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Product Brief

nRF54L15 Tag

Prototyping platform for battery-powered trackers and edge AI applications, with dual antennas for improved robustness in Bluetooth® Channel Sounding.



OVERVIEW

nRF54L15 Tag is a compact, battery-operated tag prototyping platform with dual antennas powered by the ultra-low-power wireless nRF54L15 SoC. The dual antennas enable improved robustness for distance estimation using Bluetooth® Channel Sounding. nRF54L15 Tag is an ideal and flexible platform for testing and prototyping Apple Find My and Google Find Hub compatible products, even enabling Find Hub with Precision Finding capabilities through its multi-antenna support.

nRF54L15 Tag is powered by a CR2032 coin-cell battery and is optimized for prototyping ultra-low-power battery-operated tracker products. nRF54L15 Tag contains an additional low-power accelerometer for waking it from sleep when triggered by motion, allowing it to go to deeper sleep when not active to extend battery life. The simplicity and its small form factor make the nRF54L15 Tag great for prototyping small, simple wireless IoT products such as tags, trackers, beacons and remote controls among other similar products.

In addition to precision tracking, nRF54L15 Tag is ideal for demonstrating and prototyping edge AI applications, as it integrates a six-axis inertial measurement unit with a high-accuracy accelerometer and gyroscope and can run Neuton models in a battery-operated design. This makes it great for smart wearables and remote controls, and anomaly detection for predictive maintenance.

The tag has an environmental sensor which can measure air pressure, humidity, temperature and gas for CO2 measurements and can be used for Matter applications such as the Matter weather station.

KEY FEATURES

- nRF54L15 SoC in QFN package
- Support for the following wireless protocols:
  - Bluetooth® Low Energy
  - 802.15.4
  - Matter
  - Thread®
  - Zigbee®
  - Aliro
  - NFC
  - ANT™
  - 2.4 GHz proprietary
- Dual 2.4 GHz antennas with Bluetooth Channel Sounding support
- Low-power accelerometer
- High-accuracy accelerometer and gyroscope (6DoF IMU)
- Environmental sensor
- 1x User-programmable RGB LED
- 1x User-programmable button
- Battery holder for CR2032 coin cell battery
- Footprints for additional user-input button, reset button, RGB LED, buzzer and external memory
- Compatible with nRF54L and nRF91 Series DKs and SEGGER J-Link Debugger for programming and debugging
- Supports OTA updates

APPLICATIONS

- Find My devices
- Trackers
- Asset tags
- Key fobs
- Smart rings
- Remote controls
- Beacons
- Smart appliances
- Smart wearables
- Any size-constrained and battery-powered device that can benefit from knowing the distance between itself and the user