Use case brief

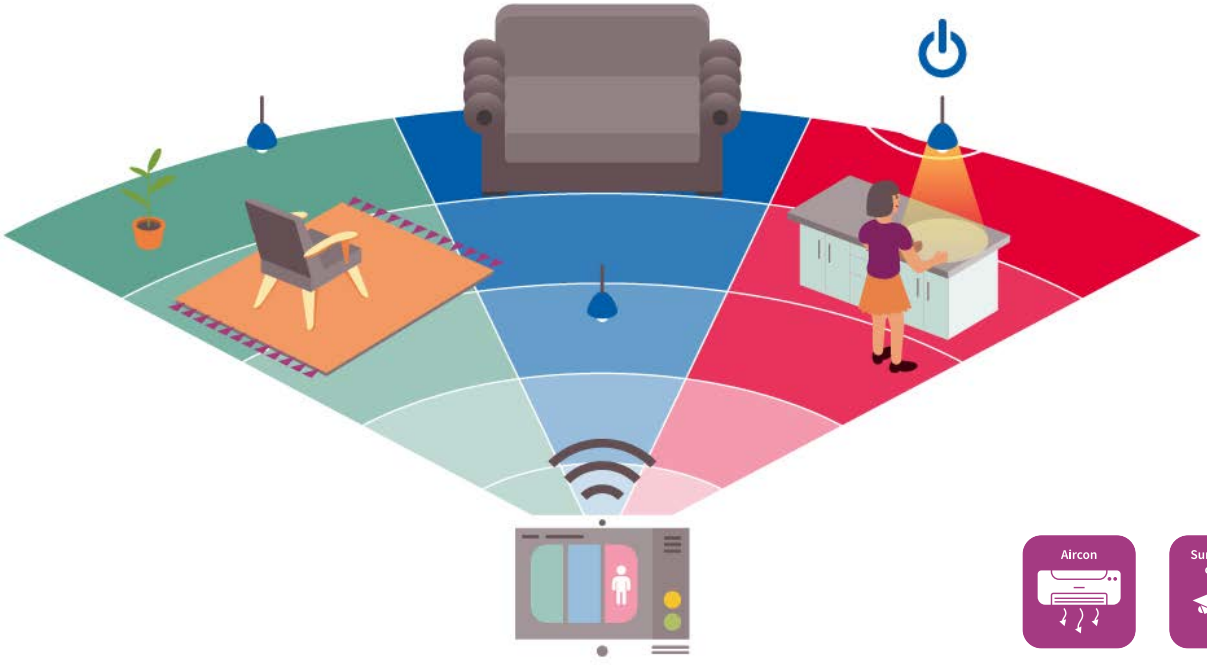
Tracking and Segmentation enabled by XENSIV™ radar IC

Infineon's smart radar IC can precisely locate several people and track them for greener provision of services according to need

The XENSIV™ BGT60TR13C radar IC can determine the location of several people in a room using the echoes of its 60 GHz pulses with its multiple antennas. It can then segment the room into zones so that the appropriate service can be delivered to each of them such as lighting or air conditioning. As it can track their individual movements, this can be dynamically reconfigured to continually deliver optimal services for comfort. In addition, turning on or off such services in different areas of an office or a home according to occupancy can provide significant cost savings.

Use case's and product's benefits for your application

- Macro and micro movements detection
- Adj. sensitivity and detection range up to 10 m
- Low power consumption
- No camera so no privacy issues and no complex video processing





www.infineon.com/radar

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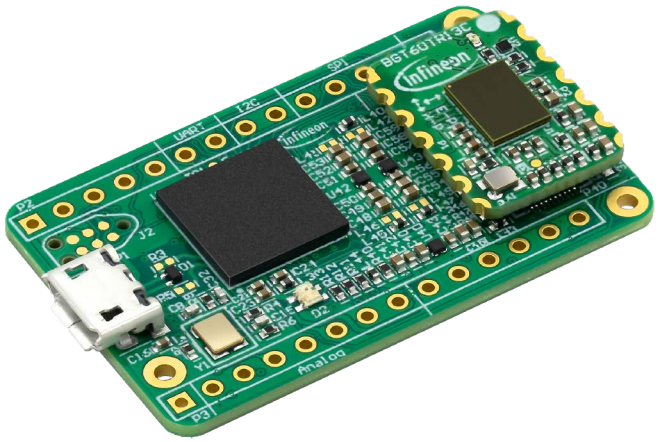
Because the radar chip is an FMCW radar (FMCW = Frequency Modulated Continous Wave), which uses echoes to determine the rate of movement of targets and their direction, it can form the basis for a smarter, safer user experience. Lighting can be turned on for the area that a person is going to rather than the usual of only when their arrival is detected. For HVAC, knowing the position and angle of movement of people within the segments of a room enables a ventilation system to align fan speed with user proximity so that delivery of these services is optimized according to people's location for an ideal user experience. In smart speakers, it can track the person giving the voice commands to help eliminated unwanted voices or noise and thus improve accuracy. For privacy, it can be implemented in a laptop's display to provide an anti-peeking feature with the display blacking out / adjusting its visibility as soon as somebody comes too close behind the user.

The alternative way to track people's movement to this level of precision would require cameras and sophisticated video processing algorithms which is expensive, power hungry and has privacy issues as images of people are involved.

Using this advanced radar sensor for accurate tracking and segmentation knowledge enables you to create smarter solutions that deliver maximum comfort and minimize energy use.



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