



Bluetooth[®] Real-Time Locating Library 3.1.2.0 GA

Gecko SDK Suite 3.1

April 7, 2021

Silicon Labs is a leading vendor in Bluetooth hardware and software technologies, used in products such as sports and fitness, consumer electronics, beacons, and smart home applications.

The Real-Time Locating (RTL) library contains features for Angle of Arrival estimation and spatial positioning. The software library comes with a C-programming language API for Windows (x86_64) and Linux (ARM Cortex A, x86_64) hosts.



KEY FEATURES

- First Generally Available release
- Azimuth and elevation calculation
- Tag X,Y,Z-position in multilocator setup

The RTL Library is released with the Bluetooth SDK. These release notes cover the following version(s):

Real-Time Locating Library 3.1.2.0 in Bluetooth SDK 3.1.2.0 released on April 7, 2021
Real-Time Locating Library 3.1.1.0 in Bluetooth SDK 3.1.1.0 released on January 27, 2021
Real-Time Locating Library 3.1.0.0 in Bluetooth SDK 3.1.0.0 released on December 9, 2020

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1 New Items

Added in release 3.1.0.0

Initial release

2 Improvements

None

3 Fixed Issues

Fixed in release 3.1.2.0

ID #	Description
408196	The Location estimator supports only one locator configuration and dimensionality mode per application
684660	Setting low values for FILTERING_AMOUNT causes segmentation fault in multi-locator host application
682291	Previous AoA-measurements may affect the results even if the AoX-estimator is reset in between
681301	AoA locator azimuth mask feature doesn't work with ranges that are transit over +-180 deg
679243	When the multilocator has configured for N locator, it requires N angle data to push it to the estimator even if multiple (≥ 2) angle data is available and there is no correlation between angle sequence ID and the collected data
679243	AoA multilocator Python GUI is rotating the locator images with incorrect logic
676757	Channel is always 0 in silabs cte iq report event
675134	AoA locator seems to sometimes mix IQ samples of tags transmitting connectionless CTE simultaneously
668780	aoa_asset_tag target application causes position error
668780	Locator's ID in AoA Multilocator config file is case-sensitive
661288	aoa_locator host application does not close nicely

Fixed in release 3.1.1.0

ID #	Description
656483	Fix an issue where, in some rare cases, IQ sample QA may hang in an infinite loop when calling the <code>sl_rtl_aox_process()</code> with IQ sample QA processing enabled.

4 Known Issues in the Current Release

Issues in bold were added since the previous release.

ID #	Description	Workaround
375152	In heavy multipath conditions, the line-of-sight signal is not always detected correctly. In some cases this may mean large errors in both azimuth and elevation readings.	None
653321	In certain environments, the elevation reading might get fixed to 89 degrees	None
653422	Visualization script in <code>aoa_multilocator_gui</code> is missing implementation for showing visualization lines for angles from locators	None
653412	Visualization script <code>aoa_multilocator_gui</code> may occasionally fail with "RunTimeError: dictionary changed size during iteration"	None

5 Deprecated Items

None

6 Removed Items

None

7 Using This Release

7.1 Installation and Use

For instructions on developing with the RTL library, see AN1296: Application Development with Silicon Labs' RTL Library and the API reference included with the documentation installed through Simplicity Studio in the Bluetooth SDK.

7.2 Support

Development Kit customers are eligible for training and technical support. Use the [Silicon Labs Bluetooth LE web page](#) to obtain information about all Silicon Labs Bluetooth products and services, and to sign up for product support.

Contact Silicon Laboratories support at <http://www.silabs.com/support> or through links on the [Simplicity Studio Welcome page](#).

8 Legal

8.1 Disclaimer

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