Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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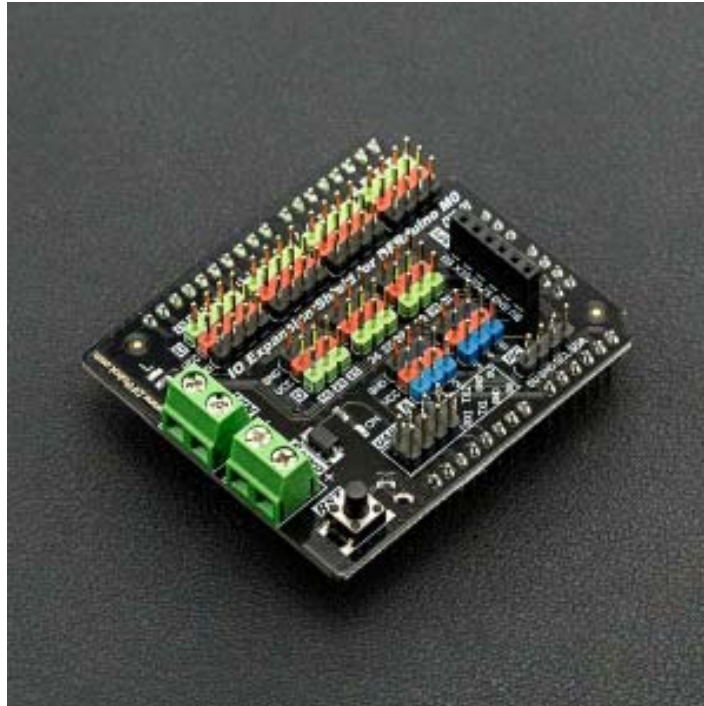

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Gravity: IO Expansion Shield For DFRduino M0

SKU: DFR0412

The IO expansion shield which is special for DFRduino M0, it extends 31 general pins from M0 board, together with DFRobot typical color code 3-pin interference. This interference has sole power supply and can connect to the sensors directly, which make the shield have excellent scalability and compatibility. The IO expansion shield for DFRduino M0 has inputs for external power and servo's power, to ensure the stability of powering the module. Its powerful scalability and ease-of-use can help electronics enthusiasts or prototyping developers eliminate the cumbersome breadboard wiring and troubleshooting time, greatly improving development productivity and enabling them to focus more on achieving their originality and ideas.
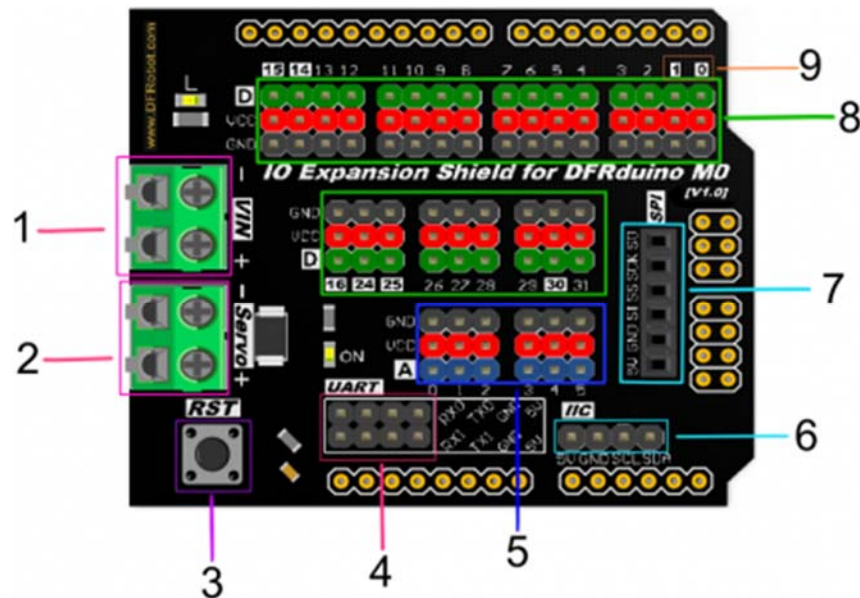
⚠️ Note: This product is only applicable to DFRduino M0, Bluno M0, not compatible with other motherboards such as Arduino Zero.

Specification

- External Power Supply: 7 ~ 23V
- External Servo Power Design
- Color-code 3Pin interface, Gravity interface compatible
- GPIOs: 31 digital pins (6 PWM port, 6 analog port)
- UART: 2
- I2C port: 1
- SPI port: 1
- Size: 62mm * 54mm/2.44 * 2.13 inches

Board Overview

Gravity: IO Expansion Shield For DFRduino M0

Num	Label	Description
1	External Power	7~23V
2	Servo Power	5~7V
3	Reset	
4	Serial	Note: This shield is only applicable to DFRduino M0, Bluno M0, on DFRduino M0, it is Serial1; on Bluno M0, it is Serial
5	Analog Input Pins	Black: GND; Red: 5V; Blue; Analog input (0~5)
6	I2C Port	
7	SPI Port	
8	Digital I/O Pins	Black: GND; Red: 5V; Green: Digital I/O Pins (0~16, 24~31)
9	Reuse Pin Marks	Reversed silk-screen mark

Instruction

- Operating Voltage:

  The operating voltage of DFRduino M0 is 5V, so the extended board supports 5V digital sensors only. The analog input pin of the expansion board can endure 0~5V.

- LED '''L''':

  A LED is designed on the extension board, which is connected to the digital pin 13 (LED).

- Gravity Color-coded 3-Pin interface:
  Color description:

1.
1. Green: digital signal (Digital Signal)
2. Blue: analog signal (Analog Signal)
3. Red: power VCC (power supply via Servo Power port)
4. Black: grounding GND

- Serial port and I2C port:

  The expansion board provides 2 serial ports and one I2C interface, in which the two serial ports are independent.

- External input power supply (7~23V):

  Provides external power input interface, external input power supply has two kinds of interface can choose, can input from the floor or by the expansion board input (not at the same time, input) input voltage is controlled in 7~23V. when the USB and the external input power supply at the same time, it will automatically switch to the external input power supply.

- Servo power input (5~7V):

  The IO expansion Shield has an external servo power port. It could provide enough power resource when you want to do drive a lot of device together. Especially servo motor. Once you connect >5V to the port. it will auto switch power resource.

FAQ

For any questions, advice or cool ideas to share, please visit the **DFRobot Forum**.