

SimpliciTI Change Log

Version 1.0.5

1. As part of power management support improvements, for builds that support End Device objects only (i.e., not Access Points or Range Extenders) the radio is by default *not* in Rx state when it is activated. This means that existing applications may not work correctly if they assume that Rx is on by default. At the application level the radio must be set to the receive state using the existing `ioctl` interface when appropriate. All the sample End Device applications now have examples of explicit radio Rx state control.¹

Note: This change affects the semantics of the build-time macro `RX_ALWAYS` which is used for non-polling End Device builds. Because the radio is now off by default defining this macro does not imply that the radio is always on. It now has more of the sense that the radio may be always on at the discretion of the application.

2. The `SMPL_LinkListen()` call is now a timed blocking call and will return when either a valid link frame is received or a (configurable) fixed amount of time has elapsed. The application can discriminate between these two by the return code. The application is then free to implement a recovery policy including another `SMPL_LinkListen()`. See Section 7.6.3 in the Developers Notes for details and how to change the default timeout value
3. Interoperability among radios of the same family (e.g. CC2500/CC2510/CC2511) especially in Frequency Agility scenarios has not been fully vetted. It is recommended that near-term development be done using common radio platforms rather than mixing platforms.
4. This release brings all previous platforms and radios to the 1.0.4 functional level of the CC2430. The major functional difference is the support for Frequency Agility.
5. See Section 5 in the SimpliciTI 1.0.5 Release Notes document to address issues with possibly missing files in the IAR IDE support for the CC1111.
6. Delay loops now calibrated by using an MCU timer resource. Many have been tuned to a first approximation to minimize busy-wait time.
7. Resources allocated to a peer connection can now be locally reclaimed. Using the Link ID as the access tag connection resources can now be reclaimed using the `ioctl` interface. This interface reclaims local resources only. It does not tear down the connection.
8. Library support has been removed from the eZ430RF-2500 projects in this distribution. The projects to build the libraries remain. But the libraries themselves and the example workspaces that previously used the libraries have been removed.

¹ This applies to applications only. The network layer will take care of the radio state to deal with its own functions.
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9. A new document is provided to show the relationship among WiFi channels, 802.15.4 channel selection and CC2500/CC1100-class channel selection used to populate the channel table for each radio.
10. Previous releases of the SimpliciTI Installer landed on the Release Notes as the document of choice to optionally open upon Installation. New users of SimpliciTI should refer to the Release Notes for details on the examples included with the distribution.

Version 1.0.4

1. Release targeting CC2430 only. Supports CC2430DB and SmartRF04 with the CC2430EM.
2. Frequency Agility feature added. The ‘AP as data hub’ example application implements a Frequency Agility scenario. The feature is enabled by defining the macro **FREQUENCY_AGILITY** in the **smp1_nwk_config.dat** file. See the 1.0.4 Release Notes for details on the End Device application modifications required for Frequency Agility.
3. The End Device application in the ‘AP as data hub’ example now requires a button press to stimulate each message sent. This is to emulate a multi-button remote control device. The previous version of the End Device application sent a message periodically on its own. See the release notes for details.
4. The End Device polling application now shows usage examples of the **ioctl** interface to implement simple power saving strategies. The polling device places the radio into the sleep state between polls. The sending application turns the receiver off as it is not used in the sample application.
5. All **NWK** applications now use transaction IDs in their individual application payloads. Previously they were (incorrectly) using the **NWK** layer transaction ID to maintain application discipline.
6. Disambiguation bug had to be fixed for polling End Devices. Only the port number was being used. The source address of the sender must be used as well so the poll frame has 4 more bytes and the validation code needs to compare the addresses.
7. Silently support the Unconnected User Datagram Link ID/port in the Connection Table so that the user no longer needs to set the **NUM_CONNECTIONS** macro to 1 larger than is needed.

Version 1.0.3

1. References to the Access Point toggling LEDs during polling removed from Release Notes example explanation, as the toggling no longer occurs
2. Fixed macro specification to remove compile error when building for the CC1100 radio.
3. Add cascading End Devices example.
4. Added support for SoC: CC1110/1111 and CC2510/2511.

5. Libraries built to support newest version of Kickstart. Library projects removed from distribution.
6. Debug/Release project configurations reduced to just Release for all projects.

Version 1.0.2

1. Fixed disambiguation bug. If a device (e.g., AP data hub) connected to more than one other device it could not distinguish among the senders of messages. The same link ID appeared to supply all the messages.
2. Incorrect values were being returned for RSSI and LQI.
3. Default stack size was changed to 200 bytes for all example projects.
4. Release Notes were updated to describe how to set the EXP examples to work with the CC1100 radio.
5. Default number of connections changed from 2 to 8 for Access Point libraries on both targets.
6. In the example main program files checking the return code from `SMPL_Link()` should test against non-success instead of against a specific error code, as there can be more than one type of error.
7. Legacy reference to a non-stack symbol (`toggleLED()`) removed from stack code. This was used for debugging and inadvertently left in the stack code.
8. Frame description figure for Client side Join frame corrected in Specification document.
9. Internal hyperlinks corrected in Developers Notes document.

Version 1.0.1

1. Libraries added to support Kickstart 0x1000 byte object file limitation.
2. Radio sleep/wakeup support added. Accessed through previously non-functioning `ioctl` interface. The `ioctl` interface is not changed but is now functioning.
3. All EXP target board example projects are now configured to build for the MSP430x4618 instead of the MSP430x4619.
4. Documentation updates as needed

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