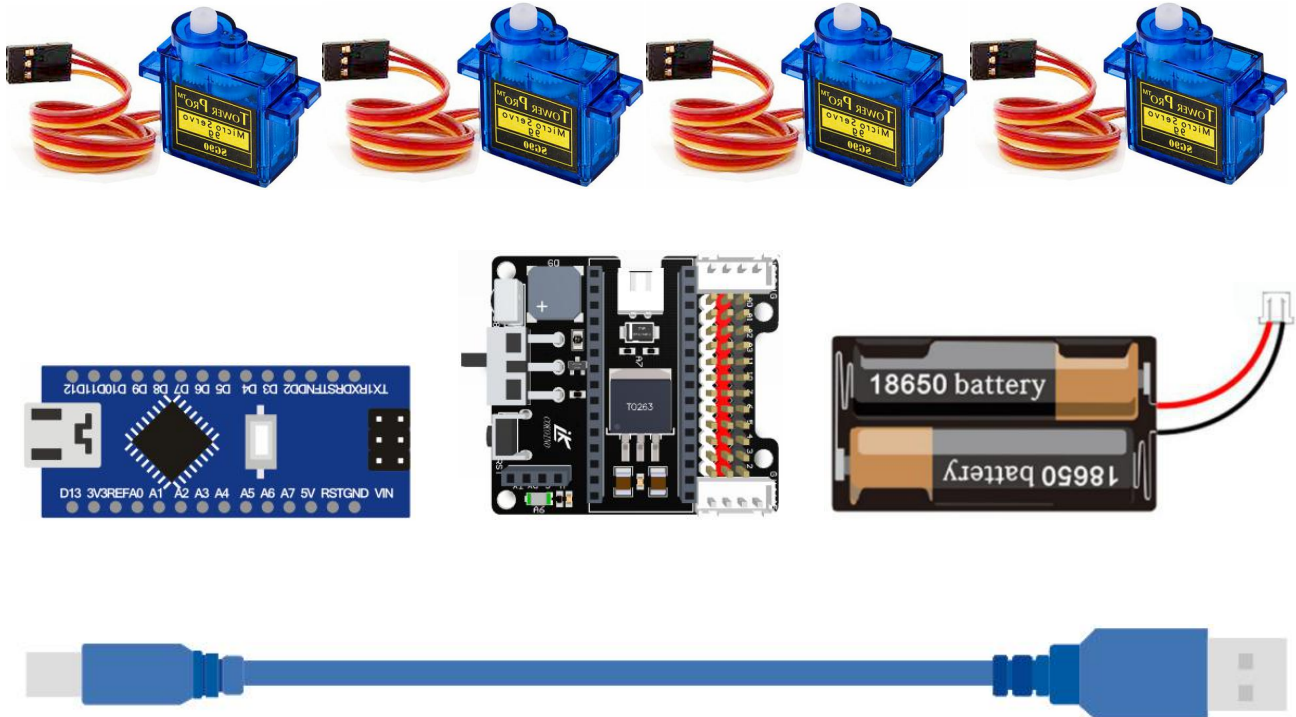


Robot servo initialization

Need to prepare:

- ◆ A Nano board
- ◆ A Nano shield
- ◆ Four servos
- ◆ A battery case with two 18650 batteries
- ◆ A usb cable

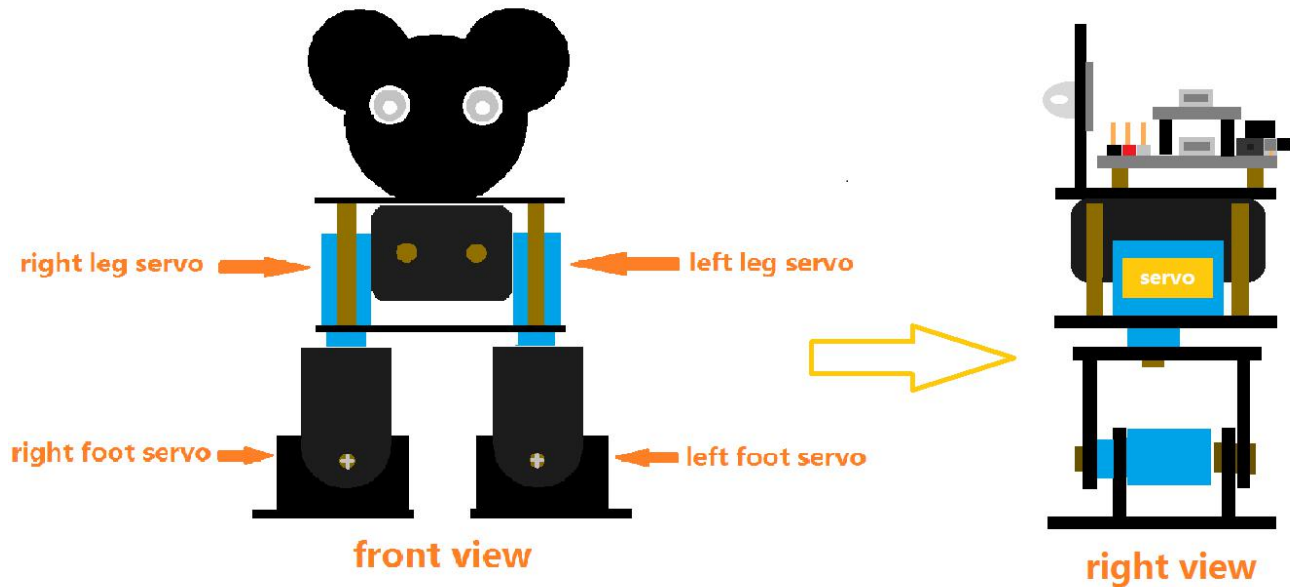


Catalogue

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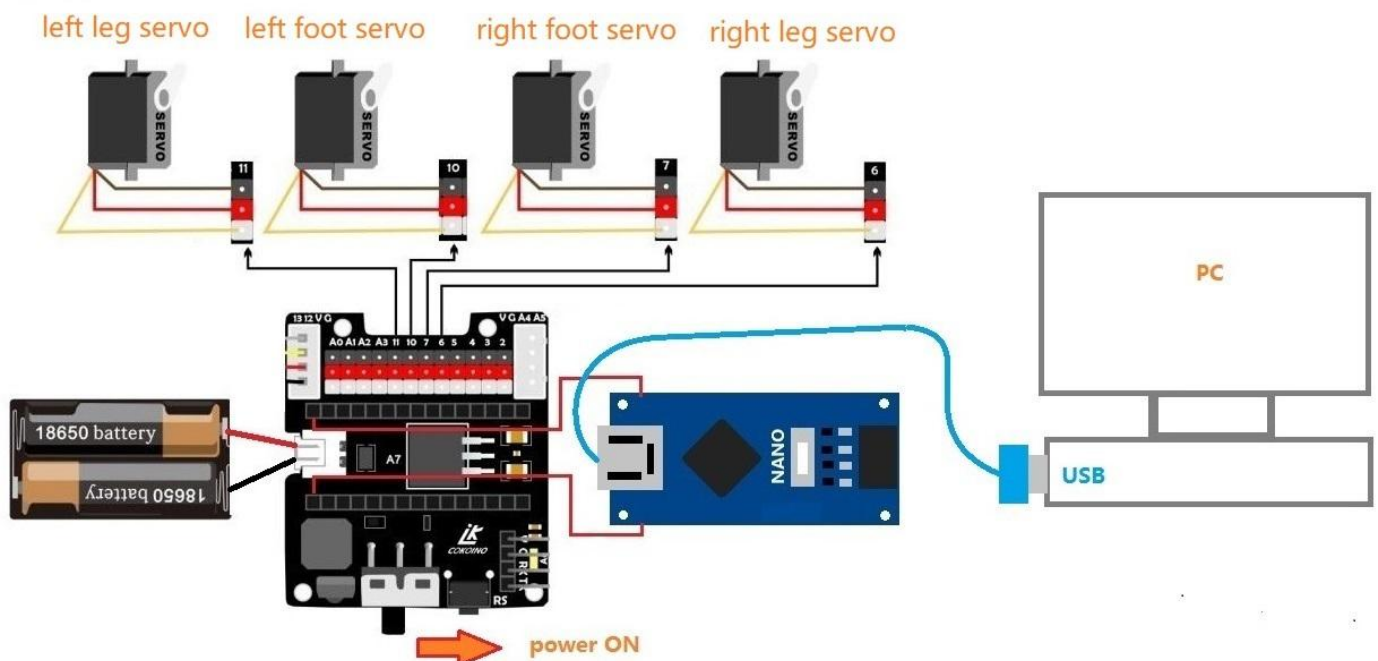
1、 Why need to adjust the angle of the servo?

We cannot know the initial Angle of the servo provided by the supplier, but we need to know the Angle of the servo to properly assemble the robot when we install it. For example, All servomotors of the robot need to be initialized to 90 degrees to be properly installed, as shown below:



2、 Initialize the four servo angles of the robot

Wiring diagram is as follows, then connect to the PC via the mini USB cable.



2.1、 Upload code

Code: (Note: The Bluetooth module cannot be plugged into the expansion board when uploading the program, otherwise the program will not work)

```
#include<Servo.h>
Servo myservo1;  // Create a servo class
Servo myservo2;  // Create a servo class
Servo myservo3;  // Create a servo class
Servo myservo4;  // Create a servo class

void setup() {
  myservo1.attach(6);  //Set the servo control pin as D6
  myservo2.attach(7);  //Set the servo control pin as D7
  myservo3.attach(10); //Set the servo control pin as D10
  myservo4.attach(11); //Set the servo control pin as D11
  delay(100);          //delay 100ms
}
////////////////////////////////////
void loop() {
  myservo1.write(90);  //The servo is 90 degrees
  myservo2.write(90);  //The servo is 90 degrees
  myservo3.write(90);  //The servo is 90 degrees
  myservo4.write(90);  //The servo is 90 degrees
  delay(1000);
}
```

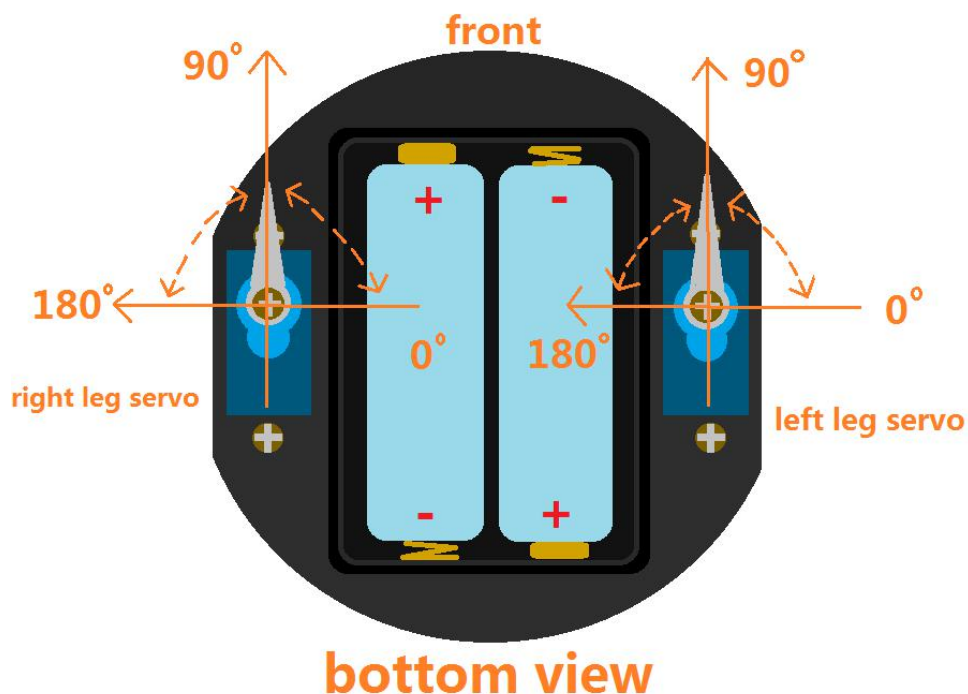
2.2、 Result:

After the code is successfully uploaded, then turn on the power switch on the nano expansion board, the program will automatically initialize the servo to 90 degrees.

3、 Installation and precautions after the initial angle of the servo

It is forbidden to rotate the servo motor again after the servo is initialized for 90 degrees.

The following figure shows the installation positions of the left leg servo and the right leg servo, and the trajectory of the movement after they are installed.



Front view of left foot servo and right foot servo after installation, and their post-installation motion trajectory.

