



## **DVSS-101 Doppler Vehicle Speed Sensor**

### **Description**

SpeedInfo's DVSS-102 Doppler Vehicle Speed Sensor is a fully self contained, roadside mounted, vehicle speed measurement sensor. This non-intrusive, high performance speed sensor shatters existing sensor performance and cost points. In addition to low unit cost, the sensor is extremely robust and will perform maintenance free for years. The sensor is battery powered, solar charged, and mounts quickly on existing poles or overpasses.

The DVSS-102 uses a 24 GHz Doppler microwave transceiver system coupled to a Digital Signal Processor to measure and calculate vehicle speed. The DVSS-102 is capable of determining average or composite vehicle speed for a multiple lane freeway or highway. Speed information is backhauled to SpeedInfo's data server over a 3G cellular data link.

### **Specifications**

#### **Coverage**

- Range up to 1800 ft
- Installs on existing infrastructure – no new poles; mounts on virtually anything
- 20 minute installation time; 15 minute replacement time
- Configurable coverage areas to suit specific installation requirements

#### **Communication**

- Real-Time Traffic Information reporting
- 3G wireless modem data-backhaul
- Adaptive traffic speed reporting (Variable reporting schedules based on congestion level)
- Bi-directional

### **Measurement**

- Bi-directional traffic data collection
- Configurable data acquisition/sample rate
- Average speed within +/- 1mph
- 1/10<sup>th</sup> mph for single vehicle in field of view
- HOV lane speed measurements

### **Mechanical**

- Enclosure
  - Anodized aluminum tube
  - Bright White Powder Coat
- Dimensions
  - 14.3" Length
  - 4" Tube diameter
  - .070" Wall thickness
- Weight
  - 14 Lbs w/o mounting bracket and solar charge panel
  - 16 Lbs with mounting bracket and solar panel

### **Environmental**

- Operating temperature
  - -30°C to +75°C
- Relative Humidity
  - 0% to 100%
- Shock and vibration
  - Shock of 5 g 10mSec half sine wave
  - Vibration of 2g up to 200Hz

### **System Power**

- Battery and charge system
  - 5 Amp hour sealed tin/lead acid battery
  - 17 day operation w/o re-charge (No sunlight condition)
  - 7 year battery life
- Solar panel charging system
  - 5-12 Watt solar panel
  - Approx 1 sq. ft. in total area
  - Battery/charge alarms
  - 0-14.4 vdc

### **Reliability**

- MTBF greater than 60,000 hours

### **Sensor Platform/Modularity**

- Temperature and fog sensors
- Visual sensors
- Vehicle counts

### **Serviceability**

- On board diagnostics/self test
- Over-the-air software updates (No service calls)