

Techolabz Beacon Configuration Guide

Techolabz Beacon Capabilities:

- Eddystone and iBeacon protocols are supported
- Configurable Eddystone URL, Eddystone UID or iBeacon UUID using proprietary Configuration APP
- User can also configure Broadcasting Power, Advertising Interval as well as Broadcasting format.

Configuring the Beacon:

- a. Download the Techolabz Beacon APP from Google Play Store.



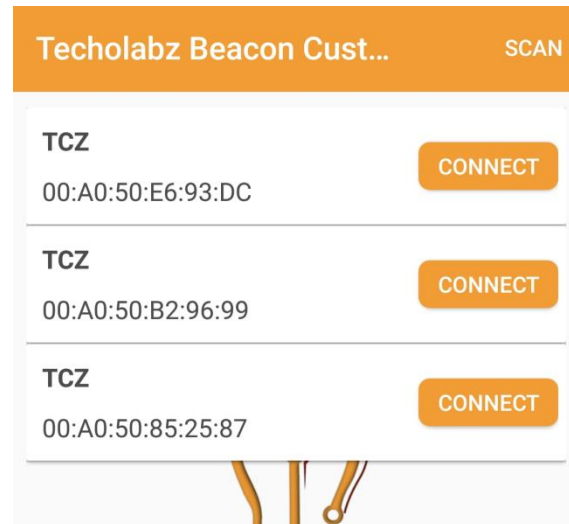
- b. Button on the beacon

(Beacons Bought After 01/04/2017, no need to press the button, beacon is always in connectable + broadcasting mode)



c. Connecting to the device (beacon)

Step1: Start the Mobile Application

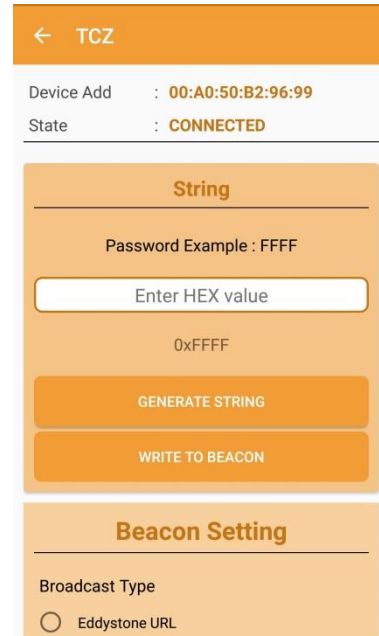
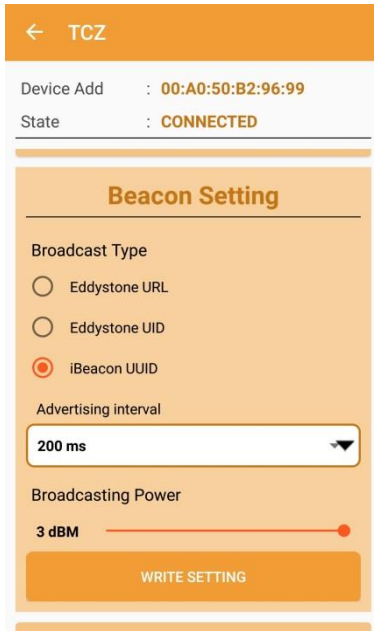


Step 4: Click connect on to the beacon you want to connect on the list. If you are not able to connect please follow the instructions that APP will provide you. This APP can only connect to Techolabz Beacons

Step 5: After all the settings are done. Please click on “back arrow” on the top left corner in the APP. Beacon will get disconnected. Wait for 3 seconds before the device starts broadcasting the desired information.

d. Configuring the Beacon:

Beacon Settings:

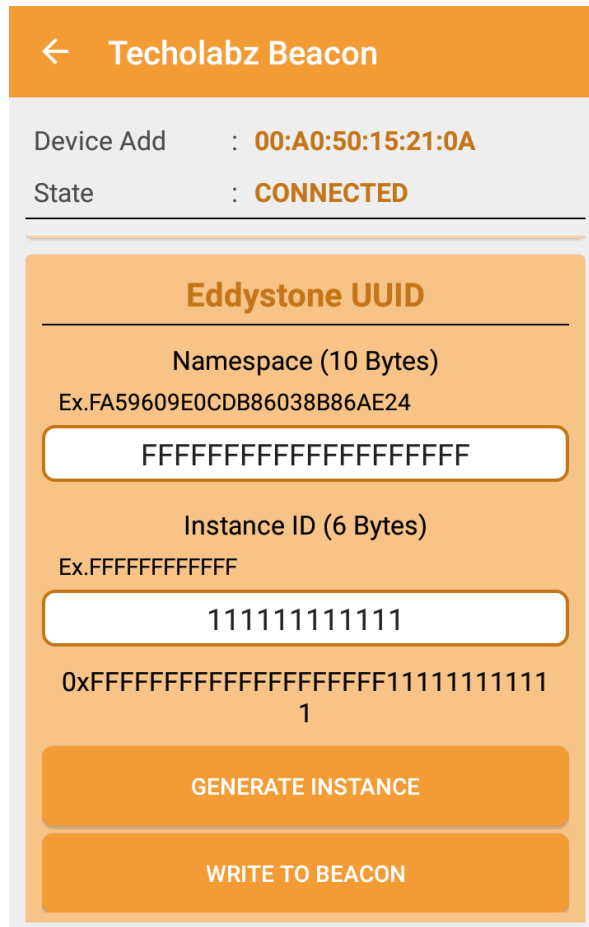


User can do the following settings:

- i. If beacon is password protected user needs to enter the assigned password
- ii. Select Broadcasting format type: (Radio Button Type Selection)
Eddystone URL, Eddystone UID and iBeacon
- iii. Advertising Interval: (Dropdown Menu Selection)
Range is from 200 millisecond to 1 second
- iv. Broadcasting Power: (Spinner Type Selection)
Range is from -18 dBm to +3dBm

Once the desired configurations are set, click on “Write Settings”. This will save your configured settings.

Eddystone UID Settings:



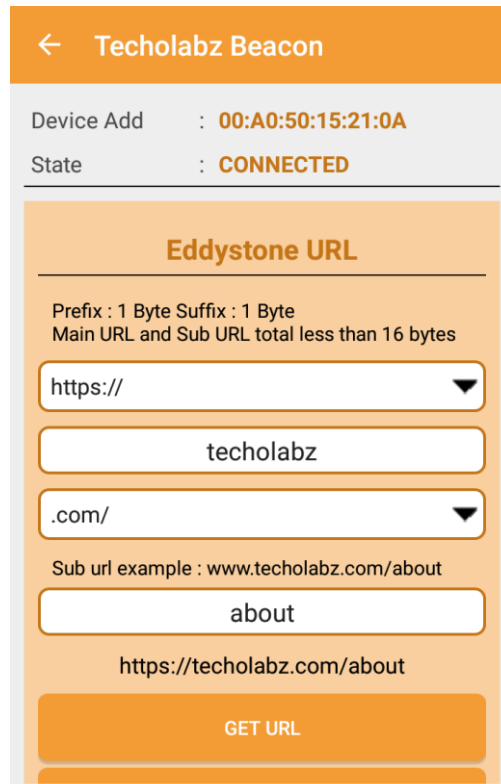
The screenshot shows a mobile application interface for configuring a beacon. At the top, there is a header with a back arrow and the text "Techolabz Beacon". Below this, the device address is shown as "00:A0:50:15:21:0A" and the state as "CONNECTED". The main section is titled "Eddystone UID" and contains two input fields: "Namespace (10 Bytes)" with an example "FA59609E0CDB86038B86AE24" and a text box containing "FFFFFFFFFFFFFFFF"; and "Instance ID (6 Bytes)" with an example "FFFFFFFFFFFF" and a text box containing "111111111111". Below these fields, the resulting broadcast packet is shown as "0xFFFFFFFFFFFFFFFF1111111111" with a "1" below it. At the bottom, there are two orange buttons: "GENERATE INSTANCE" and "WRITE TO BEACON".

As per Eddystone Protocol, the Eddystone UID is divided into two parts

- Namespace: 10 Bytes, to be entered in Hex by the user
- Instance ID: 6 Bytes, to be entered in Hex by the user

Once the desired values are set, click on “Generate Instance”. This will show you what the actual broadcast packet will contain. Then click on “Write to Beacon”. This will save your configured settings.

Eddystone URL Settings:



The screenshot shows the 'Techolabz Beacon' configuration screen. At the top, there is a back arrow and the title 'Techolabz Beacon'. Below this, the 'Device Add' is '00:A0:50:15:21:0A' and the 'State' is 'CONNECTED'. The main section is titled 'Eddystone URL' and contains the following fields and instructions:

- Prefix : 1 Byte Suffix : 1 Byte
- Main URL and Sub URL total less than 16 bytes
- Prefix dropdown menu: https://
- Main URL text input: techolabz
- Suffix dropdown menu: .com/
- Sub url example : www.techolabz.com/about
- Sub URL text input: about
- Generated URL: https://techolabz.com/about
- GET URL button

As per Eddystone Protocol, the Eddystone URL has

Prefix: 1 byte (select from drop down)

Main URL : Type in the main URL

Suffix : 1 byte (select from drop down)

Sub URL: Type in the sub URL

Once the desired values are set, click on “Get URL”. This will show you what the actual broadcast packet will contain. Then click on “Write to Beacon”. This will save your configured settings.

** The total allowed Eddystone URL length is 18 bytes

iBeacon Settings:



iBeacon Config

UUID (16 Bytes)
Ex. fa59609e0cdb86038b86ae24

Enter HEX value

Major (2 Bytes)
Ex. FFFF

Enter HEX value

Minor (2 Bytes)
Ex. AAFF

Enter HEX value

0xFFFFFFFF

GENERATE IBEACON UUID

WRITE TO BEACON

As per iBeacon Protocol, the packet is divided into three parts

UUID: 16 Bytes, to be entered in Hex by the user
 Major Number: 2 Bytes, to be entered in Hex by the user
 Minor Number: 2 Bytes, to be entered in Hex by the user

Once the desired values are set, click on “Generate iBeacon UUID”. This will show you what the actual broadcast packet will contain. Then click on “Write to Beacon”. This will save your configured settings.

ERRATA:

- a) After configuring and disconnecting the beacon, if it does not transmit , just press the button on the beacon once again and you are good to go (issue resolved for beacons after 01/04/2017)