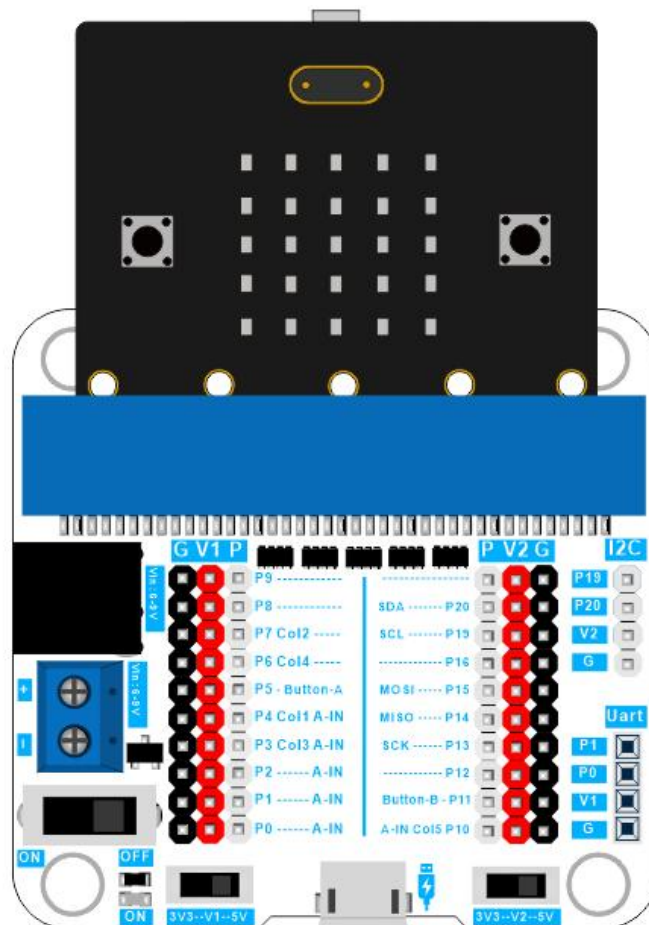


# uShield expansion board for Micro:bit

## 1. Overview

The uShield Expansion Board is a versatile shield designed for the Micro:bit. It features extensive connectivity options, including 17 digital I/O pins (with 6 supporting analog read and all 17 supporting analog write), UART, I2C, and SPI communication protocols. Power flexibility is a key advantage, with multiple input options: a DC jack (6-9V), KF305 connector (6-9V), and a Micro USB port. All power interfaces include reverse-connection protection, and a switch allows selection between 3.3V or 5V output for the pins.

The board also includes Lego-compatible mounting holes for easy integration into projects. With built-in protection resistors for each I/O pin, the uShield provides a safe and adaptable platform for expanding Micro:bit capabilities in various applications.

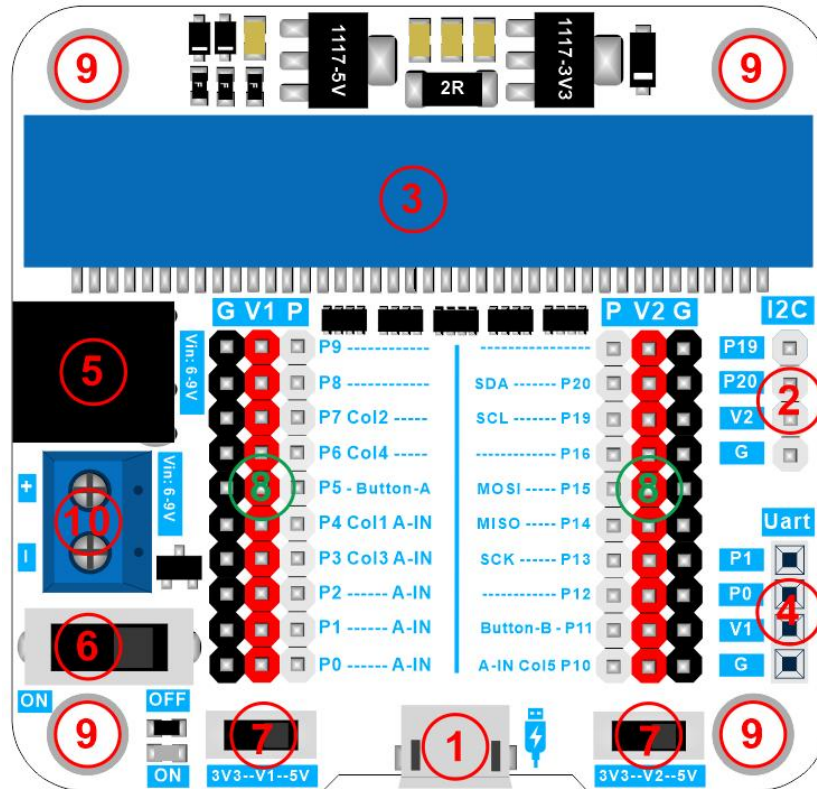


**Note: no micro: bit included in the product**

## 2. Specification parameter

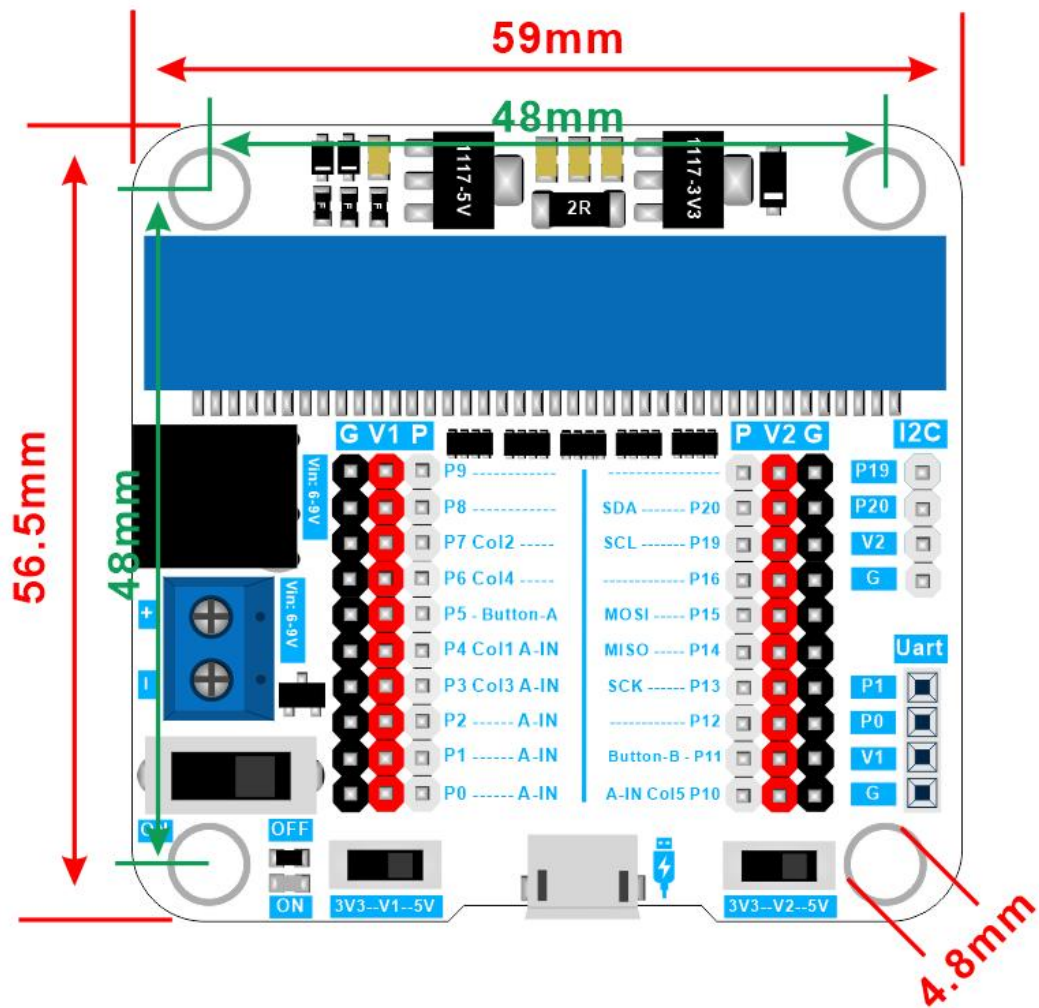
Shield	
Name	uShield expansion board for
SKU	M1E0001
Applicable motherboard	
Micro:bit	
USB connector	
Micro USB	
Pins	
Digital I/O Pins	17 (P0, P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P13, P14,
Analog read pins	6 (P0, P1, P2, P3, P4, P10)
Analog write pins	17 (P0, P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P13, P14,
Communication	
UART	Yes
I2C	Yes
SPI	Yes
Power	
DC jack Input	6--9V
KF305 connector Input	6--9V
The current of the 3.3V	500 mA
The current of the 5V	500 mA
Dimensions	
Width	59.0 mm
Length	56.5 mm
Height	14.0 mm
Weight	
25.0 g	

### 3. Interface specification



Number	Description
1	Micro USB port, for external power supply only.
2	I2C pin header expansion port (2.54mm pitch).
3	Micro:bit slot.
4	UART female header expansion port (2.54mm pitch)
5	DC-044 power jack, supports 6-9V input with reverse connection protection.
6	Control switch for Vin power input.
7	Output voltage selection switch for V1 and V2 pin
8	Micro:bit IO and power expansion port (2.54mm pitch), each IO port is connected with a 100-ohm protection resistor in series.
9	Lego-compatible holes.
10	KF-301 power connector, supports 6-9V input with reverse connection protection.

#### 4. Size



#### 5. schematic diagram

