Buyers Guide: 3D Highway Measurement

Introduction To Highway Measurement

Accurate highway defect measurement is essential for effective maintenance planning, resource allocation, and public safety. Traditional methods often lead to inconsistencies, delays, and costly errors. The latest generation of automated 3D measurement software transforms this process—providing rapid, precise data and enabling smarter, more proactive asset management.

The Basics: Why Accurate Highway Measurement Matters

- Inaccurate measurements can result in incomplete repairs, wasted resources, extended downtime, and increased compensation claims.
- Engineers, highways authorities, and contractors rely on robust, standardised data for evidence gathering, auditing, and effective project planning.
- Automation removes subjectivity, strengthens audit trails, and ultimately improves safety for all road users.

Business Benefits of Automated Highway Measurement

- **Increased Operational Efficiency** - Streamline on-site workflows, complete more surveys per shift, and reduce the need for lane closures—unlocking faster project delivery with fewer disruptions.

- **Better Accuracy and Quality** - Automated 3D measurement eliminates human error, delivers consistent high-quality data, and ensures defects and repairs are captured with reliable, repeatable precision.

- **Cost & Revenue Optimisation** - Improved measurement accuracy reduces rework, prevents over- or under-estimating materials, and strengthens evidence for compensation claims—cutting costs and protecting revenue.

- **Scalability and Digital Transformation** - Cloud-ready, integration-friendly systems connect seamlessly with council and contractor platforms, supporting network-wide deployment and enabling long-term digital asset-management strategies.

How GPC 3D Highway Measure Software Stands Out

- Trusted and field-proven, with successful deployments across local authorities, highways agencies, and private contractors.

- Real-time operation from handheld or vehicle-mounted systems, requiring no user interaction once the route is underway.

- Consistently reliable in challenging conditions, including heavy traffic, low visibility, and adverse weather—ensuring accurate, all-weather, all-hours measurement.

- Instant geospatial mapping, enabling rapid defect identification, prioritisation, and repair planning.

- Future-ready support and integration capabilities, protecting long-term requirements, scalability, and ROI

What Is 3D Highway Measurement Software?

GPC utilises depth cameras and advanced algorithms to capture the e size and shape of multiple road defects in seconds. The system is capable of measuring cracks, potholes, and debris—width, length, height, and depth—reliably, even at night or in poor weather.

Features	Why It Matters
Rapid, Automated Measurement	Capture road surface damage data in under 15 seconds.
Multi-Item Compatibility	Measures multiple defects across a route, simultaneously.
Device Flexibility	Works with handheld devices and can be vehicle-mounted for surveys.
API & Systems Integration	Links seamlessly to existing asset management or internal systems.
Measurement Precision	Provides highly accurate data for legal, insurance, and operational needs.
24/7 Operation	Performs reliably in low light or challenging conditions.
Scalable Deployment	Suitable for urban, rural, or major trunk roads; single unit or full vehicle fleets.
Secure Cloud Data	All measurement results are instantly uploaded for analysis and auditing.

Steps to Implementing Automated Highway Measurement

1. **Review Your Network and Requirements**

Assess common defect types, survey conditions, and operational constraints across your road network.

2. **Evaluate System Integration**

Confirm compatibility with your existing asset management or GIS platforms, ensuring API or data-format alignment.

3. **Plan for Scalability**

Determine whether handheld devices, vehicle-mounted systems, or a blended approach best match your survey volumes and terrain.

4. **Establish Budget and Long-Term Value**

Account for hardware, software, training, and ongoing support—prioritising multi-year contracts to maximise cost efficiency and ROI.

5. **Request a Demonstration**

Arrange a live demo to see real-world performance and validate suitability for your operational needs.

Take the Next Step

Automating highway measurement delivers clear gains in quality, safety, and public confidence. To discuss specific requirements or see a demonstration, contact GPC's team to explore how Highway Measure can improve your operations from day one.

ask@gpcsl.com

07957726233