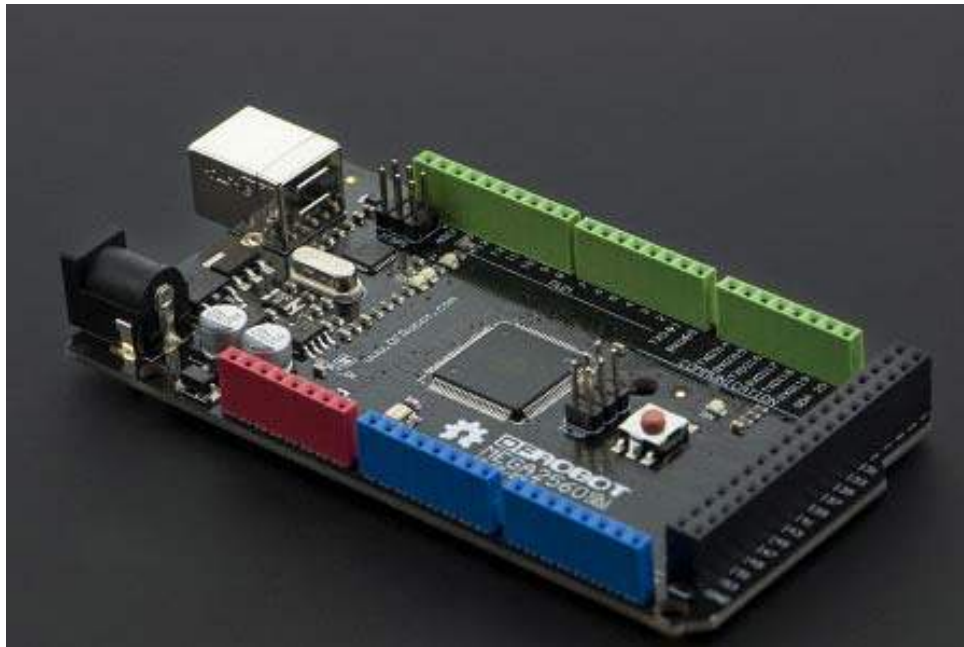# Mega 2560 V3.0 (Arduino Mega 2560 R3 Compatible) SKU: DFR0191

INTRODUCTION

NEW VERSION! This is the upgraded DFRduino Mega 2560 V3.0 which is now fully compatible with Arduino Mega 2560 R3. The Arduino Mega is a microcontroller board based on the ATmega2560. It has 54 digital input/output pins (of which 14 can be used as PWM outputs), 16 analog inputs, 4 UARTs (hardware serial ports), 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; Connect it to a computer with a USB cable or power it with a AC-to-DC adapter or battery to get started. The Mega is compatible with most shields designed for the Arduino Duemilanove, Diecimila or Uno.

One cool thing about our DFRduino microcontrollers is that the hearders with different colors are used to differentiate I/O ports in an relatively easy way:

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

This kind of correspondence match exactly the same with our sensors, making it even cooler and more user-friendly.

The R3 board enjoys following new features:

- Added SDA and SCL pins that are close to AREF pin and two other new pins close to RESET pin, allowing voltage adaptation with IOREF. Our shields will be fully compatible both with the AVR boards operating @5V and Due @3.3V in future.
- Improved RESET circuit
- Replacing the Atmega 8U2 with Atmega 16U2 (datasheet) http://www.atmel.com/images/7799s.pdf

Version history:

- V3.1 - Choose the quartz crystals resonator to improve the timer and serial accuracy. Compared with ceramic crystals, quartz crystals get better temperature stability.

SPECIFICATION

- Compatible with Arduino Mega 2560 R3
- Microcontroller: ATmega2560
- Operating Voltage: 5V
- Input Voltage (recommended): 7 ~ 12V
- Digital I/O Pins: 54 (of which 14 provide PWM output)
- Analog Input Pins: 16
- DC Current per I/O Pin: 40 mA
- DC Current for 3.3V Pin: 50 mA
- Flash Memory: 256 KB of which 8 KB used by bootloader
- SRAM: 8 KB
- EEPROM: 4 KB
- Clock Speed: 16 MHz

The Mega is compatible with:

- Mega Prototyping Shield For Arduino Mega
- Mega IO Expansion Shield V2.3 For Arduino Mega
- Mega-multi Expansion Shield
- LCD Keypad Shield For Arduino
- 2A Motor Shield for Arduino
- Stepper Motor Driver Shield for Arduino
- Screw Shield V3 for Arduino
- Xbee Shield
- DFRduino Ethernet Shield (Support Mega and SD)
- Relay Shield for Arduino V2.1

- WIFI Shield V2.2
- IO Expansion Shield For Arduino(V7)
- And other arduino standard size shields...

SHIPPING LIST

- DFRduino Mega 2560 V3.0 x1