

Crankk official guide for onboarding a Linxdot Rockchip variant gateway

 Flash the CrankkOS image to the Linxdot's eMMC
Local Dashboard setup

3) User Dashboard setup



Here are a few things you might need for this guide: USB C cable



To follow this guide, please make sure you have the **rockchip-based** 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.



In this guide, we will walk you through the process of flashing the **CrankkOS** image onto your **Linxdot** gateway using a Windows OS PC.

1) Flash the CrankkOS image to the Linxdot's eMMC

1. Download the CrankkOS image.

Please follow this **link** to download the **CrankkOS image for Linxdot**.

Once the download is complete, extract the contents of the downloaded image file.

Also download **the bootloader**, an essential component for the later stages of this guide.

2. Download and Install the Rockchip Flashing Tools.

For this step there is no need to connect your Linxdot device to your PC yet.

Rockchip Flashing Tools are available for **Windows/Linux/** MAC OS.

For Windows users, download the latest recommended version of the tools. Follow the instructions provided to install the tools. Make sure to install **RKDriverAssistant** as the first step. Then please restart your PC.

3. Connect the Linxdot to your PC via USB C cable

Use a USB C cable to connect the **Linxdot** to your PC. The port is located on the back of the gateway. For now, keep the gateway powered off.

4. Flash the unzipped CrankkOS image to the eMMC Run **RKDevTool.exe** to start the flashing tools.

Our goal here is to erase the flash memory and then install the **CrankkOS** image.

This is how it's going to look the tool interface, before the procedure:

oot				S#tt	Download
mware				Sw.	Unpack
adFlashID	ReadFlashInfo	ReadChipInfo	ReadCapa	bility	1. FLASH 2. EMMC 3. SD
stDevice	ResetDevice	Go Maskrom	Switch Sto	rage	4. SD1 5. SPINOR 6. SPINAND 7. RAW
ClearSn	DetectSecure	ExportComLog	t Selected	Stora	8. USB 9. SATA 10. PCIE
ortimage	EraseLBA	EraseAll			
irt.					
unt					

Now, while the gateway is powered off press and hold the **BT-Pair** (the same function as Recovery button from Bobcat guide) button and then insert the power cable into the **Linxdot**.

If the procedure is successful, you will receive a message indicating **Found One Loader Device**.

Download Image 0	pgrade firmware	Autanoeu Tunotio	•		
Boot					Download
Firmware				***	Unpack
ReadFlashID	ReadFlashInfo	ReadChipInfo	ReadCap	ability	1. FLASH 2. EMMC 3. SD
TestDevice	ResetDevice	Go Maskrom	Switch St	orage	4. SD1 5. SPINOR 6. SPINAND 7. RAM
ClearSn	DetectSecure	ExportComLog	t Selected	Stora	8. USB 9. SATA 10. PCIE
Exportimage	EraseLBA	EraseAll			
Start.					
Count					

Navigate to Advanced Function and select Flash.

Click on **EraseAll** button and wait until its 100% completed.

Once finished, remove the power cable and again hold **BT-Pair** button and insert the power cable back to the device. If the **Linxdot** can't be found, restart your PC and try again.

5. Flash the CrankkOS image Open **RKDevTool.exe** again.

Please note that this will erase all the previous information, stored on the **Linxdot**.

#		Storage	Address	Name 5	Path	
1		_	0x00000000	Loader	C:\Users\rock\Des	ctop/Image=Rad
2	~	EMMC	0x00000000	Image	C:\Users\rock\Desl	top\rock-5b-d
					4	Clear Items Move Up Move Down Load Config Export Config
0.0	dor Vi	ar1 0b 6	Run	Switch	Dev Partition	Clear

- 1. Select Download image tab
- 2. Make sure you are in **Maskrom mode** and **EMMC** is selected
- 3. Enable Write by Address
- 4. Right-click in the blank area of the list and select **Load** configuration file.



5. Now we have to assign the path of the **boot loader** and **CrankkOS image**

- Navigate to the download location of the boot loader by selecting the empty box next to **Path section**

and the second se	L Storage	Address	Name	Path		
1		0x00000000	Loader	C:\Users\u	iser1\DownLoads\rk356x	
2	EMMC	0x00000000	Image	C:\Users\u	iser1\Downloads\crankk	
< Open						
2 -	م		ls	v C	Search Downloads	
		-				
Organiz	e 🕶 New	folder			□ •	
		1				
•						
-	rk256v col	loader				
1	TKSJUX_SPI	1 10 1				
	ddriubo	1.10.1				

-Repeat the same process for the **CrankkOS** image. Make sure you already unzipped the file and locate the img file inside the folder.

6. Double-check all the settings, ensuring everything is in order. Confirm that the Address is set to 0, and then press **Run**.



Upon completion of the flashing process, disconnect the **USB** C cable and restart the gateway.

If, for any reason, the flashing procedure fails, you can begin again from **Step 5. Flash the unzipped CrankkOS image to the eMMC**

2) Local Dashboard setup

6. 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.

Scan						
2.168.178.1	-255		Example: 192.168.0.1-	100, 192 168.0.200	Sear ch	
esults Fa	vorites					
Status	Name	IP	Manufacturer	MAC address	Comment	s
	fritz.box	192.168.178.1	AVM Audiovisuelles Marke			
	DESKTOP-MA7TTHP.fritz.box	192.168.178.25	Intel Corporate			
	XRX9C934E454325.fritz.box	192.168.178.31	Xerox Corporation			
	192.168.178.35	192.168.178.35				
	Android.fritz.box	192.168.178.58	CHONGQING FUGUI ELEC			
	espressif.fritz.box	192.168.178.83	Espressif Inc.			
	AWAIR-ELEM-14B9A1.fritz.box	192.168.178.91				
.	WXM-M5-Miner.fritz.box	192.168.178.108	Espressif Inc.			
	192.168.178.109	192.168.178.109				
	raspberrypi.fritz.box	192.168.178.112	Raspberry Pi Trading Ltd	E4:5F:01:B1:63:B9		
-	XRX9C934E454325	192.168.178.255	Intel Corporate			

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**.

① 192.168.0.243:17080	2	Ŀ	☆
	Sign in http://192.168.0.243:17080 Your connection to this site is not private		
	Username]	
	Password		
	Sign in Cancel		

Once you logged in you will be asked to create your own password.

7. Set up the gateway.Go to the Info tab > Setup Gateway



Gateway Setup		
Gateway ID	e45f01fffec34b2c	
	Crankk	*
Model	Linxdot (RK)	*
	EU868	\mathbf{w}
Packet Forwarder		
Multiplexer Port	17000	
Forwards To	127.0.0.1:1700,127.0.0.1:1680	
GPS		
	Save	

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 RK)** 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.

8. Double mining.

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

	Helium	ø
9 Info		
🗢 Wifi Config		
(H) Radio	Install	
👯 Blockchain		
i Wallet		
C TailScale		
Helium		
Change Log		
Settings		

9. 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

10. 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.

Show 10 ~				Search
PUBLIC KEY	ALIAS	GATEWAY	BALANCE KDA	BALANCE CRKK
k:f54e8d0096a43bf9333d0761f870c7a54 8e3d0221822b25c8da82e3e70fa6fb1 PC Copy # QR Code	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.



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

11. Staking

Staking is a mandatory requirement for all gateways onboarded into Crankk, in order to receive rewards. It requires staking \$100 worth of CRKK tokens.

Those funds remain yours, and you can fully withdraw them after period of 1 year.

Available participation options You can choose any of the participation options from the list below.	
Term period is the participation period. Lock-up period is how long until you can un-participate. Participation wait is how long after staking the option is act Un-participation wait is how long after un-participation the Early termination fee is the max percentage fee when un-p end.	ivated. funds are returned. articipation right after lock-up. It linearly goes to zero by the term
Consensus Consensation Early termination fee: 50%	2449.5 сякк
Term period States	Current price wait
Network Participation	
Early termination fee: 60%	816.5 сякк
	Current price
typer Sincepution	

To complete this process:

- Log in to the **User Dashboard**.
- Navigate to **Gateways** and select your specific gateway.
- Click on **Proof-of-Trust**.
- Next to the "Network Participation" tab, you will find the current amount of CRKK tokens required for staking. Simply press the green **Participate** button.

It's important to note that the staking value remains constant at \$100. The only variable is the quantity of CRKK tokens that need to be staked. If you lack the necessary tokens for staking, our DEX offers the option to exchange KDA coins for CRKK tokens.



12. Set your gateway location

To set your gateway location you need to:

- Navigate to your gateway in the User Dashboard.
- Scroll down below the **Rank Percentage** section until you find the **Location** tab.
- Unlock your wallet by entering the correct password.
- Click on Set Location.
- Zoom out using the scroll wheel on your mouse.
- Select the desired gateway location.
- Click Submit.

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