

FCC_Configuration Procedures for iOS App



No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form or by any means without the written permission of WiSilica, Inc.

TRADEMARKS

WiSeHome, WiSe, WiSe Mesh, WiSe Tech, WiSeApp, WiDe, WiBe, WiSe Connect are trademarks of WiSilica, Inc. and/or its affiliates in the US and/or other countries. WiSilica Green in connection with IOT is distinctive of WiSilica brand products. All other registered and unregistered trademarks herein are the sole property of their respective owners.

LICENSE INFORMATION

[License Agreement](#)

General Information



Figure 1 WiFi-BLE Linkit Bridge

The WiseMesh BLE to WiFi Gateway (GW) is a fully integrated GW that provides Internet connectivity to the WiseMesh BLE mesh network. These GWs can be seamlessly integrated with any enterprise WLAN deployment or Ethernet LAN, providing the connectivity to all of the components within the WiSeMesh network, including: listener, repeaters, tags and other devices enabled through the WiSilica BLE modules.

Multiple WiseMesh GWs can be installed within a WiSeMesh network deployment and the number of GWs is determined by the application. As an example, a large scale Real-time location services application will require more GWs and internet capacity than a small scale connected lighting application.

Key Features

Power Supply Options

The WiSeMesh BLE/WiFi GW supports both Power over the Ethernet (PoE) and Mini USB power options for flexibility and ease of installation.

Dual Communication and Security

Each WiSeMesh BLE/WiFi GW can send and receive data in real time from the BLE connected devices within the mesh to and from the WiSilica cloud. Each WiSeMesh BLE/WiFi GW is AES 128k encrypted for device and network security.

WiFi Configuration

The WiseMesh BLE/WiFi GW is configured through a mobile application based user interface for WiFi configuration.

Specifications

Radio Frequency

(BLE 4.0) 2.4-2.48 Ghz

Wireless Standard Supported

WiFi (IEEE 802.11 11b/g) Bluetooth 4.1 Stack WiFi Data Rate up to 72.2 Mbps

WiFi Security

WAP-2

Device Security

AES 128k Encrypted,

With 3 Level Pairing Keys (Network, App, GUID)

Integrated Antenna

Integrated Antenna,

WiFi – 14dBm

BLE- 2.4GHz ~ 2.5GHz 2dBi

External Antenna(The device must be professionally installed)

Omni Directional Antenna 2 x 50 ohms SMA connectors:

1/2 wave whip

WiFi BLE

Power

Mini USB or PoE (48Vdc)

Physical interfaces

Mini USB, Ethernet with PoE (RJ485)

Dimensions

129 X 130 X 46mm

Operating Conditions

Temp 0-50°C

Table of Contents

Table of Contents.....	3
Table of figures	4
1 Home screen.....	5
2 Sign up	5
3 Sign In	6
4 Organization management	6
5 User Management	8
6 Device Commissioning	11
7 How to enable listener.....	15
8 Bridge Commissioning.....	16
8.1 Bridge Commissioning via Wi-Fi.....	16
8.2 Bridge Commissioning via Ethernet	18
8.3 Bridge Commissioning via P.O.E.....	18
9 How to run Bridge Diagnostics	18

Table of figures

Figure 1 Sign Up.....	5
Figure 2 Sign In	6
Figure 3 My Organizations	6
Figure 4 Click "Create (+) "option.....	7
Figure 5 Success message.....	7
Figure 6 Users	8
Figure 7 Click "Create (+) " option.....	8
Figure 8 Select User role	9
Figure 9Enter user details	9
Figure 10 Select organization	10
Figure 11 Review the details.....	10
Figure 12 Success message.....	11
Figure 13 "Add device" option.....	11
Figure 14 Select organization	12
Figure 15 Set a filter.....	12
Figure 16 Scan for devices	13
Figure 17 Scanned device	13
Figure 18Pair the beacon tag.....	14
Figure 19 Pair the listener	14
Figure 20 Paired device in dashboard.....	15
Figure 21 Listener Enable	15
Figure 22 Scan bridge device.....	16
Figure 23 Pair bridge device	17
Figure 24 Bridge device under default group.....	17
Figure 25 Bridge commissioning via ethernet.....	18
Figure 26 Status check	19
Figure 27 Bridge diagnostics.....	19

Overview

WiSe IOT Platform provides end to end user experience providing plug and play hardware for devices and bridges, and software modules for devices, bridges, apps and cloud. Manufactures, integrators, distributors, data scientists, application developers, executive management and end users can directly benefit from deploying and/or integrating with one or more components of the WiSe platform. WiSe IOT platform combines its innovative WiSe Mesh technology with plug and play modules to get a devices networked in minutes without any additional hardware. This document addresses the architecture of WiSe Platform and its components.

Hardware Versions Used

Sl#	Device	Firmware
1	Wise Beacon	1.3.27
2	Wise Mesh Listener	1.3.72
3	Wise Bridge Device	2.1.19

1 Home screen

When the application is launched, user will be welcomed by a screen containing four buttons.

1. Forgot Password
2. Sign In
3. Sign Up
4. Skip Sign In

2 Sign up

- a) Click “Sign Up” button in home screen
- b) Enter valid information in all the fields.
- c) Click “Sign Up”

On a successful sign up, a new account is created.

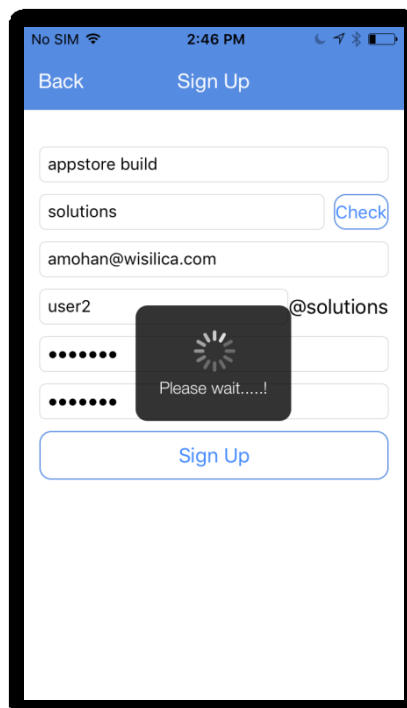


Figure 1 Sign Up

3 Sign In

- a) Enter valid credentials i.e username and password.
- b) Click “Sign In”



Figure 2 Sign In

4 Organization management

- a) Select “My Organizations” option under “Settings” tab.

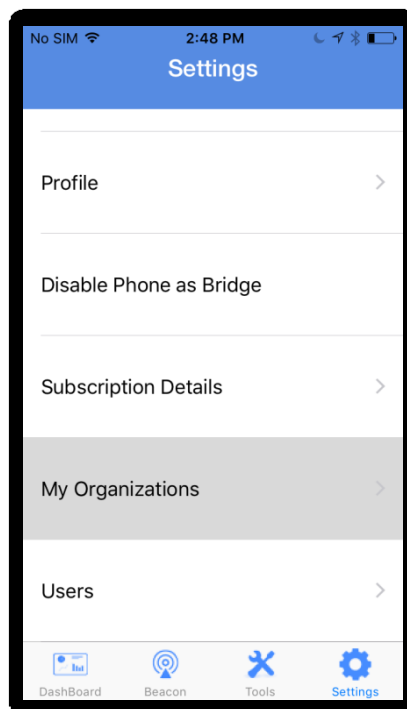


Figure 3 My Organizations

b) Click on “Create (+)” option.

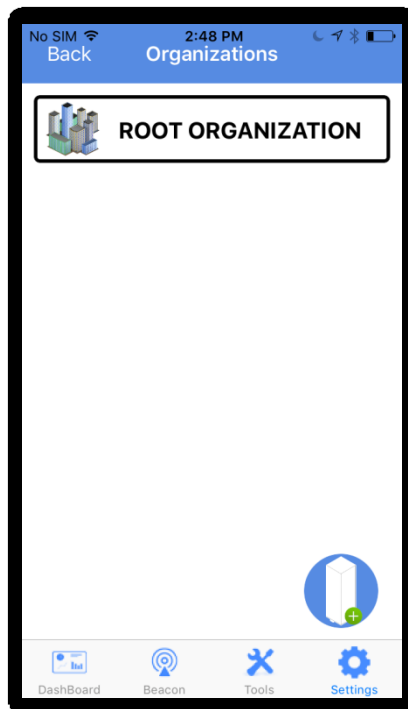


Figure 4 Click "Create (+)" option

c) Enter organization name and click “Finish”

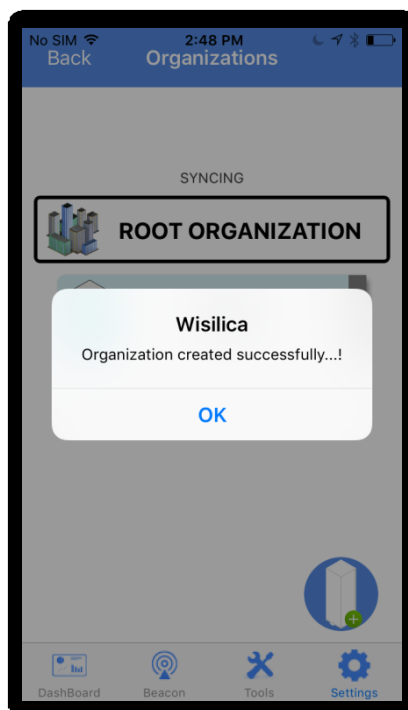


Figure 5 Success message

5 User Management

a) Select “Users” option under “Settings” tab.

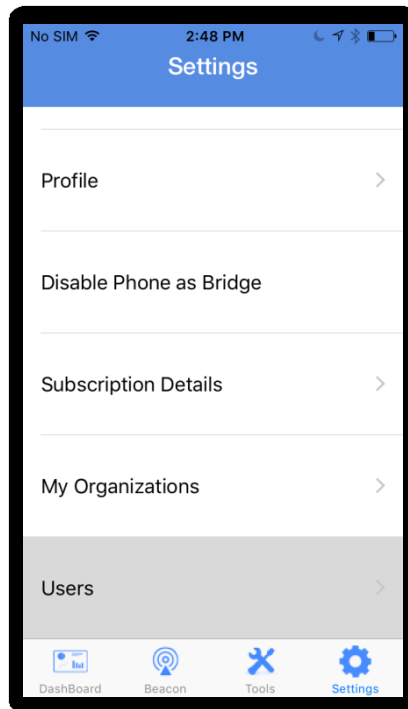


Figure 6 Users

b) Click on “Create (+)” option.

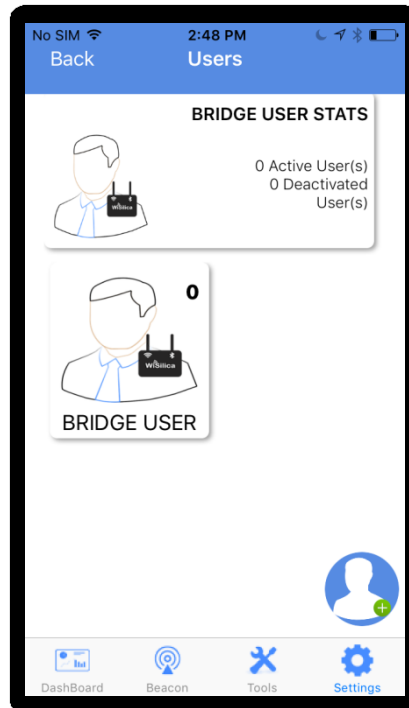


Figure 7 Click "Create (+)" option

c) Select User role and click on “Next” button.

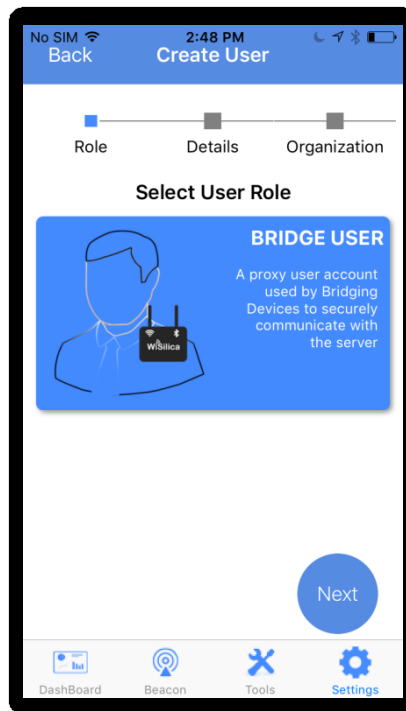


Figure 8 Select User role

d) Enter user details and click “Next” button.

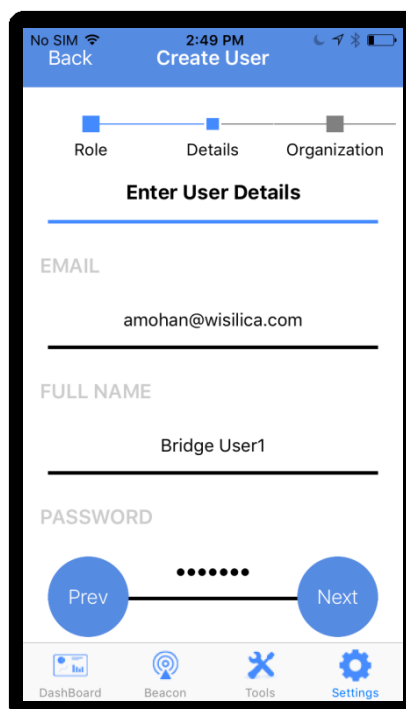


Figure 9 Enter user details

e) Select organizations to manage.

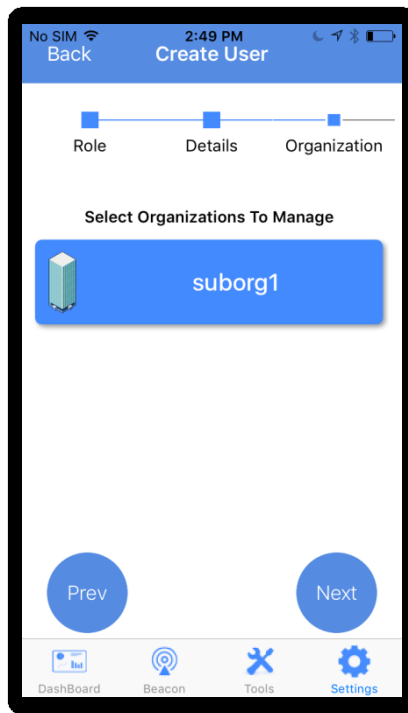


Figure 10 Select organization

f) Review the entered details and click on “Finish”.

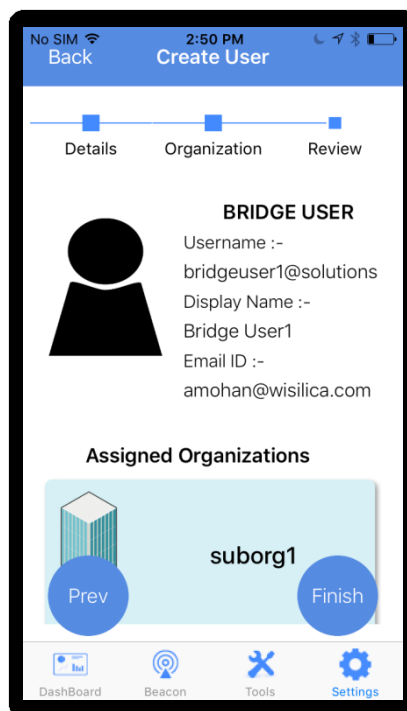


Figure 11 Review the details

g) Click on “OK” button to complete user creation.

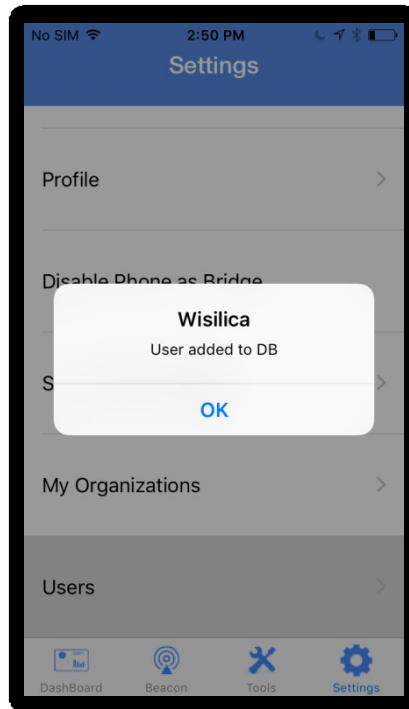


Figure 12 Success message

6 Device Commissioning

Device Commissioning is the process of scanning and assigning devices to the groups.

a) Click on “(+)” and select “Add Device” from the main menu options.

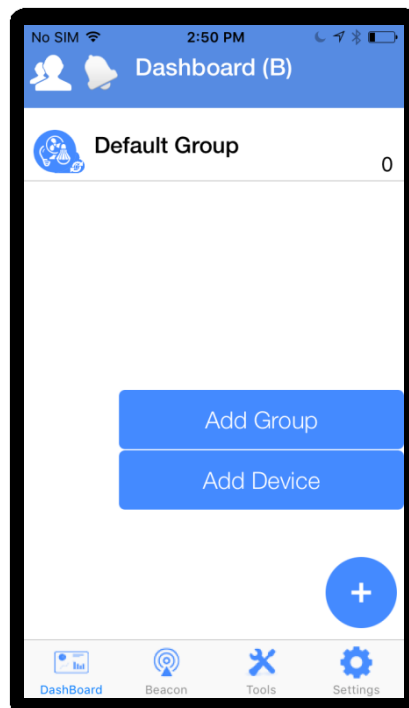


Figure 13 "Add device" option

b) Select the organization under which the device is to be commissioned.

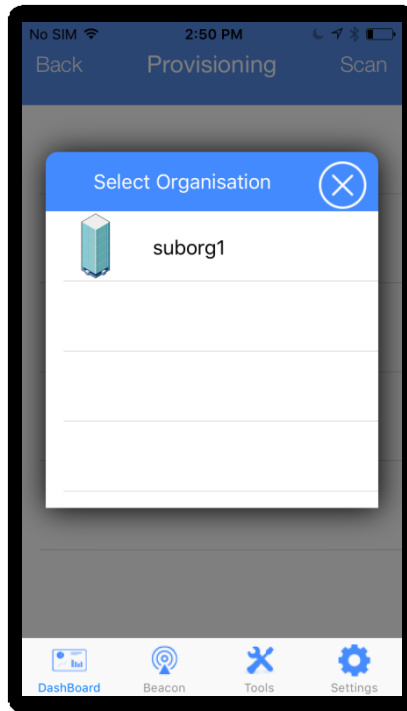


Figure 14 Select organization

c) Click on filter icon if the user wants to filter out a particular type of device that needs to be scanned for in the presence of multiple device types.(OPTIONAL)

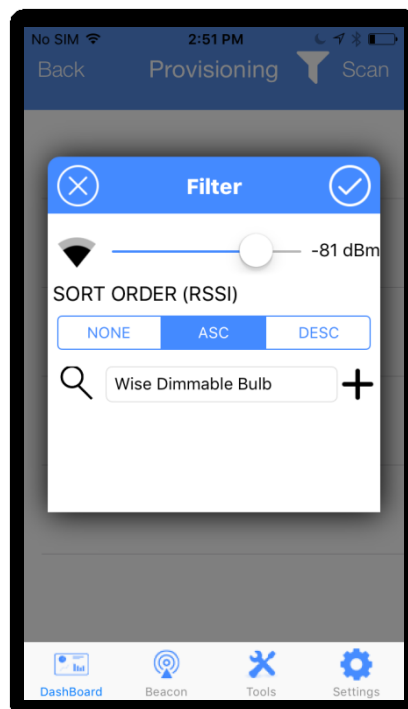


Figure 15 Set a filter

d) Click on “Scan”

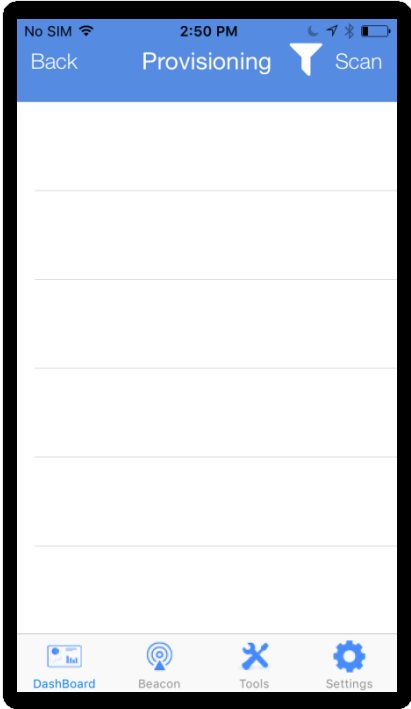


Figure 16 Scan for devices

e) When the Wise Beacon appears on scanned list, swipe leftwards.

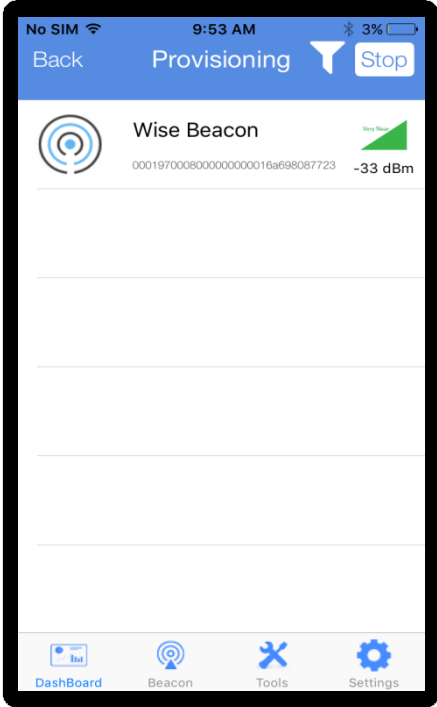


Figure 17 Scanned device

f) Click on “Pair” button .

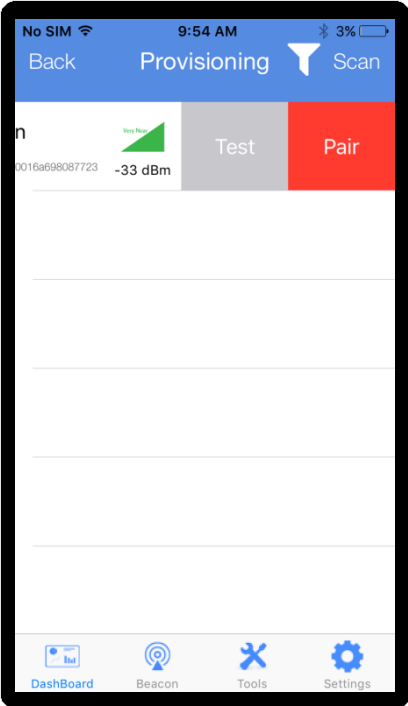


Figure 18 Pair the beacon tag

g) Scan for Wise Mesh Listener and pair the device in a similar manner.

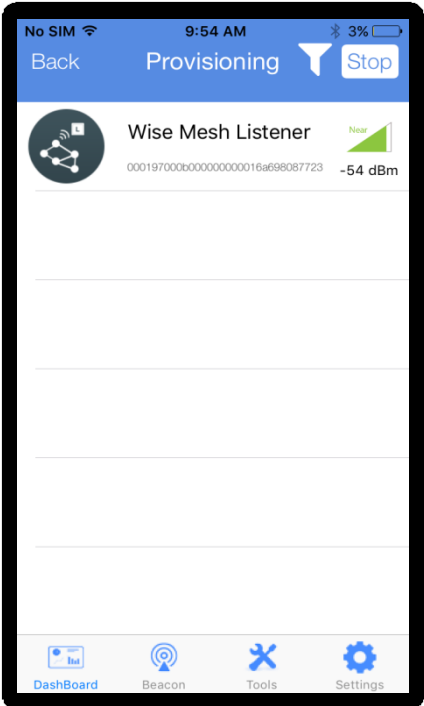


Figure 19 Pair the listener

h) Paired devices will appear in the dashboard.

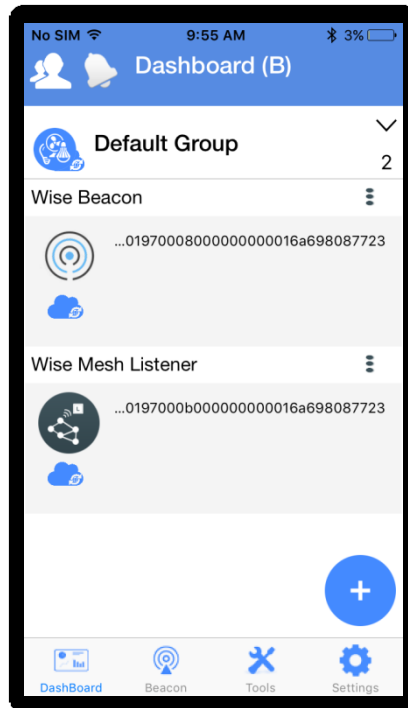


Figure 20 Paired device in dashboard

7 How to enable listener

- Click on optional menu in the right end of the paired listener.
- Select “Listener Enable”

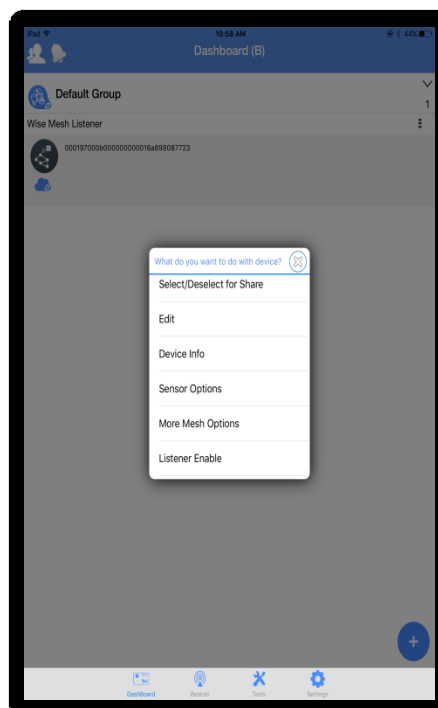


Figure 21 Listener Enable

8 Bridge Commissioning

Creating a bridge user prior to commissioning a bridge device is mandatory. Please refer heading number 5, “USER CREATION” to create a bridge user and then proceed as follows. Bridge device has to be commissioned to perform a remote operation.

8.1 Bridge Commissioning via Wi-Fi

a) In order to pair a bridge device, follow steps 6(a) to (d).

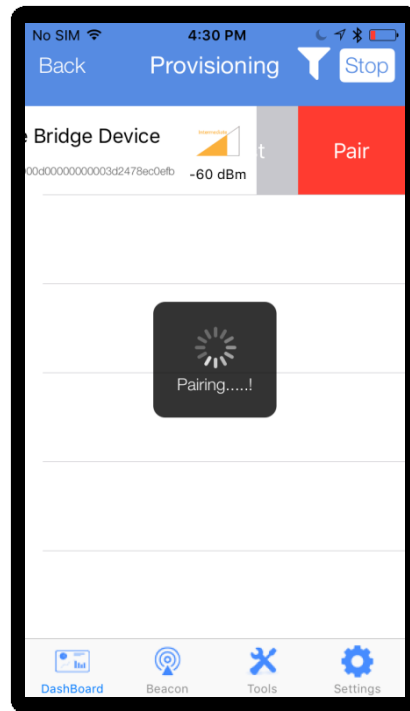


Figure 22 Scan bridge device

b) Enter the credentials as follows:

- Check the option, Bridge Listener Enabled.
- Select the encryption type.
- Enter SSID and password.
- Place the cursor in the username field and select a bridge user from the list of created bridge users.
- Enter password of the selected bridge user.
- Click on “Pair” to get the device paired.

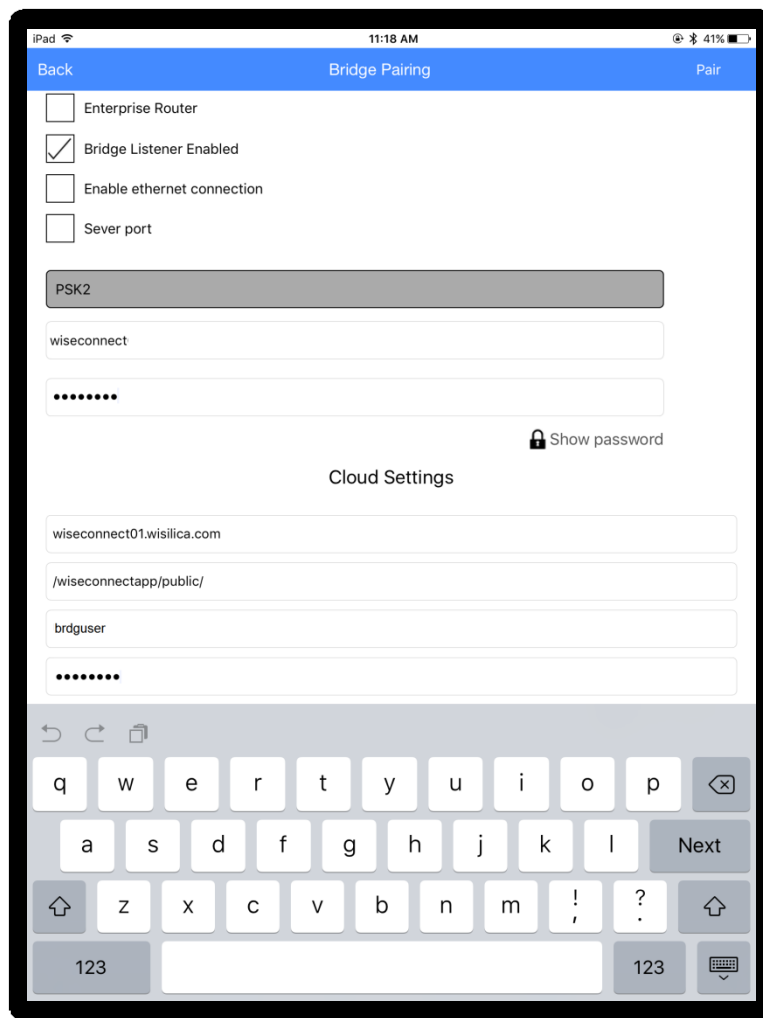


Figure 23 Pair bridge device

c) Paired bridge can be seen in the dashboard under default group.

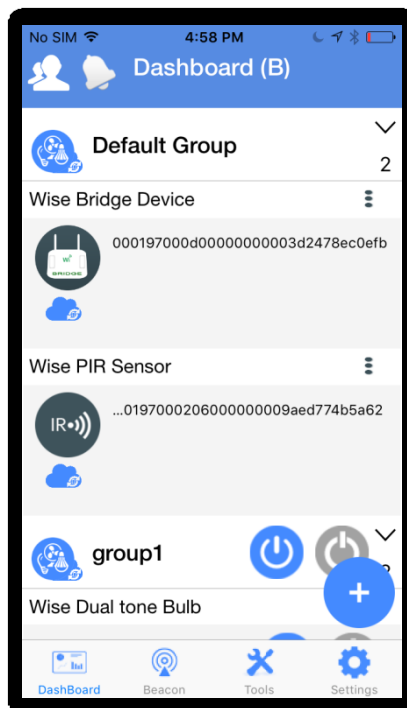


Figure 24 Bridge device under default group

8.2 Bridge Commissioning via Ethernet

- Check the options , Bridge Listener Enabled and Enable Ethernet connection.
- Place the cursor in the username field and select a bridge user from the list of created bridge users.
- Enter password of the selected bridge user.

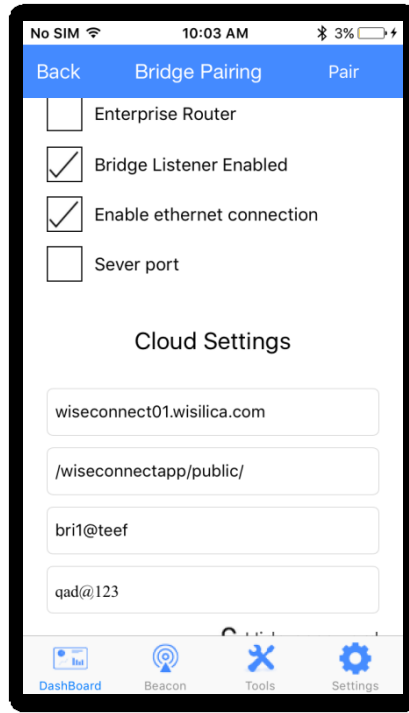


Figure 25 Bridge commissioning via Ethernet

8.3 Bridge Commissioning via P.O.E

Note : The procedure is same as in 7.2. The only difference is that the power is provided to the bridge via Ethernet cable and hence we need not connect the power cable.

9 How to run Bridge Diagnostics

Bridge diagnostics can be used to know the present operational condition of the bridge device.

- a) Select optional menu in the right end of bridge name and select “Status check”.

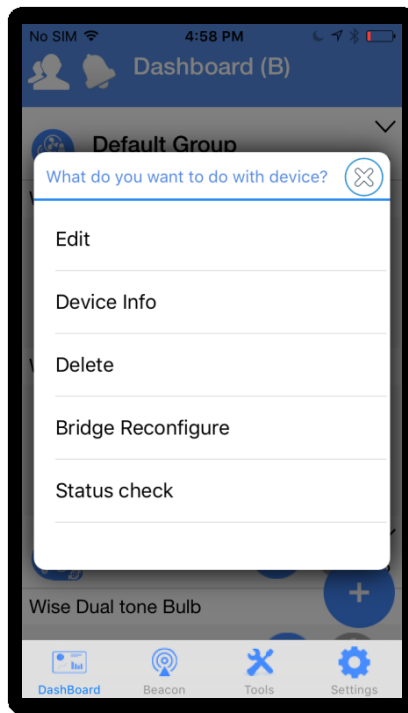


Figure 26 Status check

b) Bridge enters diagnostic mode and details of the bridge can be seen here.

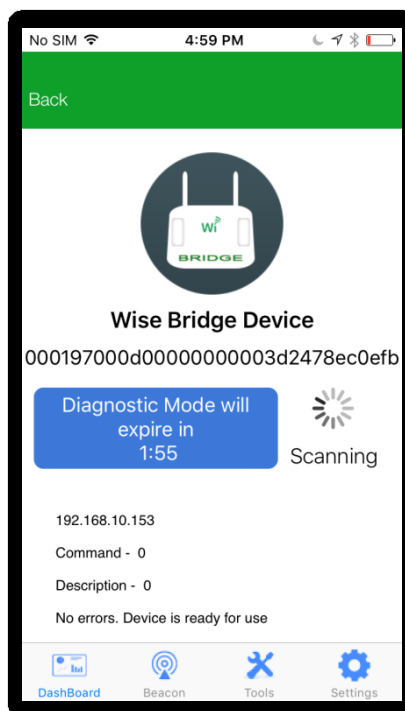


Figure 27 Bridge diagnostics

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 that is received, including any interference that may cause undesired operation.

Human exposure to RF emissions from mobile devices (47 CFR §2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

This device is acting as slave and operating in the 2.4 GHz (2412 ~2462 MHz & 2402 -2480 MHz) band.

Ad Hoc function is supported but not able to operate on non-US frequencies.
Do not use the device with the environment which below minimum -10 °C or maximum over 50°C .

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

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

RF Exposure Information

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and can be used/operated in mobile operating conditions without any restrictions. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm during normal operation.