PSOIX SDK User Guide

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1. OVERVIEW POSIX SDK!

Sentrax's POSIX SDK offers developers a range of functionalities to integrate location-based systems seamlessly into their Android applications. This SDK ensures precise user positioning and real-time floor detection through advanced algorithms. Additionally, it includes efficient beacon management methods, allowing developers to adjust configurations on the fly. Moreover, the SDK is compatible with Solix Suite and supports integration with developers' custom backends. When it comes to calibrating parameters like RSSI, developers have the flexibility to utilize RSSI data generated by the SDK, presenting it graphically for each beacon.

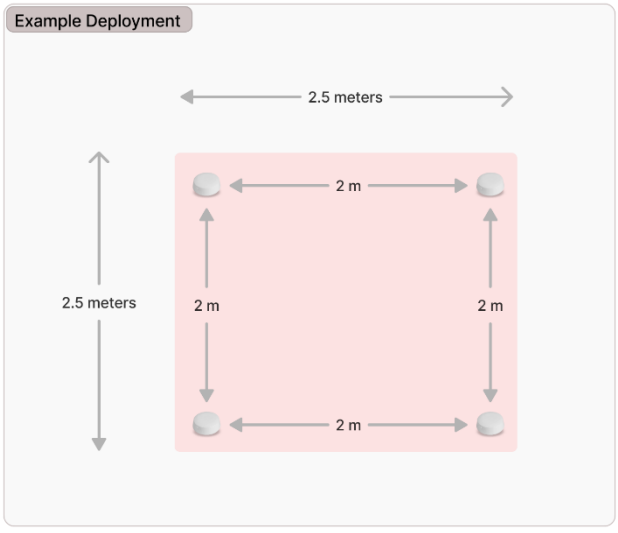
1.1. How to Install:

Step 1:

Download POSIX application from Play Store using this link:
https://play.google.com/store/apps/details?id=com.sentrax.posix

Step 2:

Ensure a minimum distance of 1 meter between each beacon. Positioning is confined to the designated beacon area. In the example above, the square area formed by the placement of four beacons determines the accuracy of positioning. A larger area results in lower accuracy.



Step 3

Access Solix portal and setup beacon devices with the following steps:

1. To add devices to any floor, go to the buildings drop-down on the bottom left of the navigation panel

2. And then select Devices, then Device List in the drop-down. (Highlighted in Green Box in Figure 1)

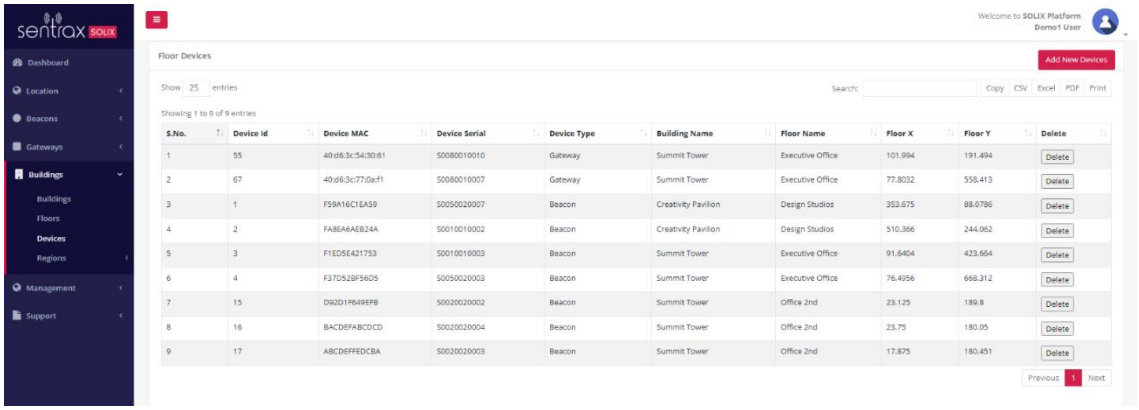


Figure 1

3. It will show the list of devices already added to the floors. If no devices are added it will show empty list

4. Here to add a new device click on Add New Devices Button on the top right of the page (Redbox). It will redirect to a page where the user can view the floor they are adding and set name and description. (Figure 1)

5. Here, From the drop-down box (highlighted with Red Box in Figure 2) select a building then, select a floor where you want to add a device. It will redirect to a page where the floor map will be loaded.

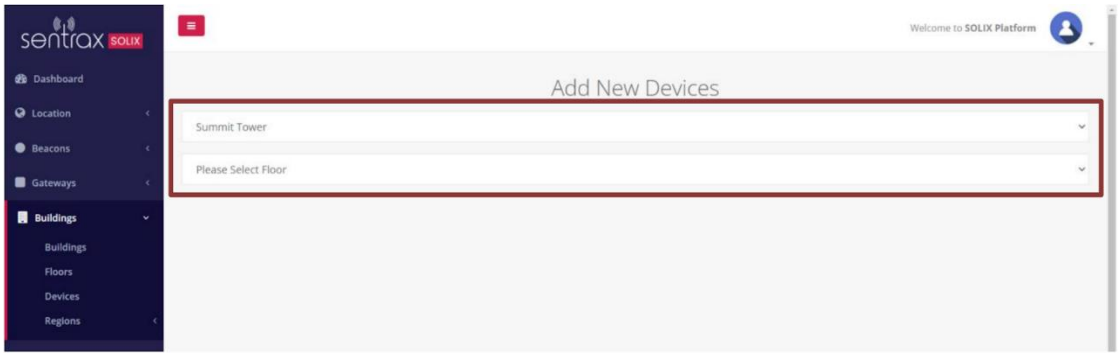


Figure 2

6. The devices will be visible on the floor if there are devices already added on this floor (Red box in Figure 3)

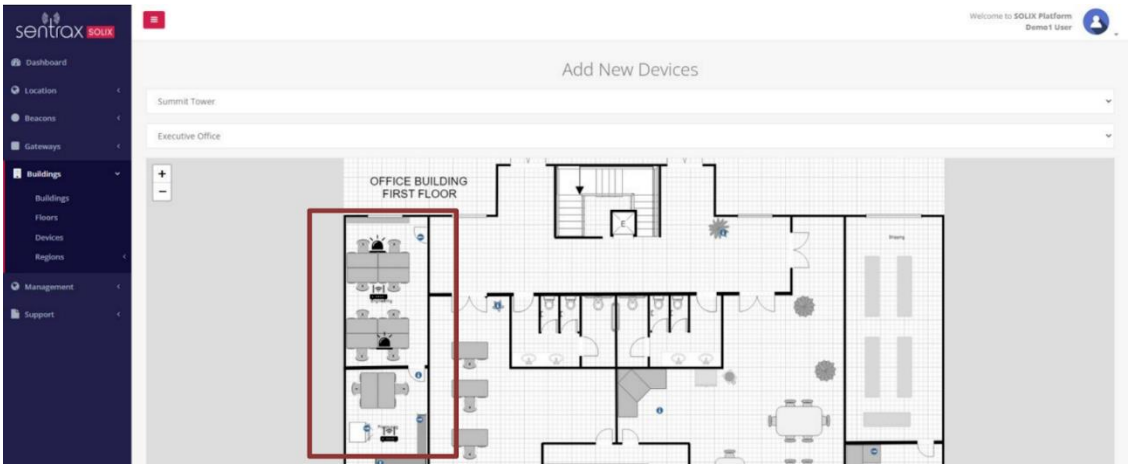


Figure 3

7. The devices will be visible on the floor if there are devices already added on this floor (Red box in Figure 3)

Figure 4

8. Now, on the floor map click on the position where you have installed the device. After clicking (Highlighted in Green Box in Figure 4) on the floor map a pop-up will appear on the screen (Highlighted in Red Box in Figure 4) asking to select the device type from the drop-down (Select Beacon).

9. After selecting the Beacon, it will list the number of devices (Serial numbers).

Figure 5

10. If you select Beacons from the Device Type drop-down it will only show device drop-down of Beacons (Serial numbers).
11. Pressing OK takes the user to the Devices list as shown in Figure 6 with new device added shown

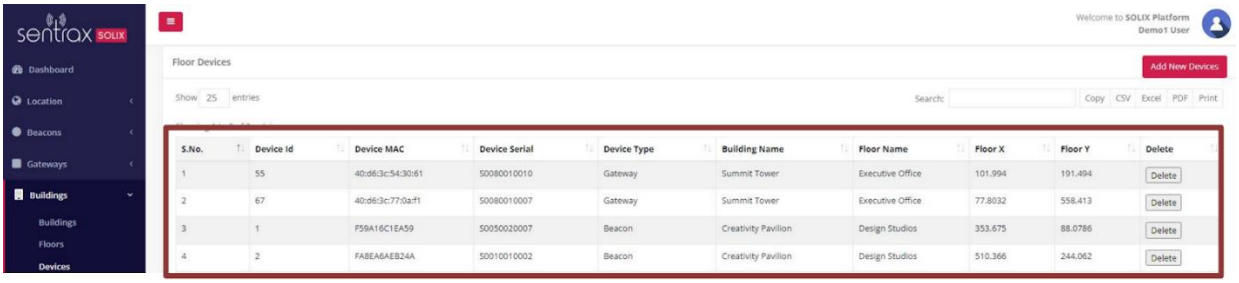
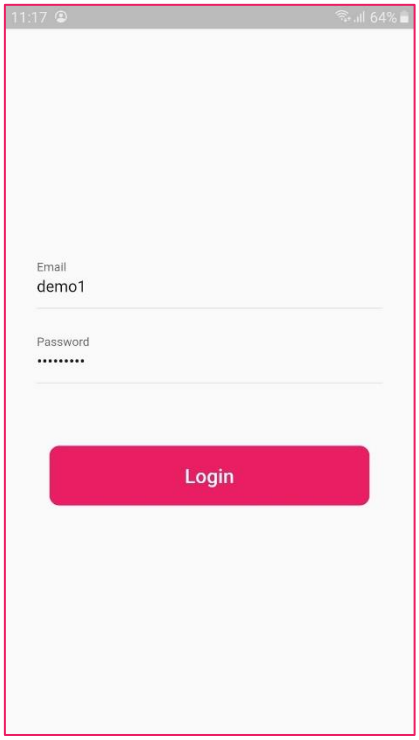


Figure 6

2. POSIX BETA APP Walkthrough:

2.1. Solix Login

User can log in using their Solix account, providing access to retrieve information on buildings, floors, and beacon details

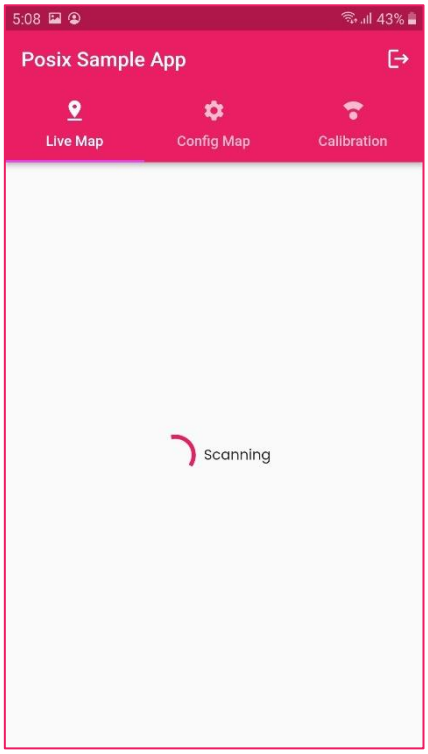


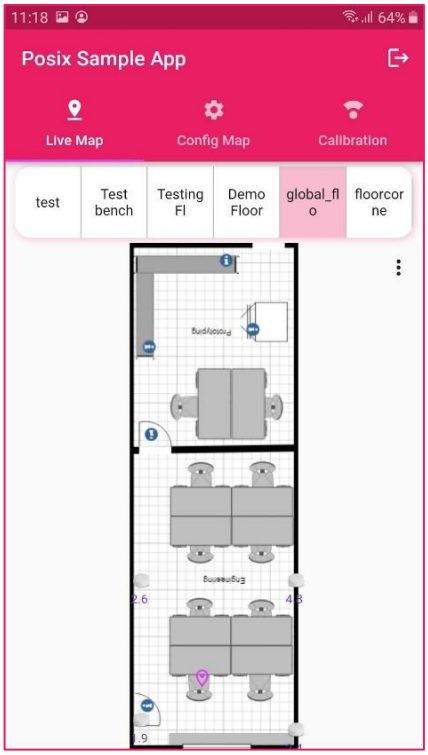
2.2. Building

Choose the building to initiate the scanning process.

2.3. Live MAP

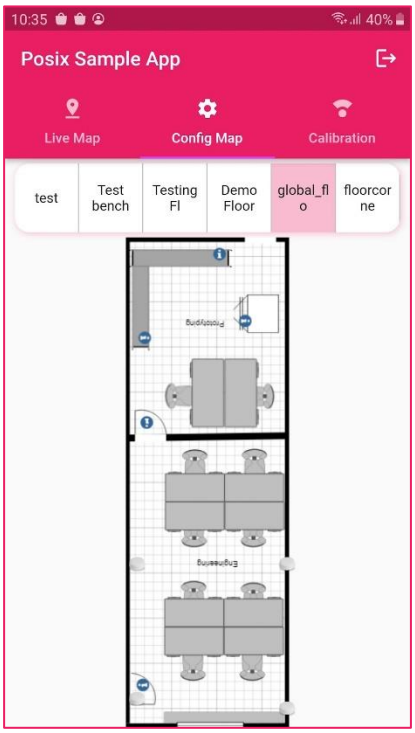
Upon logging in with a Solix account, users gain access to comprehensive details regarding buildings, floors, and beacon information.





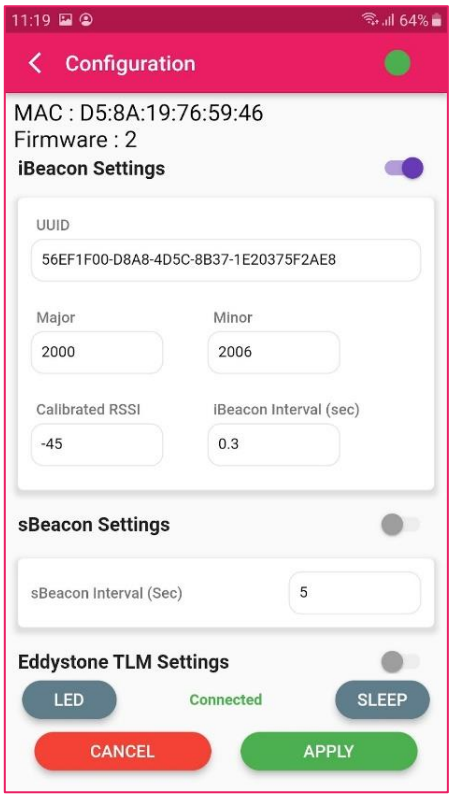
2.4. Configuration Map

Beacons are conveniently presented in the configuration tab view, facilitating straightforward configuration through a simple click.



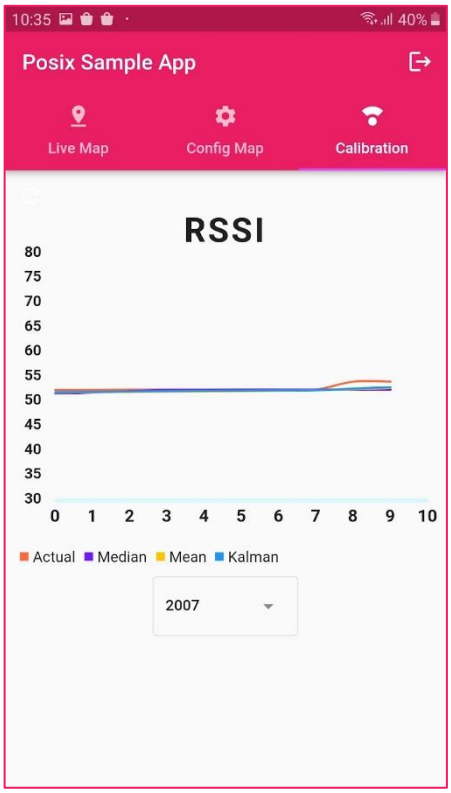
2.5. Configuration Screen

Users possess the capability to adjust beacon configurations seamlessly through the dedicated configuration screen.

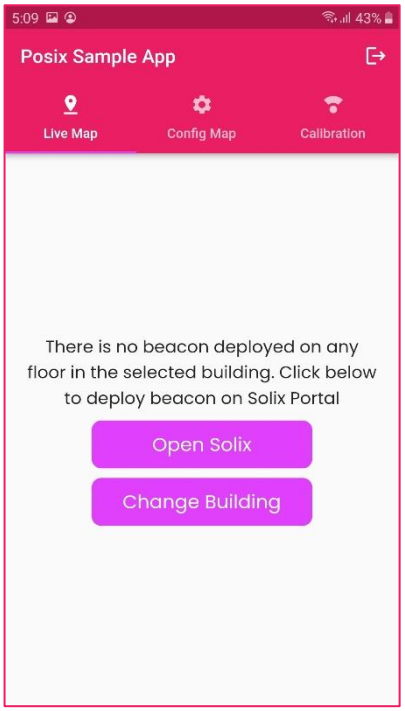


2.6. Calibration Tools

Gain access to RSSI data for each beacon, empowering users to generate calibration graphs. An illustrative example is showcased in the provided sample app.



2.7. Deploy Beacon on Solix



In the event of no beacon or floor being detected, the application presents users with two distinct options:

Open Solix: This option facilitates the deployment of beacons on the Solix floor map. Users can seamlessly integrate and position beacons within the Solix platform.

Change Building: Users also have the flexibility to switch to a different building that houses beacons.

3. FAQ:

What is Sentrax's POSIX SDK?

Sentrax's POSIX SDK is a suite of functionalities crafted to bolster location-based systems in Android applications. It encompasses features for precise user positioning, real-time floor detection, and efficient beacon management.

How does the SDK provide accurate user positioning?

The SDK achieves accurate user positioning by employing sophisticated algorithms designed to determine the user's precise location within the application.

What is real-time floor detection, and how does the SDK achieve this?

Real-time floor detection is a feature enabling the SDK to identify the user's current floor dynamically. This capability is realized through the use of meticulous algorithms embedded in the SDK.

Can developers modify configurations in real time using the SDK's beacon management methods?

Certainly, developers can utilize the SDK's beacon management methods to dynamically adjust configurations in real time, enhancing the flexibility of the location-based system.

Is the SDK compatible with Solix and other backend systems?

Yes, the SDK is designed to be seamlessly compatible with Solix as well as developers' bespoke backend systems, providing adaptability to various environments.

How can developers calibrate parameters such as RSSI using the SDK?

Developers can calibrate parameters like RSSI by leveraging the SDK's functionality to access and display RSSI data graphically for each beacon.

Can the SDK be used for custom backend integrations?

Absolutely, developers have the freedom to integrate the SDK with their proprietary backend systems, offering a tailored and customizable solution.

What benefits does Sentrax's POSIX SDK offer for location-based applications?

Sentrax's POSIX SDK provides a comprehensive solution for location-based applications, offering benefits such as accurate user positioning, real-time floor detection, beacon management, and compatibility with Solix and custom backend systems.

Are there any specific requirements for integrating Sentrax's POSIX SDK into Android applications?

The integration process typically involves incorporating the SDK into your project and following the documentation provided. Ensure your project meets any hardware or software requirements outlined in the documentation.

How can developers get support or assistance with integrating and using the SDK?

Developers can refer to the official documentation for guidance and reach out to Sentrax's support team for specific questions or assistance with SDK integration.