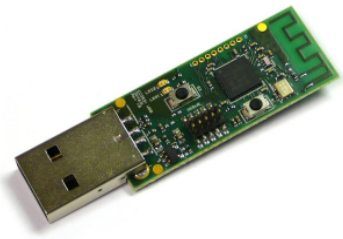
CC2531EMK Quick Start Guide

1. Kit Contents



- 1 x CC2531 USB Dongle
- Documentation

2. Getting Started

The CC2531 USB Dongle can be used as a development platform for USB and RF applications.

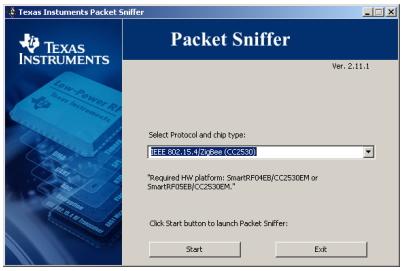
An external development tool, like the CC Debugger, is required to program and debug software running on the CC2531.

The CC2531 Dongle comes preprogrammed with software that lets the dongle operate as a packet capture device for the SmartRF Packet Sniffer.

This Quick Start Guide will describe how to use the dongle with the packet sniffer and the next steps for your own software development.

3. Install the driver

Before plugging the dongle into the PC, please install TI's SmartRF Packet Sniffer. When installing the Packet Sniffer, you will also automatically install the USB driver required for proper communication between the dongle and the packet sniffer.



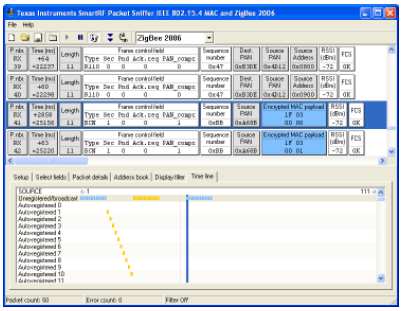
The Packet Sniffer can be downloaded from www.ti.com/packetsniffer

4. Insert the USB dongle

When inserting the USB dongle into a USB slot, Windows' new hardware wizard will appear. Select the options for automatic installation and wait for the driver installation to complete. After installation, the Packet Sniffer is ready for use.

5. Packet Sniffer

TI's SmartRF Packet Sniffer is a convenient tool for debugging of RF protocols. It displays the captured packets and decodes the packet contents depending on what protocol you are running.

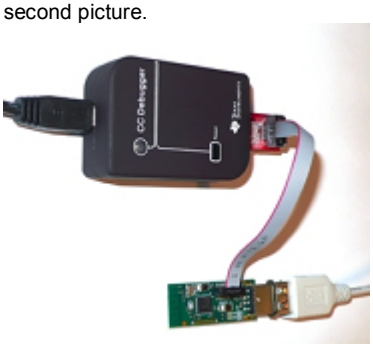


When starting the packet sniffer, select the protocol as required. The Packet Sniffer for CC2531 supports SimpliciTI, RemoTI and ZigBee PRO, in addition to a generic mode (no packet parsing).

6. Debugging and programming

For software development on the CC2531 an external debugger is necessary. This can be either a SmartRF05EB [3] as shown in the first picture,

…or a CC Debugger [4] as shown in the second picture.



7. Flash Programmer

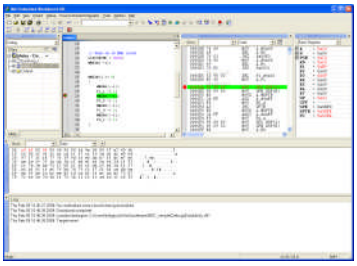
Texas Instruments has a simple tool which can be used to program the flash on the CC2531.

The Flash Programmer application, available on the kit web page [3], can be used to program Intel HEX files, read the contents of flash and several other operations.

You will need a SmartRF05EB, a CC Debugger or other programmers from Third Parties [5] to program the device.

8. IAR Embedded Workbench

To develop software and debug the CC2531, you should use IAR Embedded Workbench for 8051. IAR can also be used for programming.



A free, code size limited version can be downloaded from the web. See www.iar.com/ew8051.

9. Thank You!

We hope you will enjoy working with the CC2531 and associated Low-Power RF products from Texas Instruments.

A. Available Software

CC2531 USB Firmware Libary and Examples.
Source code of the USB Protocol Stack including simple HID and CDC examples [2].

RemoTI™ Network Protocol
TIs' implementation of the ZigBee RF4CE standard: www.ti.com/remoti

TIMAC Software
TI's IEEE 802.15.4 medium-access-control stack: www.ti.com/timac

Z-Stack™ Software
TI's ZigBee-compliant protocol stack www.ti.com/z-stack

B. More information

On Texas Instruments' Low-Power RF web site you will find all our latest products, application and design notes, FAQ section, news and events updates, and much more. Just go to www.ti.com/lprf

The Low Power RF Online Community has forums, blogs and videos. Use the forums to find information, discuss and get help with your design. Join us at www.ti.com/lprf-forum

The TI LPRF eNewsletter keeps you up to date on e.g. new products, application notes, software and events. Sign up at www.ti.com/lprfnewsletter

C. References

[1] CC2531EMK product web page
http://focus.ti.com/docs/toolsw/folders/print/cc2531emk.html

[2] CC2531 product web page
http://focus.ti.com/docs/prod/folders/print/cc2531.html

[3] CC2530 Development Kit
http://focus.ti.com/docs/toolsw/folders/print/cc2530dk.html

[4] CC Debugger
http://focus.ti.com/docs/toolsw/folders/print/cc-debugger.html

[5] LPRF Developer's Network
http://focus.ti.com/general/docs/gencontent.tsp?contentId=29028

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