

LE-TARMAC Scanner

Patent pending



Technical Data

Field of View (XY)	240 × 160 mm
Field of View (Z)	200 mm
Resolution (Z)	3...9 μm
Resolution (X/Y)	37...65 μm
Acquisition Time	~5 s per snapshot (e.g. ~20 s for 3 HDR exposures)
Multi-exposure HDR	Automatic — multiple exposures combined into a single result
Output Data	Elevation (Z), intensity, GPS location
Data Format	HDF5 (.h5), compressed
Data Transfer	USB export via web app
Scan Comments	User annotations per scan via phone app
Battery	18 V industrial battery, easy swap
Autonomy	Up to 60 scans; quick battery change
Display	OLED, high contrast, sunlight readable
Operation	2 buttons (ON/OFF, SCAN) + phone/tablet web app

Large field of view — 240 × 160 mm · 5.5× larger than the nearest competitor

Dual output — 3D topography + intensity map (bitumen content)

Phone app control — WiFi web app for remote triggering, status, and scan annotations

Multi-exposure HDR — optimal results on mixed-reflectivity surfaces

Fast acquisition — ~5 s per snapshot, automatic HDR combination

Full resolution — 3–9 μm (Z) · 37–65 μm (XY) — on par with existing instruments

On-scan comments — no paper notes or GPS-only guesswork

Portable & robust — built for on-site use with swappable industrial battery

Laus Engineering's LE-TARMAC Scanner is a portable optical device designed for accurate and efficient characterisation of road and track surface texture.

Drawing on extensive experience with existing market solutions, it has been designed to overcome the practical issues that limit other scanners. The result is a tool that combines a uniquely large field of view, fast acquisition, and robust portability with simple operation and seamless data handling.

With a simple two-button interface and companion phone app, the scanner captures high-resolution 3D surface topography and intensity maps, providing insights into both roughness metrics and bitumen content. Users can annotate each scan with comments directly from their phone, eliminating the need for paper notes or relying on GPS coordinates alone to identify scan locations. Multiple exposures are automatically combined using HDR processing, producing optimal results across surfaces with mixed reflectivity. Data is exported to USB via the web app, with no proprietary software required to access the data.