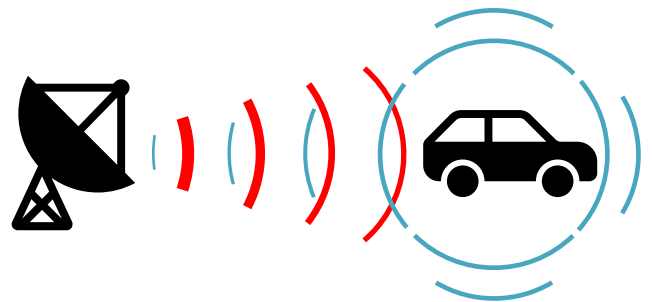




# mmWave radar vs other sensors

## uRAD Technology Fundamentals

The electromagnetic principle on which radar operates is very simple to understand. The radar antenna emits an electromagnetic wave in the direction of interest. If this wave encounters an object, a diffuse reflection is produced and a small portion of the emitted energy returns to the radar set. This “echo” signal has a frequency difference that is used to determine the velocity, distance and direction of the reflecting object given the complexity of the radar’s architecture.



uRAD uses microwave radar technology because it offers many advantages compare to other detection technologies like LIDAR (laser), PIR (infrared) or ultrasonic.

Features	uRAD	Infrared	Ultrasonic	Laser
Application flexibility	●	●	●	●
Resistance to moisture and dirt	●	●	●	●
Speed detection	●	●	●	●
Accuracy sensitivity	●	●	●	●
Resolution	●	●	●	●
Direction capability	●	●	●	●
Distance measurements	●	●	●	●
Penetration of materials	●	●	●	●
Size of solution	●	●	●	●
Cost	●	●	●	●

● Best    ● Good    ● Weak

