ixicare installation Manual


ixicare

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Kindly note that each installation is unique and might differ from time to time. Should you require assistance during the installation process, you may contact our support team (support@ixicare.com)

The ixicare system

ixi Pro & COTG

The ixi Pro, worn on the dominant hand, provides vital information about a user's health patterns, keeping healthcare providers continuously updated about the status of a user.

The ixi Pro doesn't need to be removed from the wrist to recharge as its charger slides onto the ixi Pro itself while still being worn, to ensure continuous safety for the user.

ixi Button

ixi Button is a wall-mounted alarm or emergency button. The fixed alarm button is a legal requirement for various facilities. It works using frequency hopping 2.4Ghertz radio technology and has a battery life of several years. In this way it is also permanently connected to the ixicare system and functions as a classic fixed call point.

An added benefit of the ixi Button is that it is a wireless device.

ixi Lite & Touch

ixicare Lite sends an alert when the button located on the device itself is manually pressed. When this occurs, data such as the user ID and their location within the facility is sent to the care provider.

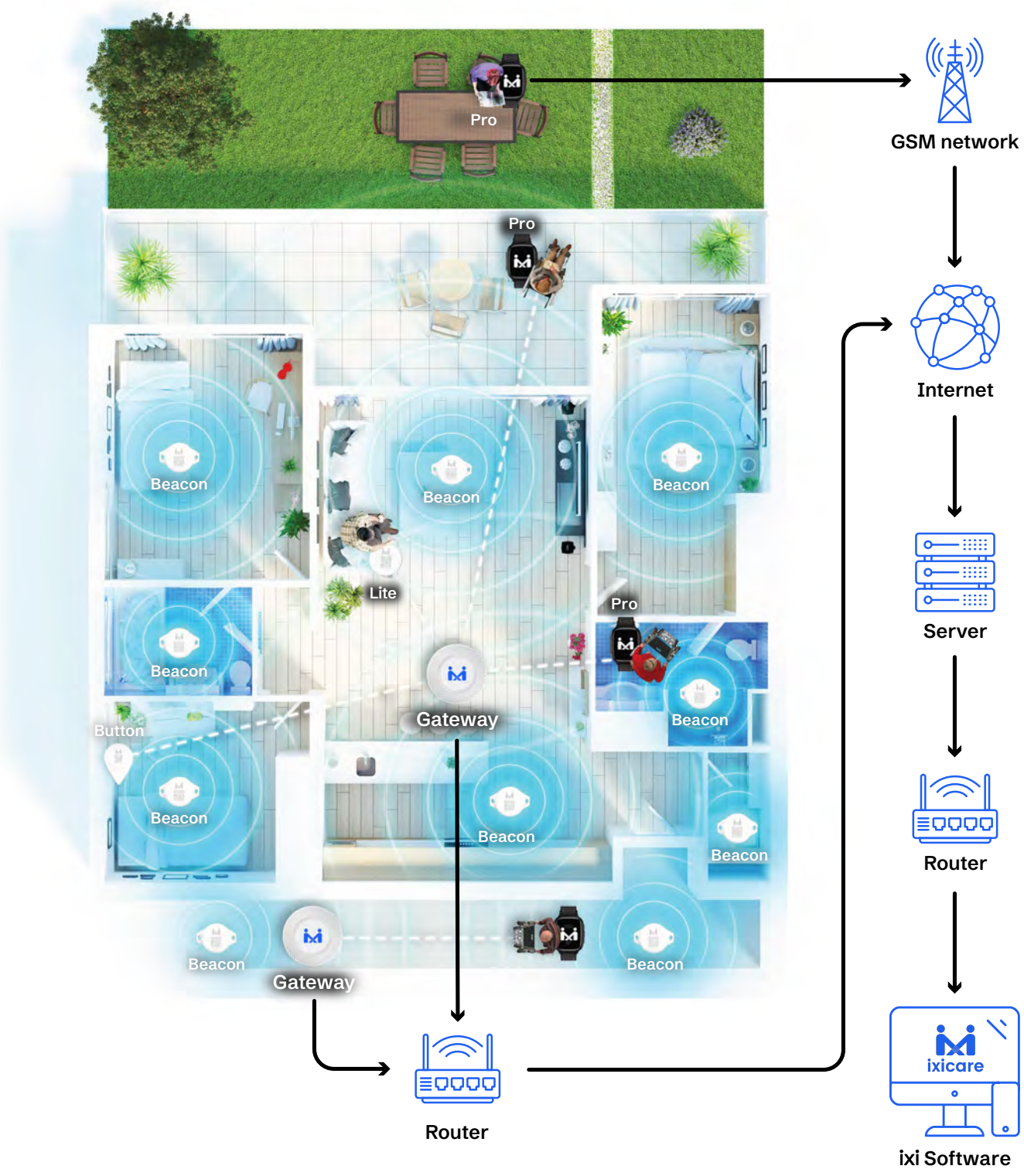
ixicare Lite functions in the same way as a classic nurse calling system, but with the added benefits of location tracking when an alert takes place. It is also waterproof.

ixi Gateway & Beacon

These ensure that the signals from the ixicare devices are received and forwarded to the server.
They will be installed across the facility to ensure accurate tracking of the ixicare devices via frequency hopping 2.4Ghertz radio technology.

How it works

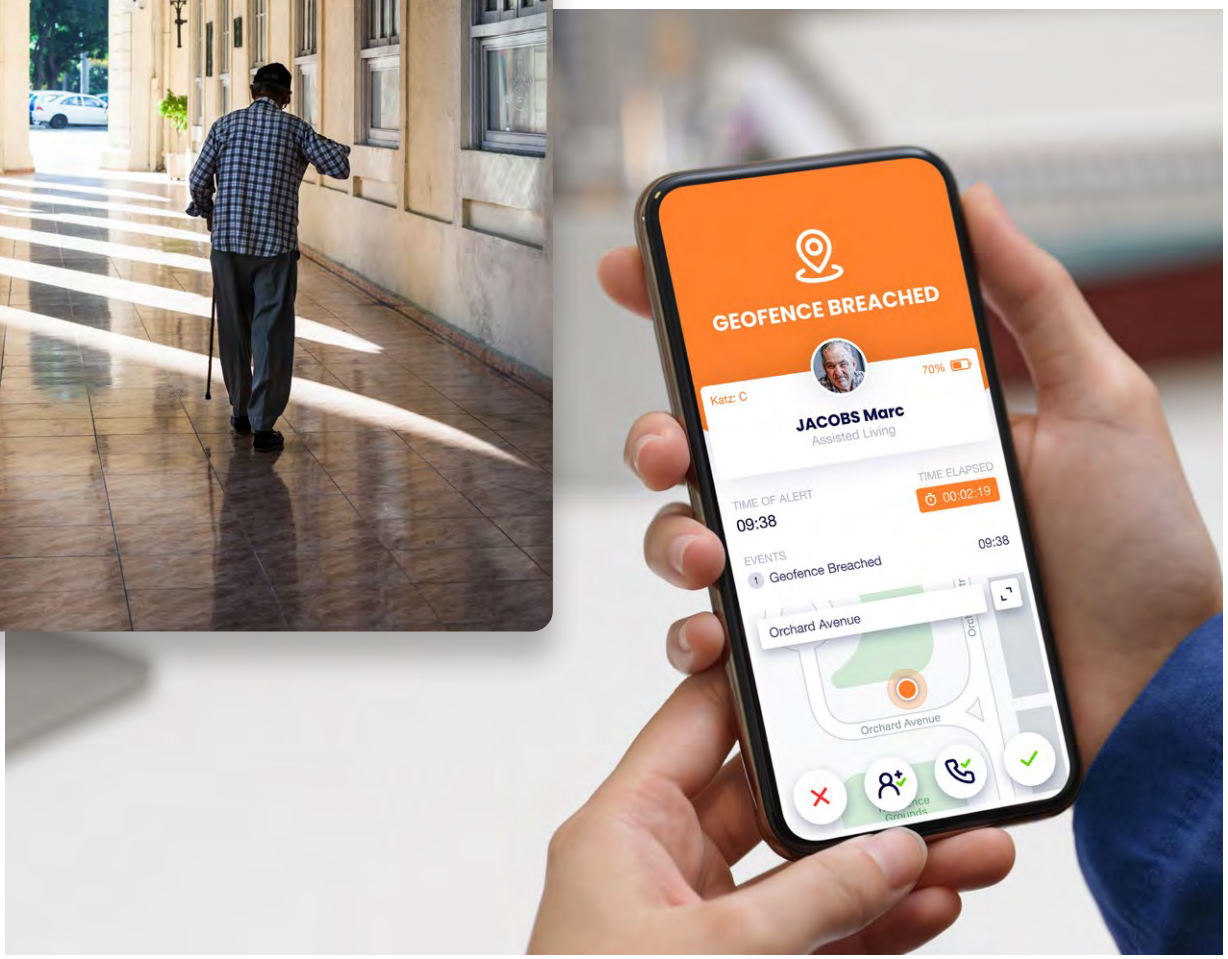
The ixicare system works indoors via the client's local area network and the ixicare bluetooth grid, whereas in outdoor environments the ixi Pro connects to mobile networks via a SIM card.



Once an irregular health pattern or a critical situation is detected by the system, an automatic, instantaneous alert is sent to an alert responder within the user's vicinity via the ixicare Mobile App on
the care provider's smartphone. In doing so, critical emergencies are proactively tended to, thus providing a proactive health monitoring system rather than a reactive one.

The ixicare distress solution also functions as a basic nurse call system where if a user needs assistance, the user can manually send an alert by pressing the button located on the ixicare wearable device.

Our system logs all notifications, both manual and automatic. The information on these notifications can be viewed via the mobile ixicare App, which is easily accessible by both staff and management. The Web App provides additional information about these notifications and allows adjustments to the system and its functionalities, such as setting geofencing or the parameters, based on which an automatic alarm should be generated.



Before installation

Prior to the installation of the ixicare system, the installer must visit the installation

premises to take note of specific technicalities such as:

- Cabling requirements
- Network - such as availability of ethernet slots, PoE switch
- Building Composition - is the building made of stone, brick? The type of building material may have an effect on network quality
- Do the digital floor plans provided by the client match the existing building?
- Measurement of walls - are the walls thick or thin? This could have an effect on network coverage
- Is the network monitored by a third party? If yes, obtain contact info if this is applicable.

The table below provides a guideline for your first visit to the installation site. Preferably this visit should be done with the director and the technical person who is responsible for the residence.

General residence info

Address residence	
Phone	
Email	
Is the residence part of a group? Name	
Single point of contact and email	
Name of the director and email	
Name of the Technical person and email	
Network SSID and Password	
Floor plans or evacuation plans received?	◯ Yes ◯ No
Do the floor plans fit reality?	◯ Yes ◯ No
Did you give a Technical and Sales brochure?	◯ Yes ◯ No

Technical evaluation residence

Local technical person present?	◯ Yes	◯ No
Do healthcare providers use a smartphone?	◯ Yes	◯ No
If yes, smartphone type		
Which OS is used? (Android, iOS)		
Is cabling foreseen or do we need to plan that first?		
If not, when is it planned?		
Access point nearby expected gateway install location?	◯ Yes	◯ No
Decent WiFi coverage? (add WiFi validation plans)		
Do the access points have a PoE port?	◯ Yes	◯ No
If the gateway is connected via the PoE port, does it work?	◯ Yes	◯ No
How about the coverage of the gateways in sever-al parts of the building?		
Is there a third party for the network?	◯ Yes	◯ No
Name of the third party and contact info		
Are there enough access points in the building?	◯	◯ No
What kind of structure is the building? (gyproc walls,...)		
Is there a technical shaft, elevator, stairwell which can possibly interrupt the ixicare system?	◯ Yes	◯ No
Elevator nearby? Stairwell?	◯ Yes	◯ No
General tech info about the residence		
Proposal installation date		

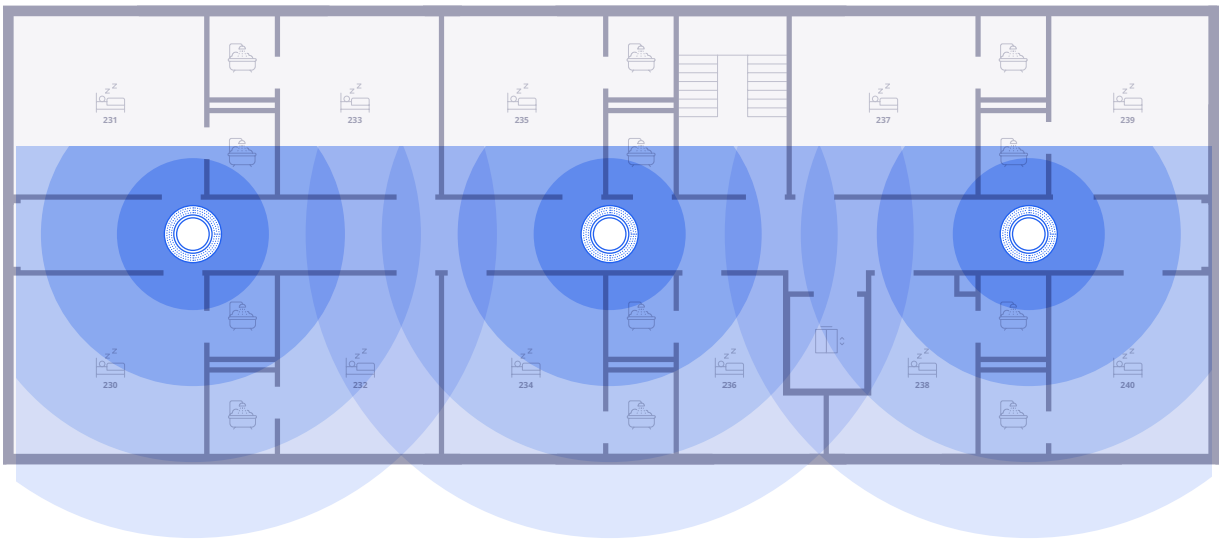
Before installation – Cont.

It is important to measure the TX strength of the gateway. This TX strength can be measured using the nRF connect app. If the strength drops beneath -75 dBm, a new gateway needs to be added. This will ensure there is always 1 GW overlay to ensure there is backup coverage (redundancy).

(See addendum for nRF Connect App walkthrough — pg16)

It is best to place the first gateway in a corner and work your way inward. This way the entire building will have the required coverage. After the installation is complete, areas with no coverage (if there are any) will become apparent and these will need to be fixed afterwards.

It is vital that a test is conducted with the gateway to check for coverage strength.



If no extra cabling is required, the operations team in Belgium will plan the installation together with the director of the residence and the installation team.

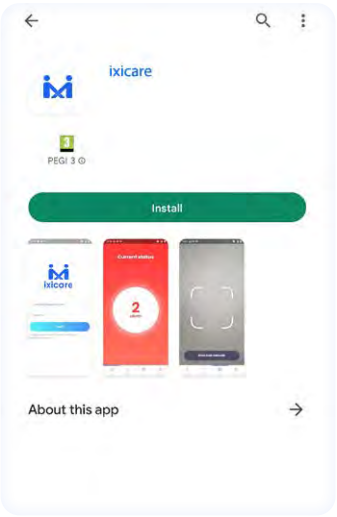
After the first visit at the residence, the operations team can start preparing for the installation, which will include:

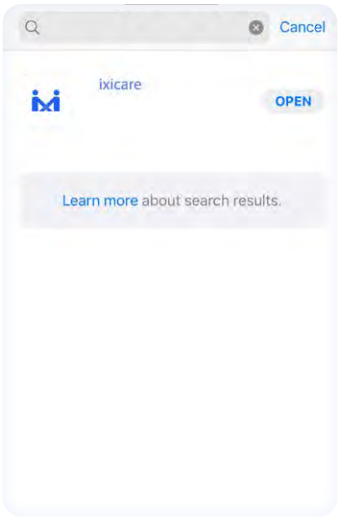
1. Rework the floor plans for the ixicare system
2. Create the residence
3. Define the zones for the residence

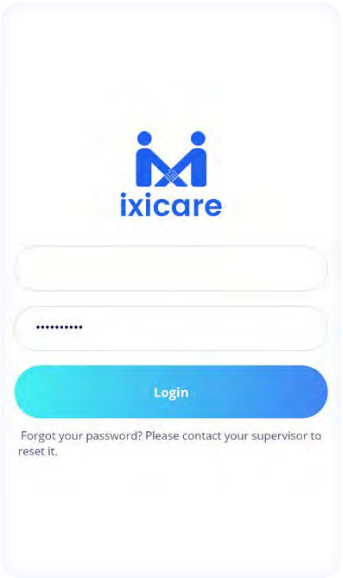
If some areas are not clear, the operations team will set up a meeting with the SPOC of the residence to agree on the names of the rooms/areas which will be used by the ixicare system.

Installer App

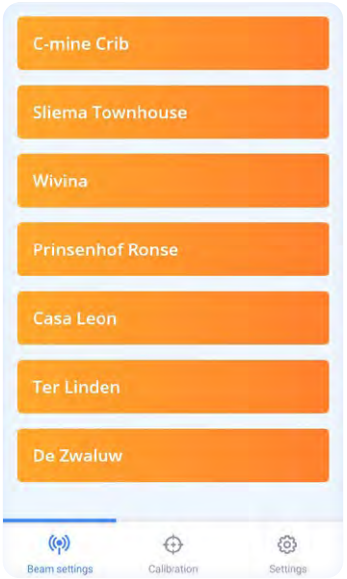
1. To install the ixicare hardware, you need the ixicare mobile app. You can find it in the Google Play Store or the Apple App Store (search for ixicare).







2. When you first launch the app, you have to agree to the privacy policy, and log in with the credentials given to you.



3. After you have logged in (credentials to be added), you will see the different residences. Select the one you are installing.

4. You will see a floor plan of the residence. Via the cursor at the top you can select different floors. You can zoom in and out, and pan around the plan. It is possible to change the plane and floor plan name

The Gateway

The installation always starts with the placement of the gateways.
You cannot start installing other devices before installing the gateways.

A gateway can be connected via:

- A PoE port on an access point (optimum installation)
- Via WiFi - ⚠ **Risk:** if the WiFi network is poor, ixicare's performance will be negatively impacted.

Via the table beneath we offer a guideline to run the first visit in a proper way. Preferably this visit should be done with the director and the technical responsible of the residence.

Installation

1. Plug in the gateway
2. Installer tool is used to scan the gateway and to confirm their placement on the residence map

- Click on a point of the map where the gateway will be installed
- Scan the QR of the gateway
- Confirm

3. Make sure the 'ON' button on the side of the Gateway is pressed in. Starting up the gateway can take up to 60 seconds. The Gateway will display its current status using the LED.

Rainbow
Gateway Booting

Partially Green
Connecting to Server

White Light
Connected to Server

No Light
No Server Connection

The rainbow pattern means the Gateway is starting up. Once activated, the LED ring will partly light up green. This indicates that the Gateway is trying to connect to the server. When the LED shows a dimmed white light, the Gateway is fully-functioning. If the Gateway light were to turn off, the Gateway has no connection to the server.

The Beacon

This device needs to be installed in each room to receive location information. In rooms where it's sure that the resident won't enter, the beacon does not need to be installed.

The Installer tool is used to scan beacons and to confirm their placement on the residence map (same installation process as for the gateway). Before placing the beacon you need to screw the beacon open and remove the plastic battery protection.

- Click on a point on the map
- Scan the QR and give it the room name
- Confirm

When the construction of a building is made of gyproc or plywood, it can be that beacons spillover to other areas. In this case you need to reduce the power level manually via a button which is on the right of the battery. Most of the times it helps to press the small button twice to lower the TX strength of the beacon. Rule ot thumb is to put the TX power of all beacons on -20

Tx power (=calibration factor) of a beacon

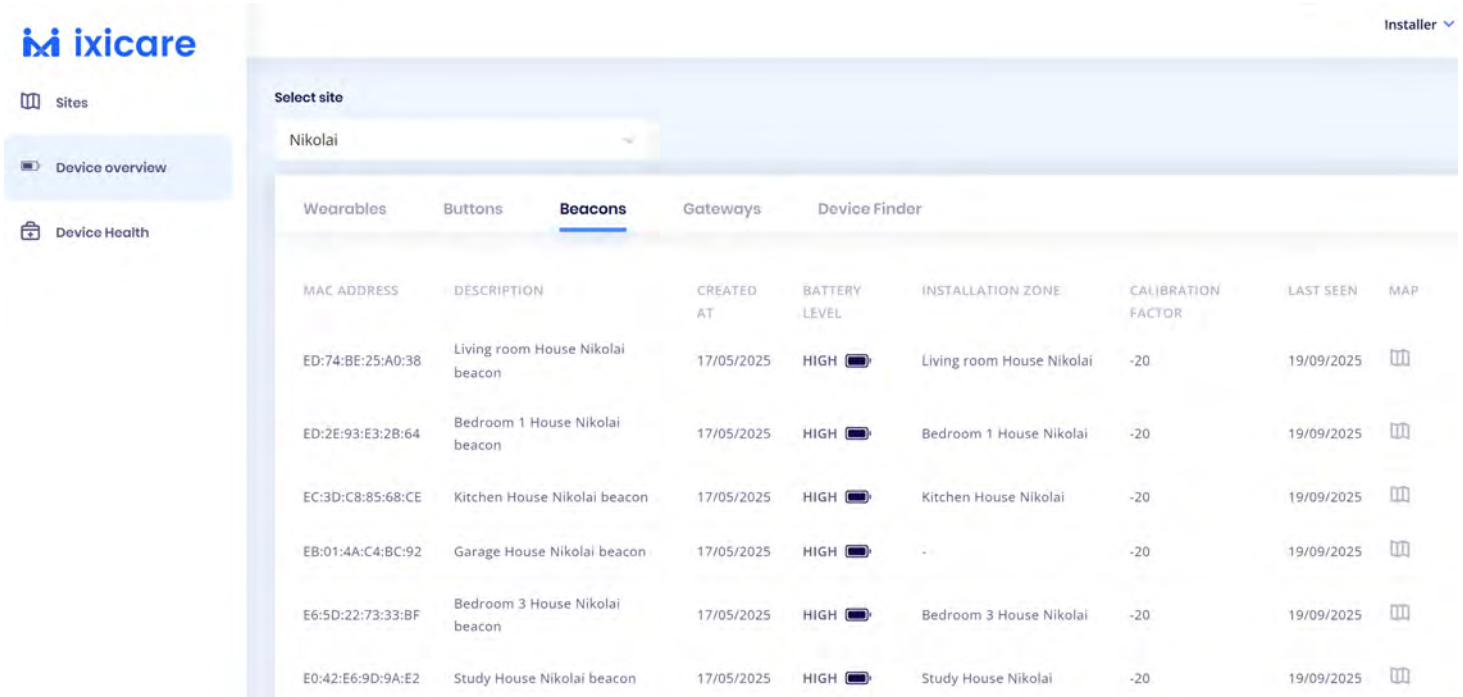
Version 2.1.0:
By default (on insertion of the battery) it will be at 0dB

- TX Power (= Calibration factor) can be adjusted to change the strength of the BLE casting of a beacon. To optimize battery drainage levels and indoor location tracking accuracy, follow the instructions underneath.

- When you press the button once, it will go to -4 dB. (you will see a RED LED while it processes)
- You can repeat this, to cycle the Tx power between these values: 4, 0, -4, -8, -12, -16, -20, -40.

- A TX Power of 4 will have the largest coverage area but will drain the beacon's battery faster. We advise to place all beacons on -20.

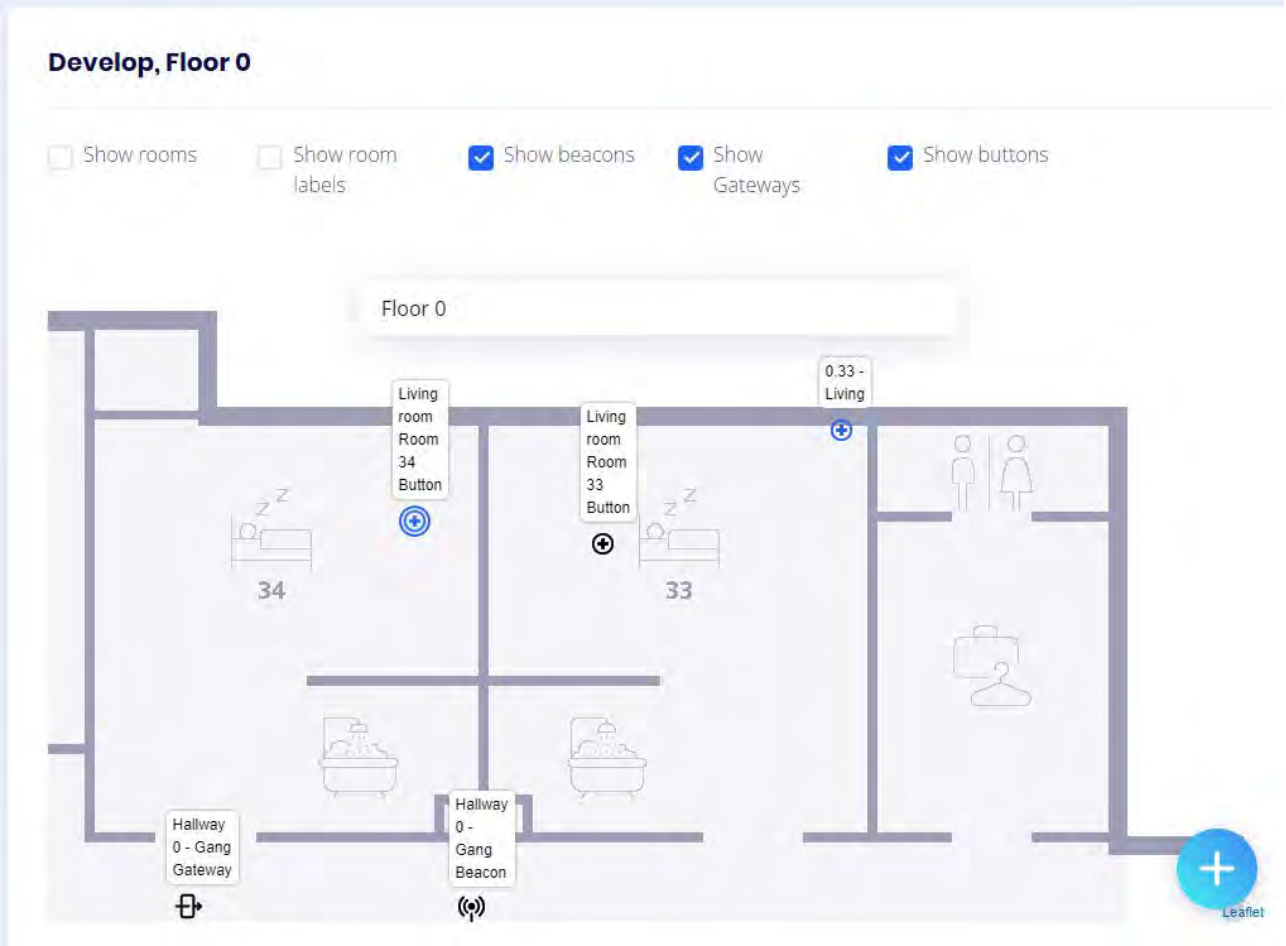
- If the current TX Power is at -40 dB, the next value after a press on the button will be 4 dB again.



The Button

A button is usually legally required to be installed next to a bed, toilet or bathroom and in general rooms on a visible place. Customers want to be able to choose whether a button is a regular button or an emergency button. This can be done during installation when scanning a button or afterwards by the customer.
The customer can add a sticker below the button to clearly indicate the special nature of the button.

- Alert Button: Is shown on the installer dashboard as a cross within a single circle
- Emergency Button: Is shown on the installer dashboard as a cross within a double circle

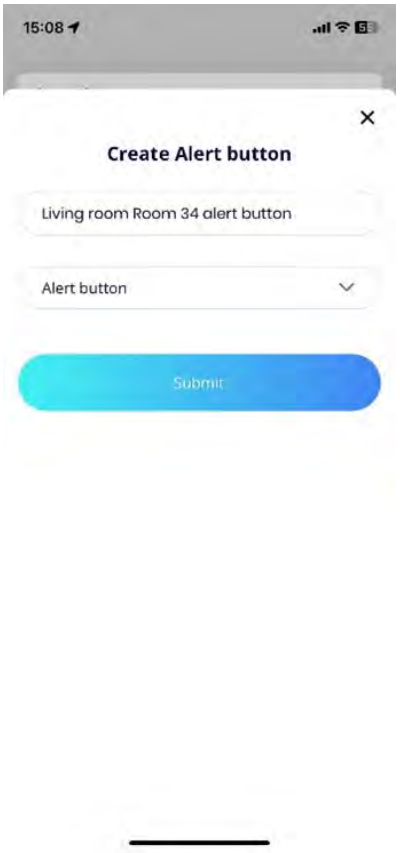


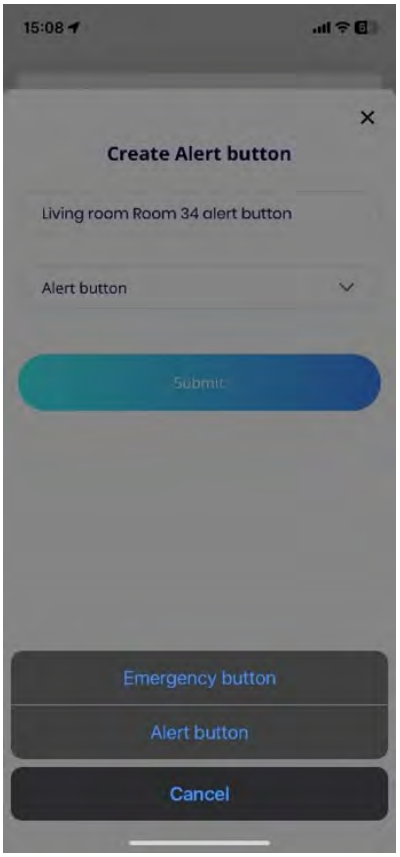
The Button

When scanning a button, a dropdown option is provided to select either 'Alert button' or 'Emergency button', with 'Alert button' selected by default.

The Installer tool is used to first pick a spot on the map, then scan the buttons and confirm their placement (same installation process as for the gateway)

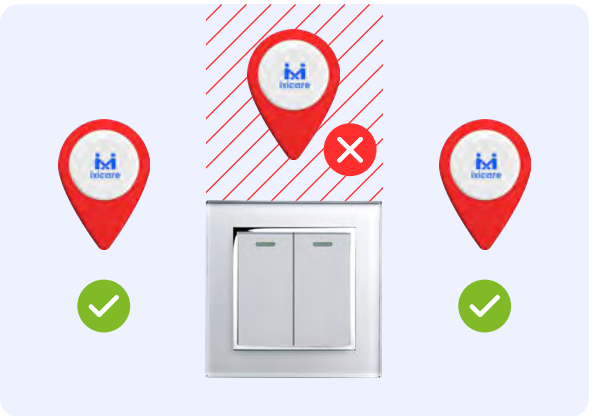
- Click on a point on the map
- Scan the QR and give it the room name
- Confirm





Physical installation

Double-sided tape is placed on the back of the button. The button is then placed on the wall using double-sided tape.



Important! When physically installing the button, make sure there is enough room around the base of the button to access the screw with a screwdriver. Failure to do this will result in staff not being able to replace the button's battery when necessary.

The button's battery is replaced by unscrewing the screw at the bottom that holds the casing together. Afterwards, place the red sticker on the button; this will show it's a button used in case of emergency.

Testing buttons

Testing buttons is not possible during the installer mode. You must log in as a healthcare provider of that residence, trigger an alarm, and see whether it arrives. You can cancel the alarm via the button (hold the button for at least 5 seconds) or via the app.

The alarm should always be cancelled through the app when placing buttons. In this way the TX strength (transmission strength) as well as the RX strength (receiving strength) of the button is tested.

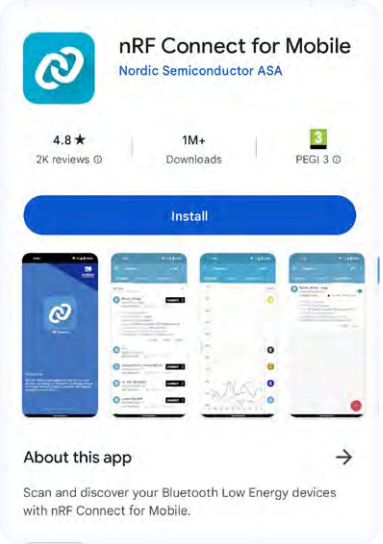
Installation done?

Test the complete setup

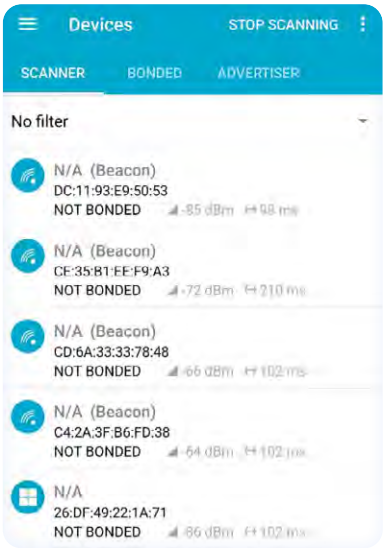
Login with an alert responder profile and test every single button.

1. Check if the button is in the correct room
2. Test the ixicare Lite/Pro and if the alerts arrive on the app
3. Provide training on how to use the app and dashboard
4. Make sure the digital manual is sent to the residence
5. Hand over batteries and chargers
6. A welcome email will be sent by the operations team together with the procedure in case of technical issues, maintenance of devices, etc.

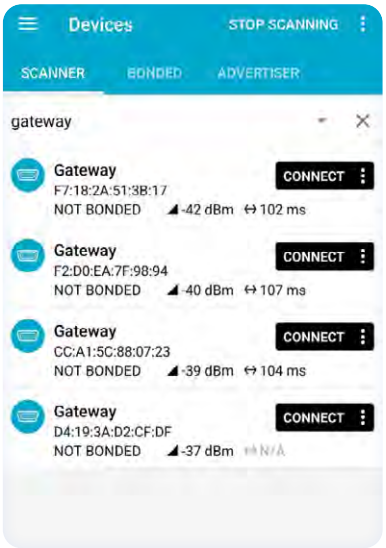
RF Connect App walkthrough



1. Download and open the nRF Connect app



2. Our devices will be named ‘Gateway’. This could be added in the filter so the app will only display our gateways



3. When walking around in the building, keep on refreshing the list to see the updated RSSI. If the RSSI is between -75dBm and 0 dBm, then it is OK

4. You can open the live graph to make it easier to see the best RSSI value as there can be more than 1 gateway in certain scenarios

5. Walk around the building and put the gateway in a good location, then test the RSSI strength in the surrounding rooms

6. Mark the locations on the floorplan, and ensure the entire building is covered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