IEEE 802.15.4 Application Template

This Application Note accompanies the software template from Jennic for applications 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 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 Jennic kits and SDK versions:

Product Type	Part Number	Version	Supported Chips	Supported Protocols
Evaluation Kit	JN5121-EK000	-	JN5121	802.15.4
	JN5121-EK010	-	JN5121	802.15.4, ZigBee
	JN5139-EK000	-	JN5139	802.15.4, JenNet
	JN5139-EK010	-	JN5139	802.15.4, JenNet, ZigBee
	JN5148-EK010	-	JN5148	802.15.4, ZigBee PRO
SDK Libraries	JN-SW-4030	v1.5	JN5139, JN5121	802.15.4, JenNet, ZigBee
	JN-SW-4040	v1.1	JN5148	802.15.4, ZigBee PRO
SDK Toolchain	JN-SW-4031	v1.1	JN5139, JN5121	-
	JN-SW-4041	v1.0	JN5148	-

Where Next?

Jennic have produced comprehensive documentation to accompany the IEEE 802.15.4 application template. You should refer to this documentation before and during application development. **It is important that you consult at least the Reference Manual described below**.

IEEE 802.15.4 Wireless Networks User Guide (JN-UG-3024)

If you are not very familiar with the IEEE 802.15.4 standard, you are recommended to first read this User Guide. It introduces the standard at an accessible level and provides a good foundation for developing IEEE 802.15.4 applications. You may also find this document as a useful starting point before accessing the detailed information available in the specification of the IEEE 802.15.4 standard (available from the IEEE).

You can download a PDF version of Jennic's *IEEE 802.15.4 Wireless Networks User Guide* from the User Guides section in the Support area of the Jennic web site (www.jennic.com/support). The part number of this document is JN-UG-3024.

IEEE 802.15.4 Application Development Reference Manual (JN-RM-2024)

In order to use the software template, you should consult this Reference Manual. It describes the processes and function calls performed in the code, as well as how to compile your finished application code.

The *IEEE 802.15.4 Application Development Reference Manual* is provided in a PDF version with this Application Note. You can also download it from the Reference Manuals section in the Support area of the Jennic web site (www.jennic.com/support). The part number of this document is JN-RM-2024.

Revision History

Version	Notes
1.0	First release
1.1	Template updated to work with the JN513x series chips and new SDK structure
1.2	Template updated for R1 of JN5139 device and Important Notice added
1.3	Updated for JN5139 and new SDK
2.0	Support for JN5148 added

Important Notice

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