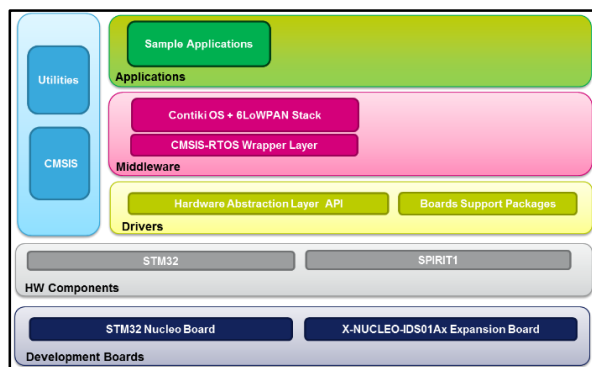


Contiki OS/6LoWPAN middleware add-on for X-CUBE-SUBG1 expansion for STM32Cube

Data brief



Description

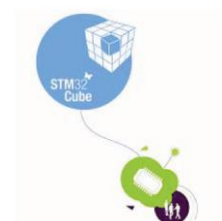
The osxContiki6LP software is an add-on for X-CUBE-SUBG1 and provides an implementation of the Contiki Operating System and Contiki 6LoWPAN stack 3.x running on the STM32 with a SPIRIT1-based sub-1 GHz RF communication board.

The expansion is built on STM32Cube software technology to ease portability across different STM32.

The software comes with sample implementations for the X-NUCLEO-IDS01A4 or X-NUCLEO-IDS01A5 board connected on a NUCLEO-L152RE or NUCLEO-F401RE board.

Features

- Middleware library with Contiki OS and Contiki 6LoWPAN protocol stack 3.x
- Support for mesh networking technology by means of the standard RPL protocol
- Sample applications including UPD sender and receiver, and border router
- Easy portability across different STM32 MCU families thanks to STM32Cube
- Free user-friendly license terms



What is STM32Cube?

STMCube™ represents the STMicroelectronics initiative to make developers' lives easier by reducing development effort, time and cost. STM32Cube covers the STM32 portfolio.

STM32Cube version 1.x includes:

- STM32CubeMX, a graphical software configuration tool that allows the generation of C initialization code using graphical wizards.
- A comprehensive embedded software platform specific to each series (such as the STM32Cube for the STM32 series), which includes:
 - the STM32Cube HAL embedded abstraction-layer software, ensuring maximized portability across the STM32 portfolio
 - a consistent set of middleware components such as RTOS, USB, TCP/IP and graphics
 - all embedded software utilities with a full set of examples

detailed description

How does this software complement STM32Cube and X-CUBE-SUBG1?

This software is based on the STM32Cube and X-CUBE-SUBG1. STM32CubeHAL is the hardware abstraction layer for the STM32 microcontroller, while X-CUBE-SUBG1 extends STM32Cube by providing a board support package (BSP) for the SPIRIT1 sub-1 GHz RF communication expansion boards.

This package contains a middleware library that provides an implementation of the Contiki OS and 6LoWPAN protocol stack version 3.x and uses the SPIRIT1 transceiver for communications. The package also includes some sample applications that the developer can use to start experimenting with the code. These applications allow sending and receiving UDP packets to/from another node in the 6LoWPAN network. A sample application that can be used to create a 6LoWPAN border (edge) router is also provided.

The SPIRIT1 is a very low-power RF transceiver, intended for RF wireless applications in the sub-1 GHz band.

1 Revision history

Table 1: Document revision history

Date	Version	Changes
14-Mar-2016	1	Initial release.

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