Smart device Android User Manual

User Manual



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1 Purpose

To understand Installation, Operation and basic functionality of Smart Tag.

2 Scope

Useful for tester, Installer and final user.

3 Definition(s) and Abbreviation(s)

Name	Abbreviation
DFU	Direct Firmware Upgrade

4 Reference(s)

Document No.	Title



5 Introduction of Smart Tag

> Smart Tag is an IOT device which can be used for many areas like cooler, deep freezer etc. to observe and log its environment like Temperature and Light. It also logs motion and door events.



6 Installation of Smart Tag Phone App

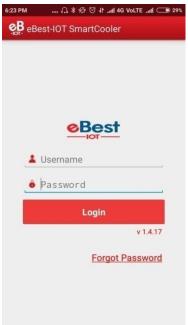
- 1) Install given apk file for eBest-iot Smart cooler application in your android phone.
- 2) Click on "eBest-IOT Smart Cooler" application icon in your Android phone. It will launch application.

Note: Please ensure Bluetooth & Mobile Wi-Fi or Mobile Data must be ON in device.



3) Application will ask for User name and Password. Press on login button after entering valid User name and Password.

Note: Wi-Fi network or mobile data enable must be required during login otherwise login will be fail.





4) On successful login user will find below screen.

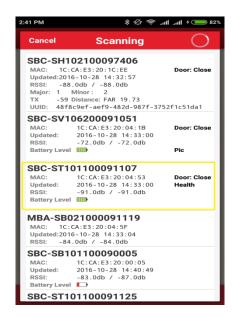
Note: Application must require Bluetooth ON. Application will communicate with device using Bluetooth.



- 1. Home
- 2. Scanning Window
- 3. VH Window



5) When user press scan window symbol, it will show available BLE device list. You can identify your device by its serial#. Touch on your device for connection



6) After connection with device, device information will be available on screen and also "X" mark are seen if application is connected to device as indicated below.





7 Installation guide of Smart Tag

7.1 Set up tool List

- 1) Smart Tag fixed into Back-Plate
- 2) One Door magnet
- 3) One BLE enabled Smart Phone / Tablet with pre installed "eBest-iot Smart cooler" app.

7.2 Identify Installation position in cooler

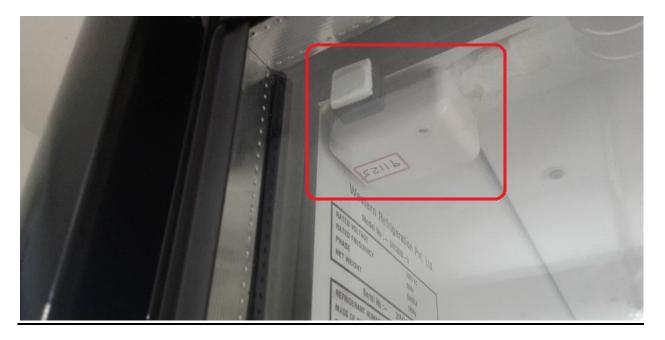
- 1) Identify installation position in cooler. Mostly preferable positions are on top left side or upper left side.
- 2) Device must be installed on the inside wall of the cooler and the magnet must be placed on the door glass.

Upper left side





Top left side



- 3) Some cooler models would have railing around the cooler inside edges which will make it difficult to install the device on the wall. In such scenarios the position of the device and the magnets can be reversed, i.e. the tag can be installed on the top left or upper left of the cooler door and the magnet can be installed on the inside wall of the cooler.
- 4) The magnet and the tag must not be more than an inch apart.



7.3 Wake up device from deep sleep

- 1) By default device is in deep sleep mode. It doesn't log any events and doesn't advertise. So it is required to bring it in normal mode.
- After installation of device and its door magnet to bring device out of deep sleep, close door so device sense door magnet and it will start advertisement for 30 second.
- 3) In this 30 seconds period, user has to connect it.
- 4) After connection, go to Menu -> click on "Power Mode" -Image 1
- 5) After clicking on "Power Mode"> Then tap on "Disable Deep Sleep".
- After disabling deep sleep mode, device will continuous advertisement forever and also logs event data.
- 7) If user doesn't disable deep sleep mode then after 30 second of disconnection, device will stops advertisement again and user can't see device in scanning.



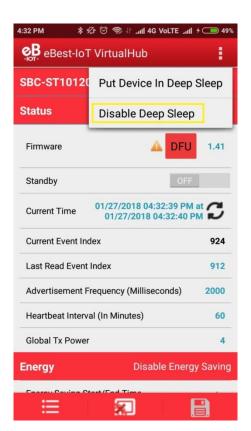
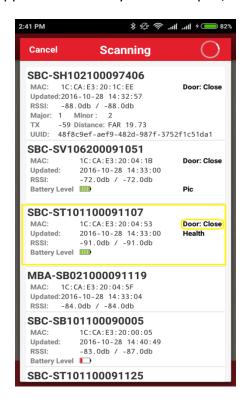


Image-1 Image-2



7.4 Verify Door Status

1) Use the android phone application to verify the door open/close status in scanning screen.





7.5 Verify Serial# and MAC

1) Verify that the serial number and MAC address on the label of the device with serial number displayed on the phone application. Label on device contains only last 8 digit of full serial number and MAC address.





8 Smart Tag Operating mode

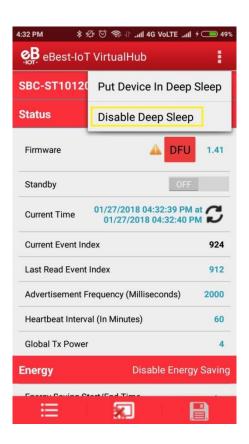
Smart Tag can be operated into one of the following 3 modes.

8.1 Deep Sleep mode

- In Deep sleep mode, device neither advertises nor logs any event data.
- Deep sleep mode is by default Enable when installed in field first time.

To Disable Deep sleep

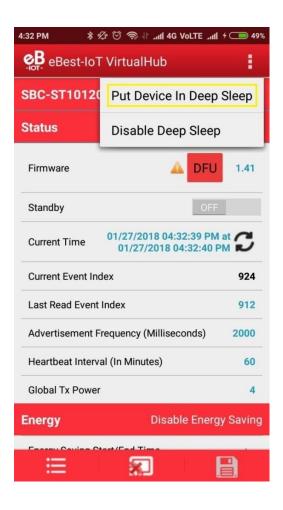
- 1) When deep sleep mode enable, no advertisement occur by device. So user can't found that device during phone app scanning.
- To disable deep sleep mode, user has to keep door magnet close to device then device starts advertisement for 30 second.
- 3) In this 30 seconds user has to connect it. After connection, go to Menu -> "Power Mode" -> "Disable Deep Sleep".
- 4) After disabling deep sleep mode, device will continuous advertisement forever and also logs event data.
- 5) If user doesn't disable deep sleep mode then after 30 second of disconnection, device will stops advertisement again and user can't see device in scanning.





To Enable Deep sleep

- 1) After connection, go to Menu -> "Power Mode" -> "Put Device In Deep Sleep".
- 2) After enabling deep sleep mode, device will stop advertising and doesn't log any event





8.2 Standby mode

- In Standby mode, device continuous advertise but doesn't log any event data.
- > Standby mode is by default disable when installed in field first time.

To Enable/Disable Standby mode

- 1) After connection, on front screen, below STATUS menu there is a toggle button to ON/OFF standby. User can enable standby mode by ON and disable by OFF. Press on save button on bottom to save it in device.
- 2) When standby mode successfully enabled in device, it will stop event logging.



8.3 Normal mode

- When deep sleep mode and standby mode are disabled in device, device is in normal mode.
- In this mode device is fully functional.



9 Smart Tag Event types

- > Smart Tag can store up to 13568 events. After that it will rewrite from old event space.
- > Smart Tag logs following events.

9.1 Health Event

- 1) Health event contains temperature, Light and Battery percentage with date and time.
- 2) User can set health event interval.

9.2 Door Event

- 1) Door Event logged by device when door open and close occur.
- 2) Also door event logged when door open timeout occur.

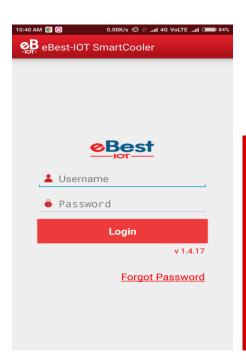
9.3 Motion Event

- 1) Motion event logged when device sense any motion in any direction.
- 2) User can set accelerometer threshold and motion sense interval.



10 Association process with Proximity / SmartTag 3rd

- 1) User can Associate "Proximity / SmartTag 3 rd" with cooler using Installation Application.
- 2) Following step to Associate "Proximity / SmartTag 3 rd" with cooler.

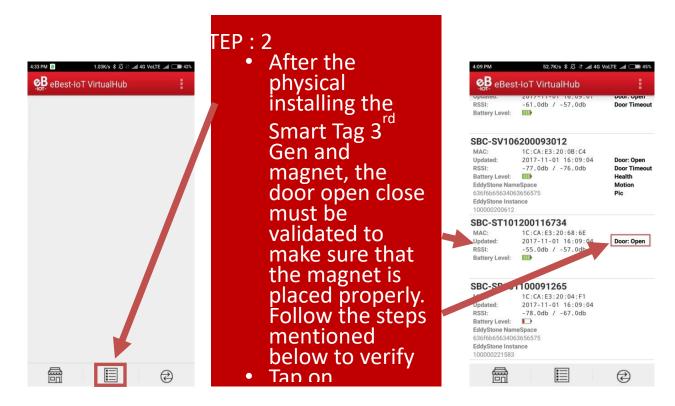


STEP 1:

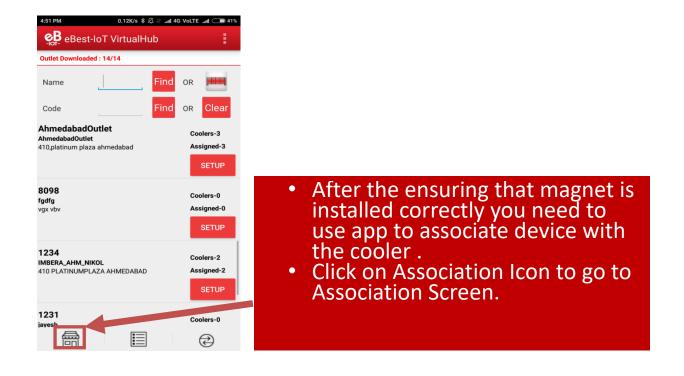
- 1. Open Smart Cooler Installation Application.
- 2 Login using the credentials provided by your administrator – after successful login, user will be directed to Outlet list view screen.



Step: 2

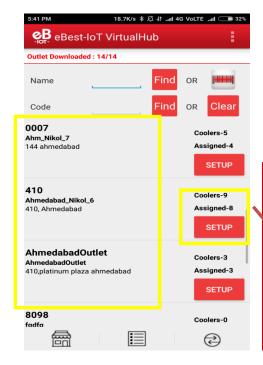


3) After Go to Install Device screen.





4) On successful login, list of outlets will be shown



Coolers – 9

Shows the number of coolers in the outlet

Associated-8

Shows the number of coolers already associated/ provisioned



Step:3



STEP 3: Selecting Outlet – Using Barcode Scanning:

- 1. Click on the Barcode icon, Barcode scanning window will open
- 2. Scan the cooler barcode using the barcode scanner Position the camera of iPad in such a way that the bar code of the Cooler (Technical ID) in the box.
- 3. Outlet will automatically be selected and a menu will be shown for choosing the device which will be installed.

Alternate - Selecting Outlet by entering Outlet Code or Name:

 If Scanning of the Cooler serial is not possible enter either the Outlet Name or Outlet Code and Tap on "Find".

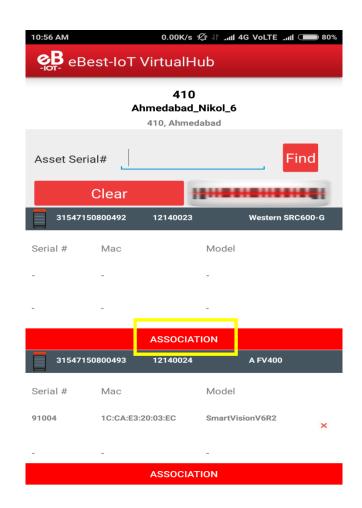
Selecting Outlet – Manual selection of cooler

 If Scanning of the Cooler serial is not possible and outlet code / name is not known, You can manually select the outlet.



- 5) New window will open allowing you to manually select the cooler for the outlet selected.
- 6) Click on "Association" button to select the Asset for installation

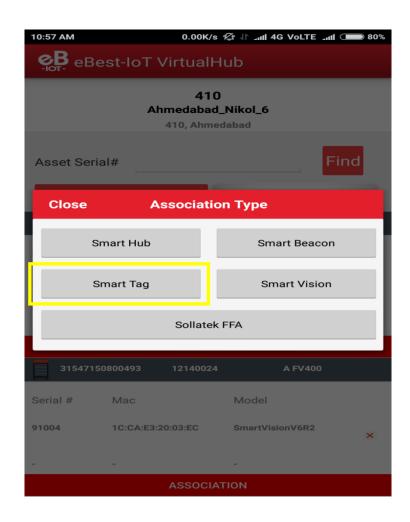




7) Click on "Association" button then New window will open to ask for selection of device type to be associated.



8) Click on "Smart Tag " to Associate Smart Tag $\mathbf{3}^{\text{rd}}$ Gen device .

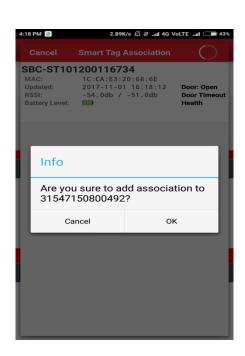


Step 4:



STEP 4

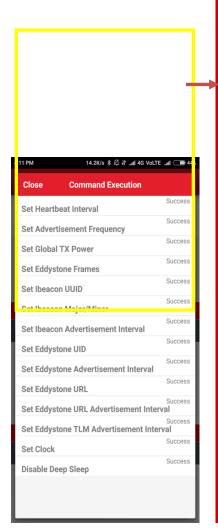
- 1. You will see list of unassociated devices, you can use the door status to identify the device being installed
- 2. After identifying the device, select the device to start Installation
- 3 App will give a popup to confirm the association, Click on Ok to confirm.





Step 5:



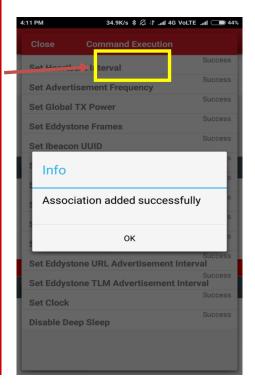


STEP 5:
On selection of the device app will connect to device and make all configuration changes and provide status.
Success message will be appear after successful association, press OK to close the popup.
When this window appears device is

provisioned, you can

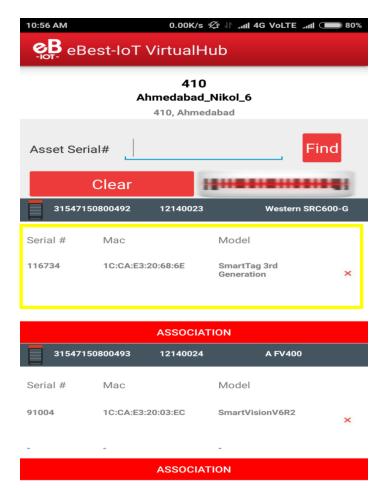
press close to return

to the outlet screen.



9) When the process is completed you will be returned to the Outlet Screen, and now you see that the Proximity / Smart Tag 3rd Gen is associated with the Cooler see below image.







11 Smart Tag Set Configuration Parameters

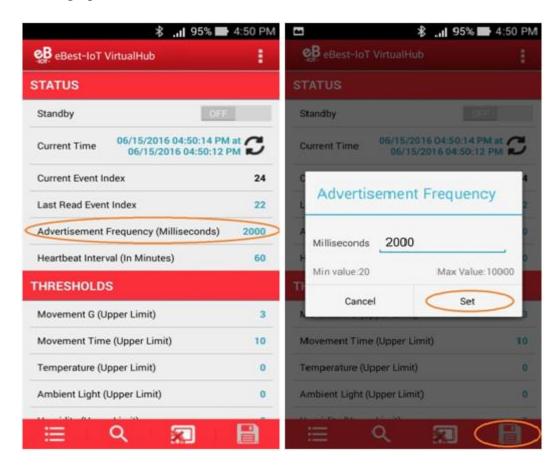
After connection user can configure following parameters. Below figure shows "Menu" button location.





11.1 Set Advertisement Interval

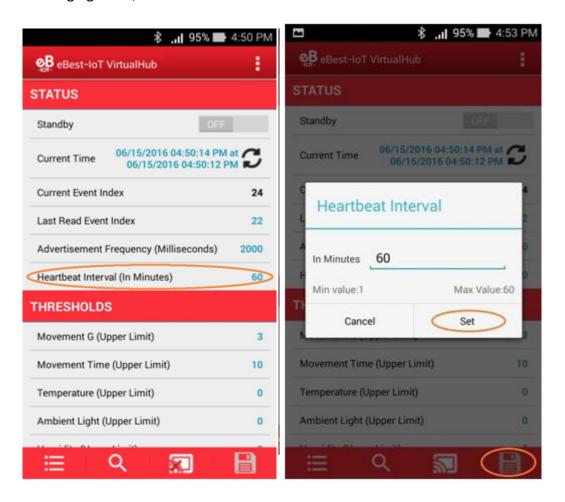
- 1) After connection, on front screen, below STATUS bar, click on "Advertisement frequency (Milliseconds)".
- 2) Enter interval value and press "Set".
- 3) After changing value, Press on save button at bottom to save it in device.





11.2 Set Health event Interval

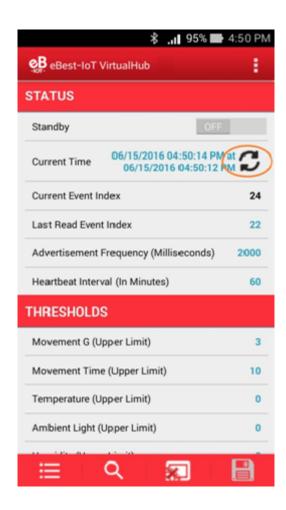
- 1) After connection, on front screen, below STATUS bar, click on "Heartbeat Interval (In Minutes)".
- 2) Enter interval value and press "Set".
- 3) After changing value, Press on save button at bottom to save it in device.





11.3 Set Current Date Time

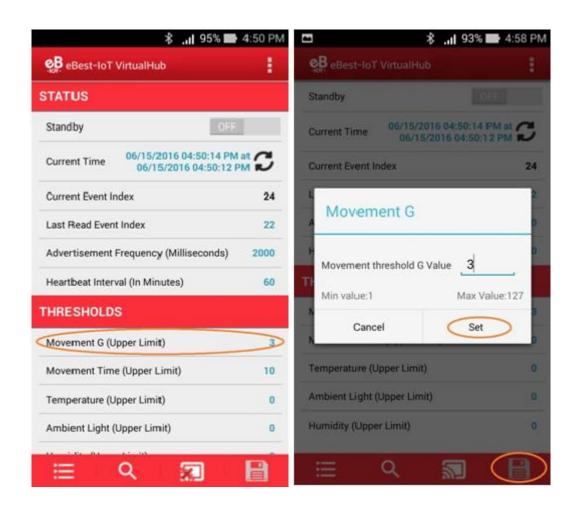
1) After connection, on front screen, below STATUS bar, on "Current Time" row, click on symbol shown in figure to set current time in device.





11.4 Set Accelerometer threshold

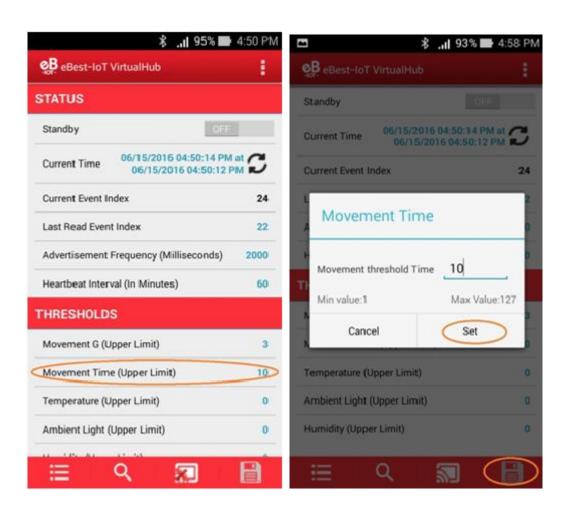
- After connection, on front screen, below THRESOLDS bar, click on "Movement G (Upper Limit)".
- 2) Enter value and press "Set".
- 3) After changing value, Press on save button on bottom to save it in device.
- 4) This figure is a sensitivity of motion sensor for sensing motion.





11.5 Set Accelerometer sense time

- 1) After connection, on front screen, below THRESOLDS bar, click on "Movement Time (Upper Limit)".
- 2) Enter value in seconds and press "Set".
- 3) After changing value, Press on save button on bottom to save it in device.

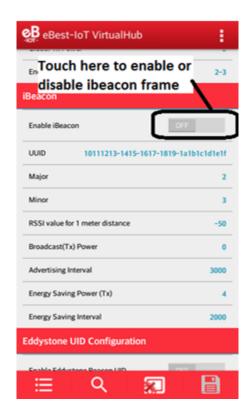




11.6 Set iBEACON parameters

11.6.1 Enable/Disable iBeacon frame

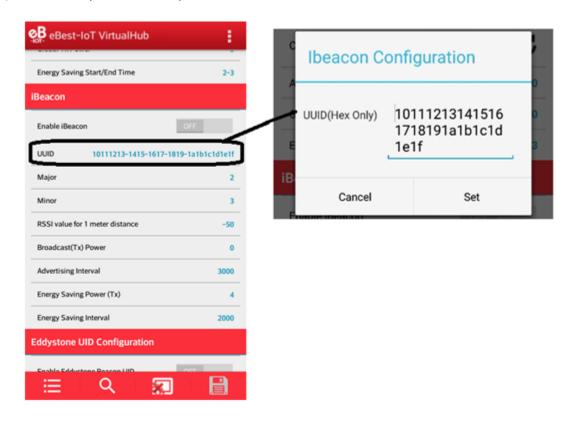
Touch on Enable iBeacon row to enable or disable iBeacon frame.





11.6.2 Set UUID

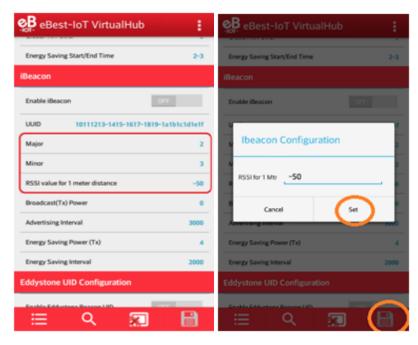
- 1) After connection, as shown in figure, below iBeacon bar touch on UUID row.
- 2) Enter 16 byte UUID and press "Set".

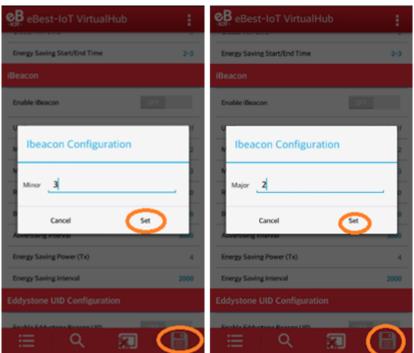




11.6.3 Set Major, Minor and RSSI

- 1) After connection, as shown in figure, below **iBeacon** bar, there is a rows for major, minor and TX power. Click on any row and write the value as shown below.
- 2) Enter value and press "Set".

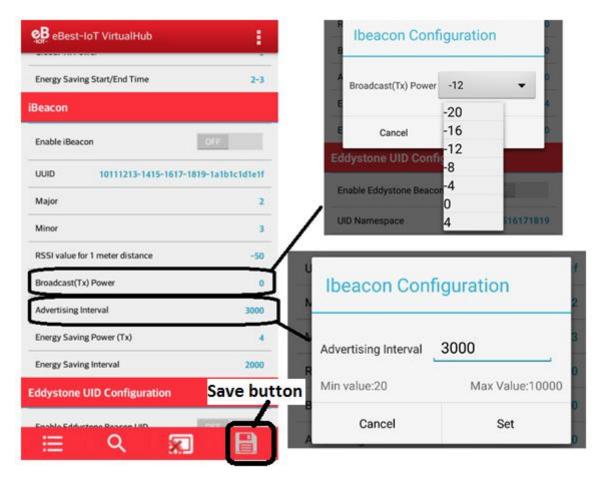






11.6.4 Set Advertisement Interval and Power

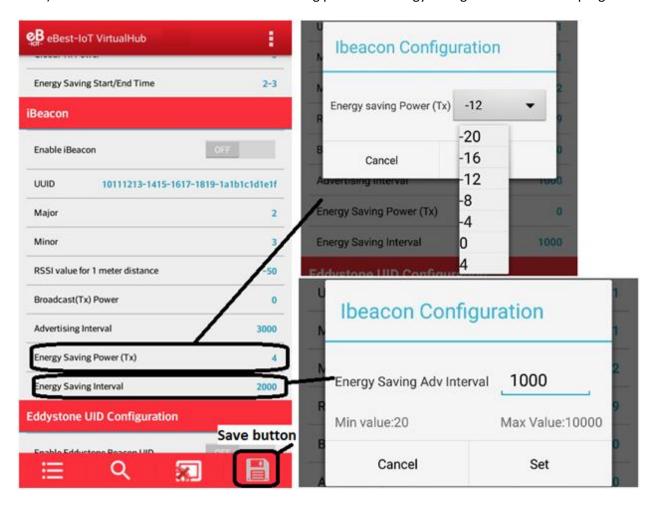
1) Advertisement Interval and it's transmit power can also be programmable.





11.6.5 Set Advertisement Interval and Power for energy saving mode

1) Advertisement interval and its transmitting power for energy saving mode can also be programmable.



Note: After changing value of any parameter, Compulsory Press on save button on bottom to save it in device.



11.7 Set Eddystone UID configuration

11.7.1 Enable/Disable UID frame

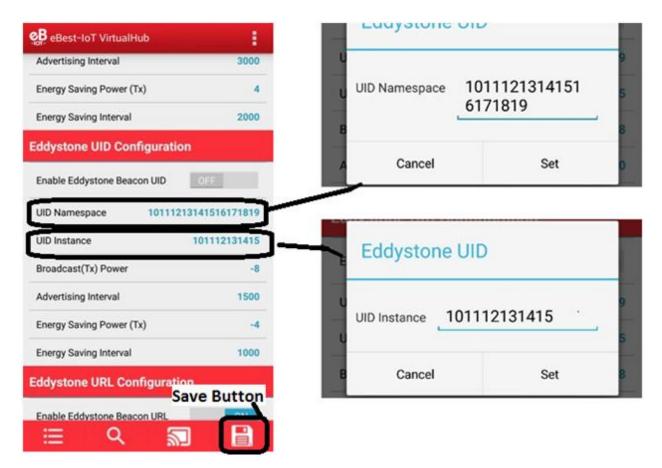
Touch on enable eddystone UID row to enable or disable Eddystone UID frame.





11.7.2 Set UID namespace and Instance.

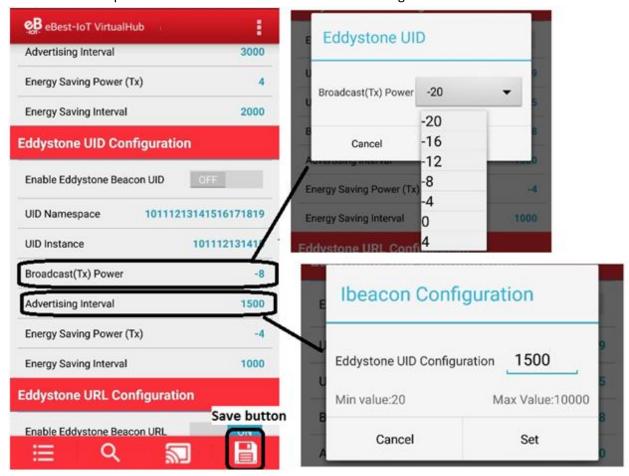
- 1) After connection, as shown in below figure touch on UID Namespace row to set name space of 10 byte, and touch on UID instance to set 6 byte instance value.
- 2) press "Set" of window and then press save button as shown in fig..





11.7.3 Set Advertisement Interval and Power

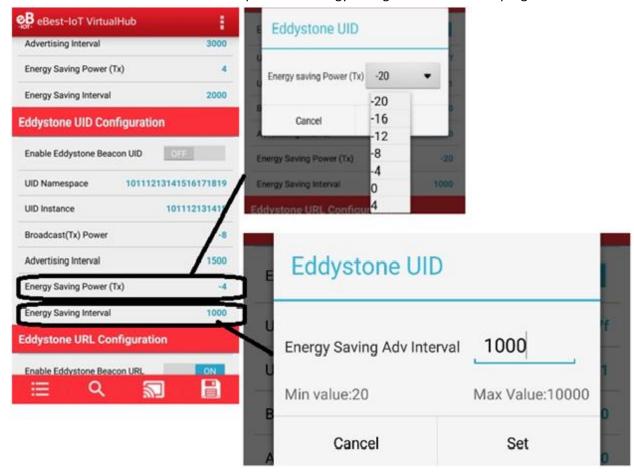
Advertisement interval and its transmit power can also be programmable press "Set" button in window and then press save button on main screen as shown in fig below.





11.7.4 Set Advertisement Interval and Power for energy saving mode

Advertisement Interval and its transmit power for energy saving mode can also be programmable.



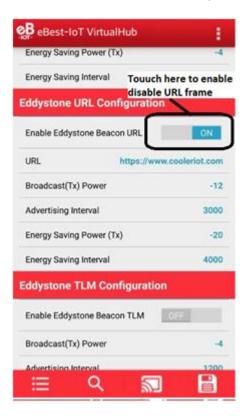
Note: After changing value of any parameter, Compulsory Press on save button on bottom to save it in device.



11.8 Set Eddystone URL configuration

11.8.1 Enable/Disable URL frame

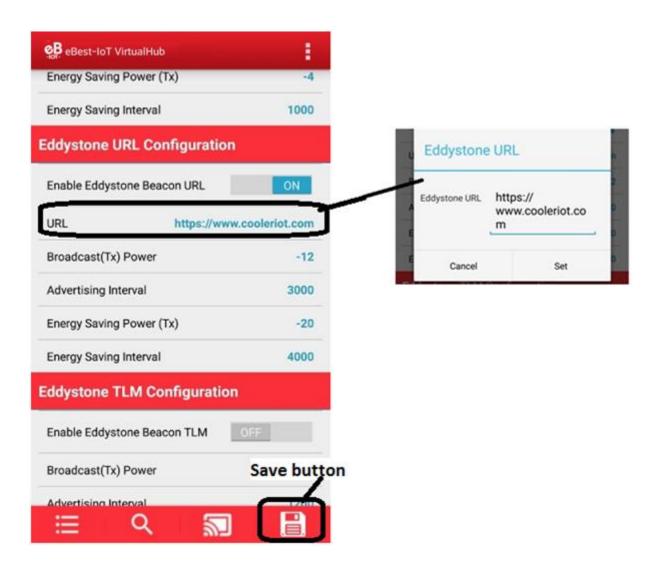
Touch on enable eddystone URL row to enable or disable Eddystone URL frame.





11.8.2 Set URL

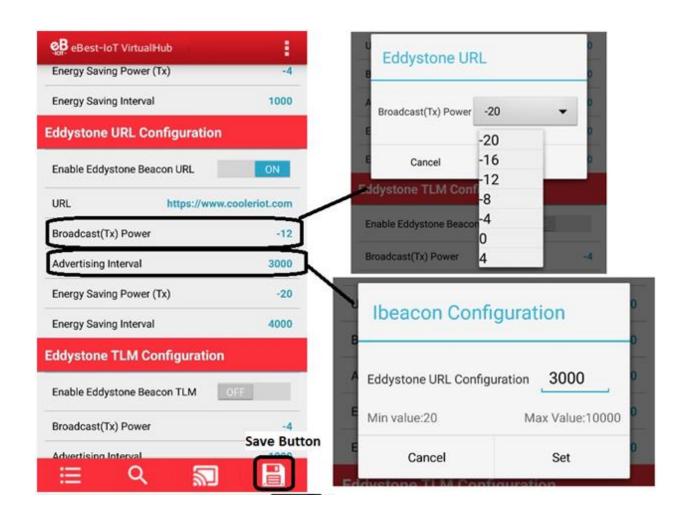
- 1) After connection, as shown in below figure touch on URL row to set URL.
- 2) press "Set" of window and then press save button as shown in fig..





11.8.3 Set Advertisement Interval and Power

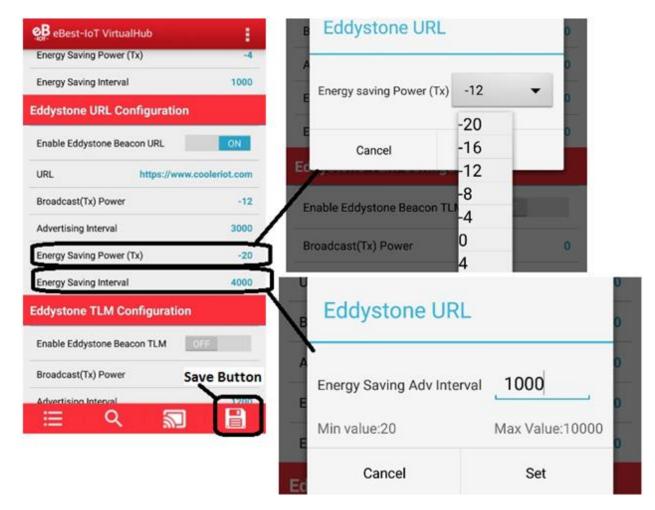
Advertisement interval and it's transmit power can also be programmable press "Set" button in window and then press save button on main screen as shown in fig below.





11.8.4 Set Advertisement Interval and Power for energy saving mode

Advertisement Interval and its transmitting power for energy saving mode can also be programmable.



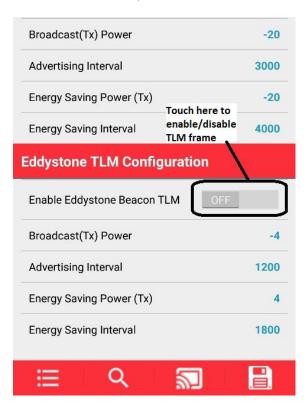
Note: After changing value of any parameter, Compulsory Press on save button on bottom to save it in device.



11.9 Set Eddystone TLM configuration

11.9.1 Enable/Disable TLM frame

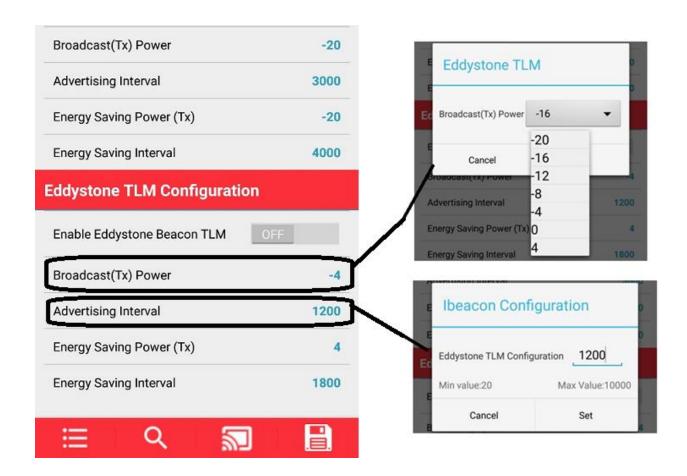
Touch on enable eddystone TLM row to enable or disable Eddystone TLM frame.





11.9.2 Set Advertisement Interval and Power

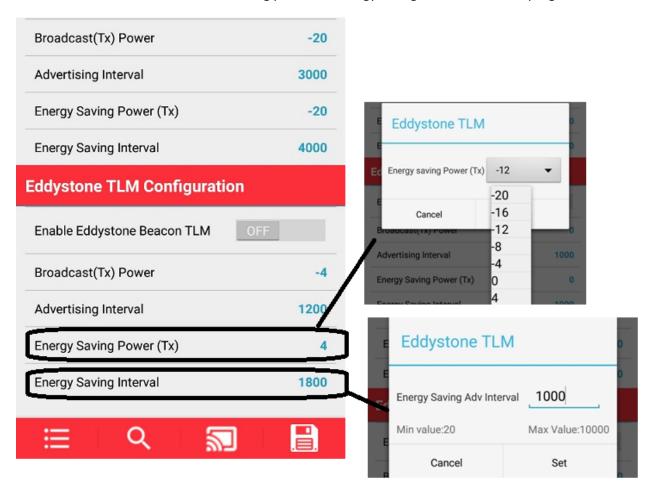
Advertisement Interval and it's transmit power can also be programmable press "Set" button in window and then press save button on main screen as shown in fig below.





11.9.3 Set Advertisement Interval and Power for energy saving mode

Advertisement and its transmitting power for energy saving mode can also be programmable.



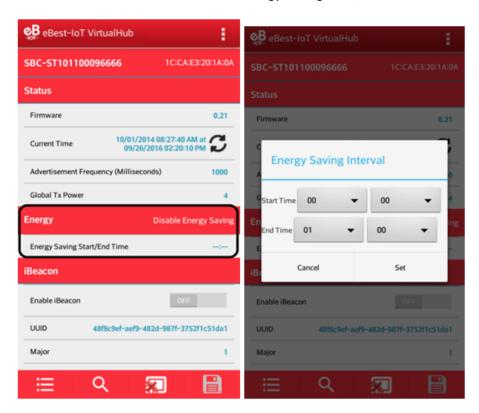
Note: After changing value of any parameter, Compulsory Press on save button on bottom to save it in device.



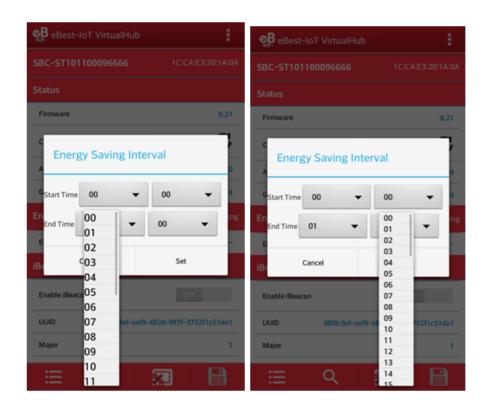
11.10 Energy Saving Mode

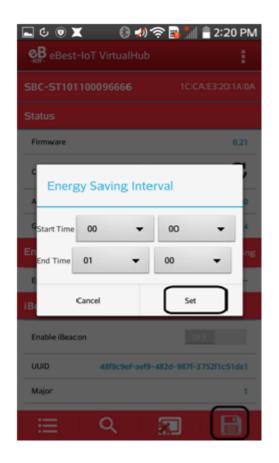
11.10.1 Set Energy saving mode

User can set the time duration for saving the power by changing the advertisement interval and its transmit power for that user need to touch on the row Energy Saving Start/End time.





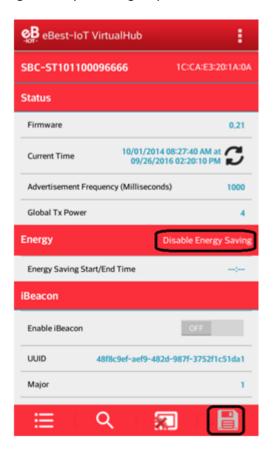






11.10.2 Disable Energy Saving Mode

User can disable the energy saving mode by touching on place as shown in below image.





11.11 Restore factory setting

- 1) After connection, go to Menu -> click on "Management" -> then click "Reset device".
- 2) Device will disconnect and restore its factory default values.
- 3) User can check factory default parameters after connecting device again.

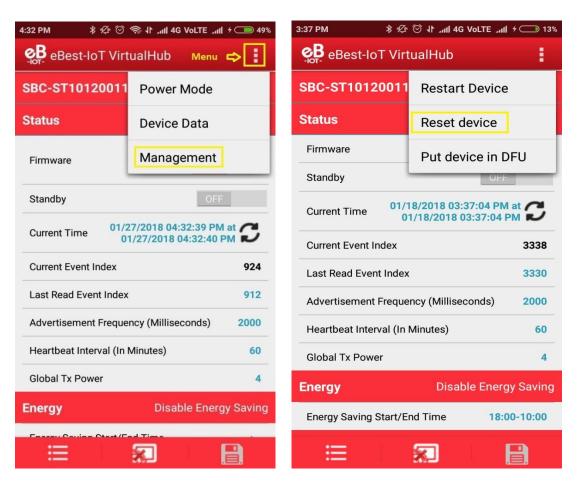


Image - 1 Image - 2



12 Smart Tag Read current real time

12.1 Read current real time sensor data

- 1) After connection, go to menu -> click on "Device data"-> then click "Read current data".
- 2) User can see real time sensor data, door status with current date and time.

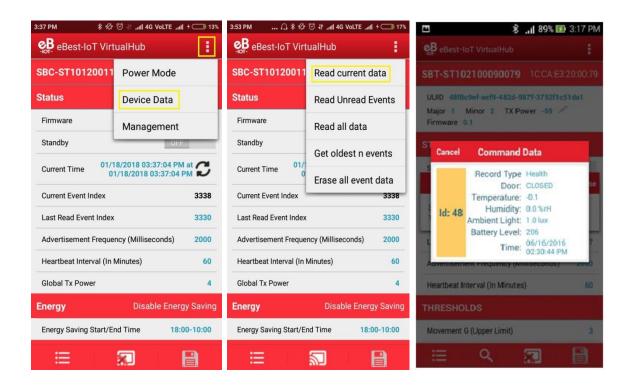


Image - 1 Image - 2 Image - 3



12.2 Read all stored event data

- 1) After connection, go to Menu -> click on "Device data"-> then click "Read all data".
- 2) User can see all logged events data on screen.

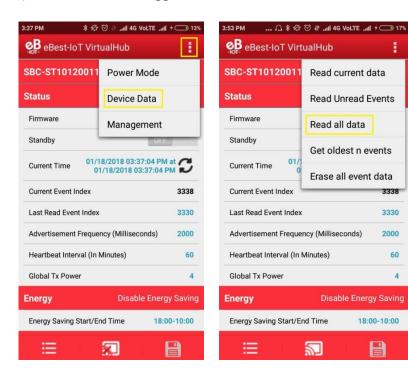




Image - 1 Image - 2 Image - 3

3330

2000

60

4

18:00-10:00



12.3 Read unread event data

- 1) After connection, go to Menu -> click on "Device data"-> then click "Read Unread Events".
- 2) User can see unread events data on screen. Unread events means those are not reported to cloud by phone apps.

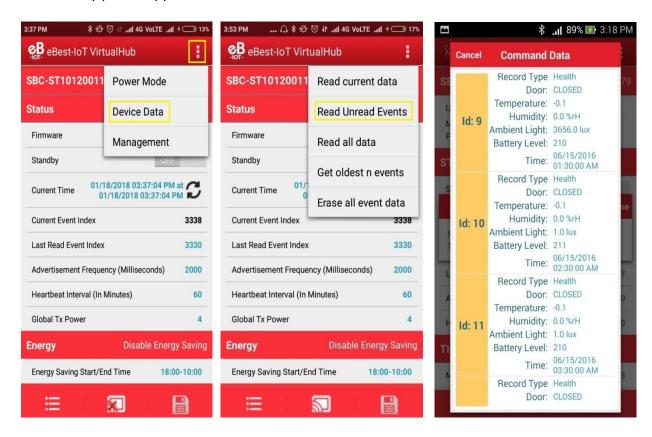


Image - 1 Image - 2 Image - 3



12.4Get oldest 'n' unread event

- 1) After connection, go to Menu -> click on "Device data" "-> then click "Get oldest n Events".
- 2) Enter count value less than or equal to total unread events count.
- 3) User can see entered 'n' unread events data on screen.





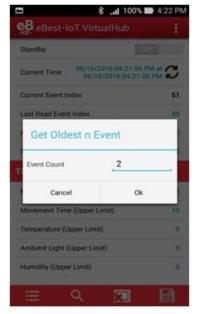


Image - 1

Image - 2

Image - 3

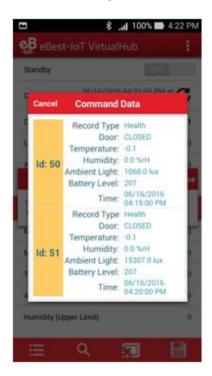
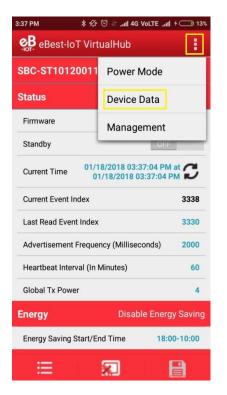


Image - 4



12.5 Erase all event data

- 1) After connection, go to Menu -> click on "Device data" "-> then click "Erase all event data".
- 2) This command sets last read events index same as current event index. So that much events doesn't uploaded on cloud.
- 3) After performing this command, to see effect of this command, user has to disconnect device and connect again. User can see current Event Index same as Last Read Event Index on front screen.



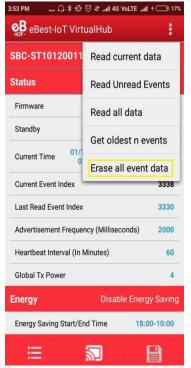




Image - 1 Image - 2 Image - 3



13 Firmware Upgrade Over the air (DFU)

- 1) User can upgrade Latest firmware of device over the air by phone app.
- 2) Whenever new firmware available on server, phone app auto download it in phone memory.
- 3) After connection to device, if new firmware is available for device then following indication shown near firmware version information on front screen as shown in below image-1.



Image - 1



4) After click on "DFU" button to start DFU and the device is disconnected automatically and display message for "Starting DFU" show Image-2. Firmware upgrade process can be visible in notification show Image-3. Do not close the application.

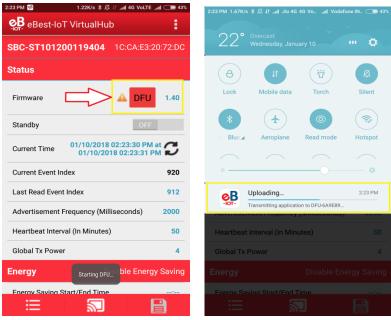


Image - 2 Image - 3

5) After successful firmware upgrade display success message for "Done". "Application has been sent successfully".

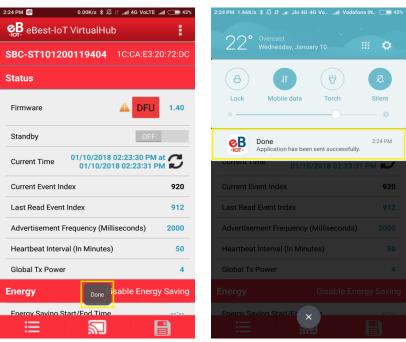


Image - 4 Image - 5



6) After successful firmware upgrade connect the device again and the Smart Tag 3G FW must display 1.41 FW and also DFU button should not be visible show image-6.

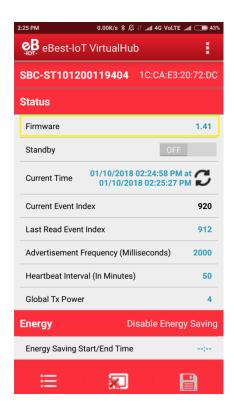


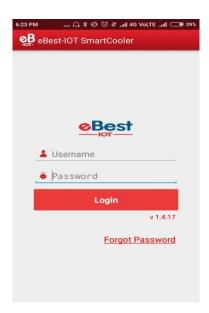
Image - 6



14 Events Upload on cloud

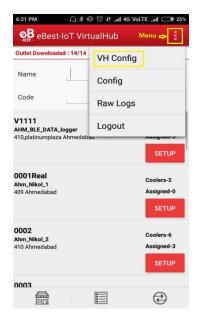
- 1) User can upload events on cloud downloaded from the devices using application.
- 2) To upload events on cloud, first user has to open "eBest-IOT smart cooler" application.

 Note: Bluetooth & Mobile Wi-Fi or Mobile Data must be enable in the phone to upload events on the cloud.

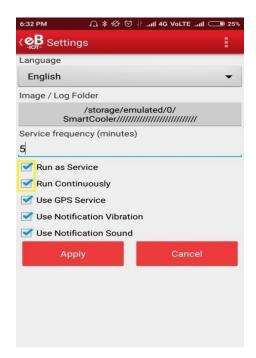


3) On successful login user will find below screen. By clicking on "Menu", a new window will get open. Then click on "VH Config".



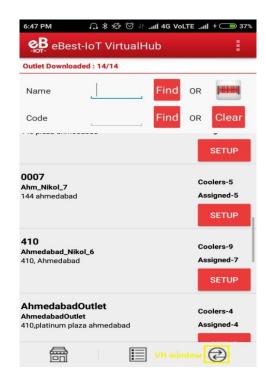


4) On clicking "VH Config" then following window will open. Ensure settings as shown in below image. "Run as Service" and "Run Continuously" must be checked as shown below image. User can change language option if need.

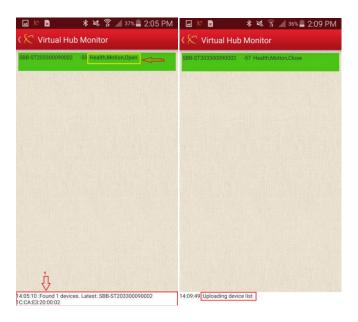


5) When user press "Apply" button then user will be redirected to the home screen. After clicking on "VH window", then application starts scanning of available BLE devices.



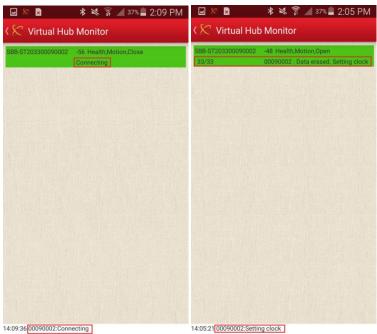


6) In advertisement screen show available BLE devices. After scan it will upload device list on cloud.



7) After uploading device list phone application connect with device and read all unread events.



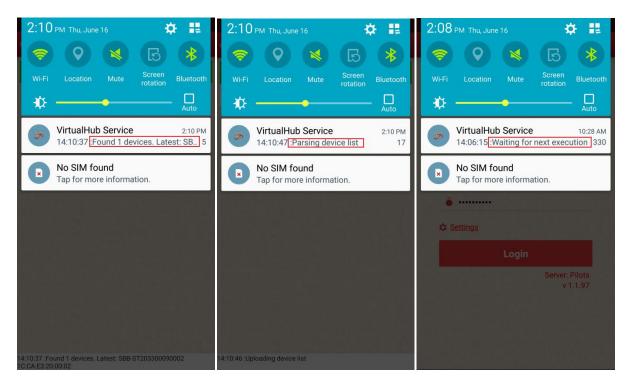




8) When phone application read all the data from the device it will display as "Data Downloaded And Clock set". After completing read data from all the devices then application will upload data to the cloud. After completion of data upload to the cloud application will give status "Waiting for next execution".



9) In case if user has set "Run Continuously" in "settings", user can close application. Data read and upload process will continue in background. User can see it in notification.





15 Introduction of Smart Vision

> Smart Vision is an IOT device which can be used for many areas like cooler, deep freezer etc. to observe and log its environment like Temperature and Light. It also logs motion, door events & Image events.



16 Installation of Smart Vision Phone App

- 1) Install given apk file for eBest-iot Smart cooler application in your android phone.
- 2) Click on "eBest-IOT Smart Cooler" application icon in your Android phone. It will launch application.

Note: Please ensure Bluetooth & Mobile Wi-Fi or Mobile Data must be ON in device.



3) Application will ask for User name and Password. Press on login button after entering valid User name and Password.

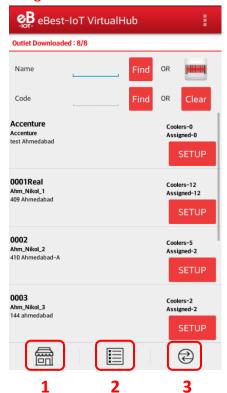
Note: Wi-Fi network or mobile data enable must be required during login otherwise login will be fail.





4) On successful login user will find below screen.

Note: Application must require Bluetooth ON. Application will communicate with device using Bluetooth.



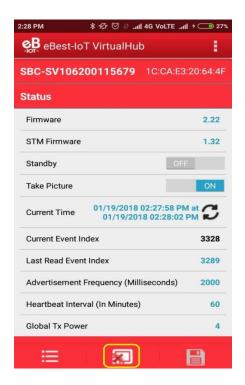
- 1.Home
- 2. Scanning Window
- 3. VH Window



5) When user press scan window symbol, it will show available BLE device list. You can identify your device by its serial#. Touch on your device for connection



6) After connection with device, device information will be available on screen and also "X" mark are seen if application is connected to device as indicated below.





17 Installation guide of Smart Vision

17.1 Set up tool List

- 1) Smart Vision fixed into Back-Plate
- 2) One Door magnet
- 3) One Hex wrench
- 4) One Pin / Paperclip (not included)
- 5) One BLE enabled Smart Phone / Tablet with pre installed "eBest-iot Smart cooler" app.

17.2 Identify Installation position in cooler

- 1) Identify installation position in cooler. Mostly preferable positions are on top left side or upper left side.
- 2) Smart Vision should be placed on inside wall of the Door of the cooler. The Magnet must be fixed on the inside surface of the cooler, and parallel stuck perpendicular to the Smart Vision fixed on the door.







17.3 Wake up device from deep sleep

1) The Smart Vision is initially on Deep Sleep mode. In this state the device does not advertise and the sensors of the devices will not be recording any events

Before installation, take the device out of the deep sleep mode by following the following step. Only take the one device you are installing out of deep sleep:

Press and hold SW2 for >3 secs. After the device comes out of deep sleep the LED will blink once.



SW1 – To test if the device is in deep sleep mode, press the SW1 once and note the LED.

LED – When SW 1 is pressed, LED blink thrice if device is in deep sleep mode. LED blinks once if device is not in deep sleep mode

Sw2 – To take the device out of deep sleep mode. (Cannot be used to put the device back to deep sleep mode)



Verify Door Status

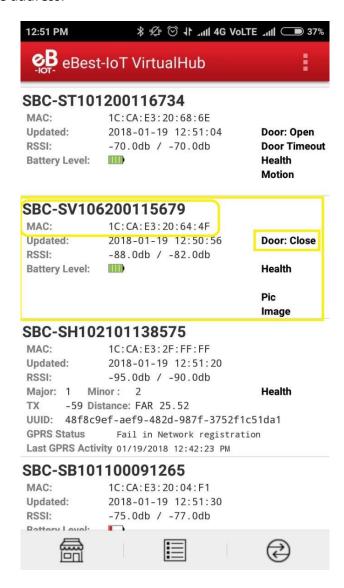
2) Use the android phone application to verify the door open/close status in scanning screen.





17.4 Verify Serial# and MAC

1) Verify that the serial number and MAC address on the label of the device with serial number displayed on the phone application. Label on device contains only last 8 digit of full serial number and MAC address.





18 Smart Tag Operating mode

Smart Vision can be operated into one of the following 3 modes.

18.1 Deep Sleep mode

- > In Deep sleep mode, device neither advertises nor logs any event data.
- Deep sleep mode is by default Enable when installed in field first time.

To Disable Deep sleep

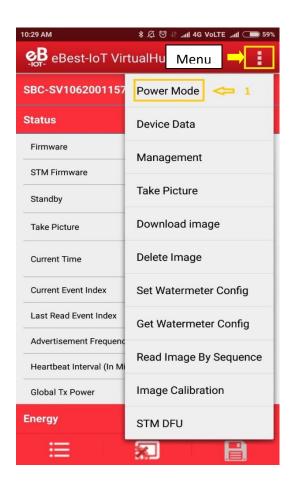
- 1) When deep sleep mode enable, no advertisement occur by device. So user can't found that device during phone app scanning.
- 2) To disable deep sleep mode, user Press and hold SW2 for >3 secs. After the device comes out of deep sleep the LED will blink once.
- 3) After disabling deep sleep mode, device will continuous advertisement forever and also logs event data.





To Enable Deep sleep

- 1) After connection, go to Menu -> Click on "Power Mode" -> press "Put Device In Deep Sleep".
- 2) After enabling deep sleep mode, device will stop advertising and doesn't log any event



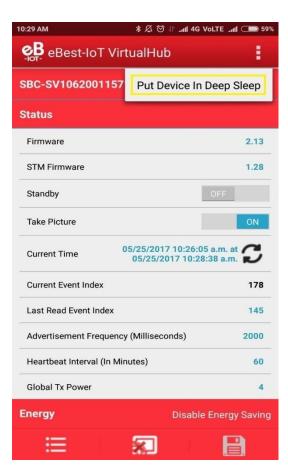


Image - 1 Image - 2



18.2 Standby mode

In Standby mode, device continuous advertise but doesn't log any event data.

To Enable/Disable Standby mode

- 1) After connection, on front screen, below STATUS menu there is a toggle button to ON/OFF standby. User can enable standby mode by ON and disable by OFF. Press on save button on bottom to save it in device.
- 2) When standby mode successfully enabled in device, it will stop event logging.



18.3 Normal mode

- When deep sleep mode and standby mode are disabled in device, device is in normal mode.
- In this mode device is fully functional.



19 Smart Vision Event types

- > Smart Vision can store up to 65135 events. After that it will rewrite from old event space.
- Smart Vision logs following events.

19.1 Health Event

- 1) Health event contains temperature, Light and Battery Status with date and time.
- 2) User can set health event interval.

19.2 Door Event

- 3) Door Event logged by device when door open and close occur.
- 4) Also door event logged when door open timeout occur.

19.3 Motion Event

- 5) Motion event logged when device sense any motion in any direction.
- 6) User can set accelerometer threshold and motion sense interval.

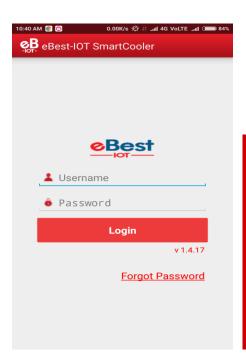
19.4 Image Event

- 7) Image event will be logged when the door will cross a certain angle which is defined in the config.
- 8) User can capture image by using "Take pic" command.



20 Association process with Proximity+Camera/Smart Vision

- 1) User can Associate "Proximity+Camera/Smart Vision" with cooler using Installation Application.
- 2) Following step to Associate "Proximity+Camera/Smart Vision" with cooler.

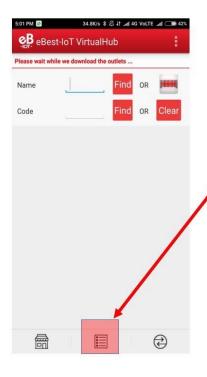


STEP 1:

- 1 Open Smart Cooler Installation Application.
- 2. Login using the credentials provided by your administrator after successful login, user will be directed to Outlet list view screen.



Verify Door Open/Close

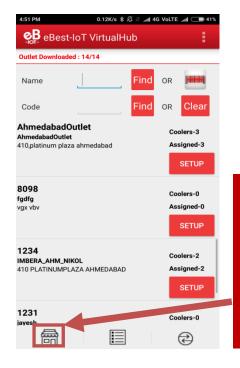


- After the physical installing the smart Vision and magnet, the door open close must be validated to make sure that the magnet is placed properly. Follow the steps mentioned below to verify
- Tap on configuration Tab, Scan for any devices in proximity
- The application lists all the Smart Visions available in the proximity
- Check the Door flag for the device matching our Smart Vision serial number, Door Status: Close, if the door is closed and Door Status: Open, if the door is Open

⊗B eBest-IoT VirtualHub -67.0db / -68.0db EddyStone NameSpace 636f6b65634063656575 100000308786 Major: 3 Minor: 8786
TX -57 Distance: NEAR 2.59
UUID: 636f6b65-0000-0000-0000-634063656575 SBC-SV106201090062 1C:CA:E3:2F:42:7E MAC: Updated: 2018-01-02 16:23:41 -56.0db / -55.0db Battery Level: IIII SBC-ST101202125873 C:CA:E3:20:8C:21 MAC Undate 2018-01-02 16:23:45 Door: Oper -66.0db / -69.0db v Level: Health 8f8c9efaef9482d987f EddyStone Instance Major: 11 Minor: 11 TX -59 Distance: NEAR 2.51
UUID: 58f8c9ef-aef9-482d-987f-3752f1c51da1 FFA-CD0211136386

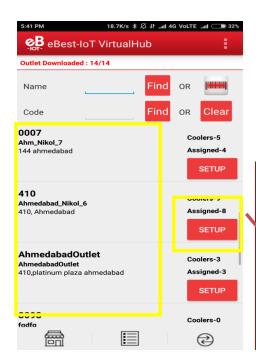
Property of Ebest-IOT Private and Confidential

3) After Go to Install Device screen.



- After the ensuring that magnet is installed correctly you need to use app to associate device with the cooler.
- Click on Association Icon to go to Association Screen.
- 4) On successful login, list of outlets will be shown

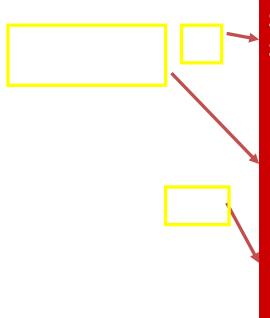


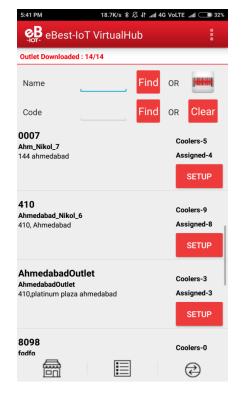


Coolers – 9
Shows the number of coolers in the outlet
Associated-8
Shows the number of coolers already associated/ provisioned

Step:3







STEP 3:

Selecting Outlet – Using Barcode Scanning:

- 1 Click on the Barcode icon, Barcode scanning window will open
- 2. Scan the cooler barcode using the barcode scanner Position the camera of iPad in such a way that the bar code of the Cooler (Technical ID) in the box.
- Outlet will automatically be selected and a menu will be shown for choosing the device which will be installed.

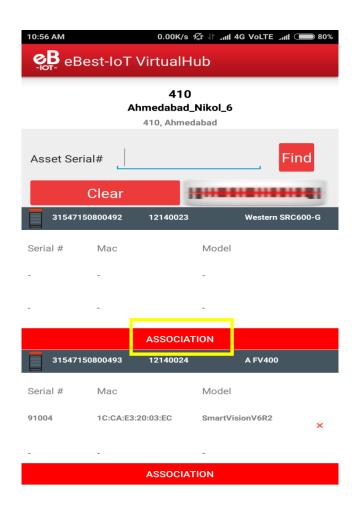
Alternate - Selecting Outlet by entering Outlet Code or Name:

1 If Scanning of the Cooler serial is not possible enter either the Outlet Name or Outlet Code and Tap on "Find".

Selecting Outlet – Manual selection of cooler

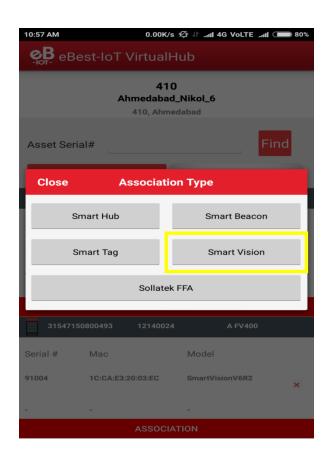
- If Scanning of the Cooler serial is not possible and outlet code / name is not known, You can manually select the outlet.
- 5) New window will open allowing you to manually select the cooler for the outlet selected.
- 6) Click on "Association" button to select the Asset for installation



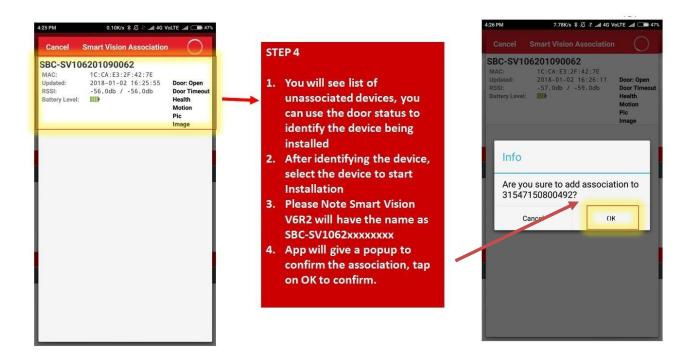




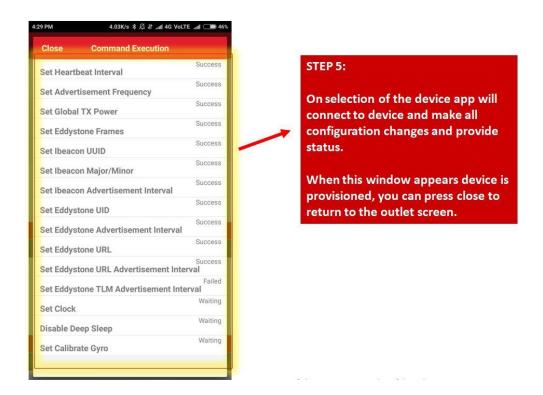
- 7) Click on "Association" button then New window will open to ask for selection of device type to be associated.
- 8) Click on "Smart Vision" to Associate Smart Vision.





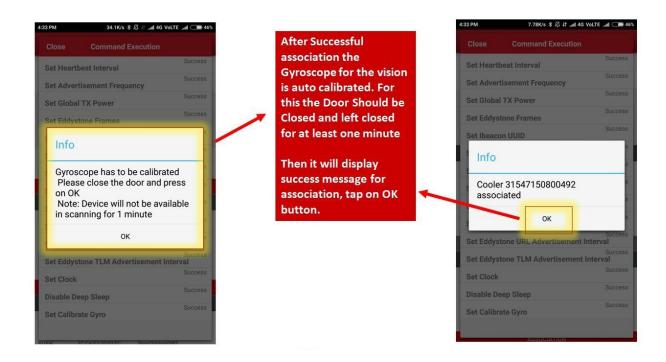


Step 5:

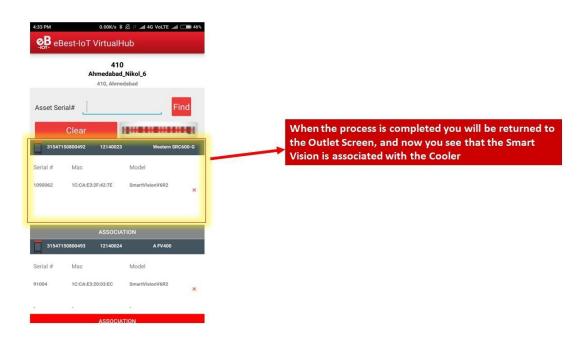


Step 6:





9) When the process is completed you will be returned to the Outlet Screen, and now you see that the Proximity / Smart Tag 3rd Gen is associated with the Cooler see below image.



21 Smart Vision Set Configuration Parameters



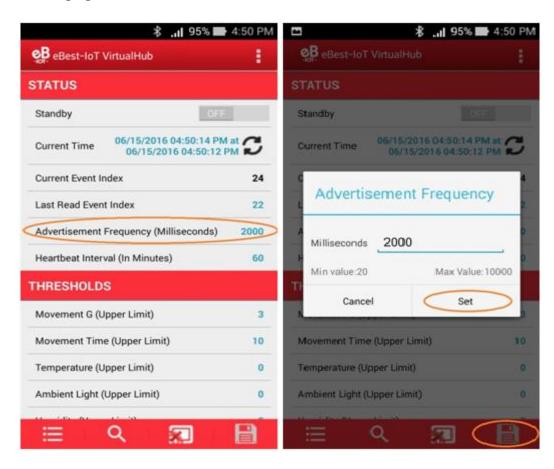
After connection user can configure following parameters. Below figure shows Menu button location.





21.1 Set Advertisement Interval

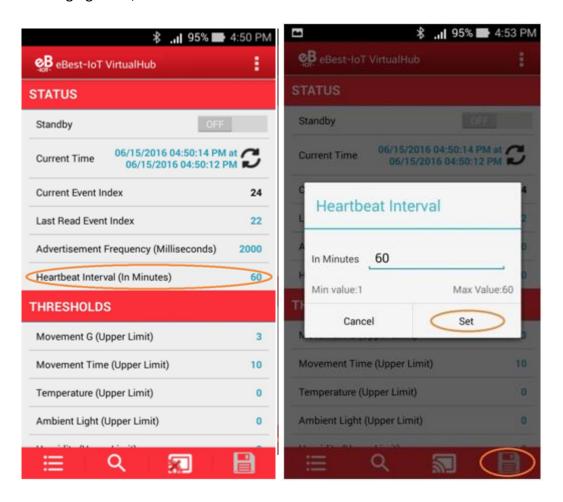
- 4) After connection, on front screen, below STATUS bar, click on "Advertisement frequency (Milliseconds)".
- 5) Enter interval value and press "Set".
- 6) After changing value, Press on save button at bottom to save it in device.





21.2 Set Health event Interval

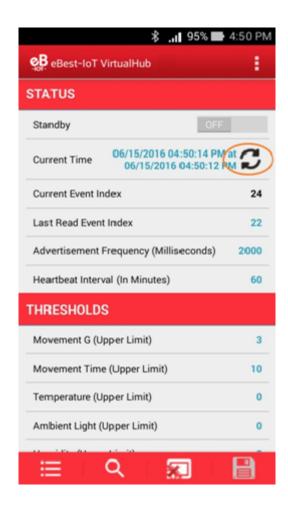
- 4) After connection, on front screen, below STATUS bar, click on "Heartbeat Interval (In Minutes)".
- 5) Enter interval value and press "Set".
- 6) After changing value, Press on save button at bottom to save it in device.





21.3 Set Current Date Time

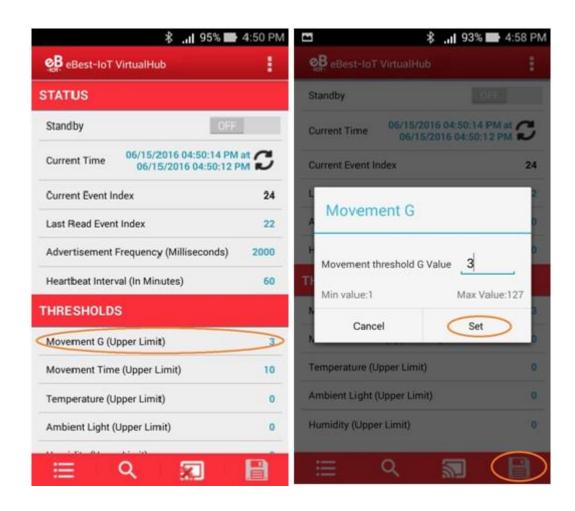
2) After connection, on front screen, below STATUS bar, on "Current Time" row, click on symbol shown in figure to set current time in device.





21.4 Set Accelerometer threshold

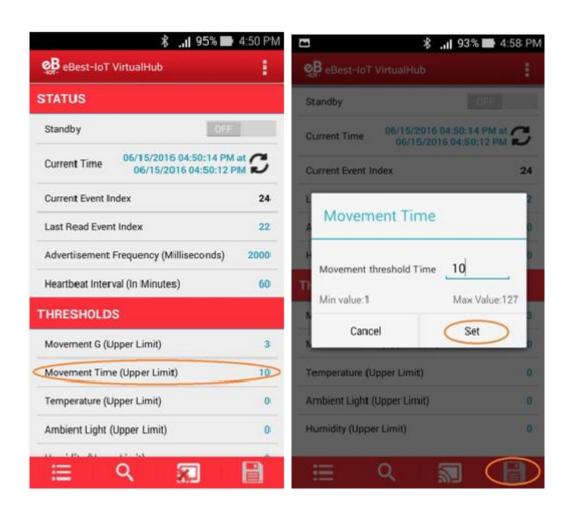
- After connection, on front screen, below THRESOLDS bar, click on "Movement G (Upper Limit)".
- 6) Enter value and press "Set".
- 7) After changing value, Press on save button on bottom to save it in device.
- 8) This figure is a sensitivity of motion sensor for sensing motion.





21.5 Set Accelerometer sense time

- 4) After connection, on front screen, below THRESOLDS bar, click on "Movement Time (Upper Limit)".
- 5) Enter value in seconds and press "Set".
- 6) After changing value, Press on save button on bottom to save it in device.

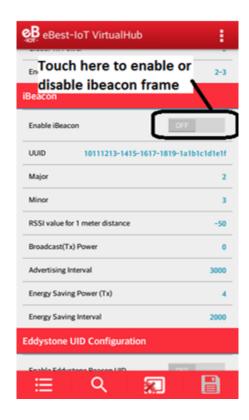




21.6 Set iBEACON parameters

21.6.1 Enable/Disable iBeacon frame

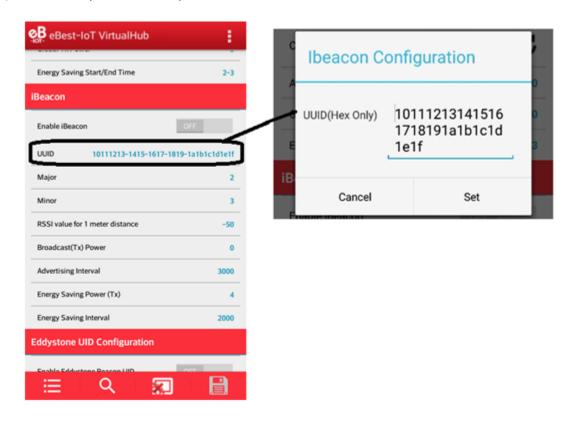
Touch on Enable iBeacon row to enable or disable iBeacon frame.





21.6.2 Set UUID

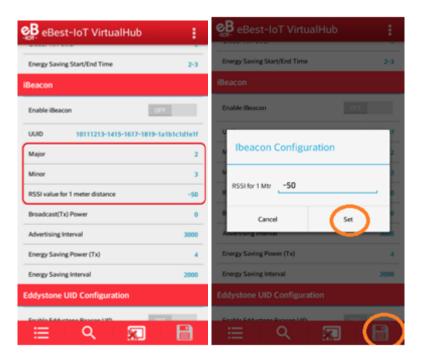
- 3) After connection, as shown in figure, below iBeacon bar touch on UUID row.
- 4) Enter 16 byte UUID and press "Set".

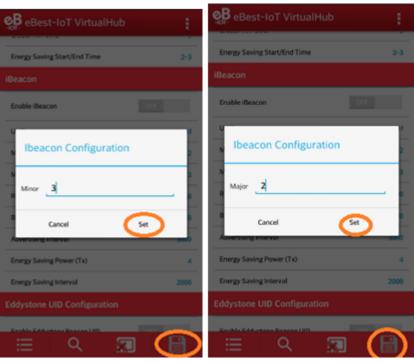




21.6.3 Set Major, Minor and RSSI

- 3) After connection, as shown in figure, below **iBeacon** bar, there is a rows for major, minor and TX power. Click on any row and write the value as shown below.
- 4) Enter value and press "Set".

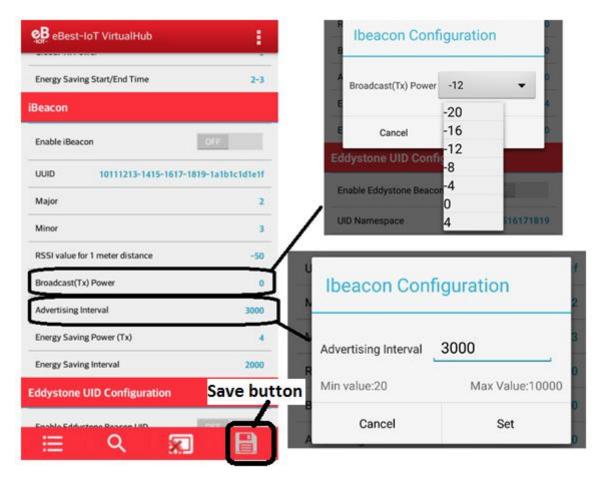






21.6.4 Set Advertisement Interval and Power

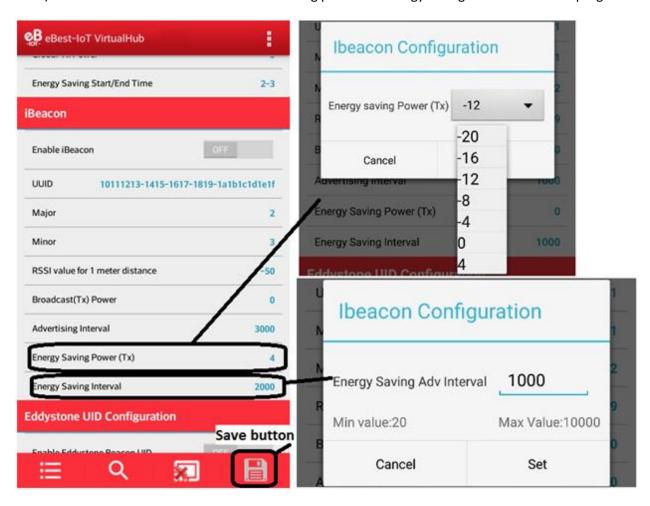
2) Advertisement Interval and it's transmit power can also be programmable.





21.6.5 Set Advertisement Interval and Power for energy saving mode

2) Advertisement interval and its transmitting power for energy saving mode can also be programmable.



Note: After changing value of any parameter, Compulsory Press on save button on bottom to save it in device.



21.7Set Eddystone UID configuration

21.7.1 Enable/Disable UID frame

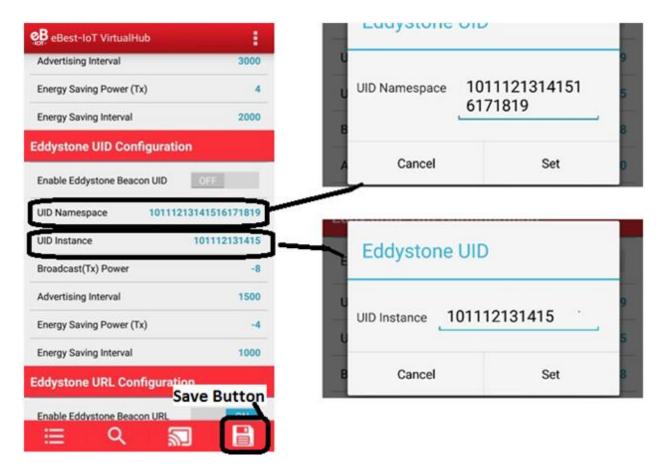
Touch on enable eddystone UID row to enable or disable Eddystone UID frame.





21.7.2 Set UID namespace and Instance.

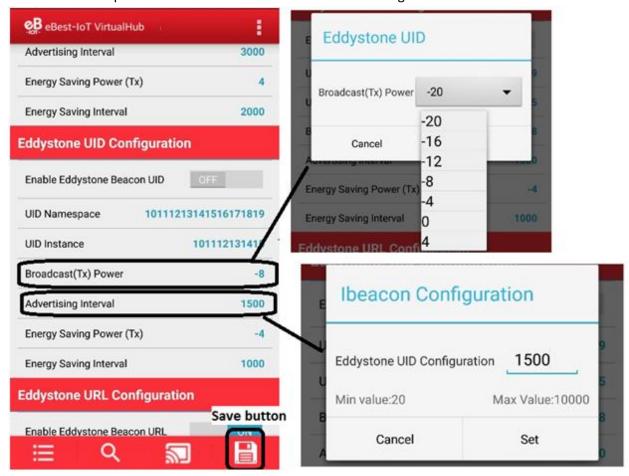
- 3) After connection, as shown in below figure touch on UID Namespace row to set name space of 10 byte, and touch on UID instance to set 6 byte instance value.
- 4) press "Set" of window and then press save button as shown in fig..





21.7.3 Set Advertisement Interval and Power

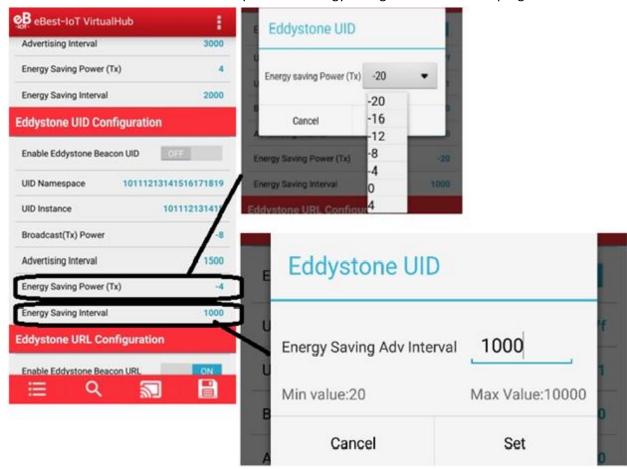
Advertisement interval and its transmit power can also be programmable press "Set" button in window and then press save button on main screen as shown in fig below.





21.7.4 Set Advertisement Interval and Power for energy saving mode

Advertisement Interval and its transmit power for energy saving mode can also be programmable.



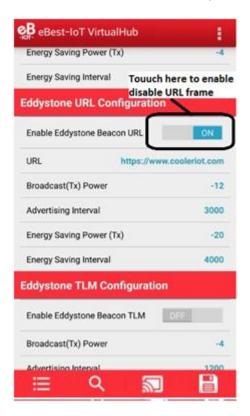
Note: After changing value of any parameter, Compulsory Press on save button on bottom to save it in device.



21.8 Set Eddystone URL configuration

21.8.1 Enable/Disable URL frame

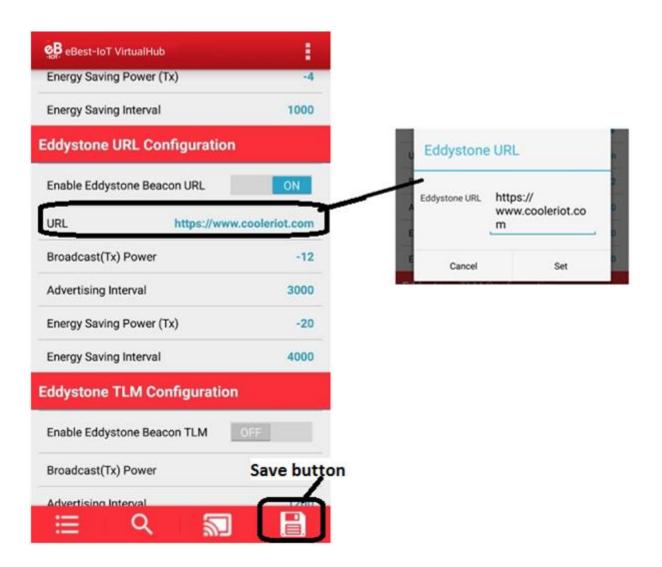
Touch on enable Eddystone URL row to enable or disable Eddystone URL frame.





21.8.2 Set URL

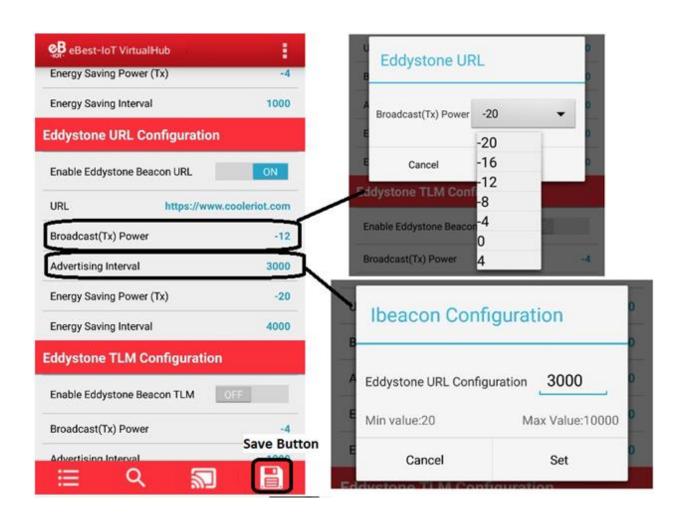
- 3) After connection, as shown in below figure touch on URL row to set URL.
- 4) press "Set" of window and then press save button as shown in fig..





21.8.3 Set Advertisement Interval and Power

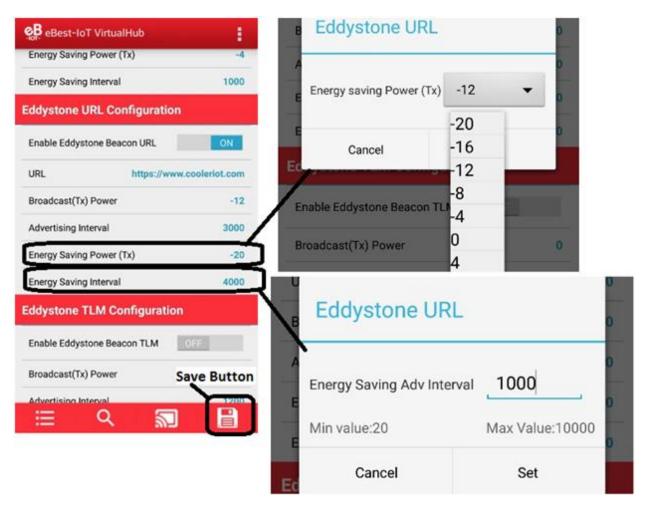
Advertisement interval and it's transmit power can also be programmable press "Set" button in window and then press save button on main screen as shown in fig below.





21.8.4 Set Advertisement Interval and Power for energy saving mode

Advertisement Interval and its transmitting power for energy saving mode can also be programmable.



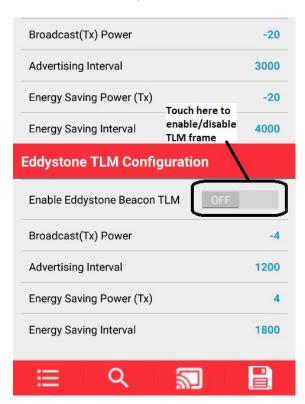
Note: After changing value of any parameter, Compulsory Press on save button on bottom to save it in device.



21.9 Set Eddystone TLM configuration

21.9.1 Enable/Disable TLM frame

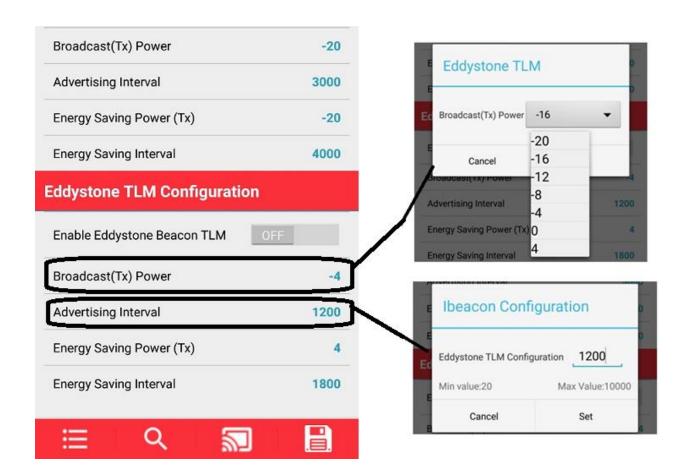
Touch on enable Eddystone TLM row to enable or disable Eddystone TLM frame.





21.9.2 Set Advertisement Interval and Power

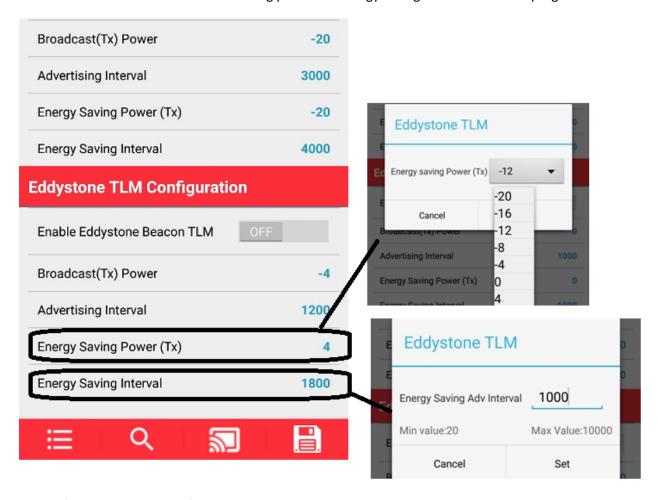
Advertisement Interval and it's transmit power can also be programmable press "Set" button in window and then press save button on main screen as shown in fig below.





21.9.3 Set Advertisement Interval and Power for energy saving mode

Advertisement and its transmitting power for energy saving mode can also be programmable.



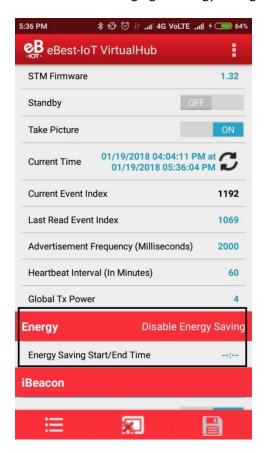
Note: After changing value of any parameter, Compulsory Press on save button on bottom to save it in device.

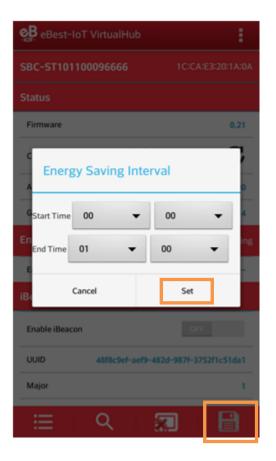


21.10Energy Saving Mode

21.10.1 Set Energy saving mode

User can set the time duration for saving the power by changing the advertisement interval and its transmit power for that user need to touch on the row Energy Saving Start/End time and set starting and end time then press set button. After changing of Energy saving interval Press on save button on bottom to save it in device.

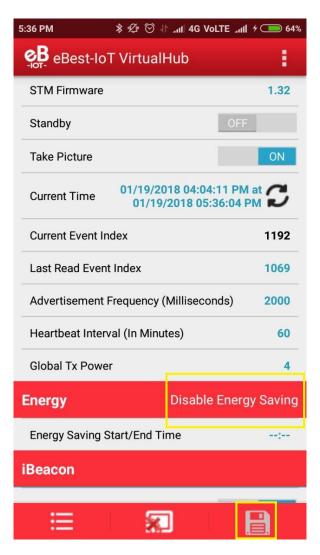






21.10.2 Disable Energy Saving Mode

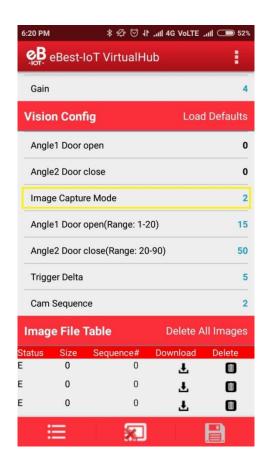
User can disable the energy saving mode by touching "Disable Energy Saving" on place as shown in below image, then press save button.





21.11 Smart Vision Camera Config

- 1) User can manually set image capture mode by using phone application. In smart vision there are 3 type of Image capture Mode,
 - 1) "Both Image on Door close" In this case both image are captured during door close time.
 - 2) "Both Image on Door open" In this case both image are captured during door open time.
 - 3) "One on Door open one on door close" In this case one Image are captured door open time and one image are captured door close time.
- 2) Connect with smart vision after click on "Image capture mode" -Image 1, then open new window select any Image capture mode and press "Set" button show Image-2, After changing value Press on save button on bottom to save it in device.



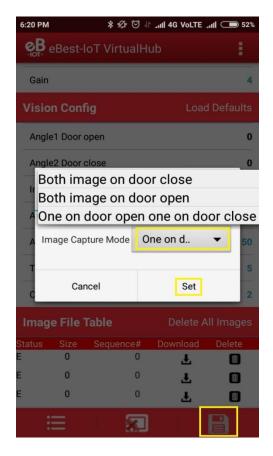
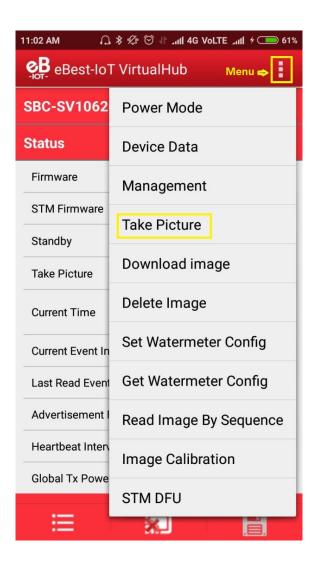


Image -1 Image - 2



21.12 Take picture

- 1) User can capture image by using "Take picture" command.
- 2) connect with smart vision go to "Menu" -> Click on "Take picture".
- 3) Device will auto disconnect and Image store in device.





21.13Smart vision captured Image view

- 1) User can view capture image using by phone application.
- 2) connect with smart vision go to "Menu" -> Click on "Download Image"- show Image 1.
- 3) Image Download process start will start click on "Download image"- show Image 2.
- 4) When image download process completed then you can see image on screen-Image 3.

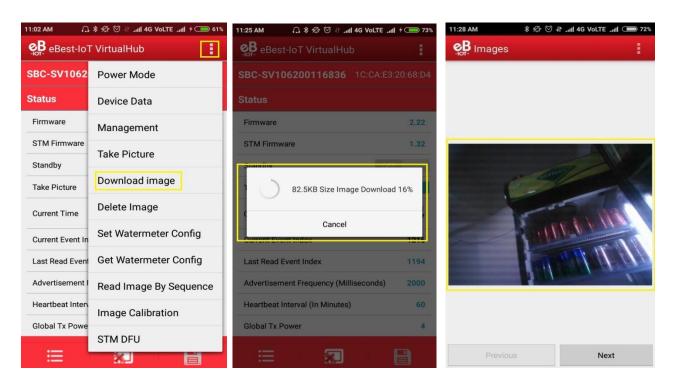


Image - 1 Image - 3



21.13.1 Read Image By Sequence

- 1) User can view capture image using by phone application.
- 2) connect with smart vision go to "Menu" -> Click on "Read Image By sequence"-Image 1.
- 3) Tap on Read Image by sequence and Enter sequence number as per define sequence value in Image file table-Image 3.
- 4) Press "ok" after enter value in sequence number, Image Download process will start on click of "ok" button, When image download process completed then you can see image on screen.

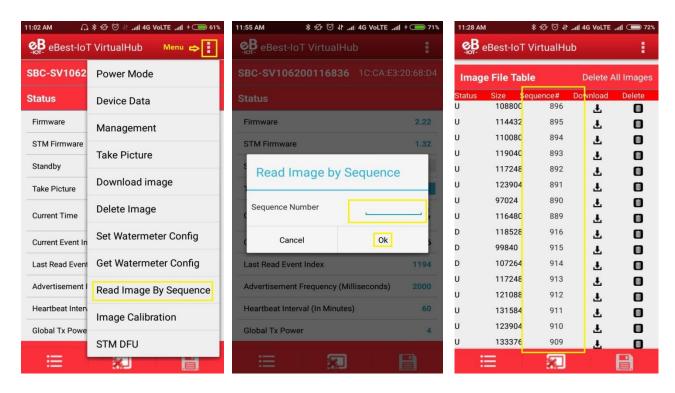


Image - 1 Image-2 Image-3



21.13.2 Image File Table

- 1) User can view and delete capture image using by phone application.
- 2) Connect with smart vision go to "Image file table".
- 3) user can view image using by "Download" button and delete image using by "Delete" button see below image.



Image



21.13.3 Calibrate Gyro

- 1) User can perform "Calibrate Gyro" using by phone application.
- 2) Using "Calibrate Gyro" command device is set to "0" angle. (Note: perform "Calibrate Gyro" command in device at the when time door status is close)
- 3) connect with smart vision go to "Menu" -> Click on "Management" Image 1.
- 4) Click on "Management" then tap on "Calibrate Gyro"-Image 2.
- 5) By pressing "Calibrate Gyro" device will give "success" response and device will auto disconnect-Image 3. (When door is open device will give "Fail" response.)

Note:- If No Image event is logged in the device even after door crossing a certain angle which is defined in the config, that time perform "calibrate gyro" command.

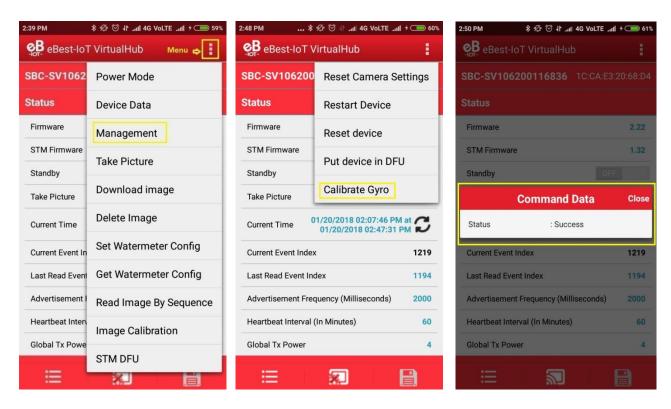


Image - 1 Image - 2 Image - 3



21.14Restore factory setting

- 1) After connection, go to Menu -> click on "Management" -> then click "Reset device".
- 2) Device will disconnect and restore its factory default values.
- 3) User can check factory default parameters after connecting device again.

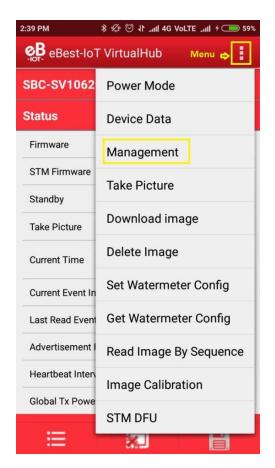




Image - 1 Image - 2



22 Smart Vision Read current real time

22.1 Read current real time sensor data

- 1) After connection, go to menu -> click on "Device data"-> then click "Read current data".
- 2) User can see real time sensor data, door status with current date and time.

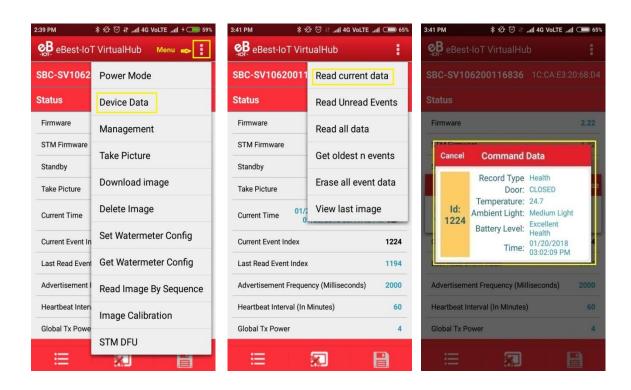


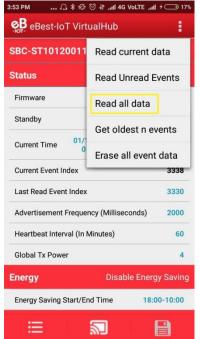
Image - 1 Image - 2 Image - 3



22.2 Read all stored event data

- 1) After connection, go to Menu -> click on "Device data"-> then click "Read all data".
- 2) User can see all logged events data on screen.





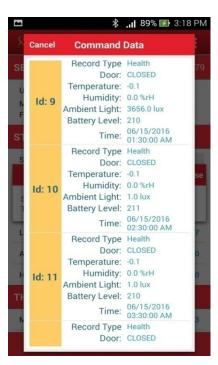


Image - 1 Image - 2 Image - 3



22.3 Read unread event data

- 1) After connection, go to Menu -> click on "Device data"-> then click "Read Unread Events".
- 2) User can see unread events data on screen. Unread events means those are not reported to cloud by phone apps.

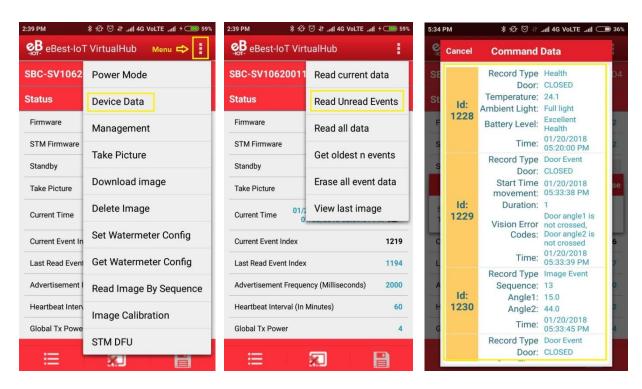


Image - 1 Image - 2 Image - 3



22.4Get oldest 'n' unread event

- 1) After connection, go to Menu -> click on "Device data" "-> then click "Get oldest n Events".
- 2) Enter count value less than or equal to total unread events count image 3.
- 3) User can see entered 'n' unread events data on screen- image 4.

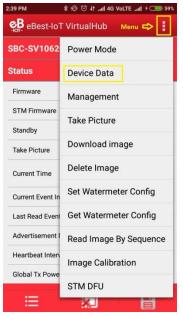






Image - 1

Image - 2

Image - 3

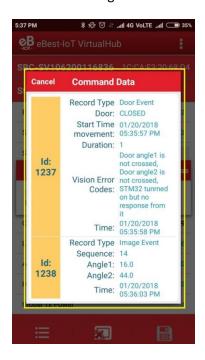


Image - 4



22.5 Erase all event data

- 1) After connection, go to Menu -> click on "Device data" "-> then click "Erase all event data".
- 2) This command sets last read events index same as current event index. So that much events doesn't uploaded on cloud.
- 3) After performing this command, to see effect of this command, user has to disconnect device and connect again. User can see current Event Index same as Last Read Event Index on front screen.



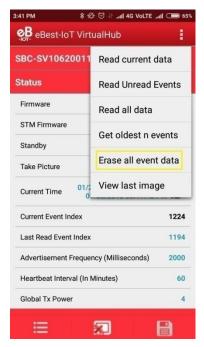




Image - 1 Image - 2 Image - 3



23 Firmware Upgrade Over the air (DFU)

- 1. User can upgrade Latest firmware of device over the air by phone app.
- 2. Whenever new firmware available on server, phone app auto download it in phone memory.
- After connection to device, if new firmware is available for device then following indication shown near firmware version information on front screen as shown in below image-1.

Two type of firmware in smart vision.

- Firmware (Nordic) 2.12 (Yellow Box Indication 2)
- > STM Firmware 1.27 (Yellow Box Indication 3)



Image - 1



- > FW (Nordic) Upgrade
- 1) Connect with smart vision after click on "DFU" button to start DFU and the device is disconnected automatically and display message for "Starting DFU" show Image-2. Firmware upgrade process can be visible in notification show Image-3. Do not close the application.
- Firmware (Nordic) 2.12 (Yellow Box Indication 2)



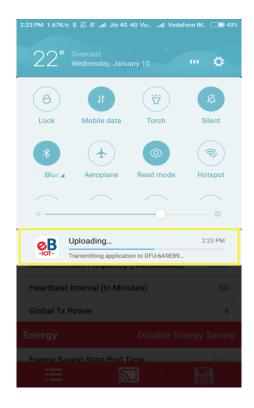


Image - 2 Image - 3



2) After successful firmware upgrade display success message for "Done". "Application has been sent successfully"-image 4.

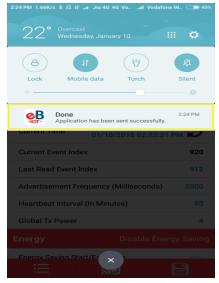


Image - 4

3) After successful firmware upgrade connect the device again and the Smart Vision FW (Nordic) must be display "2.13" FW and also DFU button should not be visible show image-5.



Image -6



> STM Firmware Upgrade

- 1. Whenever new STM firmware available on server, phone app auto download it in phone memory.
- 2. After connection to device, if STM firmware is available for device then following indication-3 shown near firmware version information on front screen as shown in below image-1.
 - > STM Firmware 1.27 (Yellow Box Indication 3)



Image-1



- 3. connect the SMART VISION, Press menu (YELLOW box indication 1). After pressing the STM DFU (YELLOW box indication 2)- image- 2.
- 4. Clicking on the STM DFU Start the upgrading process of STM Firmware shown on your screen (Image 3).

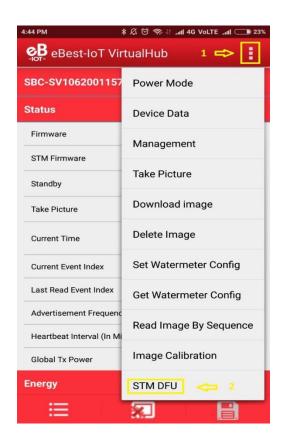




Image - 2 Image - 3



5. After uploading process is completed then reconnect with same device .

Verified that STM firmware is upgraded from 1.27 to 1.28 (Show the yellow box Indicated - Image 4), and no indication will be visible.



Image -4

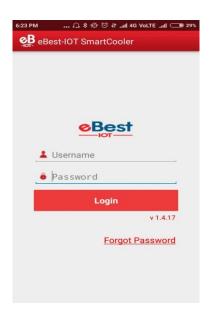


24 Events Upload on cloud

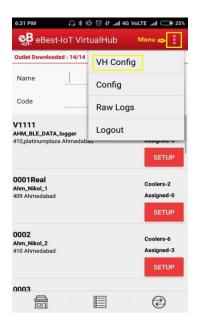
- 1) User can upload events on cloud downloaded from the devices using application.
- 2) To upload events on cloud, first user has to open "eBest-IOT smart cooler" application.

3)

Note: Bluetooth & Mobile Wi-Fi or Mobile Data must be enable in the phone to upload events on the cloud.

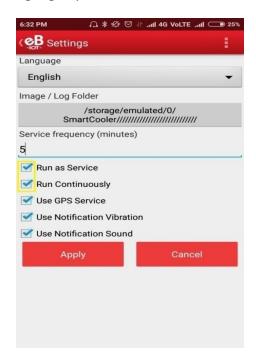


4) On successful login user will find below screen. By clicking on "Menu", a new window will get open. Then click on "VH Config".

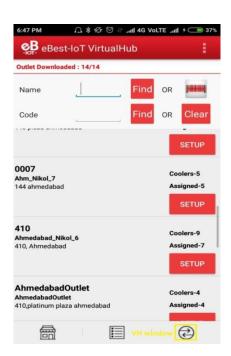




5) On clicking "VH Config" then following window will open. Ensure settings as shown in below image. "Run as Service" and "Run Continuously" must be checked as shown below image. User can change language option if need.



6) When user press "Apply" button then user will be redirected to the home screen. After clicking on "VH window", then application starts scanning of available BLE devices.

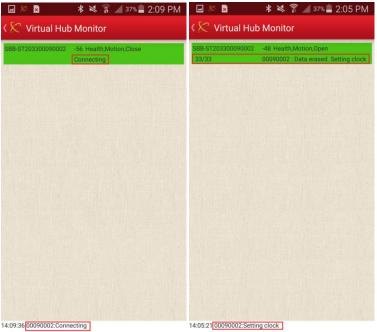




7) In advertisement screen show available BLE devices. After scan it will upload device list on cloud.



8) After uploading device list phone application connect with device and read all unread events.

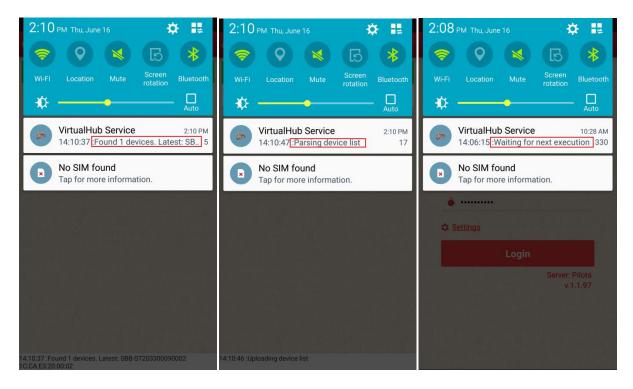




9) When phone application read all the data from the device it will display as "Data Downloaded And Clock set". After completing read data from all the devices then application will upload data to the cloud. After completion of data upload to the cloud application will give status "Waiting for next execution".



10) In case if user has set "Run Continuously" in "settings", user can close application. Data read and upload process will continue in background. User can see it in notification.





25 Introduction of Smart Hub

> Smart HUB (Always On Device) is a gateway that connects the Smart Tag or Smart Vision and collect data from device and upload data on cloud. It also has GPS for geo location tracking. It is powered device with a rechargeable battery.



26 Installation of Smart Hub Phone App

- 1) Install given apk file for eBest-iot Smart cooler application in your android phone.
- 2) Click on "eBest-IOT Smart Cooler" application icon in your Android phone. It will launch application.

Note: Please ensure Bluetooth & Mobile Wi-Fi or Mobile Data must be ON in device.



3) Application will ask for User name and Password. Press on login button after entering valid User name and Password.

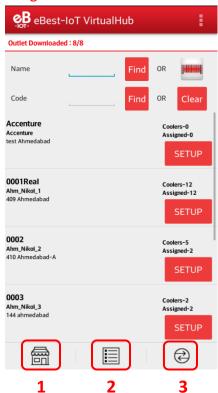
Note: Wi-Fi network or mobile data enable must be required during login otherwise login will be fail.





4) On successful login user will find below screen.

Note: Application must require Bluetooth ON. Application will communicate with device using Bluetooth.



- 4. Home
- 5. Scanning Window
- 6. VH Window



5) When user press scan window symbol, it will show available BLE device list. You can identify your device by its serial#. Touch on your device for connection



6) After connection with device, device information will be available on screen and also "X" mark are seen if application is connected to device as indicated below.





26.1 Verify Serial# and MAC

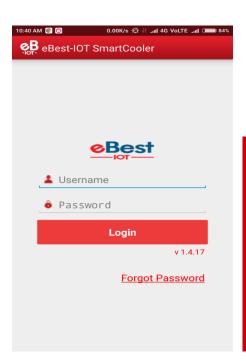
1) Verify that the serial number and MAC address on the label of the device with serial number displayed on the phone application. Label on device contains only last 8 digit of full serial number and MAC address.





27 Association process with Always On / Smart Hub

- 1) User can Associate " Always On / Smart Hub" with cooler using Installation Application.
- 2) Following step to Associate "Always On / Smart Hub" with cooler.

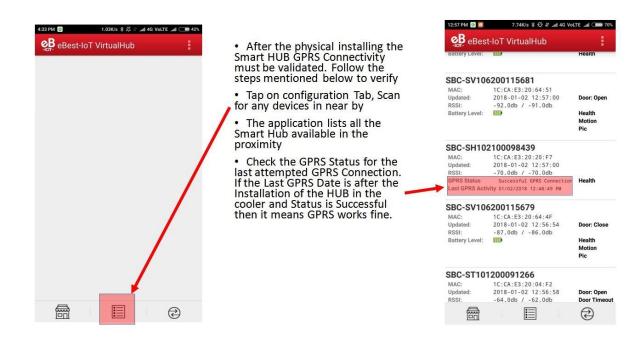


STEP 1:

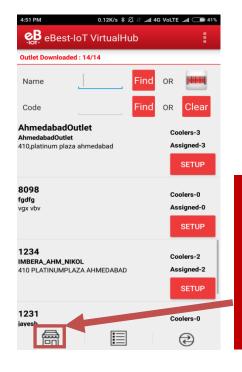
- 1. Open Smart Cooler Installation Application.
- 2 Login using the credentials provided by your administrator after successful login, user will be directed to Outlet list view screen.



Step: 2



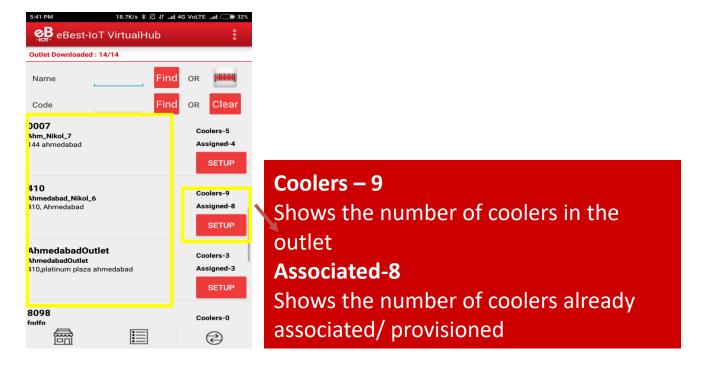
3) After Go to Install Device screen.



- After the ensuring that magnet is installed correctly you need to use app to associate device with the cooler.
- Click on Association Icon to go to Association Screen.

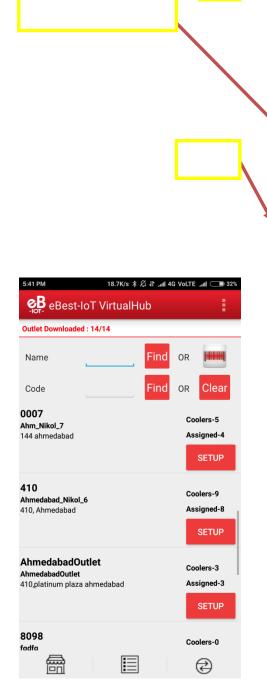


4) On successful login, list of outlets will be shown



Step:3





STEP 3: Selecting Outlet – Using Barcode Scanning:

- 1 Click on the Barcode icon, Barcode scanning window will open
- 2. Scan the cooler barcode using the barcode scanner Position the camera of iPad in such a way that the bar code of the Cooler (Technical ID) in the box.
- Outlet will automatically be selected and a menu will be shown for choosing the device which will be installed.

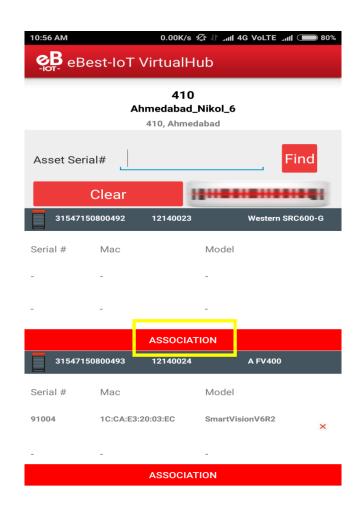
Alternate - Selecting Outlet by entering Outlet Code or Name:

 If Scanning of the Cooler serial is not possible enter either the Outlet Name or Outlet Code and Tap on "Find".

Selecting Outlet – Manual selection of cooler

- If Scanning of the Cooler serial is not possible and outlet code / name is not known, You can manually select the outlet.
- 5) New window will open allowing you to manually select the cooler for the outlet selected.
- 6) Click on "Association" button to select the Asset for installation

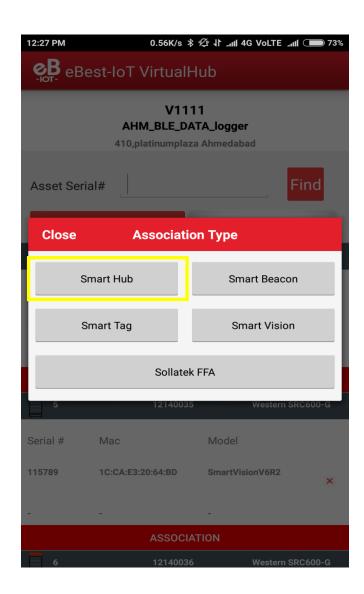




7) Click on "Association" button then New window will open to ask for selection of device type to be associated.

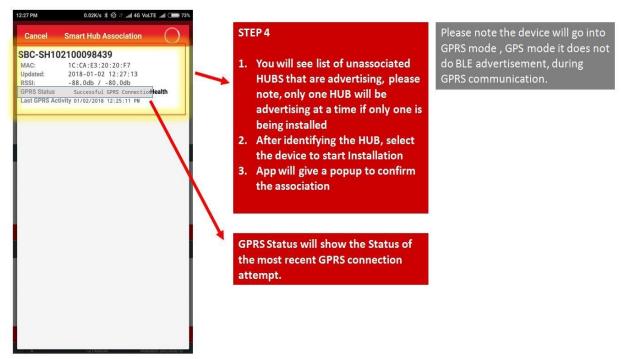


8) Click on "Smart Hub" to Associate Smart Hub.

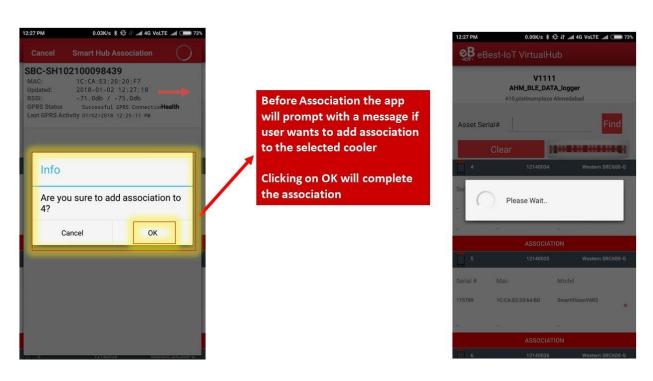


Step 4:



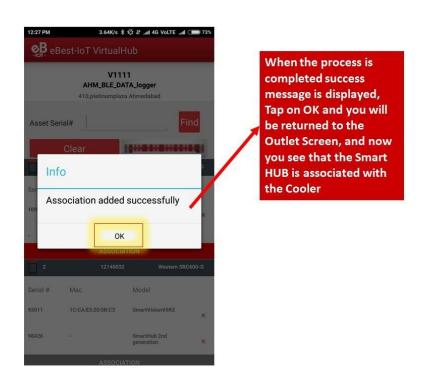


Step 5:



Step 6:





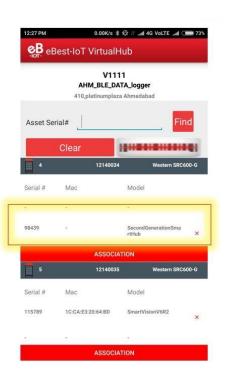


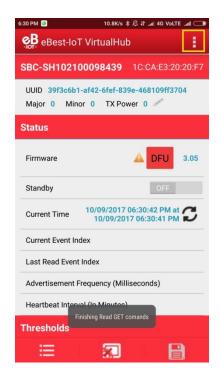
Image -1

9) When the process is completed you will be returned to the Outlet Screen, and now you see that the Always on / Smart Hub is associated with the Cooler-Show Above Image 2.

28 Smart Hub Configuration Parameters

After connection user can configure following parameters. Below figure shows Menu button location.





28.1 Restore factory setting

- 1) After connection, go to Menu -> click on "Management" -> then click "Reset device".
- 2) Device will disconnect and restore its factory default values.



3) User can check factory default parameters after connecting device again.

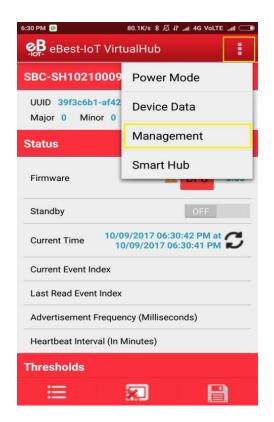




Image - 1 Image - 2



