

AprilBeacon N01

Introduction

AprilBeacon is one of the most commonly used beacons. Supporting both iBeacon and Eddystone. Battery level can be shown in the advertising data or via a Bluetooth GATT connection.

While this beacon has both iOS and Android configuration apps, the iOS app is easier to use and is more functional. If you are setting up Eddystone-URL (for Android notifications) and you consider yourself to be non-technical then you will need use of an iOS device for setup.

AprilBeacon N01 with acceleration sensor. Small size and replacable battery.

Features

- Support both iBeacon and Eddystone
- Configurable including UUID, major, minor and TX power etc
- Upgrade Over-The-Air supported.

Technical Details

- Power supply by CR2032 Battery 230~ mAh (replaceable).
- Dimensions: Height 33mm, Width 33mm, Depth 10mm
- Signal range 3m - 60m.
- Embedded acceleration sensor
- One LED and one button
- One hole for leash/strip
- Advertise 1st UUID when still, advertise 2nd UUID when move
- BLE micro controller NRF52810



Model	AprilBeacon N01
Brand	April Brother
Type of Product	Bluetooth Beacon
Operating Supply	CR2032 (3V DC)
Dimensions	33mm*33mm*10mm

Wireless Specification

Operating Frequency(RF)	2.402Ghz-2.480Ghz
Type of modulation	GFSK
Channel Spacing	2MHz
RF Output Power (EIRP)	0dBm
Bandwidth	2Mbps

Antenna Requirement

Antenna Gain	1.2dBi
Polarization	Horizontal polarization

Default Settings

Name	Parameters
Advertising Type	Sensor
Advertising Interval	700ms
TX Power	0dBm
Proximity UUID	B5B182C7-EAB1-4988-AA99-B5C1517008D9
Major	1
Minor	Last 2 bytes of mac address

Advertising Type Comparison

Advertising Type	iBeacon	Eddystone	Sensor
Advertising Interval	configurable	configurable	configurable
Button press	advertise UUID2	advertise UUID2	Change button bit in advertising data
Acceleration Sensor	Keep working	Keep working	Keep working

Packet Format

Advertising packet for sensor mode

Byte(s)	Name	Value	Notes
0	Flags[0]	0x02	See Bluetooth 4.0 Core Specification, Volume 3, Appendix C, 181.
1	Flags[1]	0x01	See Bluetooth 4.0 Core Specification, Volume 3, Appendix C, 181.
2	Flags[2]	0x06	See Bluetooth 4.0 Core Specification, Volume 3, Appendix C, 181.

Byte(s)	Name	Value	Notes
3	Length	0x03	See Bluetooth 4.0 Core Specification
4	Type	0x03	See Bluetooth 4.0 Core Specification
5, 6	Service UUID	0x59, 0xFE	Service UUID for OTA service
7	Length	0x17	See Bluetooth 4.0 Core Specification
8	Type	0x16	Manufacturer Specification data
9, 10	Service UUID	0x59, 0xFE	Service UUID for OTA service
11, 12	Compoany ID	0xAB, 0x01	ID for April Brother
13	Data Version	0x03	-
14 - 19	Mac Address	-	Reverse the order
20, 21	Temperature	-	-
22	Is Sensor Motion	0x00	When move the value = 0x01. when still the value = 0x00
23	X Acceleration	-	-
24	Y Acceleration	-	-
25	Z Acceleration	-	-
26	Current Motion Duration	0x00	Current motion time in second
27	Last Motion Duration	0x00	Last motion time in second
28	Battery Level	0x64	Battery level in percent
29	Measured Power	-	-
30	Button State	-	pressed=0x01, idle=0x00

How to make the equipment start work

Equipped with batteries or connected to power equipment which begin to work, start with Search and connected devices: (1) search AprilBeacon through shake assistant software; (2) in the search list, select you to configure the Beacon, below we abeacon_3564, for example; (3) as shown in figure 2, click "abeacon_3564", enter the connection as shown in figure 3.

Here is how to through the shake assistant software to configure and modify parameters

Note: shake assistant before use, please open the mobile phone bluetooth, mobile phone android 4.3 system requirements, iOS 7.0, bluetooth 4.0;

- 1、Open the bluetooth device, equipped with batteries;
- 2、Open shake assistant (iOS download in the APP Store, the android APP Store download), iOS as for example in figure 1 below
- 3、Search and connected devices: (1) search AprilBeacon through shake assistant software; (2) in the search list, select you to configure the Beacon, below we abeacon_3564, for example; (3) as shown in figure 2, click "abeacon_3564", enter the connection as shown in figure 3.

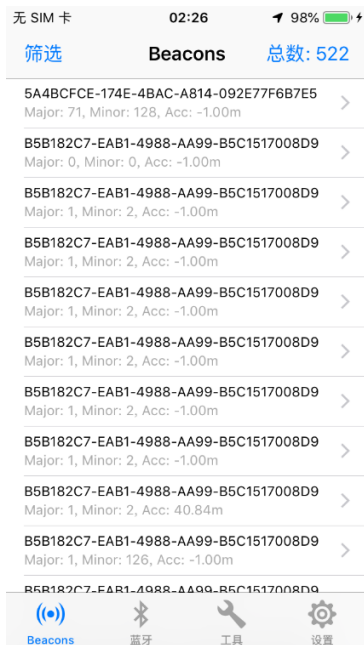


FIG.1

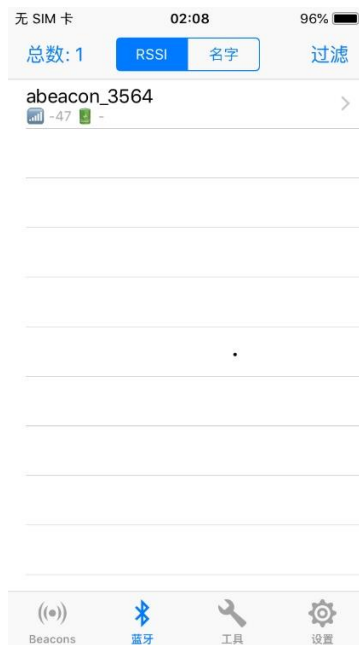


FIG.2

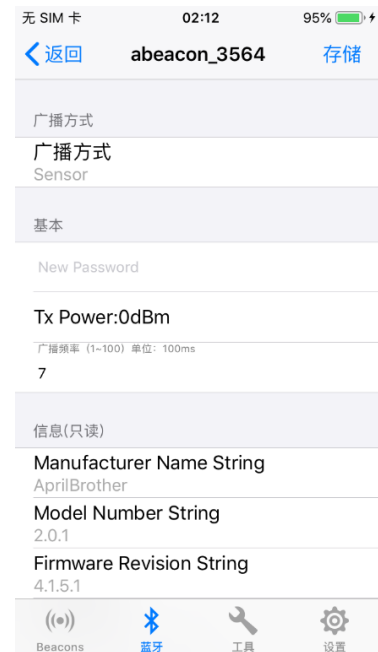


FIG.3



FCC STATEMENT :

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the

receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.