

Product Brief

Sense2Go Development Kit

24 GHz Sensor Development Kit Utilizing Infineon XMC4200 32-bit ARM® Cortex™-M4 MCU Series

This development kit allows the user to implement and test several sensing applications at the 24 GHz ISM band such as doppler based movement detection, doppler based direction of movement detection, doppler based speed estimation and Frequency-Modulated Continuous Wave (FMCW) based distance measurement of stationary targets. The kit consists of the BGT24MTR11 transceiver MMIC and a XMC4200 32-bit ARM® Cortex™-M4 Microcontroller for signal processing and communication via USB.

The CPU is already preprogrammed using Infineon's DAVE™ development tool. The module also comes bundled with a stand-alone firmware for movement detection without the aid of a PC, so this platform is a good starting point for your own applications. It samples up to 2 IF channels of the transceiver chipset and communicates via USB interface to a connected PC. A provided PC application GUI (Windows XP/Vista/7/8) can be used to display and analyze acquired data in time and frequency domain.

Applications

- Indoor/outdoor smart lighting
- Intruder alarm
- Motion detectors
- Intelligent door openers

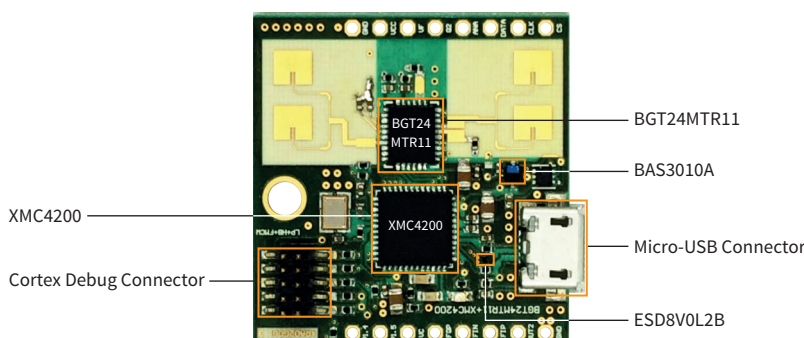
Features

- Capability to detect motion, speed and direction of movement (approaching or retreating) and software based FMCW for distance measurement
- Smallest known 24 GHz ISM band development kit
- BGT24MTR11 – 24 GHz highly integrated RF MMIC
- XMC4200 ARM® Cortex™-M4 – 32-bit industrial microcontroller
- Debug over cortex 10 pin debug connector
- Low power mode
- Integrated patch antenna

Contents of the kit include

- User manual
- SW GUI to operate kit
- Micro USB cable to USB cable (3')

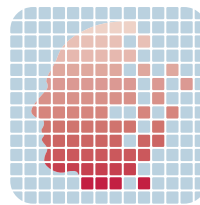
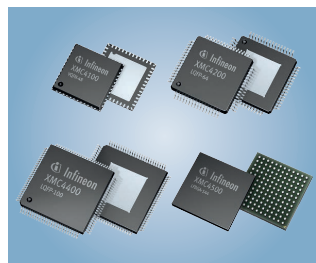
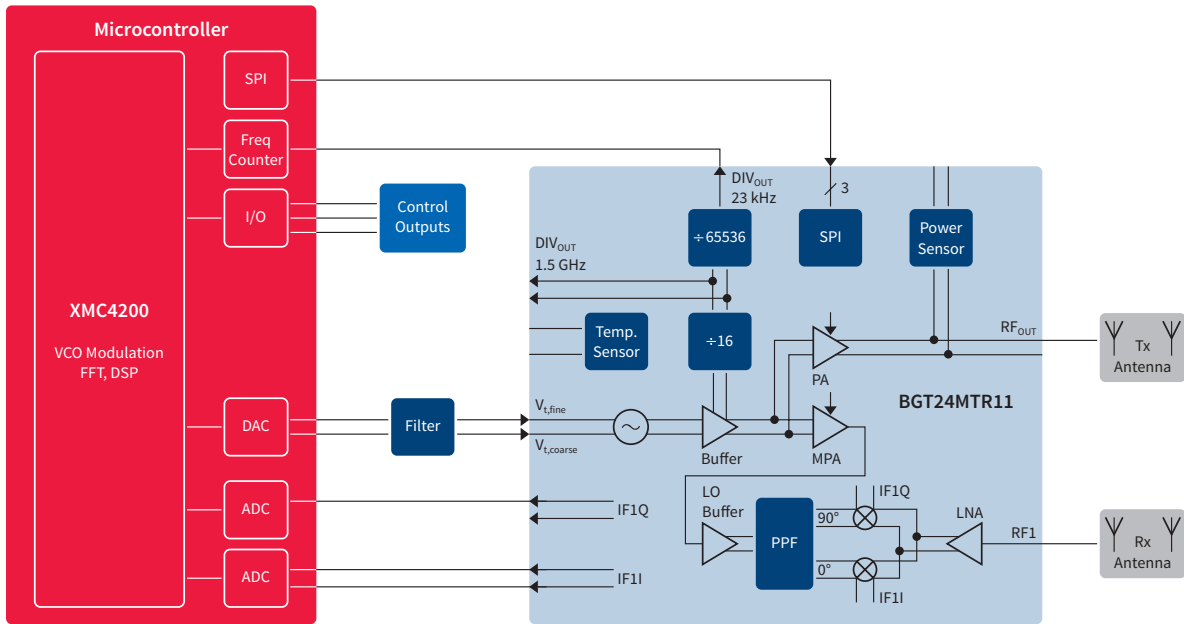
Sense2Go Development Kit – Main Components



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Sense2Go Block Diagram



Details

- www.infineon.com/24GHz
- www.infineon.com/xmc
- www.infineon.com/dave

Product Summary

Type	Description	Ordering Code (OPN)
BGT24MTR11	24 GHz radar chip with 1 transmitter and 1 receiver in PG-VQFN-32-9 package	BGT24MTR11E6327XUMA1
Sense2Go	Development kit	DEMSENSE2GOTOBO1
XMC4200-Q48K256 AB	80 MHz ARM® Cortex™-M4 with high resolution PWM unit, 256 kB flash, 40 kB RAM, rich analogmixed signal, timer/PWM and communication peripherals in PG-VQFN-48	XMC4200Q48K256ABXUMA1
BAS3010A-03W	Medium power schottky diode for high efficiency DC/DC conversion, fast switching, protection and clamping applications	BAS3010A03WE6327HTSA1
ESD8V0L2B-03L	Low capacitance TVS diode ESD / transient protection of high-speed data lines in a small form factor of 1.0 x 0.6 x 0.4 mm	ESD8V0L2B03LE6327XTMA1

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