

SESUB-PAN-T2541 EVK

Bluetooth® Low Energy Module Quick Start Guide

Kit Contains:

- 1. SP13808: SESUB-PAN-T2541 Evaluation Module
 - Equipped with the SESUB-PAN-T2541 BLE Module, a 2.4GHz band chip antenna, and a 32.768kHz sleep clock resonator
- 2. SP13809: Adapter Board
 - The adapter board contains switches and LEDs used during the TI BLE Multitool demonstration, and also a pin header for TI's CC-Debugger.
- 3. Battery Pack Power Supply
- 4. Product Selection Guide





1. Download the Texas Instruments 'TI BLE Multitool' App from the App Store for your Bluetooth® 4.0 compatible iOS device*. The TI BLE Multitool Icon will appear on your home screen when installed properly.

*Bluetooth® 4.0 is compatible with iPhone 4s and iPad 3rd Gen. or later models



 Connect the battery pack* to the SESUB-PAN-T2541 evaluation module/adapter board. The red cable connects to the top pin (Vcc), and the black cable connects to the bottom pin (GND), as shown below.

*3.0-3.6 V is the recommended power supply voltage





3. Make sure the Bluetooth function is set to 'On' on your iOS device, and then open the TI BLE Multitool App.



4. Make the evaluation module discoverable by pressing the SW1 button. LED1 will begin to flash on the evaluation board, and 'TDK BLE Smart Tag' will appear under Available Devices in the TI BLE Multitool App.





5. Select 'TDK BLE Smart Tag' from the main screen of the TI BLE Multitool App. Notice the two buttons near the top of the screen, the device information in the middle, and the RSSI value near the bottom.



6. Push SW1 or SW2 to see the respective buttons on the screen of your iOS device change position.



SW1 is pressed

SW2 is pressed



Using the SESUB-PAN-T2541 EVK with the TI CC-Debugger

Needed:

- SESUB-PAN-T2541 EVK
- TI CC-Debugger
 - The CC-Debugger must be purchased separately.
- PC (Windows OS)
- SmartRF Flash Programmer
 - TI's Flash Programmer software "swrc044s.zip" (V1.12.7 5/6/2013) is included within the firmware folder on the TDK Products Selection Guide USB drive
 - The latest version of this software can also be downloaded through TI's website by searching "SmartRF Flash Programmer". – <u>www.ti.com</u>
 - Download and install the SmartRF Flash Programmer from the TI website or from the "swrc044s.zip" file on the TDK Products Selection Guide USB drive. Search "SmartRF Flash Programmer" on <u>www.ti.com</u> and click "Get Software" to download the swrc044s.zip file.

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2. Save the swrc044s.zip file to your PC. Open the zip file from the location where it was saved and run the .exe executable file to install the TI SmartRF Flash Programmer.

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3. Follow the automatic prompts to install the software.







SmartRF Flash Programmer (1.12.7) - InstallShield Wizard	😸 SmartRF Flash Programmer (1.12.7) - InstallShield Wizard
Setup Type Choose the setup type that best suits your needs.	Ready to Install the Program The wizard is ready to begin installation.
Please select a setup type.	Click Install to begin the installation.
Complete All program features will be installed. (Requires the most disk space.)	If you want to review or change any of your installation settings, dick Back. Click Cancel to exit the wizard.
Custom Choose which program features you want installed and where they will be installed. Recommended for advanced users.	
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SmartRF Flash Programmer (1.12.7) - InstallShield Wizard	😸 SmartRF Flash Programmer (1.12.7) - InstallShield Wizard
Installing SmartRF Flash Programmer (1.12.7) The program features you selected are The program features you selected are The programmer	
Please wait while the InstallShield Wizard Installs SmartRF Flash Programmer (1.12.7) . This may take several minutes.	INSTRUMENTS The InstallShield Wizard has successfully installed SmartRF Flash Programmer (1.12.7) . Click Finish to exit the wizard.
Status:	Place shortcut on the desktop.

4. Launch the SmartRF Flash Programmer software by clicking the icon below on your desktop.

< Back

Finish

Cancel



< Back Next > Cancel

InstallShield



5. Connect the SESUB-PAN-T2541 EVK to the CC-Debugger, and then connect the CC-Debugger to the PC using the mini USB cable. When the USB cable is connected, the PC should automatically prompt you to update the driver as long as the software from Step 3 has been installed.



- 6. Make sure the firmware on the CC-Debugger is up to date. To update the firmware on the CC-Debugger, first remove the SESUB-PAN-T2541 EVK from the CC-Debugger.
 - Select "Program Evaluation Board" from the 'What do you want to program?" dropdown list from within the Smart RF Programmer
 - Click the "Update EB Firmware" button
 - Make sure that "Erase, program, and verify" is selected under "Actions"
 - Click the "Perform actions" button

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	Flash image:				
	C Erase Erase and program and verify Erase, program and verify C Append and verify C Verify against hex-file C Read flash into hex-file				
	Perform actions				



7. Install the latest version of firmware for the SESUB-PAN-T2541 EVK Module.

- Select "Program CCxxxx SoC or MSP430" from the "What do you want to program?" dropdown
- Make sure that the CC-Debugger is highlighted in the System-on-Chip menu
- Select the "SP13808_FW_v0r52_STD.hex" file from the firmware folder on the TDK Products Selection Guide USB drive in the Flash Image section
- Make sure "Erase, program and verify" is selected under the Actions menu and click "Perform Actions"

*Note if firmware fails to update, check the hardware connections and repeat installation.

Version Texas Instruments SmartRF®	Flash Programmer 💿 🔍	83				
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	Actions C Erase C Erase and program Flash lock (effective after program/append): C Erase, program and verify Write protect: C Append and verify Block debug commands (incl. read access) C Verify against hex-file NB: Cannot "Append and verify" when set!					
1944 - N	Perform actions					
	CC2541 - ID8662: Erase, program and verify DK					

<u>Note:</u> For additional information or any questions regarding the CC-Debugger, please refer to the TI CC-Debugger User's Guide: <u>http://www.ti.com/lit/ug/swru197h/swru197h.pdf</u>.