

Installation manual

Grodan GroSens Suite 2020 and e-Gro Companion App

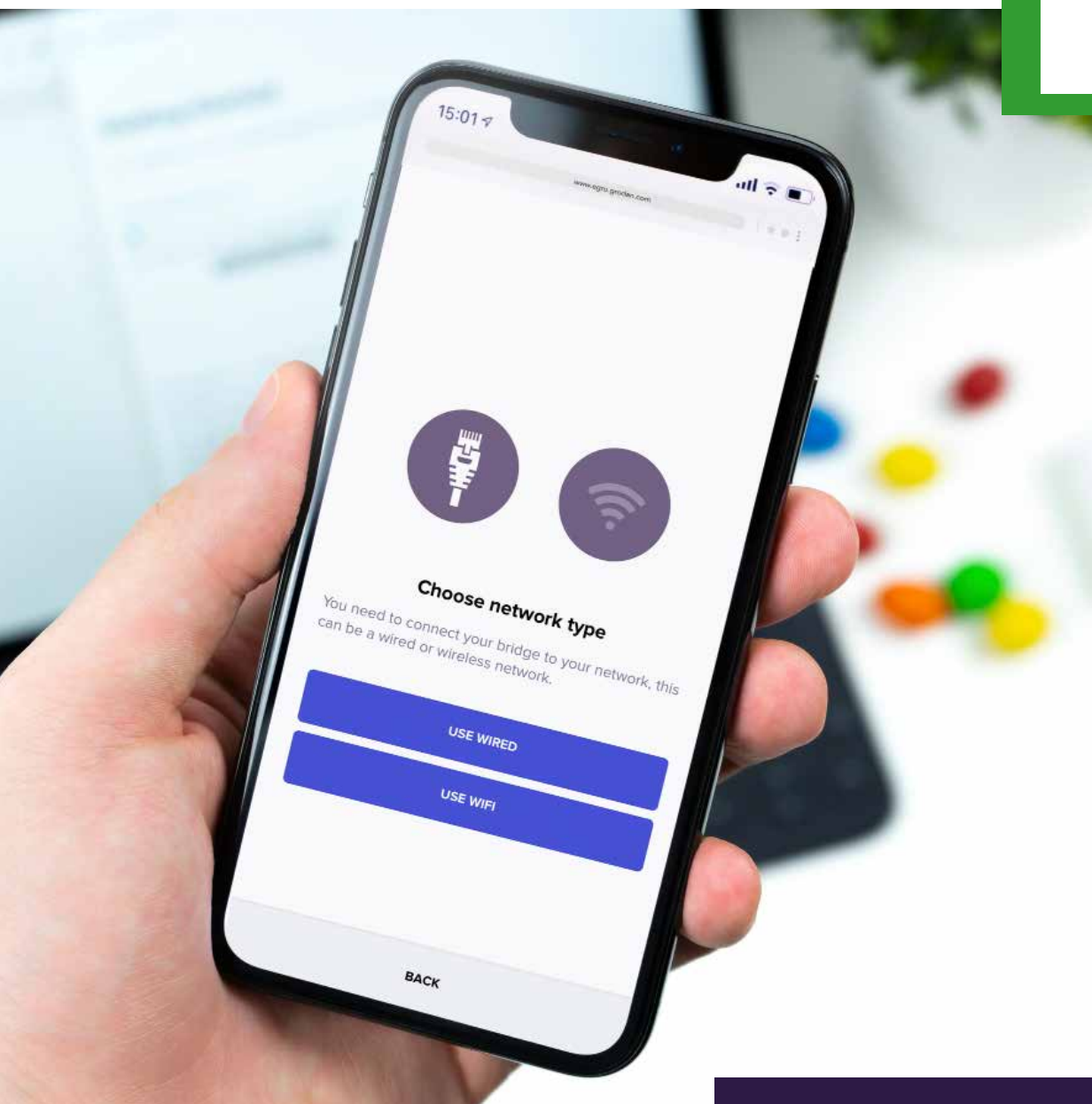


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1 Hardware

The hardware that communicates with e-Gro consists of:

A bridge

This acts as a local database for all of the sensors in a facility and speaks with the cloud via WiFi/Internet.

Rootzone sensors

Similar to GroSens these sensors collect information in the substrate including EC, WC and RZ Temp. It communicates with the bridge via Bluetooth.

Climate Sensors

Divided into Temperature/Humidity and Temperature/Humidity/CO2. Both are required to get a full reading of the room. It communicates with the bridge via Bluetooth.

A gateway

Needed for large facilities it extends the network and range of the climate and root zone sensors.



2 App

The app is the main interface for the growers to interact with the Grodan GroSens Hardware components. It is used to setup the bridge and configure the sensors. The app is available in: Apple App Store, Android Play Store and Google Play Store.

If the grower is on an Android device collect the email associated with the phone's Google Play Account and send it to Control Portals. They will grant access and send a notification to the user via email with a link they can follow to download the app.

Before setting up the bridge turn on Bluetooth on your device and connect to the same Wi-Fi network you will be connecting the bridge to.

3 Setting Up the Bridge

The current version of the app uses Bluetooth to find and configure the bridge. This improvement was made as this type of connection is not dependant on the network, reducing the need for IT experience. It also provides advanced diagnostics if an issue with the connection occurs.

Instructions are built into the app and should allow growers to install the bridges remotely with their CSM. They are very clear and easy to understand (see screenshots below).

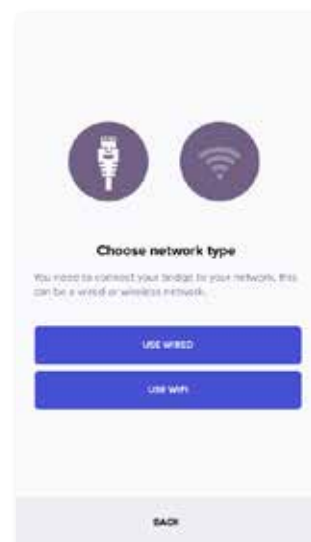
When opening the app for the first time the grower can choose between configuring a new bridge or connecting to a previously configured device.

Selecting a new bridge guides the grower through the initial hardware setup. It illustrates how to attach and position the antennae's correctly and how to connect the power cable and turn on the unit.



After the hardware is assembled the app is ready to be connected to the bridge using Bluetooth:

1. Hit 'Search' and the app will scan for all available devices
2. Once found select the appropriate bridge
3. Now the app needs to attach to the local network.
 - a. If using WiFi select WiFi and it will search for networks.
 1. Choose the appropriate network from the list of found networks and input the password (if applicable).
 - b. Alternatively, the bridge can be connected using an Ethernet cable.
 1. Plug an Ethernet cable into the back of the bridge and it will connect automatically.



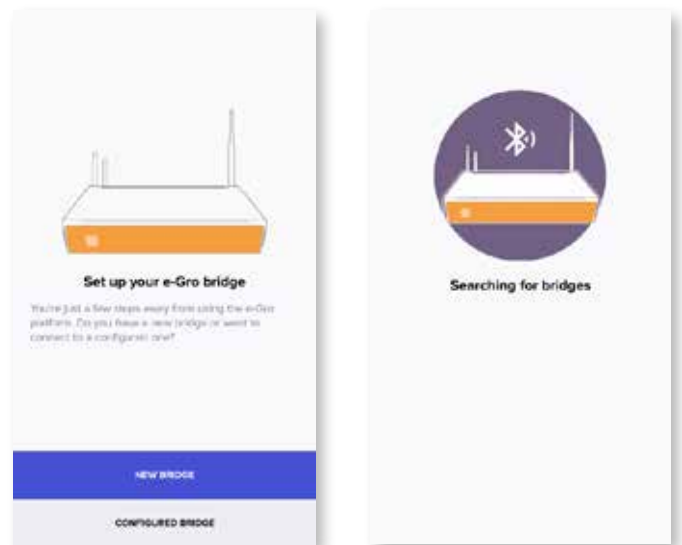
- The final step is to connect the app to the users existing MJ e-Gro account. Use the same username and password to complete the connection. All facility details that were created in e-Gro are now automatically synced in the app.

Important: If an e-Gro account is coupled the grower cannot create rooms.

By selecting a previously configured bridge the user skips the above. Instead, you are taken through the following steps:

- Select 'Configured Bridge' and it will search for a bridge over Bluetooth
- When found select the bridge from the list
- Scan the recovery QR code on the bottom of the bridge OR use an invite from an already connected app (see Settings section to generate an invite QR code).

You can now start using the various functions of the app.



Cloud Connectivity

Once the bridge is configured and connected to the internet the app can use most functions via the cloud connection (VPN). If the app detects no communication between the bridge on the local network (WiFi) it will attempt to contact the bridge through the cloud. If a connection can still not be established an error will be displayed while the app repeats the search process in the background.

4 Using the App

Dashboard

Overview of the rooms and sensors on the bridge:

Rooms

Lists all of the rooms currently created for the facility. Rooms can be added by tapping the + icon.

Important: If an e-Gro account is coupled the grower cannot create rooms.

- I Name the room
- II Select the type

Sensors

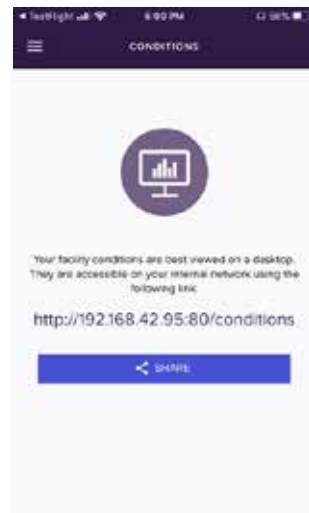
See the status of the sensor. Click on a specific sensor to see full details such as battery level, signal strength and data. A grower can add sensors to the platform by tapping the + icon.

- I Select the sensor type
- II The app will scan for sensors in range. Select the correct one
- III Assign a custom name (if applicable)
- IV Assign to the correct room

Conditions

Link to the location the grower can view various visualization. Copy the code into your browser's search bar.

If the users account has been synced with e-Gro they are redirected to their facilities Conditions page



Handheld Mode

The latest version of the Grodan GroSens root zone sensors has a built in handheld mode. At present there is no handheld or mobile mode for climate sensors:

Should you experience any difficulties while using the handheld mode please reach out to your CSM with full details for troubleshooting.

1. From the drop down select 'Handheld Mode'
2. Select the sensor you want to convert to a temporary handheld reader (take a screenshot)
3. Select the number of measurements you would like to take
4. Place the sensor in the block and start the measurement. Once data is collected stop the measurement
5. Repeat step 5 for the remaining measurements (ex. If you selected 4 measurements you will need to perform step 5 three more times)
6. Once all measurements are taken the app will show you a summary of the results
7. Download the report to your phone and share via email, text message etc.

5 Settings

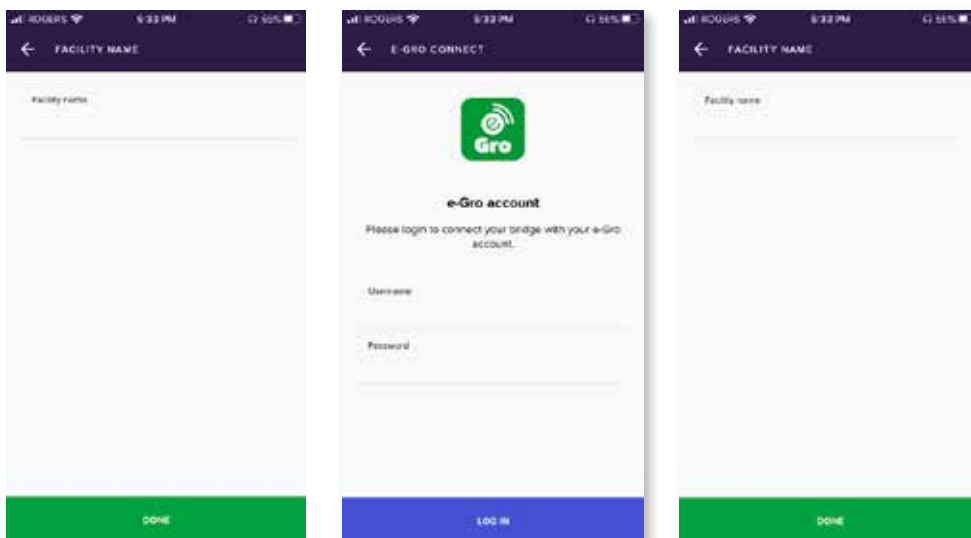
e-Gro connect

If you have not already connected the app with your e-Gro account it can be completed here. Use the same username and password to complete the synchronization.

Facility

Here you can change the name of your facility.

Important: This is only available if there is no e-Gro account connected.



Bridge

Bridge WiFi

Reconfigure the bridge WiFi. This is done over Bluetooth so the app needs to be close to the bridge. After the new connection via Bluetooth make sure the app is connected to the same local network to finish the configuration

Reset Bridge

Reset the bridge to factory default settings.

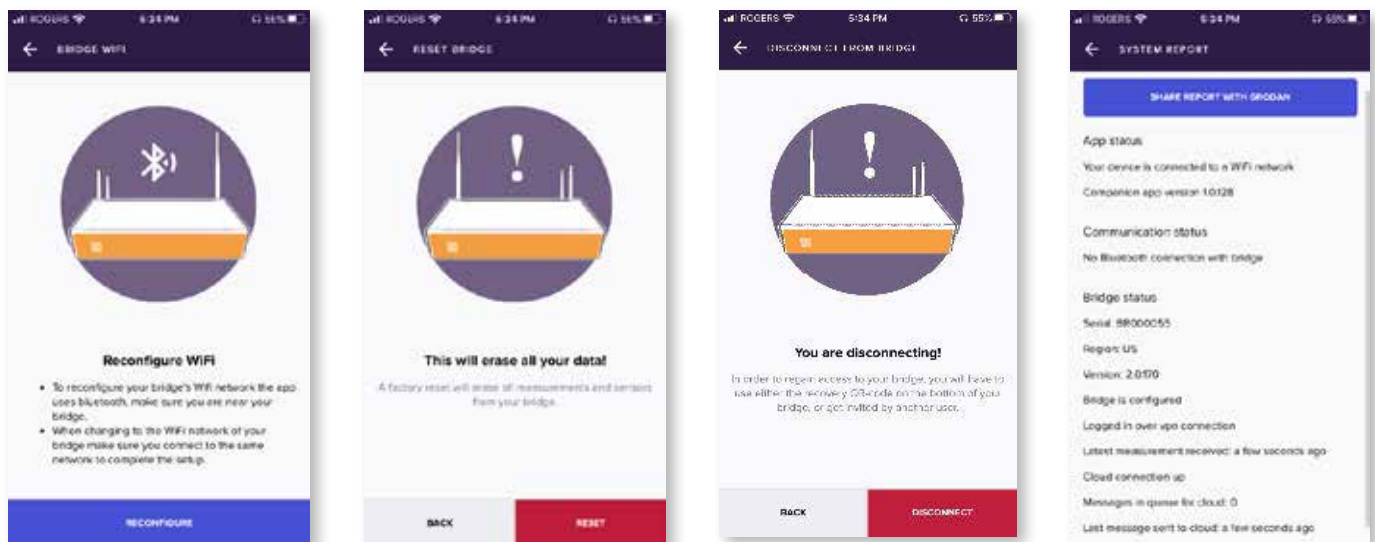
Important: Resetting a bridge will wipe all the sensor data and other settings.

Disconnect from bridge

Disconnect the app from the bridge. Authentication will be removed and the steps for a configured bridge will need to be repeated to reconnect to your device. Alternatively, you can be invited by another user.

Bridge Diagnostics/Support

Support page to get additional information on the bridge and sends it to a CSM/support mailbox for remote diagnostics.



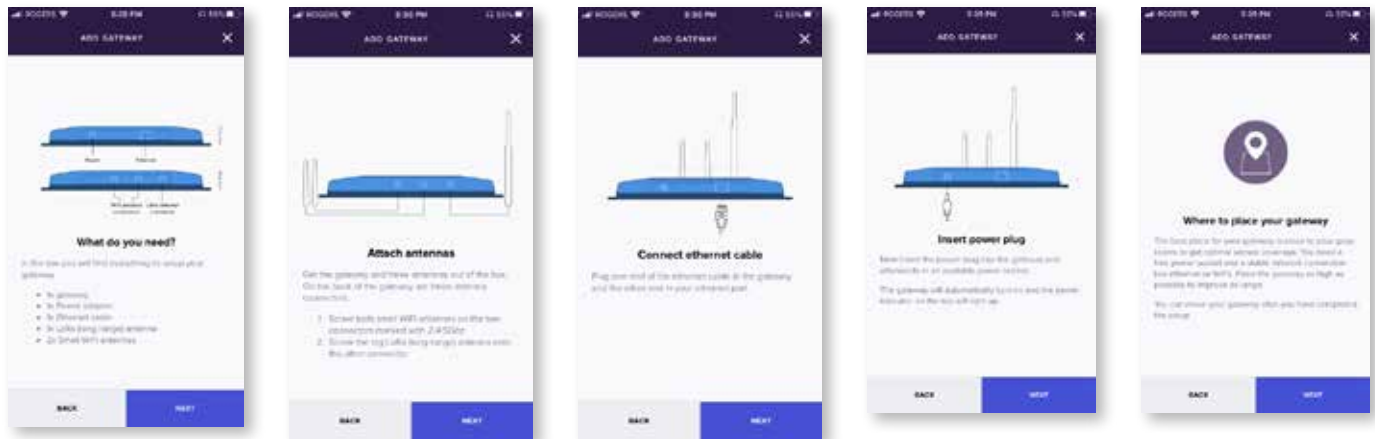
Gateways

You can increase the range of the sensor network by adding gateways. It needs to be connected to the same network as the bridge. Select the + icon and follow the instructions to add a new gateway.

Once configured you can also view the status of the device from this screen.

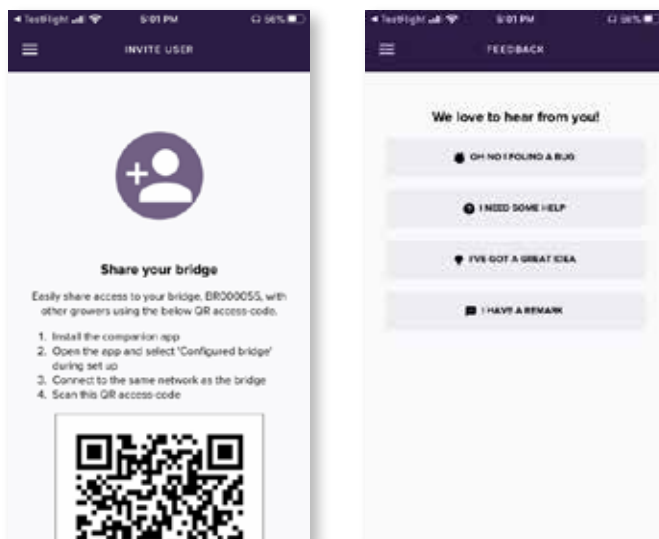
Invite user

If another grower, using the app want to access the bridge this can be done using the invite page instead of using the recovery key on the bottom of the bridge.



Feedback

Forms to quickly provide feedback that are emailed to CSM's.



The Grodan Group supplies innovative, sustainable stone wool substrate solutions for the professional horticultural sector. Based on Precision Growing principles, these solutions are particularly applied to the cultivation of vegetables and flowers. In addition to its stone wool substrates, the Grodan Group also provides tailor-made advice and tools to support Precision Growing and thus facilitate the sustainable production of healthy, safe and tasty fresh produce for consumers.

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