RapidScan

BLE Guide

August 2023

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Introduction

This guide describes how to use the RapidScan application in BLE mode and how to use the RapidScan Companion framework & demo. By default, the app is configured in Wi-Fi mode so you will need to do some minor preliminary configuration that we will go over later.

Before we get started, be aware that in BLE mode, RapidScan takes on the Central/Client role. This means that RapidScan is going to be doing the searching and the Peripheral/Server (i.e. the Companion framework) will be doing the advertising.

Pre-Requisites

- HaloRing with the RapidScan application installed
- iOS device running iOS 13 or higher

RapidScan Configuration

Out of the box, RapidScan's default connection mode is Wi-Fi so you will need to change the app's configuration to switch it to BLE mode. The quickest way to do this is by scanning a QR code containing an app config JSON like the sample below.

The contents of the QR code are shown in the lines below. The UUID value for the "bleService" key is meant to be a placeholder. We will go over what this UUID corresponds to in a future section.

```
{
    "action": "config",
    "command": {
        "mode": "ble",
        "bleService": "be3e621f-a075-4cc1-a93e-97a66b48d92a"
    }
}
```

With RapidScan open, scan the app config QR. If the configuration was successfully set, you should get a message that looks like the following highlighted in red below. If the JSON payload of the QR was not formatted correctly, RapidScan will process it as a normal barcode scan.

Connection to the Companion Demo App

To connect to the RapidScan Companion demo app, first make sure RapidScan is open on your HaloRing and the Companion demo app is open on your mobile device. Both applications should ask you to turn on Bluetooth if it is not already on and ask to allow some Bluetooth related permissions. Please accept all of these.

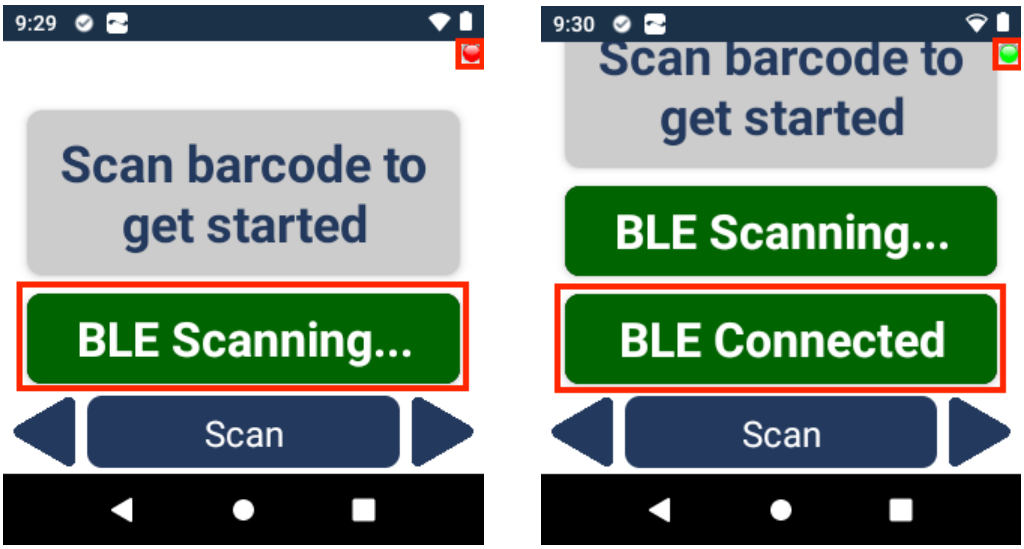
Your Companion demo app should look like the image below:

In the middle of your screen, you should see a QR that has a payload similar to the example in the previous section. The “bleService” UUID in this QR is randomly generated every session so that multiple mobile devices can be broadcasting their BLE services in the same vicinity.

All you need to do is scan the QR with your HaloRing while RapidScan is open, and it will search for and attempt to connect to your mobile device. The next section will cover monitoring your BLE connection.

Connection Status

The connection status indicator is shown below highlighted in red. When the indicator is green it means RapidScan is currently connected to your BLE server. Red indicates that the device is not currently connected.

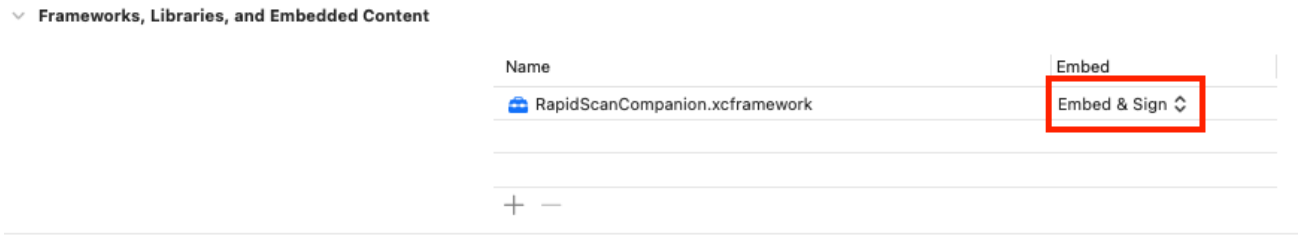


In addition, RapidScan will also give live status updates (see messages highlighted in red above). If RapidScan should disconnect from your BLE server, it will also notify the user with audio + haptic feedback and an error message.

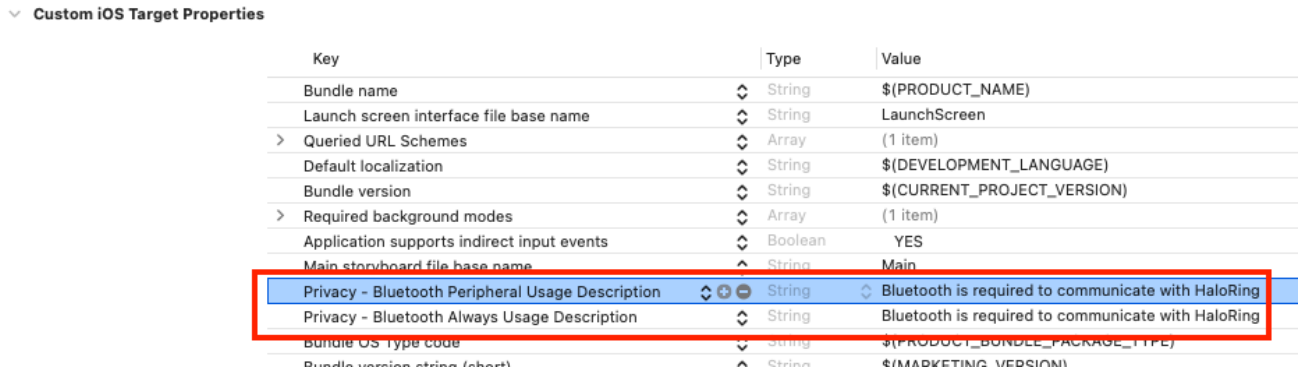
Using the iOS Companion Framework

When you are ready to add the RapidScan Companion Framework to your iOS application there are only a few preliminary steps you need to take.

First, after adding the XCFramework to your project go to your project's General tab and scroll down to the "Frameworks, Libraries and Embedded Content" section. Make sure to select "Embed & Sign" as shown in the image below.



Now, go to your project's "Info" tab and add the following Privacy permissions shown in the image below. Feel free to use whatever string value you want. The user will only see this message on the initial launch when the app asks for Bluetooth permissions.



Now your setup is complete! For an example on how to use the framework, please refer to the sample project that should have been provided with this document. It will show you how to generate your pairing QR, advertise BLE services, receive barcode scans and respond with RiSL cards.