

ZIP™ Halo Board for the BBC micro:bit

www.kitronik.co.uk/5625

This Halo board for the BBC micro:bit incorporates 24 ZIP™ colour addressable LEDs, connected to the BBC micro:bit pin P0. It also breaks out P1 and P2 to a standard 0.1" footprint.

The board includes an integrated nut and bolt connection for the BBC micro:bit.

The board produces a **regulated supply** that is fed into the 3V and GND connections to **power the connected BBC micro:bit**, removing the need to power the BBC micro:bit separately. To protect the BBC micro:bit if power is supplied through it the ZIP™ Halo will not illuminate.

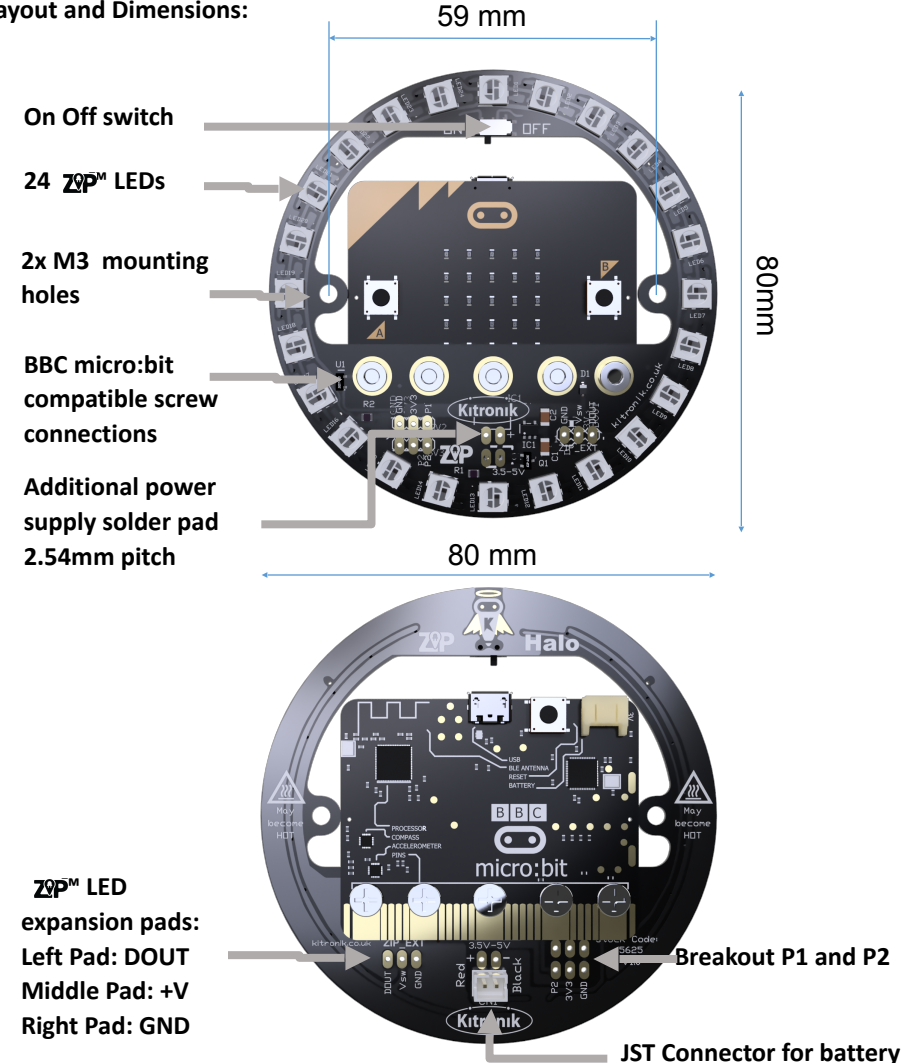


Connecting a BBC micro:bit:

The board has been designed so that the BBC micro:bit can be bolted to the back, using the 5 supplied M3x6 countersunk machine screws.

Examples: Uses for the Halo could include a lamp, clock or a compass. For more details see: <http://www.kitronik.co.uk/ziphalo>

Layout and Dimensions:



The Halo board is 11mm thick (including BBC micro:bit)

Electrical Information

Operating Voltage (Vcc)	3.5V – 5V
Number of ZIP LEDs	24
Number of external channels	3 (1x ZIP LED, 2x IO pin, each IO channel rated +3V at 50mA)
Max Current (ZIP LED running full RGB brightness)	1.2A (50mA per ZIP)

JavaScript Blocks editor code

Kitronik ZIP LEDs are compatible with any WS2812B driver code and can be coded with the Microsoft MakeCode Editor.

The example blocks (right) will cause the ZIP Halo to display a rotating rainbow pattern.

```
on start
  set Halo to NeoPixel at pin P0 with 24 leds as RGB (GRB format)
  Halo show rainbow from 1 to 360

forever
  Halo rotate pixels by 1
  Halo show
```

Caution:

ZIP LEDs may become hot if used at high brightness for prolonged periods.

