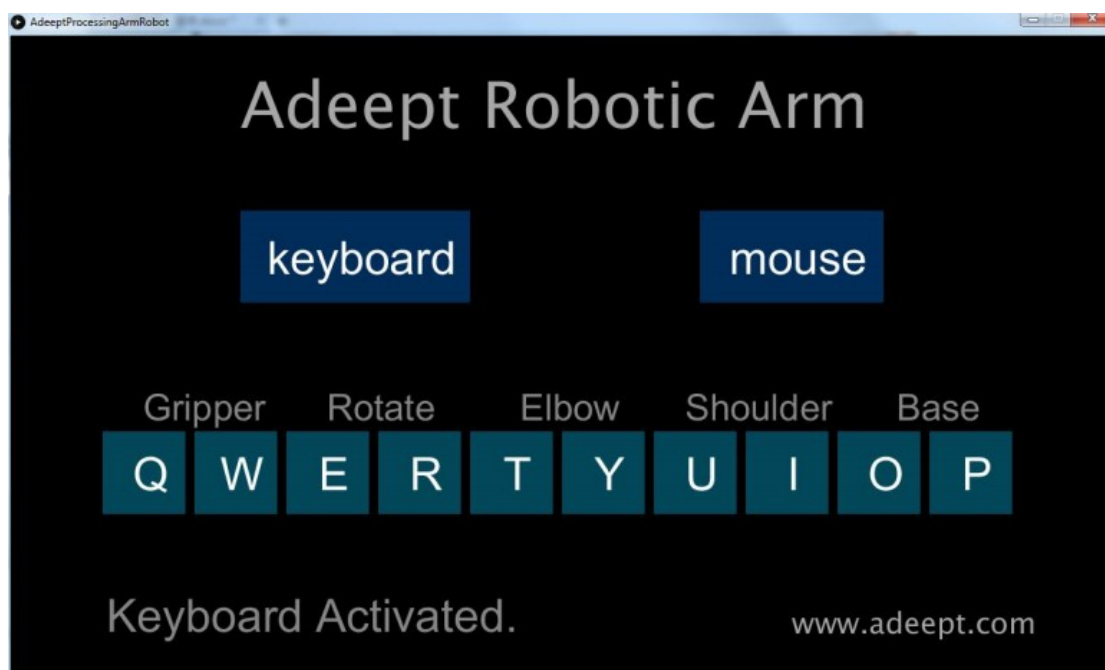


Introduction of Robotic Arm

Nowadays, under the progress of science and technology, the biggest difference between a robotic arm and a human arm lies in flexibility and strength. That is, the biggest advantage of the robotic arm is that normally it can repeat the same motion without feeling tired. Today Adept recommends a robotic learning kit to learn how to assemble a robotic arm and learn how to write the code to control the robotic arm to perform the specific motions. We provide a completed using method for learning Arduino and Processing write PC software and send motion commands to the robotic arm with Processing; write the motion of the servo of the robotic arm with Arduino.

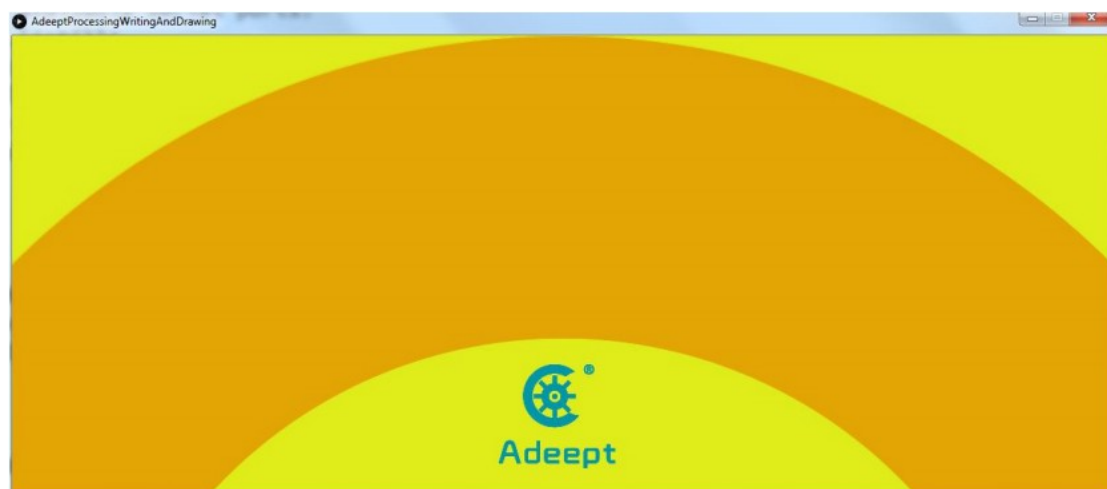
Assemble video address: <https://www.adeept.com/video/detail-81.html>

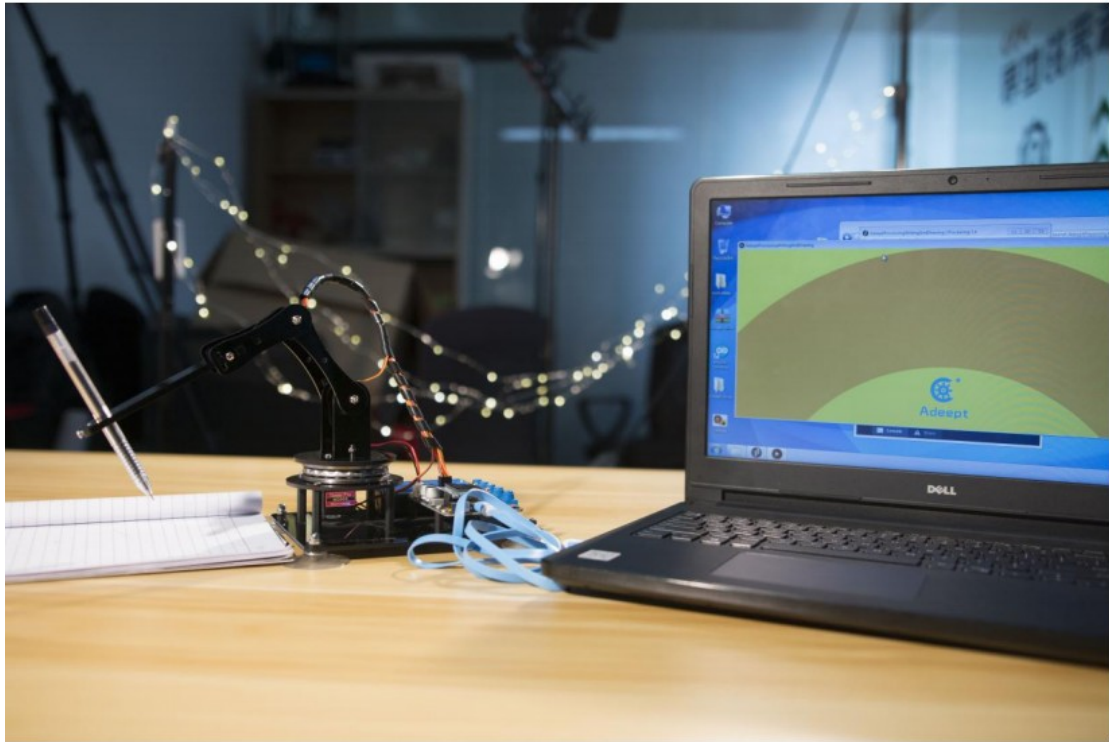
The following figure shows that we control the robotic arm to pick up the object through the keyboard with serial communication.





The following figure shows that we control the robotic arm to write and draw through the mouse with serial communication.

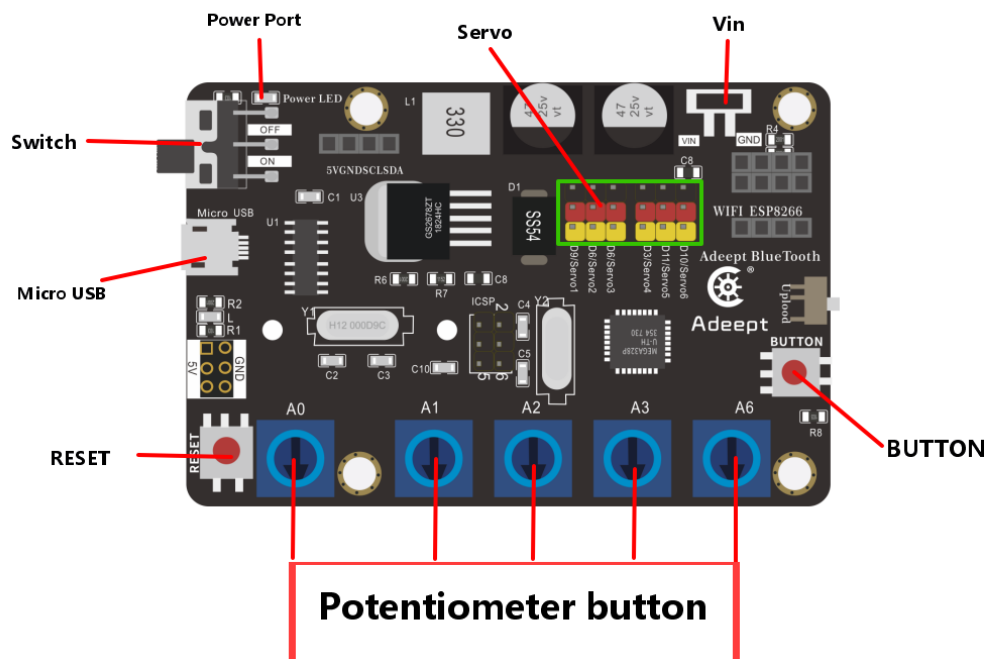




We have added the learning and memory function to the robotic arm. We let the robotic arm to record the manually controlled mechanical movements we made, and the robotic arm can learn repeatedly, such as repeat moving the object, repeat drawing the same graphic, repeat keyboard input and repeat turning book pages.

Introduction of Adept Arm Drive Board

The Adept Arm Drive Board development board is the main component of the robotic arm. Similar to the Arduino UNO development board, it is also an easy-to-use open source electronic prototyping platform, including the hardware part and the software part (Arduino IDE). The Adept Arm Drive Board development board is mainly composed of a microcontroller (MCU), a universal input/output interface, etc. You can understand it as a microcomputer motherboard. We will introduce the Adept Arm Drive Board development board in detail.



【1】 Power LED:

Power LED is used to indicate the power status of the system. The LED is on, indicating that the system is powered on and ready to run; the LED is off, indicating that the system is not powered on.

【2】 Servo:

It is the pin interface of Servo.

【3】 Vin (6-24V) :

It is the pin interface for external power supply. Use 6-24V external power supply to power the Adeept SmartHub development board.

【4】 RESET:

Restarting the Adeept SmartHub development board.

【5】 Switch:

When using Vin (6-24V) as an external power supply, Switch can control the OFF and ON of the Adeept SmartHub development board.

【6】 Micro USB:

It is used to connect the Micro USB interface of the computer to realize the serial communication, uploading program and serial monitoring between the Adeept SmartHub development board and the computer.

【7】 Potentiometer button:

Potentiometer button has five buttons: A0, A1, A2, A3, and A6. By rotating these buttons, you can control the movement of the robotic arm.

In the following courses, we will combine the application of various components to further learn the practical application of the Adeept Arm Drive Board development board.

