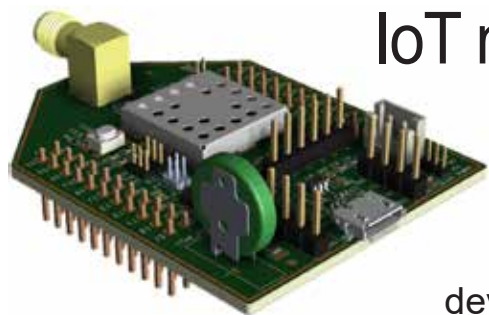


# Sub-GHz Wireless IoT module EVB (PTLR9EVB)

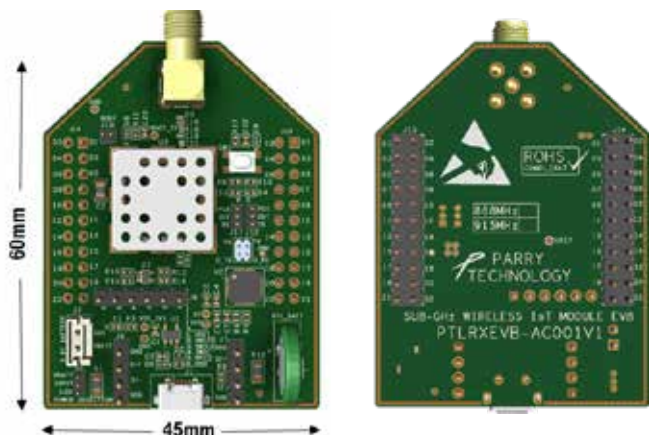


is a tool useful for evaluation and development based on

Ultra-low power multi-modulation wireless STM32WLE5x microcontroller from ST Micro-electronics. The EVB with four-layer PCB is designed for good RF performance, allowing one to be benefited from the best RF sensitivity of the integrated LoRa® RF transceiver SX126x. EVB provides access to program or debug the microcontroller via Serial Debug wire interface pins and external STLINK debugger. USB connector allows easy powering of the target and with onboard USB to UART controller, provides UART for debug during development and flashing the STM32WL MCU on board using UART bootloader feature

## Benefits

- + Four-layer PCB for good RF performance. Easy to manually solder on to the base board
- + Components provision for 50-ohm impedance match -ing of antenna
- + Standard STM32 debugger and software tools from ST can be used for development



## SUB-GHZ WIRELESS IOT MODULE EVB

Arm® Cortex®-M4 core running at 48 MHz, 256 Kbytes of Flash, 64Kbytes of RAM

Integrated sub-GHz radio based-on Semtech SX126x with +22dBm maximum RF output

High RF sensitivity down to -138dBm for LoRa® @ 125KHz, SF12

Analog Inputs, DAC, DIOs, I2C, I2S, SPI, I2C, LPUART, 2 USARTs

Frequency range supporting 863 to 930MHz, SF5 to SF12, Bandwidth of 7.8KHz to 500KHz

Operating voltage of 1.8V to 3.6V, Operating temperature -40°C to +85°

## Purchase Notes

For quick start on the development, ParryTech 915MHz Wireless IoT Module (PTLR9MOD-AC001V0) is available.

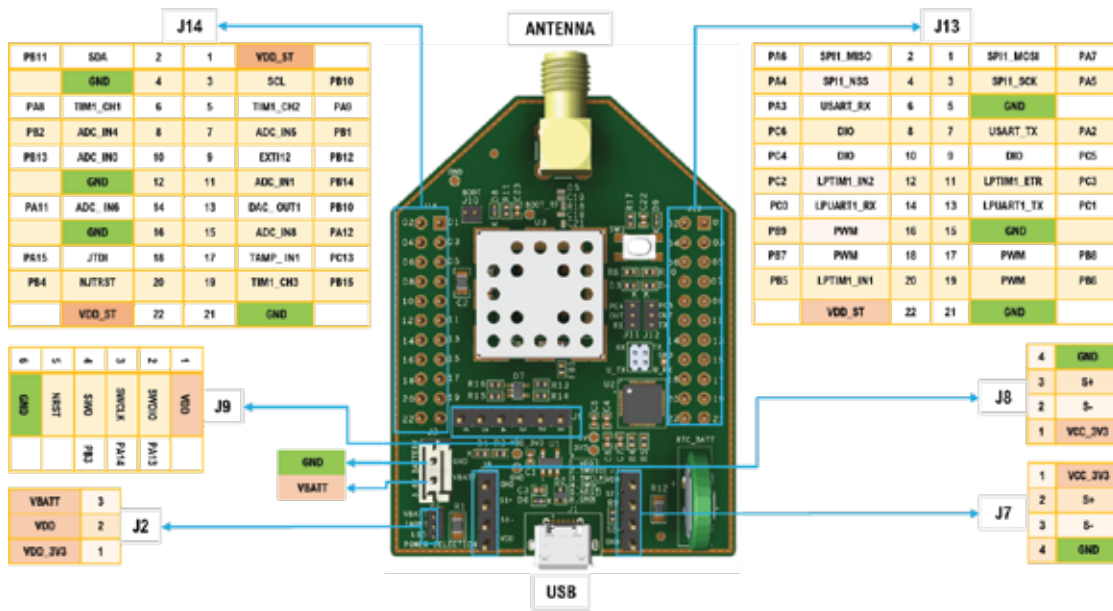
For requirement on 915MHz to Wi-Fi/BT gateways (optional 4G LTE GSM Module shield), reach out to [estore-enquiry@parrytech.net](mailto:estore-enquiry@parrytech.net)

LoRa® is a trademark of Semtech Corporation or its subsidiaries

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## Pinout Diagram



## Getting Started

MCU Datasheet,  
Reference Manual

<https://www.st.com/en/microcontrollers-microprocessors/stm32wle5cc.html#documentation>

Software dev IDE

<https://www.st.com/en/development-tools/stm32cubeide.html>

Debugger/Programmer

To be ordered separately (STLINK-V2 or STLINK-V3E). SWD pins for programming.

I/O Pin functions

All the I/O pins has alternate functions as given in LoRa® MCU data sheet

Antenna options

Default external antenna (PCB Impedance Matched). Optional helical antenna.

STM32WL Training

[https://www.st.com/content/st\\_com/en/support/learning/stm32-education/stm32-online-training/stm32wl-online-training.html](https://www.st.com/content/st_com/en/support/learning/stm32-education/stm32-online-training/stm32wl-online-training.html)

## Product Ordering Guide

Ordering Part number : **PTLR9EVB-AC001V0**

Note: This module is tuned for 902~930MHz Operation

## About Parry Technology

+ Engineering/System integration services

+ PCB development & testing

+ Total Solutions:

Products, platforms and, cloud solutions for end-to-end IoT deployments

+ E-store:

Ready to use subsystem modules/products for quick test, develop Internet of Things (IoT) applications