



Application Note: JN-AN-1174

IEEE 802.15.4 Application Template for JN516x

This Application Note accompanies the software template for applications designed to run on NXP JN516x microcontrollers in IEEE 802.15.4-based wireless networks. This document introduces the template and directs you to the documentation which details how to use the template.

Application Overview

The software template provides a basis for your own application development for JN516x devices in IEEE 802.15.4-based networks. It is designed to streamline your application development and to help you rapidly achieve effective IEEE 802.15.4 applications. You can modify the supplied code to adapt it to your own application needs. Note that the code is relevant to non-beacon enabled networks only.

The supplied code provides the basic framework for getting a network up and running. It includes the necessary function calls for setting up the network, and then transmitting and receiving data. Separate code is provided for the network Co-ordinator and End Devices.

Compatibility

The software provided with this Application Note has been tested with the following NXP kits and SDK versions:

Product Type	Part Number	Version	Supported Chips
Evaluation Kit	JN516x-EK001	-	JN5168, JN5164
SDK Libraries	JN-SW-4063	-	JN5168, JN5164
SDK Toolchain	JN-SW-4041	v1.1	JN5148, JN5142, JN5168

Where Next?

Before starting your IEEE 802.15.4 application development using the supplied template, you should refer to NXP's *IEEE 802.15.4 Stack User Guide (JN-UG-3024)*, which is available from the NXP Wireless Connectivity TechZone:

www.nxp.com/techzones/wireless-connectivity

Chapter 4 “Application Development” of this User Guide describes how to use the template provided in this Application Note. It describes the processes and function calls performed in the template code, as well as how to compile your finished application.

The *IEEE 802.15.4 Stack User Guide* should be consulted throughout your application development. It contains:

- **Introduction to the IEEE 802.15.4 standard:** If you are not already familiar with the standard, you are recommended to read the first chapter of this User Guide, which introduces the standard at an accessible level. You may find this chapter a useful starting point before accessing the detailed information available in the IEEE 802.15.4 specification (available from the IEEE).
- **Introduction to the NXP IEEE 802.15.4 software resources:** The User Guide indicates the software resources available from NXP to support IEEE 802.15.4 application development. This includes a Software Developer's Kit (SDK) containing an Application Programming Interface (API) which comprises a set of C functions and associated resources.
- **Guidance on use of the NXP 802.15.4 Stack API:** Common operations on the nodes of an IEEE 802.15.4 network are described with reference to the API functions needed to code them.
- **Resources of the NXP 802.15.4 Stack API:** The resources of the 802.15.4 Stack API are fully detailed, including functions, structures and enumerations.

Revision History

Version	Notes
1.0	First release
1.1	Documentation references updated

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