SpeedLane® Pro

Houston Radar SpeedLane® Pro

The Houston Radar SpeedLane® Pro is state of the art **true dual beam, low power side-fire radar**. It is designed to accurately detect lane, speed and class of individual vehicles and compute per lane volume, occupancy, gap, average speed, 85th percentile and headway parameters.

Features and Benefits

- Patented (US10317525) true dual beam "speed trap" technology inherently provides accurate measurements without the need for in situ calibration.
- 255 feet (78m) detection range allows flexible deployments.
- World's lowest power usage highly integrated multi-lane traffic measurement radar.
- FCC and CE approved for full 250MHz operation to suite variety of application requirements.
- Mounts on the side of the road for non-intrusive traffic data collection and works in all weather and lighting conditions.
- Simultaneously measures all vehicles in 16 user defined lanes.
- All traffic measurements are on per vehicle, per-lane basis, available in real-time and stored in device memory.
- Lane-by-lane vehicle counts, vehicle counts by user defined speed bins, length based class by user defined length bins, average and 85th percentile speeds, occupancy, headway and gap measurements.
- 1 Million individual vehicle memory allows un-interrupted data storage even in the event of communication outages.
- Companion Windows application provides intuitive GUI to set all configuration parameters, display real time plots of targets and view snapshots & streaming HD video.
- Android smartphone and tablet app for setup and camera view ease field setup and maintenance.

Specifications & Recommended Operating Conditions	
Specification	**Recommended Condition**
Type	True dual beam side-fire FMCW traffic measurement radar
Vcc	12 to 24VDC Nominal 9 to 28VDC Max
Icc@12VDC (typical)	Ethernet Off: 71mA (0.9 W) Ethernet On: 97mA (1.2W) Streaming HD video: 183mA (2.2W) With GSM Modem Option: On Line: 97 mA (1.2W) Upload New Data: 108mA (1.3W)
Reverse Power	Protected w/ auto resettable fuse
RF Power	5 mW maximum each radar
Occupied Band	24.020 GHz to 24.230 GHz
Modulation Type	Frequency with linear ramp
Beam Angle	7°x74°
Beam Polarization	Linear
Speed Accuracy	Average per lane: +/- 1% Average per direction: +/- 1% Per Vehicle: +/- 6% for 90% of vehicles
Volume Accuracy	Per Direction Typical: 98 to 99% Per Direction Minimum: 95% Per Lane Typical: 98 to 99% Per Lane Minimum: 90%
Length Class Accuracy	+/-5.7ft (1.7m) or 15% whichever larger for 90% vehicles
User Defined Lanes	16 max
User Defined Length Class	8 max
Max Detection Range	255 feet (78 m)
Minimum Setback	6 feet (1.8m)
Sample rate	500 Hz x 2 Radars
Certification	FCC, CE, IC

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Features and Benefits Continued…

- Electronic gyroscope for tilt and level measurements ease setup.
- Built-in long range Class I 2.1+EDR Bluetooth, RS232 ports.
- 512 Mbytes of on-board storage plus uSD card expansion slot.
- Built-in 1.3MP HD video camera for sighting makes setup a snap and allows convenient remote monitoring of traffic.
- Comprehensive Houston Radar protocol, C and C# SDK.
- Powerful SQL based query interface for historical data.
- Optional built-in RS485 serial and Ethernet ports.
- Optional cloud based Tetryon server to aggregate data from multiple devices provides quick and seamless dashboard view.
- Optional built-in UPS with rechargeable battery keeps unit running for over 24hrs on loss of external power.
- Optional MPPT solar charger for optimal winter and cloudy day charging.
- Optional built-in 96Whr LiFePO4 battery for temporary or solar installations. Support up to 45W panel.
- Optional penta-band 3G GSM cellular modem for remote access.
- Optional DVR records video for last 18 hours.

Image from Built-In HD Camera

Specifications & Recommended Operating Conditions	
Ethernet	Optional: 100 BaseT Half/Full Duplex auto polarity detect
Power Over Ethernet	Yes, optional 802.3af. Mode A/ Type 1 (power over data pairs)
Rechargeable Battery	Optional built-in 96WHr LiFePO4
Solar Kit	MPPT charger, 30W or larger solar panel depending on location
Storage Capacity	Speed, lane and class for last 1,000,000 vehicles. Per lane counts in user defined speed bins, length based class in 8 user defined bins, average speed, 85th percentile speed, occupancy, gap, headway for 3 last months
Sighting Camera	1.3MP HD video (Ethernet and 3G modem only) or HD snapshots. 60° field of view 1280x960, 800x600, 640x480, 320x240 (800x600 10fps video)
Bluetooth	Ultra low power 800+ feet Class I 2.1+ EDR 460KB baud rate for setup, download and camera
Smartphone/Tablet App	Android smartphone or tablet ver. 4.0.3 and higher. Bluetooth and TCP/IP access.
Remote Access	Optional built-in ultra-low power worldwide penta band 3G GSM modem
GPS	Optional Built-in
Operating °F (°C)	Without battery: -40F (-40C) to +185F (+85C) With LiFePO4 battery: -4F (-20C) to +130F (+55C)
Dimensions without mounting bracket	26”length x 3”diameter (670mm x 76mm Diameter)
Weight	Without battery: 4.6lb (2.1 Kg) With battery: 6.4lb (2.9 Kg)

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