Quick Start Instructions

Rev. 1.1

CC900DK Development Kit

Introduction

The CC900DK Development Kit is designed to make it very easy for the user to evaluate the transceiver's performance and in a short time develop his own applications.

The Development Kit includes two Evaluation Boards with a complete CC900 transceiver, voltage regulator and PC interface circuitry. Using the Evaluation Board connected to a PC running the SmartRF® Studio software, various system parameters can be changed and tested via software. The evaluation board includes a significant number of components for great flexibility. However, only a minor part of these components are required in an actual application. Check the datasheet for a typical application circuit.

Important:

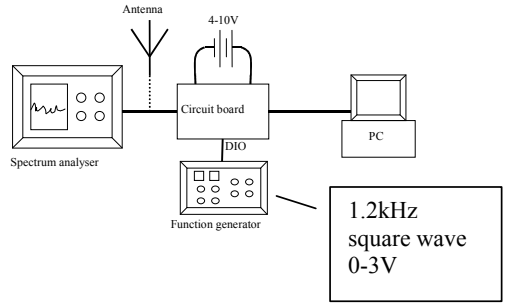
The use of radio transceivers is regulated by international and national rules. Before transmitting a RF signal out on the antenna, please contact your local telecommunication authorities to check if you are licensed to operate the transceiver.

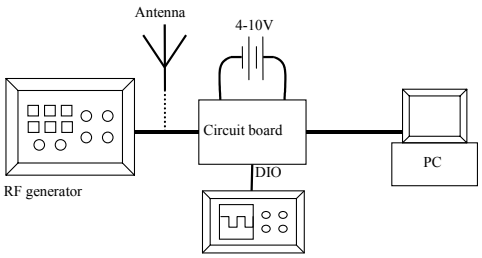
Step-by-step

To get the Evaluation Board up and running follow these steps:

1. Connect the board to an external power supply. If you are using a 4-10V supply, connect it to the 4-10V and 0V terminals on the power connector. If you are using a 3V regulated supply, connect it to the 3V and 0V terminals. Set the voltage selector switch to the correct position.
2. If you are going to measure the current consumption of the CC900 IC, insert an ampere-meter between the I_IN and I_OUT terminals on the power connector, otherwise make sure that a jumper is inserted between these terminals.
3. There are three preselector filter options: LC-filter, SAW filter, or no filter used. Each of the three filter alternatives is equipped with a female SMA antenna connector. To choose between the three filters there is a zero ohm resistor that can be moved (R61-R63).
4. Connect the parallel cable supplied between the Evaluation Board and the PC.
5. Start up the SmartRF® Studio software.
6. Recommended settings for the CC900DK are:

System parameter	Highest performance	Lowest cost
X-tal frequency	12.000000 MHz	12.000000 MHz
X-tal accuracy	5 ppm	20 ppm
RF frequency	869.000000 MHz	869.000000 MHz
IF stage	60 kHz	200 kHz
Frequency separation	20 kHz	40 kHz
Data rate	1.2 kbit/s	1.2 kbit/s
Power Amplifier class	Class B	Class B
RF output power	0 dBm	10 dBm
Receiver mode	Optimum sensitivity	Optimum sensitivity
LOCK indicator	Continuous	Continuous
VCO gain	000 (Maximum)	000 (Maximum)





The above figures show typical evaluation connections for TX (left) and RX (right). Note that the data signals to/from the CC900EB must be Manchester coded.

For details on how to use the SmartRF® Studio software please refer to the SmartRF® Studio User Manual.

IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its hardware products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any TI patent right, copyright, mask work right, or other TI intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third-party products or services does not constitute a license from TI to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. Reproduction of this information with alteration is an unfair and deceptive business practice. TI is not responsible or liable for such altered documentation.

Resale of TI products or services with statements different from or beyond the parameters stated by TI for that product or service voids all express and any implied warranties for the associated TI product or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

Following are URLs where you can obtain information on other Texas Instruments products and application solutions:

Products		**Applications**	
Amplifiers	amplifier.ti.com	Audio	www.ti.com/audio
Data Converters	dataconverter.ti.com	Automotive	www.ti.com/automotive
DSP	dsp.ti.com	Broadband	www.ti.com/broadband
Interface	interface.ti.com	Digital Control	www.ti.com/digitalcontrol
Logic	logic.ti.com	Military	www.ti.com/military
Power Mgmt	power.ti.com	Optical Networking	www.ti.com/opticalnetwork
Microcontrollers	microcontroller.ti.com	Security	www.ti.com/security
		Telephony	www.ti.com/telephony
		Video & Imaging	www.ti.com/video
		Wireless	www.ti.com/wireless

Mailing Address: Texas Instruments
Post Office Box 655303 Dallas, Texas 75265