Lesson 4 - Joystick Module

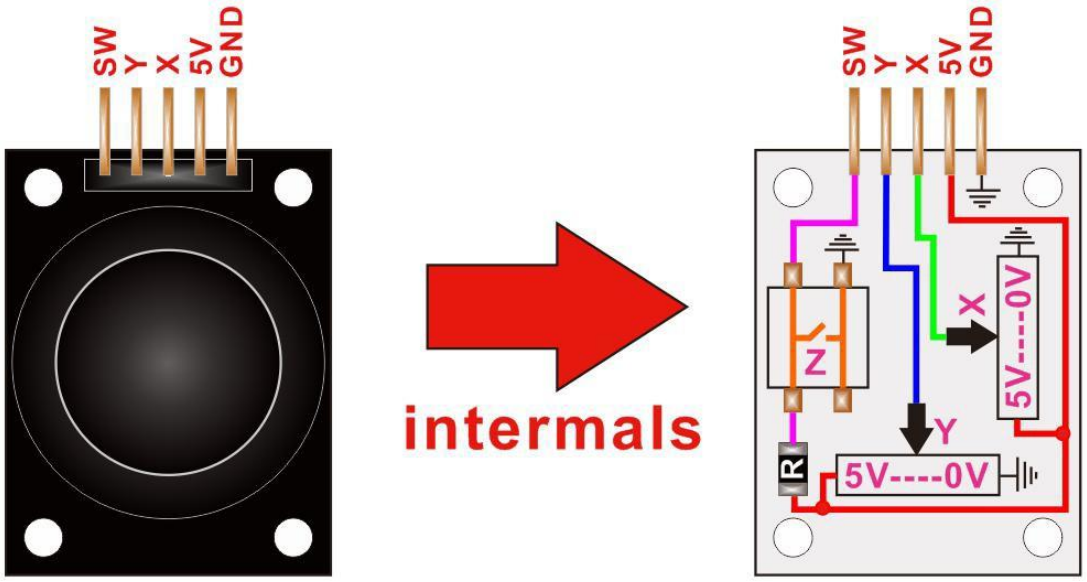
1.Overview:

This PS2 game dual-axis joystick module is made of high-quality metal PS2 joystick potentiometer, with (X, Y) 2 axis analog output, (Z) 1 button digital output.

2.Product parameters:

Interface type: analog, digital value
Three axes (X, Y, Z (buttons))
Interface: 2.54mm pin header
Size: 34x26x32mm

3.Pin and internal structure:



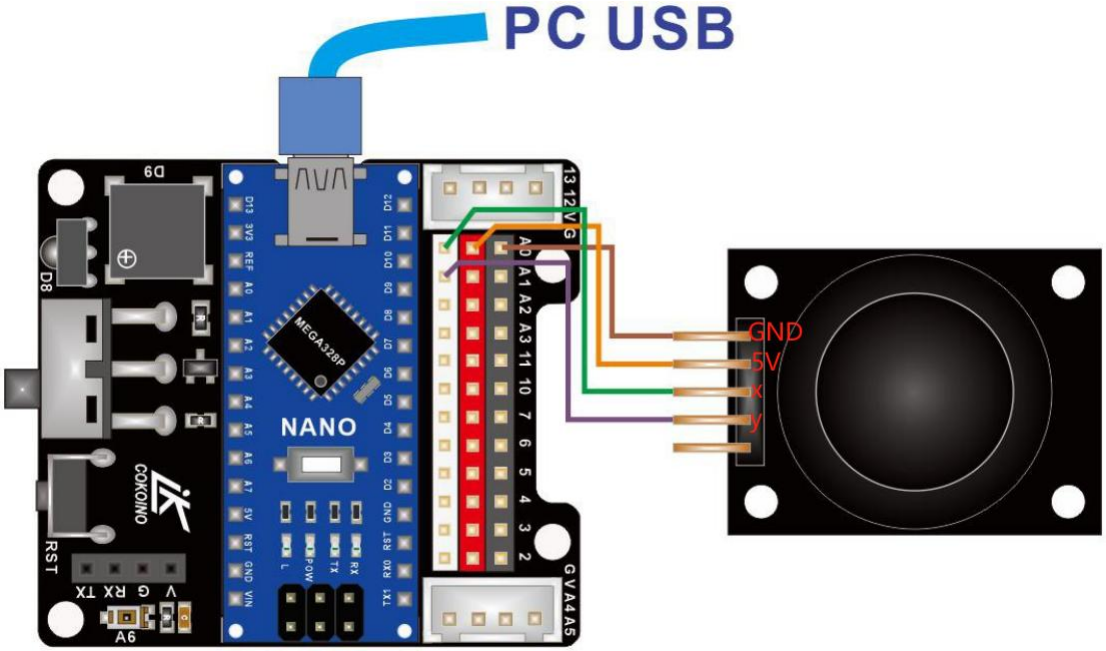
GND: Connect to the negative pole of the power supply 5V: connected to the positive pole of the power supply X: X axis analog value output

Y: Y-axis analog value output
SW: Z-axis output (button)

The joystick is made up of two passive potentio-meters (variable resistors) and a push button, it is made by mounting two potentiometers at a 90 degrees angle. The potentiometers are connected to a short stick centered by springs. This module produces an output of around 2.5V from X and Y when it is in resting position. Moving the joystick will cause the output to vary from 0v to 5V depending on its direction. This joystick also has a select button that is actuated when the joystick is pressed down.

4.How to Use Joystick?

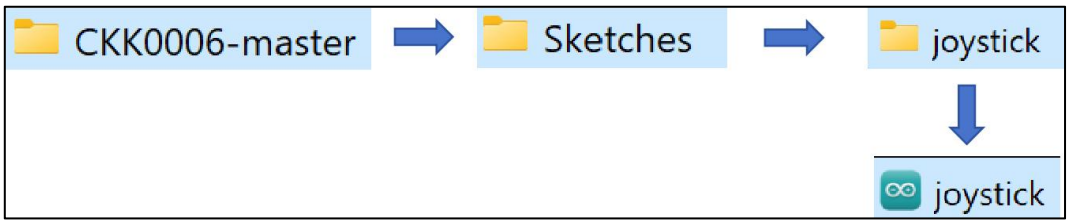
Wiring Diagram



Note: The Z-axis function is not used in the robot arm, so the joystick is not equipped with Z-axis function, you do not need to connect the sw pin.

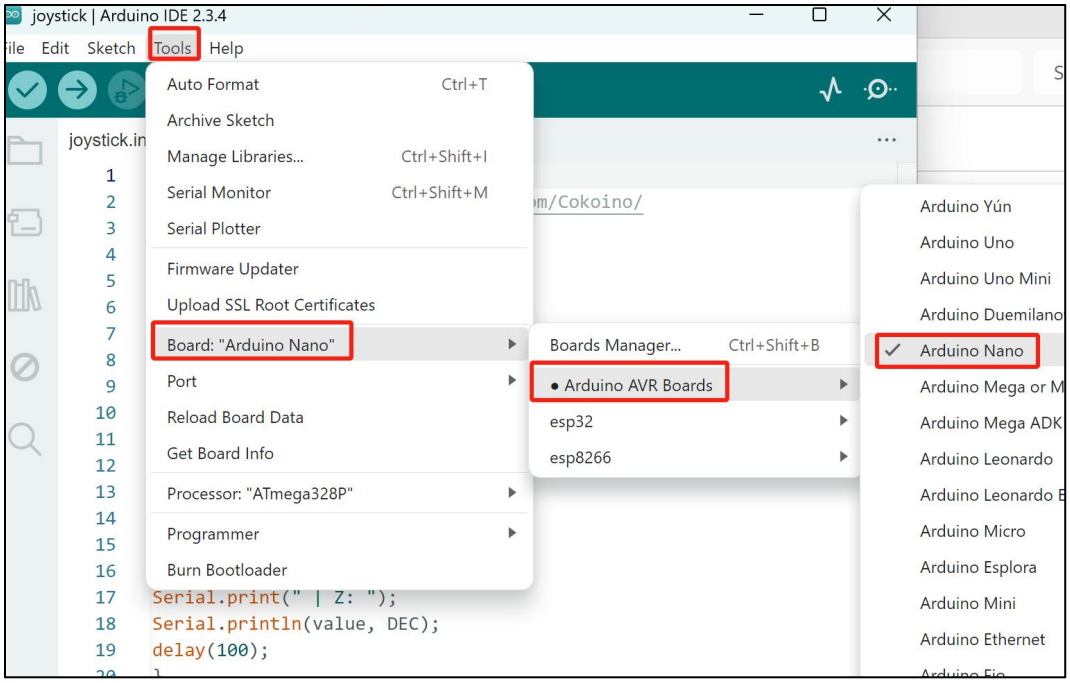
Upload code

Find the "joystick" code from the following path, open it with the Arduino IDE and upload it.

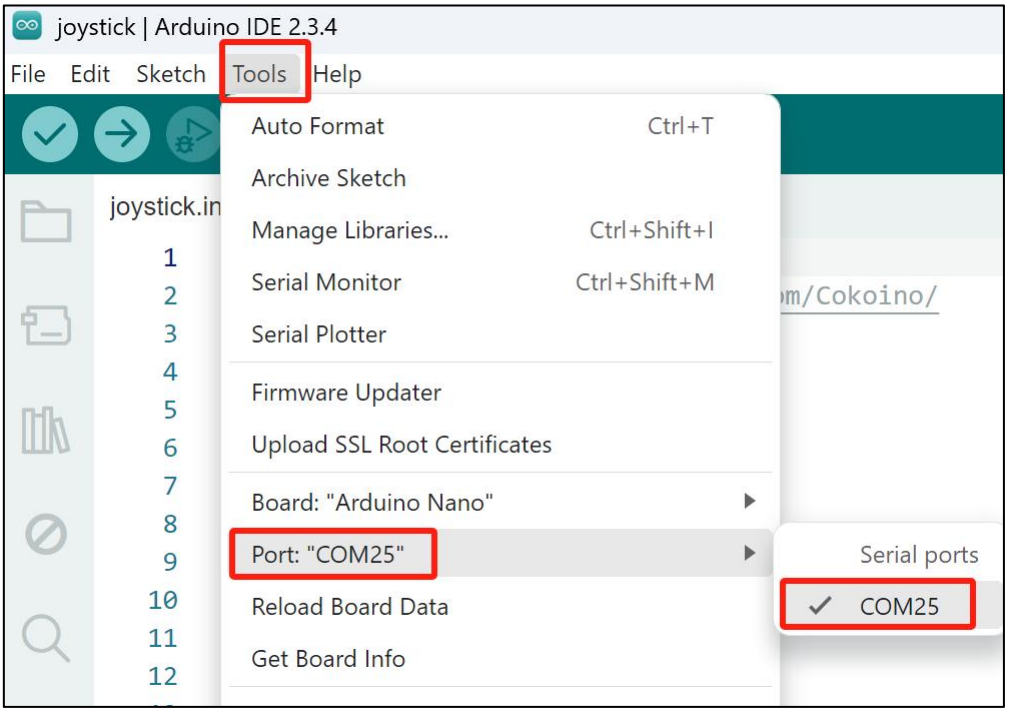


Setting up the arduino

IDE Select board



Select port

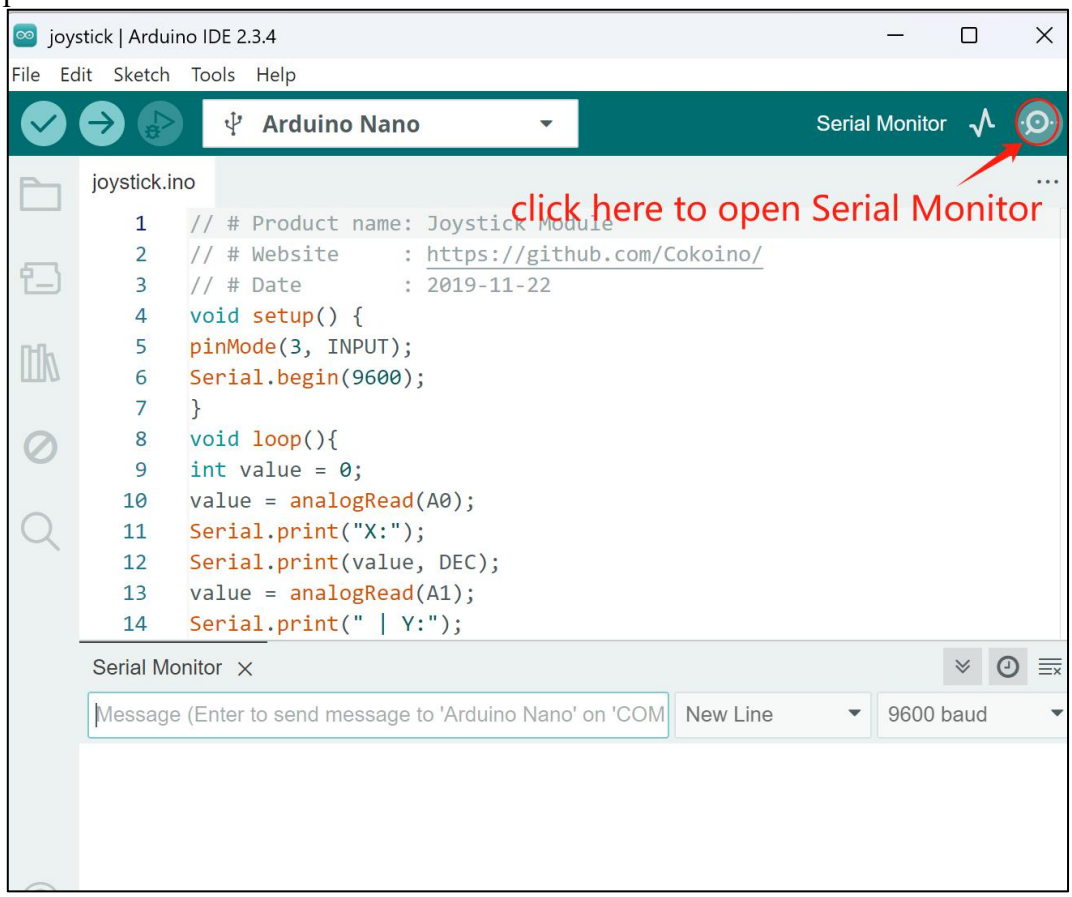


Compile and Upload the code

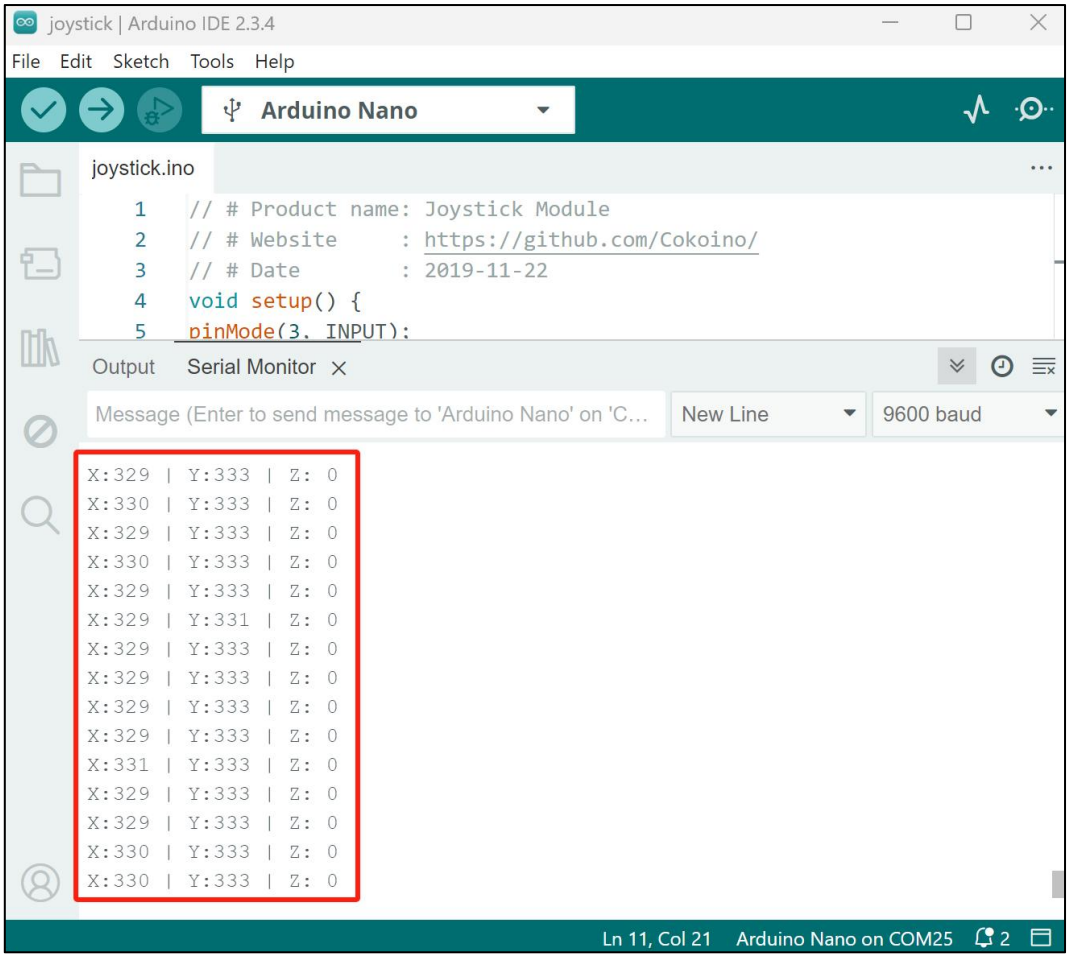
Click compile button, successfully compiled the code will display "Done compiling"

Click upload button, successfully uploading the code will display "Done uploading"

Open The Serial Monitor



The serial display can reflect the x, y, z 3D data of the joystick module in real time to the Serial Monitor window, as shown below:



Since the pin SW of the joystick module is not used, the data of the Z axis is 0