

The OmniPreSense OPS242 is a complete short-range Doppler radar sensor providing motion detection, speed, and direction reporting. All radar signal processing is done on board and a simple API reports the processed data. Flexible control over the reporting format, sample rate, and module power levels are provided. The OPS242 carries FCC modular approval, simplifying development and regulatory certifications for production release.

The OPS242 sensor can be connected to any Smart USB host (Raspberry Pi, Android device supporting OTG, PC or Mac) or Arduino using its UART interface to enable a simple IoT sensor.

Features

- 1-25m (3-80') detection range
- Speed reporting up to 348mph
- Direction reporting (Inbound/Outbound)
- Wide 76° beam width (-3 dB)
- Simple API control over USB interface
- FCC/IC modular approval
- Industrial temp operation (-40 to +85°C)
- 1.4W Active power, 0.6W Idle power
- Small form factor 40 x 54 x 8 mm, 10g

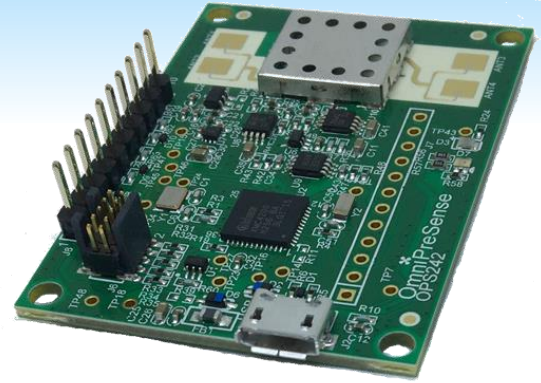
Applications

- Traffic Monitoring
- IoT Sensor
- Drone/Robotics

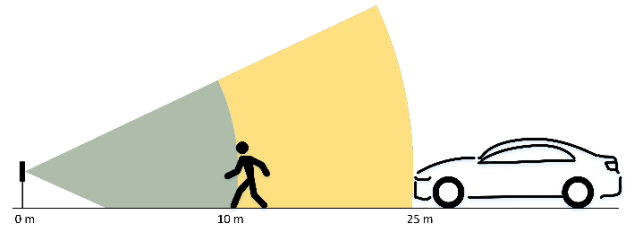
Functionality

- Traffic Monitoring
- Speed/Direction Reporting
- Presence Detection
- Collision Avoidance

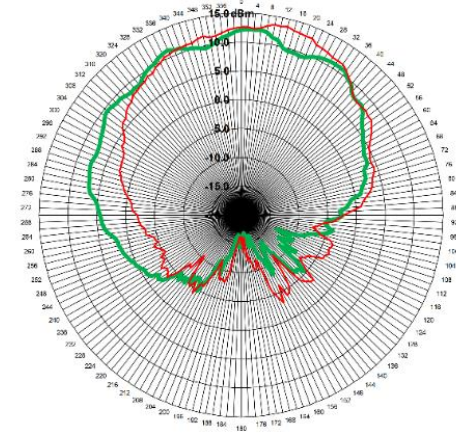
www.omnipresense.com



OPS242 Sensor



OPS242 Detection Range



Antenna Pattern

Part Number	Motion	Direction	Speed	Range
OPS242-A	•	•	•	

OPS-PB-002-E

Electrical Specifications

Parameter	Value	Notes
Operating Frequency	24.00-24.25GHz	ISM band
Transmit Power	11 dBm	
Transmit Antenna Azimuth	76°	-3 dB beamwidth
Transmit Antenna Altitude	76°	-3 dB beamwidth
Power Dissipation	1.4W (typ)	Active power
	0.6W (typ)	Idle power
UART Pin Signal Level	3.3V	
Supply Voltage	5V	
Operating Temperature	-40° to +85°C	

Ordering Information

Sensor	Type	Interface	Ordering Part Number
OPS242-A	Doppler	USB, UART	OPS241-A-CW-RP
Enclosure	-	-	OPS242-A-CW-ENC
Lens Enclosure	-	-	OPS242-A-CW-L26