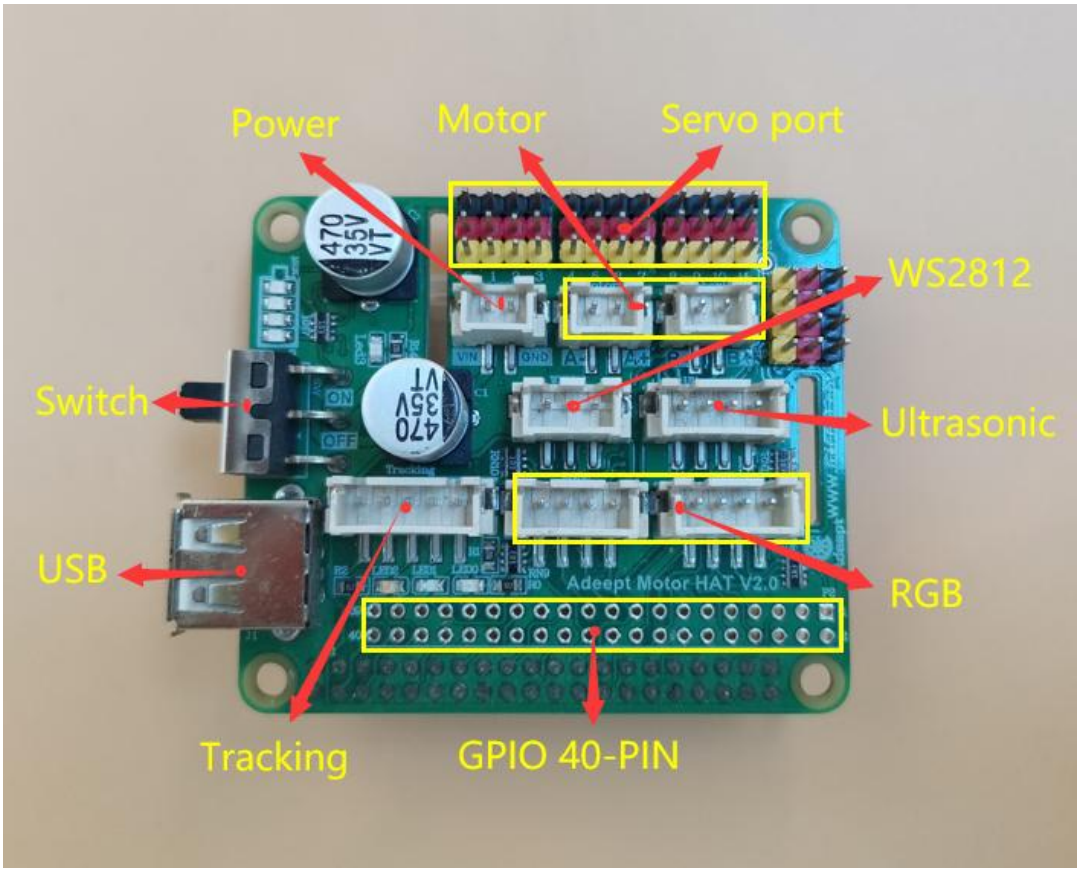
Lesson 2 Introduction of Motor HAT V2

2.1 Motor HAT

When you get the robot product, you will see a board with its name printed onside: Adeept Motor HAT V2, which is an important part of the robot. There are many interfaces on the Motor HAT V2. You can connect sensors and electronic hardware modules to the board by those interfaces to realize more functions. This robot works on the Raspberry Pi. Let's first get to know the Motor HAT V2.



Adeept Motor HAT V2.0

[Power]: The Power interface is an interface for external power supply.

[Switch]: Switch is to turn the Motor HAT ON/OFF.

[USB]: 5V power output. Note: The interface cannot charge the battery, nor can it supply power to the Raspberry Pi.

[Tracking]: The pin interface of Tracking Module.

[GPIO 40-PIN]: General Purpose Input Output (GPIO) is designed as a slot with two rows of pins on the Motor HAT. GPIO can be used to connect various peripheral electronic devices and sensors and control or monitor these devices with input/output level signals. In robot products, this GPIO interface is connected to the GPIO pins on the Raspberry Pi.

[RGB]: RGB LED interface.

[Ultrasonic]: Ultrasonic interface.

[WS2812]: The pin interface of WS2812 Module.

[Servo port]: Servo interface. No.0-No.15, a total of 16 servo interfaces.

[Motor]: Motor control interface. Used to control the start/stop and forward/reverse of the motor.

2.2 Precautions for Using the Motor HAT

When you are performing software installation, structural assembly or program debugging, you can use a USB cable to power the Raspberry Pi.

When Motor HAT is connected to a load, such as a motor or a few servos, a high-current power supply is required to connect to “Power” on the Motor HAT. You can use two high-current 18650 batterie for power supply. The Adeept robot provides a dual 18650 battery box with a 2-pin interface for you to supply power to the Motor HAT.Different Raspberry Pi models have specific requirements for current. For example, the Raspberry Pi 3B needs at least 2A to boot up, yet the

Raspberry Pi 4 needs 3A to boot normally. When you use the power adapter to power the Raspberry Pi, you can check the specifications on your power adapter.

Motor HAT cannot charge the 18650 battery, please use an additional 18650 battery charger to charge the battery.