

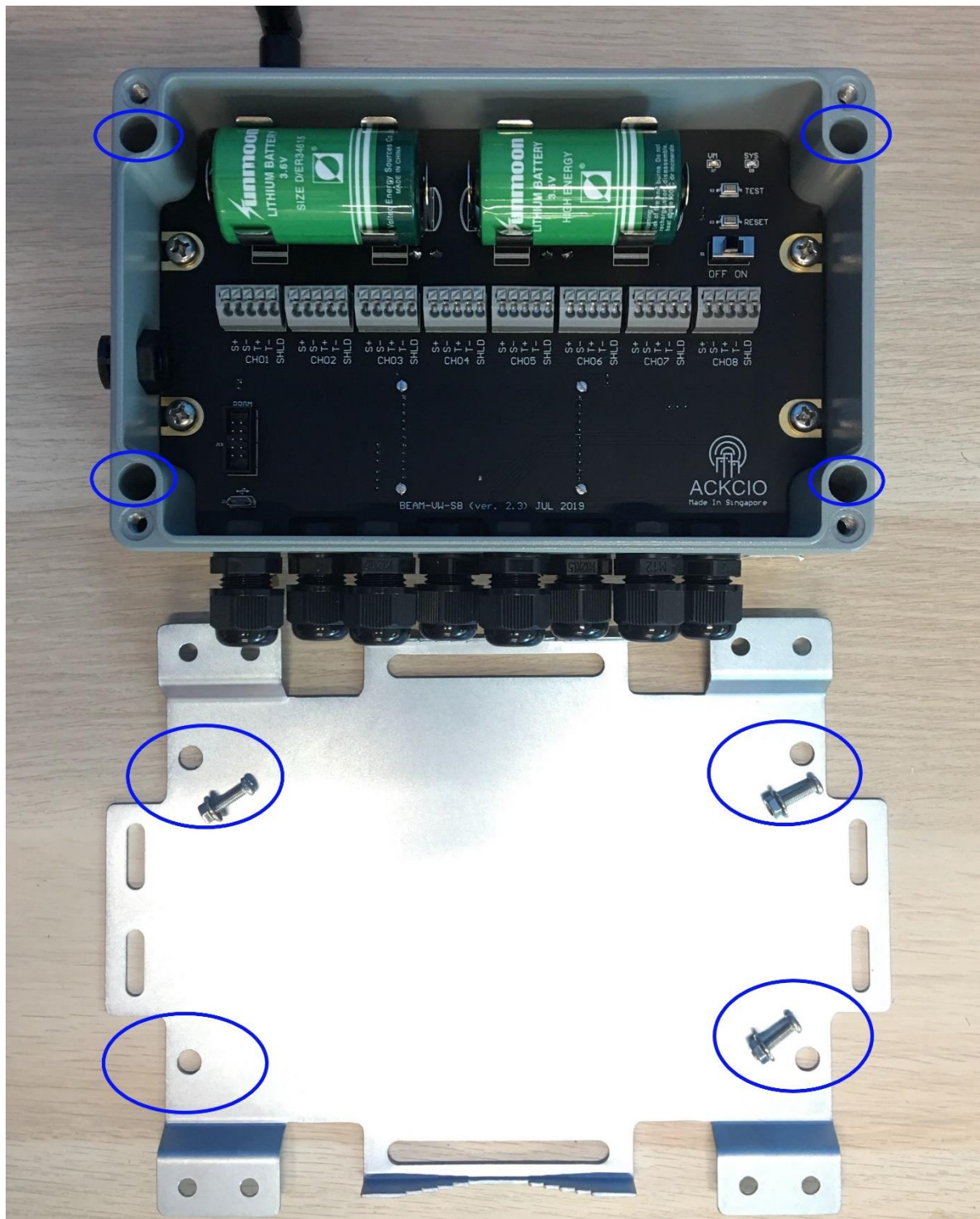
Setting up Vibrating Wire Node (BEAM-VW-S8)

This page provides information on setting up a VibratingWire Node to work with the offline Ackcio Beam gateway.

Installation

The Nodes can be directly affixed to a flat surface using M6 screws. However, for more sophisticated mounting scenarios, we recommend using the node bracket. The node bracket can be used to easily mount the node on flat surfaces, on pipes using U-bolts or cable-ties, or in other complicated settings.

If you are using the bracket, first fix the node device to the bracket using M6 screws and nuts as shown below.



Connect the SMA antenna to the bulkhead. Once the mounting is complete, the node should look as follows.



Node Setup

1. Connect the node antenna to the antenna bulkhead.
2. Connect the sensor wires to the node while ensuring that the wires are plugged in correctly.

S+: Vibrating wire input of sensor

S-: Vibrating wire input of sensor

T+: Thermistor

T- : Thermistor

PLS1 : Pulse input one (applicable for switch sensor only)

PLS2 : Pulse input two (applicable for switch sensor only)

GND : Pulse ground (applicable for switch sensor only)

SHLD: Shield wire of sensor


3. Switch off the Node and insert the battery while ensuring the polarity is followed correctly.

Configuring via the Ackcio Beam App

1. Download Ackcio Beam app at Google Playstore and connect to Gateway WiFi.

2:13 PM

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Ackcio Beam

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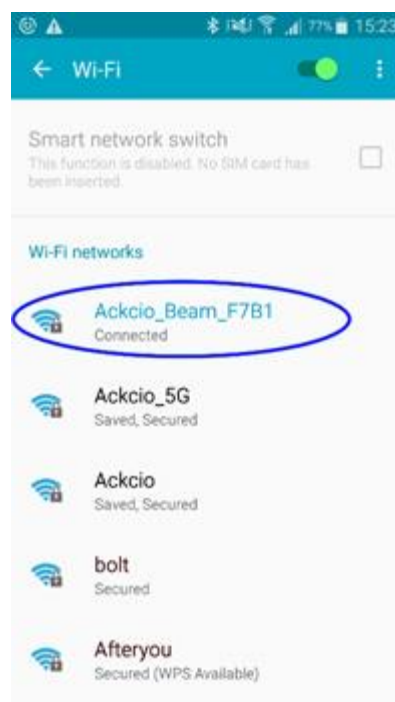
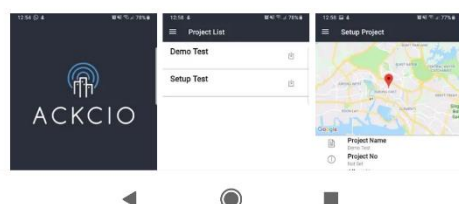
Website

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3+

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2. Plug in the USB end of the cable via an OTG adapter to your Android phone.

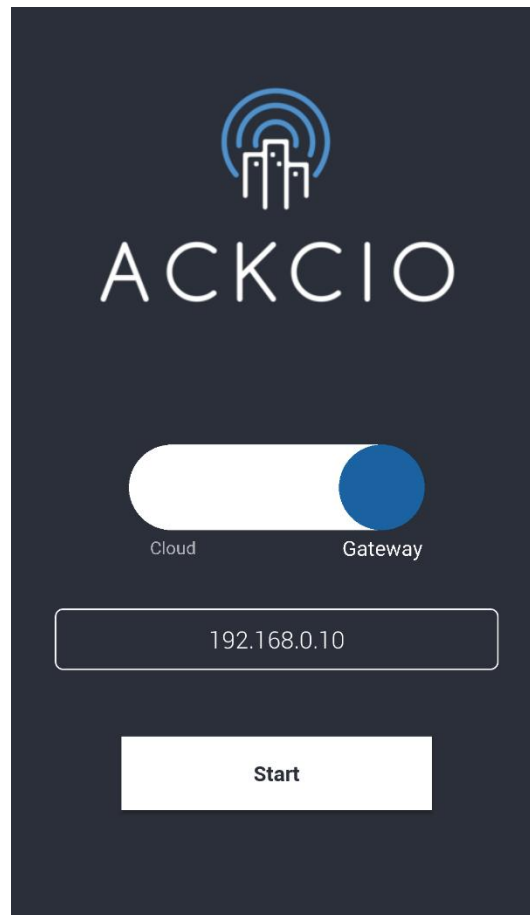


3. Important! Please make sure the Node is switch off before connecting to your Android phone. 4. Plug in micro USB end to the Node.



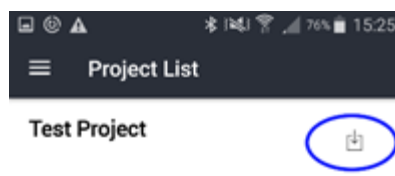
5. Switch on the Node.

6. Open the Ackcio Beam app on the phone. On toggle button, "Cloud" option is for Ackcio Online Live version. "Gateway" option is for Offline version. Please choose "Gateway" to proceed with offline version. ***(Please note that you need to add the Node and create the project first before you commission the node. Please refer to [Gateway Setup](#) for details.)***

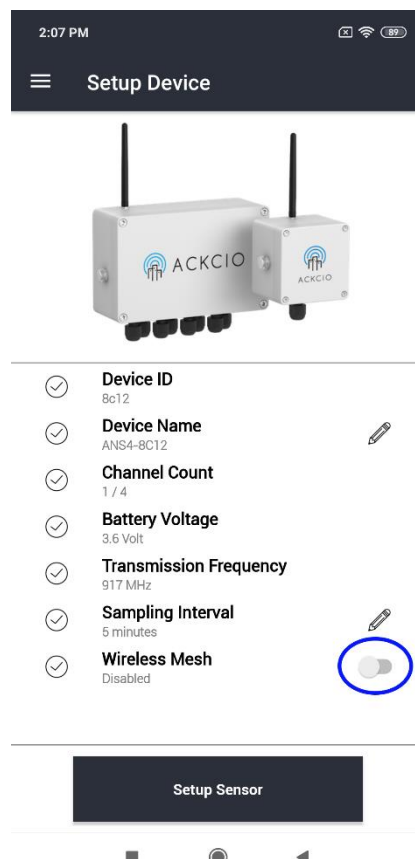
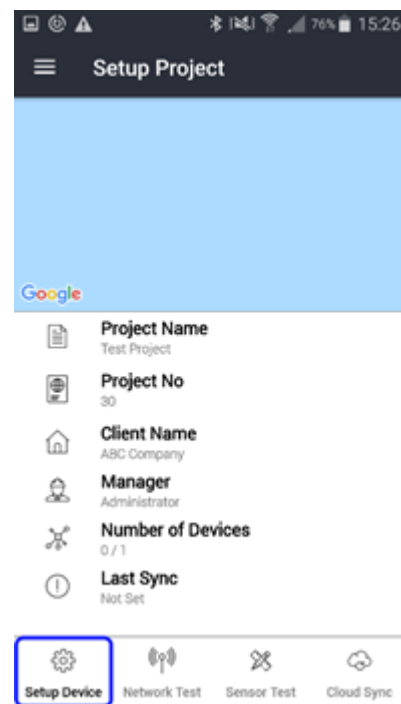


"Gateway" option to connect to Offline Gateway

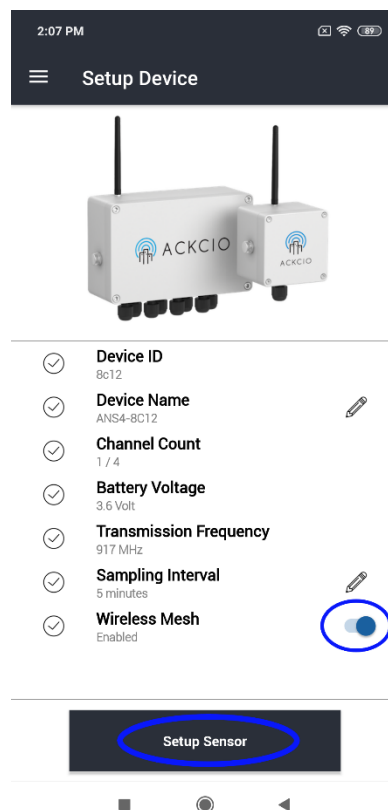
(i) You will see the project which you have already created once you open your Ackcio app. Click the button to download the project and go in to the project, you will see the project details.



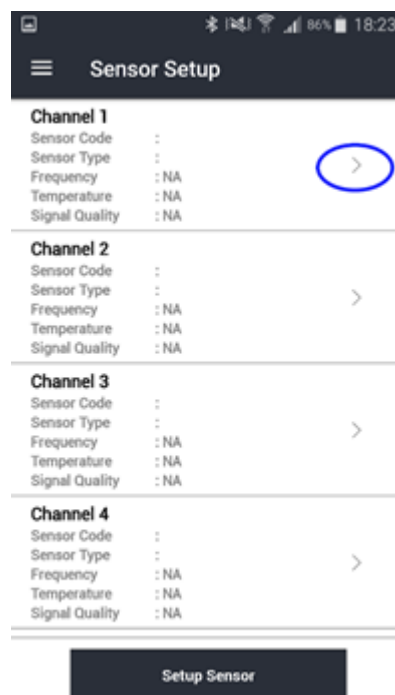
(ii) Press "**Reset**" button on the Node itself. Then click on "Setup Device" on the lower left menu on Ackcio app, the app will show connected node information. If the connection is unsuccessful, press "Reset" button on Node and connect again.



(iii) <Optional Step> If Wireless Mesh (Relay) function is to be deployed, click on "Wireless Mesh" toggle button to enable. Once done, click on “Setup Sensor”, you can now configure the sensor settings.



(iv) You will see this page with the available channels. Click “Arrow icon” on the respective channel which your sensor is connected to.



Sensor Setup

Channel 5
 Sensor Code :
 Sensor Type :
 Frequency : NA
 Temperature : NA
 Signal Quality : NA

Channel 6
 Sensor Code :
 Sensor Type :
 Frequency : NA
 Temperature : NA
 Signal Quality : NA

Channel 7
 Sensor Code :
 Sensor Type :
 Frequency : NA
 Temperature : NA
 Signal Quality : NA

Channel 8
 Sensor Code :
 Sensor Type :
 Frequency : NA
 Temperature : NA
 Signal Quality : NA

Setup Sensor

(v) **Sensor Code:** Your desired sensor name. **Sensor Type:** Select respective sensor type. **Parameters:** Turn on the parameters as connected to the Node. **Mode:** Please select the respective Sweep Mode (A or B or C), depending on the sensor.

Sensor Settings

Channel 1

Sensor Code
GeoKon

Sensor Type
Vibrating Wire

Parameters
 Frequency
 Temperature

Mode
 Sweep A : 450 to 1200 Hz
 Sweep B : 800 to 2000 Hz
 Sweep C : 1400 to 3500 Hz

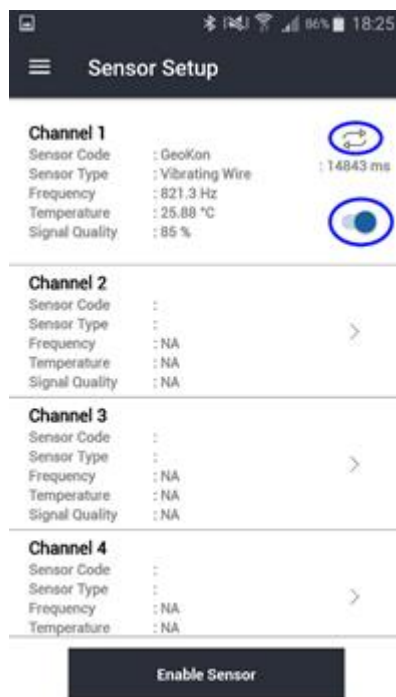
Save Settings

(vi) Click Save Settings. The Node will now read the sensor that was just configured.

(vii) On next page, you will see the first reading.

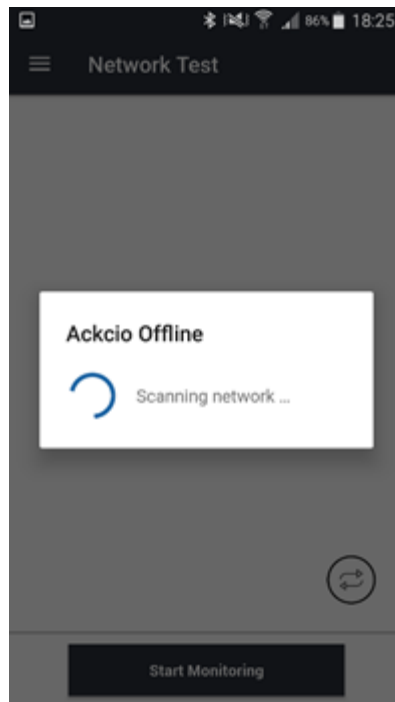


(viii) To get another reading, click on the arrow icon. If the reading is ok, please enable the sensor using the blue color icon.

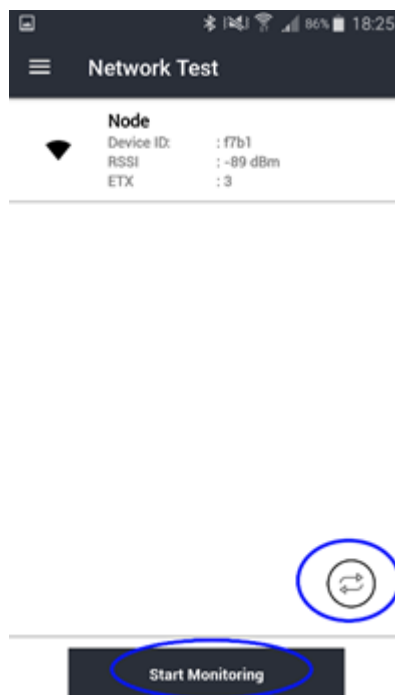


(ix) Repeat above steps to configure other sensors that are connected to the Node.

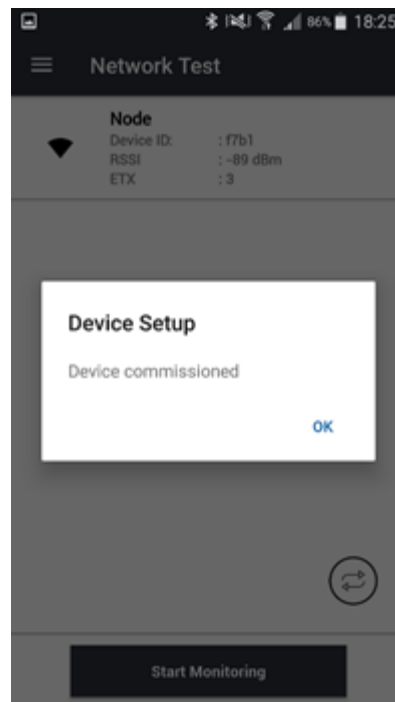
(x) Once all sensors are configured, click on “Enable Sensor” button. It will then take you to next page “Scanning Network” which will scan the wireless signal strength (RSSI) between the Node and Gateway.



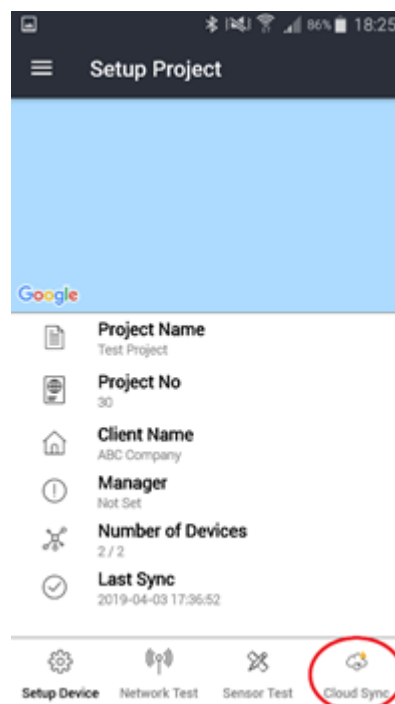
(xi) After you get the Network Test information, if you need to, you can perform another network test by pressing the button located at the lower right corner.



(xii) After that, click “Start Monitoring” button then the app will prompt “Device commissioned”. Click OK.



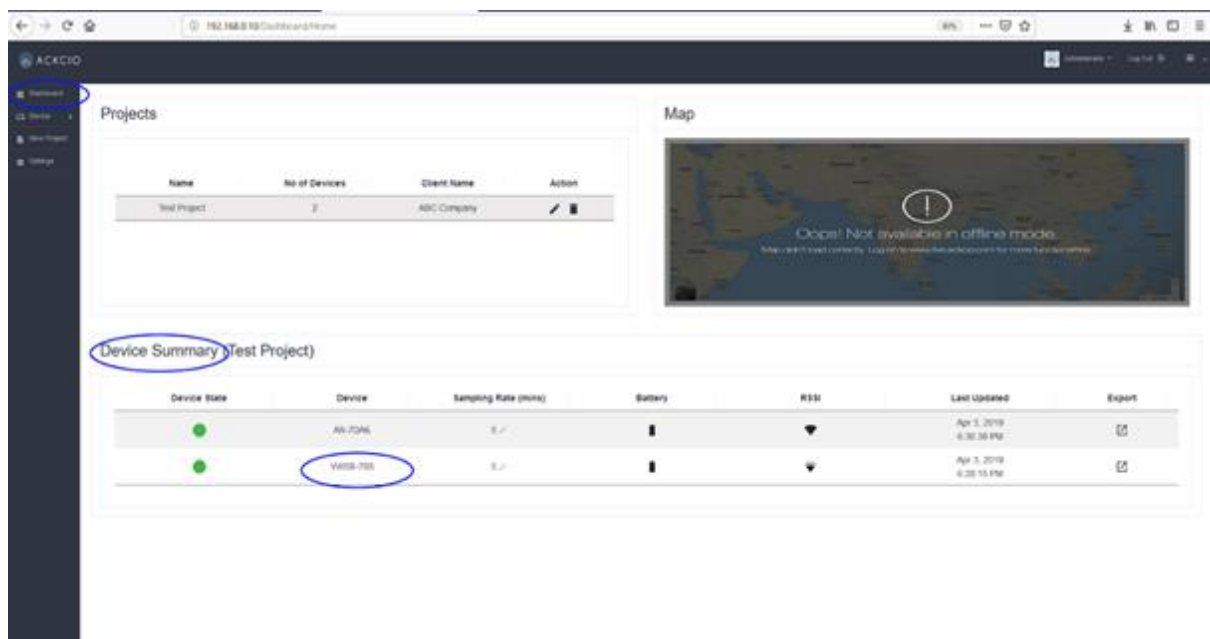
(xiii) **Important!** Next step, please press the Cloud Sync button at lower right area to send all the configuration information back to the gateway.



(xiv) If you would like to get the Node to immediately send a reading to the Gateway, please press the “SYS TEST” button on device physical circuit board.

(xv) For commissioning of additional Nodes, repeat the above steps.

(xvi) You can now go to the Gateway software dashboard on your computer and click on your project. You will now be able to see your commissioned devices under “Device Summary” Section.



FCC Caution:

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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment.
3. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.