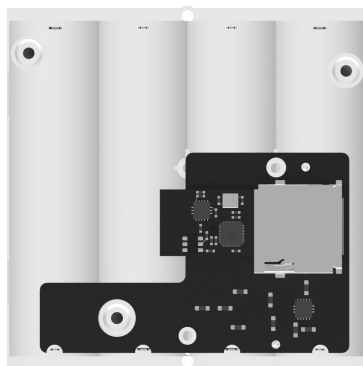# Sensoro SmartBeacon-4AA

Outlook

The SmartBeacon-4AA is built for commercial deployment.

Features

1. Ultra-Low Power

    A Bluetooth® 4.0 (Bluetooth® low energy) Nordic NFR51822 chip with ultra-low power consumption is used.

    Bluetooth low energy with intelligent energy-saving programs allows the beacon to work for three to five years on four AA batteries.

2. Compatibility

    Software and firmware are fully compatible with Apple's iBeacon and Google's Eddystone (include EID) technical requirements, and can be applied to systems including:

    iOS 7.0 or above:
    iPhone 4S, iPhone 5, iPhone 5S, iPad 3, iPad mini, iPad air.

    Android 4.3 or above:
    Samsung Galaxy S III, Galaxy S IV, Galaxy Note II, Galaxy Note III and Motorola RAZR, HTC ONE, etc.

3. Demo App and Configuration App

    The "Yunzi" (demo) app allows you to experience our beacons, while the "Sensoro" app (configuration tools) puts you in control of all of their features.

    Scan the QR code to download:

Signal Stability and Data Transmission

1. Transmission Stability and Distance

   To achieve signal stability and long-distance data transmission requirements, the SmartBeacon-4AA underwent extensive testing and modification. Its signal remains stable even in complex deployment locations. Radius frequency (RF) power demand configuration can be adjusted to a maximum radius of 80 meters. The RF power demand configuration can reduce its radius to a minimum of 0.15 meters, which covers an area of 0.225 square meters. However, it is possible that no signal will be obtained if the RF power is adjusted to a minimum.

2. Enterprise Class Device Management Support for Enterprises

   Mass management of device status is an essential component of our enterprise class cloud software solutions. Our patented beacon devices can be deployed to collect bulk data, and using the Sensoro cloud, your organization has the essential tools needed to seamlessly manage large-scale deployments. Centralized management on your phone or computer is made easy by enterprise class software solutions.

Specifications

| Property	Specifications
Chip	Nordic
Dimensions	64mm x 64mm x 23.5mm (Including the wall mount kit)
Weight	140g
Material	Polycarbonate
Three-Layered Protection	Dust/Shock Proof

|	
Protocol Standards	Bluetooth 4.0 iBeacon and Eddystone Authorization
Compatible Systems	iOS 7.0 or above, Android 4.3 or above
Upgrades	Supports over-the-air firmware upgrades
Security	Supports password access
Sensors	Temperature
LED	1 LED light bulb
Emission Strength	-30dB to +4dB (Can be adjusted to optimize signal strength)
Transmission Distance	0.15~80m
Radio Frequency (Transmission Broadcast Interval)	Adjustable (100 milliseconds~1.285 seconds)
Broadcast Time Electricity Consumption	$7.58 * 10^{-6}$ mAh (-8dB Emission Power)
Supply Voltage	3.0V
Battery	AA battery (4 batteries, not included)
Operation Life	2-5 years

Sensoro App's Configuration Tools

The Sensoro app is available for developers to check on and configure the parameters of all nearby Sensoro beacons. The Sensoro app is compatible with iOS 7.0 or above (iPhone 4S, iPhone 5, iPhone 5S, iPad 3, iPad mini, iPad air) and Android 4.3 or above (Samsung Galaxy S III, Galaxy S IV, Galaxy Note II, Galaxy Note III and Motorola RAZR, HTC ONE, etc.). Using the Sensoro app, you can deploy beacons one at a time, and then view all nearby beacons if you want to make

changes. If you would like to deploy and configure beacons in bulk, please use the "Deploy" app.

Open the Sensoro app, and the Device List of all nearby beacons will appear. The information for each beacon includes Major, Minor, as well as other basic information including an animated display of the RSSI strength.
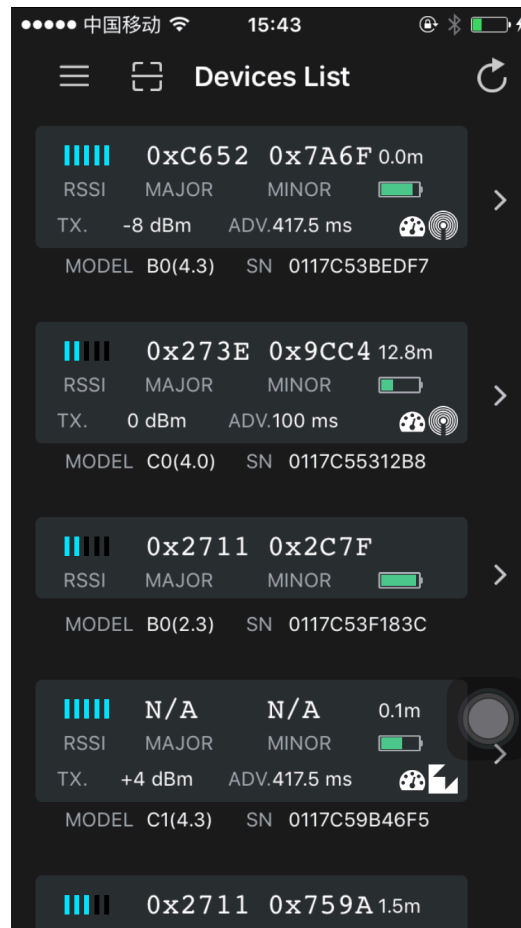
All nearby Sensoro beacons will be listed by order of when the app detected their presence. By changing the Major, Minor values, we can differentiate beacons. Since Major, Minor consists of two values, we recommend grouping associated beacons using the Major value, and labeling individual beacons using the Minor value. For example, beacons at a museum might all have the 00FF code for Major, and each individual beacon placed at different locations throughout the museum would have a unique Minor code. If you would like to view the tags of all devices in range, please log into the Sensoro Cloud on the Inspection app.
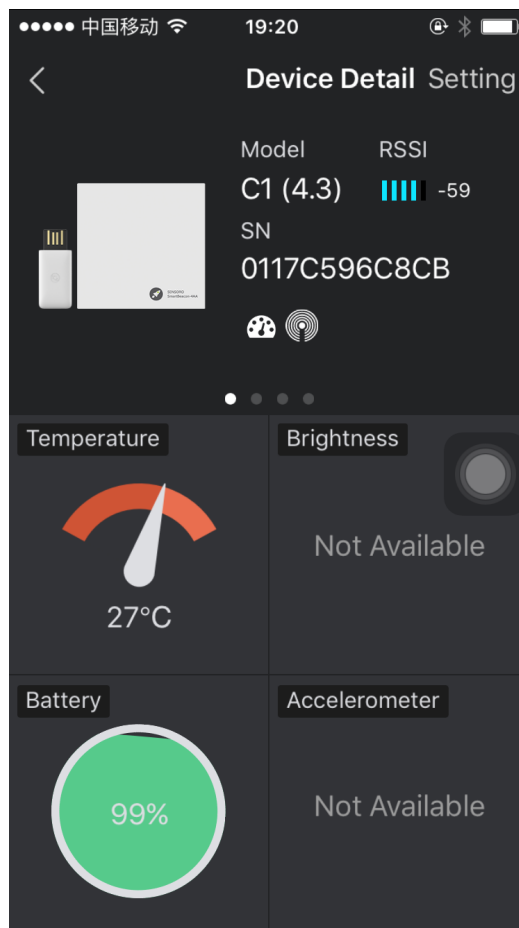
The Device Detail page displays the real-time details of each of the beacon's sensors, battery life, and RSSI signal. Touch the device box on the Device List to enter the Device Detail page.

You can also locate an individual beacon on the Device List by scanning the device's QR code. Touch the scanning icon on the top right of the device list. Once the device is scanned, it will take you to the Device Detail page.

Swipe left on the top of the Device Detail page to bring up the real-time RSSI line display graph. This more detailed RSSI graph allows developers to accurately understand the signal changes in the device, as show below.
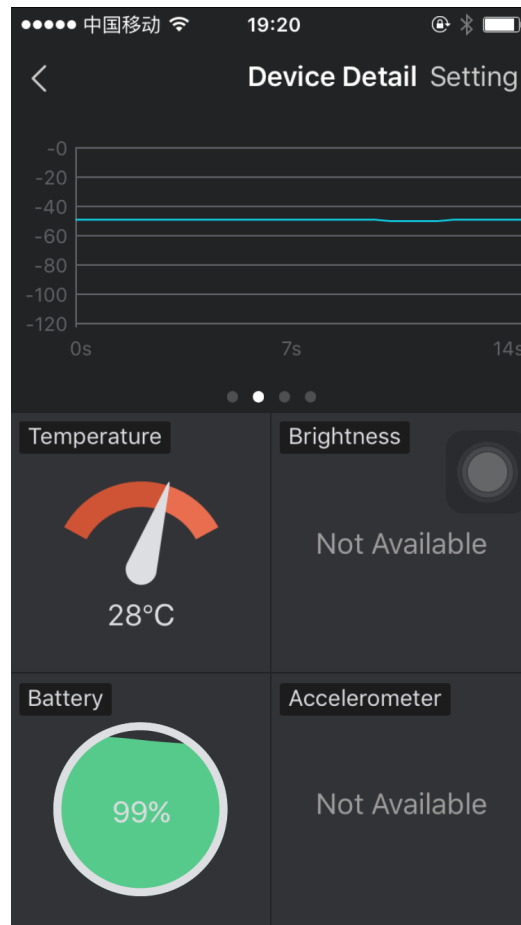
Swipe left again to view whether the device being viewed is using iBeacon or Eddystone protocol.
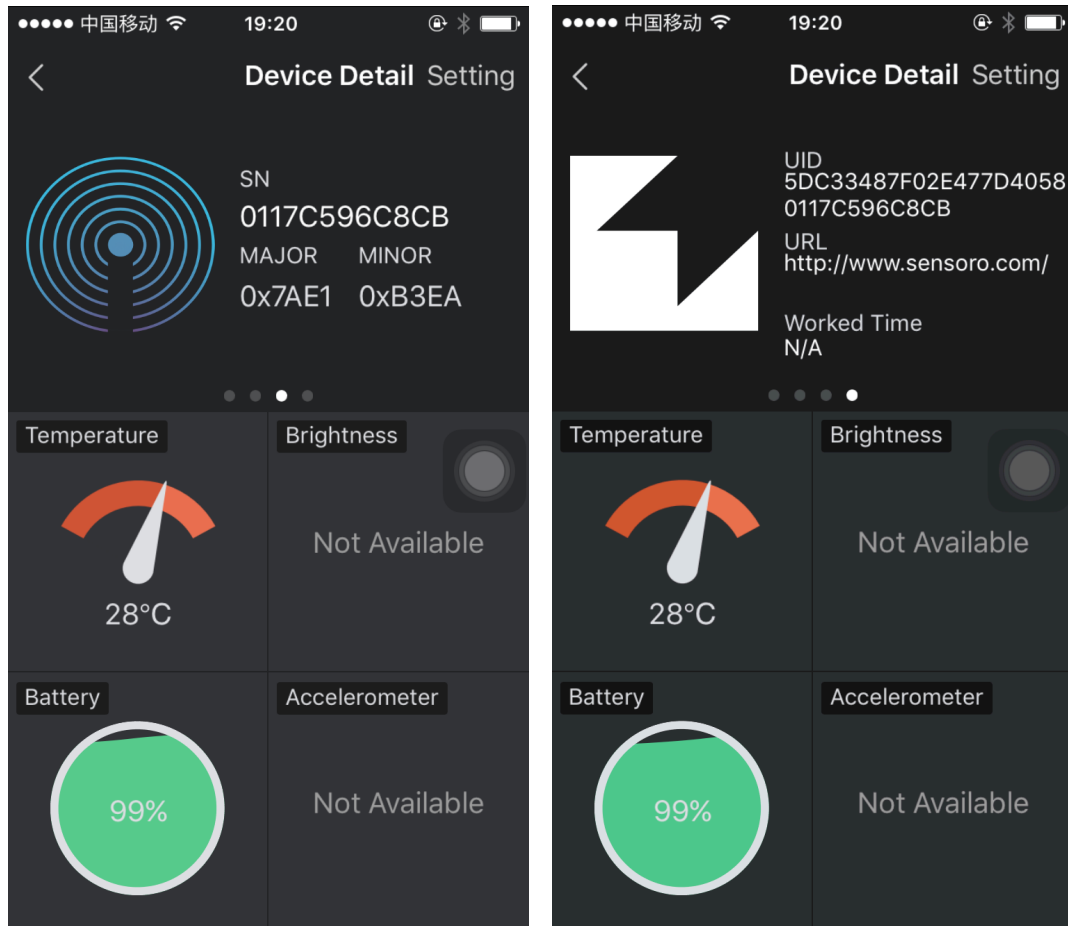
The Sensoro app supports setup of beacon's basic information (including UUID, Major and Minor) as well as the modification of device transmitting power, radio frequency, and other parameters.

For Google Eddystone, UID, URL, TLM and EID are fully supported by Sensoro app now. Moreover, you can also use this app to ONE-way-switch the beacon mode into the standard Eddystone Configuration GATT service.

*Notice:

1. Currently setting up the EID is only available on Android (download link: http://www.sensoro.com/en/download/), which needs a full installation of Google-Play-Service and Google Service Framework, and Nexus 5/6 are recommended.

2. We also have another "Full Eddystone GATT" special version firmware available, which was built to work with Google's Beacon Tool App. Please contact our sales team (seattle@sensoro.com) if you'd like to order this special version.

Google's Beacon Tool App download links:

iOS:

https://itunes.apple.com/us/app/beacon-tools/id1094371356?mt=8

Android:

https://play.google.com/store/apps/details?id=com.google.android.apps.location.beacon.beacontools&hl=en

3. Currently switching to the standard Eddystone Configuration GATT service is a ONE way feature, and a third-party tool is needed when switching back to Sensoro Configuration service. Manual for Mode Switch download link:

http://www.sensoro.com/static/Manual_for_Mode_Switch.pdf

iBeacon

iBeacon	Enabled >
UUID 23A01AF0-232A-4518-9...	>
Major	0x7AE1 >
Minor	0xB3EA >

Eddystone

UID	Disabled >
URL	Disabled >
TLM	Disabled >
NID 5DC33487F02E477D4058	>
BID	0117C596C8CB >
URL http://www.sensoro.com/	>

Eddystone

UID	Disabled >
URL	Disabled >
TLM	Disabled >
NID 5DC33487F02E477D4058	>
BID	0117C596C8CB >
URL http://www.sensoro.com/	>
TLM Interval	One per One >

Switch to eddyst...lly support mode

Broadcast

Transmit Power	Level 8 >
Advertising Interval	417.5 ms >
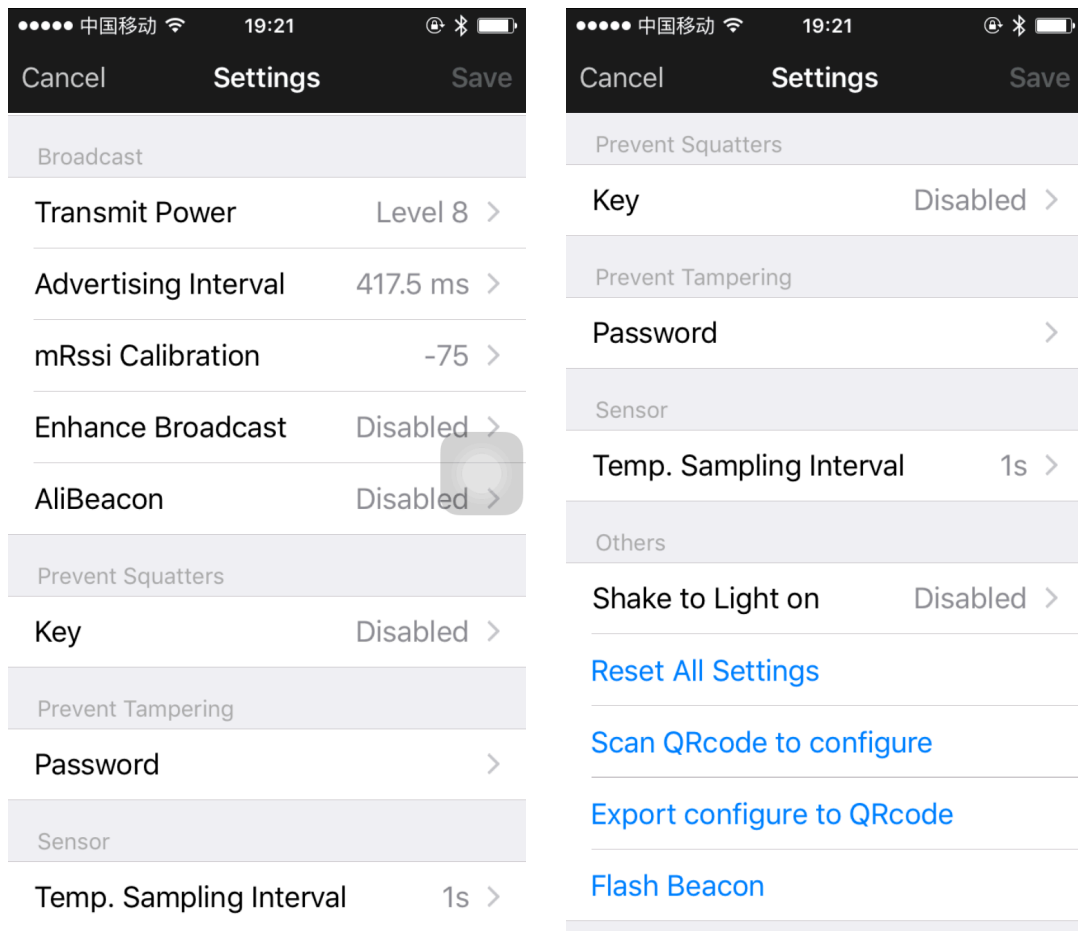
Security

The device is made secure by a hardware level password, used also by the US military, which prevents unauthorized modification of SmartBeacon-4AA parameters. SmartBeacon-4AA allows you to enjoy rich functionality and stability without security concerns.

Quality Assurance

Having passed FCC (FCC certification number: 2ADYO-C0), CE, and MIC certification, each device has rigorously undergone factory defect, spectrum, power, and stability testing.

Note:

Product Name: SmartBeacon
Model No: 4AA

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