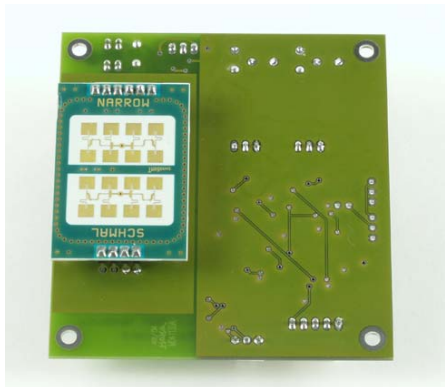
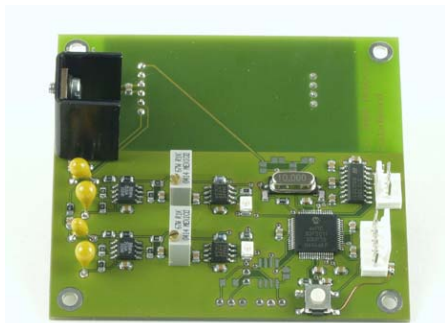


RadarBoard 2/30



datasheet

Introduction

The RadarBoard 2/30 is based on a 24 GHz radar sensor with preamplifier and a controller board with amplifier, signal conditioning, dsPIC30F5011 microcontroller and communication interfaces.

It is designed to precisely measure position and speed of moving objects in large areas. The board is sensitive for objects containing metal or water. In contrast the radar sensor is able to look through objects made of plastic or wood for example.

Typically the radar sensor is used to detect moving persons or animals in non industrial applications and to measure position, speed or direction of motion of machines/ machine parts in industrial applications:

- Security/ Surveillance
- Automotive: true speed over ground, pre-crash, parking aid
- medical supervision

A wide variety of radar sensors can be mounted to the board, so sensitivity/ detection distance or field of view can be adapted to specific application requirements.

The radar sensor even works outdoor in nearly all weather conditions including light rain and snow.

Technical data radar sensor

- Operating frequency 24,125 GHz
- Advanced PHEMT-oscillator with low power consumption
- Stereo (dual channel) operation for direction of motion detection
- Economic flat pack housing, extra small outline dimensions
- Detection areas from 12° horizontal/ vertical to 70° horizontal/ vertical
- Detection of persons up to 30 m with wide viewing angle
- Detection of velocities from 0,01 to 250 km/h

Technical data controller board

- Powerful 16 bit DSP dsPIC30F5011
- Flash memory for in circuit software update
- Low power consumption (+150 mA @ 5V)
- Small outline package
- Optional IP 65 package
- Binary (relay), RS-232 or CAN communication interface
- Measurement of object positions, velocities and direction of motion
- Detection sensitivity adjustable
- Small size 75mm x 82 mm
- Robust against vibration and shock
- Low cost

Software

The software is running on a powerful 16 bit 20 MIPS/ 30 MIPS CPU of type dsPIC30F5011 from Microchip.

Radar sensor data are continuously acquired, amplified and evaluated by the microcontroller. So the user may request the current position and velocity data by CAN or RS-232 anytime.

Information transmitted are objects positions, velocities and directions of motion.

The current status of the radar sensor data is displayed by LEDs mounted on the board.

Optional

Neobotix offers to modify both hardware and software for using RadarBoard 2/30 in special applications. Please contact Neobotix for details.