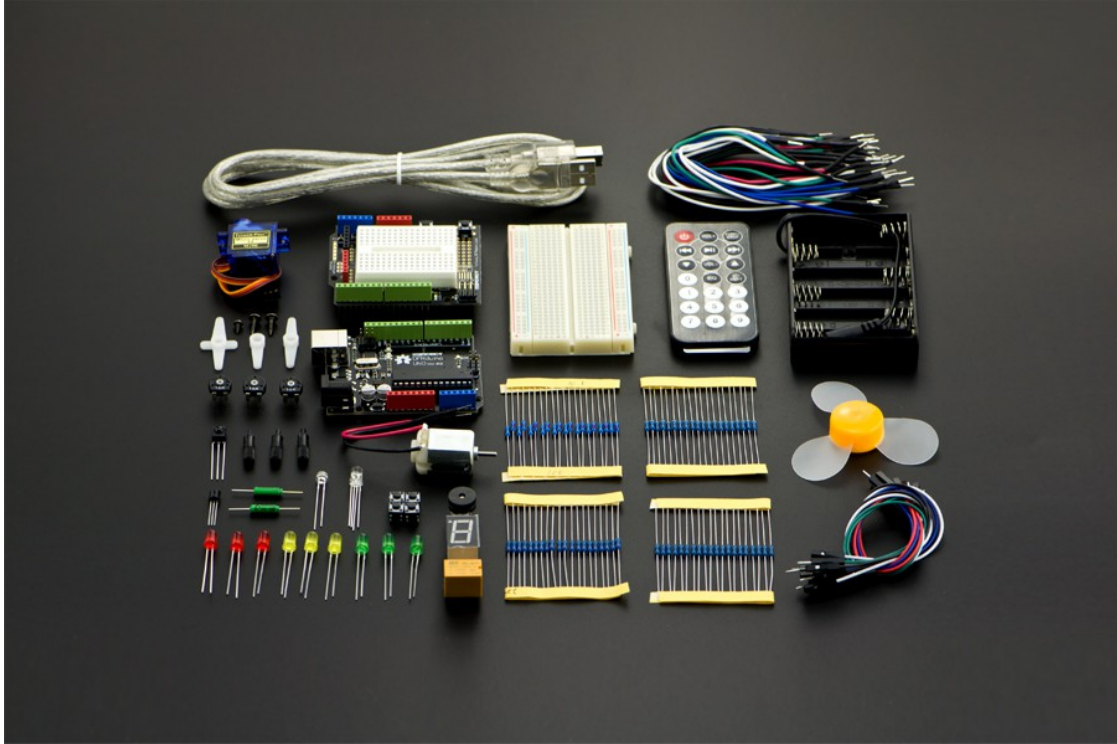


Beginner Kit for Arduino v3.0

Brand: [DFRobot](#) SKU: DFR0100

INTRODUCTION

We have upgraded the Beginner Kit for Arduino! Now the latest v3.0 kit comes with more useful components, more handy projects and higher quality parts. And most importantly, still the same price.

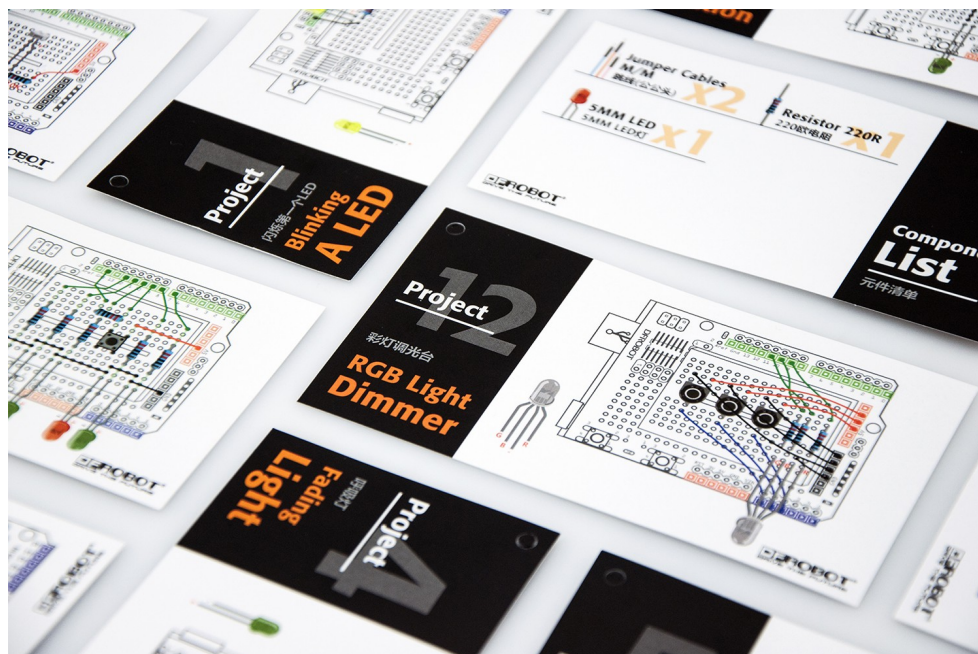
Welcome to the electronic interaction world! DFRobot proudly presents the Arduino beginner kit for those who are interested in learning about Arduino. Starting from basic LED control to more advanced environmental sensing, monitoring and actuators. This kit will guide you through the world of microcontrollers and physical computing.

A DFRduino UNO R3 (Compatible with Arduino Uno), the most stable and commonly used Arduino processor, together with DFRobot's best selling prototype shield are included in this kit.

The latest version of Beginner kit has upgraded all the details based on previous version. Besides premium quality jumper wires, double resistors, more Leds, 9g servo, IR remote transmitter and receiver, 4 more useful components are added: relay, motor, fan and potentiometer. Now you can make more fanstastic projects!



We also created project reference tabs with wiring guides of each project for you, so you can make it faster and minimize errors.



All the components package inside are extremely easy to locate and relocate quickly with our customized black labels.



We've listened all your requests and worked to provide better quality kits, even for beginner kits.

DOCUMENTS

- [Product Wiki](#)
- [Tutorial Codes](#)

SHIPPING LIST

[DFRduino UNO R3](#) x1

[Prototyping Shield](#) x1

Jumper Cables M/M x30

Jumper Cables F/M x10

Resistor 220R x20

Resistor 4.7K x20

Resistor 10K x20

Resistor 1K x20

5mm LED x10

IR Receiver Diode x1

Mini Push Button x4

Ambient Light Sensor x1

Tilt Switch Sensor x1

8-Segment LED x1

LM35 Temperature Sensor x1

Relay x1

Buzzer x1

Fan x1

130 Motor x1

10K Potentiometer x3

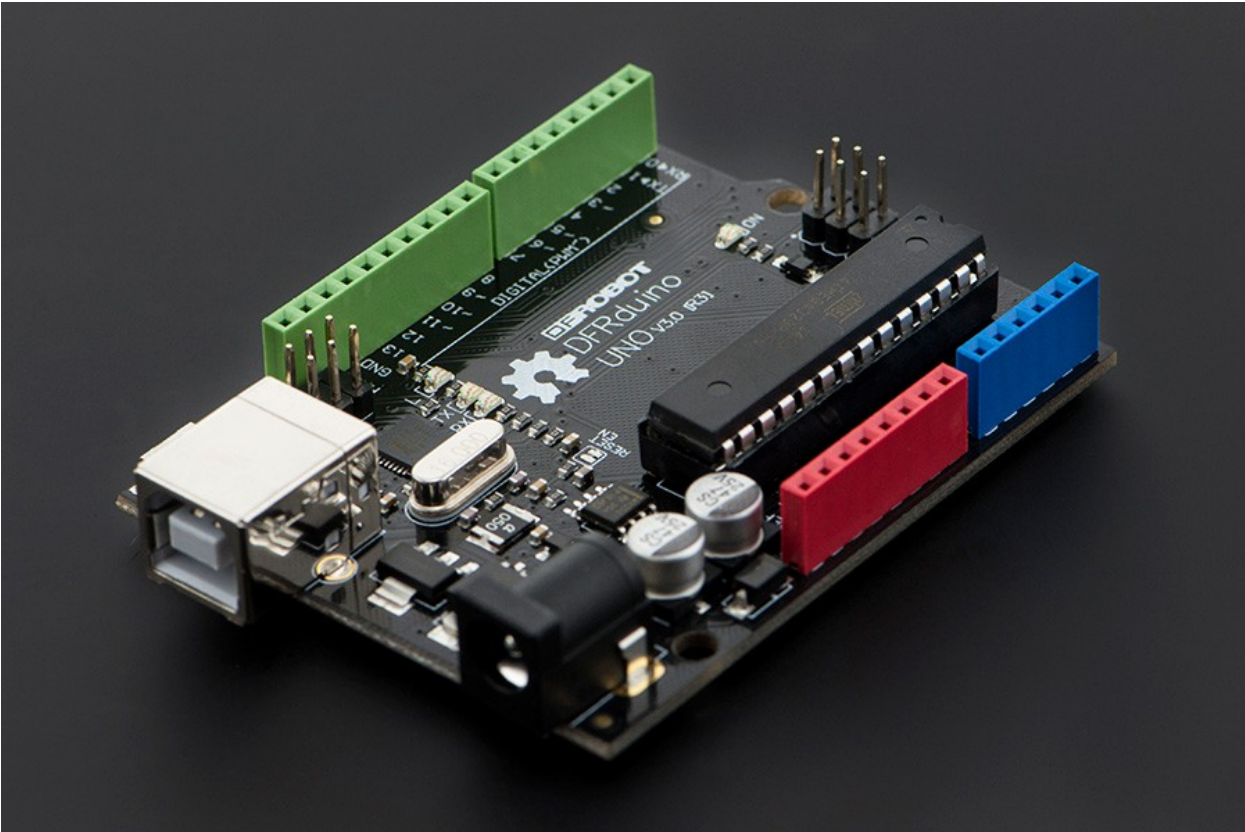
Micro Servo x1

Mini Control x1

6AA Battery Holder x1

400 Tie Point Interlocking Solderless Breadboard x1

DFRduino Uno V3.0



INTRODUCTION

DFRduino Uno V3.0 from DFRobot is a physical world computing board of small size for academics or development. It is a simple microcontroller board fully compatible with Arduino UNO R3 and Arduino IDE open-source development environment. This environment implements the Processing / Wiring language. Arduino can be used to develop stand-alone interactive objects or can be connected to software on your computer (e.g. Flash, Processing, MaxMSP). The open-source IDE can be [downloaded for free](#) (currently for Mac OS X, Windows, and Linux).

This board features the ATmega16U2 programmed as a USB-to-serial converter. An added bonus is that our DFRduino is still using the DIP package AVR Chip. You could remove it to update or reprogram the chip's firmware, or even to place it on a finished, more compact project. The cool thing about our new DFRduino microcontroller is that the headers use different colors to feature I/O ports of different types:

- **Red** for Power Section.
- **Blue** for Analog I/O.
- **Green** for Digital I/O.

These colors match our sensor cables. This makes it really easy to figure out where to connect sensors, or to identify which side is Analog (blue) or Digital (green).

The Arduino Uno is a microcontroller board based on the [ATmega328](#). 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 USB cable or power it with a AC-to-DC adapter or battery to get started.

This board added SDA and SCL pins that are near to the AREF pin and two other new pins placed near to the RESET pin, the IOREF that allow the shields to adapt to the voltage provided from the board. In future, shields will be compatible both with the board that use the AVR, which operate with 5V and with the Arduino Due that operate with 3.3V. The second one is a not connected pin, that is reserved for future purposes.

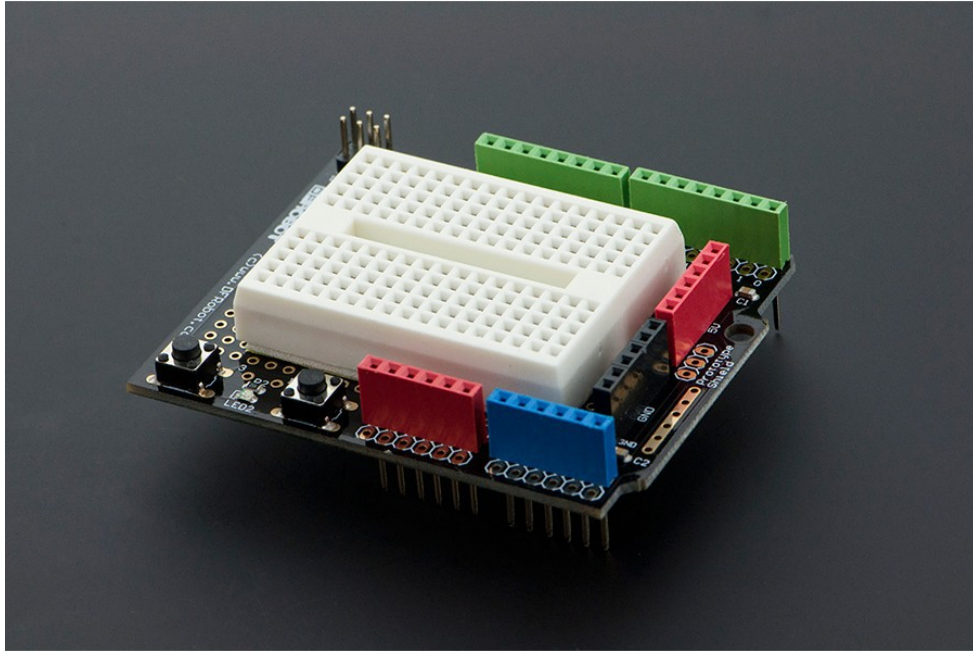
SPECIFICATION

- Microcontroller: ATmega328 (DIP Package)
- 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 of which 2KB used by bootloader
- SRAM: 2 KB (ATmega328)
- EEPROM: 1 KB (ATmega328)
- Clock Speed: 16 MHz
- Size: 75 x54 x15 mm
- Environment Friendly: Rohs Compliance

DOCUMENTS

- [ATmega328P datasheet](#)
- [Arduino Home Page](#)
- [How to](#)
- [Programming Reference](#)

Prototyping Shield for Arduino



This is a design for an open-source prototyping shield for Arduino NG/Diecimila. It has tons of cool features, to make prototyping on your Arduino easy. Shipped with fully assembled.

Compatibility

- Arduino UNO R3 (Compatible)
- Arduino Mega 1280/2560
- Arduino Due

FEATURES

- Reset button up top
- ICSP header
- Lots of GND and +5V rails
- DIP prototyping area makes it easy to add more chips
- SOIC prototyping area above USB jack for up to 14-pin SOIC chip, narrow medium or wide package.
- A 'mini' breadboard included
- Extra 6mm button

DOCUMENTS

- [Schematics](#)
- [Wiki / tutorial](#)