There is a guide on the Yahboom Repository under Chapter 33.FAQ on how to flash the SD card. Under Part 5 "Jetson Orin Nano/NX board start step", towards the end of the page.

Below is a copy of the guide on their repository with my edit.

5. Jetson Orin Nano/Orin NX board start step

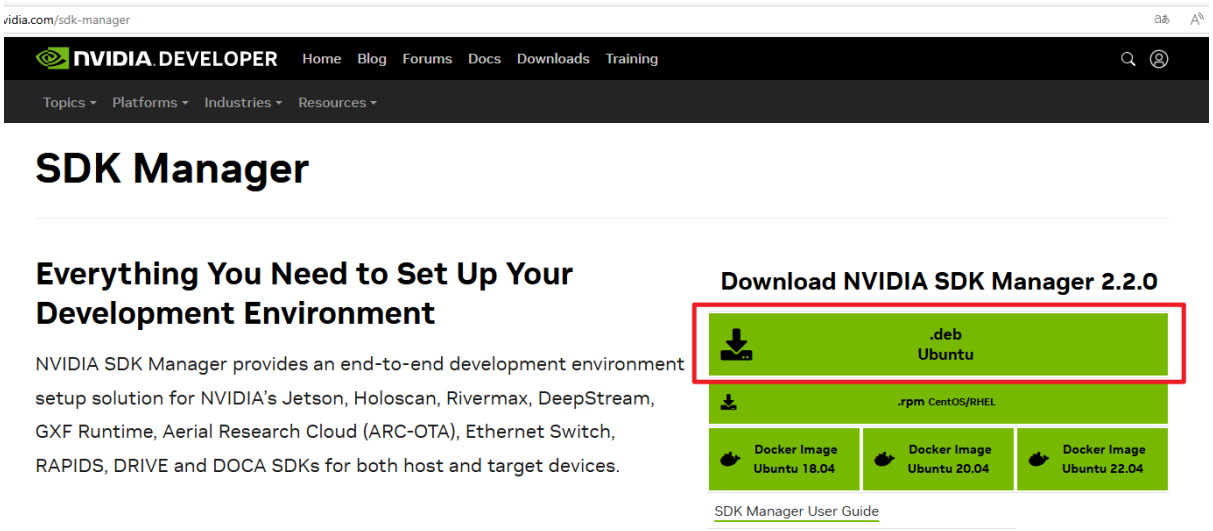
- If you use Jetson ORIN NANO version. Please refer to 《SDKmanager write system 》 to write **JetPack 5.1.1** to Jetson ORIN NANO 8GB board.
- If you use Jetson ORIN NX version. Please refer to 《SDKmanager write system》 to write **JetPack 5.1.3** to Jetson ORIN NX 16GB board.
- After successful writing, insert the SSD provided by Yahboom into the Jetson ORIN board, open the power switch of the robot car, robot car can start normally.

Write system by SDKmanager

1)Download the SDK manager from the official Nvidia Wesbite onto your Ubuntu (18.04 or 20.04).

2)Register/log in to NVIDIA account.

3)Download SDK Manager, as shown below.



- Install SDK Manager

Input following command to enter the path of the .deb file you just downloaded.

(For example, I download it to the Downloads directory here.)

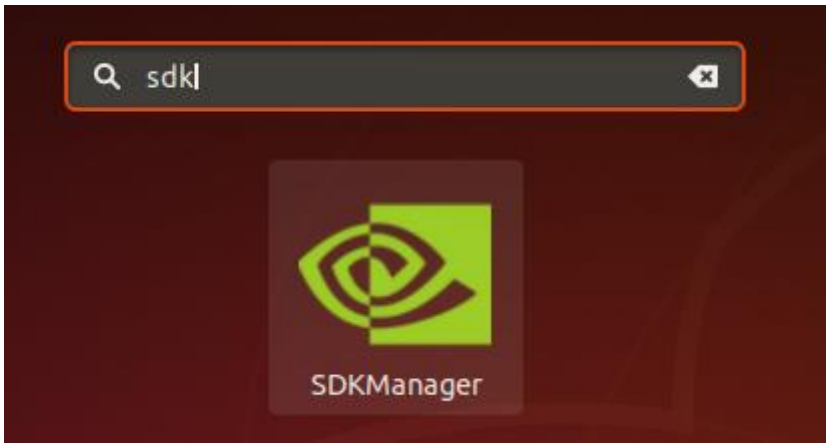
cd Downloads/

Input following command to install SDK Manager.

sudo dpkg -i sdkmanager_2.2.0-12021_amd64.deb

- Open the Ubuntu 18.04 or 20.04 machine system and search for SDK. You can find SDKManager. Please open this file.

As shown below



#Since the new version of SDKmanager cannot select the older version of jetpack, you need to use the following command to start the old version of SDKmanager and select the required jetpack version

sdkmanager --archived-versions

As shown below, if the browser pops up an interface for logging in to your NVIDIA account, you can enter your username and password to log in.

- Make the Ubuntu18.04 or 20.04 machine connect to your Jetson Orin NANO/Orin NX

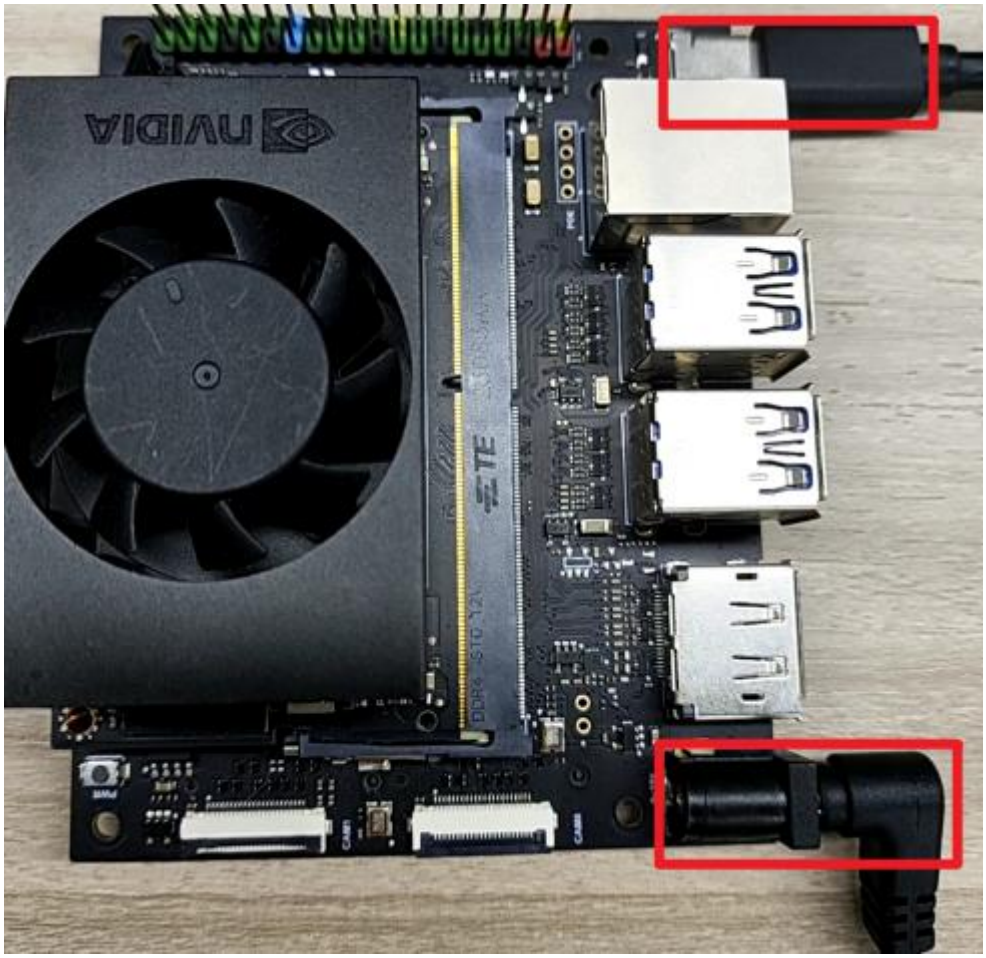
Before that, we need to complete the following operations to make Jetson Orin Nano into the system REC flashing mode.

Connect the jumper cap to the **FC REC and GND pins**, that is, the second and third pins of the carrier board, as shown below.

1)Connect USB C data cable on Jetson Orin NANO/Orin NX board.

2)Connect power supply cable on Jetson Orin NANO/Orin NX board.

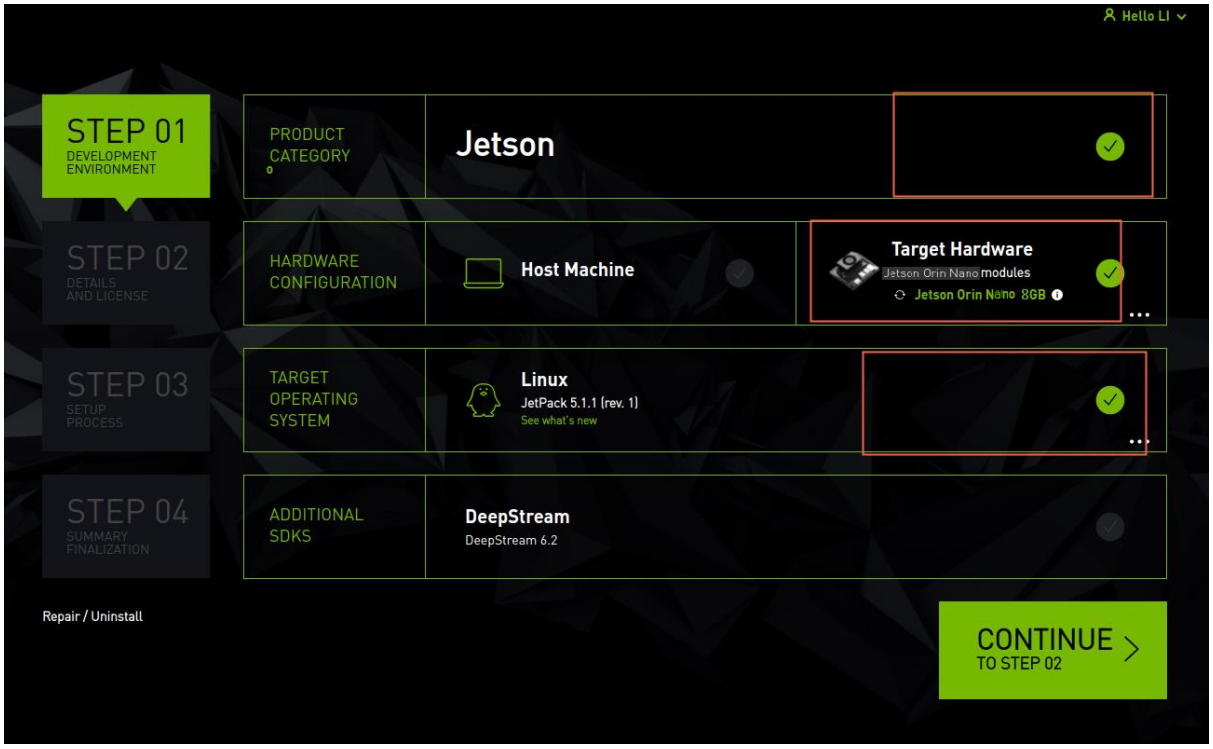
3)Since the jumper cap has been connected to the FC REC and GND pins in the previous step, the Jetson Orin NANO/Orin NX board will automatically enter the REC flashing mode after powering on.



- In the SDKManager software of the Ubuntu 18.04/20.04 machine, select **Target Hardware as Jetson Orin nano module**(Or your Orin NX module).

If you use Jetson ORIN NANO choose **JetPack 5.1.1**

If you use Jetson ORIN NX choose **JetPack 5.1.3**



If Target Hardware shows "Not Connected", please confirm whether Jetson ORIN NANO/ORIN NX board has entered REC flashing mode and successfully connected to the ubuntu machine.

Make sure everything is OK and click "refresh".

Jetson Orin NANO is divided into two versions: 4GB/8GB. Please choose according to the actual situation.

If you are currently using 8GB, please select 8GB module (do not select developer).

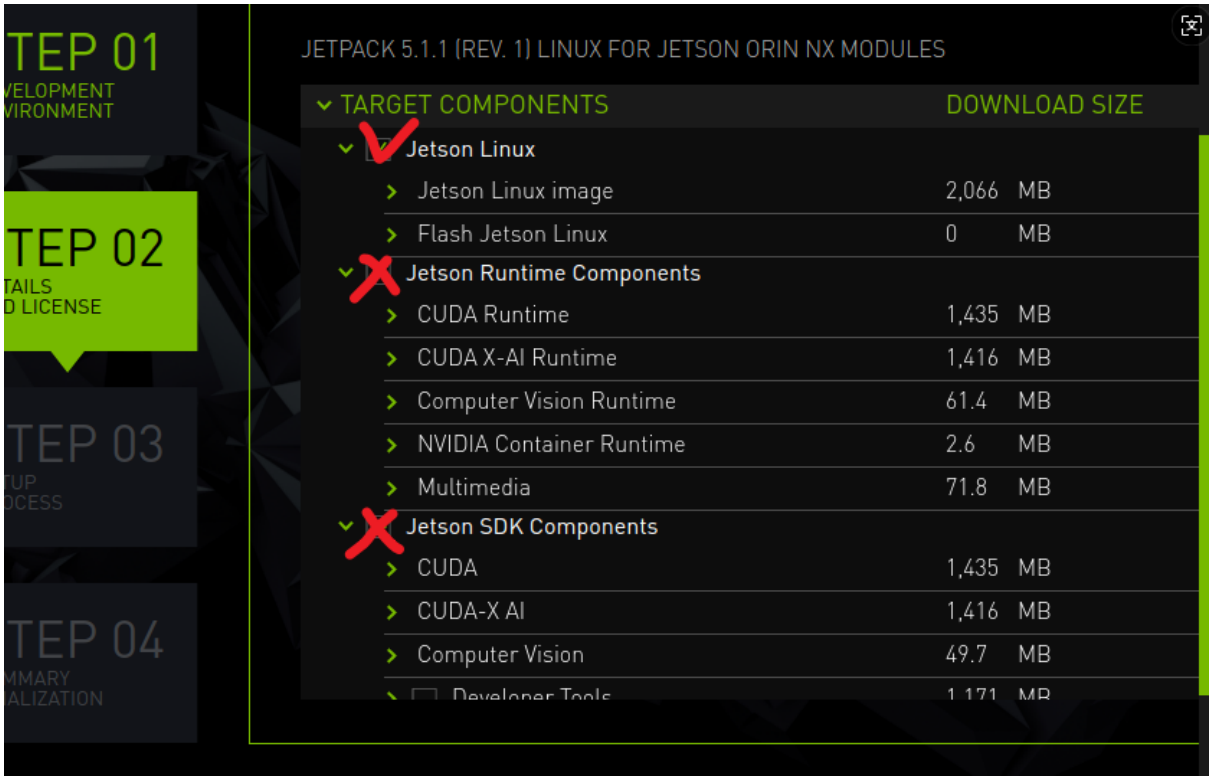
I dont know why this is mentioned above like this on their guide, does this mean if you have a dev kit, to chose 8GB instead??? And what if I have the devkit? And does it even function properly with the devkit version??

If you are currently using 4G, please select 4G module.

Generally, after connecting the Orin board to the virtual machine, the system will automatically recognize it.

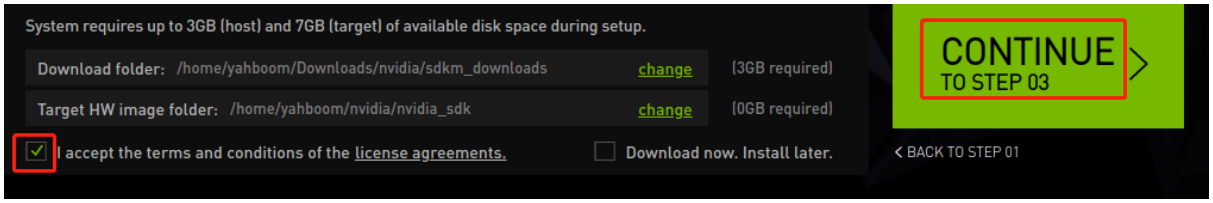
Click "CONTINUE".

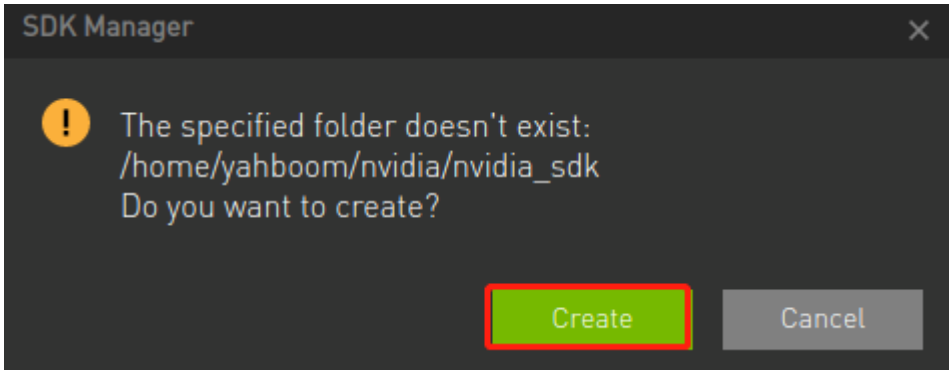
- By default, Jetson OS and Jetson SDK Components are checked, which means the system and SDK are flashed. We can also select the system OS or software SDK separately, but before writing the software SDK separately, we need to ensure that the system OS has been flashed.



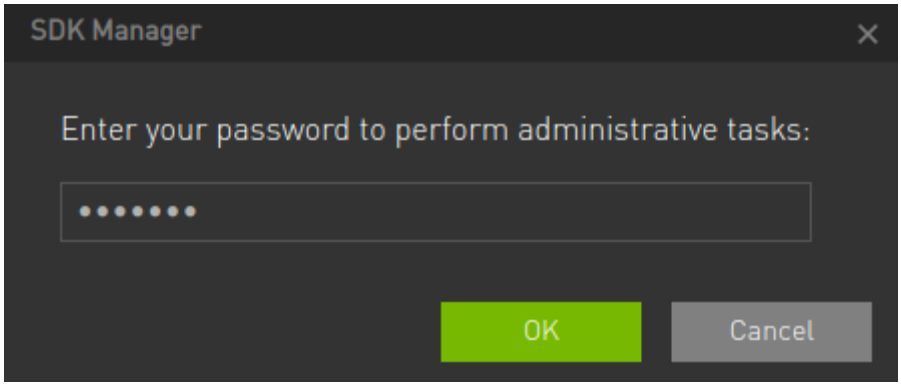
Keep the default file download path, choose agree license agreements. Click "CONTINUE" to proceed to the next step.

As shown below.





As shown below. Enter the password for the ubuntu machine.



At this time, SDKManager will first download the file to be written.

Wait for the file to be downloaded. Then, system will write to the system and SDK.

- After the system is written, power off the Jetson Orin board and remove the jumper cap between FC REC and GND.

Connect the display, power on the Jetson Orin board, and check whether the Jetson Orin board can boot normally and enter the system.

If the Jetson Orin board can boot up normally and enter the system, you can disconnect the power supply.

Insert the SSD provided by Yahboom, install the Jetson Orin board on the car, turn on the power switch, and the car can start normally.

Note

- Before performing any write or system update operations, please back up the original important data on the Jetson board. Once written or updated, it cannot be restored.
- When writing the boot or system, make sure to use the tutorials and tools that match the motherboard model.
- If you encounter any problems during the startup process, please refer to the official NVIDIA documentation of the motherboard for troubleshooting and solutions.