Manually collected and surveyed points can be added to improve absolute position accuracy.



SYSTEM SPECIFICATIONS

- Number of laser profiles: 2
- Sampling rate: up to 11,200 profiles/s
- Vehicle speed: 0 to 100 km/h
- Profile spacing: 1 to 5 mm (adjustable)
- Transversal field of view: 4 m
- Transversal accuracy: 1 mm
- Transversal resolution: 4096 points/profile
- Depth accuracy: 0.5mm
- Laser profiler dimensions: 428 mm (h) x 265 mm (l) x 139 mm (w)
- Weight: 10 kg
- Power consumption (max): 150W at 120/240 VAC