



Crankk official guide for onboarding a RPi Linxdot CM4 gateway

- 1) Flash the Crankk image to the Linxdot's internal memory (eMMC module)
- 2) Local Dashboard setup
- 3) User Dashboard setup



For this guide you will need:

Download **balenaEtcher** and **Crankk image**

PC/Laptop with Windows OS

Micro USB to USB A cable and one standard pin jumper



To follow this guide, please make sure you have the **Raspberry Pi CM4** version of the **Linxdot** gateway.

The easiest way to distinguish between these two variations is by inspecting the rear side of your device, where the ports are situated.

You can identify **Rockchip** gateways by the presence of a 'BT Pair' button located near the antenna connector, while **CM4** units lack this feature.



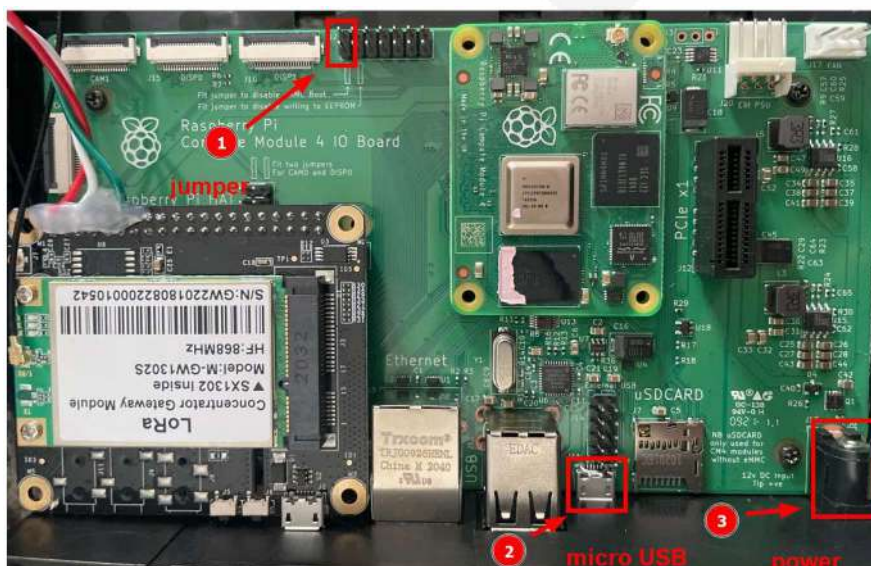
Remove the LAN cable but keep the Antenna on the gateway.

1) Flash the Crankk image to the Linxdot's internal memory (eMMC module)

1. Prepare the Linxdot for onboarding

You will have to open the **Linxdot** gateway.

Here is how the board will look from the inside.



In order to disable eMMC boot, first insert the jumper on the last slot as shown.

Secondly, connect the **Linxdot** to your PC via micro USB cable.

And lastly, plug in the power adapter.

2. Install RPI boot tools

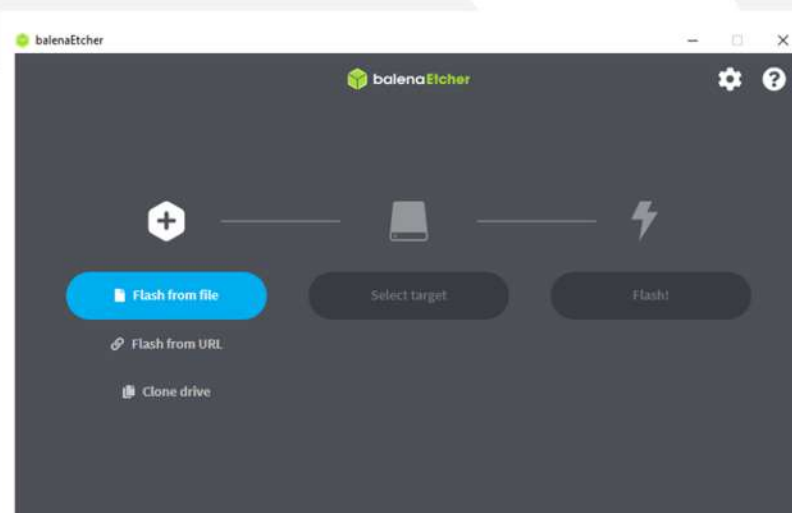
Download and install the **RPI boot tool**; this is necessary to establish a connection between the board and your PC.

Wait for the driver installation to complete then the Compute Module **eMMC** will appear on Windows as a disk.

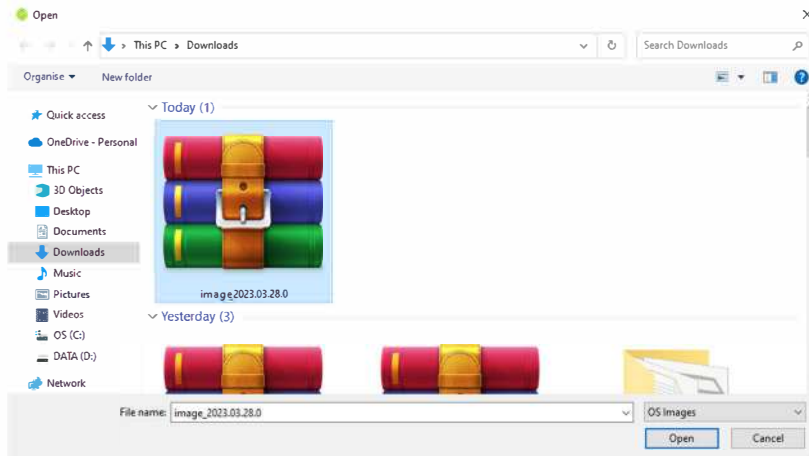
If the **eMMC** doesn't appear, run the **RPIboot.exe** file (search for "rpiboot" in the search bar to locate the file).

3. Flash the Crankk image to the eMMC module

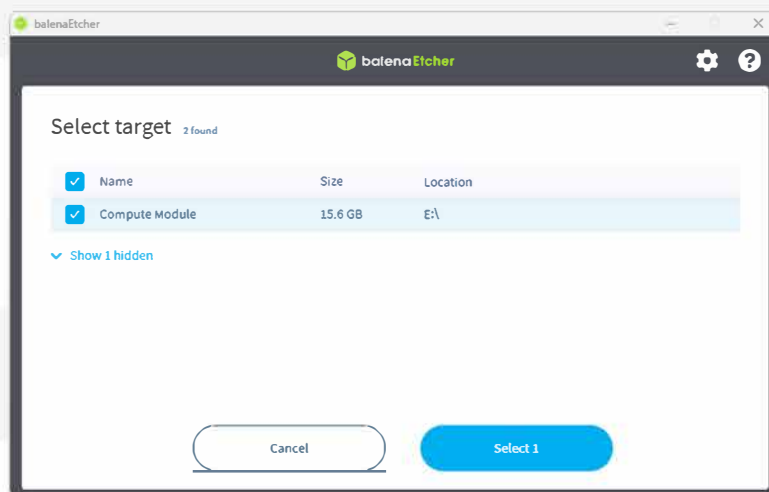
Install **balenaEtcher** and start the program.



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 the **eMMC module** > **Select** > **Flash**



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

4. Reassemble the gateway.

Once the process is completed, remove the **Micro USB**, the **power adapter** and **jumper** from the **Linxdot** device.

Reassemble the gateway.

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

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

2) Local Dashboard setup

5. Log in to the Local Dashboard.

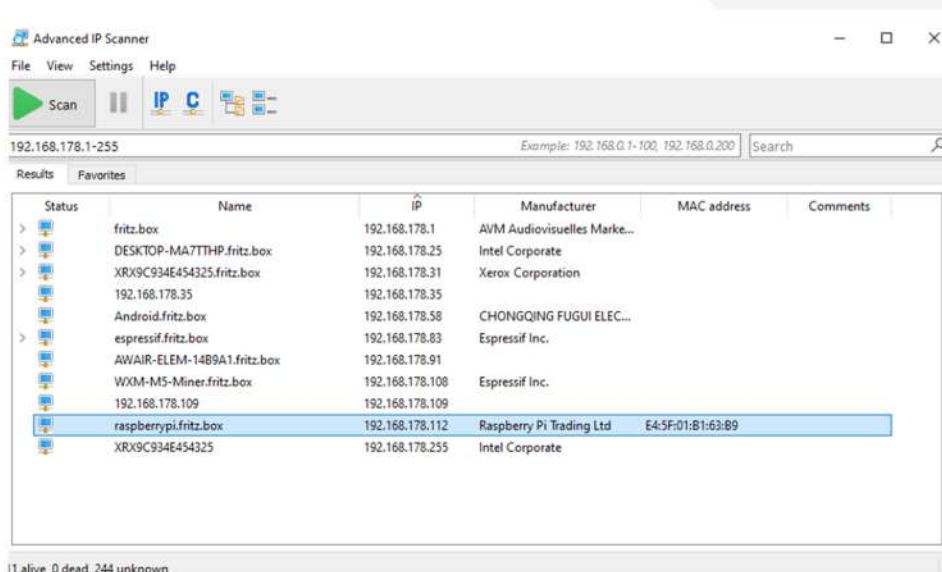
We have automated the process and you do **NOT** need to download the **Crankk Installer** anymore.

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**.

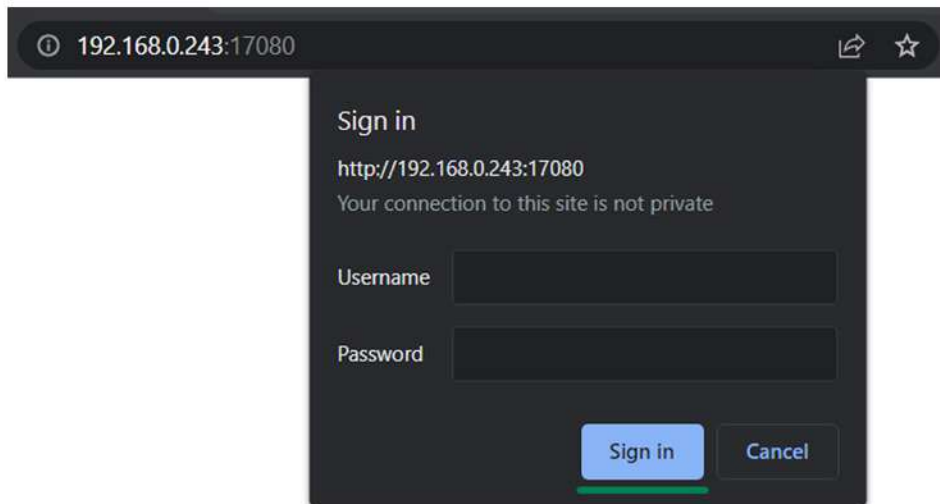
If you are unsure how to do this, you can use free tools like **Advanced IP Scanner** to help you out. Check the **MAC address** of your gateway to find the correct IP address.



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**.



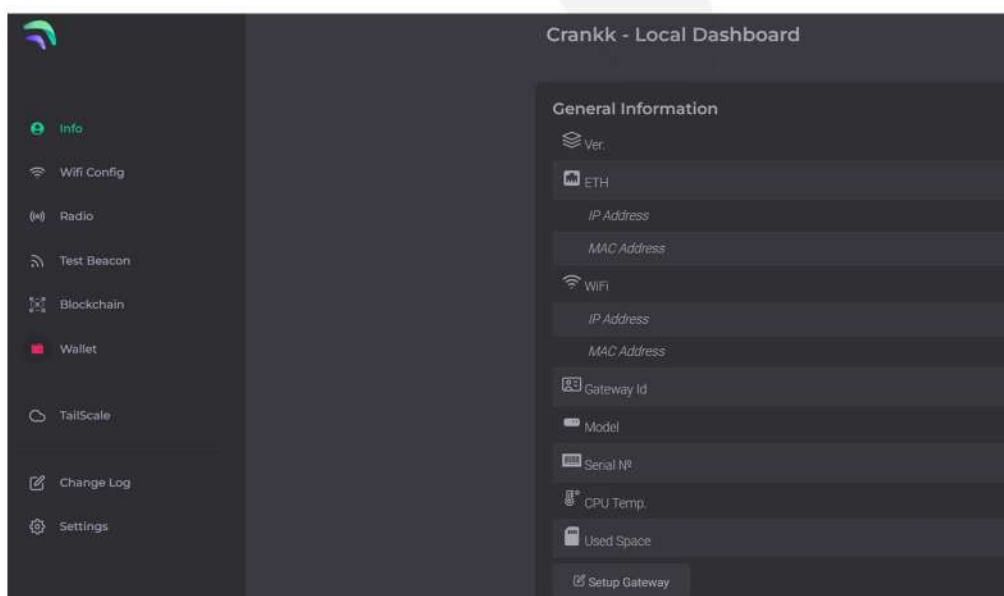
After setting up your gateway, next time you can log in with the following credentials:

- 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.

6. Set up the gateway.

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



The screenshot shows a 'Gateway Setup' form with the following fields and values:

Gateway ID	e45f01ffec34b2c
Image	Crankk
Model	Linxdot (CM4)
Region	EU868
Packet Forwarder	<input checked="" type="checkbox"/>
Multiplexer Port	17000
Forwards To	127.0.0.1:1700,127.0.0.1:1680
GPS	<input type="checkbox"/>

At the bottom of the form are two buttons: 'Save' (highlighted in green) and 'Cancel'.

Copy your **Gateway ID**, as we will need it later.

Select the **Image** that is installed on your gateway (Crankk / Helium / Nebra), **Model (Please use only Linxdot CM4)** and **Region*** (EU868 / AU915 / US915).

For **Linxdot** 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.

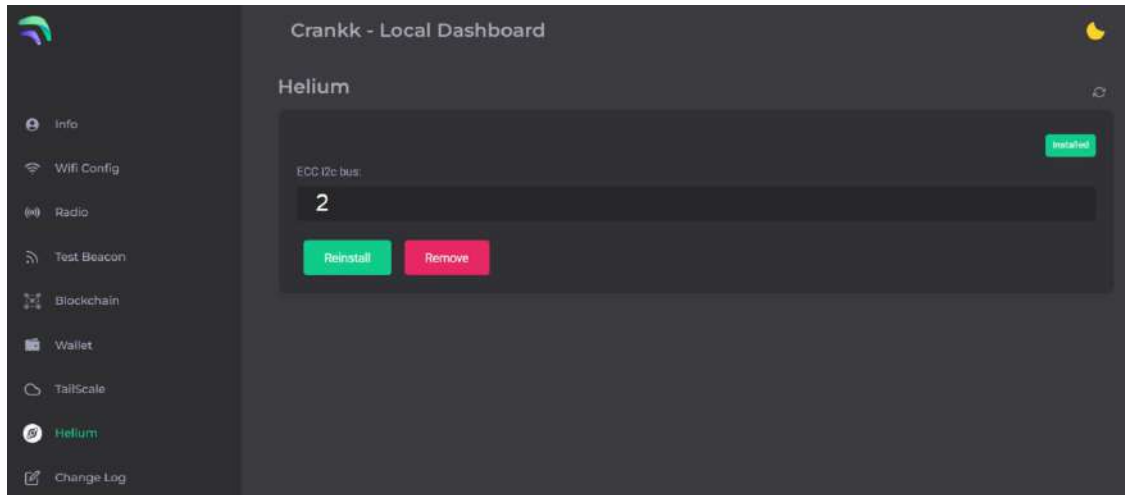
If you don't wish to mine Helium, leave only **127.0.0.1:1700**

Hit **Save**.

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

7. Double mining.

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

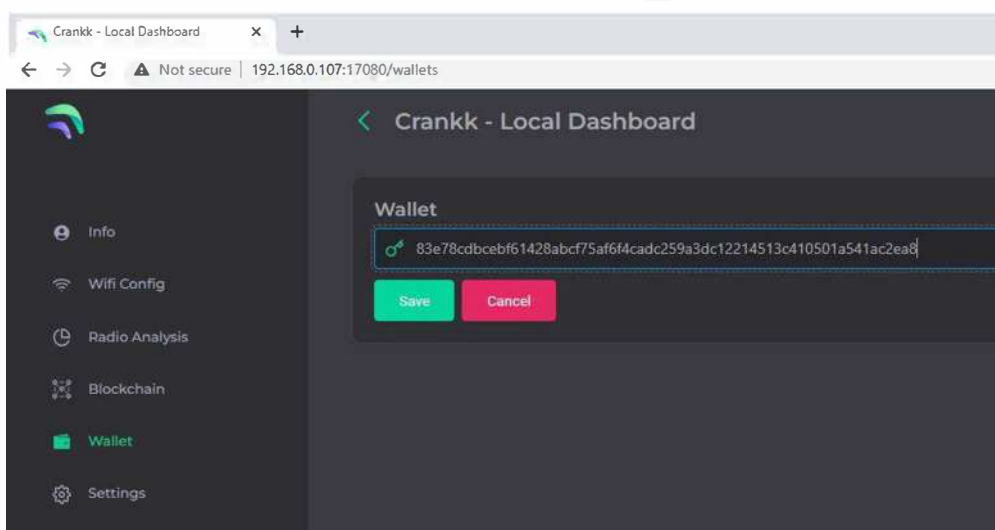


8. Import your secret key.

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.

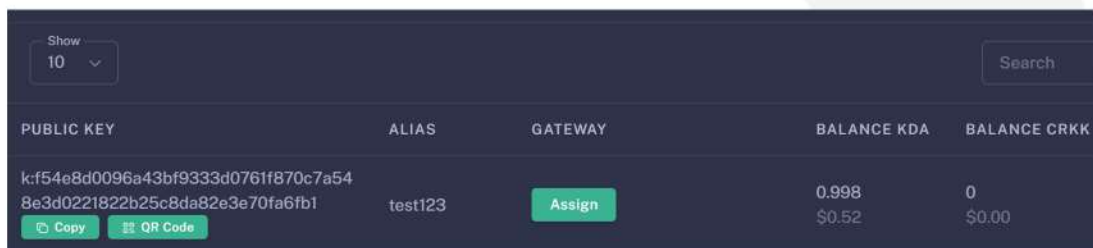
3) User Dashboard setup

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

Visit **User Dashboard** and sign in into your account.

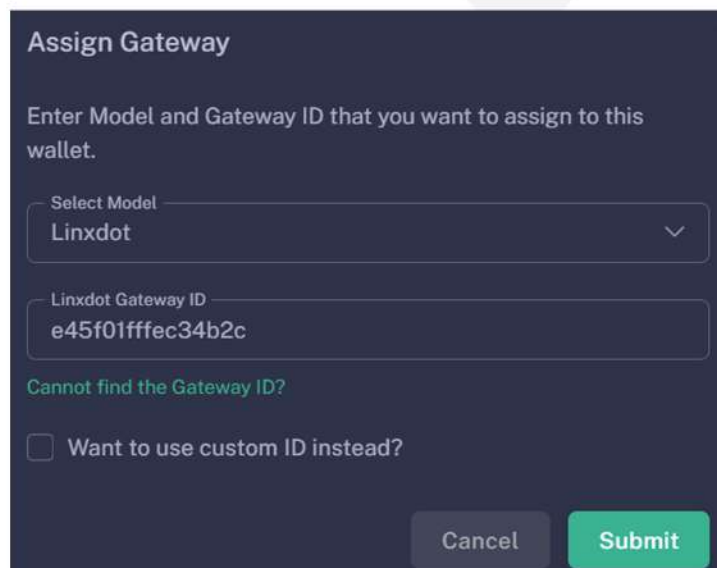
Navigate to the **Wallets** section and select the wallet that you want to use for your software license activation.

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	Assign	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
Linxdot

Linxdot Gateway ID
e45f01ffec34b2c

[Cannot find the Gateway ID?](#)

Want to use custom ID instead?

Submit

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

Congratulations! You have successfully onboarded your **Linxdot CM4** 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.