

BumbleBee Radar

Mote-Scale Pulsed Doppler Radar

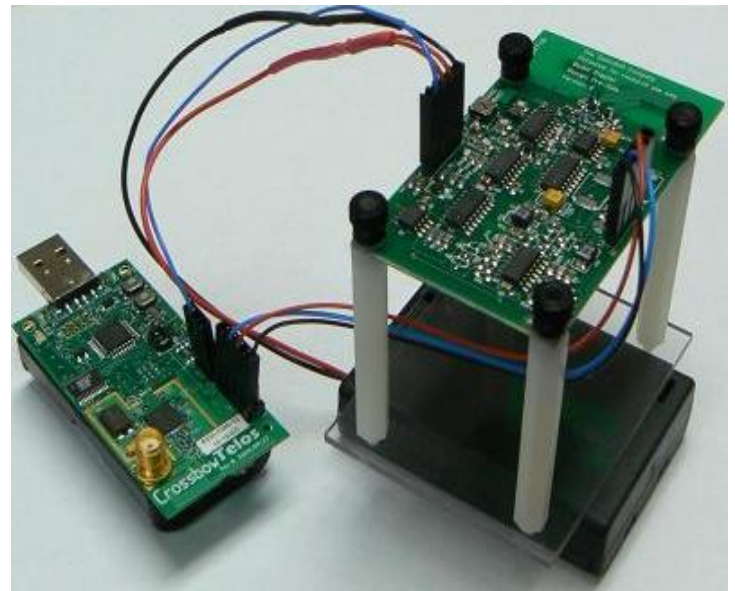
Key Features

- Range controllable through software
- Maximum range from 1 to 10 m
- Minimum range from 0.2 to 1 m
- Total power draw ~ 12 mA
- Center frequency at 5.8 GHz
- ISM Band
- On-board (i.e., internal) antenna
- 60 degree conical coverage pattern
- Optimized for human-like targets
- Quadrature output (both I & Q)
- Responds to radial velocities between 2.6 cm/s and 2.6 m/s
- Range gate sharpness of 0.2 m
- Powered by 3 AA batteries
- Easily interfaced with mote devices
- Non-interfering plastic stand.
- Cabling for use with TelosB motes
- Easy to make cabling for other mote-class devices

- \$100 each

In the U.S., exclusive of tax and shipping, and for research use. Price modestly higher in other circumstances

- Shipping since April 2008



Expected Applications

- Intrusion detection
- Better false alarm performance than PIRs
- Velocity estimation (including sign) for isolated targets
- Crowd intensity estimation
- Recognition of unique motions (e.g., dancing).
- Velocity-only tracking
- Detection of small amplitude vibrations