

Quick Start Instructions

CC2400DBK Demonstration Board Kit

Introduction

The CC2400 single chip RF transceiver provides a highly integrated, very flexible low-cost solution for applications using the worldwide 2.4 GHz frequency band. The CC2400DBK demonstration board kit is designed to make it easy for the user to prototype software source code with the use of an Atmega8 SPI interface to the CC2400 and get up to speed implementing applications very quickly.

The CC2400DBK includes two CC2400DB Demonstration Boards. The CC2400DB contains the CC2400 chip and required external components together with the Atmega8 microcontroller.

The CC2400DB serves as a prototype platform for the CC2400 software development with an Atmega8 microcontroller. The CC2400DB provides an RS-232 connection, button, joystick, three Light Emitting Diodes, voltage regulation, temperature sensor and connectors to make it easy to interface to test equipment such as a logic analyzer, and other extension boards.

The hardware is documented in the CC2400DK User Manual, while SmartRF[®] Studio is used to obtain register settings for the CC2400DB software. All documentation and software can be downloaded from Chipcon's web site. Please visit Chipcon's web site regularly for updates to the documentation and software.

Getting started

1. Connect the CC2400DB to an external power supply. When shipped, the CC2400DB can be used with a 4 -10 volt power supply (ex. AC-to DC adapter) or a 9 volt battery. If you need to change the voltage settings, please see the CC2400DBK User Manual for details.
2. Install SmartRF[®] Studio and Atmel AVR Studio software on a PC if you have not already done this. Follow the instructions given by the installation programs. The PC must be running Windows 98 or newer for SmartRF[®] Studio. Please check appropriate OS compatibility with the AVR Studio Software documentation.
3. Use the supplied RS-232 cable to connect the CC2400DB and the PC together. This port is used with the bootloader and the AVR Studio. For details see the CC2400DBK User Manual.
4. Apply correct power to the two CC2400DB.
5. Reset CC2400DB
6. By pushing the S2 button on the CC2400DB board you will start the rfBlinkLed application example that is already programmed into the application section of the processor flash. The demonstration board with the S2 button pushed is the transmitter and the yellow LED will start to blink if an RF link is obtained. On the receiver demonstration board the green LED will be blinking. If a bad packet (no acknowledgement from receiver) occurs the red LED will blink. For detailed documentation, please see the CC2400DBK User Manual.
7. You can now use this application program to test the RF range with the PCB antenna connected to the CC2400 chip.

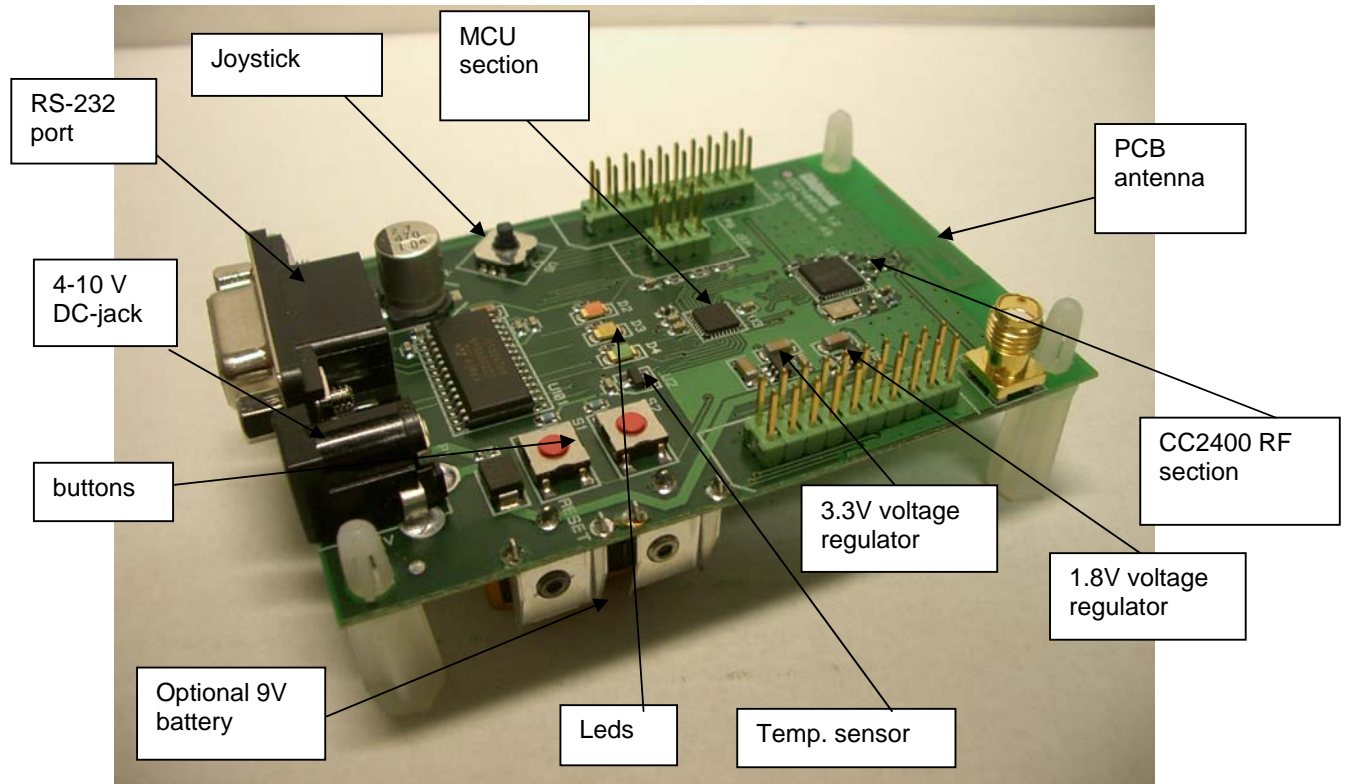


Figure 1: CC2400DB Demonstration Board

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