

# GRONODE

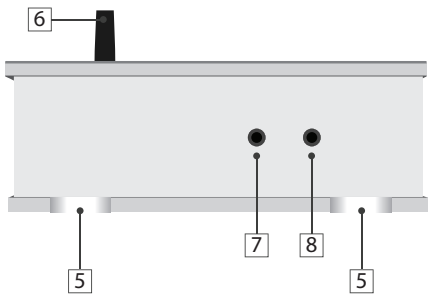
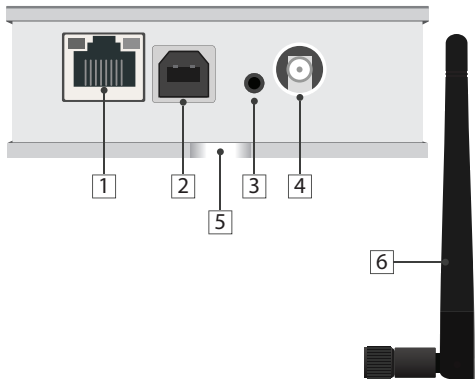
(HW03, HW04, HW05)

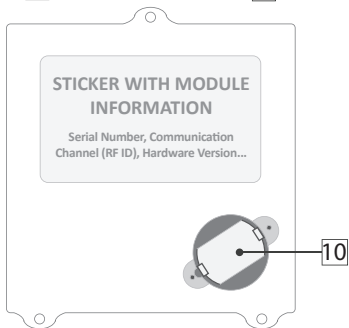
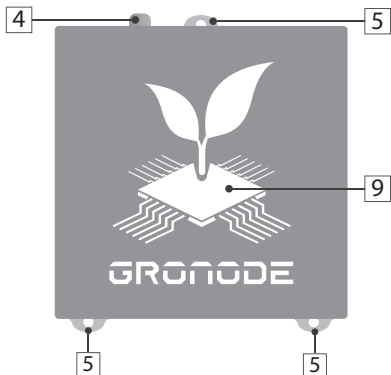


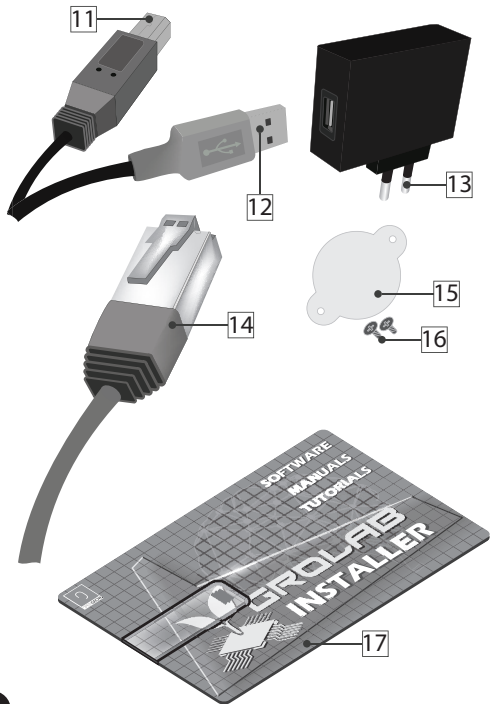
# INSTALLATION MANUAL

[www.opengrow.pt](http://www.opengrow.pt)

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- 1 Ethernet network connection port
- 2 Type-B USB power supply outlet
- 3 Module reset button
- 4 RF antenna outlet
- 5 Perforations for vertical mounting
- 6 RF communications antenna
- 7 Network configuration reset button
- 8 Firmware loading button
- 9 Status signal display
- 10 Battery holder
- 11 USB module connector
- 12 USB PC/transformer connector
- 13 110~230V<sub>AC</sub>/5V<sub>DC</sub> transformer

- 14 Ethernet LAN cable
- 15 Internal battery cover
- 16 Screws (internal battery cover)
- 17 USB pendrive with GroLab Software

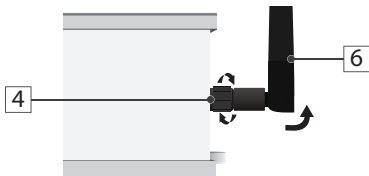
## INSTALLATION

①

### Basic connections

Screw the communications antenna (6) into the module's antenna outlet (4).

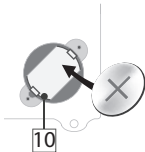
For correct communication, turn the communications antenna (6) so as to position it vertically in the direction of the module.



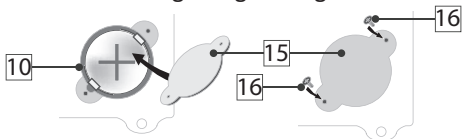
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Insert a coin cell battery\* into the GroNode's battery holder (10) with the positive pole at the top and the negative on the bottom.

\*CR2032 3V 250mAh



Place the battery cover (15) on the battery holder (10) then insert the screws (16) without exceeding its tightening.



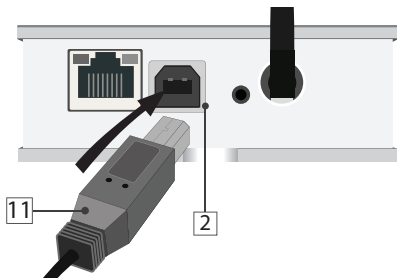
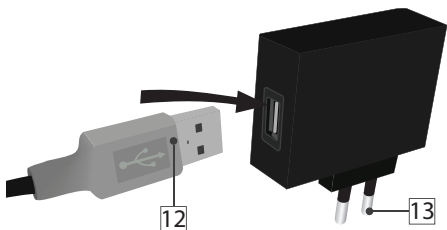
In case of loss of power, this battery ensures that the GroNode's internal clock continues to operate.

Remove the battery if you plan to keep the GroNode disconnected for a time longer than a week.

**NOTICE:** If the GroNode does not start up or it is constantly rebooting it may be due to low battery, please remove the battery or replace it. Battery should not be disposed of in the household waste but sent for recycling.



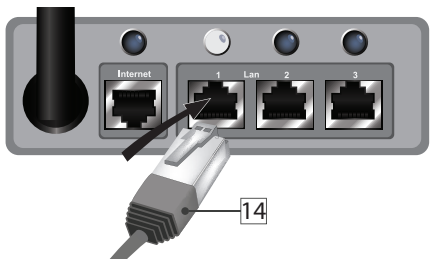
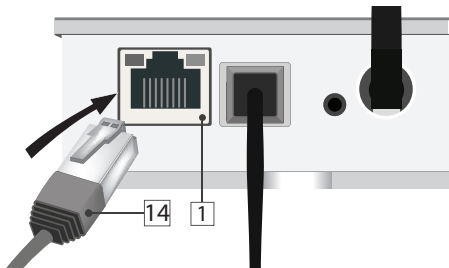
Connect one end of the USB cable (12) to the 110~230V<sub>AC</sub>/5V<sub>DC</sub> transformer and the other end (11) to the module's type-B USB outlet



Connect the transformer (13) to a 110~230V<sub>AC</sub>/5V<sub>DC</sub> power outlet.



Connect one end of the Ethernet cable (14) to the Ethernet outlet of the main GroNode module (1). Connect the other end of the Ethernet cable (14) to a free Ethernet input on your Router.



If the connection between the GroNode module and your networking device was correctly established, a yellow Led will light up. A green one will light up on the GroNode's Ethernet port.

If the module has been correctly connected to the power and the logo (9) is lit in green, but the Ethernet port LEDs do not light up (after following the steps to connect it to your router), there may be a network connection problem. Contact our technical services.

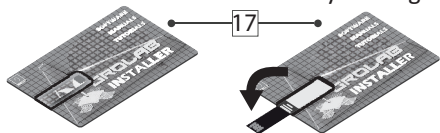
## CONFIGURATION

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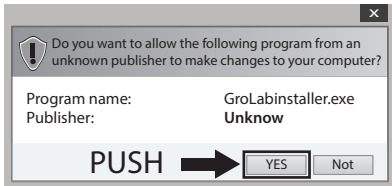
### Software installation

Open the USB Pendrive (17), insert it in your computer and run the installation program.

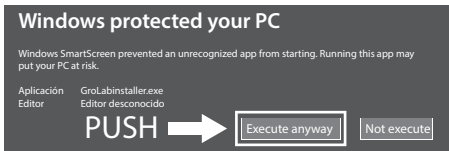
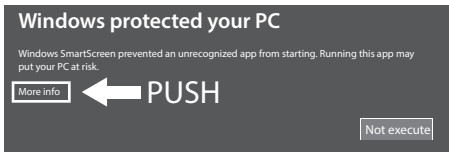
It is possible that your operating system will show an unknown software safety message.



## Windows 7 and 8.1



## Windows 10



Ignore the message, selecting **Yes** (Windows 7 and 8.1) or **Execute anyway** (Windows 10) and continue the installation.

Once the installation is complete, run the GroLab Software. Insert the credentials that you will find in the back of your GroNode. Follow the software instructions to establish a connection with GroNode.

On the back of your GroNode there's also a 10 digits serial number, insert it in the software to automatically locate your GroNode in the local network.

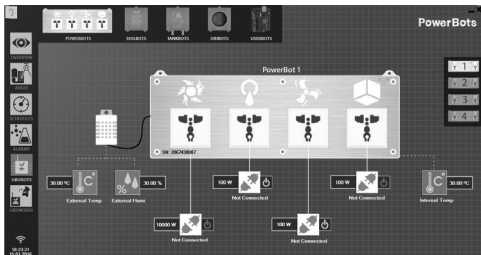
For the network connections to operate correctly, it is necessary to have the DHCP enabled on your router. If the DHCP is disabled, access your router using the procedure established by the router manufacturer and enable the DHCP option in the settings panel.

If the connection problems persist, check which IP address your router assigned to the GroNode and try to access it through the direct IP option in the GroLab software.

**NOTE:** It is also possible to connect the GroNode directly to the PC through the Ethernet cable. In this case, you should configure the network adapter to use an IP inside the default 10.0.0.1 network.

## GroNode Control

Using the software, access the module's management panel by clicking the **Modules** icon on the left-hand menu.



Connect each of the modules to the power supply. You can add up to a total of four modules of each type for each GroNode.

In a few seconds, GroNode will detect your modules. Check the GroLab tutorials\* to learn how to set your modules.

\*GroLab tutorials are available inside the USB pen drive or at [opengrow.pt/tutorials](http://opengrow.pt/tutorials).

# Problems or losses in communication

GroNode was designed to communicate with the other modules through radio frequency signals. The range of action is 25 meters (82 feet) indoors and 100 meters (328 feet) outdoors depending on space conditions.

Access the **Modules** menu on the GroLab Software and check if your modules are available. If they aren't available or they are experiencing communication losses, it is possible that you have exceeded the distance between your modules and GroNode.

Inside the **Modules** menu, you can find a wireless signal icon that indicates if the selected module is connected to the GroNode.



**NOTICE:** Some load-bearing walls and electronic devices may interfere with the signal.

If the problem persists, perform a test run by placing the module next to the GroNode and check the module's communication status through the software. If communication has been successfully re-established, repeat this operation at different distances until you detect the maximum communication distance.

If the module is not found at all, try to cycle the GroNode through all the available communication channels until you find your modules, allowing 3 minutes between channel changes.

To change the communication channel, open the GroLab Software and connect to the GroNode. Inside the **Main Menu (Configurations)**, go to **Settings (GroNode) → General Settings Tab**. Click the button in the lower right corner to enable editing and change the communication channel to the desired channel. To apply the changes, click the green button in the lower right corner.

If after following the previous steps your modules still don't show up on the GroLab Software, please contact our technical support.



## Software updates

If your equipment includes an internet connection, the software will notify you of any new updates so that you always have the latest version.

You can also download the latest version of the software at [www.opengrow.pt](http://www.opengrow.pt).

## Firmware updates

Keep in mind that some software updates will require updating your devices' firmware.

GroLab Software will guide you through all the process of updating your GroNode's firmware.

**NOTICE:** All the updates will provide crucial improvements, ensuring your system's performance.



## Reset Network

With the module powered on, press and hold the module's reset button (3) and the network reset button (7), then release the reset button (3) while holding the network reset button (7). The module should start normally and after some seconds you should see the lighting state indicator (9) to blink in purple, you should now release the network reset button (7).

After resetting the network settings, GroNode will return to the default network settings. The default settings can be found on the back of the module.

**NOTE:** DHCP option is enabled by default, this way if the GroNode is connected to a router that also has the DHCP enabled, a new IP will be automatically assigned by the router.

# SAFETY INSTRUCTIONS ⑥

The following general safety guidelines are provided to help ensure your own personal safety and protect your product from potential damage.

- Do not attempt to service the product and never disassemble the product. For some products with a user replaceable battery, please read and follow the instructions provided by the installation manual.
- Keep your device away from radiators and heat sources.
- Keep your equipment away from extremely hot or cold temperatures to ensure that it is used within the specified operating range.
- Do not push any objects into the air vents or openings of your equipment. Doing so can cause a fire or electric shock by shorting out interior components.
- Ensure that nothing rests on your equipment's cables and that the cables are not located where they can be stepped on or tripped over.
- Do not spill food or liquids on your equipment.
- Before you clean your equipment, disconnect it from the electrical outlet. Clean your device with a soft cloth lightly dampened with water. Do not use liquids or aerosol cleaners, which may contain flammable substances.
- If your equipment does not operate normally - in particular, if there are any unusual sounds or smells coming from it - unplug it immediately and contact an authorized dealer or the Open Grow support center.
- To help avoid the potential hazard of electric shock, do not connect or disconnect any cables, or perform maintenance or reconfiguration of your equipment during an electrical storm.
- Check the voltage rating before you connect the equipment to an electrical outlet to ensure that the required voltage and frequency match the available power source.
- Also, ensure that your GroLab modules and attached devices are electrically rated to operate with the AC power available in your location.
- Do not plug the equipment power cables into an electrical outlet if the power cable is damaged.
- To prevent electric shock, plug the equipment power cables into properly grounded electrical outlets.
- If you use an extension power cable, ensure that the total ampere rating of the products plugged into the extension power cable does not exceed the ampere rating of the extension cable.

# WARRANTY

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Open Grow, LDA, guarantees the purchaser that the product is free from material and/or manufacturing defects. Open Grow, LDA, liability is limited to the repair or replacement of any defective parts. Do not ship directly to Open Grow, LDA, without first consulting with us to verify the procedure that should be followed.

Contact our technical services at [support@opengrow.pt](mailto:support@opengrow.pt).

All Open Grow, LDA, products have a 2-year guarantee except for consumables (sensors and/or actuators of any type) and under normal use.

The loss of the “GroNode” module’s internal battery life as a result of its aging is not considered a manufacturing defect. Follow the replacement procedure indicated in the user manual available on your application or request more information from the technical services.

A guarantee claim is non-transferable and only the original purchaser can submit one. To enforce the guarantee the customer must always provide the purchase invoice.

## **GUARANTEE DISCLAIMER:**

Application of the guarantee is excluded should the breakdown of the defective part or parts be a result of the product’s inadequate and/or negligent use. Understood as inadequate and/or negligent use is any use other than the one for which the product is meant and/or that is recommended in the instructions manual, not executing the maintenance operations recommended in the instructions manual, carrying out operations that are different from those mentioned and that compromise the quality of the product, modifications that are not performed by authorized repairers and/or with non-original or non-approved parts.

# COMPLIANCE

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This symbol on the product or packaging means that according to local laws and regulations this product should not be disposed of in the household waste but sent for recycling. Please take it to a collection point designated by your local authorities once it has reached the end of its life, some will accept products for free. By recycling the product and its packaging in this manner you help to conserve the environment and protect human health.



This symbol on the product or packaging means that this product is compliant with RoHS Regulations of the European Parliament and Council Directive on the Restrictions of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (2011/65/EU).



This symbol on the product or packaging means that this product is in compliance with the following directives and regulations:

- (2014/53/EU) Radio equipment directive.
- (2011/65/EU) RoHS directive.
- (2014/35/EU) Low voltage directive.
- (2014/30/EU) EMC.



	Frequency Band(s)	Max. Output Power (EIRP)
2.4 G	2.4 - 2.4835 GHz	100 mW



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