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APP SDK

MokoBeaconX User Manual

MokoBeaconX User Manual

Please use the app—MokoBeaconX published by Moko Technology to configure BeaconX series products.



1. Turn ON/OFF BeaconX

Note: This step is suitable for products with button.

Turn ON BeaconX:

1. Press the button and keep holding for 3 seconds;
2. The red led flashes fast for several times and then turns off, it means that the beacon is on and starts broadcasting.

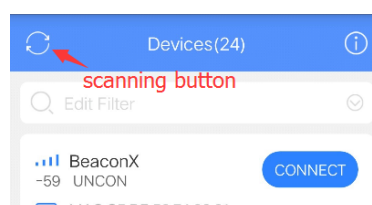
Turn OFF BeaconX:

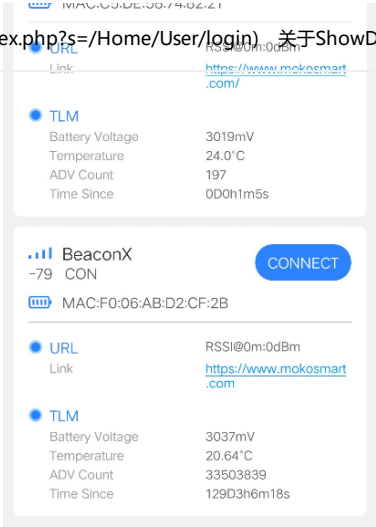
1. Press the button and keep holding for 3 seconds;
2. The red led lights on 3 seconds then turns off, it means that the beacon is off and stops broadcasting.

2. Scan and connect to BeaconX

2.1 Scan the devices

1. Turn on the telephone's Bluetooth and then open the APP **MokoBeaconX**;
2. Touch the **scanning button** on the upper left corner of the status bar to start scanning devices;
3. The default scanning time is 1 minute;
4. User also can touch the **scanning button** to stop scanning;



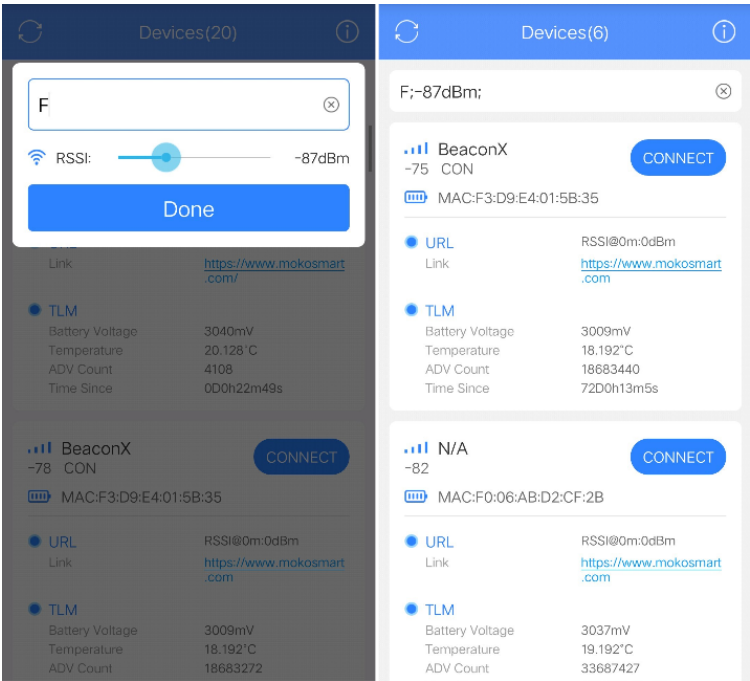


5. “CON” and “UNCON” under the device name represent connectable and unconnect able;

6.You can click on the URL and the app will jump to the corresponding web;

7.The Edit Filter at the top can help user filter the keywords and RSSI. Keywords include par t of the Device Name and Mac Address; RSSI ranges from -127dBm to 0dBm;

For Example: Enter the "F" into the dialog and slip RSSI to -87dBm, the MokoBeaconX will sho w the devices whose RSSI is stronger than -87dBm and whose Device Name and Mac Address inclu de "F".

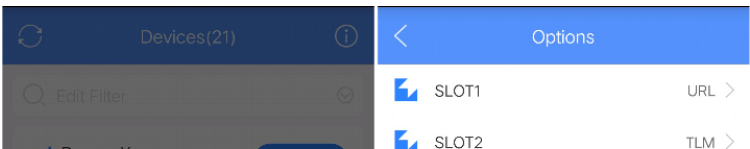


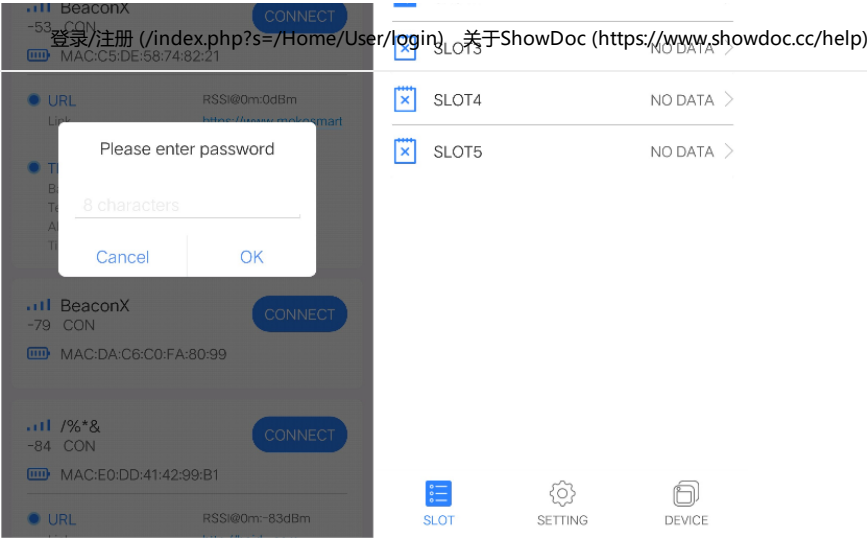
2.2 Connect to BeaconX

1.Touch the blue button “CONNECT” to connect to the device that needs to be configur ed;

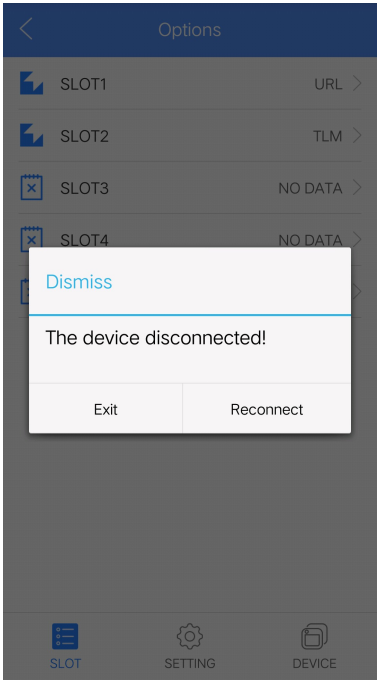
2.There will be a dialog box asking you to enter the 8 characters password;

3.When the user enters the correct password, he can enter into the configuration interface to configure BeaconX’ s parameters.





4.The device will disconnect automatically if the user does not have any operation within 2 minutes. User can click the “**Reconnect**” to reconnect the device.



3. Configure BeaconX parameters

3.1 SLOTS and Supported frames

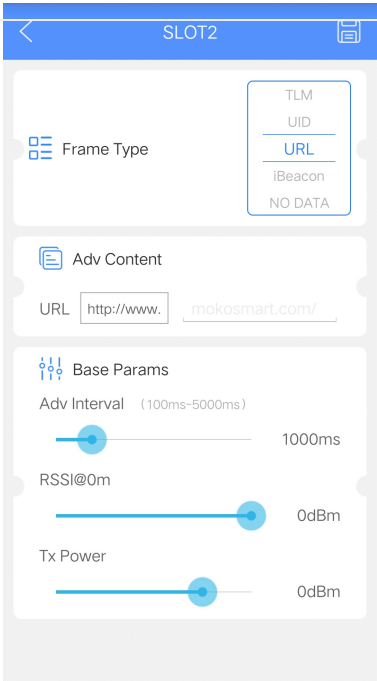
There are **5 active SLOTS** can be configured as any of the following types.

Supported frames

- Eddystone™-UID
- Eddystone™-URL
- Eddystone™-TLM
- iBeacon (UUID/Major/Minor)
- NO DATA(SOLT is shut off)

Note:BeaconX also has a device **Information SLOT** for broadcasting **Device Name**, **MAC address**, **Battery Level** , **Connection status**, **etc. Information SLOT** cannot be turned off and occupies Advertising Interval.

Users can configure one frame type to different SLOTS. For example, BeaconX can broadcast 5 sets of iBeacon data at the same time, or they can simultaneously broadcast 3 sets of URL data plus 1 set of UID data and 1 set of TLM data. Users also can configure the 5 SLOTS as NO DATA, that means BeaconX only broadcasts device **Information SLOT** ’s data.



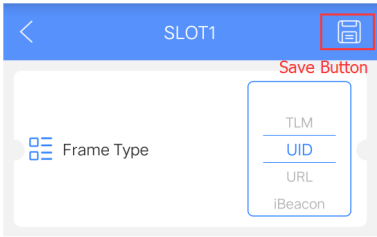
Note: TLM shows only one in the broadcast. For more, please click **Eddystone-TLM** (<https://github.com/google/eddystone/tree/master/eddystone-tlm>)

By default, BeaconX broadcasts URL(<https://www.mokosmart.com/>) and TLM. We can adjust the default setting according to the customer’ s needs.

3.2 Configure parameters

- Related data of frame type;
- Advertising Interval;
- Tx Power (Transmission Power) ;
- Measured Power(RSSI@1m (<https://github.com/1m/0m>));
- Device Information SLOT(Device name/Password/Connection status).

Each SLOT has independent TX Power and Measured Power(RSSI@0m (<https://github.com/0m/0m>) & RSSI@1m (<https://github.com/1m/1m>)). All SOLTs share a set of Advertising Interval. After configuring, touch the save button on the upper right corner of the status bar to save settings. Other operations will cancel the configuration.



3.2.1 Related data of frame type;

Eddystone™- UID
Adv Content Namespace 10 Bytes Instance ID 6 Bytes Namespace --- 10bytes Hexadecimal number Instance ID --- 6bytes Hexadecimal number
Eddystone™- URL

Adv Content

URL

http://www.

mokosmart.com/

URL Scheme Prefix

Encoded URL

- URL Scheme Prefix:
- 1. http://www.
 - 2. https://www.
 - 3. http://
 - 4. https://
- Encoded URL (Any of the following is ok) :
- 1. 1-16 characters and Eddystone-URL HTTP URL encoding (as following) ;
 - 2. 1-17 characters

Currently supported Eddystone-URL HTTP URL encoding :

Decimal	Hex	Expansion
0	0x00	.com/
1	0x01	.org/
2	0x02	.edu/
3	0x03	.net/
4	0x04	.info/
5	0x05	.biz/
6	0x06	.gov/
7	0x07	.com
8	0x08	.org
9	0x09	.edu
10	0x0a	.net
11	0x0b	.info
12	0x0c	.biz
13	0x0d	.gov

Note: Range 07-13 define the same top level domains as 00-06 without a /.

Eddystone™- TLM

NO configurable frame type data.

iBeacon

Adv Content

Major 0

Minor 0

UUID E2C56DB5-DFFB-48D2-B060-D0F5...

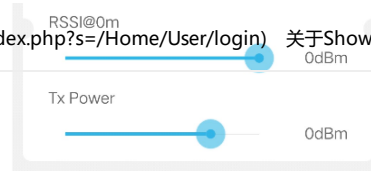
- Major --- 0-65535
- Minor --- 0-65535
- UUID --- 16bytes Hexadecimal number

3.2.2 Advertising Interval

Base Params

Adv Interval (100ms-5000ms)

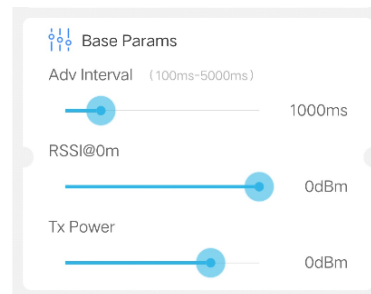
1000ms



- Default Advertising Interval: 1000ms.
- The adjustable interval of Advertising Interval is 100ms, and adjustable range of 100ms-5000ms.
- The Advertising Interval for all SLOTS is the same. It means if you modify Advertising Interval of a SLOT to 500ms, Advertising Interval of other SLOTS will be also modified to 500ms.
- Advertising interval is evenly distributed according to the number of active SLOTS (include device Information SLOT)

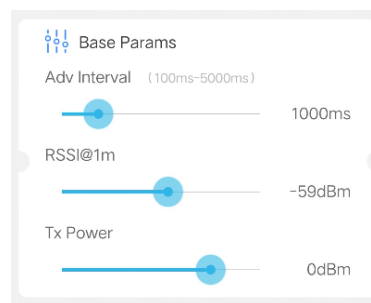
For Example: If you set the Advertising Interval to 1000ms, SLOT1 to URL, SLOT2 to TLM, SLOT3 to UID, SLOT4 to NO DATA and SLOT5 to NO DATA-it means that there are four active SLOTS (SLOT1, SLOT2, SLOT3 and device Information SLOT), BeaconX will broadcast the four active SLOTS data at intervals of 250ms.

3.2.3 Tx Power (Transmission Power)

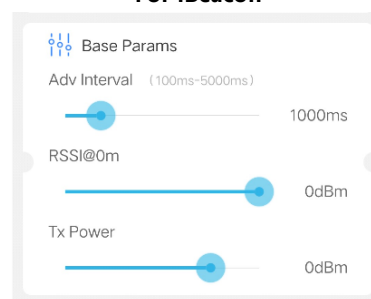


- The Transmission power of the device is determined by the chip.
- Default Tx Power: 0dBm.
- Tx Power can be configured as one of the following data: -40dBm, -20dBm, -16dBm, -12dBm, -8dBm, -4dBm, 0dBm, 3dBm, 4dBm.

3.2.4 Measured Power(RSSI@1m (<https://github.com/1m>)/0m)



For iBeacon



For Eddystone™

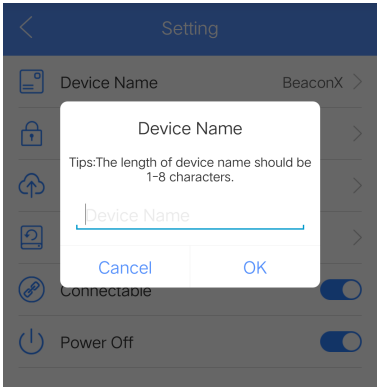
- RSSI—Received Signal Strength Indication.
- RSSI@1m (<https://github.com/1m>) refers to Receiver device receives the signal strength in 1 meter. (For iBeacon)
- RSSI@0m (<https://github.com/0m>) refers to Receiver device receives the signal strength in 0 meter. (For Eddystone™)

- The value accords with the actual test results and is usually confirmed by the customer based on the actual application. [登录/注册 \(/index.php?s=/Home/User/login\)](#) [关于ShowDoc \(https://www.showdoc.cc/help\)](#)

3.2.5 Device Information SLOT

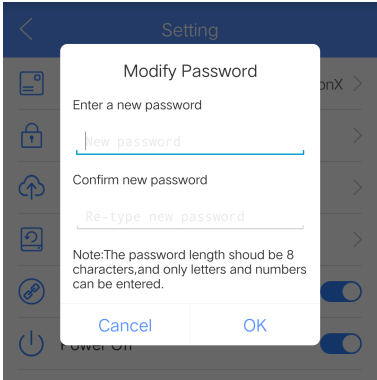
Device Name

- Default iBeacon Name: **“BeaconX”** .
- Maximum length of BeaconX Device name is 8 characters.



Modify Password

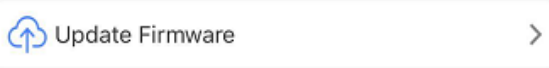
- Default password: **“Moko4321”** .
- Length of password: 8 characters (only letters and numbers, and the letters are case sensitive).
- Users need to enter the same contents twice to modify password.



Update Firmware

- If you use an iOS operating system phone, you can use iTunes to import the update file to MokoBeaconX;
- If you use an Android operating system phone, import the update file into your phone's memory or TF card;
- Select the update file;
- Start DFU.

Note:The update file must match BeaconX firmware.



Reset Factory

- Make the BeaconX to factory settings, but the password will not be restored.



Connection status

- Default connection mode: Connetable.
- When BeaconX is in disconnectable status, the device can’ t be configured. If you need to recover the connectable mode, you should do as the follow steps (device in the disco nnectable status).

1. Long press the button for 5 seconds to turn off BeaconX;

2. Press the button to turn on BeaconX;

3. The device will be in connectable status within 1 minute; User can connect to the de vice and change the connection mode to connectable status.

 Connectable



Power Off

- When the user wants to use the APP to shut down the device, or BeaconX does not sup port button shutdown, click the blue button on the right side of “Power Off” to shut down the device.

 Power Off



4. Device Information

- SOC(State of Charge)
- Mac Address
- Manufacture Date
- Produce Model
- Software Version
- Firmware Version
- Hardware Version
- Manufacture

Device info		
	SOC	100%
	Mac Address	C5:DE:58:74:82:21
	Manufacture Date	2019/02/20
	Product Model	H1
	Software Version	MkBeaconX
	Firmware Version	V2.2.0
	Hardware Version	H52V1.2
	Manufacture	MOKO TECHNOLOGY LTD.

Revision History

Revision	Description	Approved	Date
V1.0	Initial Release	Kevin	2018-08-03