CC31xx Getting Started with WLAN Station

Overview and application details

This sample application demonstrates how to start CC3100 in **WLAN-Station** mode and connect to a Wi-Fi access-point. The application connects to an access-point and pings the gateway. It also checks for an internet connectivity by pinging "www.ti.com"



By default, this application communicates w/ CC3100 over SPI. The SDK has UART-Drivers as well for MSP430F5529LP and Tiva-C platforms. For using the UART interface to communicate w/ CC3100, macro SL_IF_TYPE_UART has to be defined in the application-project's properties.

Note: This wiki page is only applicable for CC3100-SDK v1.0.0 and upward releases. For documentation on older SDKs' examples, refer corresponding file in <cc3100-sdk-installation-location>\cc3100-sdk\docs\examples\

Source Files briefly explained

• main - Initializes the device, connects to an AP and verifies the connection status

Usage

Prerequisite: This application requires an access-point with internet connectivity

- Connect the board to a Windows-PC and configure the terminal-program for seeing the logs [I
 CC31xx_&_CC32xx_Terminal_Setting_Wiki [1]] has detailed instructions for configuring the terminal-program
- Open sl_common.h and and change SSID_NAME, SEC_TYPE and PASSKEY as per your access-point's
 properties. SimpleLink device will connect to this AP when the application is executed
- Build and run the project using IAR/CCS
- See the self explanatory logs on the terminal-program's console. On success, below message will be displayed on the terminal

```
Getting started with station application — Version 1.1.0

*****************************

Device is configured in default state

Device started as STATION

Connection established w/ AP and IP is acquired

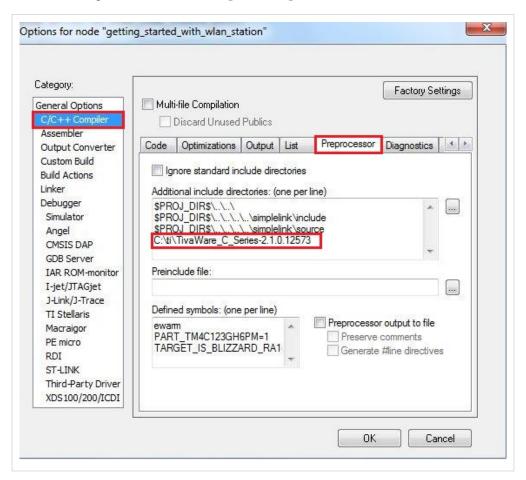
Pinging...!

Device successfully connected to the LAN and internet
```

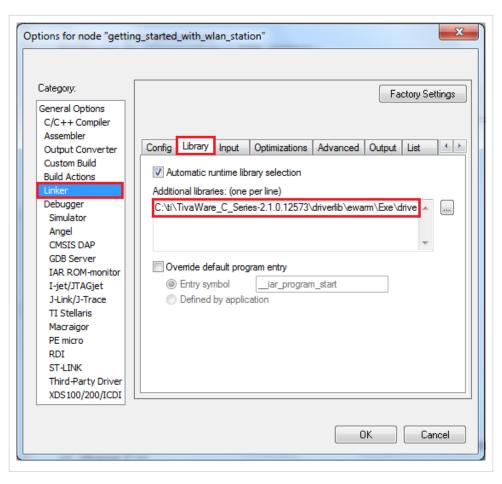
Building for Tiva-C LaunchPad

To build the application for Tiva-C LaunchPad, follow below steps:

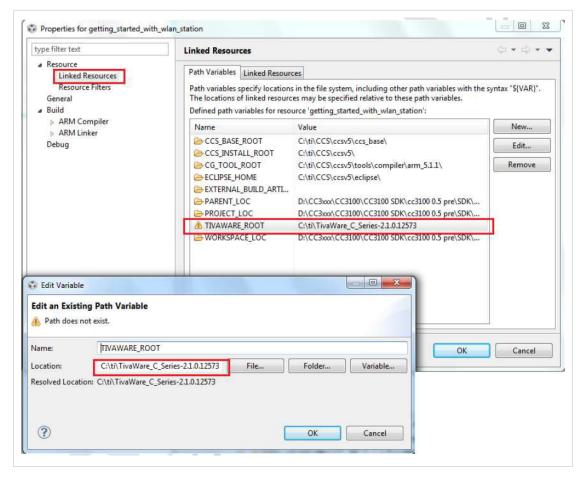
- IAR
 - Open the project's **Options**
 - Replace the tivaware path under C/C++ Compiler->Preprocessor section



• Replace the tivaware library path under Linker->Library section



- Build the project
- Code Composer Studio
 - Open the project property
 - Update TIVAWARE_ROOT variable available under Resource->Linked Resources with tivaware root directory



• Build the project

Limitations/Known Issues

None

References

[1] http://processors.wiki.ti.com/index.php/CC31xx_&_CC32xx_Terminal_Setting

Article Sources and Contributors

CC31xx Getting Started with WLAN Station Source: http://processors.wiki.ti.com/index.php?oldid=184863 Contributors: A0131814, A0132173, A0221015, Codycooke, Malokyle

Image Sources, Licenses and Contributors

File:Cc31xx cc32xx return home.png Source: http://processors.wiki.ti.com/index.php?title=File:Cc31xx_cc32xx_return_home.png License: unknown Contributors: A0221015

File: Cc31xx return sample apps.png Source: http://processors.wiki.ti.com/index.php?title=File: Cc31xx_return_sample_apps.png License: unknown Contributors: A0221015

File:Light bulb icon.png Source: http://processors.wiki.ti.com/index.php?title=File:Light bulb icon.png License: unknown Contributors: DanRinkes, PagePusher

Image:Getting_started_with_station_1.png Source: http://processors.wiki.ti.com/index.php?title=File:Getting_started_with_station_1.png License: unknown Contributors: A0132173

Image:figure8.jpg Source: http://processors.wiki.ti.com/index.php?title=File:Figure8.jpg License: unknown Contributors: A0131814

Image:figure9.png Source: http://processors.wiki.ti.com/index.php?title=File:Figure9.png License: unknown Contributors: A0131814

Image:figure7.png Source: http://processors.wiki.ti.com/index.php?title=File:Figure7.png License: unknown Contributors: A0131814

License

THE WORK (AS DEFINED BELOW) IS PROVIDED UNDER THE TERMS OF THIS CREATIVE COMMONS PUBLIC LICENSE ("CCPL" OR "LICENSE"). THE WORK IS PROTECTED BY COPYRIGHT AND/OR OTHER APPLICABLE LAW. ANY USE OF THE WORK OTHER THAN AS AUTHORIZED UNDER THIS LICENSE OR COPYRIGHT LAW IS PROHIBITED.
BY EXERCISING ANY RIGHTS TO THE WORK PROVIDED HERE, YOU ACCEPT AND AGREE TO BE BOUND BY THE TERMS OF THIS LICENSE. TO THE EXTENT THIS LICENSE MAY BE CONSIDERED TO BE A CONTRACT, THE LICENSOR GRANTS YOU THE RIGHTS CONTAINED HERE IN CONSIDERATION OF YOUR ACCEPTANCE OF SUCH TERMS AND CONDITIONS.

1. Definitions

- "Adaptation" means a work based upon the Work, or upon the Work and other pre-existing works, such as a translation, adaptation, derivative, work, arrangement of music or other alterations of a literary or artistic work, or phonogram or performance and includes cinematographic adaptations or any other form in which the Work may be recast, transformed, or adapted including in any form recognizably derived from the original, except that a work may be recast, transformed, or adapted including in any form recognizably derived from the original, except that a work may be recast, transformed, or adapted including in any form recognizably derived from the original, except that a work may be recast, transformed, or adapted including in any form recognizably derived from the original, except that a work may be recast, transformed, or adapted including in any form recognizably derived from the original, except that a work may be recast, transformed, or adapted including in any form recognizably derived from the original, except that work may be recast, transformed, or adapted including in any form recognizably derived from the original, except that work may be recast, transformed, or adapted including in any form recognizably derived from the original and copies of the Work or performances, phonograms or broadcasts, or other works or subject matter other than works listed in Section 1(f) below, which, by reason of the selection and arrangement of their contents, constitute in the letter works is included in its entire that the original and copies or the transformed work and included in the proved by Creative Commons as being essentially equivalent to this License. Including, at a minimum, because that license that the license under that license will be the provise of the second or a Performance or a Creative Commons

2. Fair Dealing Rights
Nothing in this License is intended to reduce, limit, or restrict any uses free from copyright or rights arising from limitations or exceptions that are provided for in connection with the copyright protection under copyright law or other

3. License Grant

to the terms and conditions of this License, Licensor hereby grants You a worldwide, royalty-free, non-exclusive, perpetual (for the duration of the applicable copyright) license to exercise the rights in the Work as stated

- to Reproduce the Work, to incorporate the Work into one or more Collections, and to Reproduce the Work as incorporated in the Collections; to create and Reproduce Adaptations provided that any such Adaptation, including any translation in any medium, takes reasonable steps to clearly label, demarcate or otherwise identify that changes were made to the original Work. For example, a translation could be marked "The original work was translated from English to Spanish," or a modification could indicate "The original work has been modified."; to Distribute and Publicly Perform the Work including as incorporated in Collections; and, to Distribute and Publicly Perform Adaptations.

 For the avoidance of doubts.

- i. Non-waivable Compulsory License Schemes. In those jurisdictions in which the right to collect royalties through any statutory or compulsory licensing scheme cannot be waived, the Licensor reserves the exclusive right to collect such royalties for any exercise by You of the rights granted under this License;
 ii. Waivable Compulsory License Schemes. In those jurisdictions in which the right to collect royalties through any statutory or compulsory licensing scheme can be waived, the Licensor waives the exclusive right to collect such royalties for any exercise by You of the rights granted under this License; and.
 iii. Voluntary License Schemes. The Licensor waives the right to collect royalties whether individually or, in the event that the Licensor is a member of a collecting society that administers voluntary licensing schemes, via that society, from any exercise by You of the rights granted under this License.

 The above rights may be exercised in all media and formats whether now known or hereafter devised. The above rights include the right to make such modifications as are technically necessary to exercise the rights in other media and formats. Subject to Section 8(f), all rights not expressly granted by Licensor are hereby reserved.

4. Restrictions

The license granted in Section 3 above is expressly made subject to and limited by the following restrictions:

- Restrictions

 itenses granted in Section 3 above is expressly made subject to and limited by the following restrictions:

 You may Distribute or Publicly Perform the Work only under the terms of this License. You must include a copy of, or the Uniform Resource Identifier (URI) for, this License with every copy of the Work You Distribute or Publicly Perform. You may not offer or impose any effective technological measures on the Work that restrict the terms of this License or the ability of the recipient of the Work to exercise the rights granted to that recipient under the terms of the License. Perform the Work, You may not impose any effective technological measures on the Work that restrict the ability of a recipient of the Work from You to exercise the rights granted to that recipient under the terms of the License. This Section 4(a) applies to the Work as incorporated in a Collection, but this does not require the Collection apart from the Work itself to be made subject to the terms of this License. If You create a Collection, upon notice from any Licensor You must, to the extent practicable, remove from the Adaptation only under the terms of: (i) this License; (ii) a later version of this License with the same Licenses. Elements as this Licenses (iii) a later version of this License with the same Licenses Elements as this Licenses. If you increase the Adaptation only on work of the very copy of each Adaptation on under one of the terms of the Applicable Licenses. Provide the terms of that the terms of the Adaptation and or (iii) (ii) or "iii) the "Applicable Licenses." (iii) a Creative Commons principle Licenses. If you licenses the Adaptation on under more of the terms of the Applicable Licenses. Which were the present of the Adaptation on the Constraints of the Applicable Licenses. Provide the terms of the Applicable Licenses. This Section 4(b) applies to the Adaptation on the exercise the rights granted to that recipient under the terms of the Applicable Licenses. This Section 4(b) applies to the Adaptat

5. Representations, Warranties and Disclaimer
UNLESS OTHERWISE MUTUALLY AGREED TO BY THE PARTIES IN WRITING, LICENSOR OFFERS THE WORK AS-IS AND MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND CONCERNING
THE WORK, EXPRESS, MPLIED, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF TITLE, MERCHANTIBILITY, FITNESS FOR A PARTICULAR PURPOSE,
NONINFRINGEMENT, OR THE ABSENCE OF LATENT OR OTHER DEFECTS, ACCURACY, OR THE PRESENCE OF ABSENCE OF FRORS, WHETHER OR NOT DISCOVERABLE. SOME JURISDICTIONS DO NOT
ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO SUCHE EXCLUSION MAY NOT APPLY TO YOU.

License 6

6. Limitation on Liability

EXCEPT TO THE EXTENT REQUIRED BY APPLICABLE LAW, IN NO EVENT WILL LICENSOR BE LIABLE TO YOU ON ANY LEGAL THEORY FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE
OR EXEMPLARY DAMAGES ARISING OUT OF THIS LICENSE OR THE USE OF THE WORK, EVEN IF LICENSOR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

7. Termination

a.

This License and the rights granted hereunder will terminate automatically upon any breach by You of the terms of this License. Individuals or entities who have received Adaptations or Collections from You under this License, however, will not have their licenses terminated provided such individuals or entities remain in full compliance with those licenses. Sections 1, 2, 5, 6, 7, and 8 will survive any termination of this License. Subject to the above terms and conditions, the license granted here is perpetual (for the duration of the applicable copyright in the Work). Notwithstanding the above, Licenser reserves the right to release the Work under different license terms or to stop distributing the Work at any time; provided, however that any such election will not serve to withdraw this License (or any other license that has been, or is required to be, granted under the terms of this License) and life to the license terms of this License (or any other license that has been, or is required to be, granted under the terms of this License).

8. Miscellaneous

- Each time You Distribute or Publicly Perform the Work or a Collection, the Licensor offers to the recipient a license to the Work on the same terms and conditions as the license granted to You under this License. Each time You Distribute or Publicly Perform an Adaptation, Licensor offers to the recipient a license to the original Work on the same terms and conditions as the license granted to You under this License. If any provision of this License is invalid or unenforceable law, it shall not affect the volidity or enforceability of the remainder of the terms of this License, and without further action by the parties to this agreement, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable. No term or provision of this License shall be deemed waived and no breach consented to unless such waiver or consent shall be in writing and signed by the party to be charged with such waiver or consent. This License sent unless such waiver or consent shall be in writing and signed by the party to be charged with such waiver or consent. This License constitutes the entire agreement between the parties with respect to the Work licensed here. There are no understandings, agreements or representations with respect to the Work not specified here. Licensor shall not be bound by any additional provisions that may appear in any communication from You. This License were drafted utilizing the terminology of the Berne Convention of 1961, the WIPO Copyright Treaty of 1996, the WIPO Copyright Treaty o