3D MODELING & IRI TESTING

**CS9500 Survey-Profiler**

Full Lane 3D Scanning and Rut Measurement

Merges RTK GPS or Control Points for Precise 3D Elevations

Generate Design for Smoothness & Machine Control

(configurable slope, cut/fill parameters, optimized for IRI)

Also a DOT Certified Inertial Profiler for IRI Testing

Scalable: Start with IRI; add X-Slope, Rut & 3D Scan
### HARDWARE FEATURES
- DOT certified inertial profiler for IRI smoothness testing (AASHTO M328, R054, R056-057 and ASTM E-950).
- **Scalable**: Add transverse profile system for rut depth and other measurements under AASHTO PP69-10 & 70-10.
- **Scalable**: Add IMU for cross-slope, GPS for 2D/3D survey.
- **DOT certified inertial profiler**
- **Scalable**: Add transverse profile system for rut depth and other measurements under AASHTO PP69-10 & 70-10.
- **Scalable**: Add IMU for cross-slope, GPS for 2D/3D survey.
- **Ride quality and rut depth reporting in accordance with DOT specifications**
- **Fully compatible with ProVal**
- **User configurable data collection and analysis parameters**
- **Easy software for calibration, collection and analysis of data on in-vehicle Toughbook; software license for use on Windows desktop PCs**
- **Quickly generate dense, open area 2D or 3D surfaces**
- **Highest resolution scanning merges 7500+ laser points/profile sampled at <2 in (<50 mm), IMU and corrected GPS data sets**
- **Add occasional control points for tighter, more accurate elevation data—near total stations accuracy!**
- **Multiple configurations available; examples**:
  - 2 laser track profiles, IMU and GPS for 2D relative profile.
  - 3 laser track profiles, IMU and corrected GPS for 3D Topo.
  - 6 laser full lane width profile, IMU and corrected GPS for highest resolution 3D Topo.
- **Choice of vehicle platforms**:
  - **High speed system attaches to front or rear of host vehicle.**
  - **Lightweight system on Polaris Ranger 570 EFI (2 or 3 laser).**
- **One setup for multiple passes, slopes, and lanes.**
- **Corrected GPS with RTK post processing (3D system).**
- **Interface with external GPS devices to use existing hardware.**
- **Works with third party machine control systems for variable depth milling, paving or grinding machines.**
- **Detachable core components minimizes risk of damage or theft.**
- **Panasonic Toughbook rugged operator interface computer.**
- **Reusable shipping/storage container.**
- **Patented technology.**
- **Precisely calculate areas of localized roughness for corrections or bonus/penalty results.**
- **On-screen GPS navigation along profile data.**
- **Surface data complies with all DOT & Industry specifications.**
- **Panasonic Toughbook rugged operator interface computer.**
- **Reusable shipping/storage container.**
- **Patented technology.**
- **Precisely calculate areas of localized roughness for corrections or bonus/penalty results.**
- **On-screen GPS navigation along profile data.**
- **Surface data complies with all DOT & Industry specifications.**
- **Full service, rapid response customer support.**
- **Web based issue reporting and automatic software updating.**

### SOFTWARE FEATURES
- **Inertial profiler data combined with IMU for 2D surface and corrected GPS/Control for 3D.**
- **Dense surface data for better designs.**
- **Create a design file with 2D or 3D survey data in conventional survey formats, but with higher resolution.**
- **Use surface data in SSI Profile Design module to analyze existing surface and optimize design for best smoothness values.**
- **Configurable design parameters for slope, cut/fill and smoothness.**
- **Data compatible with third-party CAD design software.**
- **On-the-Fly adjustments to design data and ongoing machine control.**
- **Design flexibility—resurvey surface to assess changes as project build progresses. Build based on the True Surface Profile.**
- **Surface designs work with both milling and paving machines.**
- **Separate or combined data formats: profile only, slope only, GPS only, or integrated 2D/3D survey data.**
- **Multiple export formats: PNEZD, PLLHD, Excel, CSV, ERD/PPF & PDF.**
- **Precisely calculate areas of localized roughness for corrections or bonus/penalty results.**
- **On-screen GPS navigation along profile data.**
- **Surface data complies with all DOT & Industry specifications.**
- **Full service, rapid response customer support.**
- **Web based issue reporting and automatic software updating.**