

RAK4630 WisDuo LoRaWAN+BLE Module

Thank you for choosing the RAK4630 WisDuo LoRaWAN+BLE Module for your awesome IoT project! 🙌 To help you get started, we have provided all necessary documentation.



Product Description

The RAK4630 is a low-power, long-range transceiver module featuring the Nordic nRF52840 MCU, which supports Bluetooth 5.0 (Bluetooth Low Energy) and the latest SX1262 LoRa transceiver from Semtech. This module adheres to Classes A, B, and C specifications of LoRaWAN 1.0.3 and also facilitates LoRa point-to-point (P2P) communication, enabling rapid implementation of custom LoRa networks.

With its dual RF communication capabilities (LoRa + BLE), the module is well-suited for diverse IoT applications, including home automation, sensor networks, building automation, and various IoT network scenarios.

The default firmware of the RAK4630 is built on RUI3 (RAKwireless Unified Interface), which simplifies using the RAK4630 as a standalone module by enabling the development of custom firmware through RUI APIs. This setup allows direct interfacing with sensors and other external peripherals without requiring an additional MCU. Additionally, the RAK4630 can communicate with an external host MCU using AT commands via USB, UART, or a BLE connection.

Product Features

- LoRaWAN 1.0.3 specification compliant
- Supported bands: IN865, EU868, AU915, US915, KR920, RU864, and AS923
- LoRaWAN Activation by OTAA/ABP
- LoRa Point-to-Point (P2P) communication
- Custom firmware using Arduino via RUI3 API
- Easy-to-use AT Command set via UART interface
- TCXO crystal for LoRa chip
- IO ports: UART, I2C, GPIO, USB
- Temperature range: -40° C to +85° C
- Supply voltage: 2.0 ~ 3.6 V
- Low-Power Wireless Systems with 7.8 kHz to 500 kHz bandwidth
- Ultra-Low Power Consumption 4.23 uA in sleep mode
- LoRa PA Boost mode with 22 dBm output power
- BLE 5.0 (Tx power -20 to +4 dBm in 4 dB steps)
- Serial Wire Debug (SWD) interface
- Module size: 15 mm x 23 mm x 3 mm



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