



# Crankk official guide for onboarding a Controllino gateway

- 1) Flash the SD card with the Crankk image
- 2) Local Dashboard setup
- 3) User Dashboard setup



We have to mention that onboarding a Controllino gateway in Crankk is not the easiest process.

We'll break this process down into smaller, manageable steps to make it hassle-free for you.

However once you've got the SD card in your hands, the rest is a piece of cake!

Here are a few things you might need for this guide: a T15 Torx, a 5mm Hex Female bit, tweezers, a screwdriver, pliers and an SD card reader/adaptor:



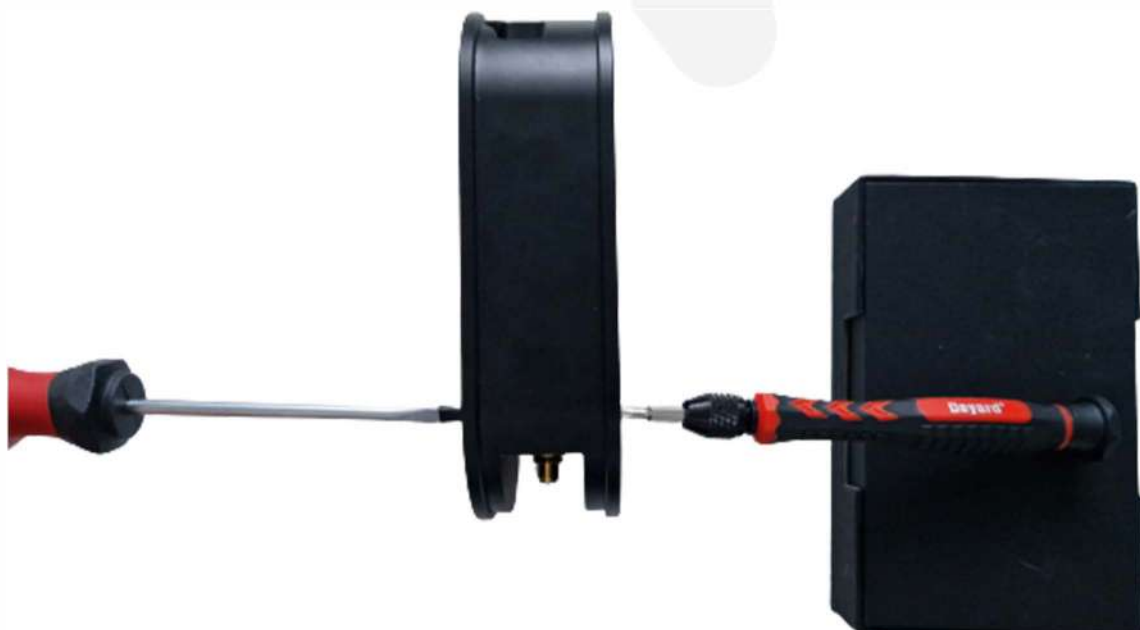
## 1) Flash the SD card with the Crankk image

You might want to consider getting replacement parts before you start with the guide, as it's very likely that some of the bolts will break. Below you can find an example of replacement parts kits.

**[Replacement parts link](#)**

### 1. Remove the top lid.

Take off the top lid using the T15 Torx. To maintain better balance and stability, you may want to hold the opposite side of the lid with a screwdriver.



**2. Open the top cover and remove the antenna connector from the LoRa module.**



**3. Remove the power connector from its socket.**

This is an easy task, as the connector is loose. If you use pliers to do this, be careful not to damage the connector cables.



#### 4. Take off the whole board.

Please do not remove the LoRa module attached to it.  
To flip the board, use a screwdriver for one side and tweezers for the other.



A sneak peek to the Raspberry Pi module:



## 5. Detach the SMA connector.

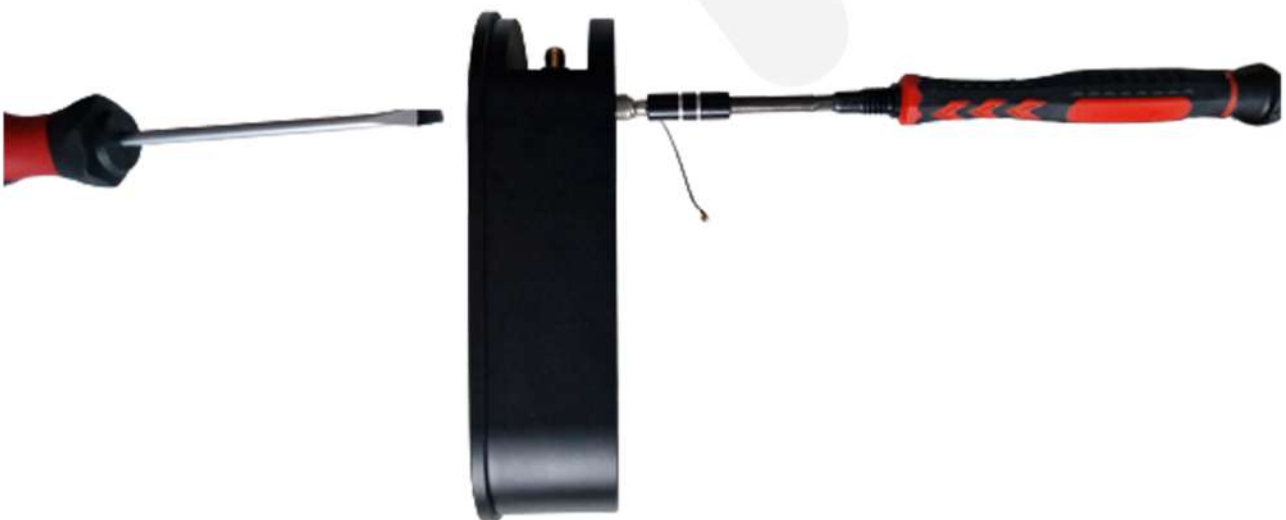
This step is optional. If you decide to skip it, please be careful not to damage the cables while pulling out the Raspberry Pi board.

## 6. Take out the bolts located on the back side of the Controllino gateway.

This is the hardest step, so please proceed carefully, as the bolts may be glued in place (thanks, Controllino!).

As shown in the image, start slowly unfastening the bolts from the outside with a slotted screwdriver while holding them with a hex screwdriver from the inside. If you are successful, that's great.

However, if the bolts do not come out this way, it means they are glued and you will need to apply more pressure to break them apart. Start slowly unscrewing the bolts with the slotted screwdriver to the right while applying maximum pressure, then switch directions. After doing this a few times, the bolts should break.

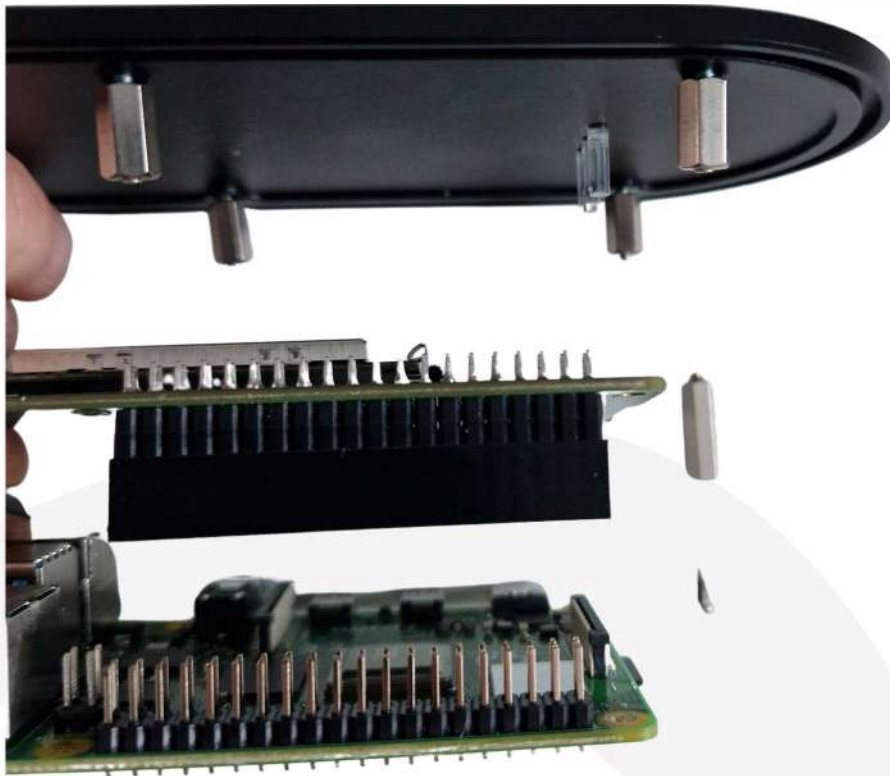




## **7. Flash the SD card and put it back in place.**

Take out the SD card and flash the Crankk image as shown in the next steps.

When you're ready to insert the SD card back into the Controllino, be careful with the pins that connect the Raspberry Pi board to the board holding the LoRa module. Take a look from the side to ensure a perfect match.



You can copy the **config** file from your original SD card and use it, or you can choose to use your own card to flash the image. We recommend using at least a 64GB SD card.

### **8. Download the Crankk image and balenaEtcher.**

Follow [this link](#) to download the official **Crankk IMG**.

And [this one](#) to download the **balenaEtcher** software, which is needed to flash the image to the SD card.

While you wait for the downloads to complete, head over to your Controllino gateway.

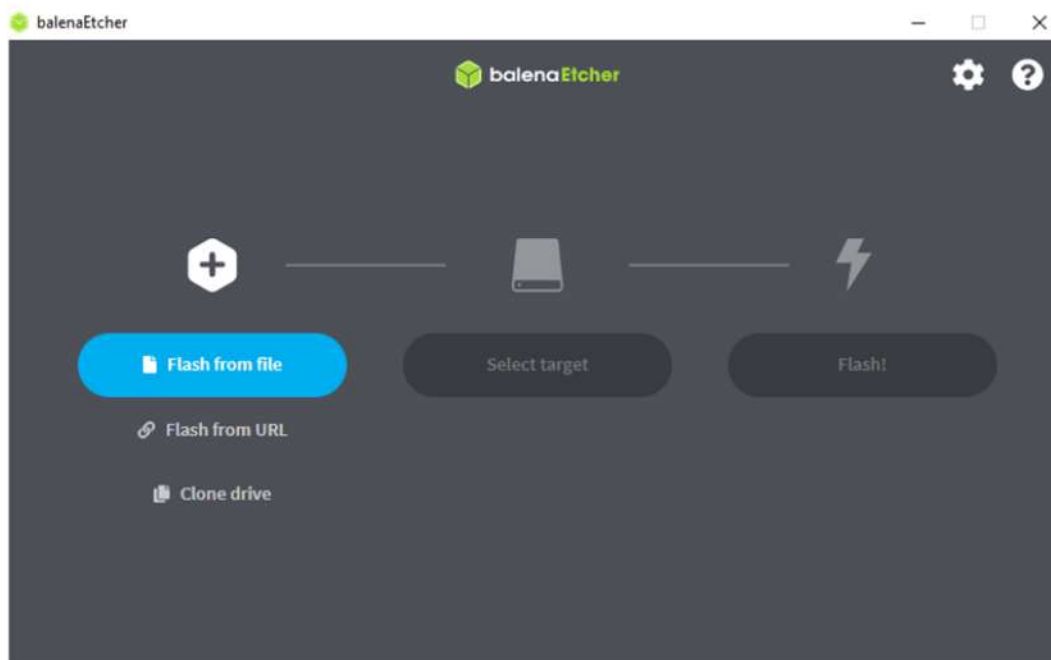
## 9. Remove the SD card from your Controllino gateway and insert it into an SD card reader/adapter on your PC.

To begin, gently remove the plastic tab and use tweezers to extract the SD card.

Next, insert the card into an SD card reader/adapter on your PC and you're ready to get started.

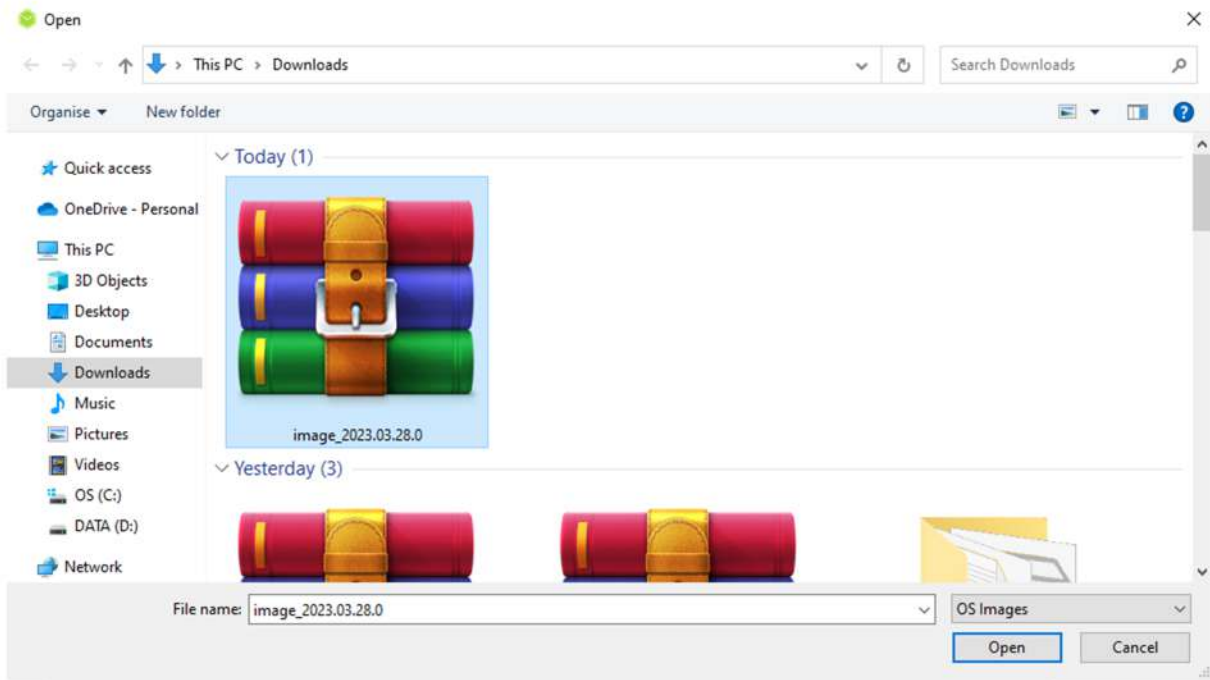
A message **Format Disk** might appear on your screen. You don't need to format the card, as the **balenaEtcher** will take care of it. You can copy the **config** file from the SD card and keep it as a backup.

## 10. Install balenaEtcher and flash the SD card.

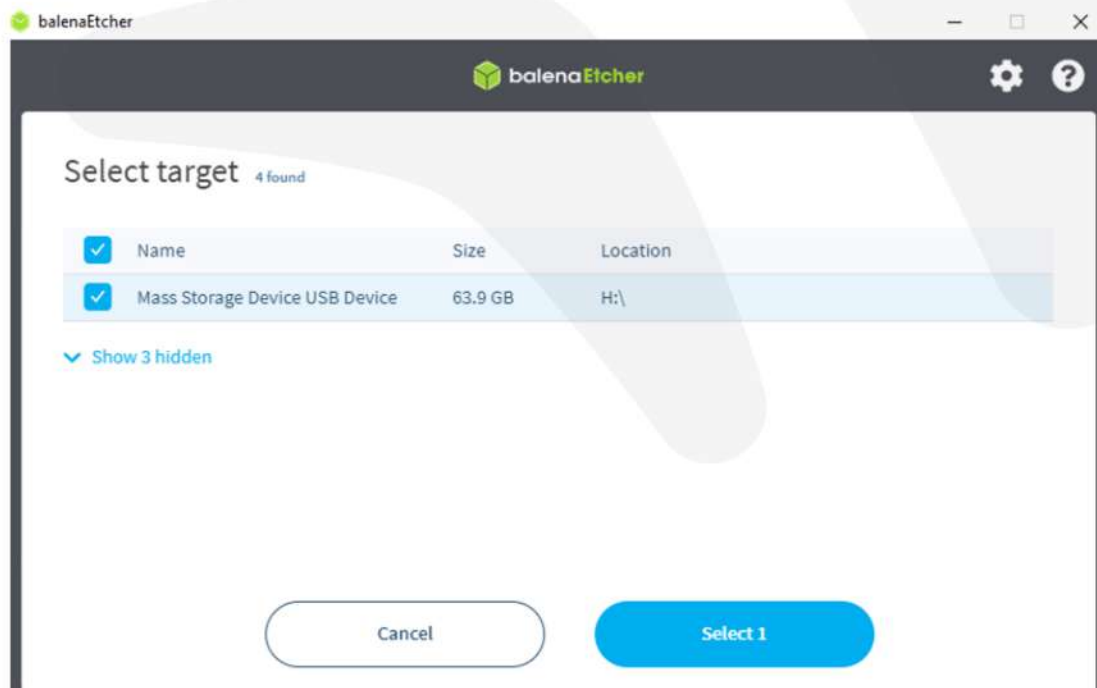


Use the **Flash from file** option and select the Crankk image file you have downloaded. You don't need to unzip the file, just select it as is





Okay, next pick your SD card > **Select** > **Flash**



The flashing process can vary, but usually takes about 20-30 minutes.

## 11. Place the SD card back into the gateway.

Once the process is completed, insert the SD card back into your gateway and attach the antenna.

Then connect the gateway via an Ethernet LAN cable to your local network and power it on.

Please wait a few minutes for the gateway to boot up and then return to your PC.

## 2) Local Dashboard setup

### 12. Log in to the Local Dashboard.

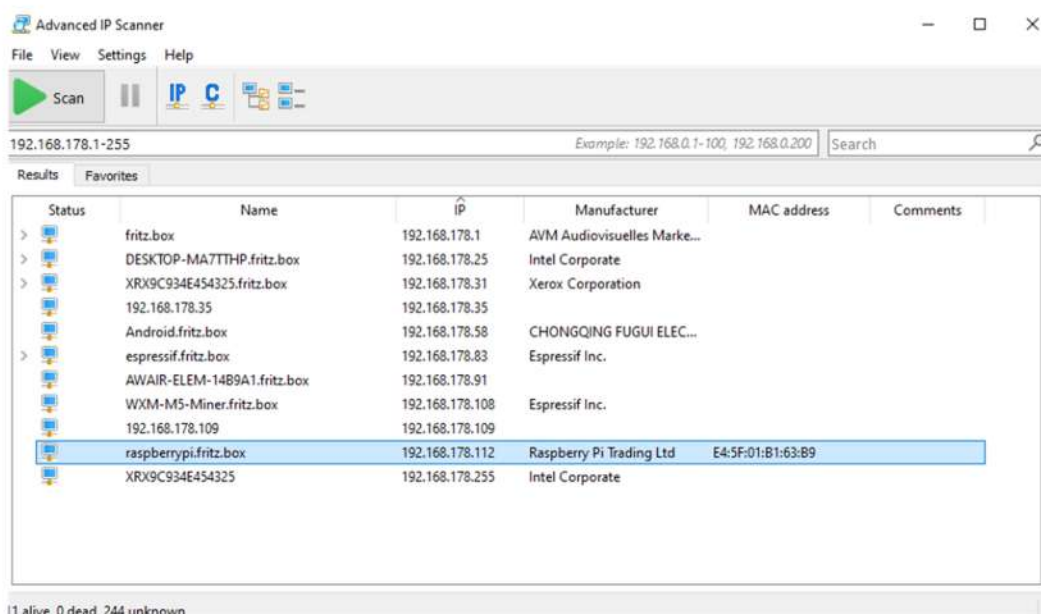
We have automated the process and you do **NOT** need to download the **Crankk Installer** anymore.

Instead, just log in to the **Local Dashboard**.

If you have any VPN enabled on your PC, please turn it off.

Now check your router to find the gateway IP address.

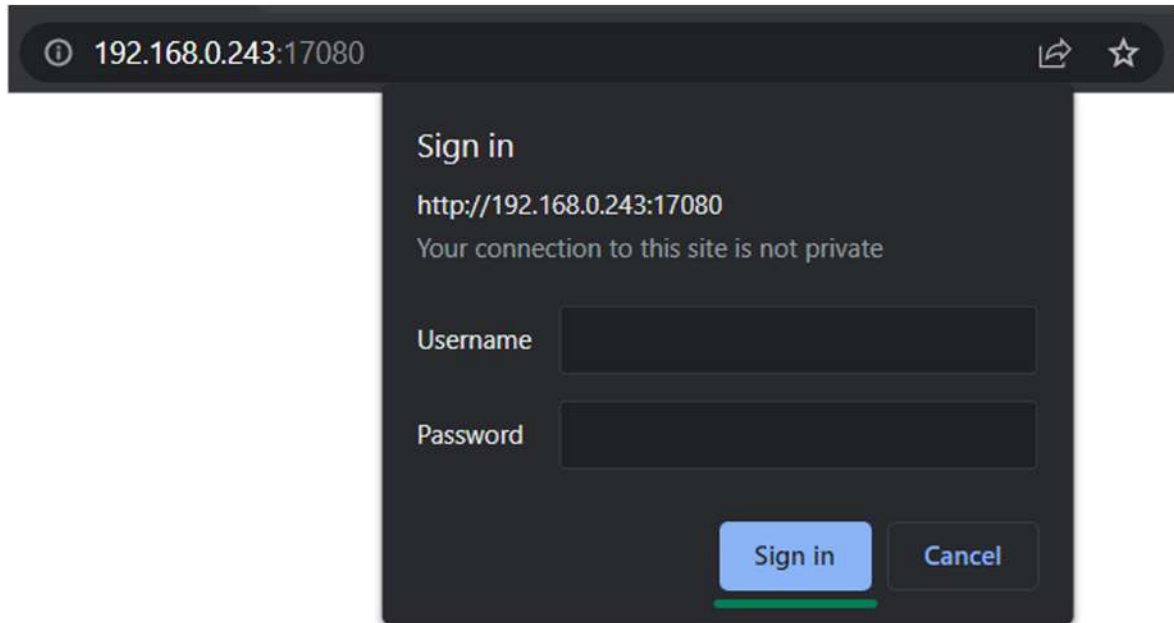
If you are unsure how to do this, you can use free tools like **Advanced IP Scanner** to help you out. Check the **MAC address** of your gateway to find the correct IP address.



Once you have the LAN IP address of your gateway, open a new browser tab from a PC on the same network and paste the IP followed by **:17080**

`http://192.168.0.243:17080`

When logging in for the first time, you do not need to enter any credentials, just press **Sign in**.



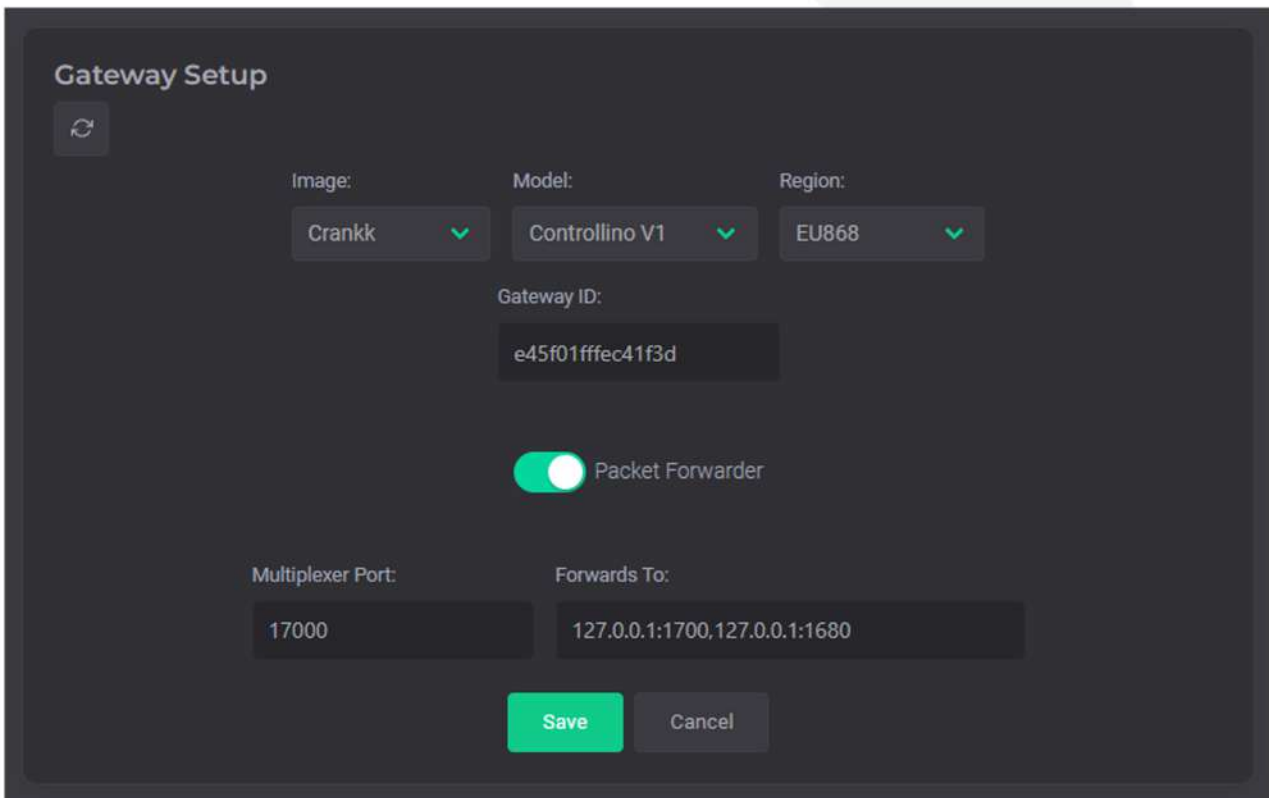
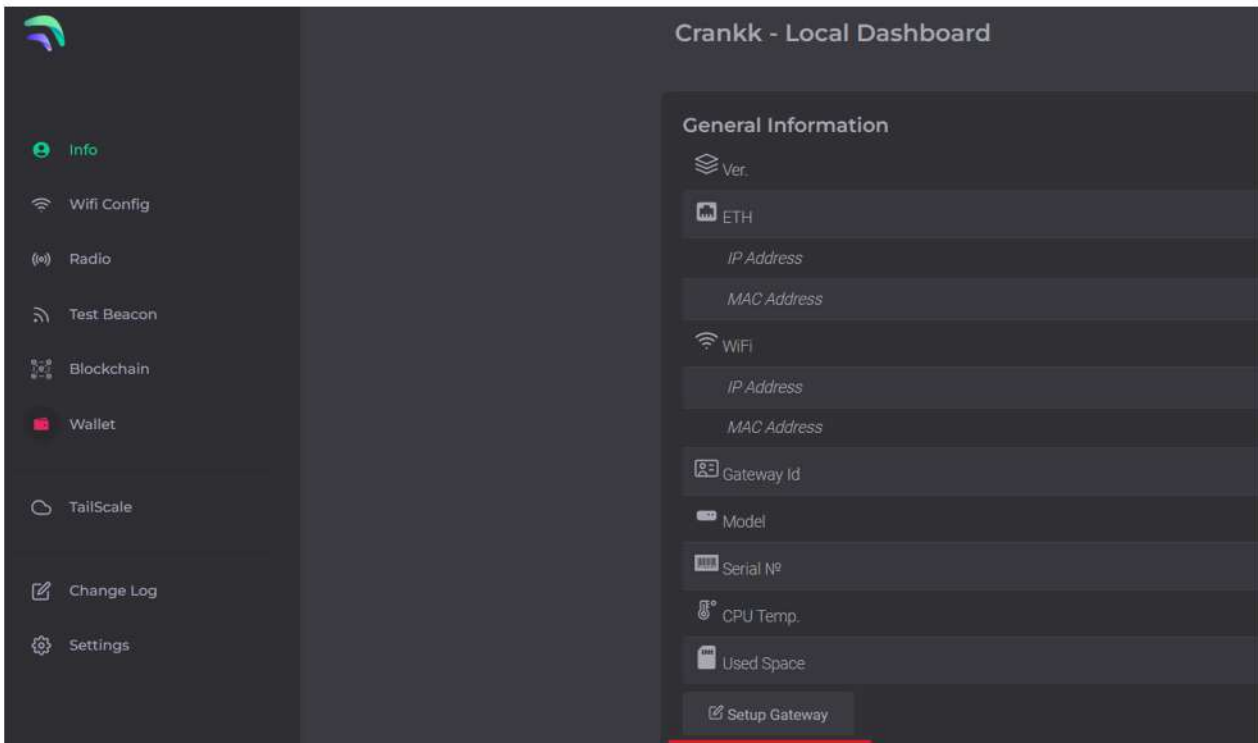
After setting up your gateway, next time you can log in with the following credentials:

- Username: **admin**
- Password: **the last 6 symbols of the gateway's MAC address (e.g. B163B9)**

Please note that you can change the password in the **Settings** tab.

### **13. Set up the gateway.**

Go to the **Info** tab > **Setup Gateway**



Copy your **Gateway ID**, as we will need it later.  
Select the **Image** that is installed on your gateway (Crankk / Helium / Nebra), **Model** and **Region\*** (EU868 / AU915 / US915).  
For **Controllino** gateways, only the Crankk image is available at the moment.

Turn on the **Packet Forwarder**.

If you are currently mining or planning to mine Helium, leave the **Forwards to** box unchanged as shown in the screenshot.

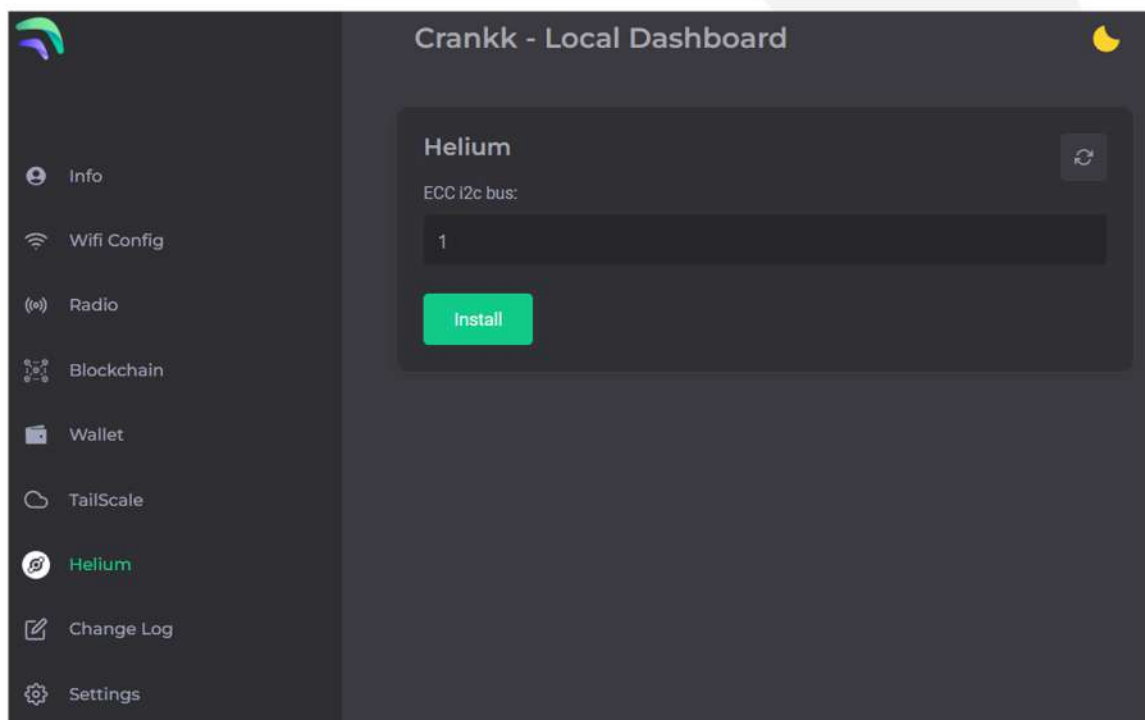
If you don't wish to mine Helium, leave only **127.0.0.1:1700**

Hit **Save**.

Your gateway will restart automatically. Please wait a few minutes while it loads.

#### 14. Double mining.

If you want to participate in Double mining, you can install Helium from here:

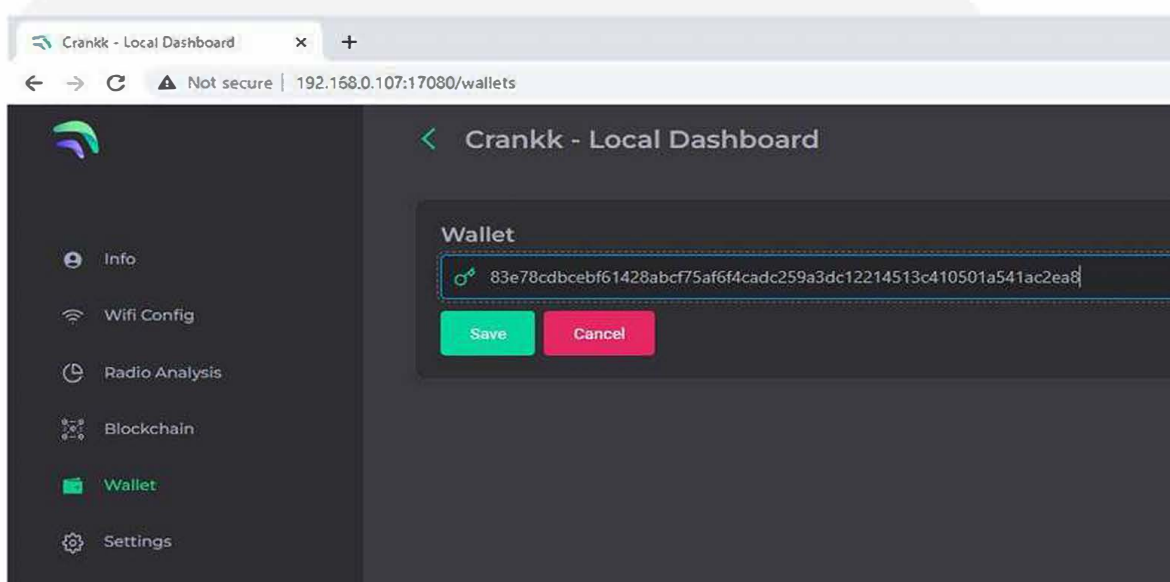


#### 15. Import your secret key.

Hint: If you don't have your secret key saved, you can go to the **User Dashboard > Wallets > find the correct wallet > use the three dots to reveal the secret key.**

Navigate to the **Wallet** section in the **Local Dashboard** and enter your **secret key**, keeping the following in mind:

- Please ensure that you copy and paste the **secret key** exactly as it is, without any spaces or other symbols
- Please double-check that it is the correct **secret key** and that it does not belong to another gateway
- Please also note that your **secret key** is different from your **wallet address/public key** starting with k:



Hit **Save**.

If you have entered the correct secret key, then you will see your **k: wallet address** displayed in the **Wallet** field.

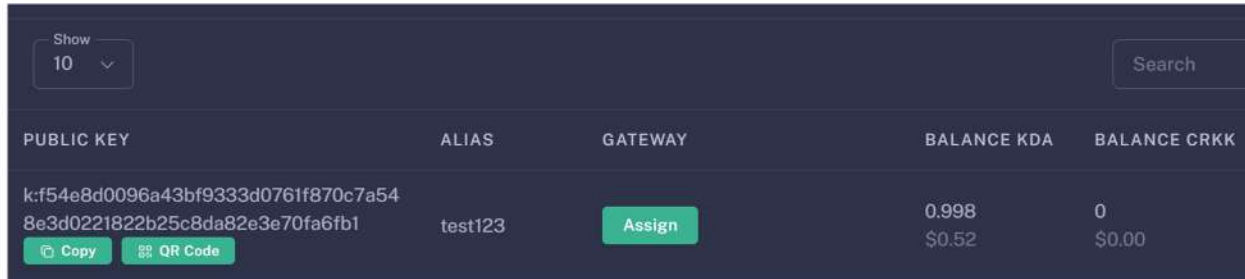
### 3) User Dashboard setup

**16. Assign your gateway ID to a wallet in the User Dashboard.**

Log in to the **User Dashboard**.

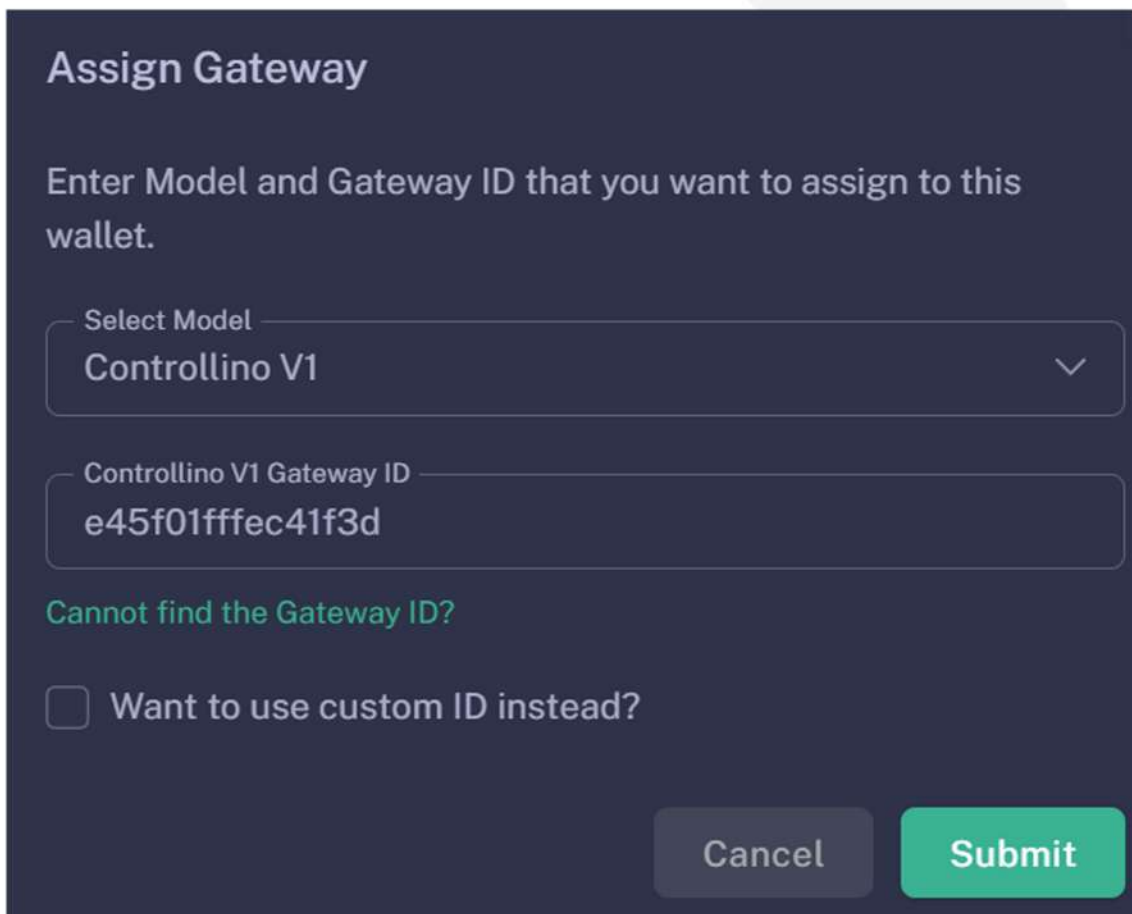
Navigate to the **Wallets** section and select the wallet that you want to use for your software license activation.

Assign your gateway ID to the chosen wallet by clicking on the **Assign** button. If you don't see such a button, it means you haven't purchased a software license for this wallet



PUBLIC KEY	ALIAS	GATEWAY	BALANCE KDA	BALANCE CRKK
k:f54e8d0096a43bf9333d0761f870c7a54 8e3d0221822b25c8da82e3e70fa6fb1	test123	<b>Assign</b>	0.998 \$0.52	0 \$0.00

Select your gateway **Model**, copy and paste your **Gateway ID** (please double-check that it is correct) and hit the **Submit** button



**Assign Gateway**

Enter Model and Gateway ID that you want to assign to this wallet.

Select Model  
Controllino V1

Controllino V1 Gateway ID  
e45f01ffec41f3d

[Cannot find the Gateway ID?](#)

Want to use custom ID instead?

Cancel Submit

Please wait a few minutes to allow the changes to sync to the blockchain.

Congratulations! You have successfully onboarded your Controllino gateway on Crankk!

*\* Crankk currently supports the following frequencies: EU868 MHz, AU915 MHz and US915 MHz. It is essential to ensure that any hardware purchased from a third-party company for use with Crankk operates on the correct frequency for your region of residence. Crankk Inc. assumes no responsibility for any issues arising from the use of hardware with an incorrect frequency. It is the responsibility of the user to select the appropriate frequency for their region of residence.*

**Please note that any modifications, updates or restrictions made by the gateway manufacturer that may impact the performance or functionality of the gateway on the Crankk network are beyond the control and responsibility of Crankk Inc. Users are advised to check compatibility and seek assistance from the gateway manufacturer for any gateway-related issues.**