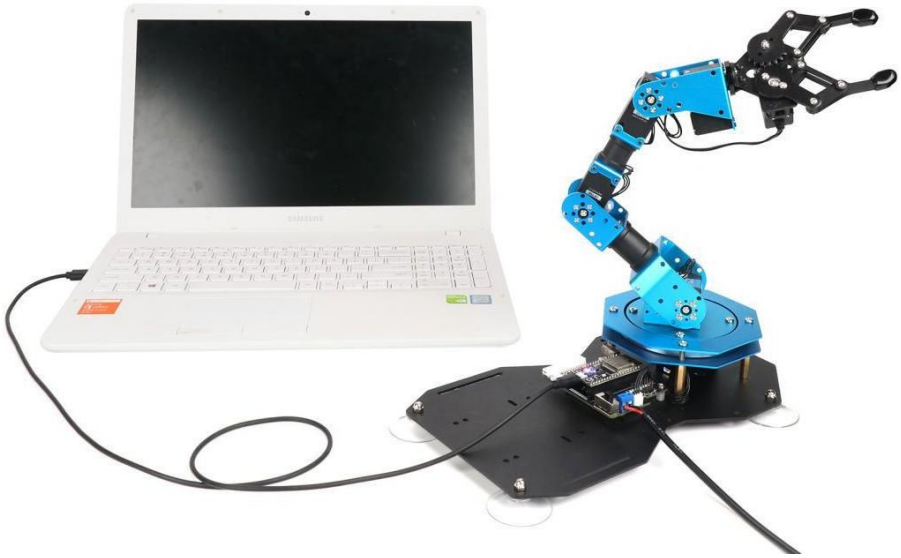
Lesson 1 xArm ESP32 PC Software Instruction

1. Device Connection and Driver Installation

Note: User who purchased the unassembled robotic arm, Please go to “1. Getting Ready/Lesson 4 Deviation Adjustment” to view the driver installation method.

Step1: open PC software under the same directory.

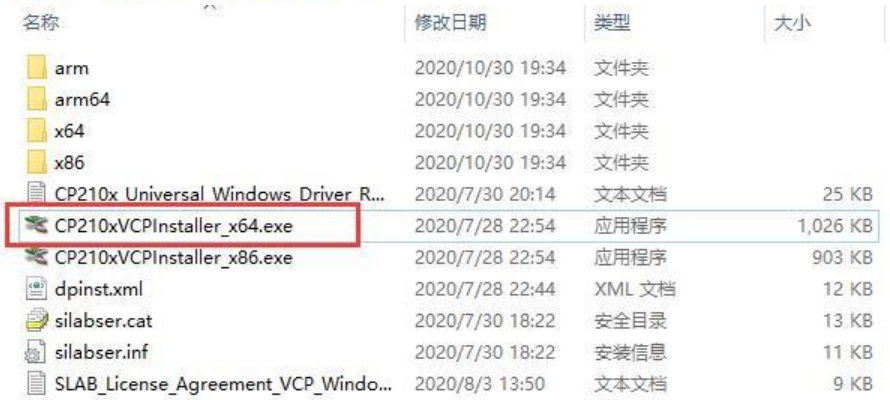
Step2: connect adapter to the robotic arm, and turn on the switch. Then connect the USB port of the robotic arm to your computer with micro-USB cable.



Step 3: Select the correct driver file according to windows operating system:

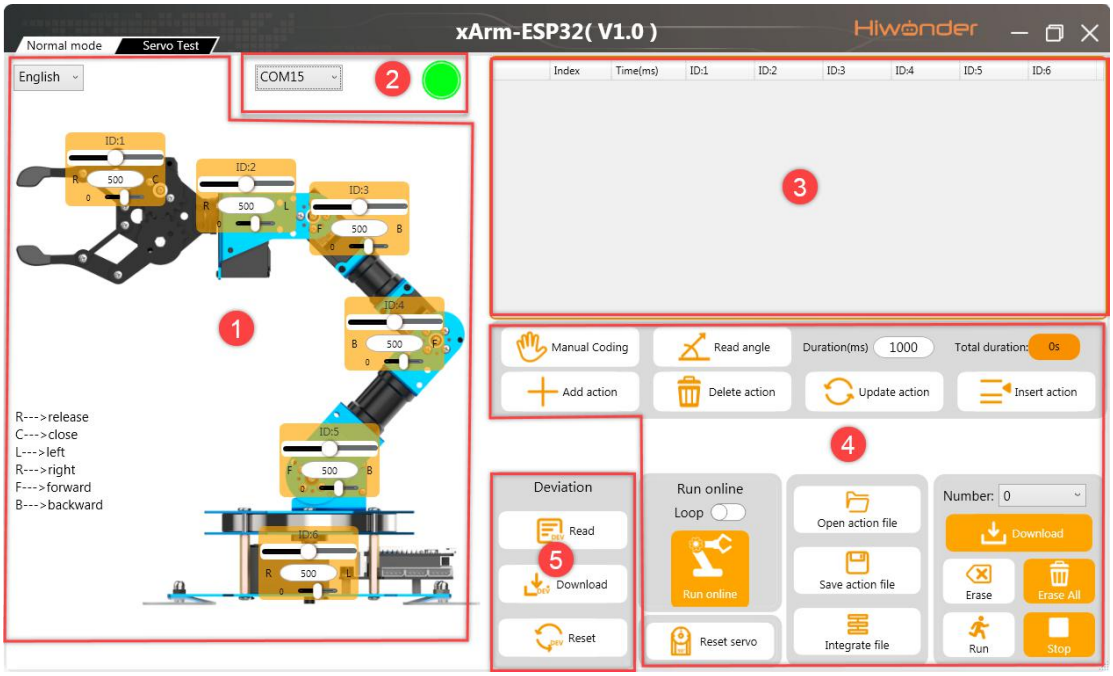
Windows System Version	Driver File
10	the installation pack is under the same directory
XP,Vista,7,8	the installation pack is under the same director.

Step 4: Take Win10 64 bit as an example for demonstration. Extract the driver package after downloading ,and then double click to open driver program, as the figure shown below:



Step 5: Install it in pop-up interface.

2. Function Instruction



① Device Connection Status:

View the device connection status

Icon	Function
	Indicates that the device is not currently connected or disconnected from the device.
	Indicates that the device has been connected successfully.

② Servo Control Area:

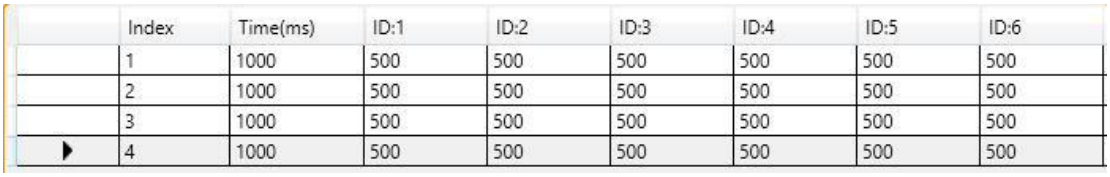
Drag the slider to adjust the rotation angle of servo.

Icon	Function Instruction
	Servo ID number. Here is ID1 servo

	Adjust servo position. The minimum value is 0 and the maximum value is 1000.
	Adjust servo deviation. The minimum value is -100 and the maximum value is 100.

③ Action data list:

It displays the running time and the value of each servo of each action.

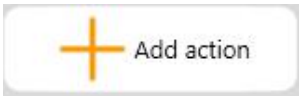
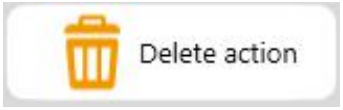
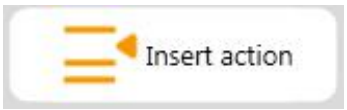


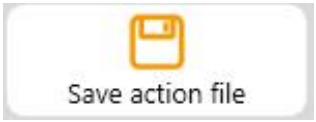
	Index	Time(ms)	ID:1	ID:2	ID:3	ID:4	ID:5	ID:6
	1	1000	500	500	500	500	500	500
	2	1000	500	500	500	500	500	500
	3	1000	500	500	500	500	500	500
▶	4	1000	500	500	500	500	500	500

Icon	Function
Index	Aaction group number. There are 230 action groups in total, and each action group can hold up to 1020 actions. If it exceeds, it will be prompted that it can only be run online and cannot be downloaded.
Time(ms)	Running time.
ID:1 500	Servo ID number. The value below is the action value of the corresponding servo. Double click 500 to modify the value.

④ Action group setting area:

Icon	Function

	Select action group number from 0-230. No.0 is set as “Attention” action by default.
	Download the actions in the current list to the controller. The original actions will be replaced after downloading.
	Click to delete all data of the current action group
	(Be careful) Click to delete all the data of action groups from 0 to 230.
	Run the selected action once.
	Stop the running action group.
	Add the action after adjusting the servo value.
	Delete the selected action in the action data list.
	Update the servo data in servo control area to the selected action in the action data list.
	Insert the new action in front of the selected action.

	Click to loosen the joints of the robotic arm to program action for robotic arm.
	Read current servo angle information (It needs to use with button “Manual Coding”).
	Click to open action group file. (The path to action group file is in “5.Appendix->1. xArm ESP32 Action Group File”)
	Save actions in action data list as a action group.
	Click to integrate several action groups into a new action group.
	Click to run the action group in the current action list（Choose the “Loop” to repeat the actions.)
	All the servos back to the initial position.

⑤ **Servo setting area:**

Icon	Function
	Read the deviation saved in the controller automatically.
	After clicking, the deviation adjusted by the PC software can be downloaded to the robotic arm.
	Click to delete the deviation on the PC software but the data saved by the control board will not change.