

Lesson 1 First Start ArmPi mini

Before starting this lesson, ArmPi mini needs to be assembled according to “3. Assembly”.

1. Charging Battery

Please fully charge robot arm at the first use and operate according to the following method.

1) Take out battery charger and put two 18650 batteries into battery charger.

Please pay attention to the positive and negative direction of the batteries.

Then connect the battery charger and charging plug (5V 3A prepare your own one) over a USB cable, and plug it into socket.

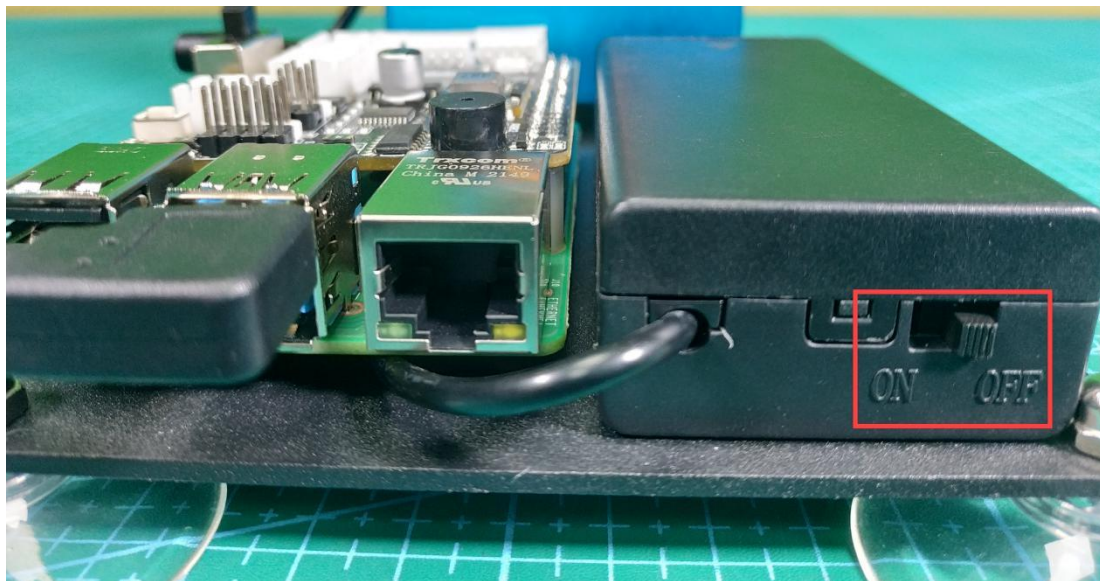


2) Wait for the charging to complete (The indicator light of charger is green before charging and turns red when charging. It need to take about 6h to fully charge. When the batteries is fully charged, the indicator will turn green from

red). After the charging is complete, please unplug the charger as soon as possible.

2. Install Battery

- 1) Push the switch of battery holder box from “ON” to “OFF”.



- 2) Install the fully charged batteries into the battery box and attach the cover.

Note: Do not make mistake when the batteries are installed!

3. Camera Connection

- 1) Before turning on robot, please make sure that the camera cable is firmly connected (The camera cable can be connected to any one of USB interfaces of Raspberry Pi).



4. Turn On/Off ArmPi mini

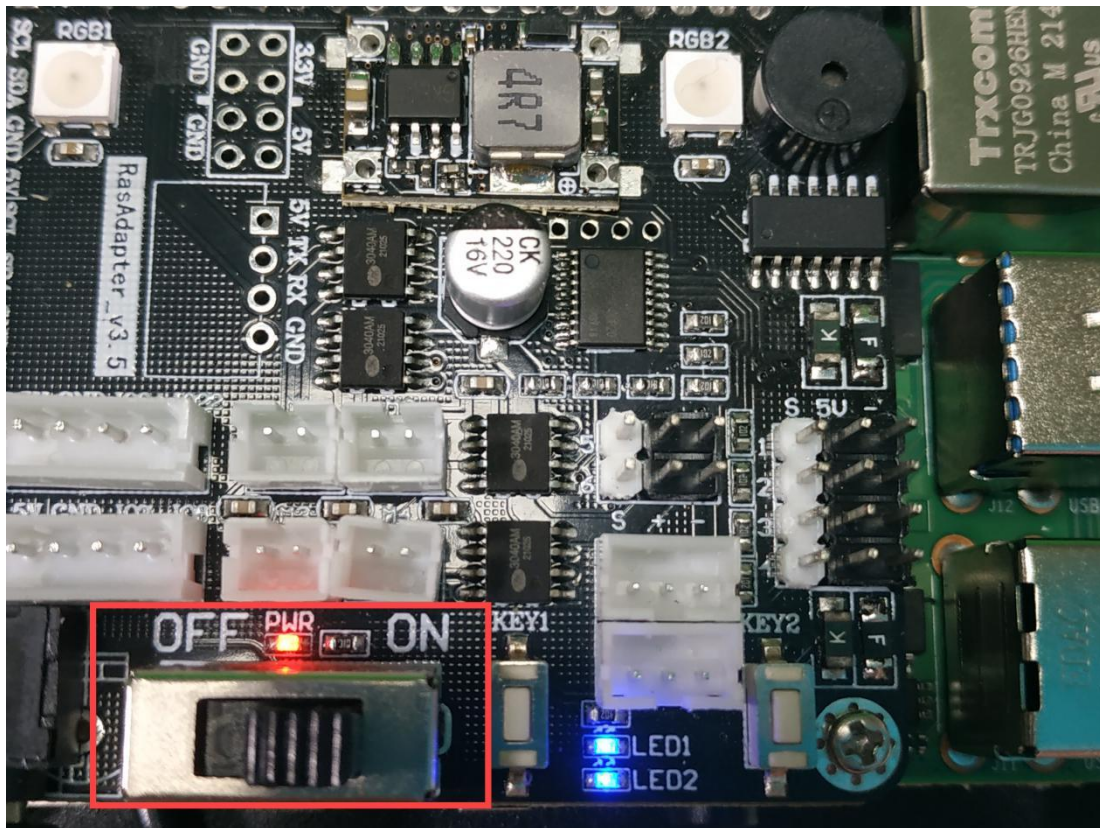
4.1 Turn on

- 1) Push the switch of battery box to “ON” side to turn on Raspberry Pi.



- 2) At this time, the LED1 and LED2 of the Raspberry Pi will be on firstly and then the LED2 will flash every 2 seconds. ArmPi mini will return to the initial posture and buzzer will make “Di” sound, which means the robot is turned on successfully.

The Raspberry Pi is a small minicomputer . It usually takes about 1 minute to boot up after it is Powered ON, which is normal.



- 3) After turning on, Raspberry Pi will be in an AP direct connection mode by default and launch a Wi-Fi hotspot starting with “HW”.

HW-CB1C69E5			
KR1			
KR5			
LH_5G			

4.2 Turn off

1) There are two turning off methods, which are hardware turning off and software turning off. The specific operation are as follow:

Method	Operation Steps
Hardware turning off	Push the switch of Raspberry Pi expansion board from “ON” to “OFF”.
Software turning off	Open the terminal, and then run “poweroff” command.

Note: Software turning off can be executed while ArmPi mini is connected via VNC.

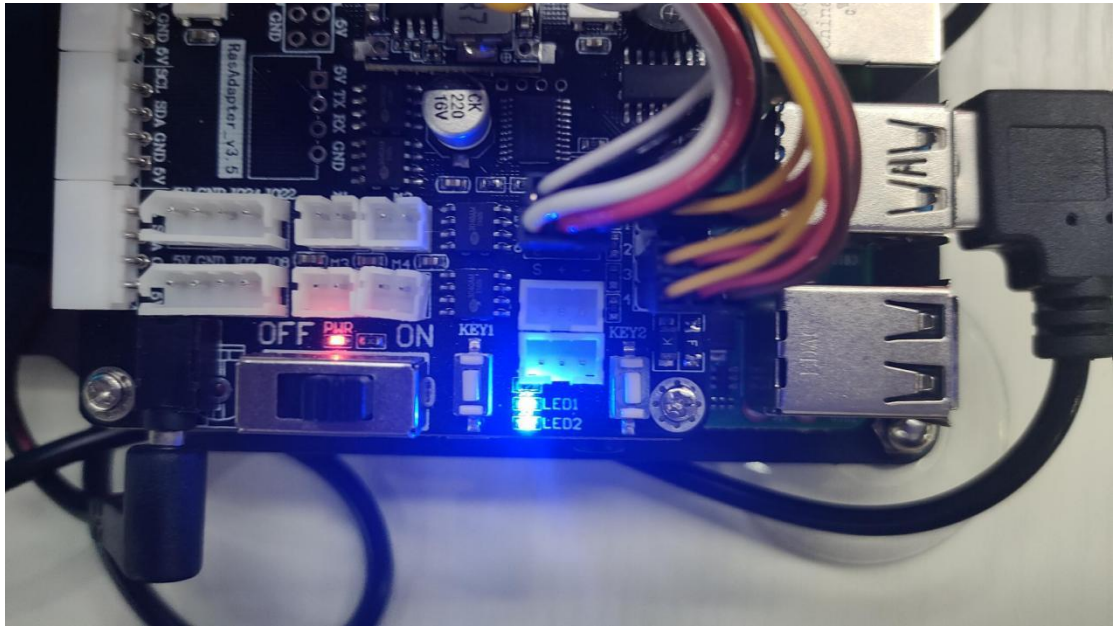
The specific operation steps can be viewed in folder “4. Quick User Experience/ Lesson 2 Set Development Environment.”

After turning on ArmPi mini successfully, please refer to “4. Quick User Experience/ Lesson 5 Position Calibration” to calibrate gripping position

(Do not skip this step!)

5. Check Battery Level

1) If the LED1 and LED2 on expansion board emit a bright blue light, which means the battery level is enough and robot can be use normally , as the figure shown below:



- 2) If the LED lights on expansion board emit faint blue light, it means the battery level is almost dead, you need to charge the battery as soon as possible, as the figure shown below:

