EFR Connect is a generic Bluetooth LE mobile app, which speeds up embedded Bluetooth application development.

With EFR Connect, you can test and debug the Bluetooth applications and Over-The-Air Direct Firmware Update (OTA DFU) during embedded development. Troubleshooting is a breeze – the Browser, Advertiser and Logging features help you fix bugs in no time. For an in-depth analysis, use Silicon Labs’ Network Analyzer (installed with Simplicity Studio) to see the collected packet trace data.

The out-of-the-box demos provided with the Silicon Labs Bluetooth Software Development Kit (SDK) get you up to speed with EFR Connect and with the entire Silicon Labs development tools ecosystem.

EFR Connect works with all Silicon Labs Bluetooth development kits, EFR32 SoCs, and modules.

These release notes cover EFR Connect (for Android and iOS) version(s):

2.3.1 released July 21st, 2021
2.3.0 released June 16th, 2021
2.2.0 released December 18th, 2020
2.1.0 released September 28th, 2020
2.0.3 released June 15th, 2020
2.0.2 released April 23rd, 2020
2.0.1 released March 20th, 2020
2.0.0 released March 17th, 2020
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1 New Features

**Added in release 2.3.0**

**Interoperability Test (IOP)**

Interoperability Test runs a sequence of Bluetooth LE operations to verify interoperability between the Bluetooth LE stack running on the mobile phone and the Silicon Labs stack running on the EFR32. This requires flashing a device with the *Bluetooth – SoC Interoperability Test* sample app from the Silicon Labs Bluetooth SDK in Simplicity Studio. For more information, see AN1346: Running the BLE Interoperability (IOP) Test Application Note.

**Demos**

Demos are precompiled images that can be flashed directly to compatible EFR32 devices from Simplicity Studio with the Bluetooth SDK installed.

- **Bluetooth - SoC Throughput**
- **Bluetooth - SoC Blinky**

**GATT Configurator**

Introduced a GATT Configurator feature that allows creating, manipulating, and enabling multiple GATT databases on the mobile app. This also displays the local GATT when connecting to a device, whereas before only the remote GATT was being shown.

**Added in release 2.2.0**

**Demos**

Ported Connected Lighting and Range Test demos from Wireless Gecko mobile app, which is no longer available for download.

**Added in release 2.1.0**

**Advertiser**

The advertiser feature was introduced, which allows using EFR Connect as a peripheral.

**Added in release 2.0.0**

**Logging**

A logging feature was introduced, which keeps a log of all Bluetooth transactions for later analysis.

**Mappings dictionary**

This feature allows naming custom services and characteristics (with 128-bit long UUIDs).

**Multi-connection support**

With EFR Connect it is now possible to connect to multiple peripheral devices and seamlessly switch between those connections to interface with their respective GATT databases.
2 Improvements

**Improved in release 2.3.1**

Added mobile -> EFR32 data direction in throughput demo

**Improved in release 2.2.0**

Added GATT data to the logs.

Added the ability to sort scan results by RSSI and device name.

Added the ability to read descriptors.

Added a bar with active filter parameters.

Added bonding support so that EFR Connect can be used as an initiator (Android only).

**Improved in release 2.1.0**

Added the ability to copy-paste characteristic’s data.

The user interface on iOS was polished with better textures for the different elements.

**Improved in release 2.0.3**

Improved workflow for GATT operations. Tapping one of the characteristics controls (read, notify or indicate) automatically expands the card to show the data. All controls are accessible without having to first expand the characteristic.

Updates to some of the icons (filter, beacon).

Better handling of error situations with descriptive messages to the user.

Silicon Labs OTA service and characteristics are automatically recognized and properly named in the browser.

**Improved in release 2.0.2**

Disabled scan auto-restoring for better stability on different mobile phones.

**Improved in release 2.0.1**

Mobile app opens on Develop view by default.

Removed “CAN CONNECT” and RSSI from advertisement details, as those are in the main device card.

Eliminated EFR/Other’s split in the Thermometer demo pop-up.

Added a way to delete custom UUID name from the mappings dictionary.

Overall user interface improvements, mostly in the iOS app.

**Improved in release 2.0.0**

UI overhaul

In this release the mobile app user interface (UI) was completely redesigned compared to the predecessor Blue Gecko app, for a seamless and consistent experience. It is divided into two focus sections, Demo and Develop.

- The Demo side hosts ready-made demos, which leverage sample apps from the Silicon Labs SDK for a quick and delightful out-of-box experience.
- The Develop side hosts features focused on helping Bluetooth firmware developers move faster with application development.

General UI improvements that were done as part of the redesign include the expansion of clickable areas, better information density, and more intuitive overall controls.
Browser Filtering

The filtering capabilities on the browser have been improved to include more parameters such as connectable/non-connectable, device name, device address (Android only), raw data (Android only), beacon type (iBeacon, AtlBeacon, Eddystone), and RSSI. In addition to that it is possible to add devices to Favorites and filter by favorites as well. Furthermore, filters can be saved for later use.
# Fixed Issues

## Fixed in release 2.3.1

<table>
<thead>
<tr>
<th>ID #</th>
<th>Platform</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>717366</td>
<td>Android</td>
<td>Reading descriptors did not work on browser server view</td>
</tr>
<tr>
<td>718739</td>
<td>Android</td>
<td>Button for opening AN1346 did not work</td>
</tr>
<tr>
<td>716969</td>
<td>iOS</td>
<td>Read descriptor and read characteristic controls were swapped</td>
</tr>
</tbody>
</table>

## Fixed in release 2.1.0

<table>
<thead>
<tr>
<th>ID #</th>
<th>Platform</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>519234</td>
<td>Android</td>
<td>Fixed issue with displaying indications and notifications in the browser</td>
</tr>
<tr>
<td>497934</td>
<td>iOS</td>
<td>Fixed issue where writing to a characteristic without manually reading would crash the app</td>
</tr>
</tbody>
</table>

## Fixed in release 2.0.3

<table>
<thead>
<tr>
<th>ID #</th>
<th>Platform</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>476503</td>
<td>Android</td>
<td>Fixed issue that could cause the app to freeze when trying to perform OTA</td>
</tr>
<tr>
<td>476711</td>
<td>iOS</td>
<td>Fixed issue with application-level OTA</td>
</tr>
</tbody>
</table>

## Fixed in release 2.0.2

<table>
<thead>
<tr>
<th>ID #</th>
<th>Platform</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>484784</td>
<td>iOS</td>
<td>Fixed an issue that prevented non-connectable advertisements without 0xFF AD Type from showing up on the browser</td>
</tr>
<tr>
<td>472556</td>
<td>Android</td>
<td>Fixed issue that cause full OTA to always be performed, even if partial OTA had been selected</td>
</tr>
</tbody>
</table>

## Fixed in release 2.0.1

<table>
<thead>
<tr>
<th>ID #</th>
<th>Platform</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>471998</td>
<td>iOS</td>
<td>Fixed scanner freeze after locking and unlocking the screen</td>
</tr>
<tr>
<td>471907</td>
<td>Both</td>
<td>When adding a new favorite device it will only surface at the top of the list after refreshing scan list</td>
</tr>
<tr>
<td>472607</td>
<td>iOS</td>
<td>Tapping log/connections/filter can now also collapse them</td>
</tr>
<tr>
<td>472589</td>
<td>iOS</td>
<td>GATT icons were changing size when active/inactive</td>
</tr>
<tr>
<td>471914</td>
<td>iOS</td>
<td>Connection interval was not reliable</td>
</tr>
<tr>
<td>472582</td>
<td>iOS</td>
<td>Connect button was not kept in the device card if the device is also sending non-connectable advertisements</td>
</tr>
<tr>
<td>459752</td>
<td>iOS</td>
<td>Fixed an issue that the app was reading all readable characteristics after discovering the GATT</td>
</tr>
<tr>
<td>472555</td>
<td>Android</td>
<td>Fixed issue that caused other devices to become favorite randomly</td>
</tr>
<tr>
<td>475277</td>
<td>Android</td>
<td>Devices advertising using advertisement extensions are now showing up on the browser as well</td>
</tr>
<tr>
<td>449865</td>
<td>Android</td>
<td>Fixed slowness in the browser after a period of scanning</td>
</tr>
<tr>
<td>472156</td>
<td>Android</td>
<td>Fixed OTA speed mode</td>
</tr>
<tr>
<td>470799</td>
<td>Android</td>
<td>Added better error description when there are issues parsing characteristics</td>
</tr>
<tr>
<td>476141</td>
<td>Android</td>
<td>Fixed issue that caused the app to crash when tapping Write button on the characteristics</td>
</tr>
</tbody>
</table>

## Fixed in release 2.0.0

<table>
<thead>
<tr>
<th>ID #</th>
<th>Platform</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>Both</td>
<td>Compared to Blue Gecko 1.5.2 multiple bugs were fixed as part of code refactoring and increased testing activities.</td>
</tr>
</tbody>
</table>
## 4 Known Issues in the Current Release

Issues in bold were added since the previous release.

<table>
<thead>
<tr>
<th>ID #</th>
<th>Platform</th>
<th>Description</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>683246</td>
<td>iOS</td>
<td>OTA may fail on some devices</td>
<td>Remove automatic disconnection after ota_control is written from the EFR32 firmware, and instead wait for the mobile phone to drop the connection</td>
</tr>
<tr>
<td>700001</td>
<td>iOS</td>
<td>A read request is being sent after writing a characteristic, which may cause a GATT timeout if the characteristic is user type and the code is not handling the read operation</td>
<td>Ensure that all supported operations are being handled on the embedded side when the characteristic is of user type</td>
</tr>
<tr>
<td>685114</td>
<td>Both</td>
<td>Advertisement data does not get updated during scanning</td>
<td>Refresh the scan list</td>
</tr>
<tr>
<td>687905</td>
<td>iOS</td>
<td>When trying to OTA an unsigned image the app is throwing “Error: device not responding” instead of “Code 0x84: Invalid file format” which is sent back to by apploader when it checks that the signature is missing from the image.</td>
<td>None</td>
</tr>
<tr>
<td>495577</td>
<td>Both</td>
<td>Some Bluetooth adopted characteristics are not being parsed correctly</td>
<td>None</td>
</tr>
<tr>
<td>676821</td>
<td>iOS</td>
<td>If notifications are sent in rapid sequence the last value to be shown in the browser may not be correct</td>
<td>If the characteristic also supports read then a manual read operation should retrieve the latest value, otherwise no workaround</td>
</tr>
</tbody>
</table>
5 Deprecated Items

**Deprecated in release 2.0.0**

The EFR Connect 2.0.0 release was made on top of what used to be the Blue Gecko app, for which 1.5.2 was the latest version.

Compared to Blue Gecko app 1.5.2 the following features were removed:

- iBeacon demo
- Keyfob demo
6 Removed Items

None
7 Using This Release

This release contains the following

- EFR Connect mobile app

For more information about the EFR Connect mobile app see the documentation.

7.1 Installation and Use

EFR Connect can be downloaded from Google Playstore or Apple Appstore, and the source code can be found on GitHub. The minimal supported OS versions are Android 9 and iOS 12.

EFR Connect is used in conjunction with Silicon Labs Bluetooth SDK, which is downloaded through Simplicity Studio. Install Simplicity Studio here.

7.2 Security Information

Security Advisories

To subscribe to Security Advisories, log in to the Silicon Labs customer portal, then select Account Home. Click HOME to go to the portal home page and then click the Manage Notifications tile. Make sure that ‘Software/Security Advisory Notices & Product Change Notices (PCNs)’ is checked, and that you are subscribed at minimum for your platform and protocol. Click Save to save any changes.

7.3 Support

Contact Silicon Laboratories support at http://www.silabs.com/support.
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