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.

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

Real-Time Locating Library 3.2.3.0 in Bluetooth SDK 3.2.3.0 released on September 24, 2021 (Bluetooth SDK update only)
Real-Time Locating Library 3.2.2.0 in Bluetooth SDK 3.2.2.0 released on September 8, 2021
Real-Time Locating Library 3.2.1.0 in Bluetooth SDK 3.2.1.0 released on July 21, 2021
Real-Time Locating Library 3.2.0.0 in Bluetooth SDK 3.2.0.0 released on June 16, 2021
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1 New Items

Added in release 3.2.0.0

Dual-Polarized antenna support for CoreHW PCB4 and PCB8 boards. The board package files need to be requested through Silicon Labs support.
2 Improvements

Changed in release 3.2.0.0

The Angle Feedback mechanism in the multi-locator algorithm is improved.
3 Fixed Issues

Fixed in release 3.2.2.0

<table>
<thead>
<tr>
<th>ID #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>720870</td>
<td>Add API for locator position and orientation update</td>
</tr>
<tr>
<td>715289</td>
<td>Split Link Layer CTE component into two subcomponents for TX and RX. Application can only include necessary capabilities to save memory</td>
</tr>
</tbody>
</table>

Fixed in release 3.2.1.0

<table>
<thead>
<tr>
<th>ID #</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>712526</td>
<td>Fixed an issue with CTE (AoA/AoD) where device may enter into hardfault if connectionless CTE or Silicon Labs CTE was enabled before connection creation</td>
</tr>
</tbody>
</table>

Fixed in release 3.1.0.0

<table>
<thead>
<tr>
<th>ID #</th>
<th>Description</th>
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<tbody>
<tr>
<td>653321</td>
<td>In certain environments, the elevation reading might get fixed to 89 degrees</td>
</tr>
<tr>
<td>653422</td>
<td>Visualization script in aoa_multilocator_gui is missing implementation for showing visualization lines for angles from locators</td>
</tr>
<tr>
<td>653412</td>
<td>Visualization script aoa_multilocator_gui may occasionally fail with &quot;RunTimeError: dictionary changed size during iteration&quot;</td>
</tr>
<tr>
<td>706445</td>
<td>AOA host app cannot be built on windows</td>
</tr>
<tr>
<td>658208</td>
<td>Fix REAL_TIME modes to also handle angle data between 179 and 180 degrees.</td>
</tr>
</tbody>
</table>
### Known Issues in the Current Release

Issues in bold were added since the previous release.

<table>
<thead>
<tr>
<th>ID #</th>
<th>Description</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>375152</td>
<td>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.</td>
<td>None</td>
</tr>
</tbody>
</table>
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.
Simplicity Studio

One-click access to MCU and wireless tools, documentation, software, source code libraries & more. Available for Windows, Mac and Linux!