

# Wheeled Instrumentation Sensor Package for (WISP) Data Collection

## Operating System Requirements

- Weather resistant laptop or tablet computer with touch screen recommended with external battery power supply
- The sensor box requires a separate USB Windows interface on a laptop or tablet computer

## Software Features

- Programming code is Python with various 3rd party modules (all open source tools)
- Grade and cross slope sensors information is reported as a floating-point number representing percentage of slope
- Grade and cross slope sampling rate of approximately 300 Hz
- Active, adjustable digital filtering (0.5 sec time constant) for almost on the fly data recording
- Fully object oriented architecture layout
- Component Object Module (COM) interface to request distance grade and cross slope
- A separate calibration routine is provided for distance. A minimum pre-measured distance of 25 feet is required
- A calibration routine is provided for calibration of grade and cross slope
- Compatible with High Efficiency Trail Assessment Process Software (HETAP)

## Hardware Features

- Sensor package usable on Roll-a-wheel, jogging stroller, ATV or OHV platforms
- Five magnets per wheel used on jogging stroller for a resolution of approximately 5 inches
- Dual reed switch pickup provides accurate distance information, and forward and reverse sensing (back up to collect missed data points/features)

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