

Micro:Bit updates

There are several new products that have been added to the micro:bit platform in recent weeks.

The two main products are the:

1. Waveshare 16 servo driver board
2. Waveshare Remote control with Joystick and buttons

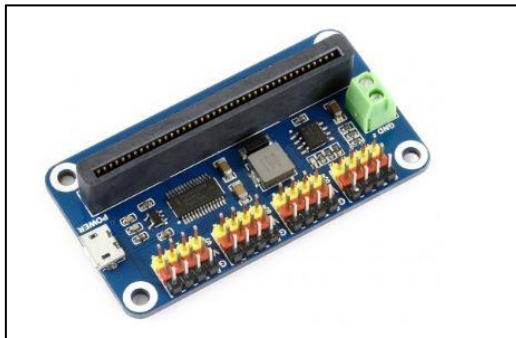
The Waveshare joystick has a library that can be made available by doing the following:
In the “extensions” tab for Github type “waveshare/joystick” - This will add the joystick library to your programming library.

The “16 Servo Driver Board” library can be found by pasting the following link in any browser:

<https://makecode.microbit.org/5x2iDEf591Pb>

It can also be found by typing the following into the extensions search bar in Microbit

github.com/waveshare/pxt-Servo



16 Servo Driver Board



Waveshare Joystick Controller

Items of Note concerning these 2 boards:

1. The 16 servo driver board can be powered through the micro USB port OR the green Port but it doesn't need both.
2. The SIGNAL wire on the 16 servo driver board is indicated in yellow on the picture. This means servos MUST be placed on the header pins with the white wire on the yellow row.
3. The FRONT of the microbit board should be facing the servo pins when plugging it in. That is the side with ONE button and the battery port.
4. On the waveshare joystick controller the microbit board plugs in with the BACK of the board facing the user (facing up). This is the side with the two buttons (A and B)
5. The Joystick controller board will work, for testing purposes, with a microUSB cable attached and NO battery. The battery is NOT a “AA” battery. It is a 3.7v Lithium battery that is rechargeable. Recharging can occur when the board is connected to a USB cable with the battery in the holder.

6. There is a DELAY when using the joystick to control servos. Users could get around the delay using buttons to drive. Some may prefer to use the joystick for an ARM control and/or a gripper control. (The delay might not be as big a deal with an arm or gripper)

You can put any of the following names into the search bar and get libraries for lots of different controllers and support devices. Many of these libraries may contain commands that may allow you to perform tasks that were unavailable before.

1. 4tronix
2. Elecfreaks
3. Kitronik
4. Sparkfun
5. Pimoroni

Some links provided below may be a help to you:

https://www.waveshare.com/wiki/Joystick_for_micro:bit#Programming_Guide

<https://github.com/waveshare/JoyStick>

Arm

https://makecode.microbit.org/_R1A7vbFPe5LY

Gamepad Send: https://makecode.microbit.org/_fDeFYh2qoP88

Wheels: https://makecode.microbit.org/_8h7gpJfaeb1m

Waveshare Gamepad Joystick: https://makecode.microbit.org/_3hu5Pw6jWKbR

Waveshare 16 Port servo controller : https://makecode.microbit.org/_3M148yR80Fjp

Kitronik 16 port servo controller: https://makecode.microbit.org/_fAydYTYbJ8J4

Tested Code to support driving with joystick, Button E and C (Control Arm), Button F and D (Gripper):

I would encourage you as a mentor and/or instructor to get the students to diligently work to develop their own code. Knowing that you have a solution should allow you to give them pointers and direction without giving them a complete solution.

https://makecode.microbit.org/_cgJaXrW20cCj WS SERVO

https://makecode.microbit.org/_UUE95seK7R66 WS JS