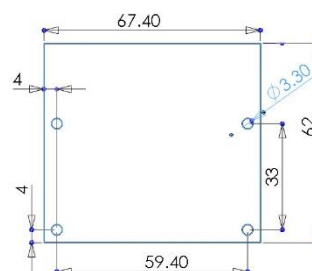


Supply Voltage:	4.5v – 6v
Max Current Pins:	1.5A
Analog Pins:	P0, P1, P2 & P16
Digital Pins:	P12, P8
Dimensions:	67 x 62 x 16 mm
Weight:	17.5 g
Manufacturer	Kitronik



1. OVERVIEW

The Driver Board is used as an extension of the Micro:bit output capabilities. With a larger Voltage and Current capacity, this board is used to drive motors when the Micro:bit is plugged to it. Although it supplies the Microbit with 3v, it drives motors to the connected supply voltage (4.5v to 6v). In addition, it has input ports that can be used for control when the Micro:bit is not controlled remotely (Bluetooth).

2. DRIVING CONFIGURATIONS

Motor speed or position (servos) is controlled through the use of the analog pins and Pulse Width Modulation (PWM). Forward and Backward rotation is done by swapping the voltage polarity of the pins at which the motors are connected. Possible configurations are:

- 2 Motors in on/off operation (P12-P18 & P16-P0) and two servos with their power connected to the power terminal blocks and their signal cable to pins P1 and P2.
- 2 Motors in variable speed mode (PWM) using analog pairs P16-P0 and P1-P2 (notice that motor connected to these must be small due to limited current output)
- 2 Motors in variable speed (P16-P0 & P1-GND) and one servo connected to the main power supply with signal provided by P2

3. CONTROL VIA BLUETOOTH

In order to operate the Micro:bit attached to the board, use Bluetooth. The pairing device must have installed the Application “Micro:bit blue” developed by Martin Wooley (Android systems only). The App is found [here](#).

4. EXAMPLE

To control a motor forward or backward rotation in on/off mode (no speed variation), the motor is connected to pins P12 & P8. If “digital write = 1” is given to P12 and “digital write = 0” to P8, the motor will spin in one direction. If the opposite is done, the motor spins in the other direction. When bot pins are “0” the motor free rotates (no voltage supplied anywhere). When both pins are “1” the motor locks.