

The Link accessory board standard for BBC micro:bit accessories

Version 1.0

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The BBC micro:bit is a standalone programmable computer. It has an edge connector that can be used for expansion of its capabilities.

Plugging the BBC micro:bit into an accessory board via this connector prevents other accessories from being used simultaneously. The Link accessory board standard defines physical connections, including a 21 way 2.54mm / 0.1" pitch header that allows additional Link compatible accessory boards to be driven from a single micro:bit.

Pins are listed bottom to top as viewed on the dimension drawing.

Pin	Function
1	micro:bit P3
2	micro:bit P0
3	micro:bit P4
4	micro:bit P5
5	micro:bit P6
6	micro:bit P7
7	micro:bit P1
8	micro:bit P8
9	micro:bit P9
10	micro:bit P10
11	micro:bit P11
12	micro:bit P12
13	micro:bit P2
14	micro:bit P13
15	micro:bit P14
16	micro:bit P15
17	micro:bit P16
18	micro:bit 3 Volt supply
19	micro:bit P19 / SCL
20	micro:bit P20 / SDA
21	GND

Boards using the Link header should diode protect the micro:bit 3V rail to ensure that different supply rails do not cause failure of the electronics on the micro:bit of accessory board. Additional Power input to the board should be in the area defined. Boards could be designed without the 80 way connector for the micro:bit. Boards designed in this manner should not provide the 3V power rail (pin 18), although they could be powered via it.

The Link standard defines 4 holes for M3 standoffs to secure the linked boards. These are positioned as per the following diagram. The mounting holes should ideally not be plated. If the holes are plated then they must be electrically isolated. The surrounding area should be free of parts.

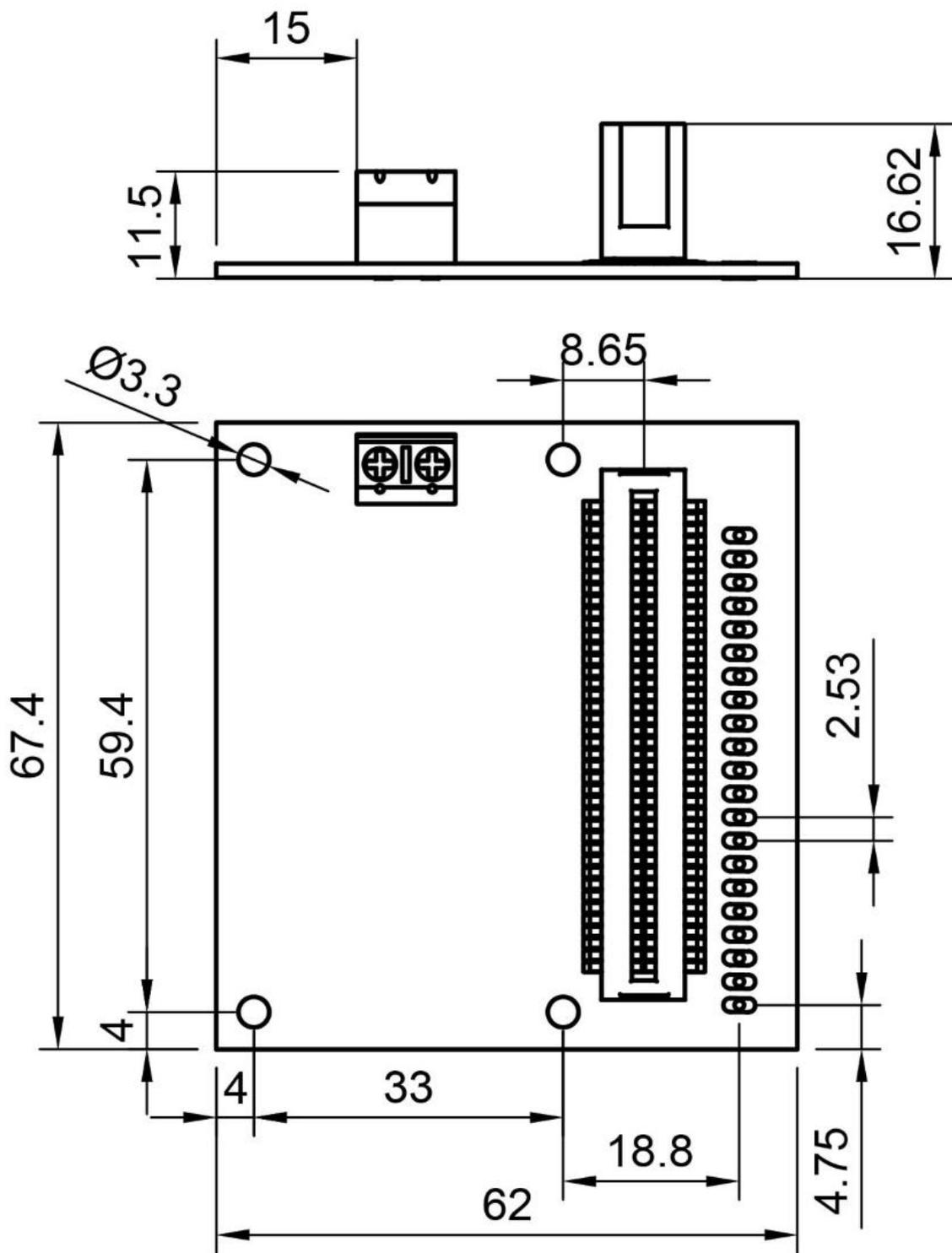


Figure 1 Link accessory board standard

Currently all Link standard boards are 62mm x 67.4mm, however there is nothing in the standard that prevents boards being a different size than this, provided the connection points are in the correct relative positions.

The micro:bit edge connector can be omitted in boards that are designed to only be used with another Link compatible board which will provide the connection to the micro:bit.

It is recommended that board linking is done using plug through headers – such as SamTec SSQ-121-04-G-S – or equivalent.