# Description

- Small, inexpensive tracked platform kit
- Frame made out of laser-cut Lexan parts
- Comes with the DFRobotShop Rover Mobile Robot Shield
- Includes Arduino Uno microcontroller module with USB connection
- Please verify the polarity of the connector before using this battery as it may differ from the image

The Mini DFRobotShop Rover Kit (Arduino Uno) is a small, inexpensive tracked platform which provides you with the basic tools needed to experiment with Arduino-based programming and mobile robots. The kit includes an Arduino Uno microcontroller module. The frame is made out of durable laser-cut Lexan parts, and the drive system is comprised of the Tamiya Twin-Motor Gear Box (must be assembled in configuration A) and a Tamiya Track and Wheel Set.
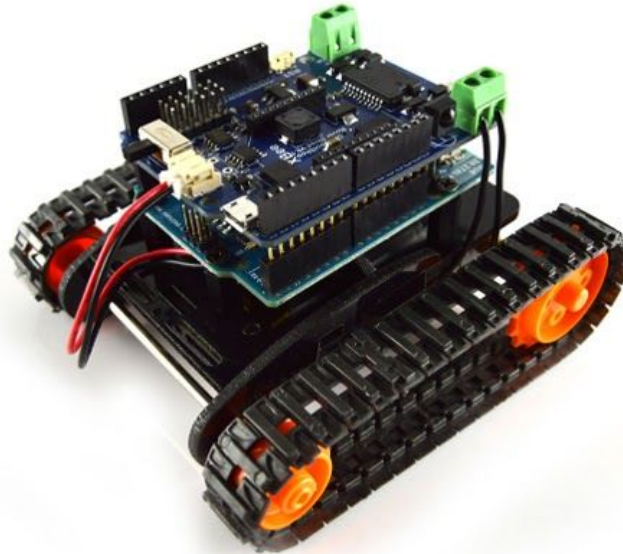

Arduino Uno

The Arduino Uno is a microcontroller board based on the ATmega328 microchip. It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a 1.5m USB Cable Type A to B or power it with an Wall Adapter Power Supply - 9VDC 650mA or DFRobot 7.4V Lipo 2200mAh Battery (Arduino Power Jack) to get started.
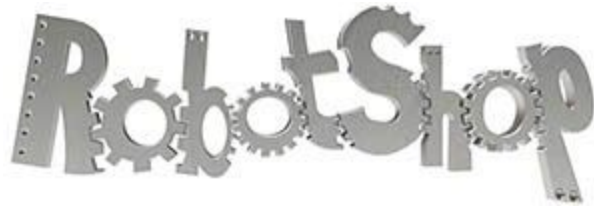
The DFRobotShop Rover Shield is the ideal "all in one" shield for small, Arduino-based mobile robot development. The shield allows you to power your Arduino using a 3.7V LiPo battery (also included with this kit) and even has a 3.7V LiPo charger onboard, allowing you to charge the battery via USB. The onboard L298P H-bridge (dual brushed DC motor controller) is perfect for controlling two small, low voltage gear motors and allows for full control over speed and direction. Additional features include a universal IR receiver, XBee headers and analog pins broken out (for easy connection to sensors).
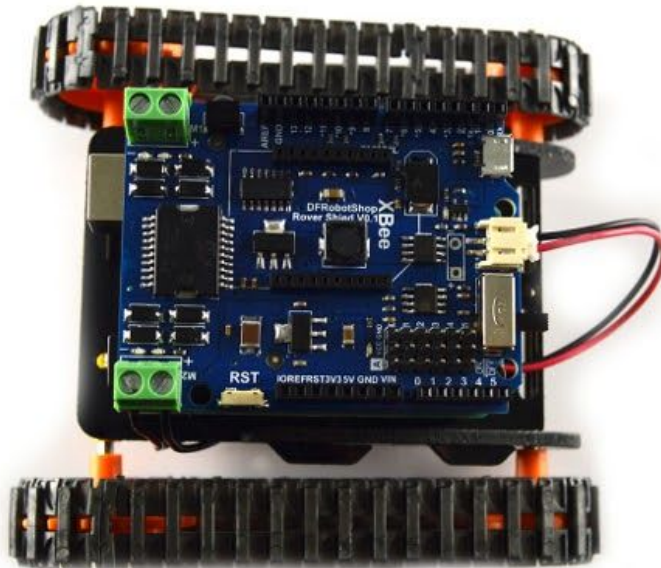
Shield Features

- Dual DC motor controller (3.5 to 9V and up to 2A per channel)
- Onboard voltage regulator
- 3.7V LiPo battery charger (via micro USB connector)
- XBee headers
- 38Khz Universal IR receiver (~10m unobstructed range)

- On/Off switch & reset button
- 3-pin analog headers (signal / 5V / GND)
- Shield stacking headers

Specifications

Arduino Uno

- Microcontroller: ATmega328
- Operating Voltage: 5V
- Input Voltage (recommended): 7-12V
- Input Voltage (limits): 6-20V
- Digital I/O Pins: 14 (of which 6 provide PWM output)
- Analog Input Pins: 6
- DC Current per I/O Pin: 40 mA
- DC Current for 3.3V Pin: 50 mA
- Flash Memory: 32 KB (ATmega328) of which 0.5 KB used by bootloader
- SRAM: 2 KB (ATmega328)
- EEPROM: 1 KB (ATmega328)
- Clock Speed: 16 MHz

What's Included

- 1x Mini RobotShop Rover Frame
- 1x Mini RobotShop Rover Hardware (wire, crimps, standoffs, screws)
- 1x Tamiya Twin Motor Gearbox (must be assembled in configuration A)
- 1x Tamiya Tracks & Sprocket Kit
- 1x DFRobotShop Rover Shield
- 1x Arduino Uno microcontroller
- 1x 3.7V 1000mAh LiPo battery

Useful Links

PDF Files

- [DFRobotShop Rover Shield Schematic](#)
- [DFRobotShop Rover Shield User Guide](#)
- [ATmel ATMega 328 Datasheet](#)
- [Arduino Uno Schematic](#)

ZIP File

- [Arduino Uno Microcontroller Reference Design](#)

Dimensions

- Width: 10.8cm
- Length: 11.8cm
- Height: 7cm
- Top Angle: 5 deg
- Weight: 135g
- There is a 36mm wide x 7mm high gap in the top support plate for a 3.7V, 1000mAh LiPo battery. Foam is included so the battery is a "friction fit"
- Front mounting slots are for general use.