

Wheeled Instrumentation Sensor Package for HETAP 3 Data Collection

Operating System Requirements

- Weather-resistant laptop or tablet computer; touch screen recommended; external battery power supply
- Compatible with Windows 7 and 10 operating systems
- Three USB ports required for sensor box, GPS, and camera

Software Features

- Programming code is Python with various 3rd party modules (all open-source tools)
- A calibration routine is provided for calibration of grade and cross-slope
- Compatible with High Efficiency Trail Assessment Process (HETAP 3 Software)

Hardware Features

- Sensor package usable on rola wheel or heavy-duty cart
- Fully digital sensor box technology
- Avionics grade three-axis accelerometer and Z-axis gyroscope in the heading direction
- Increased measurement range for grade and cross slope, plus/minus 180 degrees
- Improved accuracy of slope measurements to plus/minus 0.12 degrees for grade and cross slope
- Lower power consumption results in longer battery life
- Improved distance measurement resolution with odometer accuracy of plus/minus 2 inches
- Kallman filter allows readings to settle more quickly for faster measurements
- New wheel encoder technology with solid-state Quadrature logic wheel encoder

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